24213

4040-SE Sentronic

LCN®

Installation Instructions

This closer features two mounting options. Before beginning, determine which type of mounting best applies to your application, or had been specified for the job; then be sure to use the proper template.

1 Voltage

The voltage shown on the track cover plate must match voltage supplied to door frame (24V or 120V). If concealed wiring is wanted, prepare the frame to specifications shown on the corresponding template (pull side or push side). If surface wiring is desired, be sure to mount track on frame before running any EMT/ conduit.

2 Tracking

Depending on mounting used, insert proper track plugs into the side or top of the track. Using fasteners provided, mount track on frame to the dimensions of the template being used. Remove solenoid cover plate and make electrical connections (see pg. 2).

ⓘ **NOTE: Switch hole in the cover plate MUST be aligned with the test/release switch when reattaching the plate to the track.**

3 Spring Power

Before mounting closer, the spring power may need adjusting. Refer to the label on the closer spring tube. The 4040 SE comes preset at size 3. This will control a door up to 38" wide. If your door is wider than 38", adjust closer as shown (see illustration to the right), up to 7 full turns. Starting the cover screws at this point is recommended. Using fasteners provided, mount the closer onto the door to the template dimensions being used.

4 Arm Installation

Place the arm spacer over the top shaft of the closer. Install the arm as follows:

4a Push Side Mounting

Place the arm hub over the top closer shaft, parallel with your door. Place a wrench on the bottom shaft of the closer, and rotate away from the door. When flats in the arm hub line up with the first available flats of the shaft, slide the arm hub onto the shaft. Insert the shaft screw and tighten securely.

4b Pull Side Mounting

Place the arm hub over the top closer shaft, parallel with the door. Rotate the arm away from the door until flats in the arm hub line up with first available flats of the shaft. Slide the arm hub onto the closer shaft. Insert the shaft screw and tighten securely.

5 Set Screw in Arm

Loosen the set screw in the arm. Connect the art to the track roller, and tighten the set screw firmly.

6 Adjusting Hold-Open Door Position

Remove the screw in the adjustable arm, and open the door to the desired position. Reinsert the screw and tighten securely.

7 Regulation

Do not allow the door to slam into the frame. A "normal" closing time from a 90°position is 5 to 7 seconds, evenly divided between MAIN and LATCH SPEED. If adjustments are needed, use a 3/32" hex wrench. To adjust the MAIN SPEED, turn regulating screw (see illustration below) clockwise to slow the speed or c.c.w. to increase the speed. LATCH SPEED is adjusted in the same way. When adjusting BACKCHECK, turn the regulating screw clockwise to increase the amount of force or c.c.w. to reduce the amount of force.

ⓘ **NOTE: Do not use an abrupt backcheck setting or expect the door closer to act as a stop!**

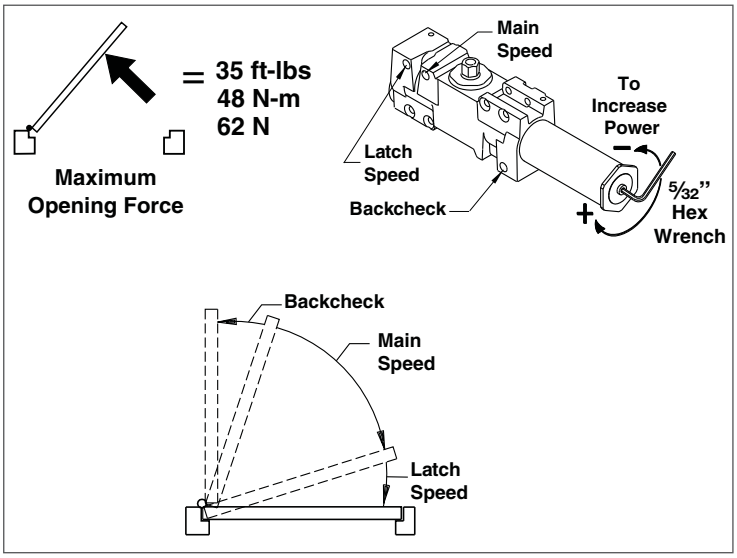
8 Door Closer Cover

With regulation done, place snap-on clip insert into the proper cutout, then snap the cover assembly onto the spring tube.

⚠ CAUTION ⚠

IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTION CAREFULLY.

For questions, call LCN at 877-671-7011.

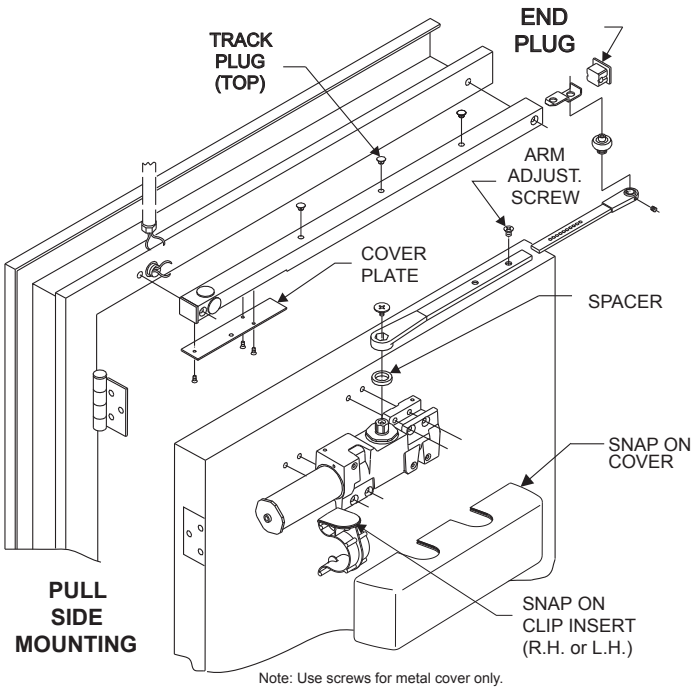


NO MAINTENANCE REQUIRED

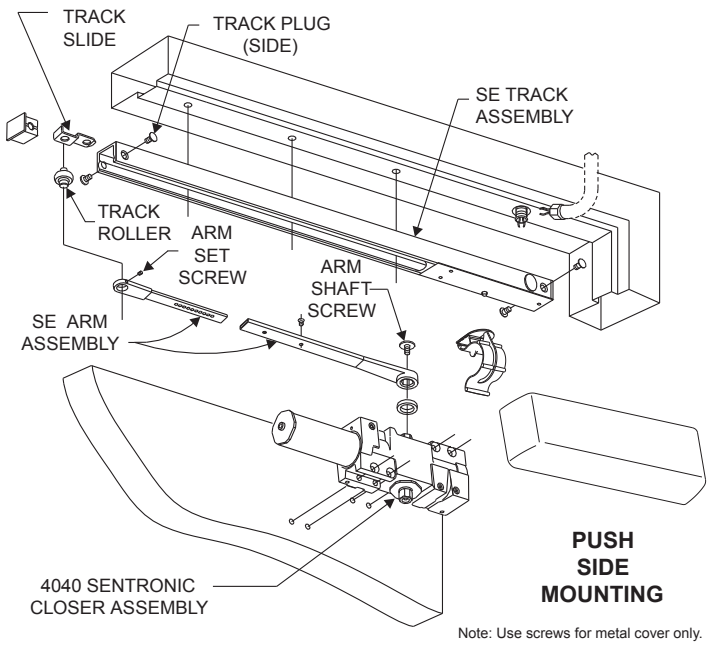
⚠ WARNING ⚠

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY!

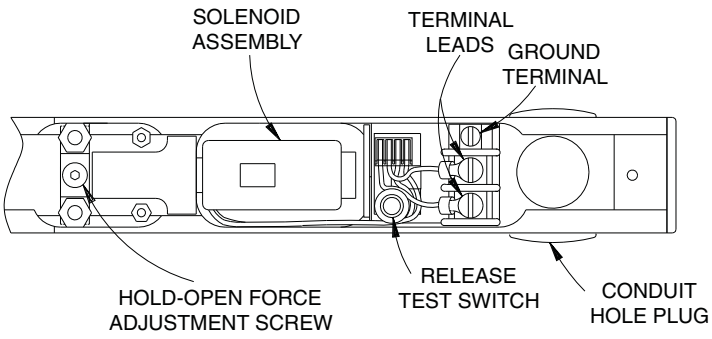
Disconnect the power before making any electrical connections or performing maintenance.



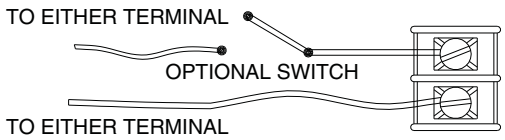
Note: Use screws for metal cover only.



Note: Use screws for metal cover only.



WIRING DIAGRAM - POLARITY NOT IMPORTANT



INPUT VOLTAGE:
24V AC/DC OR 120V AC/DC
(usually from alarm panel or detector)

Hold Open Force Adjustment:

Locate the hold-open adjustment screw in the diagram above. For greater hold-open force, insert a socket screw key wrencyh (included in the screwpack), and turn clockwise. To decrease the amount of hold-open force, turn the screw counter-clockwise. Turn a maximum of 4 turns.

Electrical checkout

1. With power on, open the door complete. The door should remain in the open position. If the door does not stay open, Check the electrical input.
2. Push the release test switch. The door should close immediately. Open the door to the hold-open position, and let it remain there.
3. The system should be checked at frequent intervals.

4040Se Hinge Face Mounted

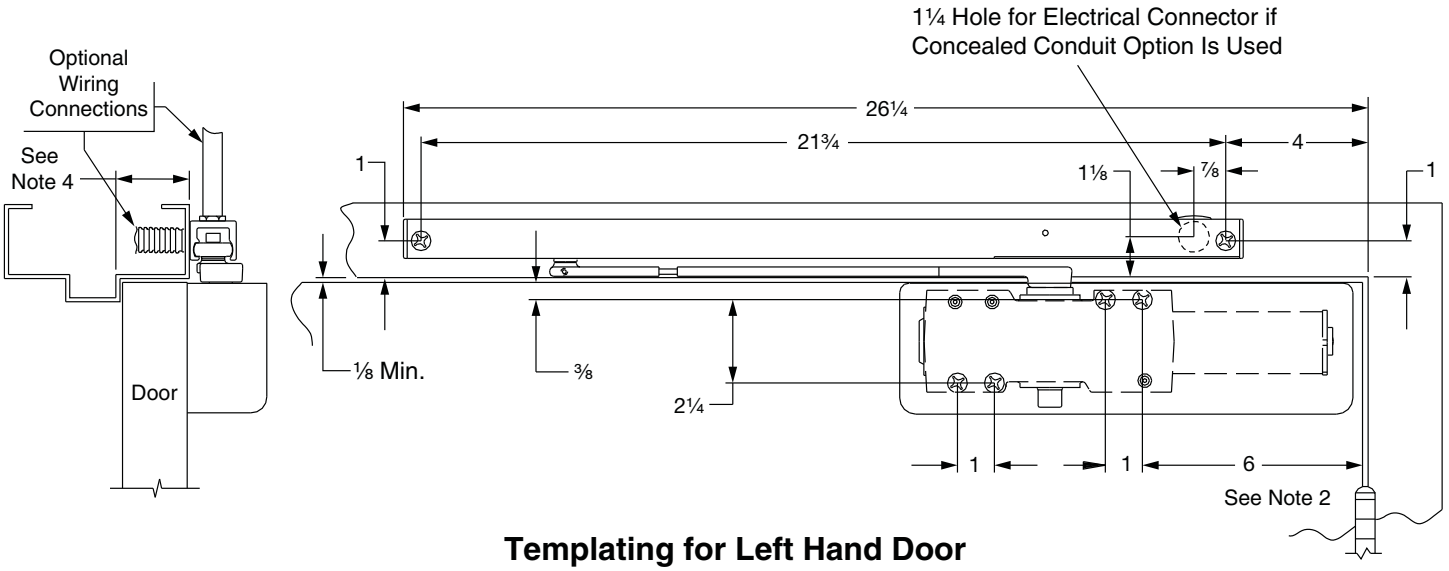
⚠ WARNING ⚠

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY!

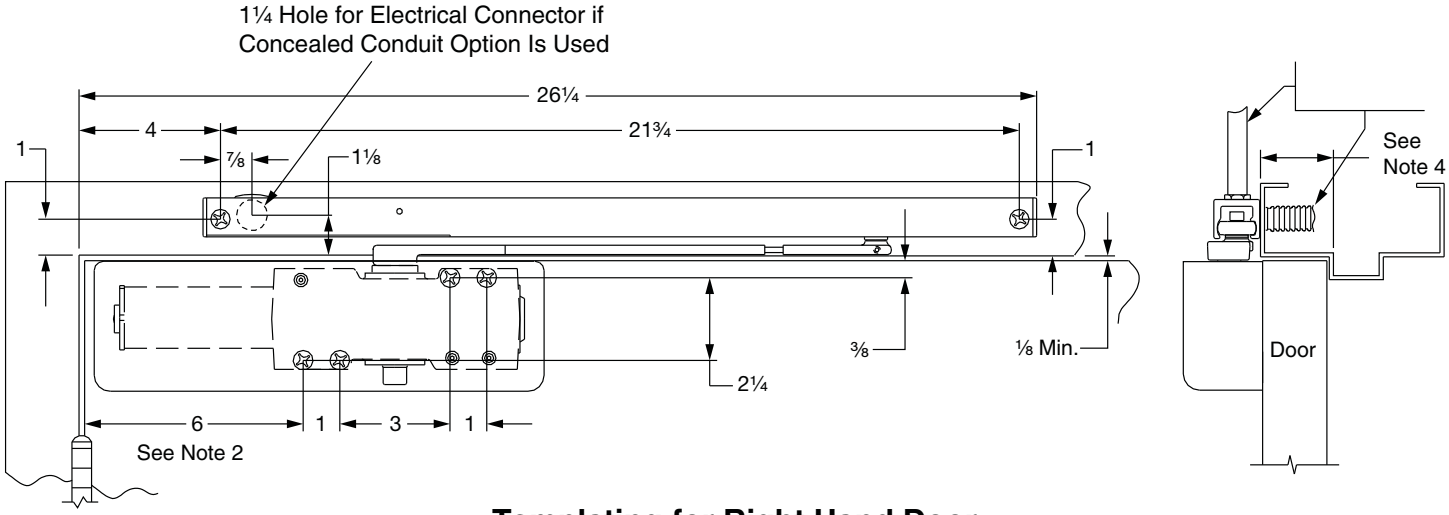
Disconnect the power before making any electrical connections or performing maintenance.

DOOR HOLDER SOLENOID DATA
24 VAC - DC Nominal =10% - 15% @ .090 Amp.Max.
120VAC - DC Nominal =10% - 15% @ .030 Amp. Max.

4040SE } 85° to 110° Hold Open
Auxiliary Stop Recommended



Templating for Left Hand Door



Templating for Right Hand Door

Notes:

1. Voltage supplied to the unit MUST match the voltage shown on the Sentronic label.
2. If the door is hung on pivots: Locate the closer and track from the pivot point of the center pivotj. For offset pivots: Locate from the pivot point and and add ⅜".
3. The floor or wall stops should be used.
4. If this dimension is greater than 1 15/16", consult the factory.
5. Reinforcing per ANSI/SDI-100 is recommended for hollow metal doors and frames.
6. If the swing clear hinges are being used, consult the factory.

Inch	¼	9/16	⅝	1	1 ⅛	1 ¼	1 11/32	1 ½	2 ⅛	2 ¼	2 ⅞	3	4	5	6	8 9/16	26 ⅜
M.M.	6	14	16	25	29	32	34	28	54	57	73	76	102	127	152	217	670

4040SE Stop-Side Mounted

⚠ WARNING ⚠

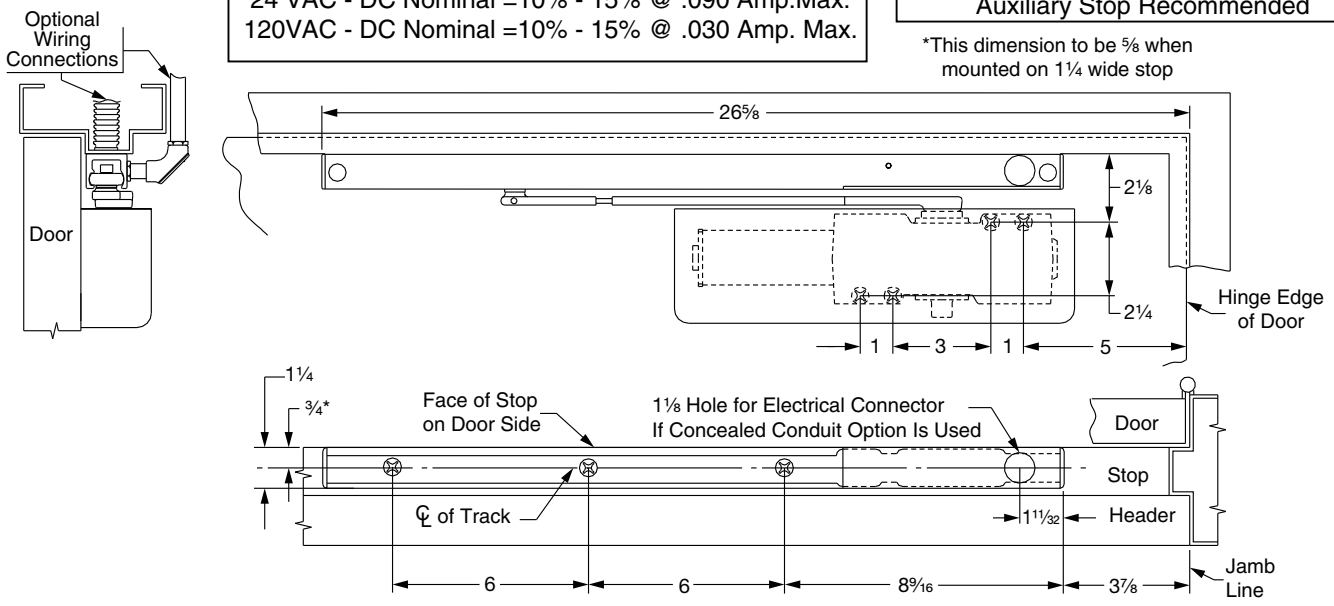
HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY!

Disconnect the power before making any electrical connections or performing maintenance.

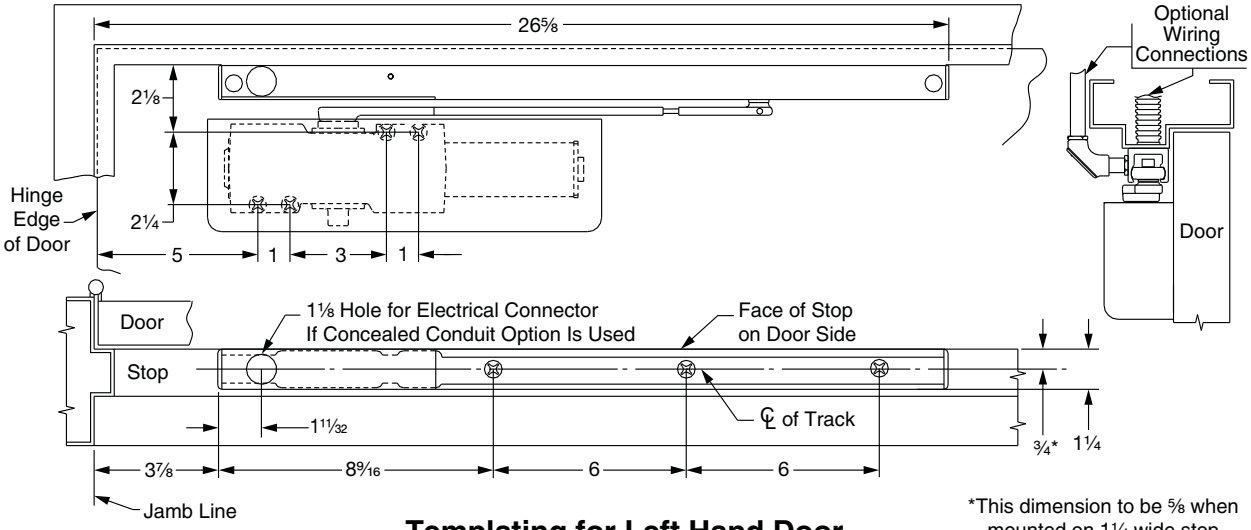
DOOR HOLDER SOLENOID DATA
24 VAC - DC Nominal =10% - 15% @ .090 Amp.Max.
120VAC - DC Nominal =10% - 15% @ .030 Amp. Max.

4040SE } 85° to 110° Hold Open
Auxiliary Stop Recommended

*This dimension to be 5/8 when mounted on 1¼ wide stop



Templating for Right Hand Door



*This dimension to be 5/8 when mounted on 1¼ wide stop

Templating for Left Hand Door

Notes:

1. Voltage supplied to the unit MUST match the voltage shown on the Sentronic label.
2. The Electrical connector is provided by LCN.
3. Locate the closer and track from the center line of the pivot or swing - clear the hing pin, if used.
4. Floor or wall stops should be used.
5. Reinforcing per ANSI/SDI-100 is recommended for hollow metal doors and frames.

Inch	¼	9/16	5/8	1	1 ⅛	1 ¼	1 11/32	1 ½	2 ⅛	2 ¼	2 ⅞	3	4	5	6	8 9/16	26 ⅜
M.M.	6	14	16	25	29	32	34	28	54	57	73	76	102	127	152	217	670

Customer Service
1-877-671-7011 www.allegion.com/us

ALLEGION

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29809

1261 CUSH

LCN®

85°- 90°- 100° - 110° Template
Push Side Mounting

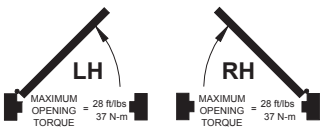
Installation Instructions

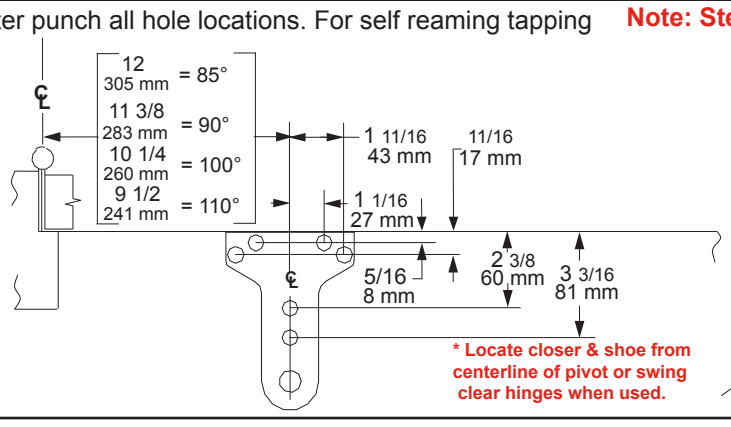
1 Locate proper template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes.

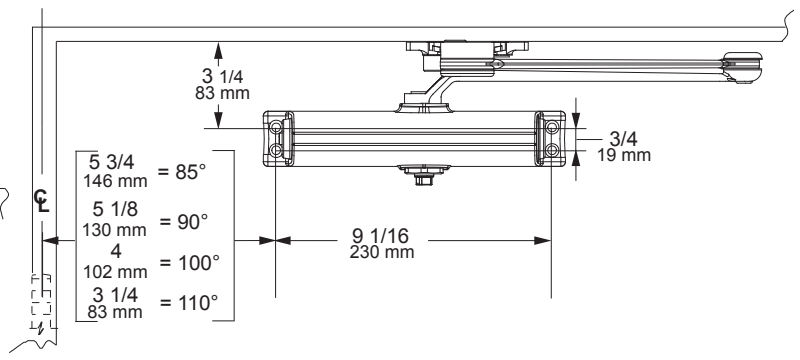
Note: Steps 1-7 show left hand door mount, right hand door is opposite.

SRT Screw

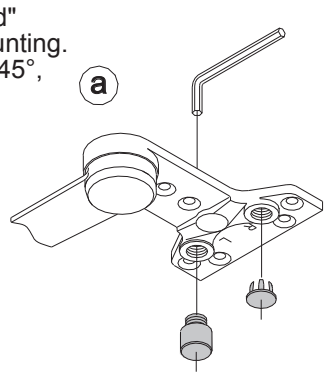
Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.

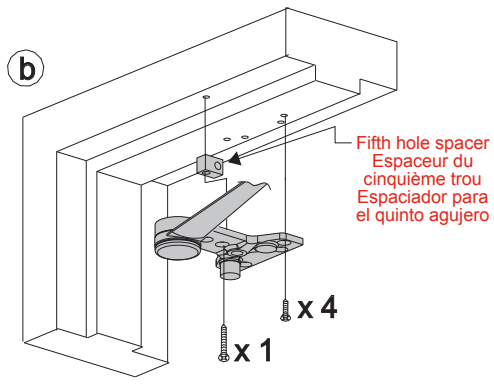




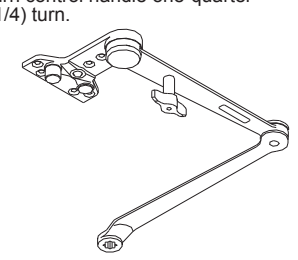


2 ⓐ Shoe must be "handed" to match door before mounting.
ⓑ Open door to approx. 45°, attach arm to frame with fasteners provided.

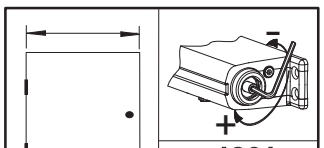




HOLD OPEN ARM: To engage or disengage hold open feature, turn control handle one-quarter (1/4) turn.



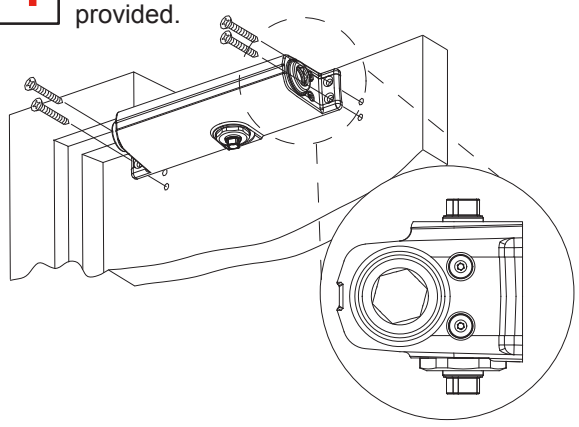
3 Determine door width, adjust spring power turns to match chart.



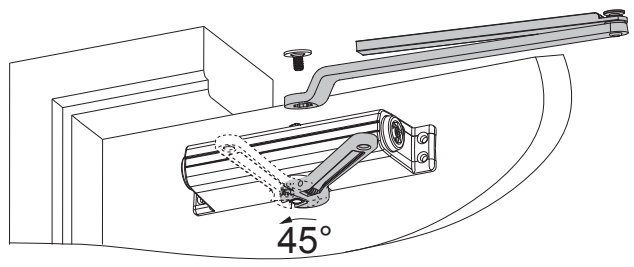
	♿ - 6
30"- 750mm	- 3
32"- 815mm	0
36"- 915mm	+ 2
42"- 1050mm	+ 6

CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 800 - 526 - 2400

4 Secure closer to door with fasteners provided.



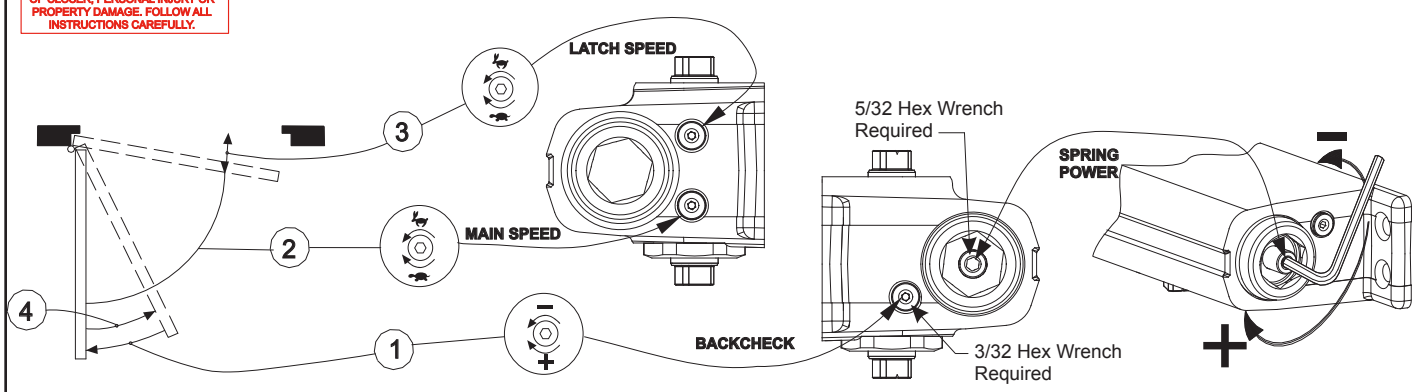
5 Rotate closer shaft 45°, and then attach main arm with provided fastener.



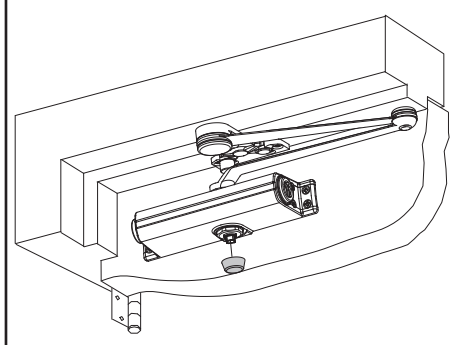
6 If necessary, adjust closer.

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



7 Press cap onto shaft.



1261 Instructions Cush et gabarit de 85°-90°-100°-110° pour une installation sur le côté à pousser.

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percezdes trous de 5/32 po.

Les étapes 1-7 illustrent une installation pour une porte main gauche, main droite à l'opposé.

Repérez le ferme-porte et la console de la ligne centrale du pivot ou de la charnière contre-coudées, lorsque celle-ci est utilisée.

2 ⓐ La main de la console doit être adaptée à celle de la porte avant l'installion.

2 ⓑ Ouvrez la porte à environ 45°, fixez le bras au cadre à l'aide des attaches fournies.

3 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau

4 Fixez le ferme-porte sur la porteavec les attaches fournies.

5 Faites pivoter l'arbre du ferme-porte 45°puis fixez le bras principal avec les attaches fournies.

6 Au besoin, réglez
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage

7 Emboitez le capuchon fermement sur la tige.

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

BRAS DE RETENUE: Pour engager ou désengager le mécanisme de retenue, tournez la manette de contrôle d'un quart (1/4) de tour.

DANGER
Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 800 - 526 - 2400

DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

1261 Instrucciones CUSH para plantilla 85°-90°-100°-110° con montaje del lado del empuje.

1 Localice la plantilla apropiada. Marque el centro de todos los agujeros. Barrene agujeros de 5/32".

Nota: Las etapas 1-7 ilustran un montaje de puerta a la izquierda; una puerta a la derecha está al lado opuesto.

Localice el cerrador y la zapata a partir de la línea central del pivote o de la bisagra, cuando se utiliza.

2 ⓐ Debe de hacerse coincidir el lado de la zapata con la puerta antes de montarla.

2 ⓑAbra la puerta hasta aprox. 45°, sujete el brazo al bastidor con los sujetadores ya incluidos.

3 Determine la anchura de la puerta. Ajuste la fuerza del resorte según lo indicado en el gráfico.

4 Sujeta el cerrador a la puerta con los tornillos ya incluidos.

5 Gire el eje del cerrador a 45° y coloque el brazo principal con los sujetadores ya incluidos.

6 Ajusta si se necesario
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

7 Coloque la tapa sobre el eje.

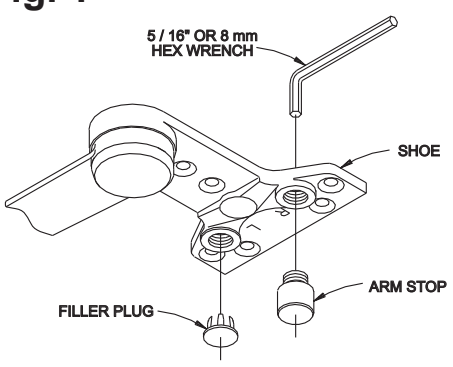
NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

BRAZO DE RETENCIÓN: Para embragar o desembragar la característica de retención, dar un cuarto de vuelta (1/4) al cabo.

ADVERTENCIA
UNA INSTALACIÓN O UN AJUSTE INCORRECTOS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL 800 - 526 - 2400

ADVERTENCIA
LA APERTURA DEMASIADO GRANDE DE LAS VÁLVULAS DE AJUSTE PUEDE OCASIONAR UN DERRAME, DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES.

Fig. 1



Both Cush and H.O. Cush shoes must be "handed" to match door **BEFORE** mounting. See **Fig. 1.**

For Left Hand doors: All shoes are shipped assembled for left hand doors. Insert 5/16" (8mm) Hex wrench into arm stop and turn counter - clockwise to **seat stop as tightly as possible.**
For Right Hand doors: (see illustration) Push filler plug out of shoe. Using a 5/16" (8mm) Hex wrench, turn arm stop clockwise to remove from shoe. Thread arm stop into hole marked "R". Turn wrench counter - clockwise, **seating stop as tightly as possible.** Insert filler plug into other hole.

La main des sabots Cush ainsi que celle des sabots Cush avec retenue doit être adaptée à cette de la porte AVANT l'installation. Voir Fig. 1.

Portes main gauche: Tous les sabots sont expédiés assemblés pour main gauche. Insérez une clé hexagonale 5/16 ou 8mm dans la butée du bras et tournez en sens inverse des aiguilles d'une montre pour assurer une assise de butée solide.
Portes main droite: (voir l'illustration). Sortez le bouchon du sabot.
À l'aide d'une clé hexagonale 5/16 ou 8mm, tournez dans le sens des aiguilles d'une montre pour enlever le sabot. En alignant bien les filets, insérez la butée du bras dans le trou "R". Tournez la clé en sens inverse des aiguilles d'une montre, pour assurer une assise de butée solide. Insérez le bouchon dans l'autre trou.

Debe de hacerse coincidir el lado de la zapata Cush o de la zapata Cush con retención antes de montarla. Ver Figura 1.

Puertas mano izquierda: las zapatas se entregan todas en sambladas para puertas mano izquierda. Inserte una llave hex 5/16 (8 mm.) en el tope del brazo y gire en sentido contrario a las agujas del reloj para seguramente asentar el tope. Puertas mano derecha: (ver la ilustración). Quite el tapón de llenado de la zapata. Con una llave hez 5/16 (8 mm.), gire el tope del brazo en el sentido de las agujas del reloj para quitarlo de la zapata. Coloque el tope del brazo en el agujero marcado con "R", alineando bien las roscas. Gire la llave en el sentido contrario a las agujas del rejoj para asentar bien seguro el tope. Inserte el tapón de llenado en otro agujero.

INSTRUCTIONS FOR INSTALLING
CUSH SHOE SUPPORT

AFTER CUSH - N - STOP IS INSTALLED

1----Set Cush Shoe Support on top of Cush Shoe and hold against frame.
2---Assemble screw, washer, and nut as shown and tighten securely.
3---Using Shoe Support as Template drill & tap two 1/4-20 holes in frame.
4---Insert screw & tighten securely.

If frame is not wide enough to receive fifth screw, install Cush Shoe Support (available from Dealer) as shown below.

Should frames have 1/2" Blade Stop it is necessary to use 1/2" Blade stop Spacer (available from Dealer). Use both Blade Stop Spacer and Shoe Support wherever required.

Si le cadre a une butée de 1/2" il faut utiliser un espaceur de butée de 1/2" (offert chez le concessionnaire). Utilisez espaceur et support de sabot au besoin.

Si los bastidores tienen un tope de pala de 1/2", se debe utilizar un espaciador de tope de pala de 1/2" (disponible del representante). Utilice un espaciador de tope de pala y un soporte de zapata cuando sea necesario.

INSTRUCTIONS POUR INSTALLER
LE SUPPORT DU SABOT CUSH

APRÈS L'INSTALLATION DU CUSH - N - STOP

1----Mettez le support du sabot Cush sur le sabot Cush et appuyez-le contre le cadre.
2---Assemblez la vis, la rondelle et le boulon comme sur l'illustration et serrez fermement.
3---En utilisant le support du sabot comme gabarit, taraudez deux trous de 1/4-20 dans le cadre.
4---Insérez la vis et serrez fermement.

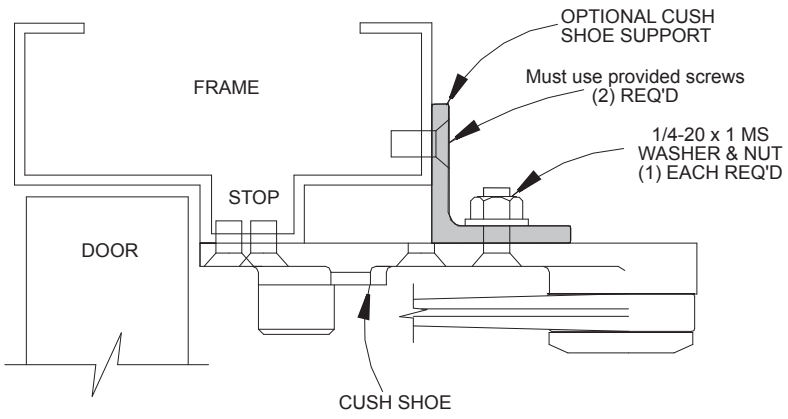
Si le cadre n'est pas assez large pour la cinquième vis, posez le support du sabot Cush (offert chez le concessionnaire) comme sur l'illustration.

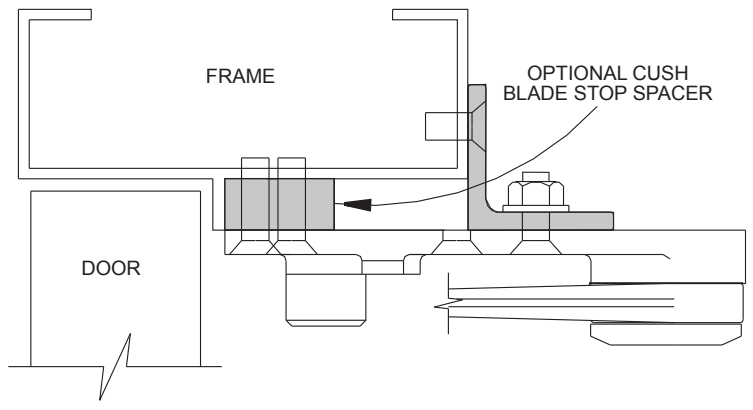
INSTRUCCIONES DE INSTALACIÓN
SOPORTE DE ZAPATA CUSH

DESPUÉS DE HABER SIDO INSTALADO EL CUSH - N - STOP

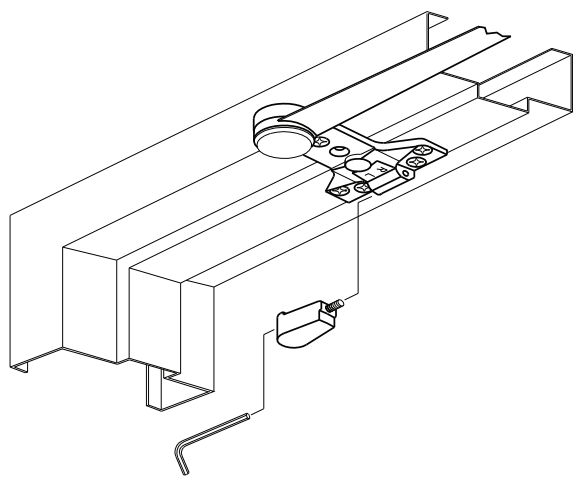
1----Coloque el soporte de zapata Cush encima del zapata Cush y téngalo contra el bastidor.
2---Monte el tornillo, la arandela y la tuerca tal como se muestra y apriételos bien.
3---Usando el soporte de zapata como plantilla, taladre y rosque dos agujeros 1/4-20 en el bastidor.
4---Inserte el tornillo y apriételo bien.

Si el bastidor no es suficientemente ancho para recibir un quinto tornillo, instale un soporte de zapata Cush (disponible del representante) tal como se muestra abajo.





INSTRUCTIONS FOR INSTALLING
SPRING CUSH ARM



INSTALLATION
(Left hand shown; Right hand opposite)

1. LOCATING: See IMPORTANT INFORMATION below. In new installations, use standard CUSH template. When replacing existing CUSH arm, use existing mounting holes.

2. INSTALLATION: Mount shoe on frame FIRST. After shoe is mounted, use a 5/32 or 4 mm hex wrench to install the contact block assembly as shown above. Make sure the screw is tightened securely into the shoe.

3. COMPLETING INSTALLATION: Complete the installation as directed for regular CUSH arms in the main instruction sheet.

IMPORTANT INFORMATION:

1261: Spring Cush dead stop will occur approximately 5° beyond normal 1261 dead stop point.

Backcheck: DO NOT reduce backcheck setting of door closer. Spring Cush arm function does not replace backcheck.

INSTRUCTIONS POUR INSTALLER
UN BRAS À RESSORT CUSH

INSTALLATION
(Main gauche illustrée; main droite à l'opposé)

1. SITUER: Voir RENSEIGNEMENTS IMPORTANTS. Pour une nouvelle installation, utilisez le gabarit CUSH standard. Pour remplacer un bras CUSH, utilisez les trous de montage déjà percés.

2. INSTALLATION: Montez le sabot sur le cadre EN PREMIER. Après avoir posé le sabot, utilisez une clé hexagonale 5/32 ou 4 mm pour installer l'assemblage comme sur l'illustration. Serrez la vis fermement dans le sabot.

3. TERMINER L'INSTALLATION: Terminer l'installation indiquée pour les bras CUSH sur la feuille d'instructions principale.

RENSEIGNEMENTS IMPORTANTS:
1261: L'arrêt du Cush à ressort se produira à environ 5° après celui du 1261 normal.
Résistance d'ouverture: NE PAS réduire la résistance d'ouverture du ferme-porte. La fonction du bras Cush à ressort ne remplace pas cette résistance.

INSTRUCCIONES DE INSTALACIÓN
DEL BRAZO DE RESORTE CUSH

INSTALACIÓN
(A la izquierda: como se muestra; a la derecha: al opuesto)

1.LOCALIZACIÓN: Vea los DATOS IMPORTANTES abajo. Utilice la plantilla CUSH estándar en las nuevas instalaciones. Utilice los agujeros de montaje existentes cuando se reemplace un brazo CUSH existente.

2. INSTALACIÓN: PRIMERO: Monte la zapata en el bastidor. Después de haber montado la zapata, utilice una llave de tuercas hexagonal 5/32 o 4 mm para instalar el ensamblaje de bloque de contacto como se muestra arriba. Asegúrese de apretar bien el tornillo en la zapata.

3. PARA COMPLETAR LA INSTALACIÓN: Complete la instalación como para los brazos CUSH regulares en la hoja de instrucciones principal.

DATOS IMPORTANTES:
1261: El paro en seco del resorte podrá ocurrir aproximadamente 5° después del punto del paro en seco 1261 normal.
Resistencia de apertura: NO reduzca el ajuste de resistencia de apertura del cerrador.
El funcionamiento del brazo de resorte Cush no reemplaza la resistencia de apertura.

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ALLEGION

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29809 Rev. 04/17-f

1461 Peel - N - Stick

28012
100° & 180° Template
P.A. Mounting

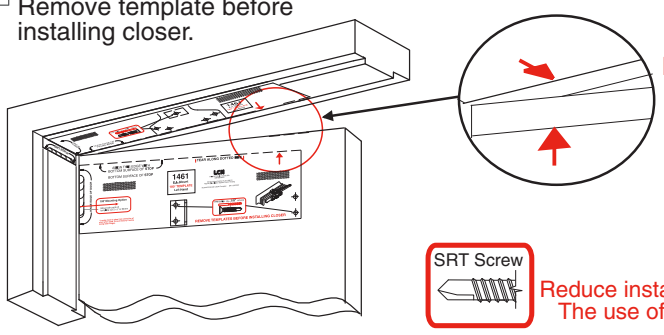
LCN®

Installation Instructions

1

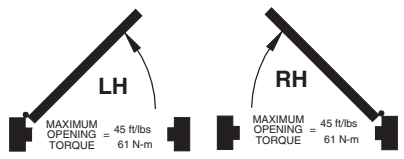
Locate proper template, tear along dotted line. Peel template and apply so red arrows align. Center punch all hole locations. For self reaming tapping screws (SRT)drill 1/8" pilot holes. Remove template before installing closer.

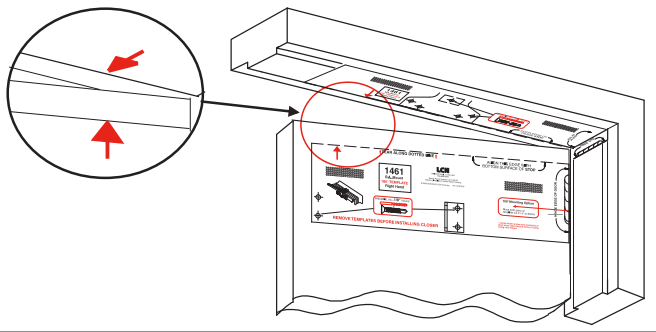
Note: Steps 2-8 show left hand door mount, right hand door is opposite.



MOUNT 180° TO MEET ADA.

For 1461 Delay 100° Mounting provides additional delay time.





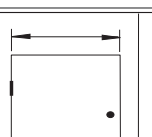
Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.

2

Determine door width, adjust spring power to match chart.

⚠CAUTION

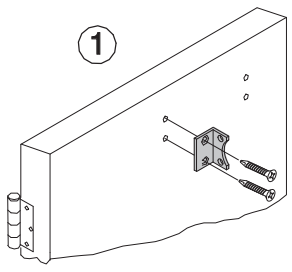
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 800 - 526 - 2400



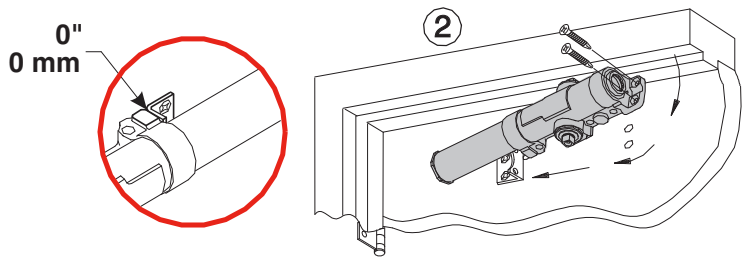
	1461
	♿ - 5
30"- 750mm	- 3
32"- 815mm	0
36"- 915mm	+ 2
42"- 1050mm	+ 6
48"- 1220mm	+ 10

3

Secure bracket with fasteners provided.



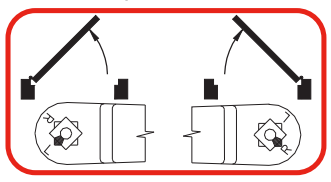
Secure closer to door with fasteners provided.

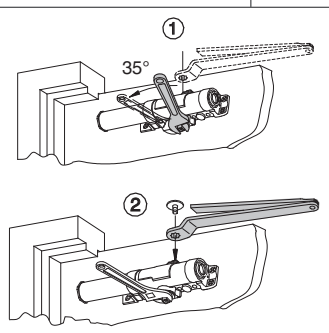


4

① Pre-load closer to 35°, as shown.

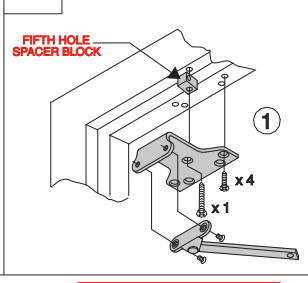
② Attach arm to closer, with provided fastener.

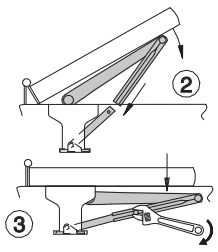




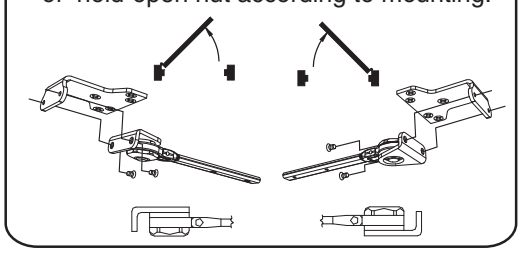
5

Attach P.A. shoe to frame and fasten forearm to shoe with fasteners provided. Pre-load arm and tighten screw.





I Optional Hold-open arm. Identify direction of hold-open nut according to mounting.



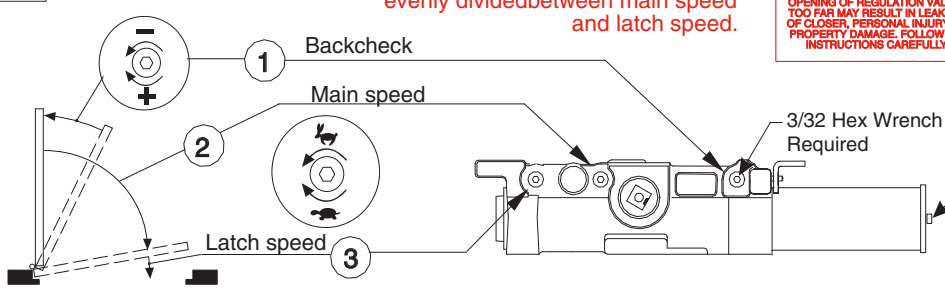
6

If necessary, adjust closer

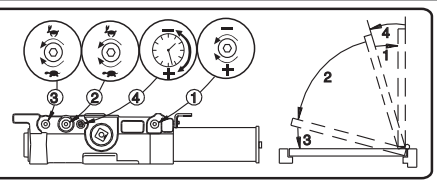
NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly dividedbetween main speed and latch speed.

⚠CAUTION

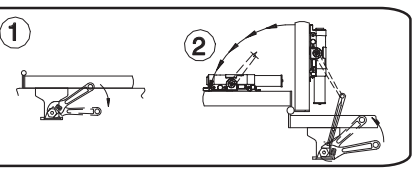
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



II
Optional Delay Action
① - Backcheck
② - Main Speed
③ - Latch Speed
④ - Delay Speed

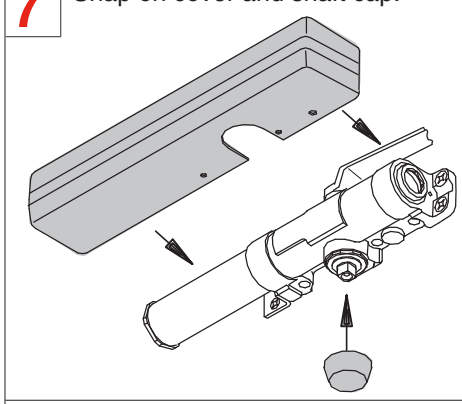


III
To adjust Optional Hold-open arm:
①Loosen hold open nut.
②Open door to desired position and tighten hold open nut securely.



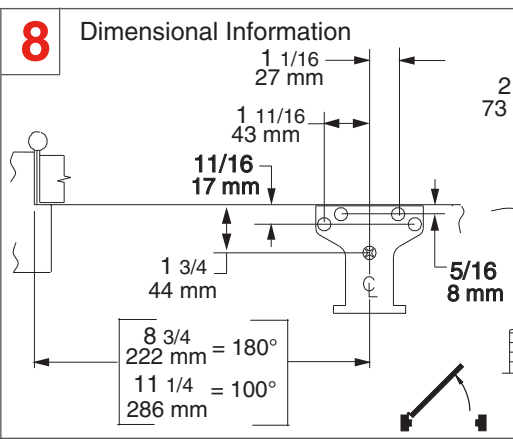
7

Snap on cover and shaft cap.

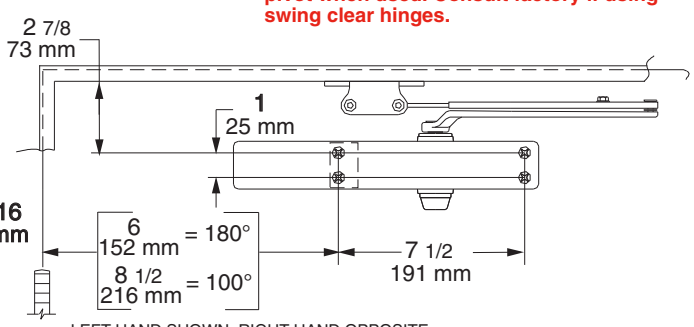


8

Dimensional Information



*** Locate closer & shoe from centerline of pivot when used. Consult factory if using swing clear hinges.**



LEFT HAND SHOWN, RIGHT HAND OPPOSITE
MAIN GAUCHE ILLUSTRÉE, MAIN DROITE CONTRAIRE
PUERTA DE MANO IZQUIERDA ILUSTRAR, MANO DERECHA LOAPUESTO

Patents Pending include:
Rapidor - Installation System
PROPRIETARY, LCN Division, Schlage Lock Company

1461 Instructions et gabarit autocollant pour une installation "bras parallèle" de 100° & 180°.

1 Repérez le gabarit approprié, détachez-le sur la ligne pointillée. Retirez la pellicule et appliquez-le pour que les flèches rouges soient alignées. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds. Retirez le gabarit avant de poser le ferme-porte.

Installation 180° pour conformité à l'ADA
Pour le 1461 l'installation de la Retenue 100° permet un délai de retenue additionnel.

Note : Les étapes 2-8 illustrent une main gauche. Le sens est inversé pour une main droite.

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Indicateur rotatif de réglage du ressort.

3 Posez la console à l'aide des attaches fournies. Fixez le ferme-porte sur la porte avec les attaches fournies.

4 ① Préchargez le ferme-porte à 35°, comme illustré.
② Fixez le bras au ferme-porte avec les attaches fournies.

5 Posez le sabot de bras parallèle sur le cadre et fixez le bras au sabot avec les attaches fournies. Préchargez le bras et resserrez la vis.

I Bras de le retenue optionnelle. Identifiez la direction du boulon de retenue selon l'ouverture de la porte.

6 Au besoin, réglez
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage

II Action retardée optionnelle
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage
④ - vitesse de retenue

7 Placez le couvercle et le capuchon du pignon.

8 Dimensions

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

III Pour régler le bras de retenue optionnelle, desserrez la vis de retenue. Ouvrez la porte à la position désirée et resserrez la vis.

⚠DANGER

Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le
877 - 671 - 7011

⚠DANGER

UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

1461 Instrucciones de Pela y Pega para plantilla 100° & 180° con montaje del brazo paralelo.

1 Localiza la plantilla apropiada, rompe a lo largo de la línea de puntos, pela la plantilla y aplícala, alineando las flechas rojas. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes. Quita la plantilla antes de instalar el cerrador.

Montar a 180° para cumplir con la norma ADA
Para la Retención del 1461, un montaje de 100° dará un tiempo de retención adicional.

Nota: Las etapas 2-8 indican un montaje de puerta hacia la izquierda, una puerta a la derecha está al opuesto.
Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

Indicador rotacional para el ajuste de la fuerza del resorte.

3 Sujeta el soporte con los sujetadores ya incluidos. Sujeta el cerrador a la puerta con los sujetadores ya incluidos.

4 ① Prearma el cerrador a 35° tal como se muestra.
② Sujeta el brazo al cerrador con el sujetador ya incluido.

5 Sujeta el pie del brazo paralelo a la armazón y coloca el antebrazo con los sujetadores ya incluidos. Prearma y aprieta el tornillo, tal como se muestra

I Brazo de retención opcional. Identifíca la dirección de la tuerca de retención según el montaje.

6 Ajusta si se necesario
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

II Acción retardada opcional
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro
④ - velocidad de retardo

7 Coloca la tapa y el tapón de tiro.

8 Datos dimensionales

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

III Para ajustar el brazo de retención opcional: Afloja la tuerca de retención. Abra la puerta a la posición deseada y aprieta bein la tuerca de retención.

⚠ADVERTENCIA

UNA INSTALACIÓN O UN AJUSTE INCORRECTOS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL
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⚠ADVERTENCIA

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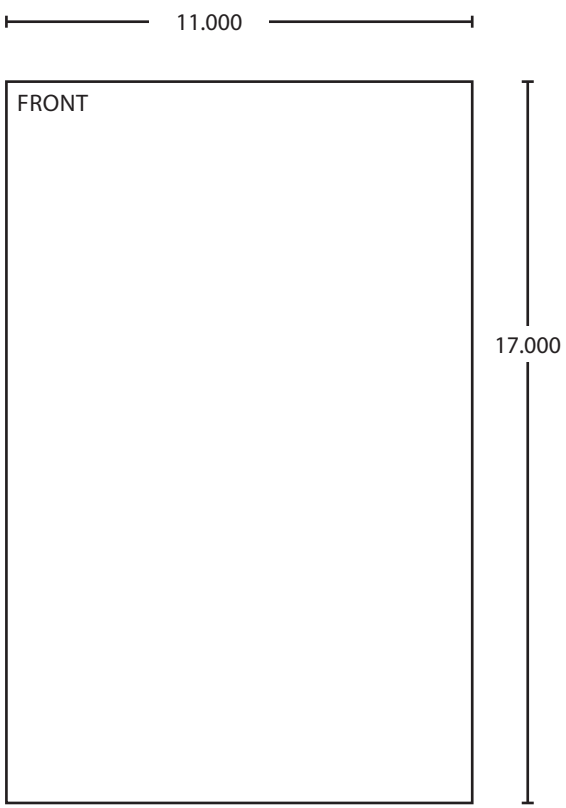
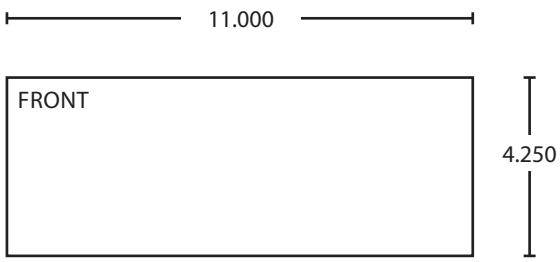


BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. Adhesive at top 1/2" of page (back)

Revision History					
M	N	P	R	S	T
042801					

Material
White Paper

Notes
2. printed two sides
3. printed black and PMS 485 (red)
4. tolerance ± .13
5. printed in country may vary
6. drawings not to scale

Revision Description:
M > Revised artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	042801	01-01-14

Title
1460 Series PA Instruction Sheet

Creation Date	Number	Revision
04-27-10	28012	M

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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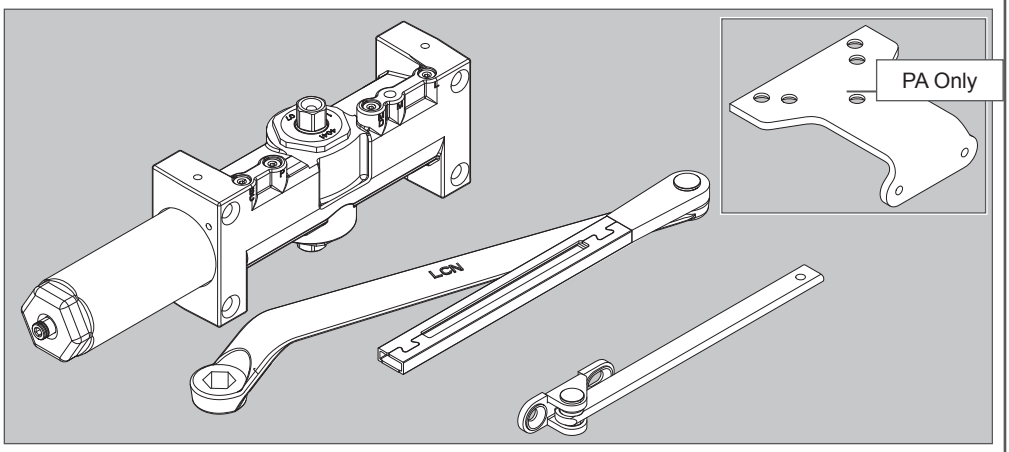
4050 & 4050 DA Series

71691

Pull Mount, Top Jamb Mount, and PA Mount

Installation Instructions

PARTS

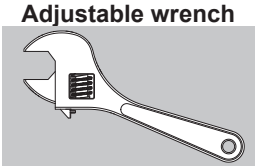


ⓘ **Screw pack information is on page 5.**

TOOLS

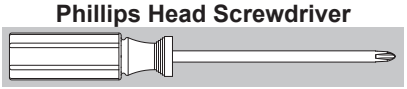
5⁄32" Hex Wrench

Adjustable wrench



1⁄8" Drill Bit

Phillips Head Screwdriver



3⁄32" Hex Wrench

⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage.
Follow all instructions carefully.
For questions, call LCN at 877 - 671 - 7011

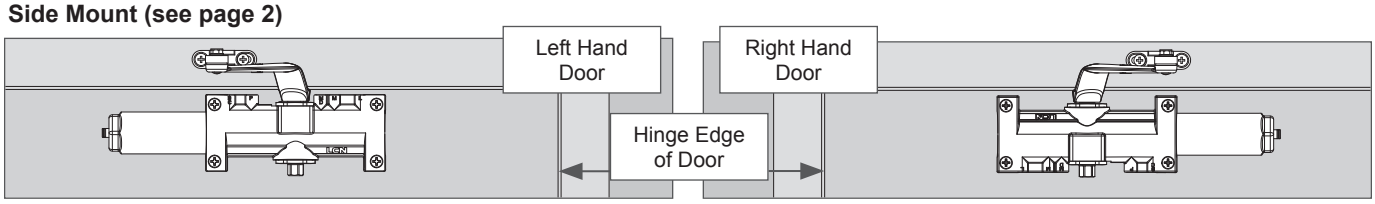
Hold open arms must not be installed on fire rated doors.

Opening the regulation valves too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.
FOLLOW ALL INSTRUCTIONS CAREFULLY.

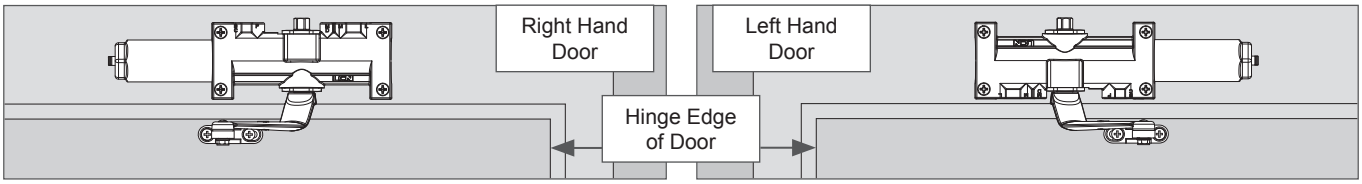
DO NOT USE THE CLOSER AS A DOOR STOP!
An auxiliary stop is recommended at the hold-open point or where the door cannot swing 180º.

Choose Installation Type

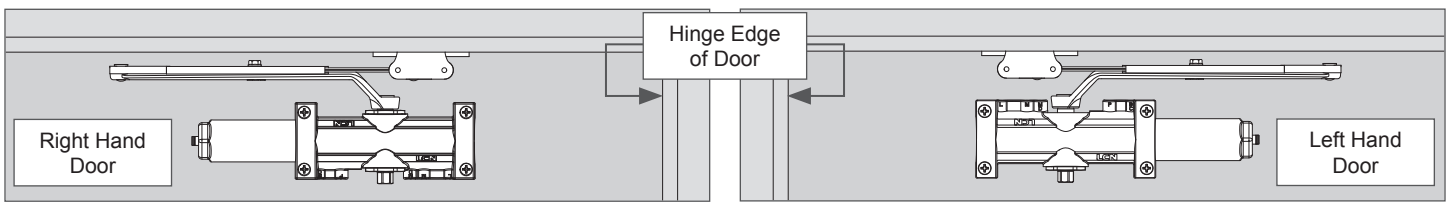
Pull Side Mount (see page 2)



Push Side Top Jamb Mount (see page 3)

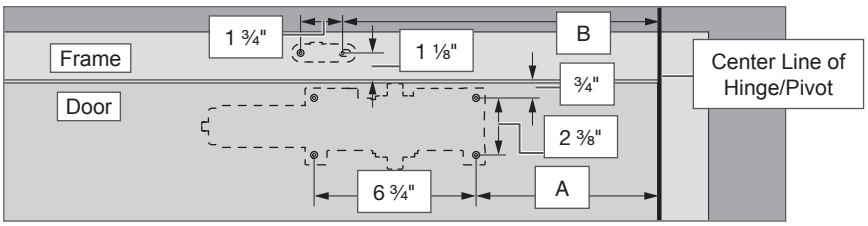


Push Side Parallel Arm (PA) (see page 4)



Pull Side Mount

Mounting Hole Dimensions
Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.

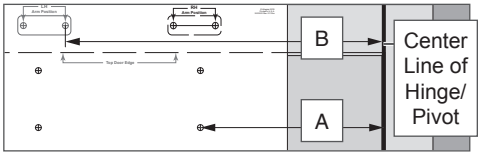


1a Determine the degree of door opening required, find dimensions "A" and "B" on the chart below.

	Opening	Measurement Hinge/Pivot Centerline
A	To 100°	7 5/8"
	101° to 120°	6 5/8"
Closer	121° to 150°	4 5/8"
	151° to 180°	4 1/8"

	Opening	Measurement Hinge/Pivot Centerline
B	To 100°	13 1/4"
	101° to 120°	12 1/4"
PA shoe	121° to 150°	10 1/4"
	151° to 180°	9 3/4"

1b Measure from hinge/pivot centerline, stick template on door. Mark drilling holes.

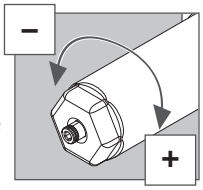


ⓘ **See Mounting Dimensions above as needed.**

1c Remove template, and drill holes where marked with a 1/8" drill bit for SRT screws.

ⓘ **SRT screws are used on metal doors.**
Wood screws are recommended on wood doors.
Reduce installation torque if using SRT screws in wood.

1d Measure and determine your door's width. Using a 5/32" or 4mm hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.



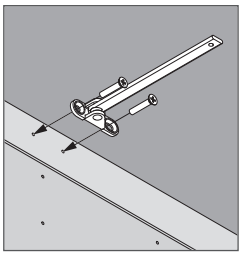
Turn counterclockwise for "-"; turn clockwise for "+"

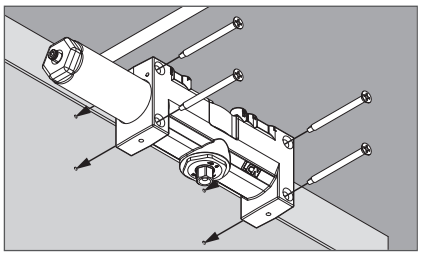
ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

ⓘ **Do not use power drill to adjust spring force! It may cause damage and void the warranty.**

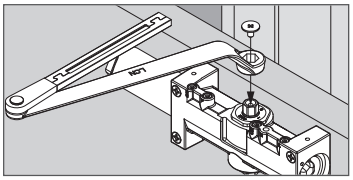
Door Width	Number of Turns
ADA Setting	-9
32" - 815 mm	-4
36" - 915 mm	0
42" - 1050 mm	+4
48" - 1220 mm	+9
54" - 1372mm	+13

ⓘ Install closer onto door and shoe onto frame using screws provided.



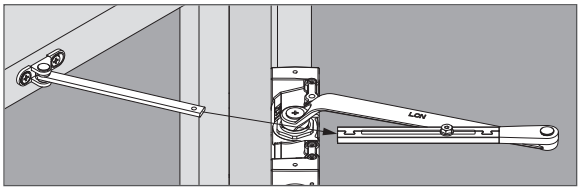


1e Install main arm to closer.
a. Place main arm onto the top closer shaft.
b. Install and tighten main arm screw.

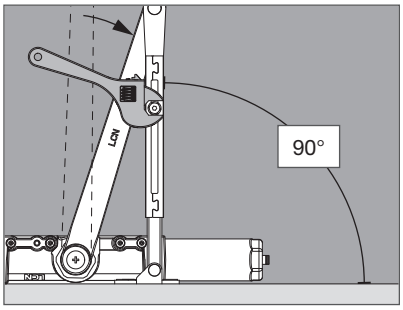


ⓘ **See page 5 for Optional Hold Open Arm installation and adjustment.**

1f Route the rod into the forearm.

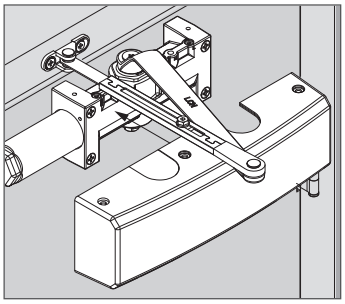


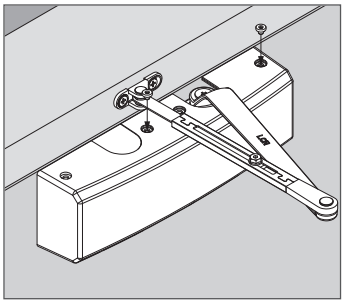
1g With door closed, preload the forearm to 90°. While the arm is still preloaded, install and tighten the arm screw.



1h Adjust the closer, if necessary. See page 5 for closer adjustment instructions.

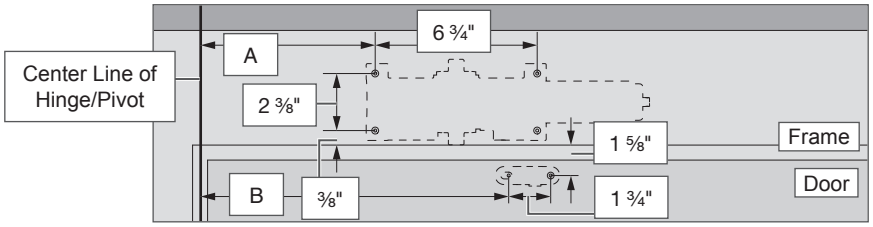
1i Install cover.





Push Side Top Jamb Mount

Mounting Hole Dimensions
Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.

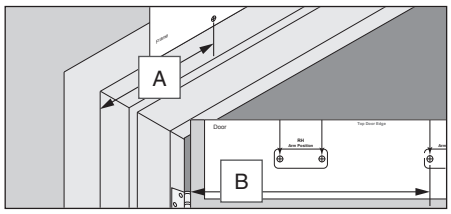


1a Determine the degree of door opening required and find dimension "A" on the chart below.

	Opening	Measurement Hinge/Pivot Centerline
A	To 100°	7 5/8"
	101° to 120°	6 5/8"
Closer	121° to 150°	4 5/8"
	151° to 180°	4 1/8"

	Opening	Measurement Hinge/Pivot Centerline
B	To 100°	13 1/4"
	101° to 120°	12 1/4"
PA shoe	121° to 150°	10 1/4"
	151° to 180°	9 3/4"

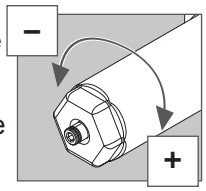
1b Measure from hinge/pivot centerline, stick template on door.
ⓘ **See Mounting Dimensions above as needed.**



Butt Hinges Mounting shown

1c Remove template, and drill holes where marked with a 1/8" drill bit.
ⓘ **SRT screws are used on metal doors.**
Wood screws are recommended on wood doors.
Reduce installation torque if using SRT screws in wood.

1d Measure and determine your door's width. Using a 5/32" or 4mm hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.



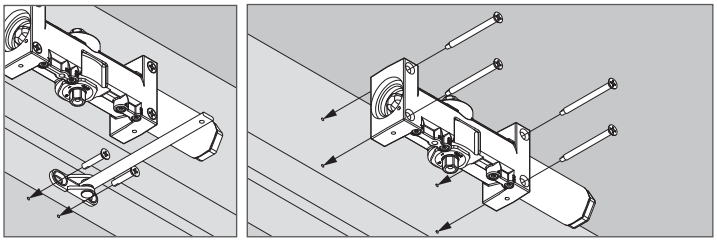
Turn counterclockwise for "-"; turn clockwise for "+"

ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

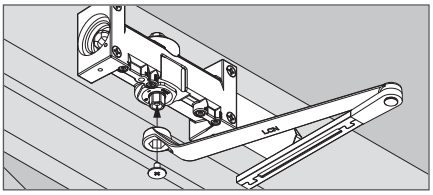
ⓘ **Do not use power drill to adjust spring force! It may cause damage and void the warranty.**

Door Width	Number of Turns
ADA Setting	-9
32" - 815 mm	-4
36" - 915 mm	0
42" - 1050 mm	+4
48" - 1220 mm	+9
54" - 1372mm	+13

Install closer onto frame and shoe onto door using screws provided.

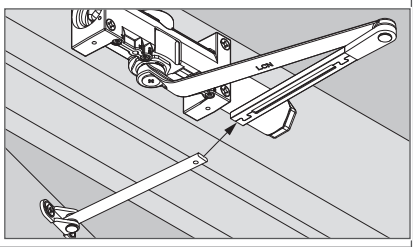


1e Install main arm to closer.
a. Place main arm onto the bottom closer shaft.
b. Install and tighten main arm screw.



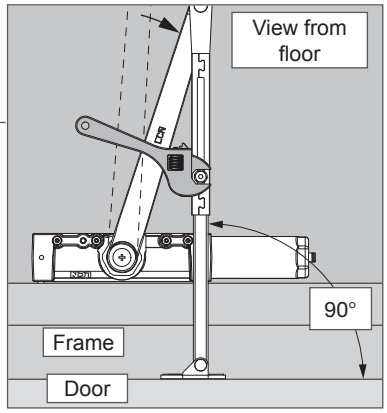
ⓘ **See page 5 for Optional Hold Open Arm installation and adjustment.**

1f Route the rod into the forearm.

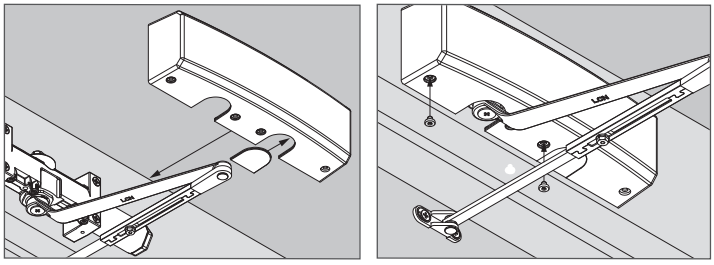


1g Preload the forearm to 90°. While the arm is still preloaded, install and tighten the arm screw.

1h Adjust the closer, if necessary. See page 5 for closer adjustment instructions.



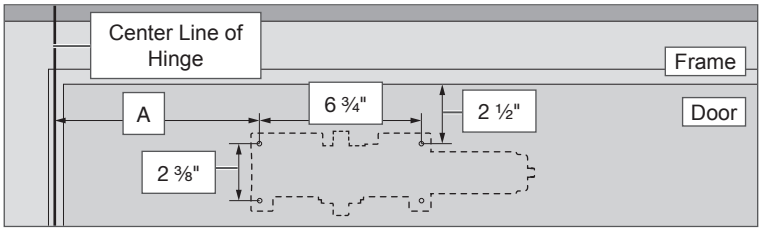
1i Install cover.

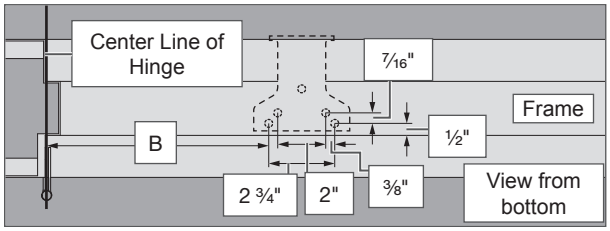


Push Side Parallel Arm (PA)

Mounting Hole Dimensions

Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.





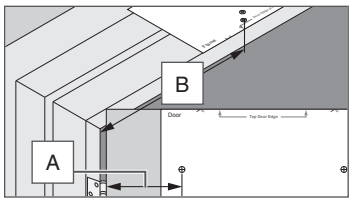
1a Determine the degree of door opening required and find dimensions “A” and “B” in the charts below.

	Opening	Measurement Hinge/Pivot Centerline
A	To 100°	8 3/4”
	101° to 130°	7 1/4”
Closer	131° to 150°	6 1/4”
	151° to 180°	5 1/4”

	Opening	Measurement Hinge/Pivot Centerline
B	To 100°	9 1/4”
	101° to 130°	7 3/4”
PA shoe	131° to 150°	6 3/4”
	151° to 180°	5 3/4”

1b Measure from door edge and stick template on door. Mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**

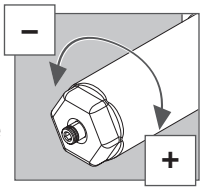


1c Remove template, and drill holes where marked with a 1/8” drill bit.

ⓘ **SRT screws are used on metal doors. Wood screws are used and recommended on wood doors. Reduce installation torque if using SRT screws in wood.**

1d Measure and determine your door’s width. Using a 5/32” hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.

Turn counterclockwise for “-”; turn clockwise for “+”

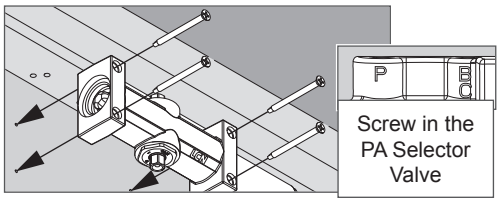


ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

ⓘ **Do not use power drill to adjust spring force! It may cause damage and void the warranty.**

Door Width	Number of Turns
ADA Setting	-9
32” - 815 mm	-4
36” - 915 mm	0
42” - 1050 mm	+4
48” - 1220 mm	+9
54” - 1372mm	+13

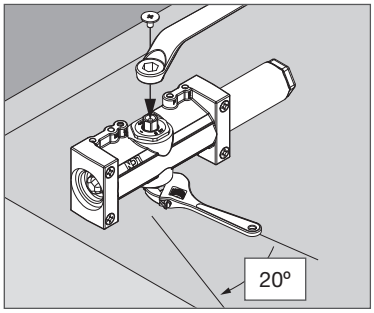
1e Screw in valve on top of closer, install closer onto door.



1f Install main arm to closer.

a. Use a wrench on the bottom closer shaft to turn the top closer shaft approximately 20°. **Hold the wrench at this angle for the next step.**
b. Place main arm onto the top closer shaft.
c. Install and tighten main arm screw.

ⓘ **See page 5 for Optional Hold Open Arm installation and adjustment.**

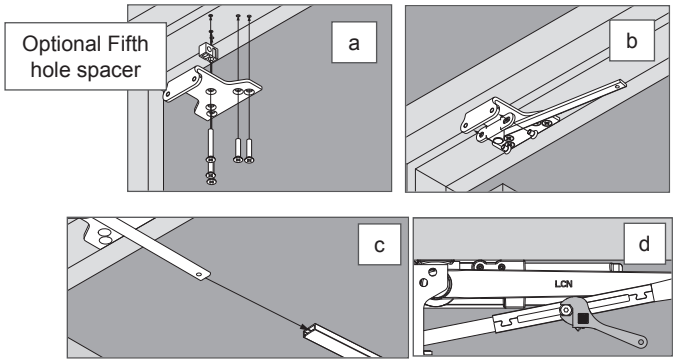


1g Install PA Shoe to frame, then shoe the rod & shoe.

a. Attach PA shoe, and optional fifth hole spacer if needed, to frame.

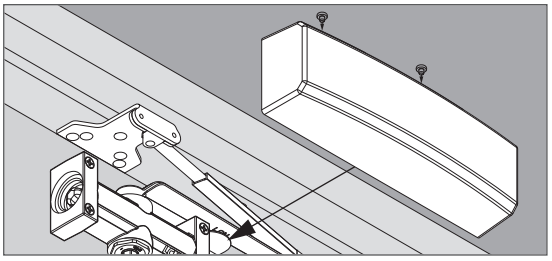
ⓘ **Use the fifth hole spacer only if there is a space between the frame and the PA shoe.**

b. Fasten rod & shoe to PA shoe.
c. Install rod into the forearm of the main arm.
d. Preload main arm to be parallel with frame, tighten arm screw.



1h Adjust the closer, if necessary. See page 5 for closer adjustment instructions.

1i Install cover.



Closer Valve Adjustment

Check closing time, and adjust closer if needed.

⚠ CAUTION ⚠

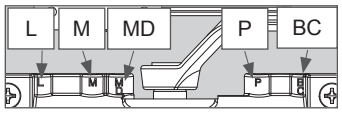
Opening the regulation valves (described below) too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.

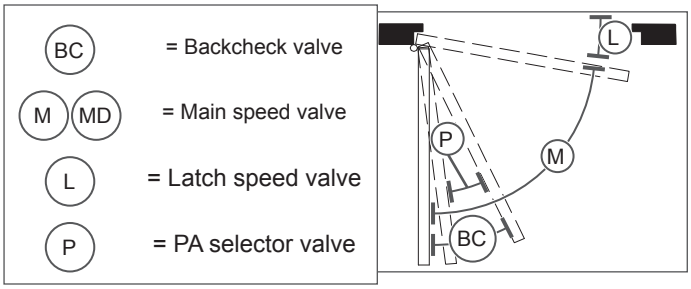
FOLLOW ALL INSTRUCTIONS CAREFULLY.

ⓘ **Valve must be closed CW to seat, never more than 3 turns CCW from seated position. Adjust the valves in 1/4 turn increments or less at a time. DO NOT TURN MORE THAN 3 FULL ROTATIONS. THIS WILL CAUSE THE CLOSER TO LEAK OIL!**

ⓘ **DO NOT ADJUST THE LATCH SPEED IF THE DOOR DOES NOT LATCH. If this occurs, adjust the spring force.**

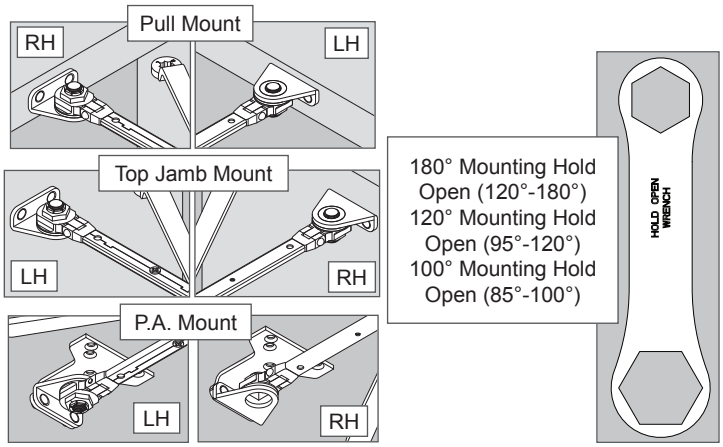
1. Open the door to 90°, measure how long the door takes to close and latch. A typical closing time is 5 to 7 seconds, evenly divided between main speed and latch speed.
2. If the closing time needs to be adjusted, use a 3/32" hex wrench to adjust the closer valves described below.
   a. Backcheck (BC)- this controls door speed opening as the door angle approaches 90°. **Do not use as a door stop.**
   b. Main Speed (MD)- this controls main speed for standard cylinders and the delay speed for delay (DA) cylinders.
   c. DA Main Speed (M)- this controls the main speed for DA cylinders. **This valve is present on DA cylinders only.**
   d. Latch Speed (L)- this controls door speed during the last few degrees of door closing.
   e. PA Selector (P)- this needs to be turned in completely for Parallel Arm (PA) mounting.
3. Turn the valves clockwise to decrease door speed, and counterclockwise to increase door speed. The latch speed and main speed should be adjusted together.





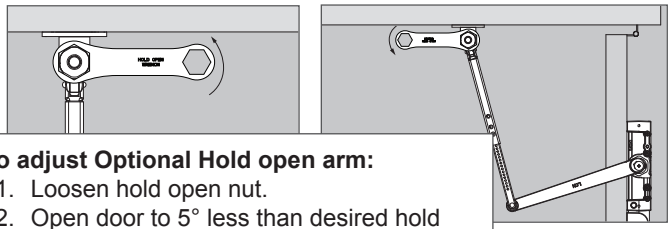
Optional Hold Open Arms

1a See the image below to determine the direction of the Hold Open nut. This is determined by the door handing.



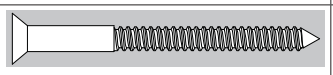
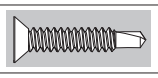
1b Hold Open Arm Adjustment.

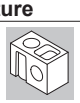
ⓘ **The Hold Open Arm installs like the regular closer arm. Follow steps 5 - 7 on pages 2, 3, and 4 for Hold Open Arm installation.**



To adjust Optional Hold open arm:

1. Loosen hold open nut.
2. Open door to 5° less than desired hold position and tighten hold open nut securely.

Screw Type	Screw Pack	Picture	Cylinder Mounting	PA Bracket Mounting	PA Shoe Mounting	5th Hole Mounting (PA Shoe Only)
Wood (for wood doors & frames)	Wood & Machine Screw Pack (WMS)		4 @ 2 ¼"	4 @ ⅝"	2 @ ⅜"	1 @ 1 ½"
Machine (for metal doors & frames) Requires hole drilling & tapping; best hold.	Standard		4 @ 3 ⅛"	4 @ 1 ⅜"		1 @ 2"
SRT - Self Reaming & Tapping (for metal doors & frames)	Standard		4 @ 2 ⅞"	4 @ 1 ½"		1 @ 2"

Screw Type	Screw Pack	Picture	Notes
Fifth Hole Spacer	Standard		
Arm Screw	Standard		

Screw Type	Screw Pack	Picture	Notes
Pinion Attachment Screw	Standard		¼-20 for attachment of the arm (see step 6).
Thru Bolt	Order TB Screw pack		1 9⁄32" or 1 17⁄32" or 1 21⁄32"

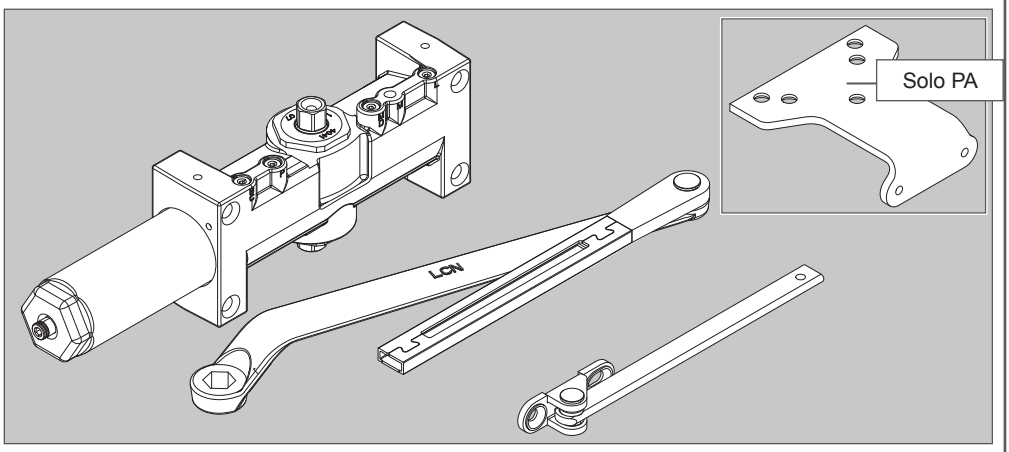
Serie DA 4050 y 4050

71691

Tirar montaje, montaje de batiente superior, montaje de PA

Instrucciones instalación

PIEZAS



ⓘ **La información sobre el paquete de tornillos se encuentra en la página 10.**

HERRAMIENTAS

Llave hexagonal de 5⁄32“

Llave ajustable

Broca de taladro de 1⁄8”

Destornillador con cabeza Phillips

Llave hexagonal de 3⁄32”

⚠ PRECAUCIÓN ⚠

La instalación o regulación incorrecta puede resultar en lesiones personales o daño a los bienes.
Siga todas las instrucciones con atención.
Si tiene preguntas, llame a LCN al 877 - 671 - 7011

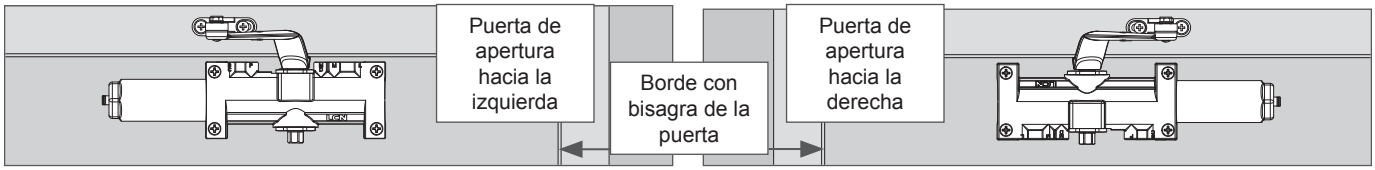
Los brazos para mantener abierto no deben instalarse en puertas con clasificación ignífuga.

¡Abrir demasiado las válvulas de regulación puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales.
SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

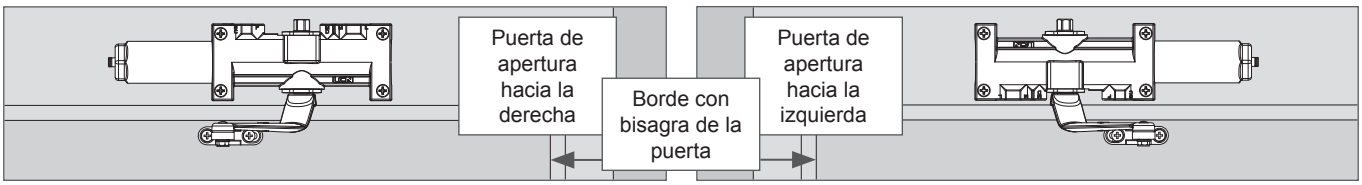
¡NO UTILICE EL MECANISMO DE CIERRE COMO TOPE DE PUERTA!
Se recomienda el uso de un tope auxiliar en el punto de mantener abierto o donde la puerta no puede girar 180º.

Seleccione el tipo de instalación

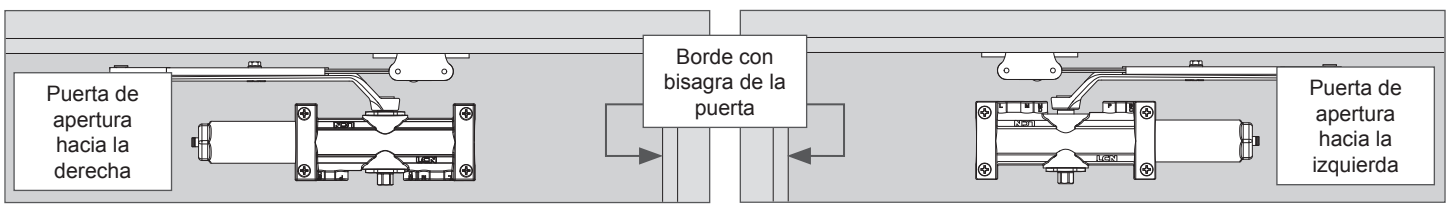
Tirar montaje lateral (ver página 7)



Empujar montaje lateral de batiente superior (ver página 8)

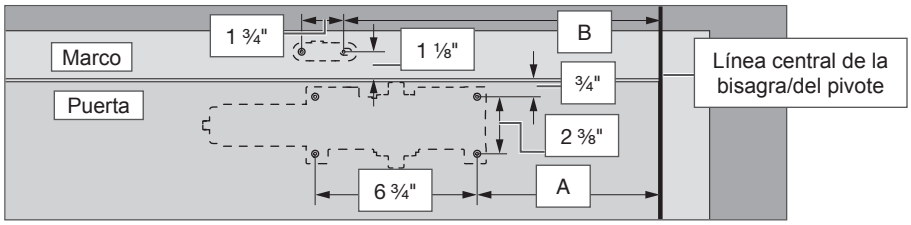


Empujar montaje lateral de brazo paralelo (PA) (ver página 9)



Tirar montaje lateral

Dimensiones del orificio de montaje
Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.



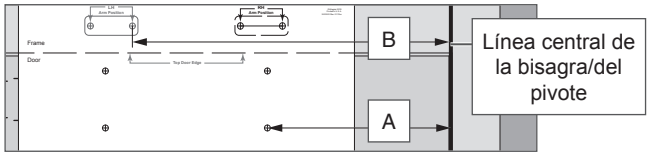
1a Determine el grado de apertura de la puerta requerido y busque las dimensiones “A” y “B” en el cuadro siguiente.

	Apertura	Medición desde la línea central de la bisagra/del pivote
A	Hasta 100°	7 5/8”
	101° a 120°	6 5/8”
Mecanismo de cierre	121° a 150°	4 5/8”
	151° a 180°	4 1/8”

	Apertura	Medición desde la línea central de la bisagra/del pivote
B	Hasta 100°	13 1/4”
	101° a 120°	12 1/4”
Zócalo PA	121° a 150°	10 1/4”
	151° a 180°	9 3/4”

1b Medición desde la línea central de la bisagra/del pivote, modelo de varilla en puerta.

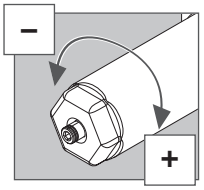
ⓘ **Vea las Dimensiones de montaje anteriores según sea necesario.**



1c Retire la plantilla y perfore orificios donde está marcado con una broca de taladro de 1/8” para tornillos SRT.

ⓘ **Los tornillos SRT se usan en puertas de metal.**
Se recomienda usar los tornillos de madera en puertas de madera.
Reduzca la torsión de la instalación si utiliza tornillos SRT en madera.

1d Mida y determine el ancho de su puerta. Con una llave de 5/32”, ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.



Gire en sentido antihorario para “-”; gire en sentido horario para “+”.

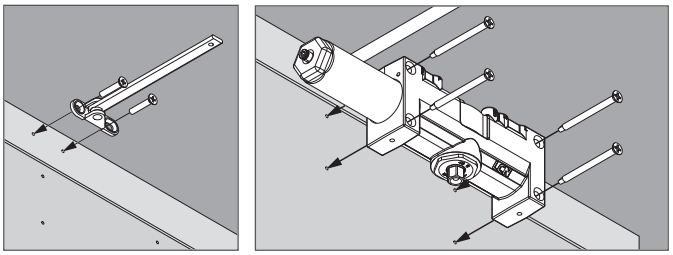
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta condiciones ambientales.**

ⓘ **¡No utilice un taladro eléctrico para ajustar la fuerza del resorte! Podría causar daños y anular la garantía.**

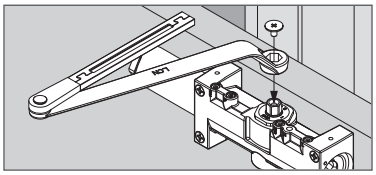
Ancho de la puerta	Número de giros
Configuración de ADA	-9
32” - 815 mm	-4
36” - 915 mm	0
42” - 1050 mm	+4
48” - 1220 mm	+9
54” - 1372mm	+13

o

ⓘ Instale el mecanismo de cierre en la puerta y el zócalo en el marco usando los tornillos provistos.

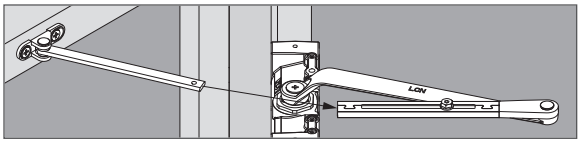


1e Instale el brazo principal en el mecanismo de cierre.
a. Coloque el brazo principal en el eje superior del mecanismo de cierre.
b. Instale y ajuste el tornillo del brazo principal.

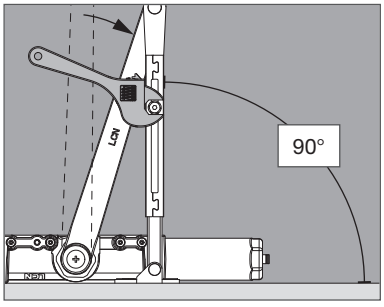


ⓘ **Consulte la página 10 for para ver la instalación y el ajuste del brazo opcional para mantener abierto.**

1f Coloque la varilla en el brazo delantero.

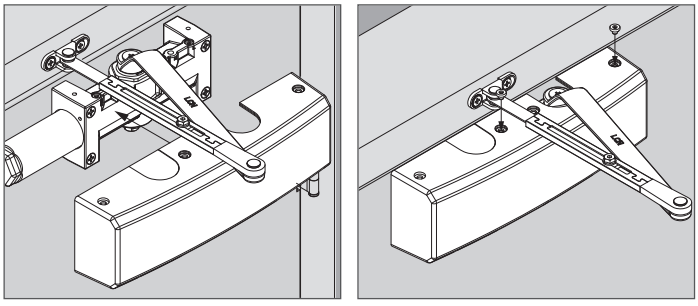


1g Con la puerta cerrada, realice una carga previa del brazo delantero a 90°. Mientras el brazo aún está precargado, instale y ajuste el tornillo del brazo.



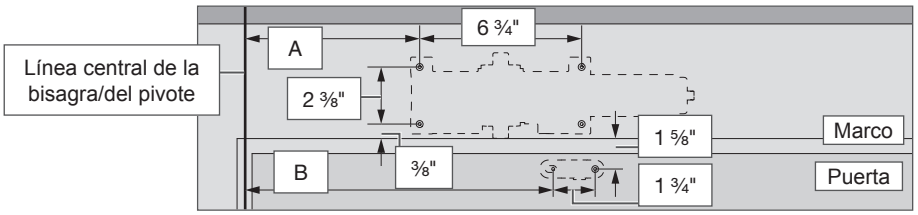
1h Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 10 para ver las instrucciones de ajuste del mecanismo de cierre.

1i Instale la cubierta.



Empujar montaje lateral de batiente superior

Dimensiones del orificio de montaje
Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.

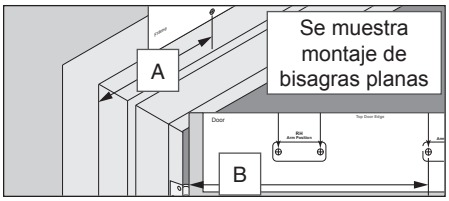


1a Determine el grado de apertura de la puerta requerido y busque las dimensiones “A” y “B” en el cuadro siguiente.

	Apertura	Medición desde la línea central de la bisagra/del pivote
A	Hasta 100°	7 5/8”
	101° a 120°	6 5/8”
Mecanismo de cierre	121° a 150°	4 5/8”
	151° a 180°	4 1/8”

	Apertura	Medición desde la línea central de la bisagra/del pivote
B	Hasta 100°	13 1/4”
	101° a 120°	12 1/4”
Zócalo PA	121° a 150°	10 1/4”
	151° a 180°	9 3/4”

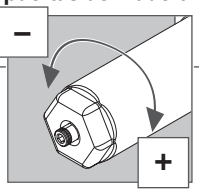
1b Medición desde la línea central de la bisagra/del pivote, modelo de varilla en puerta.



ⓘ **Vea las Dimensiones de montaje anteriores según sea necesario.**

1c Retire la plantilla y perfore orificios donde está marcado con una broca de taladro de 1/8” para tornillos SRT.

ⓘ **Los tornillos SRT se usan en puertas de metal.**
Se recomienda usar los tornillos de madera en puertas de madera. Reduzca la torsión de la instalación si utiliza tornillos SRT en madera.



1d Mida y determine el ancho de su puerta. Con una llave de 5/32”, ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

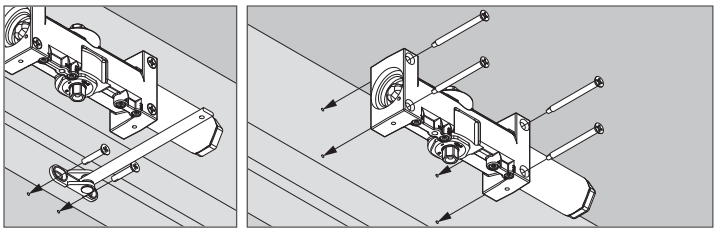
Gire en sentido antihorario para “-”; gire en sentido horario para “+”.

Ancho de la puerta	Número de giros
Configuración de ADA	-9
32” - 815 mm	-4
36” - 915 mm	0
42” - 1050 mm	+4
48” - 1220 mm	+9
54” - 1372mm	+13

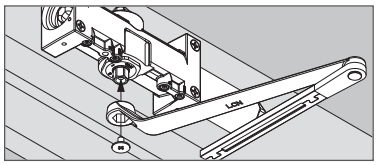
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

ⓘ **¡No utilice un taladro eléctrico para ajustar la fuerza del resorte! Podría causar daños y anular la garantía.**

1e Instale el mecanismo de cierre en el marco y el zócalo en la puerta usando los tornillos provistos.

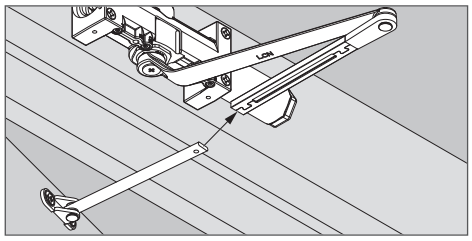


1f Instale el brazo principal en el mecanismo de cierre.
a. Coloque el brazo principal en el eje inferior del mecanismo de cierre.
b. Instale y ajuste el tornillo del brazo principal.



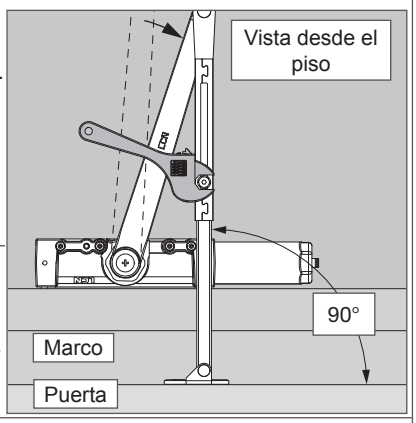
ⓘ **Consulte la página 10 for para ver la instalación y el ajuste del brazo opcional para mantener abierto.**

1g Coloque la varilla en el brazo delantero.

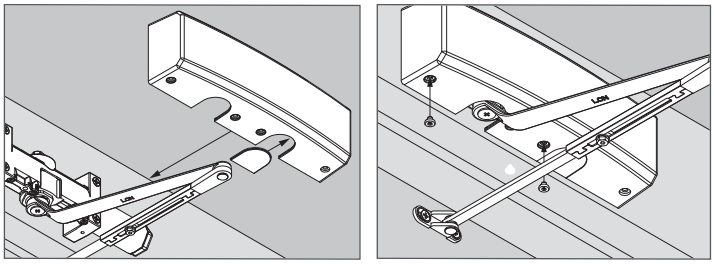


1h Con la puerta cerrada, realice una carga previa del brazo delantero a 90°. Mientras el brazo aún está precargado, instale y ajuste el tornillo del brazo.

1i Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 10 para ver las instrucciones de ajuste del mecanismo de cierre.

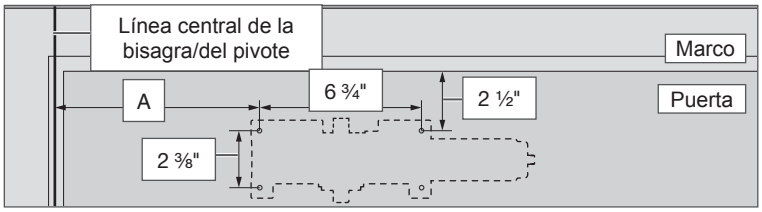


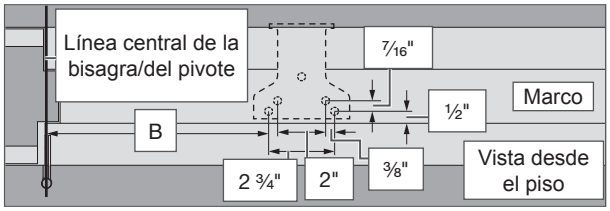
1j Instale la cubierta.



Empujar montaje lateral de brazo paralelo (PA)

Dimensiones del orificio de montaje
Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.



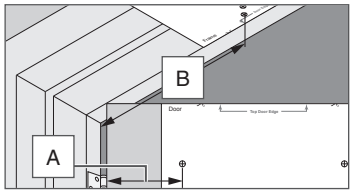


1a Determine el grado de apertura de la puerta requerido y busque las dimensiones “A” y “B” en el cuadro siguiente.

	Apertura	Medición desde la línea central de la bisagra/del pivote
A	Hasta 100°	8 3/4”
	101° a 130°	7 1/4”
Mecanismo de cierre	131° a 150°	6 1/4”
	151° a 180°	5 1/4”

	Apertura	Medición desde la línea central de la bisagra/del pivote
B	Hasta 100°	9 1/4”
	101° a 130°	7 3/4”
Zócalo	131° a 150°	6 3/4”
	151° a 180°	5 3/4”

1b Medición desde la línea central de la bisagra/del pivote, modelo de varilla en puerta.

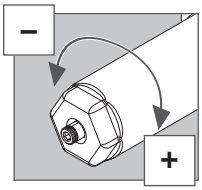


ⓘ **Vea las Dimensiones de montaje anteriores según sea necesario.**

1c Retire la plantilla y perfore orificios donde está marcado con una broca de taladro de 1/8” para tornillos SRT.

ⓘ **Los tornillos SRT se usan en puertas de metal.**
Se recomienda usar los tornillos de madera en puertas de madera. Reduzca la torsión de la instalación si utiliza tornillos SRT en madera.

1d Mida y determine el ancho de su puerta. Con una llave de 5/32”, ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.



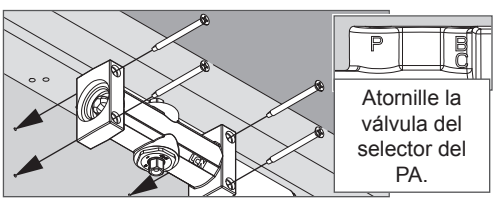
Gire en sentido antihorario para “-”; gire en sentido horario para “+”.

ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

ⓘ **¡No utilice un taladro eléctrico para ajustar la fuerza del resorte! Podría causar daños y anular la garantía.**

Ancho de la puerta	Número de giros
Configuración de ADA	-9
32” - 815 mm	-4
36” - 915 mm	0
42” - 1050 mm	+4
48” - 1220 mm	+9
54” - 1372mm	+13

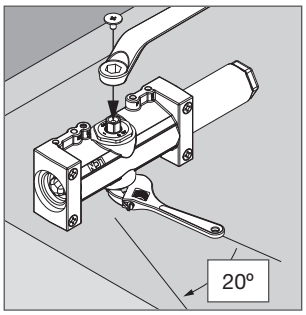
1e Atornille la válvula en la parte superior del mecanismo de cierre e instale este último en la puerta.



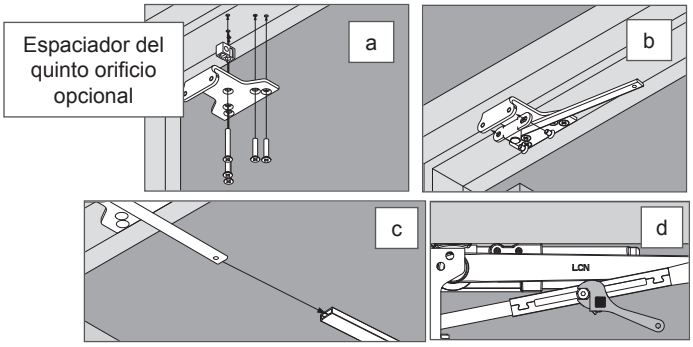
1f Instale el brazo principal en el mecanismo de cierre.
a. Use una llave en el eje inferior del mecanismo de cierre para girar el eje superior del mecanismo de cierre aproximadamente 20°. **Sostenga la llave en este ángulo para el próximo paso.**
b. Coloque el brazo principal en el eje superior del mecanismo de cierre.
c. Instale y ajuste el tornillo del brazo principal.

ⓘ **Consulte la página 10 para ver la instalación y el ajuste del brazo opcional para mantener abierto.**

1g Instale el zócalo del PA en el marco, luego en la varilla y el zócalo.
a. Coloque el zócalo del PA y el espaciador del quinto orificio opcional, de ser necesario, en el marco.

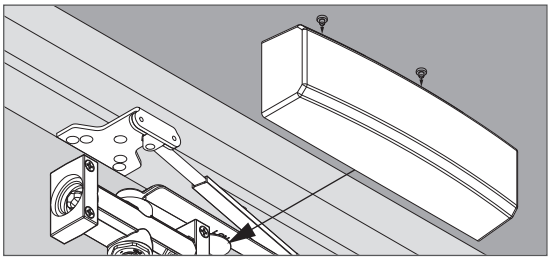


ⓘ **Use el espaciador del quinto orificio solo si hay un espacio entre el marco y el zócalo del PA.**
b. Ajuste la varilla y el zócalo en el zócalo del PA.
c. Instale la varilla en el brazo delantero del brazo principal.
d. Cargue previamente el brazo principal para que quede paralelo al marco, ajuste el tornillo del brazo.



1h Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 10 para ver las instrucciones de ajuste del mecanismo de cierre.

1i Instale la cubierta.



Ajuste de la válvula del mecanismo de cierre

Compruebe el tiempo de cierre y ajuste el mecanismo de cierre de ser necesario.

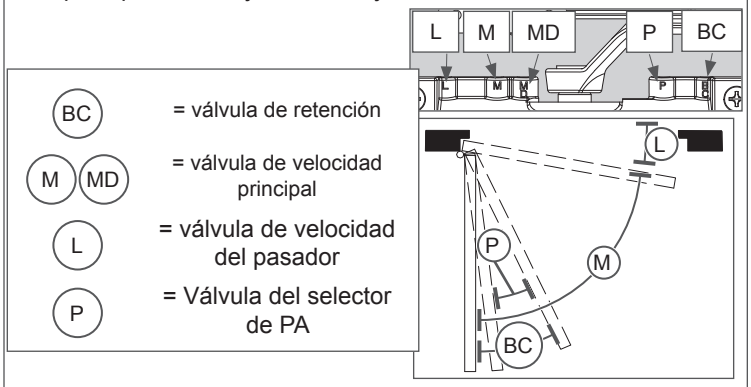
⚠ PRECAUCIÓN ⚠

¡Abrir demasiado las válvulas de regulación (como se describe a continuación) puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales. SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

ⓘ **La válvula debe cerrarse en sentido horario hasta fijarse y nunca exceder más de 3 vueltas en sentido antihorario de la posición fija. Ajuste las válvulas en incrementos de 1/4 de giro o menos a la vez. NO GIRE MÁS DE 3 ROTACIONES COMPLETAS. ¡ESTO CAUSARÁ QUE EL MECANISMO DE CIERRE PIERDA ACEITE!**

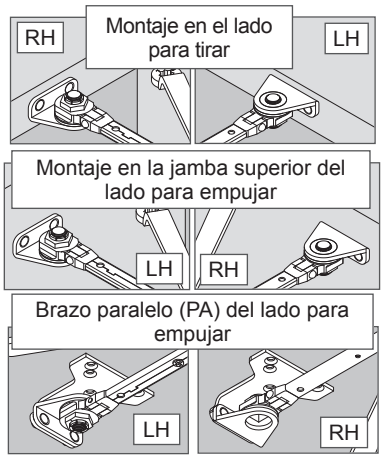
ⓘ **NO AJUSTE LA VELOCIDAD DEL PASADOR SI LA PUERTA NO SE TRABA. Si esto sucede, ajuste la fuerza del resorte.**

1. Abra la puerta a 90°, mida cuánto tiempo tarda la puerta en cerrar y trabarse. Un tiempo típico de cierre es de 5 a 7 segundos, divido de manera uniforme entre velocidad principal y velocidad del pasador.
2. Si se necesita ajustar el tiempo de cierre, use una llave hexagonal de 3/32" para ajustar las válvulas del mecanismo de cierre descritas a continuación.
   a. Retención (BC): controla la velocidad de apertura de la puerta cuando el ángulo de la puerta se acerca a 90°. **No usar como tope de puerta.**
   b. Velocidad principal (MD): controla la velocidad principal para los cilindros estándares y la velocidad de retardo para cilindros de retardo (DA).
   c. Velocidad principal de DA (M): controla la velocidad principal de los cilindros DA. **Esta válvula se encuentra solo en cilindros DA.**
   d. Velocidad del pasador (L): controla la velocidad de la puerta durante los últimos grados del cierre de la puerta.
   e. Selector de PA (P): necesita cambiarse completamente para el montaje del brazo paralelo (PA).
3. Gire las válvulas en sentido horario para reducir la velocidad de la puerta y en sentido antihorario para aumentar la velocidad de la puerta. La velocidad del pasador y la velocidad principal deben ajustarse conjuntamente.



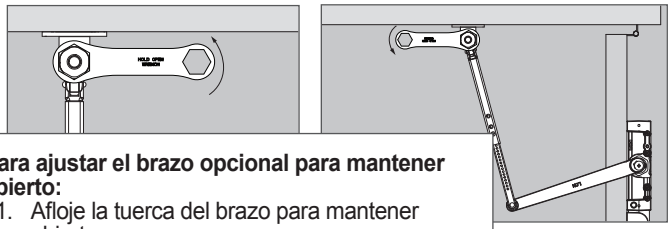
Brazos opcionales para mantener abierto

1a Vea la imagen siguiente para determinar la dirección de la tuerca para mantener abierto. Esto es determinado por el lado en el que está la manija de la puerta.



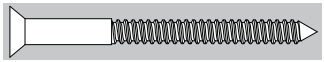
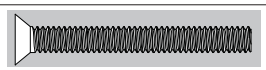
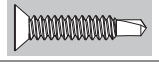
1b Ajuste del brazo para mantener abierto.

ⓘ **El brazo para mantener abierto se instala como el brazo regular del mecanismo de cierre. Siga los pasos 5 - 7 en las páginas 6, 7 y 8 para la instalación del brazo para mantener abierto.**



Para ajustar el brazo opcional para mantener abierto:

1. Afloje la tuerca del brazo para mantener abierto.
2. Abra la puerta a 5° menos que la posición deseada para mantener abierto y ajuste la tuerca del mecanismo para mantener abierto firmemente.

Tipo de tornillo	Paquete de tornillos	Imagen	Montaje en el cilindro	Montaje en el soporte del PA	Montaje en el zócalo del PA	Montaje en el 5to orificio (solo zócalo del PA)
Madera (para puertas y marcos de madera)	Paquete de tornillos para madera y maquinados (WMS)		4 @ 2 ¼"	4 @ ⅝"	2 @ ⅜"	1 @ 1 ½"
Máquina (para puertas y marcos de metal) Requiere perforación de orificio y formación de rosca; mejor sujeción	Estándar		4 @ 3 ⅛"	4 @ 1 ⅜"		1 @ 2"
SRT: autoperforación y formación de rosca (para puertas y marcos de metal)	Estándar		4 @ 2 ⅞"	4 @ 1 ½"		1 @ 2"

Tipo de tornillo	Paquete de tornillos	Imagen	Notas
Espaciador del quinto orificio	Estándar		
Tornillo de brazo	Estándar		

Tipo de tornillo	Paquete de tornillos	Imagen	Notas
Tornillo de sujeción del piñón	Estándar		¼-20 para la sujeción del brazo (ver el paso 6).
Pernos pasantes	Solicite el paquete de tornillos TB		1 9⁄32" o 1 17⁄32" o 1 21⁄32"

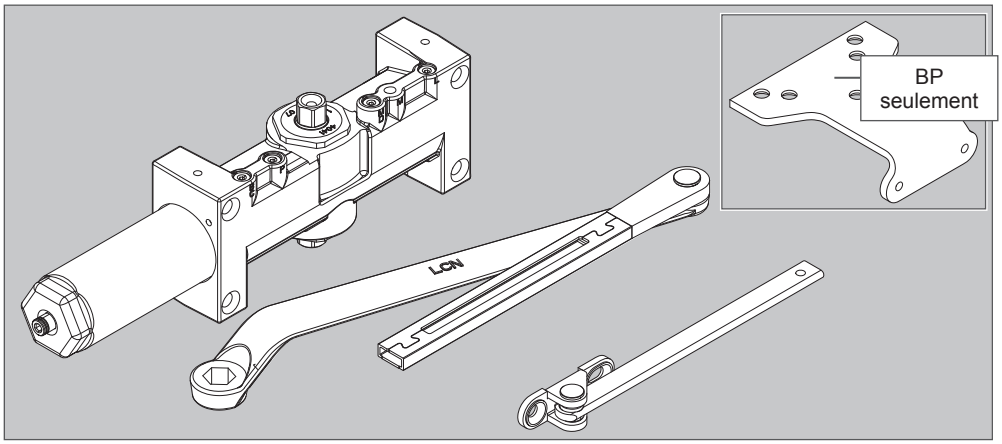
4050 et 4050 de la série DA

71691

Montage de la poignée, montage du montant supérieur et montage du BP

Instructions d'installation

PIÈCES



ⓘ **Informations sur l'ensemble de vis à la page 15.**

OUTILS

Clé hexagonale de 5⁄32 po ou 4 mm

Clé à ouverture réglable

Mèche de 3,2 mm (⅛ po)

Tournevis cruciforme

Clé hexagonale de 3⁄32 po ou 4 mm

⚠ MISE EN GARDE ⚠

Une installation inadéquate ou le non-respect des règlements peut causer des blessures ou des dommages matériels.
Suivez attentivement toutes les instructions.
Pour toute question, appelez LCN au 877 - 671 - 7011.

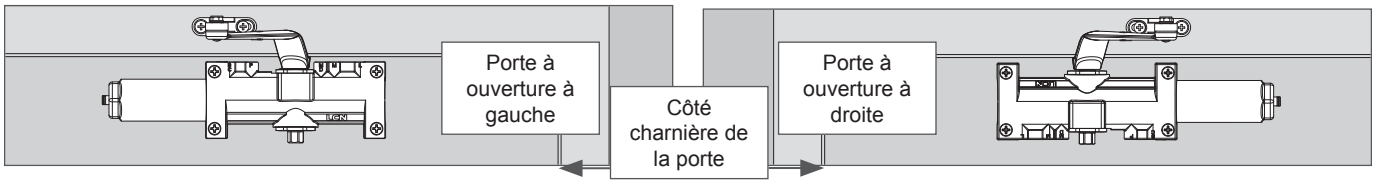
Les bras de retenue ne doivent pas être installés sur les portes coupe-feu.

Une trop grande ouverture des soupapes de régulation peut entraîner une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

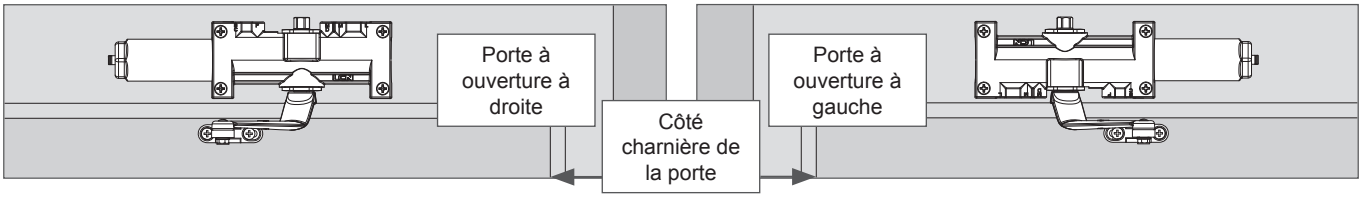
N'UTILISEZ PAS LE DISPOSITIF DE FERMETURE EN TANT QUE BUTOIR!
Il est recommandé d'utiliser un butoir auxiliaire au point de retenue ou à l'endroit où la porte ne peut s'ouvrir à 180°.

Choisissez le type d'installation

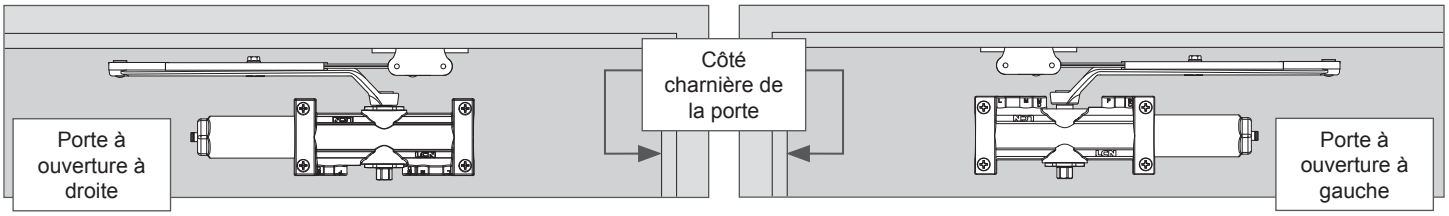
Montage côté tiré (voir page 12)



Montage du montant supérieur côté poussée (voir page 13)

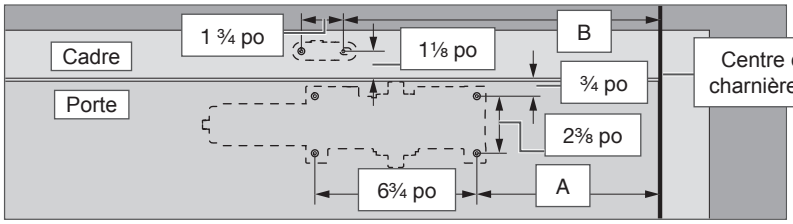


Montage du bras parallèle côté poussée (BP) (voir page 14)



Montage côté tiré

Dimensions des trous de montage
Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.



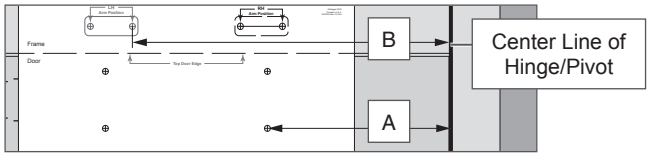
1a Déterminez le degré d'ouverture de la porte requis et trouvez les dimensions « A » et « B » dans les tableaux ci-dessous.

A	Ouverture	Mesure à partir du centre de la charnière/pivot
Dispositif de fermeture	Jusqu'à 100°	7 5/8 po
	101° à 120°	6 5/8 po
	121° à 150°	4 5/8 po
	151° à 180°	4 1/8 po

B	Ouverture	Mesure à partir du centre de la charnière/pivot
Sabot	Jusqu'à 100°	13 1/4 po
	101° à 120°	12 1/4 po
	121° à 150°	10 1/4 po
	151° à 180°	9 3/4 po

1b Mesurez à partir du centre de la charnière/pivot, collez le gabarit sur la porte. Faites des marques pour les trous à percer.

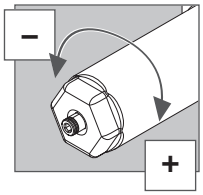
ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**



1c Retirez le gabarit et percez des trous de 3,2 mm (1/8 po) aux endroits marqués avec une mèche pour les vis SRT.

ⓘ **Les vis SRT sont utilisées sur les portes en métal. Les vis à bois sont recommandées sur les portes en bois. Réduisez le couple d'installation si vous utilisez des vis SRT dans du bois.**

1d Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé de 5/32 po ou de 4 mm, réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.



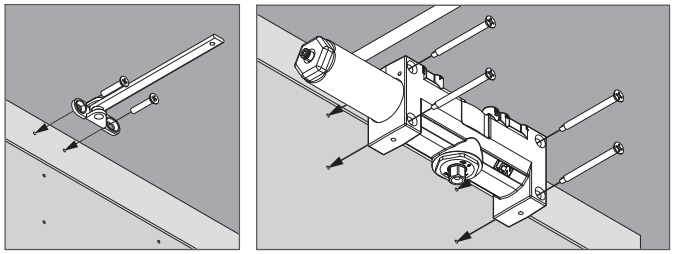
Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

Largeur de la porte	Nombre de tours
Réglage de l'ADA	-9
32" - 815 mm	-4
36" - 915 mm	0
42" - 1050 mm	+4
48" - 1220 mm	+9
54" - 1372mm	+13

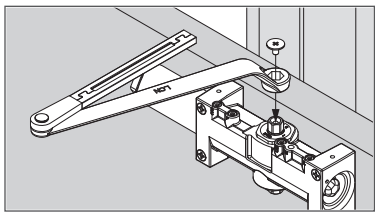
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

ⓘ **N'utilisez pas de perceuse électrique pour régler la force du ressort! Cela pourrait causer des dommages et annuler la garantie.**

1e Installez le dispositif de fermeture sur la porte et le sabot sur le cadre à l'aide des vis fournies.

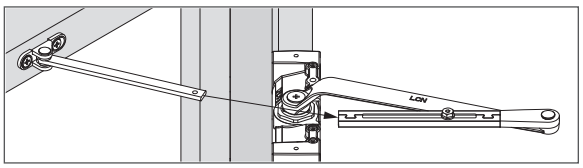


1f Installez le bras principal sur le dispositif de fermeture.
a. Placez le bras principal sur l'arbre du dispositif de fermeture supérieur.
b. Installez et serrez la vis du bras principal.

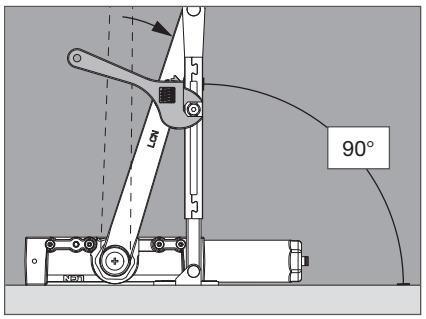


ⓘ **Consultez la page 15 pour l'installation et le réglage optionnels du bras de retenue.**

1g Insérez la tige dans l'avant-bras.

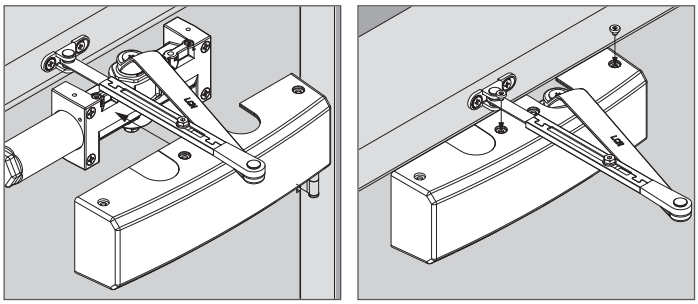


1h En gardant la porte fermée, préchargez l'avant-bras à 90°. Lorsque le bras est préchargé, installez et serrez la vis du bras.



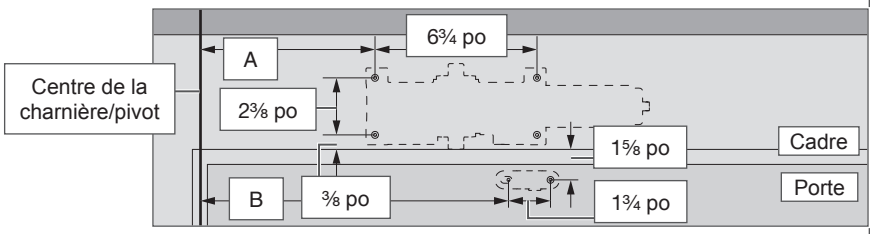
1i Réglez le dispositif de fermeture au besoin. Consultez la page 15 pour les instructions de réglage du dispositif de fermeture.

1j Installer le couvercle.



Montage du montant supérieur côté poussée

Dimensions des trous de montage
Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.

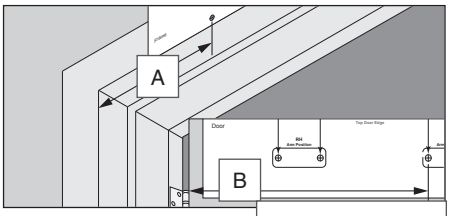


1a Déterminez le degré d'ouverture de la porte requis et trouvez les dimensions « A » et « B » dans les tableaux ci-dessous.

A	Ouverture	Mesure à partir du centre de la charnière/pivot
Dispositif de fermeture	Jusqu'à 100°	7 5/8 po
	101° à 120°	6 5/8 po
	121° à 150°	4 5/8 po
	151° à 180°	4 1/8 po

B	Ouverture	Mesure à partir du centre de la charnière/pivot
Sabot	Jusqu'à 100°	13 1/4 po
	101° à 120°	12 1/4 po
	121° à 150°	10 1/4 po
	151° à 180°	9 3/4 po

1b Mesurez à partir du centre de la charnière/pivot, collez le gabarit sur la porte. Faites des marques pour les trous à percer.



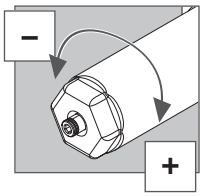
Montage des cylindres de charnière illustré

ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**

1c Retirez le gabarit et percez des trous de 3,2 mm (1/8 po) aux endroits marqués avec une mèche pour les vis SRT.

ⓘ **Les vis SRT sont utilisées sur les portes en métal. Les vis à bois sont recommandées sur les portes en bois. Réduisez le couple d'installation si vous utilisez des vis SRT dans du bois.**

1d Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé de 5/32 po ou de 4 mm, réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.



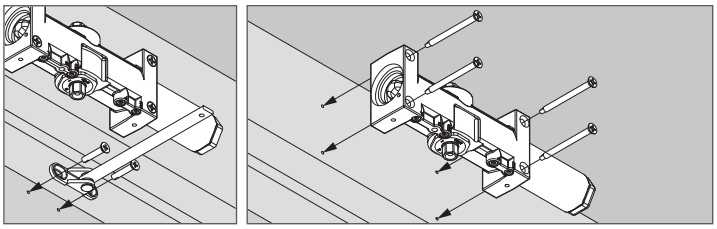
Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

Largeur de la porte	Nombre de tours
Réglage de l'ADA	-9
32" - 815 mm	-4
36" - 915 mm	0
42" - 1050 mm	+4
48" - 1220 mm	+9
54" - 1372mm	+13

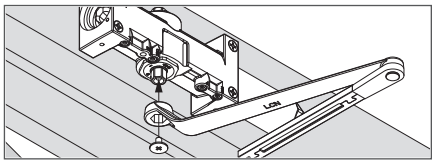
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

ⓘ **N'utilisez pas de perceuse électrique pour régler la force du ressort! Cela pourrait causer des dommages et annuler la garantie.**

1e Installez le dispositif de fermeture sur le cadre et le sabot sur la porte à l'aide des vis fournies.

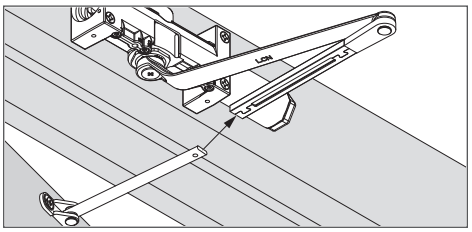


1f Installez le bras principal sur le dispositif de fermeture.
a. Placez le bras principal sur l'arbre du dispositif de fermeture inférieur.
b. Installez et serrez la vis du bras principal.



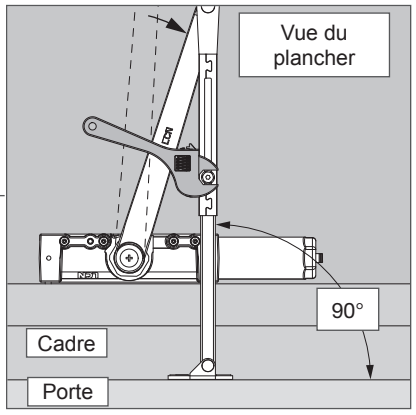
ⓘ **Consultez la page 15 pour l'installation et le réglage optionnels du bras de retenue.**

1g Insérez la tige dans l'avant-bras.

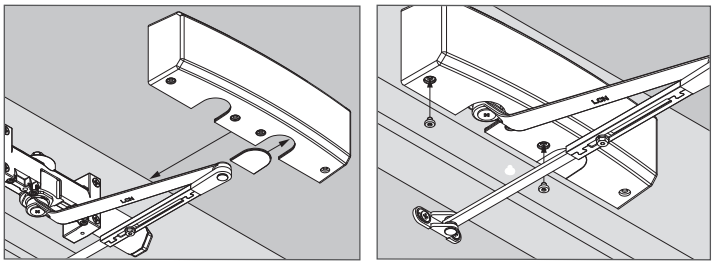


1h En gardant la porte fermée, préchargez l'avant-bras à 90°. Lorsque le bras est préchargé, installez et serrez la vis du bras.

1i Réglez le dispositif de fermeture au besoin. Consultez la page 15 pour les instructions de réglage du dispositif de fermeture.

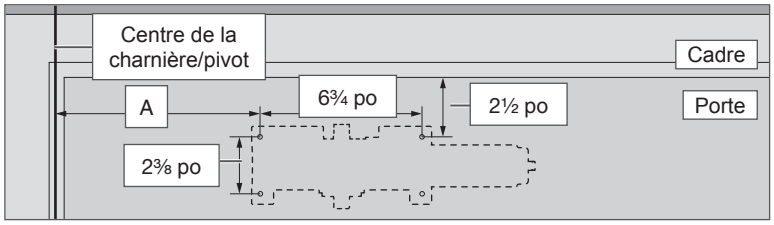


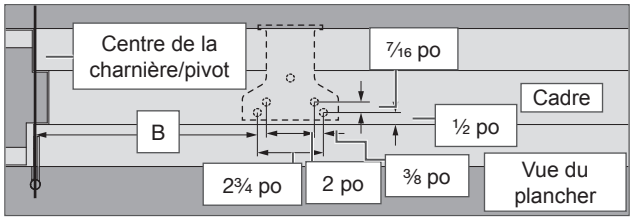
1j Installer le couvercle.



Montage du bras parallèle côté poussée (BP)

Dimensions des trous de montage
Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.

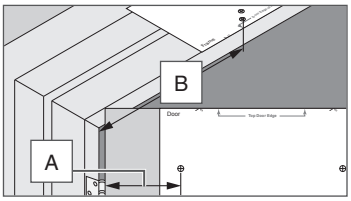




1a Déterminez le degré d'ouverture de la porte requis et trouvez les dimensions « A » et « B » dans les tableaux ci-dessous.

	Ouverture	Mesure à partir du centre de la charnière/pivot
A	Jusqu'à 100°	8 3/4 po
	101° à 130°	7 1/4 po
Dispositif de fermeture	131° à 150°	6 1/4 po
	151° à 180°	5 1/4 po
B	Jusqu'à 100°	9 1/4 po
	101° à 130°	7 3/4 po
Sabot	131° à 150°	6 3/4 po
	151° à 180°	5 3/4 po

1b Mesurez à partir du centre de la charnière/pivot, collez le gabarit sur la porte. Faites des marques pour les trous à percer.

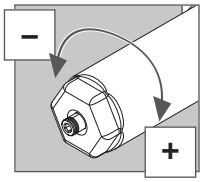


ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**

1c Retirez le gabarit et percez des trous de 3,2 mm (1/8 po) aux endroits marqués avec une mèche pour les vis SRT.

ⓘ **Les vis SRT sont utilisées sur les portes en métal. Les vis à bois sont recommandées sur les portes en bois. Réduisez le couple d'installation si vous utilisez des vis SRT dans du bois.**

1d Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé de 5/32 po ou de 4 mm, réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.



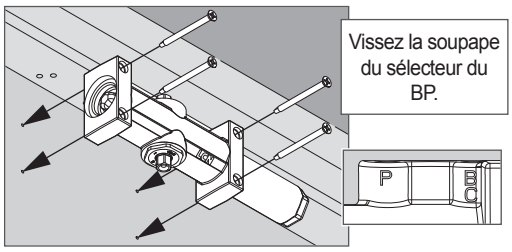
Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

Largeur de la porte	Nombre de tours
Réglage de l'ADA	-9
32" - 815 mm	-4
36" - 915 mm	0
42" - 1050 mm	+4
48" - 1220 mm	+9
54" - 1372mm	+13

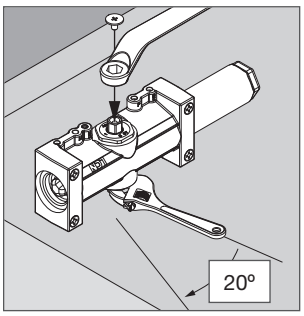
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

ⓘ **N'utilisez pas de perceuse électrique pour régler la force du ressort! Cela pourrait causer des dommages et annuler la garantie.**

1e Vissez la soupape sur le dispositif de fermeture puis installez ce dernier sur la porte.



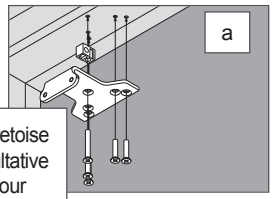
1f Installez le bras principal sur le dispositif de fermeture.



a. Utilisez une clé sur l'arbre du dispositif de fermeture inférieur pour faire pivoter l'arbre du dispositif de fermeture supérieur d'environ 20°. Maintenez la clé dans cet angle pour la prochaine étape.
b. Placez le bras principal sur l'arbre du dispositif de fermeture supérieur.
c. Installez et serrez la vis du bras principal.

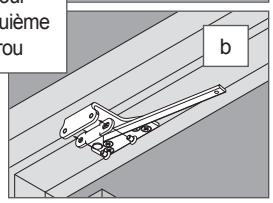
ⓘ **Consultez la page 15 pour l'installation et le réglage optionnels du bras de retenue.**

1g Installez le sabot du BP sur le cadre, puis dans la tige et le sabot.

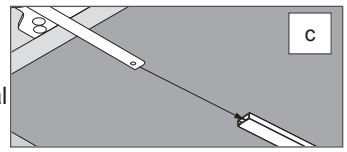


a. Fixez le sabot du BP, et l'entretoise facultative du cinquième trou, au cadre.

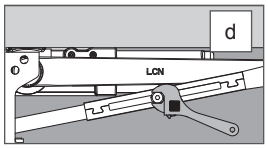
ⓘ **Utilisez l'entretoise facultative du cinquième trou seulement s'il y a un espace entre le cadre et le sabot du BP.**



b. Fixez la tige et le sabot au sabot du BP.

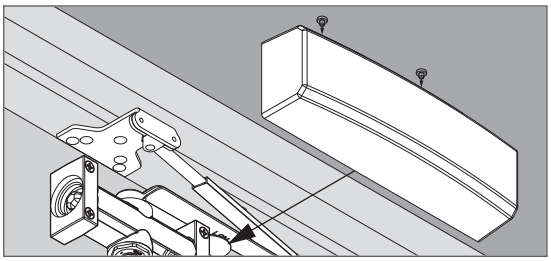


c. Installez la tige dans l'avant-bras du bras principal.
d. Préchargez le bras principal de manière à ce qu'il soit parallèle au cadre, puis serrez la vis du bras.



1h Réglez le dispositif de fermeture au besoin. Consultez la page 15 pour les instructions de réglage du dispositif de fermeture.

1i Installer le couvercle.



Réglage de la soupape du dispositif de fermeture

Vérifiez le temps de fermeture et réglez le dispositif de fermeture au besoin.

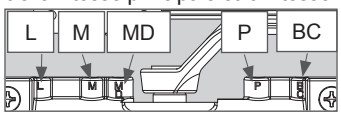
⚠ MISE EN GARDE ⚠

Trop ouvrir les soupapes de régulation (décrites ci-dessous) peut causer une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

ⓘ **La soupape doit être fermée dans le sens horaire pour être bien en place. Ne jamais faire plus de 3 tours dans le sens antihoraire lorsqu'elle est bien en place. Réglez les soupapes en effectuant 1/4 de tour ou moins à la fois. N'EFFECTUEZ PAS PLUS DE 3 ROTATIONS COMPLÈTES. CELA POURRAIT ENTRAÎNER UNE FUITE D'HUILE DANS LE DISPOSITIF DE FERMETURE!**

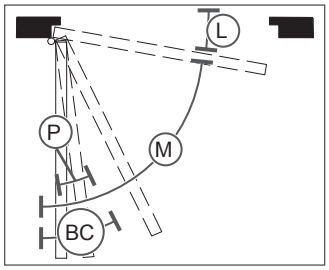
ⓘ **NE RÉGLEZ PAS LA VITESSE D'ENCLENCHEMENT SI LA PORTE NE S'ENCLENCHE PAS. Si cela se produit, réglez la force du ressort.**

1. Ouvrez la porte à 90° et comptez le temps nécessaire pour que la porte se ferme et s'enclenche. Le temps de fermeture typique est de 5 à 7 secondes et est divisé également entre la vitesse principale et la vitesse d'enclenchement.
2. Si vous devez régler le temps de fermeture, utilisez une clé hexagonale de 3/32 po pour régler les soupapes du dispositif de fermeture décrit ci-dessous.



a. Retenue (BC)- contrôle la vitesse d'ouverture de la porte lorsque l'angle s'approche de 90°. N'utilisez pas de butoir.
b. Vitesse principale (MD)- contrôle la vitesse principale pour les cylindres standard et la vitesse de retardement pour les cylindres à retardement.
c. Vitesse principale du cylindre à retardement (M)- contrôle la vitesse principale des cylindres à retardement. Cette soupape est présente sur les cylindres à retardement seulement.
d. Vitesse d'enclenchement (L)- contrôle la vitesse de la porte durant les derniers degrés de la fermeture.
e. Sélecteur du BP (P)- doit être complètement tourné vers l'intérieur pour le montage du bras parallèle (BP).

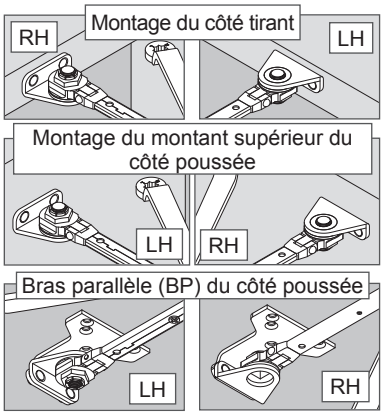
(BC)	= soupape de retenue
(M) (MD)	= soupape de la vitesse principale
(L)	= soupape de la vitesse d'enclenchement
(P)	= Soupape du sélecteur du BP



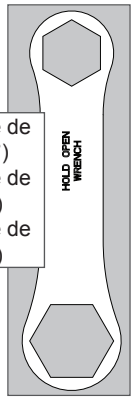
3. Faites tourner les soupapes dans le sens horaire pour faire diminuer la vitesse de la porte, et dans le sens antihoraire pour la faire augmenter. La vitesse d'enclenchement et la vitesse principale doivent être réglées ensemble.

Bras de retenue facultatifs

1a Consultez l'image ci-dessous pour déterminer la direction de l'écrou de retenue. Elle est déterminée par le positionnement de la porte.

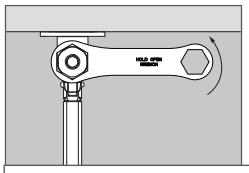


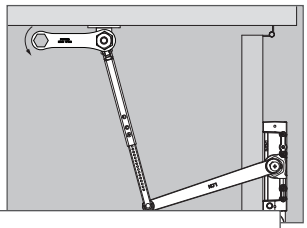
Montage de retenue de 180° (120° à 180°)
Montage de retenue de 120° (95° à 120°)
Montage de retenue de 100° (85° à 100°)



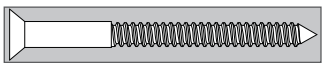
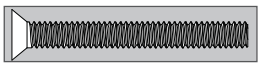
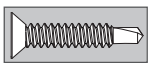
1b Réglage du bras de retenue.

ⓘ **Le bras de retenue s'installe comme le bras du dispositif de fermeture régulier. Suivez les étapes 5 à 7 des pages 12, 13 et 14 pour l'installation du bras de retenue.**

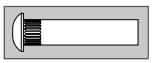




Pour régler le bras de retenue facultatif :
1. Desserrez l'écrou de retenue.
2. Ouvrez la porte de 5° de moins que la position de retenue désirée puis serrez bien l'écrou de retenue.

Type de vis	Lot de vis	Image	Montage du cylindre	Montage du support du BP	Montage du sabot du BP	Montage du 5e trou (sabot du BP uniquement)
Bois (pour les portes et les cadres en bois)	Lot de vis à bois et à métaux (WMS)		4 @ 2¼"	4 @ ⅝"	2 @ ⅜"	1 @ 1½"
De mécanique (pour les portes et les cadres en métal) Nécessite de percer des trous et de tarauder; meilleure retenue	Standard		4 @ 3⅛"	4 @ 1⅜"		1 @ 2"
SRT - Auto taraudeuse et à alésage automatique (pour les portes et les cadres en métal)	Standard		4 @ 2⅞"	4 @ 1½"		1 @ 2"

Type de vis	Lot de vis	Image	Remarques
Entretoise pour cinquième trou	Standard		
Vis du bras	Standard		

Type de vis	Lot de vis	Image	Remarques
Vis de fixation du pignon	Standard		¼--20 x 1 rondelle et écrou MS (voir etape 6).
Boulons traversants	Commander un lot de vis bois-métal		1⁹⁄₃₂ po ou, 1¹⁷⁄₃₂ po ou, 1²¹⁄₃₂ po

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71691 Rev. 01/16-b
Patent Pending

Model ES7982 SEQ

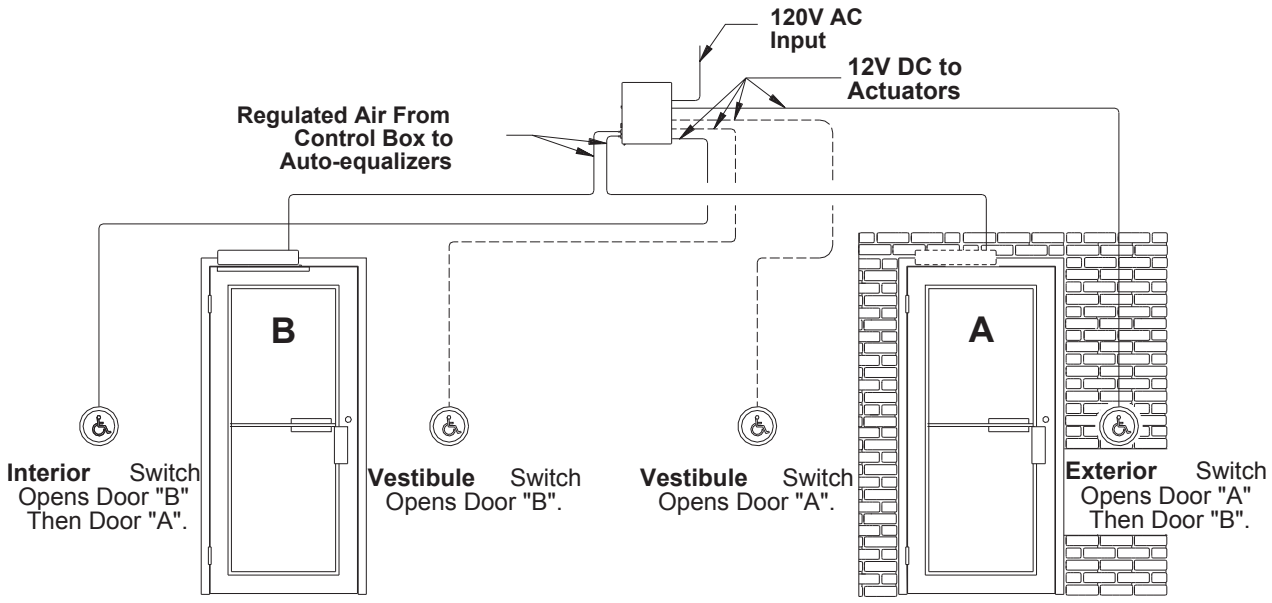
23656

Control Box

Installation Instructions

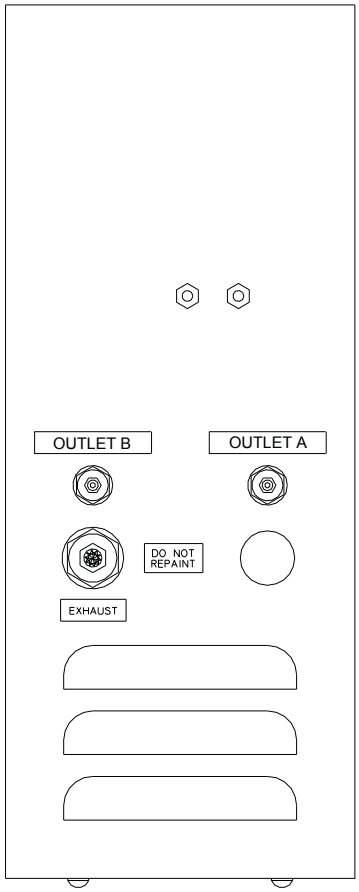
For closer information see closer installation instruction sheet.

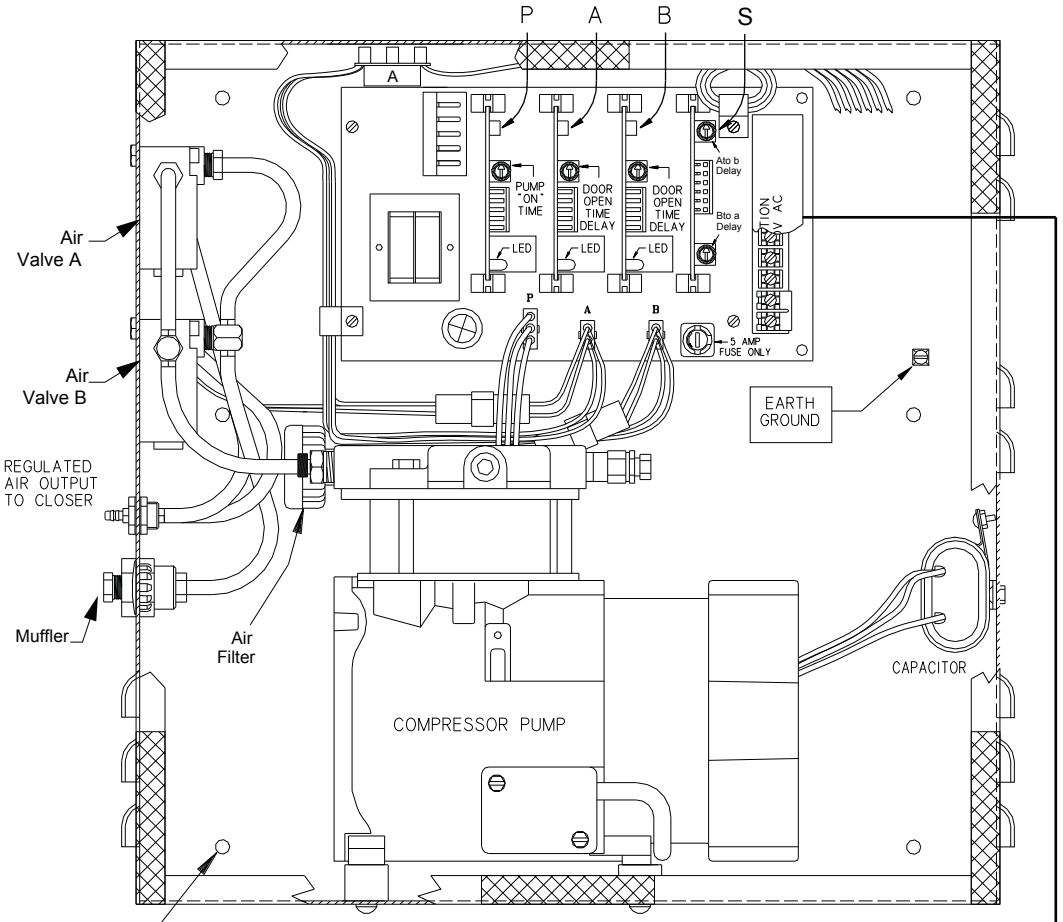
Typical Electric & Air Supply Hook Up



Installation

1a	Locate box on interior of building within 50 tubing feet of the farthest door to be controlled. **Box must be in a clean, dry, well ventilated place where temperatures do not exceed 120°F or fall below 35°F.**
1b	Mount box to a structurally sound surface using screws provided as shown on page 2 with air fittings on left side as shown. **Box must be in a clean, dry, well ventilated place where temperatures do not exceed 120°F or fall below 35°F.**
1c	Refer to instructions packed with actuators and connect leads to terminals 5 through 10 as required.
1d	Connect unpowered 120V AC input to terminals 3, 4, and ground screw. (Line side to terminal 3, neutral side to terminal 4 and ground wire to ground screw.) If door control is on a fire door, 120V AC input must be interrupted by the fire alarm panel when in alarm. When dry auxiliary fire alarm contacts are used, remove shunt from terminals 1 and 2 and connect to dry contacts of fire detector or alarm panel. Terminals 1 and 2 are in series with line side of 120V input.
1e	Turn on power. Air valves and compressor will operate one cycle when power is applied.
1f	Air pressure output has been preset at factory. If more air pressure is required to adequately open doors, regulate air adjustment valve on pump, as shown on page 3 .
1g	Adjust time delay to keep air valve energized by turning adjustment wheel on timer modules “A” & “B” (CW to increase - CCW to decrease). The LED (light) on the timer module indicates the valve is energized. The time can be adjusted from 0-30 seconds. 10 seconds is a “normal” delay.
ⓘ	**NOTICE: Timer Module “A” and “B” must operate longer than Timer Module “P”.**
1h	Adjust timer module “P” to keep compressor activated for the necessary amount of time to open the door. This can be done by rotating the adjusting wheel. (CW to increase - CCW to decrease). The LED (light) on the timer module indicates the compressor is energized. The compressor should not run more than 1-3 seconds longer than the time required to open the door.
1i	When using sequential operation, adjust dual timer module “S” for desired delay between door operation. (CW to increase delay; CCW to decrease delay). Top timer delays “A” to “B” operation; the bottom timer delays “B” to “A” operation.
1j	Test actuators to insure wiring and tubing are properly connected.





⚠ CAUTION

Do not mount box upside Down or in horizontal Position. Locate where Temperatures do not Exceed 120°F or fall Below 35°F

⚠ CAUTION

Components inside control Box will be hot to touch Under normal operation. Allow box to cool down Before making adjustments.

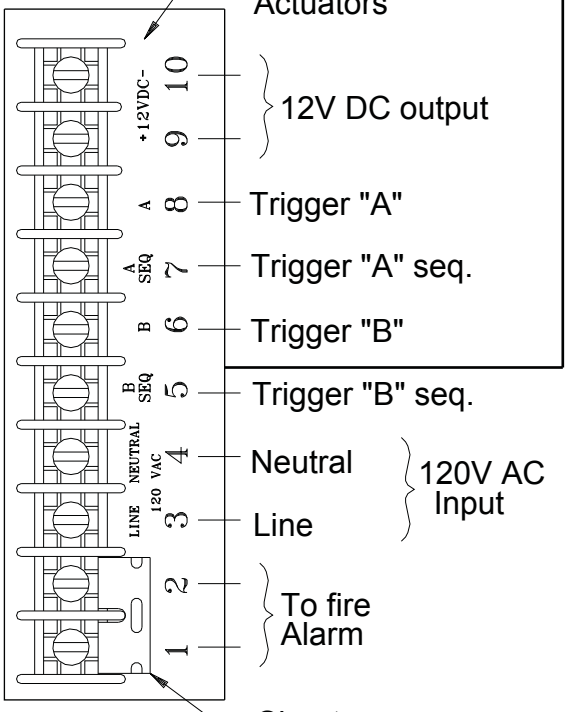
⚠ WARNING

Hazardous voltage Can shock and Cause severe injury

Disconnect power before Making any electrical Connections or performing Maintenance.

Install box with six tapcon Concrete screws 3/16 x 1 1/4 Drill 5/32 hole 1 1/4 deep With carbide tipped Concrete drill bit

Air filter should be Inspected every six Months.If filter is Damaged,contact Icn For replacement.

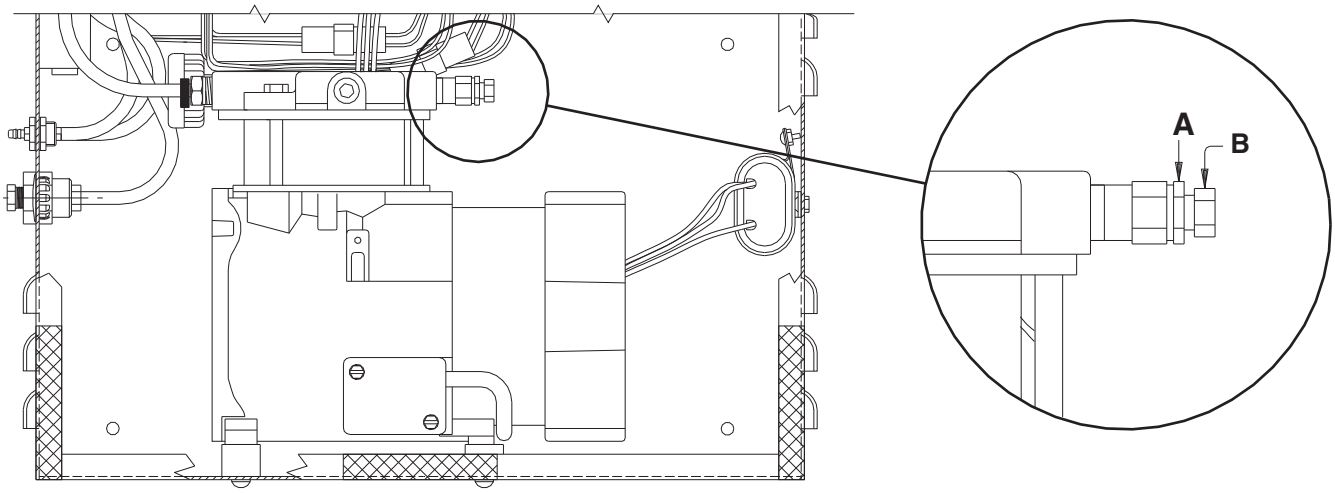


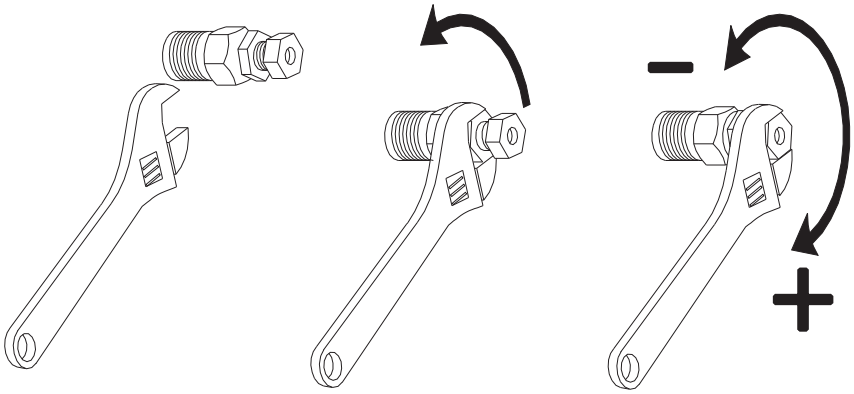
Electrical Data

Input = 120V AC @ 5 amps
Power consumption 600watts
Output is 12v dc (250 ma max.Load)

⚠ DANGER Control box **MUST** be connected to earth ground

Air Pressure Adjustment





Air Pressure Adjustment	
1a	Loosen lock nut.(A)
1b	Turn outer valve (B) to regulate air pressure.
1c	Tighten lock nut.

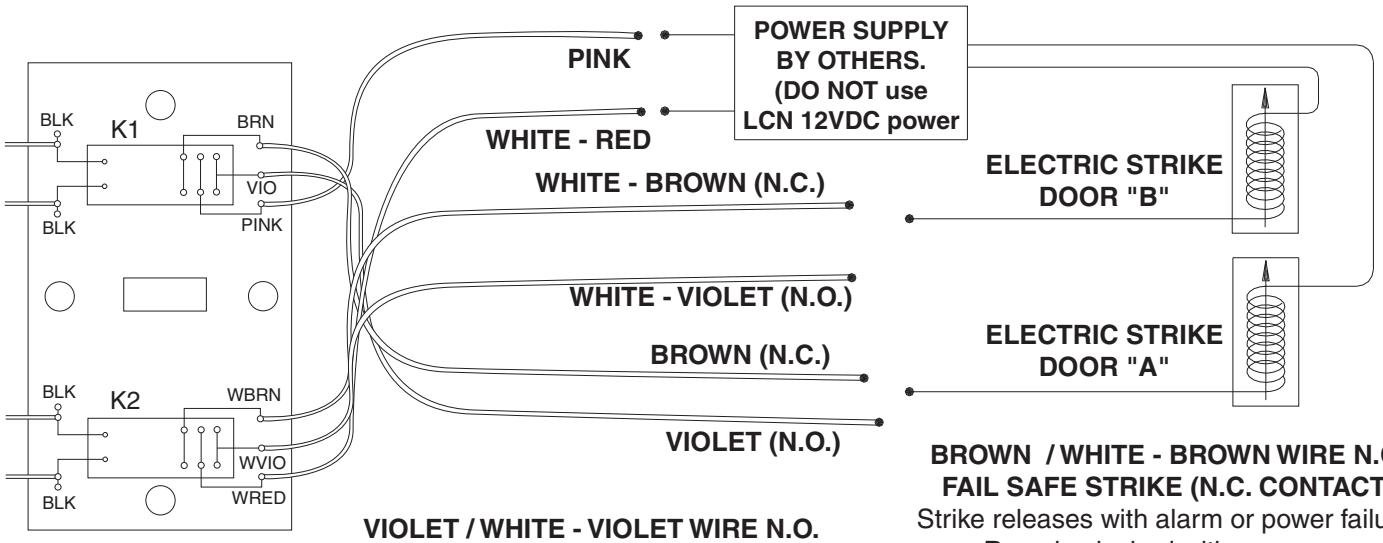
Installation Troubleshooting Chart

Symptom	Possible Cause	Suggested Remedy
No Power Opening	No power to control box / blown fuse	Verify 120VAC 60HZ power is present at terminals 3 & 4 on control box terminal strip. Check fuse. Replace only with 5 amp (3AG type) fuse.
	Actuator(s) not connected properly	Be sure a timer module board is firmly in place in “A”. “B” & “P” slots. Timer card “S” must be in place for sequential operation. Operate actuator(s). LED on timer module should light when actuator is used. The LED on timer “P” should light whenever “A” or “B” is lit. If not, momentarily short actuator terminals 6 & 10 and 8 & 10 in the control box. If LED lights, check wiring to actuators for an open circuit. If it does not light, check for voltage at terminals 9 & 10. Voltage should read from 11.75 to 13.25V DC. If there is no reading, disconnect leads from terminals 9 & 10. Short actuator terminals 6 & 10 and 8 & 10. If LED lights, check for short circuit in actuators.
	Fire alarm system causing open circuit on terminals 1 & 2	Shunt terminals 1 & 2 with power off. Restore power. If control operates when actuator terminals in the control box are shorted, an open circuit exist in wiring to fire alarm. When Auto-Equalizer is not used with fire alarms, terminals 1 & 2 must be permanently shorted with a shunt. IMPORTANT! When Auto-Equalizer is connected to fire alarm, make sure shunt is removed from terminals 1 & 2. Terminals 1 & 2 are one leg of 120V line.
	No input to Auto-Equalizer operator	Disconnect tubing from Auto-Equalizer operator. Try actuator and verify that air is coming out of tubing. If not, trace tubing to control box, checking for breaks or kinks in air line.
	Air lines obstructed with dirt or ice.	Clean or thaw lines and reroute if necessary. Eliminate dips near cold zones.
	Air valves not working	Make sure air valve leads are plugged into main board. (Be sure valves in system are plugged into connectors “A” & “B”.)
	Compressor not working	Make sure compressor leads are plugged into main board. (Be sure compressor is plugged into connector “P”).

Symptom	Possible Cause	Suggested Remedy
Does not open or fully open	Control box exhaust restricted.	Exhaust muffler may be clogged by dirty air or accidental painting. Clean in alcohol or mineral spirits.
Opens too slow or not at all	Inlet filter clogged	Replace filter element (Contact LCN for replacement)
Power opening will not time out.	Scanner maintaining signal to control box.	Make sure lenses are clean and there are no obstructions in front of scanner. Adjust range as described in scanner instructions.
	Switch circuit maintaining contact.	Check for short circuit or error in wiring to switch or scanner.
	Air valve blocked open with contaminant.	Cycle valve several times by momentarily shorting actuators in the control box. This should clear valve.
Power opening timing out too soon.	Air compressor needs readjustment.	See page 3 for regulation instructions.
	Timer cards not set properly	Set timer cards “A” & “B” for Max. time. Set timer card “P” for Min. time. Slowly increase card “P” until “time-out” is 1-3 seconds after door is fully open. Decrease timer card “A” & “B” to achieve desired time delay before closing. (Make sure “P” times out before “A” & “B”.)

MODEL ES7982 SEQ FOR USE WITH ELECTRIC LATCHING HARDWARE

ES7982 SEQ - 2 electric strikes maximum



BROWN / WHITE - BROWN WIRE N.C.
FAIL SAFE STRIKE (N.C. CONTACT)
Strike releases with alarm or power failure. Remains lached with power on. (Not compatible with UL listed fire door.)

VIOLET / WHITE - VIOLET WIRE N.O.
FAIL SECURE STRIKE (N.O. CONTACT)
Strike releases when energized. Remains locked in alarm or power failure. (Manual release hardware required to open door in alarm or power failure.)

⚠ WARNING

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY
Disconnect power before making any electrical connections or performing maintenance.

Customer Service
1-877-671-7011 www.allegion.com/us

ALLEGION

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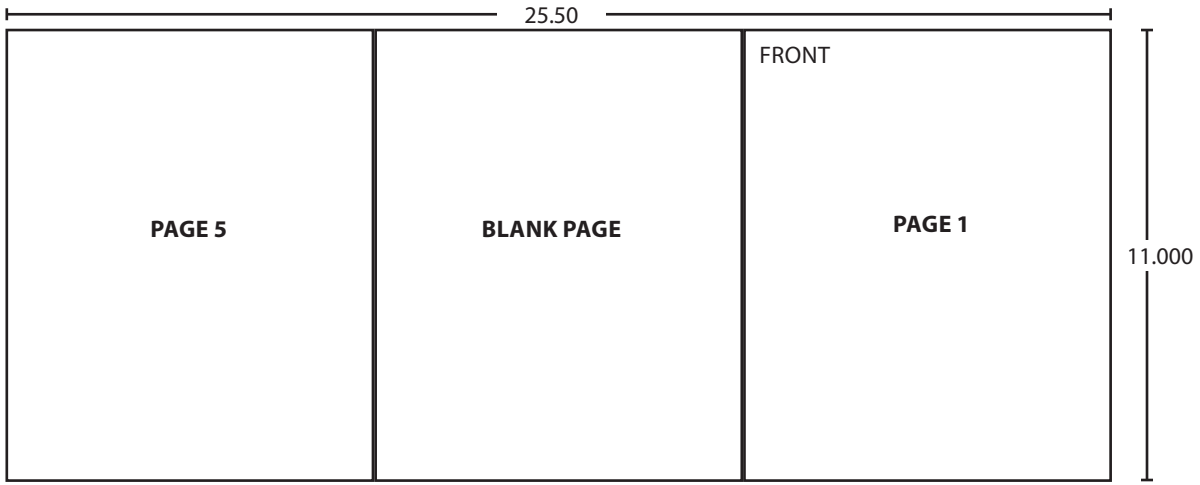
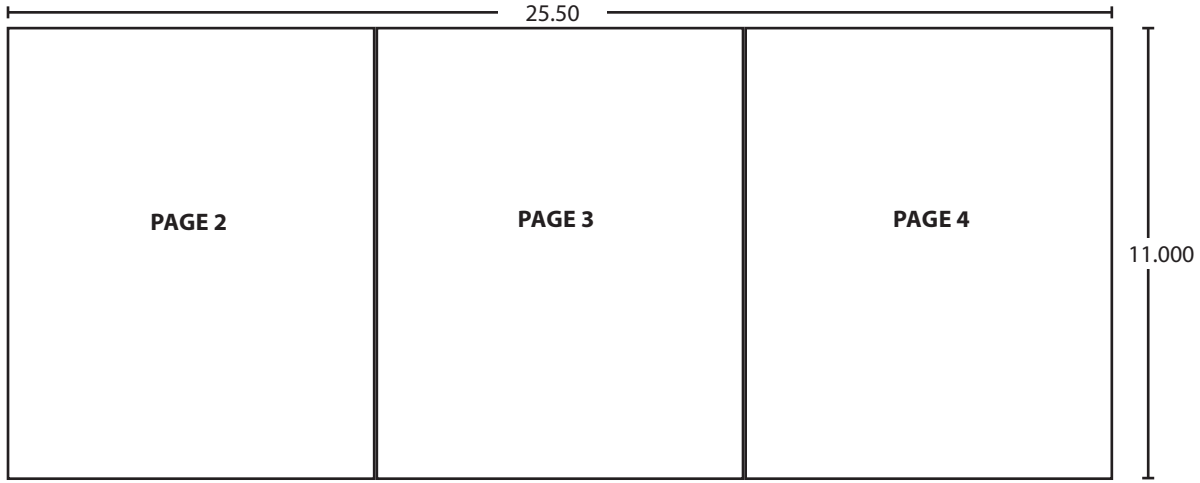
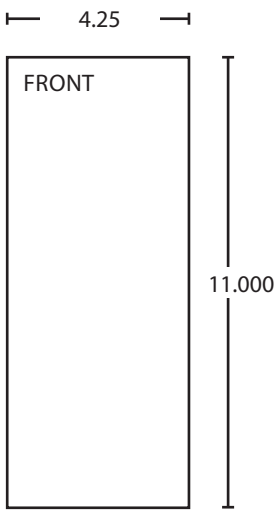
23656 Rev. 01/14-e



BEGINNING SHEET





FOLDED SHEET

Additional Notes:
1. None

Revision History					
E	F	G	H	J	K
043228					

Revision Description:
E > Revised artwork

Material	Edited By	Approved By	EC Number	Release Date
White Paper	D. Myers	M. Sasso	043228	01-01-14

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Title
ES7982 Series Sequential Control Box Instruction Sheet

Creation Date	Number	Revision
01-02-13	23656	E

Created By	Activity	
N/A	3899 Hancock Expwy Security, CO 80911	
Software: InDesign CS6		© Allegion 2014

24771

4040SE DE Sentronic

SE Double Egress

Installation Instructions

This closer features mounting options for both standard and step-down double egress frames. Before beginning, determine which type of mounting best applies to your application, or has been specified for the job, then be sure to use the proper template.

1 Voltage

The voltage shown on the track cover plate must match voltage supplied to door frame (24V or 120V). If concealed wiring is desired, prepare the frame to specifications shown on the corresponding template. If surface wiring is desired, be sure to mount the track on the frame before running any EMT/conduit.

2 Track

Insert the proper track plugs into the top of the track. Using the fasteners provided, mount the track on the frame to the template dimensions being used. Make the electrical connections (see page 2).

3 Spring Power

Before mounting closer, the spring power may need adjusting. Refer to the label on the closer spring tube. The 4040SE DE Series comes preset at size 3. This will control a door up to 38", adjust the closer as shown (see illustration to the right) up to 7 full turns. Starting the cover screws at this point is recommended. Using the fasteners provided, mount the closer on the door to the dimensions of the template being used.

4 Arm Installation

Install the arm as follows:

Rotate the arm from the door until flats in the arm hub line up with the first available flats of the shaft. Slide the arm hub onto the closer shaft. Insert the shaft screw and tighten securely.

5 Arm Screw

Loosen the set screw in the arm. Connect the arm to the track roller, and tighten the set screw firmly.

6 Door Position

To adjust the hold-open position of the door: Remove the screw in the adjustable arm, and open the door to the desired position. Reinsert the screw and tighten securely.

7 Regulation

Do not allow the door to slam into the frame. A "normal" closing time from a 90° position is 5 to 7 seconds, evenly divided between the Main and Latch Speed. If adjustments are needed, use a 3⁄32" hex wrench. To adjust the Main Speed, turn the regulating screw (see illustration) clockwise to slow the speed or c.c.w. to increase the speed. Latch Speed is adjusted in the same way. When adjusting, use the Backcheck the least amount necessary to slow the swing of the door sufficiently. To adjust the Backcheck, turn the regulating screw clockwise to increase the amount of force or c.c.w. to reduce the amount of force.

ⓘ **NOTE: Do not use an abrupt backcheck setting or expect the door closer to act as a stop!**

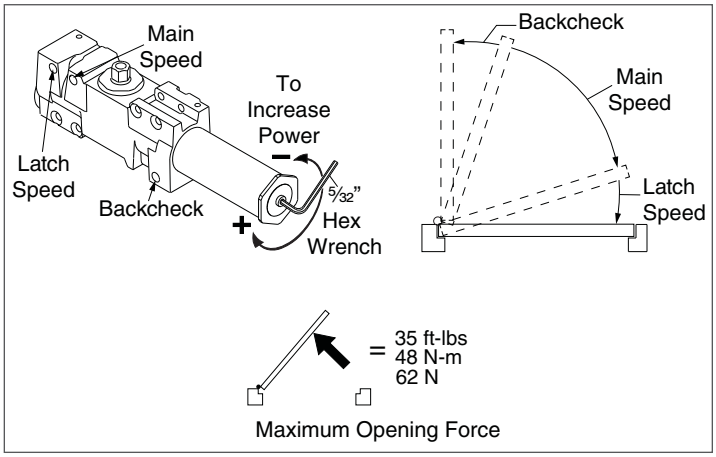
8 Door Closer Cover

With regulation done, place the snap-on clip insert into the proper cutout, then the snap cover assembly onto the spring tube.

⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully.

For questions, call LCN at 877-671-7011.



Conduit Quick Conductor

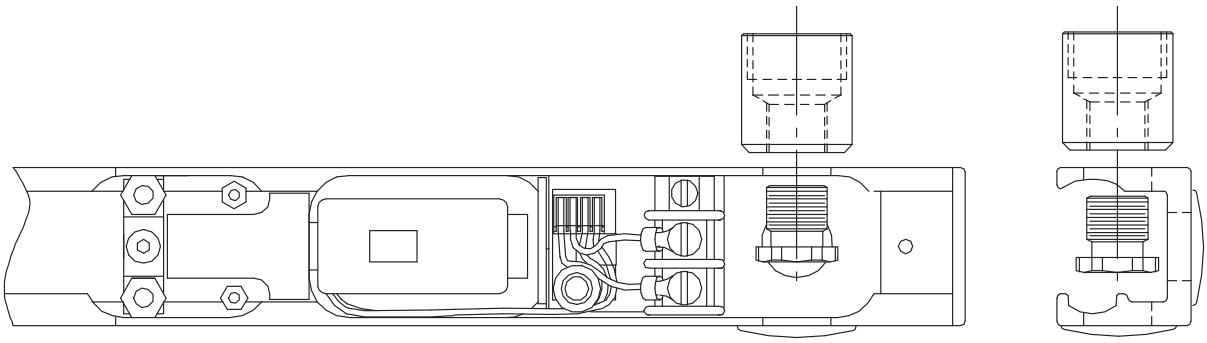


Fig. 1

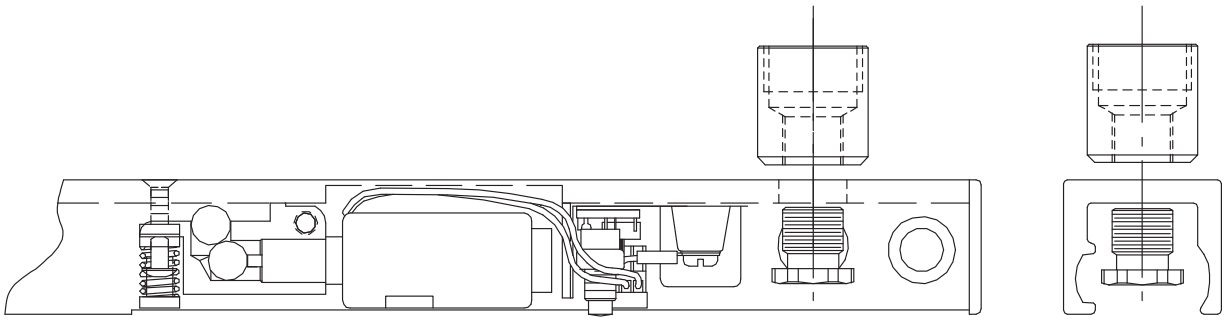


Fig. 2

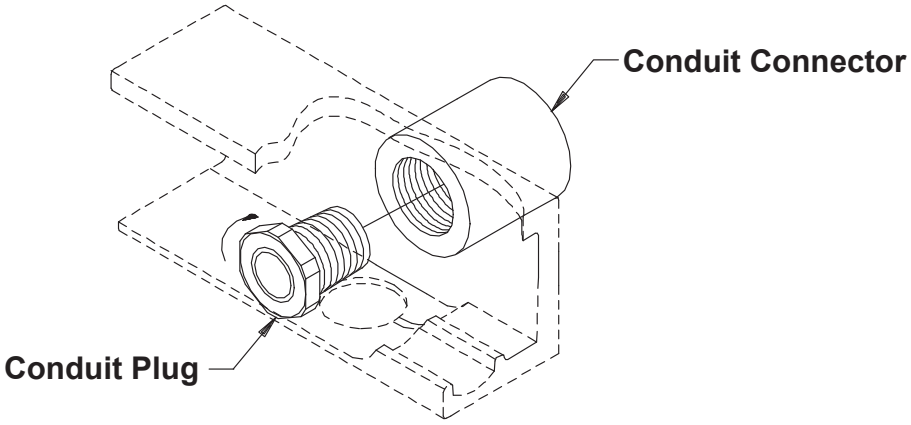
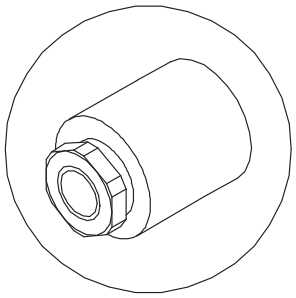


Fig. 3



Conduit Plug shown in Conduit Connector

Installation Instructions

1a	The Conduit Quick Connector and Plug can be found in the closer screwpack.
1b	The Conduit Quick Connector should be fastened to the 1/2” concealed conduit prior to step 3 on the closer installation instructions.
1c	During step 3 on the closer installation instructions, make sure that the Conduit Connector is secured flush against the track surface. See option in Fig. 1 below that matches the mounting option selected for track surface. With the track mounted, take the Conduit Plug and slide it through the 1/2” hole in the track. (see Fig.2) Tighten the Plug into the Conduit Connector using a 5/8” wrench, until completely secure, as shown in Fig.3.

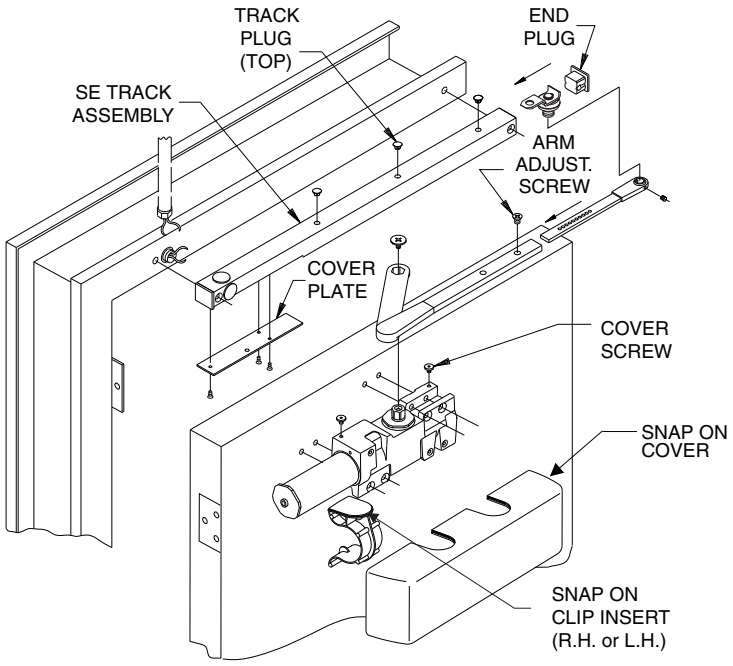
SE Mounting

⚠ WARNING ⚠

Hazardous voltage can shock and cause severe injury!

Disconnect the power before making any electrical connections or performing maintenance.

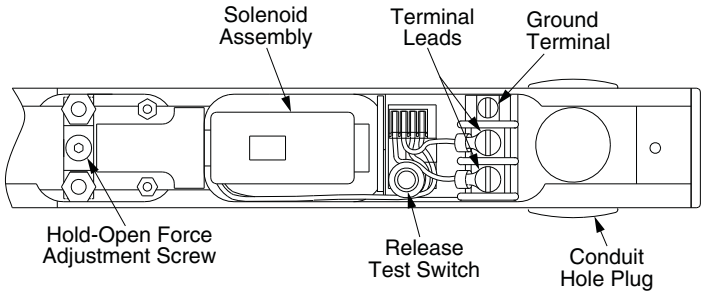
SE MOUNTING



Note: Use screws for metal cover only.

Hold-Open Force Adjustment:

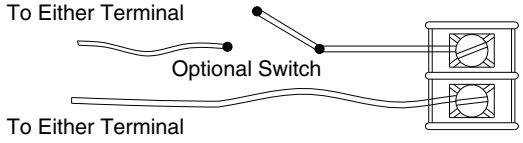
Locate the hold-open adjustment screw in the diagram to the right. For greater hold-open force, insert a 3⁄32" hex wrench, and turn clockwise. To decrease the amount of hold-open force, turn the screw counterclockwise, for a maximum of 4 turns.



Electrical Checkout

Wiring Diagram - Polarity Not Important

Input Voltage:
24v AC/DC Or 120v AC/DC
(Usually From Alarm Panel or Detector)



1. With power on, open the door. The door should remain in the open position. If the door does not stay open, check the electrical output.
2. Push the release test switch. The door should close immediately. Open the door to the hold-open position and let it remain there.
3. The system should be checked at frequent intervals. It is suggested that Step 2 be repeated every 90 days.

4040SE-DE

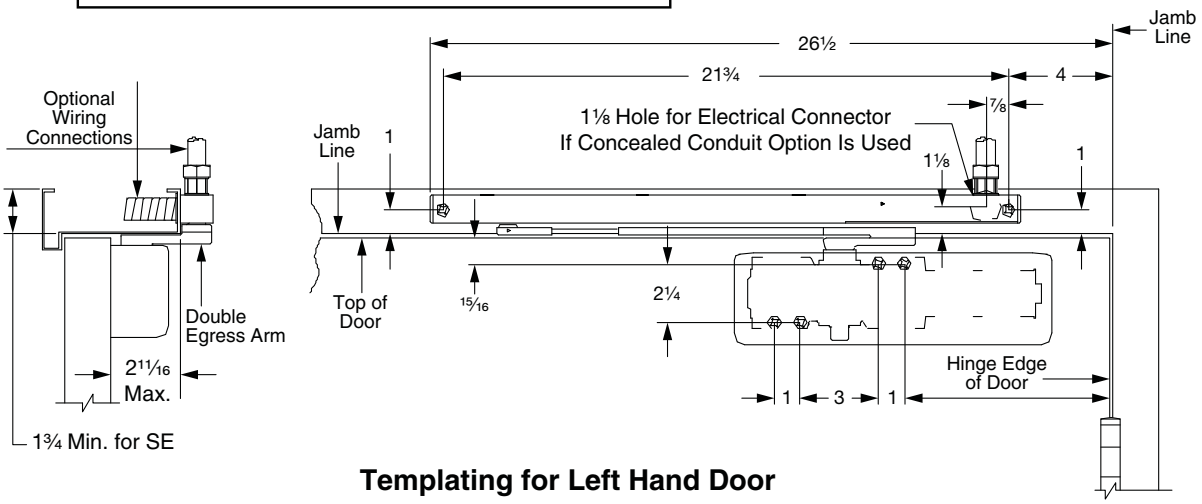
⚠ WARNING ⚠

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY!

Disconnect the power before making any electrical connections or performing maintenance.

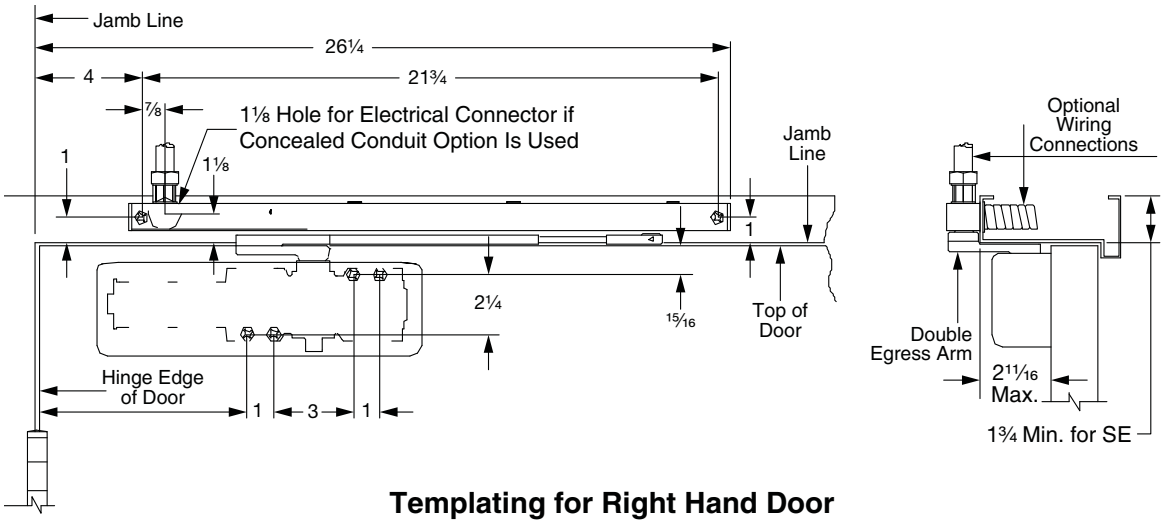
DOOR HOLDER SOLENOID DATA
24VAC - DC Nominal =10% - 15% @ .090 Amp. Max.
120 VAC - DC Nominal =10% - 15% @ .030 Amp Max.

4040SE DE Up To 95° Hold Open
Auxiliary Stop Recommended



Templating for Left Hand Door

Dim.	Reveal
7 7/8	2 11/16
7 3/8	2
6 3/4	1 1/2
6 1/2	1



Templating for Right Hand Door

Dim.	Reveal
7 7/8	2 11/16
7 3/8	2
6 3/4	1 1/2
6 1/2	1

Notes:

1. The voltage supplied must match the voltage shown on the Sentronic label.
2. If the door is hung on pivots or swing clear hinges, consult the factory.
3. Floor or wall stops must be used.
4. For 7¼" or less double egress frames, the reveal should not exceed 2 11/16".
5. The ⅛" door-to-Soffit clearance is required.
6. Reinforcing per ANSI/SDI-100 is recommended for hollow metal doors and frames.
7. The maximum butt hinge size is 5" x 5".

Inch	⅛	¼	⅞	15/16	1	1⅛	1¼	1½	1¾	2	2¼	2 11/16	2⅞	3	4	5	6½	6¾	7¼	7⅜	7⅞	21¾	26¼
M.M.	3	6	22	24	25	29	32	38	44	51	57	68	73	76	102	127	165	171	184	187	200	552	667

4040SE-DE: For ⅝" Step-down frames

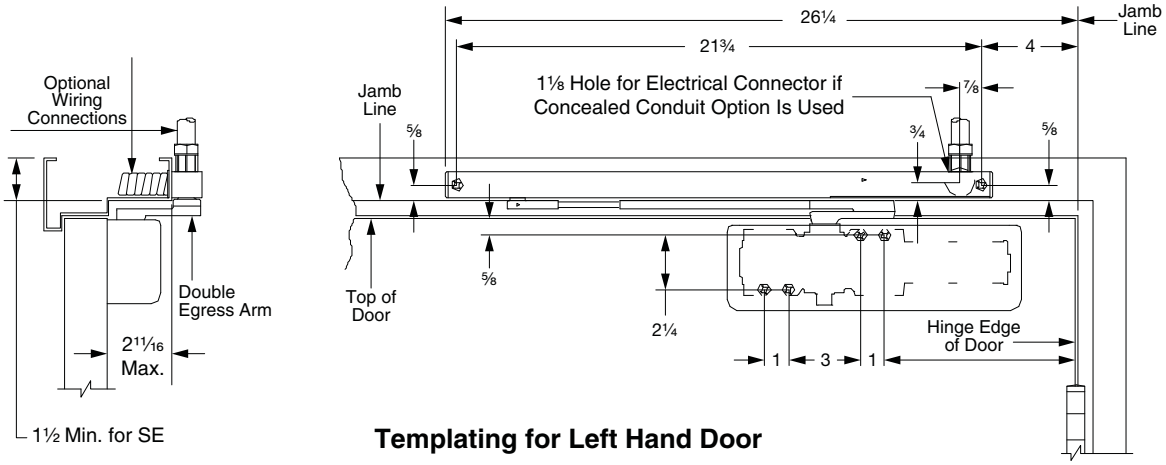
⚠ WARNING ⚠

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY!

Disconnect the power before making any electrical connections or performing maintenance.

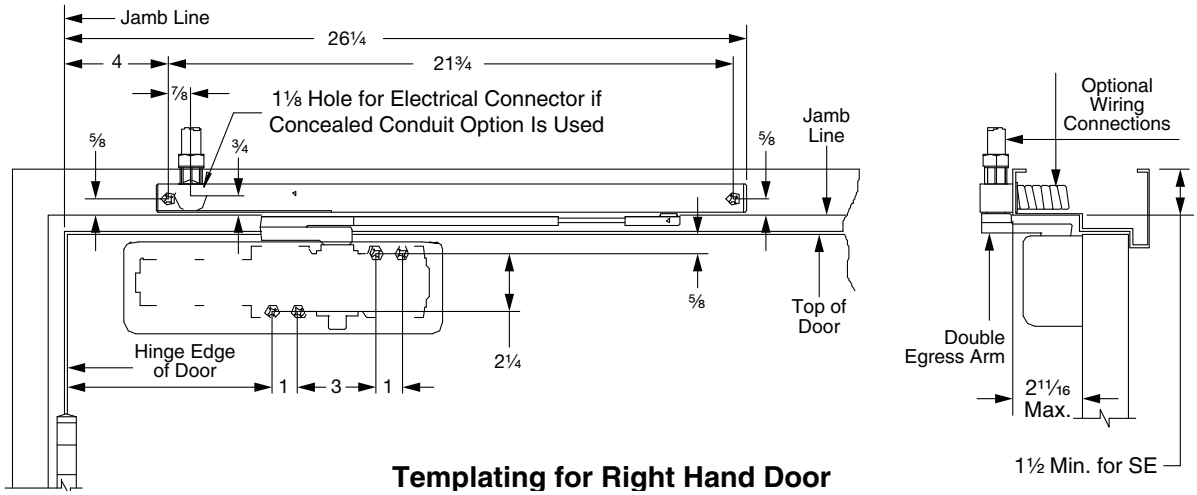
DOOR HOLDER SOLENOID DATA
24VAC - DC Nominal =10% - 15% @ .090 Amp. Max.
120 VAC - DC Nominal =10% - 15% @ .030 Amp Max.

4040SE DE Up To 95° Hold Open
Auxiliary Stop Recommended



Templating for Left Hand Door

Dim.	Reveal
7⅞	2 11/16
7⅜	2
6¾	1½
6½	1



Templating for Right Hand Door

Dim.	Reveal
7⅞	2 11/16
7⅜	2
6¾	1½
6½	1

Notes:

1. The voltage supplied must match the voltage shown on the Sentronic label.
2. If the door is hung on pivots or swing clear hinges, consult the factory.
3. Floor or wall stops must be used.
4. For 7¼" or less double egress frames, the reveal should not exceed 2 11/16".
5. The ⅛" door-to-Soffit clearance is required.
6. Reinforcing per ANSI/SDI-100 is recommended for hollow metal doors and frames.
7. The maximum butt hinge size is 5" x 5".

Inch	⅛	¼	⅞	15/16	1	1⅛	1¼	1½	1¾	2	2¼	2 11/16	2⅞	3	4	5	6½	6¾	7¼	7⅜	7⅞	21¾	26¼
M.M.	3	6	22	24	25	29	32	38	44	51	57	68	73	76	102	127	165	171	184	187	200	552	667

Customer Service
1-877-671-7011 www.allegion.com/us

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24771 Rev. 08/17-n

28479

4110 Series

Peel-N-Stick

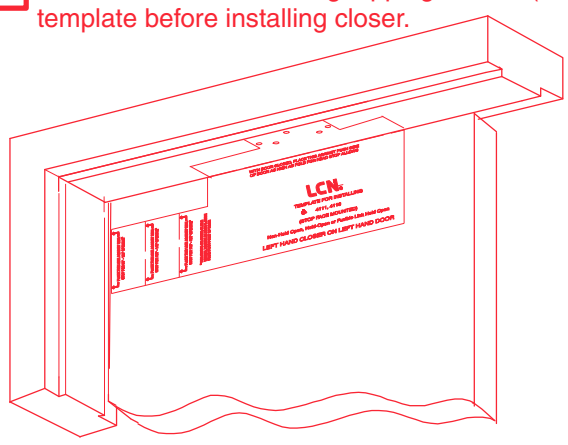
LCN®

100°-140°-180° Template
Push Side Mounting

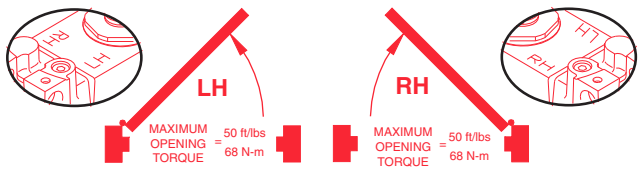
Installation Instructions

1 Locate proper template, peel tape and apply template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes. Remove template before installing closer.

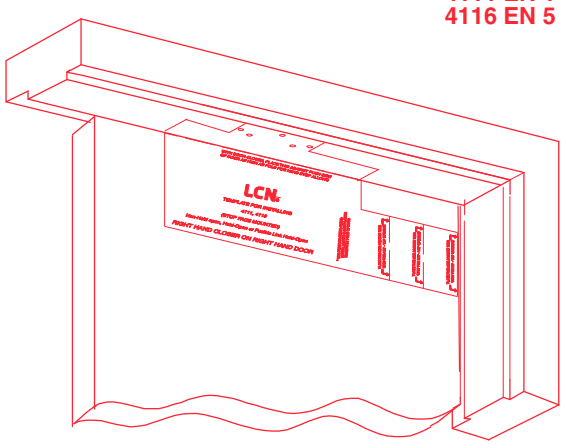
Note: Steps 3-8 show left hand door mount, right hand door is opposite. **(Fig. 66)**
4111 EN 1-4
4116 EN 5



For 4110 Delay 100° Mounting provides additional delay time.



Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.



2 Determine door width, adjust spring power to match chart.

⚠CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

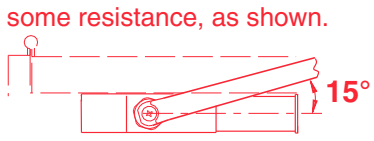
DOOR WIDTH INTERIOR	EXTERIOR	LCN FAST™ Power Adjust SET TO:
♿	———	1
34"	8.5 lb-f	2
38"	30"	3
48"	36"	4
54"	42"	5

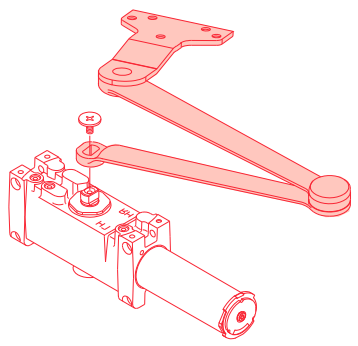
LCN® FAST™ Power Adjust for Spring Power Adjustment
(Used only on non-sized closers)

3 ① Mount arm on shaft at 15° to closer, as shown.

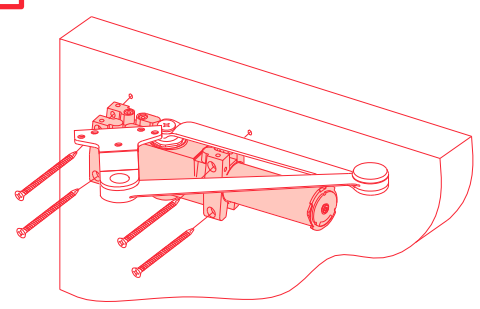
② Secure arm assembly to closer with pinion screw provided.

NOTE: Closer arm will provide some resistance, as shown.

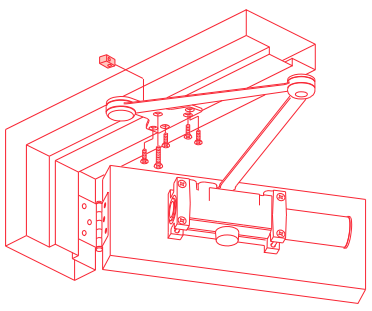




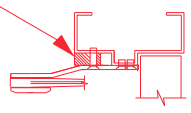
4 Using fasteners provided, secure closer to door.



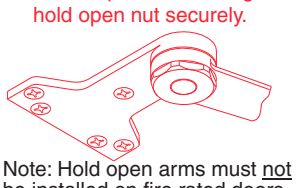
5 Open door to approx. 45°, attach arm to frame with fasteners provided.



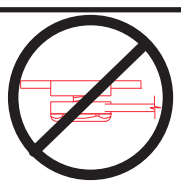
Fifth hole spacer
Espaceur du cinquième trou
Espaciador para el quinto agujero



II To adjust Optional Handed Hold-open arm:
①Loosen hold open nut.
②Open door 5° less than desired position and tighten hold open nut securely.



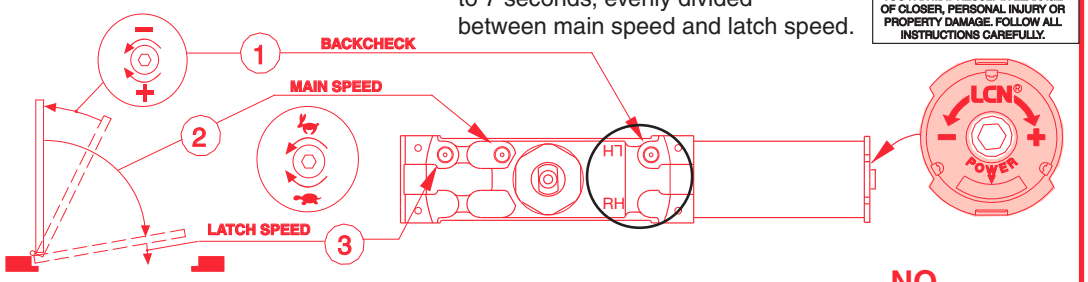
Note: Hold open arms must not be installed on fire rated doors.



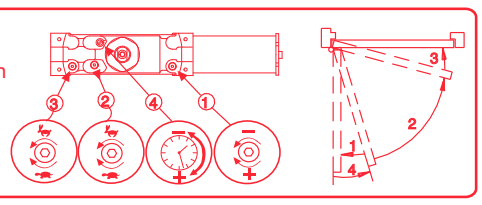
6 If necessary, adjust closer.

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

⚠CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.

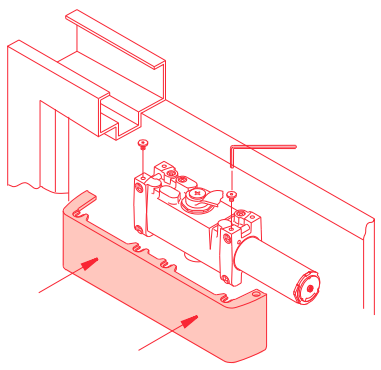


I Optional Delay Action
① - Backcheck
② - Main Speed
③ - Latch Speed
④ - Delay Speed

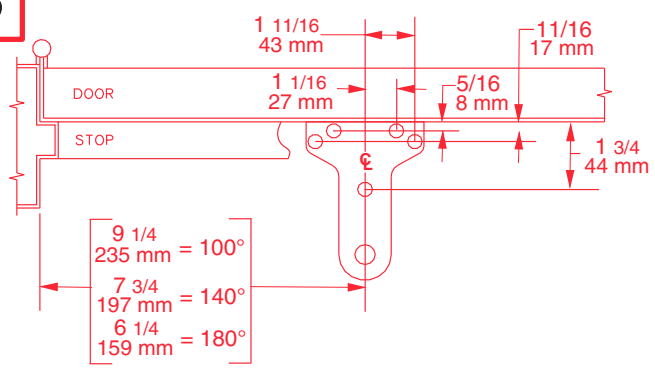


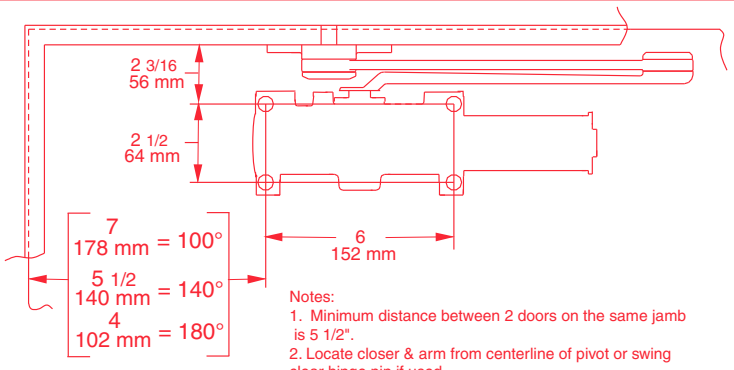
NO MAINTENANCE REQUIRED

7 Attach cover with fasteners provided.



8 Dimensional Information





Notes:
1. Minimum distance between 2 doors on the same jamb is 5 1/2".
2. Locate closer & arm from centerline of pivot or swing clear hinge pin if used.
3. Reinforcing per ANSI/SDI-100 recommended for hollow doors and frames.
4. Delay action optional.
5. For 180° opening the maximum allowable butt size is 5" x 5".
6. Closer size: 12 1/4 x 3 1/2 x 2 1/4.

LEFT HAND SHOWN, RIGHT HAND OPPOSITE
MAIN GAUCHE ILLUSTRÉE, MAIN DROITE CONTRAIRE
PUERTA DE MANO IZQUIERDA ILUSTRAR, MANO DERECHA LOAPUESTO

4110 Instructions et gabarit autocollant pour une installation sur le côté à pousser de 100°-140°-180°

1 Repérez le gabarit approprié,retirez le ruban et apposez le gabarit. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds. Retirez le gabarit avant de poser le ferme-porte.

Pour le 4110 l'installation de la Retenue 100° permet un délai de retenue additionnel.

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Réglage de force LCN® FAST™ pour régler la force du ressort

3 ① Montez le bras sur la tige à 15° du ferme-porte, comme sur l'illustration.

② Fixez l'assemblage du bras au ferme-porte à l'aide des vis fournies.

NOTE: Le bras offrira une légère résistance, comme sur l'illustration.

4 Fixez le ferme-porte sur la porte avec les attaches fournies.

5 Ouvrez la porte à environ 45°, fixez le bras au cadre à l'aide des attaches fournies.

6 Au besoin, réglez
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement

I Action retardée optionnelle
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement
④ - vitesse de retenue

7 Fixez le boîtier avec les attaches fournies.

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

II Pour régler le bras avec retenue à main optionnelle: 1. Desserrez la vis de retenue. 2. Ouvrez la porte 5° de moins que la position désirée et resserrez la vis.

⚠DANGER
Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877 - 671 - 7011

⚠DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4110 Instrucciones Pega y Pela para plantilla 100°-140°-180° montaje al lado del empujador.

1 Localice la plantilla apropiada, quite la cinta y aplique la plantilla. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes. Quita la plantilla antes de instalar el cerrador.

Para la Retención del 4110, un montaje de 100° dará un tiempo de retención adicional.

Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

LCN® FAST™ cuadrante de ajuste para ajustar la potencia del resorte

3 ① Monte el brazo en el eje a 15° del cerrador, tal como se muestra.

②Sujete el ensamblaje del brazo al cerrador con el tornillo piñión ya incluido.

NOTA: El brazo del cerrador ofrecerá cierta resistencia, tal como se muestra.

4 Sujeta el cerrador a la puerta con los tornillos ya incluidos.

5 Abra la puerta hasta aprox. 45°, sujete el brazo al bastidor con los sujetadores ya incluidos.

6 Ajusta si es necesita
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

I Acción retardada opcional
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro
④ - velocidad de retardo

7 Coloca la tapa con los sujetadores ya incluidos.

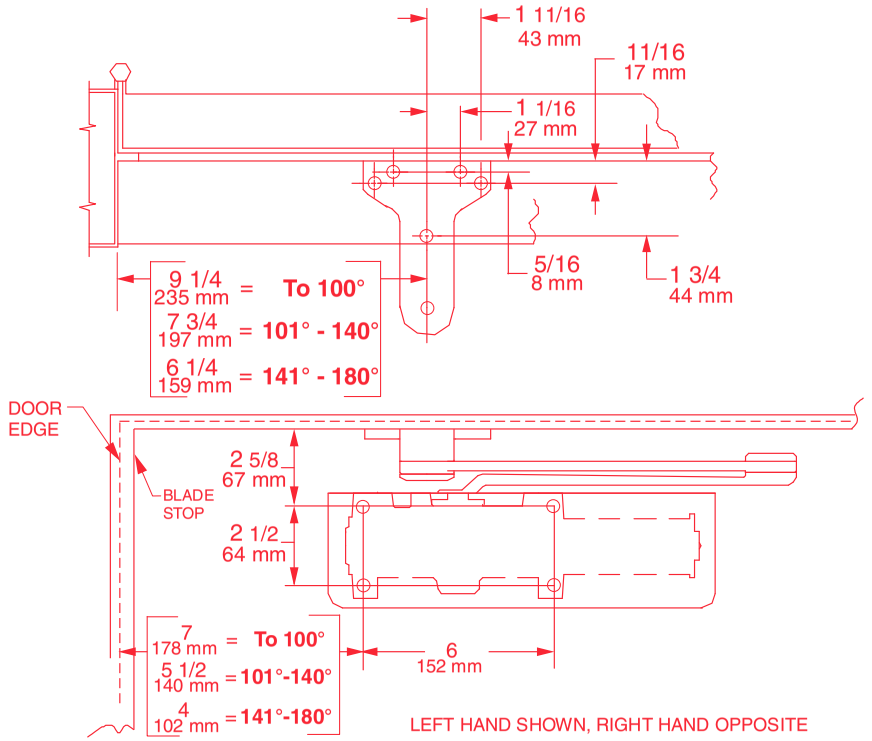
NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

II Para ajustar el brazo de retención a mano opcional: 1. Afloja la tuerca de retención. 2. Abre la puerta a 5° de menos que la posición deseada y aprieta bien la tuerca de retención.

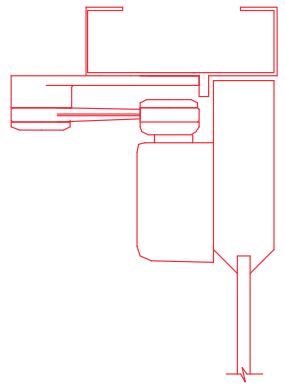
⚠ADVERTENCIA
UNA INSTALACIÓN O UN AJUSTE INCORRECTOS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL 877 - 671 - 7011

⚠ADVERTENCIA
LA APERTURA DEMASIADO GRANDE DE LAS VÁLVULAS DE AJUSTE PUEDE OCASIONAR UN DERRAME, DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES.

4110EDA with a 62G Shoe



LEFT HAND SHOWN, RIGHT HAND OPPOSITE

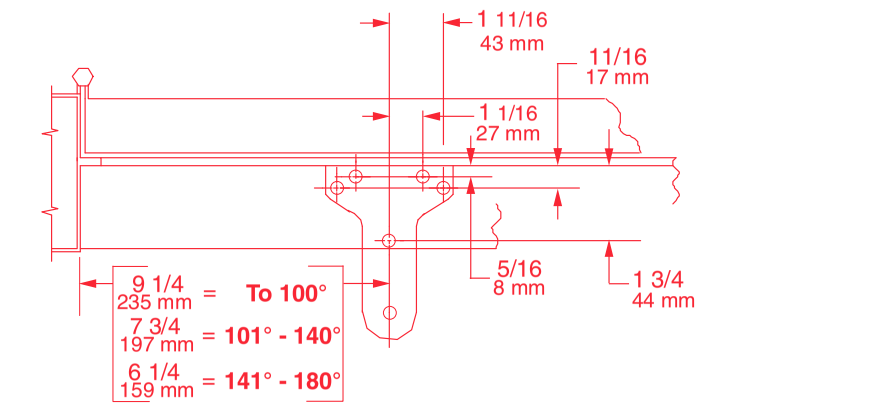


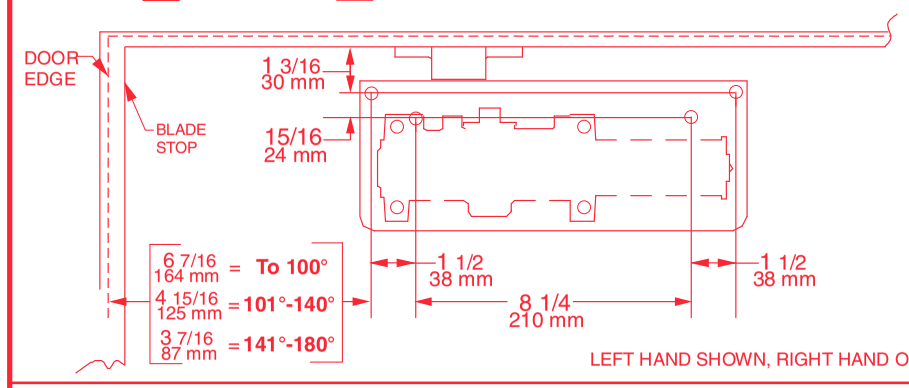
PUSH SIDE MTG. APPLIES TO:

4111 ♿
4112
4113
4114
4115
4116

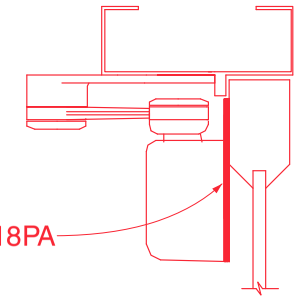
MAX. OPENING 180°
NON HOLD OPEN (90°-180°)
H-180 (90°-180° HOLD OPEN)

MIN. TOP RAIL 5 ½”





LEFT HAND SHOWN, RIGHT HAND OPPOSITE



PUSH SIDE ON 18PA APPLIES TO:

4111 ♿
4112
4113
4114
4115
4116

MAX. OPENING 180°
NON HOLD OPEN (90°-180°)
H-180 (90°-180° HOLD OPEN)

MIN. TOP RAIL 2 ½”

AUXILIARY STOP RECOMMENDED

GENERAL NOTES:
1. LOCATE CLOSER & SHOE FROM CENTERLINE OF PIVOT OR SWING CLEAR HINGE PIN WHEN USED.
2. MINIMUM DISTANCE BETWEEN 2 DOORS ON THE SAME JAMB IS 5 ½”.
3. REINFORCING PER ANSI/SD1-100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.
4. FOR 180° OPENING THE MAXIMUM ALLOWABLE BUTT SIZE IS 5” X 5”.
5. DELAY ACTION OPTIONAL.
6. CLOSER SIZE: 12 1/4 x 3 ½ x 2 1/4.

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28479 Rev. 01/14-m

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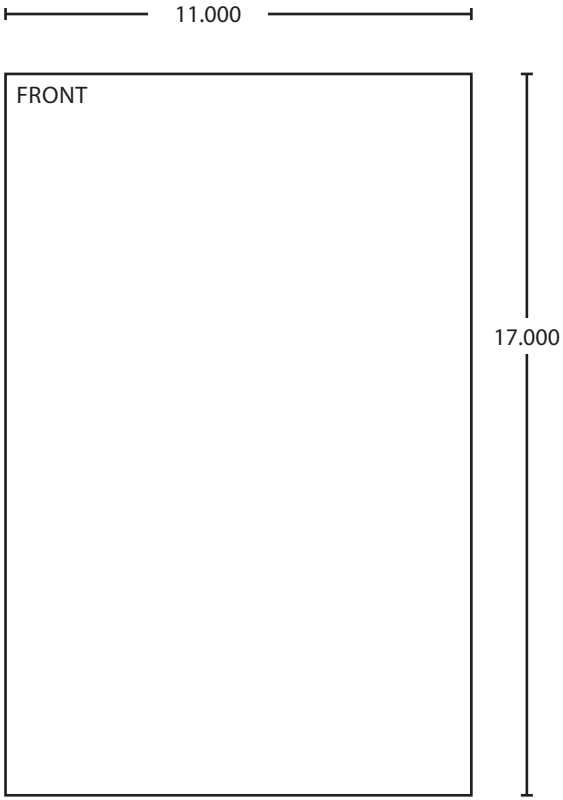
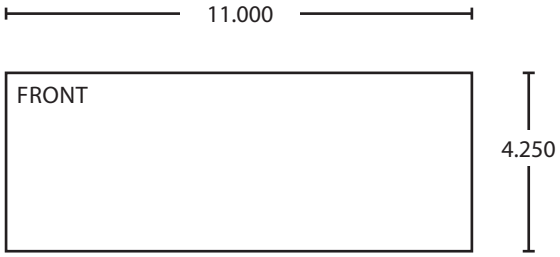


BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. Adhesive at the top 1/2" of the page (back)

Revision History					
M	N	P	R	S	T
042801					

Revision Description:
M > Revised artwork

Material
White Paper

Notes
1. printed two sides
2. printed black and PMS 1788 (orange)
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	042801	01-01-14

Title
4110 Series Push Side Instruction Sheet

Creation Date	Number	Revision
04-27-10	28479	M

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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71376

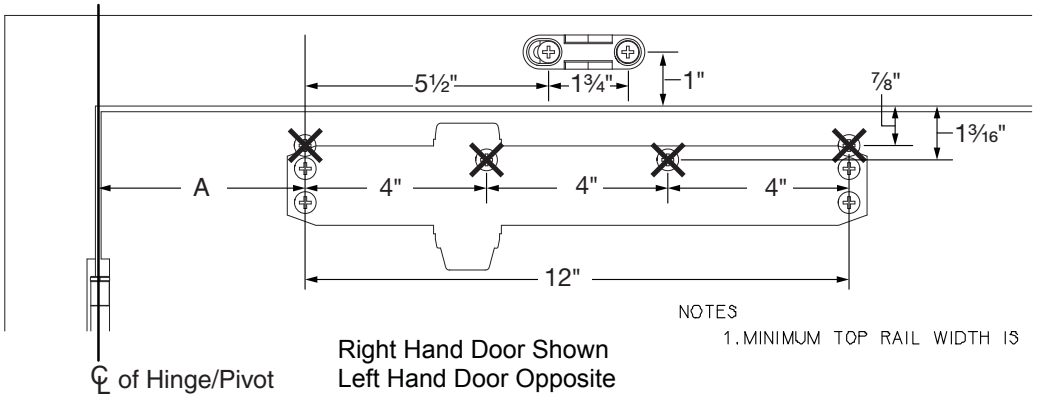
1450 Series

Drop Plate

Installation Instructions

1450 PULL SIDE (DOOR MOUNT) DROP PLATES

Pull side Arm Mounted On:
1450-18 Drop Plate
1450-18FC Drop Plate

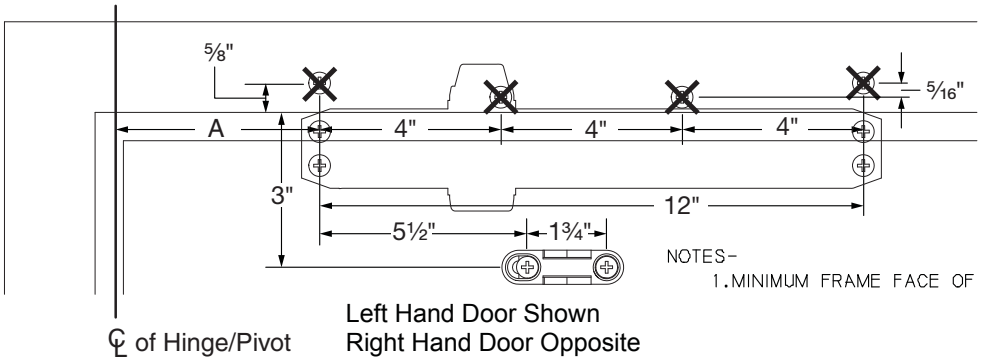


Opening	Dimension A
To 100°	7 ½"
100° -130°	6"
Over 130°	4 ½"

1450 PUSH SIDE (TOP JAMB) DROP PLATES

1450-18 Drop Plate

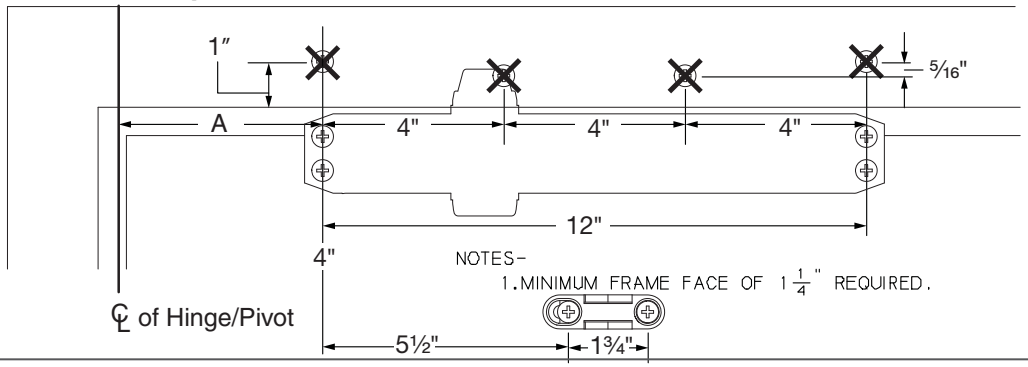
Push Side Arm Mounted On:
1450-18 Drop Plate



Opening	Dimension A
To 100°	7 ½"
100° -130°	6"
Over 130°	4 ½"

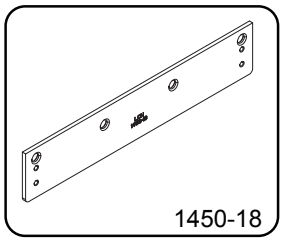
1450-18PA Drop Plate

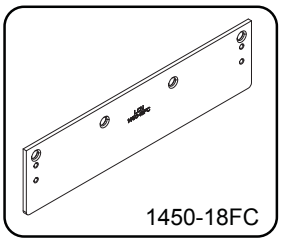
Push Side Arm Mounted On:
1450-18PA Drop Plate

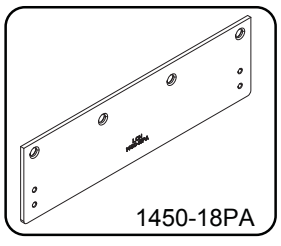


Opening	Dimension A
To 100°	7 ½"
100° -130°	6"
Over 130°	4 ½"

Left Hand Door Shown
Right Hand Door Opposite





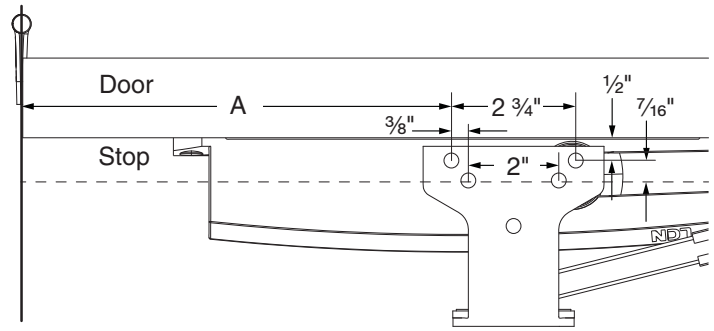


INCH	7/16	1/2	1	1 1/4	1 1/2	1 15/16	2 3/8	2 3/4	4
M.M.	11	13	25	32	38	49	60	70	102

INCH	4 1/8	5 1/2	7	7 3/4	7 7/8	8 1/4	11 1/4	11 5/8	12 3/4
M.M.	105	140	178	197	200	210	286	295	324

General Notes:
1. On Top Jamb & Hinge Face Mounts. Locate Closer & Shoe From ℄ Of Pivot or Swing Clear Hinge Pin When Used.
2. On Top Jamb Mounting When Overhead Stop is Used, Shoe Must Be Lowered To Clear Holder.
3. For 180° Opening On Hinge Face Mounts, Max Buttsize Is 5" X 5"
4 Reinforcing Per ANSI/SDI-100 Recommended For Hollow Metal Doors and Frames.

1450 Push Side (Door Mount) Drop Plates



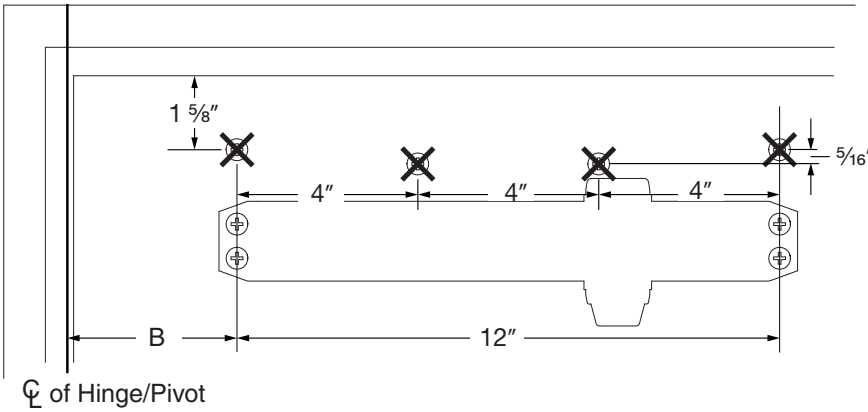
℄ of Hinge/Pivot

Left Hand Door Shown
Right Hand Door Opposite

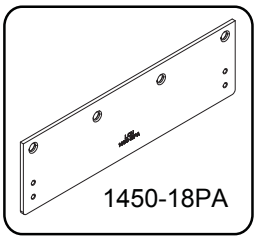
NOTES -
1. MINIMUM TOP RAIL WIDTH IS 1 7/8"

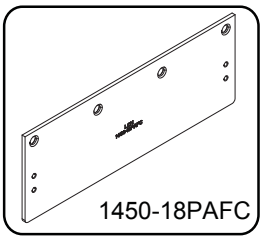
Push Side Parellel Arm Mounted On:
1450-18PA Drop Plate
1450-18PAFC Drop Plate

Opening	Dimension A	Dimension B
To 100°	9 ½"	3 ¾"
Over 130°	7"	1 ¼"



℄ of Hinge/Pivot


1450-18PA


1450-18PAFC

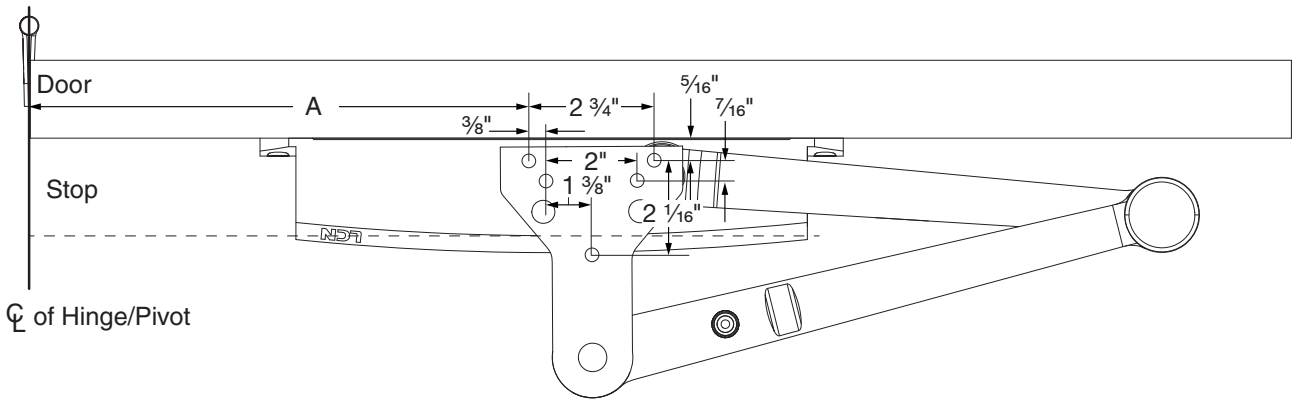
INCH	5/16	1/2	11/16	7/8	1 1/16	1 11/16	1 3/4	2 3/8	2 3/4
M.M.	8	13	17	22	27	43	44	60	70

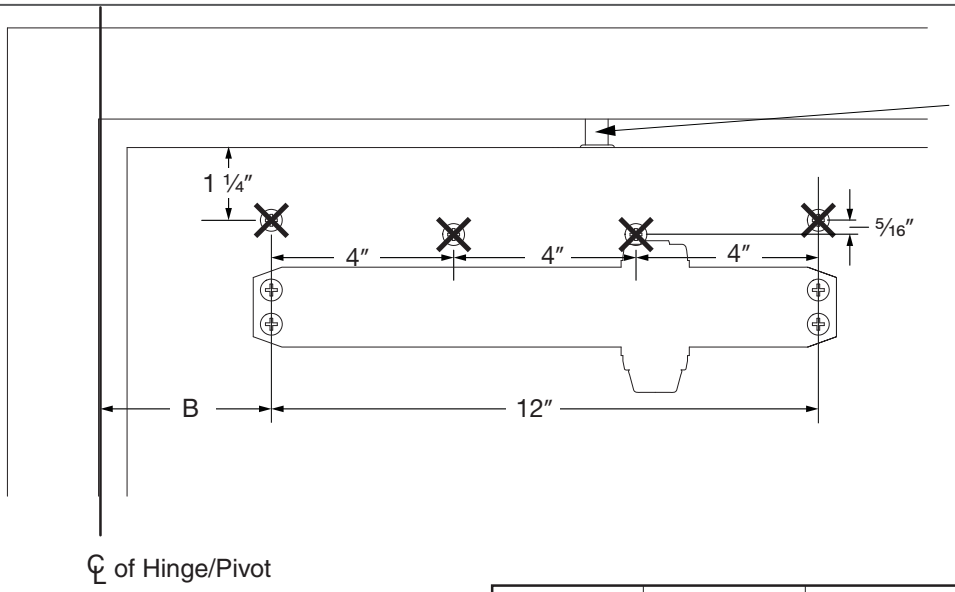
INCH	3 1/2	5 1/4	5 1/2	8 3/4	11 1/2	12 3/4
M.M.	89	133	140	222	292	324

General Notes:
1. On Top Jamb & Hinge Face mounts. Locate closer & shoe from ℄ of pivot or swing clear hinge pin when used.
2. On Top Jamb mounting when overhead stop is used, shoe must be lowered to clear holder.
3. Reinforcing Per ANSI/SDI-100 recommended for hollow metal doors and frames.

1450 Cush
Drop Plates

Push Side, Parellelarm Mounted On:
1450-18PA Drop Plate
1450-18PAFC Drop Plate



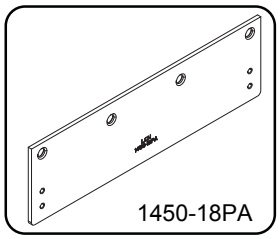


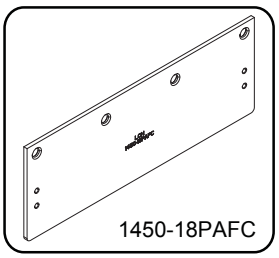
IMPORTANT

Use spacer block provided for Fifth screw ½" or ⅝"

Notes:

1. Minimum Top Rail Width is 1 ½"





Opening	Dimension A	Dimension B
85°	11"	5 ½"
90°	10 ¼"	4 ¾"
95°	9 ½"	4"
100°	8 ⅞"	3 ⅜"
105°	8 ¼"	2 ¾"
110°	7 ⅝"	2 ⅛"

INCH	1/4	5/16	3/8	1/2	5/8	11/16	7/8	1	1 1/16	1 1/2	1 5/8
M.M.	6	8	10	13	16	18	22	25	27	38	41

INCH	1 11/16	2	2 3/8	2 5/8	2 3/4	2 7/8	3 3/16	3 3/8	4 3/4	4 7/8	5 1/2
M.M.	43	51	60	66	70	73	81	86	120	123	139

INCH	5 7/8	6 5/8	7 1/2	10 1/16	11 1/16	11 9/16	12 1/4
M.M.	149	168	190	255	281	293	311

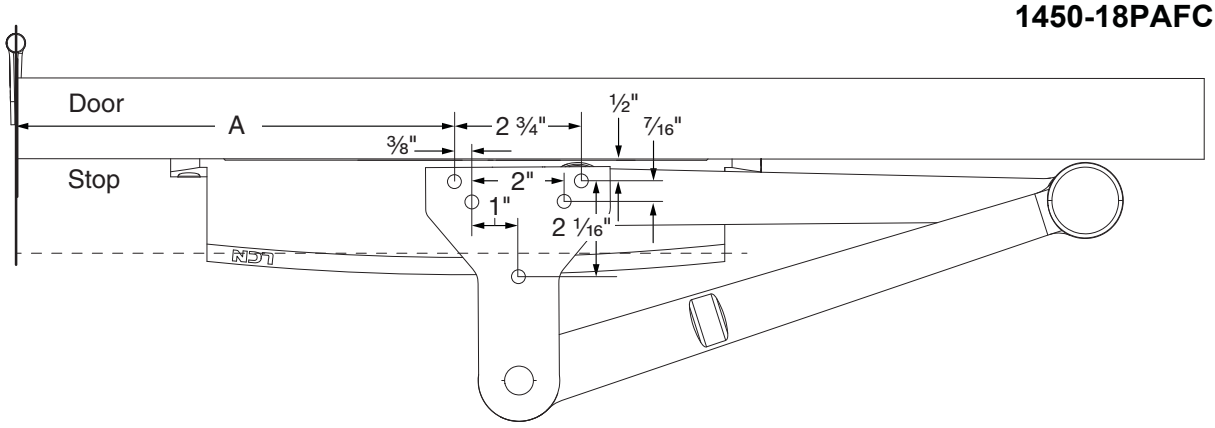
General Notes:

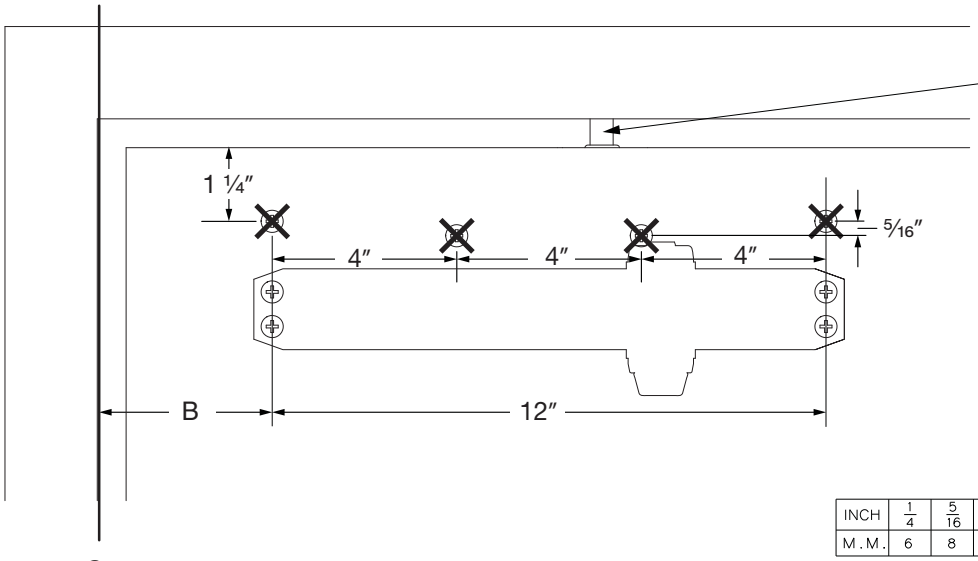
1. If door is hung on pivots Locate closer and shoe from ℄ of pivot point.
2. Top rail less than 4 3/4 Requires drop plate.
3. All dimensions applicable For hold open or dead stop.
4. Delayed action optional.
5. Reinforcing per. ANSI/SDI-100 Recommended for hollow Metal door and frames.
6. 5/8 maximum allowable side Stop.
7. Using fasters prodvided Mount drop plate with (4) 1/4 - 14 x 1 3/8 S.R.T. Mount closer to drop plates (4) 1/4 - 20 x 1/2 P.H.M.S.

✱ Increase this dimension to 15/16 for spring cush FC

1450 EDA
Drop Plates

Push Side, Parellel Arm Mounted On:
1450-18PA Drop Plate
1450-18PAFC Drop Plate





IMPORTANT
Use spacer block provided for Fifth screw 1/2" or 5/8"

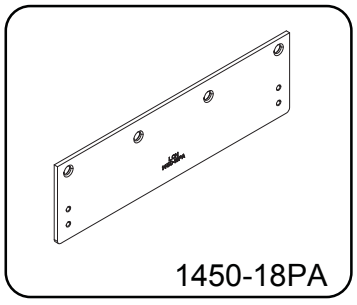
℄ of Hinge/Pivot

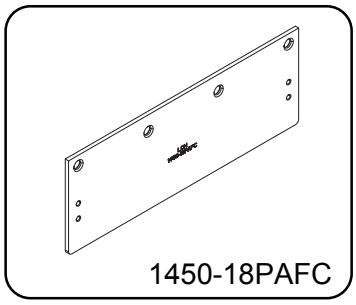
Left Hand Door Shown
Right Hand Door Opposite

INCH	1/4	5/16	3/8	1/2	5/8	11/16	7/8	1	1 1/16	1 1/2	1 5/8
M.M.	6	8	10	13	16	18	22	25	27	38	41

INCH	1 11/16	2	2 3/8	2 5/8	2 3/4	2 7/8	3 3/16	3 3/8	4 3/4	4 7/8	5 1/2
M.M.	43	51	60	66	70	73	81	86	120	123	139

INCH	5 7/8	6 5/8	7 1/2	10 1/16	11 1/16	11 9/16	12 1/4
M.M.	149	168	190	255	281	293	311


1450-18PA


1450-18PAFC

Opening	Dimension A	Dimension B
To 100°	9 1/2"	3 3/4"
Over 120°*	7"	1 1/4"

* Door openings to 180˚ conditions permitting

General Notes:
1. If door is hung on pivots locate closer and shoe from ℄ of pivot point. (consult factory if using swing clear hinges.)
2. Closer size 12 1/4 x 2 3/4 x 2 3/8.
3. Top rail less than 4 3/4 requires drop plate.
4. All dimensions applicable for hold open.
5. Delayed action optional.
6. Reinforcing per ANSI/SDI-100 recommended for hollow metal door and frames.
7. 5/8 maximum allowable side stop.
8. Using fasters provided mount drop plate with (4) 1/4 - 14 x 1 3/8 S.R.T. mount closer to drop plates with (4) 1/4 - 20 x 1/2 p.H.M.S. Max. Butt hinge size 5 x 5.

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71376 Rev. 01/16-b

28481

4110 Cush Series

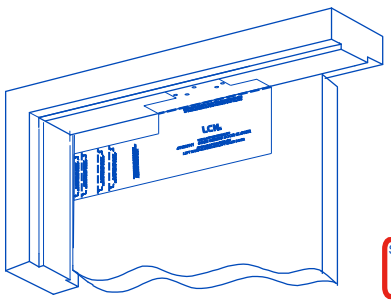
Peel-N-Stick

LCN®

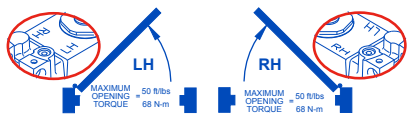
85°- 90°- 100°- 110° Template
Push Side Mounting

Installation Instructions

1 Locate proper template, peel tape and apply template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes. Remove template before installing closer.

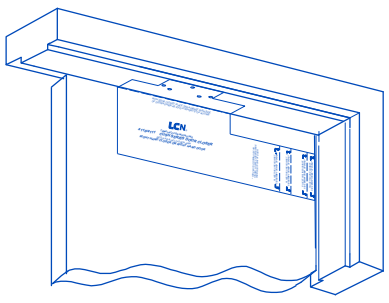


MOUNT 4111 EITHER 100° OR 110° TO MEET ADA.



SRT Screw

Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.



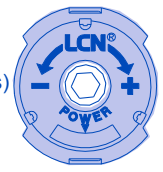
Note: Steps 2-8 show left hand door mount, right hand door is opposite.

2 Determine door width, adjust spring power to match chart.

CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

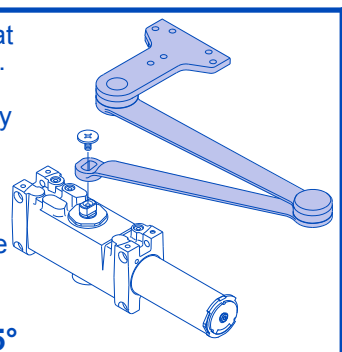
DOOR WIDTH INTERIOR	EXTERIOR	LCN FAST™ Power Adjust SET TO:
♿	—	1
34"	8.5 lb-f	2
38"	30"	3
48"	36"	4
54"	42"	5

LCN® FAST™ Power Adjust
for Spring Power Adjustment
(Used only on non-sized closers)

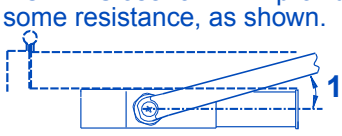


3 ① Mount arm on shaft at 15° to closer, as shown.

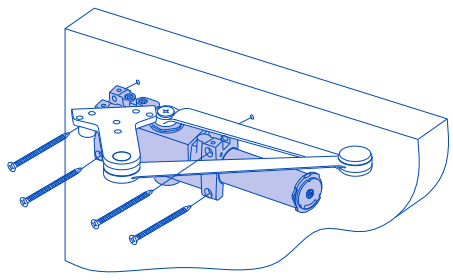
② Secure arm assembly to closer with pinion screw provided.



NOTE: Closer arm will provide some resistance, as shown.



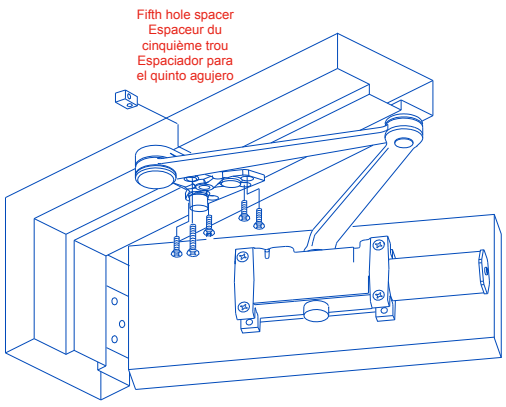
4 Using fasteners provided, secure closer to door.



5a Shoe must be "handed" to match door before mounting.

Refer to reverse side for instructions.
Instructions à lendos.
Vea al revés para las instrucciones.

5b Open door to approx. 45°, attach arm to frame with fasteners provided.

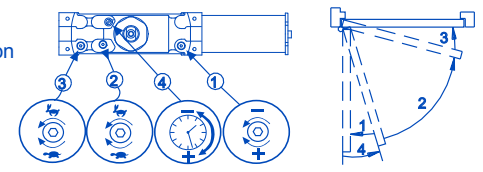


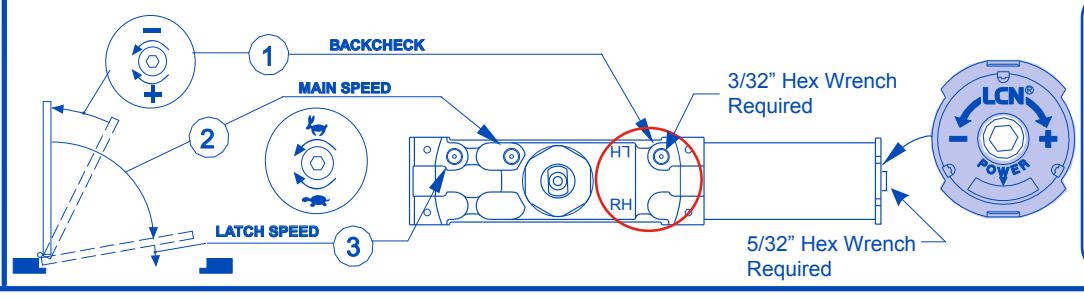
6 If necessary, adjust closer.

CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.

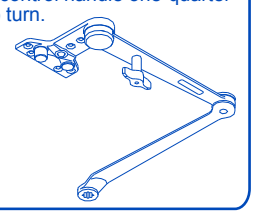
NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

I
Optional Delay Action
① - Backcheck
② - Main Speed
③ - Latch Speed
④ - Delay Speed

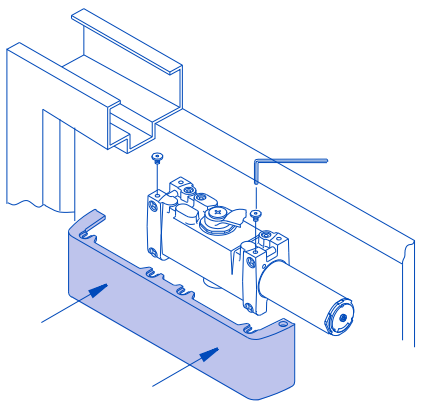




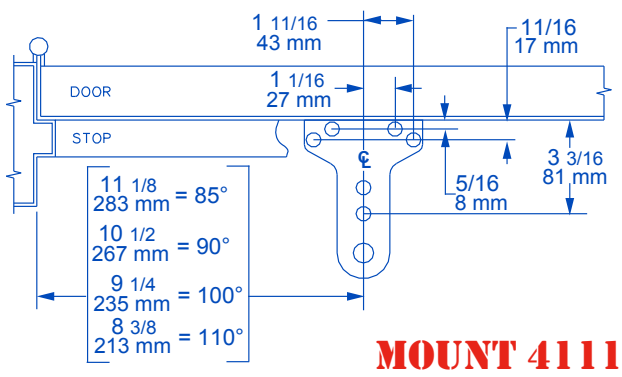
II HOLD OPEN ARM: To engage or disengage hold open feature, turn control handle one-quarter (1/4) turn.

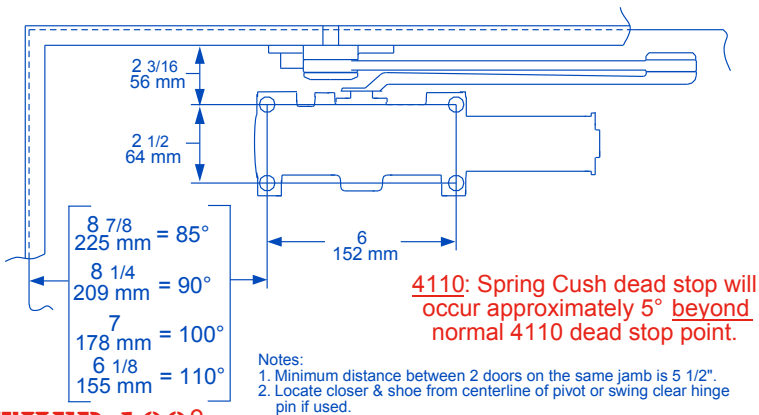


7 Attach cover with fasteners provided.



8 Dimensional Information





4110: Spring Cush dead stop will occur approximately 5° beyond normal 4110 dead stop point.

MOUNT 4111 EITHER 100° OR 110° TO MEET ADA.

LEFT HAND SHOWN, RIGHT HAND OPPOSITE
MAIN GAUCHE ILLUSTRÉE, MAIN DROITE CONTRAIRE
PUERTA DE MANO IZQUIERDA ILUSTRAR, MANO DERECHA LOAPUESTO

Notes:
1. Minimum distance between 2 doors on the same jamb is 5 1/2".
2. Locate closer & shoe from centerline of pivot or swing clear hinge pin if used.
3. Reinforcing per ANSI/SDI-100 recommended for hollow metal doors and frames.
4. Delay action optional.
5. Spring cush arm optional.
6. Closer size: 12 1/4 x 3 1/2 x 2 1/4.

4110 Cush Instructions et gabarit autocollant pour une installation sur le côté à pousser de 85°-90°-100°-110°

1 Repérez le gabarit approprié, retirez le ruban et apposez le gabarit. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds. Retirez le gabarit avant de poser le ferme-porte.

Installation 100°/110° pour conformité à l ADA

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Réglage de force LCN® FAST™ pour régler la force du ressort

3 ① Montez le bras sur la tige à 15° du ferme-porte, comme sur l'illustration.

② Fixez l'assemblage du bras au ferme-porte à l'aide des vis fournies.

NOTE: Le bras offrira une légère résistance, comme sur l'illustration.

4 Fixez le ferme-porte sur la porte avec les attaches fournies.

5a La main de la console doit être adaptée à celle de la porte avant l'installion.

5b Ouvrez la porte à environ 45°, fixez le bras au cadre à l'aide des attaches fournies.

6 Au besoin, réglez
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement

I Action retardée optionnelle
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement
④ - vitesse de retenue

7 Fixez le boîtier avec les attaches fournies.

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

II BRAS DE RETENUE: Pour engager ou désengager le mécanisme de retenue, tournez la manette de contrôle d'un quart (1/4) de tour.

DANGER
Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877 - 671 - 7011

DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4110 Instrucciones Cush Pela y Pega para plantilla 85°-90°-100°-110° montaje al lado del empujador.

1 Localice la plantilla apropiada, quite la cinta y aplique la plantilla. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes. Quita la plantilla antes de instalar el cerrador.

Montar a 100°/110° para cumplir con la norma ADA
Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

LCN® FAST™ cuadrante de ajuste para ajustar la potencia del resorte

3 ① Monte el brazo en el eje a 15° del cerrador, tal como se muestra.
②Sujete el ensamblaje del brazo alcerrador con el tornillo piñión ya incluido.

NOTA: El brazo del cerrador ofrecerá cierta resistencia, tal como se muestra.

4 Sujeta el cerrador a la puerta con los tornillos ya incluidos.

5a Debe de hacerse coincidir el lado de la zapata con la puerta antes de montarla.

5b Abra la puerta hasta aprox. 45°, sujete el brazo al bastidor con los sujetadores ya incluidos.

6 Ajusta si es necesita
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

I Acción retardada opcional
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro
④ - velocidad de retardo

7 Coloca la tapa con los sujetadores ya incluidos.

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

II BRAZO DE RETENCIÓN: Para embragar o desembragar la característica de retención, dar un cuarto de vuelta (1/4) al cabo.

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UNA INSTALACIÓN O UN AJUSTE INCORRECTOS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL 877 - 671 - 7011

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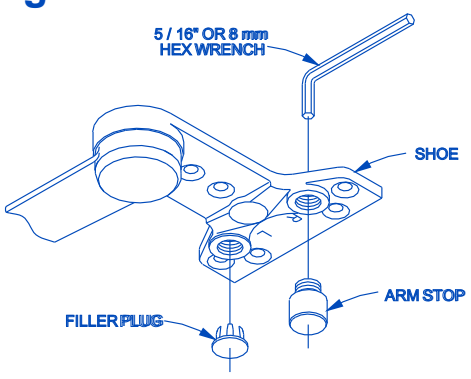
Fig. 1



Both Cush and H.O. Cush shoes must be "handed" to match door **BEFORE** mounting. See **Fig. 1.**

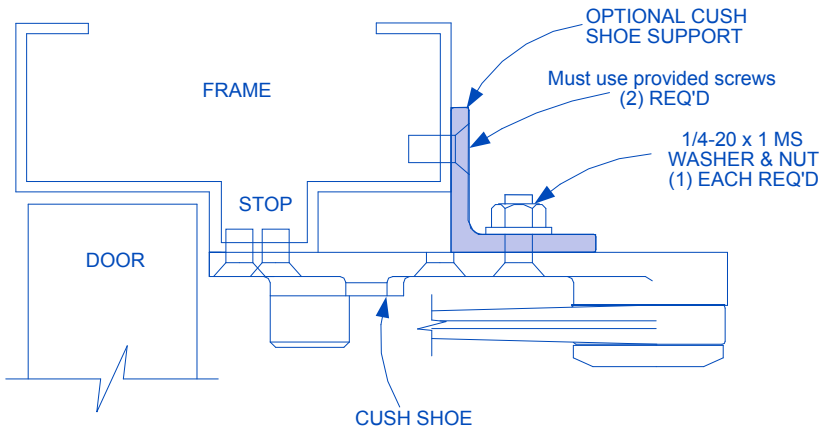
For Left Hand doors: All shoes are shipped assembled for left hand doors. Insert 5/16" (8mm) Hex wrench into arm stop and turn counter - clockwise to **seat stop as tightly as possible.**
For Right Hand doors: (see illustration) Push filler plug out of shoe. Using a 5/16" (8mm) Hex wrench, turn arm stop clockwise to remove from shoe. Thread arm stop into hole marked "R". Turn wrench counter - clockwise, **seating stop as tightly as possible.** Insert filler plug into other hole.

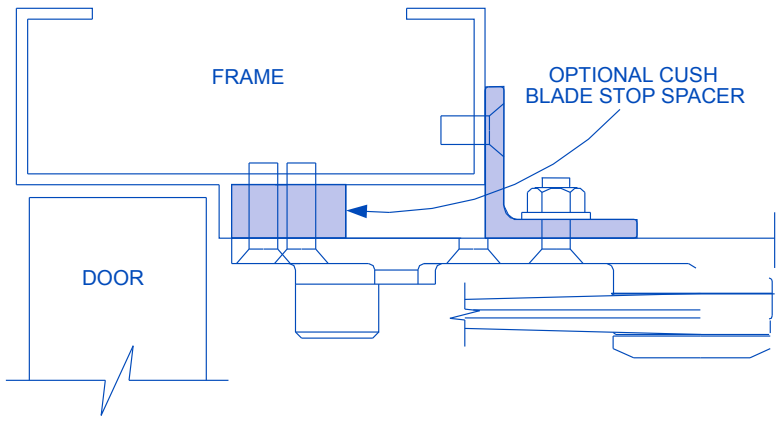
La main des sabots Cush ainsi que celle des sabots Cush avec retenue doit être adaptée à cette de la porte AVANT l'installation. Voir Fig. 1.

Portes main gauche: Tous les sabots sont expédiés assemblés pour main gauche. Insérez une clé hexagonale 5/16 ou 8mm dans la butée du bras et tournez en sens inverse des aiguilles d'une montre pour assurer une assise de butée solide.
Portes main droite: (voir l'illustration). Sortez le bouchon du sabot.
À l'aide d'une clé hexagonale 5/16 ou 8mm, tournez dans le sens des aiguilles d'une montre pour enlever le sabot. En alignant bien les filets, insérez la butée du bras dans le trou "R". Tournez la clé en sens inverse des aiguilles d'une montre, pour assurer une assise de butée solide. Insérez le bouchon dans l'autre trou.

Debe de hacerse coincidir el lado de la zapata Cush o de la zapata Cush con retención antes de montarla. Ver Figura 1.

Puertas mano izquierda: las zapatas se entregan todas en sambladas para puertas mano izquierda. Inserte una llave hex 5/16 (8 mm.) en el tope del brazo y gire en sentido contrario a las agujas del reloj para seguramente asentar el tope. Puertas mano derecha: (ver la ilustración).
Quite el tapón de llenado de la zapata. Con una llave hez 5/16 (8 mm.), gire el tope del brazo en el sentido de las agujas del reloj para quitarlo de la zapata. Coloque el tope del brazo en el agujero marcado con "R", alineando bien las roscas. Gire la llave en el sentido contrario a las agujas del rejoj para asentar bien seguro el tope. Inserte el tapón de llenado en otro agujero.





INSTRUCTIONS FOR INSTALLING
CUSH SHOE SUPPORT

AFTER CUSH - N - STOP IS INSTALLED

1----Set Cush Shoe Support on top of Cush Shoe and hold against frame.
2---Assemble screw, washer, and nut as shown and tighten securely.
3---Using Shoe Support as Template drill & tap two 1/4-20 holes in frame.
4---Insert screw & tighten securely.

If frame is not wide enough to receive fifth screw, install Cush Shoe Support (available from Dealer) as shown above.

Should frames have 1/2" Blade Stop it is necessary to use 1/2" Blade stop Spacer (available from Dealer). Use both Blade Stop Spacer and Shoe Support wherever required.

Si le cadre a une butée de 1/2" il faut utiliser un espaceur de butée de 1/2" (offert chez le concessionnaire). Utilisez espaceur et support de sabot au besoin.

Si los bastidores tienen un tope de pala de 1/2", se debe utilizar un espaciador de tope de pala de 1/2" (disponible del representante). Utilice un espaciador de tope de pala y un soporte de zapata cuando sea necesario.

INSTRUCTIONS POUR INSTALLER
LE SUPPORT DU SABOT CUSH

APRÈS L'INSTALLATION DU CUSH - N - STOP

1----Mettez le support du sabot Cush sur le sabot Cush et appuyez-le contre le cadre.
2---Assemblez la vis, la rondelle et le boulon comme sur l'illustration et serrez fermement.
3---En utilisant le support du sabot comme gabarit, taraudez deux trous de 1/4-20 dans le cadre.
4---Insérez la vis et serrez fermement.

Si le cadre n'est pas assez large pour la cinquième vis, posez le support du sabot Cush (offert chez le concessionnaire) comme sur l'illustration.

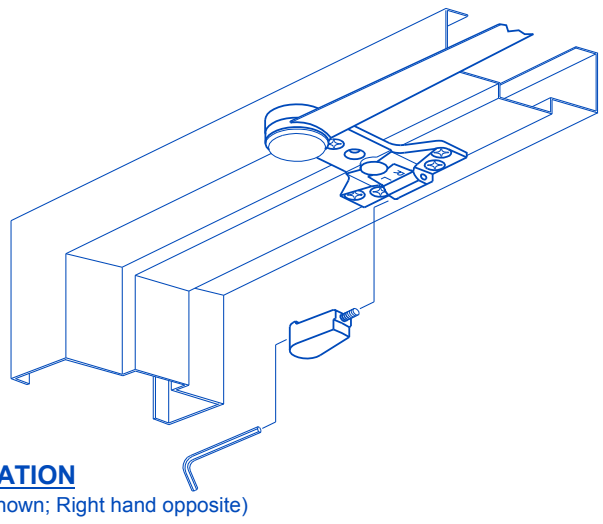
INSTRUCCIONES DE INSTALACIÓN
SOPORTE DE ZAPATA CUSH

DESPUÉS DE HABER SIDO INSTALADO EL CUSH - N - STOP

1----Coloque el soporte de zapata Cush encima del zapata Cush y téngalo contra el bastidor.
2---Monte el tornillo, la arandela y la tuerca tal como se muestra y apriételos bien.
3---Usando el soporte de zapata como plantilla, taladre y rosque dos agujeros 1/4-20 en el bastidor.
4---Inserte el tornillo y apriételo bien.

Si el bastidor no es suficientemente ancho para recibir un quinto tornillo, instale un soporte de zapata Cush (disponible del representante) tal como se muestra abajo.

INSTRUCTIONS FOR INSTALLING
SPRING CUSH ARM



INSTALLATION
(Left hand shown; Right hand opposite)

1. LOCATING: See IMPORTANT INFORMATION below. In new installations, use standard CUSH template. When replacing existing CUSH arm, use existing mounting holes.

*** See note 4 in Step 1 on front page. ***

2. INSTALLATION: Mount shoe on frame FIRST. After shoe is mounted, use a 5/32 or 4 mm hex wrench to install the contact block assembly as shown above. Make sure the screw is tightened securely into the shoe.

3. COMPLETING INSTALLATION: Complete the installation as directed for regular CUSH arms in the main instruction sheet.

IMPORTANT INFORMATION:

4110: Spring Cush dead stop will occur approximately 5° beyond normal 4110 dead stop point.

Backcheck: DO NOT reduce backcheck setting of door closer. Spring Cush arm function does not replace backcheck.

SPRING CUSH / ADAPTER PLATE COMBINATIONS:
When using a Spring Cush shoe in combination with the 4110-18 adapter plates, the shoe mounting dimensions must be increased by 1/4". Refer to the adapter plate templating on door closer instruction sheet.

INSTRUCTIONS POUR INSTALLER
UN BRAS À RESSORT CUSH

INSTALLATION
(Main gauche illustrée; main droite à l'opposé)

1. SITUER Voir RENSEIGNEMENTS IMPORTANTS. Pour une nouvelle installation, utilisez le gabarit CUSH standard. Pour remplacer un bras CUSH, utilisez les trous de montage déjà percés.

2. INSTALLATION: Montez le sabot sur le cadre EN PREMIER. Après avoir posé le sabot, utilisez une clé hexagonale 5/32 ou 4 mm pour installer l'assemblage comme sur l'illustration. Serrez la vis fermement dans le sabot.

3. TERMINER L'INSTALLATIONTerminer l'installation indiquée pour les bras CUSH sur la feuille d'instructions principale.

RENSEIGNEMENTS IMPORTANTS:
4110: L'arrêt du Cush à ressort se produira à environ 5° après celui du 4110 normal.
Résistance d'ouverture: NE PAS réduire la résistance d'ouverture du ferme-porte. La fonction du bras Cush à ressort ne remplace pas cette résistance.

INSTRUCCIONES DE INSTALACIÓN
DEL BRAZO DE RESORTE CUSH

INSTALACIÓN
(A la izquierda: como se muestra; a la derecha: al opuesto)

1.LOCALIZACIÓN: Vea los DATOS IMPORTANTES abajo. Utilice la plantilla CUSH estándar en las nuevas instalaciones. Utilice los agujeros de montaje existentes cuando se reemplace un brazo CUSH existente.

2. INSTALACIÓN: PRIMERO: Monte la zapata en el bastidor. Después de haber montado la zapata, utilice una llave de tuercas hexagonal 5/32 o 4 mm para instalar el ensamblaje de bloque de contacto como se muestra arriba. Asegúrese de apretar bien el tornillo en la zapata.

3. PARA COMPLETAR LA INSTALACIÓN:Complete la instalación como para los brazos CUSH regulares en la hoja de instrucciones principal.

DATOS IMPORTANTES:
4110: El paro en seco del resorte podrá ocurrir aproximadamente 5° después del punto del paro en seco 4110 normal.
Resistencia de apertura: NO reduzca el ajuste de resistencia de apertura del cerrador.
El funcionamiento del brazo de resorte Cush no reemplaza la resistencia de apertura.

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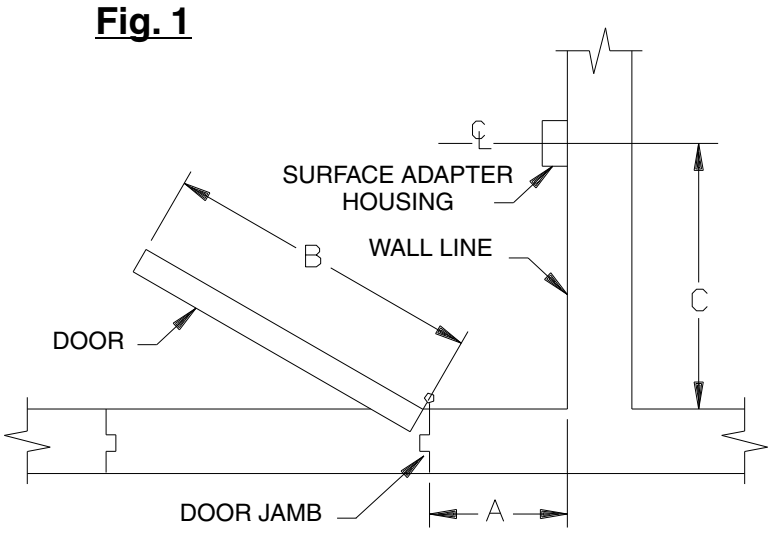
SEM 7830

Sentronic® Electro-Magnetic
Single Door Holder Surface Wall Mount

CAUTION
IMPROPER INSTALLATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 800 - 526 - 2400

Fig. 1



Step 1: Locate the Surface Mount Box

A. The magnet is shipped partially assembled for protection. Unscrew the cover from the magnet bracket assembly. Unscrew the magnet bracket assembly from the surface mount box. Keep the screws for later reattachment.

B. See Fig. 1. Measure dimensions A and B. Find the intersection of those two dimensions in Table 1. The intersection is dimension C, the centerline of the surface mount box location. (For 180° installations, take B dimension and subtract 5 5/8" to find the centerline of junction box. Note: Optional extensions maybe needed.)

C. If dimension A or B is not shown on the chart, extrapolate to find dimension C as follows.
If dimension A is 11" and dimension B is 36", then:
dimension C = 33 7/16 - ((33 7/16 - 33)/2) = 33 7/32
If dimension A is 12" and dimension B is 35", then:
dimension C = 33 - ((33 - 30 7/8)/2) = 31 15/16
If dimension A or B is beyond those listed in Table 1 or if they intersect in a blank area in Table 1, use optional extensions as needed to align contact plate and magnet.

D. See Fig. 2. The center of the surface mount box should be located about 5" from the top of the door. Using the 10 x 1 ½" PHWS screws, attach the surface mount box vertically to the wall with the surface conduit knockout pointing in the desired direction. Anchors to be provided by others to suit wall construction other than wood. The box must at least withstand a 50 pound pull.

E. Install the ½" x 11/32" surface conduit as needed.

F. Pull wire in accordance with applicable codes, standards, and authorities having jurisdiction. Electrical specifications are shown below.

Input Voltage	Current Draw Max.
120VAC, 60Hz	.02A
24VAC, 60Hz/24VDC	.02A
12VDC	.03A

Table 1 *Magnetic Door Holder Placement Chart*

7830

A = Dimension of door jamb to wall (Inch) \ *Nearest Whole Number*	*B = dimension of door width (Inch)*										
	28	*30*	*32*	*34*	*36*	*38*	*40*	*42*	*44*	*46*	*48*
2	*26*	*28*	*30*	*32*	*34*	*36*	*38*	*40*	*42*	*44*	*46*
4	*26*	*28*	*30*	*32*	*34*	*36*	*38*	*40*	*42*	*44*	*46*
6	*26*	*28*	*30*	*32*	*34*	*36*	*38*	*40*	*42*	*44*	*46*
8	*25 11/16*	*27 11/16*	*29 3/4*	*31 3/4*	*33 3/4*	*35 13/16*	*37 13/16*	*39 13/16*	*41 13/16*	*43 13/16*	*45 7/8*
10	*25 1/4*	*27 1/4*	*29 5/16*	*31 3/8*	*33 7/16*	*35 1/2*	*37 1/2*	*39 1/2*	*41 9/16*	*43 5/8*	*45 5/8*
12	*24 9/16*	*26 11/16*	*28 3/4*	*30 7/8*	*33*	*35*	*37*	*39 1/8*	*41 3/16*	*43 1/4*	*45 1/4*
14	*23 11/16*	*26*	*28*	*30 1/4*	*32 3/8*	*34 7/16*	*36 1/2*	*38 5/8*	*40 11/16*	*42 3/4*	*44 13/16*
16	*22 11/16*	*25*	*27 1/4*	*29 7/16*	*31 9/16*	*33 3/4*	*35 7/8*	*38*	*40*	*42 3/16*	*44 5/16*
18	*21 3/8*	*23 13/16*	*26 1/8*	*28 7/16*	*30 11/16*	*32 7/8*	*35*	*37 1/4*	*39 3/8*	*41 1/2*	*43 5/8*
20	*19 13/16*	*22 3/8*	*24 7/8*	*27 1/4*	*29 5/8*	*31 7/8*	*34 1/8*	*36 3/8*	*38 9/16*	*40 3/4*	*43*
22		*20 11/16*	*23 3/8*	*25 7/8*	*28 3/8*	*30 3/4*	*33*	*35 3/8*	*37 5/8*	*39 7/8*	*42*
24				*24 1/4*	*26 7/8*	*29 3/8*	*31 13/16*	*34 1/4*	*36 1/2*	*38 13/16*	*41*
26						*27 13/16*	*30 3/8*	*32 7/8*	*35 5/16*	*37 11/16*	*40*
28								*31 3/8*	*33 7/8*	*36 3/8*	*38 3/4*
30								*29 5/8*	*32 5/16*	*34 7/8*	*37 3/8*
32										*33 1/4*	*35 13/16*

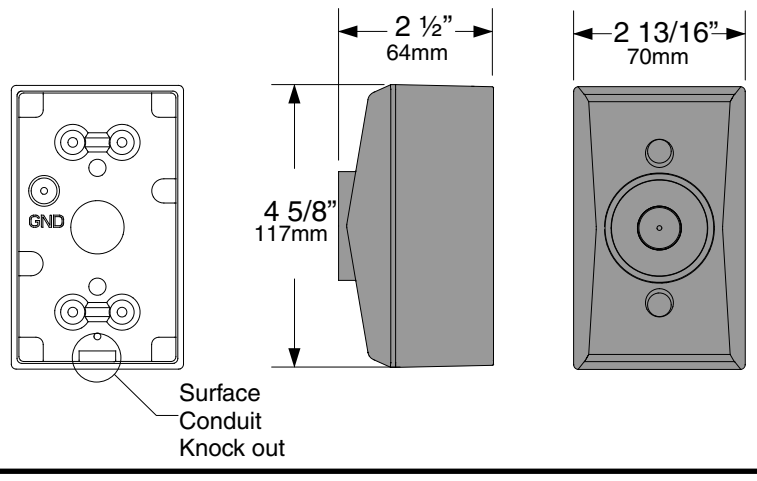


Fig. 2

WALL PORTION

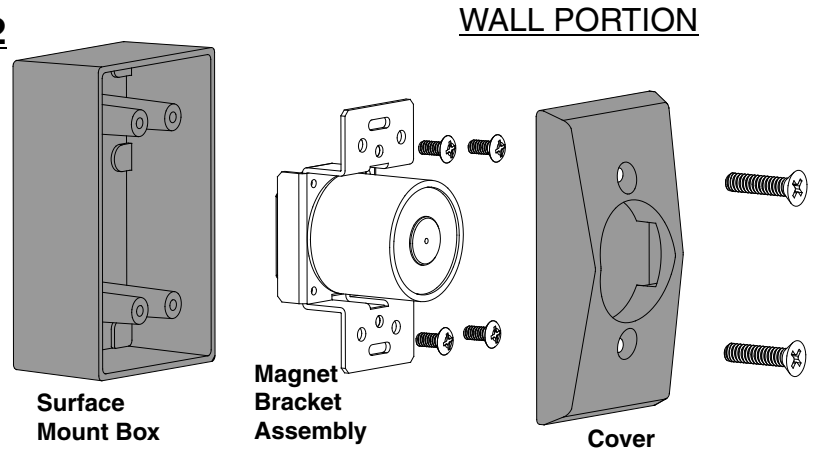
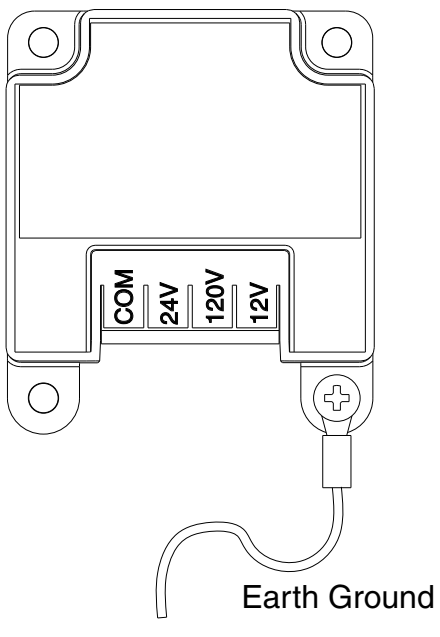


Fig. 3

Back view of magnet assembly



Step 2: Install the Magnet

A. See Fig. 3. Connect the supply earth ground wire to the green wire on the magnet bracket assembly. Connect the power supply common wire to the screw terminal marked COM. If the supply voltage is 24V, connect the power supply hot wire to the screw terminal marked 24V. If the supply voltage is 120V, connect the power supply hot wire to the screw terminal marked 120V. If the supply voltage is 12V, connect the power supply hot wire to the screw terminal marked 12V. Polarity is important on the 12V input. There are protective plastic tabs over the terminal screws. Break off the two tabs that protect COM and the desired voltage so that the screw heads are exposed.

B. See Fig. 2. With the magnet wired, position the magnet bracket assembly into the surface mount box and attach it to the box using the (4) 10-24 shorter screws from step 1A. Tighten firmly. Attach the cover housing using the (2) 10-24 longer screws from step 1A.

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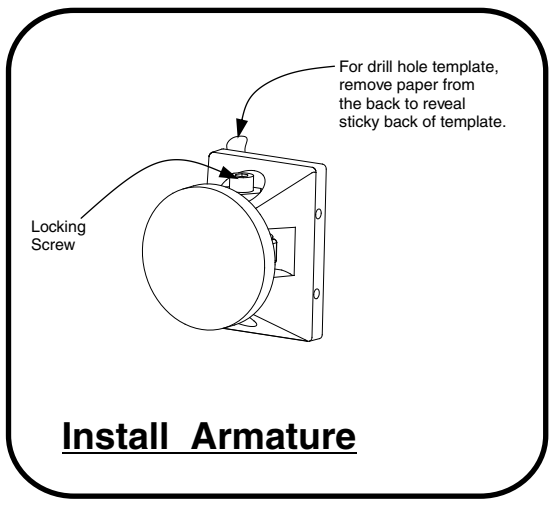
Fig. 4



Install Armature

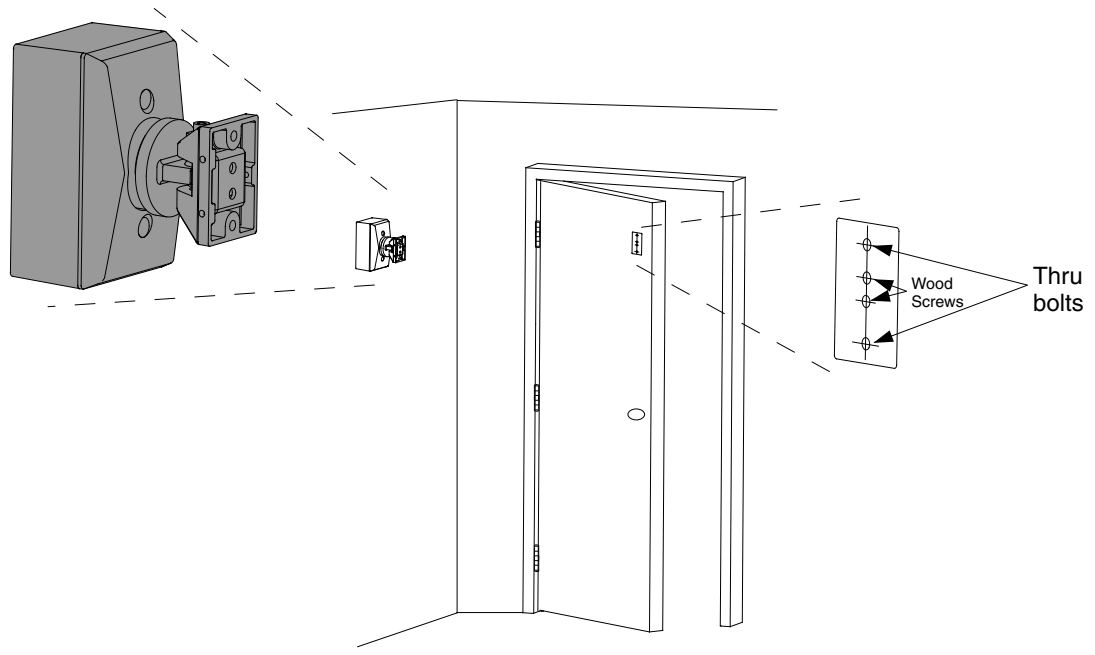
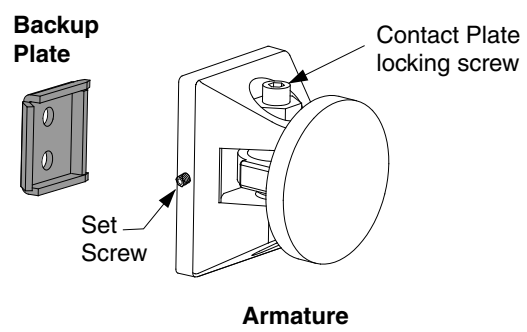


Fig. 5 WOOD SCREW MOUNTING

FOR SOLID WOOD CORE DOORS

This view shows the contact plate locking screw accessible from the top. Rotate backup plate 180° for underside access.



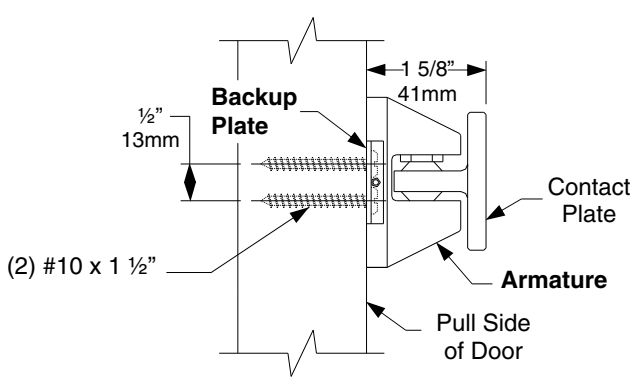
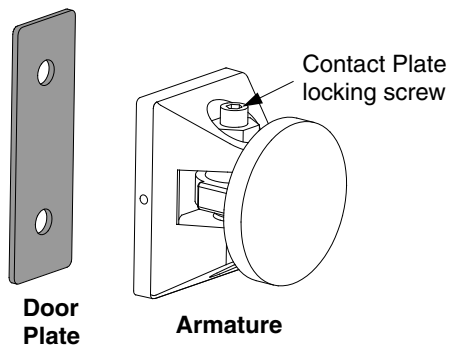
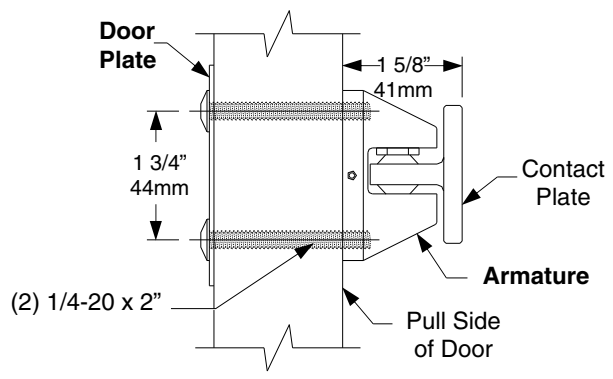


Fig. 6 THRU BOLT MOUNTING

RECOMMENDED FOR
HOLLOW METAL, HOLLOW CORE
OR COMPOSITE TYPE WOOD DOORS





Step 3: Install the Door Armature

A. See Fig. 4. Slightly loosen the contact plate locking screw using a 5/32″ Allen wrench so the contact plate can rotate with some resistance. Remove the protective paper from the drill template sticky-back label on the back of the door armature.

B. Place the armature against the wall magnet. This is best done with power applied to the magnet. If power is not available, hold the armature in place by hand. The armature contact plate must fully cover the magnet. If the contact plate is not centered and flat on the magnet, reduced holding force will result.

C. With the armature against the magnet, open the door and press it against the armature and magnet. Pull the door away to transfer the drill template to the door. Template may need assistance with transferring to door, using a flat blade screwdriver on the template tab that sticks out and push it onto the door while pulling the door away.

D. See Fig. 5 and 6. Determine if the armature will be mounted using the wood screw kit or the thru bolt kit. The thru bolt kit is recommended for 1 ¾″ hollow metal, hollow core, or composite-type wood doors. If using the wood screw kit, drill the center two holes on the template using a 1/8″ bit by 1 ¼″ deep. If using the thru bolt kit, drill the outer two holes on the template using a 5/16″ bit all the way through the door. Remove the template after the holes are drilled.

E. Attach the armature to the door using the appropriate plate and screws. If using the wood screws and backup plate, tighten the armature set screw against the backup plate as the last step using the 1/16″ Allen wrench provided.

740158

Benchmark III

Swing Operator
Models 9130, 9140 & 9150

Installation Instructions

Table of Contents

General 1
Replacement Parts & System Components 1
Replacement Parts & System Components (Cont.) 2
1 Pre-Installation Site & Product Check 3
2 Operator Installation 4
3 Wiring 7
4 Arm & Cover Installation 7
5 Operational Check 9
6 Operator Adjustment 10
7 Release for Service 11
8 Benchmark III Software 11

General

The Benchmark is an automatic electromechanical swinging door operator for use on hinged, center pivoted and offset pivoted doors. When activated, the Benchmark drives the door to full open position, then electrical power is turned off and the door is closed by spring force. The activating circuit opens the door from any position in the closing swing. During a power failure, the Benchmark acts as a manual door closer (Size 3). Door opening and closing cycles, including opening speed, back check speed, hold open time delay, closing speed, and latch position, are adjustable.

⚠ WARNING ⚠

Always disconnect main power to the operator prior to servicing or cleaning.

⚠ CAUTION ⚠

This operator is for indoor use only.

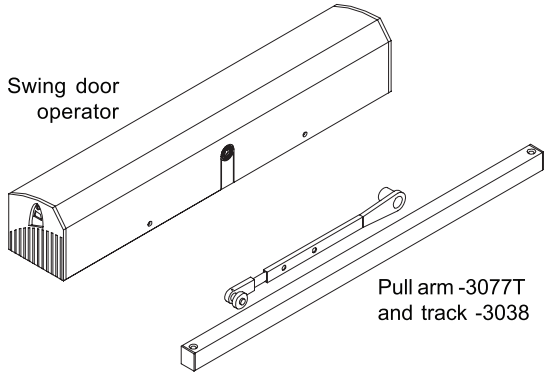
Do not mount any accessories directly to the operator.

Replacement Parts & System Components

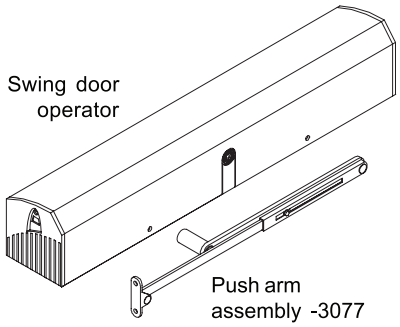
Part	27" Header	Full Length Header Single	Full Length Header Double
Premium Control Box	9130-3462SC 9140-3462SC	9130-3462SC 9140-3462SC	9150-3462SC
Gear Box	9130-3454S 9140-3554S	9130-3454 9140-3454	9150-3454S
End Caps	9130-334	9140-334	9150-334

Part	Pull	Standard Push	Extended Reveal Push	Finish
Arm Assembly	9130-3077T	9140-3077 9150-3077	9140-3077L 9150-3077L	US28 DC13

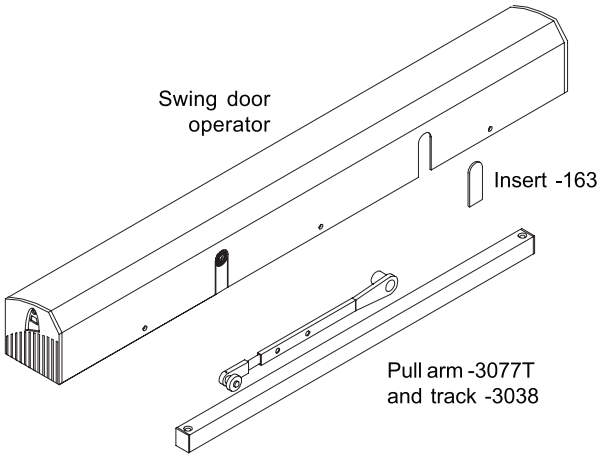
Double Push System
(Screw pack not shown)



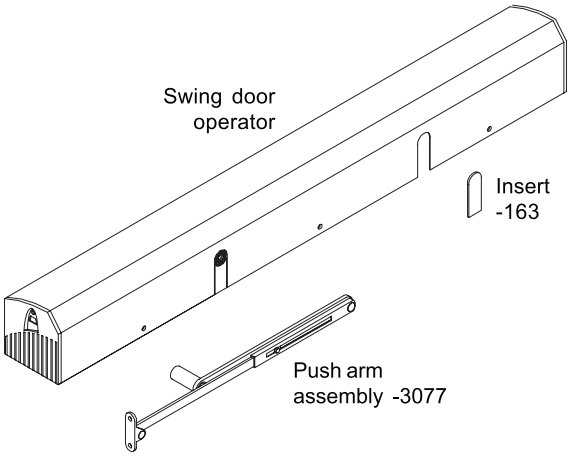
27” Pull System
(screw pack not shown)



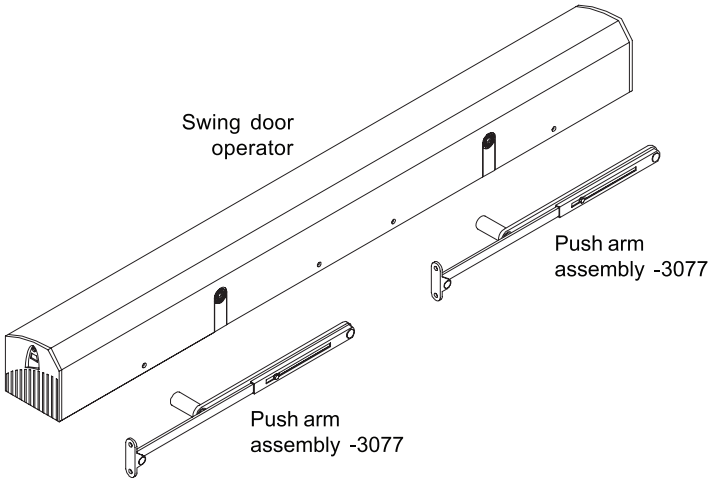
27” Push System
(screw pack not shown)



Full Length Pull System
(screw pack not shown)



Full Length Push System
(screw pack not shown)



1 Pre-Installation Site & Product Check

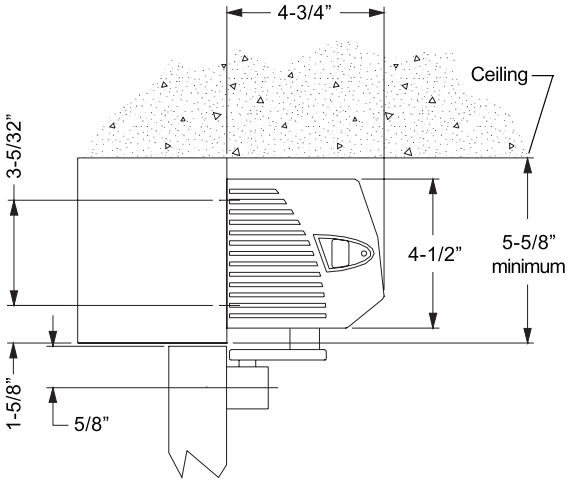
1a Check that the Product Model is correct for the required application.

1b Check that all parts listed on the Bill of Material are in the shipping container.

1c Check the architectural drawings and final approved shop drawings for the position of frame and structural openings.

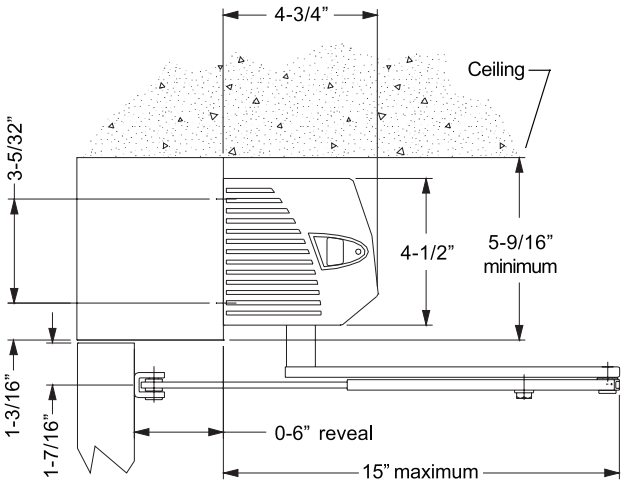
1d Check header and frame dimensions and required clearances.

Clearances for 27” Pull System and Full Length Pull System



2” frame face minimum
2” top rail in door minimum

Clearances for 27” Push System, Full Length Push System, and Double Push System



2” frame face minimum
2” top rail in door minimum
5-1/4” top rail in door minimum (flush mount)

1e Check Door Width:

a. 26” minimum for 27” Push Operator
b. 30” minimum for 27” Pull Operator
c. 36” minimum for Full Length Push or Full Length Pull Operators

1f Check that Door Weight is 200 lbs. or less. For heavier door, consult factory.

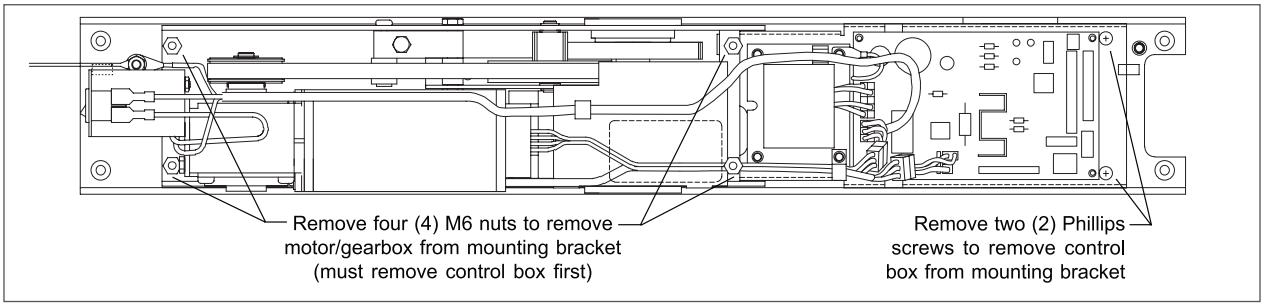
1g Check that a 115 volt, single phase, 60 Hz, fused 15 amp, 3-wire power supply is available at the side jamb with approximately 12” of wire available to connect to the Operator. UL approved flexible conduit is recommended for the 115 volt power line.

The 115 volt power supply must be a dedicated circuit from the main circuit breaker panel and must NOT be connected into any building lighting system that operates flourescent lights.

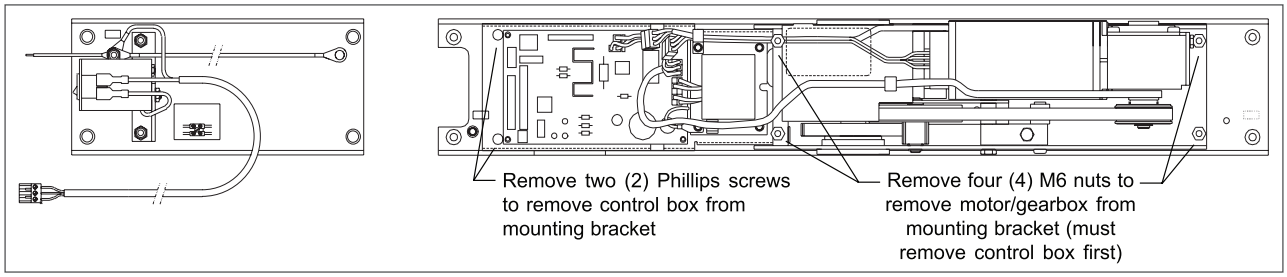
2 Operator Installation

2a Remove Control Box from Operator Mounting Bracket, then remove Motor/Gearbox from Bracket:

Control Box and Motor/Gearbox Removal
27” Pull, 27” Push, and Double Push Systems



Control Box and Motor/Gearbox Removal
Full Length Pull and Full Length Push Systems



2b Prepare Header/Frame and Door:

a. 27” Pull System ..... Page 6
b. Full Length Pull System ..... Page 6
c. 27” Push System ..... Page 7
d. Full Length Push System ..... Page 7
e. Double Push System ..... Page 8
f. Low Ceiling Application ..... Page 8

NOTE

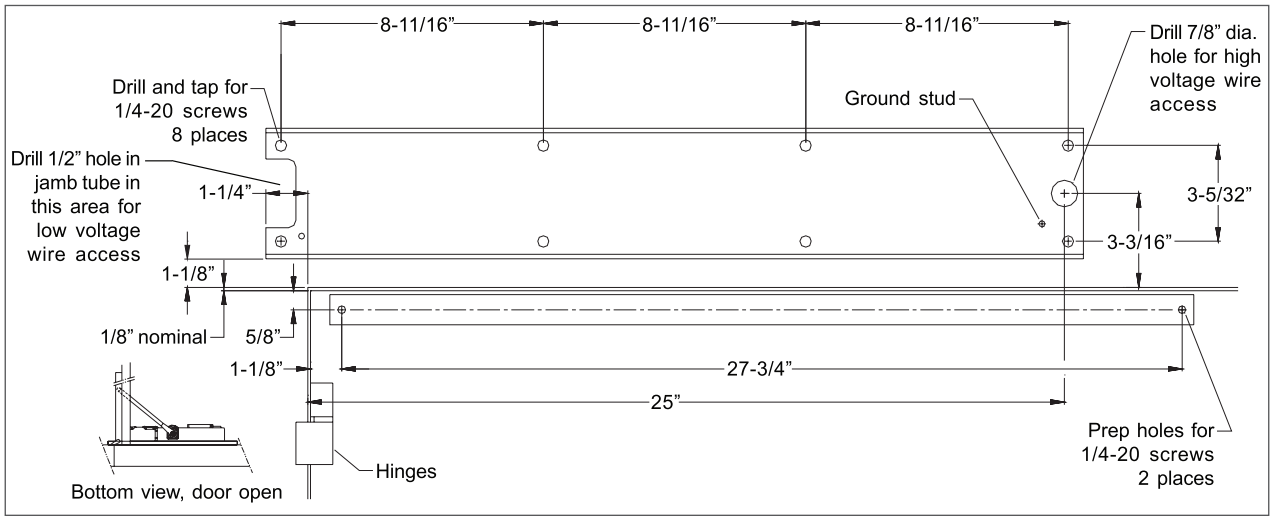
For Push Units with a Reveal greater than 6” refer to the installation sheet included in the Extended Arm package.

2c Install Operator Mounting Bracket on Header/Frame. For Full Length systems, also install Switch Bracket on Header/Frame.

2d Install Motor/Gearbox on Operator Mounting Bracket. Then install Control Box on Bracket.

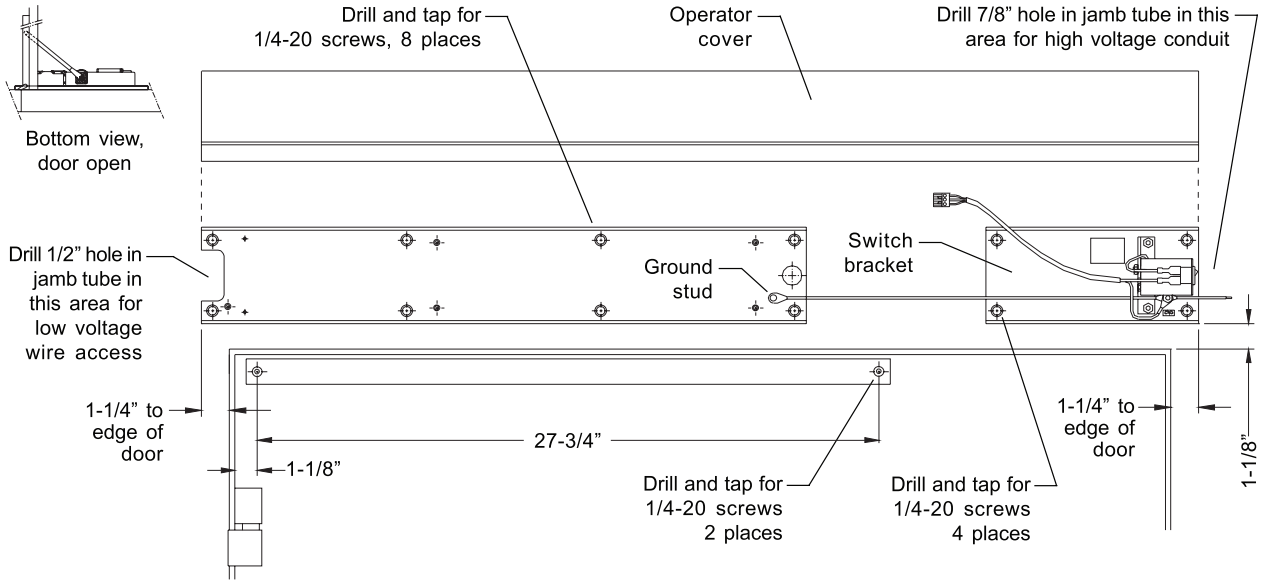
2e Proceed to Chapter 3: Wiring (Page 9).

27” Pull System
Header/Frame and Door Preparation

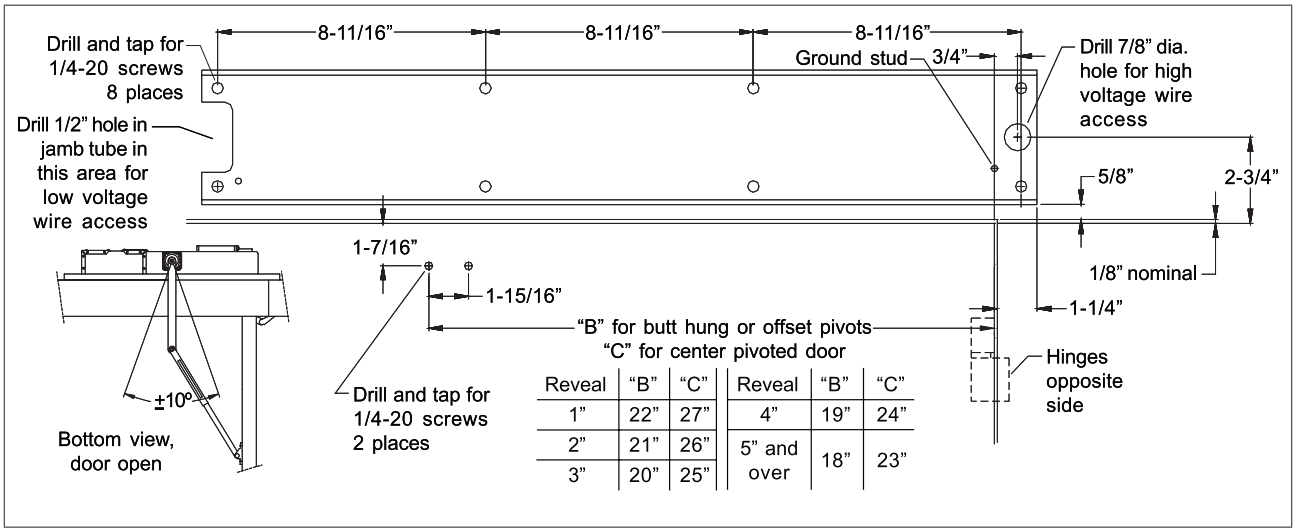


Full Length Pull System
Header/Frame and Door Preparation

Center Operator Cover (with End Caps removed) over opening and mark a vertical line at each end. Align ends of Operator Mounting Bracket and Switch Bracket with vertical lines and adjust vertical position per diagram below. Mark and prepare mounting holes.



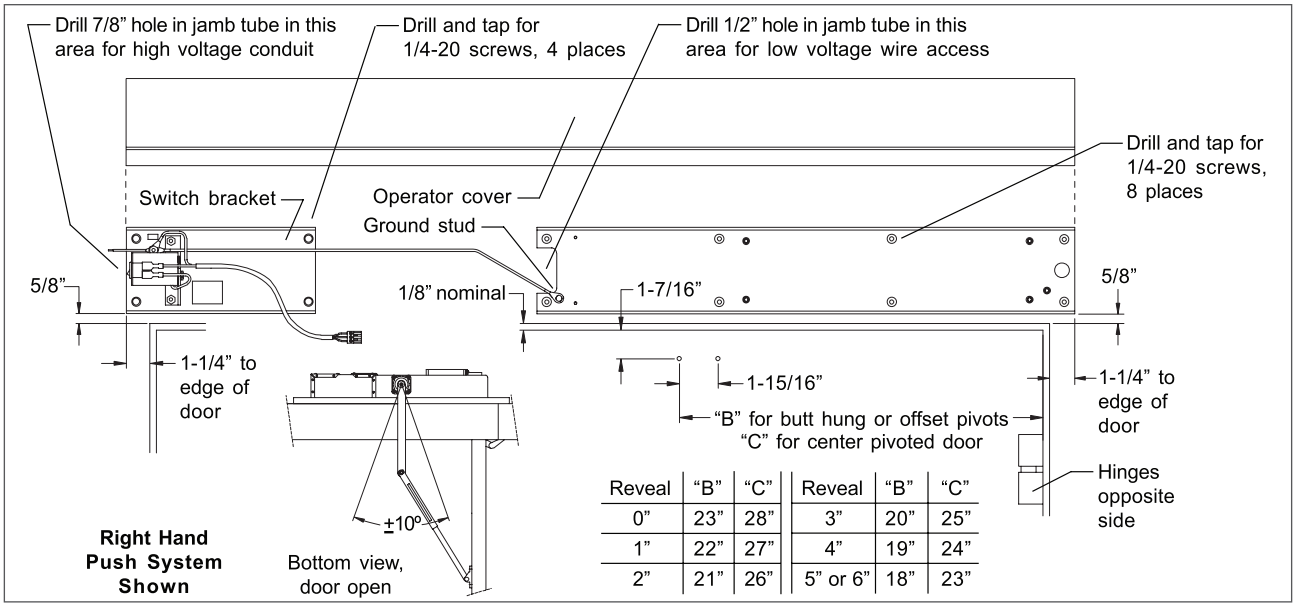
27” Push System
Header/Frame and Door Preparation



Reveal	“B”	“C”	Reveal	“B”	“C”
1”	22”	27”	4”	19”	24”
2”	21”	26”	5” and over	18”	23”
3”	20”	25”			

Full Length Push System
Frame/Header and Door Preparation

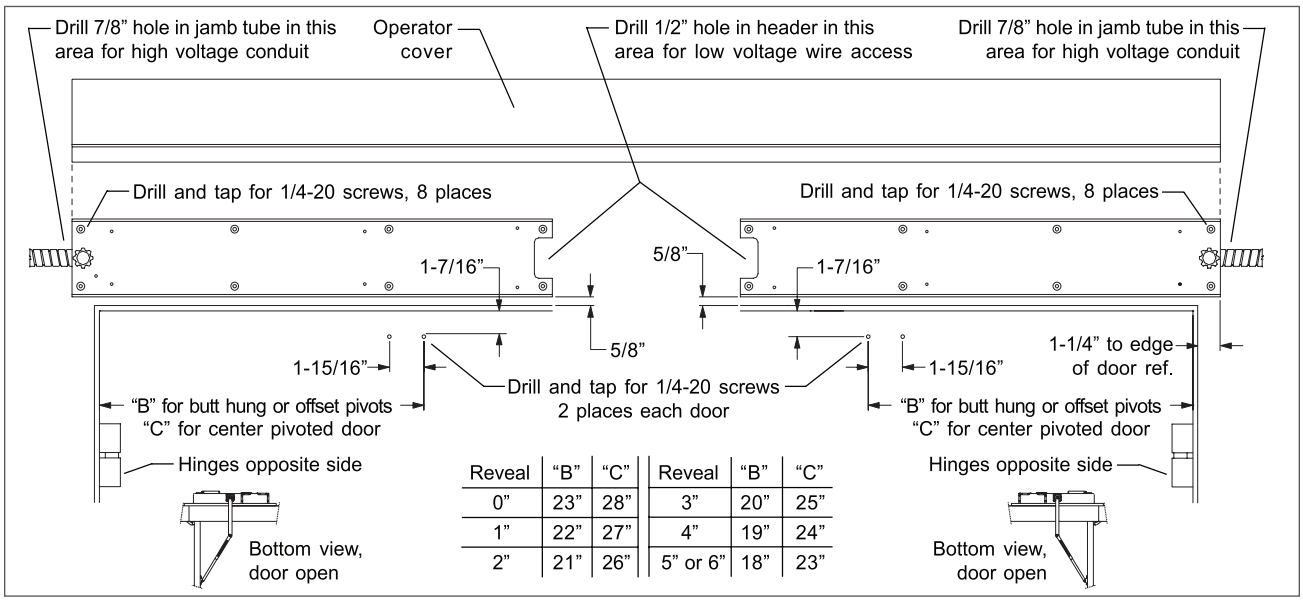
Center operator cover (with end caps removed) over opening and mark a vertical line at each end. Align ends of operator mounting bracket and switch bracket with vertical lines and adjust vertical position per diagram below. Mark and prepare mounting holes.



Reveal	"B"	"C"	Reveal	"B"	"C"
0"	23"	28"	3"	20"	25"
1"	22"	27"	4"	19"	24"
2"	21"	26"	5" or 6"	18"	23"

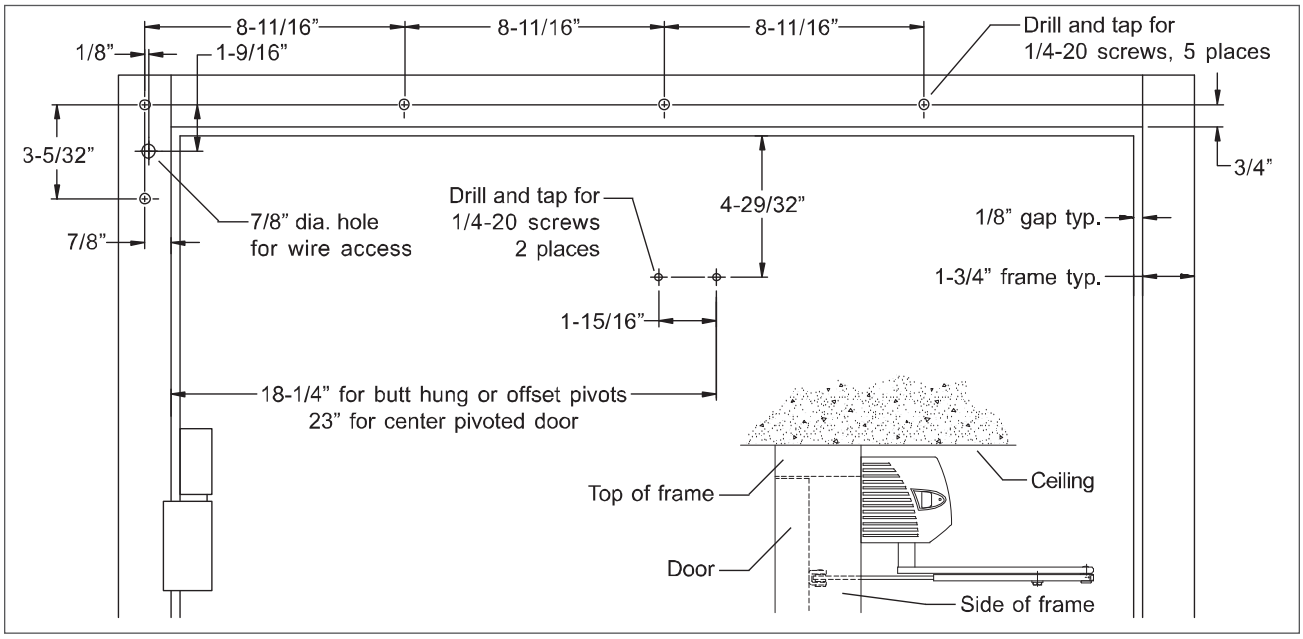
Double Push System
Header/Frame and Door Preparation

Center operator cover (with End Caps removed) over opening and mark a vertical line at each end. Align ends of Operator Mounting Bracket and Switch Bracket with vertical lines and adjust vertical position per diagram below. Mark and prepare mounting holes.



Reveal	"B"	"C"	Reveal	"B"	"C"
0"	23"	28"	3"	20"	25"
1"	22"	27"	4"	19"	24"
2"	21"	26"	5" or 6"	18"	23"

Low Ceiling Application (27” Push System Only)
Header/Frame and Door Preparation



3 Wiring

CAUTION

Make sure all wires are properly dressed and secured to prevent interference.

Route all wiring away from moving parts, sharp edges, and heat sources.

Use copper conductors only.

Do not modify the factory wiring or connect into existing electrical circuits or devices.

3a Refer to the appropriate wiring diagram for the Control Box (Page 19) or the diagram supplied for custom applications. Connect the following cables:

- Ground Cable (Ground the Operator properly with the earth from main supply)
- Hall Effect Cable (Do not wrap the Hall Effect Cable around the Motor Power Cable)
- Motor Power Cable (Do not wrap the Motor Power Cable around the Hall Effect Cable)
- Control Box Power Cable

3b Connect Activate, Safety, Key Switch, and lock accessories, as needed.

Refer to the accessory instructions for any accessories used. Do not connect any remote activating device to the door unless it is located within line of sight of the door.

3c When wiring is complete, proceed to Chapter 4: Arm and Cover Installation (page 10).

4 Arm & Cover Installation

CAUTION

Keep hands, clothing, wires, tools, etc., AWAY FROM Operator Motor when the Operator Motor is turned on.

4a Make sure the Operator Powers is turned Off.

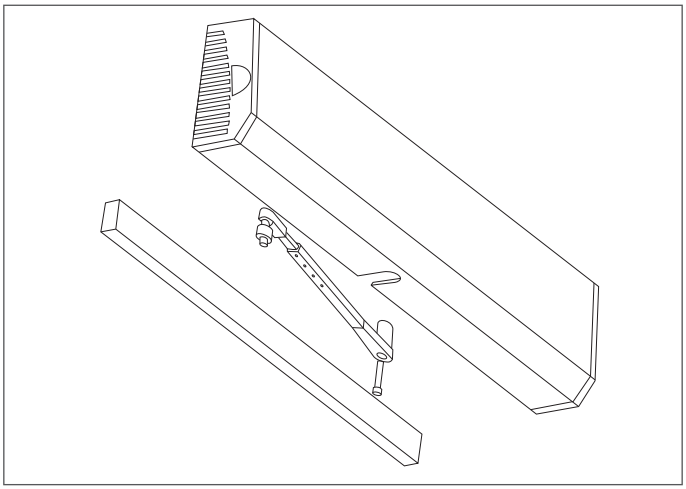
4b Install a jumper across the control box Main Act and Main Act.

4c Turn the operator power switch to On.

The operator motor will activate and drive to the Full Open position.

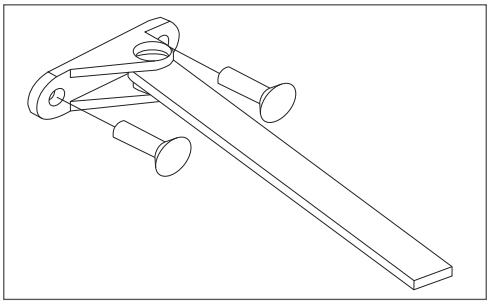
4d Attach the arm to the operator spindle loosely with the 8mm socket head screw.

For push systems, ensure that the adjusting boss is inserted correctly.

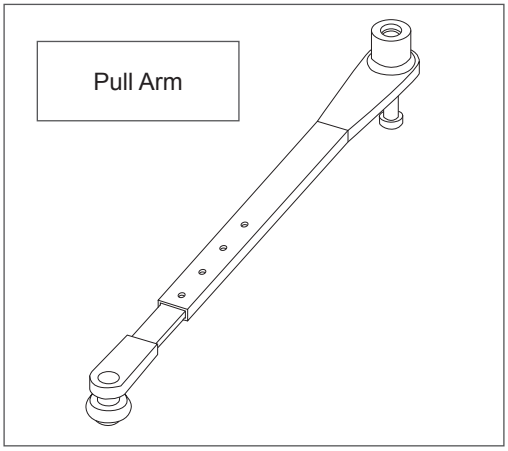


4e Attach the arm to the door.

1. For push systems, attach the push arm shoe to the door:

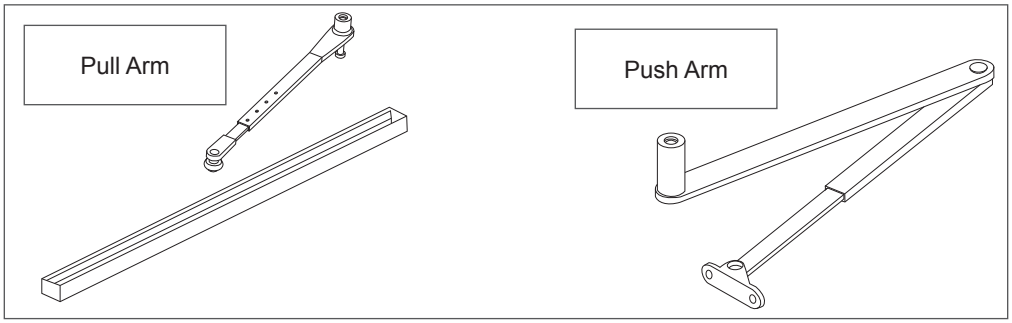


2. For pull systems, slide the pull arm roller into the track, then insert a track cap on each end of the track and attach the track to the door:



4f Adjust arm:

1. For pull systems, remove the locking screw from the arm.
2. For push system, remove the locking screw from the arm.



3. Keep the door in the full open position and adjust the arm length as necessary to align the door at 90 degrees from closed. When the arm is adjusted to the correct length, tighten the 8mm socket head screw that secures the arm to the operator spindle.
4. Ensure this screw is secure, then tighten the arm locking screw.

4g Turn Off the power operator switch. The door should close.

4h Remove the jumper from the control box Main Act and Main Act.

4i Test the operator (see Chapter 5: Operational Check on page 13).

4j Adjust the operator as required (see Chapter 6: Operator Adjustment on page 15).

4k Snap the optional end cap insert (in bag of screws) into end cap opposite the On/Off switch.

4l Install the cover assembly onto the operator.

4m Release the operator for service (see Chapter7: Release for Service on page 17).

5 Operational Check

5a Set the key switch to Auto (if used) and turn on the operator power switch.

5b Activate the operator using the activation device.

The operator will perform one sizing cycle.

Sizing cycle: Occurs after power is turned on and a legitimate activation signal is received. During the sizing cycle, the door opens and closes one time.

5c If the Door does NOT OPEN AT ALL during the sizing cycle:

- Check the door for binding.
- If an electromechanical lock is being used, check that the lock disengages before the operator opens the door.
- Check fuses, circuit breakers and connections.
- Adjust the operator and check the door operation (see Chapter 6: Operator Adjustment on page 15).

Below are default settings:

Opening Speed	9:00
Back Check Speed	3:00
Hold Open Time Delay	10:00
Latch Position	12:00
Closing Speed	12:00
SW1 1, 2, 3, 4	OFF
Back Check Position	4:00 (fully clockwise)

5d If the door does NOT OPEN FULLY during the sizing cycle:

- Check the door for binding.
- Increase the back check speed slightly and re-check the door operation. Repeat until door opens fully.

5e If the door SLAMS OPEN during the sizing cycle, decrease the back check speed slightly and re-check the door operation. Repeat until the door opens without slamming.

5f After the sizing cycle is completed and the door(s) are closed, apply a maintained activation signal. Check that the door remains open while the signal is applied.

5g If a door safety device is being used:

1. Door Open Safety:
   When the door is in the closed position, activate the safety device and try to activate the door open. The door should remain closed.
2. Door Close Safety:
   When the door is in fully open position, activate the safety device and the door should remain open.

5h When the door is operating properly, continue with step 4j above.

6 Operator Adjustment

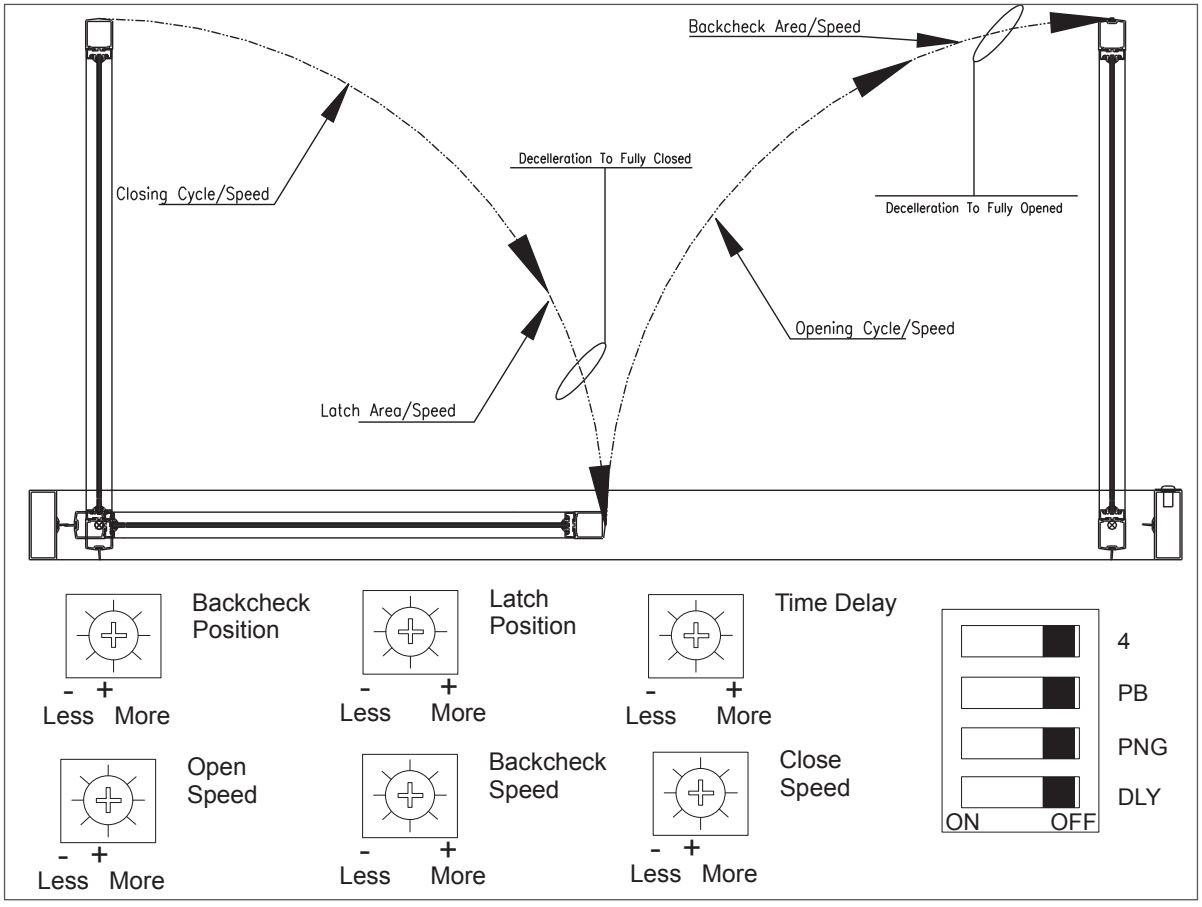
See table below and diagrams (page 16) for operator feature adjustment.
After adjusting, cycle the door several times to check for proper operation. Then continue with step 4k on page 9.

NOTE

Adjust Operator for the SLOWEST operation practical, in accordance with the latest revisions of the Americans with Disabilities Act (ADA); ANSI/BHMA A156.19 Standards for Power-Assisted and Low Energy Power-Operated Doors; and local codes.

Opening Speed: 5 seconds or more
Closing Speed: 3 seconds or more
Latch Location: 10 degrees or more
Latch Speed: 1.5 seconds or more

Features	Control	Description	Counter Clockwise	Clockwise
Opening Speed	Opening Speed	Controls opening speed of door	Slower	Faster
Back Check Speed	Back Check Speed	Controls the speed of the door near the full open position to prevent door slamming	Slower	Faster
Hold Open Time Delay	Hold Open Time Delay	Controls the length of time the door remains in the full open position: 1 sec to 15 sec	Less Time Down to 1 sec	More Time Up to 15 sec
Back Check Position	Back Check Position	Door position where back check speed engages	Less Latch	More Latch
Closing Speed	Closing Speed	Controls closing speed of door	Slower	Faster
Delayed Activation	DLY (SW1)	Delays opening of door for strike applications (1 second delay)		
Push and Go	PNG (SW2)	ON: Pushing the door open 5° causes operator to open door for remainder of open cycle		
Power Boost On or Off	PB (SW3)	ON: 3-second power boost enabled: applies additional force to close door—used for high wind situations		
	SW4	Not used		



7 Release for Service

7a Remove all tools, installation equipment and debris from the vicinity of the door.

7b MANDATORY: Install all Safety, Traffic Control and Instruction Labels onto the door, as required. Failure to do this will leave the INSTALLER LIABLE for any accidents that occur.

7c Give verbal instruction on how to properly operate the door to the owner or person in charge.

7d Give verbal instruction to the owner or person in charge on periodic inspection of the door for the following:

- Occasional damage
- Developing problems
- Minor preventative maintenance

7e Provide the owner or person in charge with a contact name and phone number to call for future service and maintenance.

IMPORTANT

Be sure to install all Safety, Traffic Control and Instruction Labels onto the door, as required.

8 Benchmark III Software

8a Operation:

1. Sizing
   From start-up (Sizing), the door will activate via:

- 1-Way Input (Main Act and Main Act).
- 2-Way Input (3-Way OFF, 3-Way HO and 3-Way GND) with key switch in the ON position, uses either Main Act or Aux Act input
- Key switch in Hold Open position.

The first motion of the door will be towards the Door Open position. The speed during Sizing is automatic and cannot be set from a potentiometer.

The door drives to full open and the system sets the open counter to full open.

The door closes at Closing Speed. The system sets the closed counter to Full Closed when the latch goes up at the Closed position.

The system calculates all other parameters required for normal operation based on the two values of Full Open and Full Closed.

2. Standard Operation

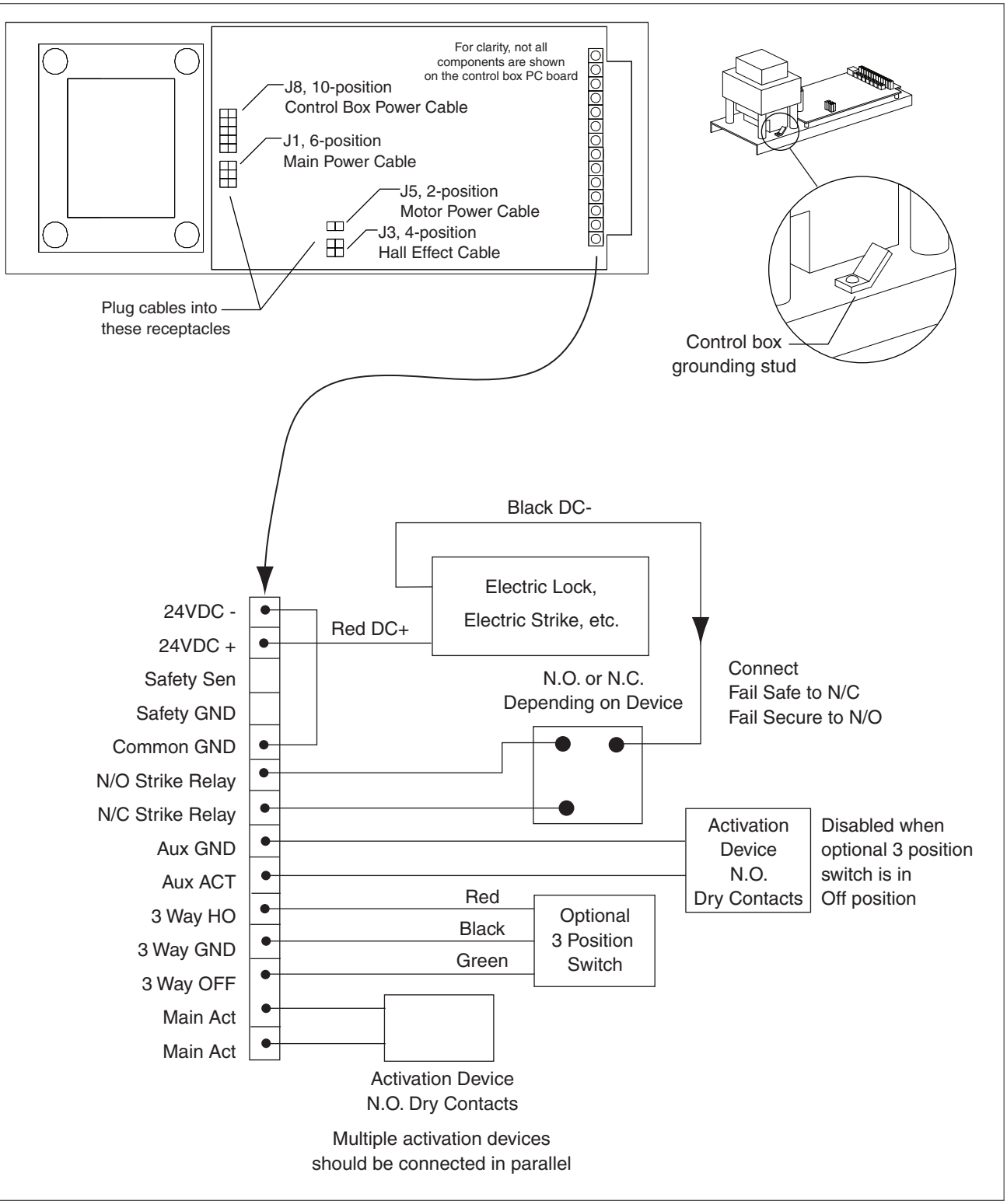
Upon a legitimate activation signal, the door accelerates to opening speed while monitoring the current load on the drive output. If the current exceeds the specified level, the door will stop and close.

The door travels at it's set speed (based on the potentiometer setting) until it reaches the Back Check position, where it will decelerate to the Back Check Speed.

The door will stop at the Hold Open position and remain there until an activation or the Hold Open Timer is cleared.

The door then closes at its Closing Speed (based on the potentiometer setting) up to the latched position.

If the Closing Speed is decreased by driving the motor in the open direction (a fixed setting), power is added to allow the spring to continue closing the door to the Full Closed position.



ALLEGION

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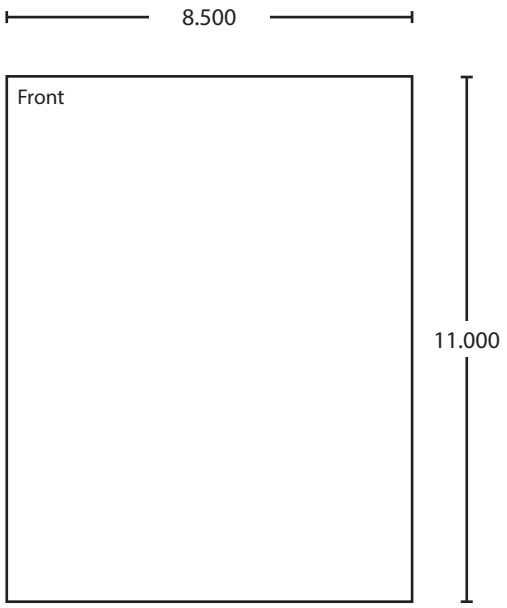
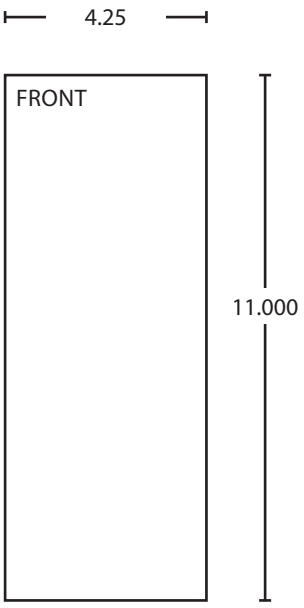
740158 Rev. 01/14-e



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
E	F	G	H	J	K
042801					

Material
White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. 12-page saddle-stitched booklet
5. drawings not to scale

Revision Description:
E > New Release

Edited By	Approved By	EC Number	Release Date
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Title
Benchmark III Swing Operator Installation Instructions

Creation Date	Number	Revision
12-15-10	740158	E

Created By
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Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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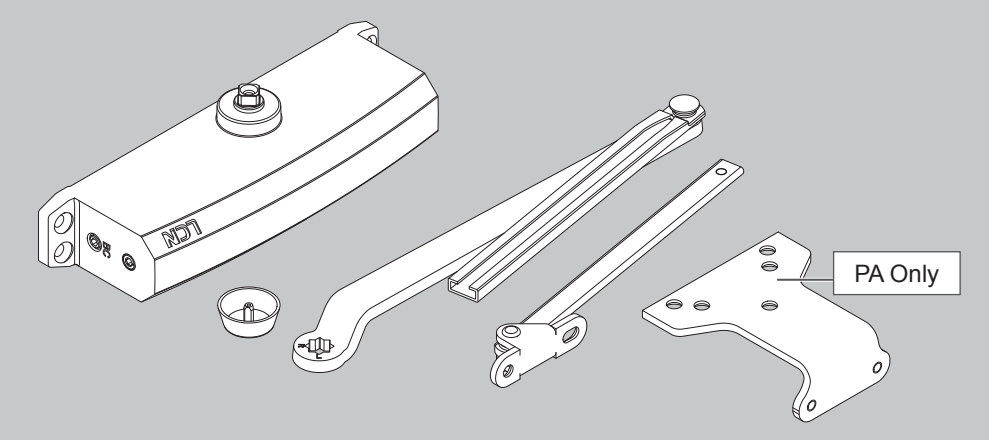
1250 Series

71375

Pull Side, Top Jamb Mount, and Parallel Arm (PA) Mount

Installation Instructions

PARTS

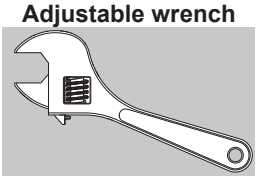


ⓘ **Screw pack information is on page 5.**

TOOLS

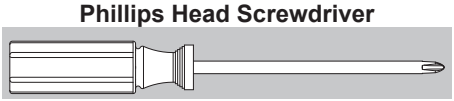
5⁄32" or 4mm Hex Wrench

Adjustable wrench



1⁄8" Drill Bit

Phillips Head Screwdriver



ⓘ **Hold Open wrench info on page 5.**

⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage.
Follow all instructions carefully.
For questions, call LCN at 877 - 671 - 7011

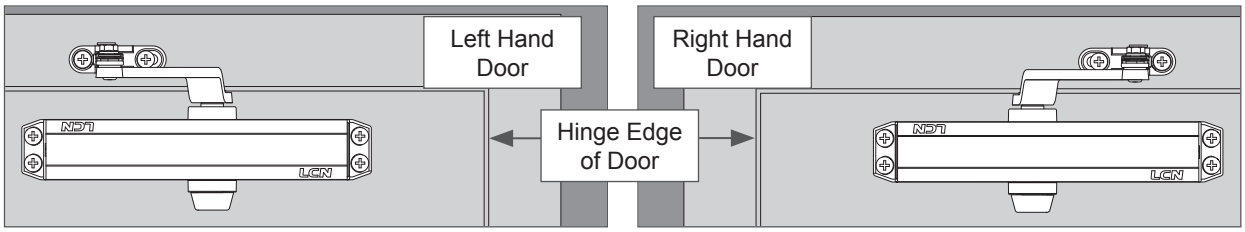
Hold open arms must not be installed on fire rated doors.

Opening the regulation valves too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.
FOLLOW ALL INSTRUCTIONS CAREFULLY.

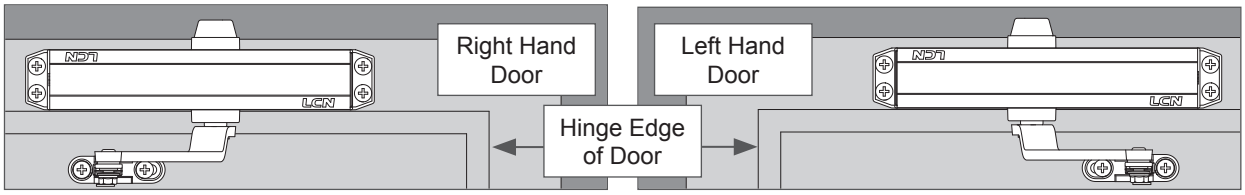
DO NOT USE THE CLOSER AS A DOOR STOP!
An auxiliary stop is recommended at the hold-open point or where the door cannot swing 180º.

Choose Installation Type

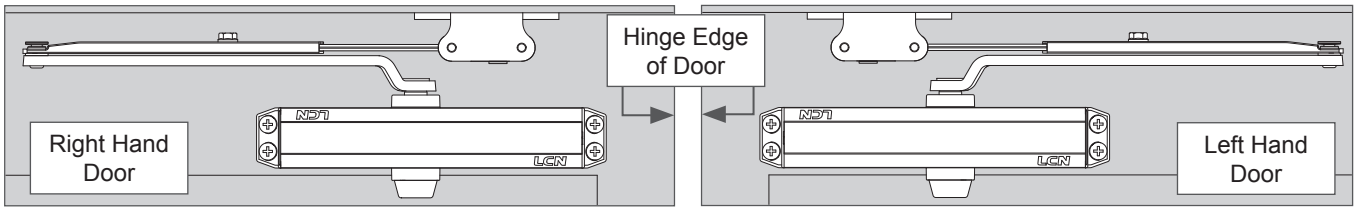
Pull Side Mount (see page 2)



Push Side Top Jamb Mount (see page 3)



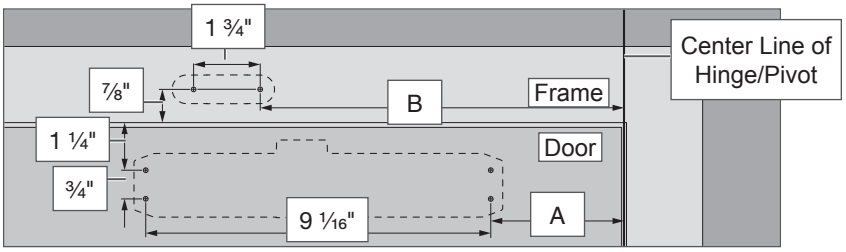
Push Side Parallel Arm (PA) Mount (see page 4)



Pull Side Mount

Mounting Hole Dimensions

ⓘ **Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.**



1 Determine the degree of door opening required and find dimension “A” on the chart below.

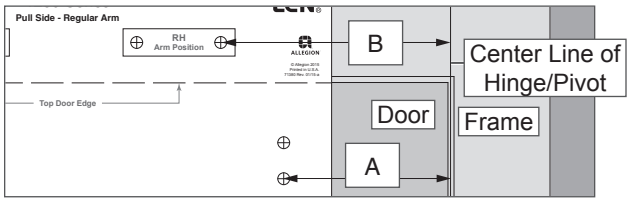
ⓘ **Opening angle of 180° is required to meet ADA.**

A Closer	Opening	Measurement from Door Edge
	To 100°	7”
	100° to 120°	6”
	120° to 180°	3½”

B Shoe	Opening	Measurement from Door Edge
	To 100°	13”
	100° to 120°	12”
	120° to 180°	9½”

2 Measure from center line of hinge/pivot and stick template on door. Mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**



3 Remove template, and drill holes where marked with a 1/8” drill bit for SRT screws.

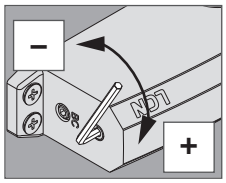
ⓘ **SRT screws are used on metal doors.**
Wood screws are used on wood doors.

4 Measure and determine your door’s width. Using a hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.

Turn counterclockwise for “-”; turn clockwise for “+”

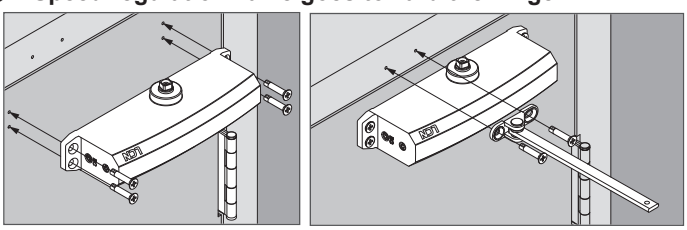
ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

Door Width	Number of Turns
ADA Setting	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Install closer onto door and shoe onto frame using screws provided.

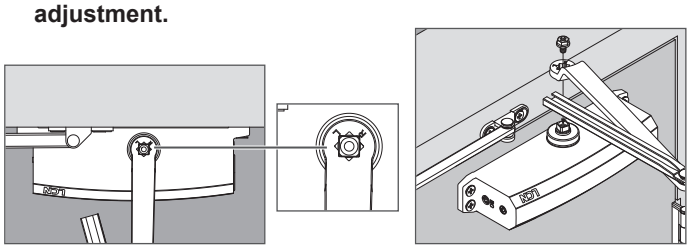
ⓘ **Speed regulation valve goes toward the hinge.**



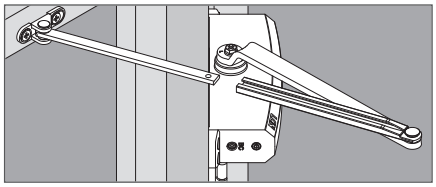
6 Install main arm to closer.

a. Place main arm onto the top closer shaft.
b. Install and tighten main arm screw.

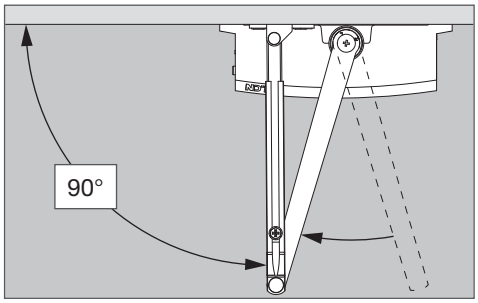
ⓘ **See page 5 for Optional Hold Open Arm installation and adjustment.**



7 Route the rod into the forearm.

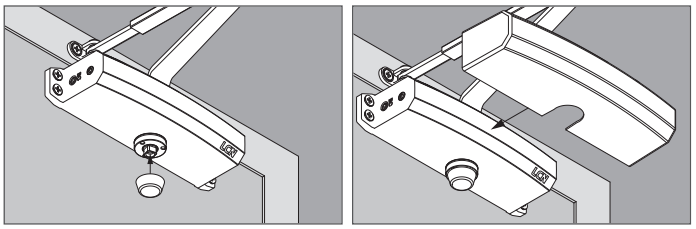


8 Preload the forearm to 90°. While the arm is still preloaded, install and tighten the arm screw.



9 Adjust the closer, if necessary. See page 4 for closer adjustment instructions.

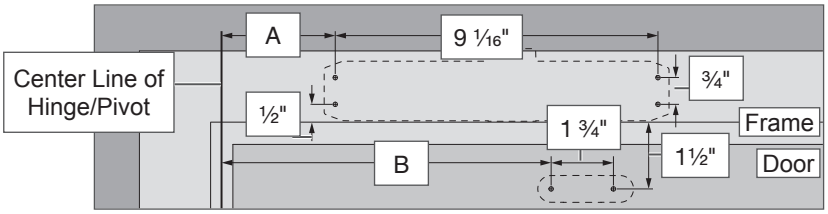
10 Screw cap onto shaft and install cover (optional).



Push Side Top Jamb Mount

Mounting Hole Dimensions

ⓘ **Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.**



1 Determine the degree of door opening required and find dimension “A” on the chart below.

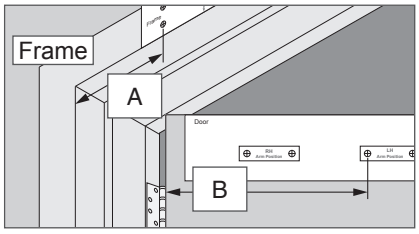
ⓘ **Opening angle of 180° is required to meet ADA.**

A Closer	Opening	Measurement from Door Edge
	To 100°	7 ½”
	100° to 120°	6”
	120° to 180°	3½”

B Shoe	Opening	Measurement from Door Edge
	To 100°	13½”
	100° to 120°	12”
	120° to 180°	9½”

2 Measure from center line of hinge/pivot and stick template on door. Mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**



3 Remove template, and drill holes where marked with a 1/8” drill bit for SRT screws.

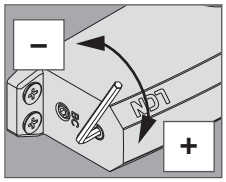
ⓘ **SRT screws are used on metal doors.**
Wood screws are used on wood doors.

4 Measure and determine your door’s width. Using a hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.

Turn counterclockwise for “-”; turn clockwise for “+”

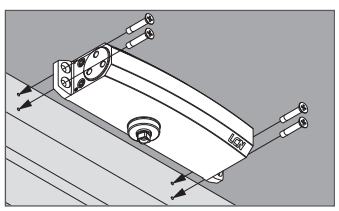
ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

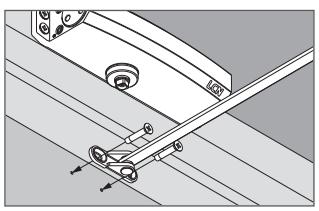
Door Width	Number of Turns
ADA Setting	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Install closer onto frame and shoe onto door using screws provided.

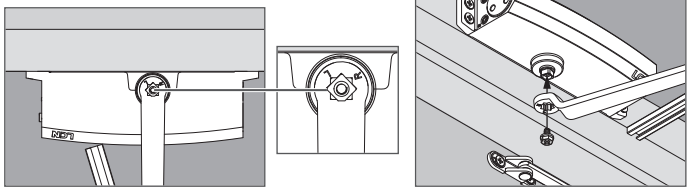
ⓘ **Speed regulation valve goes toward the hinge.**



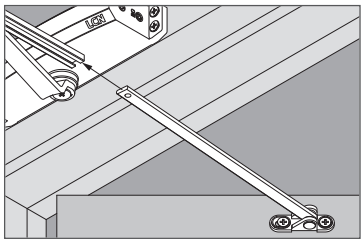


6 Install main arm to closer.
a. Place main arm onto the bottom closer shaft.
b. Install and tighten main arm screw.

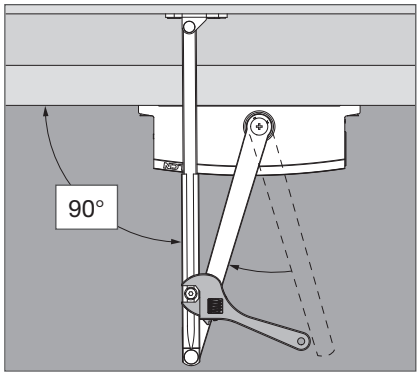
ⓘ **See page 5 for Optional Hold Open Arm installation and adjustment.**



7 Route the rod into the forearm.

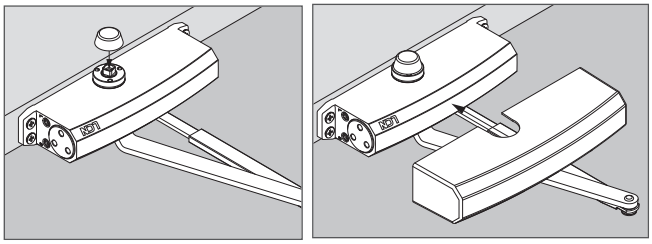


8 Preload the forearm to 90°. While the arm is still preloaded, install and tighten the arm screw.



9 Adjust the closer, if necessary. See page 4 for closer adjustment instructions.

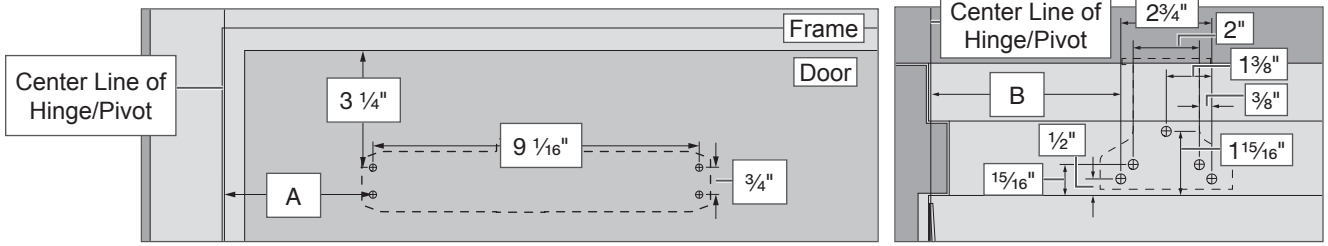
10 Screw cap onto shaft and install cover (optional).



Push Side Parallel Arm (PA) Mount

Mounting Hole Dimensions

ⓘ **Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.**



1 Determine the degree of door opening required and find dimensions “A” and “B” in the charts below.

A — Closer

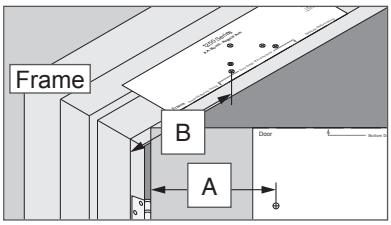
Opening	Measurement from Door Edge
To 100°	7 5/8”
100° to 130°	6 1/8”
130° to 180°	4 1/8”

B — PA Shoe

Opening	Measurement from Door Edge
To 100°	9 1/4”
100° to 130°	7 3/4”
130° to 180°	5 3/4”

2 Measure from center line of hinge/pivot and stick template on door. Mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**



3 Remove template, and drill holes where marked with a 1/8” drill bit for SRT screws.

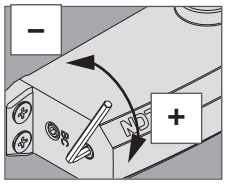
ⓘ **SRT screws are used on metal doors.**
Wood screws are used on wood doors.

4 Measure and determine your door’s width. Using a hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.

Turn counterclockwise for “-”; turn clockwise for “+”

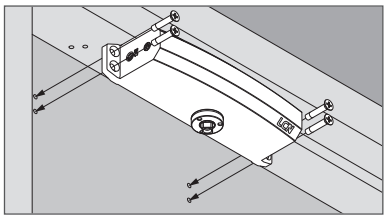
ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

Door Width	Number of Turns
ADA Setting	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Install closer onto door.

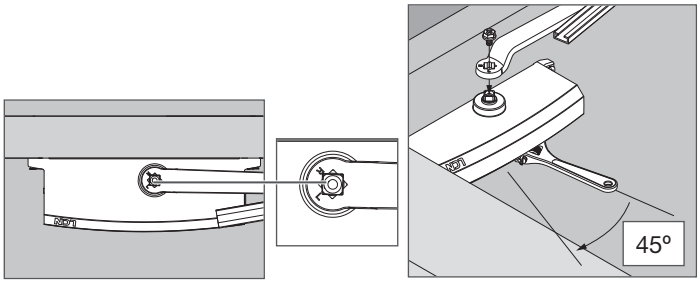
ⓘ **Speed regulation valve goes away from the hinge.**



6 Install main arm to closer.

ⓘ **See page 5 for Optional Hold Open Arm installation and adjustment.**

a. Use a wrench on the bottom closer shaft to turn the top closer shaft approximately 45°. **Hold the wrench at this angle for the next step.**
b. Place main arm onto the top closer shaft.
c. Install and tighten main arm screw.

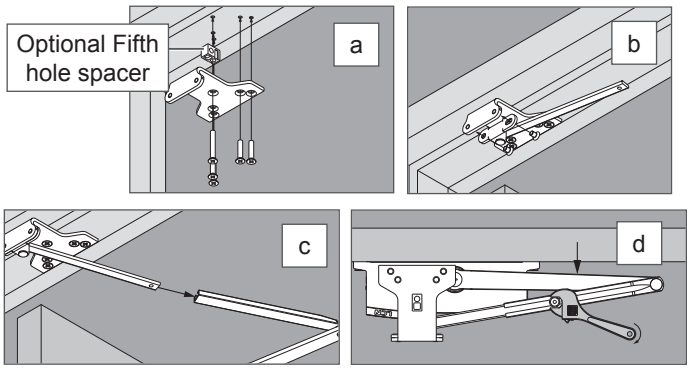


7 Install PA Shoe onto the frame, then into the rod & shoe.

a. Attach PA shoe, and optional fifth hole spacer if needed, to frame.

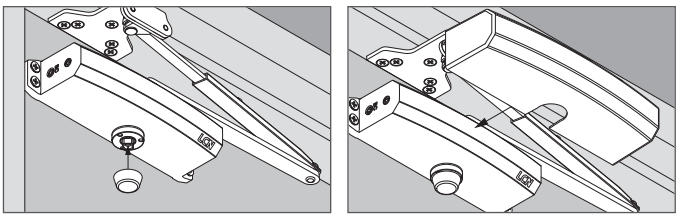
ⓘ **Use the fifth hole spacer only if there is a space between the frame and the PA shoe.**

b. Fasten rod & shoe to PA shoe.
c. Install rod into the forearm of the main arm.
d. Preload main arm to be parallel with frame, tighten arm screw.



8 Adjust the closer, if necessary. See page 5 for closer adjustment instructions.

9 Screw cap onto shaft and install cover (optional).



Closer Valve Adjustment

Check closing time, and adjust closer if needed.

⚠ CAUTION ⚠

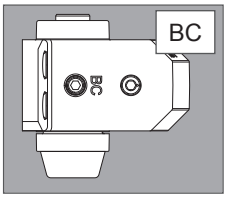
Opening the regulation valves (described below) too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.

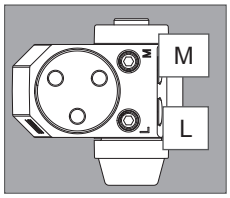
FOLLOW ALL INSTRUCTIONS CAREFULLY.

ⓘ **Valve must be closed CW to seat, never more than 3 turns CCW from seated position. Adjust the valves in 1/4 turn increments or less at a time. DO NOT TURN MORE THAN 3 FULL ROTATIONS. THIS WILL CAUSE THE CLOSER TO LEAK OIL!**

ⓘ **DO NOT ADJUST THE LATCH SPEED IF THE DOOR DOES NOT LATCH. If this occurs, adjust the spring force.**

1. Open the door to 90°, measure how long the door takes to close and latch. A typical closing time is 5 to 7 seconds, evenly divided between main speed and latch speed.
2. If the closing time needs to be adjusted, use the closer valves described below.
   a. Backcheck- this controls door speed opening as the door angle approaches 90°. **Do not use as a door stop.**
   b. Main Speed- this controls door speed during most of the closing motion.
   c. Latch Speed- this controls door speed during the last few degrees of door closing.
3. Turn the valves clockwise to decrease door speed, and counterclockwise to increase door speed. The latch speed and main speed should be adjusted together.

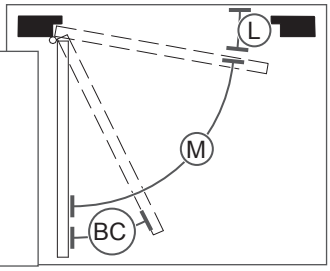




BC = Backcheck valve

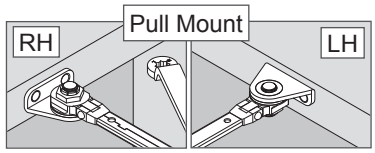
M = Main speed valve

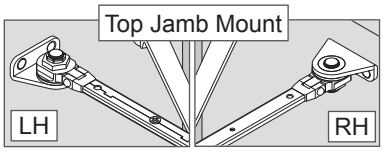
L = Latch speed valve

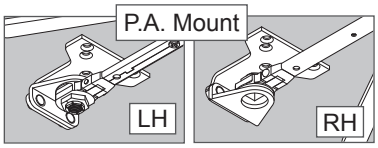


Optional Hold Open Arms

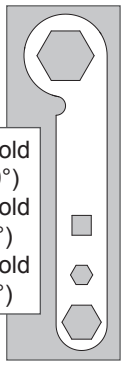
1 See the image below to determine the direction of the Hold Open nut. This is determined by the door handing.







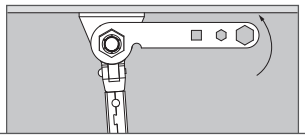
180° Mounting Hold Open (120°-180°)
120° Mounting Hold Open (95°-120°)
100° Mounting Hold Open (85°-100°)

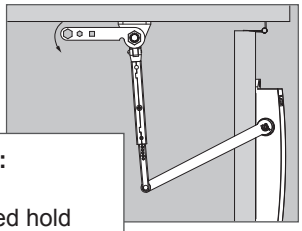


2 Hold Open Arm Adjustment.

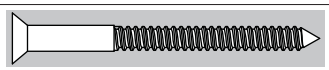
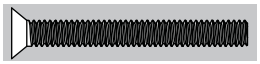
ⓘ **The Hold Open Arm installs like the regular closer arm. Follow steps 5 - 7 on page 2 for Hold Open Arm installation.**

ⓘ **Top Jamb mount handing for Hold Open Arms is reverse of other mounts.**





To adjust Optional Hold-open arm:
1. Loosen hold open nut.
2. Open door to 5° less than desired hold position and tighten hold open nut securely.

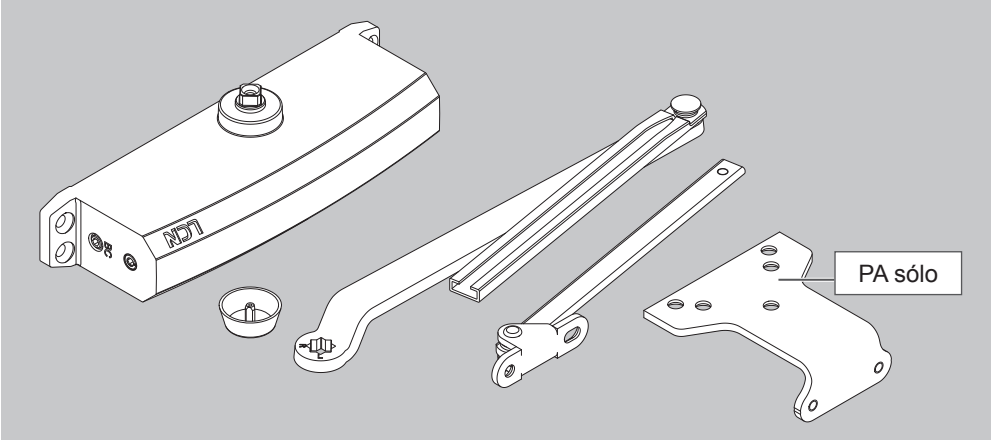
Screw Type	Picture	Cylinder Mounting	PA Bracket Mounting	PA Shoe Mounting	5th Hole Mounting (PA Shoe Only)
Wood (for wood doors & frames)		4 @ 1 3⁄16"	4 @ 1 3⁄8"		1 @ 2"
Machine (for metal doors & frames) Requires hole drilling & tapping; best hold.		4 @ 1"	4 @ 5⁄8"	2 @ 3⁄8"	1 @ 1 ½"
SRT - Self Reaming & Tapping (for metal doors & frames)		4 @ 1 ½"	4 @ 1 ½"		1 @ 2"

Screw Type	Picture	Notes
Fifth Hole Spacer		
Thru Bolts		Used when mounting through door.
Pinion Attachment Screw		1 M6 x 10mm for attachment of the arm (see step 6).

Serie 1250

Lado para tirar, montaje en jamba superior y montaje en brazo paralelo (PA) — Instrucciones de Instalación

PIEZAS

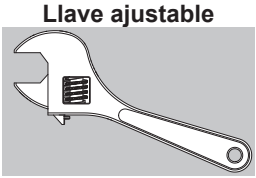


ⓘ **La información sobre el paquete de tornillos se encuentra en la página 10.**

HERRAMIENTAS

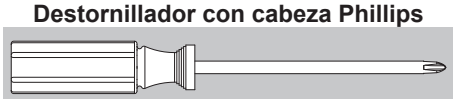
Llave hexagonal de 5⁄32" o 4 mm

Llave ajustable



Broca de taladro de 1⁄8"

Destornillador con cabeza Phillips



ⓘ **Información sobre la llave para mantener abierto en la página 10.**

⚠ PRECAUCIÓN ⚠

La instalación o regulación incorrecta puede resultar en lesiones personales o daño a los bienes.
Siga todas las instrucciones con atención.
En caso de duda, llame a LCN al 877-671-7011

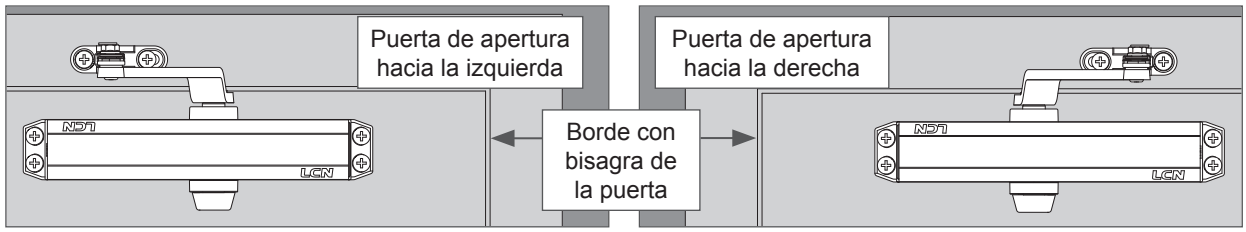
Los brazos para mantener abierto no deben instalarse en puertas con clasificación ignífuga.

¡Abrir demasiado las válvulas de regulación puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales.
SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

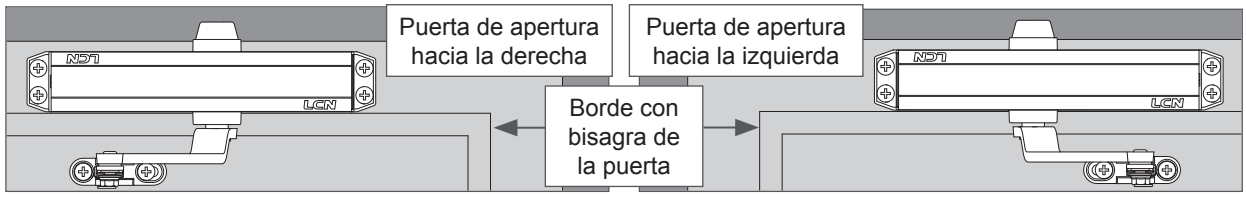
¡NO USE EL MECANISMO DE CIERRE COMO TOPE DE LA PUERTA!
Se recomienda el uso de un tope auxiliar en el punto de mantener abierto o donde la puerta no puede girar 180°.

Seleccione el tipo de instalación

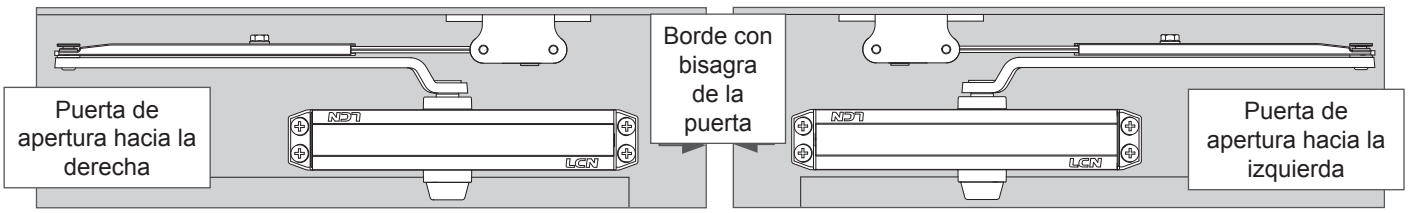
Montaje en el lado para tirar (vea la página 7)



Montaje en la jamba superior del lado para empujar (vea la página 8)



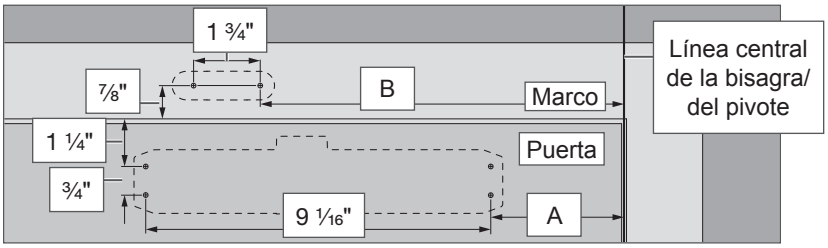
Brazo paralelo (PA) del lado para empujar (vea la página 9)



Montaje en el lado para tirar

Dimensiones de montaje

ⓘ **Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.**



1 Determine el grado de apertura de la puerta requerido y busque la dimensión "A" en al cuadro siguiente.

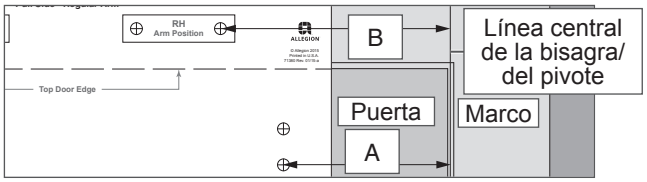
ⓘ **Se requiere un ángulo de apertura de 180° para cumplir con ADA.**

A	Apertura	Medición desde el borde de la puerta
El mecanismo de cierre	To 100°	7”
	100° to 120°	6”
	120° to 180°	3½”

B	Apertura	Medición desde el borde de la puerta
el zócalo	To 100°	13”
	100° to 120°	12”
	120° to 180°	9½”

2 Mida desde la línea central de la bisagra/del pivote y adhiera la plantilla en la puerta. Marque los orificios de perforación.

ⓘ **Vea las Dimensiones de montaje anteriores según sea necesario.**



3 Retire la plantilla y perfore orificios donde está marcado con una broca de taladro de ⅛" para tornillos SRT.

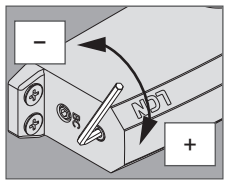
ⓘ **Los tornillos SRT se usan en puertas de metal.**
Los tornillos de madera se usan en puertas de madera.

4 Mida y determine el ancho de su puerta. Con una llave hexagonal, ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

Gire en sentido antihorario para “-”; gire en sentido horario para “+”.

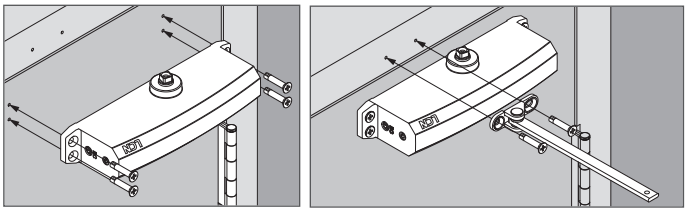
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

Ancho de la puerta	Número de giros
Configuración de ADA	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Instale el mecanismo de cierre en la puerta y el zócalo en el marco usando los tornillos provistos.

ⓘ **La vàlvula de regulaciòn de velocidad va con direction de la bisagra.**

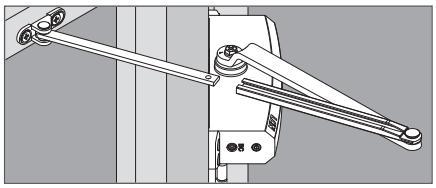


6 Instale el brazo principal en el mecanismo de cierre.

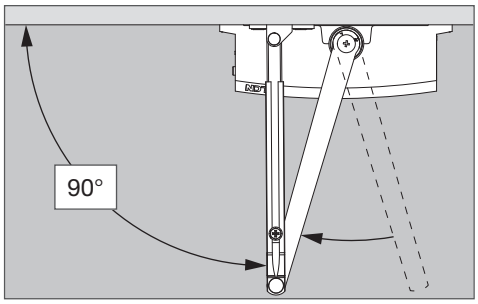
a. Coloque el brazo principal en el eje superior del mecanismo de cierre.
b. Instale y ajuste el tornillo del brazo principal.

ⓘ **Consulte la página 10 para ver la instalación y el ajuste del brazo opcional para mantener abierto.**

7 Coloque la varilla en el brazo delantero.

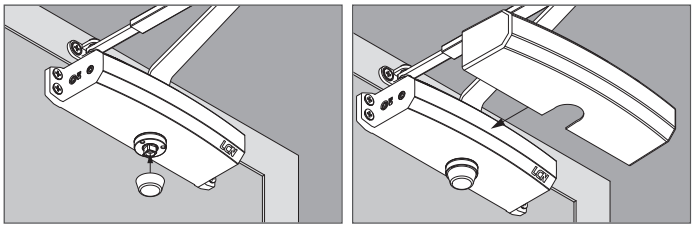


8 Cargue previamente el brazo delantero a 90°. Mientras el brazo aún está precargado, instale y ajuste el tornillo del brazo.



9 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 10 para ver las instrucciones de ajuste del mecanismo de cierre.

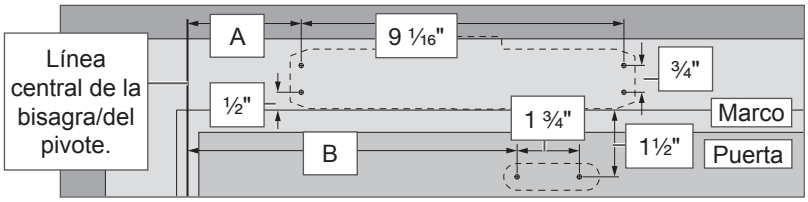
10 Atornille la tapa en el eje e instale la cubierta (opcional).



Montaje en la jamba superior del lado para empujar

Dimensiones de montaje

ⓘ **Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.**



1 Determine el grado de apertura de la puerta requerido y busque la dimensión "A" en al cuadro siguiente.

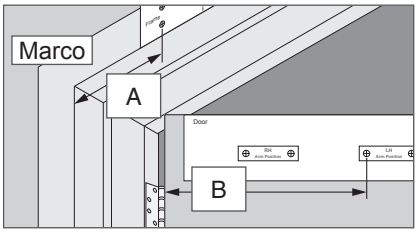
ⓘ **Se requiere un ángulo de apertura de 180° para cumplir con ADA.**

A	Apertura	Medición desde el borde de la puerta
El mecanismo de cierre	To 100°	7 ½”
	100° to 120°	6”
	120° to 180°	3½”

B	Apertura	Medición desde el borde de la puerta
el zócalo	To 100°	13½”
	100° to 120°	12”
	120° to 180°	9½”

2 Mida desde la línea central de la bisagra/del pivote y adhiera la plantilla en la puerta. Marque los orificios de perforación.

ⓘ **Vea las Dimensiones de montaje anteriores según sea necesario.**



3 Retire la plantilla y perfore orificios donde está marcado con una broca de taladro de ⅛" para tornillos SRT.

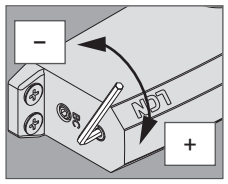
ⓘ **Los tornillos SRT se usan en puertas de metal.**
Los tornillos de madera se usan en puertas de madera.

4 Mida y determine el ancho de su puerta. Con una llave hexagonal, ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

Gire en sentido antihorario para “-”; gire en sentido horario para “+”.

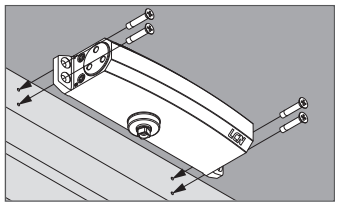
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

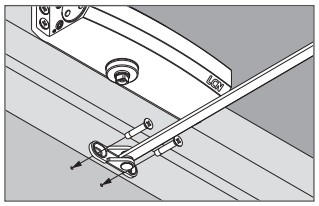
Ancho de la puerta	Número de giros
Configuración de ADA	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Instale el mecanismo de cierre en el marco y el zócalo en la puerta usando los tornillos provistos.

ⓘ **La vàlvula de regulaciòn de velocidad va con direction de la bisagra.**

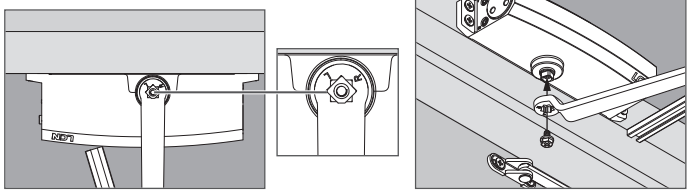




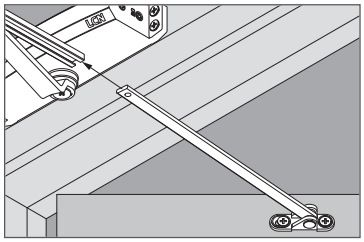
6 Instale el brazo principal en el mecanismo de cierre.

a. Coloque el brazo principal en el eje inferior del mecanismo de cierre.
b. Instale y ajuste el tornillo del brazo principal.

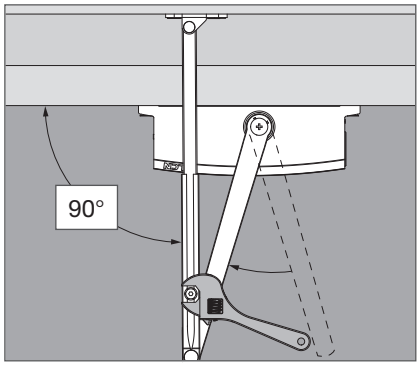
ⓘ **Consulte la página 10 para ver la instalación y el ajuste del brazo opcional para mantener abierto.**



7 Coloque la varilla en el brazo delantero.

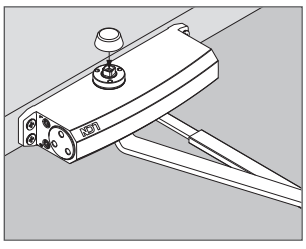


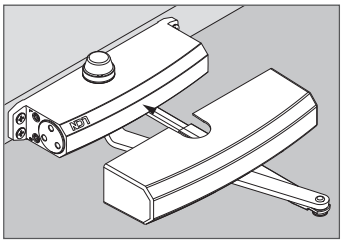
8 Cargue previamente el brazo delantero a 90°. Mientras el brazo aún está precargado, instale y ajuste el tornillo del brazo.



9 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 10 para ver las instrucciones de ajuste del mecanismo de cierre.

10 Atornille la tapa en el eje e instale la cubierta (opcional).

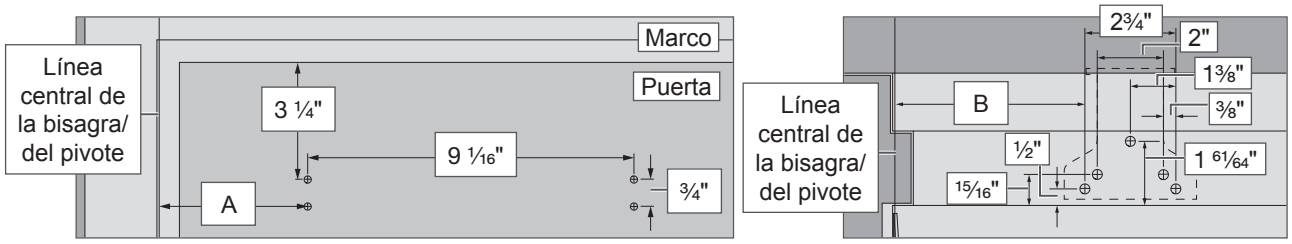




Brazo paralelo (PA) del lado para empujar

Dimensiones de montaje

ⓘ **Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.**



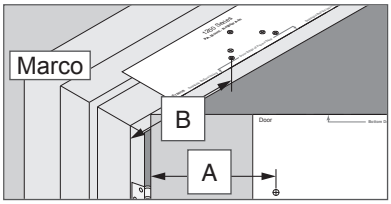
1 Determine el grado de apertura de la puerta requerido y busque las dimensiones "A" y "B" en el cuadro siguiente.

A	Apertura	Medición desde el borde de la puerta
El mecanismo de cierre	Hasta 100°	7 5/8"
	De 100° a 130°	6 1/8"
	De 130° a 180°	4 1/8"

B	Apertura	Medición desde el borde de la puerta
el zócalo PA	Hasta 100°	9 1/4"
	De 100° a 130°	7 3/4"
	De 130° a 180°	5 3/4"

2 Mida desde la línea central de la bisagra/del pivote y adhiera la plantilla en la puerta. Marque los orificios de perforación.

ⓘ **Vea las Dimensiones de montaje anteriores según sea necesario.**



3 Retire la plantilla y perfore orificios donde está marcado con una broca de taladro de ⅛" para tornillos SRT.

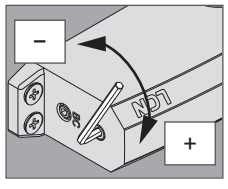
ⓘ **Los tornillos SRT se usan en puertas de metal.**
Los tornillos de madera se usan en puertas de madera.

4 Mida y determine el ancho de su puerta. Con una llave hexagonal, ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

Gire en sentido antihorario para "-"; gire en sentido horario para "+".

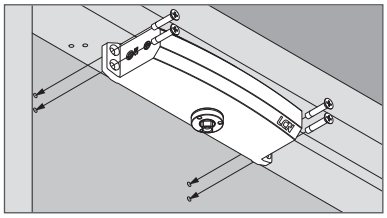
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

Ancho de la puerta	Número de giros
Configuración de ADA	-12
32" - 815 mm	-6
36" - 915 mm	0
42" - 1050 mm	+6
48" - 1220 mm	+13



5 Instale el mecanismo de cierre en la puerta.

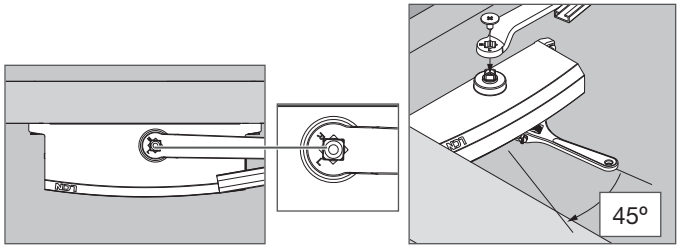
ⓘ **La vàlvula de regulaciòn de velocidad va con direction opuesta de la bisagra.**



6 Instale el brazo principal en el mecanismo de cierre.

ⓘ **Consulte la página 10 para ver la instalación y el ajuste del brazo opcional para mantener abierto.**

a. Use una llave en el eje inferior del mecanismo de cierre para girar el eje superior del mecanismo de cierre aproximadamente 45°. **Sostenga la llave en este ángulo hasta el próximo paso.**
b. Coloque el brazo principal en el eje superior del mecanismo de cierre.
c. Instale y ajuste el tornillo del brazo principal.

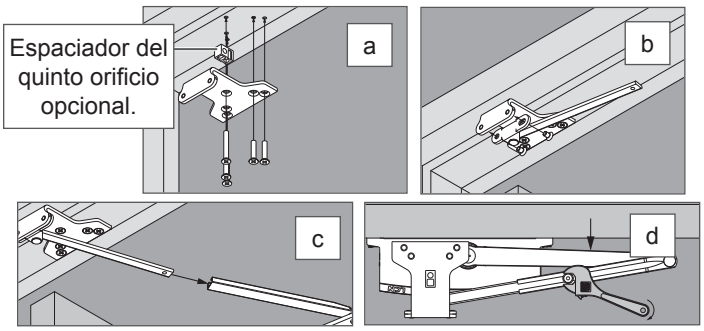


7 Instale el zócalo del PA en el marco, luego en la varilla y el zócalo.

a. Coloque el zócalo del PA y el espaciador del quinto orificio opcional, de ser necesario, en el marco.

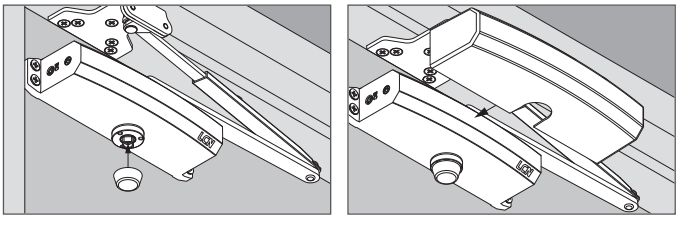
ⓘ **Use el espaciador del quinto orificio si hay un espacio entre el marco y el zócalo del PA.**

b. Ajuste la varilla y el zócalo en el zócalo del PA.
c. Instale la varilla en el brazo delantero del brazo principal.
d. Aplique una carga previa al brazo principal para que quede paralelo al marco, ajuste el tornillo del brazo.



8 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 10 para ver las instrucciones de ajuste del mecanismo de cierre.

9 Atornille la tapa en el eje e instale la cubierta (opcional).



Ajuste de la válvula del mecanismo de cierre

Compruebe el tiempo de cierre y ajuste el mecanismo de cierre de ser necesario.

⚠ PRECAUCIÓN ⚠

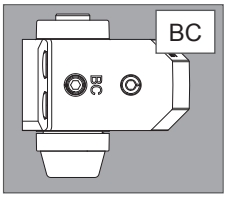
¡Abrir demasiado las válvulas de regulación (como se describe a continuación) puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales.

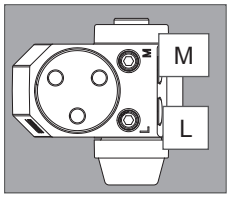
SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

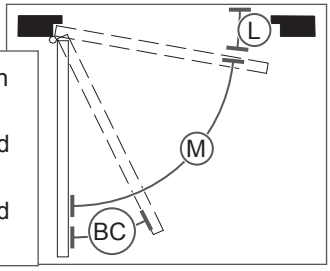
ⓘ **La Vàlvula se Cierra hacia el lado dercho(en direction de las agujas del reloj) hasta que tope,nunca mas de tres vueltas al lado izquierdo(en contra de las manesillas del reloj) del tope. Ajuste las válvulas en incrementos de 1/4 de giro o menos a la vez. ¡NO GIRE MÁS DE 4 ROTACIONES COMPLETAS - ESTO OCASIONARÁ QUE EL MECANISMO DE CIERRE TENGA UNA FUGA DE ACEITE!**

ⓘ **NO AJUSTE LA VELOCIDAD DEL PASADOR SI LA PUERTA NO SE TRABA. Si esto sucede, ajuste la fuerza del resorte.**

1. Abra la puerta a 90°, mida cuánto tiempo tarda la puerta en cerrar y trabarse. Un tiempo típico de cierre es de 5 a 7 segundos, divido de manera uniforme entre velocidad principal y velocidad del pasador.
2. Si se necesita ajustar el tiempo de cierre, use las válvulas del mecanismo de cierre como se describe a continuación.
   a. Retención: controla la velocidad de apertura de la puerta cuando el ángulo de la puerta se acerca a 90°. **No usar como tope de puerta.**
   b. Velocidad principal: controla la velocidad de la puerta durante la mayor parte del movimiento de cierre.
   c. Velocidad del pasador: controla la velocidad de la puerta durante los últimos grados del cierre de la puerta.
3. Gire las válvulas en sentido horario para reducir la velocidad de la puerta y en sentido antihorario para aumentar la velocidad de la puerta. La velocidad del pasador y la velocidad principal deben ajustarse conjuntamente.







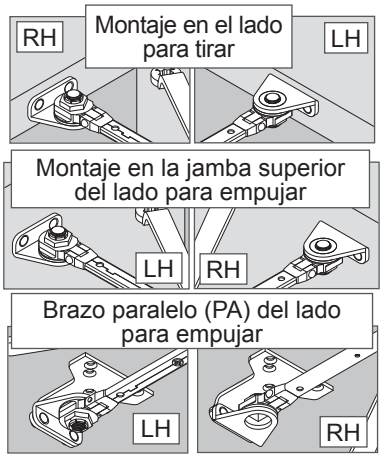
BC = válvula de retención

M = válvula de velocidad principal

L = válvula de velocidad del pasador

Brazos opcionales para mantener abierto

1 Vea la imagen siguiente para determinar la dirección de la tuerca para mantener abierto. Esto es determinado por el lado en el que está la manija de la puerta.



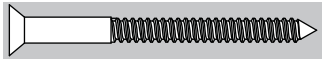
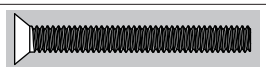
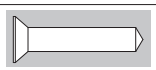
2 Ajuste del brazo para mantener abierto.

ⓘ **El brazo para mantener abierto se instala como el brazo regular del mecanismo de cierre. Siga los pasos 5 - 7 en las páginas 6, 7 y 8 para la instalación del brazo para mantener abierto.**

ⓘ **El lado de montaje en la jamba superior para los brazos para mantener abierto es inverso a los demás montajes.**

Para ajustar el brazo opcional para mantener abierto:

1. Afloje la tuerca del brazo para mantener abierto.
2. Abra la puerta a 5° menos que la posición deseada para mantener abierto y ajuste la tuerca del mecanismo para mantener abierto firmemente.

Tipo de tornillo	Imagen	Montaje en el cilindro	Montaje en el soporte del PA	Montaje en el zócalo del PA	Montaje en el 5.° orificio (solo zócalo del PA)
Madera (para puertas y marcos de madera)		4 @ 1 3⁄16"	4 @ 1 3⁄8"		1 @ 2"
Máquina (para puertas y marcos de metal) Requiere perforación de orificio y formación de rosca; mejor sujeción		4 @ 1"	4 @ 5⁄8"	2 @ 3⁄8"	1 @ 1 1⁄2"
SRT: autoperforación y formación de rosca (para puertas y marcos de metal)		4 @ 1 1⁄2"	4 @ 1 1⁄2"		1 @ 2"

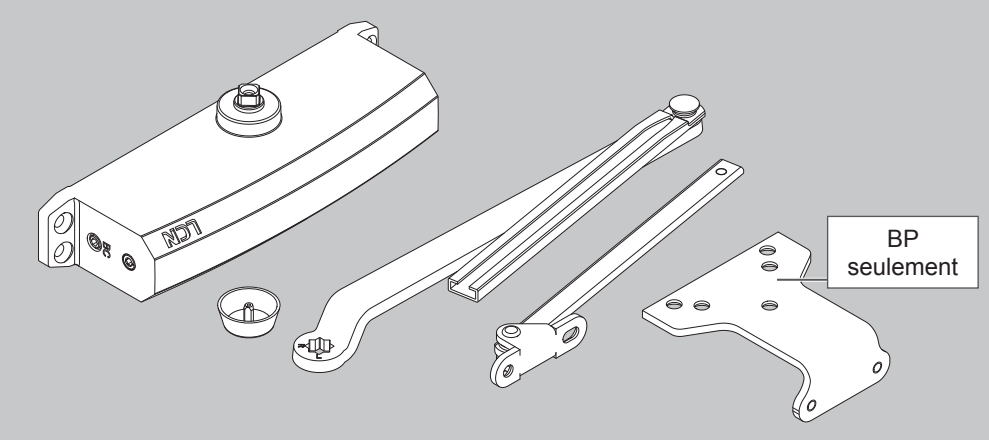
Tipo de tornillo	Imagen	Notas
Espaciador del quinto orificio		
Pernos pasantes		Se utiliza al montar a través de la puerta
Tornillo de sujeción del piñón		1 M6 x 10 mm para la sujeción del brazo (ver el paso 6)

Série 1250

Côté tirant, montage montant supérieur, montage bras parallèle (BP)

Instructions d'installation

PIÈCES

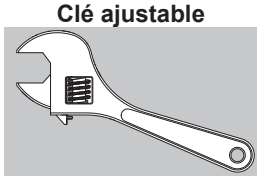


ⓘ **Informations sur l'ensemble de vis à la page 5.**

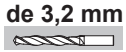
OUTILS

Clé Allen de 4 mm ou 5⁄32 po

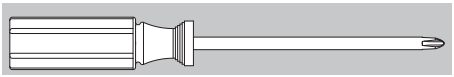
Clé ajustable



Mèche de 3,2 mm (⅛ po)



Tournevis cruciforme



ⓘ **Informations sur la clé ouverte à la page 5.**

⚠ MISE EN GARDE ⚠

Une installation inadéquate ou le non-respect des règlements peut causer des blessures ou des dommages matériels.
Suivez attentivement toutes les instructions.
Pour toute question, appelez LCN au 877-671-7011.

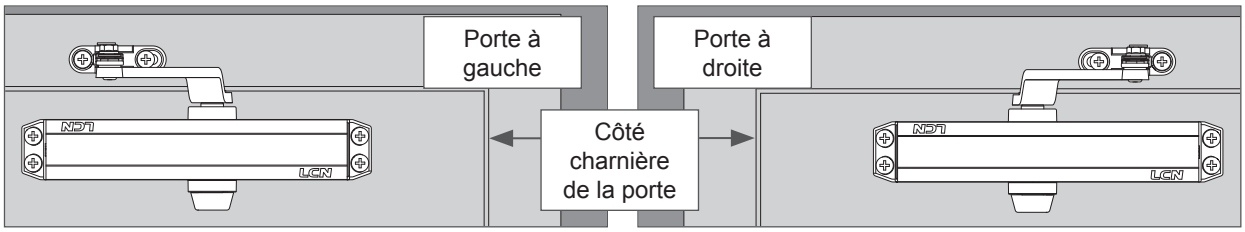
Les bras de retenue ne doivent pas être installés sur les portes coupe-feu.

Une trop grande ouverture des soupapes de régulation peut entraîner une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

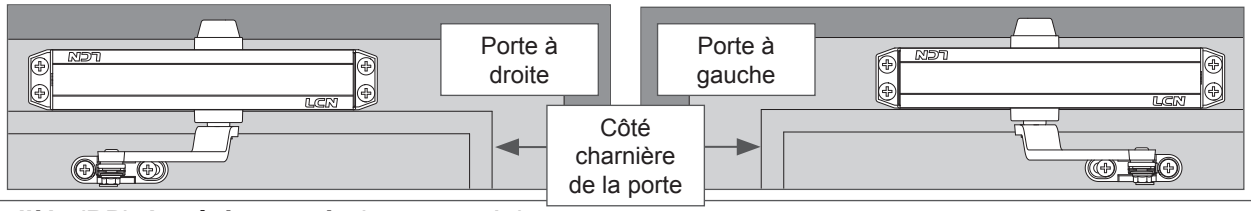
ÉVITEZ D'UTILISER LE DISPOSITIF DE FERMETURE COMME BUTOIR DE PORTE!
Il est recommandé d'utiliser un butoir auxiliaire au point de retenue ou à l'endroit où la porte ne peut s'ouvrir à 180°

Choisissez le type d'installation

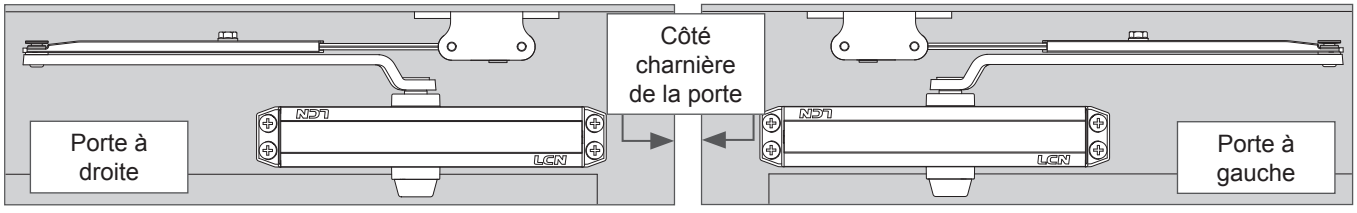
Montage du côté tirant (see page 12)



Montage du montant supérieur du côté poussée (see page 13)



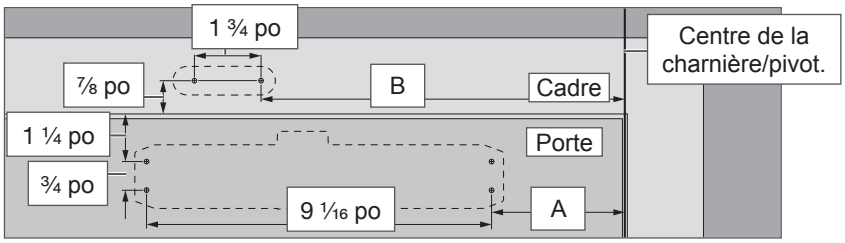
Bras parallèle (BP) du côté poussée (see page 14)



Montage du côté tirant

Dimensions de montage

ⓘ **Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.**



1 Déterminez le degré d'ouverture de la porte requis et trouvez la dimension « A » dans le tableau ci-dessous.

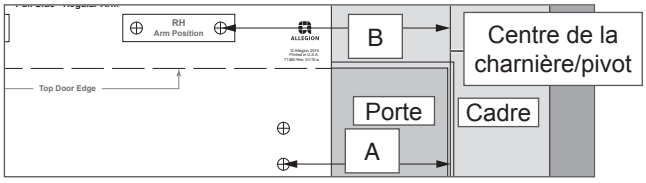
ⓘ **Un angle d'ouverture de 180° est requis pour respecter l'ADA.**

A	Ouverture	Mesure à partir du bord de la porte
Dispositif de fermeture	To 100°	7 po
	100° to 120°	6 po
	120° to 180°	3½ po

B	Ouverture	Mesure à partir du bord de la porte
Sabot	To 100°	13”
	100° to 120°	12”
	120° to 180°	9½”

2 Mesurez à partir du centre de la charnière/pivot et collez le gabarit sur la porte. Faites des marques pour les trous à percer.

ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**



3 Retirez le gabarit et percez des trous de 3,2 mm (1/8 po) aux endroits marqués avec une mèche pour les vis SRT.

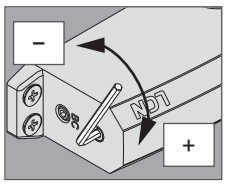
ⓘ **Les vis SRT sont utilisées sur les portes en métal. Les vis à bois sont utilisées sur les portes en bois.**

4 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé Allen, réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.

Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

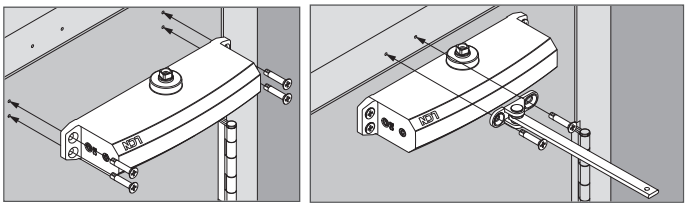
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

Largeur de la porte	Nombre de tours
Réglage de l'ADA	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Installez le dispositif de fermeture sur la porte et le sabot sur le cadre à l'aide des vis fournies.

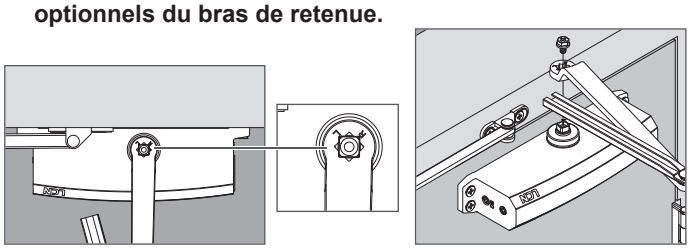
ⓘ **La valve d’ajustement de le vitesse va du côté des charnières.**



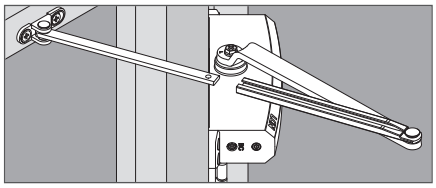
6 Installez le bras principal sur le dispositif de fermeture.

a. Placez le bras principal sur l'arbre du dispositif de fermeture supérieur.
b. Installez et serrez la vis du bras principal.

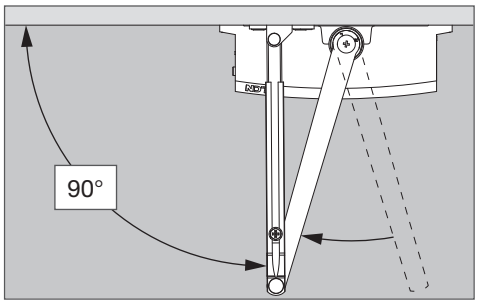
ⓘ **Consultez la page 5 pour l'installation et le réglage optionnels du bras de retenue.**



7 Insérez la tige dans l'avant-bras.

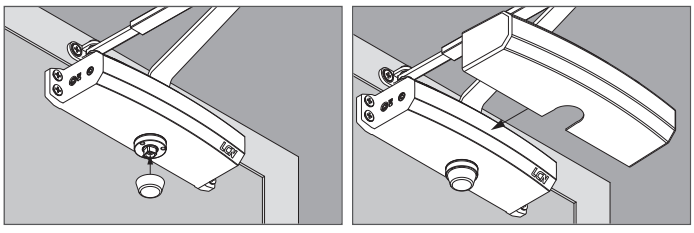


8 Préchargez l'avant-bras à 90°. Lorsque le bras est préchargé, installez et serrez la vis du bras.



9 Réglez le dispositif de fermeture au besoin. Consultez la page 5 pour les instructions de réglage du dispositif de fermeture.

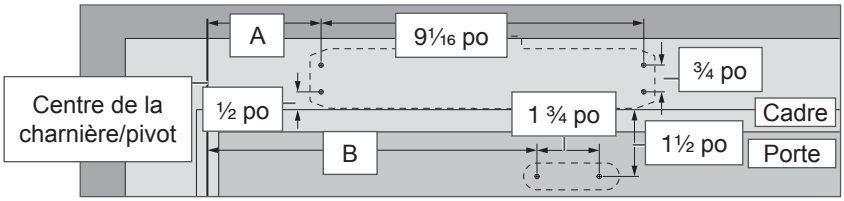
10 Tournez le capuchon sur l'arbre et installez le couvercle (en optional).



Montage du montant supérieur du côté poussée

Dimensions de montage

ⓘ **Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.**



1 Déterminez le degré d'ouverture de la porte requis et trouvez la dimension « A » dans le tableau ci-dessous.

ⓘ **Un angle d'ouverture de 180° est requis pour respecter l'ADA.**

A — El mecanismo de cierre

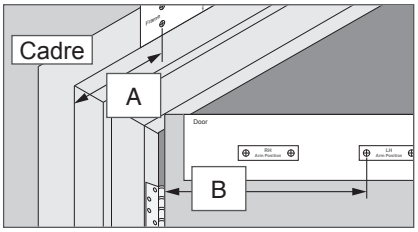
Ouverture	Mesure à partir du bord de la porte
To 100°	7 ½ po
100° to 120°	6 po
120° to 180°	3½ po

B — el zócalo

Ouverture	Mesure à partir du bord de la porte
To 100°	13½ po
100° to 120°	12 po
120° to 180°	9½ po

2 Mesurez à partir du centre de la charnière/pivot et collez le gabarit sur la porte. Faites des marques pour les trous à percer.

ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**



3 Retirez le gabarit et percez des trous de 3,2 mm (1/8 po) aux endroits marqués avec une mèche pour les vis SRT.

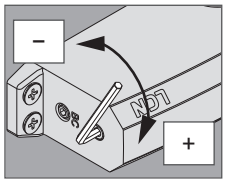
ⓘ **Les vis SRT sont utilisées sur les portes en métal.**
Les vis à bois sont utilisées sur les portes en bois.

4 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé Allen, réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.

Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

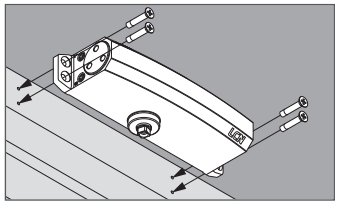
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

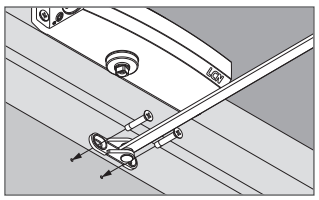
Largeur de la porte	Nombre de tours
Réglage de l'ADA	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Installez le dispositif de fermeture sur le cadre et le sabot sur la porte à l'aide des vis fournies.

ⓘ **La valve d’ajustement de le vitesse va du côté des charnières.**

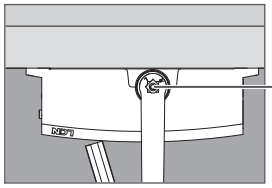


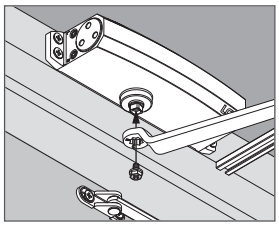


6 Installez le bras principal sur le dispositif de fermeture.

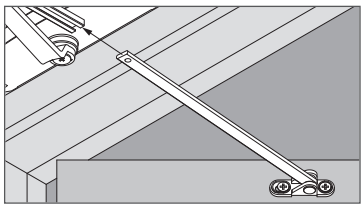
a. Placez le bras principal sur l'arbre du dispositif de fermeture inférieur.
b. Installez et serrez la vis du bras principal.

ⓘ **Consultez la page 5 pour l'installation et le réglage optionnels du bras de retenue.**

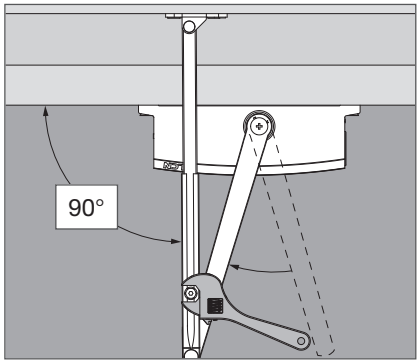




7 Insérez la tige dans l'avant-bras.

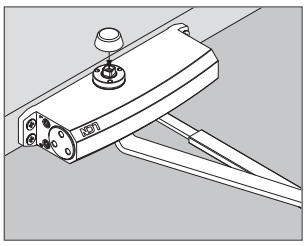


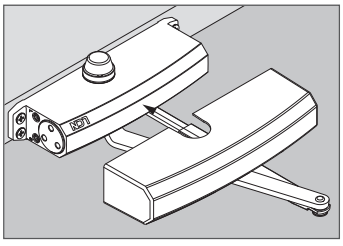
8 Préchargez l'avant-bras à 90°. Lorsque le bras est préchargé, installez et serrez la vis du bras.



9 Réglez le dispositif de fermeture au besoin. Consultez la page 5 pour les instructions de réglage du dispositif de fermeture.

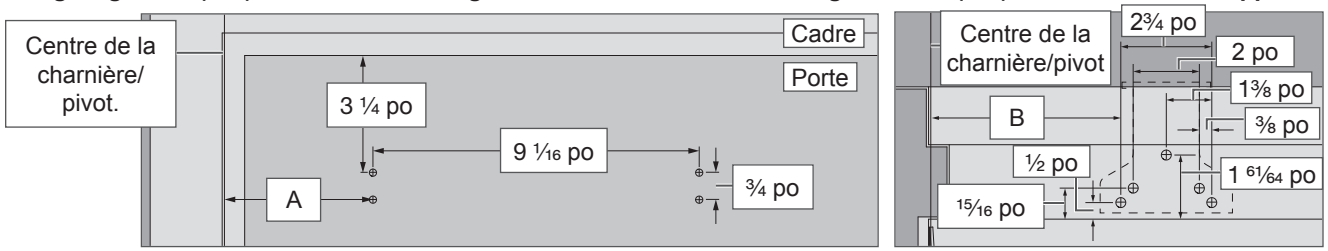
10 Tournez le capuchon sur l'arbre et installez le couvercle (en option).





Dimensions de montage

ⓘ **Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.**



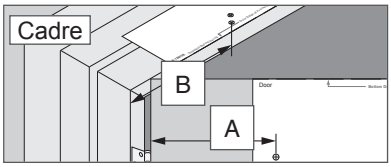
1 Déterminez le degré d'ouverture de la porte requis et trouvez les dimensions « A » et « B » dans les tableaux ci-dessous.

A	Ouverture	Mesure à partir du bord de la porte
Dispositif de fermeture	Jusqu'à 100°	7 ⅝ po
	100° à 130°	6 ⅛ po
	130° à 180°	4 ⅛ po

B	Ouverture	Mesure à partir du bord de la porte
Sabot du BP	Jusqu'à 100°	9 ¼ po
	100° à 130°	7 ¾ po
	130° à 180°	5 ¾ po

2 Mesurez à partir du centre de la charnière/pivot et collez le gabarit sur la porte. Faites des marques pour les trous à percer.

ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**



3 Retirez le gabarit et percez des trous de 3,2 mm (1/8 po) aux endroits marqués avec une mèche pour les vis SRT.

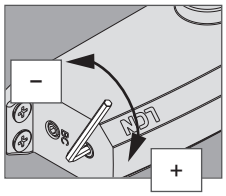
ⓘ **Les vis SRT sont utilisées sur les portes en métal.**
Les vis à bois sont utilisées sur les portes en bois.

4 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé Allen, réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.

Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

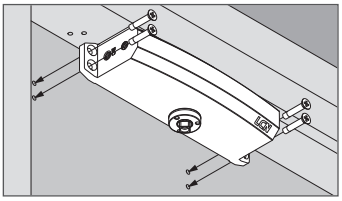
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

Largeur de la porte	Nombre de tours
Réglage de l'ADA	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Installez le dispositif de fermeture sur la porte.

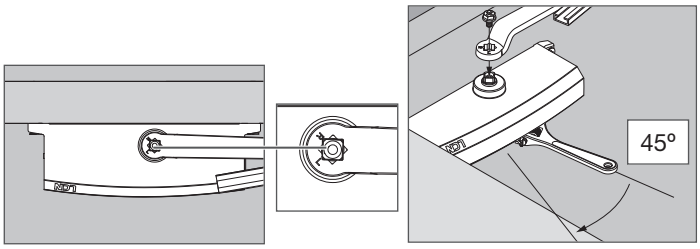
ⓘ **La valve d’ajustement de le vitesse va du côté opposé aux charnières.**



6 Installez le bras principal sur le dispositif de fermeture.

ⓘ **Consultez la page 5 pour l'installation et le réglage optionnels du bras de retenue.**

a. Utilisez une clé sur l'arbre du dispositif de fermeture inférieur pour faire pivoter l'arbre du dispositif de fermeture supérieur d'environ 45°. **Maintenez la clé dans cet angle pour la prochaine étape.**
b. Placez le bras principal sur l'arbre du dispositif de fermeture supérieur.
c. Installez et serrez la vis du bras principal.

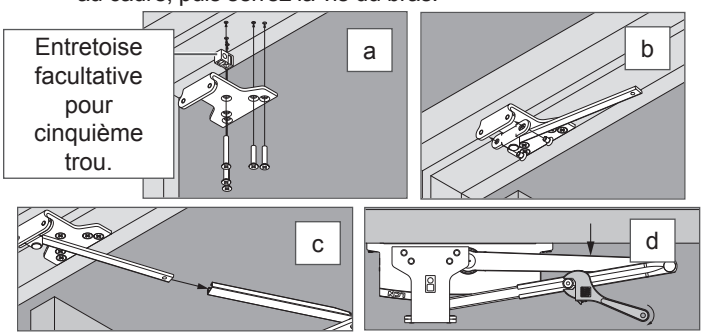


7 Installez le sabot du BP sur le cadre, puis dans la tige et le sabot.

a. Fixez le sabot du BP, et l'entretoise facultative du cinquième trou, au cadre.

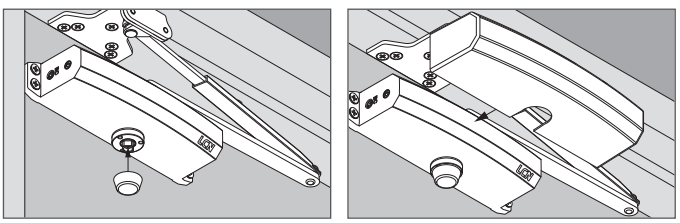
ⓘ **Utilisez l'entretoise facultative du cinquième trou seulement s'il y a un espace entre le cadre et le sabot du BP.**

b. Fixez la tige et le sabot au sabot du BP.
c. Installez la tige dans l'avant-bras du bras principal.
d. Préchargez le bras principal de manière à ce qu'il soit parallèle au cadre, puis serrez la vis du bras.



8 Réglez le dispositif de fermeture au besoin. Consultez la page 5 pour les instructions de réglage du dispositif de fermeture.

9 Tournez le capuchon sur l'arbre et installez le couvercle (en optional).



Réglage de la soupape du dispositif de fermeture

Vérifiez le temps de fermeture et réglez le dispositif de fermeture au besoin.

⚠ MISE EN GARDE ⚠

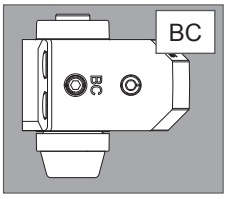
Trop ouvrir les soupapes de régulation (décrites ci-dessous) peut causer une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.

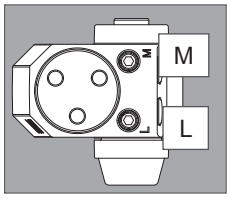
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

ⓘ **La valve se ferme en tournant dans le sens des aiguilles d'une montre; ne jamais faire plus de 3 tours dans le sens opposé aux aiguilles d'une montre à partir de la position fermée. Réglez les soupapes en effectuant 1/4 de tour ou moins à la fois. N'EFFECTUEZ PAS PLUS DE 3 ROTATIONS COMPLÈTES - CELA CAUSERA UNE FUITE D'HUILE DANS LE DISPOSITIF DE FERMETURE!**

ⓘ **NE RÉGLEZ PAS LA VITESSE D'ENCLENCHEMENT SI LA PORTE NE S'ENCLENCHE PAS. Si cela se produit, réglez la force du ressort.**

1. Ouvrez la porte à 90° et comptez le temps nécessaire pour que la porte se ferme et s'enclenche. Le temps de fermeture typique est de 5 à 7 secondes et est divisé également entre la vitesse principale et la vitesse d'enclenchement.
2. Si le temps de fermeture doit être réglé, utilisez les soupapes du dispositif de fermeture décrites ci-dessous.
   a. Retenue - contrôle la vitesse d'ouverture de la porte lorsque l'angle s'approche de 90°. **N'utilisez pas de butoir.**
   b. Vitesse principale - contrôle la vitesse de la porte durant presque tout le mouvement de fermeture.
   c. Vitesse d'enclenchement - contrôle la vitesse de la porte durant les derniers degrés de la fermeture.
3. Faites tourner les soupapes dans le sens horaire pour faire diminuer la vitesse de la porte, et dans le sens antihoraire pour la faire augmenter. La vitesse d'enclenchement et la vitesse principale doivent être réglées ensemble.

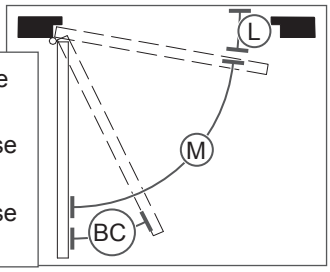




BC = soupape de retenue

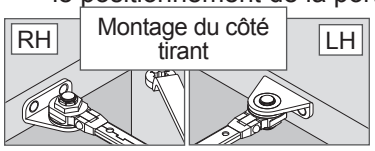
M = soupape de la vitesse principale

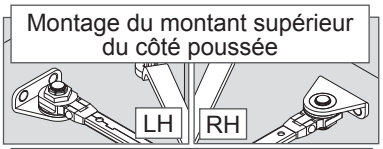
L = soupape de la vitesse d'enclenchement

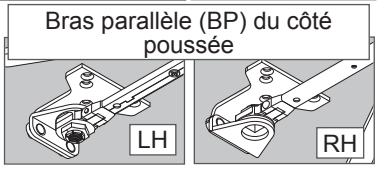


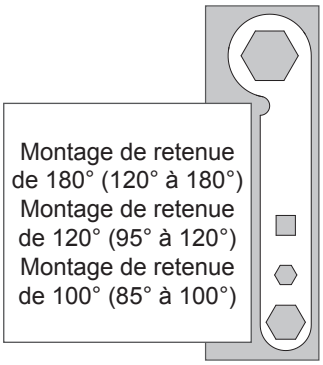
Bras de retenue facultatifs

1 Consultez l'image ci-dessous pour déterminer la direction de l'écrou de retenue. Elle est déterminée par le positionnement de la porte.





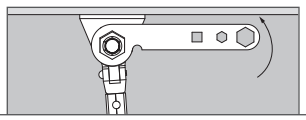


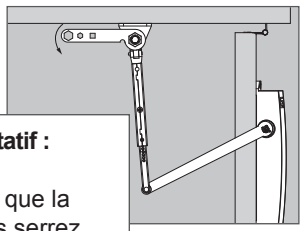


2 Réglage du bras de retenue.

ⓘ **Le bras de retenue s'installe comme le bras du dispositif de fermeture régulier. Suivez les étapes 5 à 7 des pages 2, 3 et 4 pour l'installation du bras de retenue.**

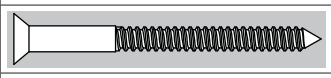
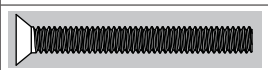
ⓘ **Le montage du montant supérieur pour les bras de retenue se fait dans le sens inverse des autres montages.**

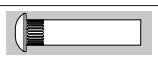




Pour régler le bras de retenue facultatif :

1. Desserrez l'écrou de retenue.
2. Ouvrez la porte de 5° de moins que la position de retenue désirée puis serrez bien l'écrou de retenue.

Type de vis	Image	Montage du cylindre	Montage du support du BP	Montage du sabot du BP	Montage du 5e trou (sabot du BP uniquement)
Bois (pour les portes et les cadres en bois)		4 @ 1 3⁄16 po	4 @ 1 3⁄8 po		1 @ 2 po
De mécanique (pour les portes et les cadres en métal) Nécessite de percer des trous et de tarauder; meilleure retenue		4 @ 1 po	4 @ 5⁄8 po	2 @ 3⁄8 po	1 @ 1 ½ po
SRT - Auto taraudeuse et à alésage automatique (pour les portes et les cadres en métal)		4 @ 1 ½ po	4 @ 1 ½ po		1 @ 2 po

Type de vis	Image	Remarques
Entretoise pour cinquième trou		
Boulons traversants		Utilisée lors du montage à travers la porte
Vis de fixation du pignon		1 M6 x 10 mm pour la fixation du bras (voir étape 6)

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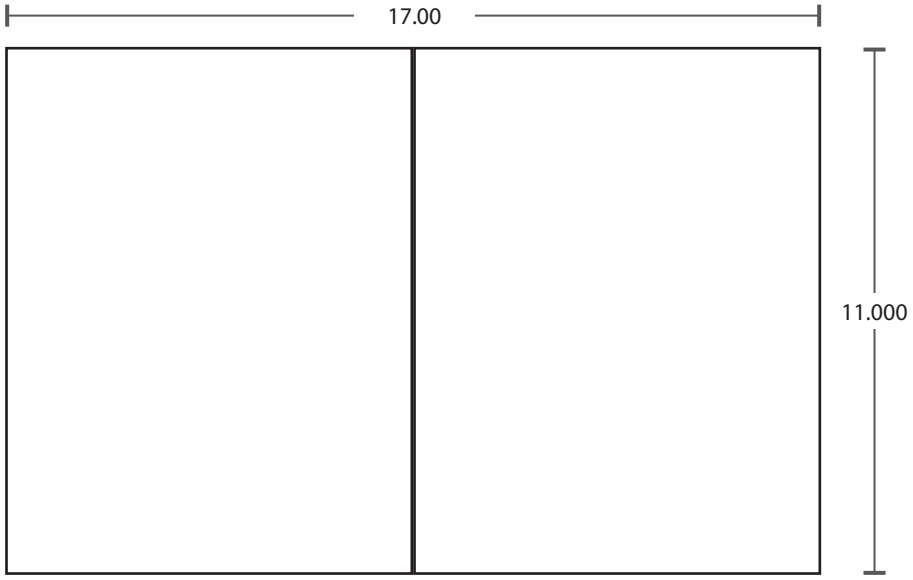
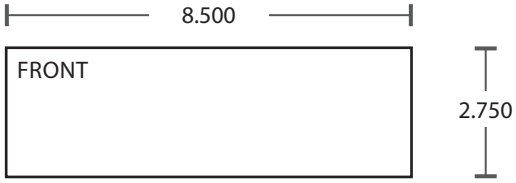
Printed in China
71375 Rev. 08/15-b
Patent Pending



BEGINNING SHEET



FINAL SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
060609					

Material
White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale
6. Saddle-stitch booklet

Revision Description:
B > Created artwork

Edited By	Approved By	EC Number	Release Date
D. Toppins	M. Roberts	xxxxx	08-27-15

Title
1250 Pull & Top Jamb Mount IS

Creation Date	Number	Revision
01-14-15	71375	B

Created By
D. Toppins

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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LCN®
1-877-671-7011

M1460 SE

1460SE: 85° - 110° HOLD OPEN
AUXILIARY STOP RECOMMENDED
MAX. OPENING: 110°

EN 3-4

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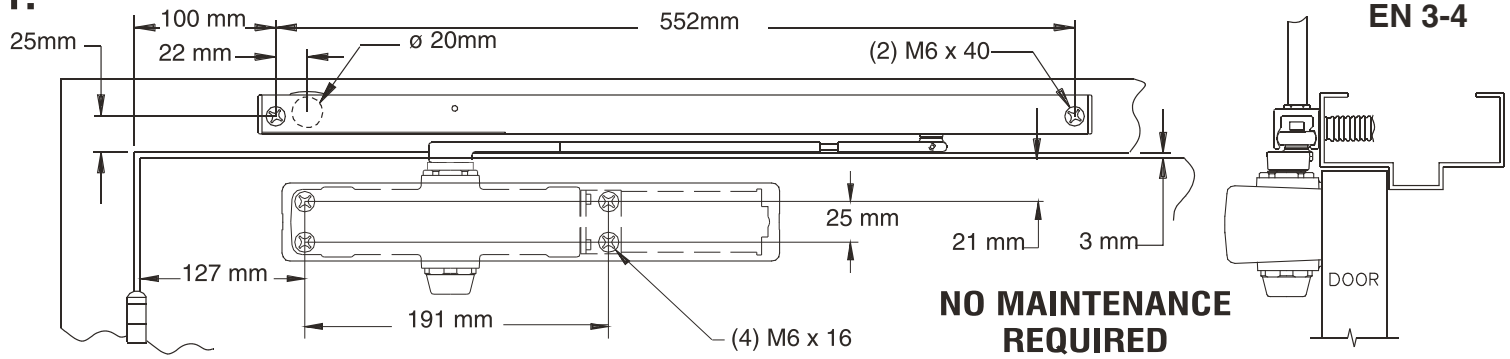

NO MAINTENANCE REQUIRED

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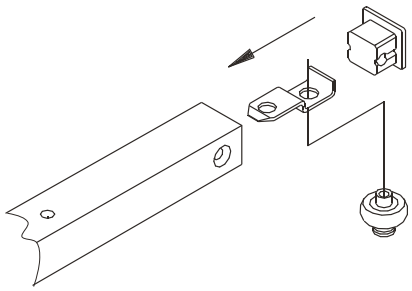

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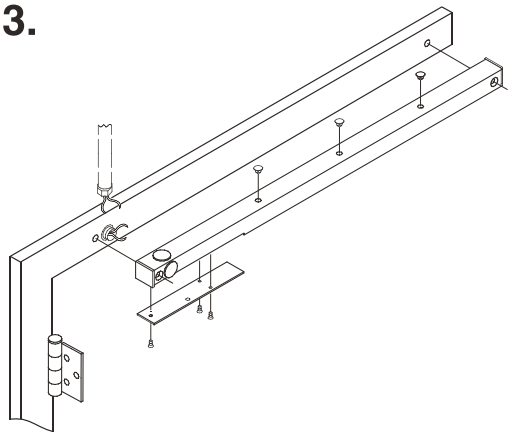

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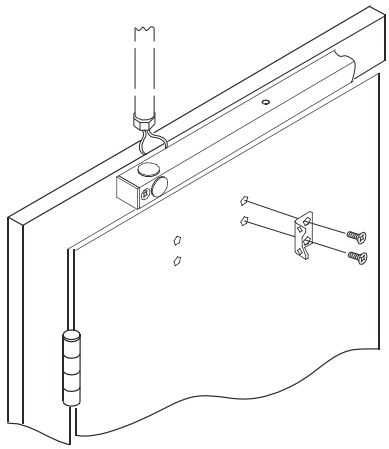

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1460 SE	
CLOSER SIZE	FULL TURNS REQ'D.
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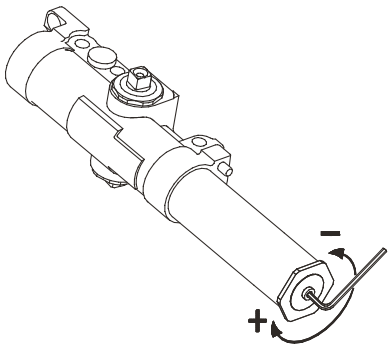
4	+8



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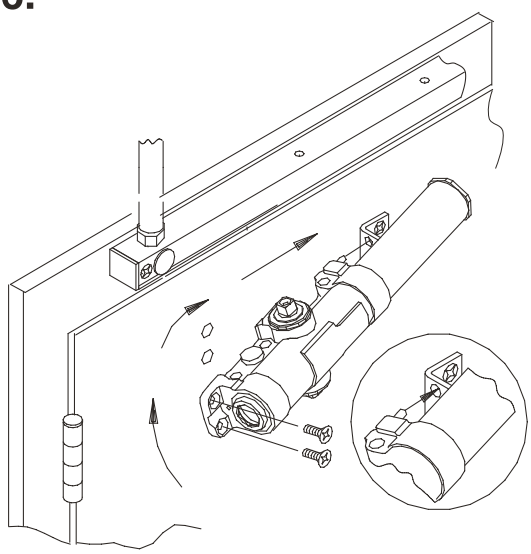

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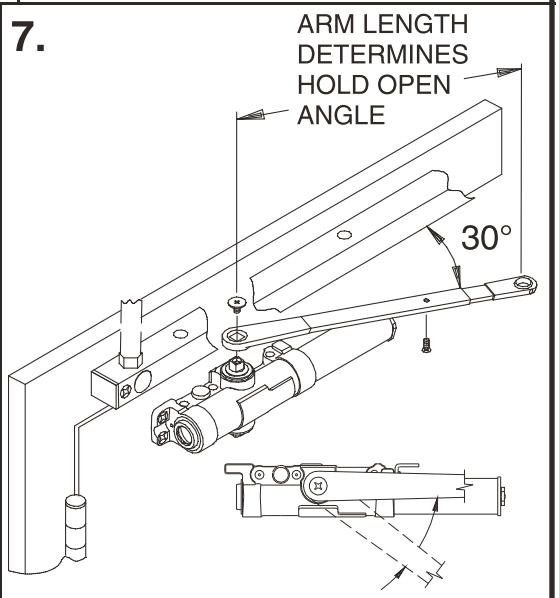

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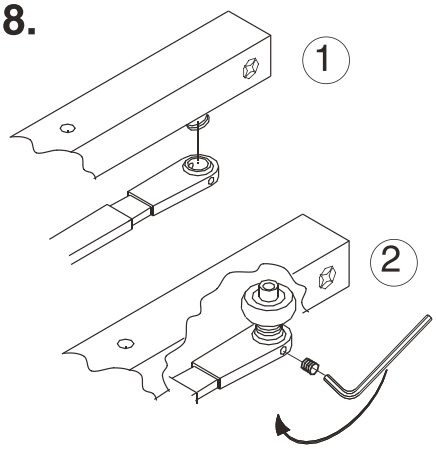

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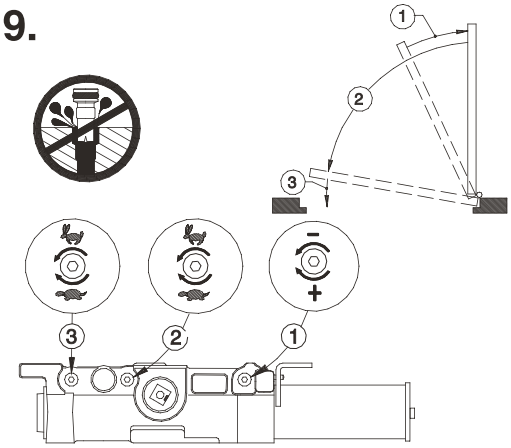

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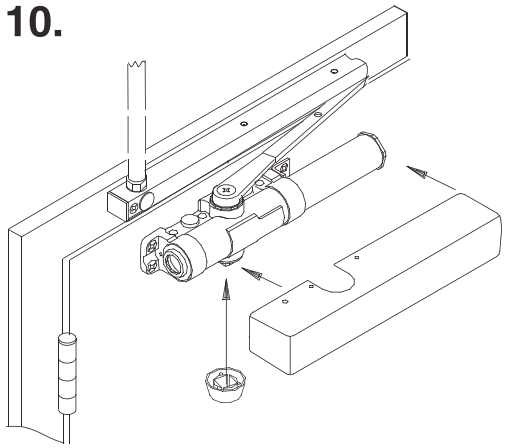

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1-877-671-7011

M1460 SE

1460SE: 85° - 110° HOLD OPEN
AUXILIARY STOP RECOMMENDED
MAX. OPENING: 110°

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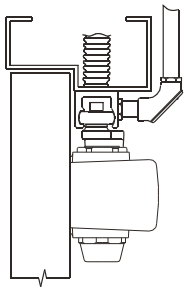

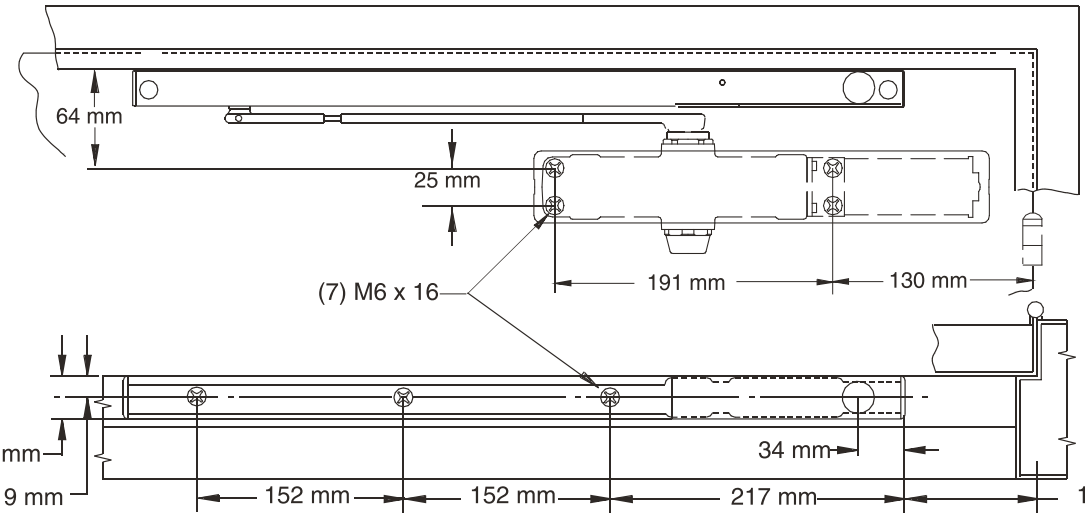

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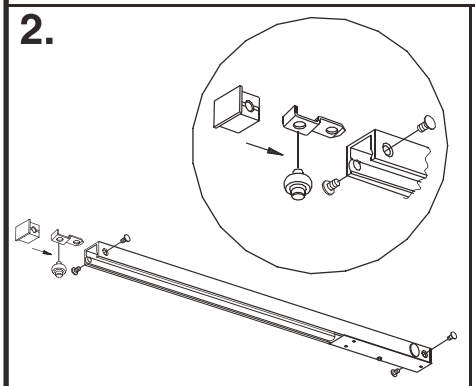

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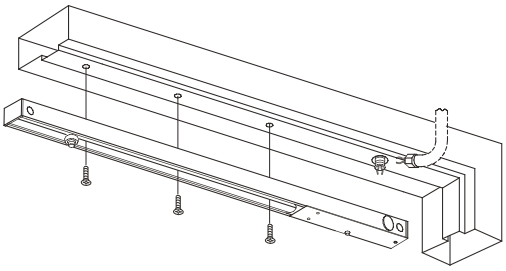

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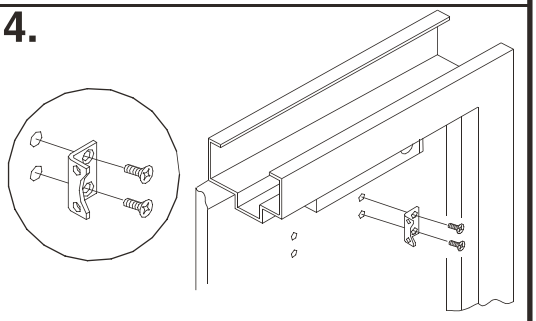

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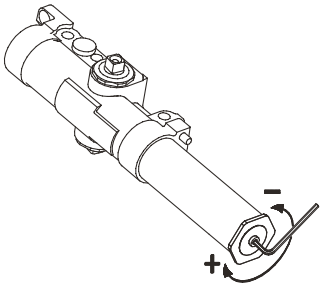

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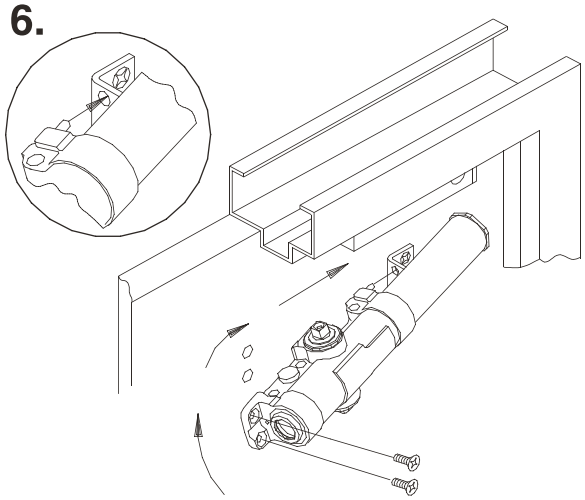

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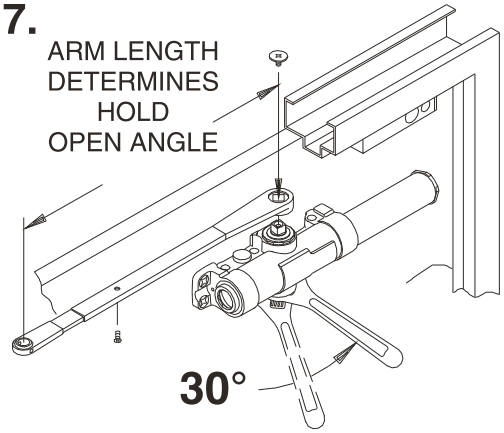

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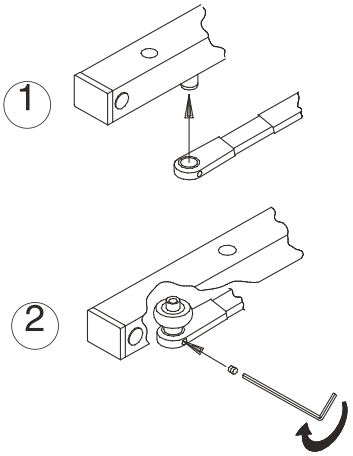

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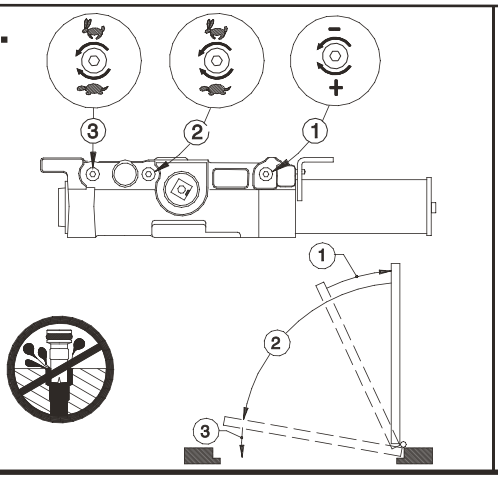

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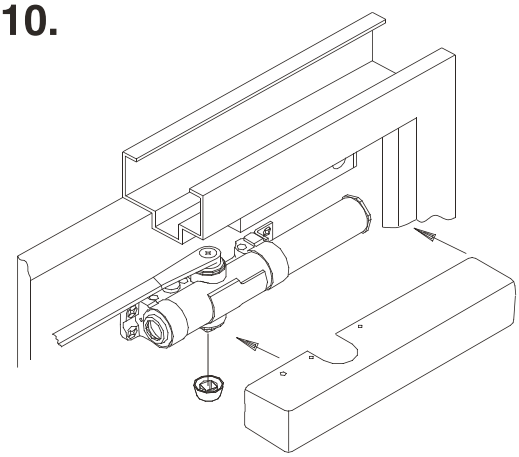


28090

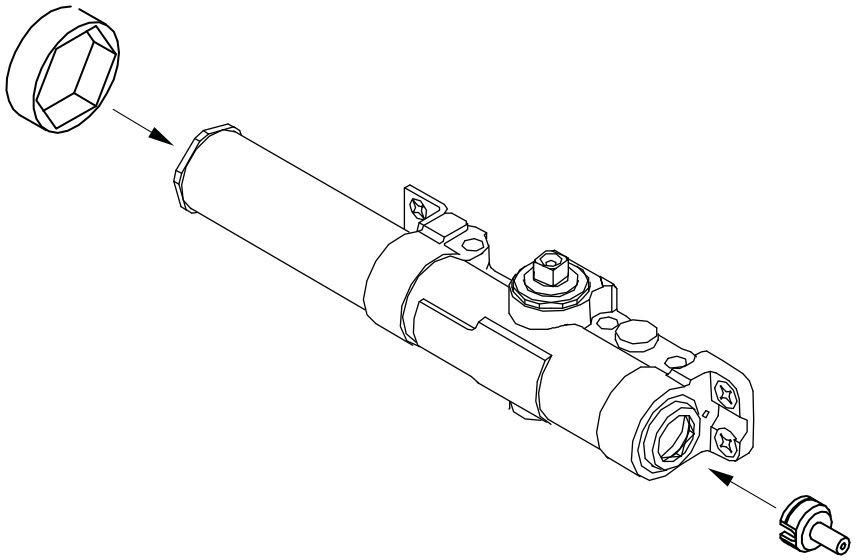
Designer Series Cover

LCN®

1461 Series

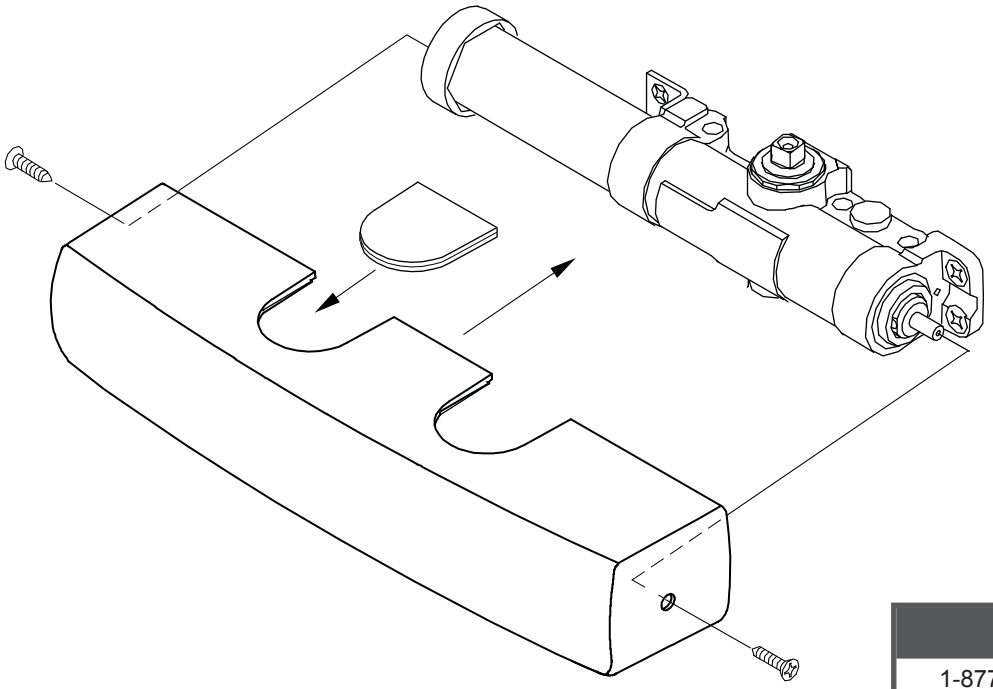
Installation Instructions

1 Attach white plastic cover adapters to both ends of door closer body.



2 Fit insert into proper cutout in cover.

3 Fit cover over closer body, aligning holes in ends of cover with holes in cover adapters.



Customer Service	
1-877-671-7011	www.allegion.com/us

4 Insert & tighten screws provided.

ALLEGION

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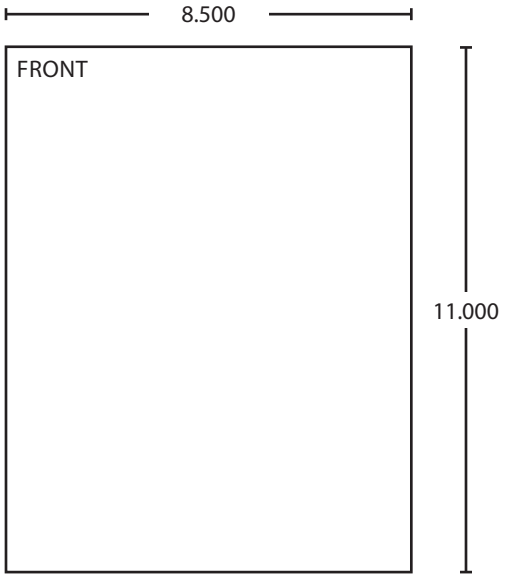
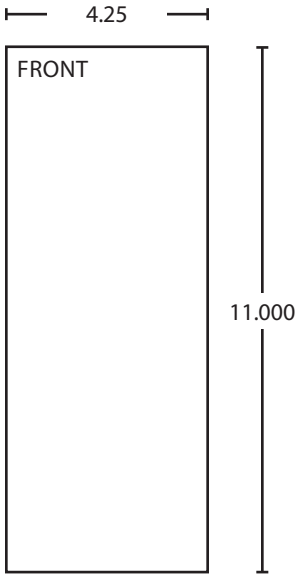
Printed in U.S.A.
28090 Rev. 01/14-d



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	N/A	N/A	043812		

Material
White Paper

Notes
1. printed one side
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
D > Revised artwork

Edited By	Approved By	EC Number	Release Date
R. Byun	M. Sasso	043812	01-01-14

Title
1460 Series DS Cover Instruction Sheet

Creation Date	Number	Revision
04-27-10	28090	D

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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LCN®

1-877-671-7011

740014-00

Benchmark Extended Reveal Kit and Extended Reveal Assembly for 10” Reveal (maximum)

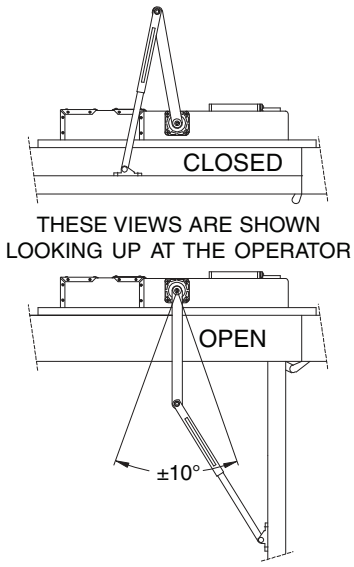


Figure 1

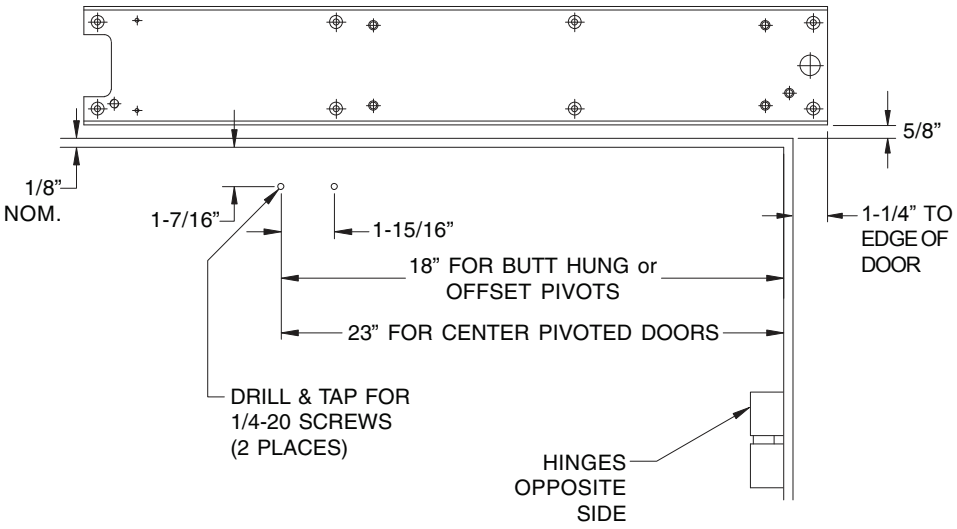
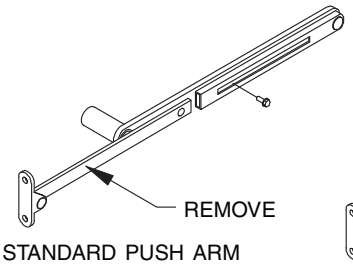
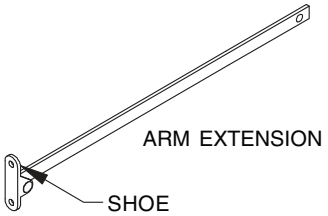


Figure 2

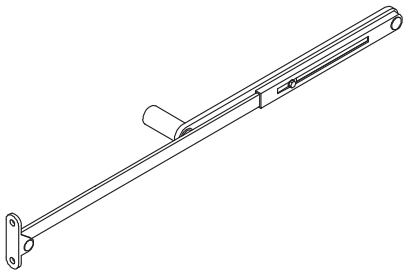


STANDARD ARM ASSEMBLY



EXTENDED REVEAL KIT

Figure 3



EXTENDED ARM ASSEMBLY

Figure 4

1. Refer to 740016-00 Benchmark Installation Instructions for installation of operator onto door frame.
2. Before attaching the arm to the unit, apply power and turn the power switch on. Activate the operator to the full open position by placing a jumper wire across the “Inside Activation” terminals to put the operator in the hold open position.
3. Extended arm assembly (Figure 4) replaces the standard arm assembly that comes with the Benchmark (Figure 3). Extended reveal kit requires that the installer remove the standard push arm (Figure 3) from the arm linkage and replace it with the arm extension (Figure 3).
4. Attach the shoe of the push arm assembly to the door (Figure 2). Slide the push arm into arm linkage and fasten loosely with the socket head cap screw provided.
5. Attach the arm linkage to the operator (Figure 1) with the 8mm socket head screw (loosely) and adjust the arm to the desired door position together with the shoe. Once the desired position has been chosen, tighten both the 8mm socket head screw and the nut connecting the two parts of the arm.
6. Remove the jumper wire.

Ingersoll Rand
Security Technologies

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4040XP/4041 DA

28102

120° Template
Pull Side

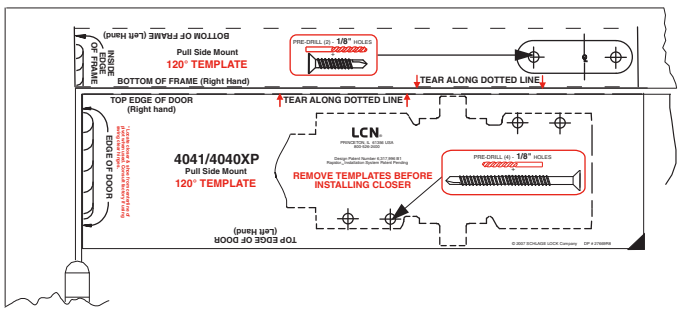
LCN®

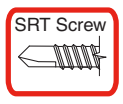
Installation Instructions

(Fig. 1)
4040XP EN 1-5

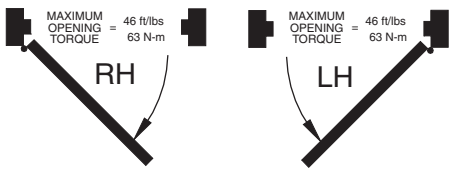
1

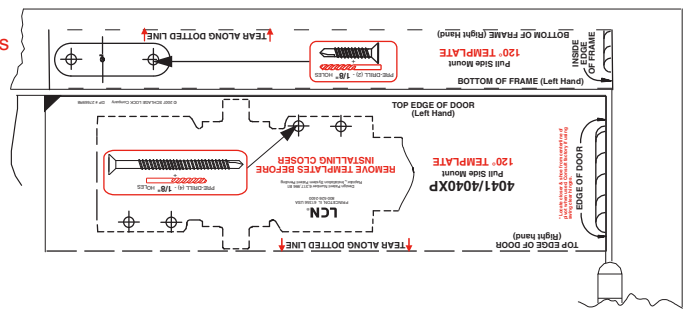
Locate proper template, tear along dotted line, peel template and apply. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes. Remove template before installing closer.





Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.





2

Determine door width, adjust spring power to match chart.

⚠ CAUTION

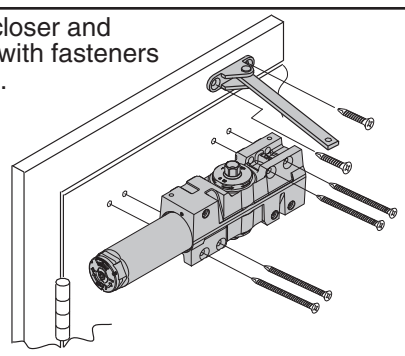
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

DOOR WIDTH		LCN FAST™ Power Adjust
INTERIOR	EXTERIOR	SET TO:
♿	——	1
34"	8.5 lb-f	2
38"	30"	3
48"	36"	4
54"	42"	5
60"	48"	6

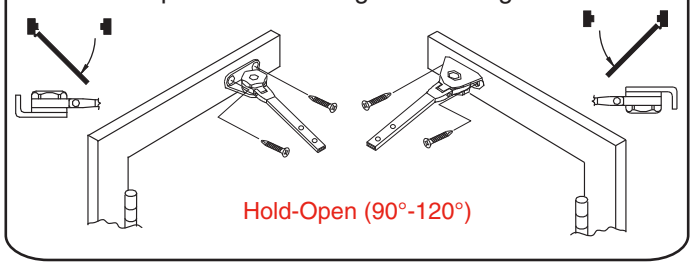
LCN® FAST™ Power Adjust for Spring Power Adjustment

3

Secure closer and forearm with fasteners provided.

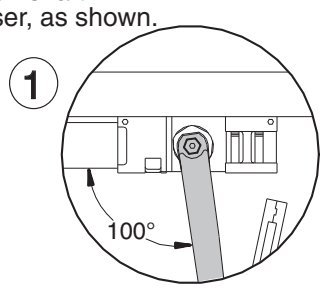


I Optional Hold-open arm. Identify direction of hold-open nut according to mounting.

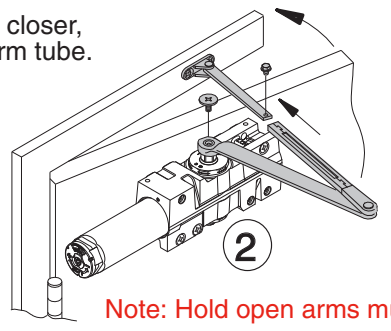


4

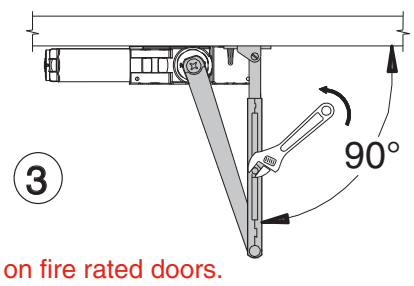
① Mount arm on shaft at 100° to closer, as shown.



② Attach arm to closer, insert rod into arm tube.



③ Pre-load arm to 90°. Fasten with screw provided.



Note: Hold open arms must not be installed on fire rated doors.

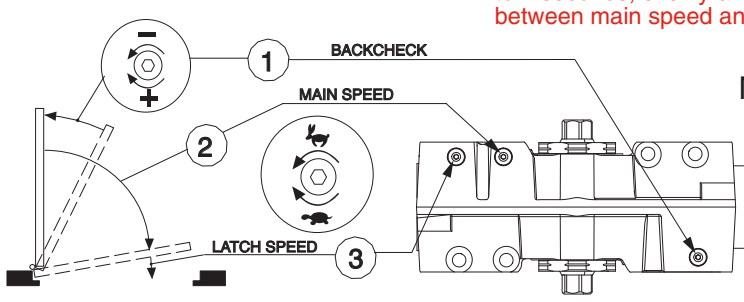
5

If necessary, adjust closer.

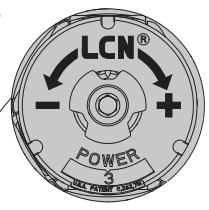
NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

⚠ CAUTION

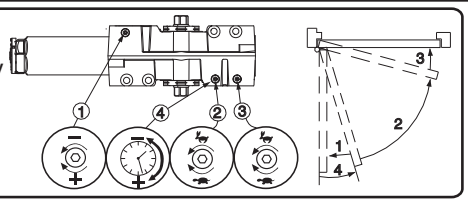
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



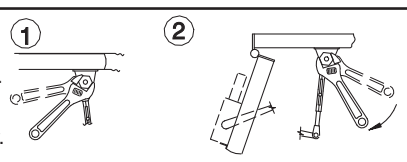
NO MAINTENANCE REQUIRED



II Optional 4041 Delay
① - Backcheck
② - Main Speed
③ - Latch Speed
④ - Delay Speed

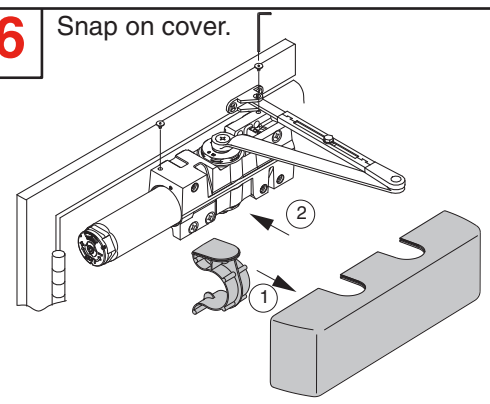


III To adjust Optional Hold-open arm:
Loosen hold open nut. Open door to desired position and tighten hold open nut securely.



6

Snap on cover.

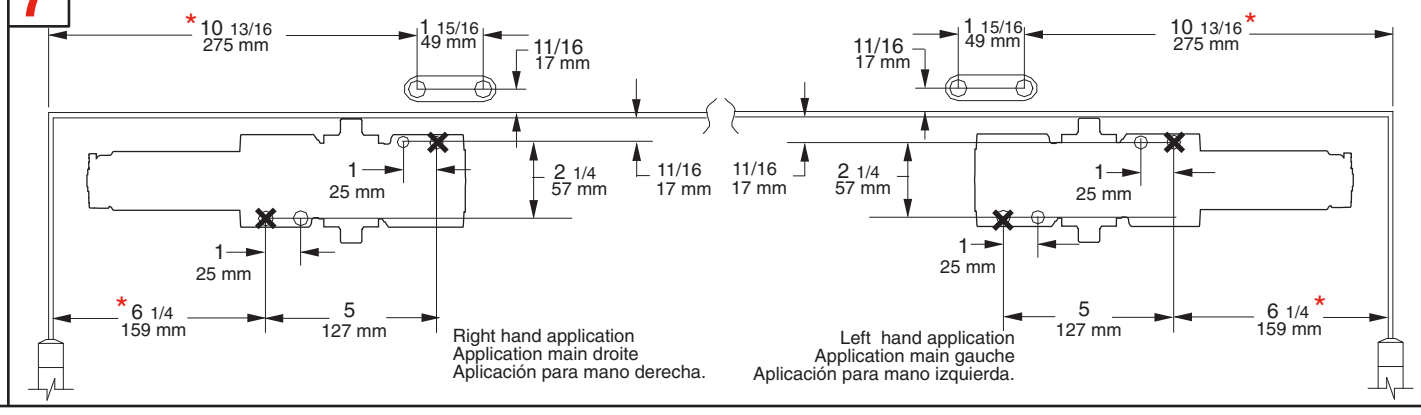


Note: Use screws to attach cover.

7

Dimensional Information

* If pivots are used, locate closer and shoe from centerline of pivot and for offset pivots increase the marked dimensions by 1/8". For swing clear hinges, consult factory.



4040XP Instructions et gabarit autocollant de 120° pour une installation sur le côté à tirer.

1 Repérez le gabarit approprié, détachez-le, retirez la pellicule et appliquez. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds. Retirez le gabarit avant de poser le ferme-porte.

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Réglage de force LCN® FAST™ pour régler la force du ressort

3 Fixez le ferme-porte et l'avant-bras avec les attaches fournies.

I Bras de retenue optionnelle. Identifiez la direction du boulon de retenue selon l'ouverture de la porte.

Bras de retenue (90°-120°)

4 ① Montez le bras sur la tige à 100° du du ferme-porte, comme sur l'illustration.

② Rattachez le bras au ferme-porte, insérez la tige dans le tube du bras.

③ Préchargez le bras à 90°. Fixez avec la vis fournie.

5 Au besoin, réglez
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage

II 4041 Action retardée optionnelle
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage
④ - vitesse de retenue

6 Fixez le couvercle.

7 Dimensions

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

III Pour régler le bras de retenue optionnelle, desserrez la vis de retenue. Ouvrez la porte à la position désirée et resserrez la vis.

⚠ DANGER

Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877 - 671 - 7011

⚠ DANGER

UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4040XP Instrucciones Pela y Pega para plantilla 120°con montaje del lado de empuje.

1 Localiza la plantilla apropiada, rompe a lo largo de la línea de puntos, pela la plantilla y aplícala. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes. Quita la plantilla antes de instalar el cerrador.

Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

LCN® FAST™ cuadrante de ajuste para ajustar la potencia del resorte

3 Sujeta el cerrador y el antebrazo con los sujetadores ya incluidos.

I Brazo de retención opcional. Identifíca la dirección de la tuerca de retención según el montaje.

Brazo de retención (90°-120°)

4 ① Monte el brazo en el eje a 100° del cerrador, tal como se muestra.

② Coloca el brazo al cerrador, inserta la varilla en el tubo del brazo.

③ Prearma el brazo a 90°. Sujeta con el tornillo ya incluido.

5 Ajusta si es necesario.
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

II 4041 Acción retardada opcional.
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro
④ - velocidad de retardo

6 Encaje la tapa.

7 Datos dimensionales.

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

III Para ajustar el brazo de retención opcional: Afloja la tuerca de retención. Abra la puerta a la posición deseada y aprieta bien la tuerca de retención.

⚠ ADVERTENCIA

UNA INSTALACIÓN O UN AJUSTE INCORRECTORS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL 877 - 671 - 7011

⚠ ADVERTENCIA

LA APERTURA DEMASIADO GRANDE DE LAS VÁLVULAS DE AJUSTE PUEDE OCASIONAR UN DERRAME, DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES.

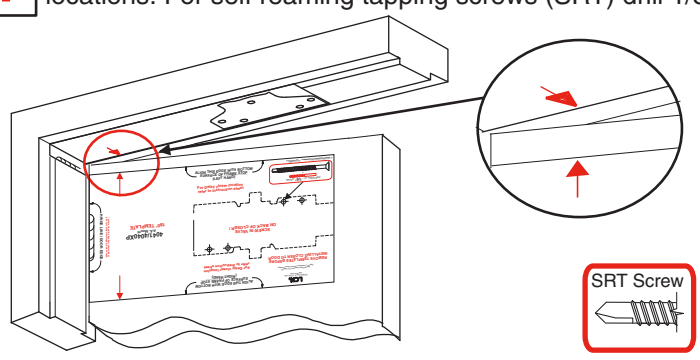
180° Template
P.A. Mounting

Installation Instructions

1

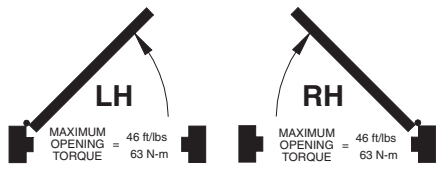
Locate proper template. Peel template and apply so red arrows align. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes. Remove template before installing closer.

(Fig. 66)
4040XP EN 1-5

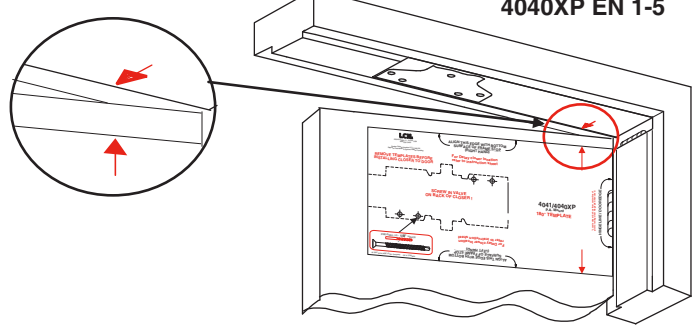


SRT Screw

For 4041 Delay 90° Mounting provides additional delay time.



Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.



2

Determine door width, adjust spring power to match chart.

⚠CAUTION

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DOOR WIDTH		LCN FAST™ Power Adjust
INTERIOR	EXTERIOR	SET TO:
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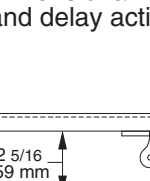
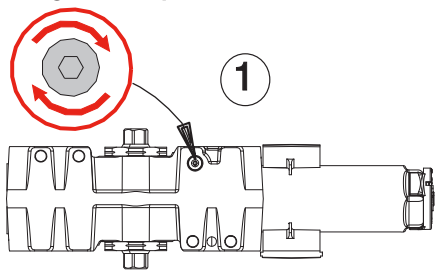
34"	8.5 lb-f	2
38"	30"	3
48"	36"	4
54"	42"	5
60"	48"	6

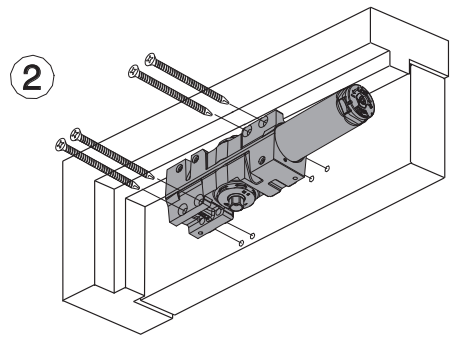
LCN® FAST™ Power Adjust for Spring Power Adjustment



3

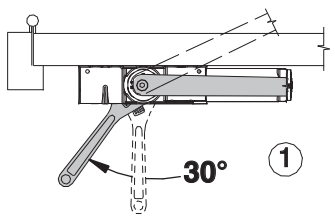
Screw in valve on back of closer.
Using screws provided, secure closer to door.



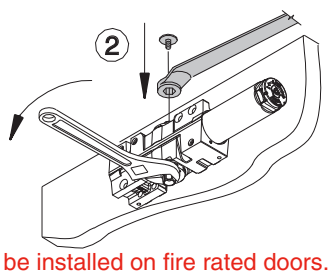


4

① Pre-load closer to 30°, as shown.



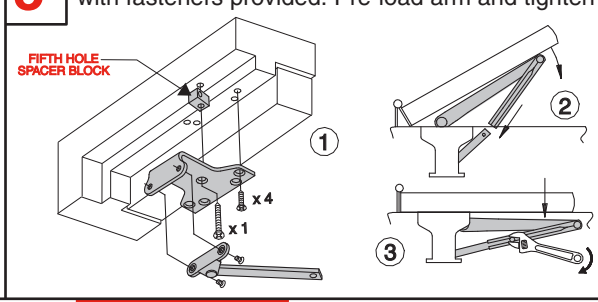
② Attach arm to closer, with provided fastener.



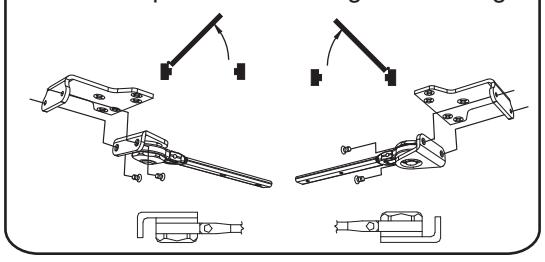
Note: Hold open arms must not be installed on fire rated doors.

5

Attach P.A. shoe to frame and fasten forearm to shoe with fasteners provided. Pre-load arm and tighten screw.



I Optional Hold-open arm. Identify direction of hold-open nut according to mounting.



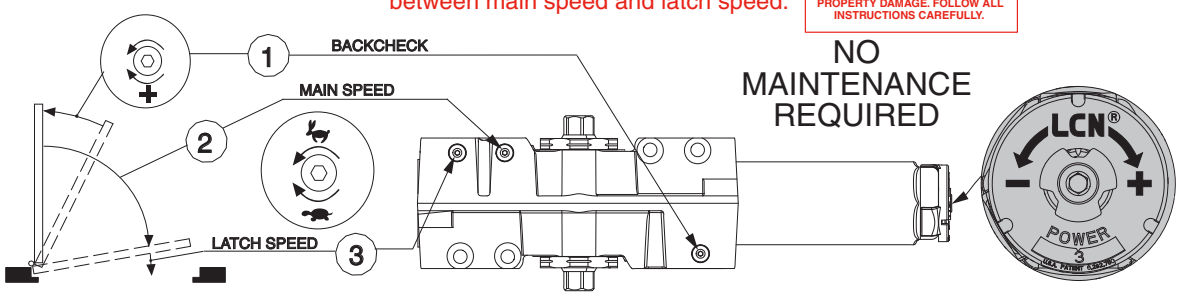
6

If necessary, adjust closer

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

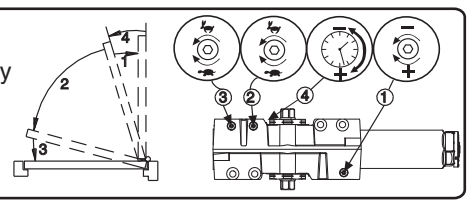
⚠CAUTION

OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.

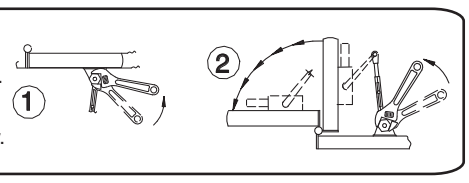


NO MAINTENANCE REQUIRED

II Optional 4041 Delay
① - Backcheck
② - Main Speed
③ - Latch Speed
④ - Delay Speed

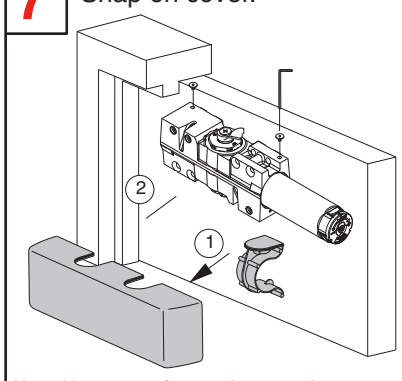


III To adjust Optional Hold-open arm:
Loosen hold open nut.
Open door to desired position and tighten hold open nut securely.



7

Snap on cover.

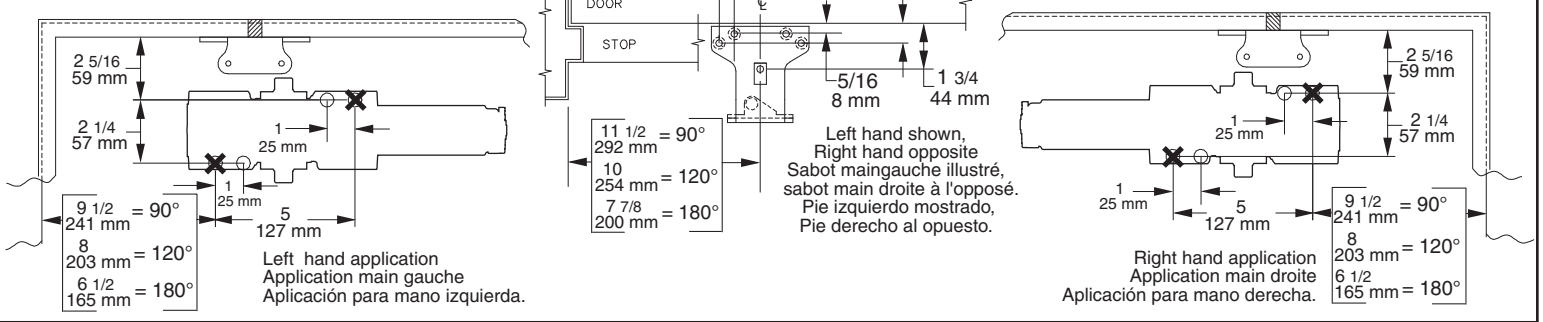


Note: Use screws for metal cover only.

8

Dimensional Information for standard and delay action mounting.

*** Locate closer & shoe from centerline of pivot or swing clear hinge pin when used.**



4040XP Instructions et gabarit autocollant de 180° pour une installation "bras parallèle".

1 Repérez le gabarit approprié. Retirez la pellicule, alignez les flèches rouges et appliquez. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds. Retirez le gabarit avant de poser le ferme-porte.

Pour le 4041 l'installation de la Retenue 90° permet un délai de retenue additionnel.

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Réglage de force LCN®FAST™ pour régler la force du ressort

3 **Vissez la soupape derrière le ferme-porte.** Fixez le ferme-porte sur la porte avec les attaches fournies.

4 ① Préchargez le ferme-porte à 30°, comme sur l'illustration.

② Rattachez le bras au ferme-porte avec l'attache fournie.

5 Rattachez le sabot du b. p. au cadre et fixez l'avant-bras sur le sabot avec les attaches fournies. Préchargez le bras et serrez la vis.

I Bras de retenue optionnelle. Identifiez la direction du boulon de retenue selon l'ouverture de la porte.

6 Au besoin, réglez
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage

II 4041 Action retardée optionnelle
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage
④ - vitesse de retenue

7 Fixez le couvercle.

8 Dimensions

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

III Pour régler le bras de retenue optionnelle, desserrez la vis de retenue. Ouvrez la porte à la position désirée et resserrez la vis.

⚠DANGER

Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877 - 671 - 7011

⚠DANGER

UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4040XP Instrucciones Pela y Pega para plantilla 180° con montaje del brazo paralelo.

1 Localiza la plantilla apropiada. Quitar la película, alinear las flechas rojas y aplicar la plantilla. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes. Quita la plantilla antes de instalar el cerrador.

Para la Retención del 4041, un montaje de 90° dará un tiempo de retención adicional.
Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico LCN®FAST™ cuadrante de ajuste para ajustar la potencia del resorte

3 Atornilla la válvula al revés del cerrador. Sujeta el cerrador a la puerta con los tornillos ya incluidos.

4 ① Precarga el cerrador a 30°, tal como se muestra.

② Coloca el brazo al cerrador con el sujetador ya incluido.

5 Coloca el pie del brazo paralelo a la armazón y coloca el antebrazo con los sujetadores ya incluidos. Prearma el brazo y aprieta el tornillo.

6 Ajusta si es necesario.
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

II 4041 Acción retardada opcional.
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro
④ - velocidad de retardo

7 Encaje la tapa.

8 Datos dimensionales para montaje estándar y de acción retardada.

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

I Brazo de retención opcional. Identifíca la dirección de la tuerca de retención según el montaje.

III Para ajustar el brazo de retención opcional: Afloja la tuerca de retención. Abra la puerta a la posición deseada y aprieta bien la tuerca de retención.

⚠ADVERTENCIA

UNA INSTALACIÓN O UN AJUSTE INCORRECTORS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL 877 - 671 - 7011

⚠ADVERTENCIA

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ALLEGION

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28102 Rev. 09/17-ya

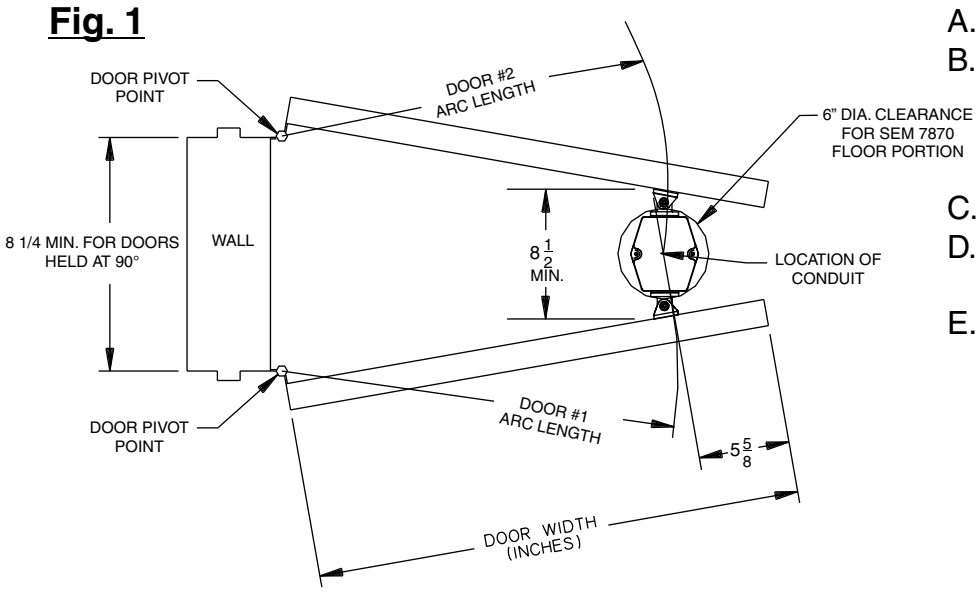
LCN®
1-800-526-2400

SEM 7870

Sentronic® Electro-Magnetic
Double Door Holder Floor Mounted

CAUTION
IMPROPER INSTALLATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 800 - 526 - 2400

Fig. 1



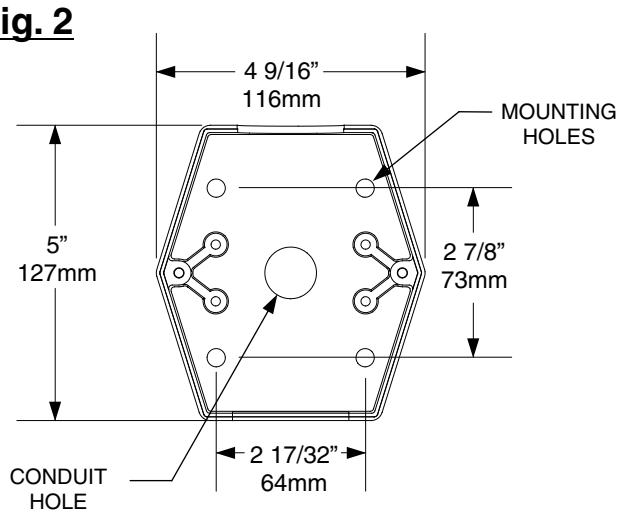
DOUBLE DOOR INSTALLATION

Step 1: Plan the Installation

A. Measure the door width.
B. Calculate the arc length by subtracting 5 5/8″ from the door width. Draw an arc at the calculated length from each of the doors pivot points as shown. String and a pencil could be used to draw the arc on the floor.
C. Where the two arc's intersect is the center of the conduit hole.
D. Drill and install conduit as needed. Maximum conduit size is ½″. Maximum conduit height above the floor is 1″.
E. Pull wire in accordance with applicable codes, standards, and authorities having jurisdiction. Electrical specifications are shown below. Maximum degree of door opening is 130°.

Input Voltage	Current Draw Max.
120VAC, 60Hz	.02A
24VAC, 60Hz/24VDC	.02A
12VDC	.03A

Fig. 2



FLOOR PORTION

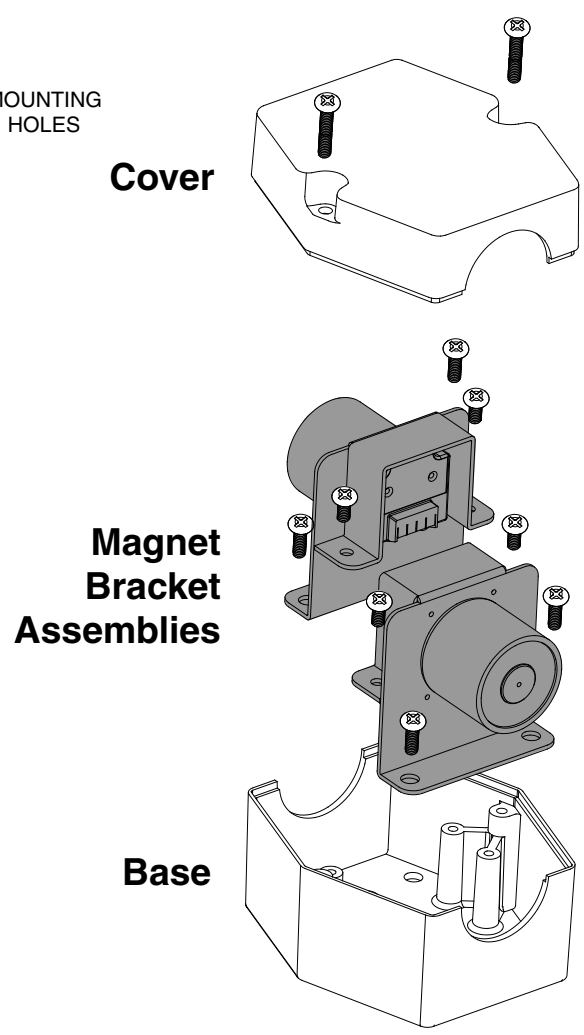
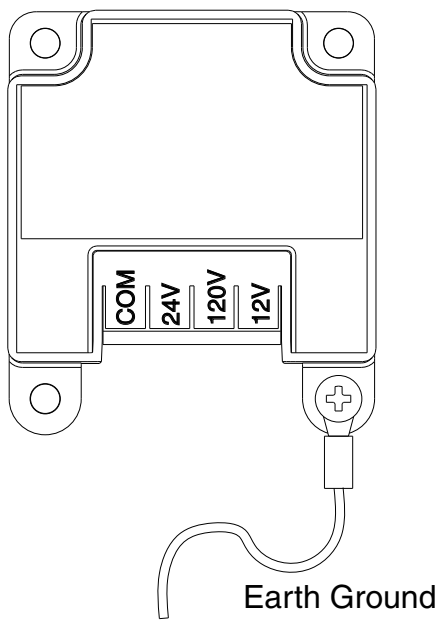


Fig. 3

Back view of magnet assembly



Step 2: Install the Magnet

A. The magnet is shipped partially assembled for protection. Unscrew the cover from the base then unscrew the magnet bracket assemblies from the base. Keep the screws for later reattachment.
B. Guide the conduit through the hole in the base and snug up the conduit nut. Square up the base to the wall, as shown in Fig.1.
C. See Fig. 2. Using the base as a template, mark the four mounting hole locations on the floor.
D. Remove the base and drill 3/8" holes in the floor at 1 1/4" deep. Install the cement anchors provided into the drilled holes, threaded ends up.
E. Reposition the base, aligning the mounting holes with the floor holes. Tighten the conduit nut. The magnet assemblies must first be connected to power supply wires before the housing base mounting screws can be installed.
F. See Fig. 3. Connect the supply earth ground wire to the green wire on the magnet assembly bracket. Connect the power supply common wire to the screw terminal marked COM. If the supply voltage is 24V, connect the power supply hot wire to the screw terminal marked 24V. If the supply voltage is 120V, connect the power supply hot wire to the screw terminal marked 120V. If the supply voltage is 12V, connect the power supply hot wire to the screw terminal marked 12V. Polarity is important on the 12V input. There are protective plastic tabs over the terminal screws. Break off the two tabs that protect COM and the desired voltage so that the screw head is exposed.
G. See Fig. 2. With the magnet wired, position the magnet bracket assemblies over the base mounting holes and the base post holes. Insert (2) ¼″-20 base mounting screws into the cement anchors and the (2) 10-24 shorter screws from step 2A into the post holes. Tighten firmly. Repeat for the second magnet bracket assembly. Attach the cover using the (2)10-24 longer screws from step 2A.

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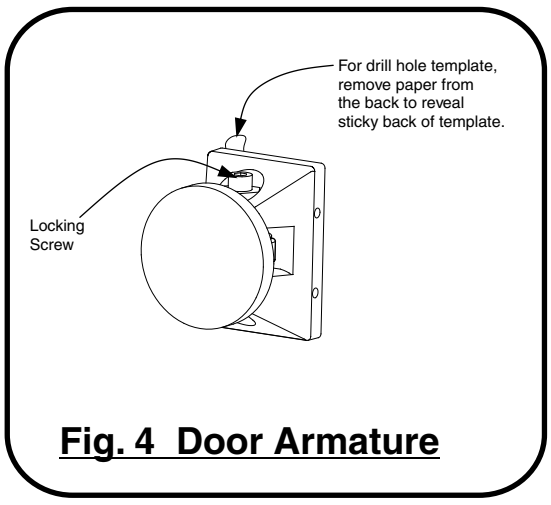
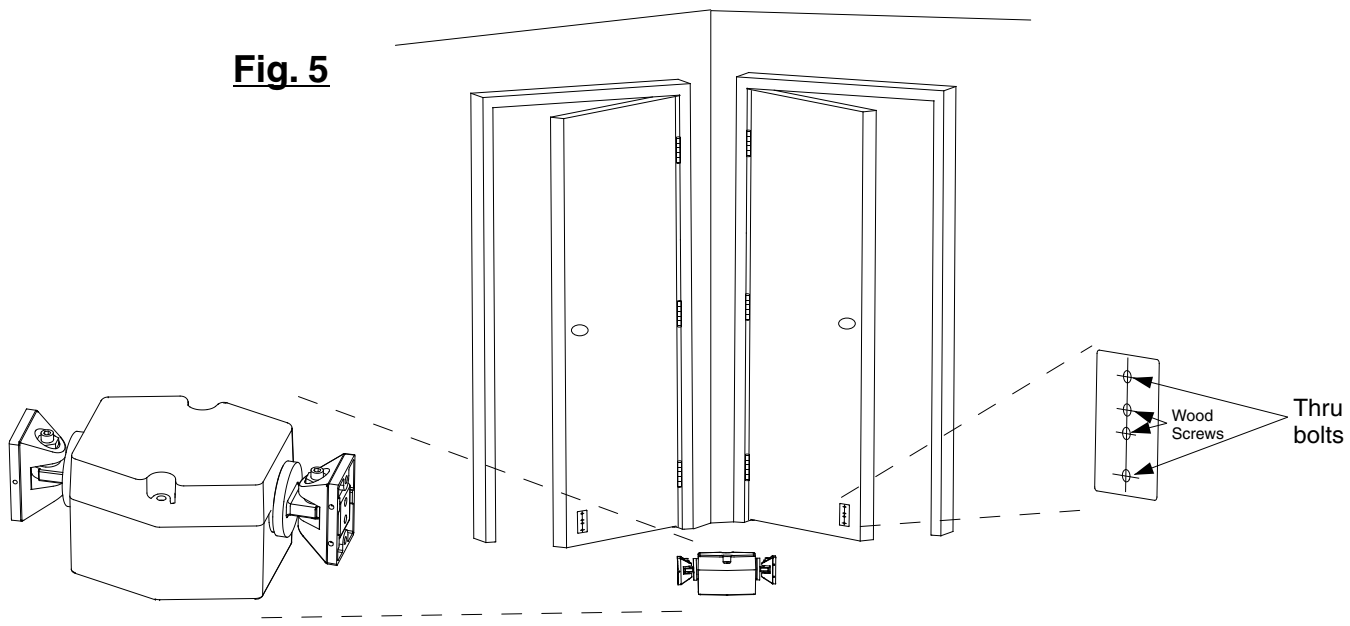


Fig. 4 Door Armature

Fig. 5



Step 3: Install the Door Armature

A. See Fig. 4. Slightly loosen the contact plate locking screw using a 5/32" Allen wrench so the contact plate can rotate with some resistance. Remove the protective paper from the drill template sticky-back label on the back of the door armature.

B. See Fig. 5. Place the armature against the floor magnet. This is best done with power applied to the magnets. If power is not available, hold the armature in place by hand. The armature contact plate must fully cover the magnet. If the contact plate is not centered and flat on the magnet, reduced holding force will result.

C. With the armature against the magnet, open the door and press it against the armature and magnet. Pull the door away to transfer the drill template to the door. Template may need assistance with transferring to door, using a flat blade screwdriver on the template tab that sticks out and push it onto the door while pulling the door away.

D. See Fig. 6 and 7. Determine if the armature will be mounted using the wood screw kit or the thru bolt kit. The thru bolt kit is recommended for 1 ¾" hollow metal, hollow core, or composite-type wood doors. If using the wood screw kit, drill the center two holes on the template using a 1/8" bit by 1 ¼" deep. If using the thru bolt kit, drill the outer two holes on the template using a 5/16" bit all the way through the door. Remove the template after the holes are drilled.

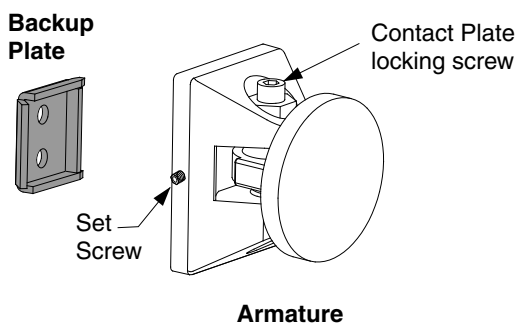
E. Attach the armature to the door using the appropriate plate and screws. If using the wood screws and backup plate, tighten the armature set screw against the backup plate as the last step using the 1/16"Allen wrench provided.

Fig. 6

WOOD SCREW MOUNTING

FOR SOLID WOOD CORE DOORS

This view shows the contact plate
locking screw accessible from the top.
Rotate backup plate 180° for underside access.



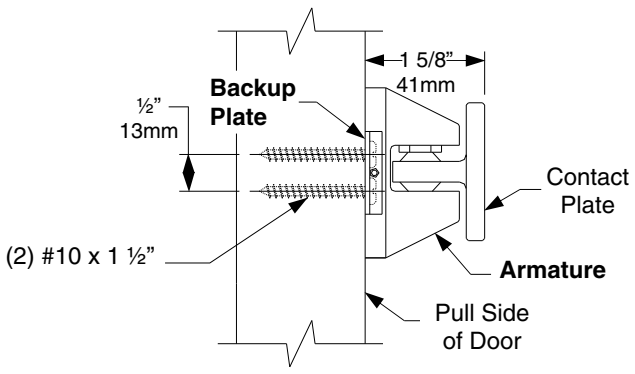
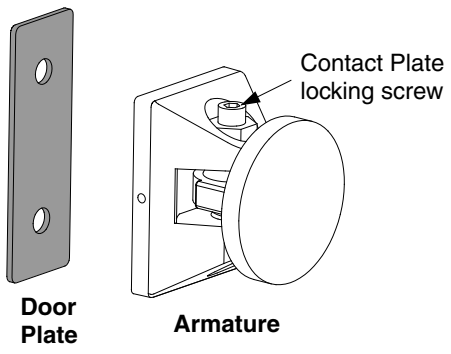
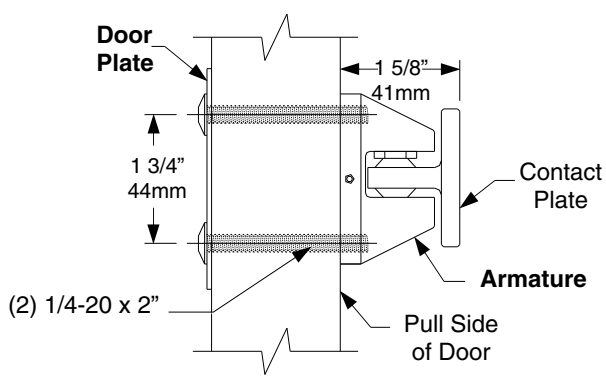


Fig. 7

THRU BOLT MOUNTING

RECOMMENDED FOR
HOLLOW METAL, HOLLOW CORE
OR COMPOSITE TYPE WOOD DOORS





72694

Optional Bumper
Parachoques Opcional
Tampon en Option

LCN®

Installation Instructions
Instrucciones para la instalación
Instructions d'installation

⚠ CAUTION:

Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions, call LCN at 877-671-7011.

⚠ DANGER:

Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877-671-7011.

⚠ ADVERTENCIA:

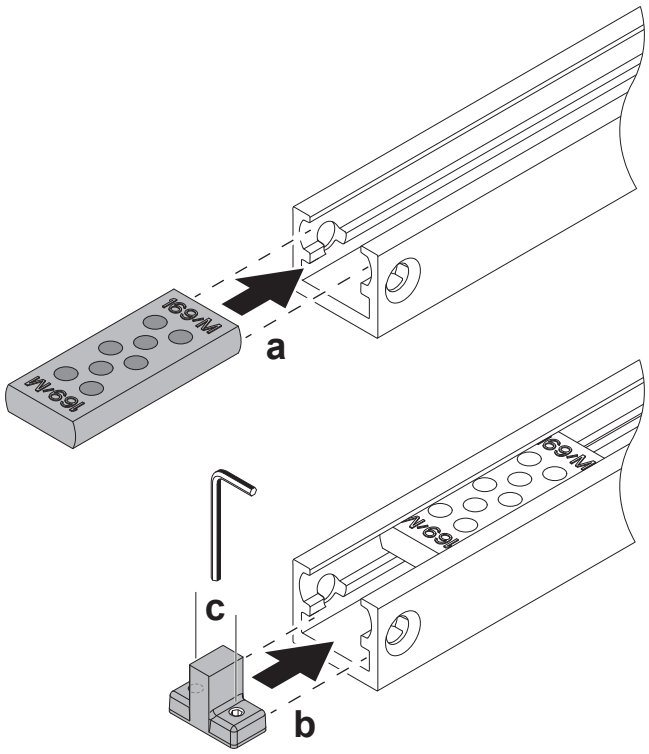
Una instalación o un ajuste incorrectos pueden resultar en daño personal o material. Siga bientodas las instrucciones. Para más informaciones, llama a LCN al 877-671-7011.

1 Install Bumper

Instalar el Parachoques

Installation du Tampon

a. Insert bumper into roller channel of track.
   Inserte el parachoques en el canal de rodamiento de la oruga.
   Introduisez le tampon dans le canal à roulette de chaque piste.
b. Insert bumper stop assembly and slide it to the position as required.
   Inserte el conjunto de tope del parachoques y deslícelo a la posición que se requiera.
   Introduisez la butée d'arrêt du tampon et faites-la glisser dans la position requise.
c. Fully tighten set screws.
   Ajuste por completo los tornillos de presión.
   Serrez complètement les vis de réglage.



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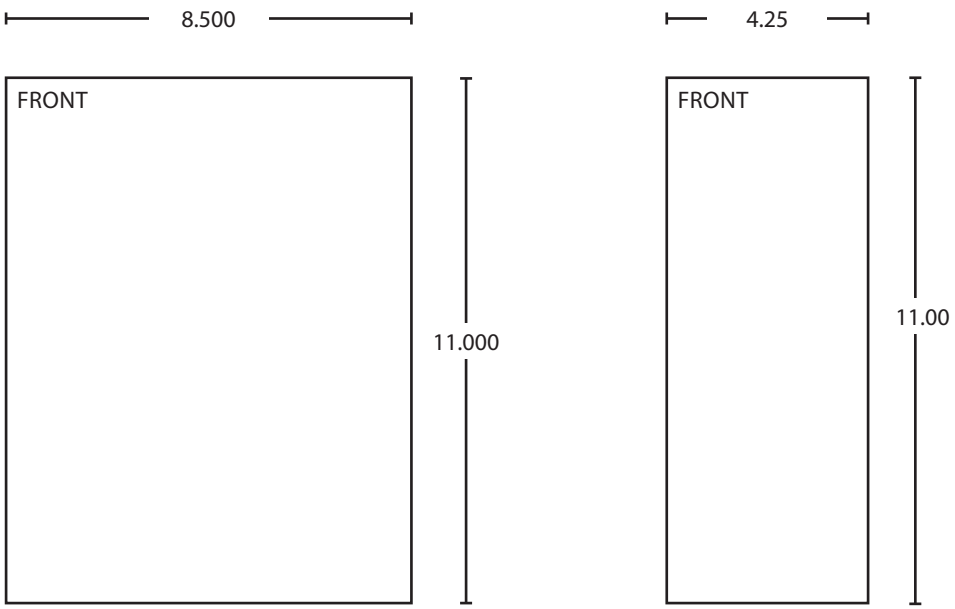
72694 Rev. 10/15-a



BEGINNING SHEET

FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
xxxxxx					

Material
White Paper

Notes
1. printed one sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
A > New document

Edited By	Approved By	EC Number	Release Date
J. Ellis	J. Pattar		10-20-15

Title
Optional Bumper Installation Instruction Sheet (new)

Creation Date	Number	Revision
10-6-15	72694	A

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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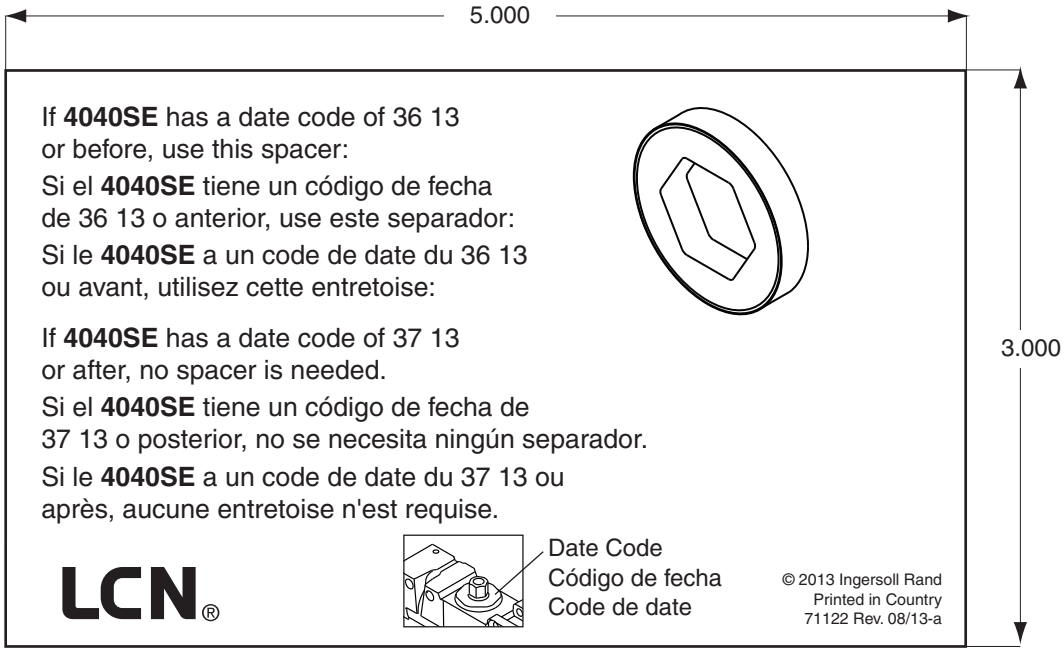

Additional Notes:
None

Revision History					
A	B	C	D	E	F
039376	EC #	EC #	EC #	EC #	EC #

Material: White Paper

Notes
1. printed one side
2. printed black
3. tolerance: ± .13
4. see sheet 2 for artwork
5. printed in country may vary
6. drawings not to scale

Revision Description:
A > Created Artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	Chaitanya Viswanadha	039376	08-13-13

Title: 4040SE IS Insert

Creation Date	Number	Revision
08-13-13	71122	A

Created By: D. Myers
Software: Illustrator CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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28476

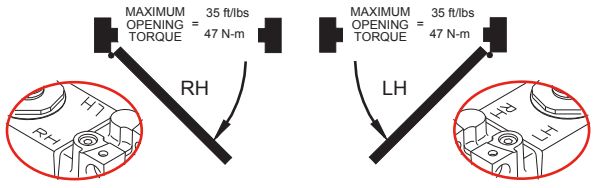
4010 Track Series

LCN®

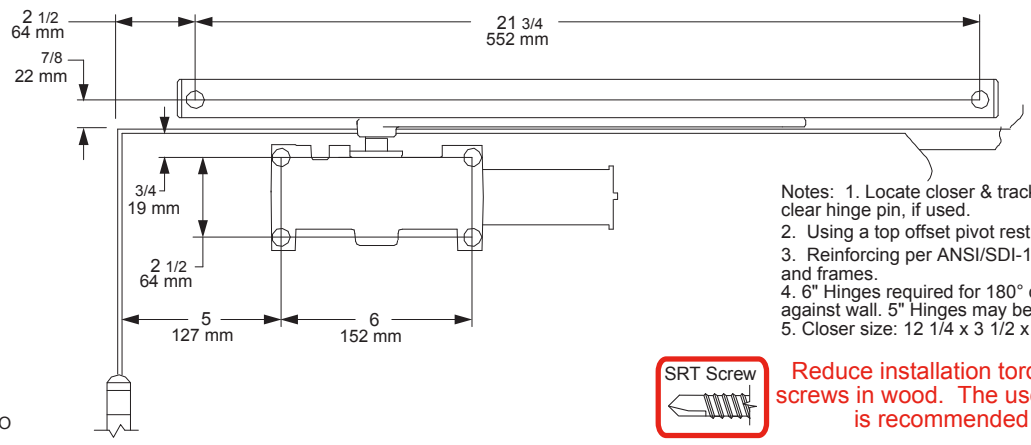
180° Template, Pull Side

Installation Instructions

1 Locate proper template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes. Verify hand of closer matches hand of door.



RIGHT HAND SHOWN, LEFT HAND OPPOSITE
MAIN DROITE ILLUSTRÉE, MAIN GAUCHE CONTRAIRE
PUERTA DE MANO DERECHA ILLUSTRADA, MANO IZQUIERDA AL OPUESTO



Notes: 1. Locate closer & track from centerline of pivot or swing clear hinge pin, if used.
2. Using a top offset pivot restricts door swing to 150°.
3. Reinforcing per ANSI/SDI-100 recommended for hollow doors and frames.
4. 6" Hinges required for 180° door opening with frame flush against wall. 5" Hinges may be used with no wall interference.
5. Closer size: 12 1/4 x 3 1/2 x 2 1/4.

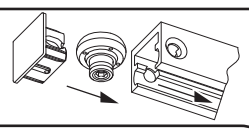
Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.

2 Determine door width, adjust spring power to match chart.

TABLE OF SIZES	
DOOR WIDTH (INTERIOR DOORS ONLY)	CLOSER SIZE
♿ - ADA	4011T
UP TO 36"(914mm)	4013T
37"(940mm) - 48"(1219mm)	4014T

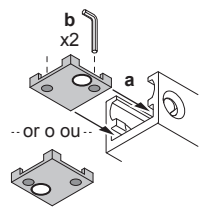
⚠CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

3 Assemble roller into track.

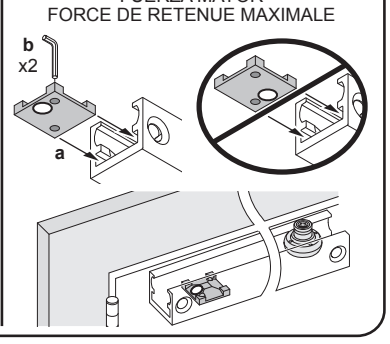


HOLD-OPEN OPTION
OPCIÓN DE MANTENER ABIERTO / OPTION DE RETENUE

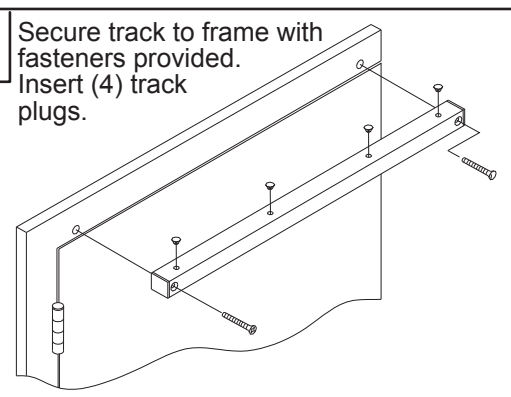
LIGHT HOLD-OPEN FORCE
FUERZA LIGERA PARA MANTENER ABIERTO
FORCE DE RETENUE LÉGÈRE



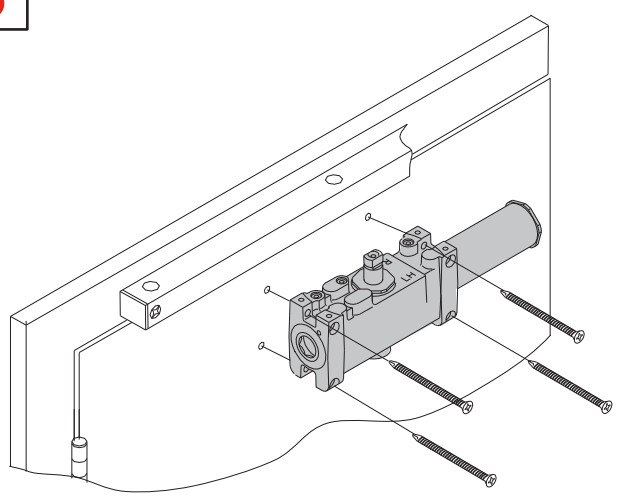
STRONG HOLD-OPEN FORCE
FUERZA MAYOR
FORCE DE RETENUE MAXIMALE



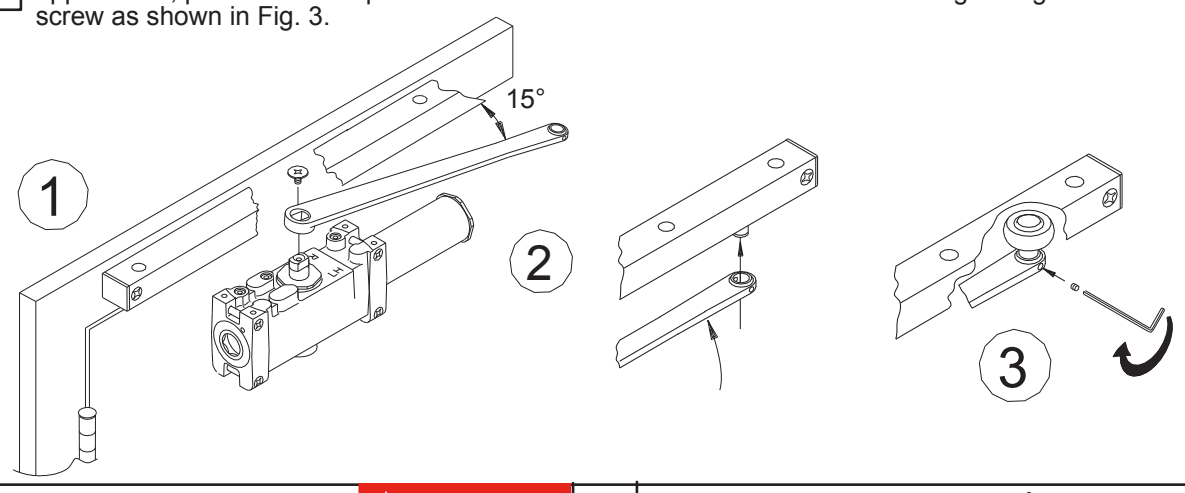
4 Secure track to frame with fasteners provided. Insert (4) track plugs.



5 Secure closer to door with fasteners provided.



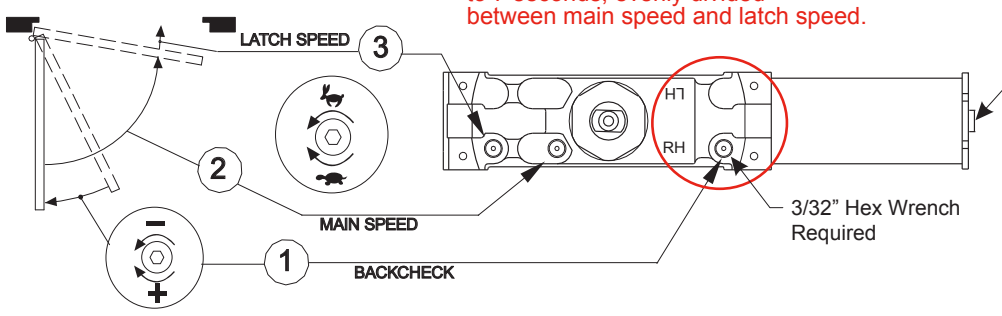
6 Attach arm to closer at pre-load position of 15°. Secure with provided pinion screw. Open door approx. 30°, pull arm over top of door and connect to track roller as shown in Fig. 2. Tighten set screw as shown in Fig. 3.



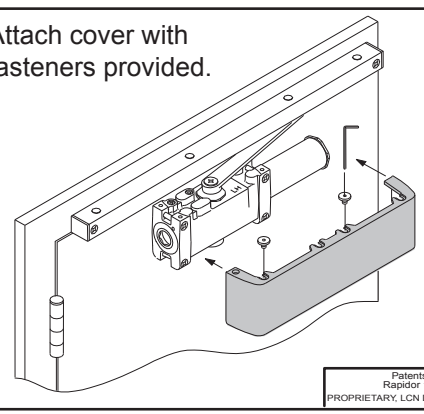
7 If necessary, adjust closer.

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

⚠CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



8 Attach cover with fasteners provided.



Patents Pending include:
Rapidor ™Installation System
PROPRIETARY, LCN Division, Schlage Lock Company

4010 Instructions du rail et gabarit de 180° pour une installation sur le côté â tirer.

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds.

Vérifiez si la main du ferme-porte correspond à la main de la porte.

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

3 Glissez le galet dans le rail.
Option de retenue.

4 Fixez le rail au cadre avec les attaches fournies. Insérez les (4) bouchons du rail.

5 Fixez le ferme-porte sur la porte avec les attaches fournies.

6 Attachez le bras au ferme-porte à la position préchargée de 15°. Fixez à l'aide es vis fournies. Ouvrez la porte à environ 30°, tirez le bras au-dessus de la porte et attachez-le au galet du rail comme sur l'illustration 2. Serrez la vis comme sur l'illustration 3.

7 Au besoin, réglez
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

8 Fixez le boîtier avec les attaches fournies.

⚠DANGER
UNE INSTALLATION OU UN RÉGLAGE INADÉQUATS PEUVENT ENTRAÎNER DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE TOUTES LES INSTRUCTIONS AVEC SOIN. POUR PLUS DE RENSEIGNEMENTS, COMPOSEZ LE 877-671-7011

⚠DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4010 Instrucciones de rieles para plantilla 180° con montaje del lado del tirón.

1 Localice la plantilla apropiada. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes.

Verifique que la mano del cerrador corresponda a la mano de la puerta.

Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

3 Ponga el rodillo de ensamblaje en el riel.
Opción de mantener abierto.

4 Sujete el riel al bastidor con los sujetadores ya incluidos. Inserte quatro (4) tapones de rieles.

5 Sujeta el cerrador a la puerta con los sujetadores ya incluidos.

6 Coloque el brazo al cerrador a la posición de precarga de 15°. Sujete con el tornillo de piñón ya incluída. Abre la puerta aprox. 30°, tire el brazo encima de la puerta y conecte a los rodillos del riel tal como se muestra en la Fig. 2. Apriete el opresor tal como se muestra en la Fig. 3.

7 Ajusta si se necesita
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

8 Coloca la tapa con los sujetadores ya incluidos.

⚠ADVERTENCIA
UNA INSTALACIÓN O UN AJUSTE INCORRECTOS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL 877-671-7011

⚠ADVERTENCIA
LA APERTURA DEMASIADO GRANDE DE LAS VÁLVULAS DE AJUSTE PUEDE OCASIONAR UN DERRAME, DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES.

Customer Service	Servicio al cliente	Service à la clientèle
1-877-671-7011	www.allegion.com/us	

ALLEGION

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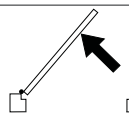
28476 Rev. 06/16-j

18755

2010 Series

LCN®

Installation Instructions

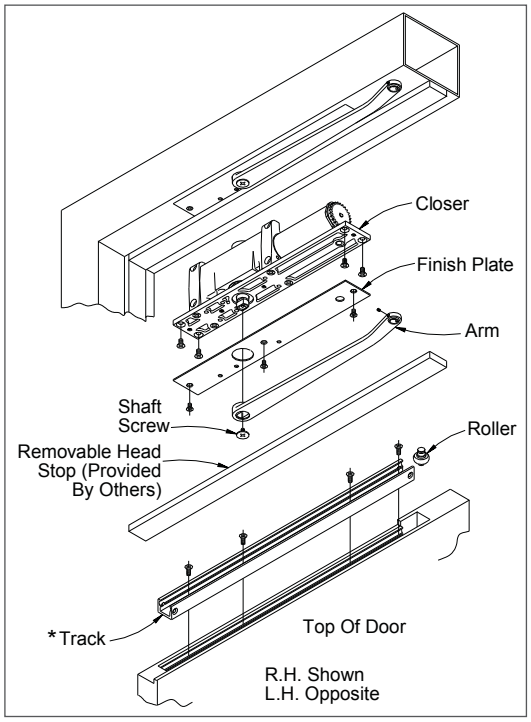


= 38.75 Ft-lbs **2015 EN 3**
52 N-m **2016 EN 4**

Maximum Opening Torque

Instructions

1. Make sure hand of closer and door correspond. Hand of closer is stamped on finish plate. Hand of closer can not be reversed.
2. If door and frame are not prepared for closer and track, prepare to dimensions shown on other side.
3. Install closer in prepared frame with proper screws. Replace finish plate (or frame plate provided by frame manufacturer) and be sure plate is flush with soffit. Place arm on closer shaft and secure with shaft screw. Insert track roller in track. Install track level in door.
4. Hang door on butts. Be sure there is no bind or friction. Open door 45° and pull arm away from stop. Using allen wrench furnished, back out arm set screw to clear arm roller stud. DO NOT DRIVE ARM DOWN OVER ROLLER STUD. Lift end of arm up and over roller and gently fit roller stud into arm. Tighten self locking set screw.



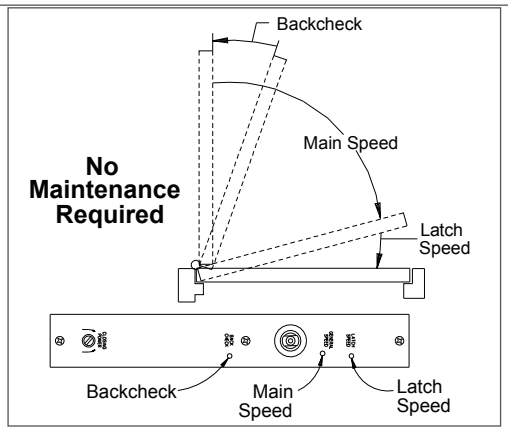
⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions, call LCN at 877-671-7011

5. IMPORTANT: Closer has been regulated prior to shipment. Adjust regulation only if necessary. Use a 3/32" hex wrench and to adjust speed (see illustration). To slow main speed of door, turn regulating screw nearest shaft clockwise. To slow latch speed of door, turn regulating screw nearest hinge clockwise. BACKCHECK To increase backcheck intensity, turn regulating screw nearest latch clockwise.

ⓘ **Do not use abrupt backcheck- nor expect door closer to act as a door stop.**

Customer Service
1-877-671-7011 www.allegion.com/us

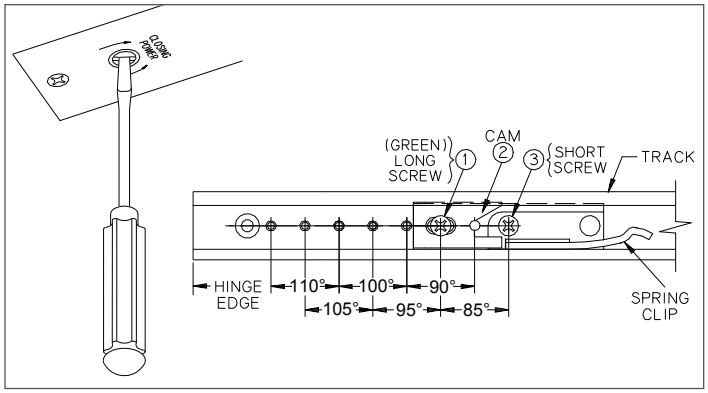


6. Adjust CLOSING POWER only if more power is needed. Closer is shipped with minimum closing power preset. To increase CLOSING POWER turn spring adjusting screw clockwise. Maximum adjustment is 18 turns.

Table of Sizes

Maximum Door Width		
Exterior Doors	Interior Doors	Catalog No. of Closers
-----	♿	2011
30 (765 mm)	38 (965 mm)	2013
36 (915 mm)	48 (1220 mm)	2014
42 (1065 mm)	54 (1370 mm)	2015
48 (1220 mm)	60 (1525 mm)	2016

7. HOLD OPEN ADJUSTMENT: Change the hold open position by removing screws (1) and then (3). Locate to required position as shown. (See illustration for hold-open spring clip position.) Install screw (3) securely. Tip cam (2) into track and locate as shown. Install long green screw (1) securely. Push door into hold open position. For INCREASED HOLDING POWER, loosen long green screw (1), slide cam (2) TOWARD LATCH, retighten long green screw (1) securely. For DECREASED HOLDING POWER, loosen long green screw (1), slide cam (2) TOWARD HINGE edge of door, retighten long green screw (1) securely.



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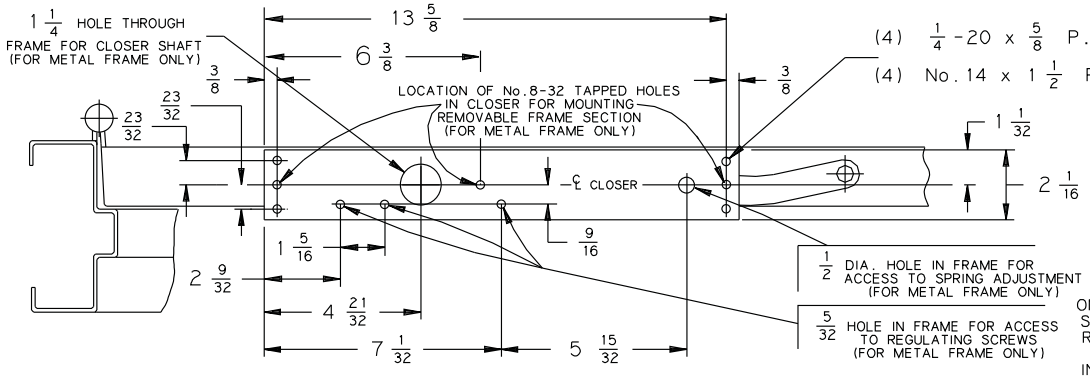
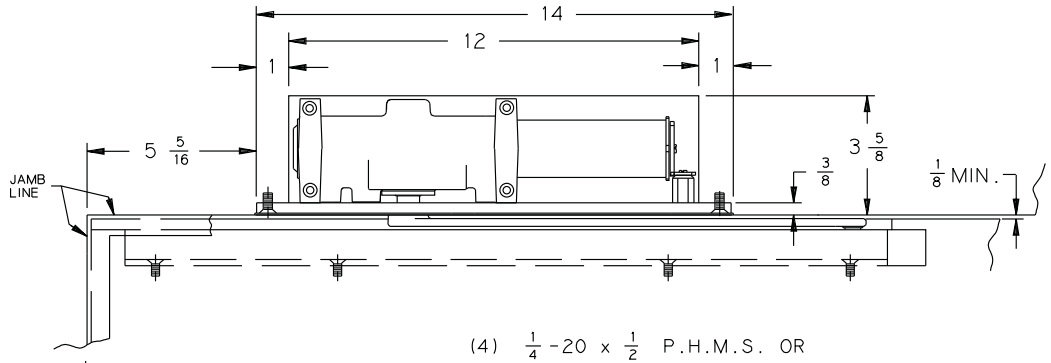
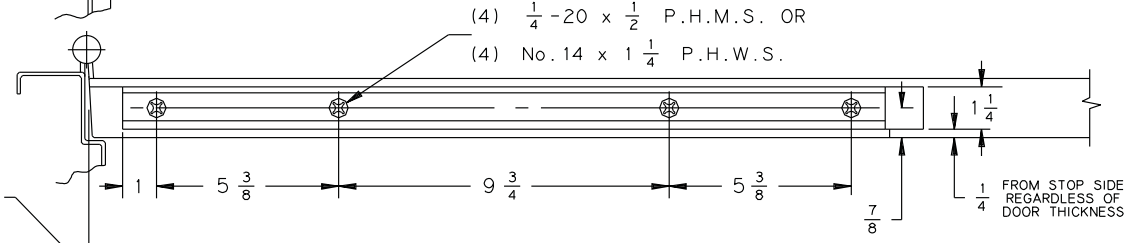
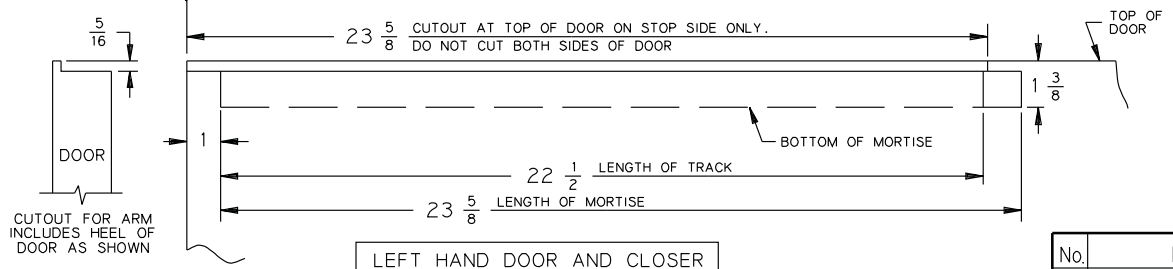
18755 Rev. 01/14-j









LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE

inch	1/8	5/32	1/4	5/16	3/8	1/2	9/16	5/8	23/32	7/8	1	1 1/32	1 1/4	1 5/16	1 3/8	1 1/2
mm	3	4	6	8	10	13	14	16	18	22	25	26	32	33	35	38

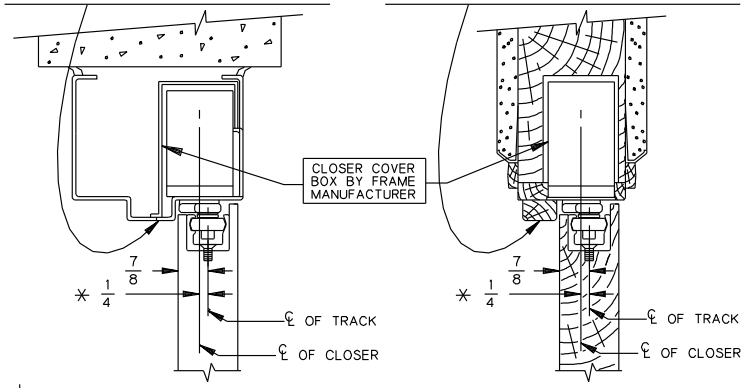
inch	2	2 1/16	2 9/32	2 19/32	3 5/8	4 21/32	5 5/16	5 3/8	7 1/32	7 1/4	9 3/4	12	13 1/4	14	22 1/2	23 5/8
mm	51	52	58	66	92	118	135	137	179	184	248	305	337	356	572	600

2011, 2013, 2014, 2015, 2016 } NON HOLD OPEN (90°-180°)
H 90 (85°-110°)
MAX. OPENING 180°

AUXILIARY STOP RECOMMENDED

ON METAL FRAMING, THE SECTION OF SOFFIT & STOP AT CLOSER MUST BE REMOVABLE. THIS SECTION MUST BE SUPPLIED BY THE FRAME MFR. TO INSURE CONFORMITY WITH REMAINDER OF THE FRAME. CONTOUR OF FRAME MAY VARY FROM THAT SHOWN.

ON WOOD FRAMING A METAL FINSH PLATE IS SUPPLIED BY LCN CLOSERS TO COVER ENTIRE CLOSER. IF APPLIED STOP IS USED THE ENTIRE HEAD STOP SHOULD BE SCREWED IN PLACE SO IT WILL BE REMOVABLE. THIS MAKES CUTTING OF STOP OVER CLOSER UNNECSSARY.



✳: 1/4 DIMENSION MAY BE INCREASED TO 7/8 TO ACCOMMODATE VARYING WALL THICKNESSES. SUBMIT DETAILS TO LCN FOR SPECIAL INSTRUCTIONS.

NOTES:

1. FOR 180° OPENINGS, MAX. ALLOWABLE BUTT SIZE IS 5" x 5".
2. MIN. STOP THICKNESS 1/2"
3. 1/8" DOOR TO SOFFIT CLEARANCE REQUIRED.
4. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS & FRAMES.
5. WITH 2" HEADER ON HOLLOW METAL FRAMES, THE HEADFRAME MUST BE MORTISED.

No.	REVISION	BY	DATE
8	TRACK MOUNTING HOLES RELOCATED	DRM	6/90
9	4 IN. HEADER WAS 2 IN.	CTB	11/90
10	REVISED SIZE CHARTS	CTB	6/92
11	SIZE 1 UPDATE / CAD CONVERSION	CTB	1/94
12	REMOVED MOUNTING BRACKETS	AMM	11/97

LCN®

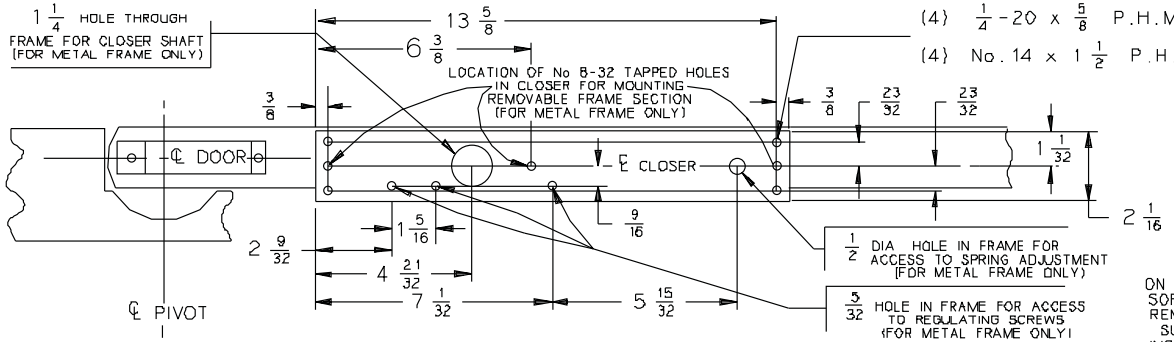
DRW BY CTB 1/94

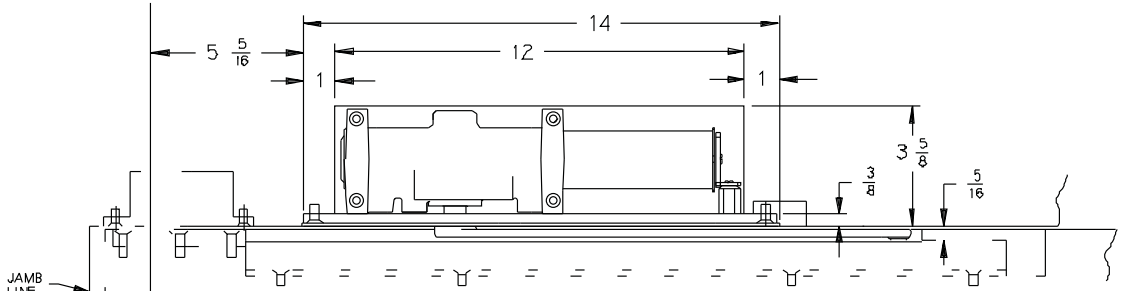
DO NOT SCALE

OVERHEAD CONCEALED CLOSER WITH CONCEALED ARM & TRACK

2010

2011 CP 2013 CP 2014 CP 2015 CP 2016 CP	NON HOLD OPEN (UP TO 120°) H 90 - (75° TO 95°) MAX. OPENING 120°.
AUXILIARY STOP RECOMMENDED	
LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE	6/96

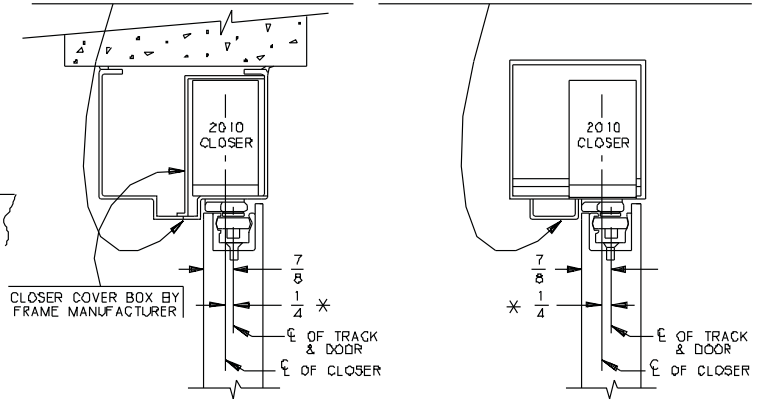




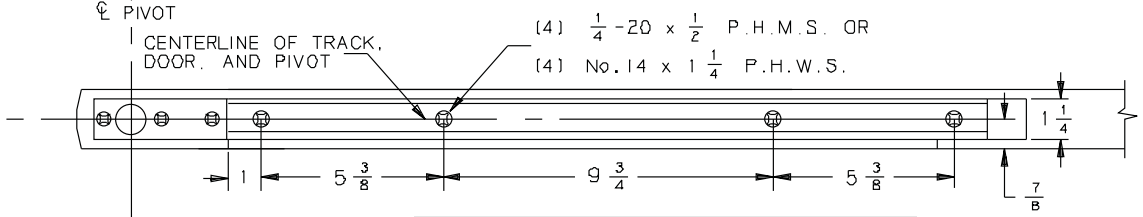
PLAN & ELEVATION OF FRAME SHOWING PREPARATION FOR 2010 CLOSER

ON METAL FRAMING, THE SECTION OF SOFFIT & STOP AT CLOSER MUST BE REMOVABLE. THIS SECTION MUST BE SUPPLIED BY THE FRAME MFR. TO INSURE CONFORMITY WITH REMAINDER OF THE FRAME. CONTOUR OF FRAME MAY VARY FROM THAT SHOWN.

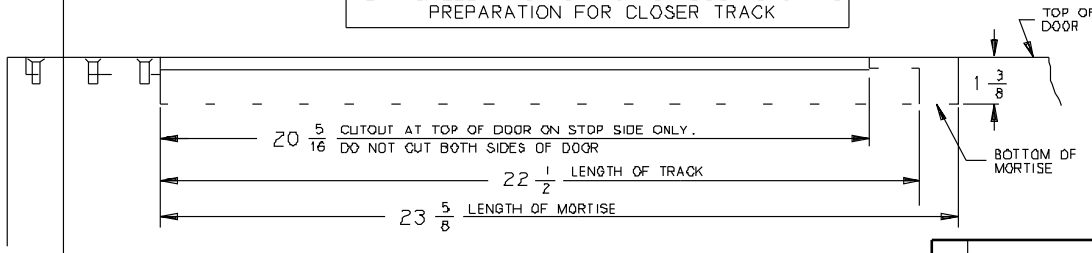
ON TUBE FRAMING A METAL FINSH PLATE IS SUPPLIED BY LCN CLOSERS TO COVER ENTIRE CLOSER IF APPLIED STOP IS USED THE ENTIRE HEAD STOP SHOULD BE SCREWED IN PLACE SO IT WILL BE REMOVABLE. THIS MAKES CUTTING OF STOP OVER CLOSER UNNECSSARY.



* : 1/4 DIMENSION MAY BE INCREASED TO ACCOMMODATE VARYING WALL THICKNESSES. SUBMIT DETAILS TO LCN FOR SPECIAL INSTRUCTIONS.



PLAN & ELEVATION OF TOP OF DOOR SHOWING PREPARATION FOR CLOSER TRACK



NOTES -
1 - MINIMUM STOP THICKNESS 1/2".
2 - 1/8" DOOR TO SOFFIT CLEARANCE REQUIRED.
3 - REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOOR AND FRAMES.
4 - THIS PRODUCT REQUIRES A 4" MINIMUM FRAME HEADER CONSULT FACTORY IF HEAD JAMB IS LESS THAN 4".

inch	1/8	5/32	1/4
mm	3	4	6

inch	5/16	3/8	1/2	9/16	5/8	23/32	7/8	1	1 1/32	1 1/4	1 5/16	1 3/8	1 1/8	1 5/8	1 3/4	2 1/16	2 9/32
mm	8	10	13	14	16	18	22	25	26	32	33	35	38	41	44	52	58

inch	2 19/32	3 5/8	4 1/8	4 21/32	5 1/4	5 5/16	5 3/8	5 13/32	7 1/32	7 1/4	9 3/4	12	13 1/4	14	20 5/16	22 1/2	23 5/8
mm	66	92	117	118	133	135	137	139	179	184	248	305	337	356	516	572	600

No.	REVISION	BY	DATE
1	CAD CONVERSION	CTB	6/93
2	TEMPLATE UPDATE	JEJ	6/96
3	TEMPLATE UPDATE	AMM	2/98
4	REMOVED PIVOT INFO.	AMM	5/01

LCN®

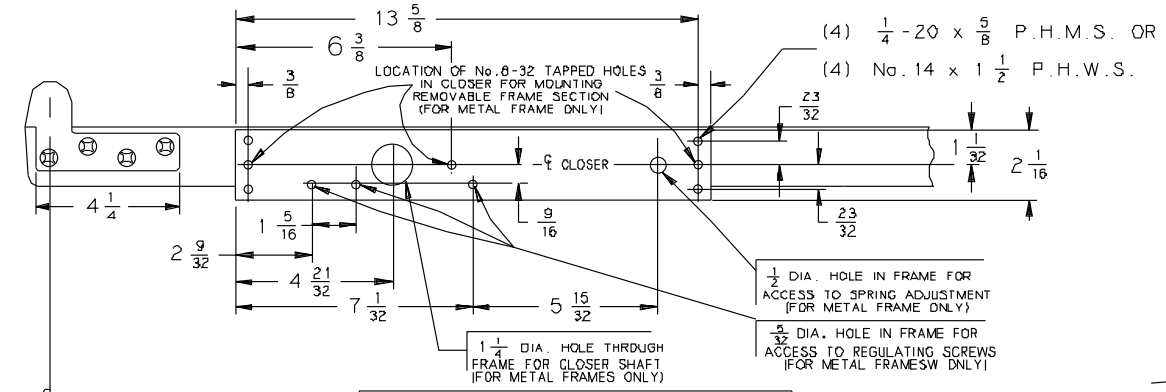
APP BY JEJ 6/96

DO NOT SCALE

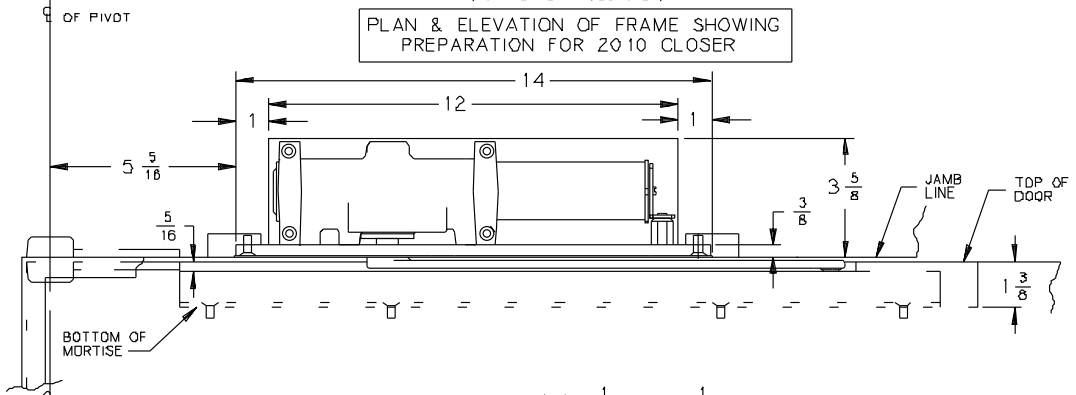
OVERHEAD CONCEALED CLOSER, ARM & TRACK WITH CENTER PIVOTS

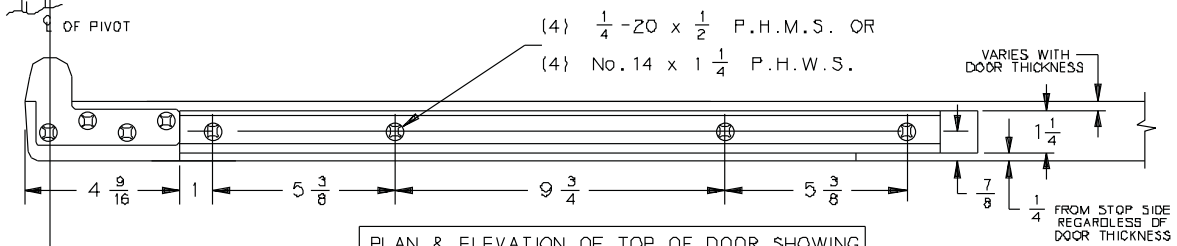
2010-CP

2011 OP 2013 OP 2014 OP 2015 OP 2016 OP	NON HOLD OPEN (up to 110°) H-90 (75° to 90°) MAX. OPENING 110°
AUXILIARY STOP RECOMMENDED	
LEFT HAND DOOR AND CLOSER SHOWN. RIGHT HAND OPPOSITE	6/96

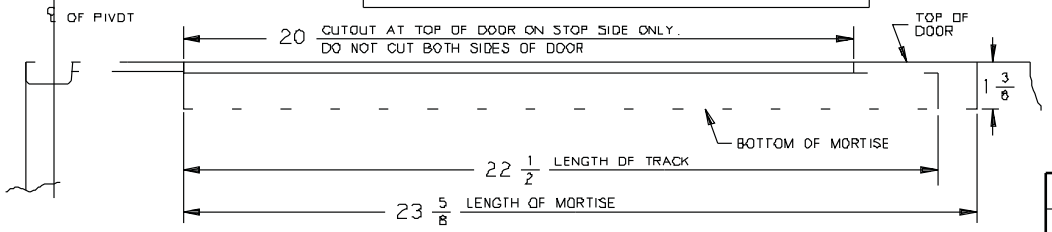


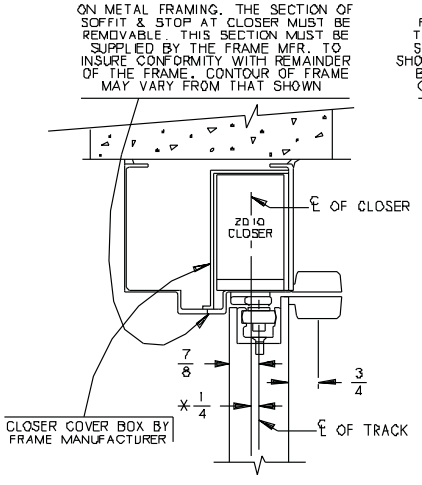
PLAN & ELEVATION OF FRAME SHOWING PREPARATION FOR 2010 CLOSER

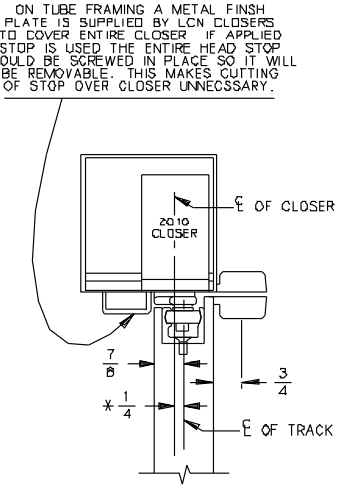




PLAN & ELEVATION OF TOP OF DOOR SHOWING PREPARATION FOR CLOSER TRACK







* : 1/4 DIMENSION MAY BE INCREASED TO ACCOMMODATE VARYING WALL THICKNESSES. SUBMIT DETAILS TO LCN FOR SPECIAL INSTRUCTIONS.

NOTES -

1 - 1/8" DOOR TO STOP CLEARANCE REQUIRED.

2 - REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOOR AND FRAMES.

3 - MINIMUM STOP THICKNESS 1/2".

4 - THIS PRODUCT REQUIRES A 4" MINIMUM FRAME HEADER. CONSULT FACTORY IF HEAD JAMB IS LESS THAN 4".

inch	1/16	1/4	5/16	3/8	9/16	5/8	23/32	3/4	7/8	1	1 1/32	1 1/16	1 1/4	1 5/16	1 3/8	2 1/16	2 9/32
mm	2	6	8	10	14	16	18	19	22	25	26	27	32	33	35	52	58

inch	2 18/32	3 5/8	4 1/4	4 9/16	4 21/32	5 5/16	5 3/8	5 15/32	7 1/32	7 1/4	9 3/4	12	13 1/4	14	20	22 1/2	23 5/8
mm	66	92	108	116	118	135	137	139	179	184	248	305	337	356	508	572	600

No.	REVISION	BY	DATE
1	CAD CONVERSION	CTB	6/93
2	TEMPLATE UPDATES	JEJ	6/96
3	TEMPLATE UPDATES	AMM	2/98
4	TEMPLATE UPDATES	AMM	9/99
5	REMOVE RIVOT INFO.	AMM	5/01

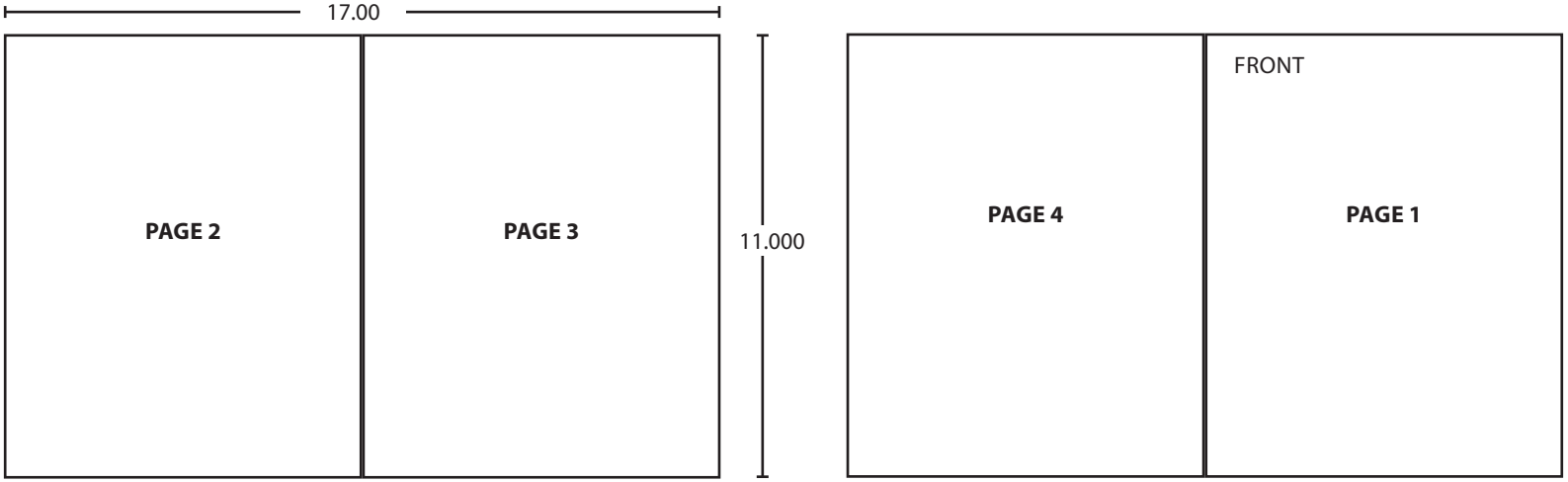
LCN®

APP BY JEJ 6/96

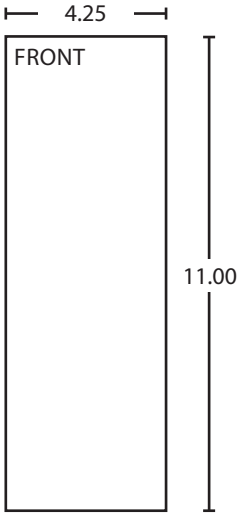
DO NOT SCALE

OVERHEAD CONCEALED CLOSER WITH CONCEALED ARM & OFFSET PIVOTS

2010-OP



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
J	K	L	M	N	P
043228					

Revision Description:
J > Revised artwork

Material
White Paper

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043228	01-01-14

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Title
2010 Series Instruction Sheet

Creation Date	Number	Revision
05-10-10	18755	J

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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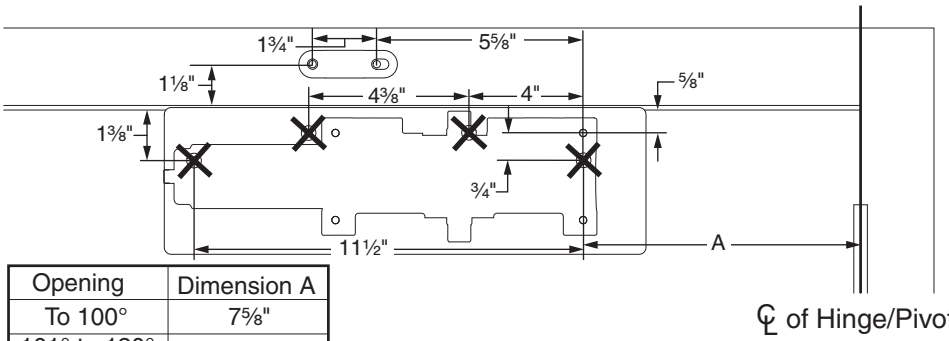
71689

4050 Series

Drop Plate

Installation Instructions

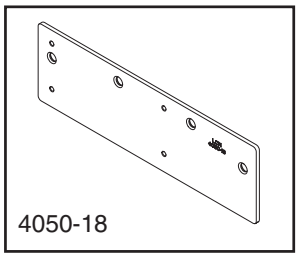
4050 PULL SIDE (DOOR MOUNT) DROP PLATE



Opening	Dimension A
To 100°	7⅝"
101° to 120°	6⅝"
121° to 150°	4⅝"
151° to 180°	4⅛"

Note: If offset pivots are used. Increase these dimensions by ⅛".

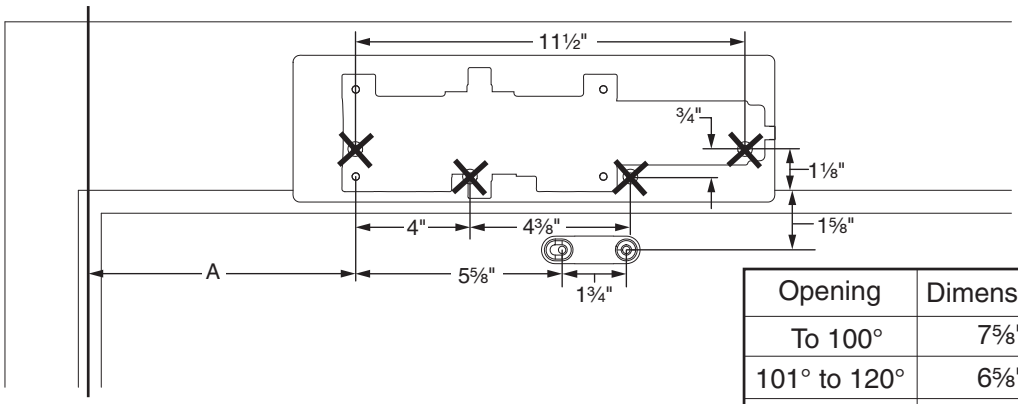
PULL SIDE MOUNT ON: 4050-18 DROP PLATE



Left Hand door shown, Right Hand opposite.

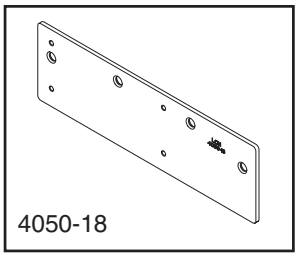
Locate drop plate & shoe from hinge/pivot centerline.

4050 PUSH SIDE (TOP JAMB) DROP PLATE



Opening	Dimension A
To 100°	7⅝"
101° to 120°	6⅝"
121° to 150°	4⅝"
151° to 180°	4⅛"

PUSH SIDE MOUNT ON: 4050-18 DROP PLATE

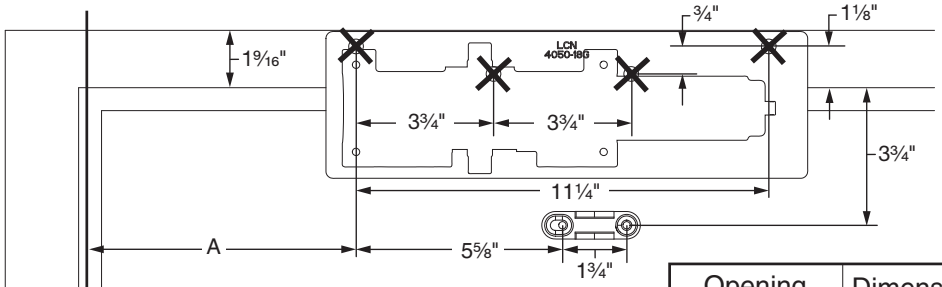


Left Hand door shown, Right Hand opposite.

Locate drop plate & shoe from hinge/pivot centerline.

Maximum reveal of 4⅛". For reveals 4⅛" - 8 ¾"; specify long rod.

4050 PUSH SIDE (TOP JAMB) DROP PLATE

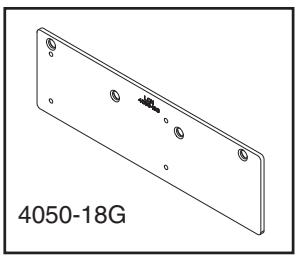


INCH	1¹⁄₃₂	⅝	1¹⁄₁₆	1⁵⁄₁₆	1	1¹⁄₁₆	1½	1¾
M.M.	9	16	17	24	25	27	38	44

INCH	1¹⁵⁄₁₆	2½	2⁹⁄₁₆	4⅛	8¼	10¾	10¹³⁄₁₆	11¼
M.M.	49	64	65	105	210	273	275	286

Opening	Dimension A
To 100°	7⅝"
101° to 120°	6⅝"
121° to 150°	4⅝"
151° to 180°	4⅛"

PUSH SIDE MOUNT ON: 4050-18G DROP PLATE

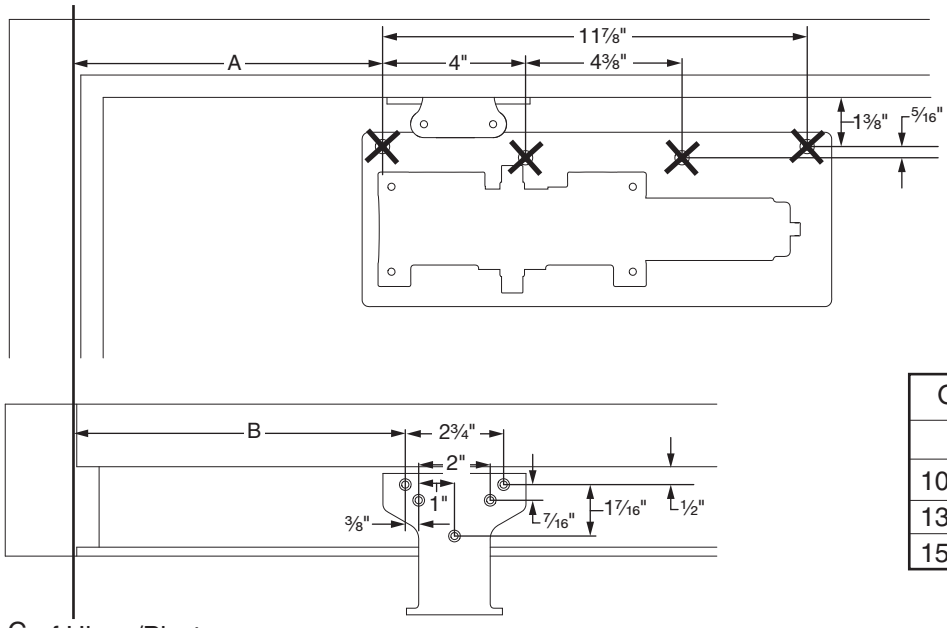


Left hand door shown, Right hand opposite.

Locate drop plate & shoe from centerline of pivot or swing clear hinge pin when used.

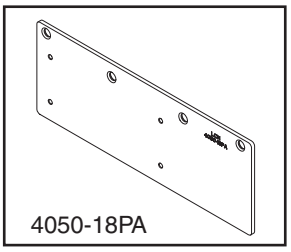
Maximum reveal of 4⅛". For reveals 4⅛" - 8 ¾"; specify long rod.

4050 PA PUSH SIDE (DOOR MOUNT) DROP PLATE



℄ of Hinge/Pivot

PUSH SIDE MOUNT ON: 4050-18PA DROP PLATE

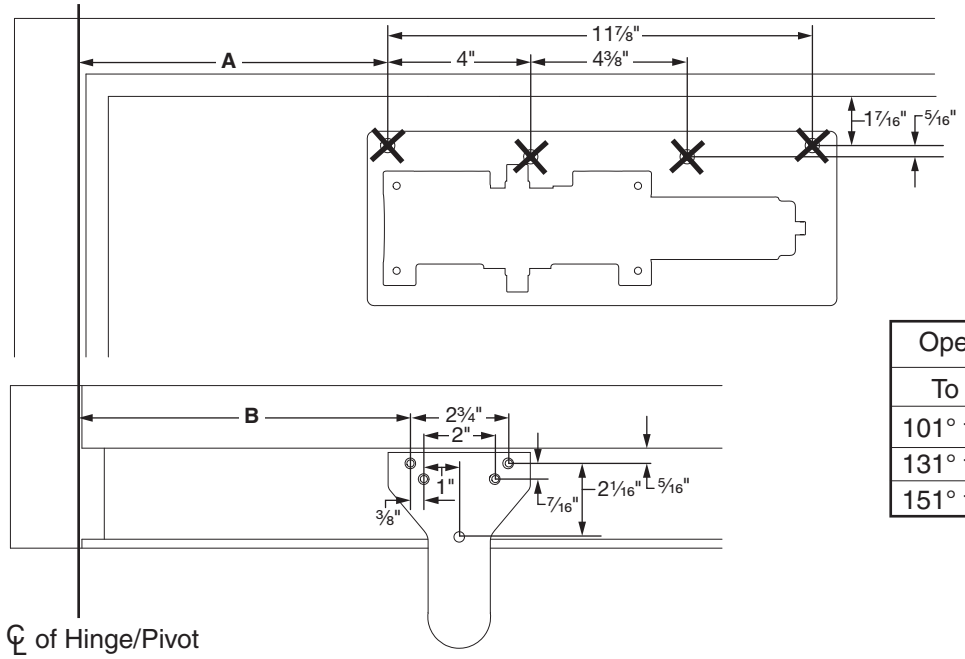


Left hand door shown,
Right hand opposite.

Locate drop plate & shoe from centerline of pivot or swing clear hinge pin when used.

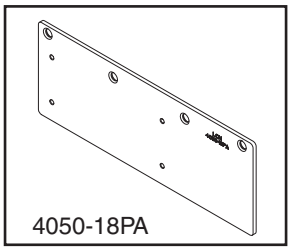
Opening	Dimension A	Dimension B
To 100°	8½"	9¼"
101° to 130°	7"	7¾"
131° to 150°	6"	6¾"
151° to 180°	5"	5¾"

4050 EDA PUSH SIDE (DOOR MOUNT) DROP PLATE



℄ of Hinge/Pivot

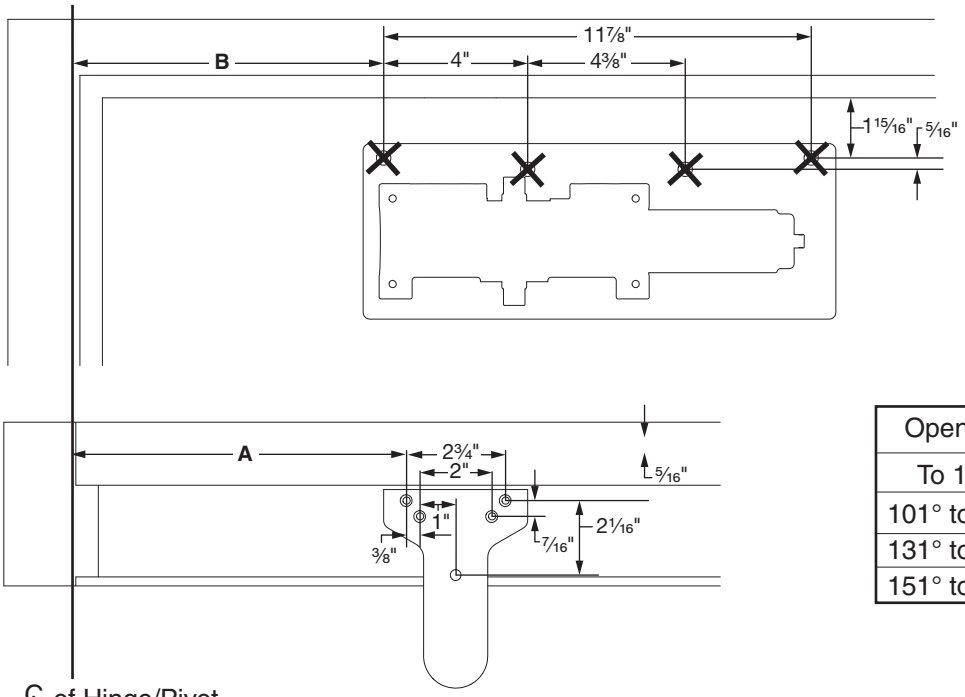
PUSH SIDE MOUNT ON: 4050-18PA DROP PLATE



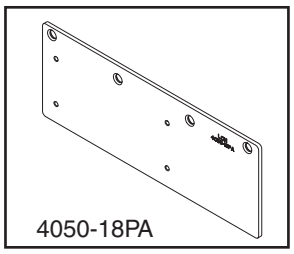
Locate drop plate & shoe from centerline of pivot or swing clear hinge pin when used.

Opening	Dimension A	Dimension B
To 100°	8½"	9¼"
101° to 130°	7"	7¾"
131° to 150°	6"	6¾"
151° to 180°	5"	5¾"

4050 EDA Push Side with 62G Arm (Door Mount) Drop Plate



PUSH SIDE MOUNT ON: 4050-18PA DROP PLATE

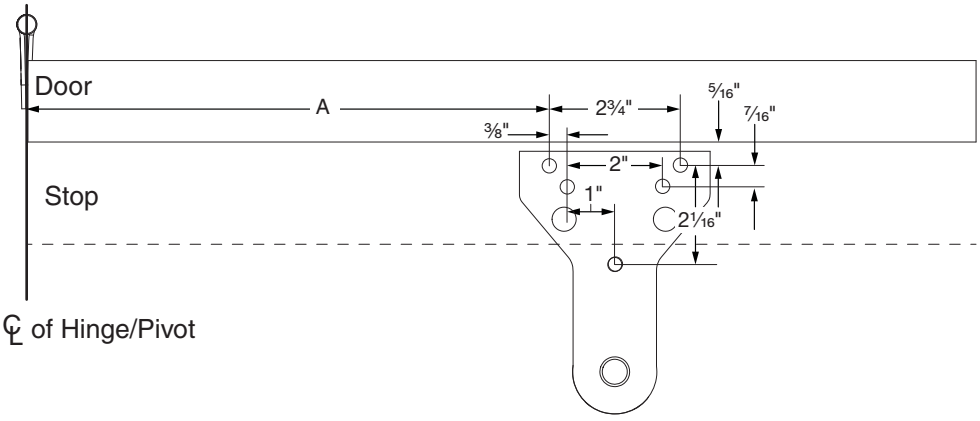


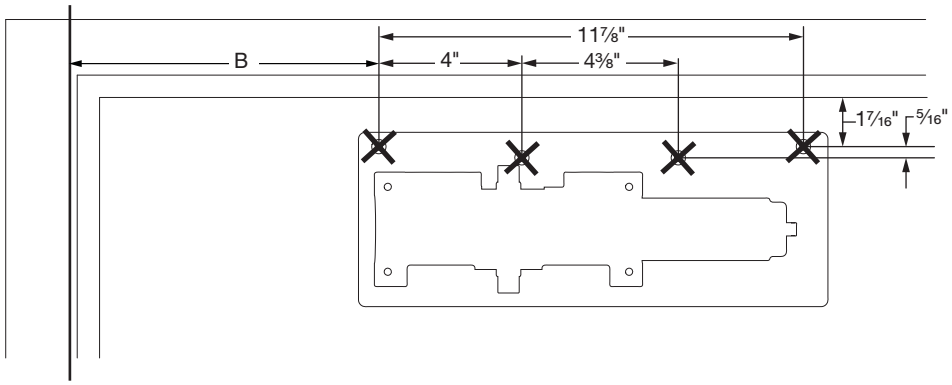
Left hand door shown,
Right hand opposite.

Locate drop plate & shoe from centerline of pivot or swing clear hinge pin when used.

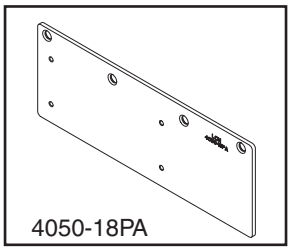
Opening	Dimension A	Dimension B
To 100°	9¼"	8½"
101° to 130°	7¾"	7"
131° to 150°	6¾"	6"
151° to 180°	5¾"	5"

4050 CUSH PUSH SIDE (DOOR MOUNT) DROP PLATE





PUSH SIDE MOUNT ON: 4050-18PA DROP PLATE



Left hand door shown,
Right hand opposite.

Locate drop plate & shoe from centerline of pivot or swing clear hinge pin when used.

IMPORTANT

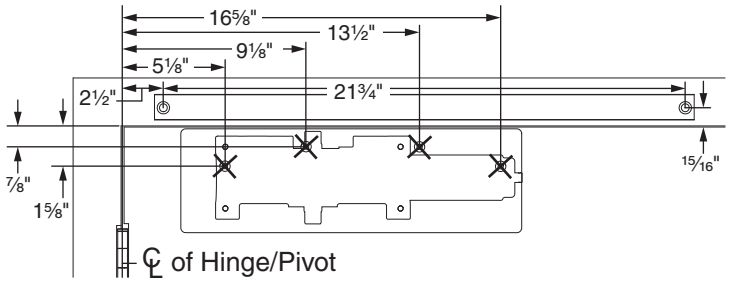
Use spacer block provided for fifth screw ½" or ⅝"

Opening	Dimension A	Dimension B
85°	11⅛"	10⅜"
90°	10¼"	9½"
95°	9⅝"	8⅞"
100°	9"	8¼"
105°	8⅜"	7⅝"
110°	7⅞"	7⅛"

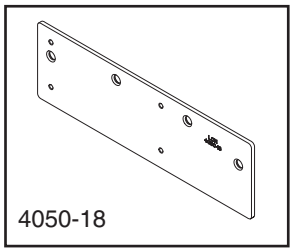
General Notes:

1. If door is hung on pivots Locate closer and shoe from ℄ of pivot point.
2. Top rail less than 5¾" Requires drop plate.
3. All dimensions applicable For hold open or dead stop.
4. Delayed action optional.
5. Reinforcing per. ANSI/SDI-100 Recommended for hollow Metal door and frames.
6. ⅝" maximum allowable side Stop.
7. Using fasters prodvided Mount drop plate with (4) ¼ - 14 x 1⅜ S.R.T. Mount closer to drop plates (4) ¼ - 20 x 2 P.H.M.S.
8. Minimum Top Rail Width is 2¼".

4050T PULL SIDE MOUNT DROP PLATE, 180° OPENING

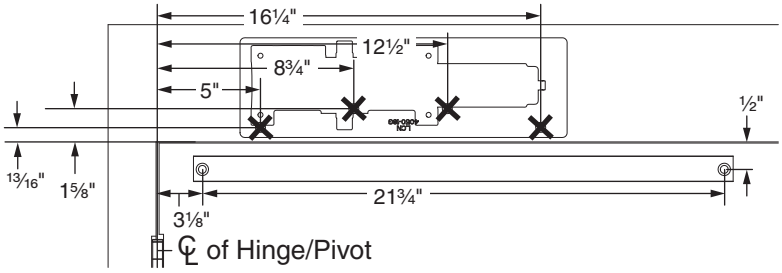


PULL SIDE MOUNT ON: 4050-18 DROP PLATE

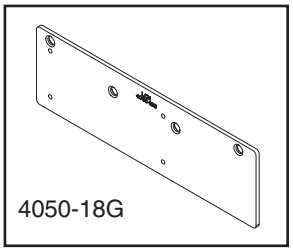


Right hand door shown,
Left hand opposite.

4050T TOP JAMB MOUNT DROP PLATE, 180° OPENING

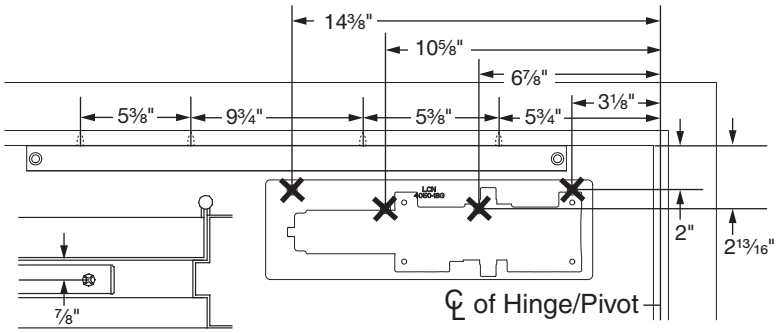


TOP JAMB MOUNT ON: 4050-18G DROP PLATE

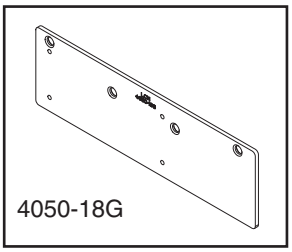


Right hand door shown,
Left hand opposite.

4050T PUSH SIDE MOUNT DROP PLATE, 120° OPENING

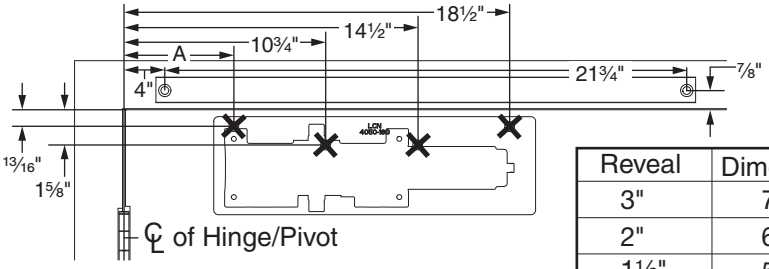


PUSH SIDE MOUNT ON: 4050-18G DROP PLATE



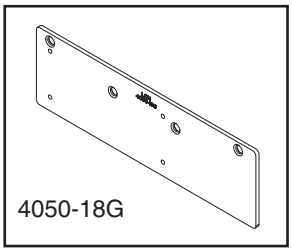
Right hand door shown,
Left hand opposite.

4050T DOUBLE EGRESS (DE) ARM MOUNT DROP PLATE



Reveal	Dimension A
3"	7"
2"	6½"
1½"	5⅞"
1"	5⅝"

DE ARM MOUNT ON: 4050-18G DROP PLATE



Right hand door shown,
Left hand opposite.

General Notes:

1. If door is hung on pivots Locate closer and shoe from ℄ of pivot point.
2. Top rail less than 5¾" Requires drop plate.
3. All dimensions applicable For hold open or dead stop.
4. Delayed action optional.
5. Reinforcing per. ANSI/SDI-100 Recommended for hollow Metal door and frames.
6. ⅝" maximum allowable side Stop.
7. Using fasters prodvided Mount drop plate with (4) ¼ - 14 x 1⅜ S.R.T. Mount closer to drop plates (4) ¼ - 20 x 2 P.H.M.S.

ALLEGION

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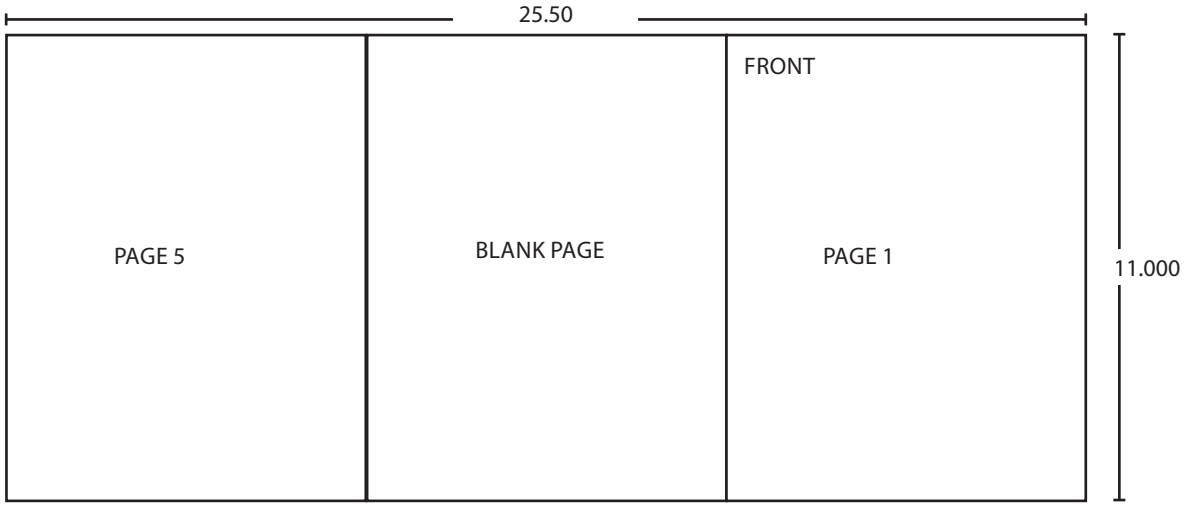
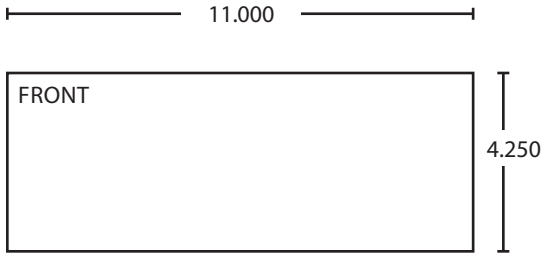
71689 Rev. 10/16-e



BEGINNING SHEET

PAGE 2 | PAGE 3 | PAGE 4



FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
064650	066037	068676	069143	070262	

Material: White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale
6. saddle-stitched booklet

Revision Description:
E > Created artwork.

Edited By	Approved By	EC Number	Release Date
D. Toppins	M. Sasso	070262	10-12-16

Title: 4050/4050 DA Drop Plates Instruction Sheet

Creation Date	Number	Revision
04-27-10	71689	E

Created By: D. Toppins

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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28268

4040XP Track

LCN®

120° Template, Pull Side

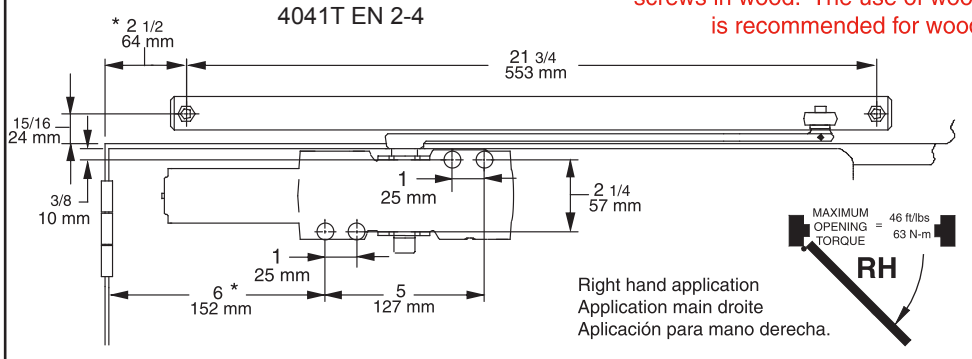
Installation Instructions

1 Locate proper template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes.

(Fig. 1)
4041T EN 2-4

Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.

SRT Screw



Right hand application
Application main droite
Aplicación para mano derecha.

Left hand application
Application main gauche
Aplicación para mano izquierda.

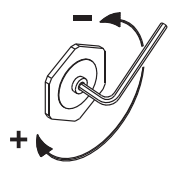
General Notes:
1. Locate closer & track from centerline of pivot.
*2. If offset pivots are used, increase these dimensions by 3/8".
3. Reinforcing per ANSI/SDI-100 recommended for hollow metal doors &frames.
4. Closer size is 12 1/4 x 3 1/2 x 2 5/32.
5. If door is hung on swing clear hinges, consult factory.

2 Determine door width, adjust spring power to match chart.

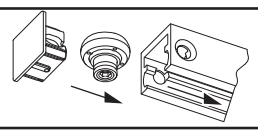
MAXIMUM DOOR WIDTH	FULL TURNS REQUIRED
INTERIOR DOORS	
5 lb-f *	15 TURNS C.C.W.
34"	8 TURNS C.C.W.
38"	0 TURNS
48"	5 TURNS C.W.

* Opening Force on 36" Door.

⚠ CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877-671-7011

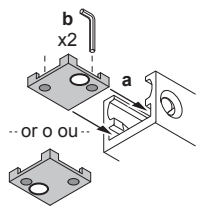


3 Assemble roller into track.

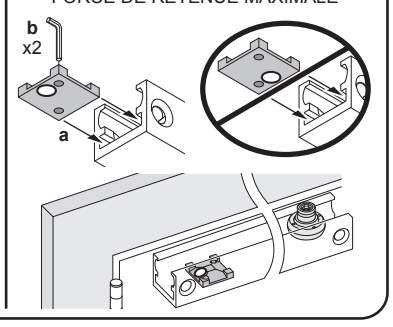


HOLD-OPEN OPTION
OPCIÓN DE MANTENER ABIERTO / OPTION DE RETENUE

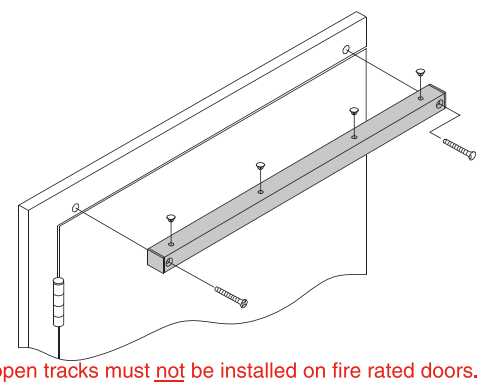
LIGHT HOLD-OPEN FORCE
FUERZA LIGERA PARA MANTENER ABIERTO
FORCE DE RETENUE LÉGÈRE



STRONG HOLD-OPEN FORCE
FUERZA MAYOR
FORCE DE RETENUE MAXIMALE

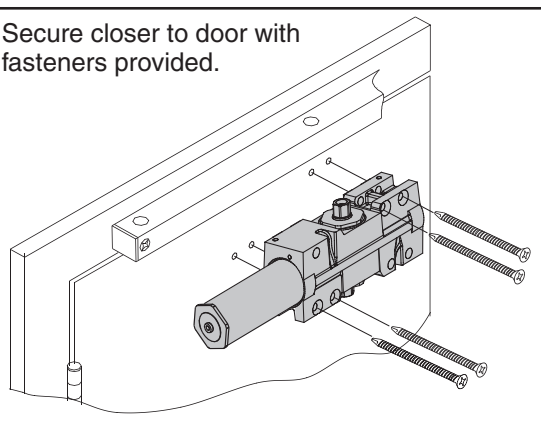


4 Secure track to frame with fasteners provided. Insert (4) track plugs.

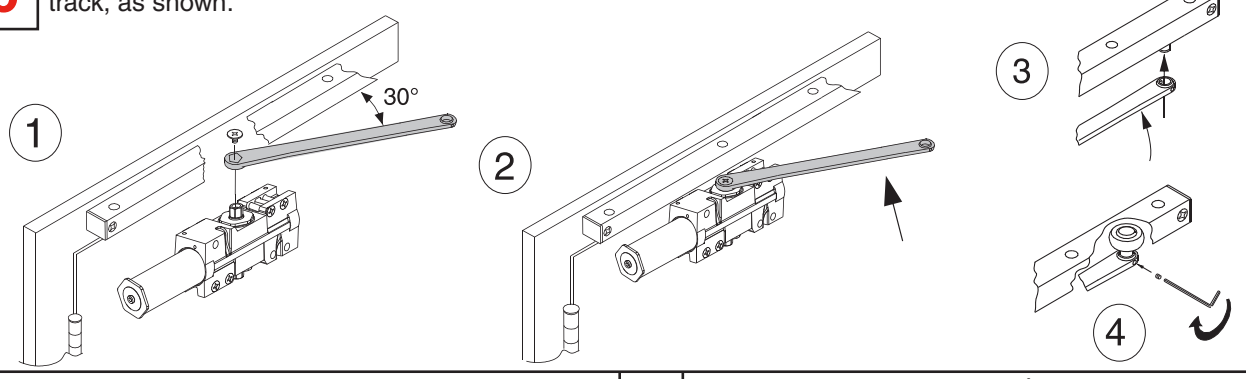


Note:
Hold open tracks must not be installed on fire rated doors.

5 Secure closer to door with fasteners provided.



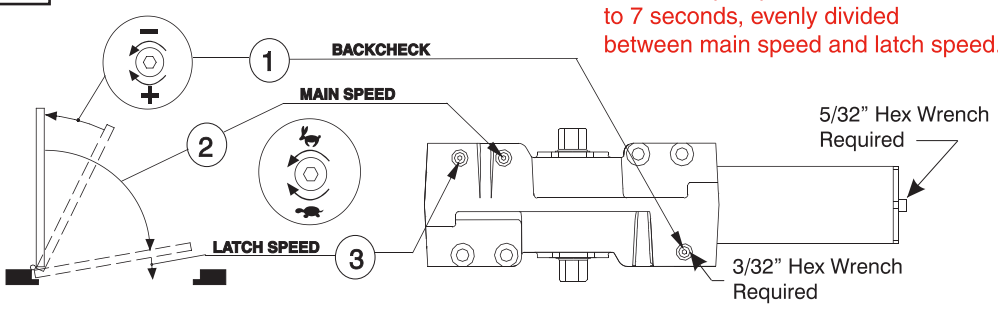
6 Attach arm to closer at pre-load position of 30°. Secure with provided pinion screw. Attach arm to track, as shown.



7 If necessary, adjust closer

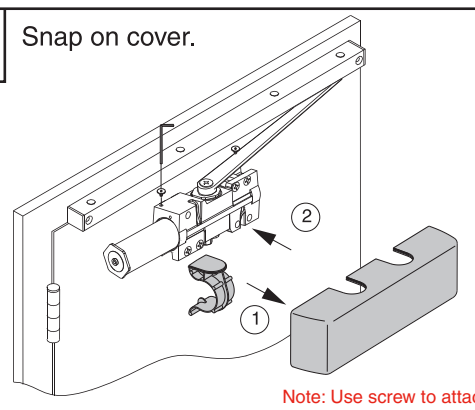
NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

⚠ CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



NO MAINTENANCE REQUIRED

8 Snap on cover.



Note: Use screw to attach cover.

4040XP Instructions du rail et gabarit de 120° pour une installation sur le côté à tirer.

1. Repérez le gabarit approprié. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds.

   Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.
2. Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.
3. Glissez le galet dans le rail. Option de retenue.
4. Fixez le rail au cadre avec les attaches fournies. Insérez les (4) bouchons du rail.
5. Fixez le ferme-porte sur la porte avec les attaches fournies.
6. Attachez le bras au ferme-porte à la position préchargée de 30°. Fixez à l'aide des vis fournies. Attachez le bras au rail, comme sur l'illustration.
7. Au besoin, réglez
   ① - frein à l'ouverture
   ② - vitesse de fermeture
   ③ - vitesse d'enclenchement

   NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.
8. Fixez le couvercle.

⚠ DANGER
UNE INSTALLATION OU UN RÉGLAGE INADÉQUATS PEUVENT ENTRAÎNER DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE TOUTES LES INSTRUCTIONS AVEC SOIN. POUR PLUS DE RENSEIGNEMENTS, COMPOSEZ LE 877-671-7011

⚠ DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4040XP Instrucciones de rieles para plantilla 120° con montaje del lado del tirón.

1. Localice la plantilla apropiada. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes.

   Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.
2. Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.
3. Monte el rodillo en el riel. Opción de mantener abierto.
4. Sujete el riel al bastidor con los sujetadores ya incluidos. Inserte quatro (4) tapones de rieles.
5. Sujeta el cerrador a la puerta con los sujetadores ya incluidos.
6. Coloque el brazo al cerrador a la posición de prearma de 30°. Sujételo con el tornillo de piñón ya incluido. Sujete el brazo al riel, tal como se muestra.
7. Ajusta si es necesita
   ① - resistencia de apertura
   ② - velocidad principal
   ③ - velocidad de seguro

   NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.
8. Encaje la tapa.

⚠ ADVERTENCIA
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⚠ ADVERTENCIA
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Customer Service	Servicio al cliente	Service à la clientèle
1-877-671-7011	www.allegion.com/us	

ALLEGION

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4040XP Track

LCN®

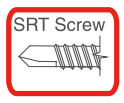
180° Template, Top Jamb

Installation Instructions

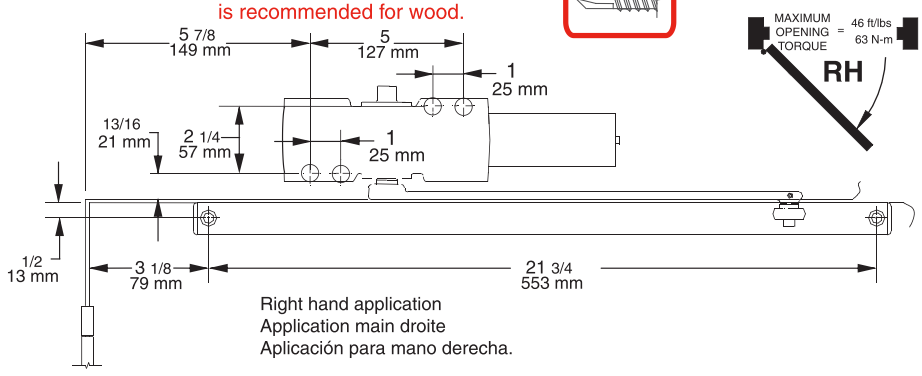
(Fig. 61)
4040XPT EN 1-3

1 Locate proper template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes.

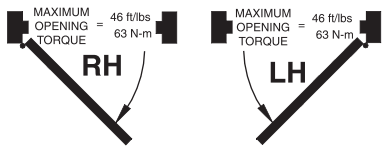
Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.

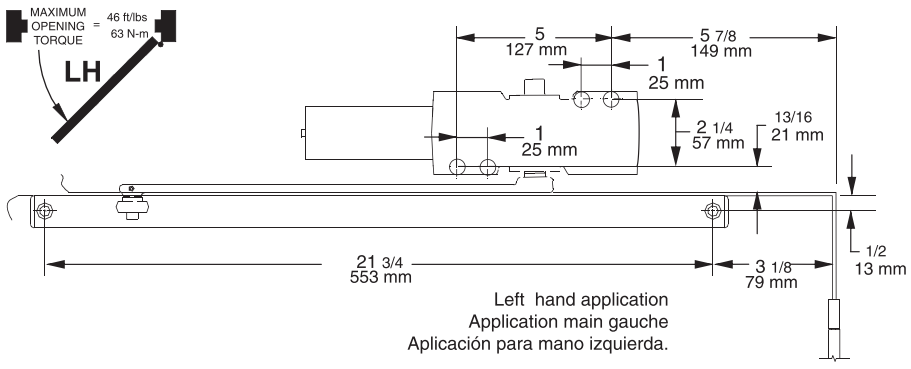


General Notes: 1. Locate closer & track from centerline of pivot or swing clear hinge pin, if used.
2. Reinforcing per ANSI/SDI-100 recommended for hollow metal doors & frames.
3. Closer size is 12 1/4 x 3 1/2 x 2 5/32.



Right hand application
Application main droite
Aplicación para mano derecha.





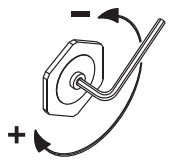
Left hand application
Application main gauche
Aplicación para mano izquierda.

2 Determine door width, adjust spring power to match chart.

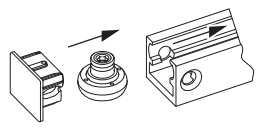
MAXIMUM DOOR WIDTH	FULL TURNS REQUIRED
INTERIOR DOORS	
5 lb-f *	15 TURNS C.C.W.
34"	8 TURNS C.C.W.
38"	0 TURNS
48"	5 TURNS C.W.

* Opening Force on 36" Door.

⚠ CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877-671-7011

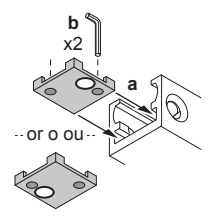


3 Assemble roller into track.

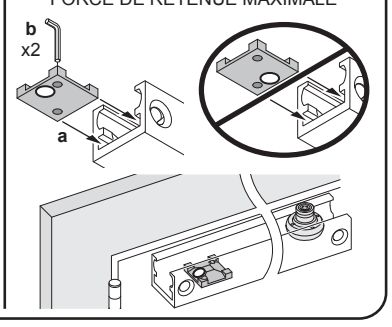


HOLD-OPEN OPTION
OPCIÓN DE MANTENER ABIERTO / OPTION DE RETENUE

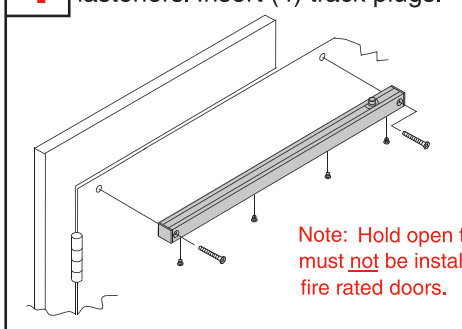
LIGHT HOLD-OPEN FORCE
FUERZA LIGERA PARA MANTENER ABIERTO
FORCE DE RETENUE LÉGÈRE



STRONG HOLD-OPEN FORCE
FUERZA MAYOR
FORCE DE RETENUE MAXIMALE

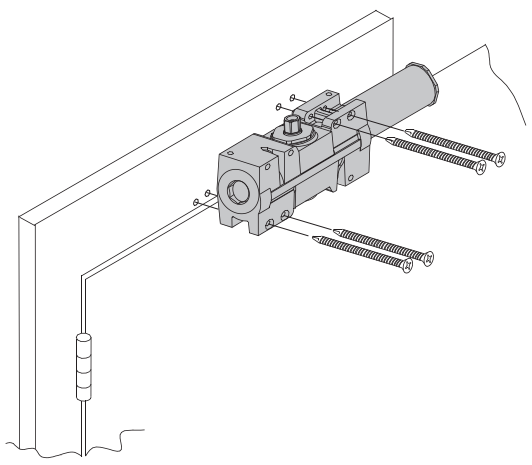


4 Secure track to door with provided fasteners. Insert (4) track plugs.

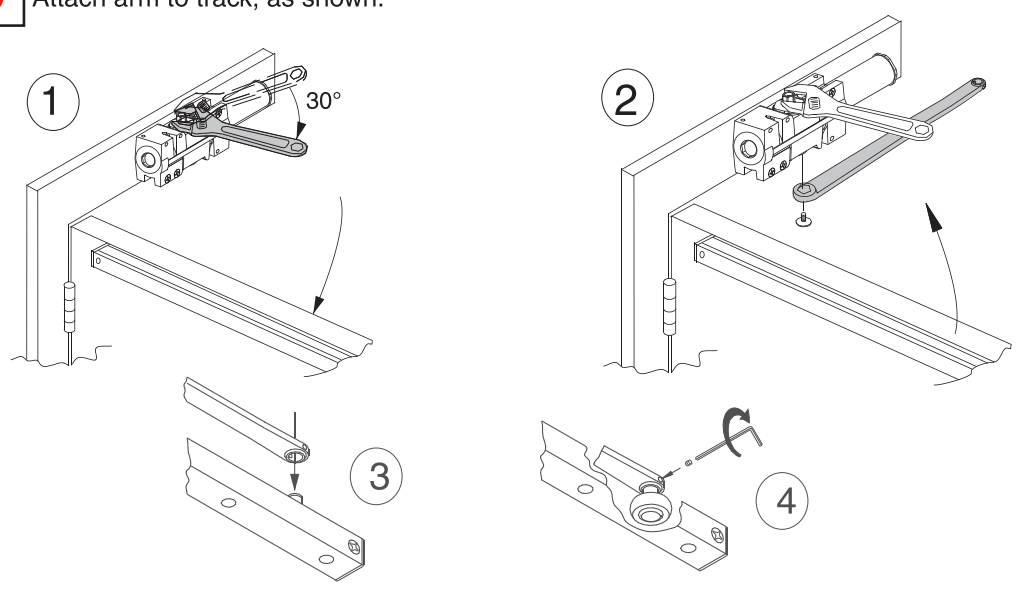


Note: Hold open tracks must not be installed on fire rated doors.

5 Secure closer to frame with fasteners provided.



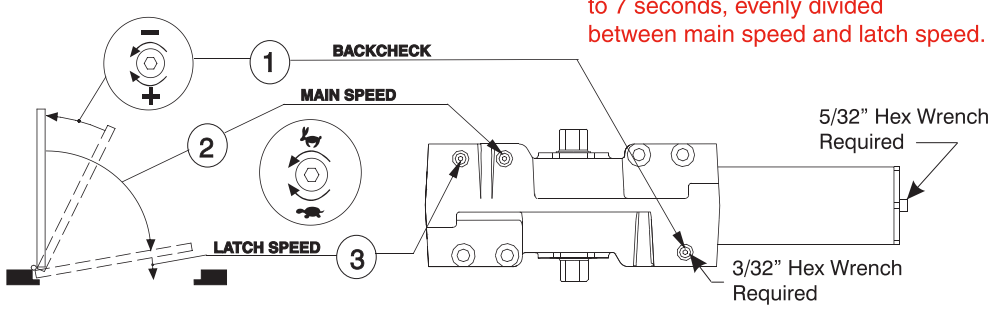
6 Attach arm to closer at pre-load position of 30°. Secure with provided shaft screw Attach arm to track, as shown.



7 If necessary, adjust closer

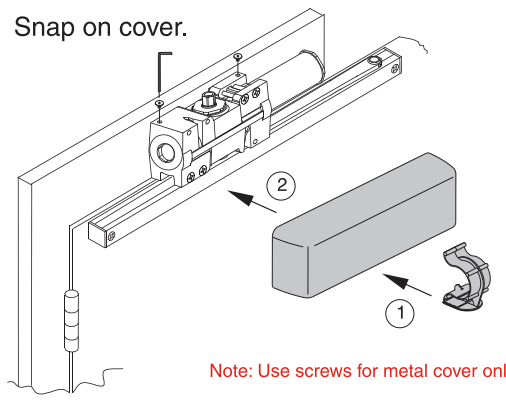
NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

⚠ CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



NO MAINTENANCE REQUIRED

8 Snap on cover.



Note: Use screws for metal cover only.

4040XP Instructions du rail et gabarit de 180° pour une installation sur le linteau.

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds.

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

3 Glissez le galet dans le rail.
Option de retenue.

4 Fixez le rail sur la porte avec les attaches fournies. Insérez les (4) bouchons du rail.

5 Fixez le ferme-porte sur le cadre avec les attaches fournies.

6 Attachez le bras au ferme-porte à la position préchargée de 30°. Fixez à l'aide des vis fournies. Attachez le bras au rail, comme sur l'illustration.

7 Au besoin, réglez
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

8 Fixez le couvercle.

⚠ DANGER
UNE INSTALLATION OU UN RÉGLAGE INADÉQUATS PEUVENT ENTRAÎNER DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE TOUTES LES INSTRUCTIONS AVEC SOIN. POUR PLUS DE RENSEIGNEMENTS, COMPOSEZ LE 877-671-7011

⚠ DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4040XP Instrucciones de rieles para plantilla 180° con montaje en la parte superior de la jamba.

1 Localice la plantilla apropiada. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes.

Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

3 Monte el rodillo en el riel.
Opción de mantener abierto.

4 Asegure el riel a la puerta con los sujetadores ya incluidos. Inserte quatro (4) tapones de riel.

5 Sujeta el cerrador a la armazón con los sujetadores ya incluidos.

6 Coloque el brazo al cerrador a la posición de prearma de 30°. Sujételo con el tornillo de piñón ya incluido. Sujete el brazo al riel, tal como se muestra.

7 Ajusta si es necesita
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

8 Encaje la tapa.

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4040XP Track

LCN®

120° Template, Push Side

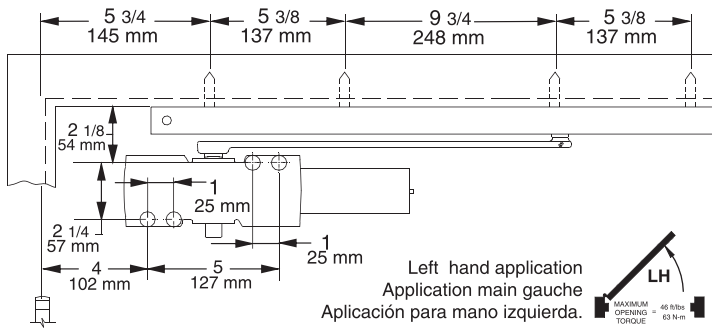
Installation Instructions

1 Locate proper template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes.

Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.

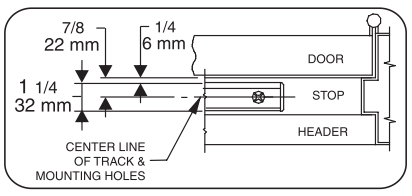
SRT Screw

General Notes: 1. Locate closer & track from centerline of pivot or swing clear hinge pin, if used.
2. Reinforcing per ANSI/SDI-100 recommended for hollow metal doors & frames.
3. Closer size is 12 1/4 x 3 1/2 x 2 5/32.

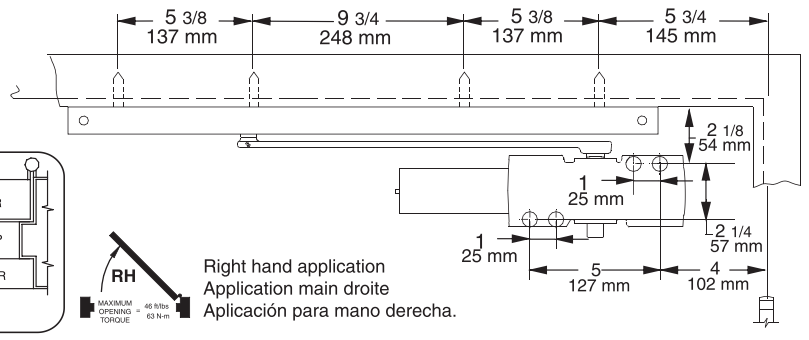


Left hand application
Application main gauche
Aplicación para mano izquierda.

LH



RH



Right hand application
Application main droite
Aplicación para mano derecha.

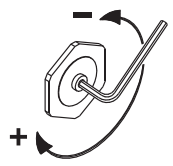
2 Determine door width, adjust spring power to match chart.

CAUTION

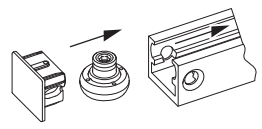
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877-671-7011

MAXIMUM DOOR WIDTH INTERIOR DOORS	FULL TURNS REQUIRED
5 lb-f *	15 TURNS C.C.W.
34"	8 TURNS C.C.W.
38"	0 TURNS
48"	5 TURNS C.W.

* Opening Force on 36" Door.

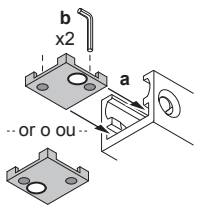


3 Assemble roller into track.

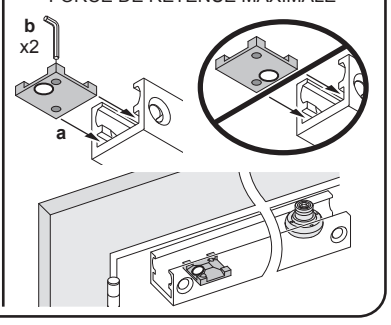


HOLD-OPEN OPTION
OPCIÓN DE MANTENER ABIERTO / OPTION DE RETENUE

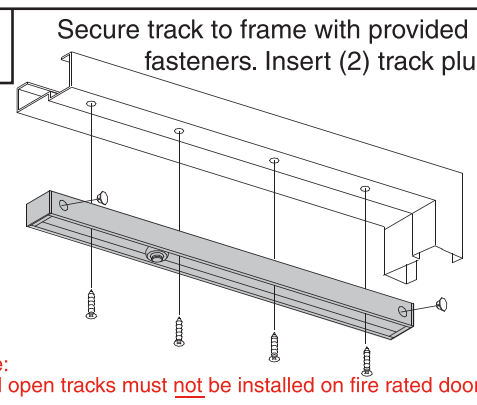
LIGHT HOLD-OPEN FORCE
FUERZA LIGERA PARA MANTENER ABIERTO
FORCE DE RETENUE LÉGÈRE



STRONG HOLD-OPEN FORCE
FUERZA MAYOR
FORCE DE RETENUE MAXIMALE

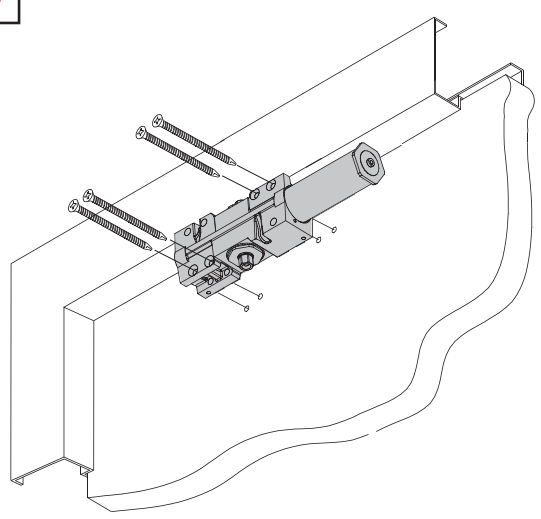


4 Secure track to frame with provided fasteners. Insert (2) track plugs.

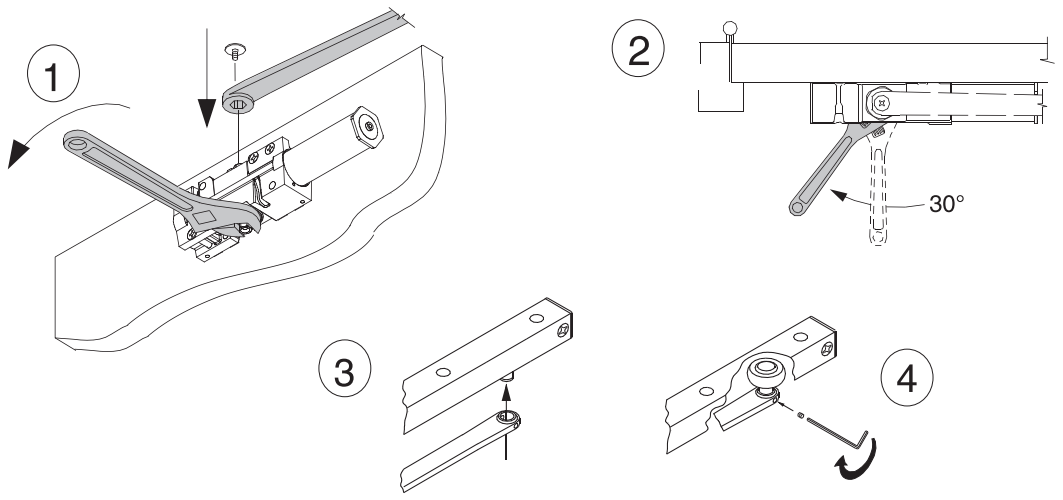


Note:
Hold open tracks must not be installed on fire rated doors.

5 Secure closer to door with fasteners provided.



6 Attach arm to closer at pre-load position of 30°. Secure with provided shaft screw. Attach arm to track, as shown.

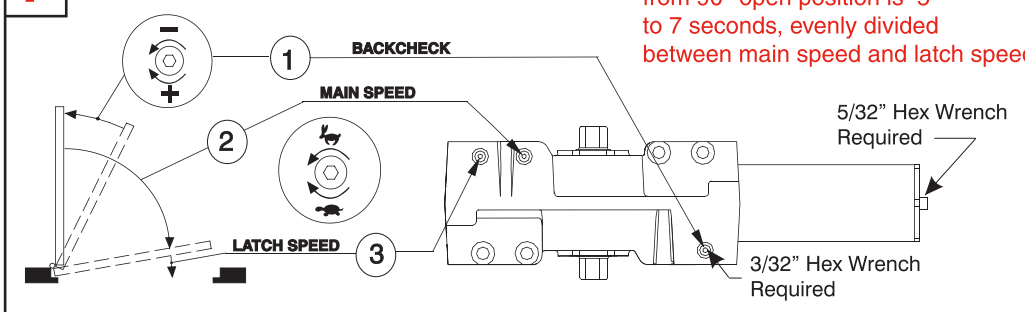


7 If necessary, adjust closer

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

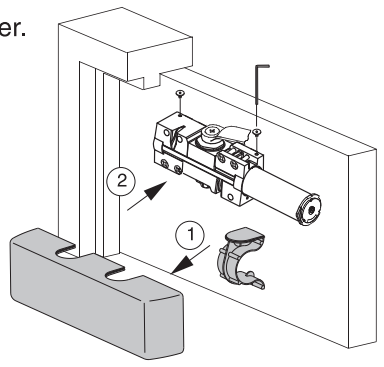
CAUTION

OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



NO MAINTENANCE REQUIRED

8 Snap on cover.



Note: Use screws for metal cover only.

4040XP Instructions du rail et gabarit de 120° pour une installation sur le côté à pousser.

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds.

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

3 Glissez le galet dans le rail.
Option de retenue.

4 Fixez le rail au cadre avec les attaches fournies. Insérez les (2) bouchons du rail.

5 Fixez le ferme-porte sur la porte avec les attaches fournies.

6 Attachez le bras au ferme-porte à la position préchargée de 30°. Fixez à l'aide des vis fournies. Attachez le bras au rail, comme sur l'illustration.

7 Au besoin, réglez
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

8 Fixez le couvercle.

DANGER

UNE INSTALLATION OU UN RÉGLAGE INADÉQUATS PEUVENT ENTRAÎNER DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE TOUTES LES INSTRUCTIONS AVEC SOIN. POUR PLUS DE RENSEIGNEMENTS, COMPOSEZ LE 877-671-7011

DANGER

UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4040XP Instrucciondes de rieles para plantilla 120° con montaje del lado del empuje.

1 Localice la plantilla apropiada. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes.

Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

3 Monte el rodillo en el riel.
Opción de mantener abierto.

4 Sujete el riel al bastidor con los sujetadores ya incluidos. Inserte dos (2) tapones de rieles.

5 Sujeta el cerrador a la puerta con los sujetadores ya incluidos.

6 Coloque el brazo al cerrador a la posición de prearma de 30°. Sujételo con el tornillo de piñón ya incluido. Sujete el brazo al riel, tal como se muestra.

7 Ajusta si es necesita
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

8 Encaje la tapa.

ADVERTENCIA

UNA INSTALACIÓN O UN AJUSTE INCORRECTOS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL 877-671-7011

ADVERTENCIA

LA APERTURA DEMASIADO GRANDE DE LAS VÁLVULAS DE AJUSTE PUEDE OCASIONAR UN DERRAME, DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES.

23762

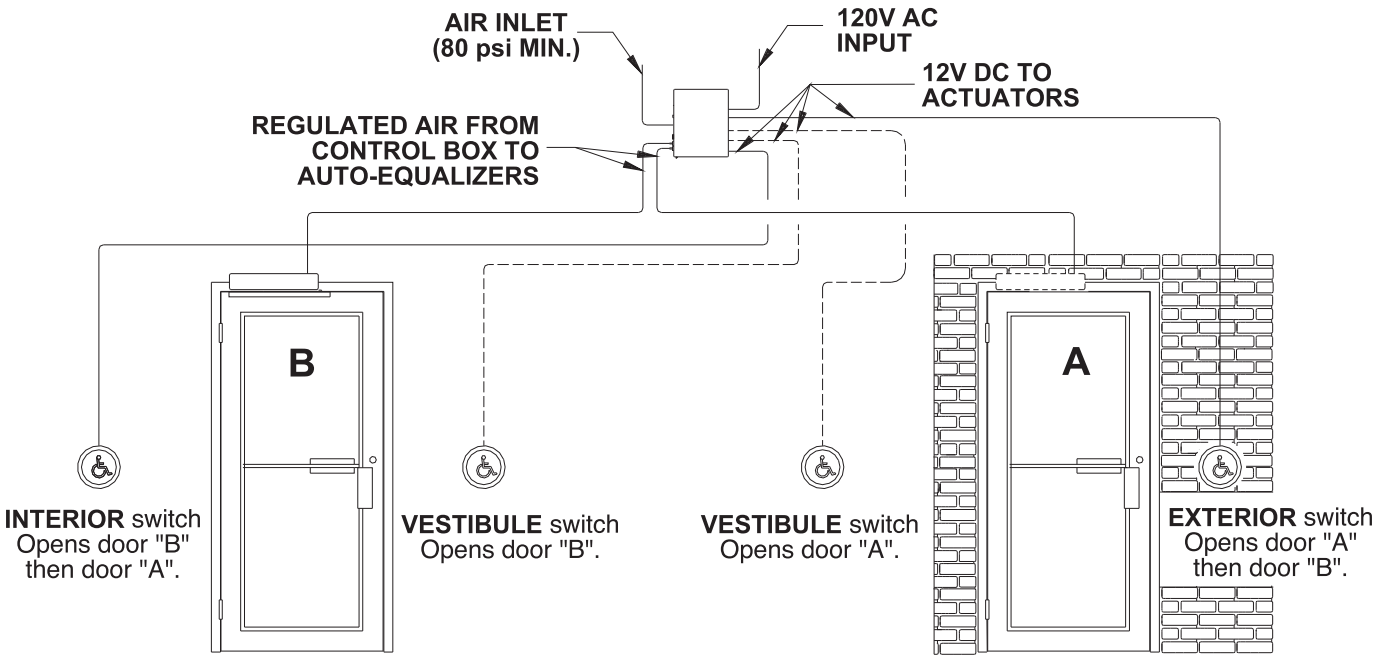
Control Box

Models 7902 SEQ & ES7902 SEQ

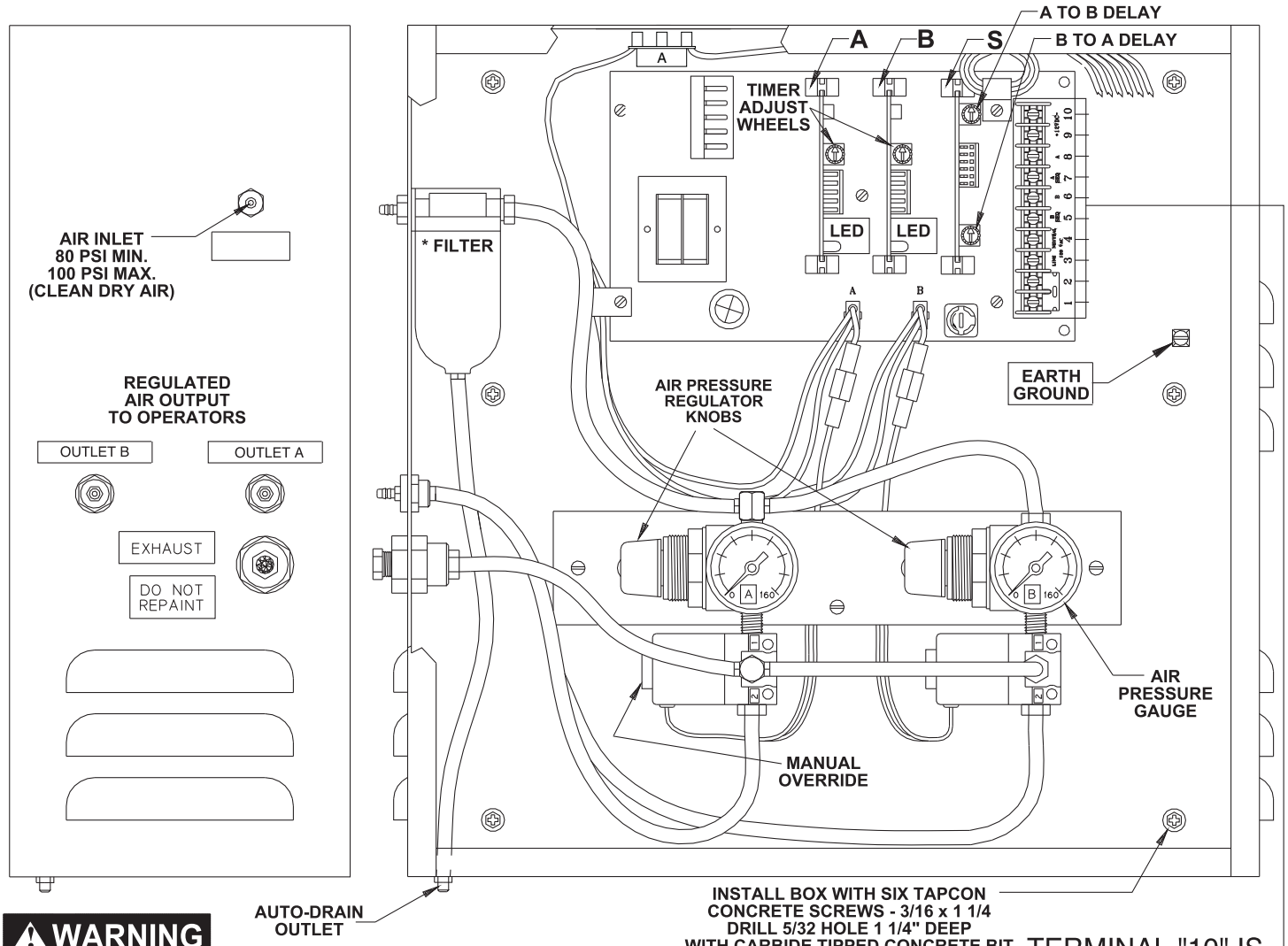
Installation Instructions

ⓘ **For closer information see closer installation instruction sheet**

Typical Electric & Air Supply Hook Up



1	Locate box on interior of building within 100 tubing feet of the door to be controlled. **Box must be in a clean, dry, well ventilated place where temperatures do not exceed 120°F or fall below 35°F.**
2	Mount box to a structurally sound surface using screws provided as shown on page 2 with air fittings on left side as shown. **Do not mount box upside down or on a horizontal plane.**
3	Refer to instructions packed with actuators and connect leads to terminals 5 through 10 as required.
4	Connect unpowered 120V AC input to terminals 3, 4, and ground screw. (Line side to ternimal 3, neutral side to terminal 4 and ground wire to ground screw). If door control is on a fire door, 120V AC input must be interrupted by the fire alarm panel when in alarm. When dry auxiliary fire alarm contacts are used, remove shunt from terminals 1 and 2 and connect to dry contacts of fire detector or alarm panel. Terminals 1 and 2 are in series with line side of 120V input.
5	Turn on power. Air valve will operate one cycle when power is applied.
6	Air pressure output valve has been preset at factory. If more air pressure is required to adequately open doors, adjust regulator valves found inside control box.
7	Adjust time delay to keep air valve energized by turning adjustment wheel on timer modules “A” & “B” (CW to increase - CCW to decrease). The LED (light) on the timer module indicates the valve is energized. The time can be adjusted from 0-30 seconds. 10 seconds is a “normal” delay.
8	When using sequential operation, adjust dual timer module “S” for desired delay between door operation. (CW to increase delay; CCW to decrease delay). Top timer delays “A” to “B” operation; the bottom timer delays “B” to “A” operation.
9	Test actuators to ensure wiring and tubing are properly connected.



⚠ WARNING

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

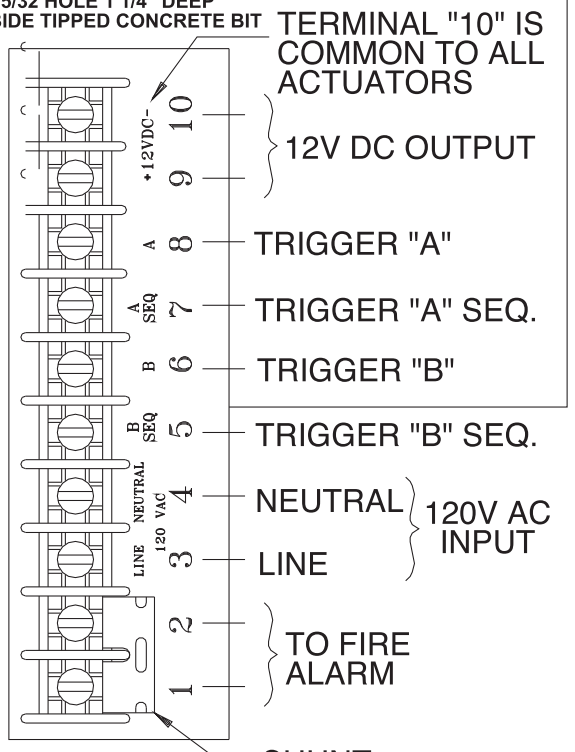
Disconnect power before making any electrical connections or performing maintenance.

ELECTRICAL DATA

INPUT = 120V AC @ .3 AMPS
POWER CONSUMPTION 36 WATTS
OUTPUT IS 12V DC

⚠ CAUTION

DO NOT MOUNT BOX UPSIDE DOWN OR IN HORIZONTAL POSITION. LOCATE WHERE TEMPERATURES DO NOT EXCEED 120°F OR FALL BELOW 35°F



AIR FILTER MAINTENANCE:

1. **EACH TIME BOWL IS CLEANED OR FILTER ELEMENT REPLACED:**
   A.) Depressurize unit
   B.) Inspect seals and replace cracked, deteriorated or damaged seals with original manufacturers approved seals only.
2. **FILTER ELEMENT** - Clean periodically by removing filter, tapping on hard surface and blowing off with compressed air. When servicing element, blow off louvers with compressed air.
3. **AUTOMATIC DRAIN** - If automatic drain fails to keep filter bowl drained of water, use a pencil or small screwdriver to push the piston up, allowing filter to drain.
4. Be sure filter bowl assembly is firmly secured in place before reactivating unit.
5. Replace filter with LCN part # 929.

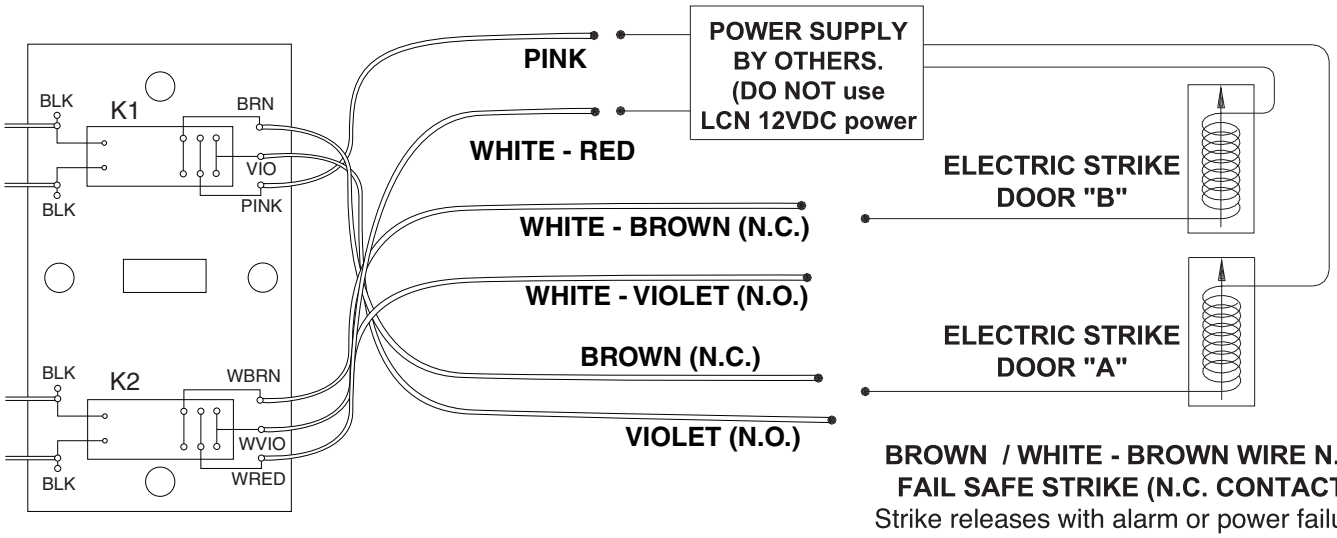
⚠ DANGER CONTROL BOX **MUST** BE CONNECTED TO EARTH GROUND

Installation Troubleshooting Chart

Symptom	Possible Cause	Suggested Remedy
No Power Opening.	No power to control box/blown fuse.	Verify 120VAC 60HZ power is present at terminals 3 & 4 on control box terminal strip. Check fuse. Replace only with 5 amp (3AG type) fuse.
	Actuator(s) not connected properly.	Be sure a timer module board is firmly in place in “A,” “B” & “S” slots. Operate actuator(s). LED on timer module should light when actuator is used. If not, briefly short actuator terminal in the control box. If LED lights, check wiring to actuators for an open circuit. If it does not light, check for voltage at terminals 9 &10. Voltage should read from 11.75 to 13.25V DC. If there is no reading, disconnect leads from terminals 9 & 10. Short actuator terminals. If LED lights, check for short circuit in actuators.
	Fire alarm system causing open circuit on terminals 1 & 2.	Shunt terminals 1 & 2 with power off. Restore power. If control operates when actuator terminals in the control box are shorted, an open circuit exist in wiring to fire alarm. When Auto-Equalizer is not used with fire alarms, terminals 1 & 2 must be permanently shorted with a shunt. **IMPORTANT!** When Auto-Equalizer is connected to fire alarm, make sure shunt is removed from terminals 1 & 2. Terminals 1 & 2 are one leg of 120V line.
	No input to Auto-Equalizer operator.	Disconnect tubing from Auto-Equalizer operator. Try actuator and verify that air is coming out of tubing. If not, trace tubing to control box, checking for breaks or kinks in air line.
	Air lines obstructed with dirt or ice.	Clean or thaw lines and reroute if necessary. Eliminate dips near cold zones. If freezing is a repeated problem, desiccant filter may need to be changed.
	Air valves not working.	Make sure air valve leads are plugged into main board. (Be sure valves in system are plugged into connectors “A” & “B”.)
	Low or no air inlet pressure to control box.	Check compressor output to make sure air shut-off is open. 80 psi must be available at the control box. If not, check compressor and lines.
	No air output to Auto-Equalizer operator.	Check pressure gauge in control box. Adjust as required, if necessary. Check for leaking or damaged lines in control box.
Power opening will not time out.	Scanner maintaining signal to control box.	Make sure lenses are clean and there are no obstructions in front of scanner. Model 909 or 939 proximity scanner may “see” an opposite wall. Adjust range as described earlier.
	Switch circuit maintaining contact.	Check for short circuit or error in wiring to actuator.
	Air valve blocked open with contaminant.	Cycle valve several times by momentarily shorting actuator terminals. This should clear valve.
	Control box exhaust restricted.	Exhaust muffler may be clogged. Clean in alchohol or mineral spirits.

Model ES7902 SEQ. for use with Electric Latching Hardware

ES7902 SEQ. - 2 electric strikes maximum



BROWN / WHITE - BROWN WIRE N.C.
FAIL SAFE STRIKE (N.C. CONTACT)
Strike releases with alarm or power failure.
Remains lached with power on.
(Not compatible with UL listed fire door.)

VIOLET / WHITE - VIOLET WIRE N.O.
FAIL SECURE STRIKE (N.O. CONTACT)
Strike releases when energized. Remains locked in alarm or power failure. (Manual release hardware required to open door in alarm or power failure.)

⚠ WARNING

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.

Customer Service
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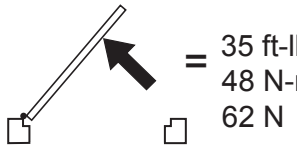
23762 Rev. 05/14-e

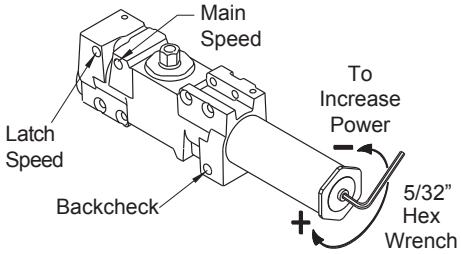
24191

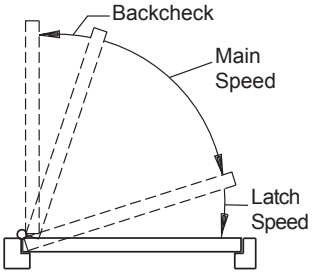
4040SEL Sentronic

LCN®

Installation Instructions







Installation

1a This closer features two mounting options. Before beginning, determine which type of mounting best applies to your application or has been specified for the job, then be sure to use the proper template.

1b The voltage shown on the track cover plate must match voltage supplied to door frame (24V or 120V). If **concealed wiring** is desired, prepare the frame to specifications shown on the corresponding template (pull side or push side). If **surface wiring** is desired, be sure to mount track on frame **before** running any EMT / conduit.

1c Depending on mounting used, insert proper track plugs into side or top of the track. Using fasteners provided, mount track on frame to the dimensions of the template being used. Remove solenoid cover plate and make electrical connections (See Pg. 2). NOTE: Switch hole in cover plate MUST be aligned with test / release switch when re-attaching plate to track.

1d Before mounting closer, the spring power may need adjusting. The 4040 SEL comes preset as a size 3. This will control a door up to 38" wide. If door is wider than 38", adjust closer as shown (see illustration below) up to 7 full turns. Starting the cover screws at this point is recommended. Using fasteners provided, mount closer on door to the dimensions of the template being used.

1e Arm Installation: Install arm as follows:

1. **Push side mounting:** Place arm hub over top closer shaft, parallel with door. Place a wrench on bottom shaft of closer and rotate away from door. When flats in arm hub line up with the first available flats of the shaft, slide arm hub onto shaft. Insert shaft screw and tighten securely.
2. **Pull side mounting:** Place arm hub over top closer shaft, parallel with door. Rotate arm away from door until flats in arm hub line up with first available flats of shaft. Slide arm hub onto closer shaft. Insert shaft screw and tighten securely.

1f Loosen the set screw in arm. Connect arm to track roller, and tighten set screw firmly.

1g **To adjust hold-open position of door:** Remove screw in the adjustable arm and open door to desired position. Re-insert screw and tighten securely.

1h Regulation: Do not allow door to slam into frame. A "normal" closing time from a 90° position is 5 to 7 seconds, evenly divided between **MAIN** and **LATCH SPEEDS**. If adjustments are needed, use a 3/32" hex wrench. To adjust **MAIN SPEED**, turn regulating screw (see illustration) clockwise to slow speed or c.c.w. to increase speed. **LATCH SPEED** is adjusted in the same way. When adjusting **BACKCHECK**, use least amount necessary to retard swing of door sufficiently. To adjust **BACKCHECK**, turn regulating screw clockwise to increase the amount of force or c.c.w. to reduce the amount of force. **DO NOT USE AN ABRUPT BACKCHECK SETTING OR EXPECT THE DOOR CLOSER TO AS A STOP!**

1i With regulation done, place snap on clip insert into proper cutout then snap cover assembly onto spring tube.

⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions, call LCN at 877-671-7011

Customer Service

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24191 Rev. 08/17-m

Conduit Quick Connector

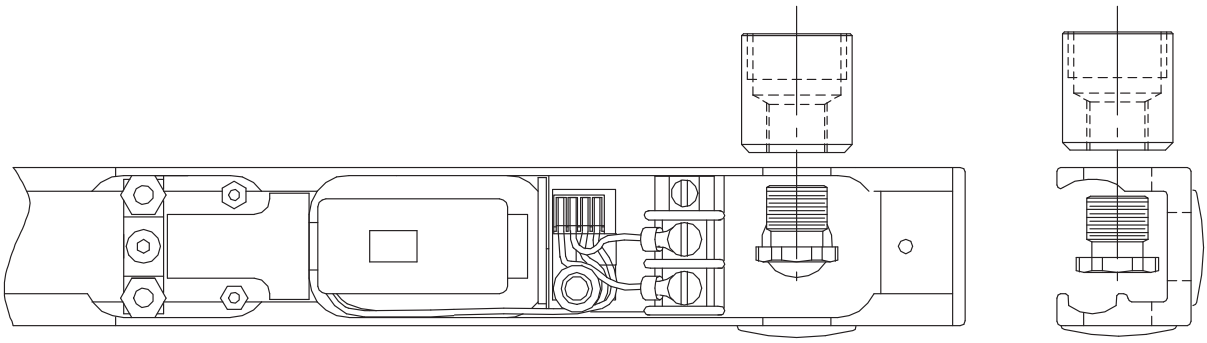


Fig. 1

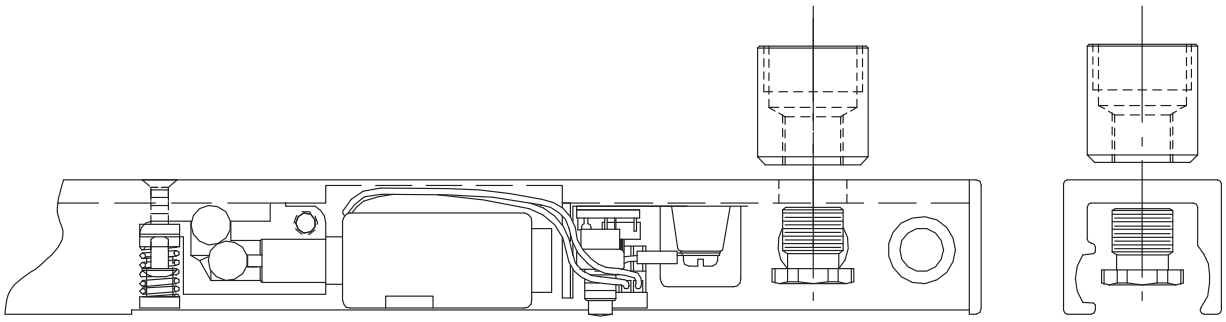


Fig. 2

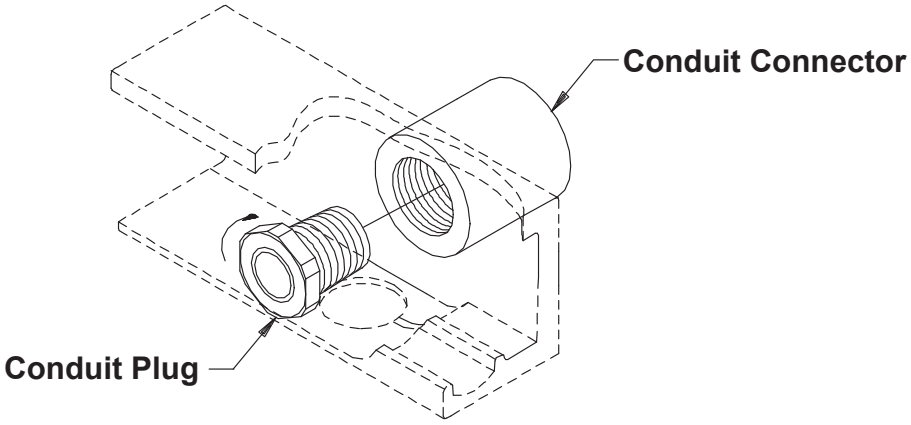
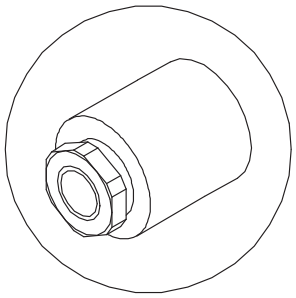


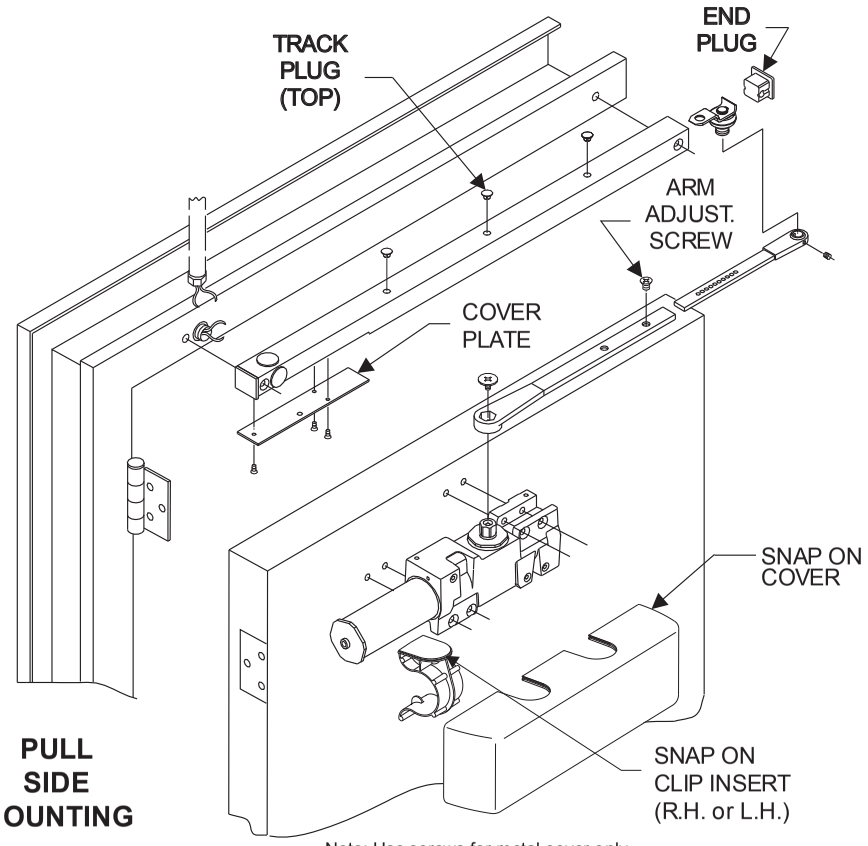
Fig. 3



Conduit Plug shown in Conduit Connector

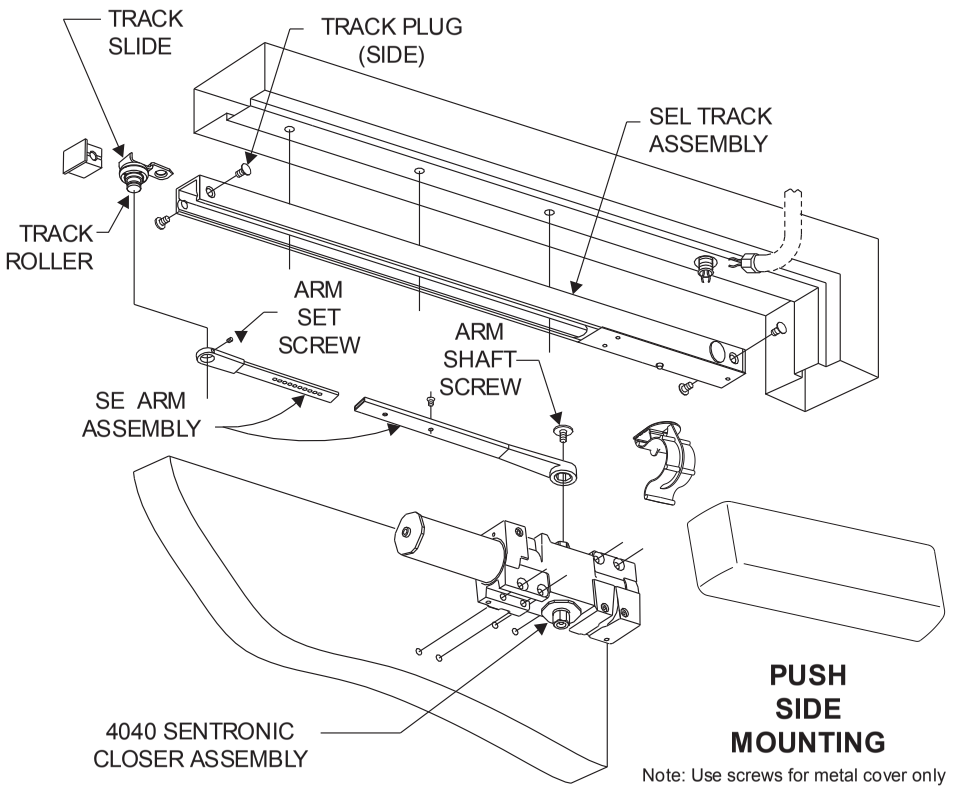
Installation Instructions

1a	The Conduit Quick Connector and Plug can be found in the closer screwpack.
1b	The Conduit Quick Connector should be fastened to the 1/2” concealed conduit prior to step 3 on the closer installation instructions.
1c	During step 3 on the closer installation instructions, make sure that the Conduit Connector is secured flush against the track surface. See option in Fig. 1 below that matches the mounting option selected for track surface. With the track mounted, take the Conduit Plug and slide it through the 1/2” hole in the track. (see Fig.2) Tighten the Plug into the Conduit Connector using a 5/8” wrench, until completely secure, as shown in Fig.3.



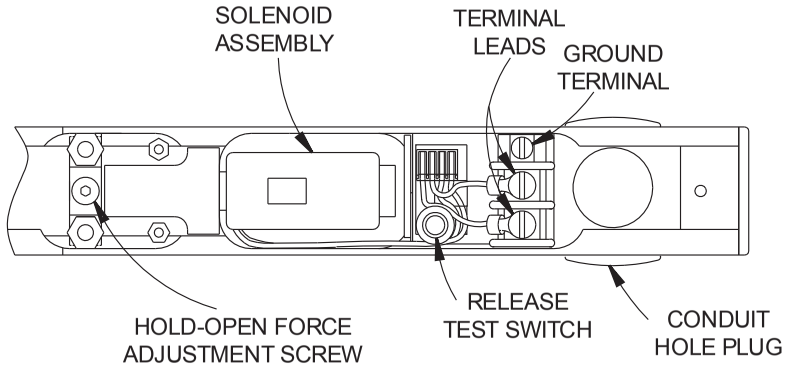
PULL SIDE MOUNTING

Note: Use screws for metal cover only.



PUSH SIDE MOUNTING

Note: Use screws for metal cover only



HOLD OPEN FORCE ADJUSTMENT: Locate hold-open adjustment screw in diagram above. For greater hold open force, insert socket screw key wrench (included in screwpack) and turn clockwise. To decrease amount of hold open force, turn screw counter-clockwise. Maximum of 4 turns.

ELECTRICAL CHECKOUT:

1. With power on, open door completely. Door should remain in open position. If door does not stay open, check electrical input.
2. Push release test switch. Door should close immediately. Open the door to hold-open position and let it remain there.
3. System should be checked at frequent intervals. It is suggested that step 2 be repeated every 90 days.

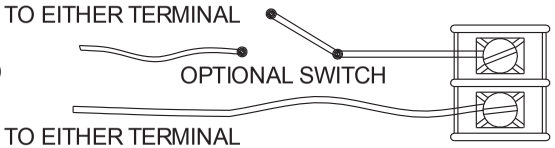
⚠ WARNING

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.

WIRING DIAGRAM - POLARITY NOT IMPORTANT

INPUT VOLTAGE:
24V AC/DC OR 120V AC/DC
(usually from alarm panel or detector)



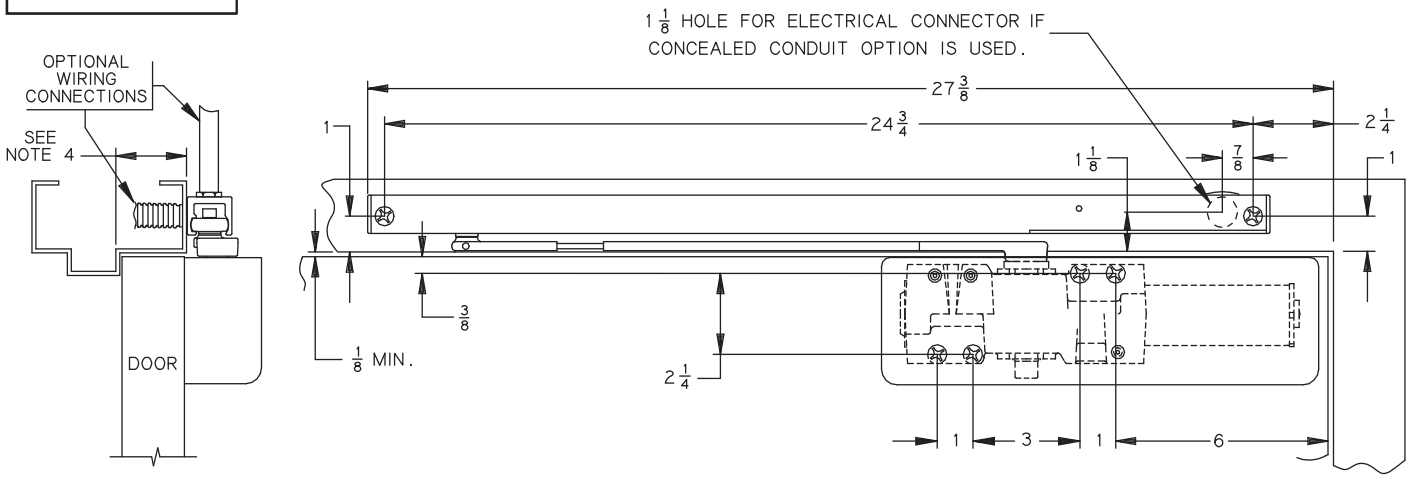
4040SEL } 90° TO 120° HOLD OPEN
AUXILIARY STOP RECOMMENDED

⚠ WARNING

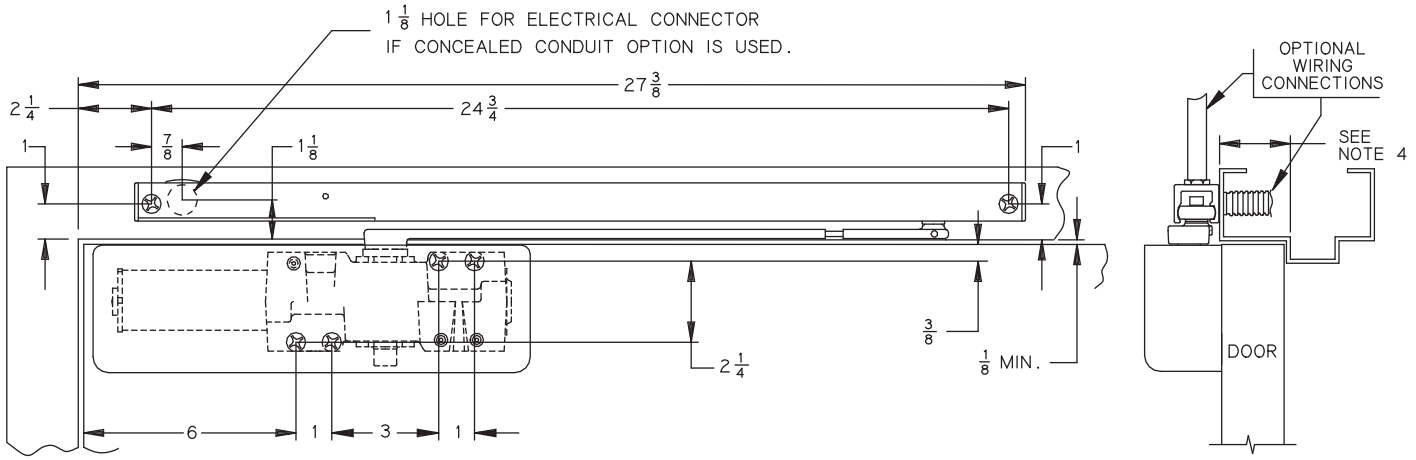
HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.

DOOR HOLDER SOLENOID DATA
24 VAC - DC Nominal =10% - 15% @ .090 Amp.Max.
120VAC - DC Nominal =10% - 15% @ .030 Amp. Max.



TEMPLATING FOR LEFT HAND DOOR



TEMPLATING FOR RIGHT HAND DOOR

NOTES-

1. Voltage supplied to unit MUST match voltage shown on Sentronic® label.
2. If door is hung on pivots: Locate closer and track from pivot point of center pivot. For offset pivots, locate from pivot point and add 3/8".
3. Floor or wall stops should be used.
4. If this dimension is greater than 1 15/16", consult factory.
5. Reinforcing per ANSI\SDI-100 is recommended for hollow metal doors and frames.
6. If swing clear hings are being used, consulty factory.

INCH	1/8	1/4	3/8	7/8	15/16	1	1 1/16	1 1/8
M.M.	3	6	10	22	24	25	27	29

INCH	1 1/2	1 15/16	2 1/4	2 7/8	3	3 1/4	6	24 3/4	27 3/8
M.M.	38	49	57	73	76	83	152	619	695

4040SEL
HINGE FACE MOUNTED

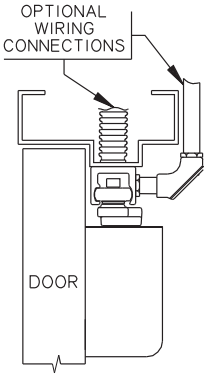
4040SEL } 90° TO 120° HOLD OPEN

AUXILIARY STOP RECOMMENDED

DOOR HOLDER SOLENOID DATA

24VAC - DC Nominal =10% - 15% @ .090 Amp. Max.

120 VAC - DC Nominal =10% - 15% @ .030 Amp Max.

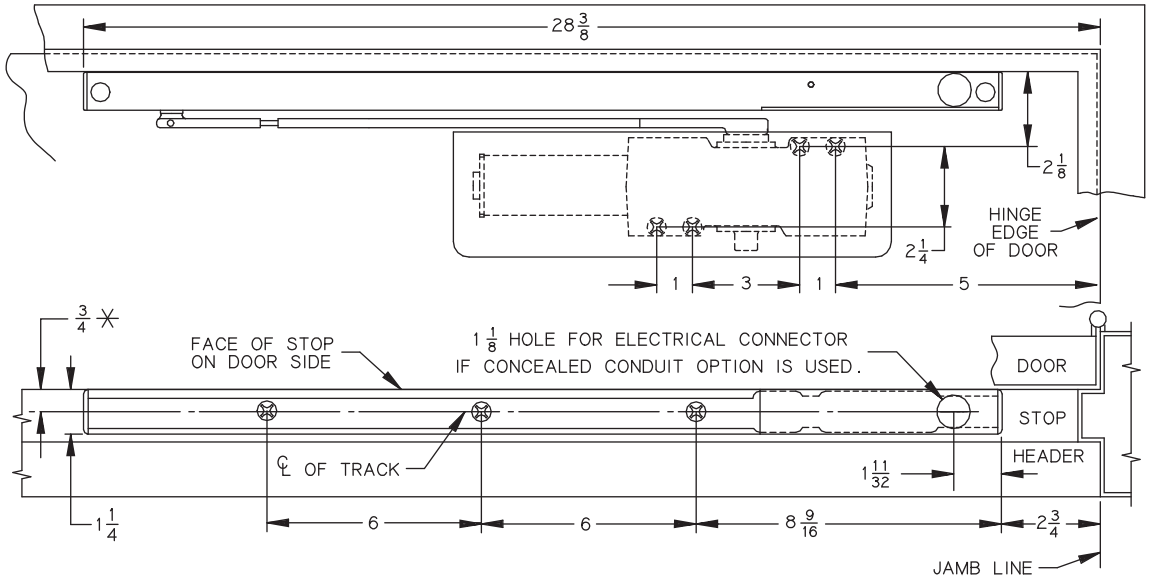


⚠ WARNING

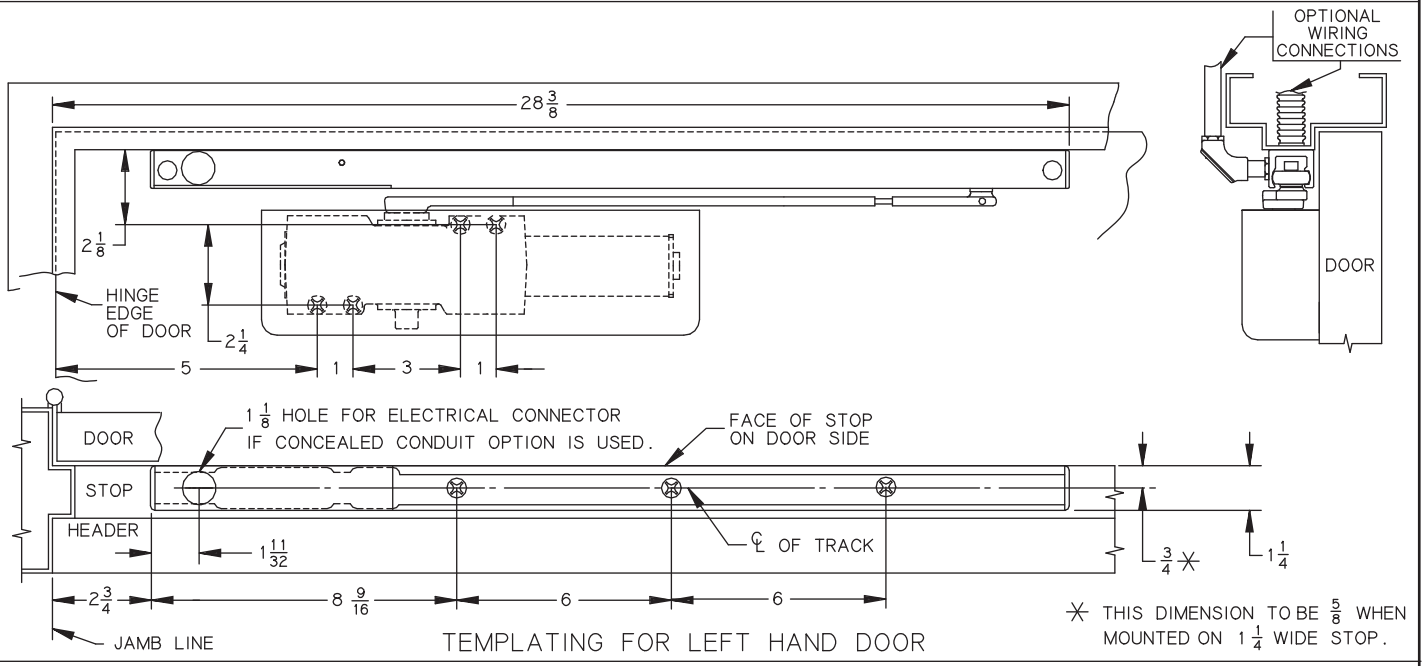
HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.

✳ THIS DIMENSION TO BE $\frac{5}{8}$ WHEN MOUNTED ON $1\frac{1}{4}$ WIDE STOP.



TEMPLATING FOR RIGHT HAND DOOR



TEMPLATING FOR LEFT HAND DOOR

✳ THIS DIMENSION TO BE $\frac{5}{8}$ WHEN MOUNTED ON $1\frac{1}{4}$ WIDE STOP.

NOTES-

1. Voltage supplied to unit MUST match voltage shown on Sentronic®label.
2. Electrical connector is provided by LCN.
3. Locate closer and track from C of pivot or swing - clear hinge pin, if used.
4. Floor or wall stops should be used.
5. Reinforcing per ANSI\SDI-100 is recommended for hollow metal doors and frames.

INCH	1/4	9/16	5/8	1	1 1/8	1 1/4	1 11/32	1 1/2
M.M.	6	14	16	25	29	32	34	28

INCH	2 1/8	2 1/4	2 7/8	3	4	5	6	8 9/16	28 3/8
M.M.	54	57	73	76	102	127	152	217	721

4040SEL

STOP- SIDE MOUNTED

3130 Series

25051

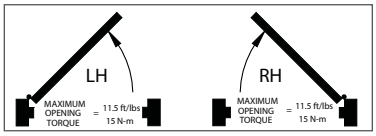
Not for installation on UL rated 20 minute wood core doors per CAN/ULC-S104-10

Installation Instructions

⚠ CAUTION ⚠

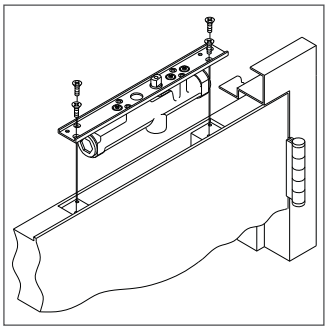
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877-671-7011.

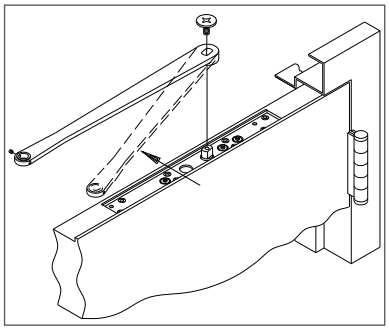
1 Installation



1a Determine hand of door using diagram above. Hand of closer must match hand of door. The closer mtg. plate is marked with an “R” or “L”. Prepare door & frame per template on reverse side. Template page shows a LH installation, RH is opposite. Proper mortising of door and frame is required for closer to operate correctly.

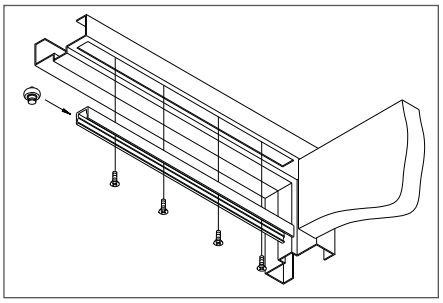
1b Install closer into door as shown below and secure with screws provided (as called out on template).



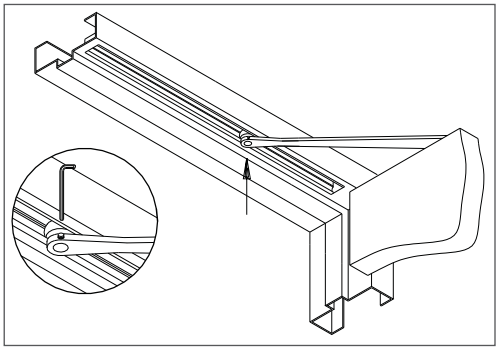


1c Attach arm to closer as shown below, then fasten with arm shaft screw. Arm must be pre-loaded approx. 20°, as shown. When installed correctly, arm should press against the lip at top of door.

1d Insert track roller into end of track, as shown below. Place track up into mortise with hold open holes in top of track toward hinge. Secure with screws provided.

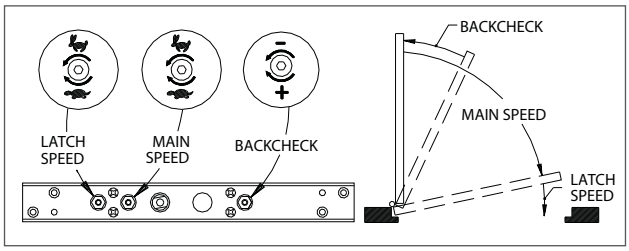


1e Open door partially and pull arm away from door. Fit arm onto track roller stud. NOTE: It may be necessary to loosen arm set screw before arm will fit onto roller stud. Once arm is fitted firmly onto roller stud, use the socket screw key provided and tighten arm set screw. Open door to approx. 90° and allow the door to close, observing closing speed. If adjustments are needed, refer to step F.



2 Closer Regulation

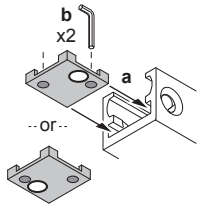
The 3130 series closer has been regulated prior to shipment. If adjustments are needed, use a 3⁄32” hex wrench and consult diagram below.



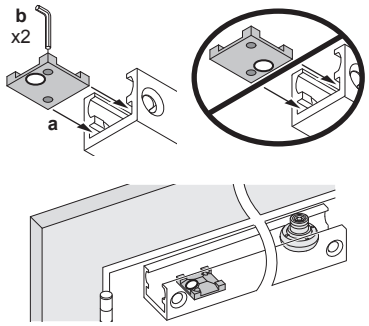
3 Hold-Open Information

HOLD-OPEN OPTION

LIGHT HOLD-OPEN FORCE



STRONG HOLD-OPEN FORCE



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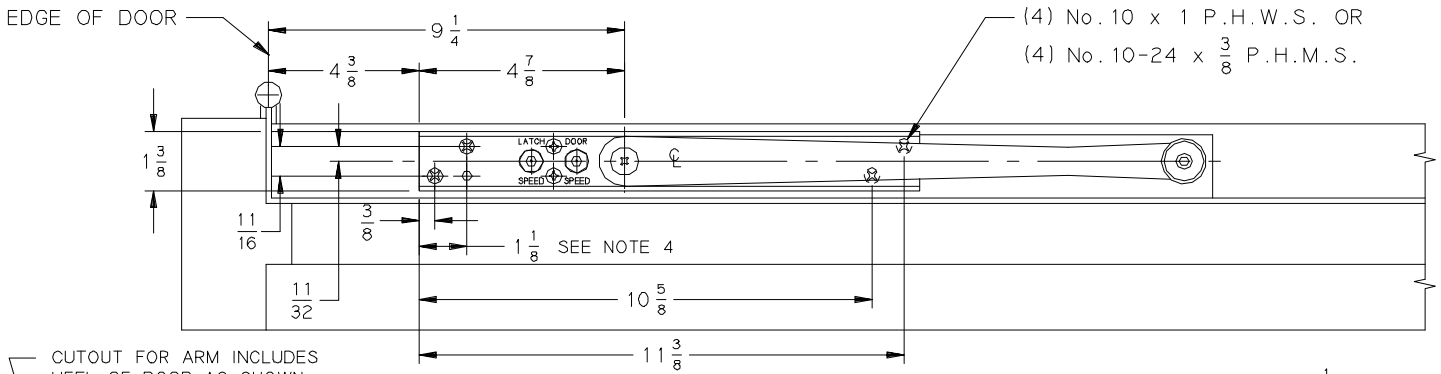
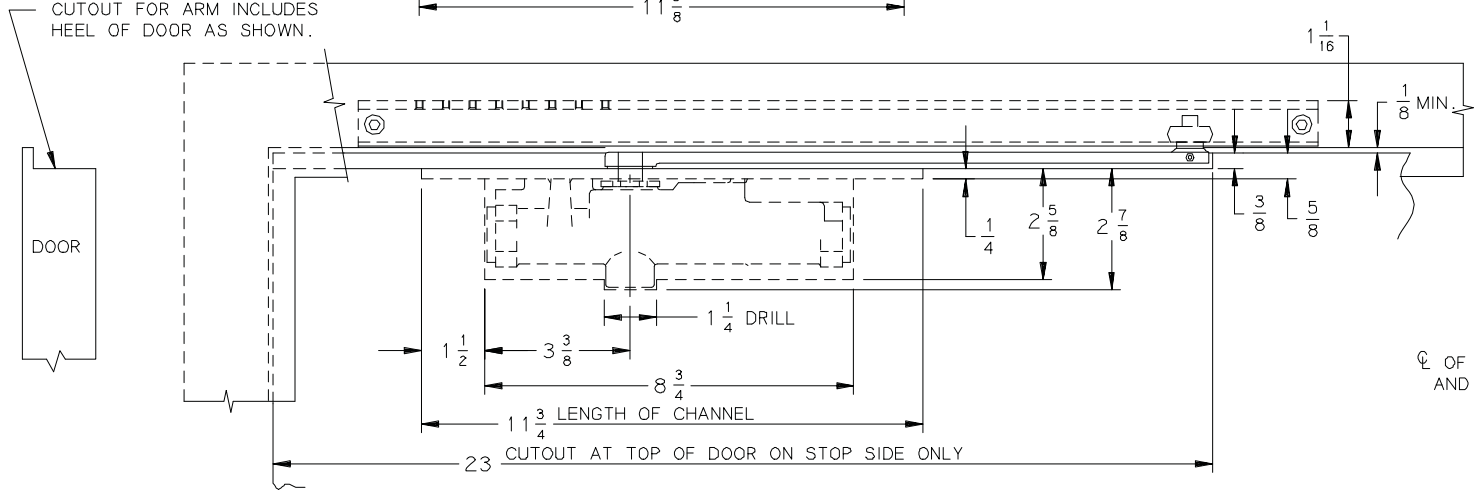
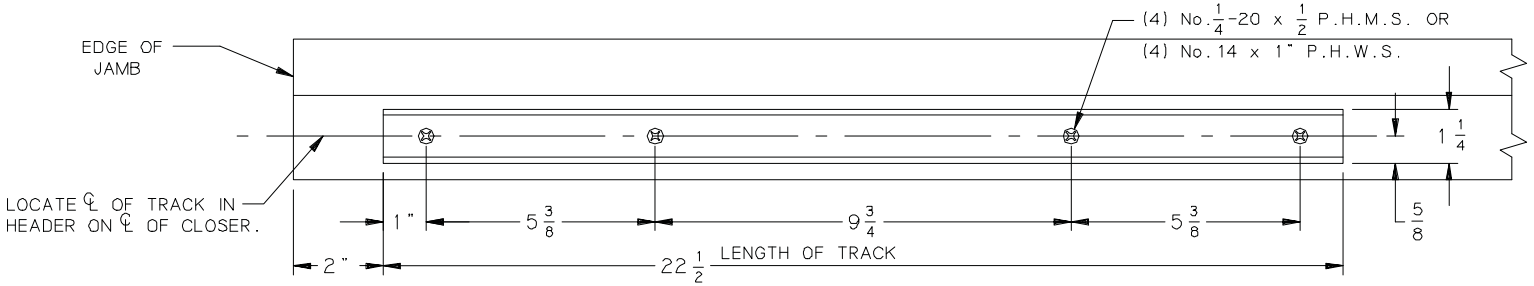
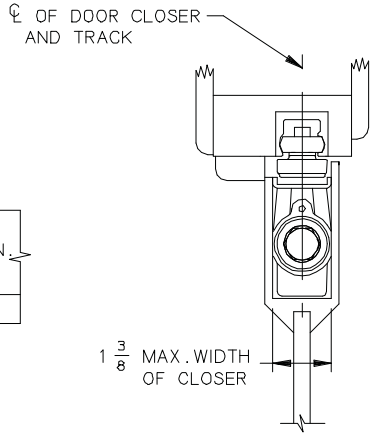
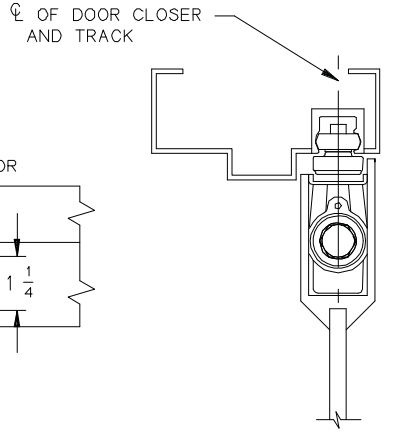








WOOD DOOR
WOOD FRAME



METAL DOOR
METAL FRAME

3131 } NON HOLD OPEN-(UP TO 140°)
3132 } H-90 (85° TO 100°)
3133 } MAXIMUM OPENING 140°

AUXILIARY STOP RECOMMENDED

LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE | 6/96

GENERAL NOTES-

1. IF PIVOT OR SWING CLEAR HINGE PIN IS USED CONSULT FACTORY.
2. FOR INTERIOR DOORS ONLY.
3. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.
4. HOLE PATTERN FOR 4 CHANNEL SCREWS IDENTICAL FOR R.H.& L.H.

INCH	1/8	1/4	11/32	3/8	1/2	5/8	11/16	3/4	1
M.M.	3	6	9	10	13	16	17	19	25

INCH	1 1/16	1 1/8	1 1/4	1 3/8	1 1/2	2	2 5/8	2 7/8	3 3/8	3 1/2
M.M.	27	29	32	35	38	51	67	73	86	89

INCH	4 1/4	4 3/8	4 7/8	8 3/4	9 1/4	10 5/8	11 3/8	11 3/4	22 1/2	23
M.M.	108	111	124	222	235	270	289	299	572	584

No.	REVISION	BY	DATE
5	TEMPLATE UPDATE	JEJ	6/96
6	CORRECTION (ARM)	CTB	11/97

LCN®

APP BY JEJ 6/96

DO NOT SCALE

CONCEALED DOOR CLOSER, TRACK, AND ARM

3130

Serie 3130

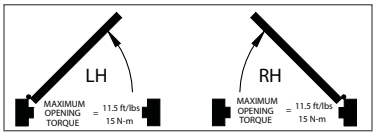
Not for installation on UL rated 20 minute wood core doors per CAN/ULC-S104-10

Installation de Montage

⚠ DANGER ⚠

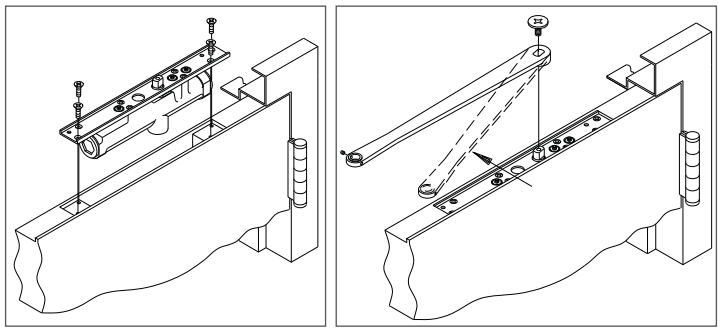
Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877-671-7011.

1 Installation de Montage



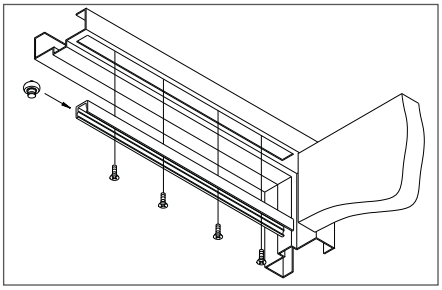
1a Déterminer s'il s'agit d'une porte qui s'ouvre á droite ou á gauche en fonction du schéma ci-dessus. L'ouverture á droite ou á gauche du fermoir doit correspondre á celle de la porte. Sur la platine du fermoir figure la lerure "R" ou "L". Préparer la porte et le châssis conformément au modéle au verso. La page modéle indique un assemblage côté gauche le côté droit est l'inverse. Un mortaisage approprié de la porte er du chassis est nécessaire pour que le fermoir puisse fonctionner comme il faut.

1b Installer le fermoir dans la porte comme indiqé ci-dessous et serrer les vis de l'arbre qui ont étré fournies (conformément au modéle).

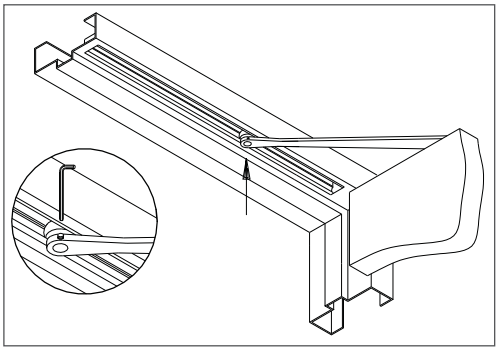


1c Attacher la bras fermoir conformément au schéma ci-dessous et sécuriser avec la vis du bras. Le bras devra étre ouvert á un angle d'envrion 20°, conformément au schéma. Une fois installé correctement le bras devrait presser contre la lévre en haur de la porte.

1d Insérer le rouleau á l'extrémité de la piste de roulement comme il est indiquie ci-dissous. Placer la piste de roulement dans la mortaise de façon á ce que les trous pour "laisser ouven" soient situés au dessus de le piste de roulement vers les gonds. Serrer les vis fournies.

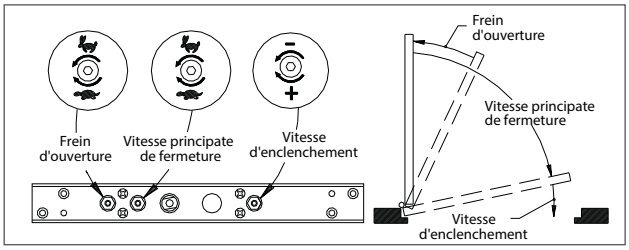


1e Ouvrir la porte á moitié et tirer le bras dans la direction opposée de la porte. Installer bras sur la tige de la piste de roulement. N.B. scra peut-ére necessaire de desserrer la vis du bras pour que le bras puisse étre installé convenablement sur la tige de roulement. Une fois que le bras a étré proprement fixé sur la tige (de la piste de roulement), utiliser la clé fournie pour serrer la vis du bras. Ouvrir la porte á un angle d'environ 90° et laisser la porte se refermer en observant la vitesse de fermeture. Si un ajustement est nécessaire voir etape F.

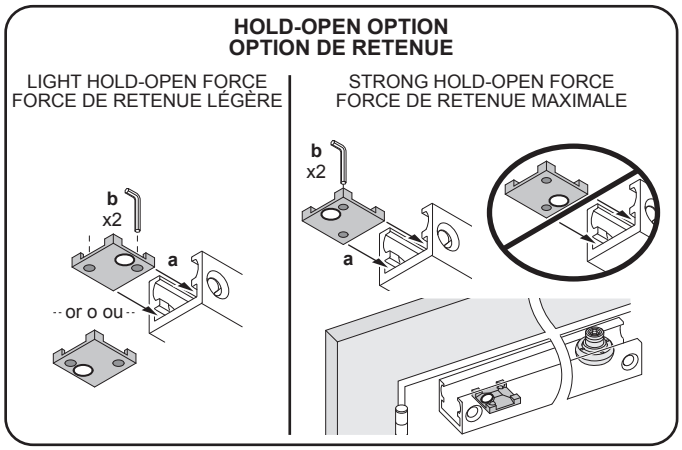


2 Reglage Du Fermoir

Le fermoir modéle 3130 a étré régléavant son expédition. S'il doit écre ajusté utiliser la clé qui a étré et consulter le dessin ci-dessous.



3 Informations Publiques



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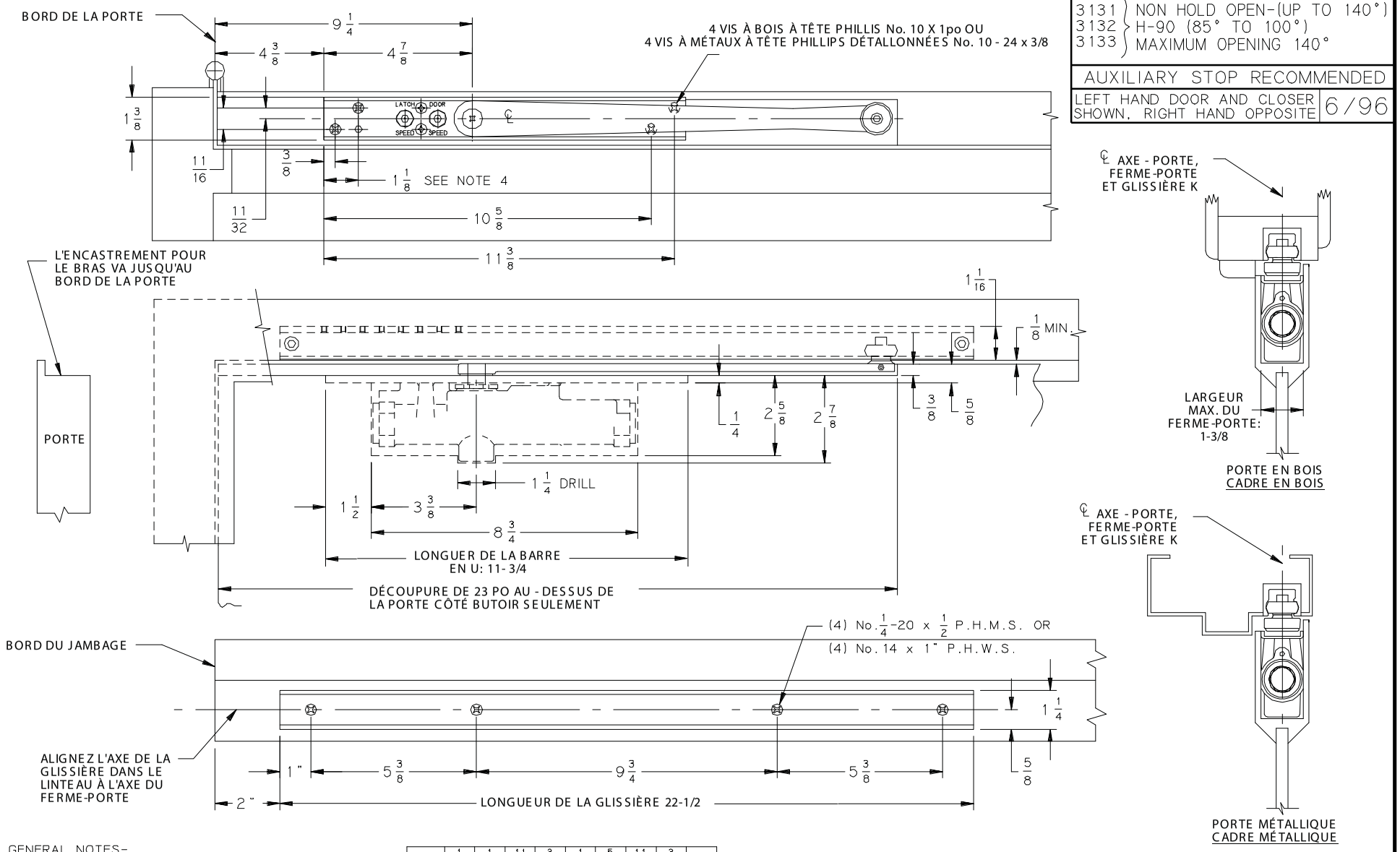

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LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE | 6/96

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INCH	4 1/4	4 3/8	4 7/8	8 3/4	9 1/4	10 5/8	11 3/8	11 3/4	22 1/2	23
M.M.	108	111	124	222	235	270	289	299	572	584

No.	REVISION	BY	DATE
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6	CORRECTION (ARM)	CTB	11/97

LCN

APP BY JEJ 6/96

DO NOT SCALE

CONCEALED DOOR CLOSER, TRACK, AND ARM

3130

SEM 7840/7850

29352

Sentronic Electro-Magnetic
Single Door Holder Concealed Wall Mount

Installation Instructions

⚠ CAUTION ⚠

Improper Installation may result in personal injury or property damage. Follow all instructions carefully. For questions, call LCN at 877-671-7011

1 Locate the Junction Box (Not Provided)

1a See Fig. 1. Measure dimensions A and B. Find the intersection of those two dimensions in Table 1. The intersection is dimension C, the centerline of the surface mount box location. (For 180° installations, take B dimension and subtract 5 ⅝" to find the centerline of junction box.

ⓘ **Note: Optional extensions may be needed.**

1b If dimension A or B is not shown on the chart, extrapolate to find dimension C as follows:

- If dimension A is 11" and dimension B is 36", then:
  Dimension C = 33 - ((33-32 ½)/2)= 32 ¾
- If dimension A is 12" and dimension B is 35", then:
  Dimension C = 32 ½ - ((32 ½ - 30 ⅜)/2)= 31 ⁷⁄₁₆
- If dimension A or B is beyond those listed in Table 1 or if they intersect in a blank area in Table 1, use optional extensions as needed to align contact plate and magnet.

1c See Fig. 2. The center of the junction box should be located about 5" from the top of the door. Install junction box to withstand at least a 50 pound pull.

1d Pull wire in accordance with applicable codes, standards, and authorities having jurisdiction. Electrical specifications are shown below.

Input Voltage	Current Draw Max.
120VAC, 60Hz	.02A
24VAC, 60Hz/24VDC	.02A
12VDC	.03A

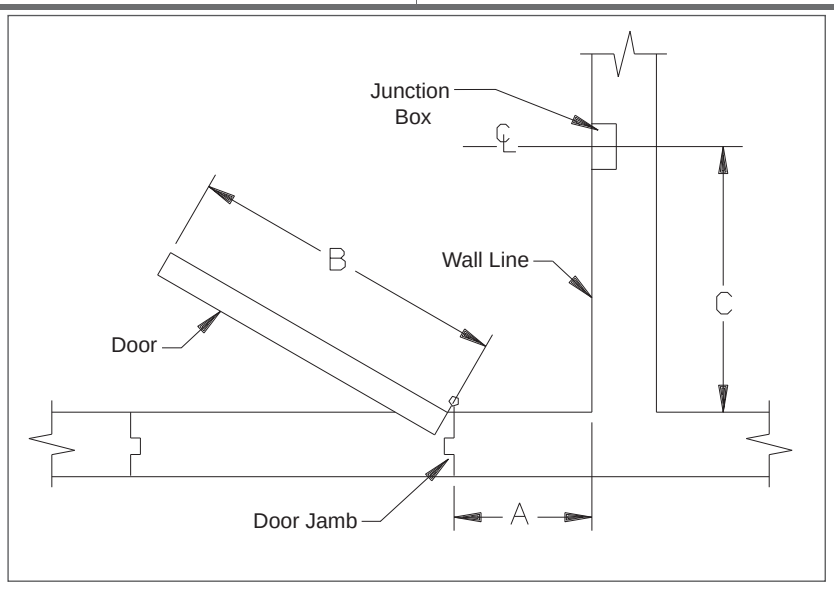


Figure 1

2 Install the Magnet

2a The magnet is shipped partially assembled for protection. Unscrew the cover from the magnet bracket assembly. Keep the screws for later reattachment.

2b See Fig. 3. Connect the supply earth ground wire to the green wire on the magnet bracket assembly. Connect the power supply common wire to the screw terminal marked COM. If the supply voltage is 24V, connect the power supply hot wire to the screw terminal marked 24V. If the supply voltage is 12V, connect the power supply hot wire to the screw terminal marked 12V. Polarity is important on the 12V input. There are protective plastic tabs over the terminal screws. Break off the two tabs that protect COM and the desired voltage so that the screw heads are exposed.

2c See Fig. 2. With the magnet wired, position the magnet bracket assembly into the junction box and attach it to the box using the (2) 6-32 screws. Tighten firmly. Attach the cover housing using the (2) 10-24 screws from step 2A.

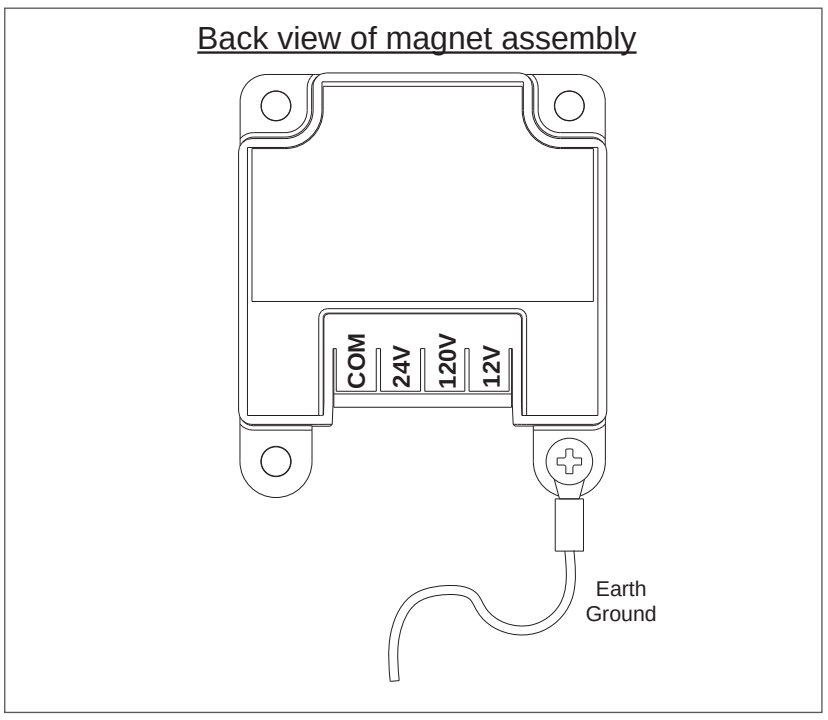


Figure 3

Magnetic Door Holder Placement Chart+
7840/50
B= dimension of door width (Inch)

	Nearest Whole Number	28	30	32	34	36	38	40	42	44	46	48
A = Dimension of door jamb to wall (Inch)	2	26 ⅛	28 ⅛	30 ⅛	32 ⅛	34 ⅛	36 ⅛	38 ⅛	40 ⅛	42 ⅛	44 ⅛	46 ⅛
	4	26	28	30	32	34	36	38	40	42	44	46
	6	25 ¾	27 ¾	29 ¹³⁄₁₆	31 ¹³⁄₁₆	33 ¹³⁄₁₆	35 ⅝	37 ⅞	39 ⅞	41 ⅞	44	46
	8	25 ⁵⁄₁₆	27 ⅜	29 ⁷⁄₁₆	31 ½	33 ½	35 ½	37 ⅝	39 ⅝	41 ⅝	43 ⅝	45 ¹¹⁄₁₆
	10	24 ¾	26 ¹³⁄₁₆	29	31	33	35 ⅛	37 ³⁄₁₆	39 ¼	41 ¼	43 ⁵⁄₁₆	45 ⅜
	12	24	26	28 ¼	30 ⅜	32 ½	34 ⁹⁄₁₆	36 ¹¹⁄₁₆	38 ¾	40 ¹³⁄₁₆	42 ⅞	45
	14	23	25 ³⁄₁₆	27 ⅜	29 ⅝	31 ¾	33 ¹⁵⁄₁₆	36	38 ⅛	40 ¼	42 ⁵⁄₁₆	44 ⅜
	16	21 ⅝	24	26 ⅜	28 ⅝	30 ⅞	33	35 ¼	37 ⁷⁄₁₆	39 ⁹⁄₁₆	41 ¹¹⁄₁₆	43 ¹³⁄₁₆
	18	20 ⅛	22 ¾	25 ⅛	27 ½	29 ¹³⁄₁₆	32 ⅛	34 ⅜	36 ⁹⁄₁₆	38 ¾	41	43
	20	18 ¼	21	23 ¹¹⁄₁₆	26 ³⁄₁₆	28 ⅝	31	33 ⁵⁄₁₆	35 ⁹⁄₁₆	37 ¹³⁄₁₆	40	42 ¼
	22		19	22	24 ⅝	27 ³⁄₁₆	29 ¹¹⁄₁₆	32	34 ⁷⁄₁₆	36 ¾	39	41 ⁵⁄₁₆
	24				22 ¾	25 ½	28 ⅛	30 ¹¹⁄₁₆	33 ⅛	35 ³⁄₁₆	38	40 ¼
	26						26 ⅜	29	31 ¹¹⁄₁₆	34 ⅝	36 ⅝	39
	28								30	32 ⅝	35 ³⁄₁₆	37 ¹¹⁄₁₆
	30								28	30 ⅞	33 ⁹⁄₁₆	36 ³⁄₁₆
	32										31 ¹¹⁄₁₆	34 ½

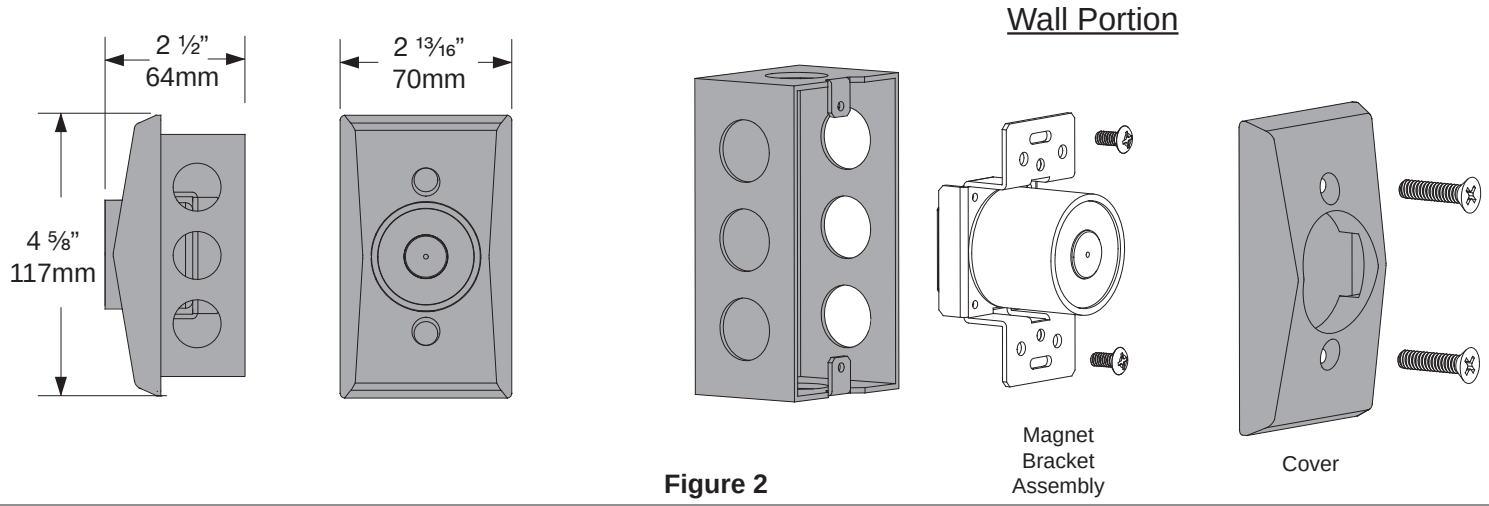
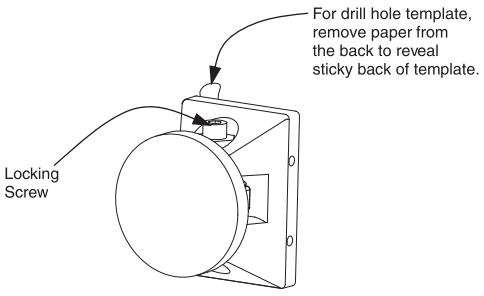
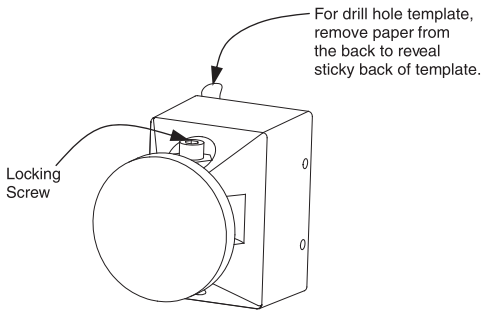


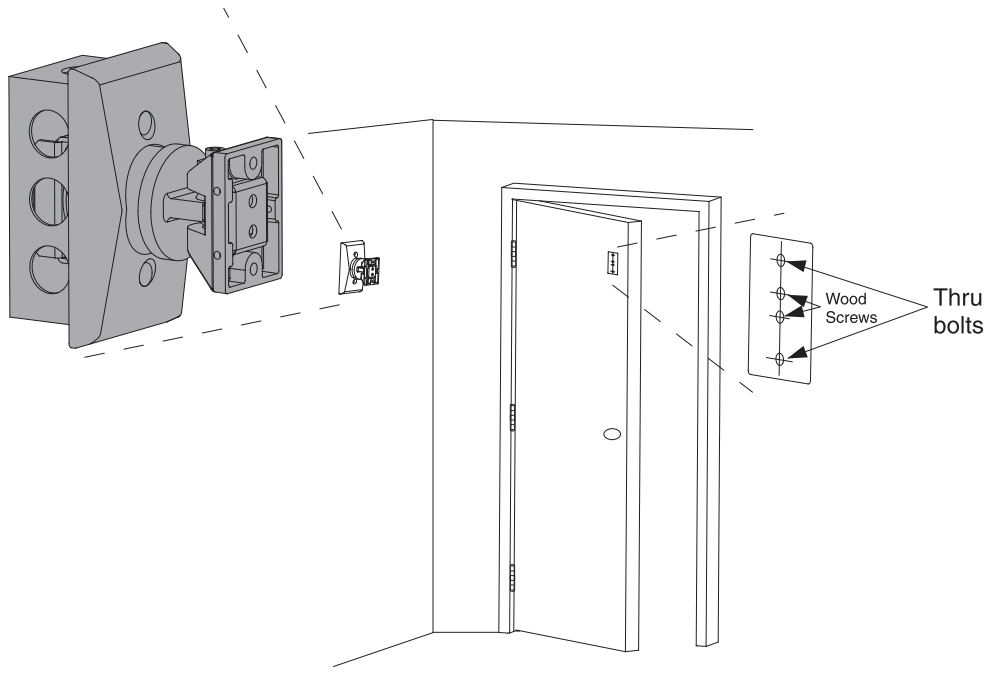
Figure 2

Install Armature for 7840



Install Armature for 7850



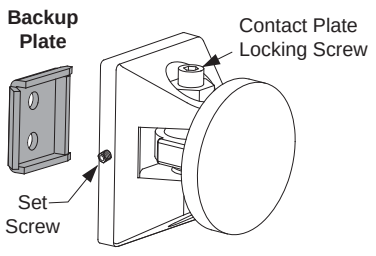


*7840SEM show, 7850SEM can be mounted in the same fashion.

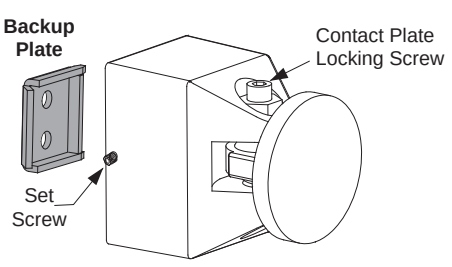
Figure 4

Wood Screw Mounting
For Solid Wood Core Doors

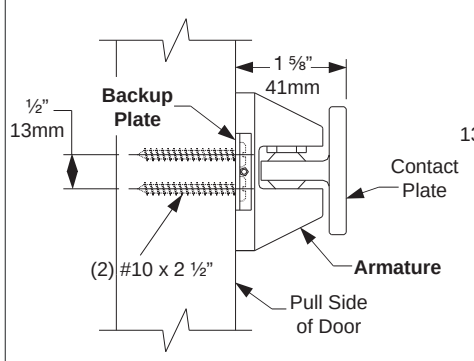
This view shows the contact plate locking screw accessible from the top.
Rotate backup plate 180° for underside access.



SEM 7840 Armature



SEM 7850 Armature



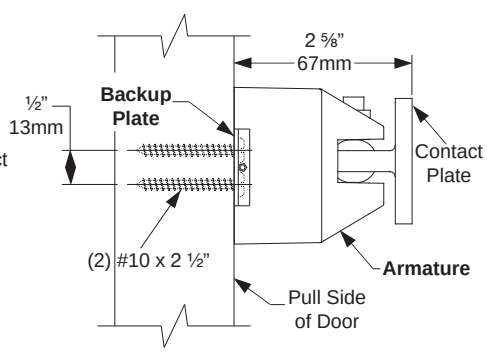
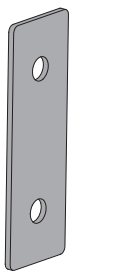


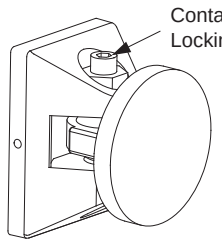
Figure 5

Thru Bolt Mounting

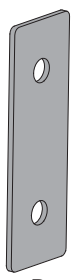
Recommended for Hollow Metal,
Hollow Core, or Composite Type Wood Doors



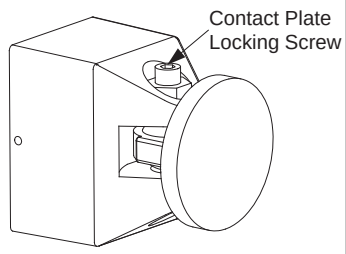
Door Plate



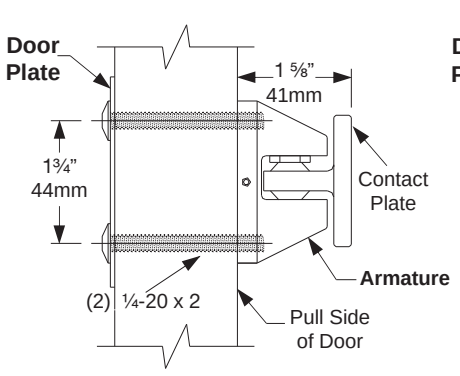
SEM 7840 Armature



Door Plate



SEM 7850 Armature



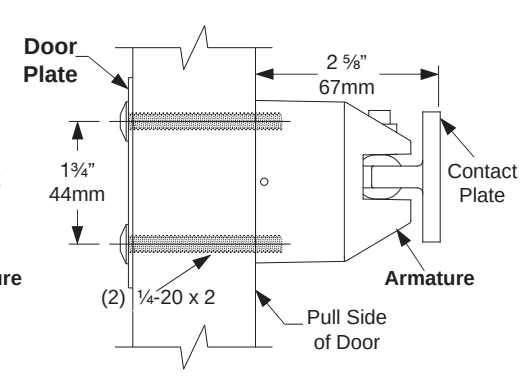


Figure 6

3	Install the Door Armature
3a	See Fig. 4. Slightly loosen the contact plate locking screw using a 5⁄32" Allen wrench so the contact plate can rotate with some resistance. Remove the protective paper from the drill template sticky-back label on the back of the door armature.
3b	Place the armature against the wall magnet. This is best done with power applied to the magnet. If power is not available, hold the armature in place by hand. The armature contact plate must fully cover the magnet. If the contact plate is not centered and flat on the magnet, reduced holding force will result.
3c	With the armature against the magnet, open the door and press it against the armature and magnet. Pull the door away to transfer the drill template to the door. Template may need assistance with transferring to door, using a flat blade screwdriver on the template tab that sticks out and push it onto the door while pulling the door away.
3d	See Fig. 5 and 6. Determine if the armature will be mounted using the wood screw kit or the thru bolt kit. The thru bolt kit is recommended for 1 ¾" hollow metal, hollow core, or composite-type wood doors. If using the wood screw kit, drill the center two holes on the template using a ⅛" bit by 1 ¼" deep. If using the thru bolt kit, drill the outer two holes on the template using a 5⁄16" bit all the way through the door. Remove the template after the holes are drilled.
3e	Attach the armature to the door using the appropriate plate and screws. If using the wood screws and backup plate, tighten the armature set screw against the backup plate as the last step using the 1⁄16" Allen wrench provided.

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ALLEGION

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28991

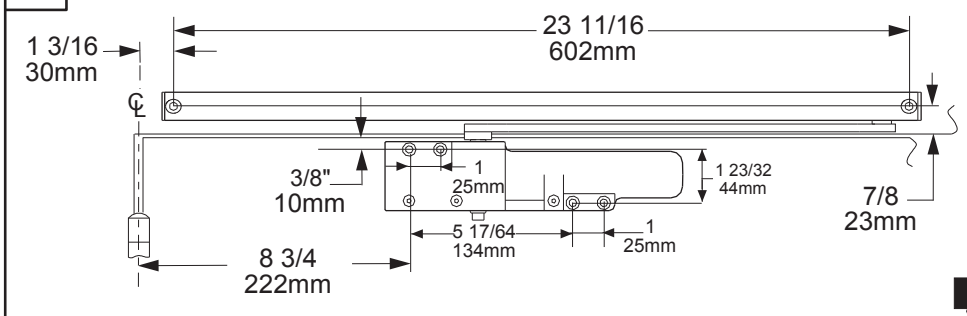
4031 Track

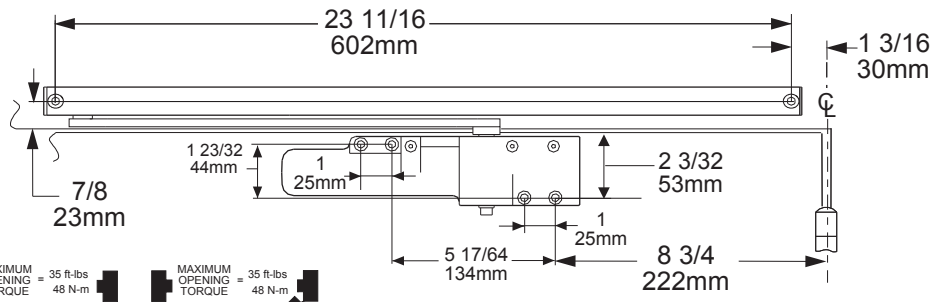
LCN®

180° Template, Pull Side

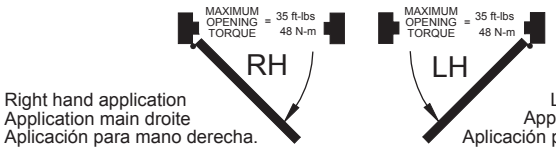
Installation Instructions

1 Locate proper template. Center punch all hole locations, pre-drill 5/32" for closer & 13/64" for track.





General Notes:
1. Locate closer & track from centerline of pivot.
2. Reinforcing per ANSI/SDI-100 recommended for hollow metal doors & frames.
3. Closer size is 9 5/8 x 3 1/2 x 1 1/2.
5. If door is hung on off set pivots or swing clear hinges, consult factory.



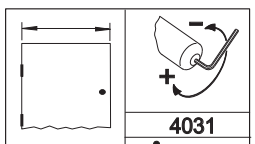
Right hand application
Application main droite
Aplicación para mano derecha.

Left hand application
Application main gauche
Aplicación para mano izquierda.

2 Determine door width, adjust spring power to match chart.

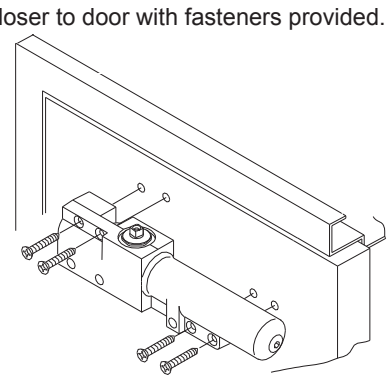
CAUTION

IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

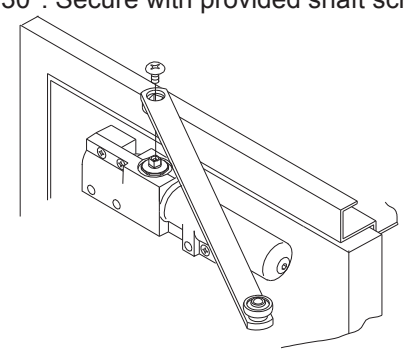


	4031
	♿ - 6
30"- 750mm	- 6
32"- 815mm	-4
36"- 915mm	0
42"- 1050mm	+ 6

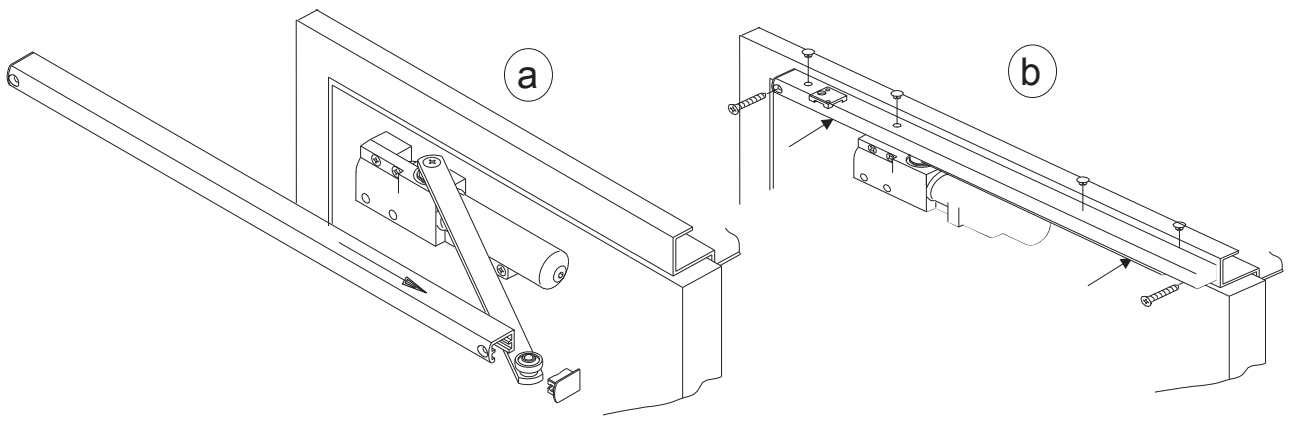
3 Secure closer to door with fasteners provided.



4 Attach arm to closer at pre-load position of 30°. Secure with provided shaft screw.

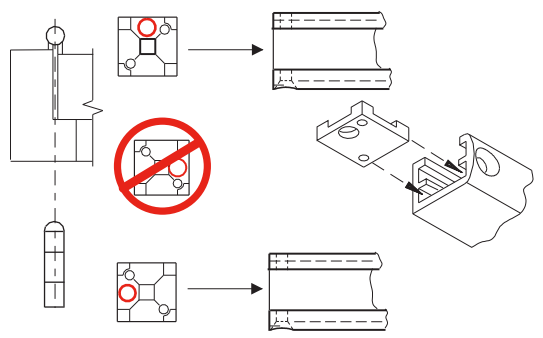


5 ⓐ Insert arm roller assembly into track. ⓑ Secure track to frame with fasteners provided. Insert (4) track plugs.



HOLD-OPEN OPTION

REGULAR HOLD-OPEN FORCE
FORCE DE RETENUE NORMALE
FUERZA REGULAR



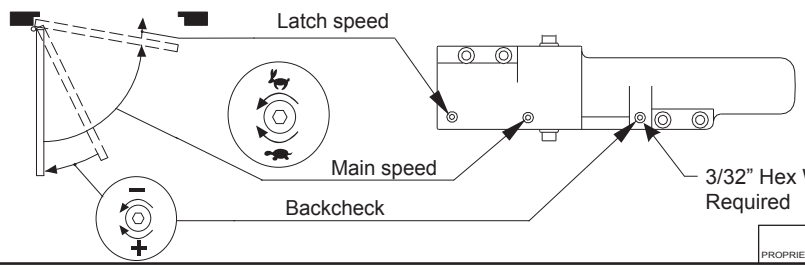
STRONG HOLD-OPEN FORCE
FORCE DE RETENUE MAXIMALE
FUERZA MAYOR

6 If necessary, adjust closer

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

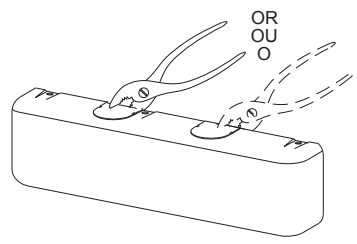
CAUTION

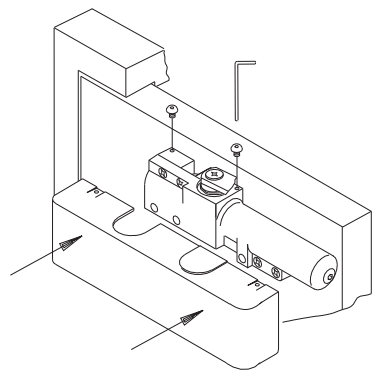
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



Patents Pending include:
Rapidor ™Installation System
PROPRIETARY, LCN Division, Schlage Lock Company

7 Attach cover with fasteners provided





4031 Instructions du rail et gabarit de 180° pour une installation sur le côté à tirer.

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Prépercez des trous de 5/32" pour le ferme-porte et de 13/64" pour le rail.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

3 Fixez le ferme-porte sur la porte avec les attaches fournies.

4 Attach arm to closer at pre-load position of 30°.
Secure with provided shaft screw.

5 ⓐ Insêrer le bras et le galet dans la glissière.
ⓑ Fixez le rail au cadre avec les attaches fournies. Insérez les (4) bouchons du rail.

6 Au besoin, réglez
vitesse de verrouillage
vitesse de fermeture
résistance d'ouverture

7 Fixez le boîtier avec les attaches fournies.

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

DANGER

Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877 - 671 - 7011

DANGER

UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4031 Instrucciones de rieles para plantilla 180° con montaje del lado del tirón.

1 Localice la plantilla apropiada. Marque el centro de todos los agujeros. Prebarrene agujeros de 5/32" para el cerrador y de 1 3/64" para el riel.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

3 Sujeta el cerrador a la puerta con los sujetadores ya incluidos.

4 Attach arm to closer at pre-load position of 30°.
Secure with provided shaft screw.

5 ⓐ Inserte ensambldura del rodillo de, dentro de la riel.
ⓑ Sujete el riel al bastidor con los sujectadores ya incluidos. Inserte quatro (4) tapones de rieles.

6 Ajusta si es necesita
velocidad de seguro
velocidad principal
resistencia de apertura

7 Coloca la tapa con los sujetadores ya incluidos.

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

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ALLEGION

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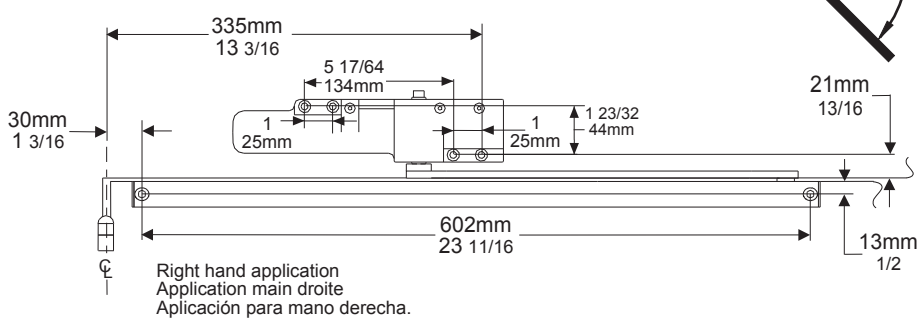
28991 Rev. 01/14-c

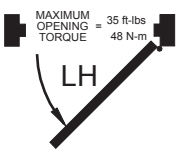
4031 Track

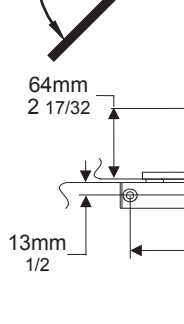
180° Template, Top Jamb

1 Locate proper template. Center punch all hole locations, pre-drill 5/32" for closer & 13/64" for track.

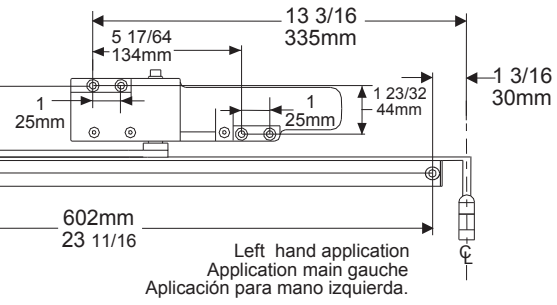


Right hand application
Application main droite
Aplicación para mano derecha.





General Notes:
1. Locate closer & track from centerline of pivot.
2. Reinforcing per ANSI/SDI-100 recommended for hollow metal doors & frames.
3. Closer size is 9 5/8 x 3 1/2 x 1 1/2.
5. If door is hung on off set pivots or swing clear hinges, consult factory.



Left hand application
Application main gauche
Aplicación para mano izquierda.

2 Determine door width, adjust spring power to match chart.

	4031
	♿ - 6
30"- 750mm	- 6
32"- 815mm	-4
36"- 915mm	0
42"- 1050mm	+ 6

⚠CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT
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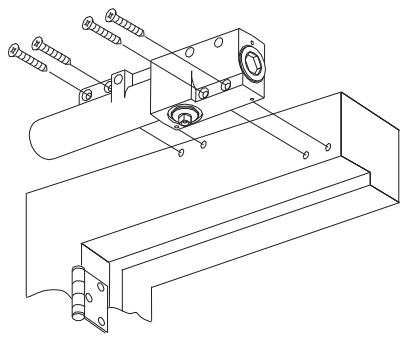
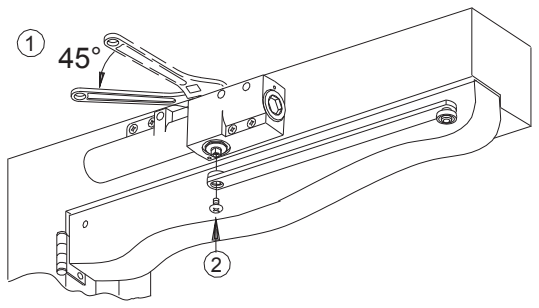
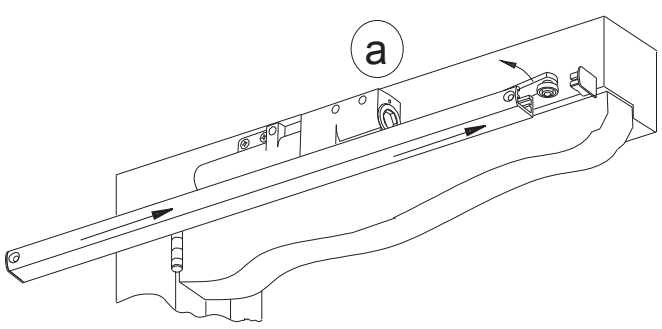
3 Secure closer to frame with fasteners provided.

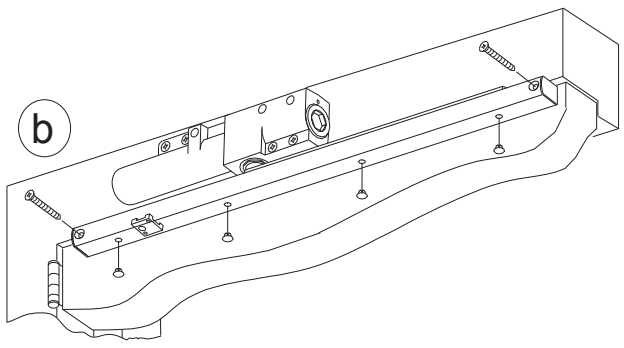


4 Attach arm to closer at pre-load position of 45°.
Secure with provided shaft screw.

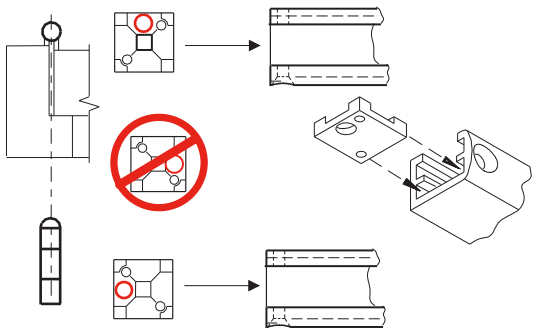


5 ⓐ Insert arm roller assembly into track.
ⓑ Secure track to door with fasteners provided. Insert (4) track plugs.





HOLD-OPEN OPTION

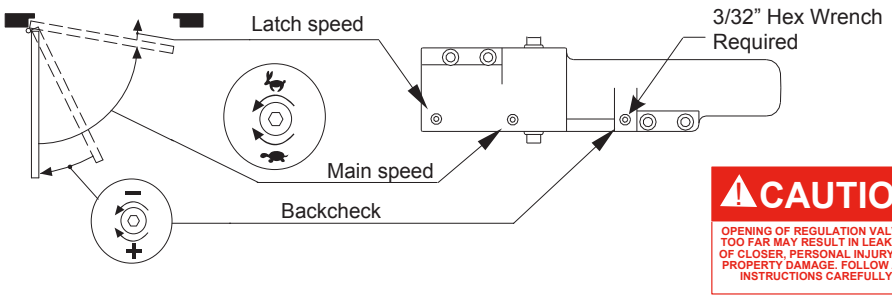


REGULAR HOLD-OPEN FORCE
FORCE DE RETENUE NORMALE
FUERZA REGULAR

STRONG HOLD-OPEN FORCE
FORCE DE RETENUE MAXIMALE
FUERZA MAYOR

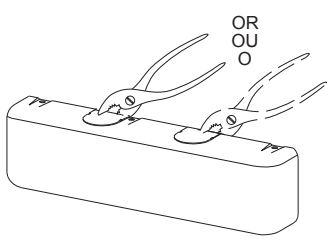
6 If necessary, adjust closer

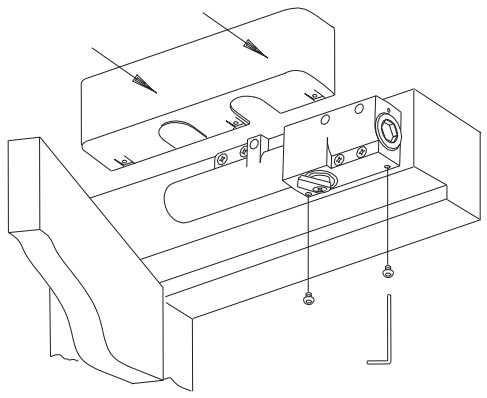
NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.



⚠CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.

7 Attach cover with fasteners provided.





4031 Instructions du rail et gabarit de 180° pour une installation sur le linteau.

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Prépercez des trous de 5/32" pour le ferme-porte et de 13/64" pour le rail.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

3 Fixez le ferme-porte sur le cadre avec les attaches fournies.

4 Attach arm to closer at pre-load position of 45°.
Secure with provided shaft screw.

5 ⓐ Insêrer le bras et le galet dans la glissière.
ⓑ Fixez le rail sur la porte avec les attaches fournies. Insérez les (4) bouchons du rail.

6 Au besoin, réglez
vitesse de verrouillage
vitesse de fermeture
résistance d'ouverture

7 Fixez le boîtier avec les attaches fournies.

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

⚠DANGER
Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le
877 - 671 - 7011

⚠DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4031 Instrucciones de rieles para plantilla 180° con montaje en la parte superior de la jamba.

1 Localice la plantilla apropiada. Marque el centro de todos los agujeros. Prebarrene agujeros de 5/32" para el cerrador y de 1 3/64" para el riel.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

3 Sujeta el cerrador a la armazón con los sujetadores ya incluidos.

4 Attach arm to closer at pre-load position of 45°.
Secure with provided shaft screw.

5 ⓐ Inserte ensambldura del rodillo de, dentro de la riel.
ⓑ Asegure el riel a la puerta con los sujetadores ya incluidos. Inserte quatro (4) tapones de riel.

6 Ajusta si es necesita
velocidad de seguro
velocidad principal
resistencia de apertura

7 Coloca la tapa con los sujetadores ya incluidos.

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

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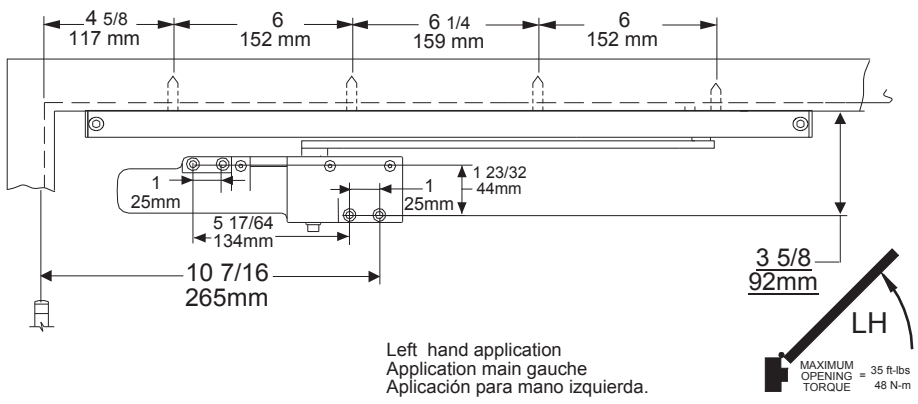
4031 Track

110° Template, Push Side

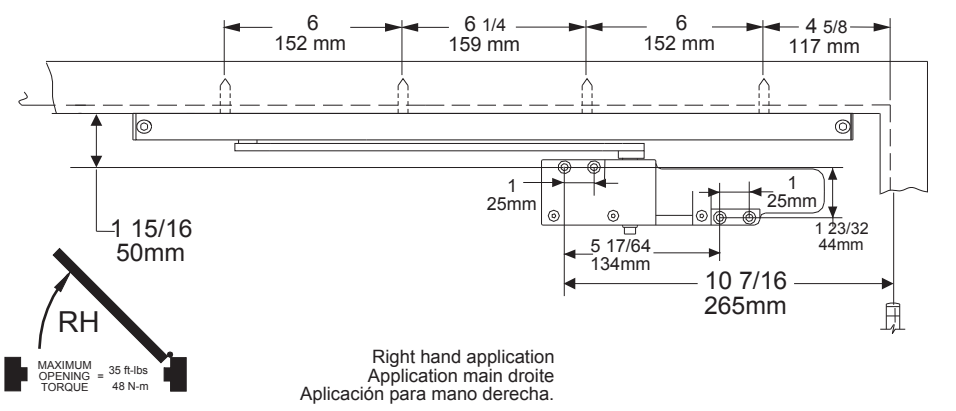
Installation Instructions

1 Locate proper template. Center punch all hole locations, pre-drill 5/32" for closer & 13/64" for track.

General Notes:
1. Locate closer & track from centerline of pivot.
2. Reinforcing per ANSI/SDI-100 recommended for hollow metal doors & frames.
3. Closer size is 9 5/8 x 3 1/2 x 1 1/2.
5. If door is hung on off set pivots or swing clear hinges, consult factory.



Left hand application
Application main gauche
Aplicación para mano izquierda.



Right hand application
Application main droite
Aplicación para mano derecha.

2 Determine door width, adjust spring power to match chart.

	4031
	- 6
30"- 750mm	- 6
32"- 815mm	-4
36"- 915mm	0
42"- 1050mm	+ 6

CAUTION

IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT
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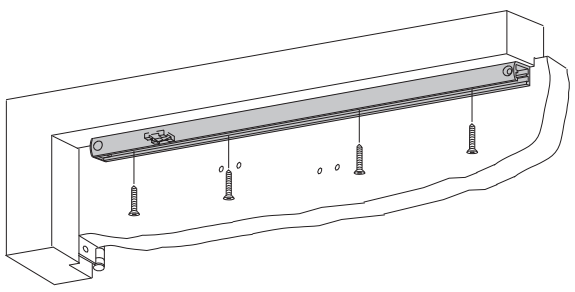
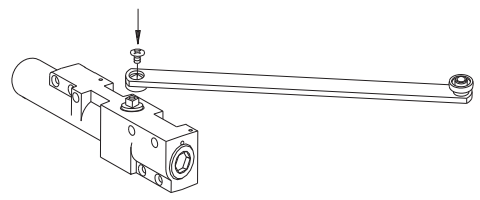
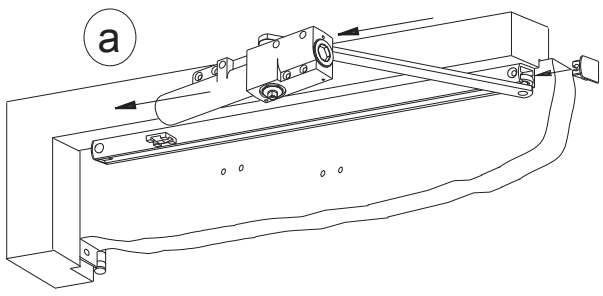
3 Secure track to frame with provided fasteners.

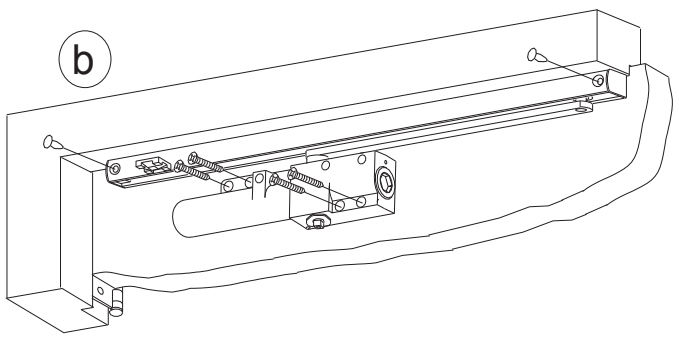


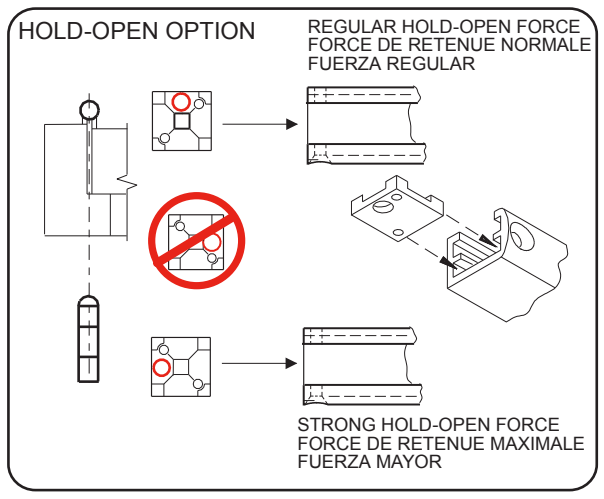
4 Attach arm to closer at pre-load position of 30°. Secure with provided shaft screw.



5 ⓐ Insert arm roller assembly into track. ⓑ Secure closer to door with fasteners provided. Insert (2) track plugs.

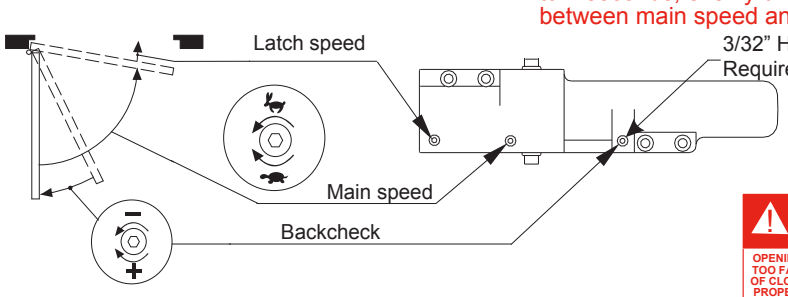






8 If necessary, adjust closer

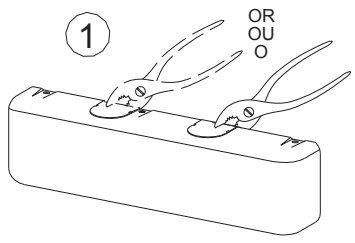
NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

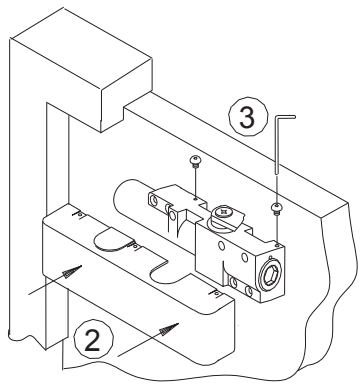


CAUTION

OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.

9 Attach cover with fasteners provided.





4031 Instructions du rail et gabarit de 110° pour une installation sur le linteau.

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Prépercez des trous de 5/32" pour le ferme-porte et de 13/64" pour le rail.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

3 Fixez le rail au cadre avec les attaches fournies.

4 Fixez le ferme-porte sur la porte avec les attaches fournies.

5 ⓐInsêrer le bras et le galet dans la glissière.
ⓑFixez le ferme-porte sur la porte avec les attaches fournies. Insérez les (2) bouchons du rail.

6 Au besoin, réglez
vitesse de verrouillage
vitesse de fermeture
résistance d'ouverture

7 Fixez le boîtier avec les attaches fournies.

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

DANGER

Une installation ou un réglage inadéquats peuvent entrainer des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le
877 - 671 - 7011

DANGER

UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4031 Instrucciones de rieles para plantilla 110° con montaje en la parte superior de la jamba.

1 Localice la plantilla apropiada. Marque el centro de todos los agujeros. Prebarrene agujeros de 5/32" para el cerrador y de 1 3/64" para el riel.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

3 Sujete el riel al bastidor con los sujetadores ya incluidos.

4 Sujeta el cerrador a la puerta con los sujetadores ya incluidos.

5 ⓐInserte ensambldura del rodillo de, dentro de la riel.
ⓑSujeta el cerrador a la puerta con los sujetadores ya incluidos. Inserte quatro (2) tapones de rieles.

6 Ajusta si es necesita
velocidad de seguro
velocidad principal
resistencia de apertura

7 Coloca la tapa con los sujetadores ya incluidos.

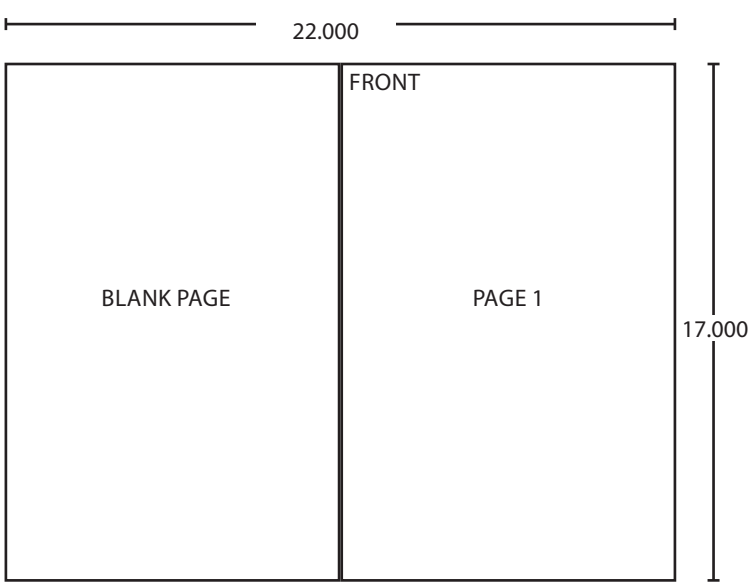
NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

ADVERTENCIA

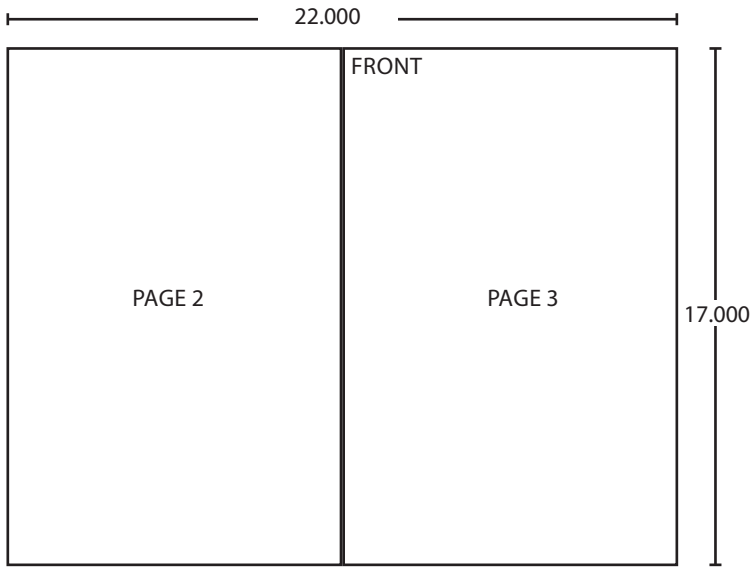
UNA INSTALACIÓN O UN AJUSTE INCORRECTOS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL
877 - 671 - 7011

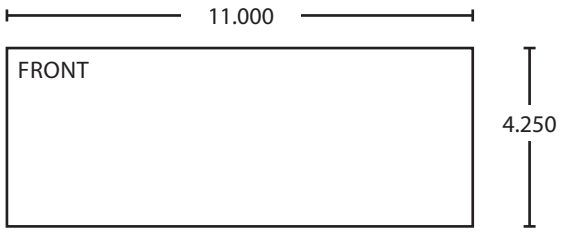
ADVERTENCIA

LA APERTURA DEMASIADO GRANDE DE LAS VÁLVULAS DE AJUSTE PUEDE OCASIONAR UN DERRAME, DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES.



BEGINNING SHEET





FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	N/A	043812			

Revision Description:
C > Revised artwork

Material
White Paper

Notes
1. printed two sides
2. printed black and PMS 485 (red)
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Edited By	Approved By	EC Number	Release Date
R. Byun	M. Sasso	043812	01-01-14

Title
4030T Series Instruction Sheet

Creation Date	Number	Revision
04-27-10	28991	C

Created By
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Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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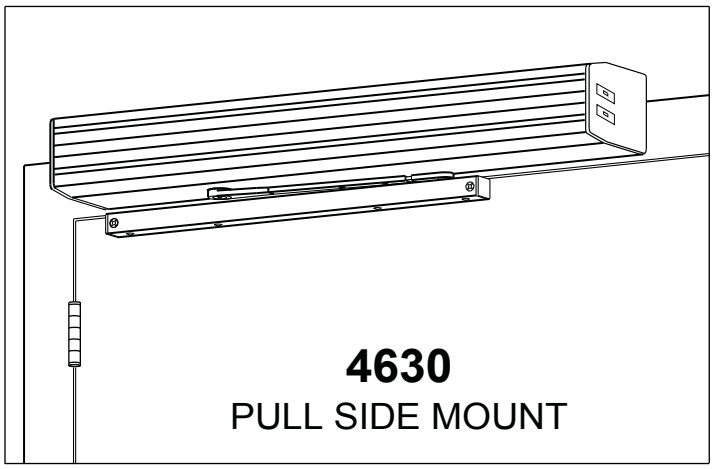
28101

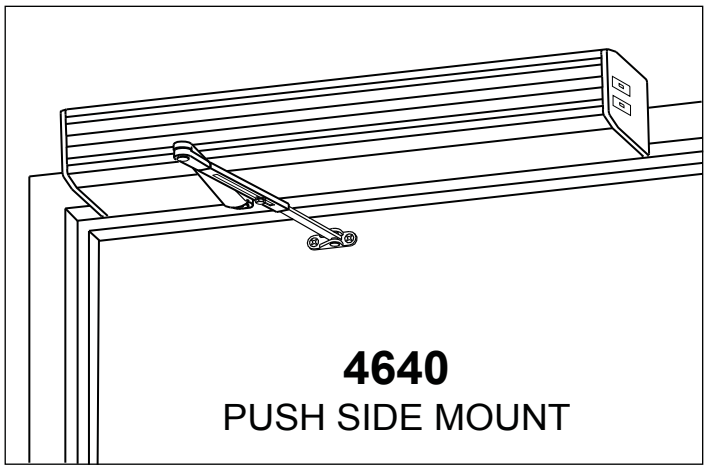
4600 Electronic Low Energy Operator

4630, 4640 Electric Auto Equalizer Series

Installation Instructions



4630
PULL SIDE MOUNT



4640
PUSH SIDE MOUNT

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Controller Setting Adjustment 15
Controller Programming 16
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Illustrated Parts List 19

The 4600 Series electric Auto-Equalizer™ series combines all door operator and door control functions in one package. This versatile, easy-to-install system is low maintenance and offers the following features:

Top jamb mounting on either side of an interior door allows 90° of power opening. (Mounting for exterior door on the inside only)

- Manual opening up to 170° (4630) or 100° (4640).
- Easy access to on / off and hold open switches.
- Quiet, reliable operator delivers consistent performance.
- No expensive service contracts or periodic maintenance required.
- Fail safe operator acts as a standard door closer in event of power outage.
- Low energy operator does not require guard rails or safety mats.
- Advanced, easy-to-install controller module allows independent adjustment of:
  a. Door Opening Speed » Delay / Trigger Time for Sequential Option
  b. Door Opening Force » Electric Strike Delay Time
  c. Hold Open Time » 90° Slow Down
  d. Alternate Action Timeout » Safety Scanner Lockout Time

Customer Service

1-877-671-7011 www.allegion.com/us

This installation instruction sheet is a valuable reference and should not be discarded. It should be given to building owner or maintenance supervisor after installation is complete.

General Information

The 4600 series Auto-Equalizer™ is designed to meet the following codes & standards:

- ANSI A156.19, section 2.1
- ANSI A117.1, section 4.13.11 requirements.
- ADA law section 4.13.12
- UL listed for use on labeled doors.
- Complies with UL & NEC requirements for Class 1 (high voltage) & Class 2 (low voltage) by providing separate conduit connections for each.

Both the 4631 & 4642 are non-handed, non-sized door operators that provide all the standard features of a heavy duty LCN door closer; including independent adjustment of backcheck, main speed and latch speed functions as well as adjustable closing power: 4631 (size 1 to 4) / 4642 (size 2 to 5). Both models are shipped with LCN's "Ultra X" all-weather hydraulic fluid for reliable operation at a wide range of temperatures. Requirements for installation are as follows:

- The 4631 is designed for pull side installation on the top jamb and requires a minimum door width of 36" and a 2" min. head frame. Top rail of door must be 1 ⅛" min. and butt hinge size should not exceed 5". Maximum pull side reveal of ⅛". Maximum door weight is 225 lbs.
- The 4642 is designed for push side installation on the top jamb for both standard and flush ceiling conditions. It requires a minimum door width of 36" and a 1 ¾" min. head frame. Top rail of door must be at least 1 ¾" and butt hinge size should not exceed 5". The 4642 accommodates reveals up to 4 ½". For reveal depths of 4 ½" - 8", requires 4642 L (Long Arm). For reveal depths greater than 8" - consult factory. Maximum door weight is 225 lbs.

The 4600 series can accommodate both surface and concealed wiring applications. **It requires 120VAC supplied to the operator.** Maximum AC current load is 1 amp. A built-in 12VDC & 24VDC power supply (rated for 1 amp combined current load) can power peripheral actuators, electronic strikes or mag-lock devices. The 4600 series is compatible with all LCN 8300 series actuators and scanners. High-security card readers or keypads may also be used as actuators. The 4600 series will accept inputs from a wide variety of security systems, allowing security personnel to regulate accessability. A 4600 will accept a fire alarm input to deactivate unit when fire alarm is triggered. A circuit breaker and resettable fuses protect high-voltage inputs and low-voltage output circuits, respectively. To ensure proper electrical functions, installation should be made when temperature is between 35° F up to 120° F.

The 4600 series installation has three sections:

Section 1 - Fastening mounting channel to frame / electrical connections.

Section 2 - Installing closer body & arm assembly

Section 3 - Installation of controller and adjustment of settings.

⚠ IMPORTANT ⚠

Follow all instructions carefully. Failure to do so may result in personal injury or property damage. Use extreme caution when dealing with high voltage. High voltage connections should be made by a qualified professional. Closer and controller adjustments might be necessary to meet ANSI A156.19 requirements. To verify the force requirements, a force gauge is needed. If you have any questions, call LCN at 1 - 877 - 671 - 7011.

NOTICE:

The following procedures involve electrical connections and running conduit for both high & low voltage wiring. **Electrical power must be disconnected** during the installation of the 4600 series door operator. It is also important to examine the proper template for your installation to determine the mounting channel position and correct conduit location.

SECTION 1
SECURING MOUNTING PLATE ASSEMBLY TO FRAME

NOTE: Before beginning installation, determine which conduit connection option is to be used.

CONCEALED WIRING:

Both high & low voltage conduit lines should be run to door frame and made accessible through two holes to be drilled in frame per proper template on page 4 or 5.

SURFACE WIRING:

Mounting channel must be mounted to frame **BEFORE** running high & low voltage conduit lines to the operator.

1. Prepare door and frame per template on page 4 for 4630/ page 5 for 4640. Be sure all holes are located correctly before drilling and/or tapping. Mounting surface of frame must be vertically level. Conduit access holes in frame are for **CONCEALED WIRING ONLY!** If using concealed wiring option, see step 2 below. **FOR SURFACE WIRING**, proceed to step 3.
2. Refer to correct template to determine proper location for conduit. Remove appropriate conduit plugs, exposing conduit holes in back of mounting channel, as shown in **Fig 1**. Attach 1/2" conduit to mounting channel, as shown in **Fig 2**. Place mounting channel into position on frame. Once mounting channel is in position and flush on frame, insert fasteners and tighten securely.

NOTE: The conduit set-up shown is for a 4630 mounting. Conduit location will vary with other mountings.

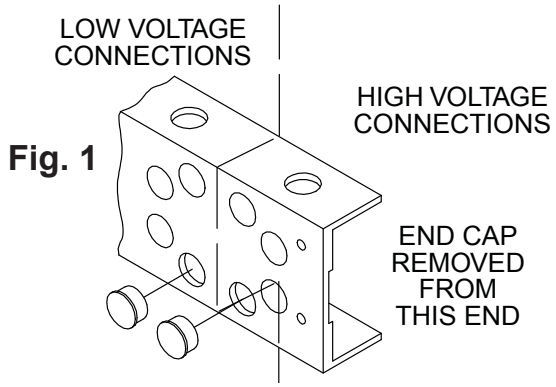


Fig. 1

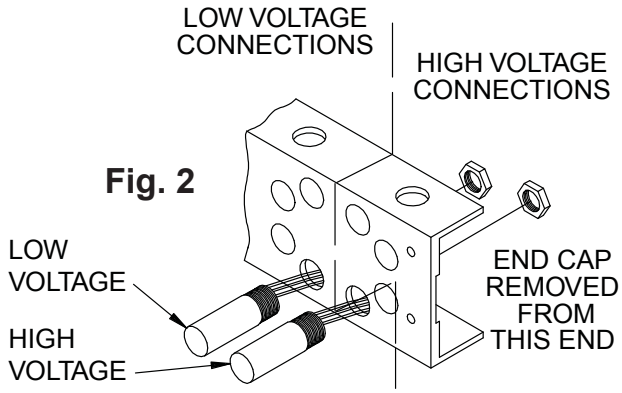


Fig. 2

3. Position mounting channel on frame, connect conduit and tighten securely.

CONDUIT THROUGH TOP OF MOUNTING CHANNEL:

After mounting plate is attached to frame, run 1/2" conduit to access holes in top of mounting channel. Conduit should be connected to channel as shown here in **Fig. 3**.

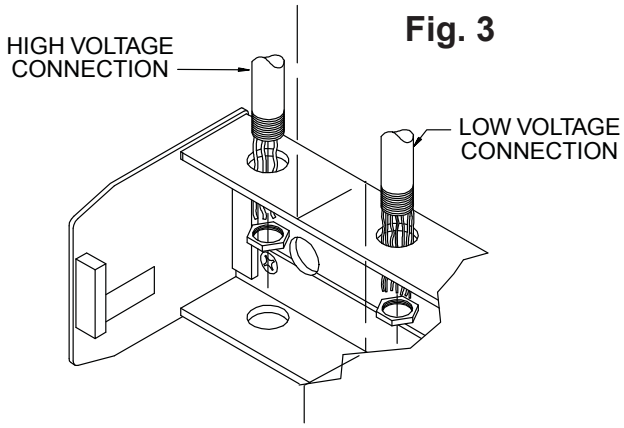


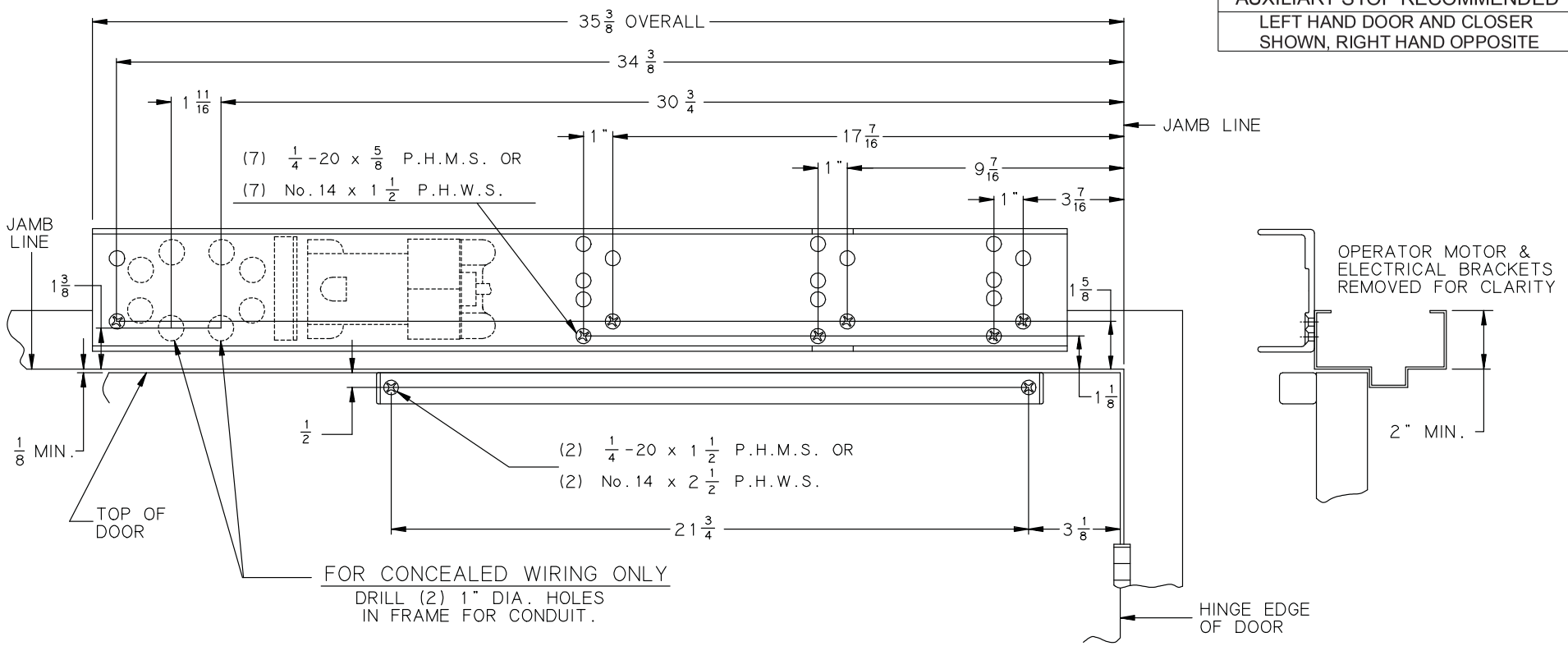
Fig. 3

4630 SERIES
PULL SIDE/TOP JAMB MOUNTED
NON-HANDED AUTO-EQUALIZER™

4630 } 170° MAXIMUM OPENING
90° POWER OPENING

AUXILIARY STOP RECOMMENDED

LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE



1. VOLTAGE SUPPLIED TO FRAME MUST CORRESPOND TO VOLTAGE OF OPERATOR.
2. MAXIMUM BUTT SIZE IS 5".
3. MINIMUM DOOR WIDTH IS 36".
4. AUXILIARY STOP RECOMMENDED AT MAXIMUM OPENING POINT(170°).
5. LOCATE OPERATOR AND TRACK FROM CENTER LINE OF SWING CLEAR HINGE PIN IF USED.
6. CONSULT FACTORY IF DOOR IS HUNG ON PIVOTS OR WIDE THROW HINGES.
7. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.
8. OVERALL OPERATOR SIZE: 33 1/2" X 4 3/8" X 5 3/16".

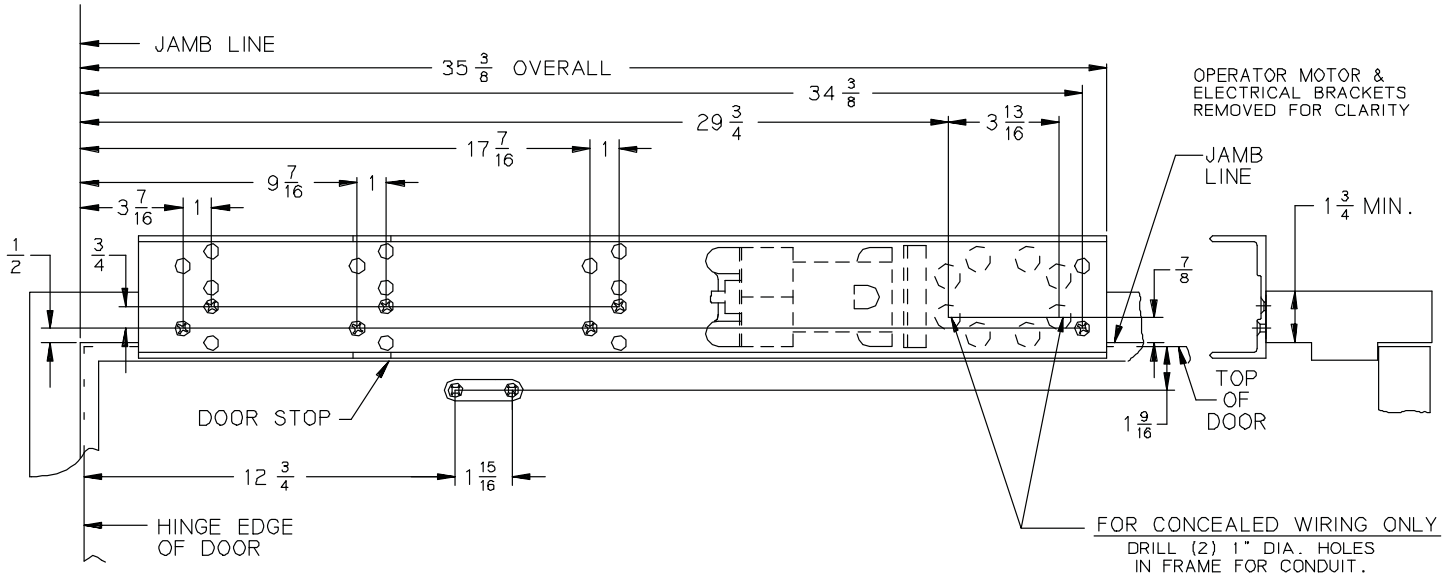
INCH	1/8	1/4	1/2	5/8	1	1 1/8	1 3/8	1 1/2	1 5/8	1 11/16	2	2 1/2	3 1/8
M.M.	3	6	13	16	25	28	35	38	42	43	51	64	79

INCH	3 7/16	4 3/8	5	5 3/16	9 7/16	17 7/16	21 3/4	30 3/4	33 1/2	34 3/8	35 3/8	36
M.M.	87	112	127	132	240	443	552	781	850	873	900	915

LCN®

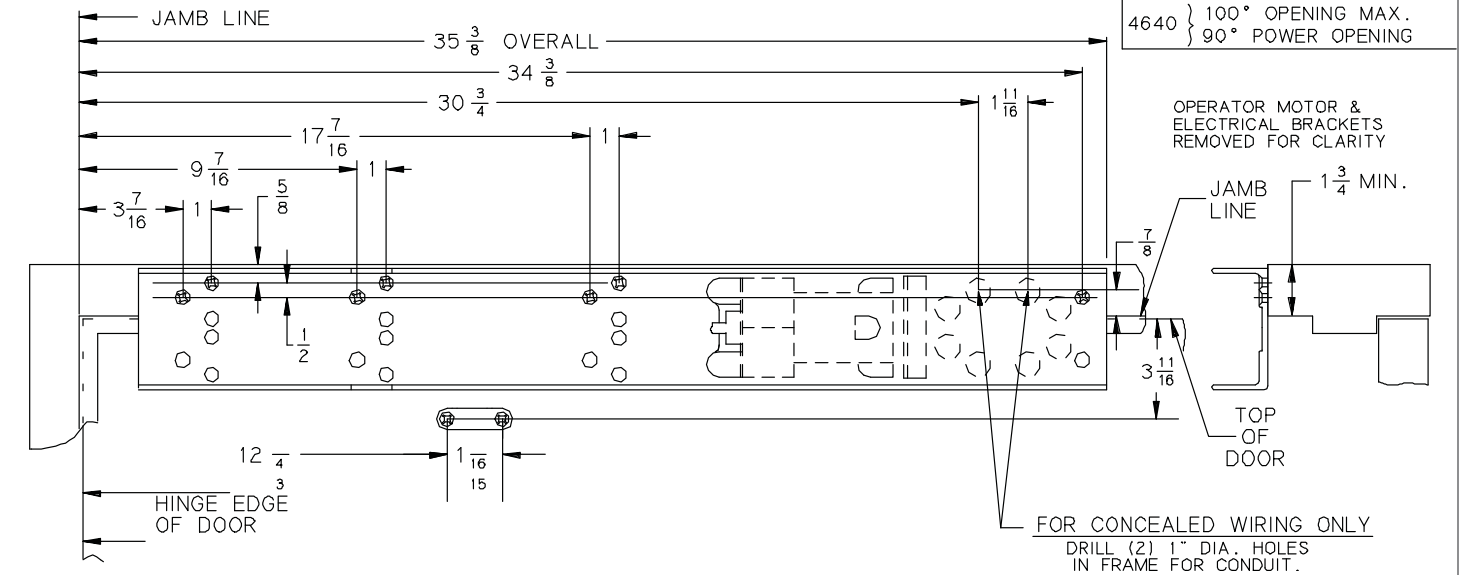
4640 SERIES PUSH SIDE/TOP JAMB MOUNTED
NON-HANDED AUTO-EQUALIZER™
REGULAR/FLUSH CEILING MOUNTS

PUSH SIDE/TOP JAMB MOUNT	
4640	100° OPENING MAX. 90° POWER OPENING



LEFT HAND SHOWN, RIGHT HAND OPPOSITE

PUSH SIDE/TOP JAMB MOUNT	
4640	100° OPENING MAX. 90° POWER OPENING



LEFT HAND SHOWN, RIGHT HAND OPPOSITE

1. VOLTAGE SUPPLIED TO FRAME MUST CORRESPOND TO VOLTAGE OF OPERATOR.
2. MAXIMUM BUTT SIZE IS 5".
3. MINIMUM DOOR WIDTH IS 36".
4. MAXIMUM STOP THICKNESS IS 5/8".
5. MAXIMUM REVEAL DEPTH IS 4 ½"UP TO 8" REVEALS WITH LONG ARM OPTION, CONSULT FACTORY.
6. AUXILIARY STOP RECOMMENDED AT MAXIMUM OPENING POINT (100°).
7. LOCATE OPERATOR & SHOE FROM THE CENTERLINE OF SWING CLEAR HINGE PIN IF USED.
8. CONSULT FACTORY IF DOOR IS HUNG ON PIVOTS OR WIDE-THROW HINGES.
9. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS & FRAMES.
10. OVERALL OPERATOR SIZE: 33 ½"X 4 3/8" X 5 3/16".

INCH	1/4	1/2	5/8	3/4	7/8	1	1 1/2	1 9/16	1 11/16	1 3/4
M.M.	6	13	16	19	22	25	38	40	43	44

INCH	1 15/16	3 7/16	3 11/16	3 13/16	4 3/8	4 1/2	5	5 3/16	8
M.M.	49	87	94	97	112	114	127	132	204

INCH	9 7/16	12 3/4	17 7/16	29 3/4	30 3/4	33 1/2	34 3/8	35 3/8	36
M.M.	240	324	443	756	850	857	873	900	915

LCN®

SECTION 2

INSTALLING CLOSER ASSEMBLY

1. At this point of the installation, the mounting channel assembly should be attached securely to door frame. All electrical connections at the unit should be hooked up, but **UNPOWERED**.
2. **CLOSING FORCE ADJUSTMENT:** (See **Fig. 4**). Turn spring adjustment clockwise the required number of turns to match door width as shown in **Tables 1 & 2**. Maximum adjustments: 14 turns clockwise.

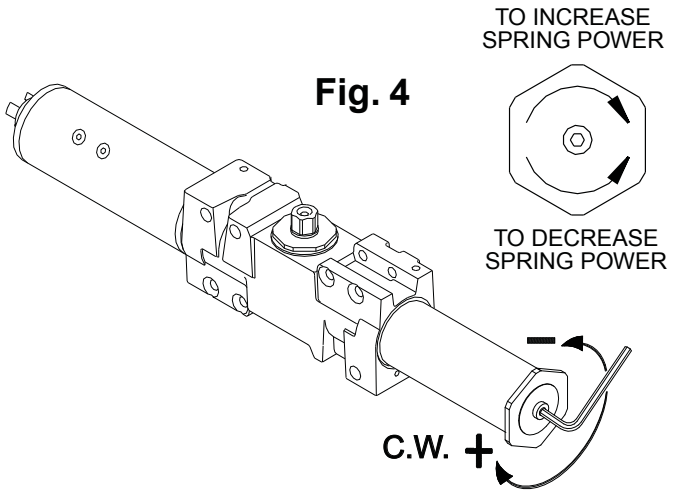


Fig. 4

Verify that closing force is not more than 15 lbs when measured one inch from door edge to comply with ANSI A156.19.

TABLE 1

INTERIOR DOOR	
MAXIMUM DOOR WIDTH	NUMBER OF TURNS
36”	0
48”	2 TURNS C.W.
54”	7 TURNS C.W.

TABLE 2

EXTERIOR DOOR	
MAXIMUM DOOR WIDTH	NUMBER OF TURNS
36”	2 TURNS C.W.
42”	7 TURNS C.W.

NOTE: Do not allow any form of lubricant to come into contact with any part of clutch assembly.

NOTE: Electrical components not shown.

3. Mount closer to mounting channel assembly. Closer and clutch gear coupler’s should mesh loosely as shown in **Fig. 5** above. Line closer mounting holes up with holes in stand-offs attached to mounting channel. Fasten with (4) 1/4 - 20 x 2 5⁄16”machine screws provided and tighten securely.
4. **It is extremely important that closer is properly aligned with motor/clutch assembly.**

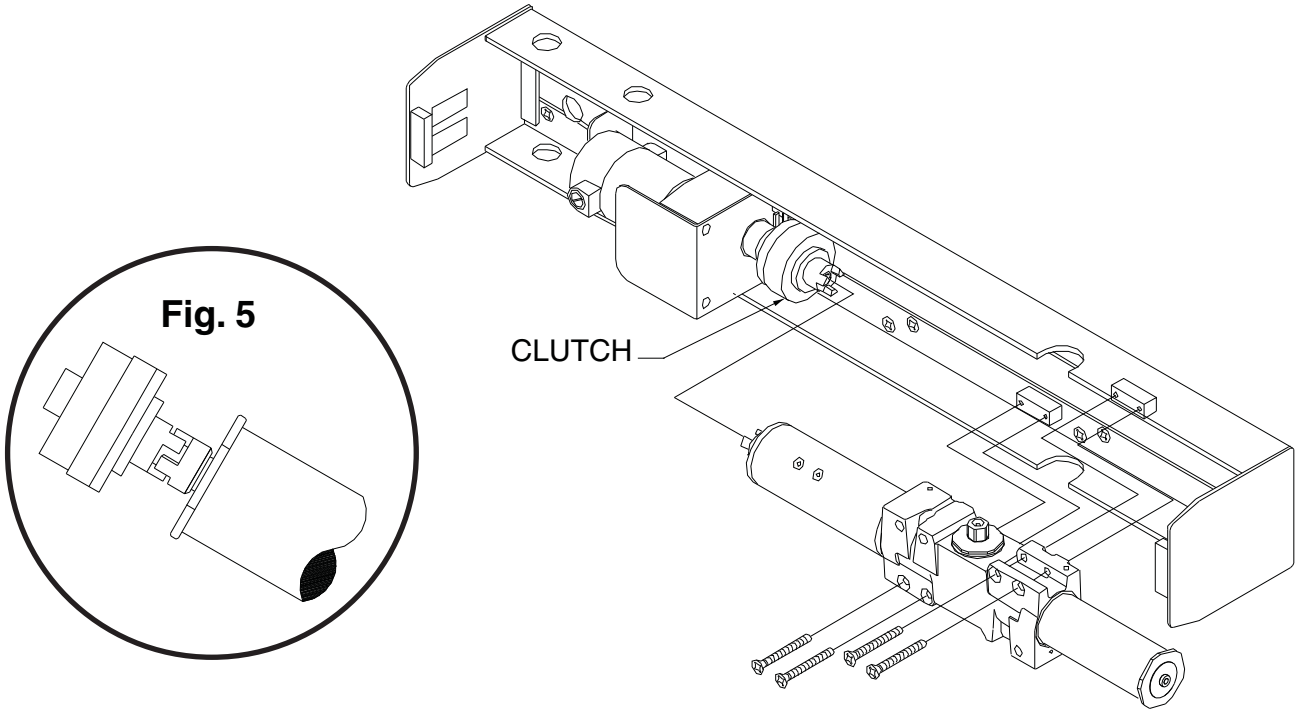
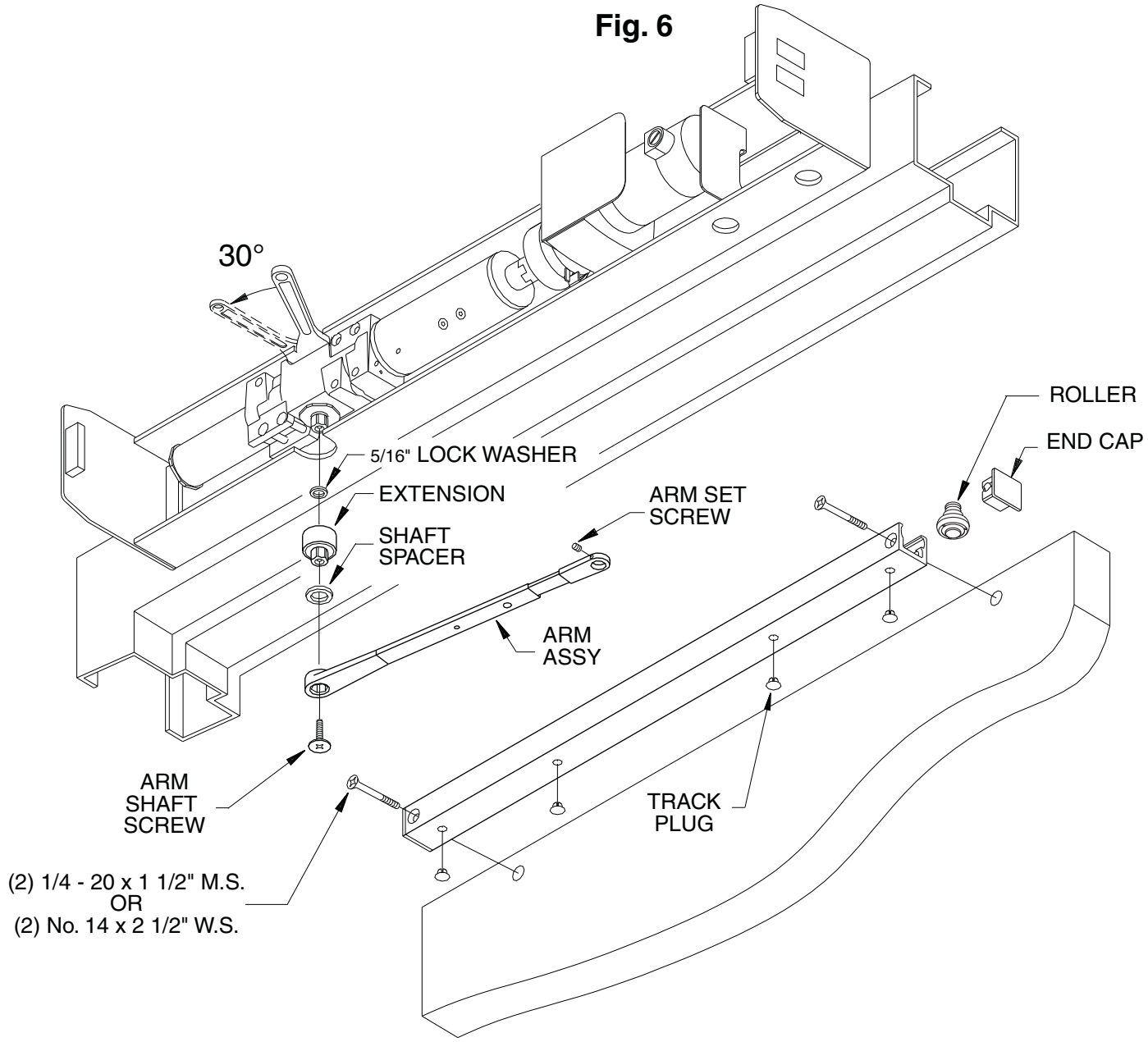


Fig. 5

NOTE: Right hand door shown, left hand will be opposite.

Fig. 6



1. Insert (4) track plugs into bottom of track, as shown in **Fig. 6** above. Remove track end cap, insert track roller and replace end cap.
2. Mount track assembly to door, attaching securely with either (2) 1/4-20 x 1 ½" machine screws or (2) No. 14 x 2 ½" wood screws provided.
3. Locate SHAFT EXTENSION, LOCK WASHER, SPACER & ARM SHAFT SCREW in fastener box. Fit arm and spacer onto shaft extension. Place lock washer into the shaft extension so it locates between closer shaft and shaft extension. Place wrench on top closer shaft and rotate approx. 30°, as shown above. Fit arm assembly over closer shaft and fasten with arm shaft screw as shown in **Fig. 6** above.
4. Open door partially. Pull closer arm away from frame. Fit hole in end of arm over the stud of track roller. Tighten arm set screw, attaching arm to track.
5. Proceed to **REGULATION INFORMATION** on page 9.

NOTE: Left hand door shown, Right hand will be opposite.

Fig. 7

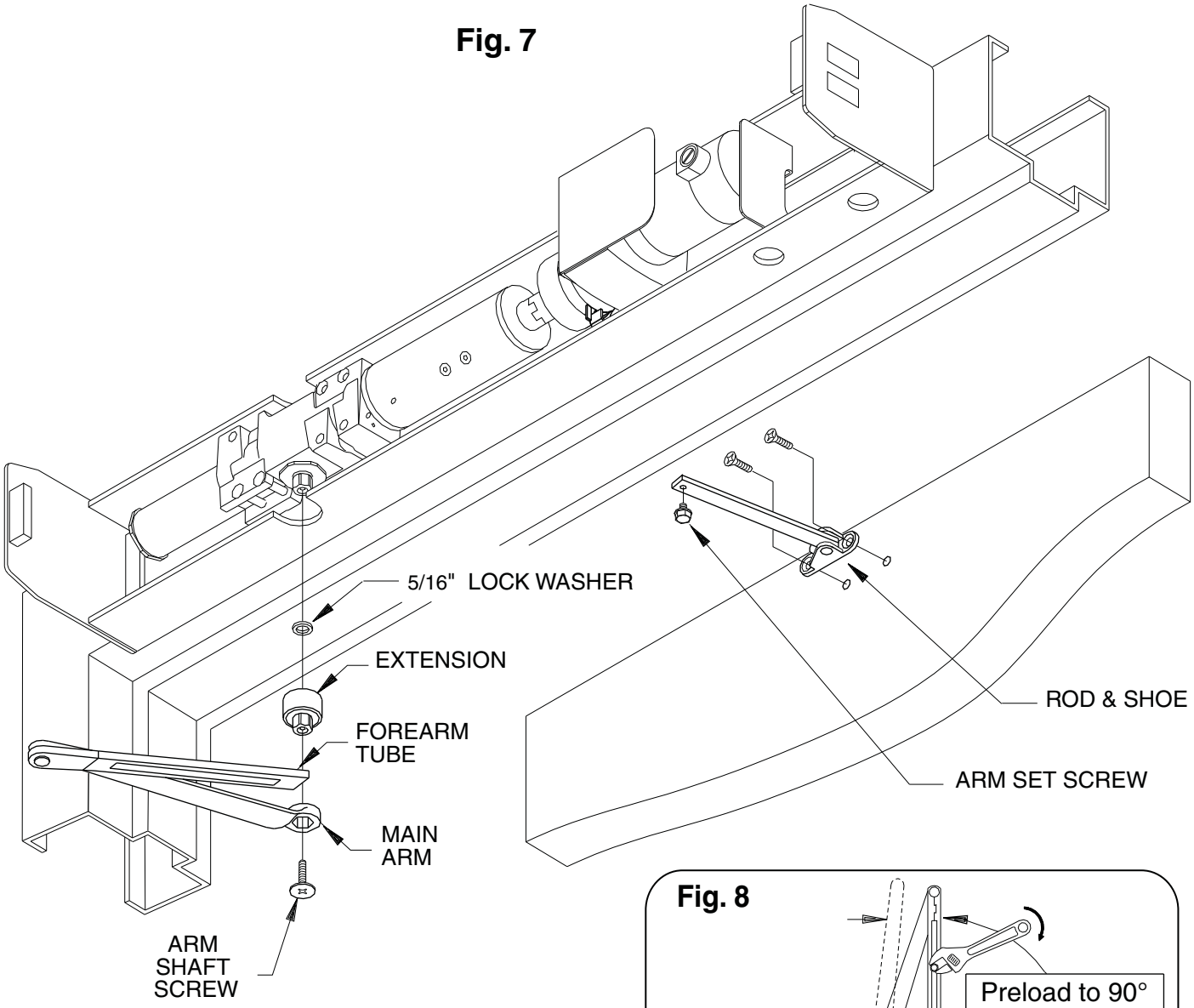
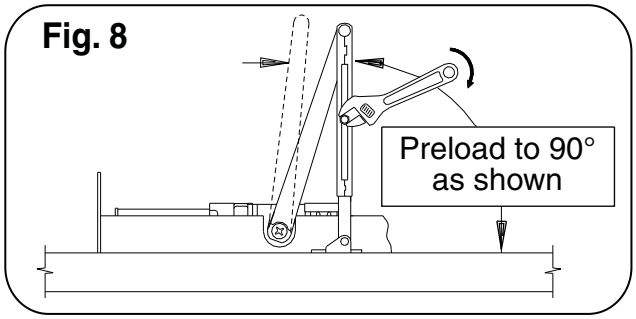


Fig. 8



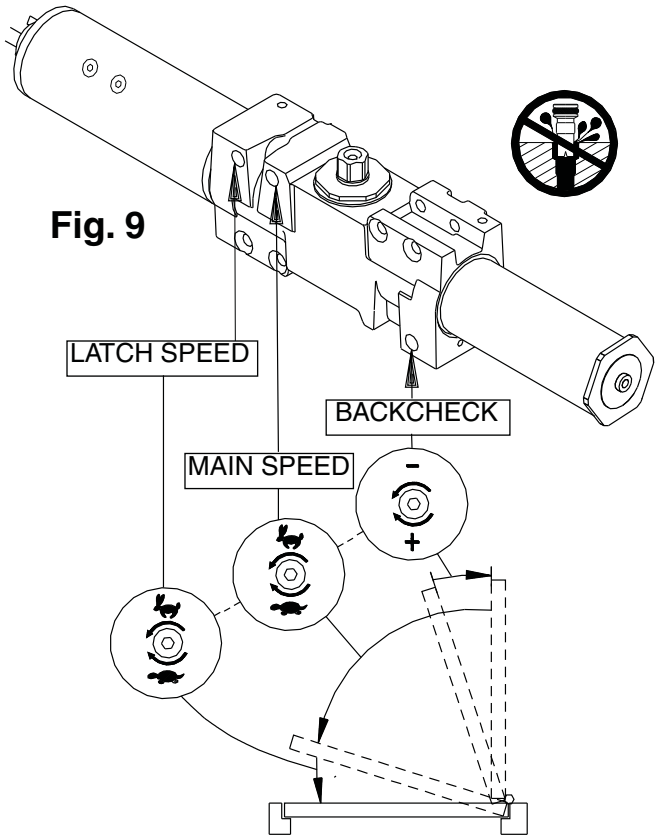
1. Locate SHAFT EXTENSION, LOCK WASHER & ARM SHAFT SCREW in fastener box. Fit arm onto shaft extension. Place lock washer into shaft extension so it will rest between closer shaft and shaft extension. Fit arm assembly over closer shaft so main arm is positioned at approx. 90° to operator assembly and fasten with arm shaft screw, as shown in **Fig. 7** above.
2. Attach rod & shoe assembly to door with (2) 1/4 - 20 x ⅝"" machine screws or (2) No. 14 x 1 ½" wood screws provided. The longer end of shoe should point towards hinge edge, as shown above.
3. Open door partially, insert rod into forearm tube, then close the door.
4. Insert arm set screw into rod and finger tighten. Preload arm to 90°, as shown in **Fig. 8** above. Holding arm in this position, place a wrench on arm set screw and tighten securely.
5. Proceed to **REGULATION INFORMATION** on page 9.

DOOR CLOSER HYDRAULIC REGULATION & POWER ADJUSTMENT

1. **CLOSING SPEED ADJUSTMENT:** (See **Fig. 9**)
   The hydraulic regulation of the 4600 series has been adjusted prior to shipment. To meet ANSI A156.19 table 1 requirements, open door to 90° and determine the closing time. Make sure the spring power and closing speed are correct. If adjustments are necessary, use 3/32 allen wrench provided and refer to door diagram shown in **Fig. 9**. Turn **MAIN SPEED & LATCH SPEED** screws clockwise to slow door speed, counter-clockwise to increase speed. The installation of the controller will make the **MAIN** and **LATCH SPEED** regulating screws inaccessible.

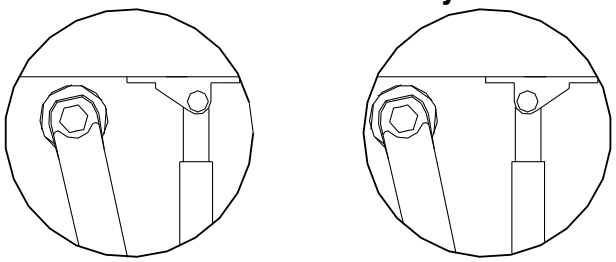
NOTE: Do not back regulating screws out of closer or an oil leak will occur

Fig. 9



2. **BACKCHECK ADJUSTMENT:**
   Backcheck slows the door swing as it approaches full opening. Adjust the backcheck setting only if necessary. Increase backcheck strength by turning **BACKCHECK** screw clockwise by quarter turns. Make sure backcheck adjustments conform to ANSI A156.19 sections 4.2, 4.4, 4.5, and tables I & II. **DO NOT USE AN ABRUPT BACKCHECK SETTING.**
   a. Remove forearm set screw and open door, separating rod from forearm tube.
   b. Remove shoe screws and flip shoe 180° as shown in **Fig. 10**. Re-attach shoe to door.
   c. Re-assemble arm, as in steps 3 & 4 on page 8.
   d. Verify that closing force is no more than 15 lbs when measured one inch from door edge to comply with ANSI A156.19.

Fig. 10
For 4640 series only



STANDARD INSTALLATION

SHOE POSITIONED FOR INCREASED POWER AT LATCH

LOCATING CAUTION / AUTOMATIC DOOR DECAL

1. Locate one decal on each side of door, near latch area to meet ANSI A156.19-2007 code requirements. Decal must be located at 50” (+/- 12”) from the floor to the center line of the sign. The decal location must be visible without interference from door trim or auxiliary door hardware.
2. Clean the 6” x 6” area where decal is to be placed. Apply decal by removing the backing and “rolling” it onto door. This will help prevent air bubbles from being trapped under decal.

SECTION 3

INSTALLATION & ADJUSTMENT OF CONTROLLER BOARD

NOTE: Be sure electrical power source is disconnected.

1. **MOUNT CONTROLLER TO OPERATOR ASSEMBLY:** Locate controller assembly in shipping carton. Position the controller as shown in **Fig. 11**. Slide onto mounting plate assembly, guiding cut-outs in controller onto mounting pins as shown.
2. Once the front of controller is fitted onto pins, push entire controller into position, as shown in **Fig. 12**. With controller in proper position, insert (1) *unpainted* #8 - 32 x 3/8" flat head screw into bottom of mounting plate, as shown.

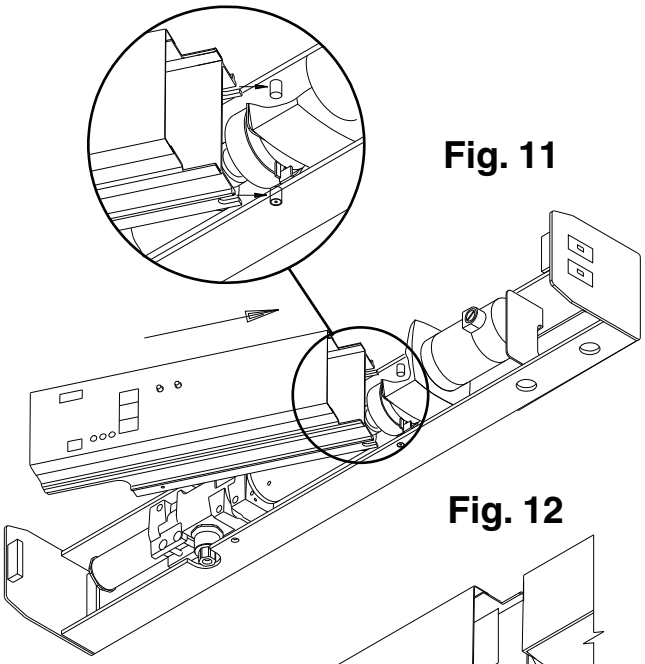


Fig. 11

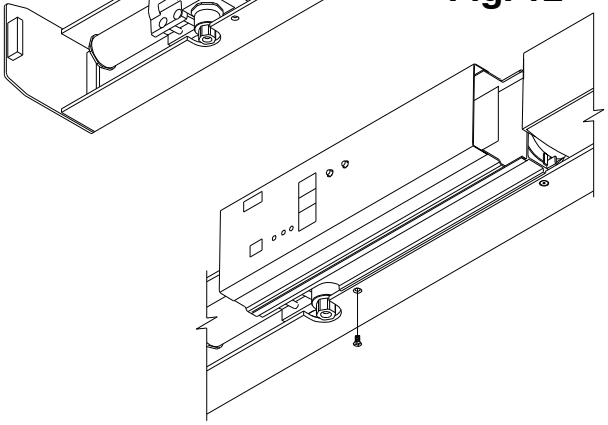


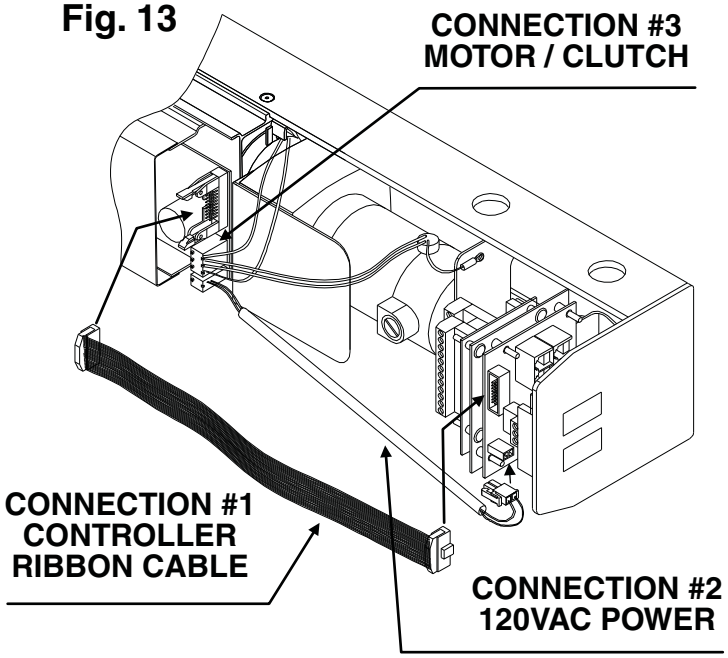
Fig. 12

NOTE: For adjustments to door closer regulating screws, controller must be removed. Do this by: Removing power to operator, unplugging the electrical connections, removing screw, tilting controller away from operator and disengaging controller from mounting pins. Follow steps 1 & 2 above to reattach.

WIRING CONNECTIONS:

1. There will be 3 key wiring harness connectors shipped in the hardware box. The first is a ribbon cable connector. It should be fitted into receptacles on rear board assembly and the controller as shown in **CONNECTION #1** of **Fig. 13**.

Fig. 13



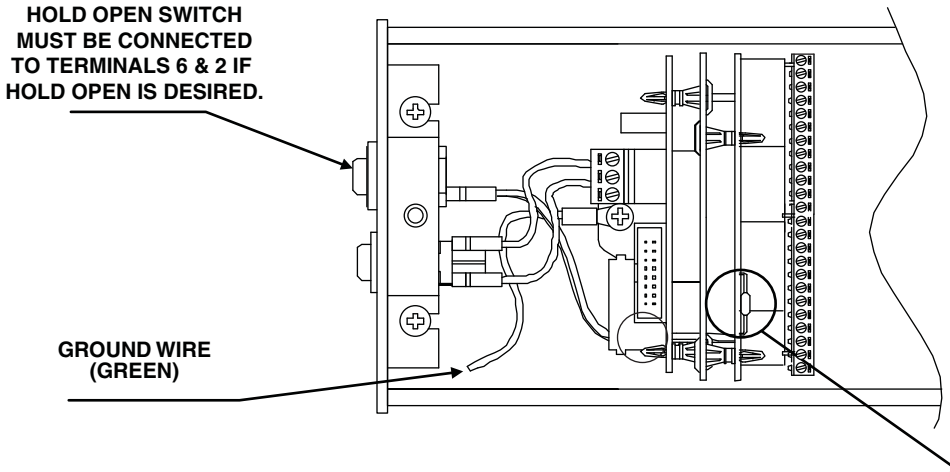
2. **The second connector is a 2 wire lead for the 120 VAC power and should be fitted firmly into into receptacles on rear board assembly and the controller as shown in CONNECTION #2 of Fig. 13.**
3. The third connector is for the motor / clutch. The connector should be fitted firmly into receptacle on the controller as shown in **CONNECTION #3** of **Fig. 13**.
4. Electrical power can now be safely supplied to the 4600 series operator. The controller settings have been pre-set prior to shipment. Adjustment information is detailed on pages 15-17. It will be necessary for the 4600 series door operator to be functional while adjustments and settings are made. Trigger actuator device(s) and check to make sure that door opens freely. Arm assembly motion and door travel should not make contact or have interference with any object.

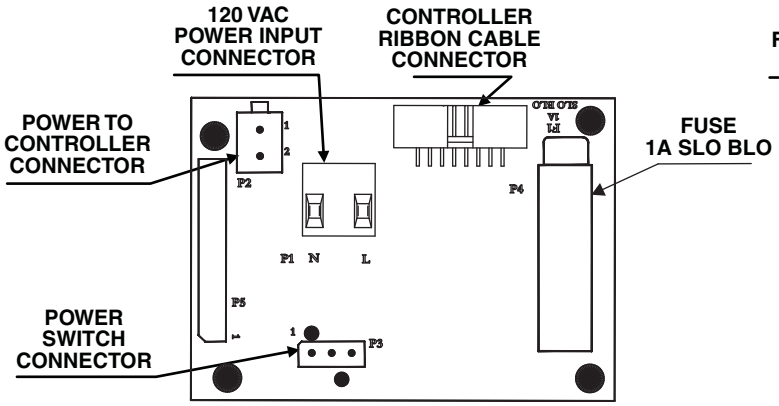
ELECTRICAL CONNECTIONS - Use copper wire only.

HIGH VOLTAGE ELECTRICAL CONNECTIONS

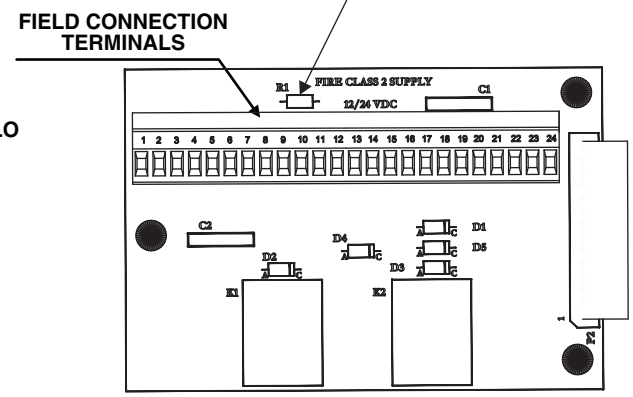
⚠ WARNING

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY.
Disconnect power before making any electrical connections or performing any maintenance.





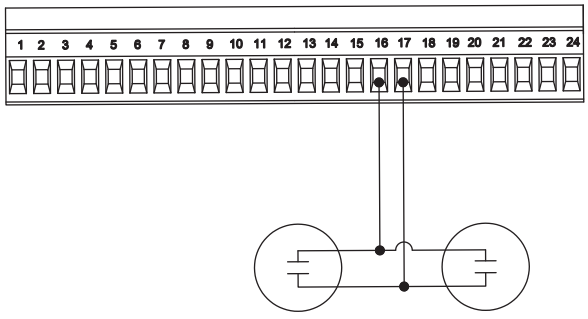
POWER BOARD



ACTUATOR BOARD

LOW VOLTAGE (CLASS 2 NEC) ELECTRICAL CONNECTIONS

SINGLE DOOR WIRING CONNECTIONS

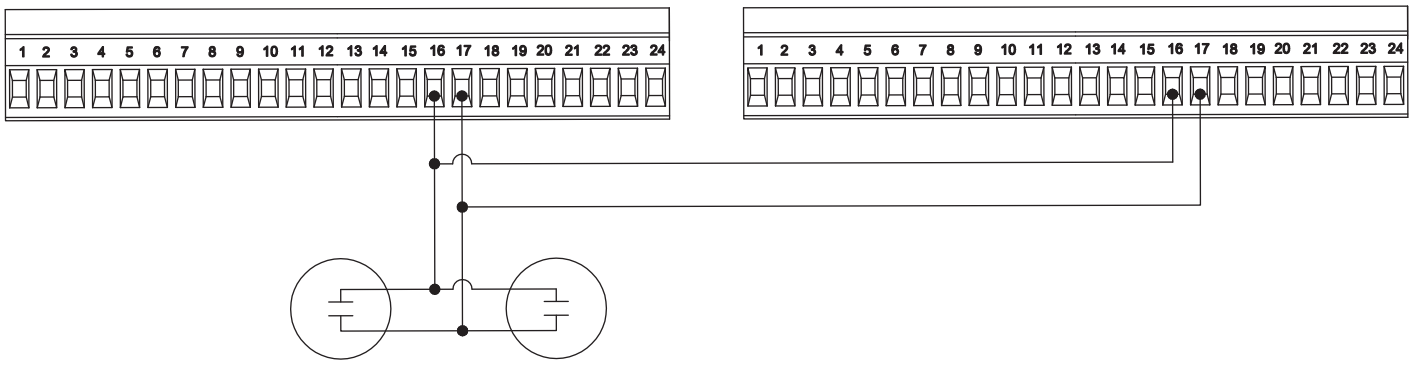


ANY NORMALLY OPEN DRY CONTACT ACTUATOR

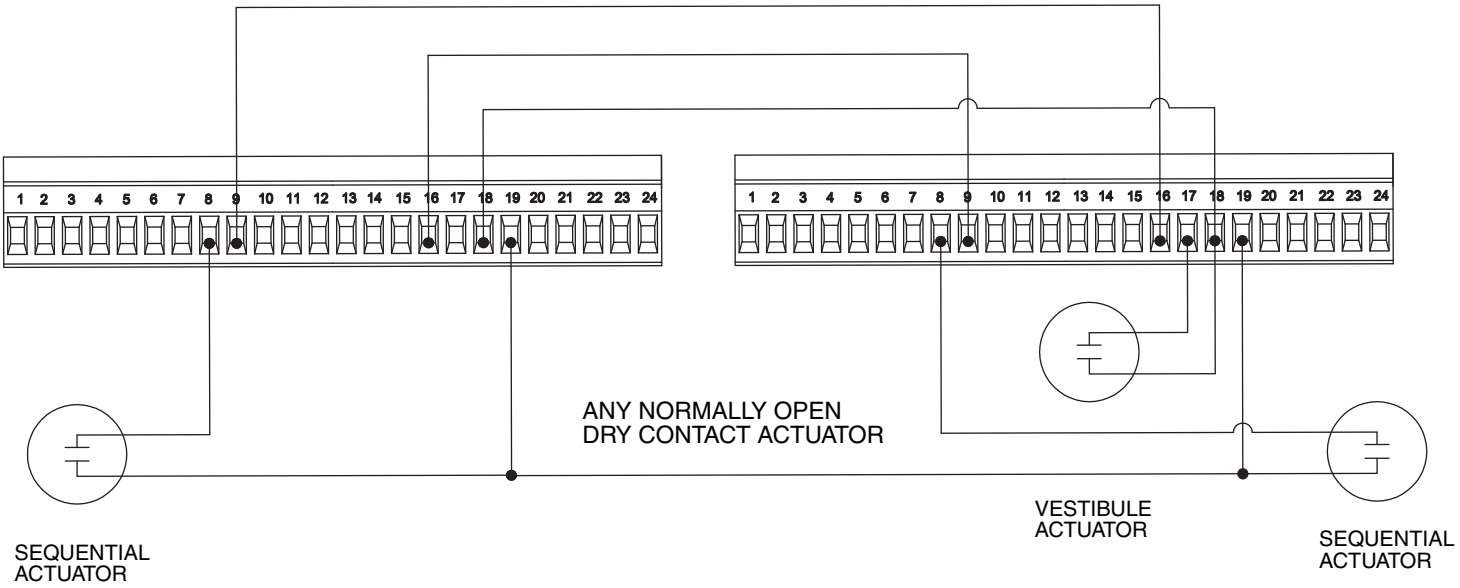
FUNCTION	TERMINAL
Actuator - Normal Input (N.O.)	16 & 17 or 18 & 19
Actuator - Sequential Input (N.O.)	8 & 19
Actuator - Alternate Action (N.O.)	15 & 17
Actuator - Continuous (N.O.)	6 & 2
Sequential Output	9
Stop Side Safety (N.O.)	19 & 20
Swing Side Safety (N.O.)	19 & 21
Fire Alarm Contact (N.C.)	13 & 14 (Fire Shunt)
Auxiliary Relay Contacts(5 amp max)	10 - Common
	11 - N.O.
	12 - N.C.
E.S. Relay Contacts(5 amp max)	22 - Common
	23 - N.O.
	24 - N.C.
12V DC & 24V DC Negative*	2, 4, 13, 17, & 19
12V DC Positive*	5 & 7
24V DC Positive*	1 & 3

* Note: 1 Amp max load between 12V and 24V DC outputs

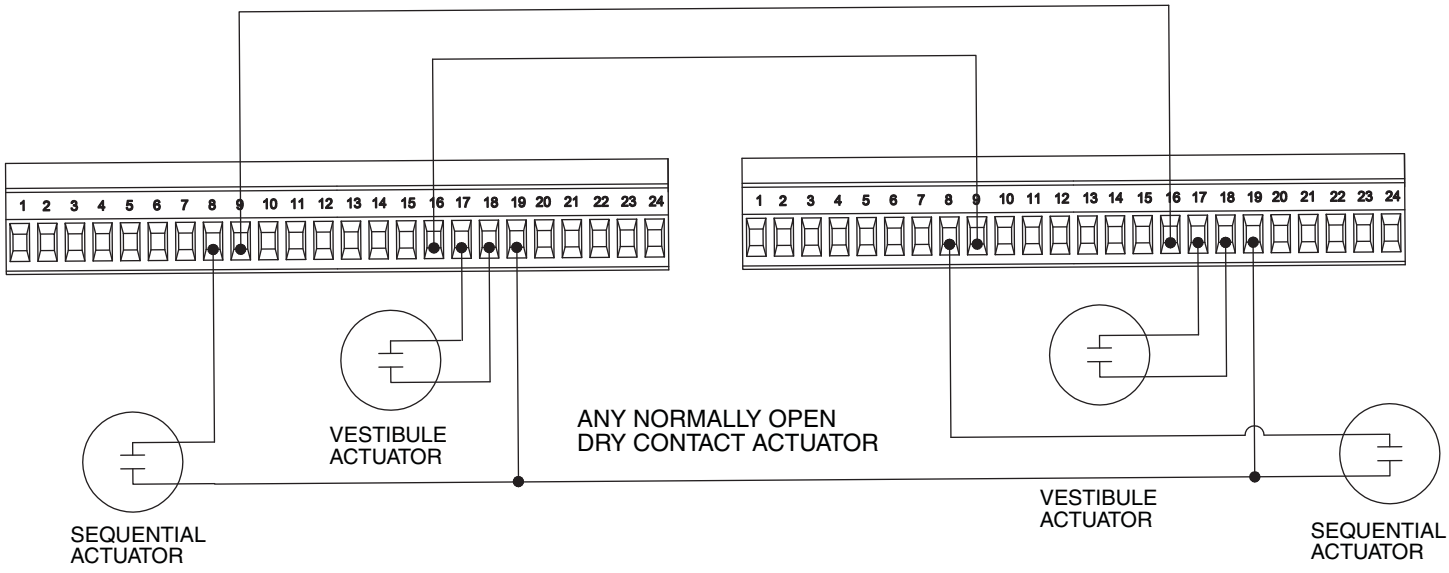
SIMULTANEOUS PAIR WIRING CONNECTIONS



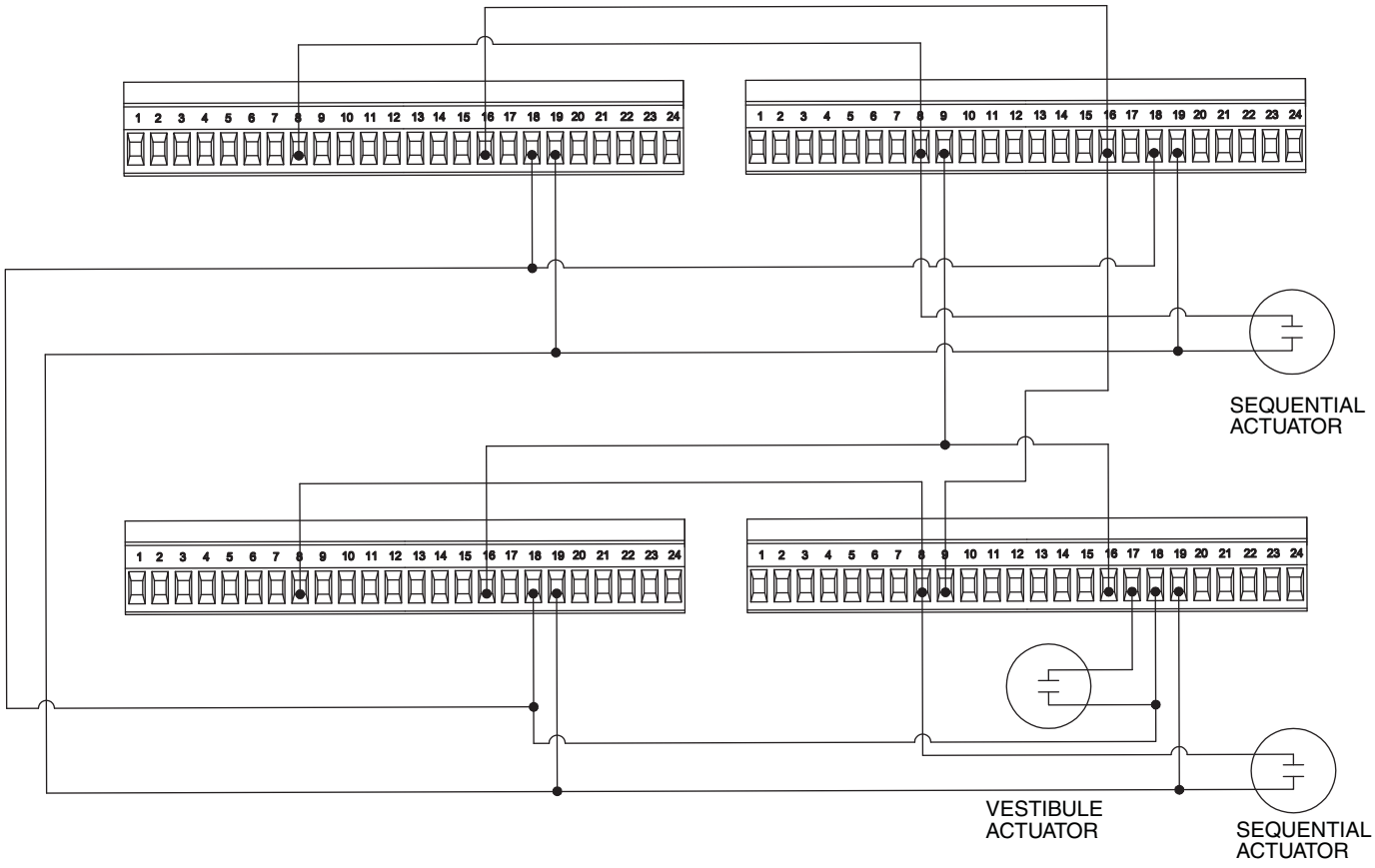
SEQUENTIAL WIRING CONNECTIONS - SIMULTANEOUS VESTIBULE



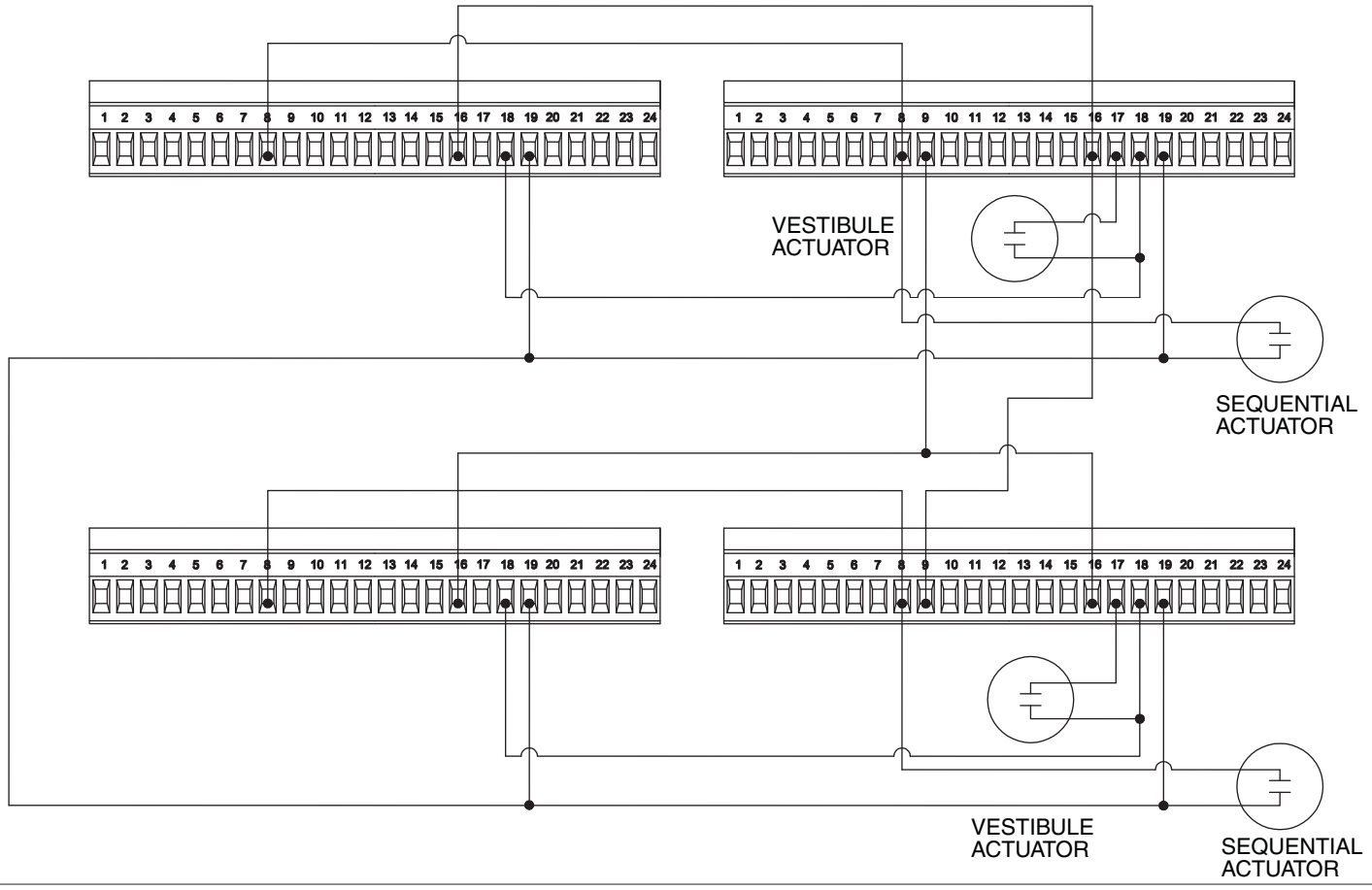
SEQUENTIAL WIRING CONNECTIONS - INDEPENDENT VESTIBULE



SEQUENTIAL PAIR WIRING CONNECTIONS - SIMULTANEOUS VESTIBULE

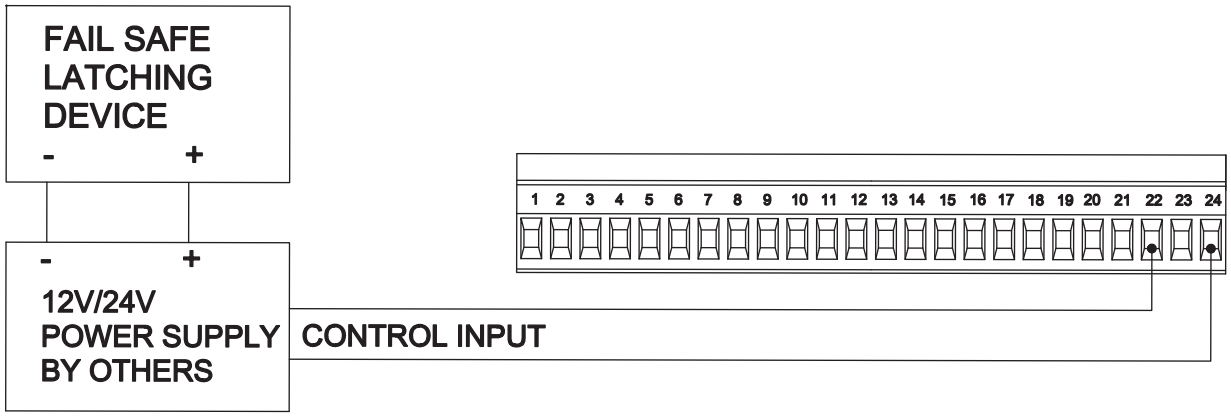


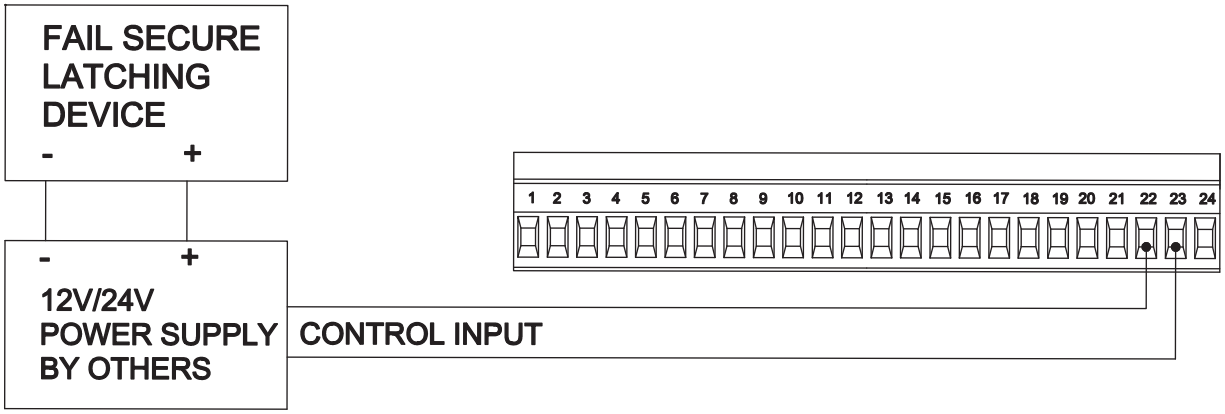
SEQUENTIAL PAIR WIRING CONNECTIONS - INDEPENDENT VESTIBULE PAIRS



WIRING INFORMATION FOR ELECTRONIC LATCHING DEVICES

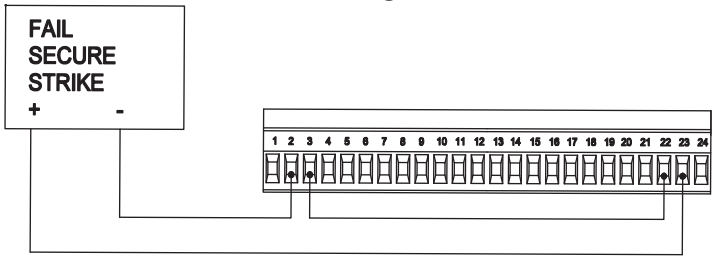
12V or 24V power supply by others



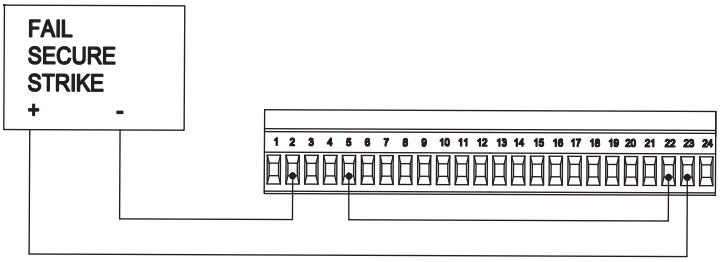


WIRING INFORMATION FOR ELECTRIC STRIKE / MAG-LOCK SYSTEM

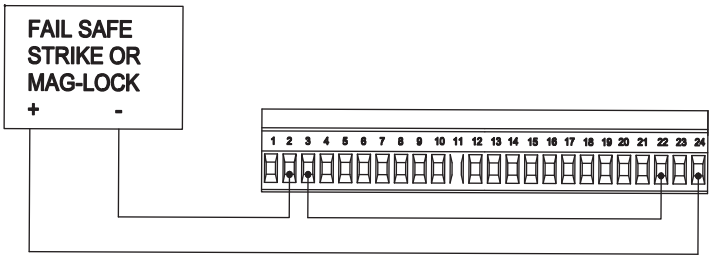
24V DC



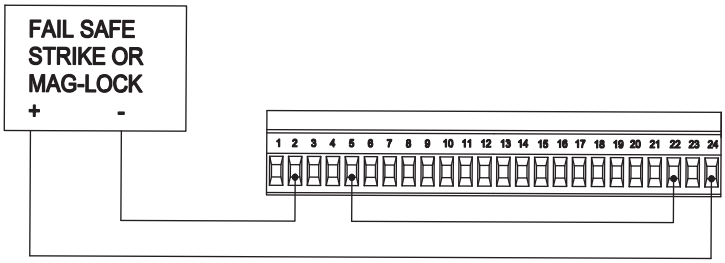
12V DC



24V DC

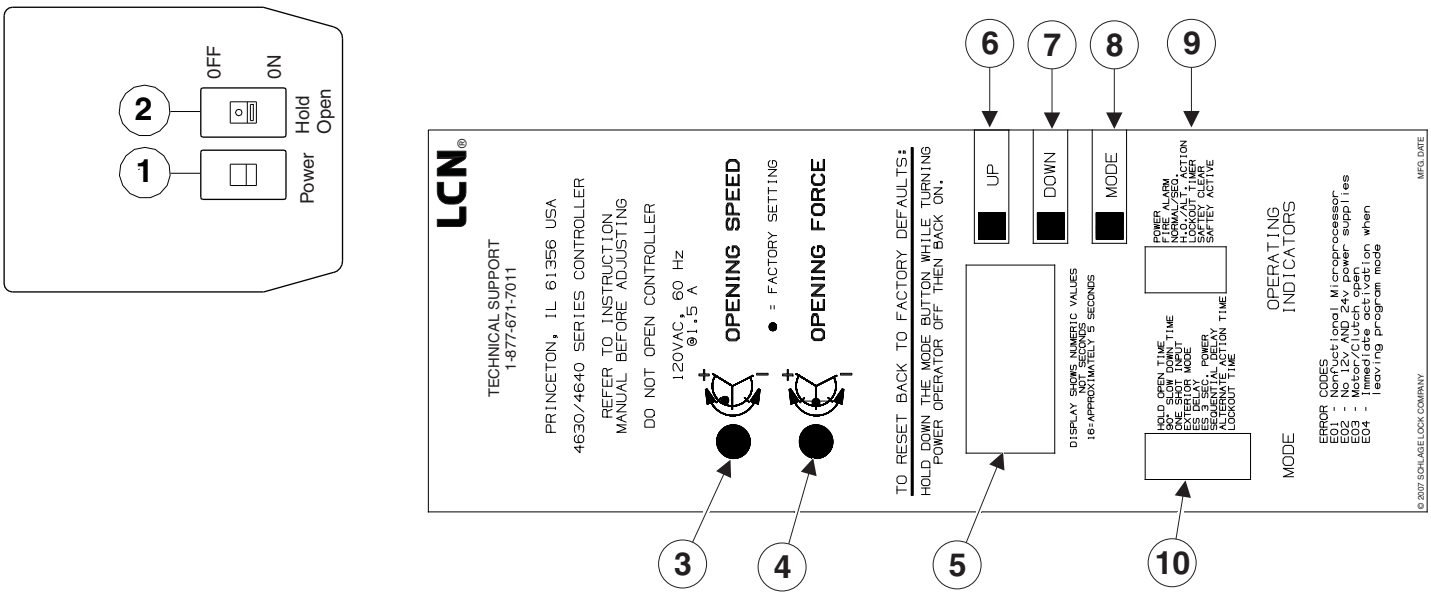


12V DC



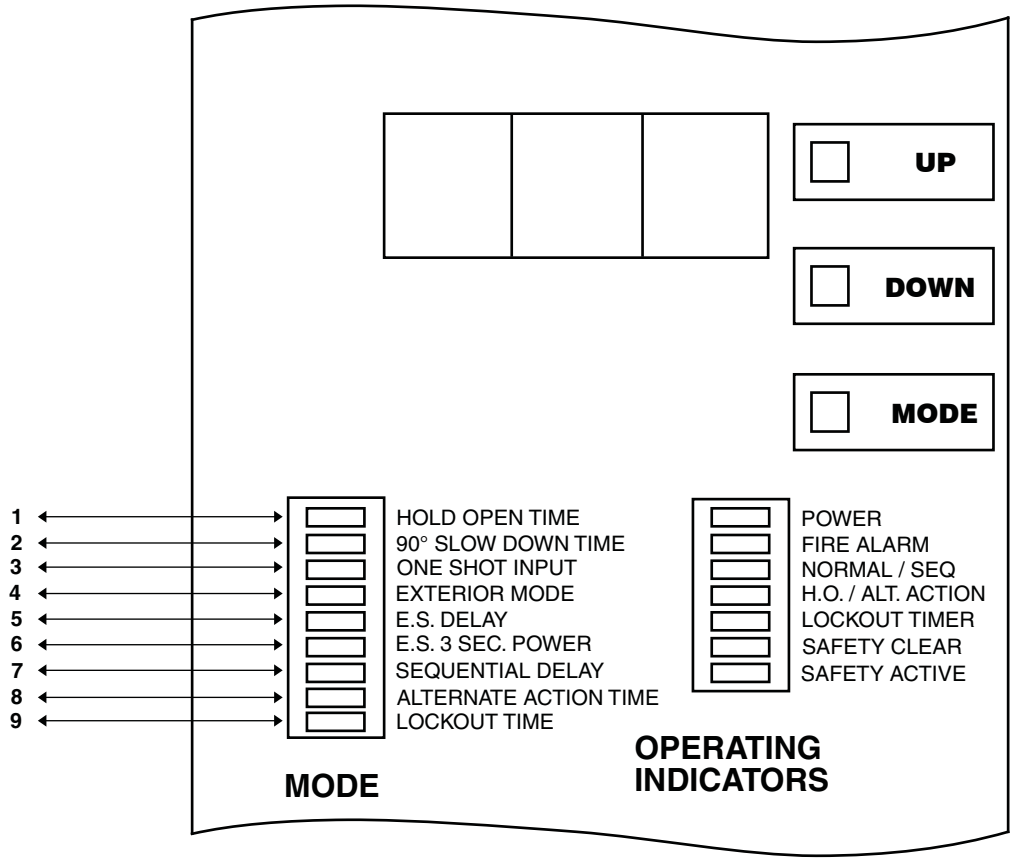
FOR ADDITIONAL WIRING INFORMATION CONTACT LCN CLOSERS ELECTRICAL APPLICATIONS DEPT. AT 1 - 877 - 671 - 7011

CONTROLLER SETTING ADJUSTMENTS



Consult diagram above. Each setting / indicators labeled #1 - #10, which correspond with numbers below. Adjustments for #3 & #4 are made with a small flat blade screwdriver. Turn clockwise to increase speed / force or counterclockwise to decrease speed / force. Controller functions are preset before shipment. **Adjustments should be made only if necessary.** Factory pre-set positions are shown on controller label.

1. **ON/OFF SWITCH** - Allows operator to be turned on & off without disconnecting power.
2. **HOLD OPEN SWITCH** - Provides option to keep door in hold open position (fire signal will override).
3. **OPENING SPEED** - Adjusts opening speed of door. Opening speed must be within ANSI A156.19 specifications (see **TABLE 3** on pg. 18). Large, heavy doors and / or strong door closer backcheck settings may require a slower speed adjustment for proper operation. As a general rule, a slower door speed and use of an auxiliary door stop will provide smoother operation.
4. **OPENING FORCE** - Adjusts amount of force the door exerts when opening (15 lbs. max). Normal adjustment is for door to open 90° or encounter an auxiliary door stop, where motor will stop. If clutch slips more than 1/4 turn when door stops, adjust OPENING FORCE down until there is minimal or no clutch slippage. If OPENING FORCE is increased too much, it may overpower clutch & motor. Motor will stop running after 15 seconds. It will then go into HOLD OPEN DELAY and cycle through the closing sequence.
5. **TIME DISPLAY** - Displays a numeric value relating to the timing adjustment indicated on the mode display. **16 = Approximately 5 Seconds.**
6. **UP BUTTON** - Increases time display number or change from (OFF to ON) when in programming mode.
7. **DOWN BUTTON** - Decreases time display number or change from (ON to OFF) when in programming mode.
8. **MODE BUTTON** - Advances through programming setups indicated on Mode Indicator.
9. **OPERATING INDICATORS** - Displays operating information about internal functions and external hardware.
10. **MODE INDICATION** - When programming, indicates the program mode currently being displayed.



1. **HOLD OPEN TIME:** Adjusts the amount of time door stays open after reaching the 90° position.
2. **90° SLOW DOWN TIME:** The time from start of door movement to a transition at approximately 70°, when door opening speed is reduced.
3. **ONE SHOT INPUT (OFF/ON):** If off, hold open delay starts upon last activation input signal. If on, hold open delay starts upon first activation input signal and ignores all others.
4. **EXTERIOR MODE (OFF/ON):** If off, door stops and hold open timer starts after door encounters first restriction. If on, door will pause for 1 second upon first restriction(wind), then try to open again. Hold open timer starts after door encounters second restriction.
5. **E.S. DELAY:** Controls the time between activation signal and actual door movement. Allows time for electric latching hardware to release before door starts to open. Default time should only be adjusted when using electric latching hardware.
6. **E.S. 3 SECOND POWER (OFF/ON):** If off, E.S. Relay is powered entire time door is open. Releases when door starts to close. If on, E.S Relay is powered for only 3 seconds after door is activated, then releases.
7. **SEQUENTIAL DELAY:** Controls the time from first door activation to second door activation during sequential door application. Should only be adjusted for sequential door application.
8. **ALTERNATE ACTION TIME:** Controls the time the door will remain open after an alternate action input is received. Provides an automatic second input to close the door if a second alternate action input is not received within the preset time. Should only be set if using alternate action door application.
9. **LOCKOUT TIME:** Controls the time that a safety scanner input is ignored during door closing. Should only be set if safety scanners are used.

CONTROLLER PROGRAMMING

Apply power to operator after all components are installed. Controller will perform a self diagnostics and Display will show an Error Code if error is present. If no error is present, operator will be in RUN Mode (“POWER” Operating Indicator Light “ON”) and the Display will be blank.

Normal Operating Mode = Power and Safety Clear indicators on controller lit.

ERROR CODES:

E01 = Non-functional Microprocessor

E02 = No 12V and 24V power supplies

E03 = Motor / Clutch not plugged in or open coil. Resistance values (Clutch 1200 ohms) (Motor 40 to 70 ohms)

E04 = Continuous activation signal upon power up or when leaving programming mode.

If (H.O./ALT. Action) indicator on controller is lit, check hold open switch on end cap. Must be off.

If (NORMAL/SEQ.) indicator on controller is lit, check for mis wired or stuck actuator switch.

Must be N.O. Contacts.

To enter programming mode, press **MODE** button.

HOLD OPEN TIME indicator will be lit and display will show programmed time. To change time, press UP or DOWN button respectively. Adjustment 0 to 999. Default 16. Must be at least 5 seconds of hold open time. To continue programming mode, press mode button.

90° SLOW DOWNTIME indicator will be lit and display will show programmed time. To change time, press UP or Down button respectively. Adjustment 0 to 26. Default 9. To continue programming mode, press mode button.

ONE SHOT INPUT indicator will be lit and display will show programmed state. To change state, press UP or DOWN button respectively. Adjustment ON/OFF. Default OFF. To continue programming mode, press mode button.

EXTERIOR MODE indicator will be lit and display will show programmed state. To change state, press UP or DOWN button respectively. Adjustment ON/OFF. Default ON. To continue programming mode, press mode button.

E.S. DELAY indicator will be lit and display will show programmed time. To change time, press UP or DOWN button respectively. Adjustment 0 to 16. Default 0. To continue programming mode, press mode button.

E.S. 3 SECOND POWER indicator will be lit and display will show programmed state. To change state, press UP or DOWN button respectively. Adjustment ON/OFF. Default ON. To continue programming mode, press mode button.

SEQUENTIAL DELAY indicator will be lit and display will show programmed time. To change time, press UP or DOWN button respectively. Adjustment 0 to 100. Default 0. To continue programming mode, press mode button.

ALTERNATE ACTION TIME indicator will be lit and display will show programmed time. To change time, press UP or DOWN button respectively. Adjustment 0 to 3. Default 0 = No Time Out, 1 = 10 Minute Time Out, 2 = 20 Minute Time Out, 3 = 30 Minute Time Out. To continue programming mode, press mode button.

LOCKOUT TIME indicator will be lit and display will show programmed time. To change time, press UP or DOWN button respectively. Adjustment 0 to 66. Default 20. To exit programming mode, press mode button to return to RUN mode (display blank). Programming is now complete. Activate operator to check that all function and timings are correct. Setting can be changed at any time by pressing Mode Button to scroll to the desired Program Mode.

Note: Controller will automatically exit Programming Mode and return to run Mode after 15 seconds with no input from MODE, UP or DOWN buttons.

TO RESET BACKTO FACTORY DEFAULTS: HOLD DOWNTHE MODE BUTTON WHILE TURNING POWER TO OPERATOR “OFF” THEN BACK “ON” USING THE ON/OFF SWITCH ON OPERATOR END CAP.

TABLE 3 (below) lists the maximum door opening speeds specified by ANSI 156.19 for Low - Energy Door Operators. 4630/4640 max. opening speed to 90° is 5 seconds. If weight of door is unknown, use **TABLE 4** to determine approximate door weight.

TABLE 3

MAXIMUM DOOR WEIGHT IN POUNDS	FASTEST OPENING TIME 0° to 80°		
	DOOR WIDTH IN INCHES		
	36"	42"	48"
100 lbs.	3.0 sec	3.5 sec	4.0 sec
125 lbs.	3.5 sec	4.0 sec	4.5 sec
150 lbs.	3.5 sec	4.0 sec	4.5 sec
200 lbs.	4.0 sec	4.5 sec	5.5 sec

TABLE 4

TYPE OF DOOR	WEIGHT PER SQ. FT.	TYPICAL 3'0" X 7'0" DOOR WEIGHT
- Solid Core Wood - 20 Ga. Flush Hollow Metal - Aluminum x 1/4" Glass	**5.5 lbs**	**115 lbs**
- Mineral Core Door - 16 Ga. Flush Hollow Metal - Aluminum x 1" Glass	**7.0 lbs**	**147 lbs**

BASIC OPERATION INFORMATION

Note: If fire alarm contacts are activated at any time during the opening cycle or while in hold open, the 4600 series Door Operator will override any function and close the door immediately. All power door functions are stopped until the fire alarm contacts are deactivated.

When triggered by actuator switch:

1. Controller checks for optional swing-side safety sensor input. If activated, opening cycle is aborted.
   a. If sequential actuator inputs are used then the A-B SEQUENTIAL DELAY timer is started.
   b. Auxiliary and E.S. Relay contacts are triggered.
2. Opening cycle starts after ELECTRIC STRIKE DELAY times out.
3. Motor & clutch are activated.
   a. If sequential actuator inputs are used then the A-B SEQUENTIAL DELAY output will signal the next operator.
4. Controller monitors the motor during opening cycle for door obstructions that exceed the present OPENING FORCE setting. If an obstruction is encountered controller will pause opening cycle for one second, then attempt to open door again (SECOND CHANCE feature).
   a. Opening cycle resumes until power opening range is reached or a second obstruction is sensed.
   b. Opening door encounters BACKCHECK range of door closer. A strong BACKCHECK setting will cause controller to act as though it hit an obstruction, triggering the SECOND CHANCE feature. Some experimentation with OPENING FORCE, OPENING SPEED & BACKCHECK settings may be necessary for applications where wind and/ or air pressure problems occur.
   c. Controller goes into HOLD OPEN DELAY mode for preset amount of time.
   d. The controller will maintain the hold open mode as long as an actuator input signal is present. The HOLD OPEN DELAY mode timer is reset with each additional actuator input signal. With each additional sequential actuator input a sequential output signal is sent.
5. Controller checks for optional push-side safety sensor input. If activated, the operator will hold door open until sensor de-activates.
   a. Controller releases door for closing cycle. Closing cycle is controlled by door closer assembly.

COVER INSTALLATION

1. Depending on conduit option used and hand of door, remove proper knock - outs from operator cover. NOTE: If concealed conduit option is being used, do not remove conduit knock - outs.
2. Align cover with operator and guide into position as shown here in **Fig. 14**. Attach cover to the operator using (2) painted # 8 - 32 x 3/8" flat head machine screws, as shown.

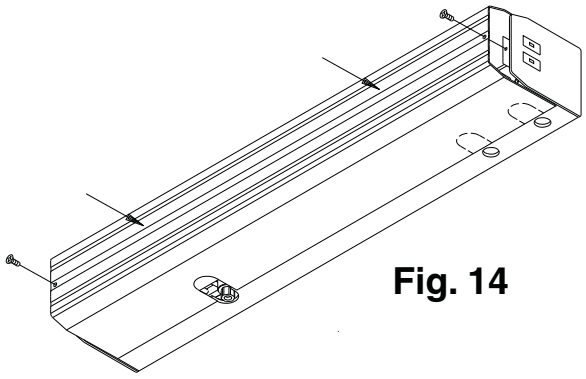
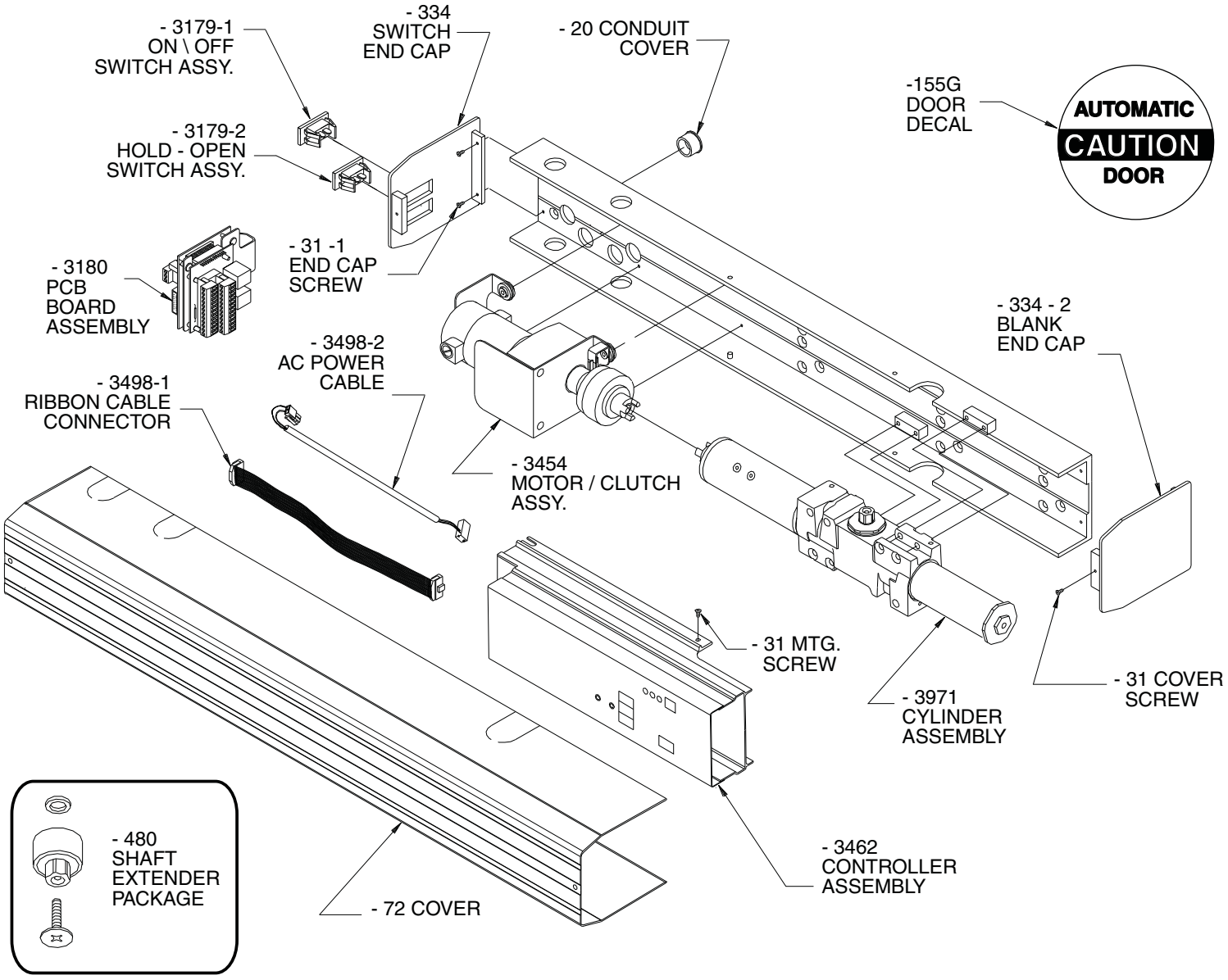


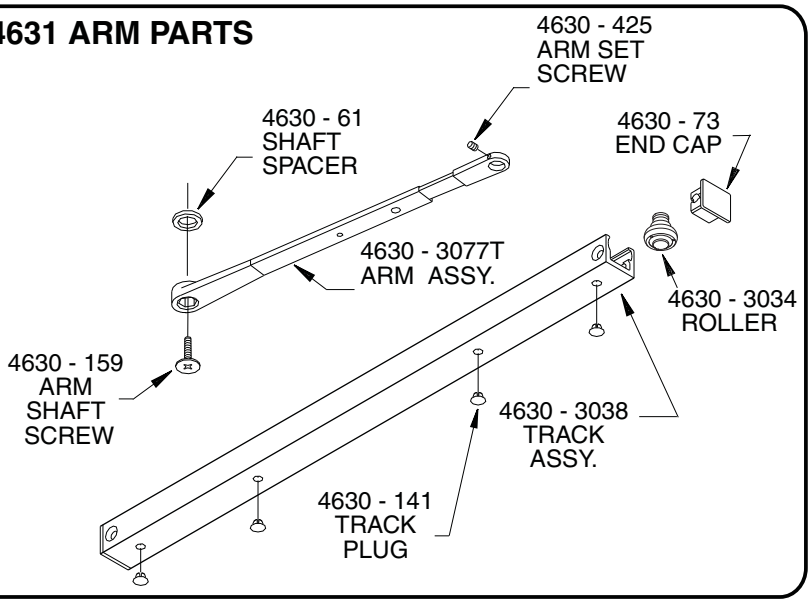
Fig. 14

4630/4640 REPLACEMENT PARTS LIST INFORMATION

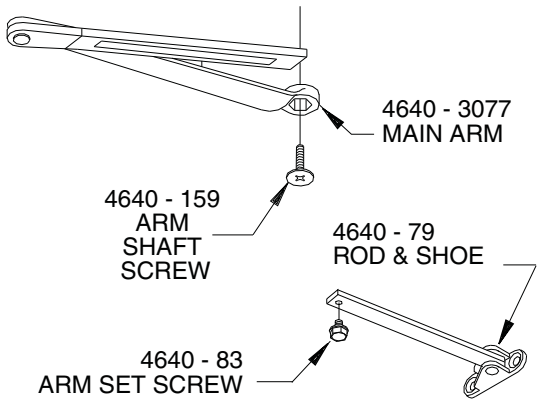
When ordering replacement parts remember to specify Model (4640 or 4630) in front on the desired part #. Also specify Color / Finish when required.



4631 ARM PARTS



4642 ARM PARTS



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28101 Rev. 06/16-u

28486

4510 Track Series

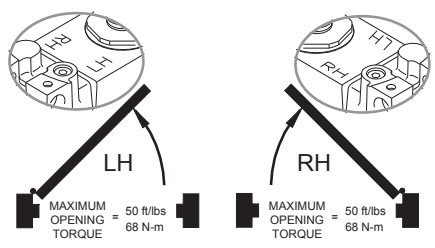
LCN®

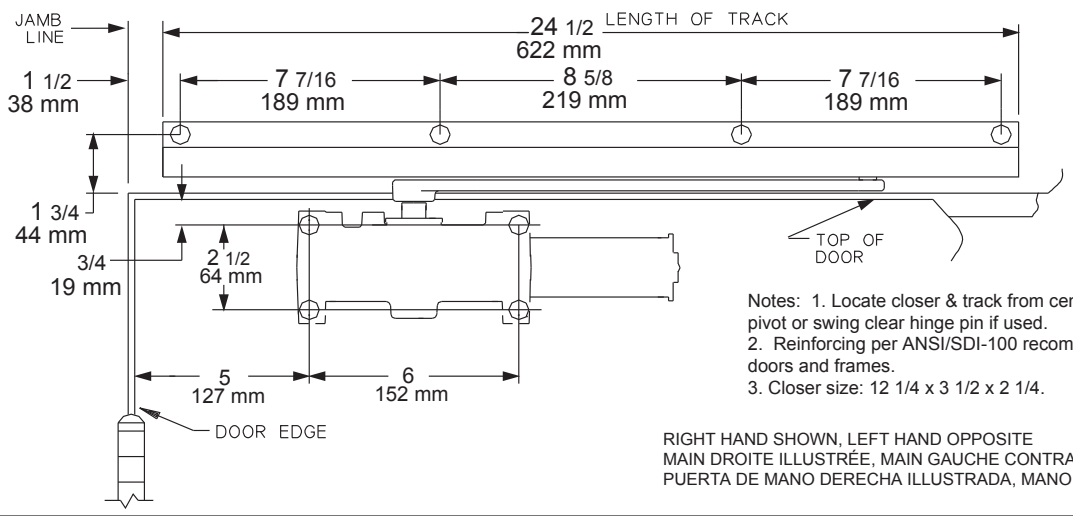
180° Template, Pull Side

Installation Instructions

1 Locate proper template, Drill and tap pilot holes for 1/4 x 20 Machine screws.

Verify hand of closer matches hand of door.





Notes: 1. Locate closer & track from centerline of pivot or swing clear hinge pin if used.
2. Reinforcing per ANSI/SDI-100 recommended for hollow doors and frames.
3. Closer size: 12 1/4 x 3 1/2 x 2 1/4.

RIGHT HAND SHOWN, LEFT HAND OPPOSITE
MAIN DROITE ILLUSTRÉE, MAIN GAUCHE CONTRAIRE
PUERTA DE MANO DERECHA ILLUSTRADA, MANO IZQUIERDA AL OPUESTO

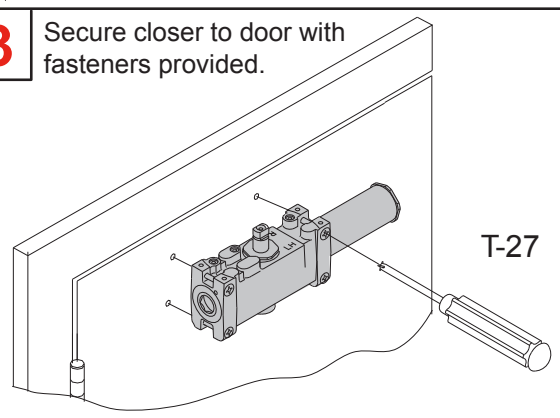
2 Determine door width, adjust spring power to match chart.

CAUTION

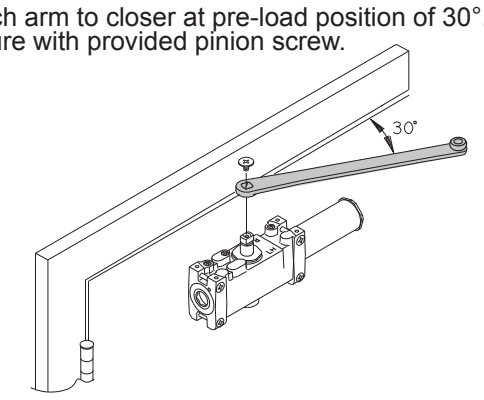
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

TABLE OF SIZES	
DOOR WIDTH (INTERIOR DOORS ONLY)	CLOSER SIZE
♿ - ADA	4511T
UP TO 36"(914mm)	4513T
37"(940mm) - 48"(1219mm)	4514T

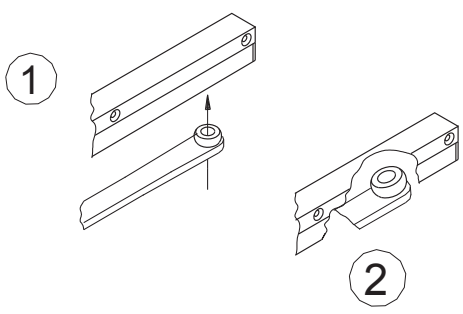
3 Secure closer to door with fasteners provided.

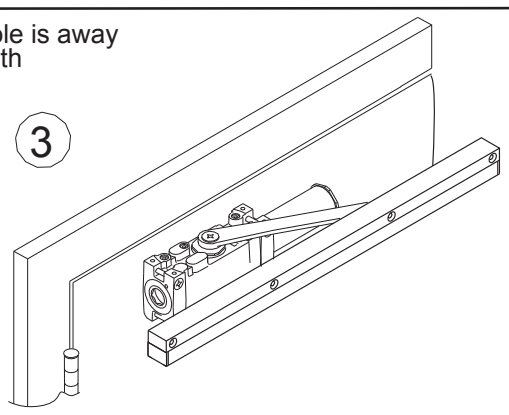


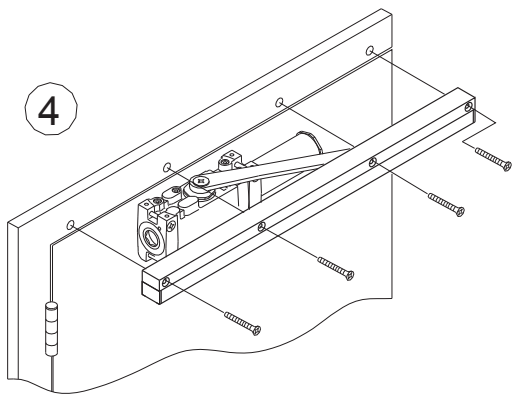
4 Attach arm to closer at pre-load position of 30°. Secure with provided pinion screw.



5 Attach track to closer arm. Be sure roller access hole is away from hinge edge of frame. Secure track to frame with fasteners provided.





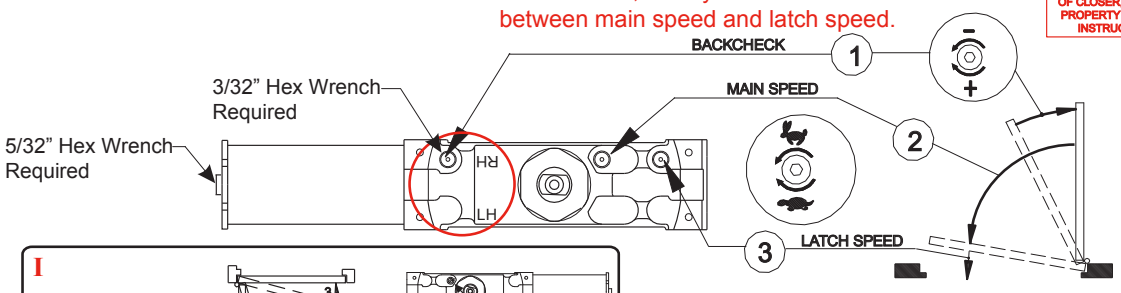


6 If necessary, adjust closer.

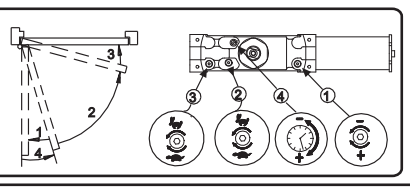
NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

CAUTION

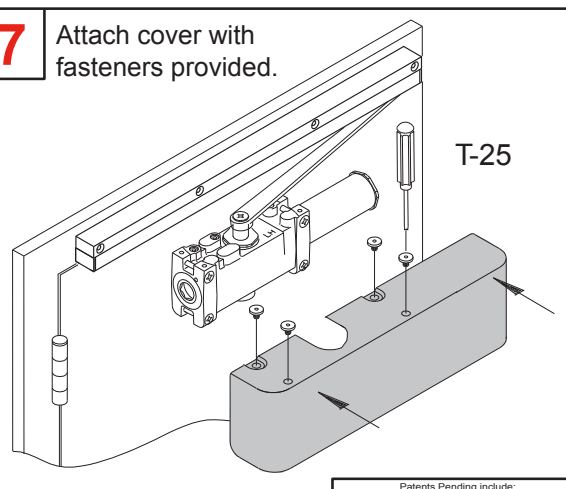
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



I
Optional Delay Action
① - Backcheck
② - Main Speed
③ - Latch Speed
④ - Delay Speed



7 Attach cover with fasteners provided.



Patents Pending include:
Rapidor ™ Installation System
PROPRIETARY, LCN Division, Schlage Lock Company

4510 Instructions du rail et gabarit de 180° pour une installation sur le côté â tirer.

1 Localice la plantilla apropiada, taladra y rosca agujeros pilotos para tornillos de máquina de 1/4 x 20.

Vérifiez si la main du ferme-porte correspond à la main de la porte.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

3 Fixez le ferme-porte sur la porte avec les attaches fournies.

4 Attachez le bras au ferme-porte à la position préchargée de 30°. Fixez à l'aide des vis fournies.

5 Attachez le rail au bras du ferme-porte. Assurez-vous que le trou d'accès du galet s'éloigne du bord des charnières du cadre. Fixez le rail au cadre avec les attaches fournies.

6 Attachez le rail au bras du ferme-porte. Fixez le rail sur le cadre à l'aide des attaches fournies.

7 Au besoin, réglez
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement

I Action retardée optionnelle
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage
④ - vitesse de retenue

8 Fixez le boîtier avec les attaches fournies.

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

DANGER

Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877 - 671 - 7011

DANGER

UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4510 Instrucciones de rieles paraplantilla 180° con montaje del lado del tirón.

1 Repérez le gabarit approprié, percez et taraudez des trous de guidage pour des vis à métal de 1/4 x 20.

Verifique que la mano del cerrador corresponda a la mano de la puerta.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

3 Sujeta el cerrador a la puerta con los sujetadores ya incluidos.

4 Coloque el brazo al cerrador a la posición de prearma de 30°. Sujete con el tornillo de piñón ya incluido.

5 Coloque el riel al brazo del cerrador. Asegúre que el agujero de acceso para el rodillo sea fuera del borde de la bisagra del bastidor. Sujete el riel al bastidor con los sujetadores ya incluidos.

6 Coloque el riel al brazo del cerrador. Sujete el riel al bastidor con los sujetadores ya incluidos.

7 Ajusta si se necesita
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

I Acción retardada opcional.
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro
④ - velocidad de retardo

8 Coloca la tapa con los sujetadores ya incluidos.

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

ADVERTENCIA

UNA INSTALACIÓN O UN AJUSTE INCORRECTOS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL 877 - 671 - 7011

ADVERTENCIA

LA APERTURA DEMASIADO GRANDE DE LAS VÁLVULAS DE AJUSTE PUEDE OCASIONAR UN DERRAME, DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES.

Customer Service 1-877-671-7011
Servicio al cliente www.allegion.com/us
Service à la clientèle

ALLEGION

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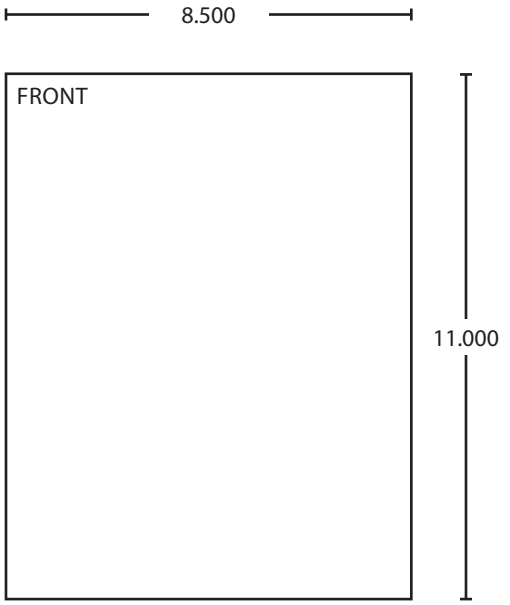
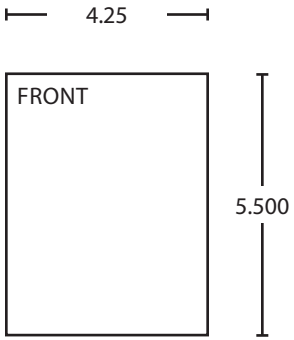
28486 Rev. 01/14-f



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	N/A	N/A	N/A	N/A	043812

Material
White Paper

Notes
1. printed one side
2. printed black and PMS 485 (red)
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
F > Revised artwork

Edited By	Approved By	EC Number	Release Date
R. Byun	M. Sasso	043812	01-01-14

Title
4510T Series Instruction Sheet

Creation Date	Number	Revision
04-27-10	28486	F

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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71931

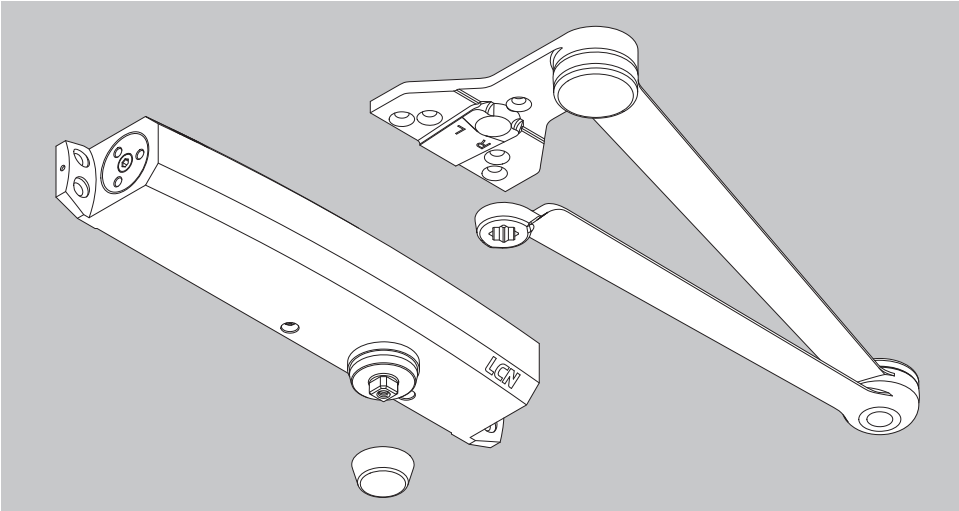
1450/1450DA Series

LCN®

EDA/HEDA Mount

Installation Instructions

PARTS

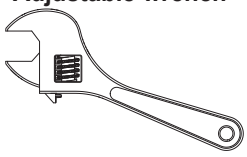


ⓘ **Screw pack information is on page 3.**

TOOLS

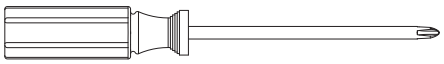
5⁄32" or 4mm Hex Wrench

Adjustable wrench



1⁄8" Drill Bit

Phillips Head Screwdriver



ⓘ **Hold Open wrench info is on page 3.**

⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage.
Follow all instructions carefully.
For questions, call LCN at 877 - 671 - 7011

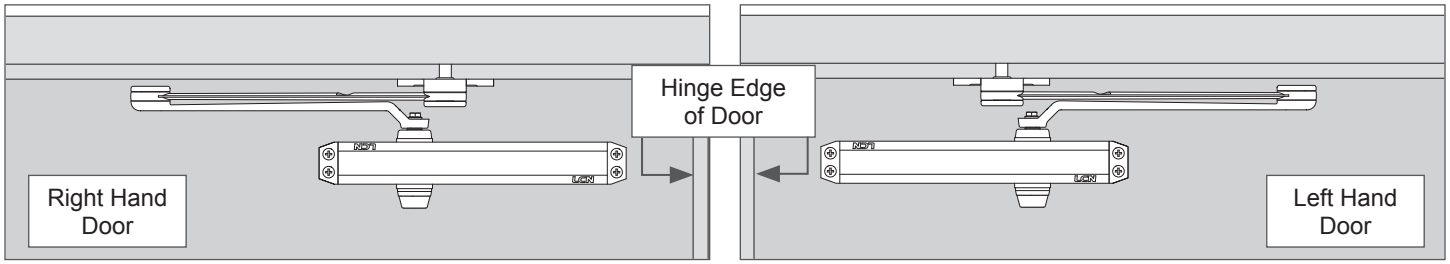
Hold open arms must not be installed on fire rated doors.

Opening the regulation valves too far may result in the closer leaking oil!
This may result in closer and property damage, and personal injury.
FOLLOW ALL INSTRUCTIONS CAREFULLY.

DO NOT USE THE CLOSER AS A DOOR STOP!
An auxiliary stop is recommended at the hold-open point or where the door cannot swing 180º.

Choose Installation Type

EDA (see page 2)



ALLEGION

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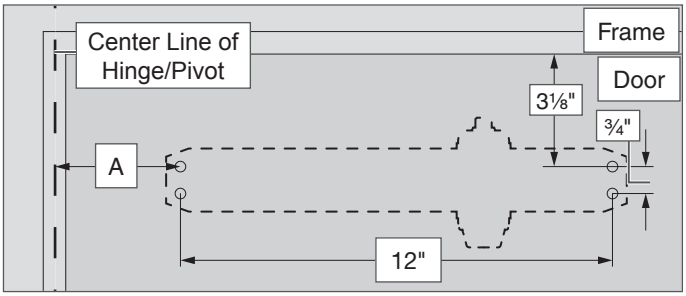
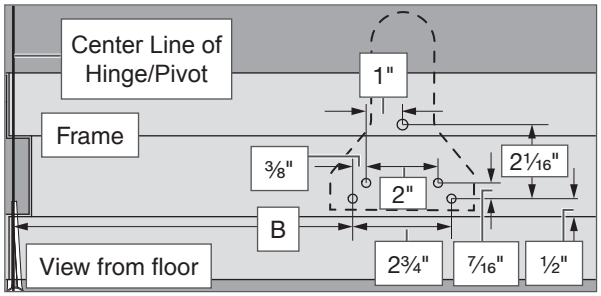
71931 Rev. 07/17-d
Patent Pending

Mounting Dimensions

ⓘ **Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.**





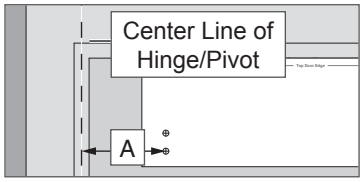
1 Determine the degree of door opening required and find dimensions “A” and “B” on the chart below.

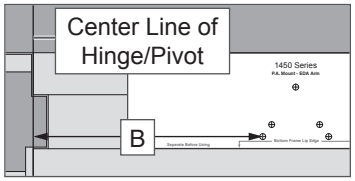
A Closer	Opening	Measurement from Door Edge
	To 120°	3 3/4”
	120° to 180°	1 1/4”

B Shoe	Opening	Measurement from Door Edge
	To 120°	9 3/8”
	120° to 180°	6 7/8”

2 Measure from center line of hinge/pivot and stick template on door. Mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**





3 Remove template, and drill holes where marked with a 1/8” drill bit for SRT screws.

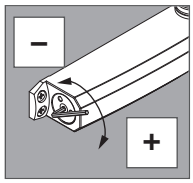
ⓘ **SRT screws are used on metal doors.**
Wood screws are used on wood doors.

4 Measure and determine your door’s width. Using a hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.

Turn counterclockwise for “-”; turn clockwise for “+”

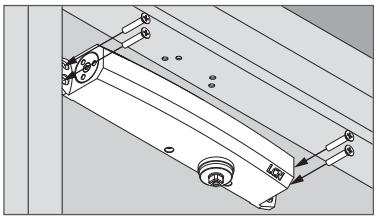
ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

Door Width	Number of Turns
ADA Setting	-5
32” - 815 mm	-3
36” - 915 mm	0
42” - 1050 mm	+5
48” - 1220 mm	+10
54” - 1372mm	+15



5 Install closer onto door.

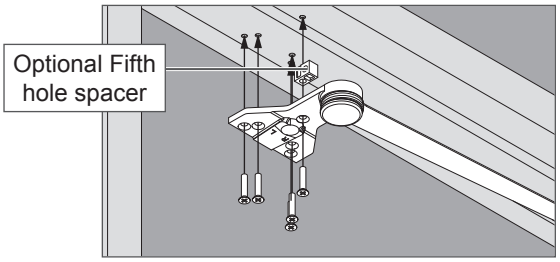
ⓘ **Speed regulation valve goes away from the hinge.**



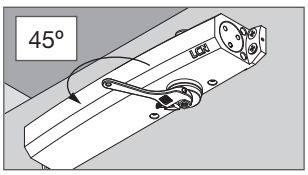
6 Install EDA shoe & fifth hole spacer onto frame.

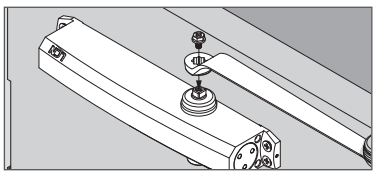
ⓘ **Use the fifth hole spacer only if there is a space between the frame and the shoe.**

ⓘ **Intallation limited to reveals greater than 2 11/16”.**



7 Rotate closer shaft 45°, attach main arm with provided fastener.

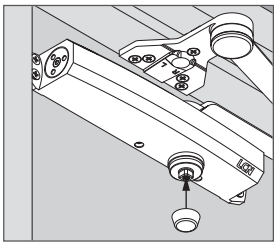


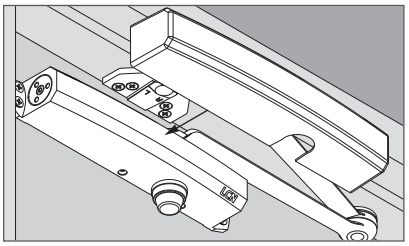


8 Adjust the closer, if necessary. See page 3 for closer adjustment instructions.

9 Screw cap onto shaft, or install cover.

ⓘ **Use screws for full plastic and metal covers.**

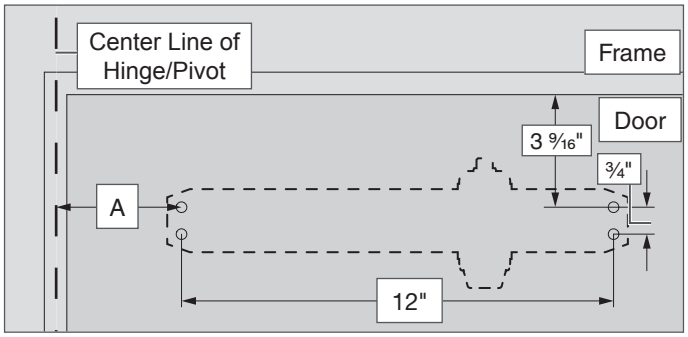


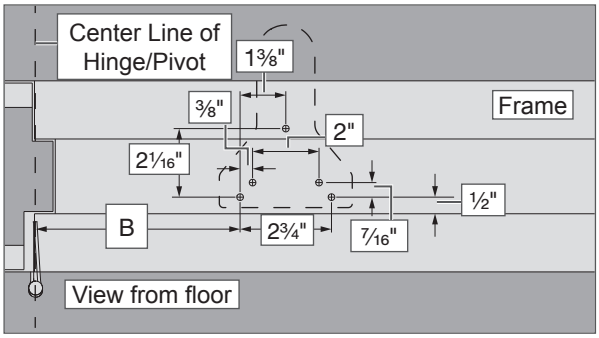


EDA-62G Shoe

Follow EDA instructions for installation using the dimensions listed below. The only difference between EDA and EDA 62G is location of the closer on the door.

EDA-62G Shoe:





Closer Valve Adjustment

Check closing time, and adjust closer if needed.

⚠ CAUTION ⚠

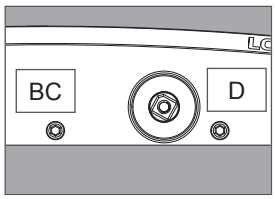
Opening the regulation valves (described below) too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.

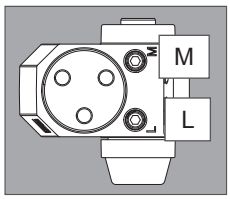
FOLLOW ALL INSTRUCTIONS CAREFULLY.

ⓘ **Valve must be closed CW to seat, never more than 3 turns CCW from seated position. Adjust the valves in 1/4 turn increments or less at a time. DO NOT TURN MORE THAN 3 FULL ROTATIONS. THIS WILL CAUSE THE CLOSER TO LEAK OIL!**

ⓘ **DO NOT ADJUST THE LATCH SPEED IF THE DOOR DOES NOT LATCH. If this occurs, adjust the spring force.**

1. Open the door to 90°, measure how long the door takes to close and latch. A typical closing time is 5 to 7 seconds, evenly divided between main speed and latch speed.
2. If the closing time needs to be adjusted, use the closer valves described below.
   a. Backcheck (BC)- this controls door speed opening as the door angle approaches 90°. **Do not use as a door stop.**
   b. Main Speed (M)- this controls door speed during most of the closing motion.
   c. Latch Speed (L)- this controls door speed during the last few degrees of door closing.
   d. DA Speed (D)- this controls the delay speed for DA cylinders. **This valve is present on DA cylinders only.**
3. Turn the valves clockwise to decrease door speed, and counterclockwise to increase door speed. The latch speed and main speed should be adjusted together.





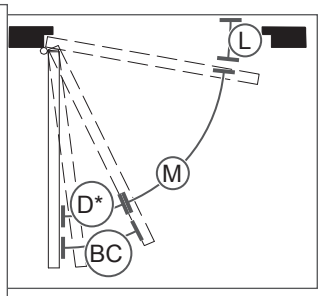
BC = Backcheck valve

M = Main speed valve

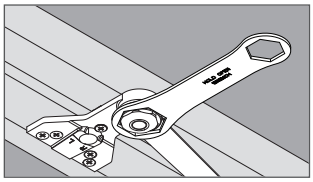
D = Delay speed valve*

L = Latch speed valve

* Optional

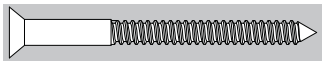
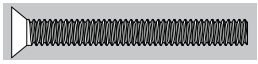
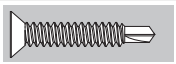


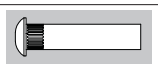
Optional Hold Open Arms



To adjust Optional Hold-open arm:

1. Loosen hold open nut.
2. Open door to 5° less than desired hold position and tighten hold open nut securely.

Screw Type	Picture	Cylinder Mounting	Shoe Mounting	5th Hole Mounting
Wood (for wood doors & frames)		4 @ 1 3⁄16"	4 @ 1 3⁄8"	1 @ 2"
Machine (for metal doors & frames) Requires hole drilling & tapping; best hold.		4 @ 1"	4 @ 5⁄8"	1 @ 1 ½"
SRT - Self Reaming & Tapping (for metal doors & frames)		4 @ 1 ½"	4 @ 1 ½"	1 @ 2"

Screw Type	Picture	Notes
Fifth Hole Spacer		
Thru Bolts		Used when mounting through door.
Pinion Attachment Screw		1 M6 x 10mm for attachment of the arm (see step 6).
Cover Screws		

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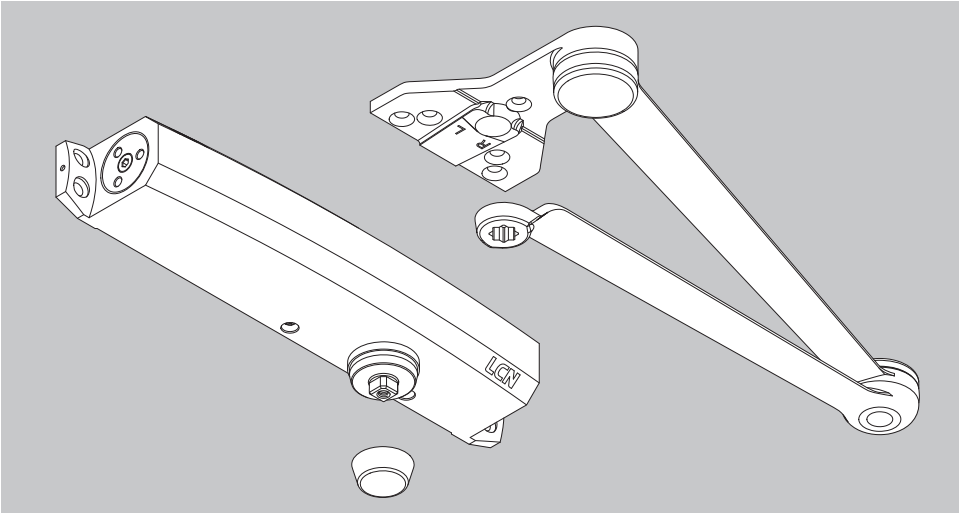
Serie DA 1450 y 1450

LCN®

Montaje EDA/HEDA

Instrucciones de Instalación

PIEZAS

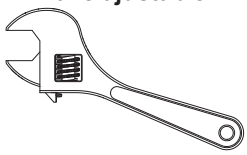


ⓘ **La información sobre el paquete de tornillos se encuentra en la página 7.**

HERRAMIENTAS

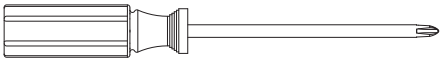
Llave hexagonal de 5⁄32" o 4 mm

Llave ajustable



Broca de taladro de ⅛"

Destornillador con cabeza Phillips



ⓘ **Información sobre la llave para mantener abierto en la página 7.**

⚠ PRECAUCIÓN ⚠

La instalación o regulación incorrecta puede resultar en lesiones personales o daño a los bienes.
Siga todas las instrucciones con atención.
En caso de duda, llame a LCN al 877-671-7011

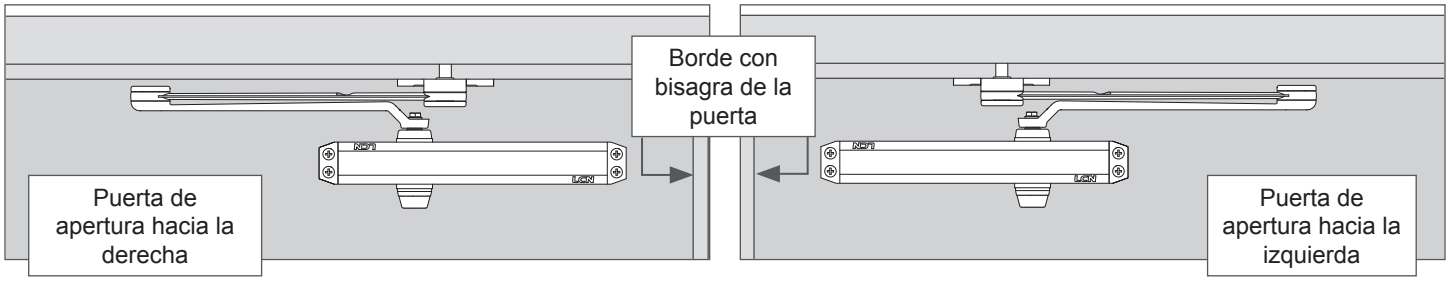
Los brazos para mantener abierto no deben instalarse en puertas con clasificación ignífuga.

¡Abrir demasiado las válvulas de regulación puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales.
SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

¡NO USE EL MECANISMO DE CIERRE COMO TOPE DE LA PUERTA!
Se recomienda el uso de un tope auxiliar en el punto de mantener abierto o donde la puerta no puede girar 180°.

Seleccione el tipo de instalación

EDA (vea la página 6)



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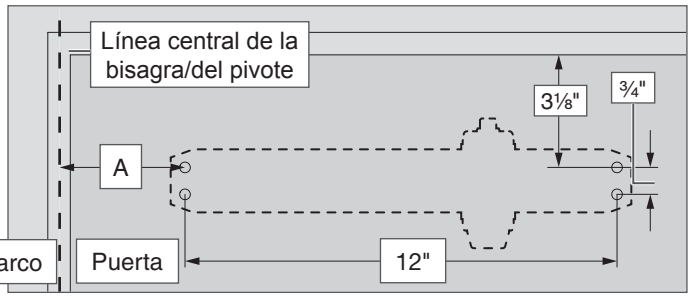
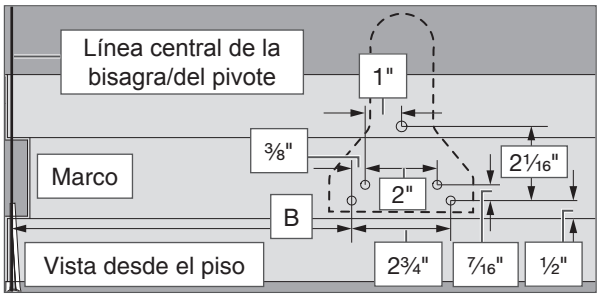
Montage en EDA

Dimensiones de montaje

ⓘ **Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.**





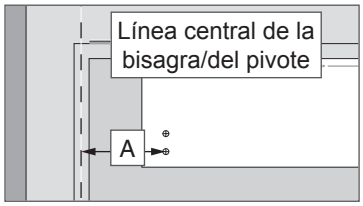
1 Determine el grado de apertura de la puerta requerido y busque las dimensiones “A” y “B” en el cuadro siguiente.

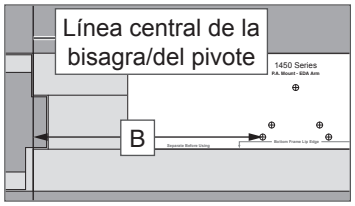
A	Apertura	Medición desde el borde de la puerta
El mecanismo de cierre	Hasta 120°	3 3/4”
	120° a 180°	1 1/4”

B	Apertura	Medición desde el borde de la puerta
el zócalo	Hasta 120°	9 3/8”
	120° a 180°	6 7/8”

2 Mida desde la línea central de la bisagra/del pivote y adhiera la plantilla en la puerta. Marque los orificios de perforación

ⓘ **Vea las Dimensiones de montaje anteriores según sea necesario.**





3 Retire la plantilla y perfore orificios donde está marcado con una broca de taladro de ⅛” para tornillos SRT.

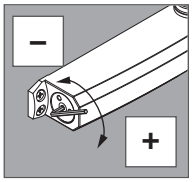
ⓘ **Los tornillos SRT se usan en puertas de metal.**
Los tornillos de madera se usan en puertas de madera.

4 Mida y determine el ancho de su puerta. Con una llave hexagonal, ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

Gire en sentido antihorario para “-”; gire en sentido horario para “+”.

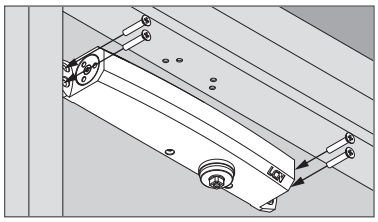
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

Ancho de la puerta	Número de giros
Configuración de ADA	-5
32” - 815 mm	-3
36” - 915 mm	0
42” - 1050 mm	+5
48” - 1220 mm	+10
54” - 1372mm	+15



5 Instale el mecanismo de cierre en la puerta.

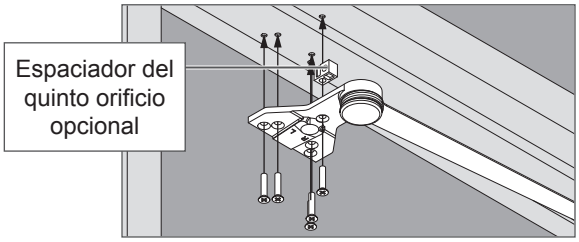
ⓘ **La vàlvula de regulaciòn de velocidad va con direction opuesta de la bisagra.**



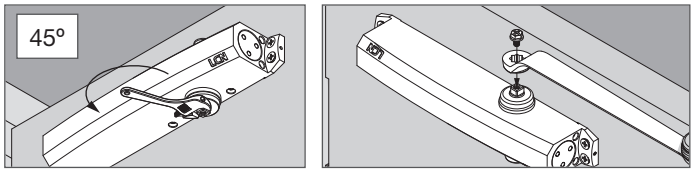
6 Instale el zócalo del EDA en el marco, luego en la varilla y el zócalo.

ⓘ **Use el espaciador del quinto orificio si hay un espacio entre el marco y el zócalo del EDA.**

ⓘ **Instalación limitada a listones de más de 2 11⁄16”.**



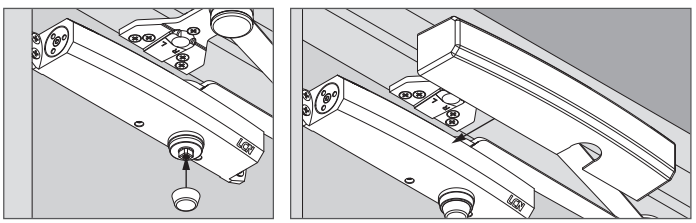
7 Gire el eje del cerrador a 45° y coloque el brazo principal con los sujetadores ya incluidos.



8 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 7 para ver las instrucciones de ajuste del mecanismo de cierre.

9 Atornille la tapa en el eje e instale la cubierta.

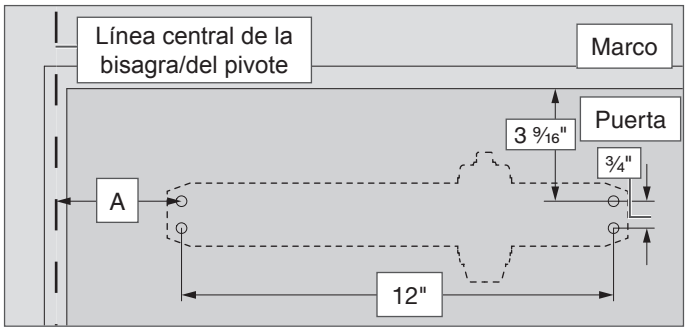
ⓘ **Use tornillos para las cubiertas completas de plástico y de metal.**

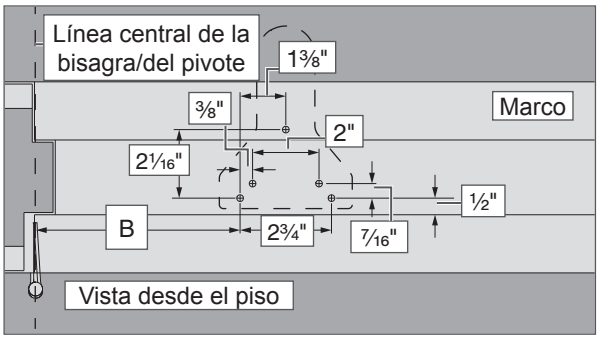


Zapata EDA-62G

Siga las instrucciones de EDA para la instalación usando las dimensiones que figuran a continuación. La única diferencia entre EDA y EDA 62G es la ubicación del cierrapuertas en la puerta.

Zapata EDA-62G:





Ajuste de la válvula del mecanismo de cierre

Compruebe el tiempo de cierre y ajuste el mecanismo de cierre de ser necesario.

⚠ PRECAUCIÓN ⚠

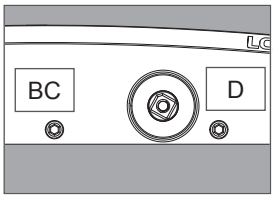
¡Abrir demasiado las válvulas de regulación (como se describe a continuación) puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales.

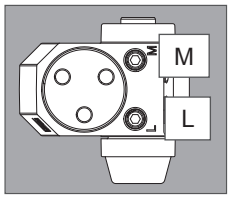
SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

ⓘ **La Vàlvula se Cierra hacia el lado dercho(en direction de las agujas del reloj) hasta que tope,nunca mas de tres vueltas al lado izquierdo(en contra de las manesillas del reloj) del tope. Ajuste las válvulas en incrementos de 1/4 de giro o menos a la vez. ¡NO GIRE MÁS DE 4 ROTACIONES COMPLETAS - ESTO OCASIONARÁ QUE EL MECANISMO DE CIERRE TENGA UNA FUGA DE ACEITE!**

ⓘ **NO AJUSTE LA VELOCIDAD DEL PASADOR SI LA PUERTA NO SE TRABA. Si esto sucede, ajuste la fuerza del resorte.**

1. Abra la puerta a 90°, mida cuánto tiempo tarda la puerta en cerrar y trabarse. Un tiempo típico de cierre es de 5 a 7 segundos, divido de manera uniforme entre velocidad principal y velocidad del pasador.
2. Si se necesita ajustar el tiempo de cierre, use las válvulas del mecanismo de cierre como se describe a continuación.
   a. Retención (BC): controla la velocidad de apertura de la puerta cuando el ángulo de la puerta se acerca a 90°. **No usar como tope de puerta.**
   b. Velocidad principal (M): controla la velocidad de la puerta durante la mayor parte del movimiento de cierre.
   c. Velocidad del pasador (L): controla la velocidad de la puerta durante los últimos grados del cierre de la puerta.
   d. Velocidad principal de DA (D): esto controla la velocidad de retardo de los cilindros de DA. **Esta válvula se encuentra solo en cilindros DA.**
3. Gire las válvulas en sentido horario para reducir la velocidad de la puerta y en sentido antihorario para aumentar la velocidad de la puerta. La velocidad del pasador y la velocidad principal deben ajustarse conjuntamente.





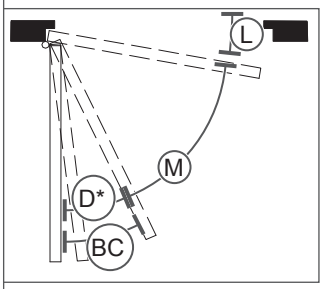
BC = válvula de retención

M = válvula de velocidad principal

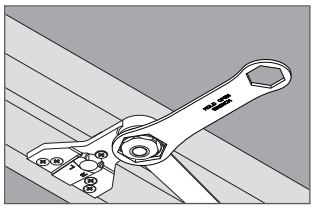
D = Válvula de velocidad de retardo*

L = válvula de velocidad del pasador

* Opcional

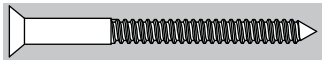
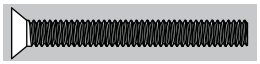
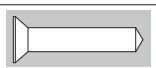


Brazos opcionales para mantener abierto (HEDA)



Para ajustar el brazo opcional para mantener abierto:

1. Afloje la tuerca del brazo para mantener abierto.
2. Abra la puerta a 5° menos que la posición deseada para mantener abierto y ajuste la tuerca del mecanismo para mantener abierto firmemente.

Tipo de tornillo	Imagen	Montaje en el cilindro	Montaje en el soporte	Montaje en el 5.° orificio
Madera (para puertas y marcos de madera)		4 @ 1 3⁄16"	4 @ 1 3⁄8"	1 @ 2"
Máquina (para puertas y marcos de metal) Requiere perforación de orificio y formación de rosca; mejor sujeción		4 @ 1"	4 @ 5⁄8"	1 @ 1 ½"
SRT: autoperforación y formación de rosca (para puertas y marcos de metal)		4 @ 1 ½"	4 @ 1 ½"	1 @ 2"

Tipo de tornillo	Imagen	Notas
Espaciador del quinto orificio		
Pernos pasantes		Se utiliza al montar a través de la puerta
Tornillo de sujeción del piñón		1 M6 x 10 mm para la sujeción del brazo (ver el paso 6)
Tornillos de cubierta		

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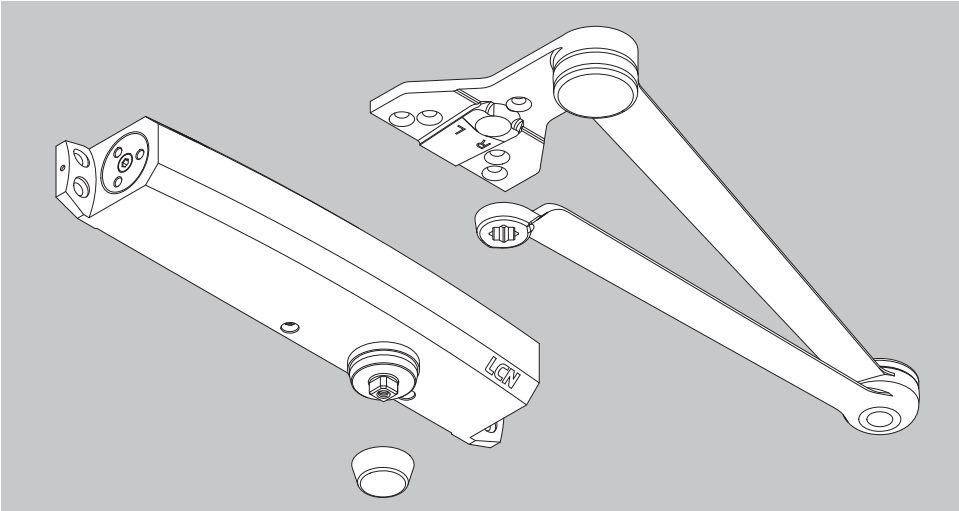
Montage du EDA/HEDA

Instructions d'installation

PIÈCES

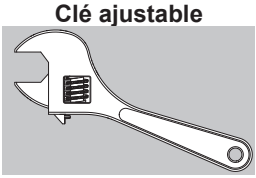


ⓘ **Informations sur l'ensemble de vis à la page 11.**

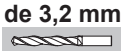
OUTILS

Clé Allen de 4 mm ou 5⁄32 po

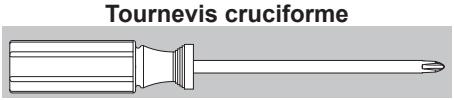
Clé ajustable



Mèche de 3,2 mm (⅛ po)



Tournevis cruciforme



ⓘ **Informations sur la clé ouverte à la page 11.**

⚠ MISE EN GARDE ⚠

Une installation inadéquate ou le non-respect des règlements peut causer des blessures ou des dommages matériels.
Suivez attentivement toutes les instructions.
Pour toute question, appelez LCN au 877-671-7011.

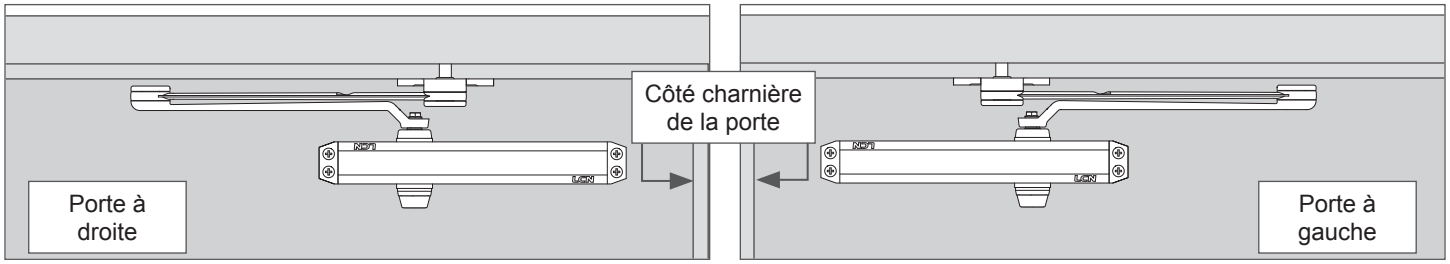
Les bras de retenue ne doivent pas être installés sur les portes coupe-feu.

Une trop grande ouverture des soupapes de régulation peut entraîner une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

ÉVITEZ D'UTILISER LE DISPOSITIF DE FERMETURE COMME BUTOIR DE PORTE!
Il est recommandé d'utiliser un butoir auxiliaire au point de retenue ou à l'endroit où la porte ne peut s'ouvrir à 180°

Choisissez le type d'installation

Montage du EDA (voir page 10)



Service à la clientèle

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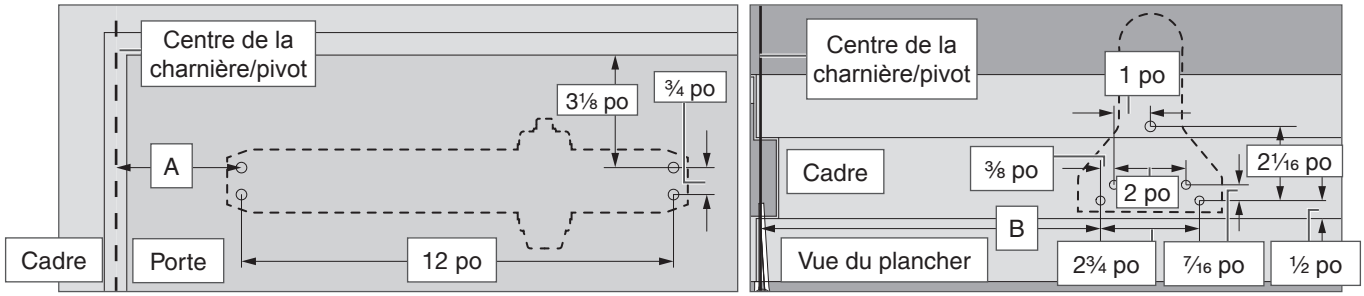
Montage du EDA

Dimensions de montage

ⓘ **Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.**



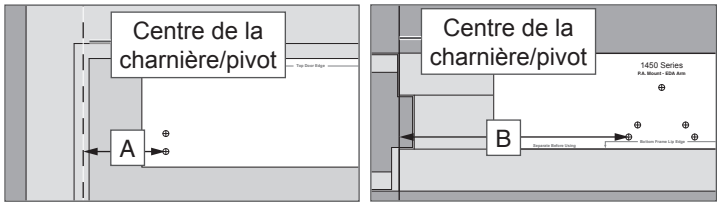
1 Déterminez le degré d'ouverture de la porte requis et trouvez les dimensions « A » et « B » dans les tableaux ci-dessous.

A – Dispositif de fermeture	Ouverture	Mesure à partir du bord de la porte
	Jusqu'à 120°	3 3/4"
	120° à 180°	1 1/4"

B – Sabot	Ouverture	Mesure à partir du bord de la porte
	Jusqu'à 120°	9 3/8"
	120° à 180°	6 7/8"

2 Mesurez à partir du centre de la charnière/pivot et collez le gabarit sur la porte. Faites des marques pour les trous à percer.

ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**



3 Retirez le gabarit et percez des trous de 3,2 mm (1/8 po) aux endroits marqués avec une mèche pour les vis SRT.

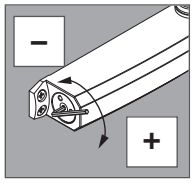
ⓘ **Les vis SRT sont utilisées sur les portes en métal.**
Les vis à bois sont utilisées sur les portes en bois.

4 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé Allen, réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.

Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

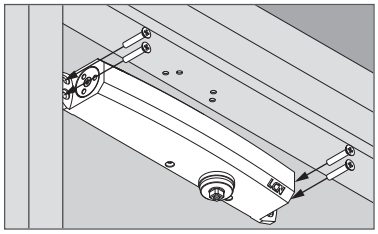
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

Largeur de la porte	Nombre de tours
Réglage de l'ADA	-5
32 po - 815 mm	-3
36 po - 915 mm	0
42 po - 1050 mm	+5
48 po - 1220 mm	+10
54 po - 1372mm	+15



5 Installez le dispositif de fermeture sur la porte.

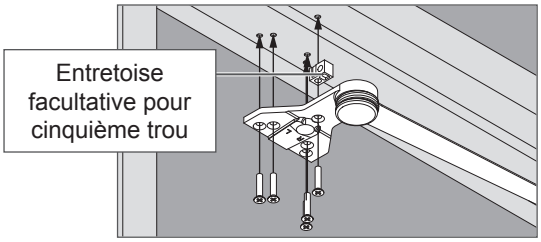
ⓘ **La valve d'ajustement de le vitesse va du côté opposé aux charnières.**



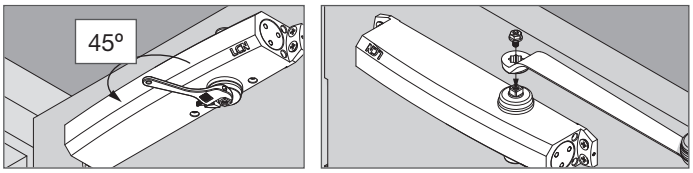
6 Installez le sabot du EDA sur le cadre.

ⓘ **Utilisez l'entretoise facultative du cinquième trou seulement s'il y a un espace entre le cadre et le sabot du EDA.**

ⓘ **Installation limitée pour révéler plus de 2 11⁄16 po.**



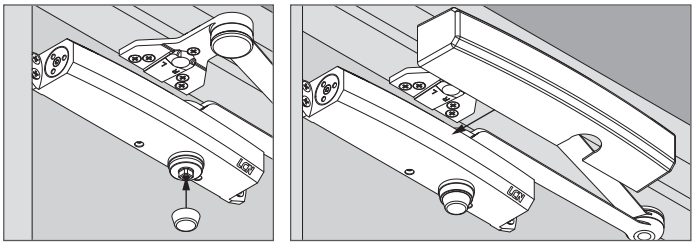
7 Faire pivoter l'arbre du dispositif de fermeture 45°, installez et serrez la vis du bras principal.



8 Réglez le dispositif de fermeture au besoin. Consultez la page 11 pour les instructions de réglage du dispositif de fermeture.

9 Tournez le capuchon sur l'arbre et installez le couvercle.

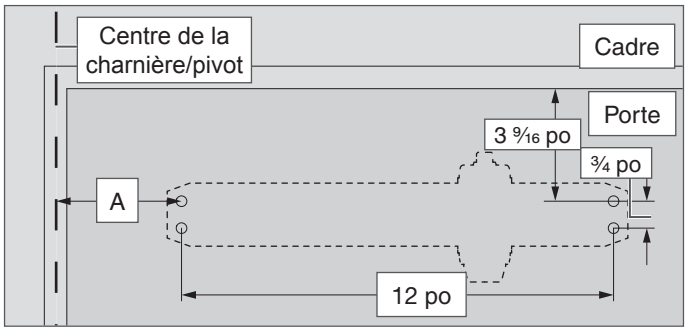
ⓘ **Utilisez des vis pour les couvercles entièrement en plastique et en métal.**

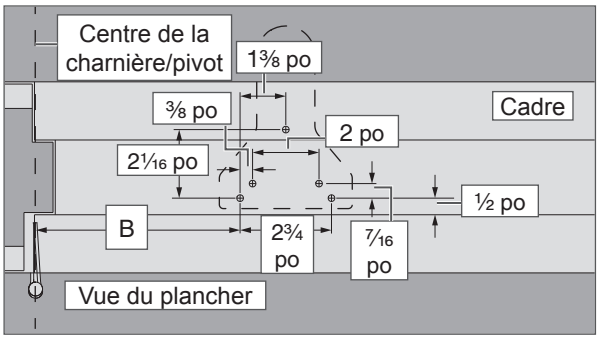


Sabot EDA-62G

Respectez les instructions du bras EDA pour l'installation selon les dimensions indiquées ci-dessous. La seule différence entre les bras EDA et EDA 62G est l'emplacement du système de fermeture sur la porte.

Sabot EDA-62G:





Réglage de la soupape du dispositif de fermeture

Vérifiez le temps de fermeture et réglez le dispositif de fermeture au besoin.

⚠ MISE EN GARDE ⚠

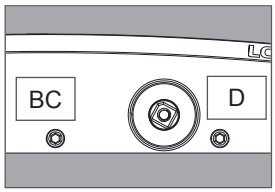
Trop ouvrir les soupapes de régulation (décrites ci-dessous) peut causer une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.

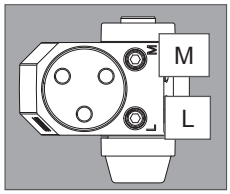
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

ⓘ **La valve se ferme en tournant dans le sens des aiguilles d'une montre; ne jamais faire plus de 3 tours dans le sens opposé aux aiguilles d'une montre à partir de la position fermée. Réglez les soupapes en effectuant 1/4 de tour ou moins à la fois. N'EFFECTUEZ PAS PLUS DE 3 ROTATIONS COMPLÈTES - CELA CAUSERA UNE FUITE D'HUILE DANS LE DISPOSITIF DE FERMETURE!**

ⓘ **NE RÉGLEZ PAS LA VITESSE D'ENCLENCHEMENT SI LA PORTE NE S'ENCLENCHE PAS. Si cela se produit, réglez la force du ressort.**

1. Ouvrez la porte à 90° et comptez le temps nécessaire pour que la porte se ferme et s'enclenche. Le temps de fermeture typique est de 5 à 7 secondes et est divisé également entre la vitesse principale et la vitesse d'enclenchement.
2. Si le temps de fermeture doit être réglé, utilisez les soupapes du dispositif de fermeture décrites ci-dessous.
   a. Retenue (BC) - contrôle la vitesse d'ouverture de la porte lorsque l'angle s'approche de 90°. **N'utilisez pas de butoir.**
   b. Vitesse principale (M) - contrôle la vitesse de la porte durant presque tout le mouvement de fermeture.
   c. Vitesse d'enclenchement (L) - contrôle la vitesse de la porte durant les derniers degrés de la fermeture.
   d. Vitesse DA (D) — contrôle la vitesse du retardement des cylindres DA. **Cette soupape est présente sur les cylindres à retardement seulement.**
3. Faites tourner les soupapes dans le sens horaire pour faire diminuer la vitesse de la porte, et dans le sens antihoraire pour la faire augmenter. La vitesse d'enclenchement et la vitesse principale doivent être réglées ensemble.





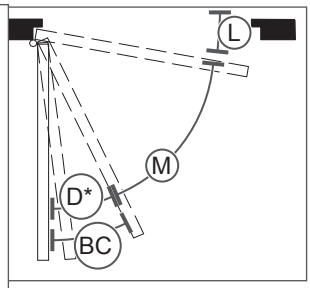
BC = soupape de retenue

M = soupape de la vitesse principale

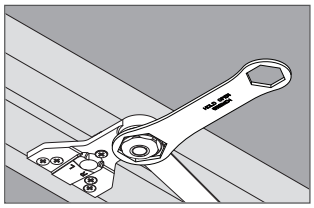
D = Valve de vitesse de délai*

L = soupape de la vitesse d'enclenchement

* Optionnel

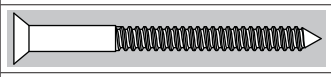


Bras de retenue facultatifs (HEDA)



Pour régler le bras de retenue facultatif :

1. Desserrez l'écrou de retenue.
2. Ouvrez la porte de 5° de moins que la position de retenue désirée puis serrez bien l'écrou de retenue.

Type de vis	Image	Montage du cylindre	Montage du support du BP	Montage du 5e trou
Bois (pour les portes et les cadres en bois)		4 @ 1 3⁄16 po	4 @ 1 3⁄8 po	1 @ 2 po
De mécanique (pour les portes et les cadres en métal) Nécessite de percer des trous et de tarauder; meilleure retenue		4 @ 1 po	4 @ 5⁄8 po	1 @ 1 1⁄2 po
SRT - Auto taraudeuse et à alésage automatique (pour les portes et les cadres en métal)		4 @ 1 1⁄2 po	4 @ 1 1⁄2 po	1 @ 2 po

Type de vis	Image	Remarques
Entretoise pour cinquième trou		
Boulons traversants		Utilisée lors du montage à travers la porte
Vis de fixation du pignon		1 M6 x 10 mm pour la fixation du bras (voir étape 6)
Vis du couverture		

28013

1461 EDA

110° Template
Push Side Mounting

LCN®

Installation Instructions

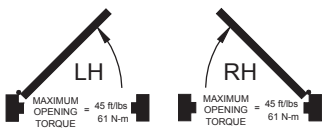
Note: Steps 1-7 show left hand door mount, right hand door is opposite.

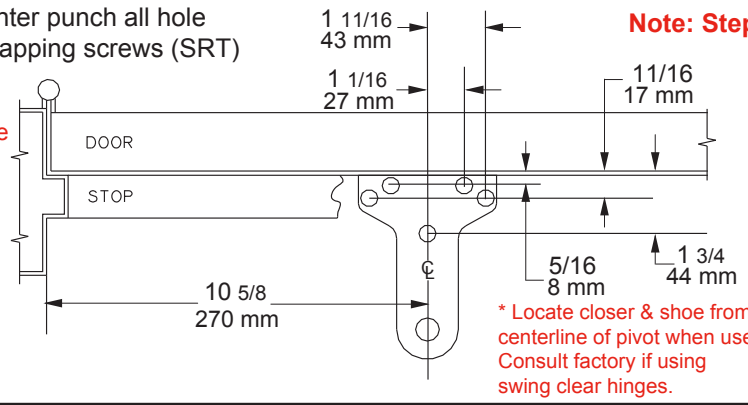
1

Locate proper template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes.

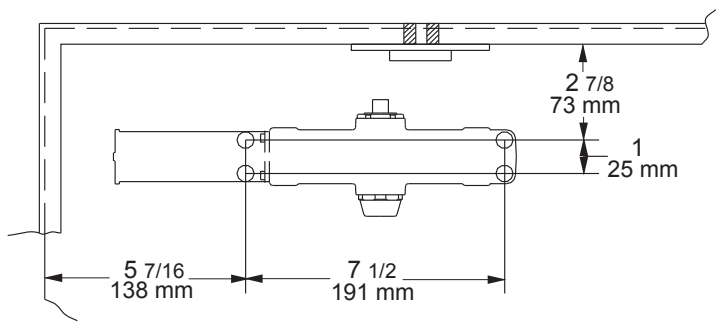
SRT Screw

Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.





* Locate closer & shoe from centerline of pivot when used. Consult factory if using swing clear hinges.

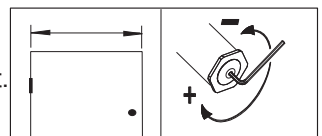


2

Determine door width, adjust spring power to match chart.

⚠CAUTION

IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 800 - 526 - 2400

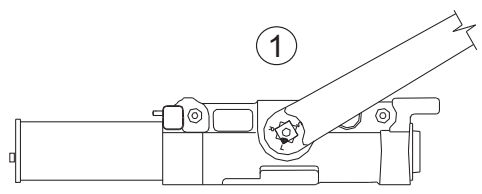


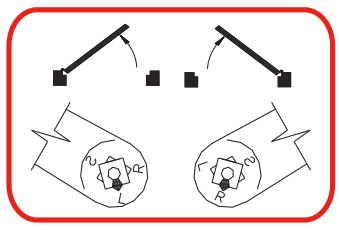
	1461
	♿ - 5
30"- 750mm	- 3
32"- 815mm	0
36"- 915mm	+ 2
42"- 1050mm	+ 6
48"- 1220mm	+ 10

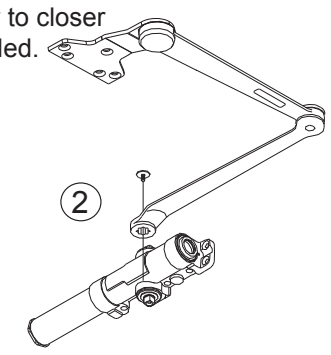
3

① Mount arm on shaft at 30° to closer, as shown.

② Secure arm assembly to closer with pinion screw provided.

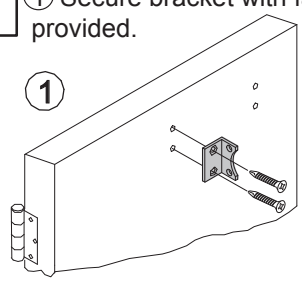




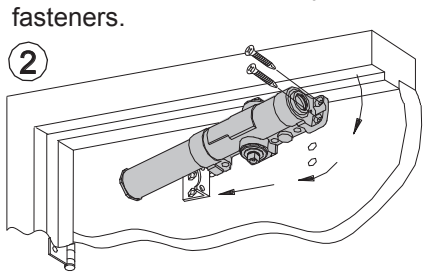


4

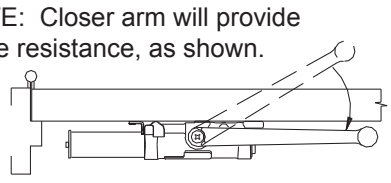
① Secure bracket with fasteners provided.

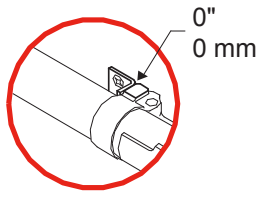


② Secure closer to door with provided fasteners.



NOTE: Closer arm will provide some resistance, as shown.

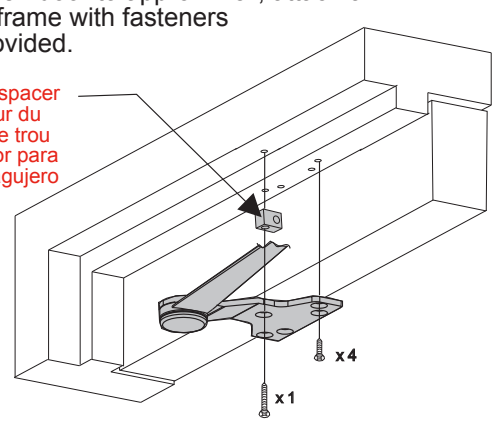




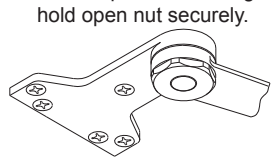
5

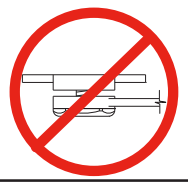
Open door to approx. 45°, attach arm to frame with fasteners provided.

Fifth hole spacer
Espaceur du cinquième trou
Espaciador para el quinto agujero



II To adjust Optional Handed Hold-open arm:
①Loosen hold open nut.
②Open door 5° less than desired position and tighten hold open nut securely.





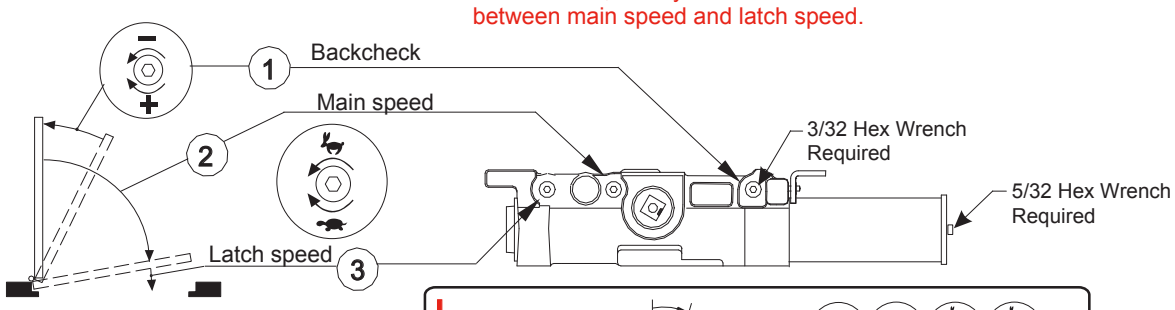
6

If necessary, adjust closer

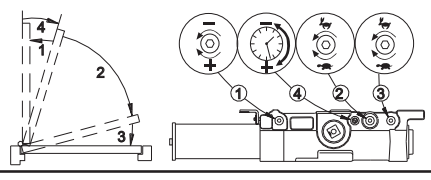
NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

⚠CAUTION

OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.

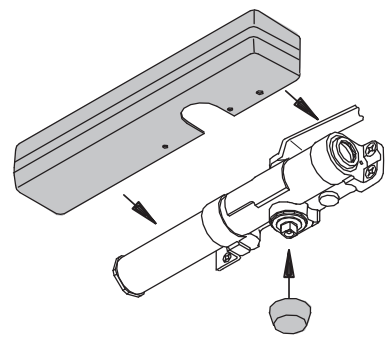


I Optional Delay Action
① - Backcheck
② - Main Speed
③ - Latch Speed
④ - Delay Speed



7

Snap on cover and shaft cap.



Patents Pending include:
Rapidor ™Installation System
PROPRIETARY, LCN Division, Schlage Lock Company

1461 EDA Instructions et gabarit 110° pour une installation sur le côté à pousser

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds.

Note : Les étapes 1- 7 illustrent une main gauche. Le sens est inversé pour une main droite.

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Indicateur rotatif de réglage du ressort.

3 ① Montez le bras sur la tige à 30° du ferme-porte, comme sur l'illustration.
② Fixez l'assemblage du bras au ferme-porte à l'aide des vis fournies.

4 ① Fixez la console à l'aide des attaches fournies.
② Fixez le ferme-porte sur la porte avec les attaches fournies.
NOTE: Le bras offrira une légère résistance, comme sur l'illustration.

5 Ouvrez la porte à environ 45°, fixez le bras au cadre à l'aide des attaches fournies.

6 Au besoin, réglez
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage

I Action retardée optionnelle
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage
④ - vitesse de retenue

7 Placez le couvercle et le capuchon du pignon.

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

II Pour régler le bras avec retenue à main optionnelle: 1. Desserrez la vis de retenue. 2. Ouvrez la porte 5° de moins que la position désirée et resserrez la vis.

⚠DANGER

Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 800 - 526 - 2400

⚠DANGER

UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

1461 Instrucciones EDA para plantilla 110° montaje al lado de empuje.

1 Localice la plantilla apropiada. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes.

Nota: Las etapas 1-7 indican un montaje de puerta a la izquierda, una puerta a la derecha está al opuesto.

Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

Indicador rotacional para el ajuste de la fuerza del resorte.

3 ① Monte el brazo en el eje a 30° del cerrador, tal como se muestra.
②Sujete el ensamblaje del brazo al cerrador con el tornillo piñión ya incluido.

4 ① Sujete el soporte con los sujetadores ya incluidos.
② Sujete el cerrador a la puerta con los sujetadores ya incluidos.

NOTA: El brazo del cerrador ofrecerá cierta resistencia, tal como se muestra.

5 Abra la puerta hasta aprox. 45°, sujete el brazo al bastidor con los sujetadores ya incluidos.

6 Ajusta si se necesario
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

I Acción retardada opcional
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro
④ - velocidad de retardo

7 Coloca la tapa y el tapón de tiro.

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

II Para ajustar el brazo de retención a mano opcional: 1. Afloja la tuerca de retención. 2. Abre la puerta a 5° de menos que la posición deseada y aprieta bien la tuerca de retención.

⚠ADVERTENCIA

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Customer Service 1-877-671-7011
Servicio al cliente **Service à la clientèle** www.allegion.com

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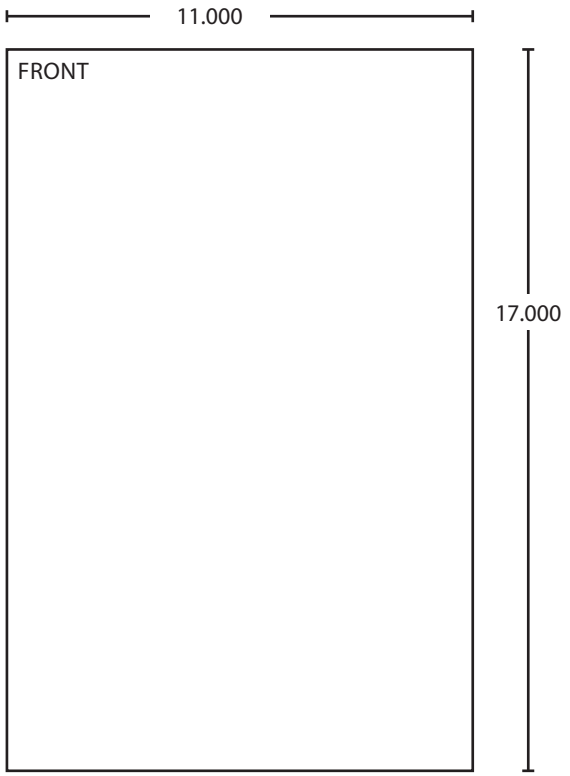
28013 Rev. 01/14-h



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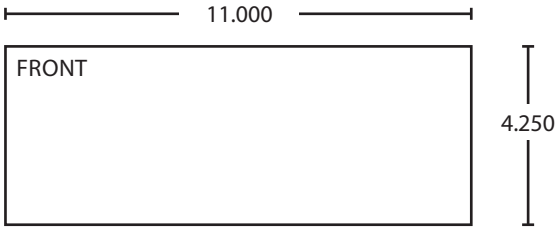

FOLDED SHEET

Additional Notes:
1. None

Revision History					
C	D	E	F	G	H
N/A	N/A	N/A	N/A	N/A	043812

Material
White Paper

Notes
1. printed one side
2. printed black and PMS 485 (red)
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
H > Revised artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043812	01-01-14

Title
1460 Series EDA Instruction Sheet

Creation Date	Number	Revision
04-27-10	28013	H

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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28020

1460/1461 TRACK

LCN®

180° Template Pull Side Mounting

Installation Instructions

1

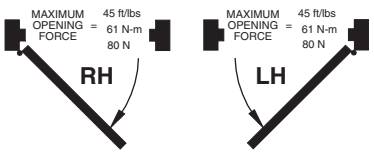
Locate proper template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes.

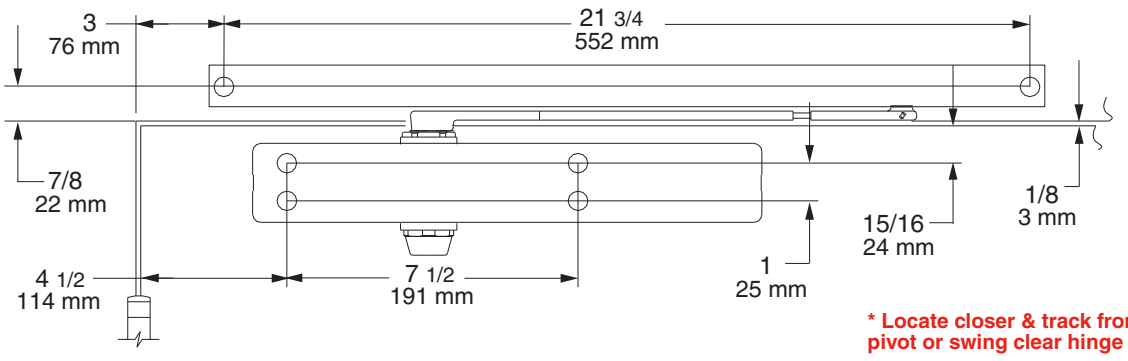
EN 2-4

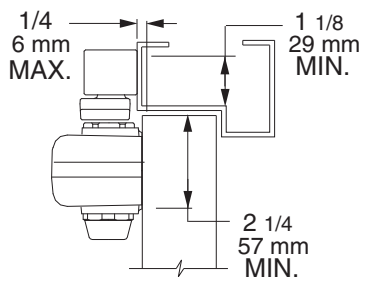
Note: Steps 1-8 show right hand door mount, left hand door is opposite.
Note: Hold open arms must not be installed on fire-rated doors.

SRT Screw

Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.







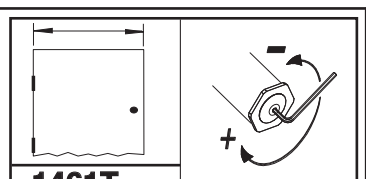
*** Locate closer & track from centerline of pivot or swing clear hinge pin when used.**

2

Determine door width, adjust spring power to match chart.

⚠CAUTION

IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877-671-7011

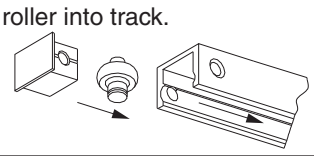


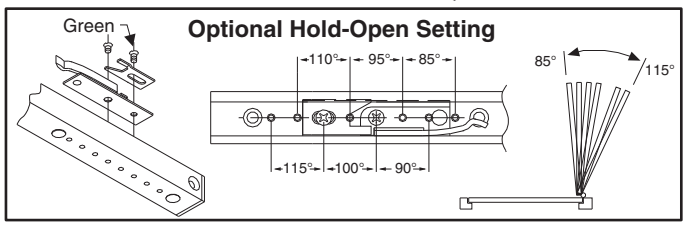
1461T	
♿	*0*

1460T	
30"- 750mm	*- 5*
36"- 915mm	*0*
48"- 1220mm	*+ 9*

3

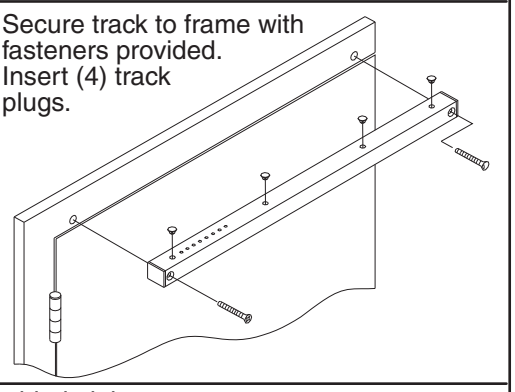
Assemble roller into track.





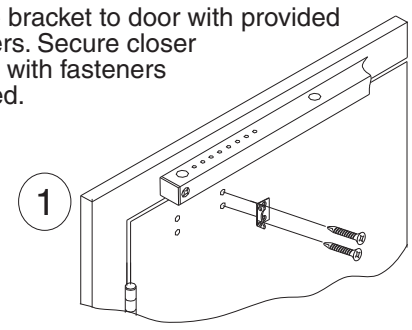
4

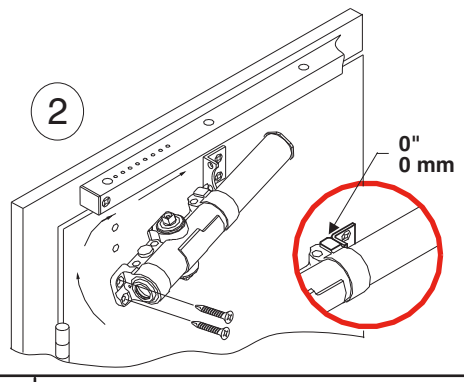
Secure track to frame with fasteners provided. Insert (4) track plugs.



5

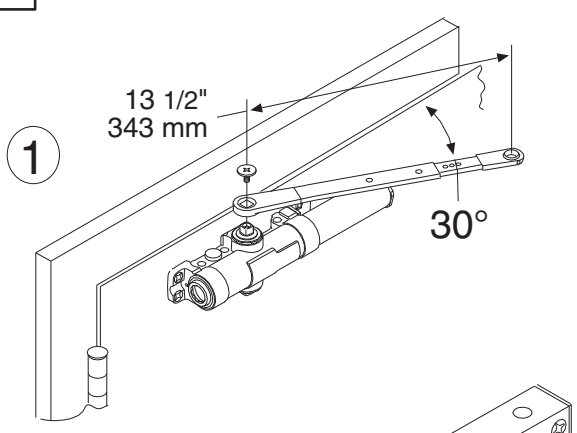
Secure bracket to door with provided fasteners. Secure closer to door with fasteners provided.

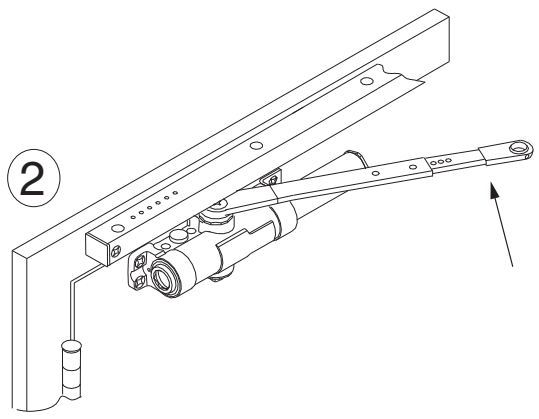


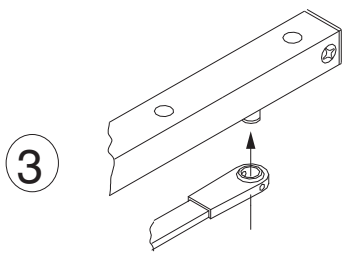


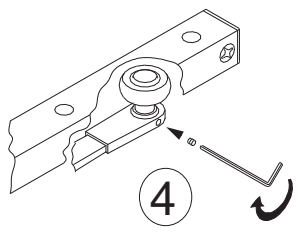
6

Attach arm to closer at pre-load position of 30°. Secure with provided pinion screw. Attach arm to track, as shown.









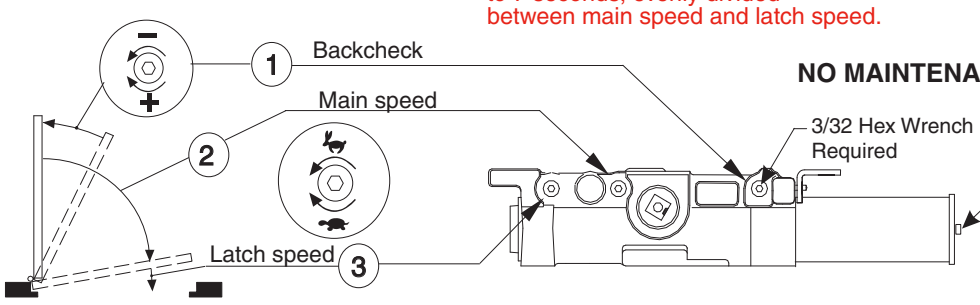
7

If necessary, adjust closer

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

⚠CAUTION

OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



NO MAINTENANCE REQUIRED

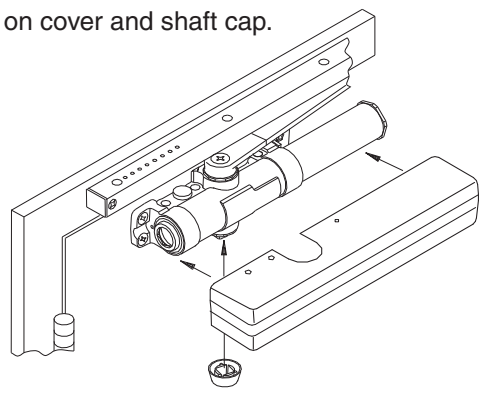
3/32 Hex Wrench Required

5/32 Hex Wrench Required

Patents Pending include:
Rapidor ™ Installation System
PROPRIETARY, LCN Division, Schlage Lock Company

8

Snap on cover and shaft cap.



1460/1461 Instructions pour rail et gabarit 180° pour une installation sur le côté à tirer

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds.

Note: Étapes 1-8 illustrent une main droite, main gauche à l'opposé

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Indicateur rotatif de réglage du ressort.

3 Glissez le galet dans le rail.
Réglage de l'angle d'ouverture optionnel

4 Fixez le rail au cadre avec les attaches fournies. Insérez les (4) bouchons du rail.

5 Fixez la console à la porte à l'aide des attaches fournies. Fixez le ferme-porte sur la porte avec les attaches fournies.

6 Attachez le bras au ferme-porte à la position préchargée de 30°. Fixez à l'aide des vis fournies. Attachez le bras au rail, comme sur l'illustration.

7 Au besoin, réglez
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

8 Placez le couvercle et le capuchon du pignon.

⚠DANGER

Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877-671-7011

⚠DANGER

UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

1460/1461 Instrucciones de rieles para plantilla 180° montaje al lado del tirón.

1 Localice la plantilla apropiada. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes.

Nota: Las etapas 1-8 indican un montaje de puerta a la derecha; una puerta a la izquierda está al lado opuesto.

Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

Indicador rotacional para el ajuste de la fuerza del resorte.

3 Monte el rodillo en el riel.
Posición de retención opcional

4 Sujete el riel al bastidor con los sujetadores ya incluidos. Inserte quatro (4) tapones de rieles.

5 Sujete el soporte a la puerta con los sujetadores ya incluidos. Sujete el cerrador a la puerta con los sujetadores ya incluidos.

6 Coloque el brazo al cerrador a la posición de prearma de 30°. Sujete con el tornillo de piñón ya incluido. Sujete el brazo al riel, tal como se muestra.

7 Ajusta si se necesita
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

8 Coloca la tapa y el tapón de tiro.

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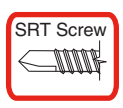
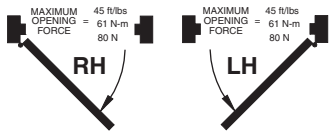
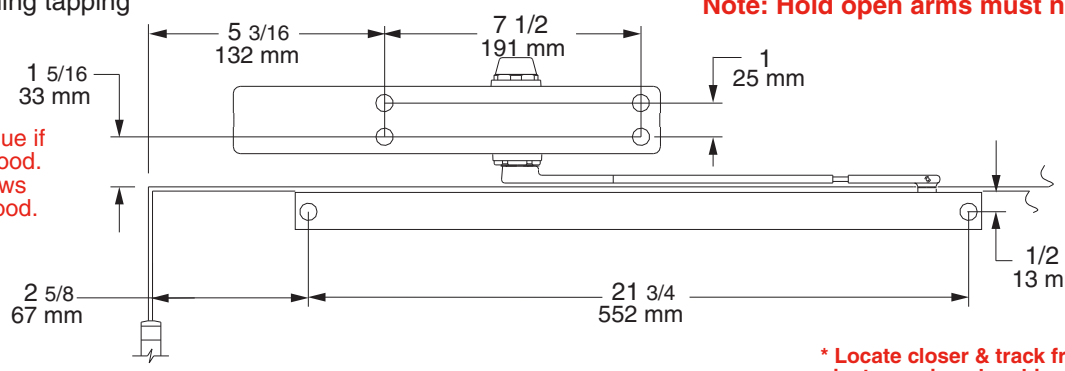
1 Locate proper template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes.

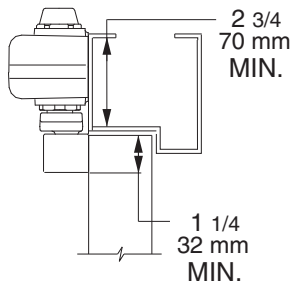
Note: Steps 1-8 show right hand door mount, left hand door is opposite.
Note: Hold open arms must not be installed on fire-rated doors.



Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.



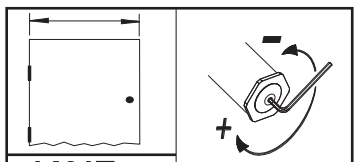




*** Locate closer & track from centerline of pivot or swing clear hinge pin when used.**

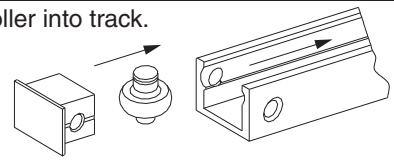
2 Determine door width, adjust spring power to match chart.

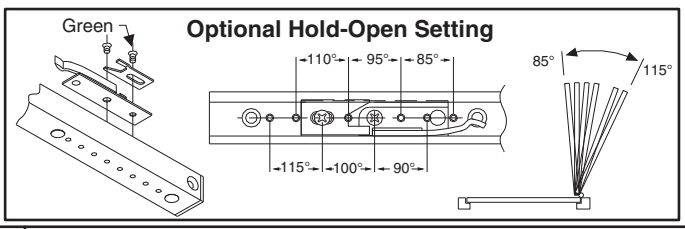
CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877-671-7011



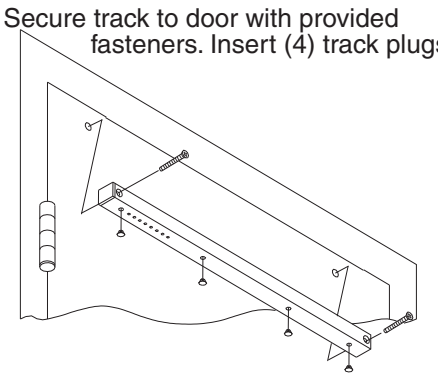
1461T	
♿	0
1460T	
30"- 750mm	- 5
36"- 915mm	0
48"- 1220mm	+ 9

3 Assemble roller into track.

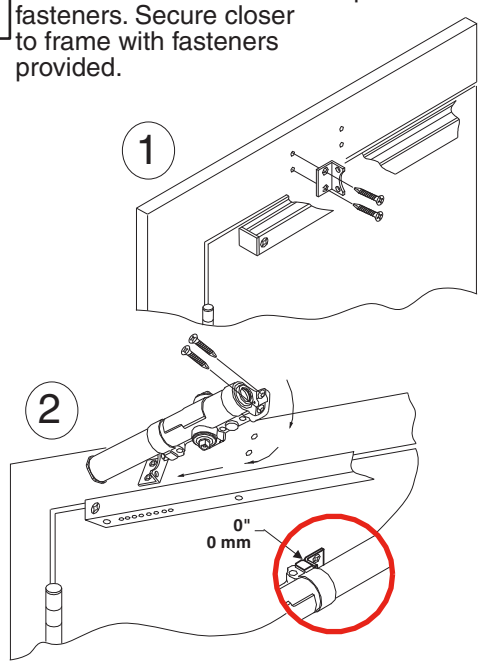




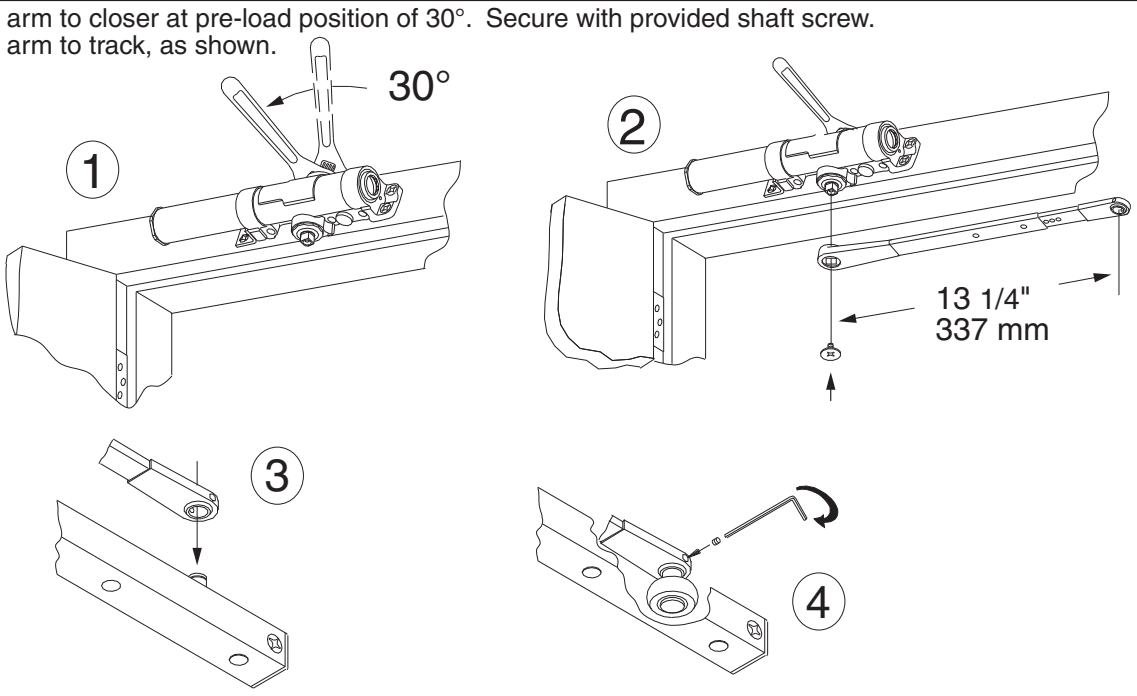
4 Secure track to door with provided fasteners. Insert (4) track plugs.



5 Secure bracket to frame with provided fasteners. Secure closer to frame with fasteners provided.



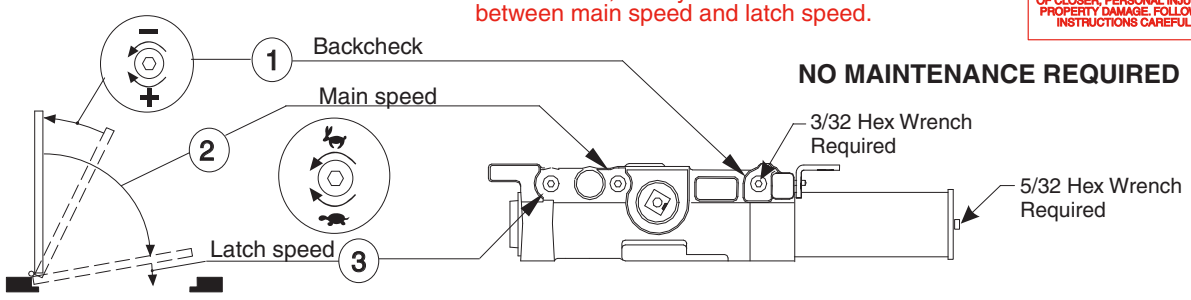
6 Attach arm to closer at pre-load position of 30°. Secure with provided shaft screw. Attach arm to track, as shown.



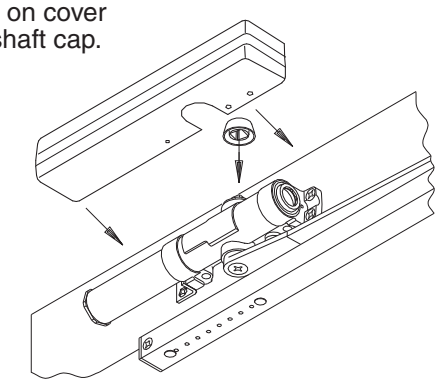
7 If necessary, adjust closer

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



8 Snap on cover and shaft cap.



1461 Rail Instructions et gabarit de 180° pour une installation sur le linteau

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds.

Note: Étapes 1-8 illustrent une main droite, main gauche à l'opposé

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Indicateur rotatif de réglage du ressort.

3 Glissez le galet dans le rail.
Réglage de l'angle d'ouverture optionnel

4 Fixez le rail sur la porte avec les attaches fournies. Insérez les (4) bouchons du rail.

5 Fixez la console au cadre à l'aide des attaches fournies. Fixez le ferme-porte sur la porte avec les attaches fournies.

6 Attachez le bras au ferme-porte à la position préchargée de 30°. Fixez à l'aide des vis fournies. Attachez le bras au rail, comme sur l'illustration.

7 Au besoin, réglez
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

8 Placez le couvercle et le capuchon du pignon.

DANGER
Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877-671-7011

DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

1461 Instrucciones de rieles para plantilla 180° montaje en la parte superior de la jamba.

1 Localice la plantilla apropiada. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes.

Nota: Las etapas 1-8 indican un montaje de puerta a la derecha; una puerta a la izquierda está al lado opuesto.

Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

Indicador rotacional para el ajuste de la fuerza del resorte.

3 Monte el rodillo en el riel.
Posición de retención opcional

4 Sujete el riel a la puerta con los sujetadores ya incluidos. Inserte quatro (4) tapones de riel.

5 Sujete el soporte al bastidor con los sujetadores ya incluidos. Asegure el cerrador a la puerta con los sujetadores ya incluidos.

6 Coloque el brazo al cerrador a la posición de prearma de 30°. Sujete con el tornillo de piñón ya incluido. Sujete el brazo al riel, tal como se muestra.

7 Ajusta si se necesita
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

8 Coloca la tapa y el tapón de tiro.

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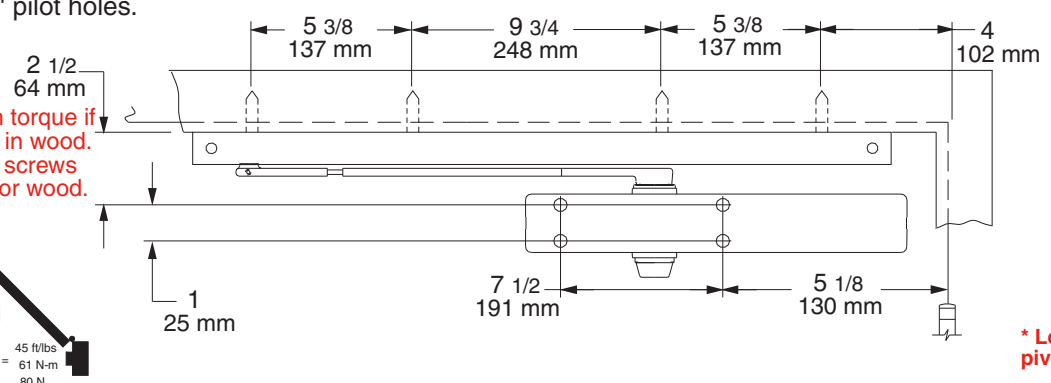
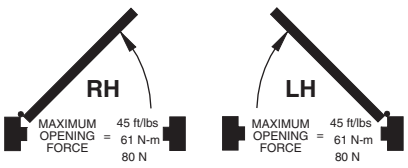
1 Locate proper template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes.

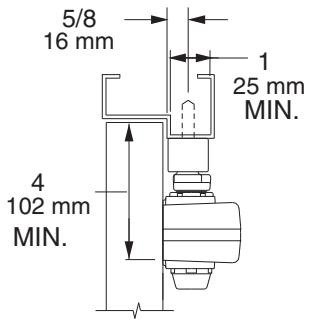
Note: Steps 1-8 show right hand door mount, left hand door is opposite.
Note: Hold open arms must not be installed on fire-rated doors.



SRT Screw

Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.

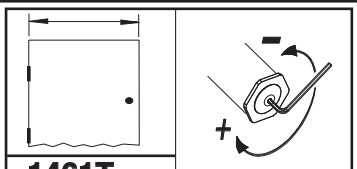




*** Locate closer & track from centerline of pivot or swing clear hinge pin when used.**

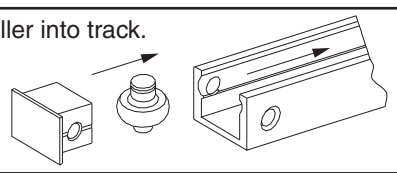
2 Determine door width, adjust spring power to match chart.

CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877-671-7011

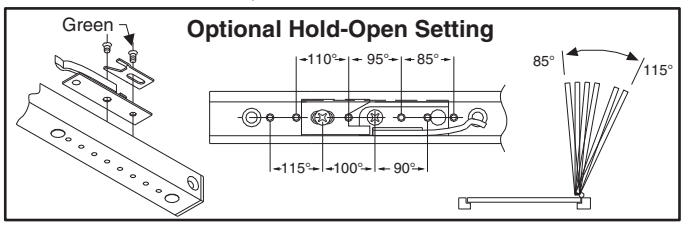


1461T	
♿	*0*
1460T	
30"- 750mm	*- 5*
36"- 915mm	*0*
48"- 1220mm	*+ 9*

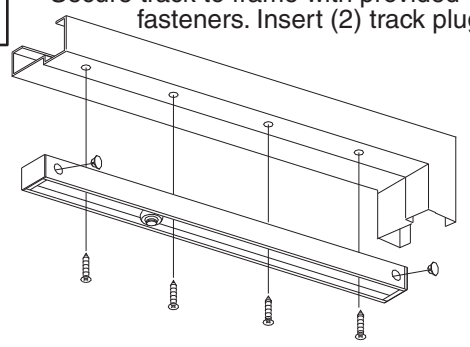
3 Assemble roller into track.



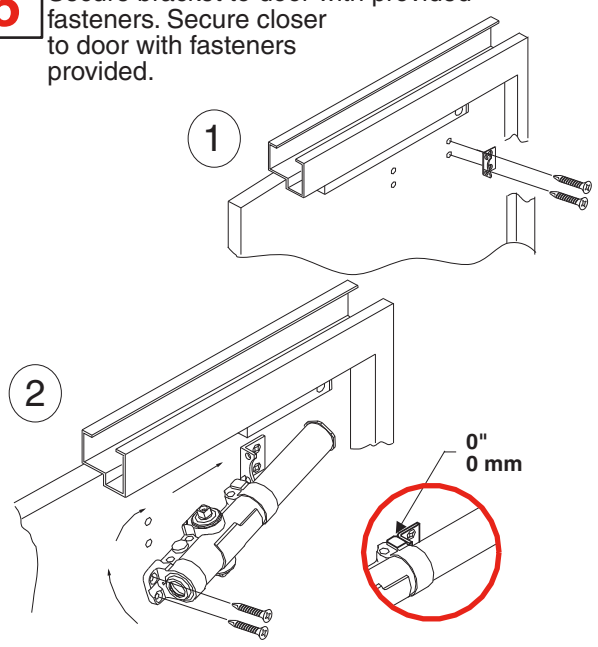
Optional Hold-Open Setting



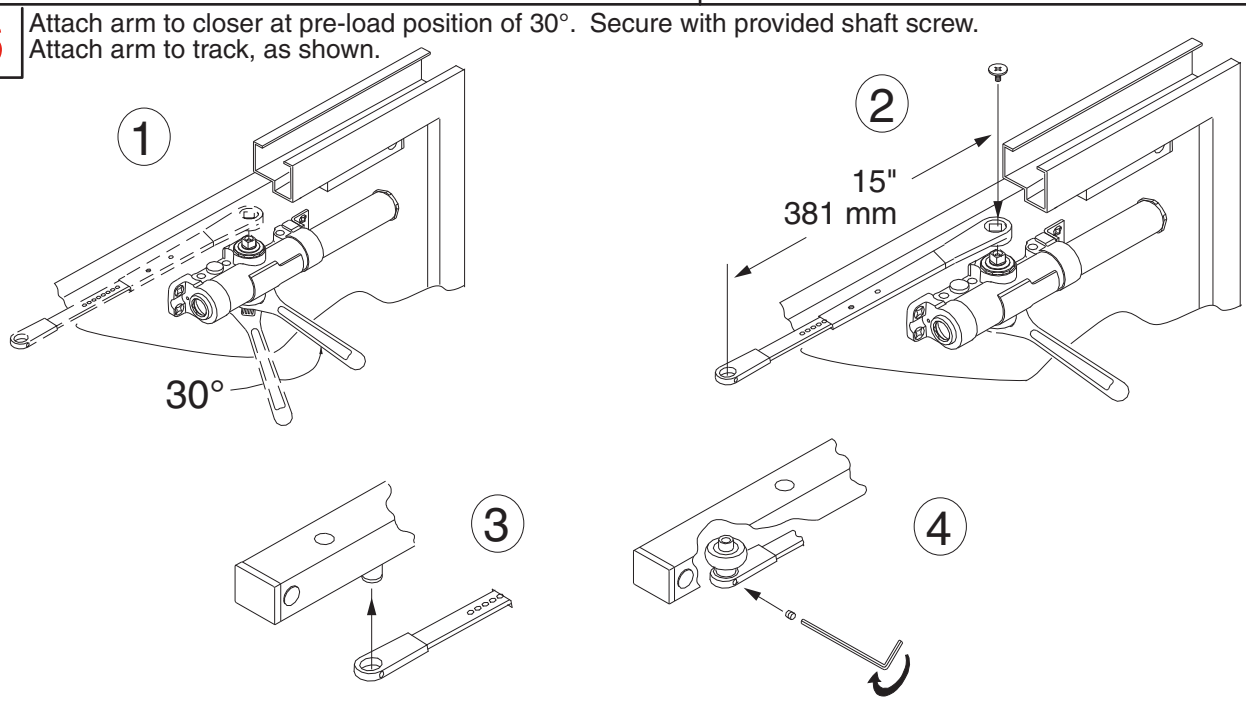
4 Secure track to frame with provided fasteners. Insert (2) track plugs.



5 Secure bracket to door with provided fasteners. Secure closer to door with fasteners provided.



6 Attach arm to closer at pre-load position of 30°. Secure with provided shaft screw. Attach arm to track, as shown.

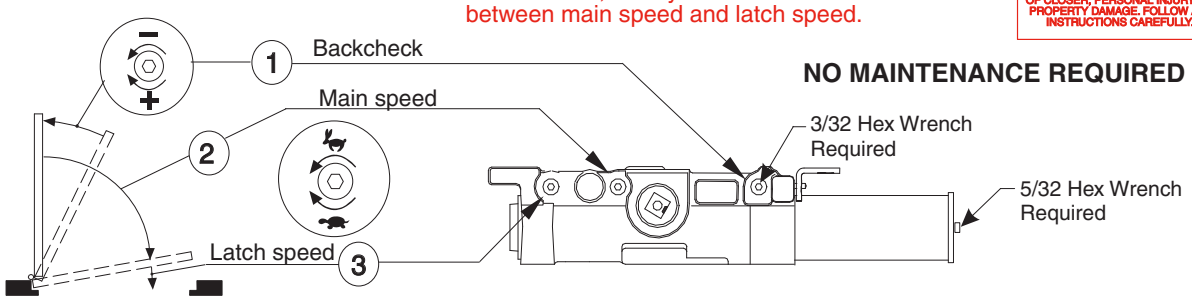


7 If necessary, adjust closer

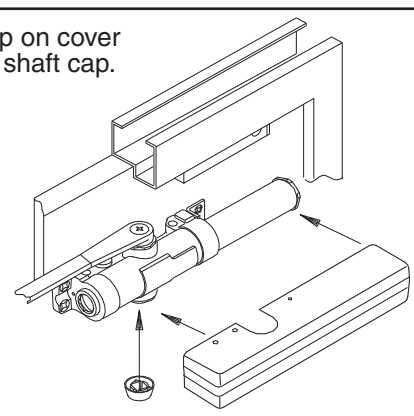
NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.

NO MAINTENANCE REQUIRED



8 Snap on cover and shaft cap.



1461 Rail Instructions et gabarit de 180° pour une installation sur le côté à pousser

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds.

Note: Étapes 1-8 illustrent une main droite, main gauche à l'opposé

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Indicateur rotatif de réglage du ressort.

3 Glissez le galet dans le rail.
Réglage de l'angle d'ouverture optionnel

4 Fixez le rail au cadre avec les attaches fournies. Insérez les (2) bouchons du rail.

5 Fixez la console à la porte à l'aide des attaches fournies. Fixez le ferme-porte sur la porte avec les attaches fournies.

6 Attachez le bras au ferme-porte à la position préchargée de 30°. Fixez à l'aide des vis fournies. Attachez le bras au rail, comme sur l'illustration.

7 Au besoin, réglez
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

8 Placez le couvercle et le capuchon du pignon.

DANGER
Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877-671-7011

DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

1461 Instrucciones de rieles para plantilla 180° montaje del lado de empuje.

1 Localice la plantilla apropiada. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes.

Nota: Las etapas 1-8 indican un montaje de puerta a la derecha; una puerta a la izquierda está al lado opuesto.
Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

Indicador rotacional para el ajuste de la fuerza del resorte.

3 Monte el rodillo en el riel.
Posición de retención opcional

4 Sujete el riel al bastidor con los sujetadores ya incluidos. Inserte dos (2) tapones de rieles.

5 Sujete el soporte a la puerta con los sujetadores ya incluidos. Sujete el cerrador a la puerta con los sujetadores ya incluidos.

6 Coloque el brazo al cerrador a la posición de prearma de 30°. Sujete con el tornillo de piñón ya incluido. Sujete el brazo al riel, tal como se muestra.

7 Ajusta si se necesita
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

8 Coloca la tapa y el tapón de tiro.

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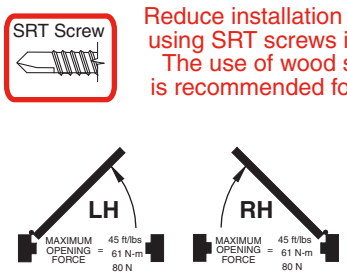
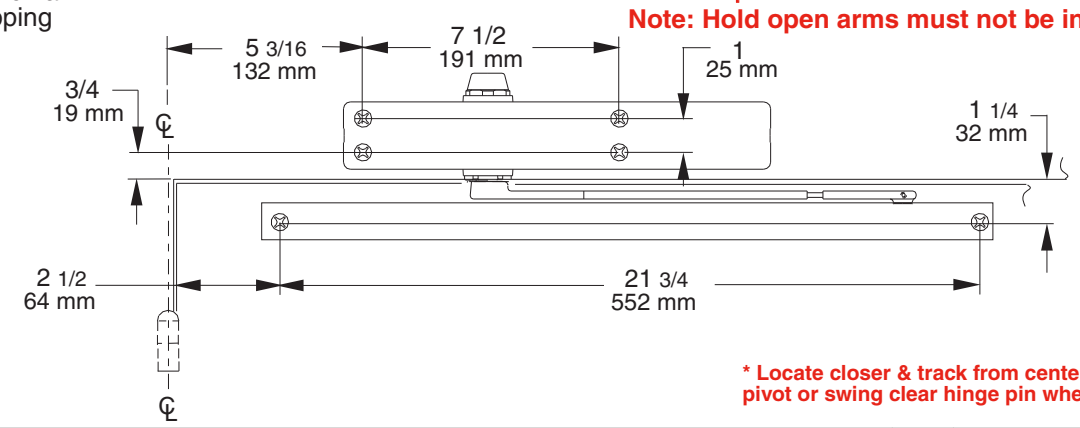
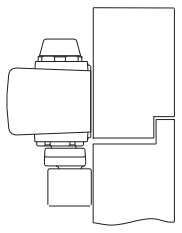
1 Locate proper template. Center punch all hole locations. For self reaming tapping screws (SRT)drill 1/8" pilot holes.

Note: Steps 1-8 show left hand door mount, right hand door is opposite.
Note: Hold open arms must not be installed on fire-rated doors.



Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.

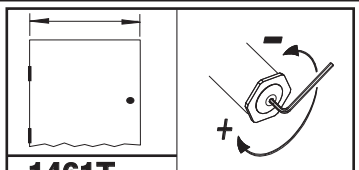




*** Locate closer & track from centerline of pivot or swing clear hinge pin when used.**

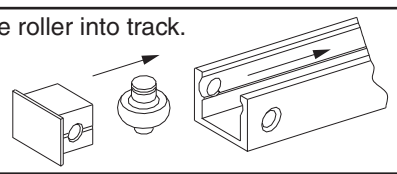
2 Determine door width, adjust spring power to match chart.

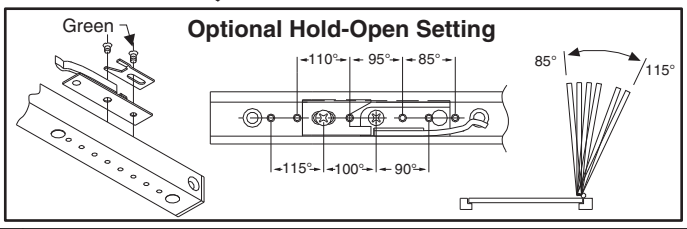
CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877-671-7011



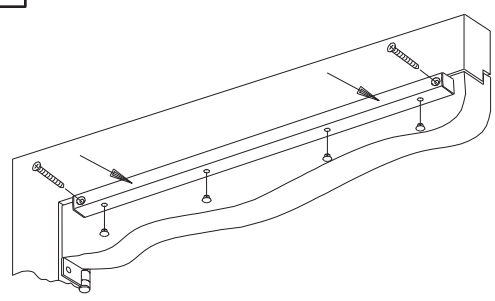
1461T	
♿	*0*
1460T	
30"- 750mm	*- 5*
36"- 915mm	*0*
48"- 1220mm	*+ 9*

3 Assemble roller into track.

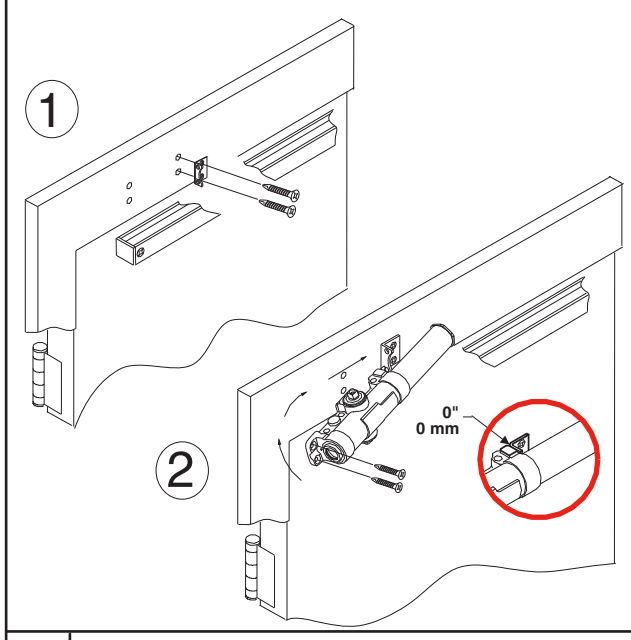




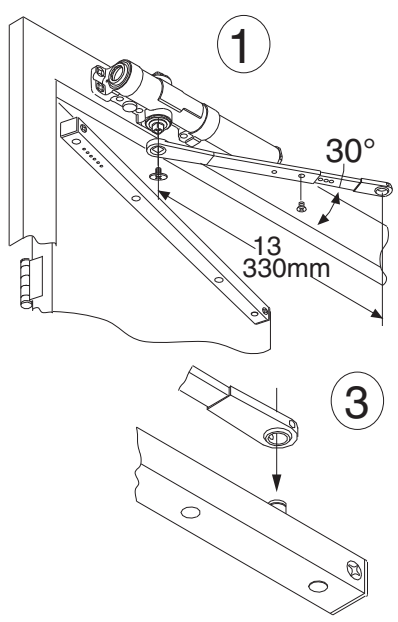
4 Secure track to door with provided fasteners. Insert (4) track plugs.

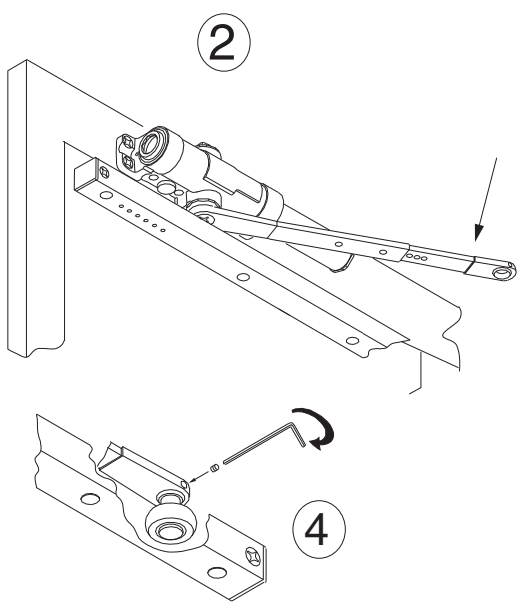


5 Secure bracket to frame with provided fasteners. Secure closer to frame with fasteners provided.



6 Attach arm to closer at pre-load position of 30°. Secure with provided shaft screw. Attach arm to track, as shown.

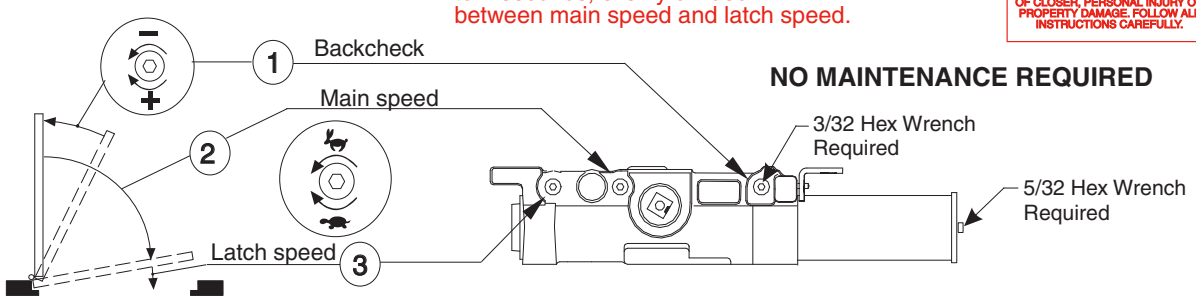




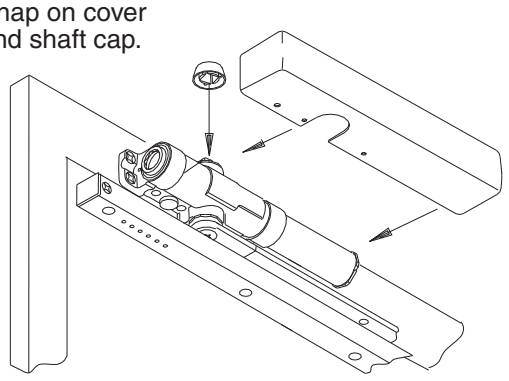
7 If necessary, adjust closer

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



8 Snap on cover and shaft cap.



1461 Rail Instructions et gabarit de 130° pour une installation sur le côté à pousser

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds.

Note: Étapes 1-8 illustrent une main droite, main gauche à l'opposé

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Indicateur rotatif de réglage du ressort.

3 Glissez le galet dans le rail.
Réglage de l'angle d'ouverture optionnel

4 Fixez le rail sur la porte avec les attaches fournies. Insérez les (4) bouchons du rail.

5 Fixez la console au cadre à l'aide des attaches fournies. Fixez le ferme-porte sur la porte avec les attaches fournies.

6 Attachez le bras au ferme-porte à la position préchargée de 30°. Fixez à l'aide des vis fournies. Attachez le bras au rail, comme sur l'illustration.

7 Au besoin, réglez
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

8 Placez le couvercle et le capuchon du pignon.

DANGER
Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877-671-7011

DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

1461 Instrucciones de rieles para plantilla 130° montaje del lado de empuje.

1 Localice la plantilla apropiada. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes.

Nota: Las etapas 1-8 indican un montaje de puerta a la derecha; una puerta a la izquierda está al lado opuesto.

Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

Indicador rotacional para el ajuste de la fuerza del resorte.

3 Monte el rodillo en el riel.
Posición de retención opcional

4 Sujete el riel a la puerta con los sujetadores ya incluidos. Inserte quatro (4) tapones de riel.

5 Sujete el soporte al bastidor con los sujetadores ya incluidos. Asegure el cerrador a la puerta con los sujetadores ya incluidos.

6 Coloque el brazo al cerrador a la posición de prearma de 30°. Sujete con el tornillo de piñón ya incluido. Sujete el brazo al riel, tal como se muestra.

7 Ajusta si se necesita
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

8 Coloca la tapa y el tapón de tiro.

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28020 Rev. 03/14-k

70856

Label Kit 700118

LCN®

For use with all low energy operators

Signage Instructions

ANSI A156.19-1997 requires these Applications for all low energy doors. Failure to do so leaves the installer LIABLE for any accident that might occur. THESE SIGNS MUST BE USED!

KIT CONTENTS:

PART #	KIT QTY.	DESCRIPTION	
27274	2	6 ½" YELLOW CIRCLE "CAUTION AUTOMATIC DOOR"	(2 SIDED)
740071-00	2	6 ½" x 1 ¾" BLUE RECTANGLE "ACTIVATE SWITCH TO OPERATE"	(2 SIDED)
740072-00	1	5" x 1 ¾" BLUE RECTANGLE "PUSH TO OPERATE"	(1 SIDED)
740073-00	1	5" x 1 ¾" BLUE RECTANGLE "PULL TO OPERATE"	(1 SIDED)
740069-00	2	HEADER JAMB DRILL TEMPLATE	
740070-00	1	SURFACE APPLIED HEADER MOUNTING DRILL TEMPLATE	

27274

740071-00

740072-00

740073-00

WHEN DOOR IS ACTIVATED BY SEPARATE WALL SWITCH, USE THE FOLLOWING:

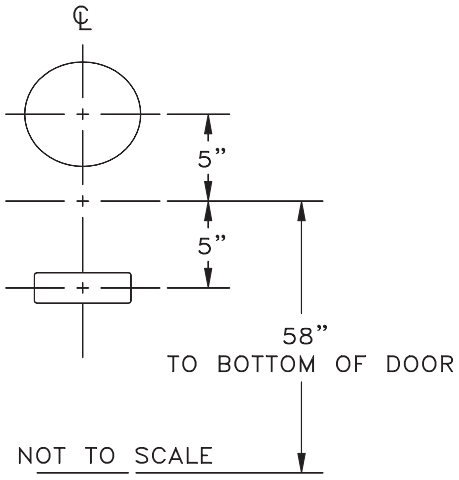
CLEAR GLASS DOOR			SOLID OPAQUE DOOR	
QTY	LABEL		QTY	LABEL
1	27274		2	27274
1	740071-00		2	740071-00

WHEN DOOR IS ACTIVATED BY DOOR MOTION, USE THE FOLLOWING:

CLEAR GLASS DOOR			SOLID OPAQUE DOOR	
QTY	LABEL		QTY	LABEL
1	27274		2	27274
1	740072-00		1	740072-00
1	740073-00		1	740073-00

LABEL LOCATION:

NOTE: Mount sign on door at a height of 58" (+/- 5") in a symmetrical pattern.



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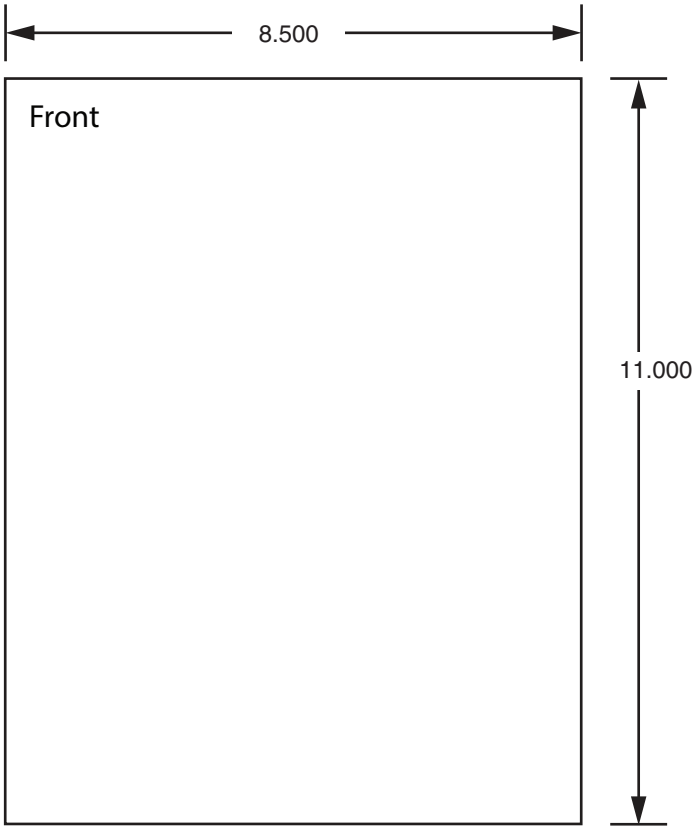
70856 Rev. 02/14-c



Beginning and Final Sheet

Additional Notes:
None

Revision History					
C	D	E	F	G	H
047232	EC #	EC #	EC #	EC #	EC #

Revision Description:
C > Revised Artwork

Material
Paper on Adhesive

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	047232	02-27-14

Notes
1. printed one side
2. printed black
3. tolerance: ± .13
4. printed in country may vary
5. drawings to not scale

Title
SIGNAGE INSTRUCTION SHEET

Creation Date	Number	Revision
04-27-10	70856	C

Created By
N/A

Software: Illustrator CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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17577

Cush Shoe Support

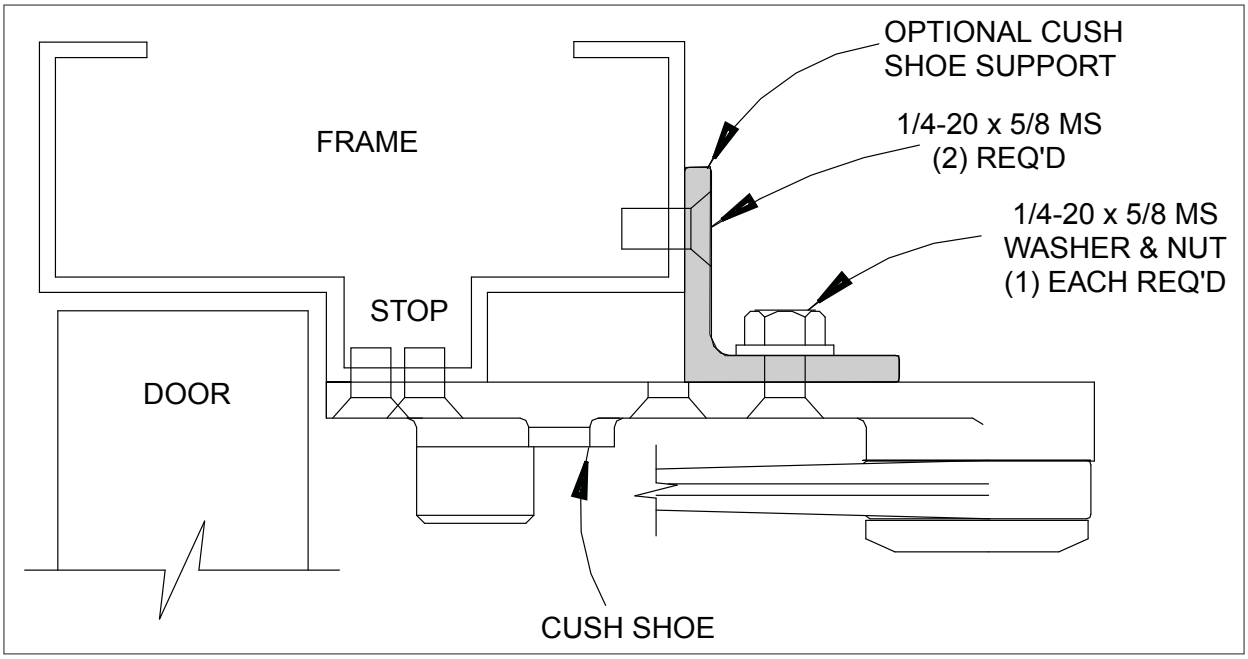
LCN®

Instructions for installing after Cush - N - Stop is installed

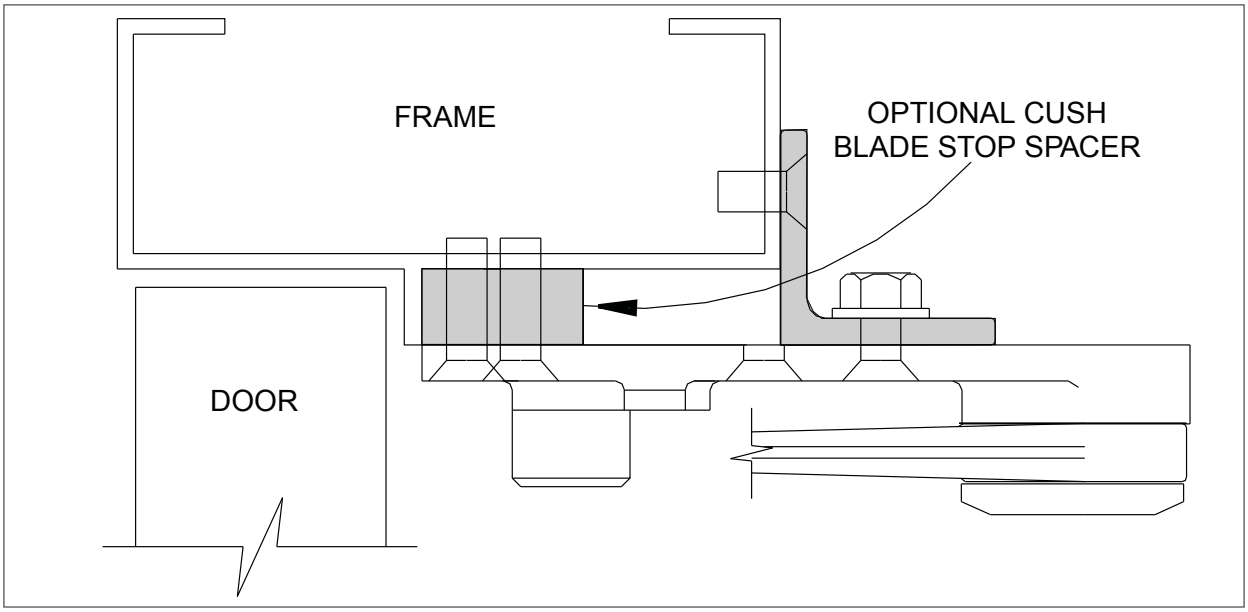
Installation Instructions

If frame is not wide enough to receive fifth screw, install Cush Shoe Support (available from Dealer) as shown below.

1a	Set Cush Shoe Support on top of Cush Shoe and hold against frame.
1b	Assemble screw, washer, and nut as shown and tighten securely.
1c	Using Shoe Support as Template drill & tap two 1/4-20 holes in frame.
1d	Insert screw & tighten securely.



Should frames have 1/2” Blade Stop it is necessary to use 1/2” Blade stop Spacer (available from Dealer). Use both Blade Stop Spacer and Shoe Support wherever required.



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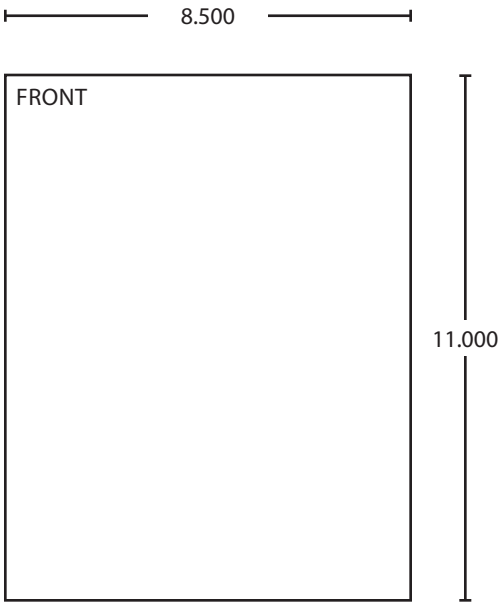
17577 Rev. 01/14-e



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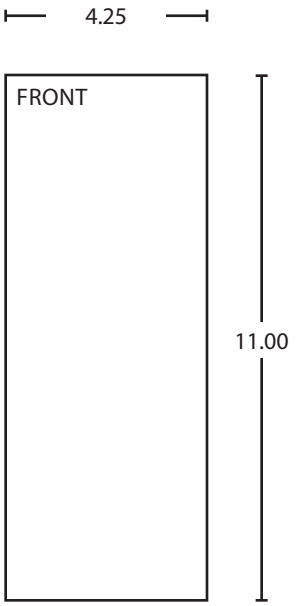

FOLDED SHEET

Additional Notes:
1. None

Revision History					
E	F	G	H	J	K
043228					

Material
White Paper

Notes
1. printed one side
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
E > Revised artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043228	01-01-14

Title
Cush Shoe Support Instruction Sheet

Creation Date	Number	Revision
05-10-10	17577	E

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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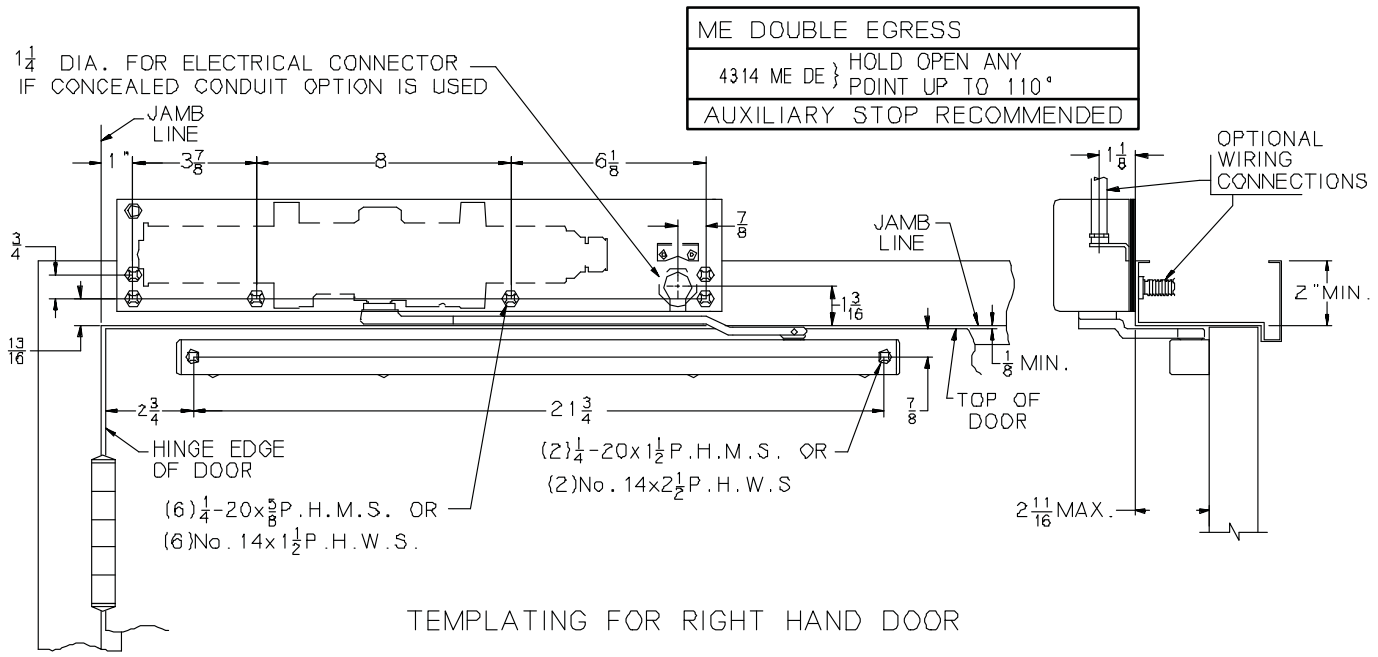
18789

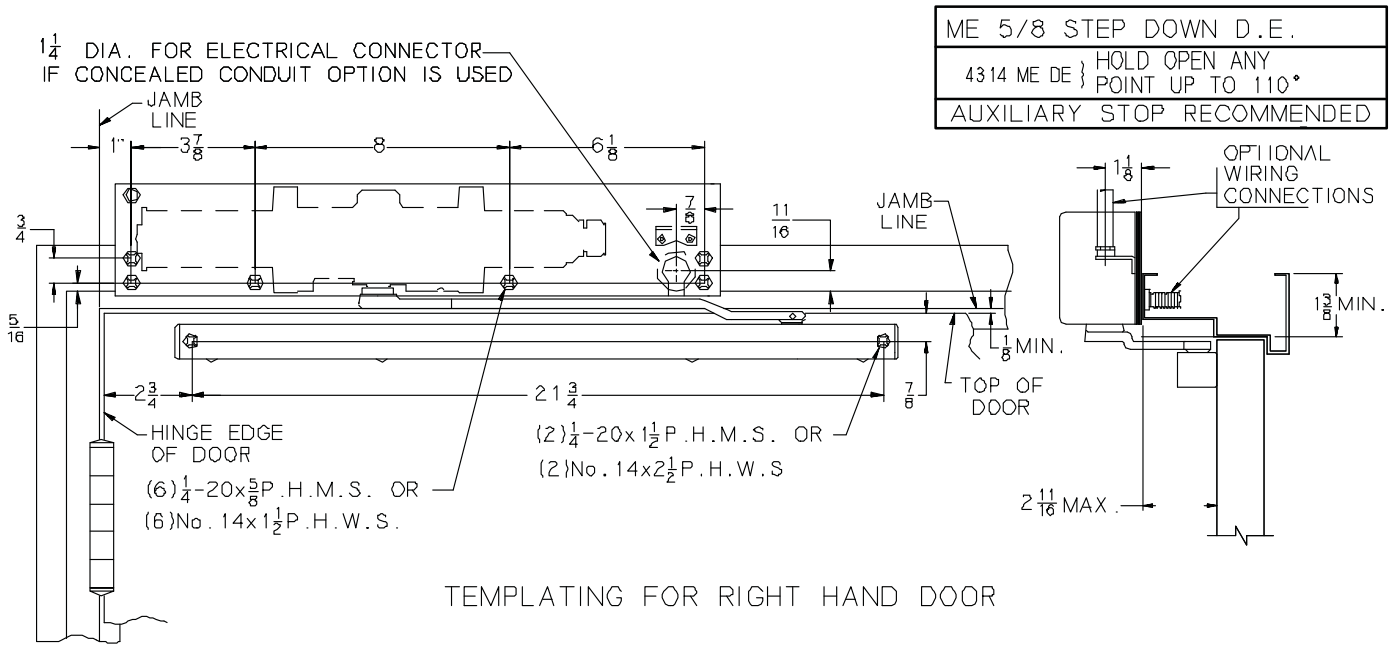
4310 DE Series

LCN®

Installation Instructions



TEMPLATING FOR RIGHT HAND DOOR



TEMPLATING FOR RIGHT HAND DOOR

NOTES-

1. RIGHT HAND DOOR AND CLOSER SHOWN, LEFT HAND OPPOSITE.
2. VOLTAGE SHOWN ON SENTRONIC LABEL MUST MATCH VOLTAGE SUPPLIED.
3. IF DOOR IS HUNG ON PIVOT OR SWING CLEAR HINGES CONSULT FACTORY.
4. FOR 7 1/4" OR LESS DOUBLE EGREES FRAMES. REVEAL NOT TO EXCEED 2 11/16".
5. FLOOR OR WALL STOP SHOULD BE USED.
6. FOR ADDITIONAL INFORMATION ON RECOMMENDED USE OF THIS UNIT CONSULT NFPA-72E PAMPHLET.
7. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.

INCH	1/8	1/4	1/2	5/8	3/4	13/16	7/8	1	1 1/8
M.M.	3	6	13	16	19	21	22	25	29

INCH	1 3/16	1 1/4	1 1/2	2	2 1/2	3 7/8	8	11 1/8	21 3/4
M.M.	30	32	38	51	64	98	203	283	553

⚠CAUTION

IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

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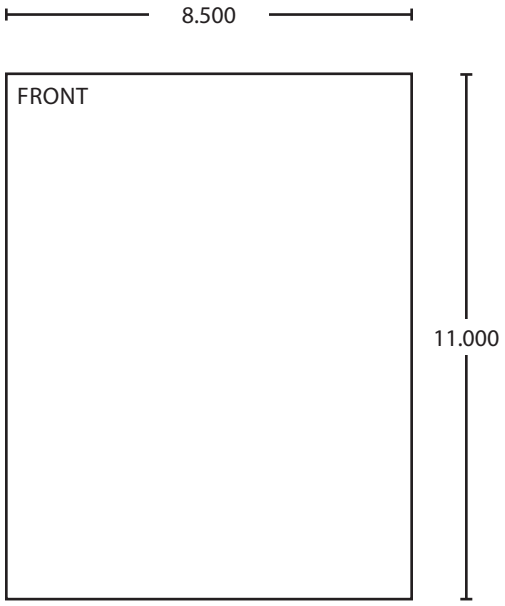
18789 Rev. 01/14-f



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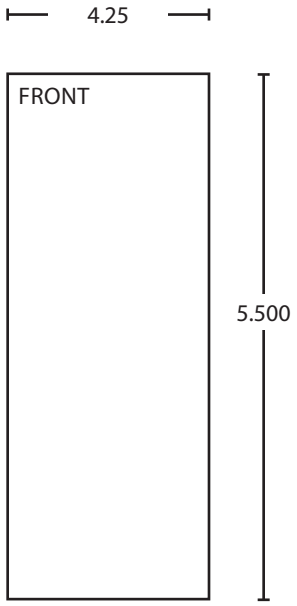

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Additional Notes:
1. None

Revision History					
F	G	H	J	K	L
043228					

Material
White Paper

Notes
1. printed one side
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
F > Revised artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043228	01-01-14

Title
4319ME Series DE Instruction Sheet

Creation Date	Number	Revision
05-10-10	18789	F

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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Model 7902/ES7902

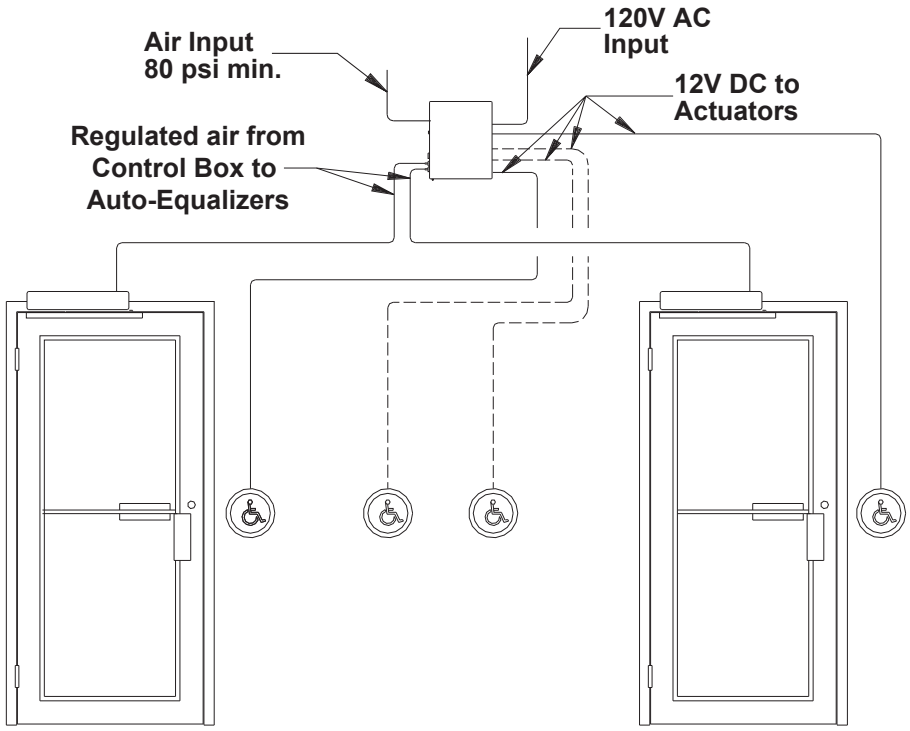
23761

Control Box

Installation Instructions

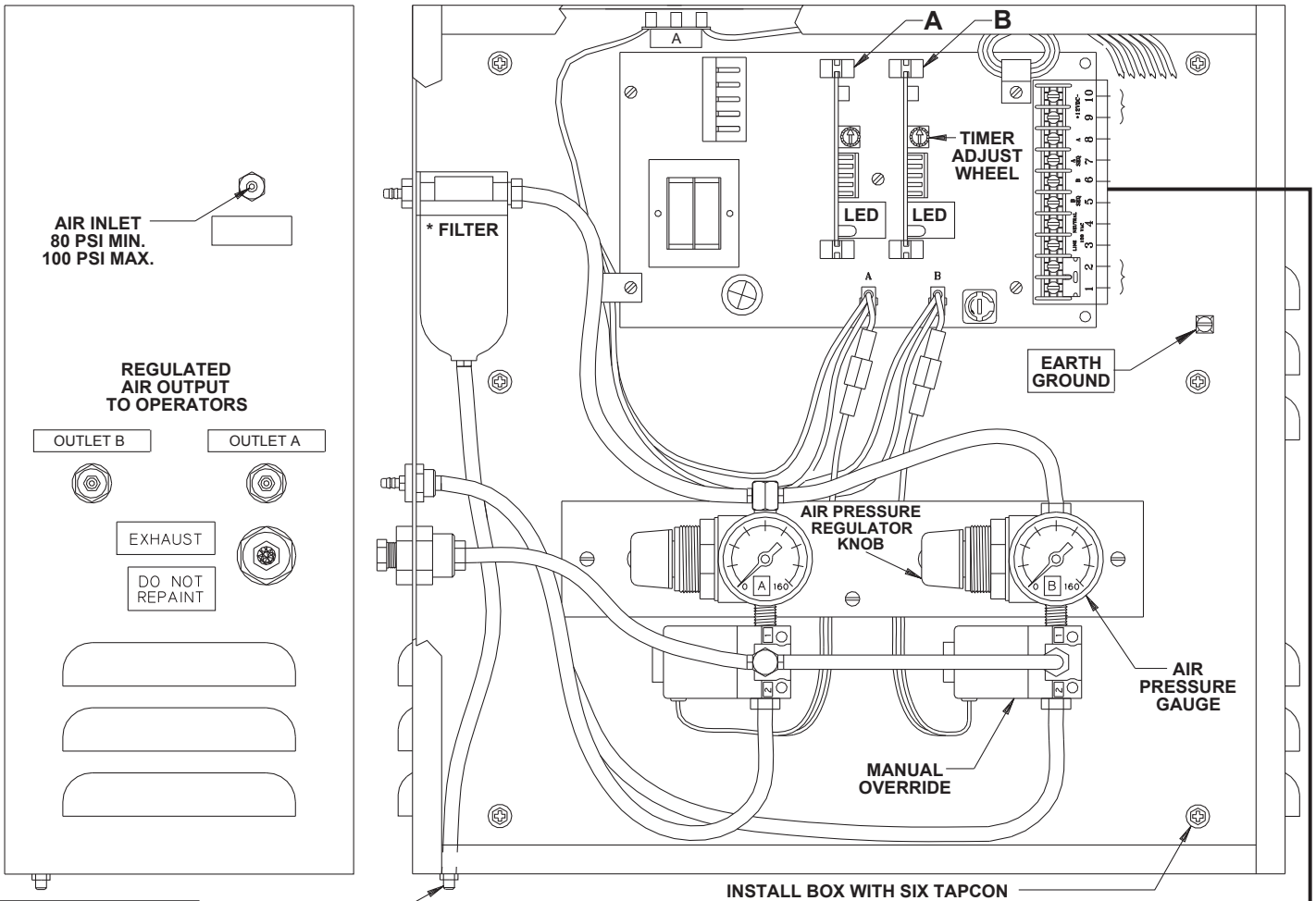
For closer information see closer installation instruction sheet.

Typical Electric & Air Supply Hook Up



Installation

1a	Locate box on interior of building within 100 tubing feet of the door to be controlled. **Box must be in a clean, dry, well ventilated place where temperatures do not exceed 120°F or fall below 35°F.**
1b	Mount box to a structurally sound surface using screws provided as shown on page 2 with air fittings on left side as shown. **Do not mount box upside down or on a horizontal plane.**
1c	Refer to instructions packed with actuators and connect leads to terminals 6, 8, 9, and 10 as required.
1d	Connect 1/8 inch diameter air tubing from clean, dry air source to inlet on side of box. Connect 1/8 inch diameter air tubing from door control to output fittings “A” & “B” on side of the control box.
1e	Connect unpowered 120V AC input to terminals 3, 4, and ground screw. (Line side to terminal 3, neutral side to terminal 4 and ground wire to ground screw.) If door control is on a fire door, 120V AC input must be interrupted by the fire alarm panel when in alarm. When dry auxiliary fire alarm contacts are used, remove shunt from terminals 1 and 2 and connect to dry contacts of fire detector or alarm panel. Terminals 1 and 2 are in series with line side of 120V input.
1f	Turn on power. Air valve will operate one cycle when power is applied.
1g	Air pressure output has been preset at factory. If more air pressure is required to adequately open doors, adjust regulator valves found inside control box.
1h	Adjust time delay to keep air valve energized by turning adjustment wheel on timer modules “A” & “B” (CW to increase - CCW to decrease). The LED (light) on the timer module indicates the valve is energized. The time can be adjusted from 0-30 seconds. 10 seconds is a “normal” delay.
1i	Test actuators to insure wiring and tubing are properly connected.



⚠ WARNING

HAZARDOUSVOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

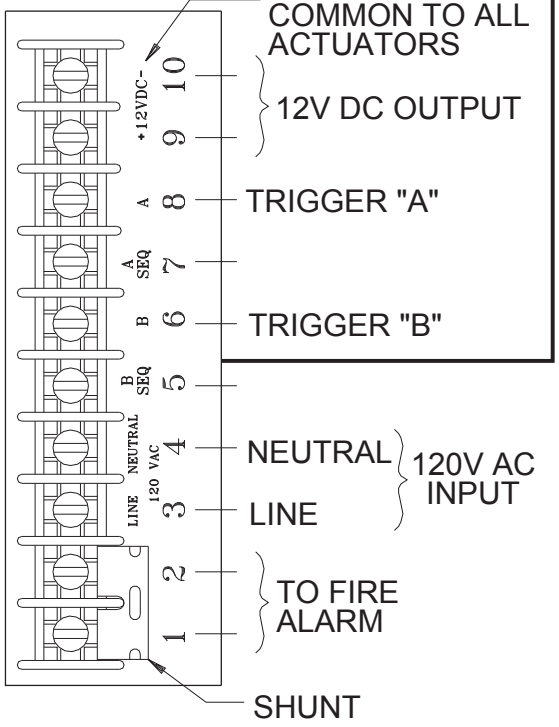
Disconnect power before making any electrical connections or performing maintenance.

Electrical Data

Input = 120V AC @ .3 amps
Power consumption 36 watts
Output is 12V DC

⚠ CAUTION

Do not mount box upside down or in horizontal position. Locate where temperatures do not exceed 120°F or fall below 35°F.



* REMOVE THIS SHUNT ONLY WHEN CONNECTING TO NORMALLY CLOSED FIRE ALARMS CONTACTS

AIR FILTER MAINTENANCE:

1. **EACH TIME BOWL IS CLEANED OR FILTER ELEMENT REPLACED:**
   A.) Depressurize unit
   B.) Inspect seals and replace cracked, deteriorated or damaged seals with original manufacturers approved seals only.
2. **FILTER ELEMENT**-Clean periodically by removing filter, tapping on hard surface and blowing off with compressed air. When servicing element, blow off louvers with compressed air.
3. **AUTOMATIC DRAIN**-If automatic drain fails to keep filter bowl drained of water, use a pencil or small screwdriver to push the piston up, allowing filter to drain.
4. Be sure filter bowl assembly is firmly secured in place before reactivating unit.
5. Replace filter with LCN part #929.

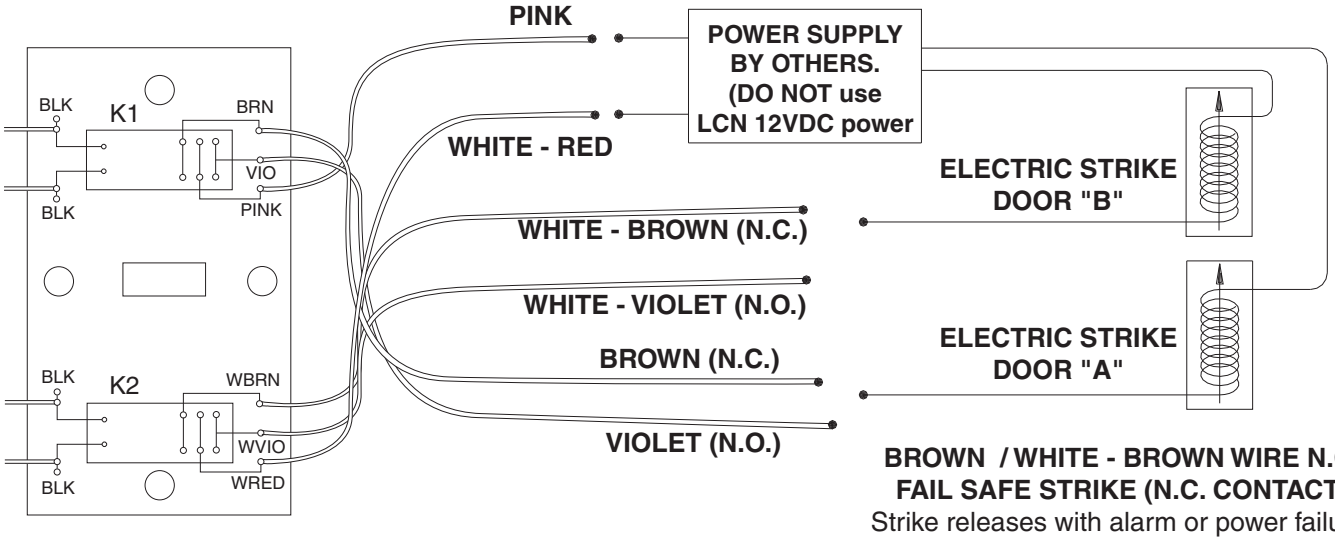
⚠ DANGER CONTROL BOX **MUST** BE CONNECTED TO EARTH GROUND

Installation Troubleshooting Chart

Symptom	Possible Cause	Suggested Remedy
No Power Opening	No power to control box / blown fuse	Verify 120VAC 60HZ power is present at terminals 3 & 4 on control box terminal strip. Check fuse. Replace only with 5 amp (3AG type) fuse.
	Actuator(s) not connected properly	Be sure a timer module board is firmly in place in “A” & “B” slots. Operate actuator(s). LED on timer module should light when actuator is used. If not, briefly short actuator terminals 6 & 10 and 8 & 10 in the control box. If LED lights, check wiring to actuators for an open circuit. If it does not light, check for voltage at terminals 9 &10. Voltage should read from 11.75 to 13.25V DC. If there is no reading, disconnect leads from terminals 9 & 10. Short actuator terminals 6 & 10 and 8 & 10. If LED lights, check for short circuit in actuators.
	Fire alarm system causing open circuit on terminals 1 & 2	Shunt terminals 1 & 2 with power off. Restore power. If control operates when actuator terminals 8 & 10 in the control box are shorted, an open circuit exist in wiring to fire alarm. When Auto-Equalizer is not used with fire alarms, terminals 1 & 2 must be permanently shorted with a shunt. **IMPORTANT!** When Auto-Equalizer is connected to fire alarm, make sure shunt is removed from terminals 1 & 2. Terminals 1 & 2 are one leg of 120V line.
	No input to Auto-Equalizer operator	Disconnect tubing from Auto-Equalizer operator. Try actuator and verify that air is coming out of tubing. If not, trace tubing to control box, checking for breaks or kinks in air line.
	Air lines obstructed with dirt or ice.	Clean or thaw lines and reroute if necessary. Eliminate dips near cold zones. If freezing is a repeated problem, desiccant filter may need to be changed.
	Air valves not working	Make sure air valve leads are plugged into main board. (Be sure valves in system are plugged into connector “A” & “B”.)
	Low or no air inlet pressure to control box.	Check compressor output to make sure air shut-off is open. 80 psi must be available at the control box. If not, check compressor and lines.
	No air output to Auto-Equalizer operator	Check pressure gauge in control box. Adjust as required, if necessary. Check for leaking or damaged lines in control box.
Power Opening will not time out.	Scanner maintaining signal to control box.	Make sure lenses are clean and there are no obstructions in front of scanner. Model 909 or 939 proximity scanner may “see” an opposite wall. Adjust range as described earlier.
	Switch circuit maintaining contact.	Check for short circuit or error in wiring to actuator.
	Air valve blocked open with contaminant.	Cycle valve several times by momentarily shorting terminals 6 & 10 and 8 & 10. This should clear valve.
	Control box exhaust restricted	Exhaust muffler may be clogged. Clean in alcohol or mineral spirits.

Model ES7902 For Use With Electric Latching Hardware

ES7902 - 2 electric strikes maximum



BROWN / WHITE - BROWN WIRE N.C.
FAIL SAFE STRIKE (N.C. CONTACT)
Strike releases with alarm or power failure.
Remains lached with power on.
(Not compatible with UL listed fire door.)

VIOLET / WHITE - VIOLET WIRE N.O.
FAIL SECURE STRIKE (N.O. CONTACT)
Strike releases when energized. Remains locked in alarm or power failure. (Manual release hardware required to open door in alarm or power failure.)

⚠ WARNING

HAZARDOUS VOLTAGE
CAN SHOCK AND
CAUSE SEVERE INJURY
Disconnect power before making any electrical connections or performing maintenance.

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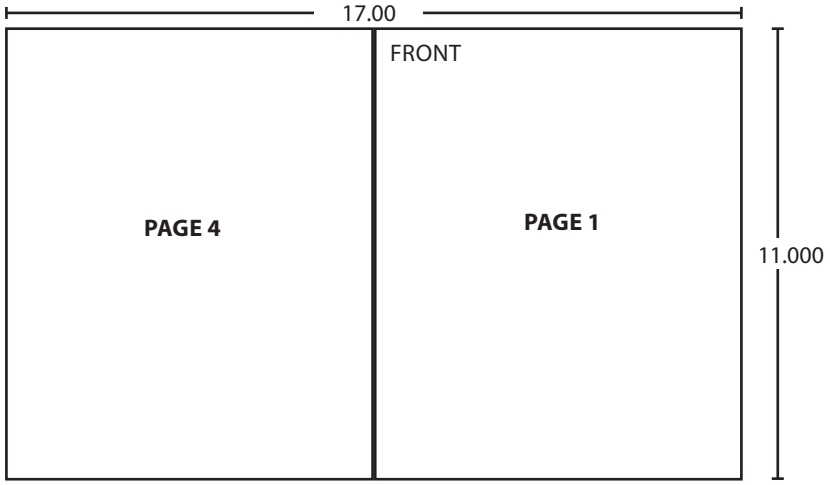
23761 Rev. 01/14-d



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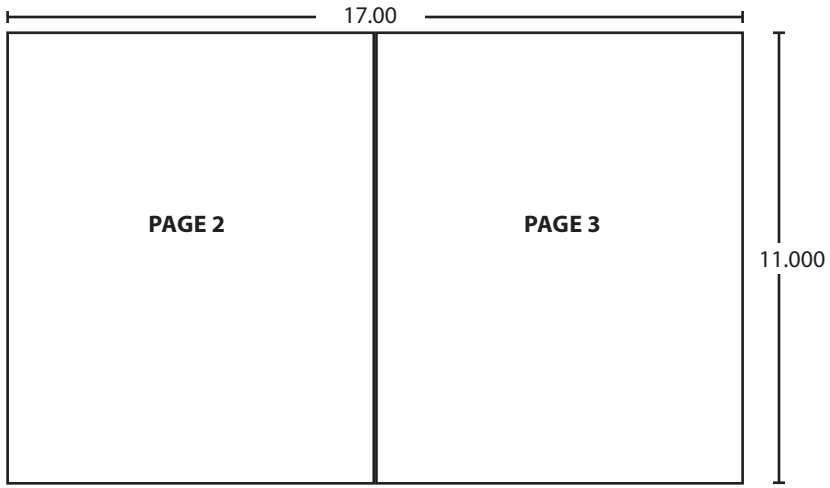

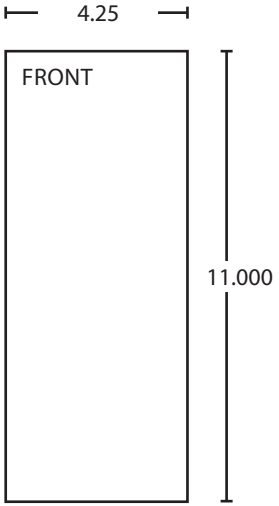

FOLDED SHEET

Additional Notes:
1. None

Revision History					
D	E	F	G	H	J
043228					

Revision Description:
D > Revised artwork

Material	Edited By	Approved By	EC Number	Release Date
White Paper	D. Myers	M. Sasso	043228	01-01-14

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Title
7902/ES7902 Series Control Box Instruction Sheet

Creation Date	Number	Revision
04-27-10	23761	D

Created By	Activity
N/A	3899 Hancock Expwy Security, CO 80911
Software: InDesign CS6	

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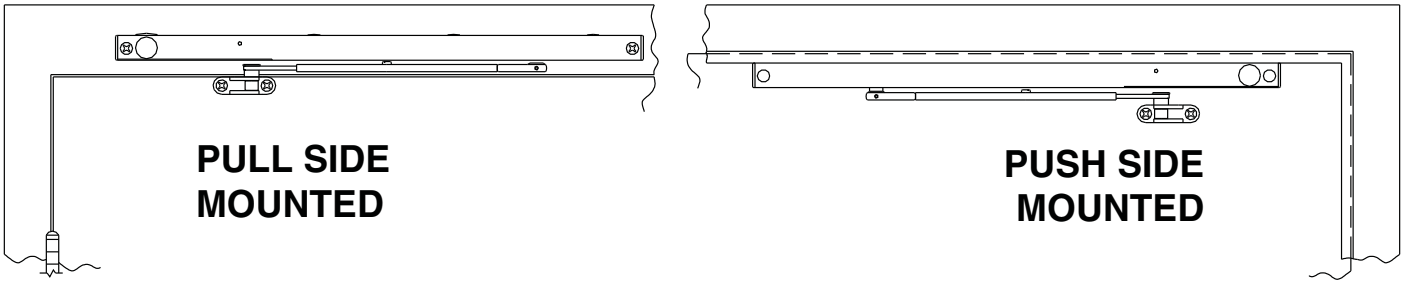
19842

SEH Sentronic Electronic Door Holder

Installation Instructions



Important Information

The LCN SEH Sentronic is a door holder that must be installed in conjunction with a UL listed opposite-side mounted door closer or floor closer, which provides a minimum of 5 lb closing force measured 30” out on door from the hinge/pivot center line at the hold-open door position.

The hold-open feature is adjustable in 3° increments from 80° to 100°. Floor or wall stops should be used.

This instruction sheet and template apply to doors hung on butt hinges. Consult the factory if pivots or swing-clear hinges are to be used.

Installation Instructions

1. The voltage shown on the track cover plate must match the voltage supplied to the door frame (24V or 120V). If **concealed** wiring is desired, prepare the frame to the specifications per the template on page 3. If **surface** wiring, mount the track to the frame **before** running the EMT/conduit. For **24V wiring**, see the enclosed Conduit Quick Connect instruction sheet.
2. Remove the end cap from the track. Insert the track slide and track roller, making sure that the stud is inserted into the hole in the track slide. Reinsert the end cap into the track. Insert the track plugs into the track. Using the fasteners provided, mount the track on the frame to the dimensions of the template on page 3.
3. Remove the cover plate and make all the necessary electrical connections. Replace the cover plate, making sure the Test/Release button is through the hole.
4. Using the fastener provided, mount the rod & shoe part of the arm assembly to the door per the template on page 3.
5. Loosen the set screw in the end of the tube part of the arm assembly and connect to the track roller. Tighten the set screw firmly. With the track roller at the latch edge of the track, open the door part-way and insert the rod into the arm tube.
6. Slide the roller to the hinge edge of the track, into the hold-open position. Open the door to the desired degree of the hold-open and insert the arm adjusting screw, tightening firmly.
7. Turn the power on and perform the electrical checkout as follows:
    a. With power on, open the door completely. The door should remain in the open position. If the door does not stay open, check the electrical input.
    b. Push the release test switch. The door should close immediately. Open the door to the hold-open position and let it remain there.
    c. The system should be checked at frequent intervals. It is suggested that step ‘b’ be repeated every 90 days.

Conduit Quick Conductor

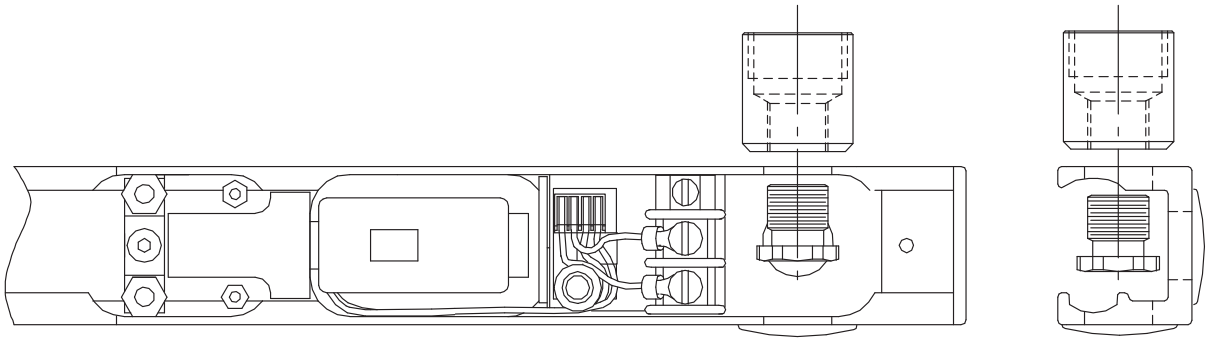


Fig. 1

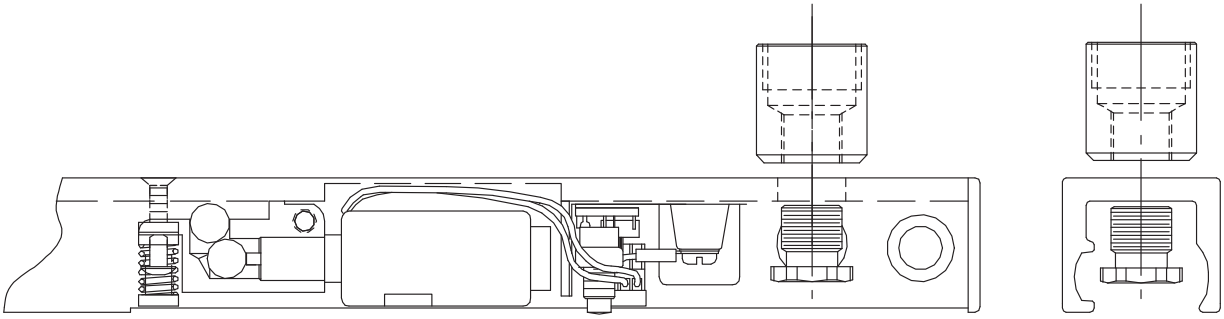


Fig. 2

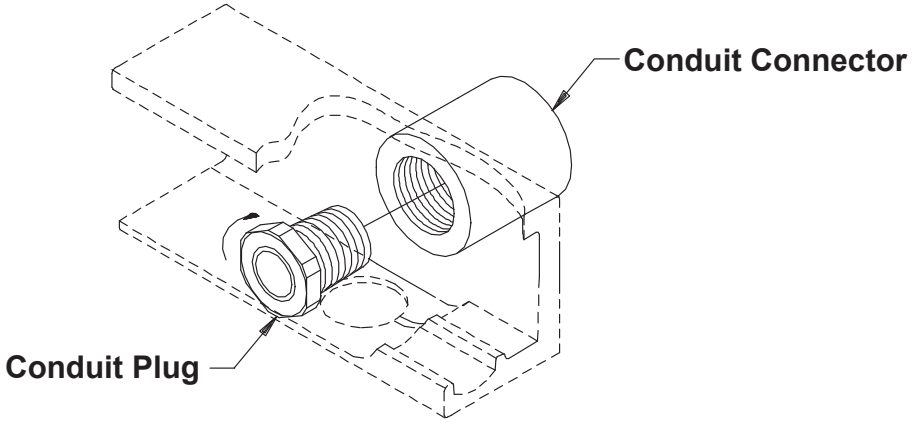
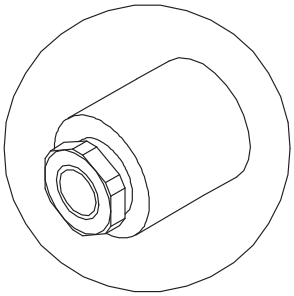


Fig. 3

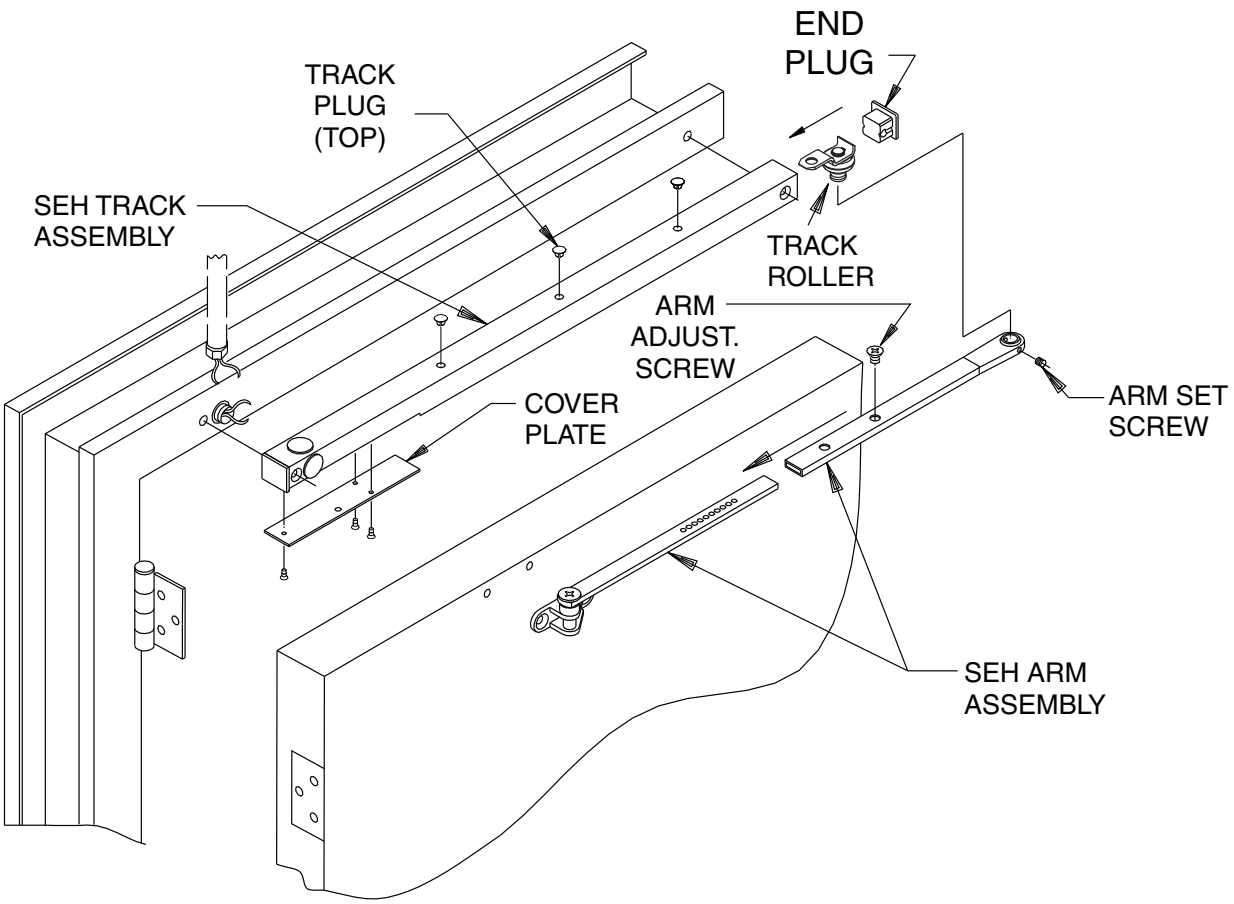


Conduit Plug shown in Conduit Connector

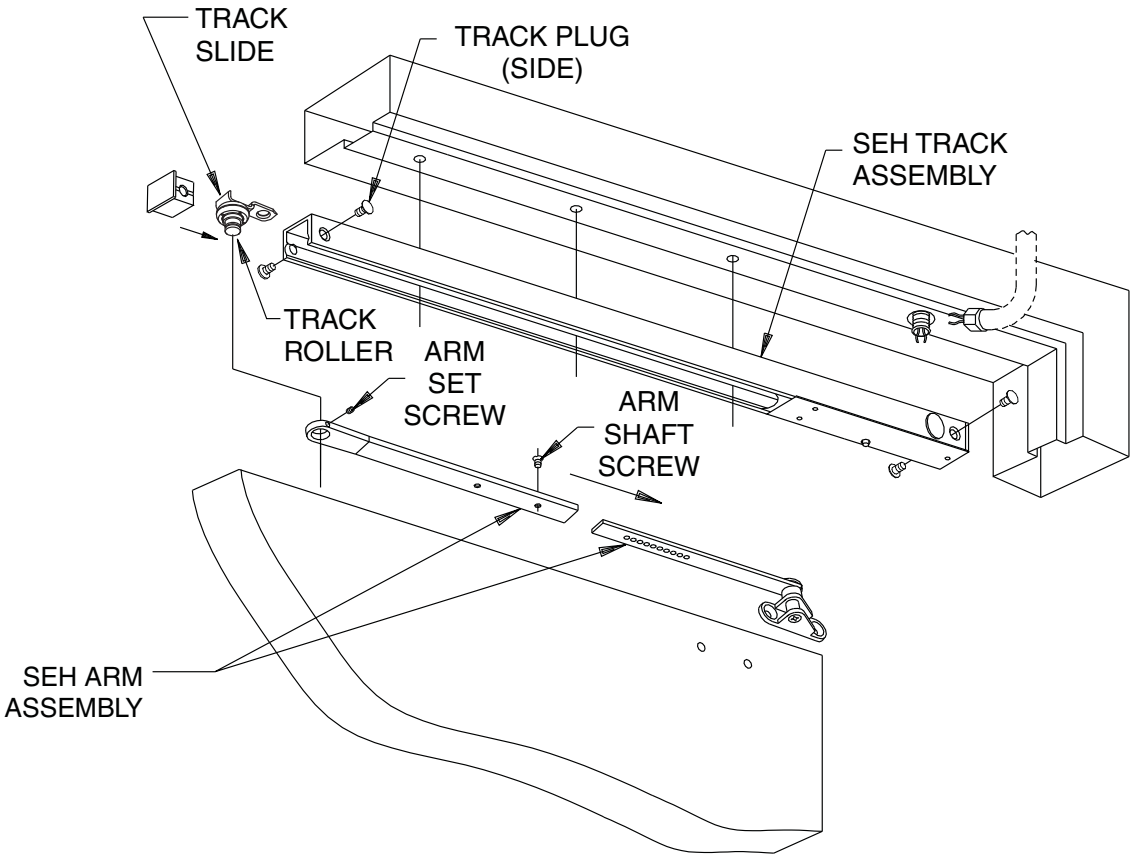
Installation Instructions

1a	The Conduit Quick Connector and Plug can be found in the closer screwpack.
1b	The Conduit Quick Connector should be fastened to the 1/2” concealed conduit prior to step 3 on the closer installation instructions.
1c	During step 3 on the closer installation instructions, make sure that the Conduit Connector is secured flush against the track surface. See option in Fig. 1 below that matches the mounting option selected for track surface. With the track mounted, take the Conduit Plug and slide it through the 1/2” hole in the track (see Fig.2). Tighten the Plug into the Conduit Connector using a 5/8” wrench, until completely secure, as shown in Fig.3.

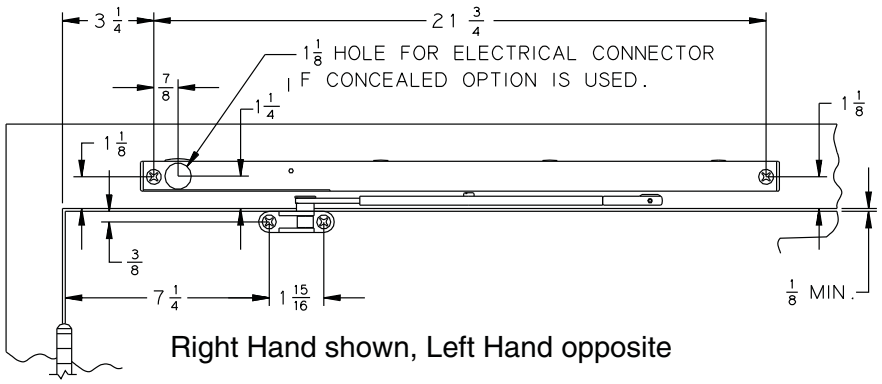
Pull Side Mounting



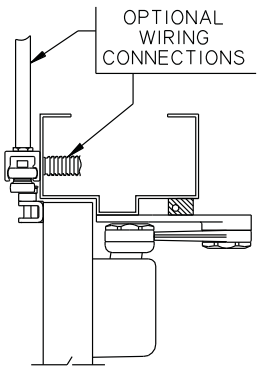
Push Side Mounting



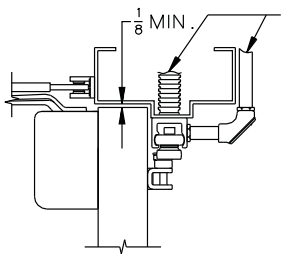
Pull Side Template

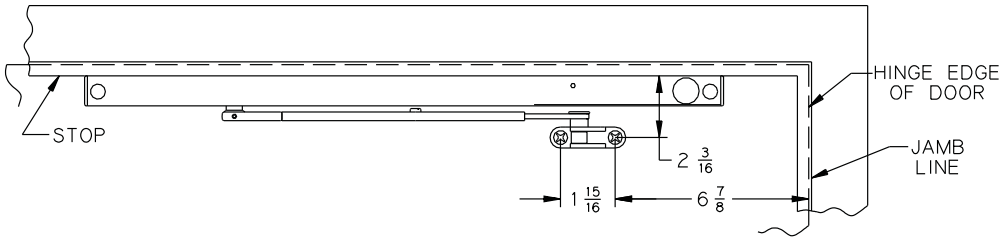


Right Hand shown, Left Hand opposite

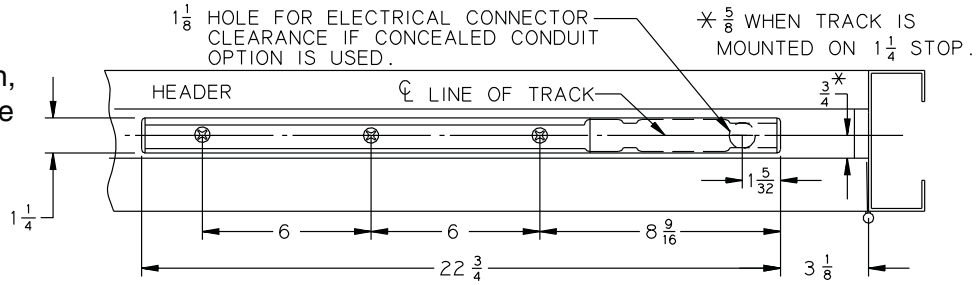


Push Side Template



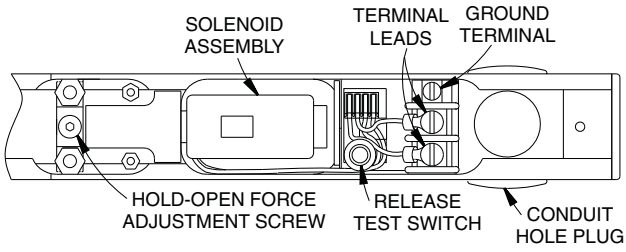


Right Hand shown,
Left Hand opposite

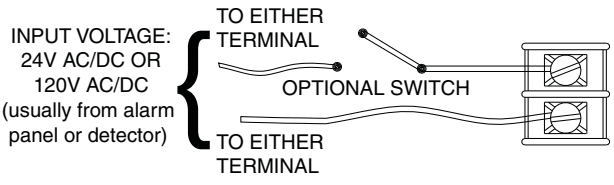


Hold Open Force Adjustment

Locate the hold-open adjustment screw in the diagram above. For greater hold-open force, insert a 3⁄32 Allen wrench (included in the screwpack) and turn clockwise. To decrease the amount of hold-open force, turn the screw counter-clockwise. Have a maximum of 4 turns.



Wiring Diagram - Polarity Not Important



⚠ WARNING ⚠

Hazardous voltage can shock and cause severe injury!

Disconnect the power before making any electrical connections or performing maintenance.

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19842 Rev. 08/17-I

15022

4410ME Series

Door closer with electronic release & Multi-point hold open

Installation Instructions

1 Closer Installation

1a Closer Information

Closer is handed at the factory. The hand of the closer must match the hand of the door (see the door handing diagram below). Determine the closer mounting template to use - Standard or Flush-Ceiling (see page 4). Refer to the proper template for the entire installation

1b Voltage

Voltage supplied to the door frame MUST match voltage of the solenoid.

1c Before beginning this step, determine which type of wiring option will be used, and follow the corresponding instructions:

Concealed Wiring: see Figure 3 on page 3.

a. Prepare the frame per the proper template on page 4. Be sure all the holes are dimensioned correctly before drilling and tapping.
b. Assemble the conduit connector provided to the flexible conduit, then attach to the hole in the mounting plate.
c. Secure the mounting plate to the frame with the screws provided.

⚠ WARNING ⚠

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.

Surface Wiring: see Figure 4 on page 3.

ⓘ **NOTE: Remove the knockout in the top of the cover.**

a. Prepare the frame per the proper template on page 4. Be sure all the holes are dimensioned correctly before drilling and tapping.
b. Secure the mounting plate to the frame with the screws provided.
c. Attach the surface run ½" EMT conduit to the hole in the bracket on the mounting plate. Be sure the conduit is securely attached to the bracket.

1d Wiring Connections

Make the wiring connections at this time. Connect the two black wires to the input voltage (polarity is not important). The green wire MUST be connected to an earth ground (see Figures 3 & 4 on page 3).

1e Main Arm

Place the main arm onto the shaft, approximately 90° to the closer body, and secure with the arm shaft screw.

1f Rod & Shoe

Attach the rod and shoe to the door, per the proper template on page 4, with the provided screws.

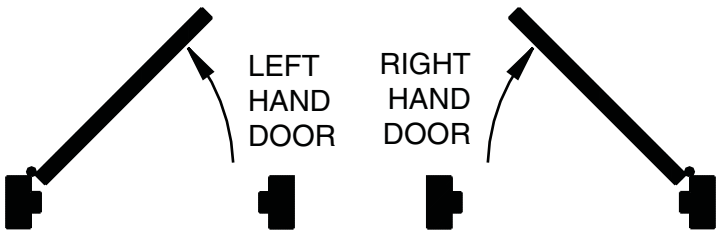
1g Insert the Rod

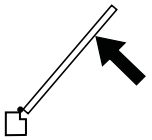
Open the door partway and insert the rod into the forearm, then close the door. Pull the Main Arm to a right angle (90°) to the door, insert the arm set screw, and tighten securely.

1h Regulate the Closer

Regulate the closer and perform the electrical checkout, as instructed on page 2, before installing the closer cover.

HOW TO TELL HAND OF DOOR:





= 33 ft-lbs
45 N-m
58 N

MAXIMUM OPENING FORCE

Customer Service
1-877-671-7011 www.allegion.com/us

ALLEGION

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15022 Rev. 01/14-h

2 Regulation Instructions

See Figure 2 on the opposite page for regulating screw location, door control diagram & spring power adjustment

2a Spring Power Adjustment

DO NOT ALLOW THE DOOR TO SLAM INTO THE FRAME. The spring power should be adjusted **only** if more power is needed to close the door. Turning the spring adjustment 5⁄32" Allen Wrench clockwise will increase the spring power. Maximum adjustment is six (6) turns.

2b Regulation

A "normal" closing time from a 90° position is five (5) to seven (7) seconds, equally divided between the **MAIN** and **LATCH SPEED**. If adjustments are needed, use a 3⁄32" Allen Wrench. To adjust the **MAIN SPEED**, turn the regulating screw clockwise to slow the door speed, or counterclockwise to increase the door speed. **LATCH SPEED** is adjusted the same way. When adjusting the **BACKCHECK,** use the least amount of force necessary to sufficiently slow the swing of the door.To adjust the closer **BACKCHECK**, turn the regulating screw clockwise to increase the amount of force, or counterclockwise to reduce the amount of force. **DO NOT USE THE ABRUPT BACKCHECK SETTING OR EXPECT THE CLOSER TO ACT AS A STOP!**

⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions, call LCN at 877-671-7011

3 Electrical Checkout

After completion of installation & wiring, and with the unit properly powered, perform the following tests:

3a Hold Open the Door

With power on, open the door any position and release. The door should remain in the hold-open position within 10°. For a bypass model to hold open, the door must be opened beyond the degree of the door swing indicated on the label.

3b Door

If the door does not remain in the hold open position, push the on/off switch. If the door still does not hold open, verify the proper voltage input at the solenoid leads.

3c Power Release

Turn the power off. The door should close completely.

3d Manual Release

To release manually, pull firmly on the door. The door should close completely.

3e Rechecking the System

The system should be checked at regular intervals. It is recommended that steps 3a-3c be repeated every 90 days.

4 Electrical Data for Door Holder Solenoid

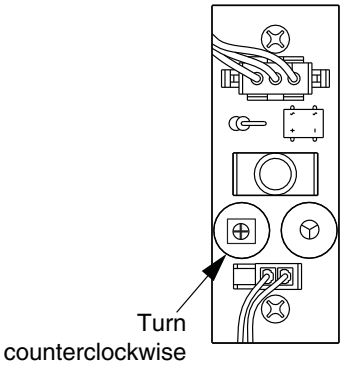
24V AC-DC Nominal +10% - 15% @ 0.075 Amp. Max.
120V AC-DC Nominal +10% - 15% @ 0.030 Amp. Max.

24 V Hold Open Force Adjustment

If the door is hard to pull out of the hold open position, adjust as shown.

IMPORTANT

The closer leaves the factory set at a maximum holding force. The holding force may be decreased and increased again, but it cannot be increased beyond the original setting.



Turn counterclockwise to decrease the holding force

Figure 1

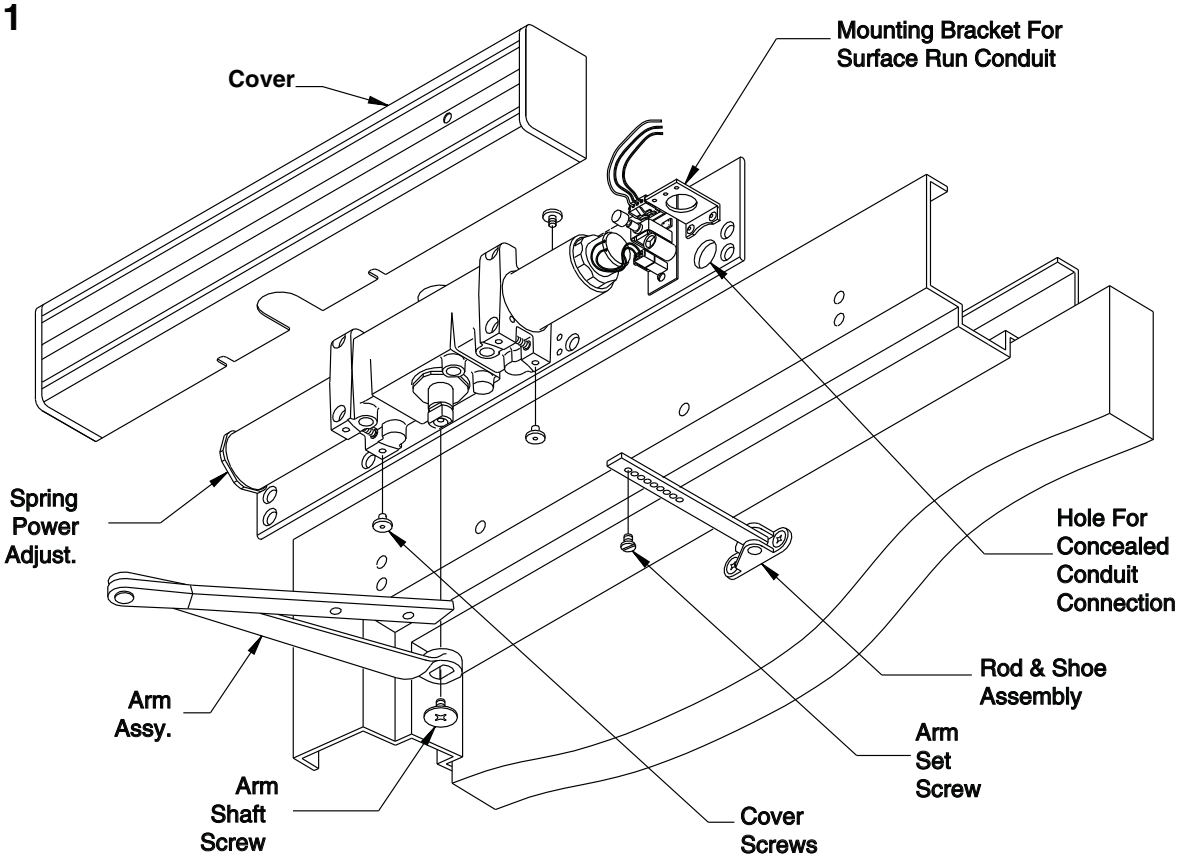
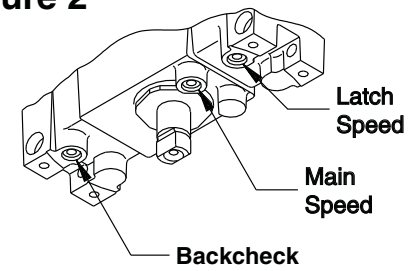
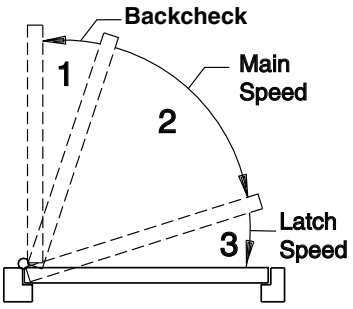
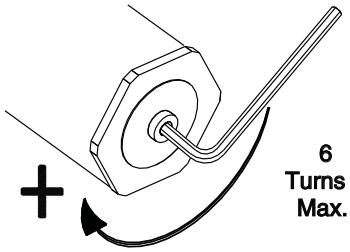


Figure 2







To Increase Closing Power

Figure 3

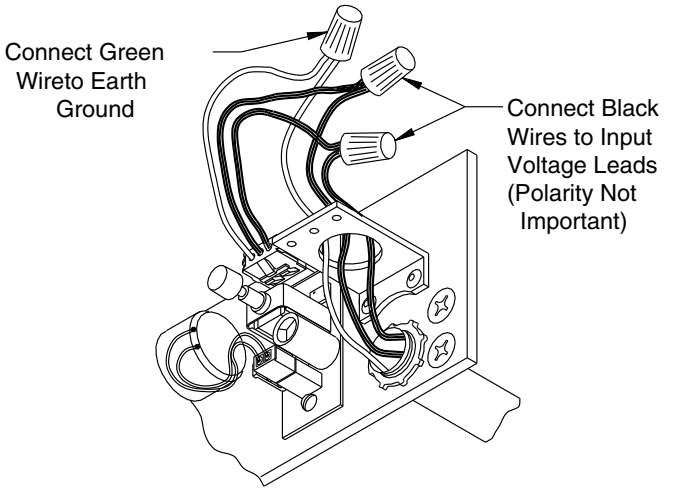
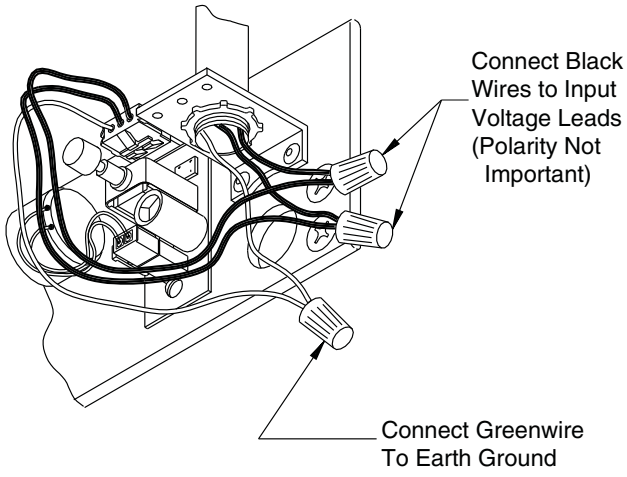


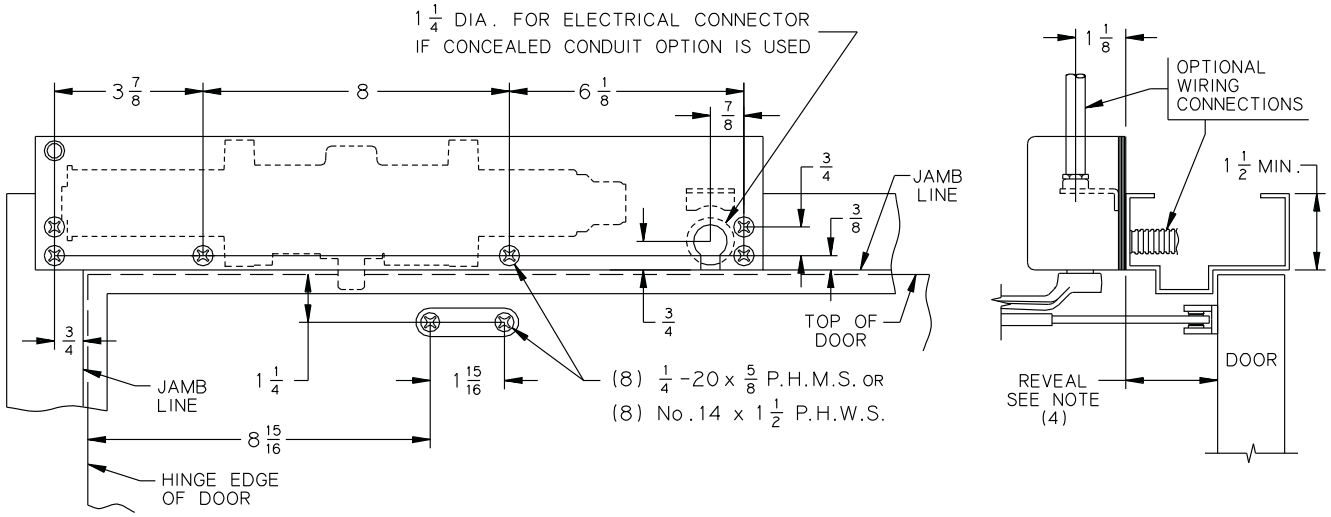
Figure 4



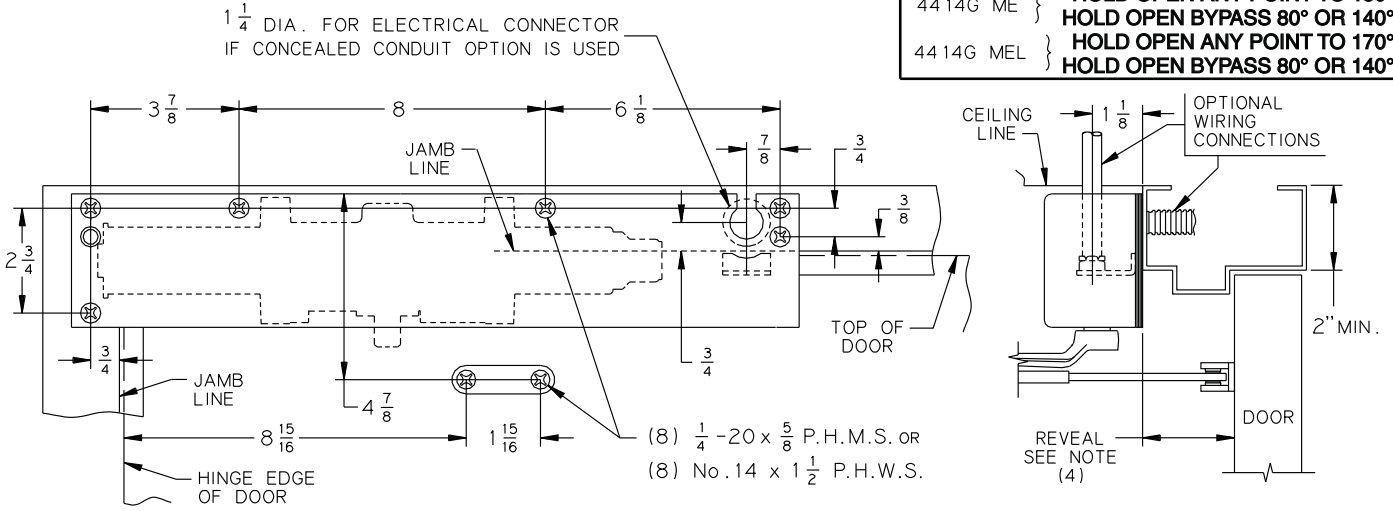
4410 ME

4414 ME	HOLD OPEN ANY POINT TO 150° HOLD OPEN BYPASS 80° OR 140°
4414 MEL	HOLD OPEN ANY POINT TO 170° HOLD OPEN BYPASS 80° OR 140°
LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE	5/94

"L" INDICATES LONG ARM



4414G ME	HOLD OPEN ANY POINT TO 150° HOLD OPEN BYPASS 80° OR 140°
4414G MEL	HOLD OPEN ANY POINT TO 170° HOLD OPEN BYPASS 80° OR 140°



⚠ WARNING

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.

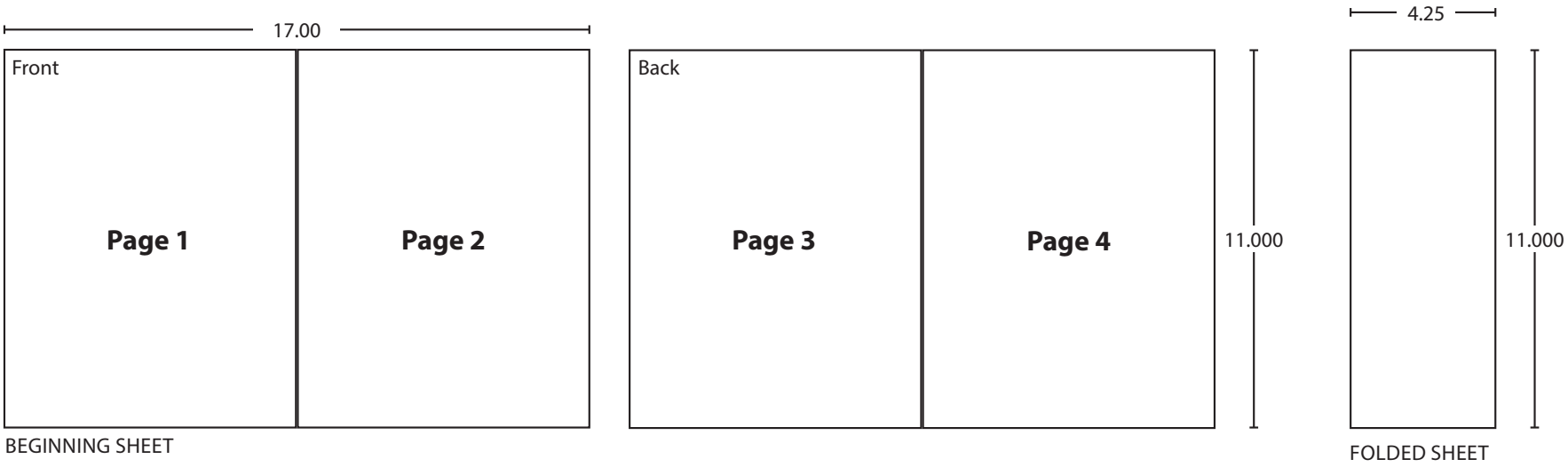
NOTES-

1. Voltage supplied to unit must match voltage shown on Sentronic® label.
2. Locate closer and shoe from ℄ of pivot when pivots are used. For use with swing clear hinges, consult factory.
3. Auxiliary stop is recommended. For use with overhead stops, shoe must be lowered to clear holder.
4. Long arm required for opening beyond 160°. Reveal not exceed 3 7/8" (5 3/4" FRAME).
5. Maximum stop thickness is 5/8".
6. Electric connector provided by LCN.
7. Reinforcing per ANSI\SDI - 100 is recommended for hollow metal door and frames.

INCH	1/4	3/8	1/2	5/8	3/4	7/8	1 1/8	1 1/4	1 1/2	1 15/16	2
M.M.	6	10	13	16	19	22	29	32	38	49	51

INCH	2 9/16	2 3/4	3 7/8	5 3/4	6 1/8	8	8 15/16	2'4"	3'0"	3'1"	4'0"
M.M.	65	70	98	146	156	203	227	700	900	925	1200

LCN®



Additional Notes:
1. None

Revision History					
G	H	J	K	L	M
038791	043228				

Material
White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
H > Revised artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043228	01-01-14

Title
4410ME Series Instruction Sheet

Creation Date	Number	Revision
05-10-10	15022	H

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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28475

4010 Series

Peel-N-Stick

LCN®

100°, 140° Template
Pull Side

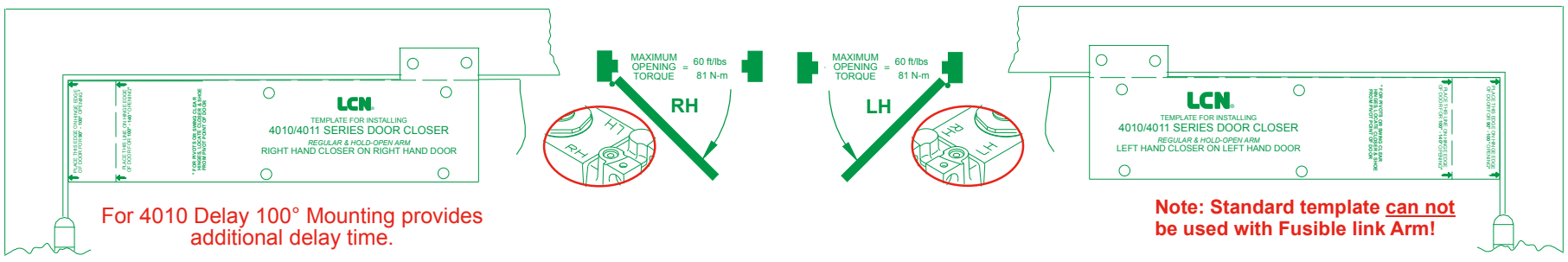
Installation Instructions

1

Locate proper template, peel tape and apply template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes. Remove template before installing closer.

Note: Steps 3-7 show left hand door mount, right hand door is opposite.

(Fig. 1)
4011 EN 1-5
4016 EN 6



For 4010 Delay 100° Mounting provides additional delay time.

Note: Standard template <u>can not</u> be used with Fusible link Arm!

2

Determine door width, adjust spring power to match chart.

DOOR WIDTH INTERIOR	EXTERIOR	LCN FAST™ Power Adjust SET TO:
♿	——	1
34"	8.5 lb-f	2
38"	30"	3
48"	36"	4
54"	42"	5

LCN® FAST™ Power Adjust for Spring Power Adjustment

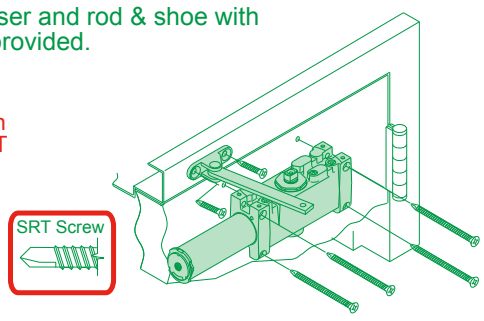
(Used only on non-sized closers)

⚠CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 800 - 526 - 2400

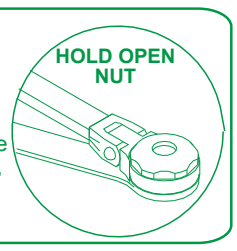
3

Secure closer and rod & shoe with fasteners provided.

Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.

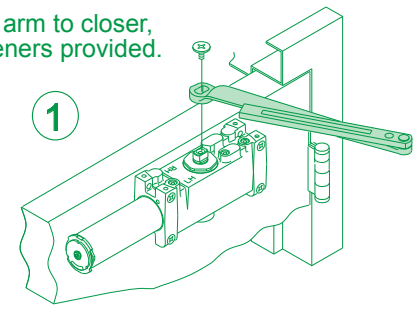


I TO ADJUST OPTIONAL HOLD-OPEN (90°-140°)
Arm is preset to hold open at 90°. To adjust: Loosen hold open nut. Open door to a few degrees before the desired hold open position, and tighten hold open nut securely.

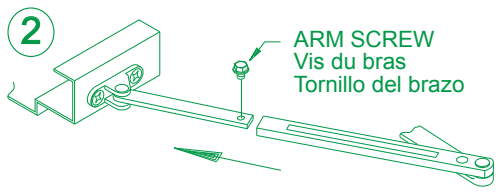


4

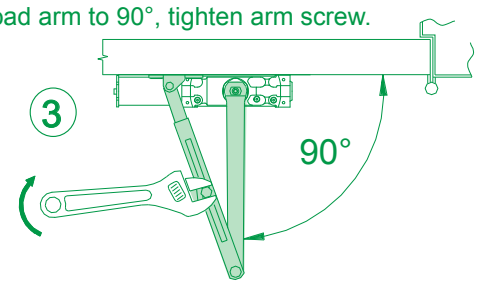
① Attach arm to closer, with fasteners provided.



② Insert rod into arm tube, thread arm screw into rod.



③ Pre-load arm to 90°, tighten arm screw.



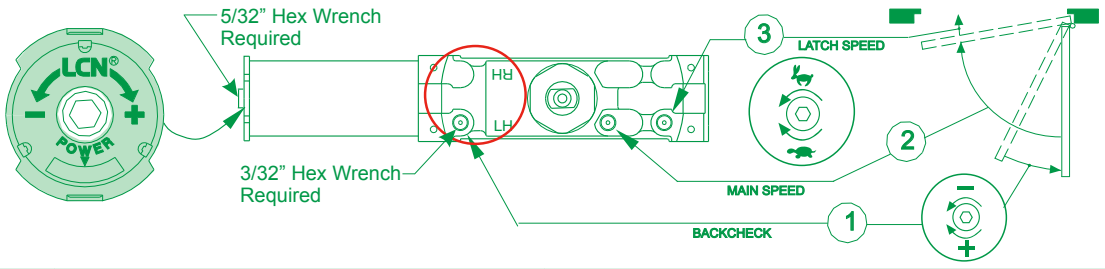
Note: Hold open arms must <u>not</u> be installed on fire rated doors.

5

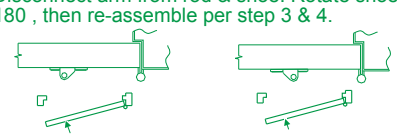
If necessary, adjust closer.

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

NO MAINTENANCE REQUIRED



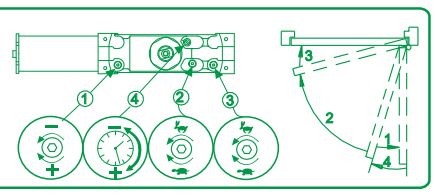
TO INCREASE CLOSING FORCE AT LATCH:
Disconnect arm from rod & shoe. Rotate shoe 180 , then re-assemble per step 3 & 4.



⚠CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.

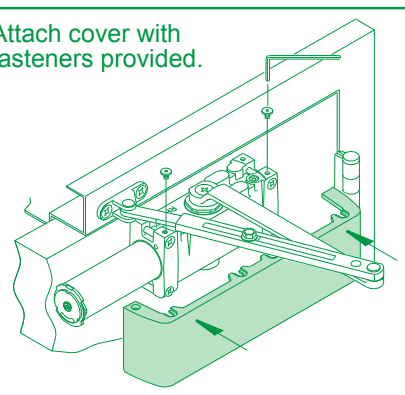
II

Optional Delay Action
① - Backcheck
② - Main Speed
③ - Latch Speed
④ - Delay Speed



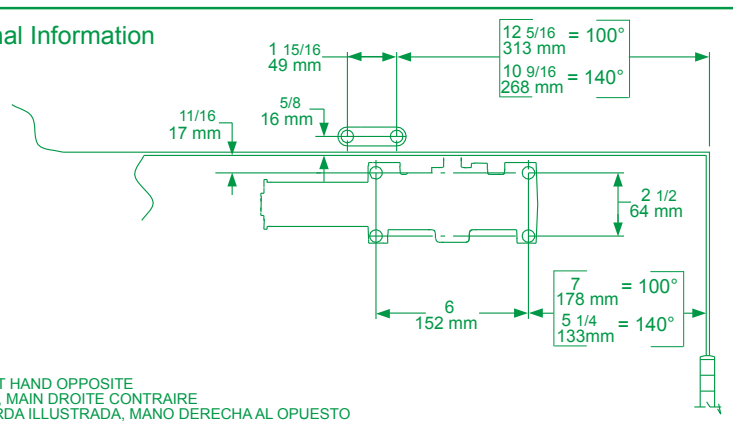
6

Attach cover with fasteners provided.



7

Dimensional Information



LEFT HAND SHOWN, RIGHT HAND OPPOSITE
MAIN GAUCHE ILLUSTRÉE, MAIN DROITE CONTRAIRE
PUERTA DE MANO IZQUIERDA ILLUSTRADA, MANO DERECHA AL OPUESTO

Notes:
1. Locate closer & arm from centerline of pivot or swing clear hinge pin if used.
2. Reinforcing per ANSI/SDI-100 recommended for hollow doors and frames.
3. Delay action optional.
4. Auxiliary stop recommended at maximum opening or maximum hold-open.
5. Closer size: 12 1/4 x 3 1/2 x 2 1/4.

4010 Instructions et gabarit autocollant pour une installation sur le côté à tirer de 100°, 140°

1 Repérez le gabarit approprié, retirez le ruban et apposez le gabarit. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds. Retirez le gabarit avant de poser le ferme-porte.

Note: Les étapes 3-7 illustrent une main droite. Le sens est inversé pour une maingauche.
Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.
Réglage de force LCN®FAST™ pour régler la force du ressort

3 Fixez le ferme-porte et l'avant-bras avec les attaches fournies.

I Pour régler la retenue optionnelle (90°-140°): Le bras est préréglé pour une retenue à 90°. Pour modifier: Desserrez la vis de retenue, ouvrez la porte à quelques degrés avant la position de retenue désirée. Resserrez la vis.

4 ① Fixez le bras au ferme-porte avec les attaches fournies.

② Insérez la tige dans le tube du bras, insérez la vis du bras dans la tige.

③ Préchargez le bras à 90°, serrez la vis du bras.

5 Au besoin, réglez
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage

II Action retardée optionnelle
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage
④ - vitesse de retenue

6 Fixez le boîtier avec les attaches fournies.

7 Dimensions

Note: Ne pas utiliser le gabarit standard pour le bras avec élément fusible.

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

⚠DANGER
Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 800 - 526 - 2400

⚠DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4010 Instrucciones Pega y Pela para plantilla 100°, 140° montaje al lado del tirón.

1 Localice la plantilla apropiada, quite la cinta y aplique la plantilla. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes. Quita la plantilla antes de instalar el cerrador.

Nota: Las etapas 3-7 indican un montaje de puerta a la izquierda**, una puerta a la** derecha **está al lado opuesto.**
Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.
LCN®FAST™cuadrante de ajuste para ajustar la potencia del resorte

3 Sujeta el cerrador y el antebrazo con los sujetadores ya incluidos.

I Para ajustar la retención opcional (90°-140°): El brazo está prefijado para retener a 90°. Para ajustar : Afloje la tuerca de retención, abra la puerta hasta unos grados antes de la posición de retención deseada. Apriete suficientemente la tuerca de retención.

4 ① Coloque el brazo al cerrador con los sujetadores ya incluidos.

② Introduzca la barra en el tubo del brazo; inserte el tornillo del brazo en la barra.

③ Prearme el brazo a 90°, y apriete el tornillo del brazo.

5 Ajusta si es necesario.
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

II Acción retardada opcional.
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro
④ - velocidad de retardo

6 Coloca la tapa con los sujetadores ya incluidos.

7 Datos dimensionales.

Nota: No se usa la plantilla estándar con el Brazo de eslabón fusible.

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

⚠ADVERTENCIA
UNA INSTALACIÓN O UN AJUSTE INCORRECTORS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL 800 - 526 - 2400

⚠ADVERTENCIA
LA APERTURA DEMASIADO GRANDE DE LAS VÁLVULAS DE AJUSTE PUEDE OCASIONAR UN DERRAME, DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES.

ALLEGION

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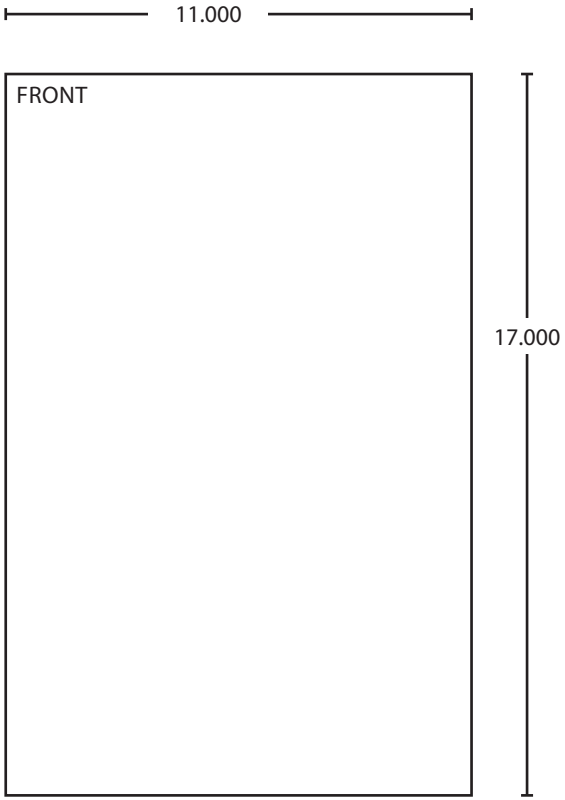
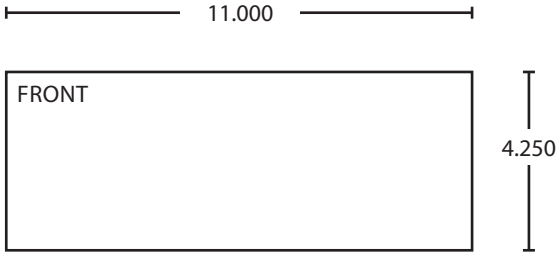
28475 Rev. 01/14-m



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. Adhesive at top 1/2" of page (back)

Revision History					
M	N	P	R	S	T
042801					

Revision Description:
M > Revised artwork

Material
White Paper

Notes
1. printed two sides
2. printed black, PMS 347 (green), PMS 485 (red)
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	042801	01-01-14

Title
4010 Series Instruction Sheet

Creation Date	Number	Revision
11-15-08	28475	M

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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29293

334 Concealed Switch Endcap Retro Fit

LCN®

Installation Instructions

1a	Turn power off.
1b	Use 3/32 Allen wrench to remove operator cover.
1c	Disconnect the 120V power connector from the printed circuit board.
1d	Unplug the 334 end cap power and hold open switches from printed circuit board.
1e	Loosen the screws a few turns that hold the 334 end cap to the mounting channel. Don't remove the screws.
1f	Remove the 334 end cap.
1g	Plug the 334CS end cap power switch into the three pin connector on the power input circuit board.
1h	Place the 334CS end cap into position under the two mounting channel screws and tighten.
1i	Make sure the 334CS power switch is on.
1j	Reconnect the 120V power connector to the printed circuit board. Make sure the operator is functional.
1k	Reattach operator cover.
1l	Turn power on.

Customer Service

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29293 Rev. 03/14-b

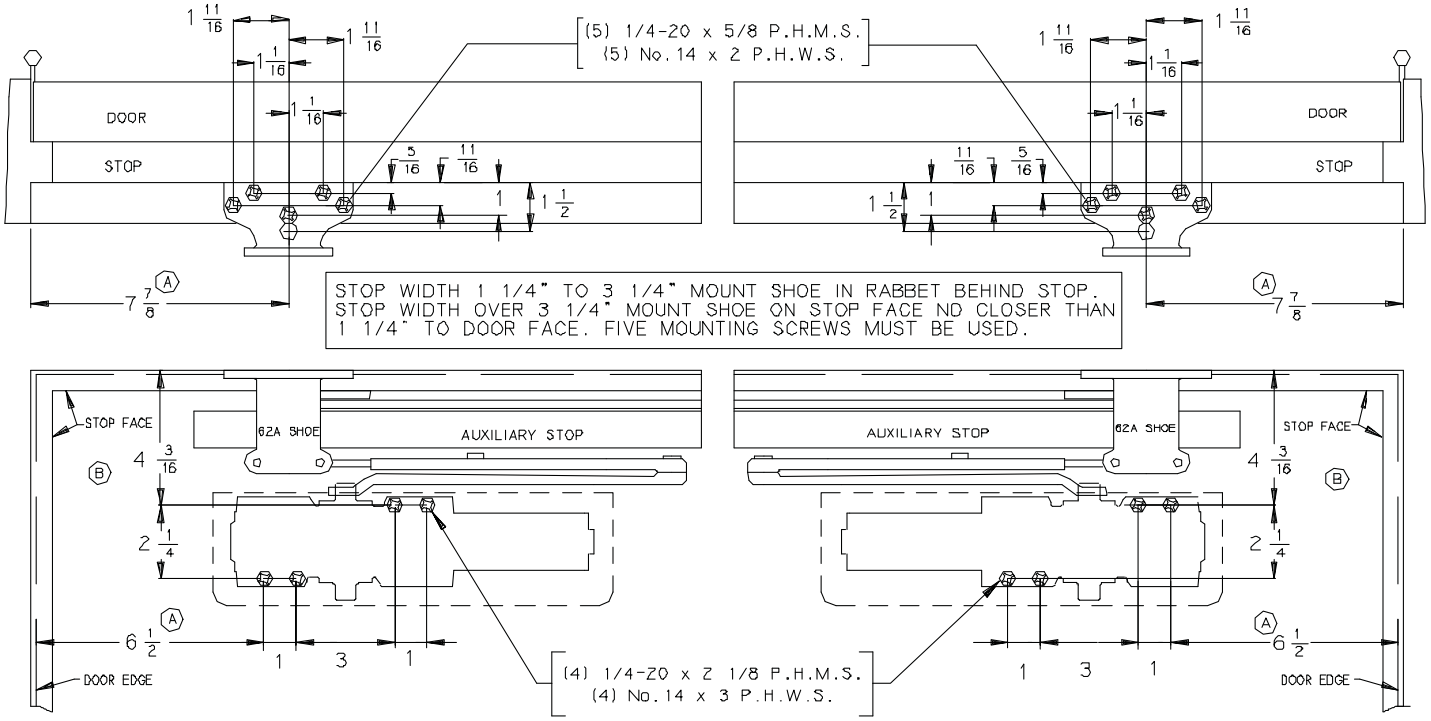
28073

ST-2776

62A Shoe, 4040-18 Plate

Installation Instructions

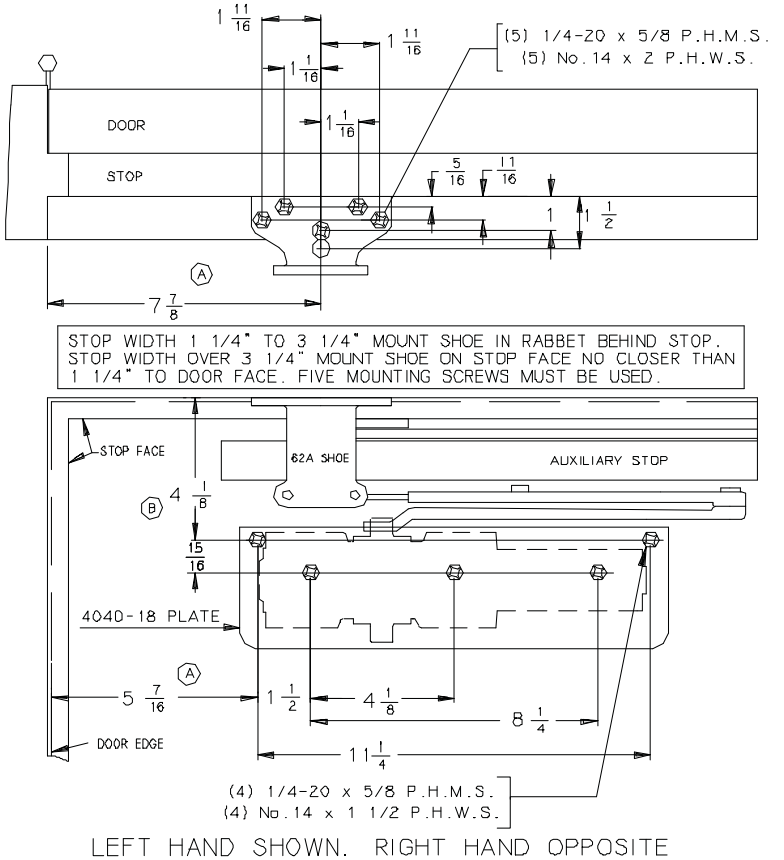
STOP FACE MOUNTED WITH 62A SHOE



LEFT HAND

RIGHT HAND

STOP FACE MOUNTED WITH 62A SHOE AND 4040-18 PLATE



LEFT HAND SHOWN. RIGHT HAND OPPOSITE

General Notes

A. Locate closer and shoe from center line of pivot or swing clear hinge when used.

B. This dimension is always from the same surface as the shoe is mounted on.

C. Top rail less than 7” requires a drop plate.

D. The auxiliary stop is shown for reference only. This template may be used to provide clearance for other types of hardware such as coordinators, soundseals etc.

E. Reinforcing per ANSI/SDI-100 recommended for hollow metal door and frame.

F. Closer size: 12-1/4 x 3-1/2 x 2-5/32

G. Backcheck selector valve must be turned all the way in for this installation. Refer to the instruction sheet packed with the closer.

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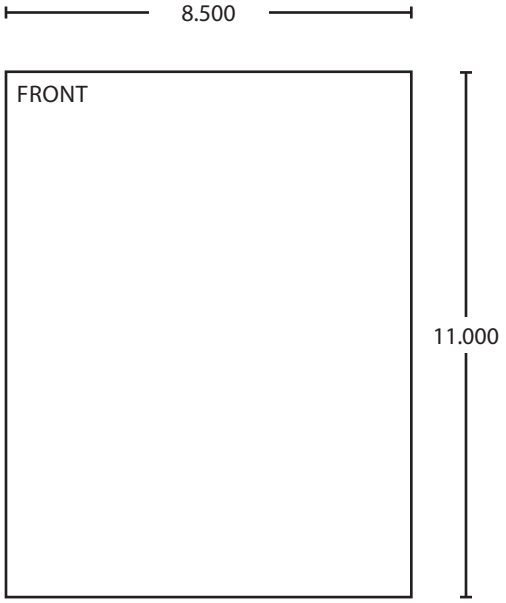
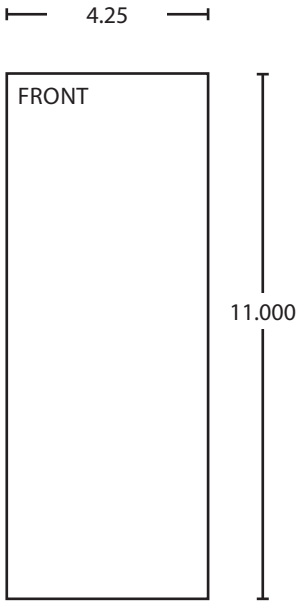
28073 Rev. 01/14-b



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	043812				

Material
White Paper

Notes
1. printed one side
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
B > Revised artwork

Edited By	Approved By	EC Number	Release Date
R. Byun	M. Sasso	043812	01-01-14

Title
4040/4041 Stop Face with 62A Shoe Instruction Sheet

Creation Date	Number	Revision
11-15-10	28073	B

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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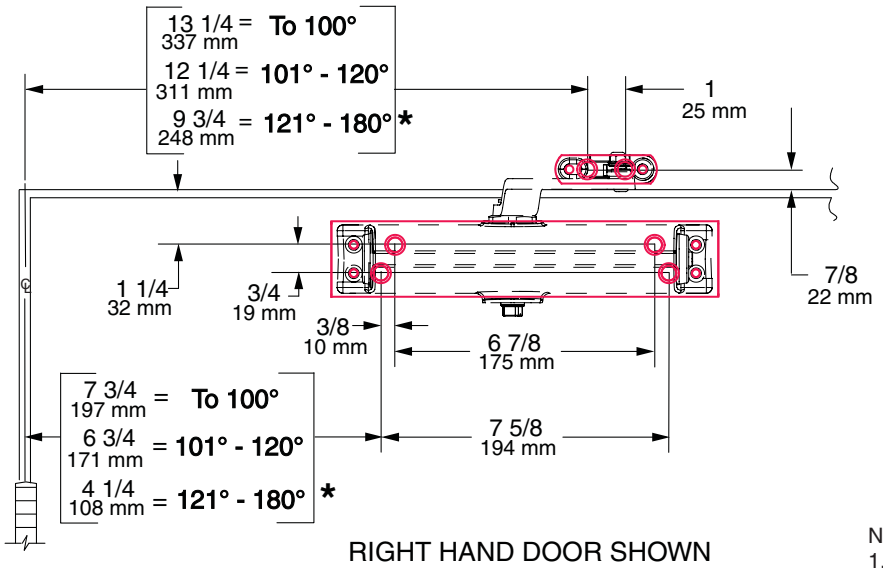
1260 PULL SIDE (DOOR MOUNT) QUICK FIX BRACKETS

PULL SIDE ARM MOUNTED ON: 1260-QF PLATES

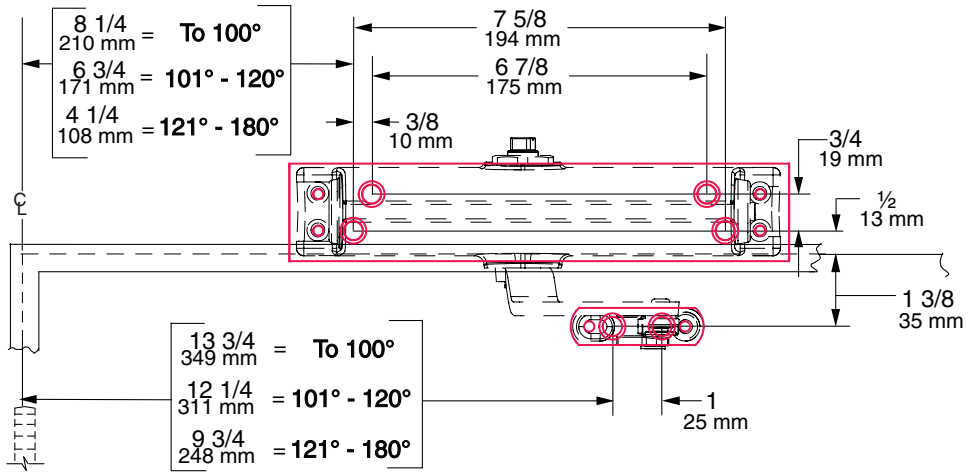


RIGHT HAND DOOR SHOWN
LEFT HAND DOOR OPPOSITE

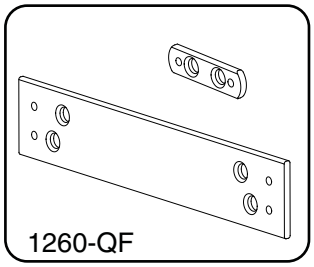
NOTES -
1. MINIMUM TOP RAIL HEIGHT 2 1/4.
* 2. TRIM PERMITTING.

1260 PUSH SIDE (TOP JAMB) QUICK FIX BRACKETS

PUSH SIDE ARM MOUNTED ON: 1260-QF PLATES



LEFT HAND DOOR SHOWN
RIGHT HAND DOOR OPPOSITE



The Quick Fix bracket is to be used when preexisting holes are stripped out.

GENERAL NOTES:
1. LOCATE CLOSER & SHOE FROM CENTERLINE OF PIVOT OR SWING CLEAR HINGE PIN WHEN USED.
2. ON TOP JAMB MOUNTING WHEN OVERHEAD STOP IS USED, SHOE MUST BE LOWERED TO CLEAR HOLDER.
3. FOR 180° OPENING, MAX BUTT SIZE IS 5" X 5"
4 REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.
5. CLOSER SIZE IS 10" x 2 1/4" x 2 7/8".

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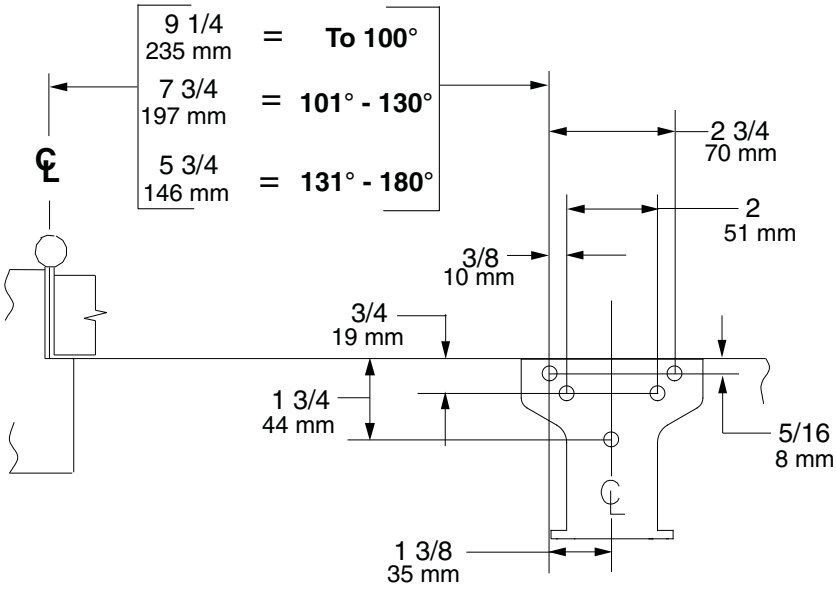
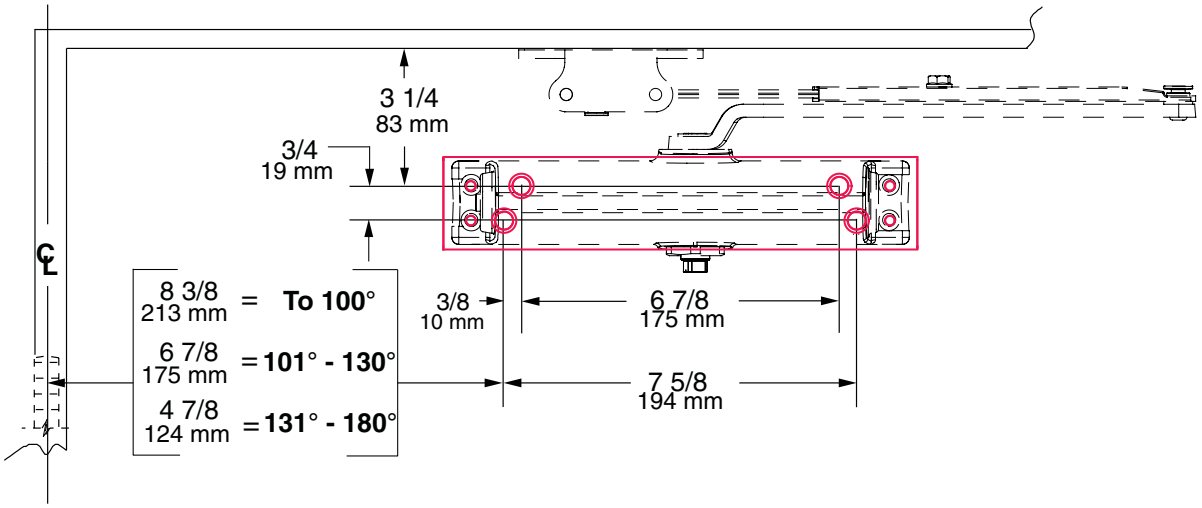
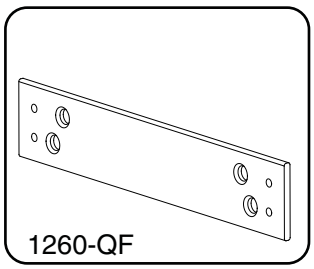
P1260 PUSH SIDE (DOOR MOUNT) QUICK FIX BRACKET

PUSH SIDE PARALLEL ARM MOUNTED ON: 1260-QF PLATE





LEFT HAND DOOR SHOWN
RIGHT HAND DOOR OPPOSITE



The Quick Fix bracket is to be used when preexisting holes are stripped out.

GENERAL NOTES:
1. LOCATE CLOSER & SHOE FROM CENTERLINE OF PIVOT OR SWING CLEAR HINGE PIN WHEN USED.
2. FOR 180° OPENING ON HINGE FACE MOUNTS, MAX BUTT SIZE IS 5" X 5"
3 REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.
4. CLOSER SIZE IS 10" x 2 1/4" x 2 7/8".

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28014

1461 CUSH

LCN®

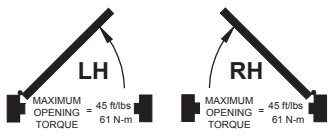
85°- 90°- 100° Template
Push Side Mounting

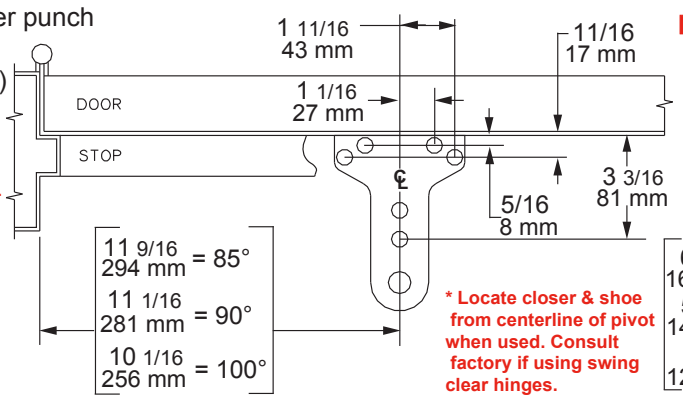
Installation Instructions

1 Locate proper template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes.

SRT Screw

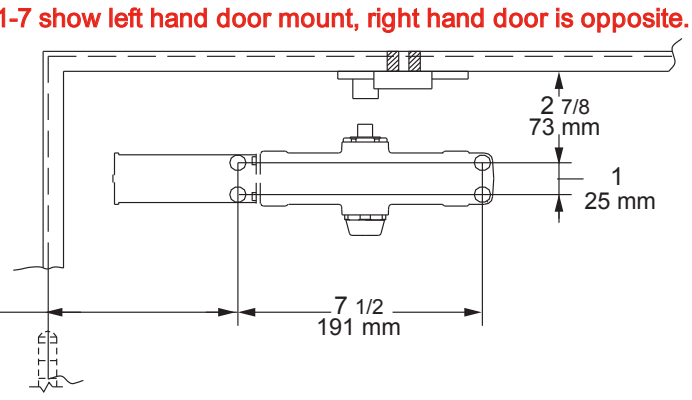
Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.





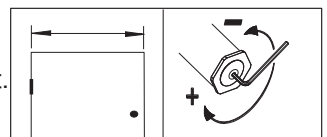
* Locate closer & shoe from centerline of pivot when used. Consult factory if using swing clear hinges.

Note: Steps 1-7 show left hand door mount, right hand door is opposite.



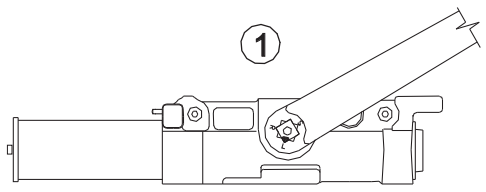
2 Determine door width, adjust spring power to match chart.

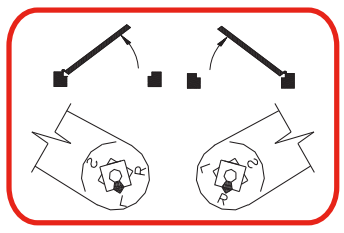
⚠CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011



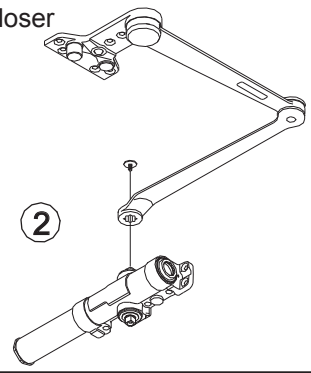
	1461
	♿ - 5
30"- 750mm	- 3
32"- 815mm	0
36"- 915mm	+ 2
42"- 1050mm	+ 6
48"- 1220mm	+ 10

3 ① Mount arm on shaft at 30° to closer, as shown.

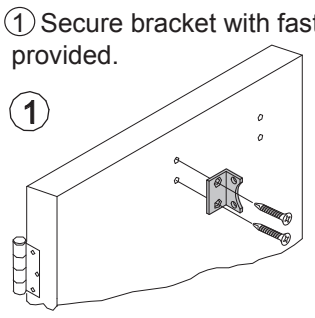




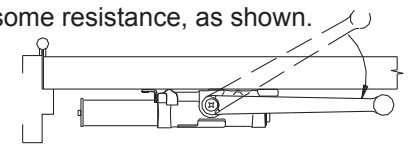
② Secure arm assembly to closer with pinion screw provided.



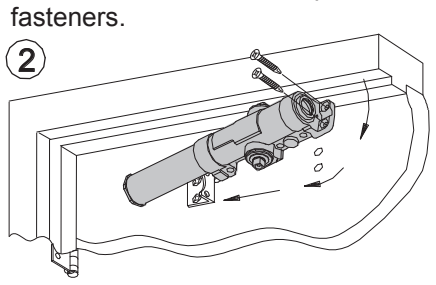
4 ① Secure bracket with fasteners provided.

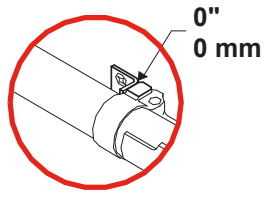


NOTE: Closer arm will provide some resistance, as shown.

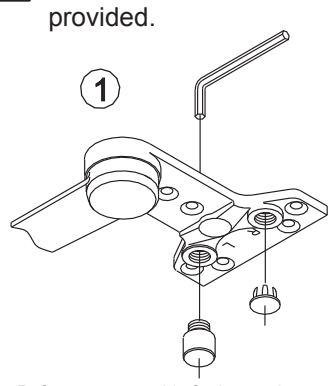


② Secure closer to door with provided fasteners.

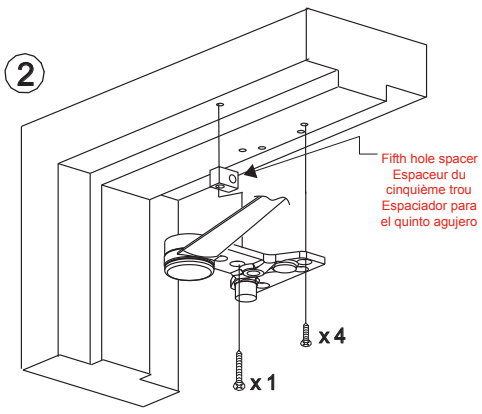




5 ① Shoe must be "handed" to match door before mounting.
② Open door to approx. 45°, attach arm to frame with fasteners provided.



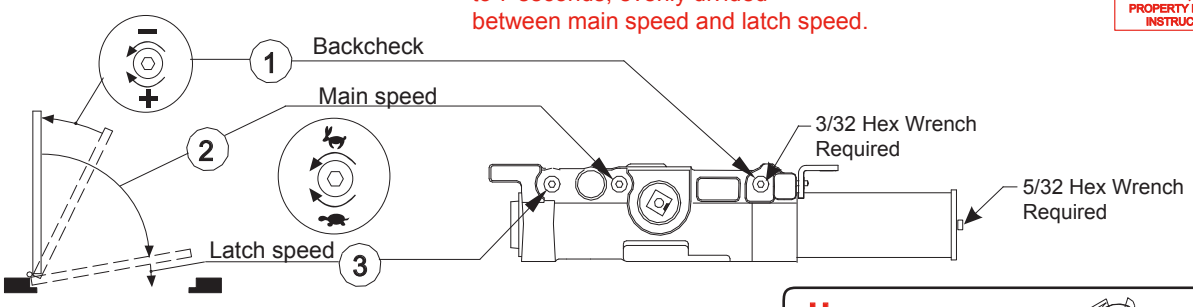
Refer to reverse side for instructions.
Instructions à lendos.
Vea al revés para las instrucciones.



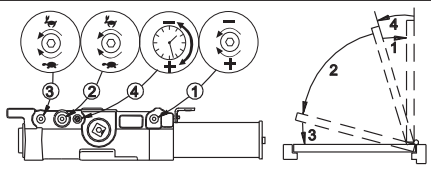
6 If necessary, adjust closer

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

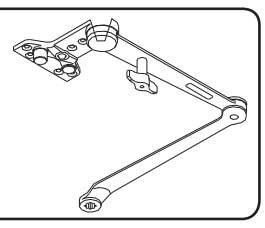
⚠CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



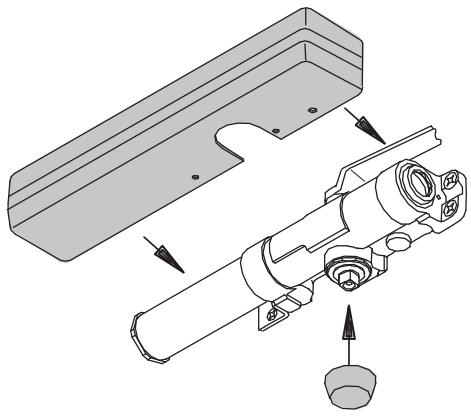
I Optional Delay Action
① - Backcheck
② - Main Speed
③ - Latch Speed
④ - Delay Speed



II HOLD OPEN ARM: To engage or disengage hold open feature, turn control handle one - quarter (1/4) turn.



7 Snap on cover and shaft cap.



1461 CUSH Instructions et gabarit 85°-90°-100° pour une installation sur le côté à pousser

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds.

Note : Les étapes 1- 7 illustrent une main gauche. Le sens est inversé pour une main droite.

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Indicateur rotatif de réglage du ressort.

3 ①Montez le bras sur la tige à 30° du ferme-porte, comme sur l'illustration.
②Fixez l'assemblage du bras au ferme-porte à l'aide des vis fournies.

4 ①Fixez la console à l'aide des attaches fournies.
② Fixez le ferme-porte sur la porte avec les attaches fournies.
NOTE: Le bras offrira une légère résistance, comme sur l'illustration.

5 ① **La main de la console doit être adaptée à celle de la porte avant l'installion.**

5 ②Ouvrez la porte à environ 45°, fixez le bras au cadre à l'aide des attaches fournies.

6 Au besoin, réglez
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement

I Action retardée optionnelle
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement
④ - vitesse de retenue

7 Placez le couvercle et le capuchon du pignon.

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

II BRAS DE RETENUE: Pour engager ou désengager le mécanisme de retenue, tournez la manette de contrôle d'un quart (1/4) de tour.

⚠DANGER
Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877 - 671 - 7011

⚠DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

1461 Instrucciones CUSH para plantilla 85°-90°-100° montaje al lado de empuje.

1 Localice la plantilla apropiada. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes.

Nota: Las etapas 1-7 indican un montaje de puerta a la izquierda, una puerta a la derecha está al lado opuesto.

Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

Indicador rotacional para el ajuste de la fuerza del resorte.

3 ①Monte el brazo en el eje a 30° del cerrador, tal como se muestra.
②Sujete el ensamblaje del brazo al cerrador con el tornillo piñión ya incluido.

4 ①Sujete el soporte con los sujetadores ya incluidos.
②Sujete el cerrador a la puerta con los sujetadores ya incluidos.

NOTA: El brazo del cerrador ofrecerá cierta resistencia, tal como se muestra.

5 ①Debe de hacerse coincidir el lado de la zapata con la puerta antes de montarla.

5 ②Abra la puerta hasta aprox. 45°, sujete el brazo al bastidor con los sujetadores ya incluidos.

6 Ajusta si se necesita
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

I Acción retardada opcional
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro
④ - velocidad de retardo

7 Coloca la tapa y el tapón de tiro.

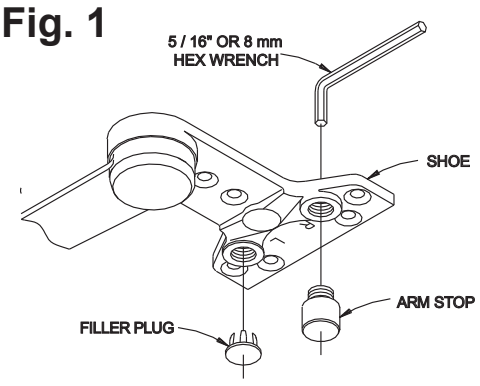
NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

II **BRAZO DE RETENCIÓN:** Para embragar o desembragar la característica de retención, dar un cuarto de vuelta (1/4) al cabo.

⚠ADVERTENCIA
UNA INSTALACIÓN O UN AJUSTE INCORRECTOS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL 877 - 671 - 7011

⚠ADVERTENCIA
LA APERTURA DEMASIADO GRANDE DE LAS VÁLVULAS DE AJUSTE PUEDE OCASIONAR UN DERRAME, DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES.

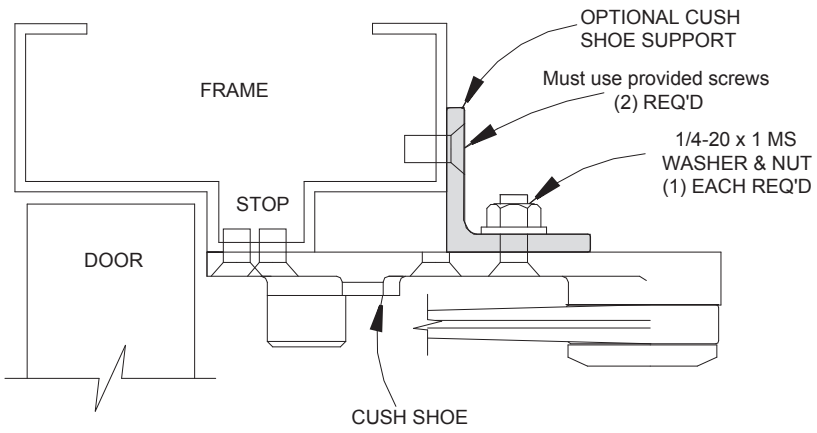
Fig. 1

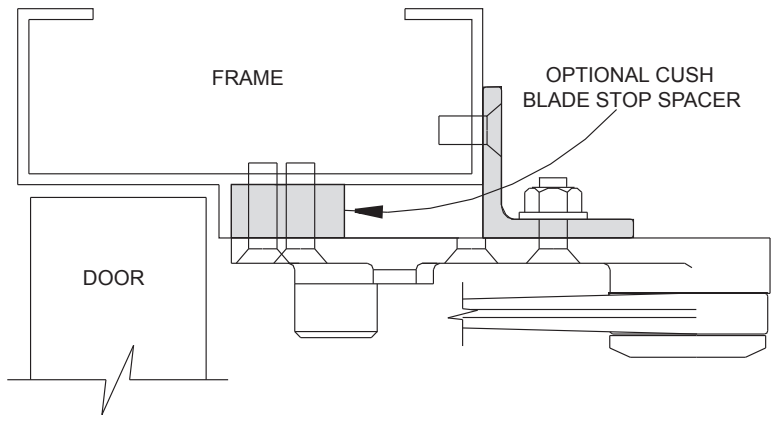


Both Cush and H.O. Cush shoes must be "handed" to match door **BEFORE** mounting. See **Fig. 1.**
For Left Hand doors: All shoes are shipped assembled for left hand doors. Insert 5/16" (8mm) Hex wrench into arm stop and turn counter - clockwise to **seat stop as tightly as possible.**
For Right Hand doors: (see illustration) Push filler plug out of shoe. Using a 5/16" (8mm) Hex wrench, turn arm stop clockwise to remove from shoe. Thread arm stop into hole marked "R". Turn wrench counter - clockwise, **seating stop as tightly as possible.** Insert filler plug into other hole.

La main des sabots Cush ainsi que celle des sabots Cush avec retenue doit être adaptée à cette de la porte AVANT l'installation. Voir Fig. 1.
Portes main gauche: Tous les sabots sont expédiés assemblés pour main gauche. Insérez une clé hexagonale 5/16 ou 8mm dans la butée du bras et tournez en sens inverse des aiguilles d'une montre pour assurer une assise de butée solide.
Portes main droite: (voir l'illustration). Sortez le bouchon du sabot.
À l'aide d'une clé hexagonale 5/16 ou 8mm, tournez dans le sens des aiguilles d'une montre pour enlever le sabot. En alignant bien les filets, insérez la butée du bras dans le trou "R". Tournez la clé en sens inverse des aiguilles d'une montre, pour assurer une assise de butée solide. Insérez le bouchon dans l'autre trou.

Debe de hacerse coincidir el lado de la zapata Cush o de la zapata Cush con retención antes de montarla. Ver Figura 1.
Puertas mano izquierda: las zapatas se entregan todas en sambladas para puertas mano izquierda. Inserte una llave hex 5/16 (8 mm.) en el tope del brazo y gire en sentido contrario a las agujas del reloj para seguramente asentar el tope. Puertas mano derecha: (ver la ilustración).
Quite el tapón de llenado de la zapata. Con una llave hez 5/16 (8 mm.), gire el tope del brazo en el sentido de las agujas del reloj para quitarlo de la zapata. Coloque el tope del brazo en el agujero marcado con "R", alineando bien las roscas. Gire la llave en el sentido contrario a las agujas del rejoj para asentar bien seguro el tope. Inserte el tapón de llenado en otro agujero.





INSTRUCTIONS FOR INSTALLING
CUSH SHOE SUPPORT
AFTER CUSH - N - STOP IS INSTALLED

1----Set Cush Shoe Support on top of Cush Shoe and hold against frame.
2---Assemble screw, washer, and nut as shown and tighten securely.
3---Using Shoe Support as Template drill & tap two 1/4-20 holes in frame.
4---Insert screw & tighten securely.

If frame is not wide enough to receive fifth screw, install Cush Shoe Support (available from Dealer) as shown below.

INSTRUCTIONS POUR INSTALLER
LE SUPPORT DU SABOT CUSH
APRÈS L'INSTALLATION DU CUSH - N - STOP

1----Mettez le support du sabot Cush sur le sabot Cush et appuyez-le contre le cadre.
2---Assemblez la vis, la rondelle et le boulon comme sur l'illustration et serrez fermement.
3---En utilisant le support du sabot comme gabarit, taraudez deux trous de 1/4-20 dans le cadre.
4---Insérez la vis et serrez fermement.
Si le cadre n'est pas assez large pour la cinquième vis, posez le support du sabot Cush (offert chez le concessionnaire) comme sur l'illustration.

Should frames have 1/2" Blade Stop it is necessary to use 1/2" Blade stop Spacer (available from Dealer). Use both Blade Stop Spacer and Shoe Support wherever required.

Si le cadre a une butée de 1/2" il faut utiliser un espaceur de butée de 1/2" (offert chez le concessionnaire). Utilisez espaceur et support de sabot au besoin.

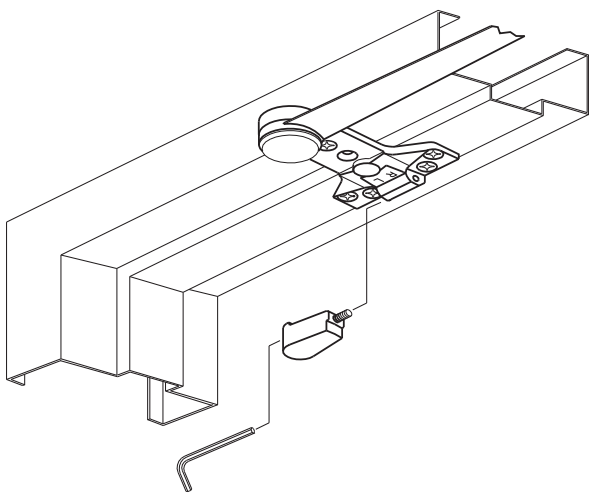
Si los bastidores tienen un tope de pala de 1/2", se debe utilizar un espaciador de tope de pala de 1/2" (disponible del representante). Utilice un espaciador de tope de pala y un soporte de zapata cuando sea necesario.

INSTRUCCIONES DE INSTALACIÓN
SOPORTE DE ZAPATA CUSH
DESPUÉS DE HABER SIDO INSTALADO EL CUSH - N - STOP

1----Coloque el soporte de zapata Cush encima del zapata Cush y téngalo contra el bastidor.
2---Monte el tornillo, la arandela y la tuerca tal como se muestra y apriételos bien.
3---Usando el soporte de zapata como plantilla, taladre y rosque dos agujeros 1/4-20 en el bastidor.
4---Inserte el tornillo y apriételo bien.

Si el bastidor no es suficientemente ancho para recibir un quinto tornillo, instale un soporte de zapata Cush (disponible del representante) tal como se muestra abajo.

INSTRUCTIONS FOR INSTALLING
SPRING CUSH ARM



INSTALLATION
(Left hand shown; Right hand opposite)

1. **LOCATING**: See IMPORTANT INFORMATION below. In new installations, use standard CUSH template. When replacing existing CUSH arm, use existing mounting holes.

2. **INSTALLATION**: Mount shoe on frame FIRST. After shoe is mounted, use a 5/32 or 4 mm hex wrench to install the contact block assembly as shown above. Make sure the screw is tightened securely into the shoe.

3. **COMPLETING INSTALLATION**: Complete the installation as directed for regular CUSH arms in the main instruction sheet.

IMPORTANT INFORMATION:
1461: Spring Cush dead stop will occur approximately 5° beyond normal 1461 dead stop point.
Backcheck: DO NOT reduce backcheck setting of door closer. Spring Cush arm function does not replace backcheck.

INSTRUCTIONS POUR INSTALLER
UN BRAS À RESSORT CUSH

INSTALLATION
(Main gauche illustrée; main droite à l'opposé)
1. SITUER Voir RENSEIGNEMENTS IMPORTANTS. Pour une nouvelle installation, utilisez le gabarit CUSH standard. Pour remplacer un bras CUSH, utilisez les trous de montage déjà percés.
2. INSTALLATION: Montez le sabot sur le cadre EN PREMIER. Après avoir posé le sabot, utilisez une clé hexagonale 5/32 ou 4 mm pour installer l'assemblage comme sur l'illustration. Serrez la vis fermement dans le sabot.
3. TERMINER L'INSTALLATIONTerminer l'installation indiquée pour les bras CUSH sur la feuille d'instructions principale.

RENSEIGNEMENTS IMPORTANTS:
1461: L'arrêt du Cush à ressort se produira à environ 5° après celui du 1461 normal.
Résistance d'ouverture: NE PAS réduire la résistance d'ouverture du ferme-porte. La fonction du bras Cush à ressort ne remplace pas cette résistance.

INSTRUCCIONES DE INSTALACIÓN
DEL BRAZO DE RESORTE CUSH

INSTALACIÓN
(A la izquierda: como se muestra; a la derecha: al opuesto)
1.LOCALIZACIÓN: Vea los DATOS IMPORTANTES abajo. Utilice la plantilla CUSH estándar en las nuevas instalaciones. Utilice los agujeros de montaje existentes cuando se reemplace un brazo CUSH existente.
2. INSTALACIÓN: PRIMERO: Monte la zapata en el bastidor. Después de haber montado la zapata, utilice una llave de tuercas hexagonal 5/32 o 4 mm para instalar el ensamblaje de bloque de contacto como se muestra arriba. Asegúrese de apretar bien el tornillo en la zapata.
3. PARA COMPLETAR LA INSTALACIÓN: Complete la instalación como para los brazos CUSH regulares en la hoja de instrucciones principal.

DATOS IMPORTANTES:
1461: El paro en seco del resorte podrá ocurrir aproximadamente 5° después del punto del paro en seco 1461 normal.
Resistencia de apertura: NO reduzca el ajuste de resistencia de apertura del cerrador. El funcionamiento del brazo de resorte Cush no reemplaza la resistencia de apertura.

Customer Service	Servicio al cliente	Service à la clientèle
1-877-671-7011	www.allegion.com	

ALLEGION

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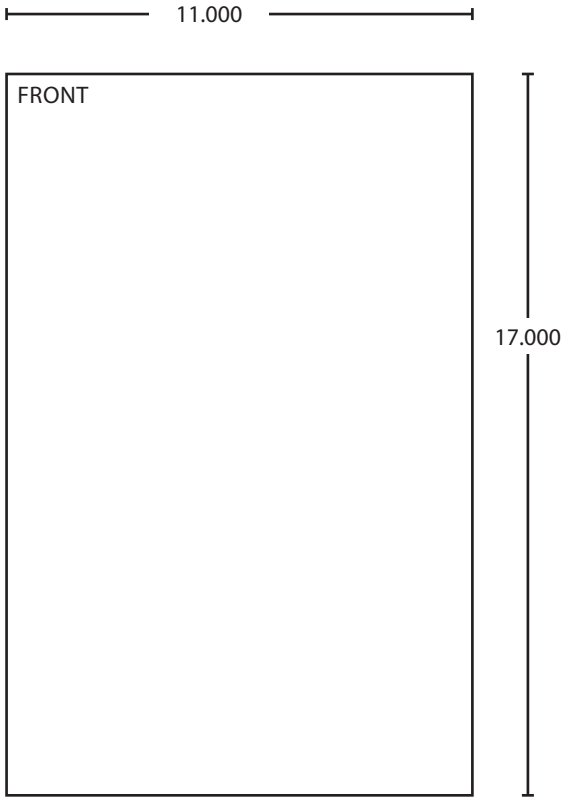
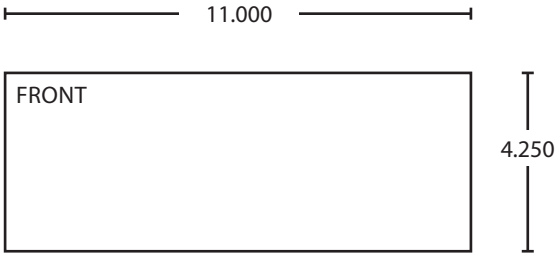


BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
D	E	F	G	H	J
N/A	N/A	N/A	N/A	N/A	043812

Material
White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
J > Revised artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043812	01-01-14

Title
1460 Series Cush Instruction Sheet

Creation Date	Number	Revision
04-27-10	28014	J

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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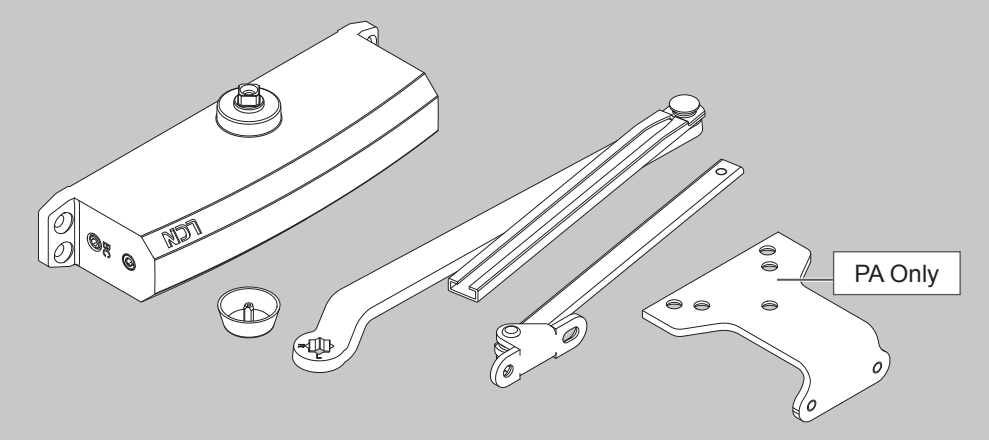
1250 Series

71375

Pull Side, Top Jamb Mount, and Parallel Arm (PA) Mount

Installation Instructions

PARTS

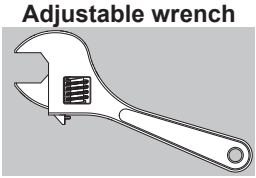


ⓘ **Screw pack information is on page 5.**

TOOLS

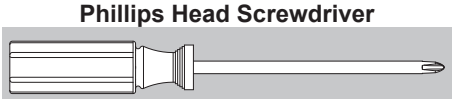
5⁄32" or 4mm Hex Wrench

Adjustable wrench



1⁄8" Drill Bit

Phillips Head Screwdriver



ⓘ **Hold Open wrench info on page 5.**

⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage.
Follow all instructions carefully.
For questions, call LCN at 877 - 671 - 7011

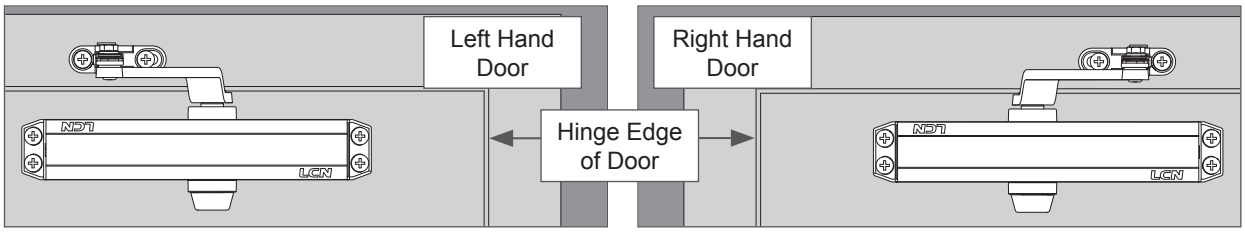
Hold open arms must not be installed on fire rated doors.

Opening the regulation valves too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.
FOLLOW ALL INSTRUCTIONS CAREFULLY.

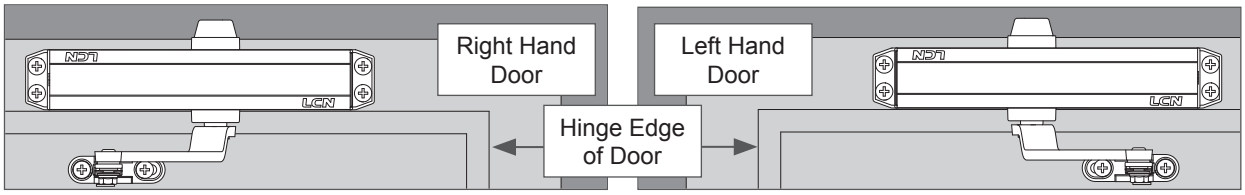
DO NOT USE THE CLOSER AS A DOOR STOP!
An auxiliary stop is recommended at the hold-open point or where the door cannot swing 180º.

Choose Installation Type

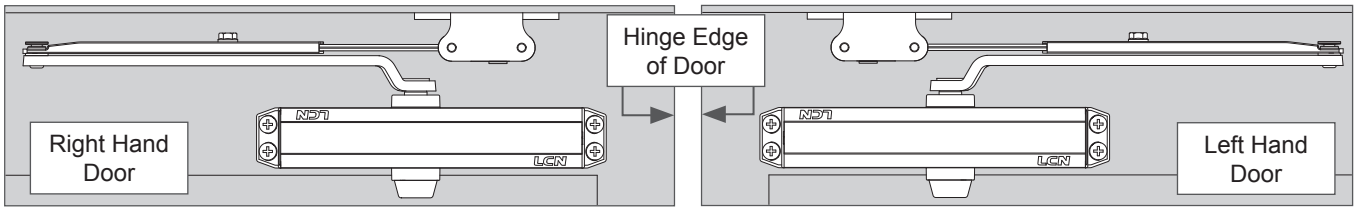
Pull Side Mount (see page 2)



Push Side Top Jamb Mount (see page 3)



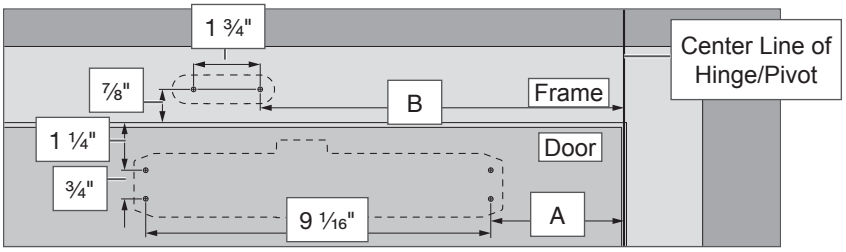
Push Side Parallel Arm (PA) Mount (see page 4)



Pull Side Mount

Mounting Hole Dimensions

ⓘ **Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.**



1 Determine the degree of door opening required and find dimension “A” on the chart below.

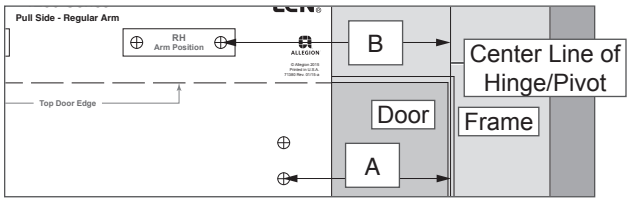
ⓘ **Opening angle of 180° is required to meet ADA.**

A Closer	Opening	Measurement from Door Edge
	To 100°	7”
	100° to 120°	6”
	120° to 180°	3½”

B Shoe	Opening	Measurement from Door Edge
	To 100°	13”
	100° to 120°	12”
	120° to 180°	9½”

2 Measure from center line of hinge/pivot and stick template on door. Mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**



3 Remove template, and drill holes where marked with a 1/8” drill bit for SRT screws.

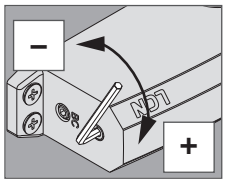
ⓘ **SRT screws are used on metal doors.**
Wood screws are used on wood doors.

4 Measure and determine your door’s width. Using a hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.

Turn counterclockwise for “-”; turn clockwise for “+”

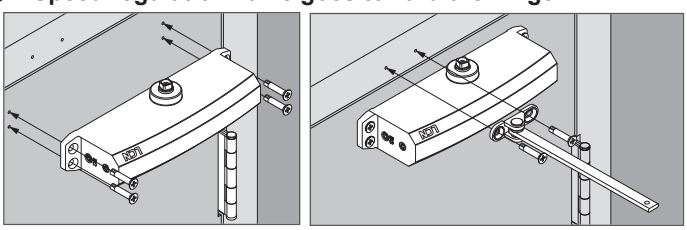
ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

Door Width	Number of Turns
ADA Setting	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Install closer onto door and shoe onto frame using screws provided.

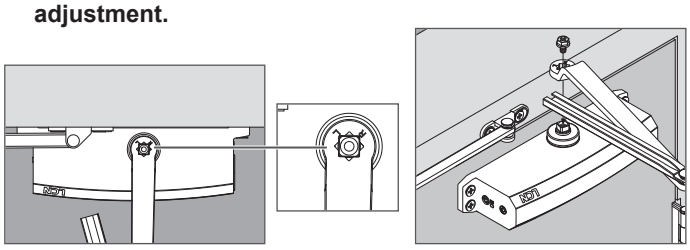
ⓘ **Speed regulation valve goes toward the hinge.**



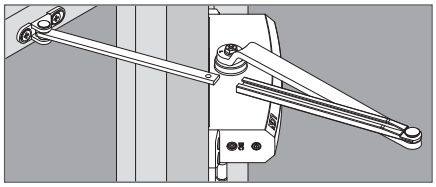
6 Install main arm to closer.

a. Place main arm onto the top closer shaft.
b. Install and tighten main arm screw.

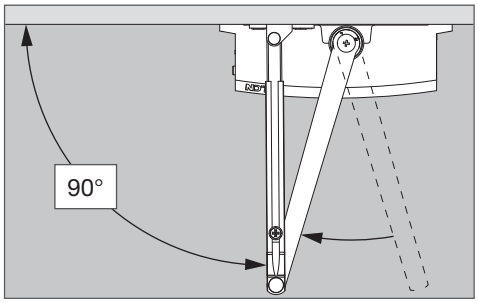
ⓘ **See page 5 for Optional Hold Open Arm installation and adjustment.**



7 Route the rod into the forearm.

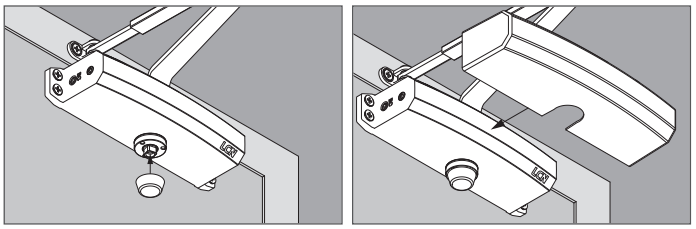


8 Preload the forearm to 90°. While the arm is still preloaded, install and tighten the arm screw.



9 Adjust the closer, if necessary. See page 4 for closer adjustment instructions.

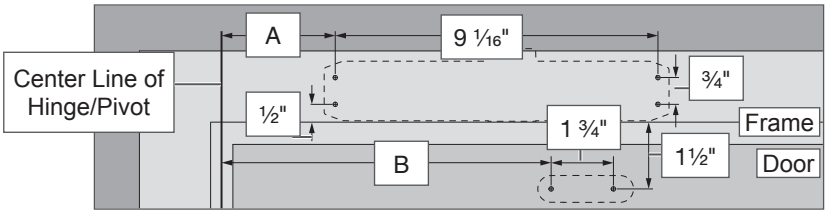
10 Screw cap onto shaft and install cover (optional).



Push Side Top Jamb Mount

Mounting Hole Dimensions

ⓘ **Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.**



1 Determine the degree of door opening required and find dimension “A” on the chart below.

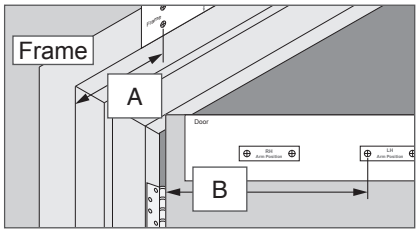
ⓘ **Opening angle of 180° is required to meet ADA.**

A Closer	Opening	Measurement from Door Edge
	To 100°	7 ½”
	100° to 120°	6”
	120° to 180°	3½”

B Shoe	Opening	Measurement from Door Edge
	To 100°	13½”
	100° to 120°	12”
	120° to 180°	9½”

2 Measure from center line of hinge/pivot and stick template on door. Mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**



3 Remove template, and drill holes where marked with a 1/8” drill bit for SRT screws.

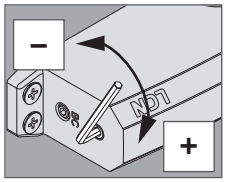
ⓘ **SRT screws are used on metal doors.**
Wood screws are used on wood doors.

4 Measure and determine your door’s width. Using a hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.

Turn counterclockwise for “-”; turn clockwise for “+”

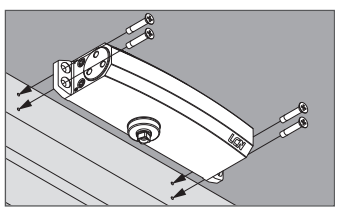
ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

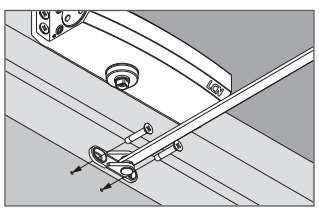
Door Width	Number of Turns
ADA Setting	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Install closer onto frame and shoe onto door using screws provided.

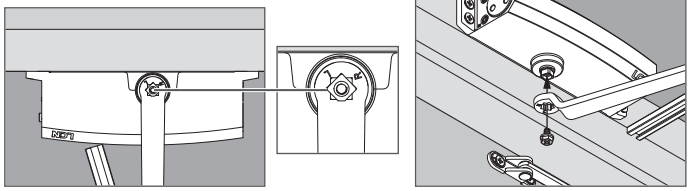
ⓘ **Speed regulation valve goes toward the hinge.**



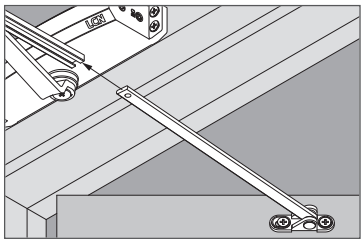


6 Install main arm to closer.
a. Place main arm onto the bottom closer shaft.
b. Install and tighten main arm screw.

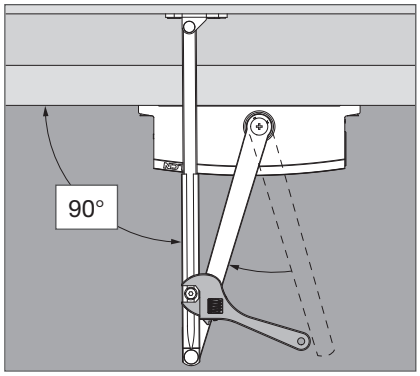
ⓘ **See page 5 for Optional Hold Open Arm installation and adjustment.**



7 Route the rod into the forearm.

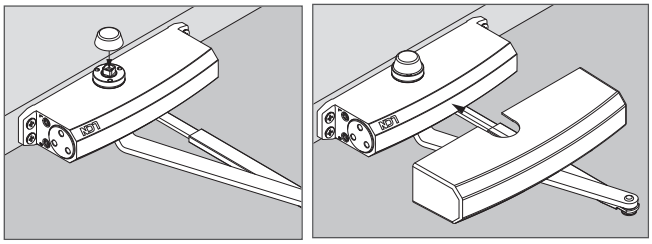


8 Preload the forearm to 90°. While the arm is still preloaded, install and tighten the arm screw.



9 Adjust the closer, if necessary. See page 4 for closer adjustment instructions.

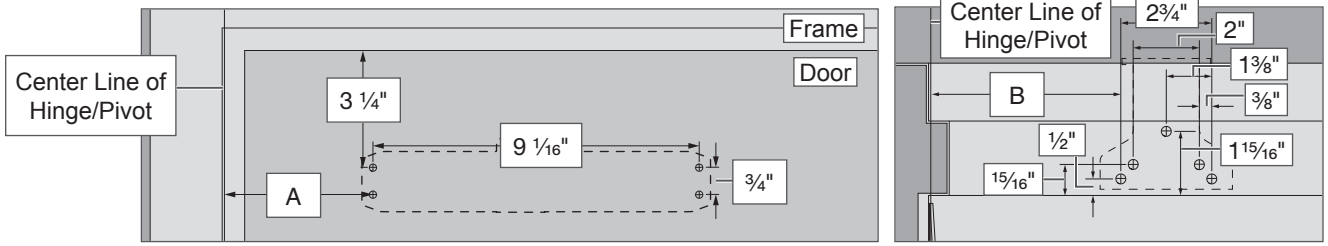
10 Screw cap onto shaft and install cover (optional).



Push Side Parallel Arm (PA) Mount

Mounting Hole Dimensions

ⓘ **Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.**



1 Determine the degree of door opening required and find dimensions “A” and “B” in the charts below.

A — Closer

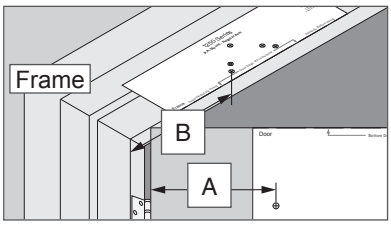
Opening	Measurement from Door Edge
To 100°	7 5/8”
100° to 130°	6 1/8”
130° to 180°	4 1/8”

B — PA Shoe

Opening	Measurement from Door Edge
To 100°	9 1/4”
100° to 130°	7 3/4”
130° to 180°	5 3/4”

2 Measure from center line of hinge/pivot and stick template on door. Mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**



3 Remove template, and drill holes where marked with a 1/8” drill bit for SRT screws.

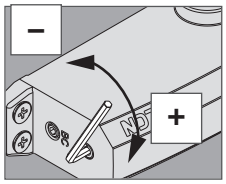
ⓘ **SRT screws are used on metal doors.**
Wood screws are used on wood doors.

4 Measure and determine your door’s width. Using a hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.

Turn counterclockwise for “-”; turn clockwise for “+”

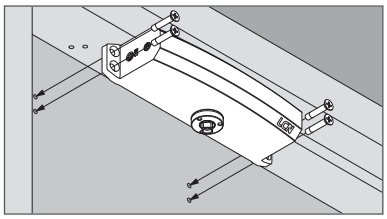
ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

Door Width	Number of Turns
ADA Setting	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Install closer onto door.

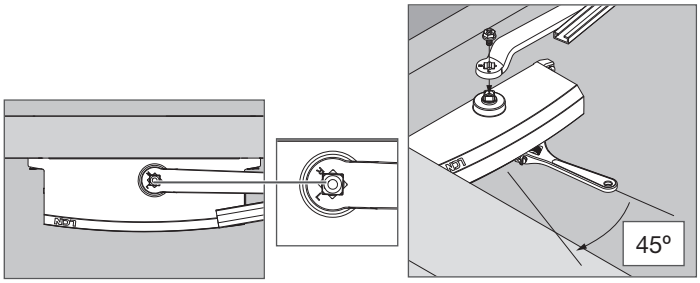
ⓘ **Speed regulation valve goes away from the hinge.**



6 Install main arm to closer.

ⓘ **See page 5 for Optional Hold Open Arm installation and adjustment.**

a. Use a wrench on the bottom closer shaft to turn the top closer shaft approximately 45°. **Hold the wrench at this angle for the next step.**
b. Place main arm onto the top closer shaft.
c. Install and tighten main arm screw.

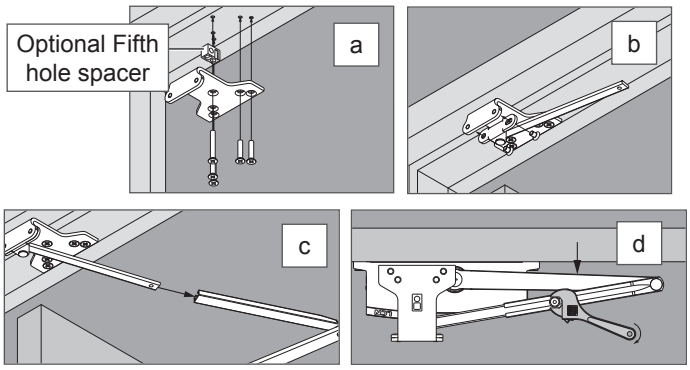


7 Install PA Shoe onto the frame, then into the rod & shoe.

a. Attach PA shoe, and optional fifth hole spacer if needed, to frame.

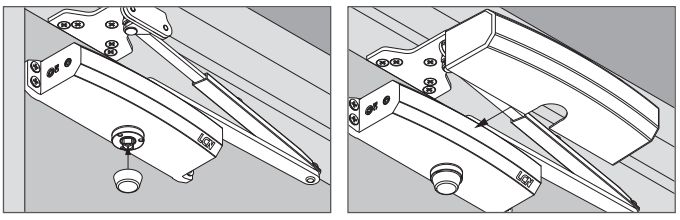
ⓘ **Use the fifth hole spacer only if there is a space between the frame and the PA shoe.**

b. Fasten rod & shoe to PA shoe.
c. Install rod into the forearm of the main arm.
d. Preload main arm to be parallel with frame, tighten arm screw.



8 Adjust the closer, if necessary. See page 5 for closer adjustment instructions.

9 Screw cap onto shaft and install cover (optional).



Closer Valve Adjustment

Check closing time, and adjust closer if needed.

⚠ CAUTION ⚠

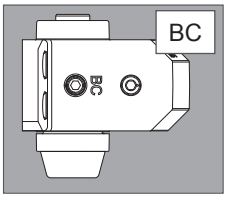
Opening the regulation valves (described below) too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.

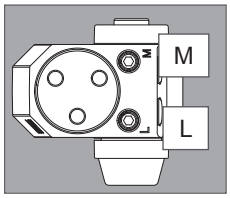
FOLLOW ALL INSTRUCTIONS CAREFULLY.

ⓘ **Valve must be closed CW to seat, never more than 3 turns CCW from seated position. Adjust the valves in 1/4 turn increments or less at a time. DO NOT TURN MORE THAN 3 FULL ROTATIONS. THIS WILL CAUSE THE CLOSER TO LEAK OIL!**

ⓘ **DO NOT ADJUST THE LATCH SPEED IF THE DOOR DOES NOT LATCH. If this occurs, adjust the spring force.**

1. Open the door to 90°, measure how long the door takes to close and latch. A typical closing time is 5 to 7 seconds, evenly divided between main speed and latch speed.
2. If the closing time needs to be adjusted, use the closer valves described below.
   a. Backcheck- this controls door speed opening as the door angle approaches 90°. **Do not use as a door stop.**
   b. Main Speed- this controls door speed during most of the closing motion.
   c. Latch Speed- this controls door speed during the last few degrees of door closing.
3. Turn the valves clockwise to decrease door speed, and counterclockwise to increase door speed. The latch speed and main speed should be adjusted together.

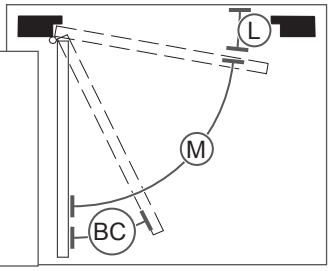




BC = Backcheck valve

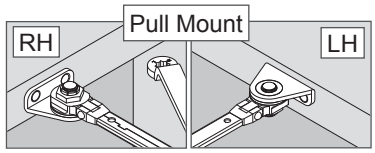
M = Main speed valve

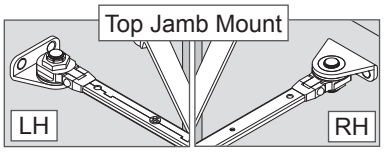
L = Latch speed valve

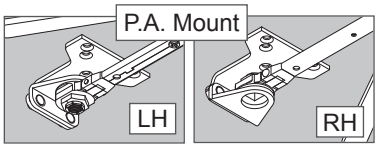


Optional Hold Open Arms

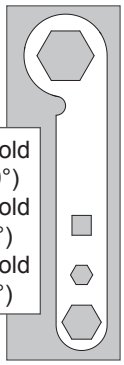
1 See the image below to determine the direction of the Hold Open nut. This is determined by the door handing.







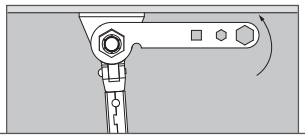
180° Mounting Hold Open (120°-180°)
120° Mounting Hold Open (95°-120°)
100° Mounting Hold Open (85°-100°)

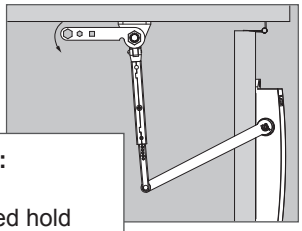


2 Hold Open Arm Adjustment.

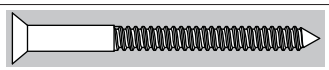
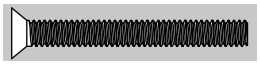
ⓘ **The Hold Open Arm installs like the regular closer arm. Follow steps 5 - 7 on page 2 for Hold Open Arm installation.**

ⓘ **Top Jamb mount handing for Hold Open Arms is reverse of other mounts.**





To adjust Optional Hold-open arm:
1. Loosen hold open nut.
2. Open door to 5° less than desired hold position and tighten hold open nut securely.

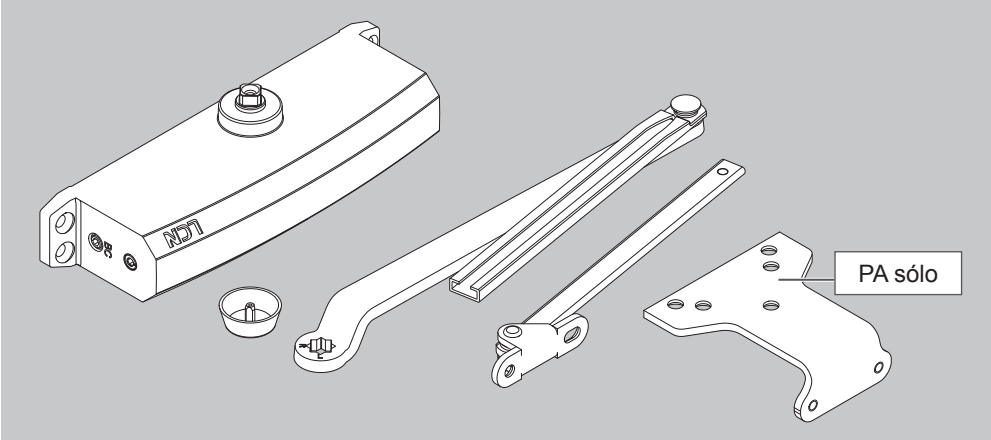
Screw Type	Picture	Cylinder Mounting	PA Bracket Mounting	PA Shoe Mounting	5th Hole Mounting (PA Shoe Only)
Wood (for wood doors & frames)		4 @ 1 3⁄16"	4 @ 1 3⁄8"		1 @ 2"
Machine (for metal doors & frames) Requires hole drilling & tapping; best hold.		4 @ 1"	4 @ 5⁄8"	2 @ 3⁄8"	1 @ 1 ½"
SRT - Self Reaming & Tapping (for metal doors & frames)		4 @ 1 ½"	4 @ 1 ½"		1 @ 2"

Screw Type	Picture	Notes
Fifth Hole Spacer		
Thru Bolts		Used when mounting through door.
Pinion Attachment Screw		1 M6 x 10mm for attachment of the arm (see step 6).

Serie 1250

Lado para tirar, montaje en jamba superior y montaje en brazo paralelo (PA) — Instrucciones de Instalación

PIEZAS

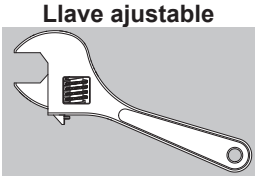


ⓘ **La información sobre el paquete de tornillos se encuentra en la página 10.**

HERRAMIENTAS

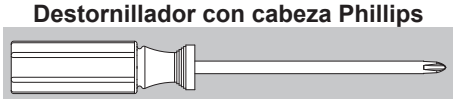
Llave hexagonal de 5⁄32" o 4 mm

Llave ajustable



Broca de taladro de 1⁄8"

Destornillador con cabeza Phillips



ⓘ **Información sobre la llave para mantener abierto en la página 10.**

⚠ PRECAUCIÓN ⚠

La instalación o regulación incorrecta puede resultar en lesiones personales o daño a los bienes.
Siga todas las instrucciones con atención.
En caso de duda, llame a LCN al 877-671-7011

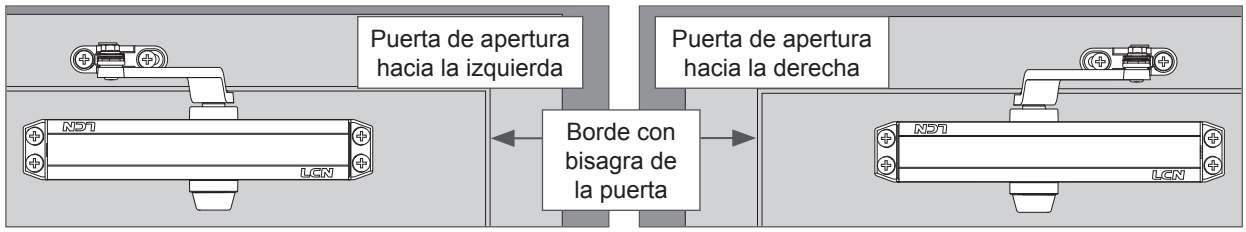
Los brazos para mantener abierto no deben instalarse en puertas con clasificación ignífuga.

¡Abrir demasiado las válvulas de regulación puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales.
SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

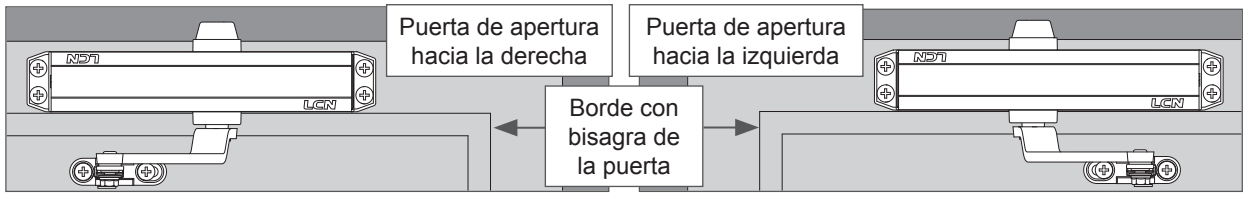
¡NO USE EL MECANISMO DE CIERRE COMO TOPE DE LA PUERTA!
Se recomienda el uso de un tope auxiliar en el punto de mantener abierto o donde la puerta no puede girar 180°.

Seleccione el tipo de instalación

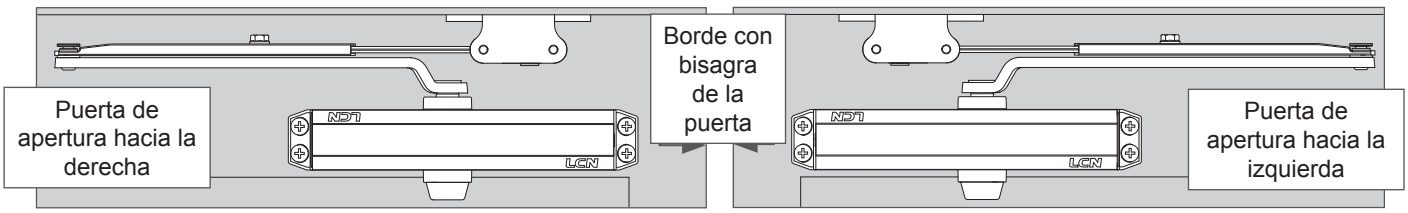
Montaje en el lado para tirar (vea la página 7)



Montaje en la jamba superior del lado para empujar (vea la página 8)



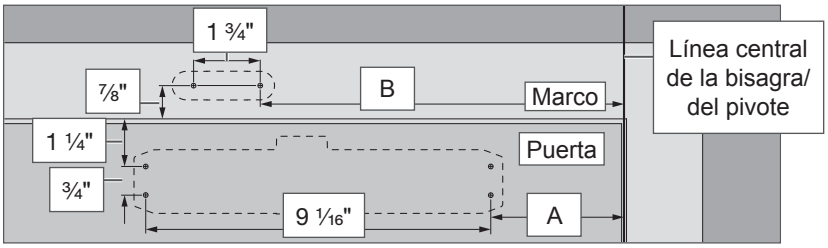
Brazo paralelo (PA) del lado para empujar (vea la página 9)



Montaje en el lado para tirar

Dimensiones de montaje

ⓘ **Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.**



1 Determine el grado de apertura de la puerta requerido y busque la dimensión "A" en al cuadro siguiente.

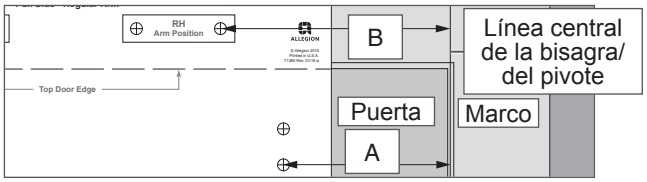
ⓘ **Se requiere un ángulo de apertura de 180° para cumplir con ADA.**

A	Apertura	Medición desde el borde de la puerta
El mecanismo de cierre	To 100°	7”
	100° to 120°	6”
	120° to 180°	3½”

B	Apertura	Medición desde el borde de la puerta
el zócalo	To 100°	13”
	100° to 120°	12”
	120° to 180°	9½”

2 Mida desde la línea central de la bisagra/del pivote y adhiera la plantilla en la puerta. Marque los orificios de perforación.

ⓘ **Vea las Dimensiones de montaje anteriores según sea necesario.**



3 Retire la plantilla y perfore orificios donde está marcado con una broca de taladro de ⅛" para tornillos SRT.

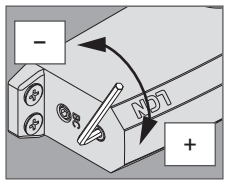
ⓘ **Los tornillos SRT se usan en puertas de metal.**
Los tornillos de madera se usan en puertas de madera.

4 Mida y determine el ancho de su puerta. Con una llave hexagonal, ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

Gire en sentido antihorario para “-”; gire en sentido horario para “+”.

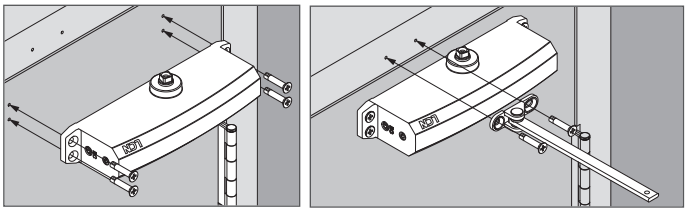
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

Ancho de la puerta	Número de giros
Configuración de ADA	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Instale el mecanismo de cierre en la puerta y el zócalo en el marco usando los tornillos provistos.

ⓘ **La vàlvula de regulaciòn de velocidad va con direction de la bisagra.**

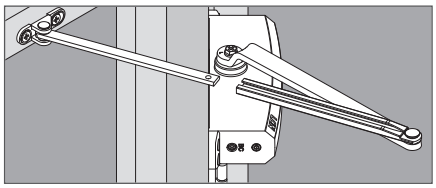


6 Instale el brazo principal en el mecanismo de cierre.

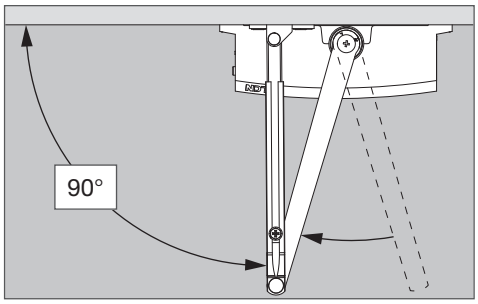
a. Coloque el brazo principal en el eje superior del mecanismo de cierre.
b. Instale y ajuste el tornillo del brazo principal.

ⓘ **Consulte la página 10 para ver la instalación y el ajuste del brazo opcional para mantener abierto.**

7 Coloque la varilla en el brazo delantero.

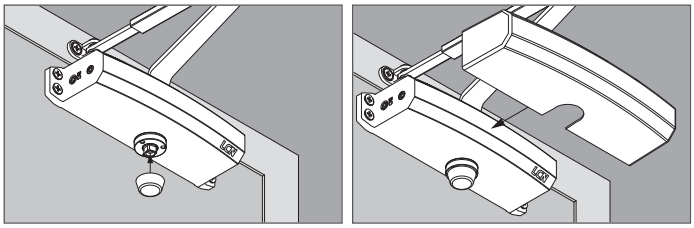


8 Cargue previamente el brazo delantero a 90°. Mientras el brazo aún está precargado, instale y ajuste el tornillo del brazo.



9 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 10 para ver las instrucciones de ajuste del mecanismo de cierre.

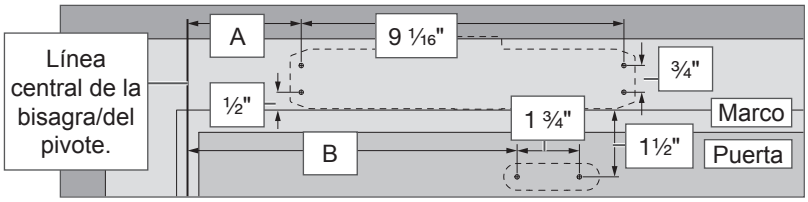
10 Atornille la tapa en el eje e instale la cubierta (opcional).



Montaje en la jamba superior del lado para empujar

Dimensiones de montaje

ⓘ **Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.**



1 Determine el grado de apertura de la puerta requerido y busque la dimensión "A" en al cuadro siguiente.

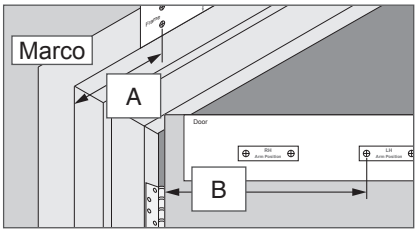
ⓘ **Se requiere un ángulo de apertura de 180° para cumplir con ADA.**

A	Apertura	Medición desde el borde de la puerta
El mecanismo de cierre	To 100°	7 ½”
	100° to 120°	6”
	120° to 180°	3½”

B	Apertura	Medición desde el borde de la puerta
el zócalo	To 100°	13½”
	100° to 120°	12”
	120° to 180°	9½”

2 Mida desde la línea central de la bisagra/del pivote y adhiera la plantilla en la puerta. Marque los orificios de perforación.

ⓘ **Vea las Dimensiones de montaje anteriores según sea necesario.**



3 Retire la plantilla y perfore orificios donde está marcado con una broca de taladro de ⅛" para tornillos SRT.

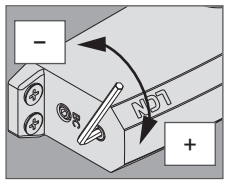
ⓘ **Los tornillos SRT se usan en puertas de metal.**
Los tornillos de madera se usan en puertas de madera.

4 Mida y determine el ancho de su puerta. Con una llave hexagonal, ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

Gire en sentido antihorario para “-”; gire en sentido horario para “+”.

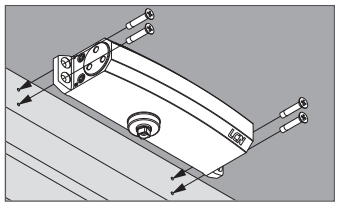
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

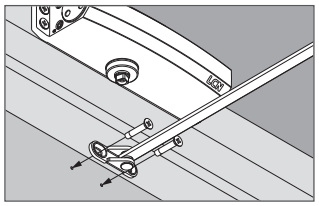
Ancho de la puerta	Número de giros
Configuración de ADA	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Instale el mecanismo de cierre en el marco y el zócalo en la puerta usando los tornillos provistos.

ⓘ **La vàlvula de regulaciòn de velocidad va con direction de la bisagra.**

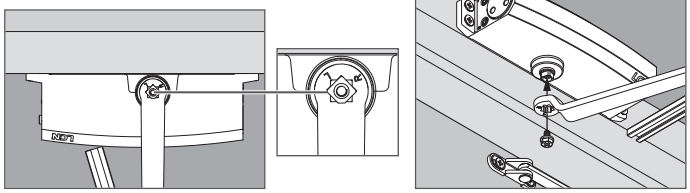




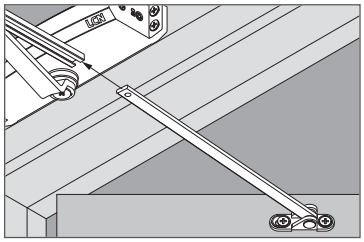
6 Instale el brazo principal en el mecanismo de cierre.

a. Coloque el brazo principal en el eje inferior del mecanismo de cierre.
b. Instale y ajuste el tornillo del brazo principal.

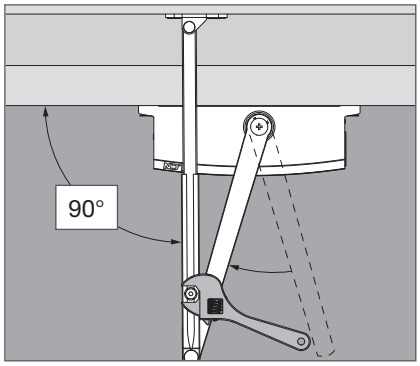
ⓘ **Consulte la página 10 para ver la instalación y el ajuste del brazo opcional para mantener abierto.**



7 Coloque la varilla en el brazo delantero.

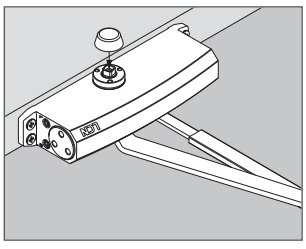


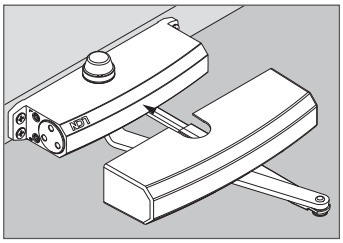
8 Cargue previamente el brazo delantero a 90°. Mientras el brazo aún está precargado, instale y ajuste el tornillo del brazo.



9 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 10 para ver las instrucciones de ajuste del mecanismo de cierre.

10 Atornille la tapa en el eje e instale la cubierta (opcional).

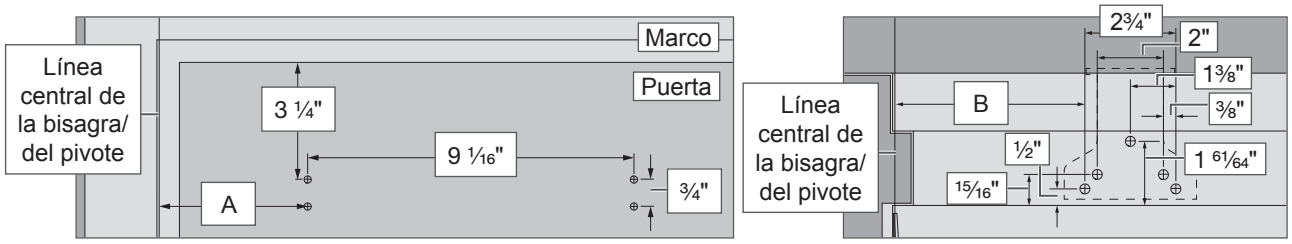




Brazo paralelo (PA) del lado para empujar

Dimensiones de montaje

ⓘ **Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.**



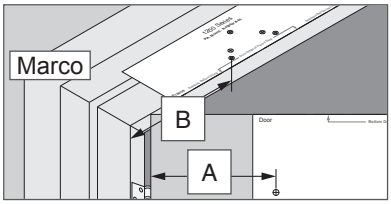
1 Determine el grado de apertura de la puerta requerido y busque las dimensiones "A" y "B" en el cuadro siguiente.

A	Apertura	Medición desde el borde de la puerta
El mecanismo de cierre	Hasta 100°	7 5/8"
	De 100° a 130°	6 1/8"
	De 130° a 180°	4 1/8"

B	Apertura	Medición desde el borde de la puerta
el zócalo PA	Hasta 100°	9 1/4"
	De 100° a 130°	7 3/4"
	De 130° a 180°	5 3/4"

2 Mida desde la línea central de la bisagra/del pivote y adhiera la plantilla en la puerta. Marque los orificios de perforación.

ⓘ **Vea las Dimensiones de montaje anteriores según sea necesario.**



3 Retire la plantilla y perfore orificios donde está marcado con una broca de taladro de ⅛" para tornillos SRT.

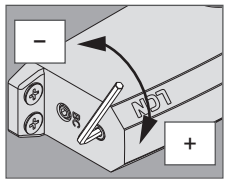
ⓘ **Los tornillos SRT se usan en puertas de metal.**
Los tornillos de madera se usan en puertas de madera.

4 Mida y determine el ancho de su puerta. Con una llave hexagonal, ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

Gire en sentido antihorario para "-"; gire en sentido horario para "+".

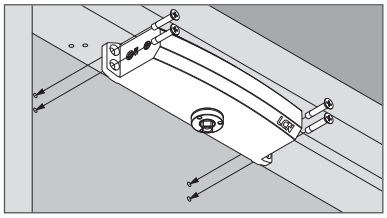
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

Ancho de la puerta	Número de giros
Configuración de ADA	-12
32" - 815 mm	-6
36" - 915 mm	0
42" - 1050 mm	+6
48" - 1220 mm	+13



5 Instale el mecanismo de cierre en la puerta.

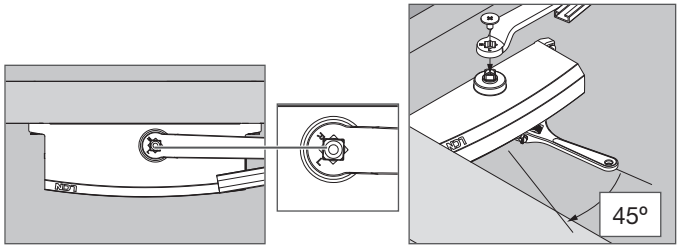
ⓘ **La vàlvula de regulaciòn de velocidad va con direction opuesta de la bisagra.**



6 Instale el brazo principal en el mecanismo de cierre.

ⓘ **Consulte la página 10 para ver la instalación y el ajuste del brazo opcional para mantener abierto.**

a. Use una llave en el eje inferior del mecanismo de cierre para girar el eje superior del mecanismo de cierre aproximadamente 45°. **Sostenga la llave en este ángulo hasta el próximo paso.**
b. Coloque el brazo principal en el eje superior del mecanismo de cierre.
c. Instale y ajuste el tornillo del brazo principal.

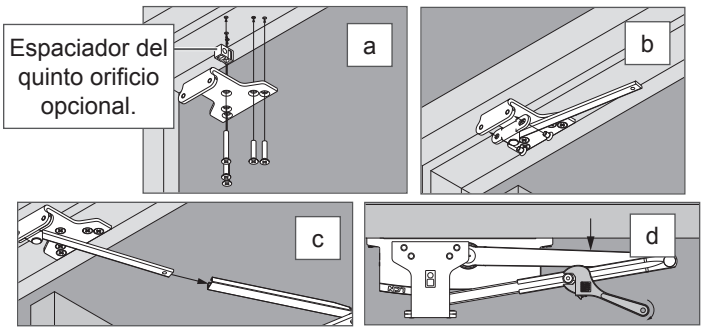


7 Instale el zócalo del PA en el marco, luego en la varilla y el zócalo.

a. Coloque el zócalo del PA y el espaciador del quinto orificio opcional, de ser necesario, en el marco.

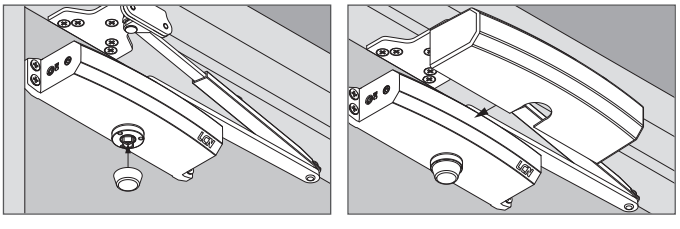
ⓘ **Use el espaciador del quinto orificio si hay un espacio entre el marco y el zócalo del PA.**

b. Ajuste la varilla y el zócalo en el zócalo del PA.
c. Instale la varilla en el brazo delantero del brazo principal.
d. Aplique una carga previa al brazo principal para que quede paralelo al marco, ajuste el tornillo del brazo.



8 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 10 para ver las instrucciones de ajuste del mecanismo de cierre.

9 Atornille la tapa en el eje e instale la cubierta (opcional).



Ajuste de la válvula del mecanismo de cierre

Compruebe el tiempo de cierre y ajuste el mecanismo de cierre de ser necesario.

⚠ PRECAUCIÓN ⚠

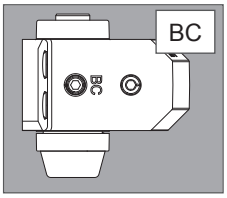
¡Abrir demasiado las válvulas de regulación (como se describe a continuación) puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales.

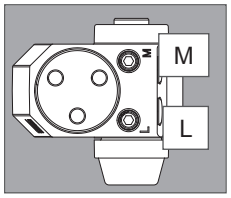
SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

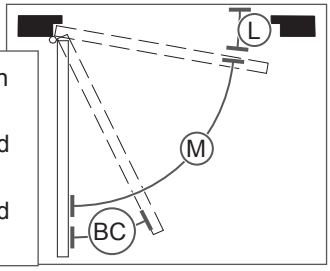
ⓘ **La Vàlvula se Cierra hacia el lado dercho(en direction de las agujas del reloj) hasta que tope,nunca mas de tres vueltas al lado izquierdo(en contra de las manesillas del reloj) del tope. Ajuste las válvulas en incrementos de 1/4 de giro o menos a la vez. ¡NO GIRE MÁS DE 4 ROTACIONES COMPLETAS - ESTO OCASIONARÁ QUE EL MECANISMO DE CIERRE TENGA UNA FUGA DE ACEITE!**

ⓘ **NO AJUSTE LA VELOCIDAD DEL PASADOR SI LA PUERTA NO SE TRABA. Si esto sucede, ajuste la fuerza del resorte.**

1. Abra la puerta a 90°, mida cuánto tiempo tarda la puerta en cerrar y trabarse. Un tiempo típico de cierre es de 5 a 7 segundos, divido de manera uniforme entre velocidad principal y velocidad del pasador.
2. Si se necesita ajustar el tiempo de cierre, use las válvulas del mecanismo de cierre como se describe a continuación.
   a. Retención: controla la velocidad de apertura de la puerta cuando el ángulo de la puerta se acerca a 90°. **No usar como tope de puerta.**
   b. Velocidad principal: controla la velocidad de la puerta durante la mayor parte del movimiento de cierre.
   c. Velocidad del pasador: controla la velocidad de la puerta durante los últimos grados del cierre de la puerta.
3. Gire las válvulas en sentido horario para reducir la velocidad de la puerta y en sentido antihorario para aumentar la velocidad de la puerta. La velocidad del pasador y la velocidad principal deben ajustarse conjuntamente.







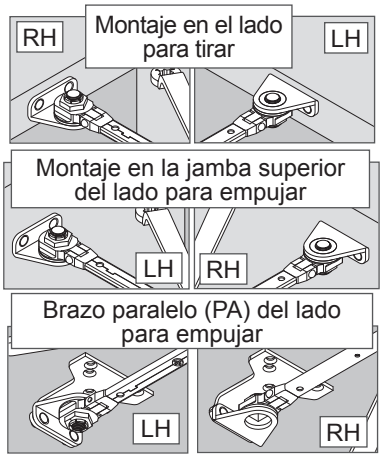
BC = válvula de retención

M = válvula de velocidad principal

L = válvula de velocidad del pasador

Brazos opcionales para mantener abierto

1 Vea la imagen siguiente para determinar la dirección de la tuerca para mantener abierto. Esto es determinado por el lado en el que está la manija de la puerta.



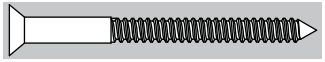
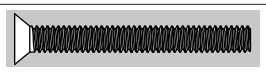
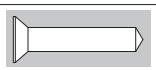
2 Ajuste del brazo para mantener abierto.

ⓘ **El brazo para mantener abierto se instala como el brazo regular del mecanismo de cierre. Siga los pasos 5 - 7 en las páginas 6, 7 y 8 para la instalación del brazo para mantener abierto.**

ⓘ **El lado de montaje en la jamba superior para los brazos para mantener abierto es inverso a los demás montajes.**

Para ajustar el brazo opcional para mantener abierto:

1. Afloje la tuerca del brazo para mantener abierto.
2. Abra la puerta a 5° menos que la posición deseada para mantener abierto y ajuste la tuerca del mecanismo para mantener abierto firmemente.

Tipo de tornillo	Imagen	Montaje en el cilindro	Montaje en el soporte del PA	Montaje en el zócalo del PA	Montaje en el 5.° orificio (solo zócalo del PA)
Madera (para puertas y marcos de madera)		4 @ 1 3⁄16"	4 @ 1 3⁄8"		1 @ 2"
Máquina (para puertas y marcos de metal) Requiere perforación de orificio y formación de rosca; mejor sujeción		4 @ 1"	4 @ 5⁄8"	2 @ 3⁄8"	1 @ 1 1⁄2"
SRT: autoperforación y formación de rosca (para puertas y marcos de metal)		4 @ 1 1⁄2"	4 @ 1 1⁄2"		1 @ 2"

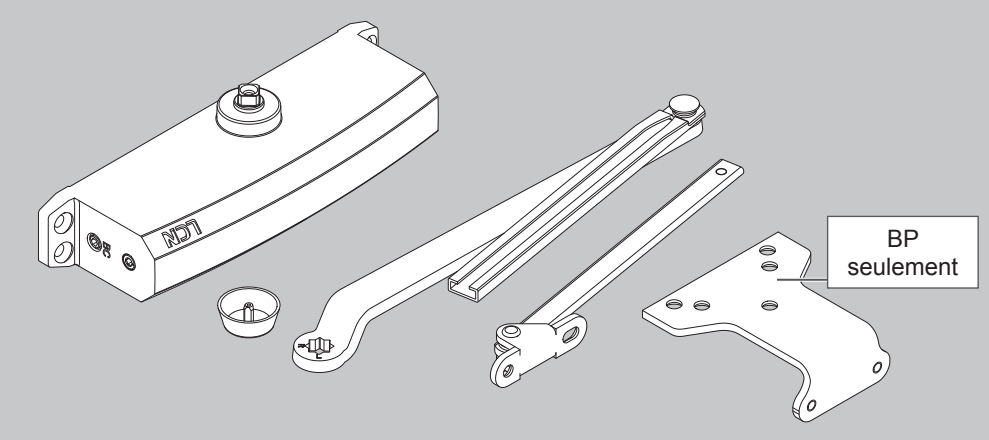
Tipo de tornillo	Imagen	Notas
Espaciador del quinto orificio		
Pernos pasantes		Se utiliza al montar a través de la puerta
Tornillo de sujeción del piñón		1 M6 x 10 mm para la sujeción del brazo (ver el paso 6)

Série 1250

Côté tirant, montage montant supérieur, montage bras parallèle (BP)

Instructions d'installation

PIÈCES

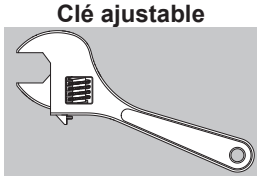


ⓘ **Informations sur l'ensemble de vis à la page 5.**

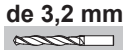
OUTILS

Clé Allen de 4 mm ou 5⁄32 po

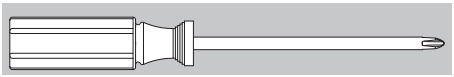
Clé ajustable



Mèche de 3,2 mm (⅛ po)



Tournevis cruciforme



ⓘ **Informations sur la clé ouverte à la page 5.**

⚠ MISE EN GARDE ⚠

Une installation inadéquate ou le non-respect des règlements peut causer des blessures ou des dommages matériels.
Suivez attentivement toutes les instructions.
Pour toute question, appelez LCN au 877-671-7011.

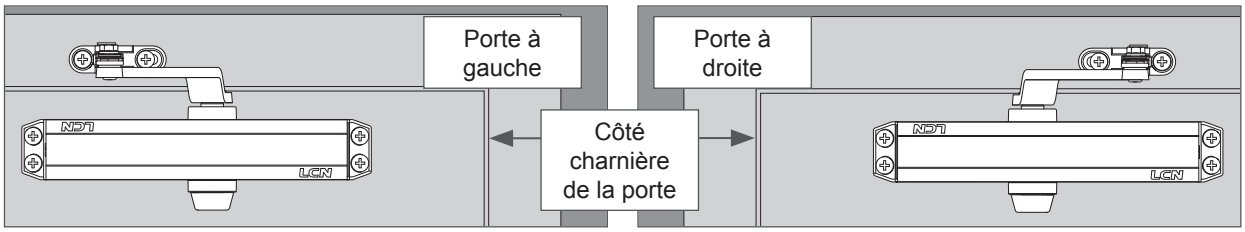
Les bras de retenue ne doivent pas être installés sur les portes coupe-feu.

Une trop grande ouverture des soupapes de régulation peut entraîner une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

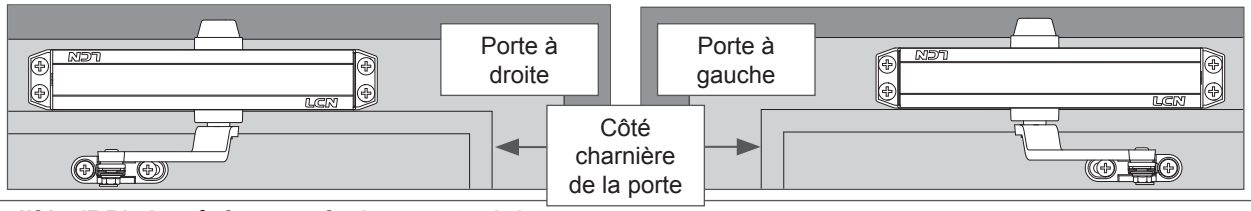
ÉVITEZ D'UTILISER LE DISPOSITIF DE FERMETURE COMME BUTOIR DE PORTE!
Il est recommandé d'utiliser un butoir auxiliaire au point de retenue ou à l'endroit où la porte ne peut s'ouvrir à 180°

Choisissez le type d'installation

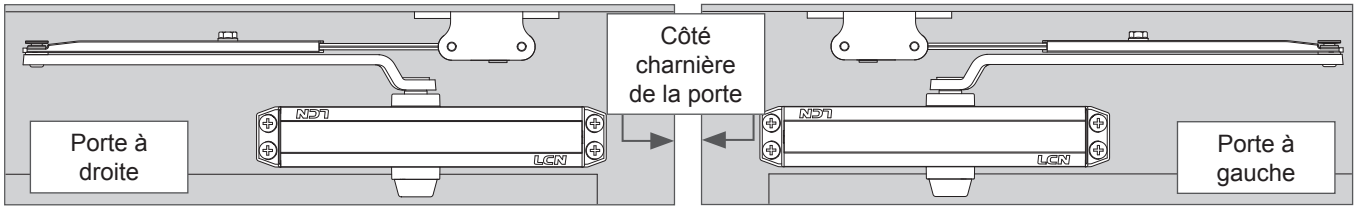
Montage du côté tirant (see page 12)



Montage du montant supérieur du côté poussée (see page 13)



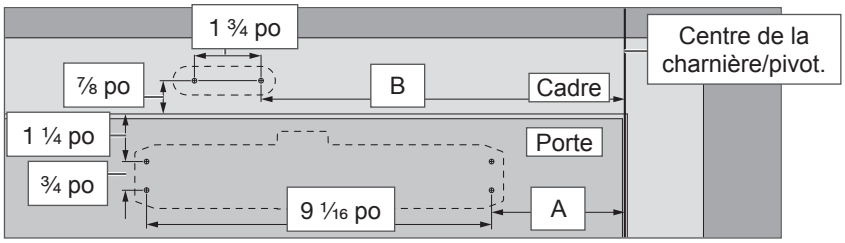
Bras parallèle (BP) du côté poussée (see page 14)



Montage du côté tirant

Dimensions de montage

ⓘ **Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.**



1 Déterminez le degré d'ouverture de la porte requis et trouvez la dimension « A » dans le tableau ci-dessous.

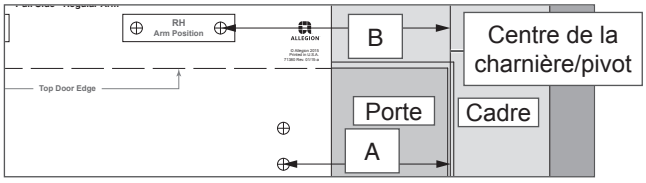
ⓘ **Un angle d'ouverture de 180° est requis pour respecter l'ADA.**

A	Ouverture	Mesure à partir du bord de la porte
Dispositif de fermeture	To 100°	7 po
	100° to 120°	6 po
	120° to 180°	3½ po

B	Ouverture	Mesure à partir du bord de la porte
Sabot	To 100°	13”
	100° to 120°	12”
	120° to 180°	9½”

2 Mesurez à partir du centre de la charnière/pivot et collez le gabarit sur la porte. Faites des marques pour les trous à percer.

ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**



3 Retirez le gabarit et percez des trous de 3,2 mm (1/8 po) aux endroits marqués avec une mèche pour les vis SRT.

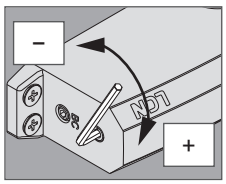
ⓘ **Les vis SRT sont utilisées sur les portes en métal. Les vis à bois sont utilisées sur les portes en bois.**

4 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé Allen, réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.

Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

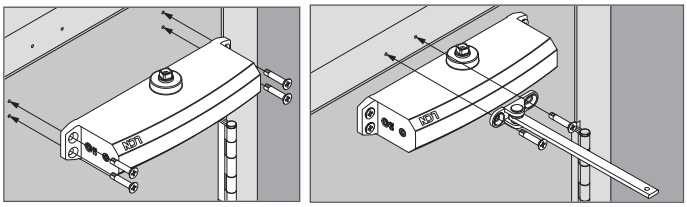
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

Largeur de la porte	Nombre de tours
Réglage de l'ADA	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Installez le dispositif de fermeture sur la porte et le sabot sur le cadre à l'aide des vis fournies.

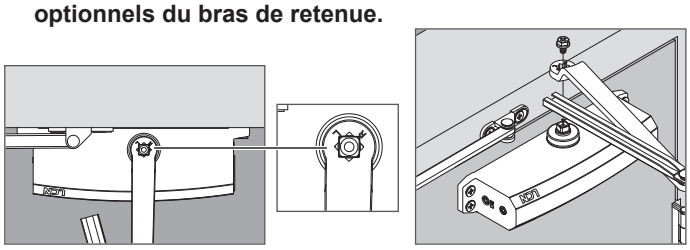
ⓘ **La valve d’ajustement de le vitesse va du côté des charnières.**



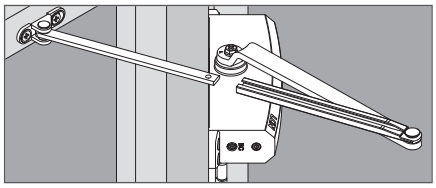
6 Installez le bras principal sur le dispositif de fermeture.

a. Placez le bras principal sur l'arbre du dispositif de fermeture supérieur.
b. Installez et serrez la vis du bras principal.

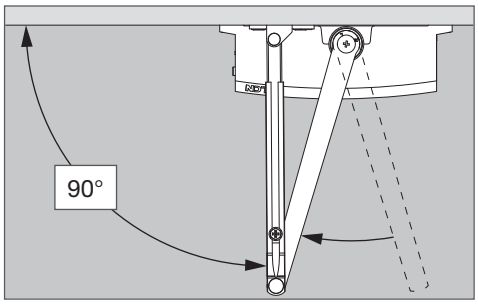
ⓘ **Consultez la page 5 pour l'installation et le réglage optionnels du bras de retenue.**



7 Insérez la tige dans l'avant-bras.

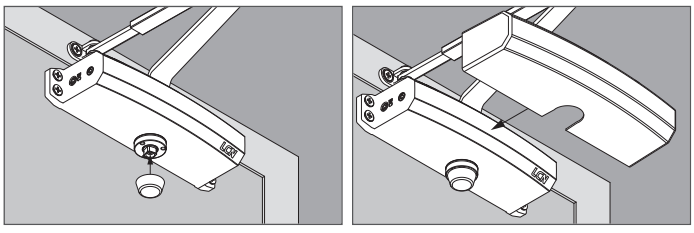


8 Préchargez l'avant-bras à 90°. Lorsque le bras est préchargé, installez et serrez la vis du bras.



9 Réglez le dispositif de fermeture au besoin. Consultez la page 5 pour les instructions de réglage du dispositif de fermeture.

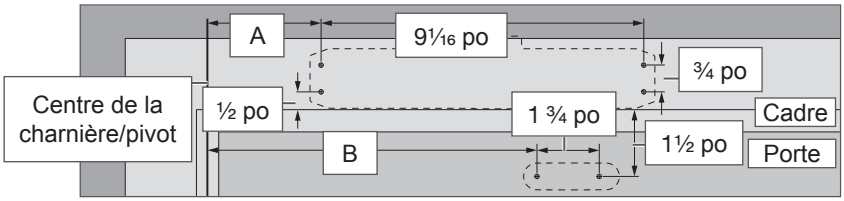
10 Tournez le capuchon sur l'arbre et installez le couvercle (en optional).



Montage du montant supérieur du côté poussée

Dimensions de montage

ⓘ **Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.**



1 Déterminez le degré d'ouverture de la porte requis et trouvez la dimension « A » dans le tableau ci-dessous.

ⓘ **Un angle d'ouverture de 180° est requis pour respecter l'ADA.**

A — El mecanismo de cierre

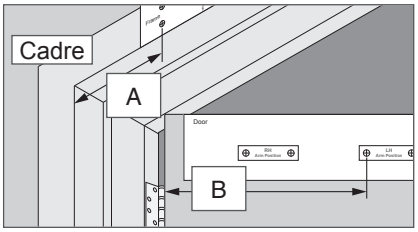
Ouverture	Mesure à partir du bord de la porte
To 100°	7 ½ po
100° to 120°	6 po
120° to 180°	3½ po

B — el zócalo

Ouverture	Mesure à partir du bord de la porte
To 100°	13½ po
100° to 120°	12 po
120° to 180°	9½ po

2 Mesurez à partir du centre de la charnière/pivot et collez le gabarit sur la porte. Faites des marques pour les trous à percer.

ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**



3 Retirez le gabarit et percez des trous de 3,2 mm (1/8 po) aux endroits marqués avec une mèche pour les vis SRT.

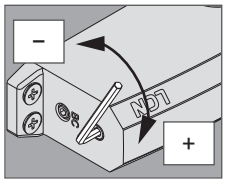
ⓘ **Les vis SRT sont utilisées sur les portes en métal.**
Les vis à bois sont utilisées sur les portes en bois.

4 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé Allen, réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.

Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

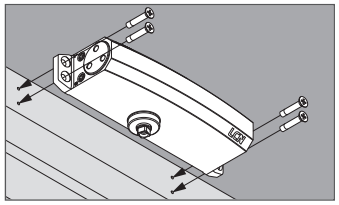
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

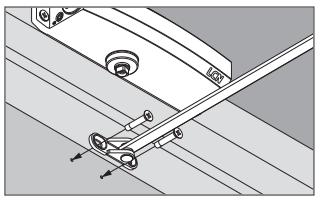
Largeur de la porte	Nombre de tours
Réglage de l'ADA	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Installez le dispositif de fermeture sur le cadre et le sabot sur la porte à l'aide des vis fournies.

ⓘ **La valve d’ajustement de le vitesse va du côté des charnières.**

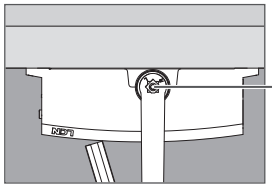


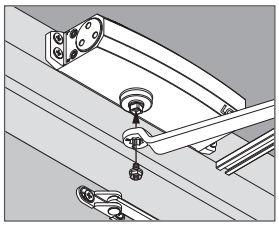


6 Installez le bras principal sur le dispositif de fermeture.

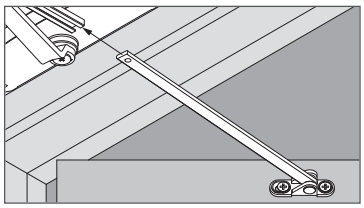
a. Placez le bras principal sur l'arbre du dispositif de fermeture inférieur.
b. Installez et serrez la vis du bras principal.

ⓘ **Consultez la page 5 pour l'installation et le réglage optionnels du bras de retenue.**

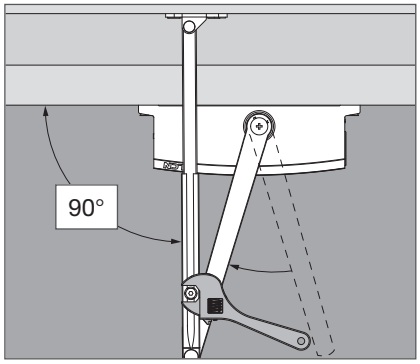




7 Insérez la tige dans l'avant-bras.

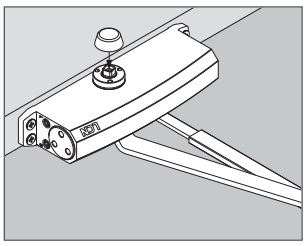


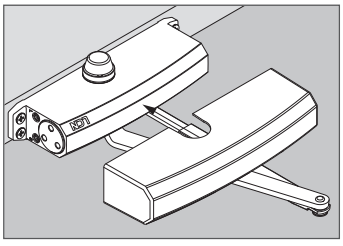
8 Préchargez l'avant-bras à 90°. Lorsque le bras est préchargé, installez et serrez la vis du bras.



9 Réglez le dispositif de fermeture au besoin. Consultez la page 5 pour les instructions de réglage du dispositif de fermeture.

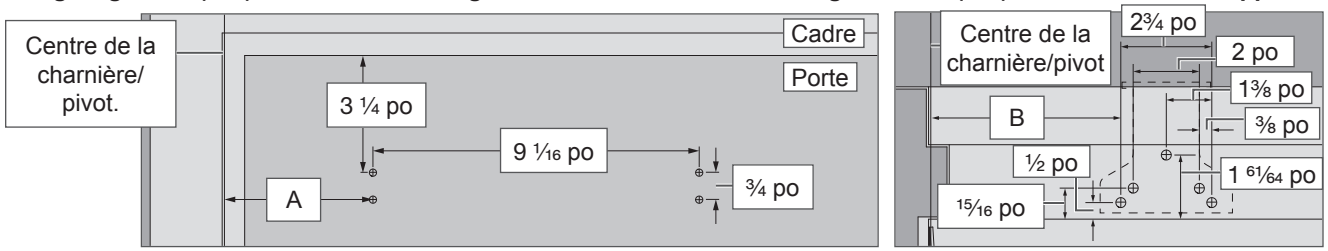
10 Tournez le capuchon sur l'arbre et installez le couvercle (en option).





Dimensions de montage

ⓘ **Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.**



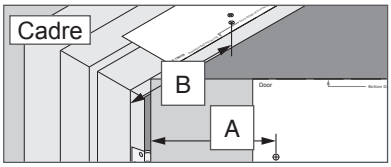
1 Déterminez le degré d'ouverture de la porte requis et trouvez les dimensions « A » et « B » dans les tableaux ci-dessous.

A	Ouverture	Mesure à partir du bord de la porte
Dispositif de fermeture	Jusqu'à 100°	7 ⅝ po
	100° à 130°	6 ⅛ po
	130° à 180°	4 ⅛ po

B	Ouverture	Mesure à partir du bord de la porte
Sabot du BP	Jusqu'à 100°	9 ¼ po
	100° à 130°	7 ¾ po
	130° à 180°	5 ¾ po

2 Mesurez à partir du centre de la charnière/pivot et collez le gabarit sur la porte. Faites des marques pour les trous à percer.

ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**



3 Retirez le gabarit et percez des trous de 3,2 mm (1/8 po) aux endroits marqués avec une mèche pour les vis SRT.

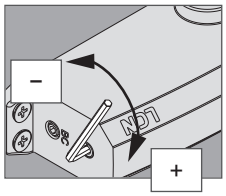
ⓘ **Les vis SRT sont utilisées sur les portes en métal.**
Les vis à bois sont utilisées sur les portes en bois.

4 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé Allen, réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.

Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

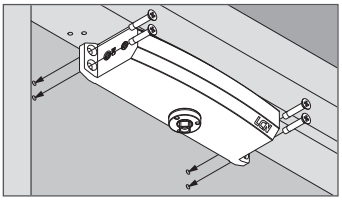
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

Largeur de la porte	Nombre de tours
Réglage de l'ADA	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Installez le dispositif de fermeture sur la porte.

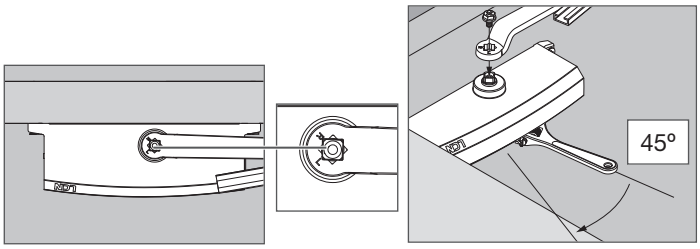
ⓘ **La valve d’ajustement de le vitesse va du côté opposé aux charnières.**



6 Installez le bras principal sur le dispositif de fermeture.

ⓘ **Consultez la page 5 pour l'installation et le réglage optionnels du bras de retenue.**

a. Utilisez une clé sur l'arbre du dispositif de fermeture inférieur pour faire pivoter l'arbre du dispositif de fermeture supérieur d'environ 45°. **Maintenez la clé dans cet angle pour la prochaine étape.**
b. Placez le bras principal sur l'arbre du dispositif de fermeture supérieur.
c. Installez et serrez la vis du bras principal.

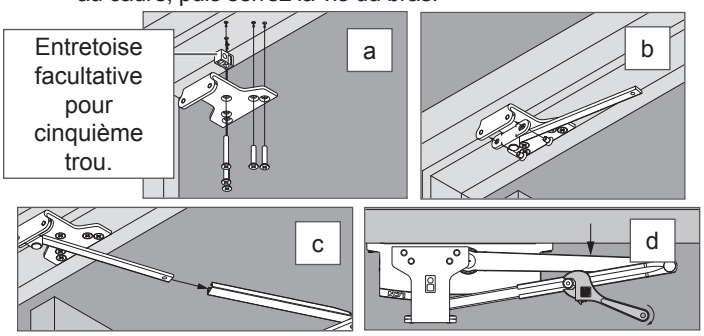


7 Installez le sabot du BP sur le cadre, puis dans la tige et le sabot.

a. Fixez le sabot du BP, et l'entretoise facultative du cinquième trou, au cadre.

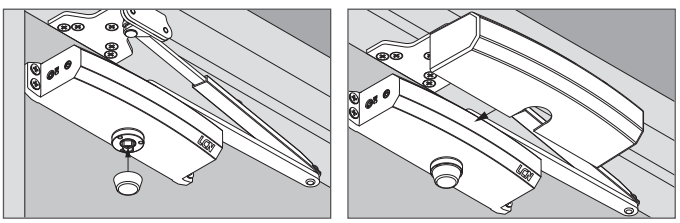
ⓘ **Utilisez l'entretoise facultative du cinquième trou seulement s'il y a un espace entre le cadre et le sabot du BP.**

b. Fixez la tige et le sabot au sabot du BP.
c. Installez la tige dans l'avant-bras du bras principal.
d. Préchargez le bras principal de manière à ce qu'il soit parallèle au cadre, puis serrez la vis du bras.



8 Réglez le dispositif de fermeture au besoin. Consultez la page 5 pour les instructions de réglage du dispositif de fermeture.

9 Tournez le capuchon sur l'arbre et installez le couvercle (en optional).



Réglage de la soupape du dispositif de fermeture

Vérifiez le temps de fermeture et réglez le dispositif de fermeture au besoin.

⚠ MISE EN GARDE ⚠

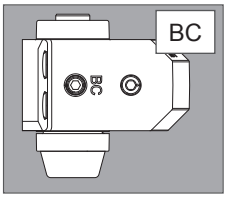
Trop ouvrir les soupapes de régulation (décrites ci-dessous) peut causer une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.

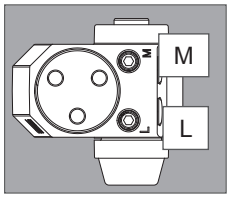
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

ⓘ **La valve se ferme en tournant dans le sens des aiguilles d'une montre; ne jamais faire plus de 3 tours dans le sens opposé aux aiguilles d'une montre à partir de la position fermée. Réglez les soupapes en effectuant 1/4 de tour ou moins à la fois. N'EFFECTUEZ PAS PLUS DE 3 ROTATIONS COMPLÈTES - CELA CAUSERA UNE FUITE D'HUILE DANS LE DISPOSITIF DE FERMETURE!**

ⓘ **NE RÉGLEZ PAS LA VITESSE D'ENCLENCHEMENT SI LA PORTE NE S'ENCLENCHE PAS. Si cela se produit, réglez la force du ressort.**

1. Ouvrez la porte à 90° et comptez le temps nécessaire pour que la porte se ferme et s'enclenche. Le temps de fermeture typique est de 5 à 7 secondes et est divisé également entre la vitesse principale et la vitesse d'enclenchement.
2. Si le temps de fermeture doit être réglé, utilisez les soupapes du dispositif de fermeture décrites ci-dessous.
   a. Retenue - contrôle la vitesse d'ouverture de la porte lorsque l'angle s'approche de 90°. **N'utilisez pas de butoir.**
   b. Vitesse principale - contrôle la vitesse de la porte durant presque tout le mouvement de fermeture.
   c. Vitesse d'enclenchement - contrôle la vitesse de la porte durant les derniers degrés de la fermeture.
3. Faites tourner les soupapes dans le sens horaire pour faire diminuer la vitesse de la porte, et dans le sens antihoraire pour la faire augmenter. La vitesse d'enclenchement et la vitesse principale doivent être réglées ensemble.

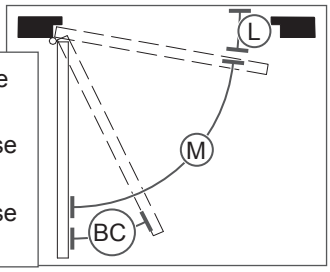




BC = soupape de retenue

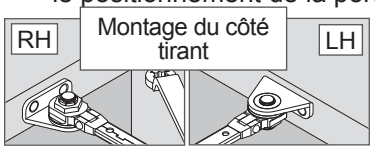
M = soupape de la vitesse principale

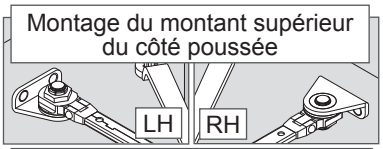
L = soupape de la vitesse d'enclenchement

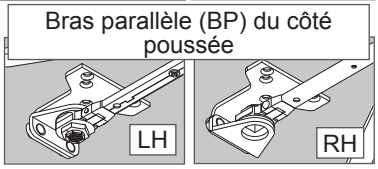


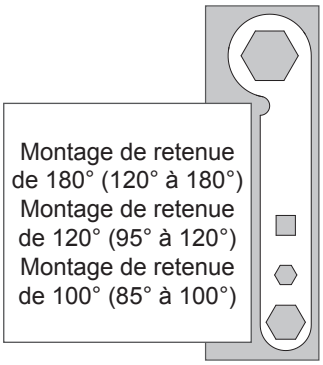
Bras de retenue facultatifs

1 Consultez l'image ci-dessous pour déterminer la direction de l'écrou de retenue. Elle est déterminée par le positionnement de la porte.





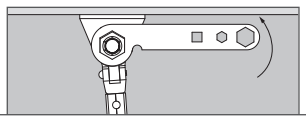


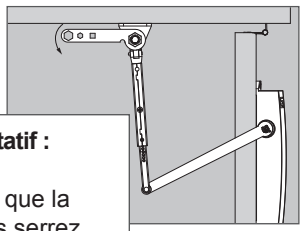


2 Réglage du bras de retenue.

ⓘ **Le bras de retenue s'installe comme le bras du dispositif de fermeture régulier. Suivez les étapes 5 à 7 des pages 2, 3 et 4 pour l'installation du bras de retenue.**

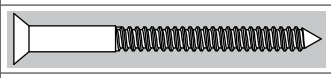
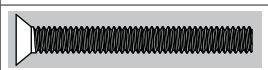
ⓘ **Le montage du montant supérieur pour les bras de retenue se fait dans le sens inverse des autres montages.**

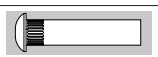




Pour régler le bras de retenue facultatif :

1. Desserrez l'écrou de retenue.
2. Ouvrez la porte de 5° de moins que la position de retenue désirée puis serrez bien l'écrou de retenue.

Type de vis	Image	Montage du cylindre	Montage du support du BP	Montage du sabot du BP	Montage du 5e trou (sabot du BP uniquement)
Bois (pour les portes et les cadres en bois)		4 @ 1 3⁄16 po	4 @ 1 3⁄8 po		1 @ 2 po
De mécanique (pour les portes et les cadres en métal) Nécessite de percer des trous et de tarauder; meilleure retenue		4 @ 1 po	4 @ 5⁄8 po	2 @ 3⁄8 po	1 @ 1 ½ po
SRT - Auto taraudeuse et à alésage automatique (pour les portes et les cadres en métal)		4 @ 1 ½ po	4 @ 1 ½ po		1 @ 2 po

Type de vis	Image	Remarques
Entretoise pour cinquième trou		
Boulons traversants		Utilisée lors du montage à travers la porte
Vis de fixation du pignon		1 M6 x 10 mm pour la fixation du bras (voir étape 6)

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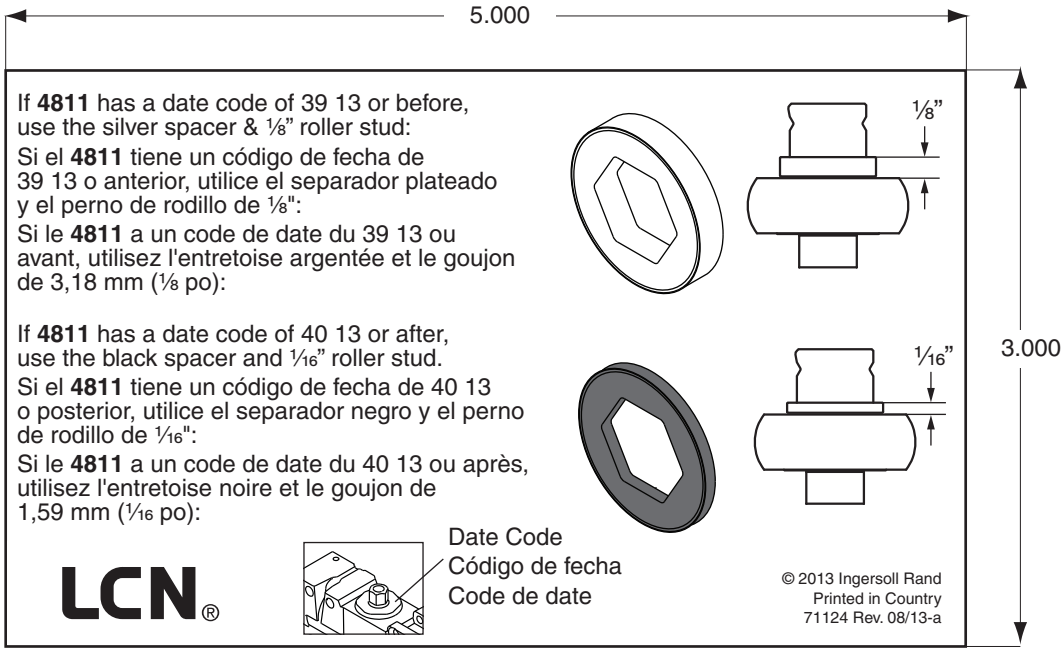
71375 Rev. 01/16-c
Patent Pending



Additional Notes:
None

Revision History					
A	B	C	D	E	F
039376	EC #	EC #	EC #	EC #	EC #

Material: White Paper

Notes
1. printed one side
2. printed black
3. tolerance: ± .13
4. see sheet 2 for artwork
5. printed in country may vary
6. drawings not to scale

Revision Description:
A > Created Artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	Chaitanya Viswanadha	039376	08-13-13

Title: 4811 IS Insert

Creation Date	Number	Revision
08-13-13	71124	A

Created By: D. Myers
Software: Illustrator CS6

Activity:
3899 Hancock Expwy
Security, CO 80911

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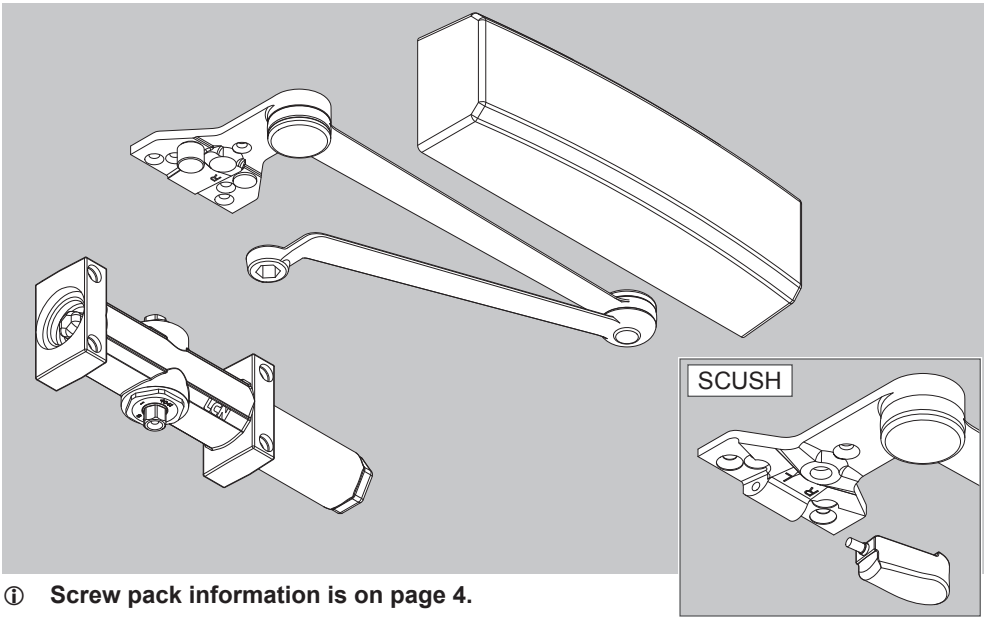
4050 Series

71688

CUSH & Spring CUSH (SCUSH) Mount

Installation Instructions

PARTS

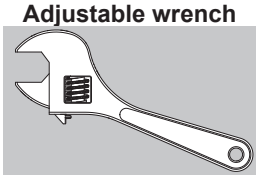


ⓘ **Screw pack information is on page 4.**

TOOLS

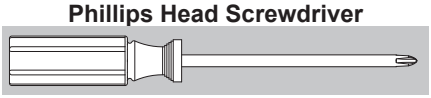
3/32" Hex Wrench

Adjustable wrench



1/8" Drill Bit

Phillips Head Screwdriver



5/32" Hex Wrench

Hold Open wrench info on page 4.

⚠ CAUTION ⚠

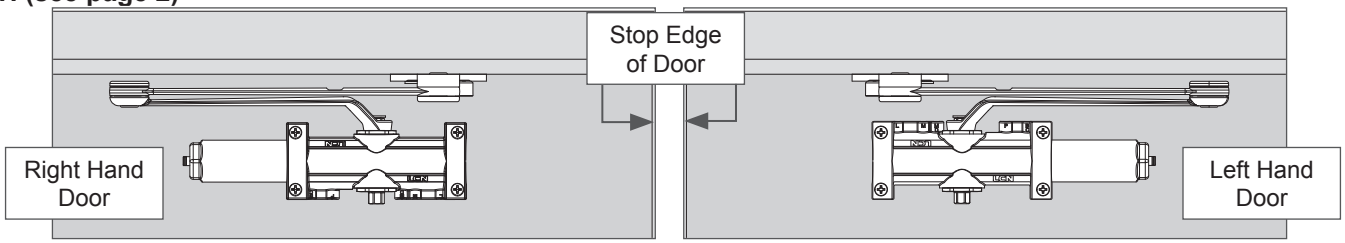
Improper installation or regulation may result in personal injury or property damage.
Follow all instructions carefully.
For questions, call LCN at 877 - 671 - 7011

Hold open arms must not be installed on fire rated doors.

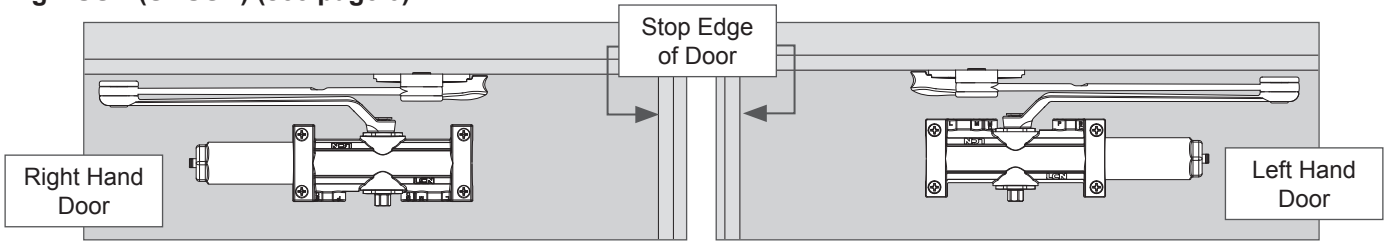
Opening the regulation valves too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.
FOLLOW ALL INSTRUCTIONS CAREFULLY.

Choose Installation Type

CUSH (see page 2)



Spring CUSH (SCUSH) (see page 3)



Customer Service

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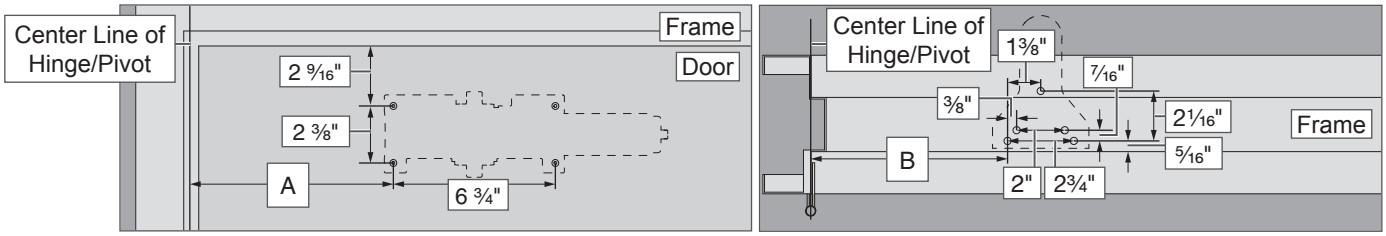
CUSH

Mounting Dimensions

ⓘ **Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.**



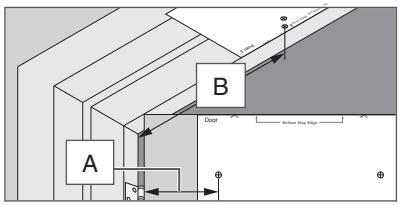
1 Determine the degree of door opening required and find dimensions “A” and “B” in the charts below.

ⓘ **SCUSH dead stop will occur about 5° beyond normal dead stop point.**

Opening	Measurement from Center Line of Hinge/Pivot	
	A	B
85°	10 5/8”	11 1/8”
90°	9 3/4”	10 1/4”
95°	9 1/8”	9 5/8”
100°	8 1/2”	9”
105°	7 7/8”	8 3/8”
110°	7 3/8”	7 7/8”

2 Measure from centerline of hinge/pivot and stick template on door. Mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**



3 Remove template, and drill holes where marked with a 1/8” drill bit for SRT screws.

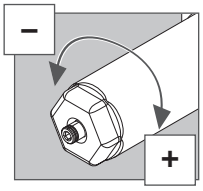
ⓘ **SRT screws are used on metal doors.**
Wood screws are used and recommended on wood doors.
Reduce installation torque if using SRT screws in wood.

4 Measure and determine your door’s width. Use 5/32” hex wrench to adjust the closer spring power. Use the table below to determine number of turns required.
Turn counterclockwise for “-”; turn clockwise for “+”

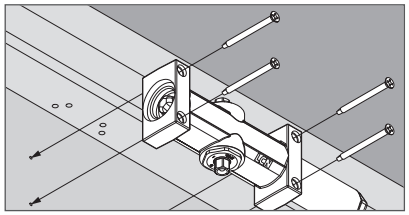
ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

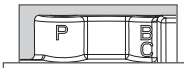
ⓘ **Do not use power drill to adjust spring force! It may cause damage and void the warranty.**

Door Width	Number of Turns
ADA Setting	-9
32” - 815 mm	-4
36” - 915 mm	0
42” - 1050 mm	+4
48” - 1220 mm	+9
54” - 1372mm	+13



5 Install closer onto door.



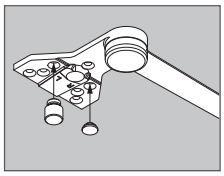


Screw in the PA Selector Valve.

6 Adjust the shoe to match the door handing.

ⓘ **If RH door, do not adjust shoe. If LH door, change stop location to opposite side.**

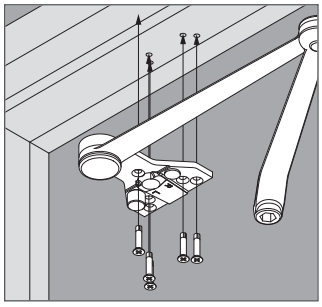
ⓘ **For installing SCUSH Contact block, see page 3.**



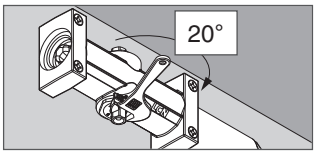
7 Install CUSH shoe & fifth hole spacer onto frame.

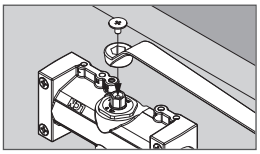
ⓘ **Use the fifth hole spacer only if there is a space between the frame and the shoe.**

ⓘ **Use of 5th Hole limited to reveals greater than 2 11⁄16”.**



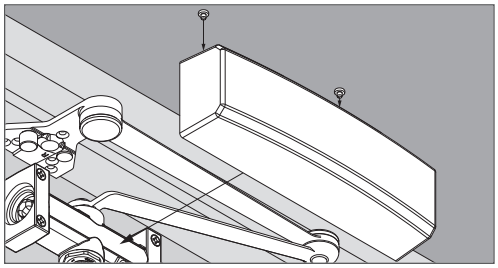
8 Preload closer shaft to 20°, attach main arm to closer.





9 Adjust the closer, if necessary. See page 4 for closer adjustment instructions.

10 Install cover.



Spring CUSH (SCUSH)

Spring CUSH arms (SCUSH) have specific instructions for mounting the SCUSH shoe. Otherwise, SCUSH arms install like a regular CUSH arm.

⚠ IMPORTANT ⚠

DO NOT reduce the closer's backcheck setting! Spring CUSH arm function does not replace backcheck.

⚠ IMPORTANT ⚠

Spring CUSH dead stop will occur approximately 5° <u>beyond</u> normal 4050 dead stop point.

1 Locating

In new installations, use the standard CUSH template. When replacing an existing CUSH arm, use the existing mounting holes.

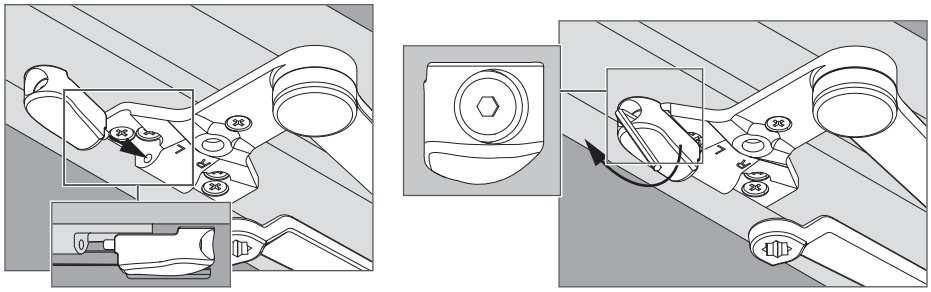
2 Installation

a. Mount the shoe onto the frame.
b. Use a 5/32" hex wrench to install the contact block assembly, as shown below. Make sure the screw is tightened securely into the shoe.

3 Completing installation

Complete the closer installation as directed for regular CUSH arms on page 2.

ⓘ **Left Hand (LH) shown. Right Hand (RH) opposite.**



CUSH Shoe Support for After Installation

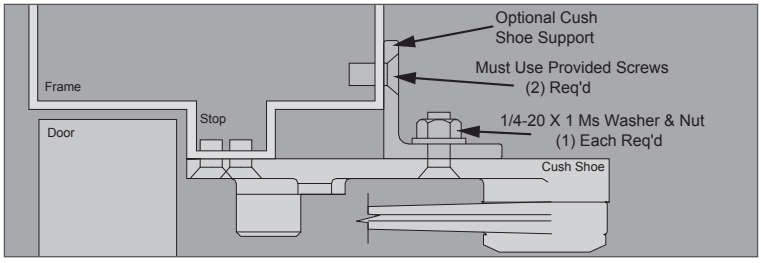
1 CUSH Shoe Support limited to reveals between 1 1⁄16" and 1 13⁄16".

2 Set CUSH Shoe Support on top of the shoe and hold against the frame.

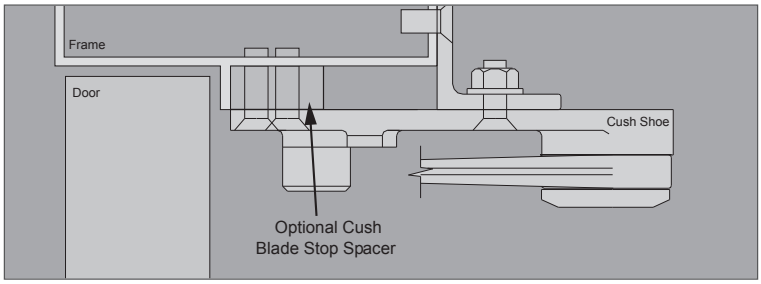
3 Assemble the screw, washer, and nut as shown below, and tighten securely.

4 Using the shoe support as a template, drill and tap two holes for 1/4-20 screws in the frame.

5 Insert the screws and tighten securely.



6 Should frames have 1/2" Blade Stop, it is necessary to use a 1/2" Blade Stop Spacer, available from your dealer. Use both the Blade Stop Spacer and Shoe Support wherever required.



Closer Valve Adjustment

Check closing time, and adjust closer if needed.

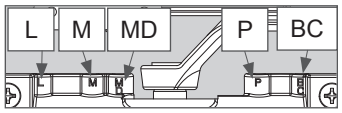
⚠ CAUTION ⚠

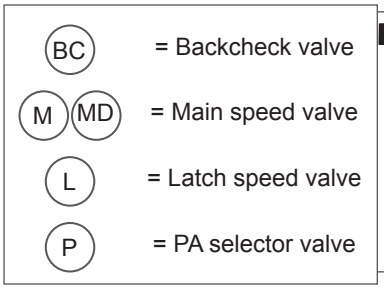
Opening the regulation valves (described below) too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.

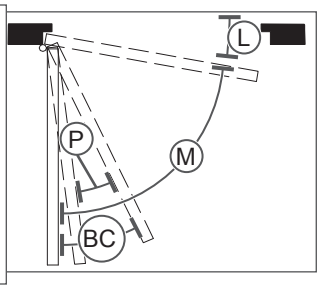
FOLLOW ALL INSTRUCTIONS CAREFULLY.

- ⓘ **Valve must be closed CW to seat, never more than 3 turns CCW from seated position. Adjust the valves in 1/4 turn increments or less at a time. DO NOT TURN MORE THAN 3 FULL ROTATIONS. THIS WILL CAUSE THE CLOSER TO LEAK OIL!**
- ⓘ **DO NOT ADJUST THE LATCH SPEED IF THE DOOR DOES NOT LATCH. If this occurs, adjust the spring force.**

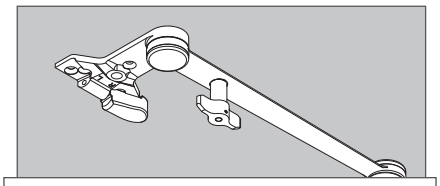
1. Open the door to 90°, measure how long the door takes to close and latch. A typical closing time is 5 to 7 seconds, evenly divided between main speed and latch speed.
2. If the closing time needs to be adjusted, use a 3/32" hex wrench to adjust the closer valves described below.
   a. Backcheck (BC)- this controls door s peed opening as the door angle approaches 90°. **Do not use as a door stop.**
   b. Main Speed (MD)- this controls main speed for standard cylinders and the delay speed for delay (DA) cylinders.
   c. DA Main Speed (M)- this controls the main speed for DA cylinders. **This valve is present on DA cylinders only.**
   d. Latch Speed (L)- this controls door speed during the last few degrees of door closing.
   e. PA Selector (P)- this needs to be turned in completely for Parallel Arm (PA) mounting.
3. Turn the valves clockwise to decrease door speed, and counterclockwise to increase door speed. The latch speed and main speed should be adjusted together.





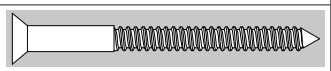
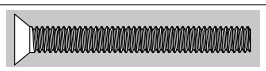
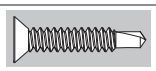


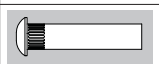
Optional Hold Open Arms



To adjust Optional Hold-open arm:

To engage or disengage hold open feature, turn control handle 1/4 turn.

Screw Type	Screw Pack	Picture	Cylinder Mounting	PA Shoe Mounting	5th Hole Mounting (PA Shoe Only)
Wood (for wood doors & frames)	Wood & Machine Screw Pack (WMS)		4 @ 2 ⅞"	2 @ 1 ½"	1 @ 2"
Machine (for metal doors & frames) Requires hole drilling & tapping; best hold.	Standard		4 @ 2 ¼"	4 @ ⅝"	1 @ 1 ½"
SRT - Self Reaming & Tapping (for metal doors & frames)	Standard		4 @ 3"	4 @ 1 ½"	1 @ 2"

Screw Type	Screw Pack	Picture	Notes
Fifth Hole Spacer	Standard		
Arm Screw	Standard		
Pinion Attachment Screw	Standard		¼-20 for attachment of the arm (see step 6).
Thru Bolt	Order TB Screw pack		1 9⁄32" or 1 17⁄32" or 1 21⁄32"

71688

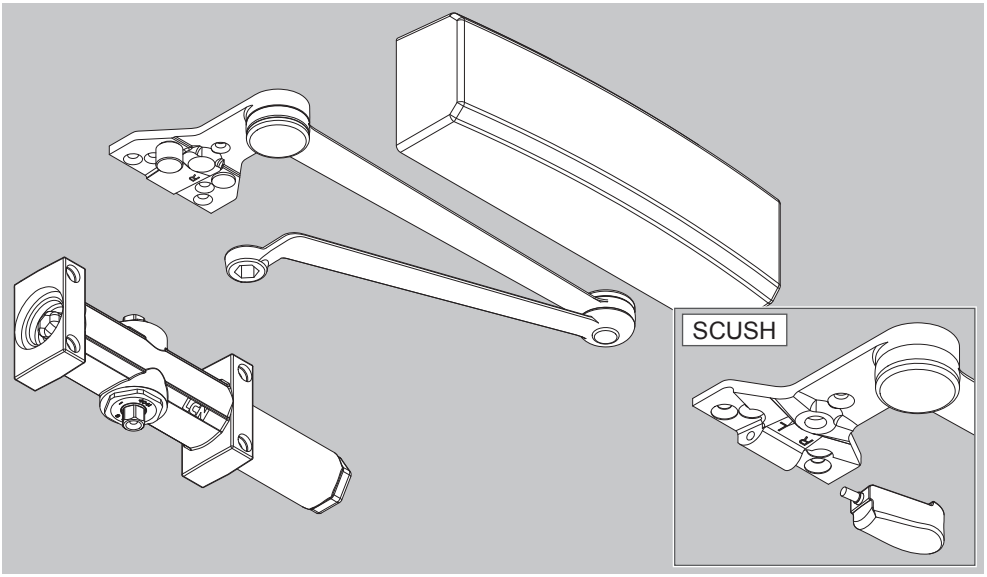
Serie 4050

LCN®

Montaje en CUSH y Cierrapuertas de Resorte (SCUSH)

Instrucciones de Instalación

PIEZAS



ⓘ **La información sobre el paquete de tornillos se encuentra en la página 8.**

HERRAMIENTAS

Llave hexagonal de 5⁄32“

Llave ajustable

Broca de taladro de 1⁄8”

Destornillador con cabeza Phillips

Llave hexagonal de 3⁄32”

⚠ PRECAUCIÓN ⚠

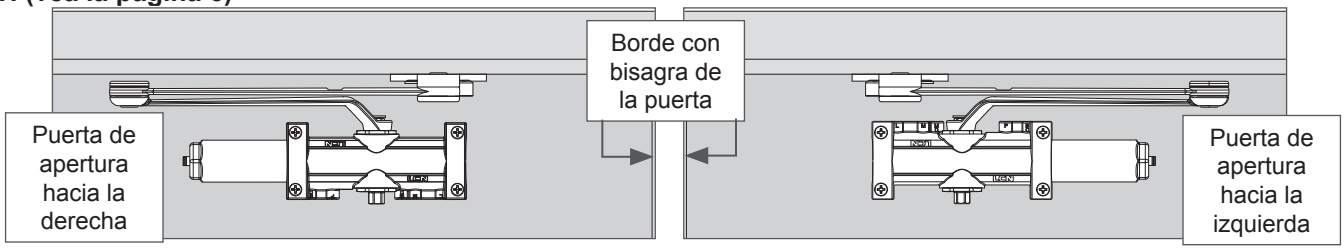
La instalación o regulación incorrecta puede resultar en lesiones personales o daño a los bienes.
Siga todas las instrucciones con atención.
En caso de duda, llame a LCN al 877-671-7011

Los brazos para mantener abierto no deben instalarse en puertas con clasificación ignífuga.

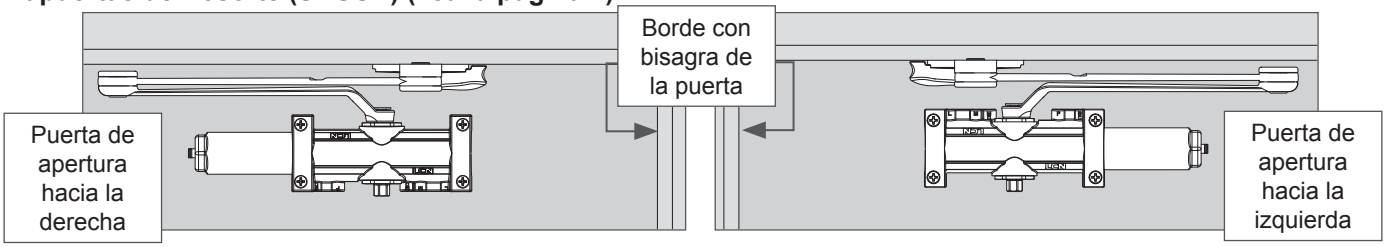
¡Abrir demasiado las válvulas de regulación puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales.
SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

Seleccione el tipo de instalación

CUSH (vea la página 6)



Cierrapuertas de Resorte (SCUSH) (vea la página 7)



Servicio al cliente

1-877-671-7011 www.allegion.com/us

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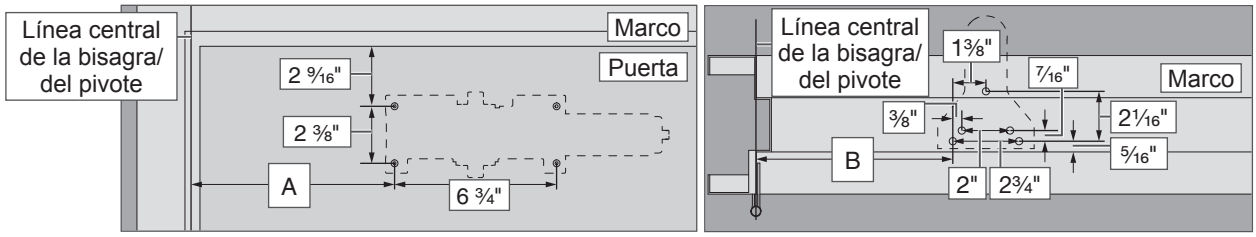
Montaje en CUSH

Dimensiones del orificio de montaje

Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.



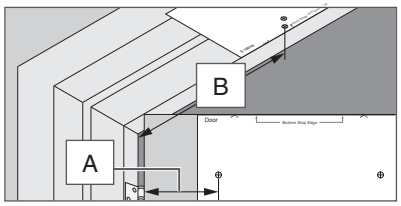
1 Determine el grado de apertura de la puerta requerido y busque las dimensiones “A” y “B” en el cuadro siguiente.

ⓘ **El cierrapuertas de resorte se detendrá a alrededor de 5 grados más allá del punto normal de detención.**

Apertura	Medición desde línea central de la bisagra/del pivote	
	A	B
85°	10 5/8”	11 1/8”
90°	9 3/4”	10 1/4”
95°	9 1/8”	9 5/8”
100°	8 1/2”	9”
105°	7 7/8”	8 3/8”
110°	7 3/8”	7 7/8”

2 Mida desde la línea central de la bisagra/del pivote y adhiera la plantilla en la puerta. Marque los orificios de perforación.

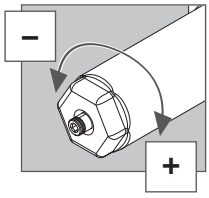
ⓘ **Vea las dimensiones de montaje anteriores según sea necesario.**



3 Retire la plantilla y perfore orificios donde está marcado con una broca de taladro de ⅛” para tornillos SRT.

ⓘ **Los tornillos SRT se usan en puertas de metal.**
Se recomienda usar los tornillos de madera en puertas de madera.
Reduzca la torsión de la instalación si utiliza tornillos SRT en madera.

4 Mida y determine el ancho de su puerta. Con una llave de 5/32”, ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.



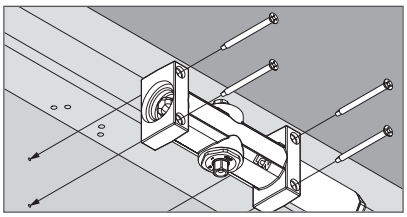
Gire en sentido antihorario para “-”; gire en sentido horario para “+”.

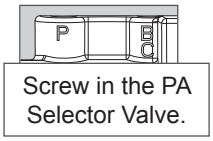
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

ⓘ **¡No utilice un taladro eléctrico para ajustar la fuerza del resorte! Podría causar daños y anular la garantía.**

Ancho de la puerta	Número de giros
Configuración de ADA	-9
32” - 815 mm	-4
36” - 915 mm	0
42” - 1050 mm	+4
48” - 1220 mm	+9
54” - 1372mm	+13

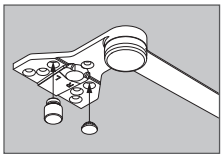
5 Instale el mecanismo de cierre en la puerta.





Screw in the PA Selector Valve.

6 Ajuste del zapato para que coincida con la orientación de la puerta.



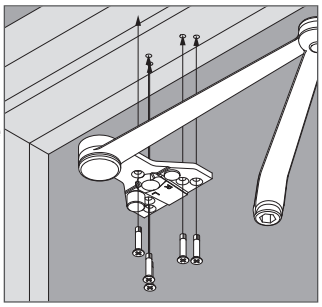
ⓘ **En caso de puerta que se abre hacia la derecha, no ajuste la zapata. En caso de puerta que se abre hacia la izquierda, cambie la ubicación del tope al lado opuesto.**

ⓘ **Para instalar el bloque de contacto con amortiguación por resorte, vea la página 7.**

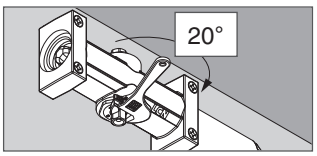
7 Instale el zócalo del EDA en el marco, luego en la varilla y el zócalo.

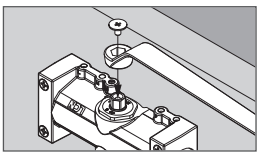
ⓘ **Use el espaciador del quinto orificio si hay un espacio entre el marco y el zócalo del EDA.**

ⓘ **El uso del 5.to orificio está limitado a listones de más de 2 11⁄16”.**



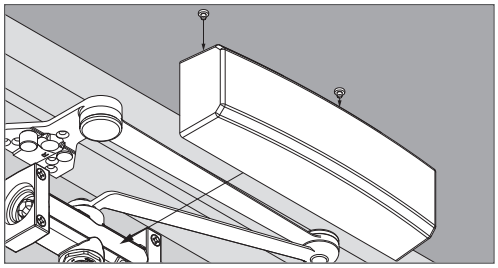
8 Cargue previamente el mecanismo de cierre a 20°, instale el brazo principal en el mecanismo de cierre.





9 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 8 para ver las instrucciones de ajuste del mecanismo de cierre.

10 Instale la cubierta.



Cierrapuertas de Resorte (SCUSH)

Los brazos del cierrapuertas de resorte (SCUSH) cuentan con instrucciones específicas para el montaje de la zapata del cierrapuertas con resorte. De lo contrario, los brazos del cierrapuertas con resorte se instalan como los brazos de un cierrapuertas regular.

⚠ IMPORTANTE ⚠	⚠ IMPORTANT ⚠
¡NO reduzca la configuración de retención del cierrapuertas! La función del brazo del cierrapuertas con resorte no reemplaza la retención.	**El paro en seco del resorte podrá ocurrir aproximadamente 5° <u>después</u> del punto del paro en seco 4050 normal.**

1 Ubicación

En instalaciones nuevas, use la plantilla estándar del cierrapuertas. Al reemplazar el brazo de un cierrapuertas existente, use los orificios de montaje existentes.

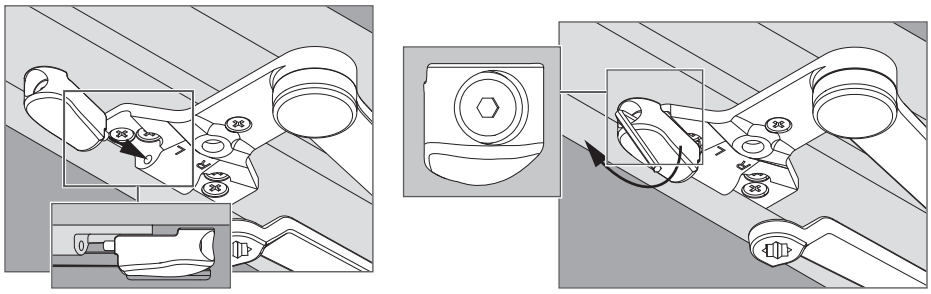
2 Instalación

a. Monte la zapata en el marco.
b. Use una llave hexagonal de 5/32” o 4 mm para instalar el ensamble del bloque de contacto, como se muestra a continuación. Asegúrese de que el tornillo esté ajustado firmemente en la zapata.

3 Finalización de la instalación

Complete la instalación del cierrapuertas tal como se indica para los brazos del cierrapuertas regular en la página 6.

ⓘ **Se muestra la apertura hacia la izquierda (LH). El procedimiento para apertura hacia la derecha (RH) es opuesto.**



Soporte de la zapata del cierrapuertas después de la instalación

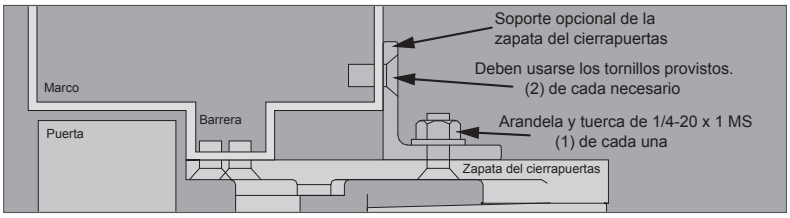
1 El soporte de zapata está limitado a listones de entre 1 1⁄16” y 1 13⁄16”.

2 Coloque el soporte de la zapata del cierrapuertas sobre la zapata y mantenga contra el marco.

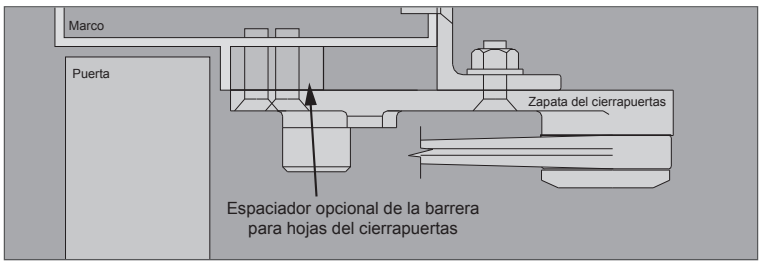
3 Ensamble el tornillo, la arandela y la tuerca como se muestra a continuación, y ajuste firmemente.

4 Usando el soporte de la zapata como plantilla, perfore y marque dos orificios para tornillos de 1/4-20 en el marco.

5 Inserte los tornillos y ajuste con firmeza.



6 Si los marcos tienen barreras para hojas de 1/2”, es necesario usar un espaciador de 1/2” para barreras para hojas, disponible a través de su distribuidor. Use el espaciador para barreras para hojas y el soporte de la zapata, de ser necesario.



Ajuste de la válvula del mecanismo de cierre

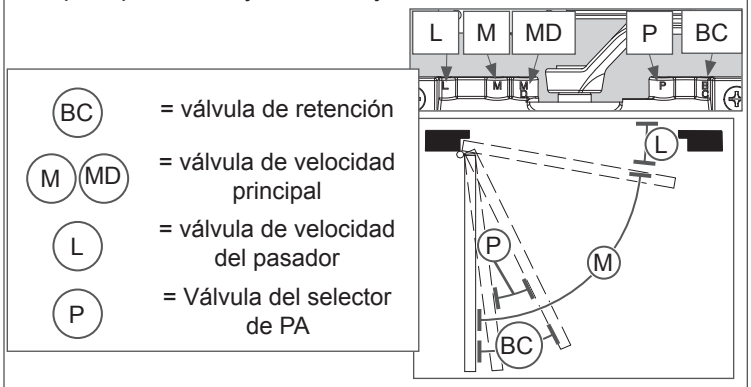
Compruebe el tiempo de cierre y ajuste el mecanismo de cierre de ser necesario.

⚠ PRECAUCIÓN ⚠

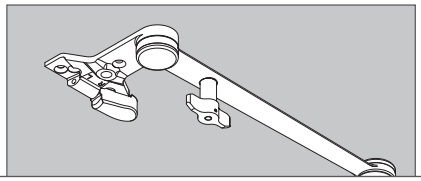
¡Abrir demasiado las válvulas de regulación (como se describe a continuación) puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales. SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

- ⓘ **La válvula debe cerrarse en sentido horario hasta fijarse y nunca exceder más de 3 vueltas en sentido antihorario de la posición fija. Ajuste las válvulas en incrementos de 1/4 de giro o menos a la vez. NO GIRE MÁS DE 3 ROTACIONES COMPLETAS. ¡ESTO CAUSARÁ QUE EL MECANISMO DE CIERRE PIERDA ACEITE!**
- ⓘ **NO AJUSTE LA VELOCIDAD DEL PASADOR SI LA PUERTA NO SE TRABA. Si esto sucede, ajuste la fuerza del resorte.**

1. Abra la puerta a 90°, mida cuánto tiempo tarda la puerta en cerrar y trabarse. Un tiempo típico de cierre es de 5 a 7 segundos, divido de manera uniforme entre velocidad principal y velocidad del pasador.
2. Si se necesita ajustar el tiempo de cierre, use una llave hexagonal de 3/32" para ajustar las válvulas del mecanismo de cierre descritas a continuación.
   a. Retención (BC): controla la velocidad de apertura de la puerta cuando el ángulo de la puerta se acerca a 90°. **No usar como tope de puerta.**
   b. Velocidad principal (MD): controla la velocidad principal para los cilindros estándares y la velocidad de retardo para cilindros de retardo (DA).
   c. Velocidad principal de DA (M): controla la velocidad principal de los cilindros DA. **Esta válvula se encuentra solo en cilindros DA.**
   d. Velocidad del pasador (L): controla la velocidad de la puerta durante los últimos grados del cierre de la puerta.
   e. Selector de PA (P): necesita cambiarse completamente para el montaje del brazo paralelo (PA).
3. Gire las válvulas en sentido horario para reducir la velocidad de la puerta y en sentido antihorario para aumentar la velocidad de la puerta. La velocidad del pasador y la velocidad principal deben ajustarse conjuntamente.

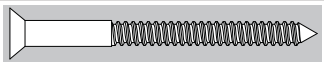
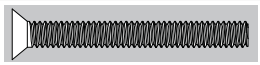
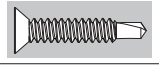


Brazos opcionales para mantener abierto



Para ajustar el brazo opcional para mantener abierto:

Para acoplar o desacoplar la función de mantener abierto, gire la manija de control en un 1/4 de vuelta

Tipo de tornillo	Paquete de tornillos	Imagen	Montaje en el cilindro	Montaje en el zócalo del PA	Montaje en el 5to orificio (solo zócalo del PA)
Madera (para puertas y marcos de madera)	Paquete de tornillos para madera y maquinados (WMS)		4 @ 2 ⅞"	2 @ 1 ½"	1 @ 2"
Máquina (para puertas y marcos de metal) Requiere perforación de orificio y formación de rosca; mejor sujeción	Estándar		4 @ 2 ¼"	4 @ ⅝"	1 @ 1 ½"
SRT: autoperforación y formación de rosca (para puertas y marcos de metal)	Estándar		4 @ 3"	4 @ 1 ½"	1 @ 2"

Tipo de tornillo	Paquete de tornillos	Imagen	Notas
Espaciador del quinto orificio	Estándar		
Tornillo de brazo	Estándar		
Tornillo de sujeción del piñón	Estándar		¼-20 para la sujeción del brazo (ver el paso 6).
Pernos pasantes	Solicite el paquete de tornillos TB		1 9⁄32" o 1 17⁄32" o 1 21⁄32"

71688

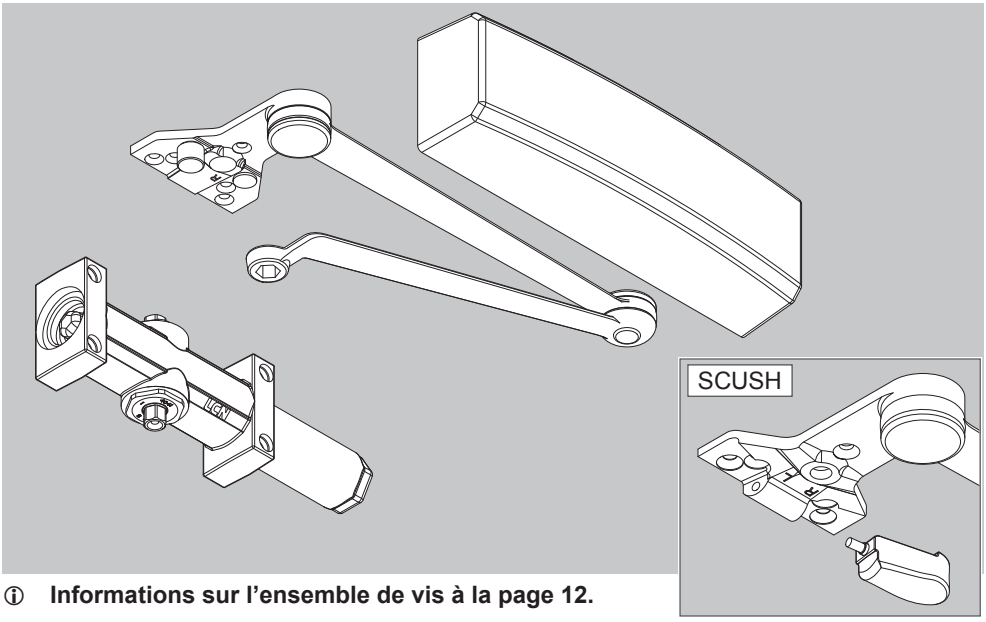
4050 Séries

LCN®

Montage du CUSH et bras à ressort CUSH (SCUSH)

Instructions d'installation

PIÈCES



ⓘ **Informations sur l'ensemble de vis à la page 12.**

OUTILS

- Clé hexagonale de 5⁄32 po ou 4 mm
- Clé à ouverture réglable
- Mèche de 3,2 mm (⅛ po)
- Tournevis cruciforme
- Clé hexagonale de 3⁄32 po ou 4 mm

⚠ MISE EN GARDE ⚠

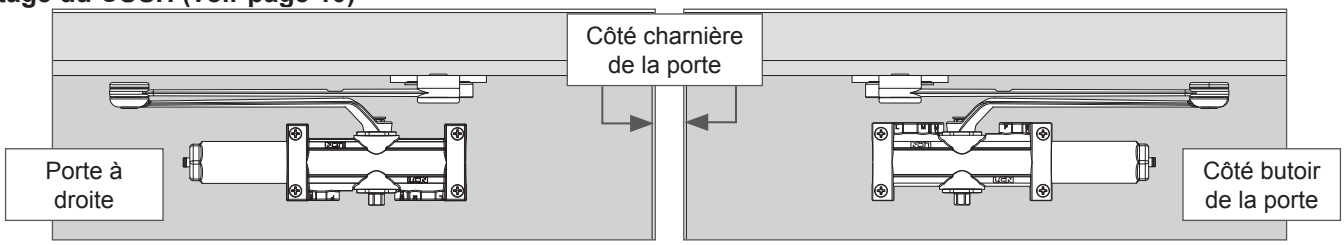
Une installation inadéquate ou le non-respect des règlements peut causer des blessures ou des dommages matériels.
Suivez attentivement toutes les instructions.
Pour toute question, appelez LCN au 877-671-7011.

Les bras de retenue ne doivent pas être installés sur les portes coupe-feu.

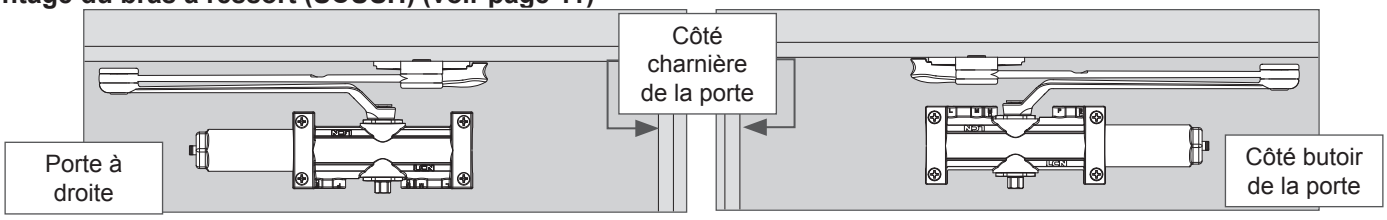
Une trop grande ouverture des soupapes de régulation peut entraîner une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

Choisissez le type d'installation

Montage du CUSH (voir page 10)



Montage du bras à ressort (SCUSH) (voir page 11)



Service à la clientèle

1-877-671-7011 www.allegion.com/us

ALLEGION

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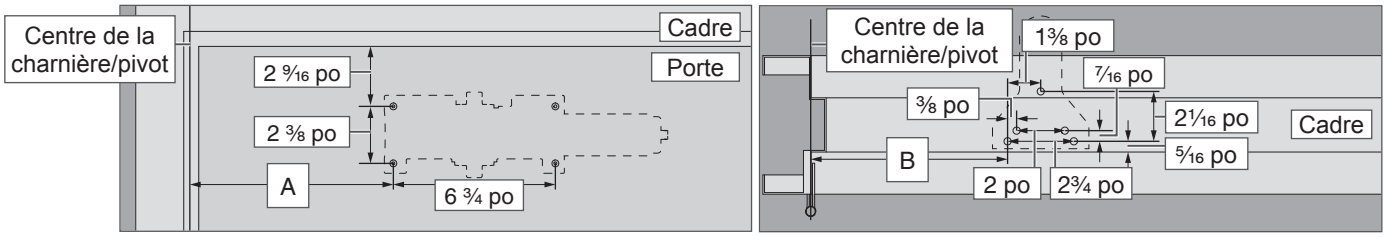
Montage du CUSH

Dimensions de montage

ⓘ **Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.**

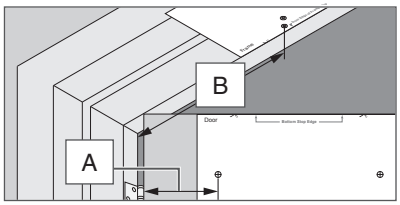


1 Déterminez le degré d'ouverture de la porte requis et trouvez les dimensions « A » et « B » dans les tableaux ci-dessous.

ⓘ **La butée fixe du ressort amortisseur se tiendra à environ 5 degrés au-delà du point d'arrêt normal.**

Ouverture	Mesure à partir du centre de la charnière/pivot	
	A	B
85°	10 5/8 po	11 1/8 po
90°	9 3/4 po	10 1/4 po
95°	9 1/8 po	9 5/8 po
100°	8 1/2 po	9 po
105°	7 7/8 po	8 3/8 po
110°	7 3/8 po	7 7/8 po

2 Mesurez à partir du centre de la charnière/pivot et collez le gabarit sur la porte. Faites des marques pour les trous à percer.

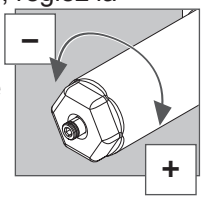


ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**

3 Retirez le gabarit et percez des trous de 1/8 po aux endroits marqués avec une mèche pour les vis SRT.

ⓘ **Les vis SRT sont utilisées sur les portes en métal. Les vis à bois sont utilisées et recommandées sur les portes en bois. Réduisez le couple d'installation si vous utilisez des vis SRT dans du bois.**

4 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé de 5/32 po ou de 4 mm, réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.



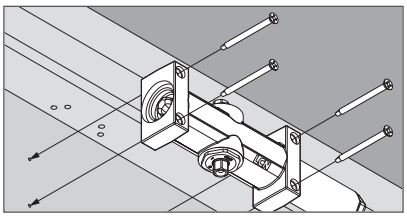
Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

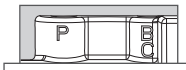
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

ⓘ **N'utilisez pas de perceuse électrique pour régler la force du ressort! Cela pourrait causer des dommages et annuler la garantie.**

Largeur de la porte	Nombre de tours
Réglage de l'ADA	-9
32 po - 815 mm	-4
36 po - 915 mm	0
42 po - 1050 mm	+4
48 po - 1220 mm	+9
54 po - 1372mm	+13

5 Installez le dispositif de fermeture sur la porte.

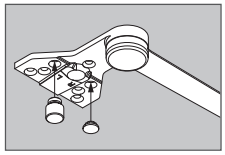




Vissez la soupape du sélecteur du BP.

6 Régler le sabot pour correspondre à la position de la porte.

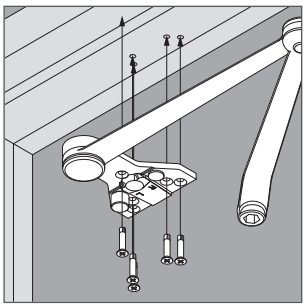
ⓘ **S'il s'agit d'une porte droite, n'ajustez pas le sabot. s'il s'agit d'une porte gauche, déplacez la butée du côté opposé.**
Pour installer l'ensemble de contact à ressort Cush, voir page 11.



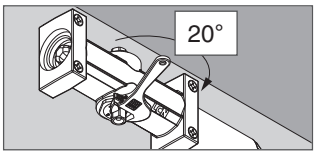
7 Installez le sabot du EDA sur le cadre.

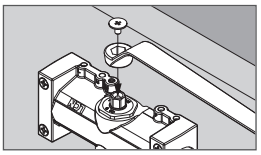
ⓘ **Utilisez l'entretoise facultative du cinquième trou seulement s'il y a un espace entre le cadre et le sabot du EDA.**

ⓘ **Utilisez le 5e trou limité pour révéler plus de 2 11⁄16 po.**



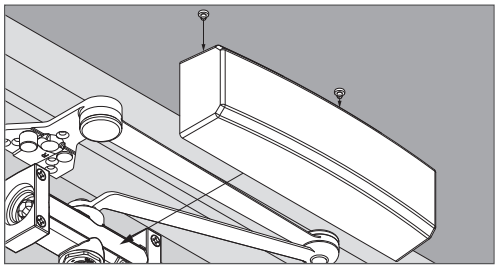
8 Faire pivoter l'arbre du dispositif de fermeture 20°, installez et serrez la vis du bras principal.





9 Réglez le dispositif de fermeture au besoin. Consultez la page 12 pour les instructions de réglage du dispositif de fermeture.

10 Installer le couvercle.



Montage du bras à ressort (SCUSH)

Les bras du ressort amortisseur (SCUSH) ont des instructions spécifiques pour le montage du sabot SCUSH. Autrement, les bras du SCUSH s'installent comme des bras CUSH réguliers.

⚠ IMPORTANT ⚠

NE PAS diminuer le réglage de retenue du dispositif de fermeture! La fonction de bras du ressort amortisseur ne remplace pas la retenue.

⚠ IMPORTANT ⚠

L'arrêt du CUSH à environ 5° <u>après</u> celui du 4050 normal.

1 Positionnement

Pour les nouvelles installations, utilisez le modèle standard CUSH. Pour le remplacement d'un bras CUSH existant, utilisez les trous de montage existants.

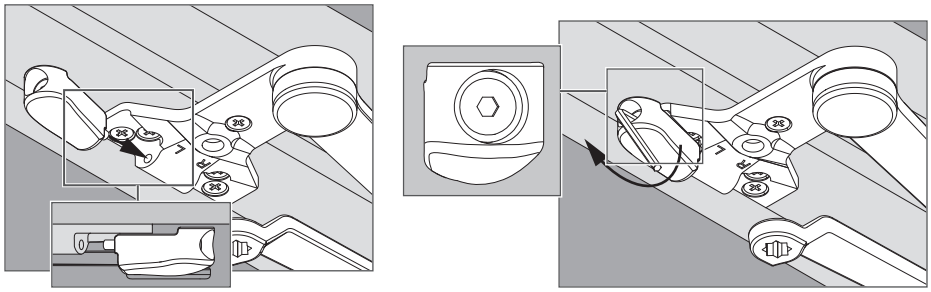
2 Installation

a. Montez le sabot sur l'encadrement.
b. Utilisez une clef hexagonale de 5/32 po ou 4 mm pour installer l'assemblage du bloc de contact, comme illustré. Assurez-vous que la vis est bien serrée sur le sabot.

3 Achèvement de l'installation

Terminez l'installation du dispositif de fermeture tel qu'indiqué pour les bras CUSH standard à la page 10.

ⓘ **Montage à gauche (MG) illustré. Le montage à droite (MD) se fait de manière opposée.**



Support du sabot CUSH après l'installation

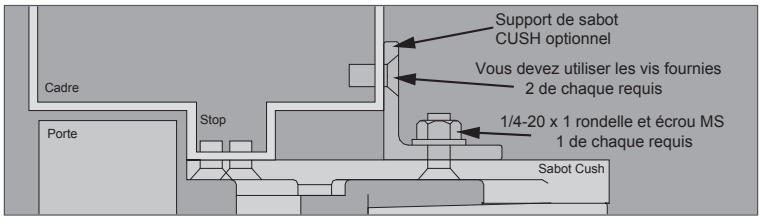
1 Sabot CUSH limité pour révéler entre 1 1⁄16 po et 1 13⁄16 po.

2 Placez le support du sabot CUSH au-dessus du sabot et tenez-le contre l'encadrement.

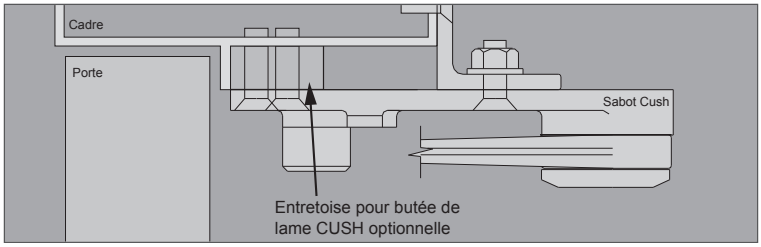
3 Assemblez la vis, la rondelle et l'écrou tel qu'illustré ci-dessous, puis serrez solidement.

4 En vous servant du support à sabot comme gabarit, percez et taraudez deux trous pouvant accueillir deux vis 1/4-20 dans l'encadrement.

5 Insérez les vis et serrez solidement.



6 Si les encadrements ont une butée de lame de 1/2 po, il est nécessaire d'utiliser une entretoise pour butée de lame de 1/2 po, offerte chez votre fournisseur. Utilisez une entretoise pour butée de lame et un support de sabot, lorsque nécessaire.



Réglage de la soupape du dispositif de fermeture

Vérifiez le temps de fermeture et réglez le dispositif de fermeture au besoin.

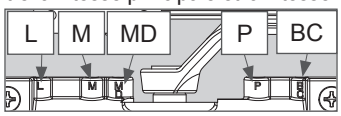
⚠ MISE EN GARDE ⚠

Trop ouvrir les soupapes de régulation (décrites ci-dessous) peut causer une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

ⓘ **La soupape doit être fermée dans le sens horaire pour être bien en place. Ne jamais faire plus de 3 tours dans le sens antihoraire lorsqu'elle est bien en place. Réglez les soupapes en effectuant 1/4 de tour ou moins à la fois. N'EFFECTUEZ PAS PLUS DE 3 ROTATIONS COMPLÈTES. CELA POURRAIT ENTRAÎNER UNE FUITE D'HUILE DANS LE DISPOSITIF DE FERMETURE!**

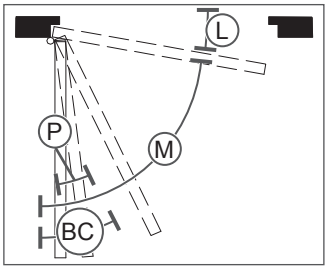
ⓘ **NE RÉGLEZ PAS LA VITESSE D'ENCLENCHEMENT SI LA PORTE NE S'ENCLENCHE PAS. Si cela se produit, réglez la force du ressort.**

1. Ouvrez la porte à 90° et comptez le temps nécessaire pour que la porte se ferme et s'enclenche. Le temps de fermeture typique est de 5 à 7 secondes et est divisé également entre la vitesse principale et la vitesse d'enclenchement.
2. Si vous devez régler le temps de fermeture, utilisez une clé hexagonale de 3/32 po pour régler les soupapes du dispositif de fermeture décrit ci-dessous.



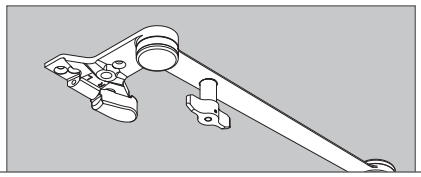
   a. Retenue (BC)- contrôle la vitesse d'ouverture de la porte lorsque l'angle s'approche de 90°. N'utilisez pas de butoir.
   b. Vitesse principale (MD)- contrôle la vitesse principale pour les cylindres standard et la vitesse de retardement pour les cylindres à retardement.
   c. Vitesse principale du cylindre à retardement (M)- contrôle la vitesse principale des cylindres à retardement. Cette soupape est présente sur les cylindres à retardement seulement.
   d. Vitesse d'enclenchement (L)- contrôle la vitesse de la porte durant les derniers degrés de la fermeture.
   e. Sélecteur du BP (P)- doit être complètement tourné vers l'intérieur pour le montage du bras parallèle (BP).

(BC)	= soupape de retenue
(M) (MD)	= soupape de la vitesse principale
(L)	= soupape de la vitesse d'enclenchement
(P)	= Soupape du sélecteur du BP



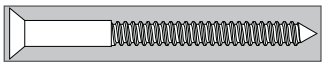
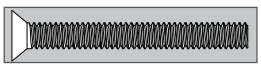
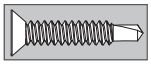
3. Faites tourner les soupapes dans le sens horaire pour faire diminuer la vitesse de la porte, et dans le sens antihoraire pour la faire augmenter. La vitesse d'enclenchement et la vitesse principale doivent être réglées ensemble.

Bras de retenue facultatifs



Pour régler le bras de retenue facultatif:

Pour enclencher ou désengager une caractéristique ouverte, tournez la poignée de contrôle d'un quart de tour.

Type de vis	Lot de vis	Image	Montage du cylindre	Montage du sabot du BP	Montage du 5e trou (sabot du BP uniquement)
Bois (pour les portes et les cadres en bois)	Lot de vis à bois et à métaux (WMS)		4 @ 2 ⅞"	2 @ 1 ½"	1 @ 2"
De mécanique (pour les portes et les cadres en métal) Nécessite de percer des trous et de tarauder; meilleure retenue	Standard		4 @ 2 ¼"	4 @ ⅝"	1 @ 1 ½"
SRT - Auto taraudeuse et à alésage automatique (pour les portes et les cadres en métal)	Standard		4 @ 3"	4 @ 1 ½"	1 @ 2"

Type de vis	Lot de vis	Image	Remarques
Entretoise pour cinquième trou	Standard		
Vis du bras	Standard		

Type de vis	Lot de vis	Image	Remarques
Vis de fixation du pignon	Standard		¼--20 x 1 rondelle et écrou MS (voir etape 6).
Boulons traversants	Commander un lot de vis bois-métal		1 9⁄32 po ou, 1 17⁄32 po ou, 1 21⁄32 po

27032

3210 Series

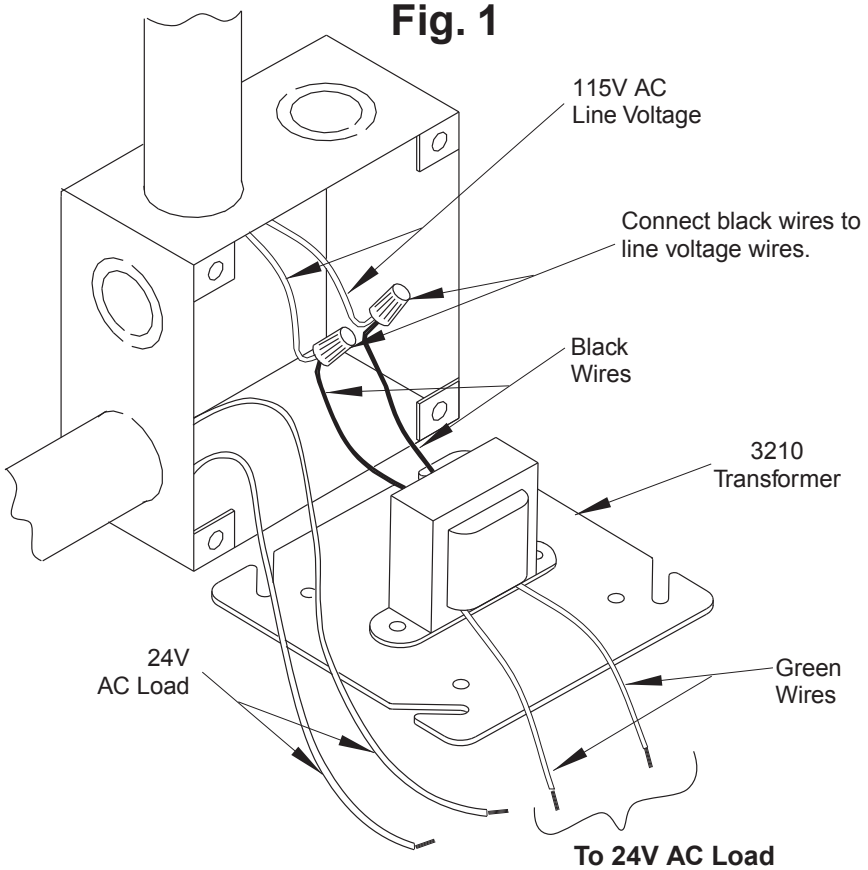
LCN®

24VAC Transformer

Installation and Wiring Instructions

This unit is intended to be mounted onto a 4” x 4” x 2 1/8” electrical junction box. This transformer is intended for use on: SE, ME and SEM Series products. Its purpose is to reduce line voltage from 115V AC to 24V AC.

Fig. 1



⚠ CAUTION ⚠

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.

To Install Transformer:

1a	Turn off incoming power before any connections take place.
1b	Connect the black wires (primary) of the transformer to the 115V AC supply voltage (See **Fig. 1**).
1c	Connect the green wires (secondary) of the transformer to the 24V AC load (See **Fig. 1**). Ex.: ME, MEC, MED, SE, SEC, SED.
1d	Ensure that all connections are secure and no wires are exposed. Then fasten faceplate with mounted transformer to 4” x 4” junction box.
1e	Turn on the main power.
1f	Turn on load unit to ensure it is functioning properly. If not functioning, repeat the above steps.

Customer Service

1-877-671-7011 www.allegion.com/us

ALLEGION

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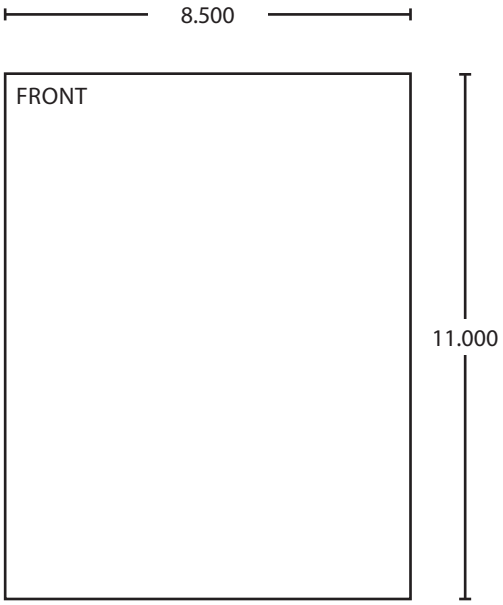
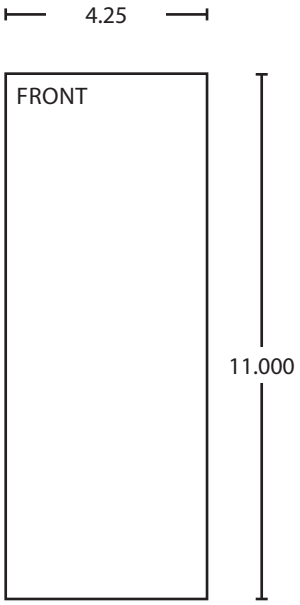
27032 Rev. 01/14-c



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	N/A	043812			

Material
White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
C > Revised artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043812	01-01-14

Title
3210 Series 24VAC Transformer Instruction Sheet

Creation Date	Number	Revision
04-27-10	27032	C

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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18782

3130-SEL Sentronic

LCN®

Installation Instructions

ⓘ **NOTE: Not for installation on UI rated 20 minute wood core doors per can/ulc-s104-10**

Instructions

1a Closer is handed at factory and must match hand of door. hand of closer shown on mounting channel. Voltage shown on SENTRONIC cover plate must match voltage supplied to door frame.

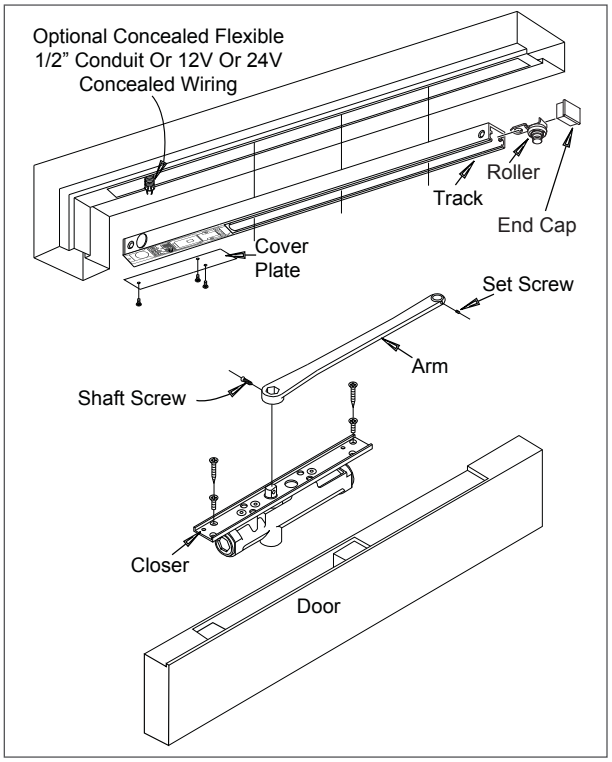
1b If door & frame are not prepared for closer & track then prepare in accordance with details on opposite side.

1c Remove cover plate from track. Assemble flexible conduit connector to tapped hole provided in top of track. Connect power supply wires to track terminal strip. See wiring diagram below. Insert track roller into track. Make sure roller stud is inserted into hole in track slide. Insert track into frame and secure with proper screws as shown on opposite side. Replace cover plate.

1d Insert closer in cut out in door & secure with proper screws.

1e Place arm on closer shaft and secure with shaft screw.

1f Loosen set screw in end of arm, open door part way (about 30°), pull arm away from top of door and connect to track roller. Tighten set screw firmly. Open door to hold open position.



Regulation

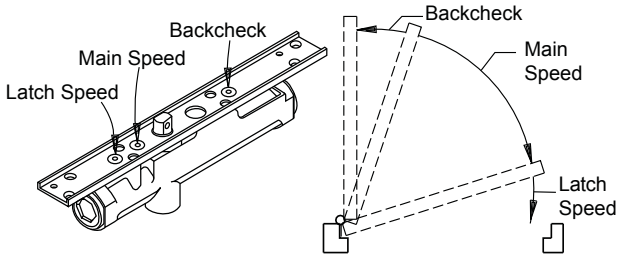
ⓘ **Important**
Do not allow door to slam into frame. A "normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main swing speed and latch swing speed. Use socket screw key furnished. To slow **MAIN SPEED** of door, turn regulating screw (nearest arm) clockwise. To slow **LATCH SPEED** of door, turn regulating screw (nearest hinge) clockwise.

Backcheck

To increase **BACKCHECK**, turn regulating screw (nearest latch) clockwise. Use lightest **BACKCHECK** that will retard door opening sufficiently.
DO NOT ABRUPT BACKCHECK NOR EXPECT DOOR CLOSER TO ACT AS A STOP

⚠ CAUTION ⚠

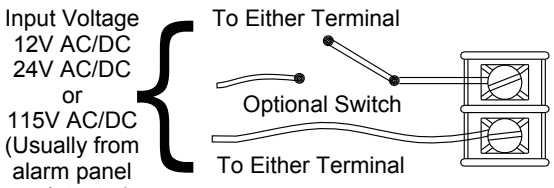
Improperly installed or regulated closers can cause property damage or personal injury. Please follow these instructions carefully.



Electrical Checkout

1. With power on, open door fully. Door should remain in open position. If door does not stay open check electrical input.
2. Turn power off. Door should close immediately. Turn power on and leave door in the open position.
3. System should be checked at frequent intervals. It is suggested that steps 1 & 2 be repeated every 90 days.

ⓘ **Note: If door does not close when power is off, consult LCN Representative or factory.**



Polarity Not Important

Conduit Quick Connector

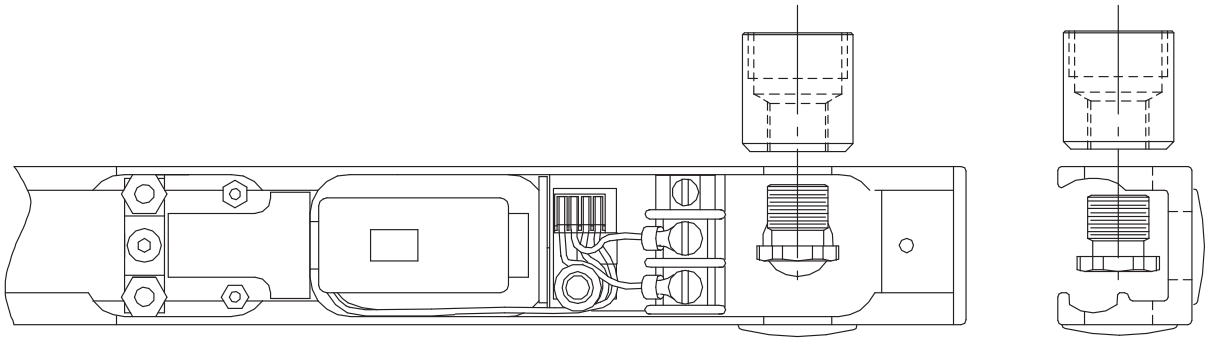


Fig. 1

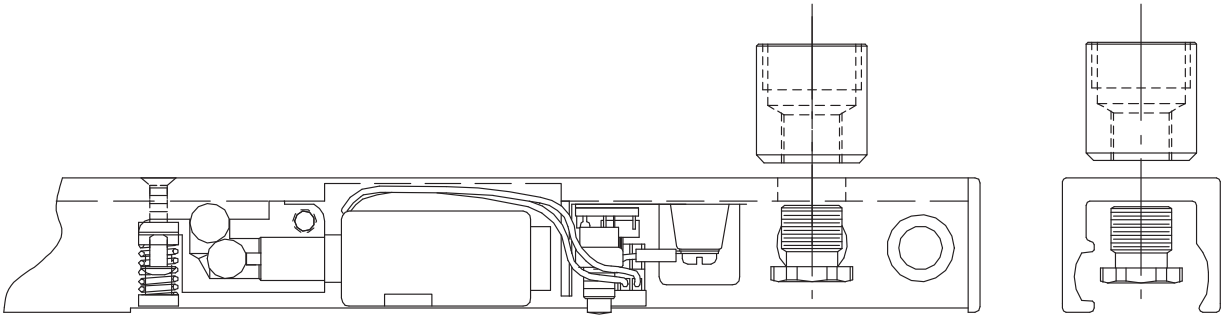


Fig. 2

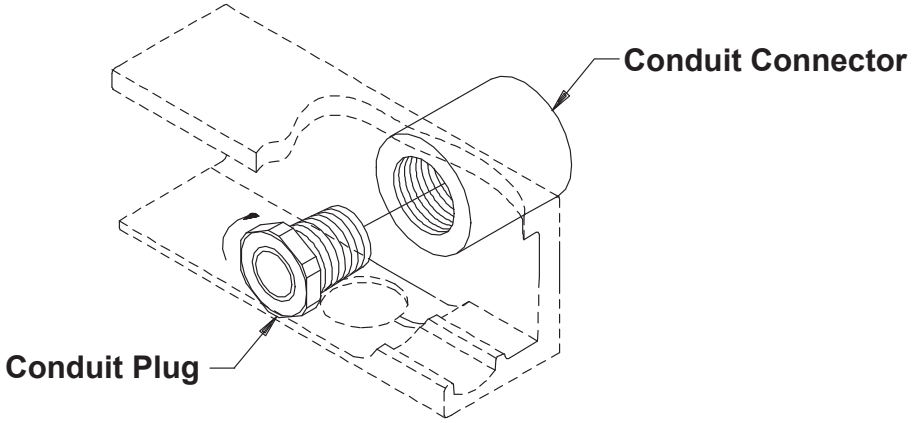
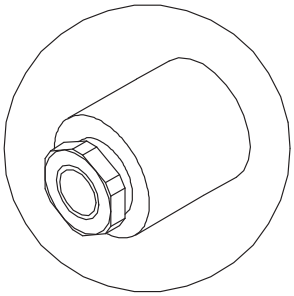


Fig. 3



Conduit Plug shown in Conduit Connector

Installation Instructions

1a The Conduit Quick Connector and Plug can be found in the closer screwpack.

1b The Conduit Quick Connector should be fastened to the 1/2” concealed conduit prior to step 3 on the closer installation instructions.

1c During step 3 on the closer installation instructions, make sure that the Conduit Connector is secured flush against the track surface. See option in Fig. 1 below that matches the mounting option selected for track surface. With the track mounted, take the Conduit Plug and slide it through the 1/2” hole in the track. (see Fig.2) Tighten the Plug into the Conduit Connector using a 5/8” wrench, until completely secure, as shown in Fig.3.

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1-877-671-7011 www.allegion.com/us

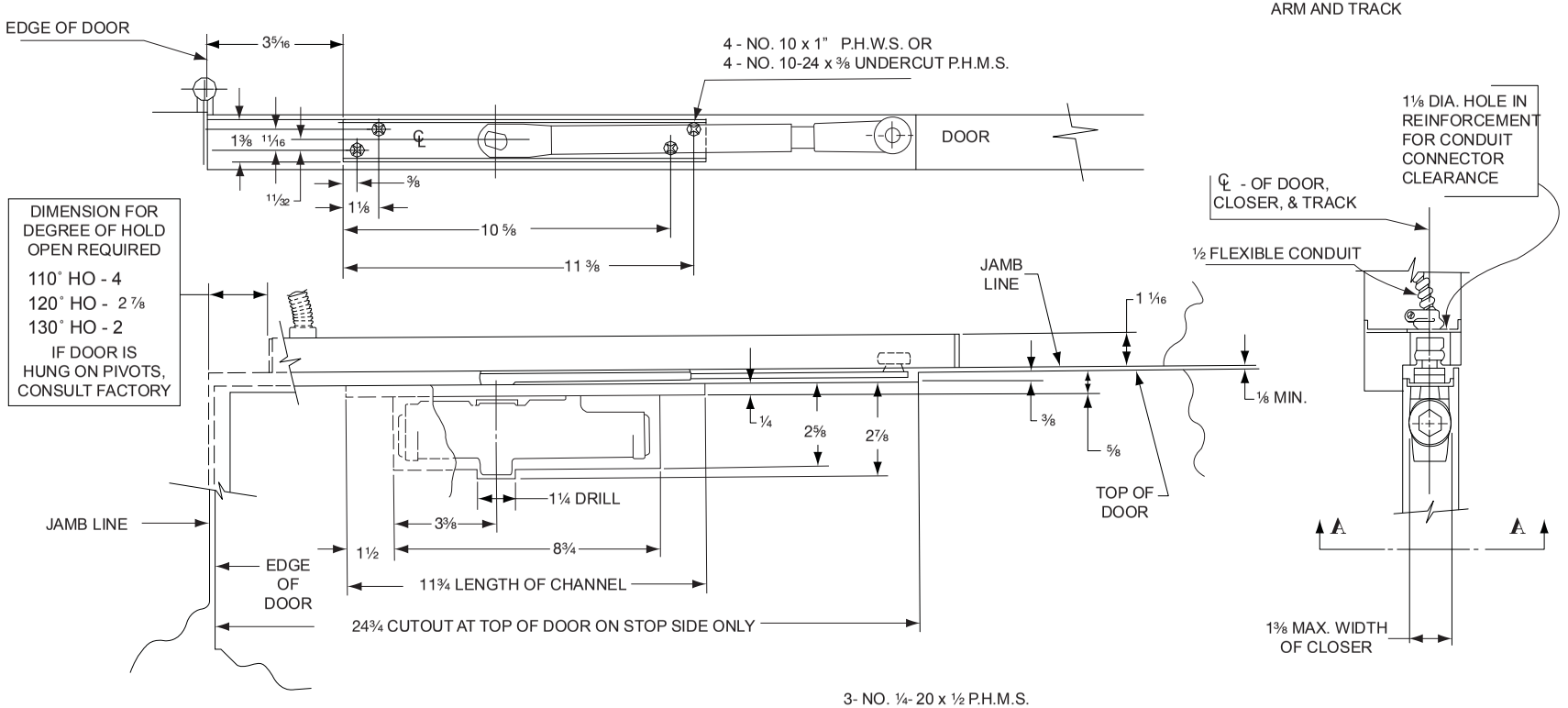
THIS TEMPLATE APPLIES TO

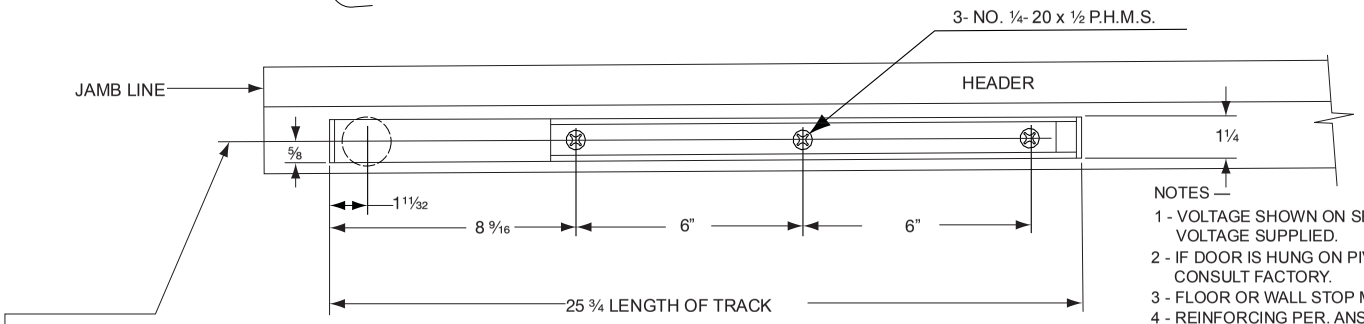
3133-SE
3134-SE } 85° to 110° HOLD OPEN

MINIMUM DOOR WIDTH 2' 6"
SE-L MEANS EXTRA LONG
ARM AND TRACK

DOOR HOLDER SOLENOID
12 VAC - DC Nominal + 10% - 15% @ .180 Amp. Max.
24 VAC - DC Nominal + 10% - 15% @ .090 Amp. Max.
120 VAC - DC Nominal + 10% - 15% @ .030 Amp. Max.

Sentronic®





LOCATE ℄ OF TRACK IN HEADER ON ℄ OF CLOSER

VIEW A-A DOOR & CLOSER OMITTED FOR CLARITY

LEFT HAND DOOR AND CLOSER SHOWN
RIGHT HAND OPPOSITE

AUXILIARY STOP RECOMMENDED

NOTES —
1 - VOLTAGE SHOWN ON SENTRONIC® LABEL MUST MATCH VOLTAGE SUPPLIED.
2 - IF DOOR IS HUNG ON PIVOTS OR SWING CLEAR HINGES CONSULT FACTORY.
3 - FLOOR OR WALL STOP MUST BE USED.
4 - REINFORCING PER. ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOOR & FRAMES.

INCH	1/8	1/4	11/32	3/8	1/2	5/8	11/18	3/4	1	1 1/16	1 1/8	1 5/32	1 1/4	1 3/8	1 1/2	2 5/8	2 7/8	3 5/18	3 3/8	3 1/2	3 7/8	7 7/8	8 3/4	10 5/8	11 3/8	11 3/4	24	22 3/4
M.M.	3.2	6.4	8.7	9.5	12.7	15.9	17.4	19.1	25.4	27.0	28.6	29.4	31.8	34.9	38.1	66.7	73.0	84.1	85.7	88.9	98.4	200	222.3	269.9	288.9	298.4	609.6	577.9

DO NOT SCALE			
NO	REVISION	BY	DATE
7	Revised Template Replaces 2/13/73 & Track Mounting Holes Relocated	DRM	6/19/90

LCN®
3130 SE FULLY CONCEALED DOOR CLOSER/HOLDER WITH ELECTRONIC RELEASE

By 6-19-90 RJS
APPR 6-19-90 CZ
DO NOT SCALE
3130 SEL

PRINCETON, ILLINOIS

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Printed in U.S.A.
18782 Rev. 08/17-f

25122

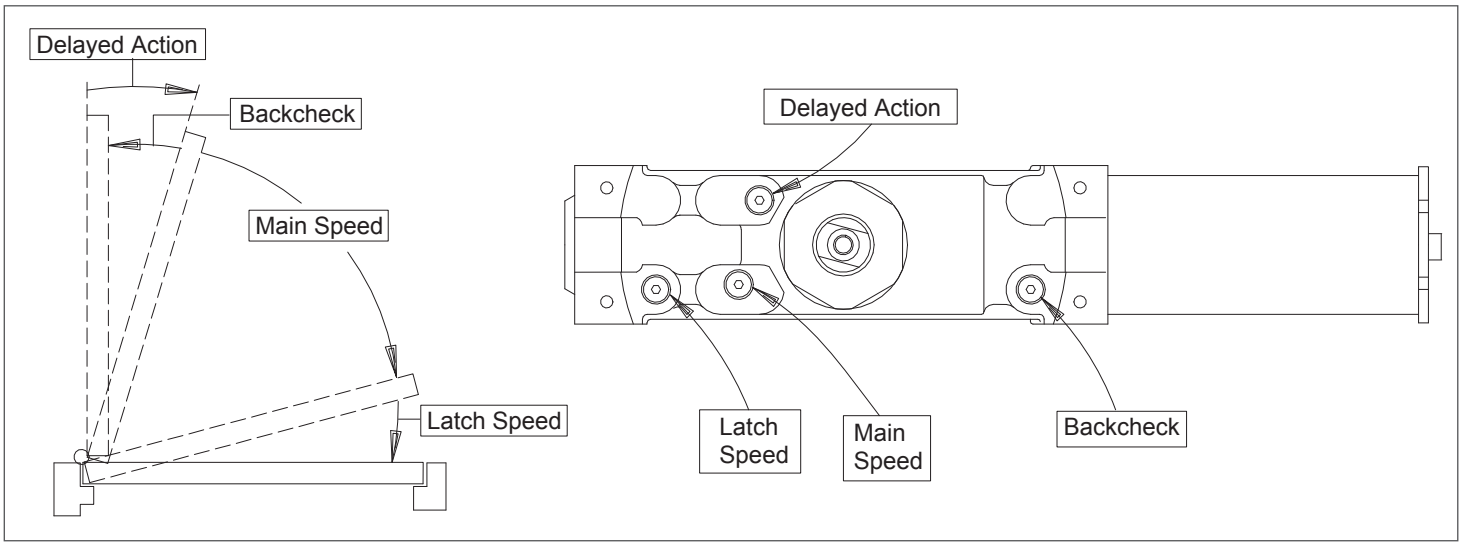
Delayed Action Closers

Installation Instructions

Use this sheet for regulating delayed action closers.

Delaying action depends on templating used. Full delayed action takes place from the maximum degree of opening that the closer is templated for and releases approximately 15° to 20° from that point.

Use template and instruction sheet packed with closer for installing and regulating main, latch, and backcheck speeds of door.



Regulating Delayed Action Time

Closer is regulated for approximately 60 seconds of delay time. If necessary to change, regulate as follows:

ⓘ **CAUTION: Sensitive adjusting screw!**

To decrease delaying time of door, turn delayed action screw counter clockwise a few degrees at a time.

To increase delaying time of door, turn delayed action screw clockwise a few degrees at a time.

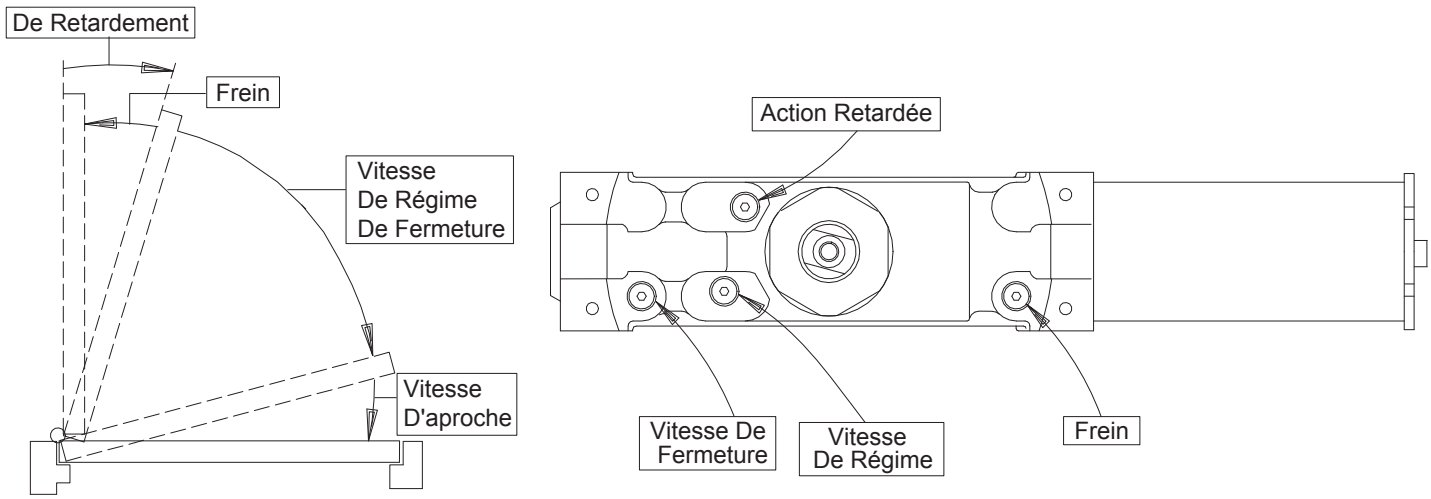
Customer Service	Service à la clientèle
1-877-671-7011	www.allegion.com/us

Réglage Du Ferme-Porte À Retardement

Utiliser cette feuille pour le réglage du ferme-porte à retardement.

Le retardement dépend du gabarit employé. Le retardement cfomplet a lieu à compter du degré maximal d'ouverture selon le gabarit installéet le ferme-porte relâche environ entre 15° or 20° de ce point.

Employer le gabarit et les directives qui accompagnent le ferme-porte pour installer et réler les vitesses de régime, de fermeture et de limiteur de la porte.



Réglage De L'action Retardée

Le ferme-porte est réglé au retardement d'environ 60 secondes. S'il est nécessaire de le changer, réglez comme suit:

ⓘ **MISE EN GARDE - vis de réglage sensible!**

Pour diminuer retardant le temps de porte, le virage a retardé la vis d'action quelques degrés dans le sens des aiguilles d'une montre opposés à la fois.

Pour augmenter retardant le temps de porte, le virage a retardé la vis d'action quelques degrés dans le sens des aiguilles d'une montre à la fois.

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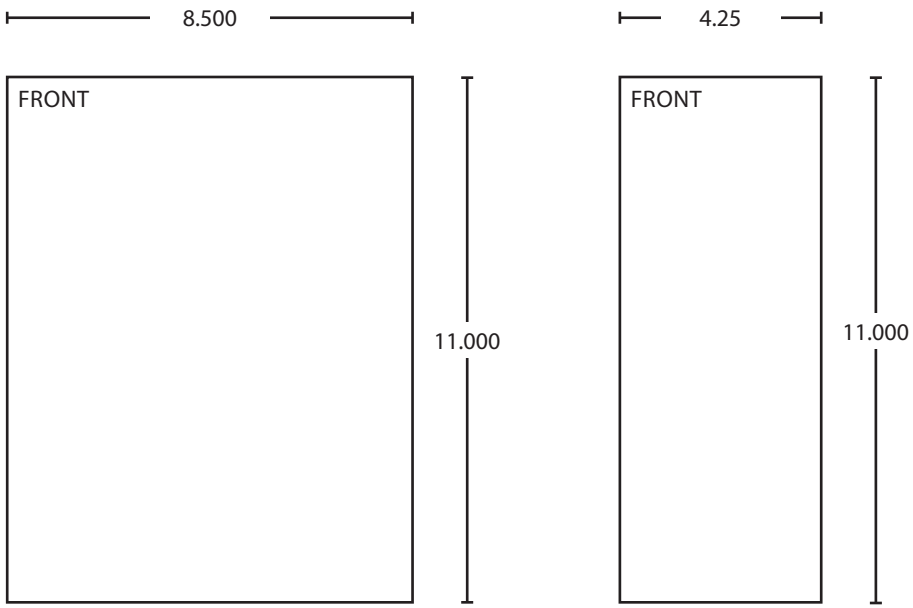
25122 Rev. 01/14-e



Additional Notes:
1. None

Revision History					
E	F	G	H	J	K
043228					

Revision Description:
E > Revised artwork

Material	Edited By	Approved By	EC Number	Release Date
White Paper	D. Myers	M. Sasso	043228	01-01-14

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Title
Delayed Action Regulation Instruction Sheet

Creation Date	Number	Revision
04-27-10	25122	E

Created By	Activity	
N/A	3899 Hancock Expwy Security, CO 80911	
Software: InDesign CS6		© Allegion 2014

LCN

ALLEGION

4410 MEC

Sentronic®

DOOR CLOSER WITH ELECTRONIC RELEASE & MULTI - POINT HOLD OPEN.
(COMPANION UNIT TO THE 4410 MED SERIES DETECTOR UNIT)

INSTALLATION INSTRUCTIONS

1. Closer is handed at factory and marked with an "R" or "L" on top of packing nut. The hand of closer must match hand of door (See door handing diagram at bottom of page). Determine closer mounting template to be used - Standard or Flush-Ceiling (see Pg.4). **MEC mounting should match corresponding MED mounting.** Refer to proper template for entire installation.

2. Voltage supplied to door frame MUST be 24V. **Refer to selected MED wiring diagram for electrical connection information.**

3. Before beginning Step 3, determine which type of wiring option is to be used and follow the corresponding instructions.

FOR CONCEALED WIRING: See Fig. 3 on page 3.

A. Prepare frame per proper template on page 4. Be sure all the holes are dimensioned correctly before drilling and tapping.

B. Assemble conduit connector provided to flexible conduit, then attach to hole in mounting plate.

C. Secure mounting plate to frame with screws provided.

⚠ WARNING

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.

FOR SURFACE WIRING: See Fig. 4 on page 3. **NOTE:** Remove knockout in top of cover.

A. Prepare frame per proper template on page 4. Be sure all holes are dimensioned correctly before drilling and tapping.

B. Secure mounting plate to frame with screws provided.

C. Attach the surface run 1/2" EMT conduit to hole in bracket on mounting plate. Be sure conduit is securely attached to bracket.

4. Make wiring connections at this time. Connect two black wires to 2 solenoid leads on MED unit REF: White - Black / White - Red **(MED & MEC must have same power input).** Green wire MUST be connected to an earth ground. (See Fig. 3 & 4 on page 3)

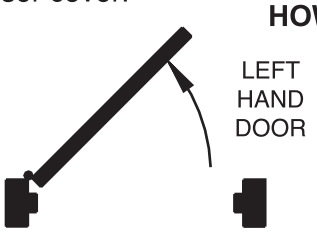
5. Place main arm onto shaft, 90° to closer body and secure with arm shaft screw.

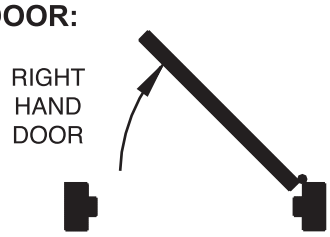
6. Attach rod & shoe to door (per proper template on page 4) with screws provided.

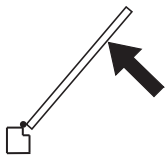
7. Open door part way and insert rod into forearm, then close door. With **main arm** at right angle (90°) to door, insert arm set screw and tighten securely.

8. Regulate closer and perform electrical checkout as instructed on page 2 before installing closer cover.

HOW TO TELL HAND OF DOOR:







MAXIMUM OPENING FORCE

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REGULATION INSTRUCTIONS

SEE FIGURE 2 ON OPPOSITE PAGE FOR REGULATING SCREW LOCATION, DOOR CONTROL DIAGRAM & SPRING POWER ADJUSTMENT

1. **SPRING POWER ADJUSTMENT:** Do not allow door to slam into frame. Spring power should be adjusted **only** if more power is needed to close the door. Turning spring adjustment clockwise will increase spring power. 6 turns maximum adjustment.

2. Regulation: A "normal" closing time from a 90° position is 5 to 7 seconds, equally divided between **MAIN** and **LATCH SPEED.** If adjustments are needed, use the socket screw key provided. To adjust **MAIN SPEED,** turn regulating screw clockwise to slow door speed or c.c.w. to increase speed. **LATCH SPEED** is adjusted in the same way. When adjusting the **BACK CHECK,** use the least amount of force necessary to sufficiently retard the swing of door. To adjust closer **BACKCHECK,** turn regulating screw clockwise to increase amount of force or c.c.w. to reduce the amount of force. **DO NOT USE ABRUPT BACKCHECK SETTING OR EXPECT CLOSER TO ACT AS A STOP !**

⚠ CAUTION

IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 800 - 526 - 2400

ELECTRICAL CHECKOUT

AFTER COMPLETION OF INSTALLATION & WIRING, AND WITH THE UNIT PROPERLY POWERED, PERFORM THE FOLLOWING TESTS:

1. With power on, open the door any position. Door should remain in that position, unless closer hold open is designed to bypass a portion of the door swing (look for label on cylinder). For a bypass model to hold open, the door must be opened beyond degree of door swing indicated on label.

2. If door does not hold open, push on / off switch. If door still does not hold open, verify proper voltage input at solenoid leads.

3. Turn power off. Door should close completely.

4. To release manually, pull on door firmly. Door should close completely.

5. System should be checked at regular intervals. It is recommened that steps 1-3 be repeated every 90 days.

ELECTRICAL DATA FOR DOOR HOLDER SOLENOID:

24V AC-DC Nominal +10% - 15% @ .090 Amp. Max.

HOLD OPEN FORCE ADJUSTMENT

IF DOOR IS HARD TO PULL OUT OF HOLD OPEN, ADJUST AS SHOWN

IMPORTANT

Closer leaves the factory set at maximum holding force. The holding force may be decreased and increased again, but it cannot be increased beyond the original setting.

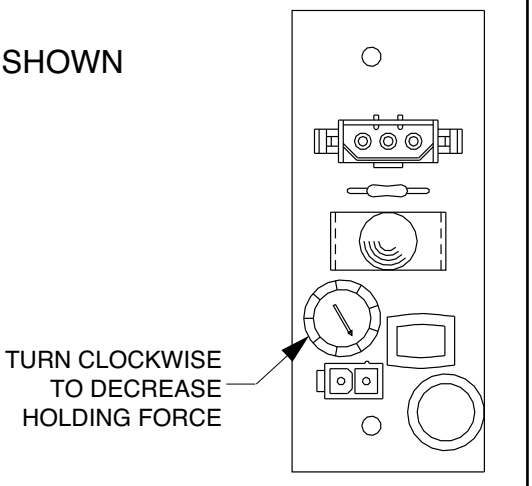


Figure 1

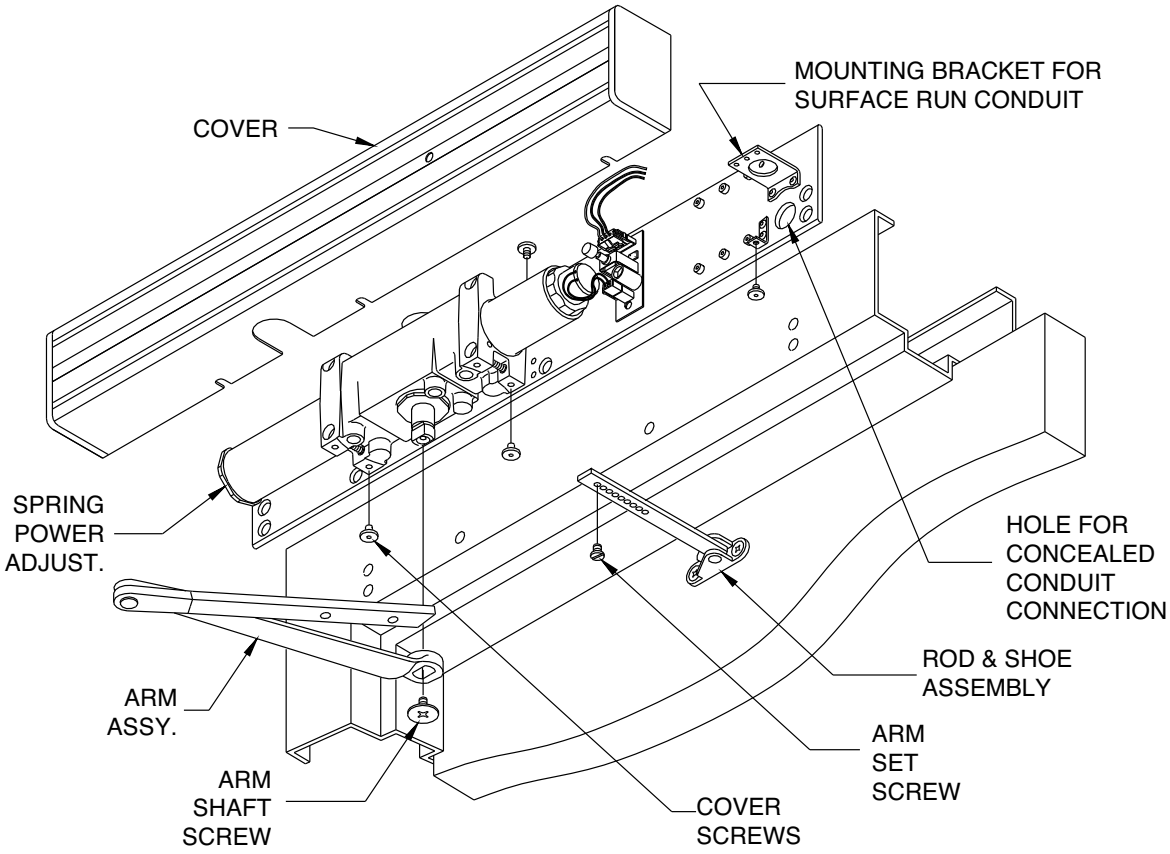
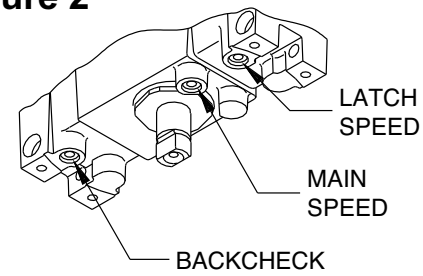
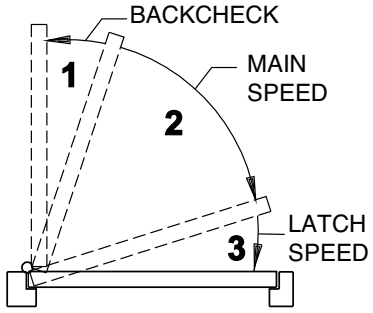
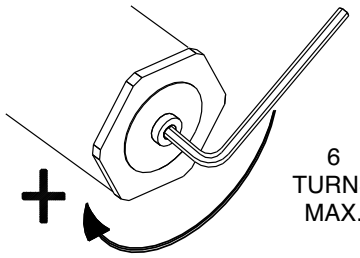


Figure 2







TO INCREASE CLOSING POWER

Figure 3

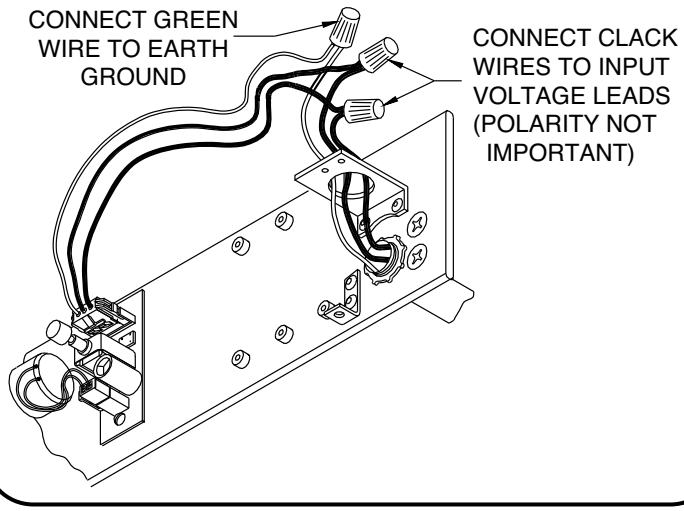
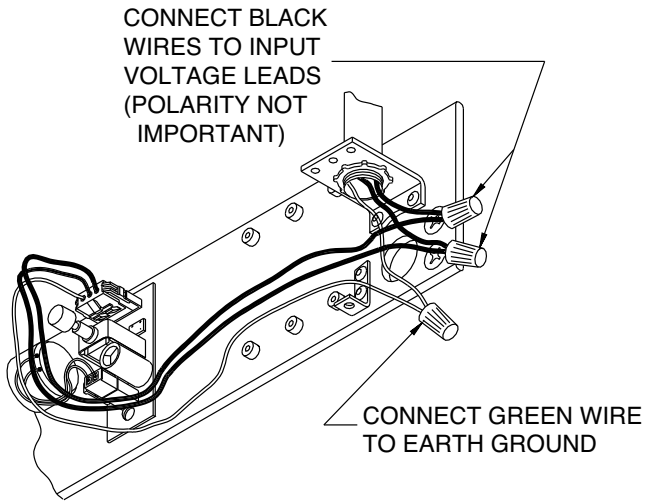


Figure 4



⚠ WARNING

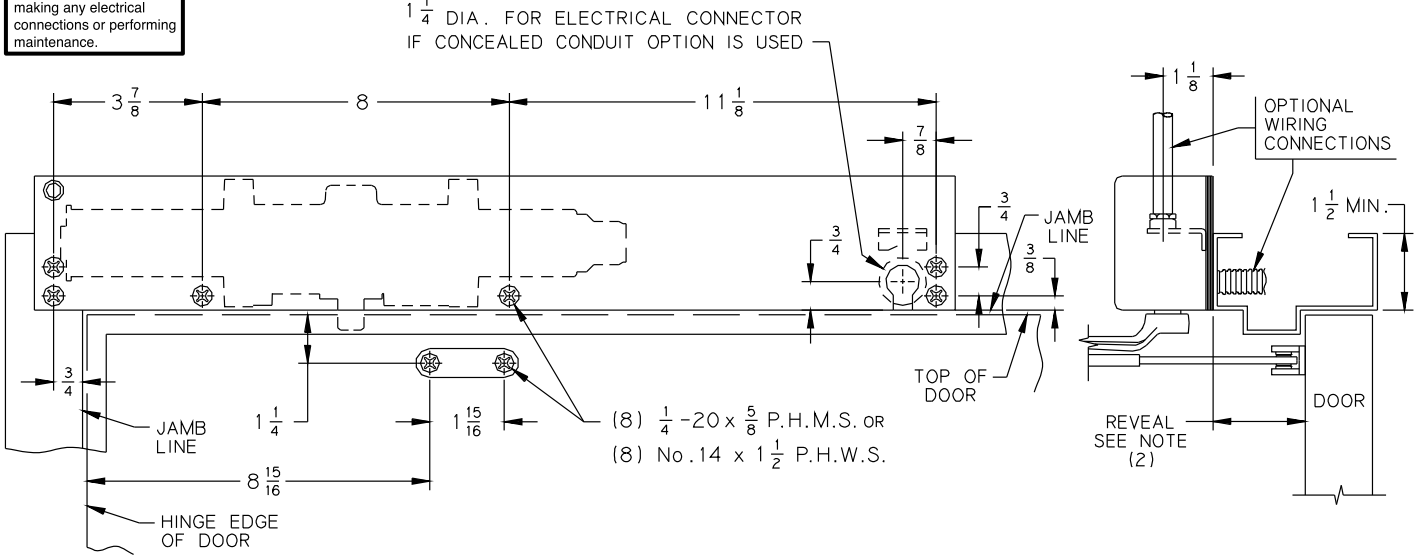
HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.

4413 MEC } HOLD OPEN ANY POINT TO 160°
4414 MEC } HOLD OPEN BYPASS 80° OR 140°
4413 MECL} HOLD OPEN ANY POINT TO 170°
4414 MECL} HOLD OPEN BYPASS 80° OR 140°

LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE | 1/97

"L" INDICATES LONG ARM



4413G MEC } HOLD OPEN ANY POINT TO 160°
4414G MEC } HOLD OPEN BYPASS 80° OR 140°
4413G MECL} HOLD OPEN ANY POINT TO 170°
4414G MECL} HOLD OPEN BYPASS 80° OR 140°

"L" INDICATES LONG ARM

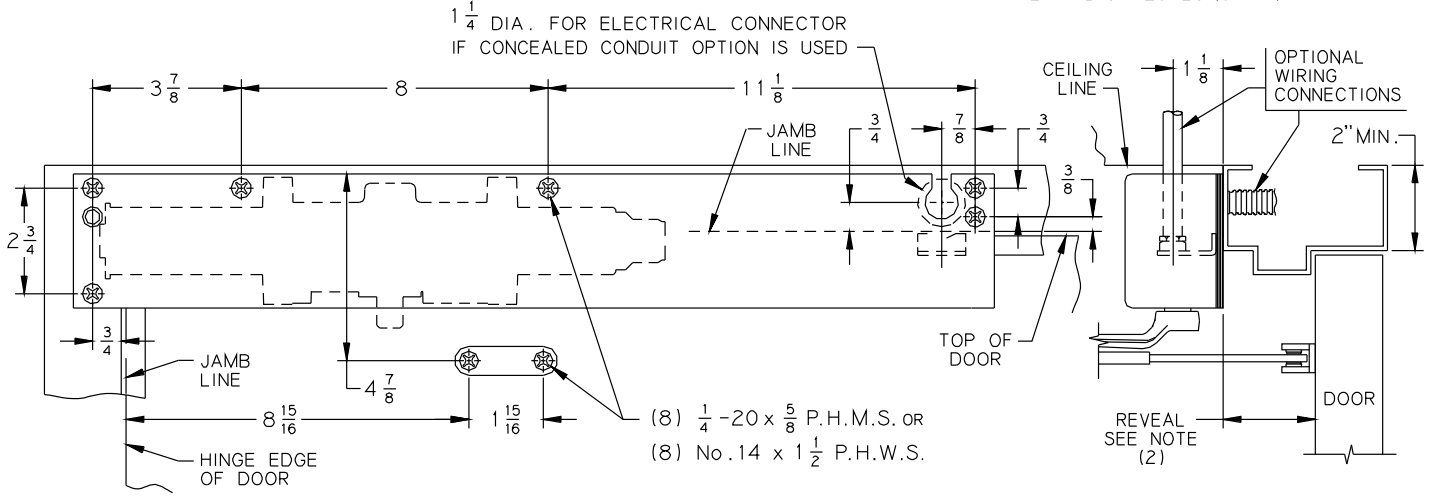


TABLE OF SIZES	
MAXIMUM DOOR WIDTH INTERIOR DOORS ONLY	CLOSER No.
2'4" THRU 3'0"	4413 MEC
3'1" THRU 4'0"	4414 MEC

NOTES-

1. VOLTAGE SUPPLIED TO UNIT MUST BE 24 VOLTS.
2. LONG ARMS REQUIRED FOR OPENING BEYOND 160°. REVEAL NOT TO EXCEED 3 7/8. (5 3/4 FRAME).
3. MAXIMUM STOP THICKNESS 5/8.
4. ELECTRICAL CONNECTOR IS PROVIDED BY LCN.
5. IF DOOR IS HUNG ON PIVOTS, LOCATE CLOSER AND SHOE FROM CENTERLINE OF PIVOT. IF DOOR IS HUNG ON SWING CLEAR HINGES, CONSULT FACTORY.
6. FLOOR OR WALL STOPS SHOULD BE USED.
7. FOR ADDITIONAL INFORMATION ON RECOMMENDED USE OF THIS UNIT CONSULT NFPA-72E PAMPHLET.
8. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.

INCH	1/4	3/8	1/2	5/8	3/4	7/8	1 1/8	1 1/4	1 1/2	1 15/16	2
M.M.	6	10	13	16	19	22	29	32	38	49	51

INCH	2 9/16	2 3/4	3 7/8	5 3/4	8	8 15/16	11 1/8	2'4"	3'0"	3'1"	4'0"
M.M.	65	70	98	146	203	227	283	700	900	925	1200

No.	REVISION	BY	DATE
3	CAD CONVERSION	DRM	05/94

LCN

APP BY DRM 5/94

DO NOT SCALE

PUSH SIDE, TOP JAMB MOUNTED CLOSER WITH MULTI-POINT HOLD OPEN

4410 MEC

14126

5030 Series

LCN®

Installation Instructions

⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions contact LCN Closers: 1-877-671-7011

1 Installation

1a Closer Handing

Make sure hand of closer and door correspond. Hand of closer is stamped on mounting plate. Hand of closer can not be changed.

1b Door and Frame Preparation

Determine if door is to be hung on hinges, offset pivots to center pivots. If frame is not prepared for closer, prepare to dimensions shown on proper template. Note: On butt hinge applications, closer can be templated for 100° or 180° of opening.

1c Install Closer onto Door

Install closer in prepared frame with fasteners provided. Be sure mounting plate is flush with soffit. Install head stop.

1d Install Door and Closer onto Frame

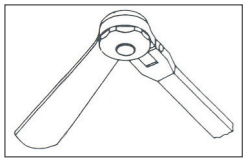
Hang door. Be sure there is no bind or friction. Place main arm on shaft and push up into position. Insert arm screw and tighten securely. Close door and install shoe. Open door slightly and insert rod in forearm. Close door. Starting with main arm at right angle to door, move arm toward latch until holes in rod and tube line up. Insert and tighten screw.

2 Regulation and Backcheck

Door closer regulation is preset at the factory. Adjust as follows only if necessary: A “normal” closing time from a 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed (see figure below). Use a 3/32” hex wrench to adjust regulating screws. To slow main speed of door, turn middle regulating screw clockwise. To slow latch speed, turn regulating screw closet to hinge clockwise.
BACKCHECK: To increase backcheck intensity, turn regulating screw screw closest to the latch clockwise.
DO NOT USE ABRUPT BACKCHECK. DO NOT USE DOOR CLOSER AS A DOOR STOP.

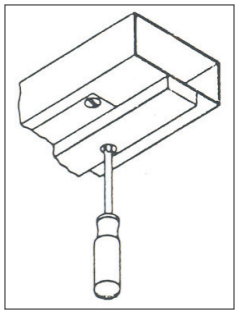
3 Adjusting the Arm

To adjust 90° hold-open arm (up to 100° opening). The hold open features is at the elbow. Arm is preset to hold door open at approximately 90°. To change setting, loosen adjusting nut, open door to desired hold open position, tighten adjusting nut.



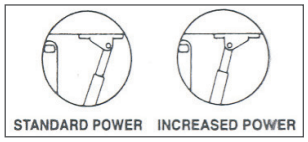
4 Closing Power

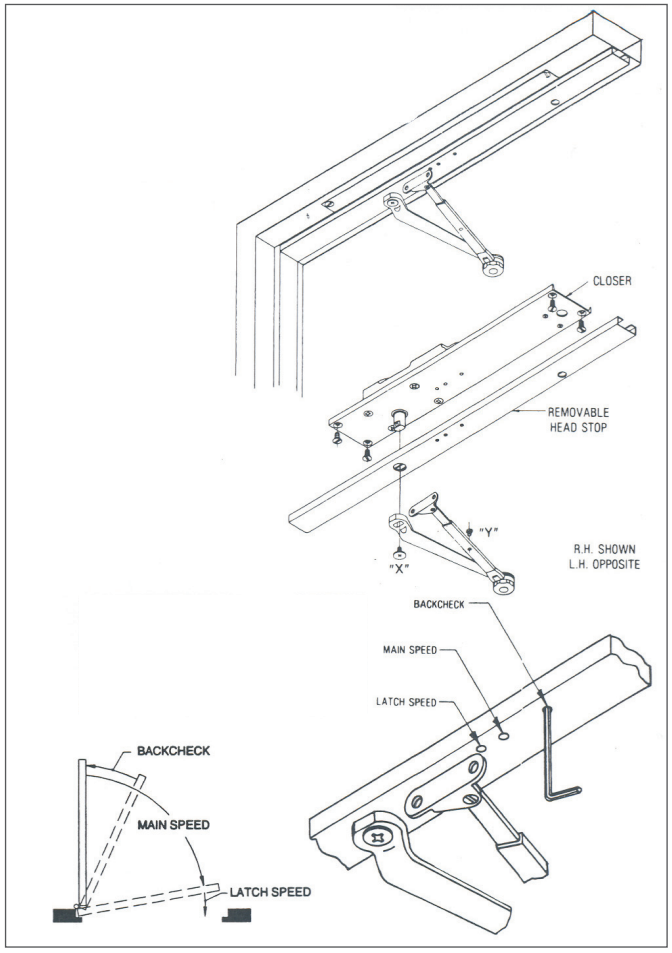
Adjust CLOSING POWER only if more power is needed. Closer is shipped with minimum closing power pre-set. To increase CLOSING POWER turn spring adjusting screw clockwise. Maximum adjustment 36 turns.



To adjust for additional closing power at latch. (Regular & 90° H.O. only)

1. Remove screw “Y” (step 1d) and separate rod from tube.
2. Remove shoe screws and turn shoe over.
3. Reassemble arm.





Customer Service
1-877-671-7011 www.allegion.com/us

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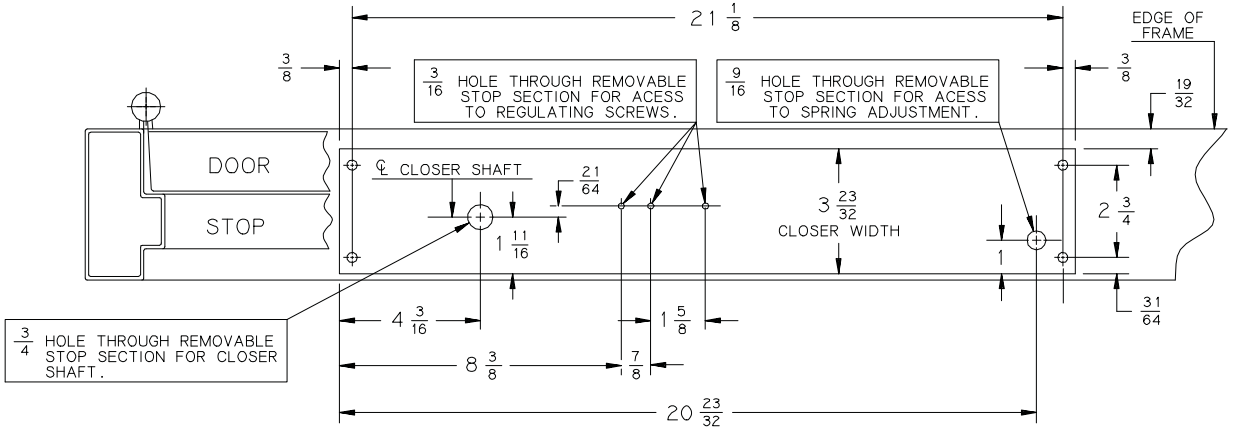
14126 Rev. 06/15-g

5031
5032
5033
5034
5035
5036
} NON HOLD OPEN (UP TO 100°)
H-90° (UP TO 100°)

AUXILIARY STOP RECOMMENDED

LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE

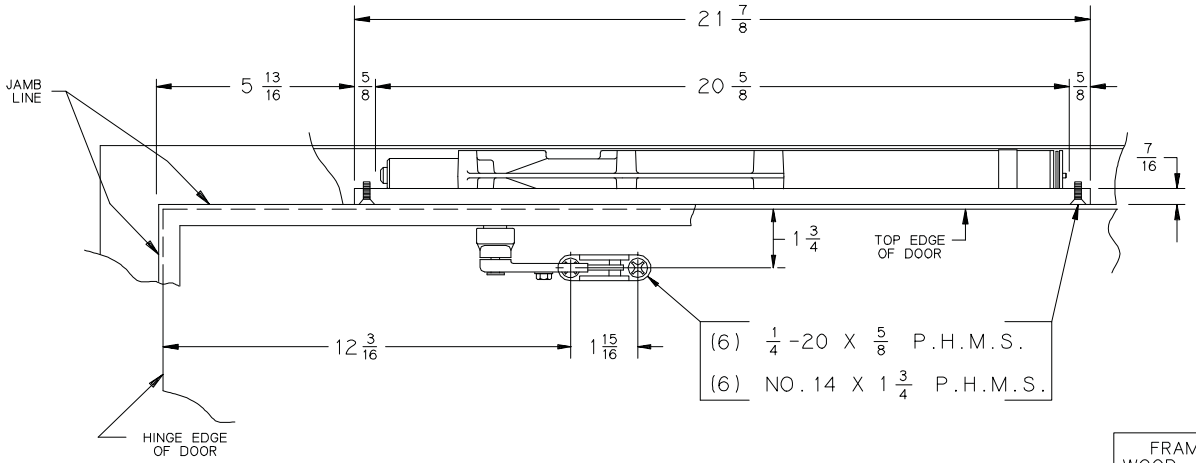
6/96

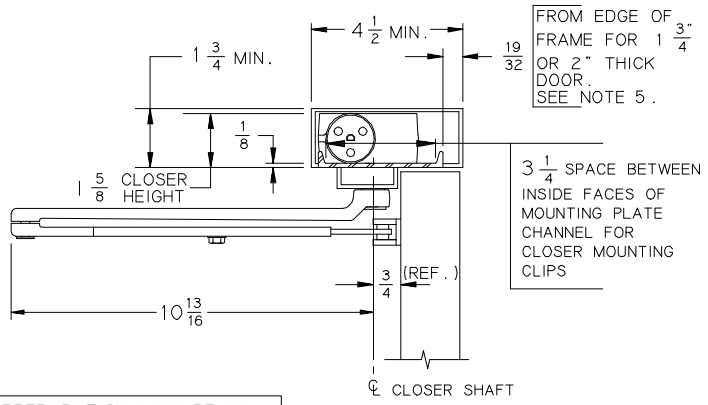


NOTES :

1. FOR DOOR OPENINGS GREATER THAN 100° SEE 5030 (101°TO 180°) TEMPLATE.
2. MAXIMUM STOP THICKNESS 5/8".
3. 1/8" DOOR TO SOFFIT CLEARANCE REQUIRED.
4. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS & FRAMES.
5. FOR DOORS THICKER THAN 1 3/4" CONSULT LCN.

AN ALUMINUM COMBINATION MOUNTING AND FINISH PLATE IS INCLUDED AS PART OF THE CLOSER. AN APPLIED REMOVABLE HEADSTOP MUST BE USED AND MOUNTED BETWEEN SIDE STOPS FOR REMOVABILITY. MOUNTING SCREW HOLES FOR REMOVABLE HEADSTOP MUST SPAN CLOSER MOUNTING/FINISH PLATE





FRAME PREPARATION MAY BE IN WOOD, HOLLOW METAL OR ALUMINUM TUBE. CONSULT FACTORY IF FRAME DETAIL IS DIFFERENT.

THIS TEMPLATE FOR OPENINGS UP TO 100° ONLY.

inch	1/8	3/16	1/4	21/64	3/8	7/16	31/64	9/16	19/32	5/8	3/4	7/8	1	1 5/8	1 11/16	1 3/4
mm	3	5	6	8	10	11	12	14	15	16	19	22	25	41	43	44

inch	1 15/16	2	2 3/4	3 1/4	3 23/32	4 3/16	4 1/2	5 13/16	8 3/8	10 13/16	12 3/16	20 5/8	20 23/32	21 1/8	21 7/8
mm	49	51	70	83	94	106	114	148	213	275	310	524	526	537	556

No.	REVISION	BY	DATE
1	CAD CONVERSION	CTB	6/93
2	TEMPLATE UPDATE	JEJ	6/96
3	TEMPLATE UPDATE	AMM	2/98

APP BY JEJ 6/96

DO NOT SCALE

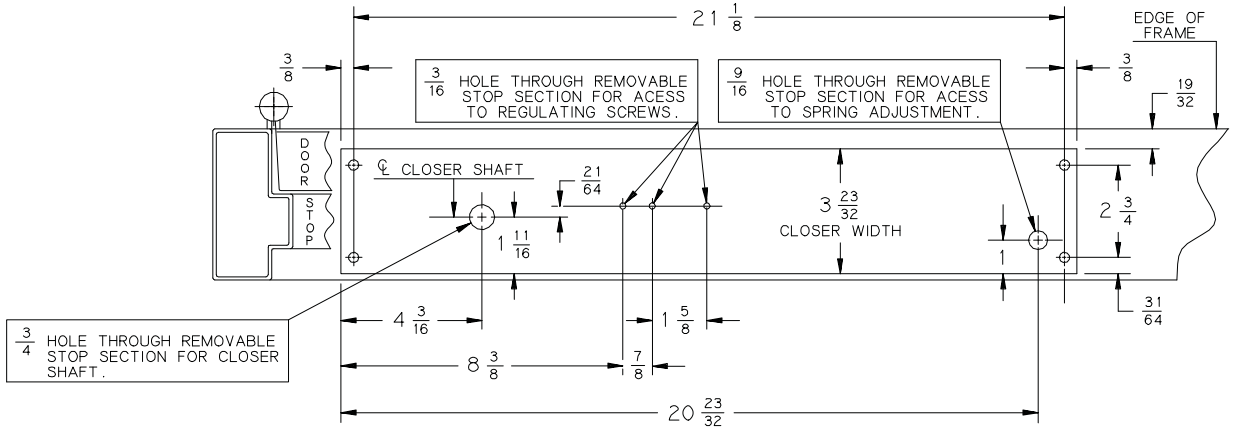
OVERHEAD CONCEALED CLOSER WITH STANDARD ARM

5030 (UP TO 100°)

5031
5032
5033
5034
5035
5036
} NON HOLD OPEN (101°TO 180°)

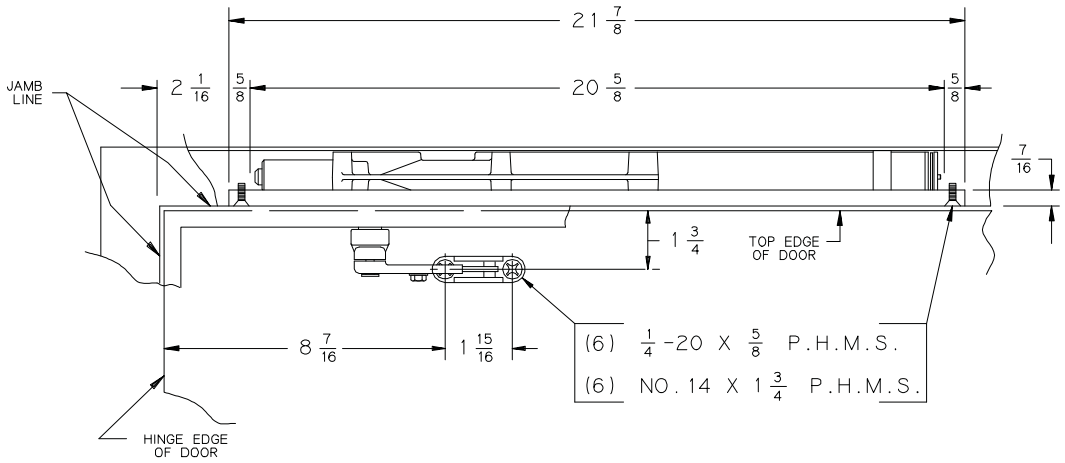
AUXILIARY STOP RECOMMENDED

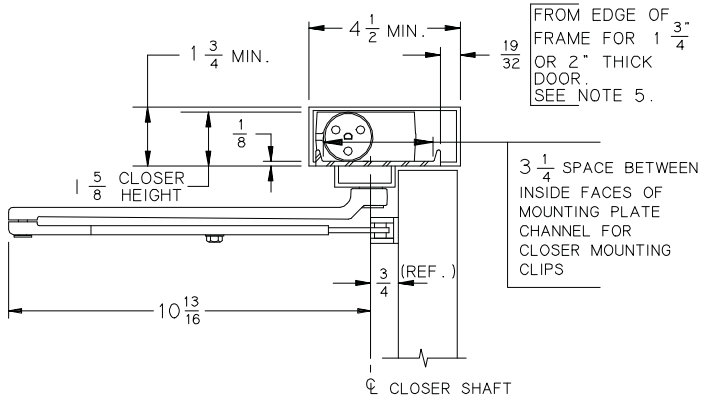
LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE | 6/96



NOTES :

1. FOR DOOR OPENINGS LESS THAN 101° SEE 5030 (UP TO 100°) TEMPLATE
2. MAXIMUM STOP THICKNESS $\frac{5}{8}$".
3. $\frac{1}{8}$" DOOR TO SOFFIT CLEARANCE REQUIRED.
4. FOR 180° OPENINGS, MAXIMUM ALLOWABLE BUTT HINGE SIZE IS 6" X 6".
5. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS & FRAMES.
6. FOR DOORS THICKER THAN $1\frac{3}{4}$" CONSULT LCN.





FRAME PREPARATION MAY BE IN WOOD, HOLLOW METAL OR ALUMINUM TUBE. CONSULT FACTORY IF FRAME DETAIL IS DIFFERENT.

AN ALUMINUM COMBINATION MOUNTING AND FINISH PLATE IS INCLUDED AS PART OF THE CLOSER. AN APPLIED REMOVABLE HEADSTOP MUST BE USED AND MOUNTED BETWEEN SIDE STOPS FOR REMOVABILITY. MOUNTING SCREW HOLES FOR REMOVABLE HEADSTOP MUST SPAN CLOSER MOUNTING/FINISH PLATE

THIS TEMPLATE FOR OPENINGS FROM 101°TO 180° ONLY.

inch	1/8	3/16	1/4	21/64	3/8	7/16	31/64	9/16	19/32	5/8	3/4	7/8	1	1 5/8	1 11/16	1 3/4	1 15/16
mm	3	5	6	8	10	11	12	14	15	16	19	22	25	41	43	44	49

inch	2	2 1/16	2 1/2	2 3/4	3 1/4	3 23/32	4 3/16	4 1/2	6	8 3/8	8 7/16	10 13/16	20 5/8	20 23/32	21 1/8	21 7/8
mm	51	52	64	70	83	94	106	114	152	213	214	275	524	526	537	556

No.	REVISION	BY	DATE
1	CAD CONVERSION	CTB	6/93
2	TEMPLATE UPDATE	JEJ	6/96
3	TEMPLATE UPDATE	AMM	2/98
4	REMOVED H180 ARM	JDT	9/09

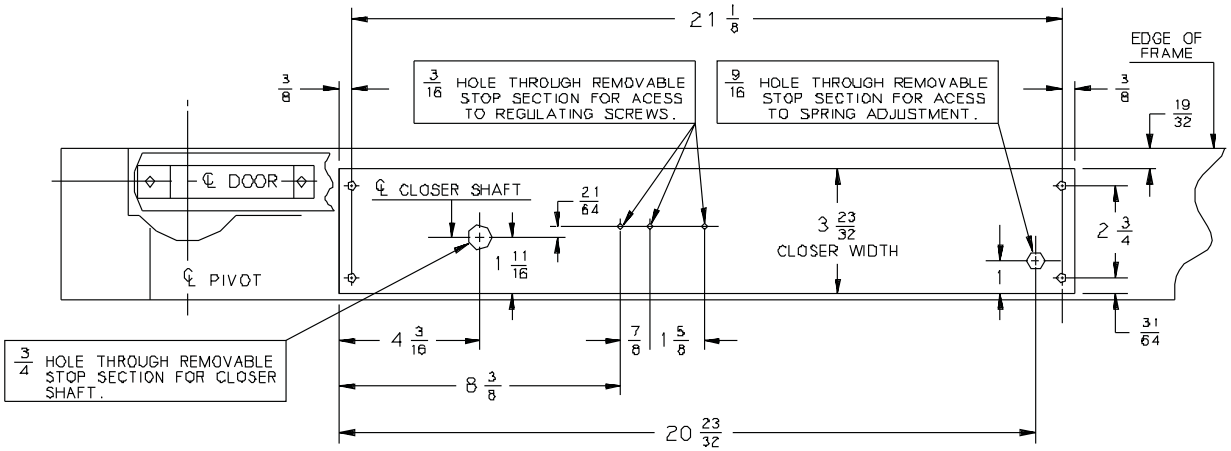
APP BY JEJ 6/96

DO NOT SCALE

OVERHEAD CONCEALED CLOSER WITH STANDARD ARM

5030 (101°TO 180°)

5031 5032 5033 5034 5035 5036	NON HOLD OPEN (UP TO 120°] H-90° (UP TO 120°)
AUXILIARY STOP RECOMMENDED	
LEFT HAND DOOR AND CLOSER SHOWN. RIGHT HAND OPPOSITE	6/96



NOTES :

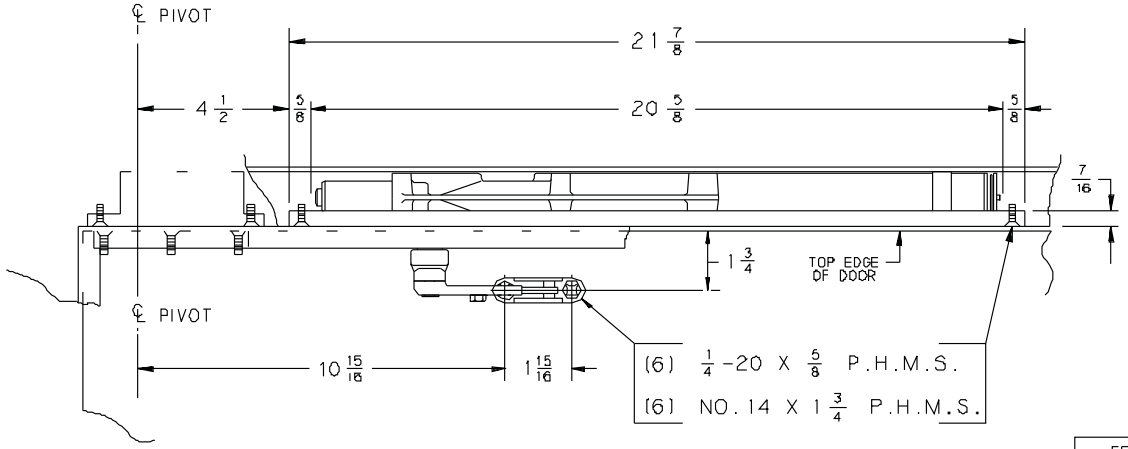
1 - MAXIMUM STOP THICKNESS $\frac{5}{8}$".

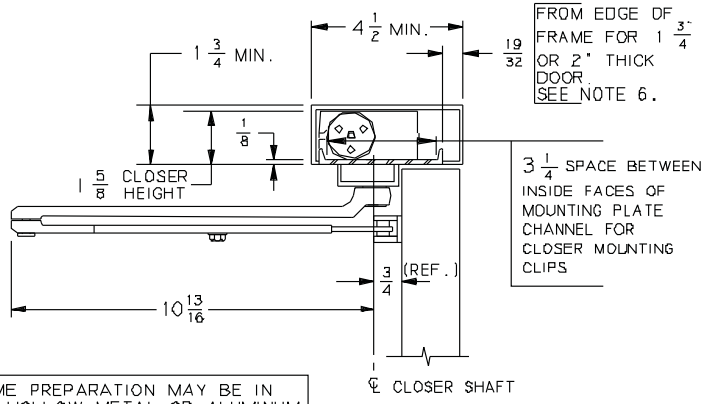
2 - $\frac{1}{8}$" DOOR TO SOFFIT CLEARANCE REQUIRED.

3 - REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOOR AND FRAMES.

4 - FOR DOORS THICKER THAN $1\frac{3}{4}$" CONSULT LCN.

AN ALUMINUM COMBINATION MOUNTING AND FINISH PLATE IS INCLUDED AS PART OF THE CLOSER. AN APPLIED REMOVABLE HEADSTOP MUST BE USED AND MOUNTED BETWEEN SIDE STOPS FOR REMOVABILITY. MOUNTING SCREW HOLES FOR REMOVABLE HEADSTOP MUST SPAN CLOSER MOUNTING/FINISH PLATE.





FRAME PREPARATION MAY BE IN WOOD. HOLLOW METAL OR ALUMINUM TUBE. CONSULT FACTORY IF FRAME DETAIL IS DIFFERENT

inch	1/8	3/16	1/4	21/64	3/8	7/16	31/64	1/2	9/16	19/32
mm	3	5	6	8	10	11	12	13	14	15

inch	5/8	3/4	7/8	1	1 5/8	1 11/16	1 3/4	1 15/16	2	2 3/4	3 1/4
mm	16	19	22	25	41	43	44	49	51	70	83

inch	3 23/32	4 3/16	4 1/2	5 1/4	8 3/8	10 13/16	10 15/16	20 5/8	20 23/32	21 1/8	21 7/8
mm	94	106	114	133	213	275	278	524	526	537	556

No.	REVISION	BY	DATE
1	CAD CONVERSION	CTB	6/93
2	TEMPLATE UPDATE	JEJ	6/96
3	TEMPLATE UPDATE	AMM	2/98
4	REMOVED PIVOT INFO.	AMM	5/01

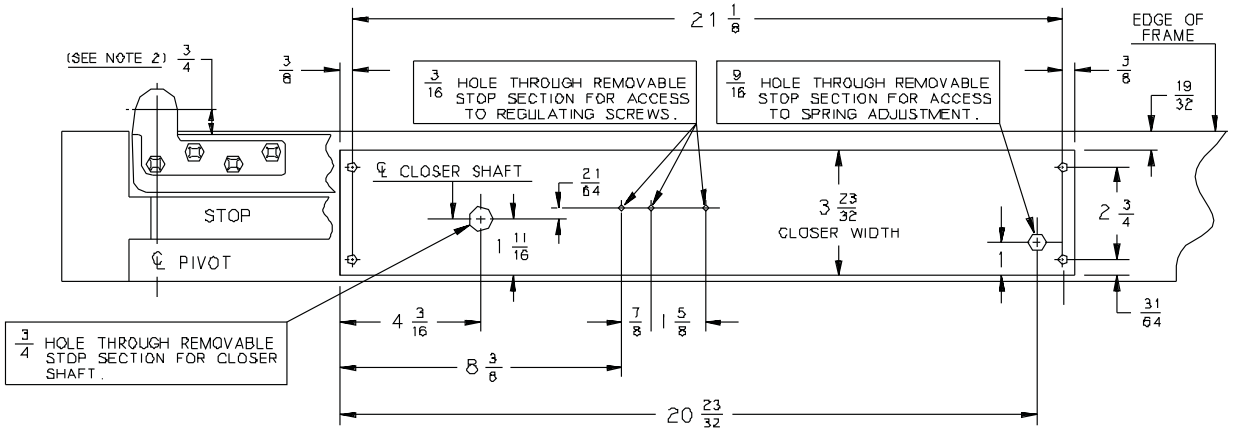
APP BY JEJ 6/96

DO NOT SCALE

OVERHEAD CONCEALED CLOSER WITH STANDARD ARM

5030-CP

5031-OP 5032-OP 5033-OP 5034-OP 5035-OP 5036-OP	H-90° (UP TO 115°)
AUXILIARY STOP RECOMMENDED	
LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE	6/96



NOTES :

1 - BEVEL HEEL EDGE OF DOOR $\frac{1}{8}$" IN 2".

2 - FOR PIVOT INSTALLATION DETAILS, SEE 7220 SERIES PIVOT TEMPLATE.

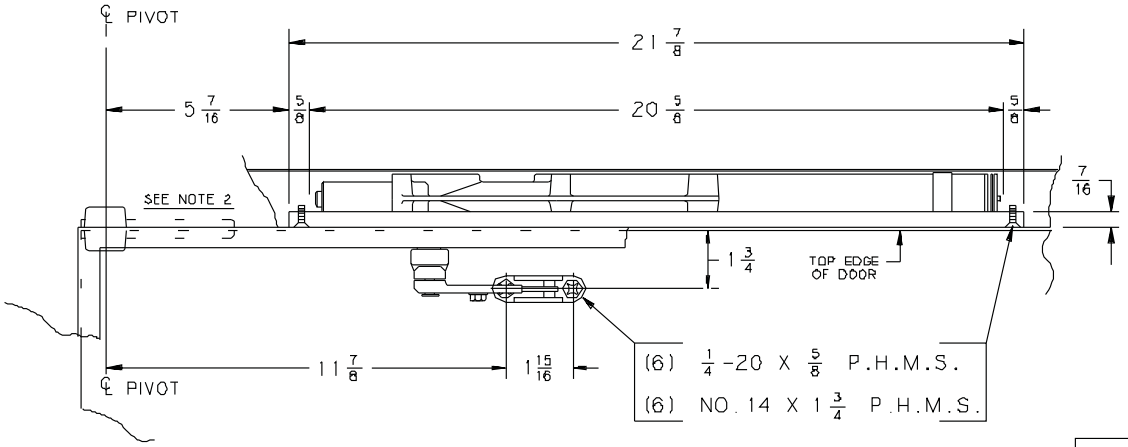
3 - MAXIMUM STOP THICKNESS $\frac{5}{8}$".

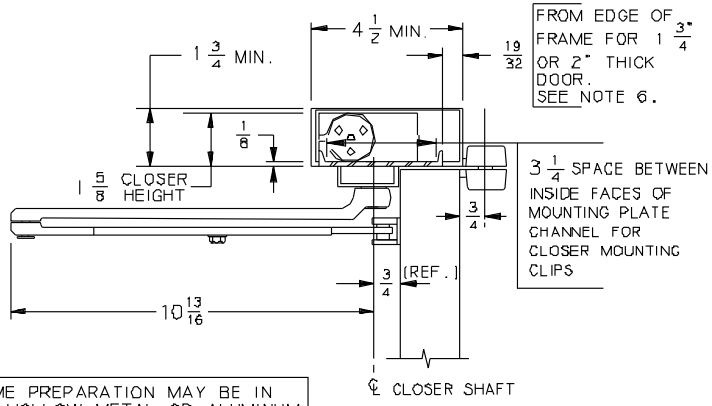
4 - $\frac{1}{16}$" DOOR TO SOFFIT CLEARANCE REQUIRED.

5 - REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOOR AND FRAMES.

6 - FOR DOORS THICKER THAN 1 $\frac{3}{4}$" CONSULT LCN.

AN ALUMINUM COMBINATION MOUNTING AND FINISH PLATE IS INCLUDED AS PART OF THE CLOSER. AN APPLIED REMOVABLE HEADSTOP MUST BE USED AND MOUNTED BETWEEN SIDE STOPS FOR REMOVABILITY. MOUNTING SCREW HOLES FOR REMOVABLE HEADSTOP MUST SPAN CLOSER MOUNTING/FINISH PLATE.





FRAME PREPARATION MAY BE IN WOOD, HOLLOW METAL OR ALUMINUM TUBE. CONSULT FACTORY IF FRAME DETAIL IS DIFFERENT.

inch	1/16	1/8	3/16	1/4	21/64	3/8	7/16	31/64	9/16	19/32
mm	2	3	5	6	8	10	11	12	14	15

inch	5/8	3/4	1	1 5/8	1 11/16	3/4	1 15/16	2	2 3/4	3 1/4
mm	16	19	25	41	43	44	49	51	70	83

inch	3 23/32	4 3/16	4 1/2	5 7/16	8 3/8	10 13/16	11 7/8	20 5/8	20 23/32	21 1/8	21 7/8
mm	94	106	114	138	213	275	302	524	526	537	556

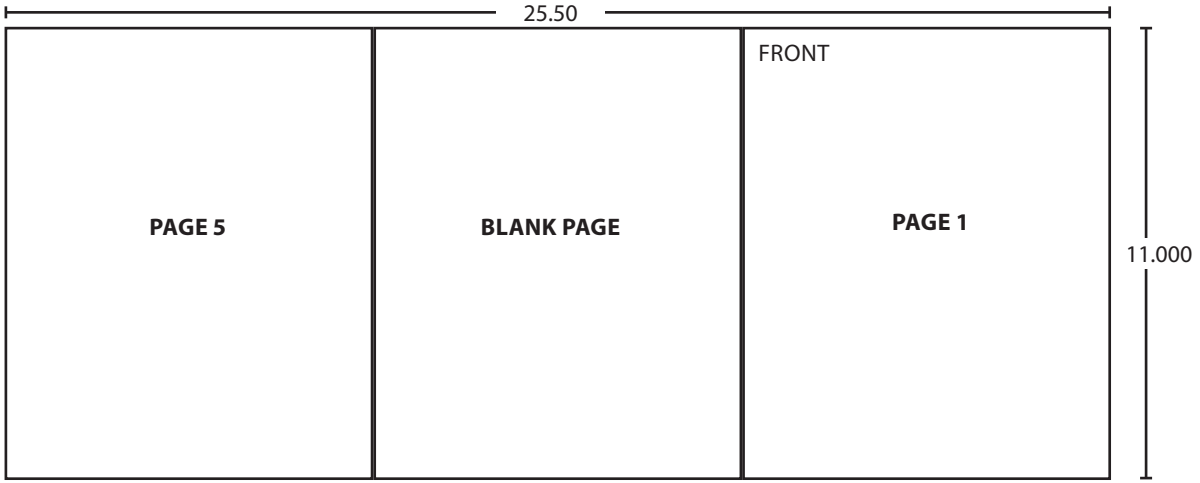
No.	REVISION	BY	DATE
2	TEMPLATE UPDATE	JEJ	6/96
3	TEMPLATE UPDATE	AMM	2/98

APP BY JEJ 6/96

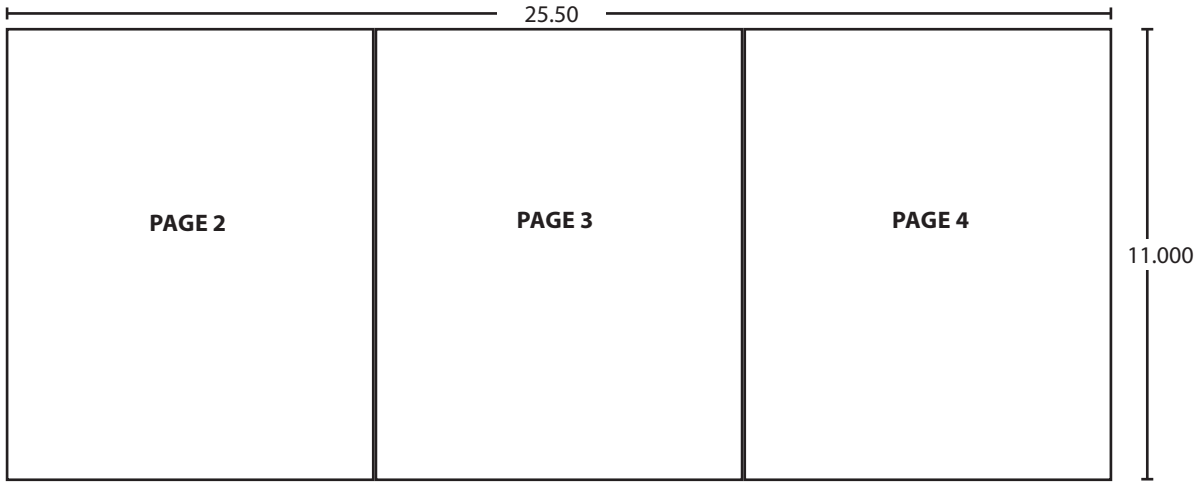
DO NOT SCALE

OVERHEAD CONCEALED CLOSER WITH STANDARD ARM

5030-OP



BEGINNING SHEET



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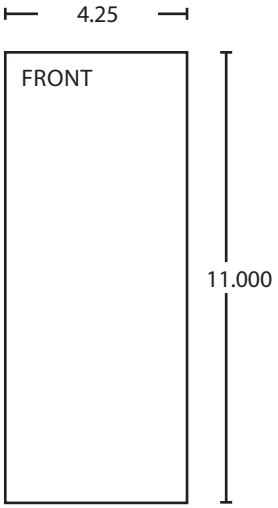

FOLDED SHEET

Additional Notes:
1. None

Revision History					
F	G	H	J	K	L
043228					

Revision Description:
G > Revised artwork

Material	Edited By	Approved By	EC Number	Release Date
White Paper	J. Ellis	M. Roberts		06-10-15

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Title
5030 Series Instruction Sheet

Creation Date	Number	Revision
05-10-10	14126	G

Created By	Activity
N/A	3899 Hancock Expwy Security, CO 80911
Software: InDesign CS6	

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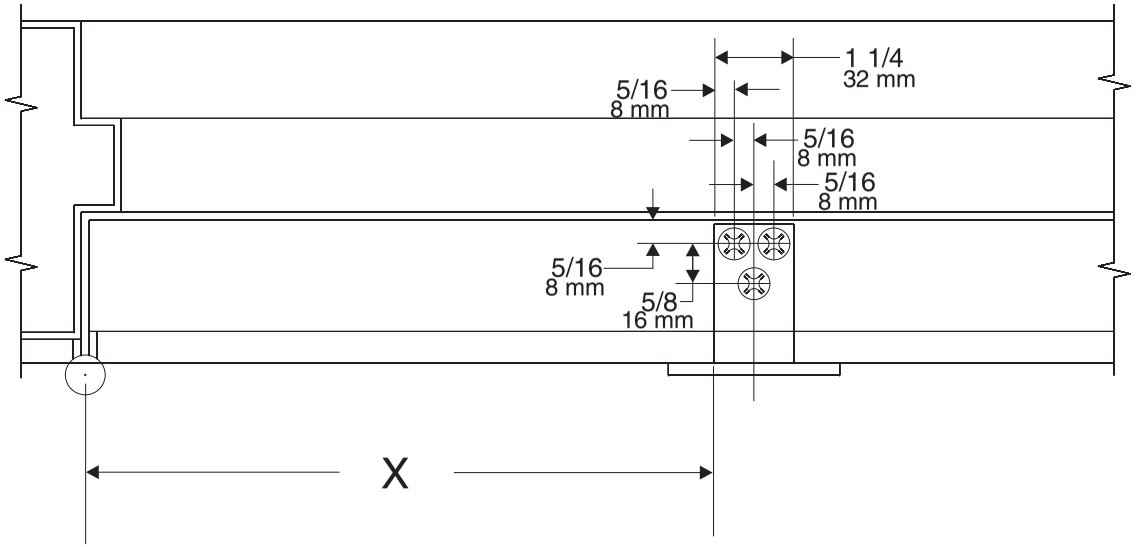
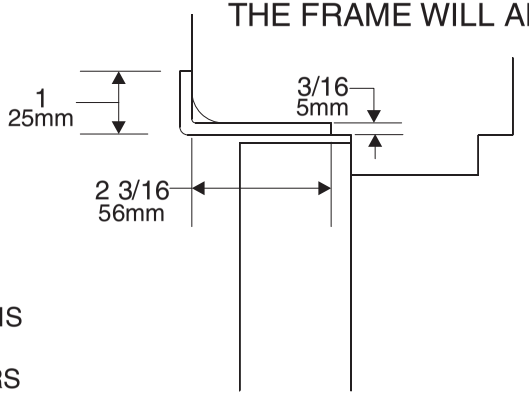
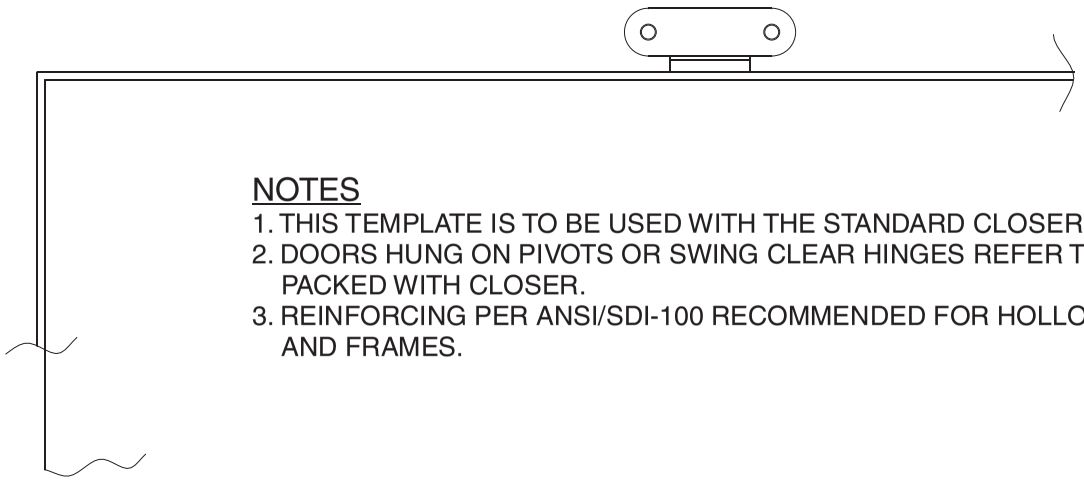
3065 - 65 SOFFIT SHOE FOR USE WITH RADIUS TRIM AND PULL SIDE CLOSER

CLOSER	OPENING SWING	DIM. "X"
1070	UP TO 100°	12 3/4
	101° TO 180°	9 1/4
1370	UP TO 180°	8
1460	UP TO 110°	11 5/8
	111° TO 180°	8 5/8
4031	UP TO 180°	10 1/16
3030	UP TO 110°	11
	111° TO 130°	10
	131° TO 180°	9
4010	UP TO 100°	12 11/16
	101° TO 140°	10 15/16
4040	UP TO 120°	11 3/16
1260	UP TO 100°	13 3/8
	101° TO 120°	12 3/8
	121° TO 180°	9 7/8



NOTE
INSTALL SHOE AS FAR INTO THE RABBET AS THE FRAME WILL ALLOW





NOTES
1. THIS TEMPLATE IS TO BE USED WITH THE STANDARD CLOSER TEMPLATE.
2. DOORS HUNG ON PIVOTS OR SWING CLEAR HINGES REFER TO INSTRUCTIONS PACKED WITH CLOSER.
3. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.

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1-800-526-2400

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28887

Series 6030

Instrucciones de Instalación

FIG. 1

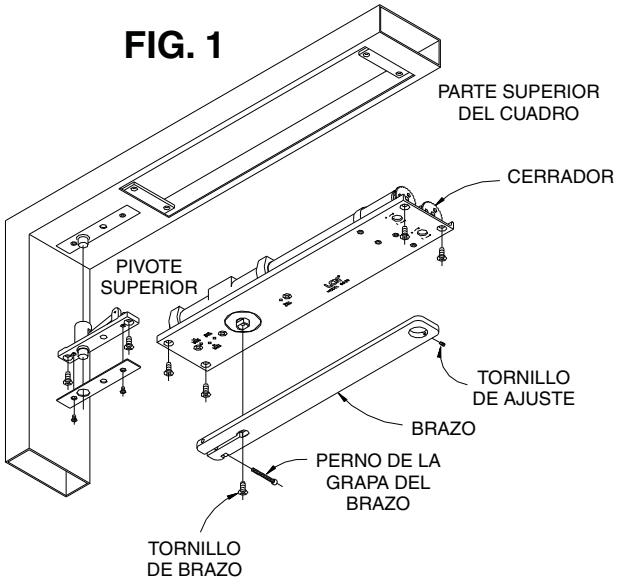


FIG. 2

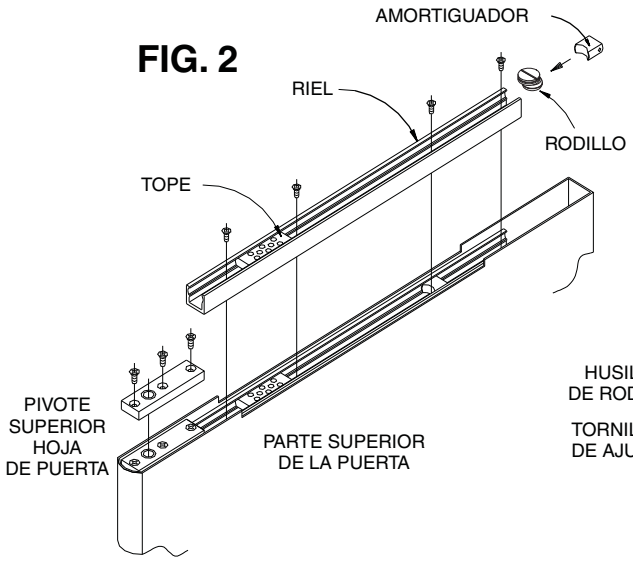
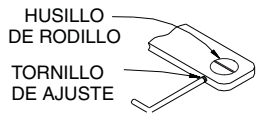


FIG. 3



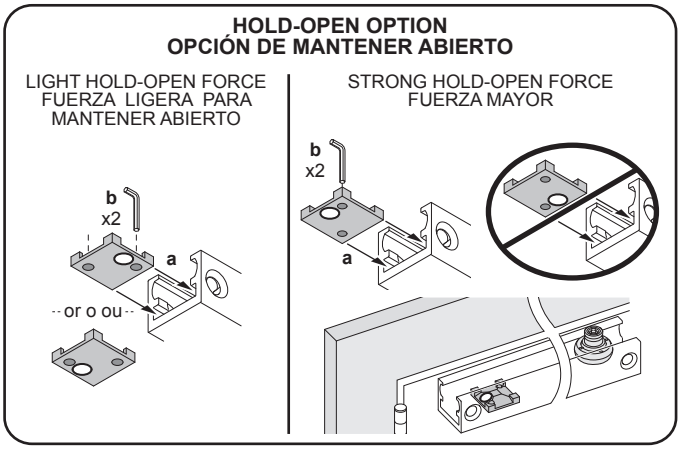
1. Prepare la puerta y el cuadro para recibir el pivote y el cerrador, segun las plantillas en las páginas 2 y 3. Instale el pivote y el cerrador.
2. Debe ahora colgar la puerta en los pivotes. Refiérase a la hoja de instalación del pivote para más detalles.
3. Coloque el brazo al eje del cerrador con el tornillo de brazo. Apretando los tornillo.

CUIDADO

EL BRAZO DEL CERRADOR ESTÁ BAJO FUERTE PRESIÓN PARA REGRESAR. TÉNGALO FIRMAMENTE DURANTE LA ETAPA SIGUIENTE.

4. Abra la puerta a 45°. Jale el brazo hasta la puerta y deslice el hursillo de rodillo abajo del agujero del brazo. Coloque el hursillo en el brazo con la ranura en sentido transversal como se muestra en la FIG.3. Gire el tornillo de ajuste lo suficiente para retener el hursillo de rodillo, pero no apriete del todo. Deje la puerta cerrarse, y con el brazo horizontal, apirete el perno de la grapa del brazo (a la extremidad del eje del brazo) con la llave hexagonal incluida.
5. Debe centrar con el cuadro la puerta cerrada. Si no, abra parcialmente la puerta y, con un desarmador, gire el hursillo de rodillo más o menos un octavo de vuelta. (Quízas deberá sacar un poco el tornillo de ajuste). Repita si es necesario, hasta que sea centrada tal como se necesita. Cuando esté bien, apriete seguramente el tornillo de ajuste del brazo. (Cuando las puertas están emparejadas, hay que ajustar las dos hasta que se igualen). Abra la puerta, deslice el amortiguador en el riel hasta por lo menos 6 pulgadas del extremo. Deje cerrar la puerta para que se coloque el amortiguador automaticamente.

Información para mantener abierto

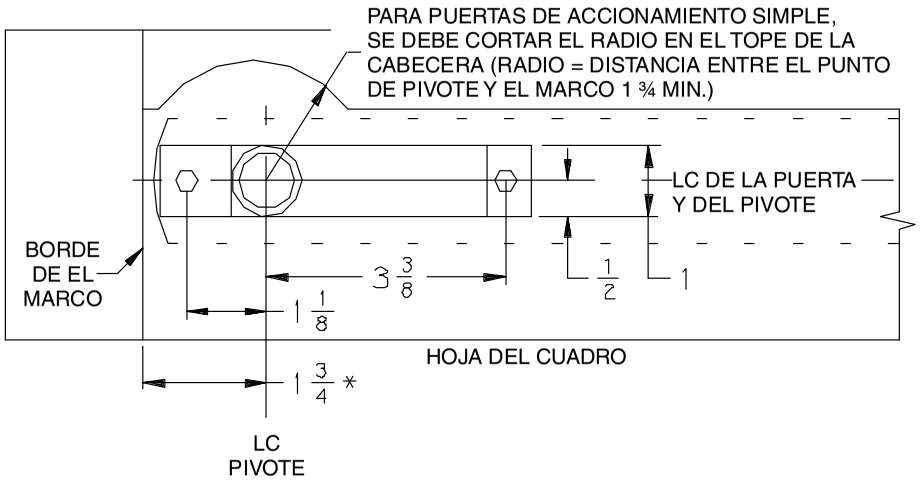


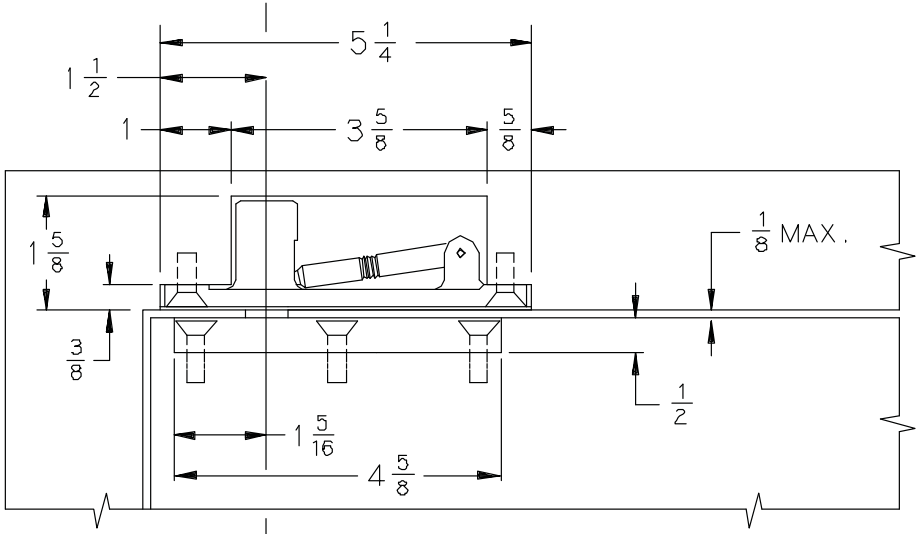
Servicio al cliente

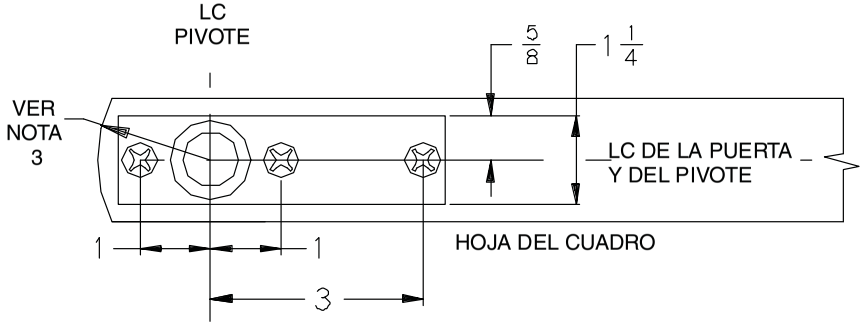
1-877-671-7011 www.allegion.com/us

7250-3101 PIVOTE SUPERIOR CENTRAL

PUERTA Y PIVOTE MANO DERECHA MOSTRADOS. MANO IZQUIERDA AL OPUESTO. | 11/96





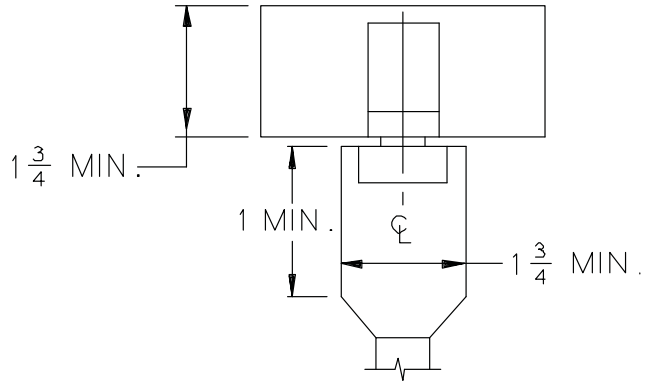


NOTAS:

1. EL INSTALADOR DEBE VERIFICAR QUE LA LÍNEA CENTRAL DEL PUNTO DE PIVOTE SUPERIOR QUEDE ALINEADA CON LA LÍNEA CENTRAL DEL PUNTO DE PIVOTE INFERIOR.
2. EL RADIO DEL BORDE DEL TALÓN DE LA PUERTA NO DEBE EXCEDER LA DISTANCIA ENTRE EL PUNTO DEL PIVOTE Y EL MARCO. RADIO ESTÁNDAR DE 2 PUL GADAS MOSTRADO.
3. FABRICANTES DE PIVOTES ACEPTARÁN 1/4 - 20 x 3/4" SS PHMS O No. 14 x 1 1/2" PHWS COMO OPCIÓN.

*4. SE PUEDE VARIAR EL CENTRO DE PIVOTE. LA DISTANCIA MÍNIMA ES 1 1/2" COMO MOSTRADO.

5. SE RECOMIENDA REFORZAR SEGÚN ANSI/SDI-100 PARA PUERTAS Y CUADROS METÁLICAS HUECAS.



INCH	1/8	1/4	3/8	1/2	5/8	3/4	1	1 1/8	1 1/4	1 5/16	1 1/2	1 5/8	1 3/4	3	3 3/8	3 5/8	4 5/8	5 1/4
M.M.	3	6	10	12	16	19	25	29	32	33	38	41	44	76	86	92	117	133

No.	REVISION	BY	DATE
0	NEW TEMPLATE	CTB	9/96
1	REVISED TEMPLATE	AMM	9/99

LCN®

APP BY CTB 11/96

NO REDUCIR

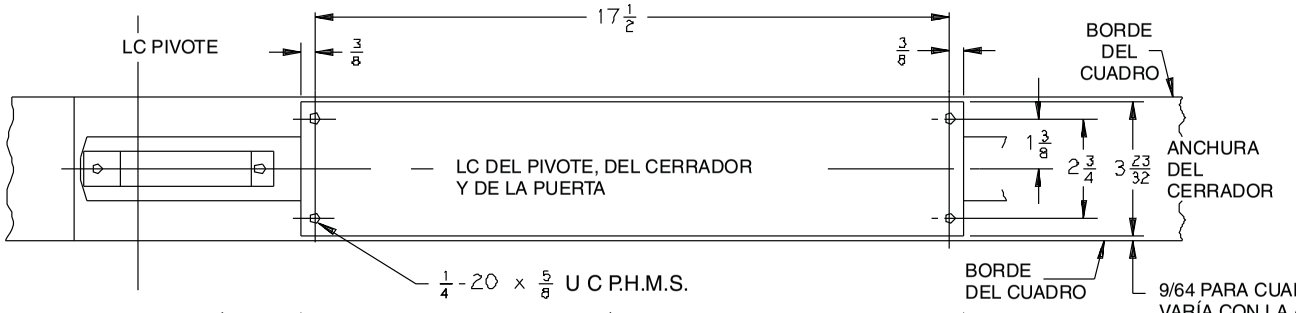
PIVOTE SUPERIOR CENTRAL, UTILIZADO EN CONJUNTOS: 7253, 7255, 7255J Y 7256

7250-3101 PIVOTE SUPERIOR

6031-CP 6032-CP 6033-CP 6034-CP 6035-CP	SIN RETENCIÓN (HASTA 95°) H-90 (80° HASTA 95°) APERTURA MAX. 95°

TOPE AUXILIAR RECOMENDADO

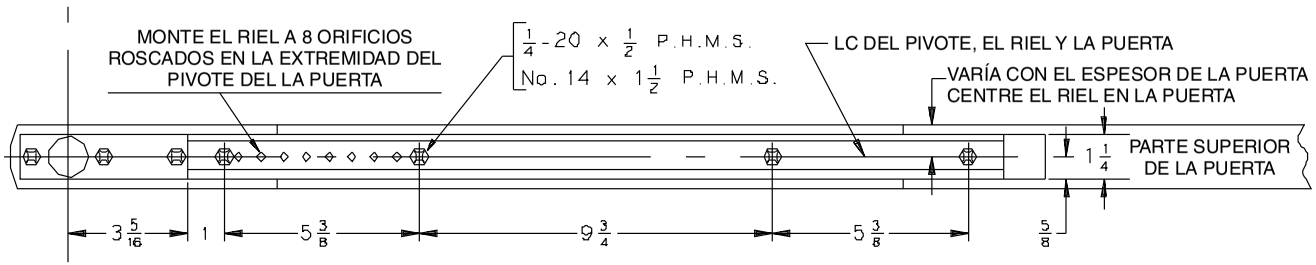
CERRADOR OCULTO DE DOBLE ACCIÓN	6/96

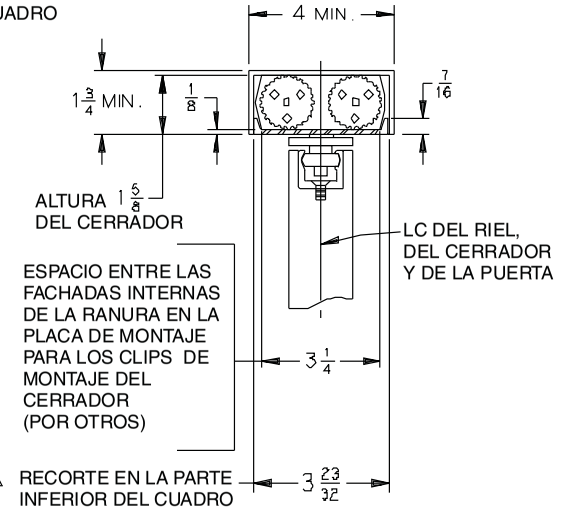


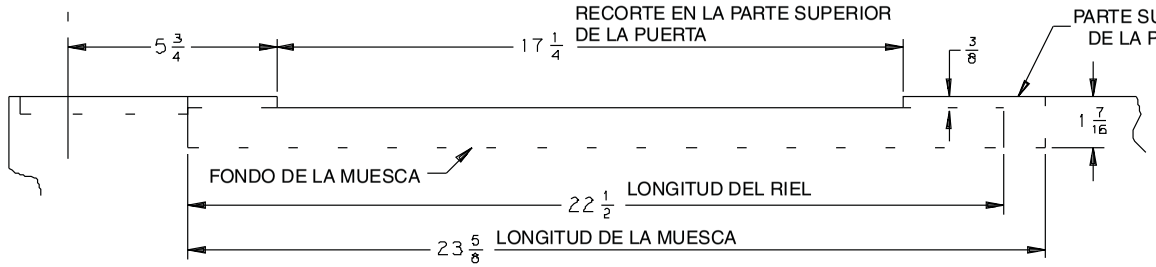
PIVOTE, PUERTA, RIEL Y CERRADOR DEBEN TODOS UTILIZAR LA MISMA LÍNEA CENTRAL

9/64 PARA CUADRO DE 4 PULGADAS VARÍA CON LA ANCHURA DEL CUADRO CENTRE EL CERRADOR EN LA ANCHURA DEL CUADRO

PLAN Y ELEVACIÓN DEL CUADRO MOSTRANDO PREPARACIÓN PARA CERRADOR 6030







NOTAS:
1. SE NECESITA UN JUEGO DE 1/8 ENTRE LA PUERTA Y EL PLAFÓN.
2. SE RECOMIENDA REFORZAR SEGÚN ANSI/SDI-100 PARA PUERTAS Y BASTIDORES HUECOS DE METAL.

PLAN Y ELEVACIÓN DE LA PARTE SUPERIOR DE LA PUERTA MOSTRANDO PREPARACIÓN PARA EL RIEL DEL CERRADOR

inch	1/8	9/64	1/4	5/16	7/16	1/2	5/8	3/4	1	1 1/4	1 3/8	1 7/16	1 1/2	1 5/8	1 3/4
mm	3	4	6	10	11	13	16	19	25	32	35	37	38	41	44

inch	2 3/4	3 1/4	3 5/16	3 23/32	4	4 1/2	5 1/8	5 3/4	9 3/4	16 7/8	17 1/4	17 1/2	18 1/4	22 1/2	23 5/8
mm	70	83	84	94	102	114	137	146	248	429	438	445	464	572	600

No.	REVISION	BY	DATE
1	CAD CONVERSION	CTB	8/93
2	TEMPLATE UPDATE	JEJ	6/96
3	REMOVED PIVOT INFO.	AMM	5/01

LCN®

APP BY JEJ 6/96

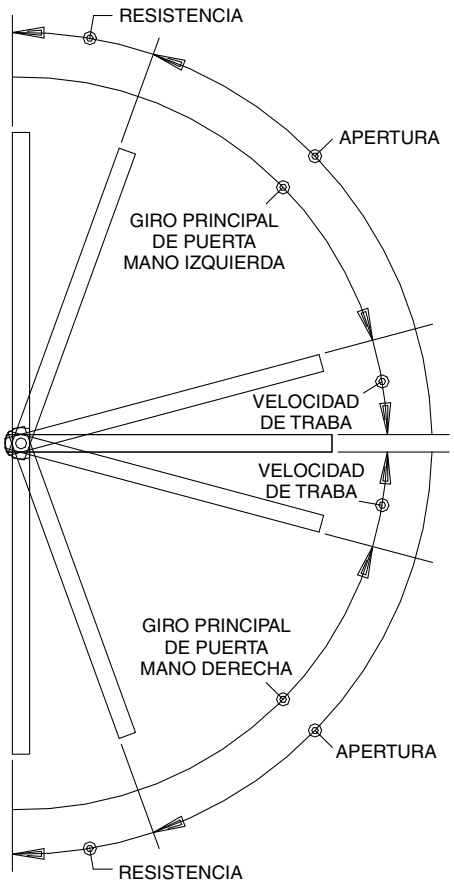
NO SE DEBE REDUCIR

CERRADOR ELEVADO OCULTO A DOBLE ACCIÓN CON PIVOTES CENTRALES

6030-CP

Series 6030
Instrucciones de Adjuste

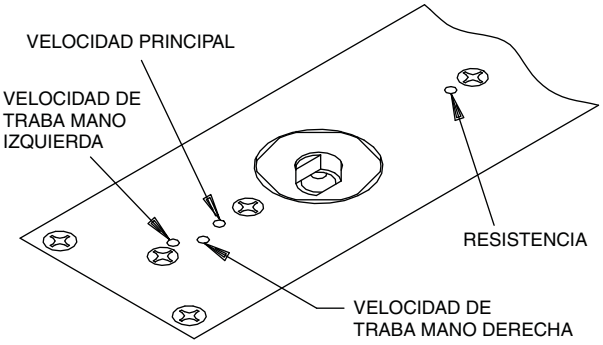
AJUSTE: (Ver el diagrama)



1. Para ajustar la velocidad del arco principal: Hay un tornillo de ajuste del arco principal para los dos arcos de la puerta. Si se debe ajustar, gire el tornillo en el sentido de las agujas del reloj para bajar el giro principal de la puerta. Para acelerar el giro principal, gire el tornillo en el sentido contrario al de las manecillas del reloj. El tiempo de cerradura normal, a partir de una posición de apertura de 90° es de 5 a 7 segundos, dividido igualmente entre la velocidad del giro principal y la velocidad de traba. Utilice la llave hexagonal incluida.
2. Hay dos tornillos de ajuste para ajustar la velocidad de traba. Refiérase al diagrama para identificar la mano del giro, y utilice el tornillo marcado LH (mano izquierda) o RH (mano derecha). Si se debe ajustar, gire el tornillo apropiado del sentido de las agujas del reloj para retardar la traba. Para acelerar la traba, gire el tornillo en el sentido contrario al de las manecillas del reloj.
3. Para ajustar la intensidad de resistencia de apertura hay un tornillo de ajuste para los dos giros de la puerta. Ajústelo con la más ligera resistencia lo que retardará la velocidad de apertura de la puerta durante los pocos últimos grados de apertura.

CUIDADO

NO AJUSTE ABRUPTAMENTE UNA RESISTENCIA, NI ESPERE A QUE EL CERRADOR ACTÚE COMO TOPE DE PUERTA. PARA AUMENTAR LA RESISTENCIA, GIRE EL TORNILLO EN EL SENTIDO DE LAS AGUJAS DEL RELOJ. PARA DISMINUIR LA RESISTENCIA, GIRE EL TORNILLO EN EL SENTIDO CONTRARIO AL DE LAS MANECILLAS DEL RELOJ.



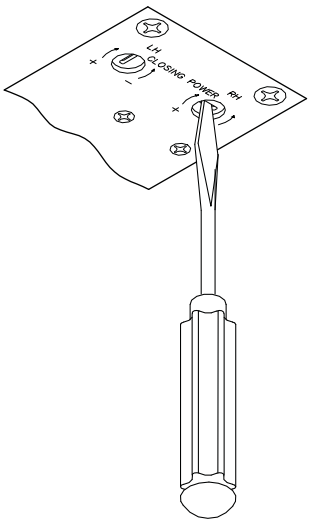
⚠ ADVERTENCIA ⚠

UNA INSTALACIÓN O UN AJUSTE INCORRECTORS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES.

Ajuste de la fuerza de cierre

Se entrega el cerrador con potencia mínima de cierre, y se puede aumentar individualmente la potencia de cada giro. Para ajustar, utilice el tornillo de ajuste del resorte correspondiente a la mano del giro en el diagrama de ajuste. Para aumentar, gire el tornillo en el sentido de las manecillas del reloj. Ajuste máximo es de 36 revoluciones.

TABLA DE TAMAÑOS		
Anchura máxima de las puertas		No. de catálogo del cerrador
Exterior	Interior	
----------	38” (965 mm)	6033
36” (900 mm)	48” (1220 mm)	6034
42” (1065 mm)	54” (1370 mm)	6035



Nota: Especifíe el próximo cerrador más elevado donde hay fuerte corrientes de aire.

ALLEGION

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28887 Rev. 06/16-d

Drop Plates

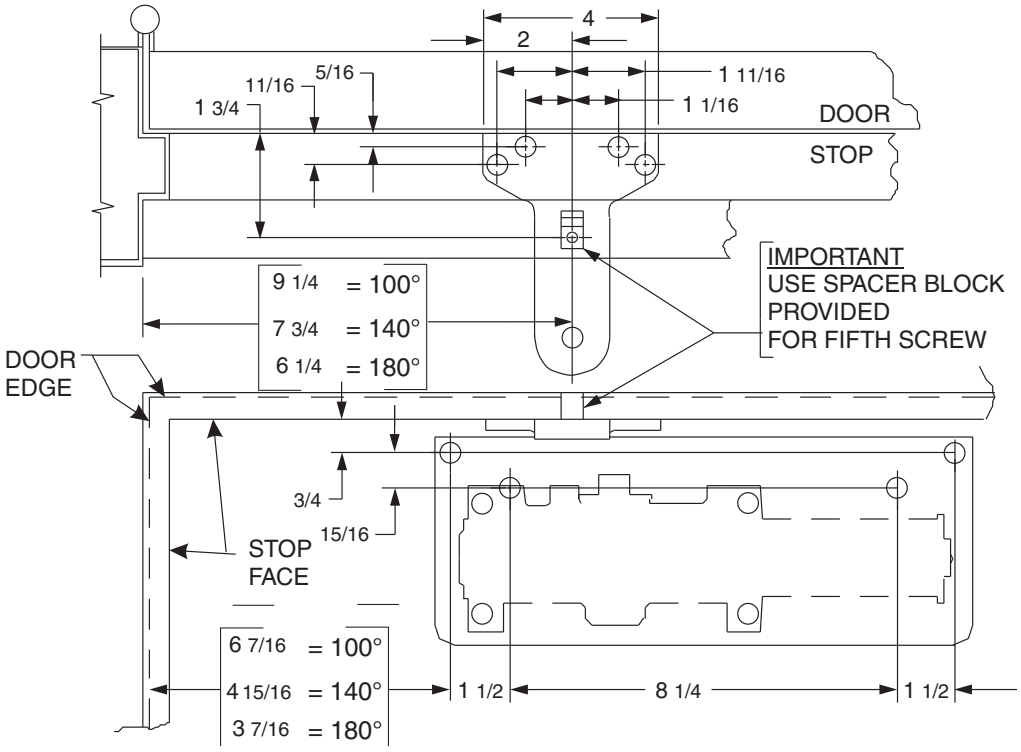
28501

4110, 4110 Cush, 4210, 4210 Cush, 4110T, 4210T

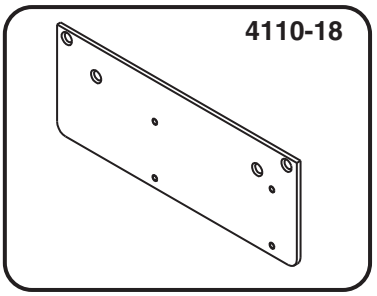
Templates

4110 PUSH SIDE (DOOR MOUNT) DROP PLATE

PERMITS 180° MAXIMUM OPENING



PUSH SIDE MOUNT ON: 4110-18 DROP PLATE

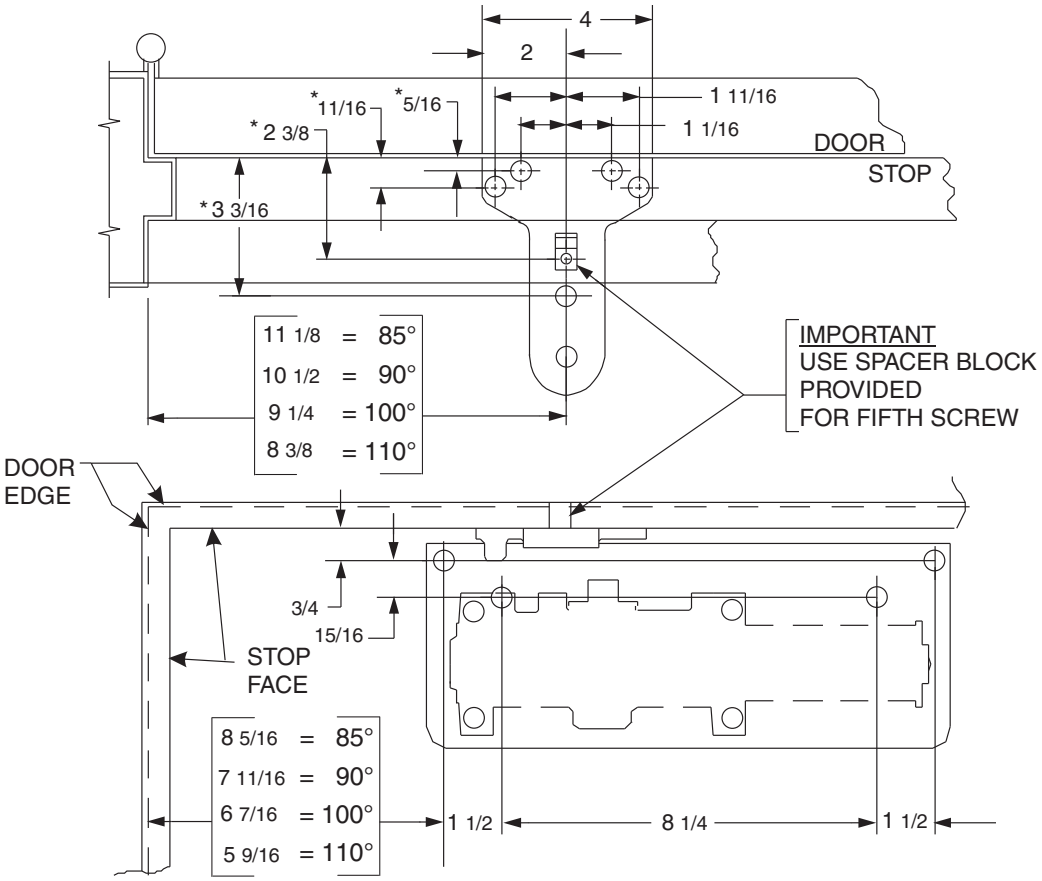


LEFT HAND DOOR SHOWN,
RIGHT HAND DOOR OPPOSITE

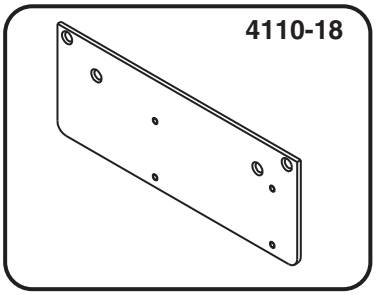
INCH	5/16	11/16	3/4	15/16	1 1/16	1 1/2	1 11/16	1 3/4	2
M.M.	8	17	19	24	27	38	43	44	51
INCH	2 3/8	3 3/16	3 7/16	4	4 15/16	6 1/16	6 1/4	6 7/16	6 15/16
M.M.	60	81	87	102	125	154	159	164	176
INCH	7 3/4	8 3/16	8 1/4	8 13/16	8 7/8	9 1/4	9 3/4	11	11 5/8
M.M.	197	208	210	224	225	235	248	279	295

4110 CUSH PUSH SIDE (DOOR MOUNT) DROP PLATE

PERMITS 110° MAXIMUM OPENING



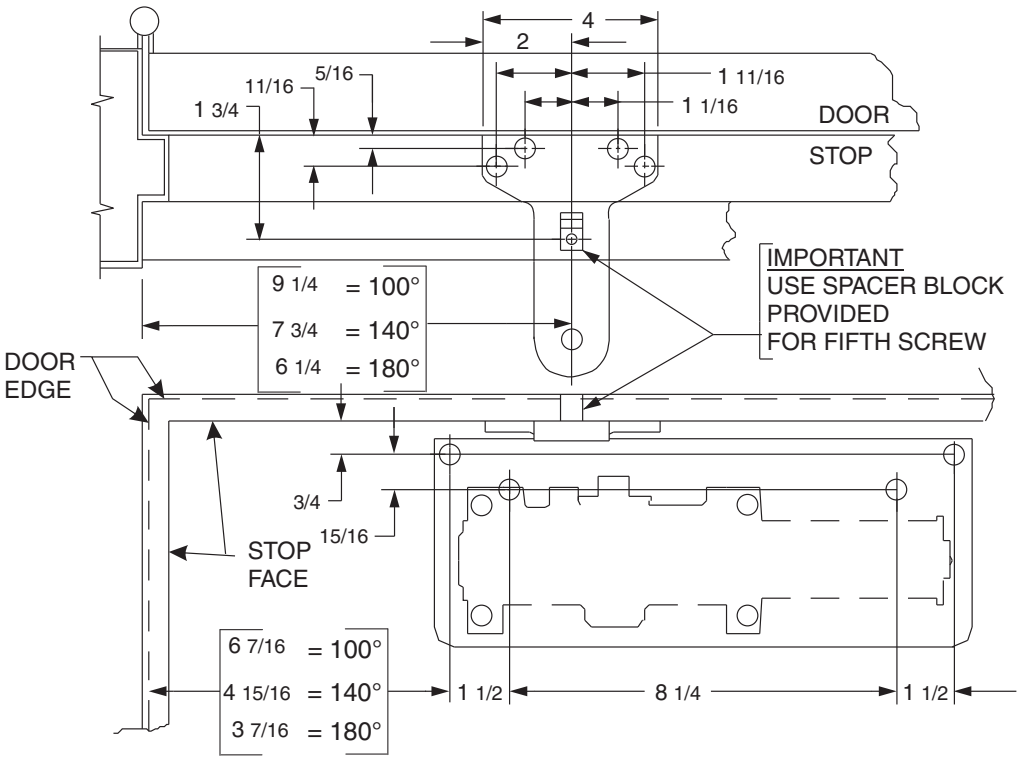
PUSH SIDE MOUNT ON: 4110-18 DROP PLATE



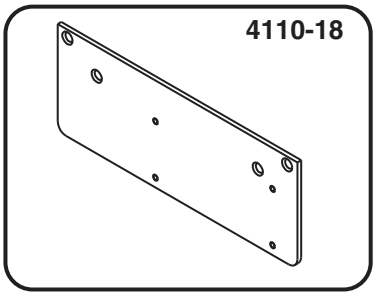
LEFT HAND DOOR SHOWN,
RIGHT HAND DOOR OPPOSITE

NOTE:
* INCREASE THESE DIMENSIONS 1/4" WHEN SPRING CUSH OPTION IS USED.

4210 PUSH SIDE (DOOR MOUNT) DROP PLATE — PERMITS 180° MAXIMUM OPENING



PUSH SIDE MOUNT ON: 4110-18 DROP PLATE



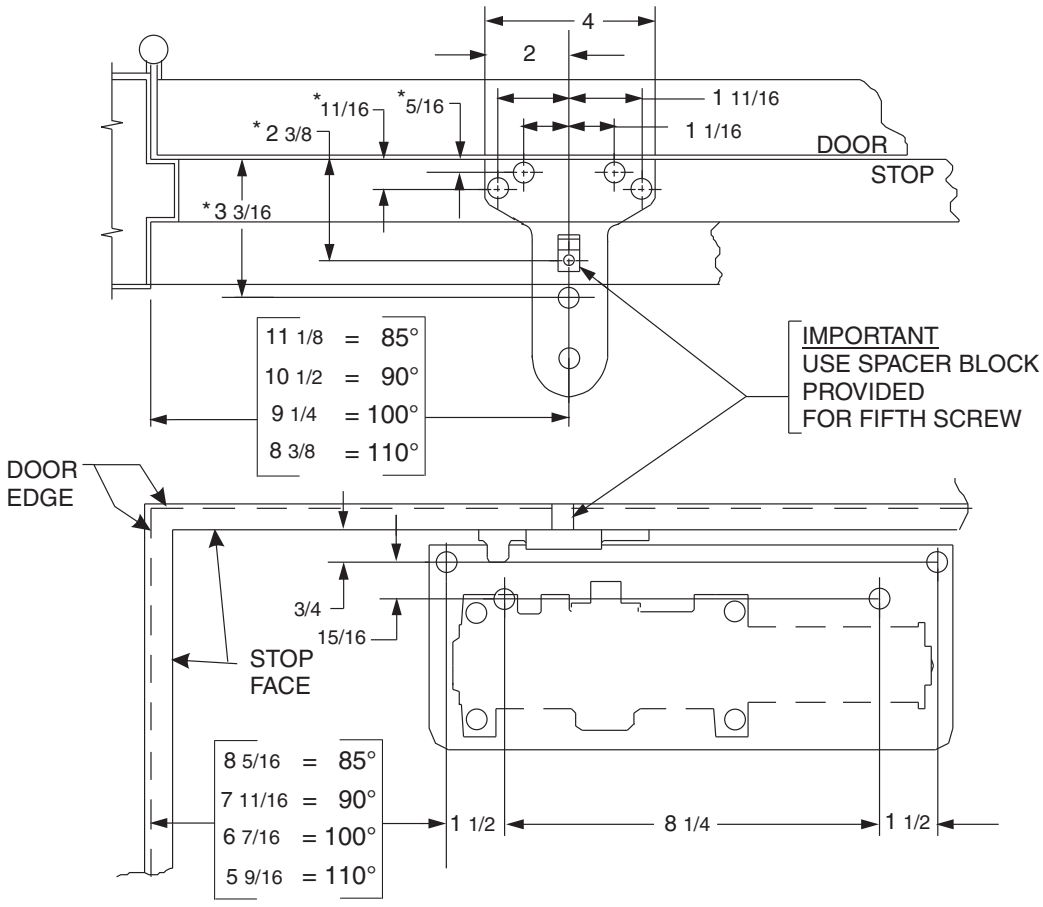
LEFT HAND DOOR SHOWN,
RIGHT HAND DOOR OPPOSITE

INCH	5/16	11/16	3/4	15/16	1 1/16	1 1/2	1 11/16	1 3/4	2
M.M.	8	17	19	24	27	38	43	44	51

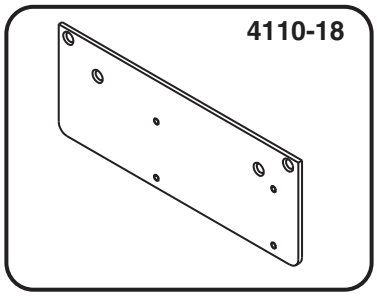
INCH	2 3/8	3 3/16	3 7/16	4	4 15/16	6 1/16	6 1/4	6 7/16	6 15/16
M.M.	60	81	87	102	125	154	159	164	176

INCH	7 3/4	8 3/16	8 1/4	8 13/16	8 7/8	9 1/4	9 3/4	11	11 5/8
M.M.	197	208	210	224	225	235	248	279	295

4210 CUSH PUSH SIDE (DOOR MOUNT) DROP PLATE — PERMITS 110° MAXIMUM OPENING



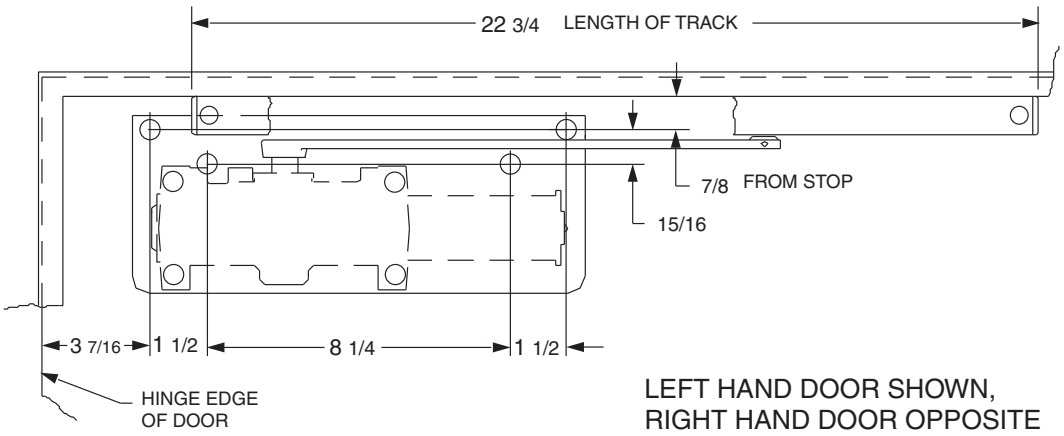
PUSH SIDE MOUNT ON: 4110-18 DROP PLATE



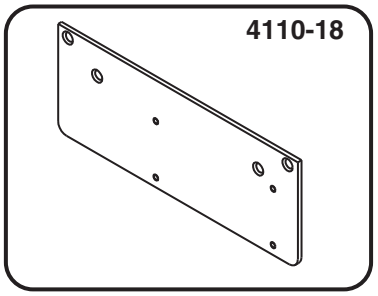
NOTE:
* INCREASE THESE DIMENSIONS 1/4" WHEN SPRING CUSH OPTION IS USED.

4110T PUSH SIDE (DOOR MOUNT) DROP PLATE

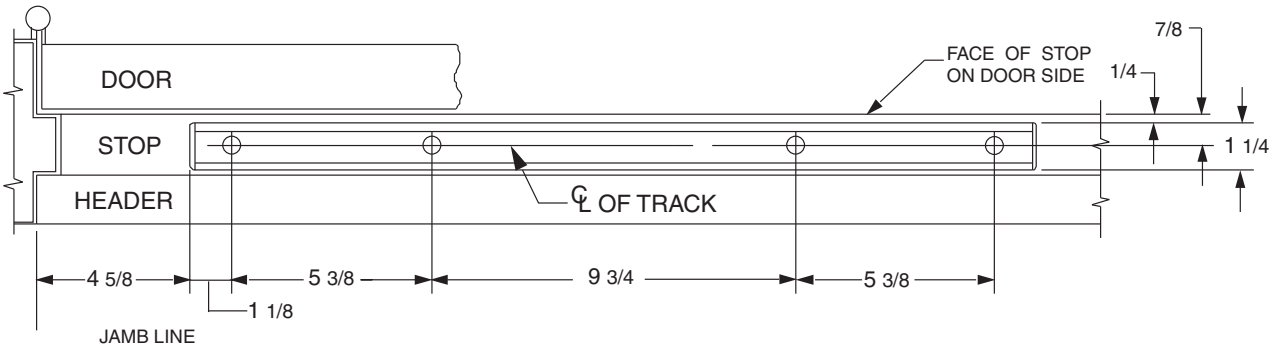
PERMITS 110° MAXIMUM OPENING



PUSH SIDE MOUNT ON: 4110-18 DROP PLATE

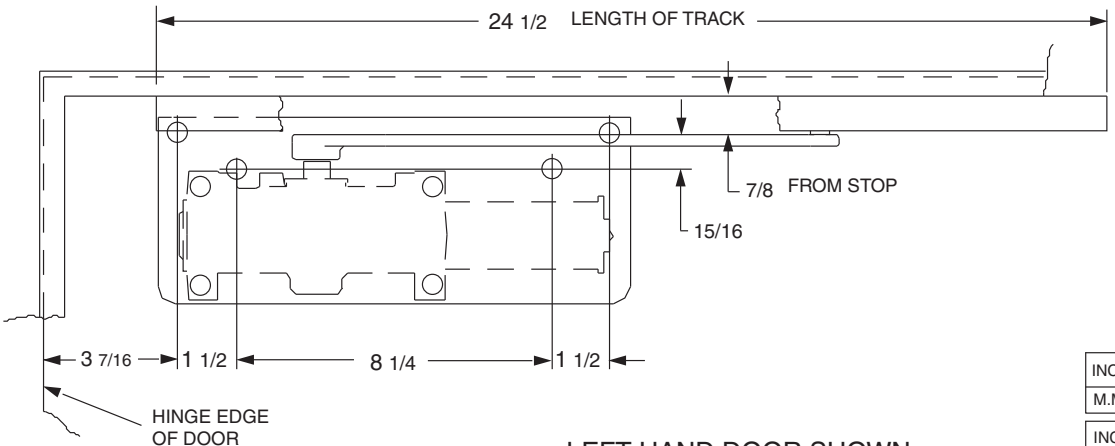


LEFT HAND DOOR SHOWN,
RIGHT HAND DOOR OPPOSITE

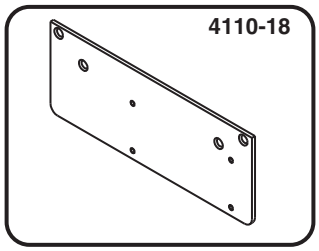


4210T PUSH SIDE (DOOR MOUNT) DROP PLATE

PERMITS 110° MAXIMUM OPENING



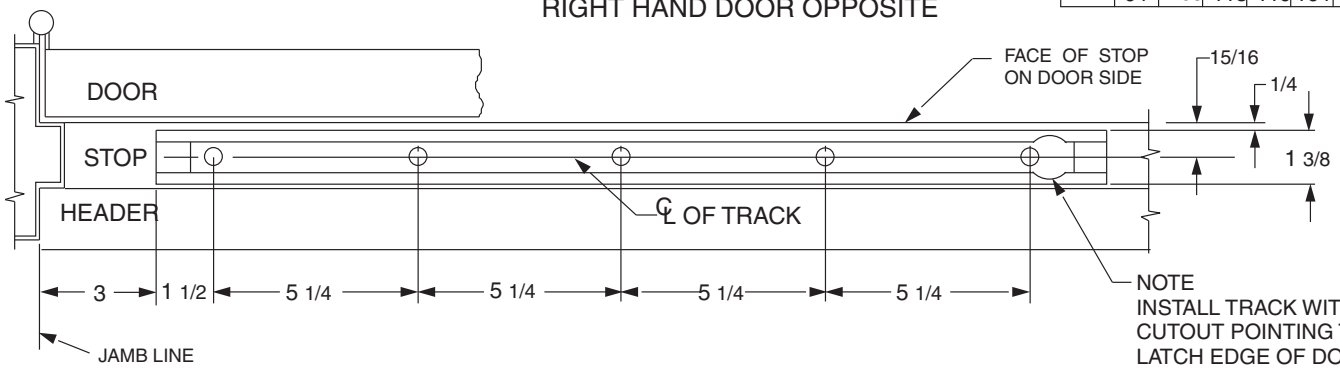
PUSH SIDE MOUNT ON: 4110-18 DROP PLATE



INCH	1/4	7/8	15/16	1 1/8	1 1/4	1 3/8	1 1/2	3
M.M.	13	22	24	38	38	38	38	49

INCH	3 7/16	4 5/8	5 1/4	5 3/8	8 1/4	9 3/4	21 3/4	22 3/4
M.M.	64	105	113	119	164	189	553	578

LEFT HAND DOOR SHOWN,
RIGHT HAND DOOR OPPOSITE



NOTE
INSTALL TRACK WITH CIRCULAR CUTOUT POINTING TOWARD LATCH EDGE OF DOOR.

Customer Service

1-877-671-7011 www.allegion.com/us

ALLEGION

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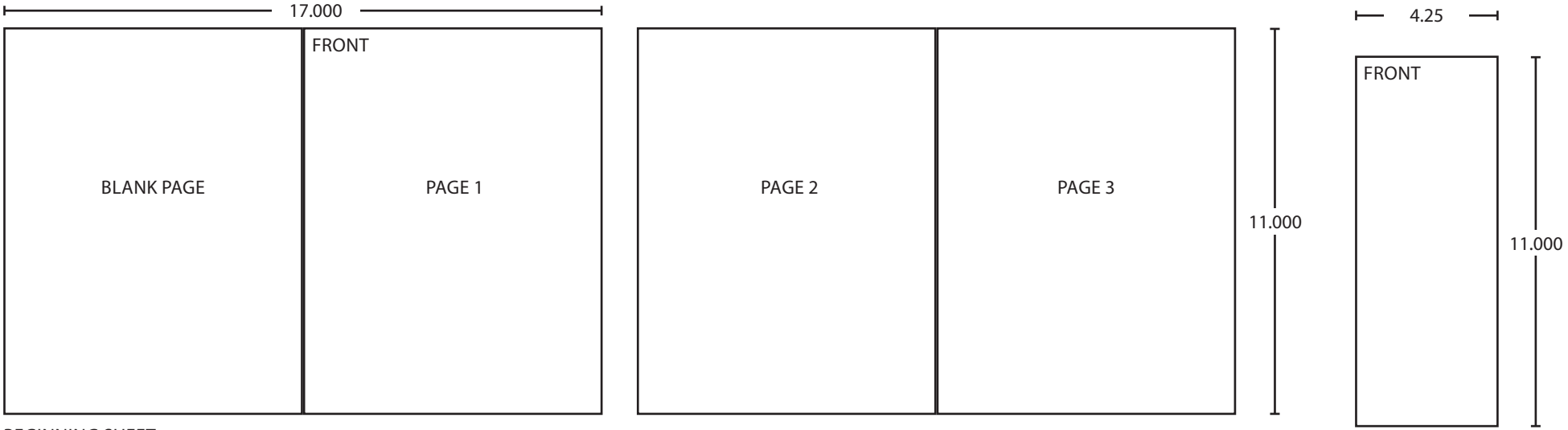
28501 Rev. 01/14-f



BEGINNING SHEET

FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	N/A	N/A	N/A	N/A	043812

Material
White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
F > Revised artwork

Edited By	Approved By	EC Number	Release Date
R. Byun	M. Sasso	043812	01-01-14

Title
4110 & 4210 Series Drop Plate Instruction Sheet

Creation Date	Number	Revision
04-27-10	28501	F

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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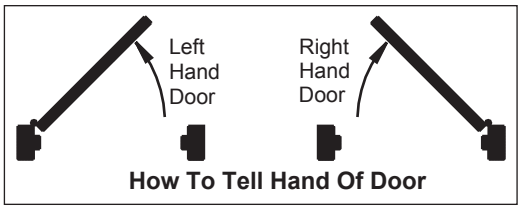
24828

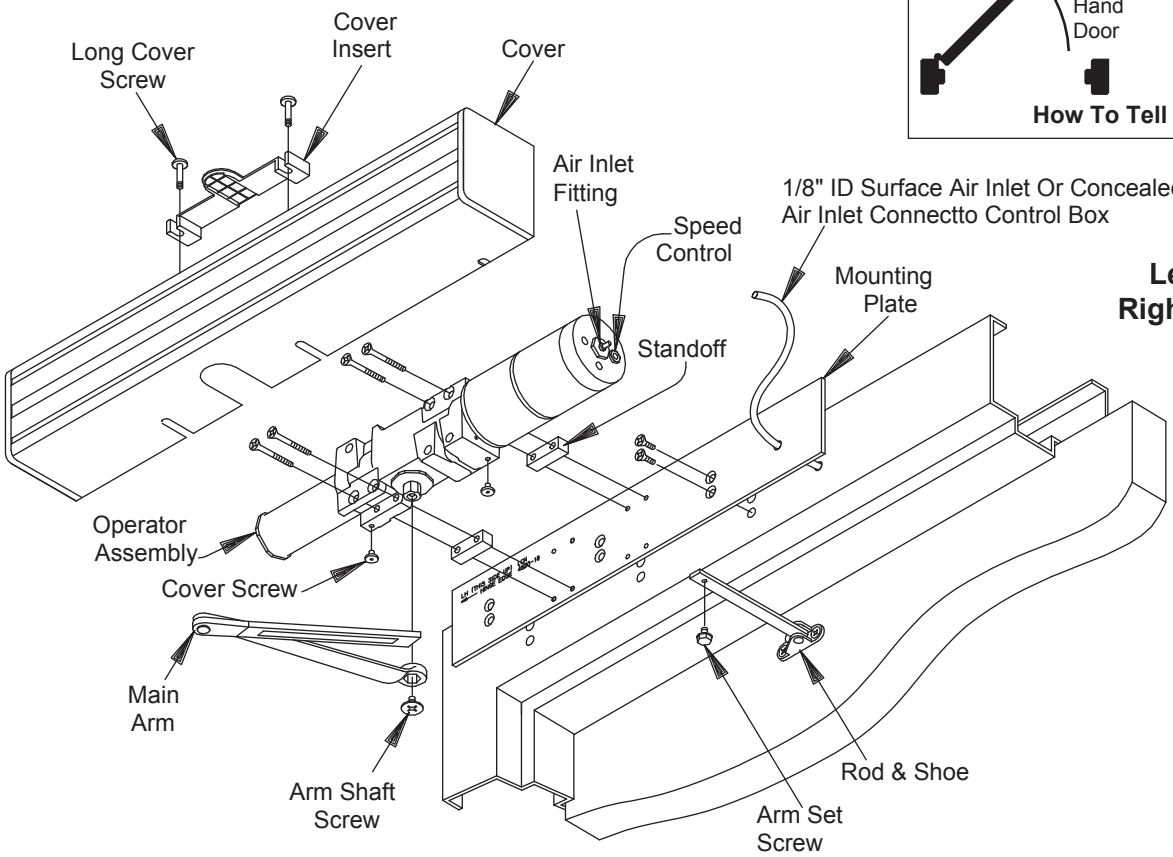
4820 Series

LCN®

Non-Handed/Non-Sized Auto-Equalizer
Low Energy Door Operator, Installation and Adjustment of Door Operator

Installation Instructions





Left Hand Shown, Right Hand Opposite

1 Installation

ⓘ **NOTE: This door operator requires additional system components, see LCN Closer Catalog.**

1a	Prepare frame per template (page 6), then secure mounting plate to frame with screws provided.
1b	Secure operator assembly to mounting plate with ¼-20 x 2½ P.H.M.S.
1c	Connect air line to air inlet fitting.
1d	Place main arm on operator shaft 100° to operator assembly and secure with shaft screw.
1e	Attach rod and shoe to door.
1f	Open door, insert rod in forearm tube, close door.
1g	With rod and shoe at right angle to door, insert forearm set screw and tighten securely.

⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions, call LCN at 877 - 671 - 7011.

Customer Service	
1-877-671-7011	www.allegion.com/us

ALLEGION

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24828 Rev. 06/16-h

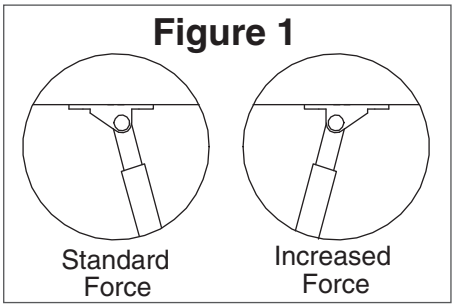
2 Closing Force Adjustment

2a To adjust CLOSING FORCE, use 5⁄32" allen wrench to turn the spring adjustment clockwise or counterclockwise the required number of turns to match the door width in the tables in Step 3. Maximum adjustment: 3 turns counter-clockwise and 10 turns clockwise.

2b ADJUSTMENT FOR ADDITIONAL CLOSING FORCE AT LATCH. (See Fig. 1)

a. Remove forearm set screw and separate rod from tube.
b. Remove shoe screws and turn shoe over.
c. Reassemble arm, as in steps 6 & 7 of installation.

Figure 1



3 Closing Speed Adjustment (see Fig. 2)

3a A “normal” closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed

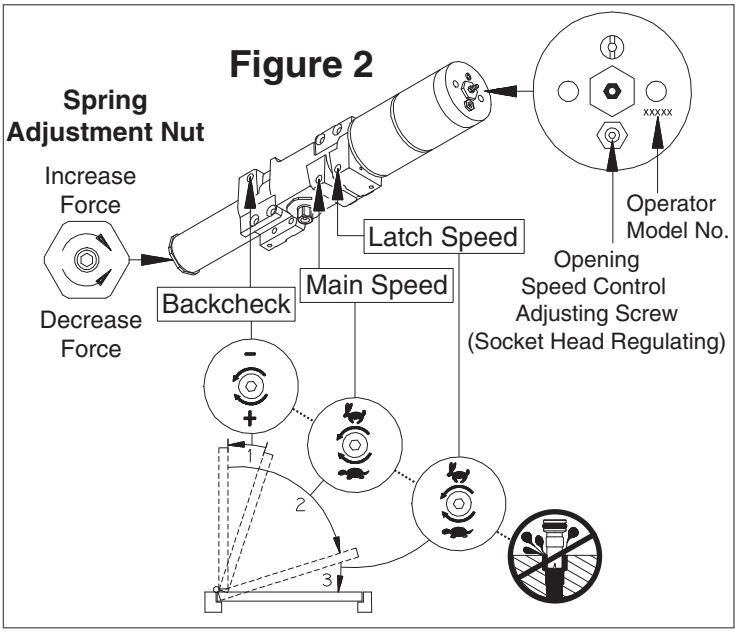
3b Use 3⁄32" allen wrench provided.

3c To slow MAIN SPEED of door, turn regulating screw (nearest to arm) clockwise.

3d To slow LATCH SPEED of door, turn regulating screw (nearest to latch) clockwise.

3e Do not allow door to slam into frame.

Figure 2



Exterior Door	
Maximum Door Width	Number of Turns
30”	0 Turns
36”	2 Turns C.W.
42”	7 Turns C.W.

Interior Door	
Maximum Door Width	Number of Turns
34”	3 Turns C.C.W.
38”	0 Turns
48”	2 Turns C.W.
54”	7 Turns C.W.

4 Opening Speed Adjustment

ⓘ **NOTE: For air pressure regulation, see control box instructions.**

4a The door opening speed must be adjusted to suit the width and weight of door. The wider and/or heavier the door, the slower it should open. To determine opening speed, measure door leaf width and weight and set speed to open door from 0° to 80° for the time shown in the table below. The opening speed control adjusting screw is located in the end of the door operator near the tubing connection (see Figure 2). Using a 3⁄32" allen wrench (provided), turn the speed control clockwise to slow the door, counter clockwise to increase speed.

Door Weight in Pounds	FASTEST OPENINGTIME 0° to 80°		
	DOOR WIDTH IN INCHES		
	36"	42”	48”
100 lbs.	3.0 sec	3.5 sec	4.0 sec
125 lbs.	3.5 sec	4.0 sec	4.5 sec
150 lbs.	3.5 sec	4.0 sec	4.5 sec
200 lbs.	4.0 sec	4.5 sec	5.5 sec

ⓘ **NOTE: If door width or weight is between the sizes and pounds listed, use the time shown for the next wider or heavier door.**

⚠ CAUTION ⚠

DO NOT SET DOOR SPEED FASTER THAN CHART RECOMMENDS.

4b If door weight cannot be measured, the weight can be estimated by finding the area of the door (length x width) and multiplying it by the weight per square feet for the door type that is being used as shown in the table below.

Type of Door	Weight per Sq. Ft.
- Solid Core Wood - 20 Ga.Flush Hollow Metal - Aluminum x ¼" Glass	5.5 lbs
- Mineral Core Door - 16 Ga.Flush Hollow Metal - Aluminum x 1” Glass	7.0 lbs

ⓘ **NOTE: These weights are for 1 ¾” thick doors. If the doors are thicker or thinner, consult door manufacturer for proper weight, or weigh the door.**

5 Backcheck Adjustment

5a Backcheck slows the door swing as it approached full opening (see Figure 2 on page 2).

5b Increase the resistance of backcheck only if necessary to prevent the door from striking a wall. To do this, turn the regulating screw (nearest to hinge) clockwise by quarter turns. **DO NOT USE AN ABRUPT BACKCHECK.**

6 Delay Time Adjustment

After opening, the door should remain at the 90° position for no less than 5 seconds. This “Delay Time” can be increased to approximately 30 seconds by turning the timer adjustment wheel(s) clockwise. For the location of this wheel(s), refer to 7900 or 7980 Series Control Box Instruction Sheet. Adjust “Delay Time” to maximum practical for the elderly or handicap. Time cycle begins when switch or scanner is released.

7 Attach Cover

7a Slide cover insert into the top cutout in cover (see Figure 3).

7b Push cover over the operator assembly and against mounting plate.

7c Insert cover screws and tighten securely.

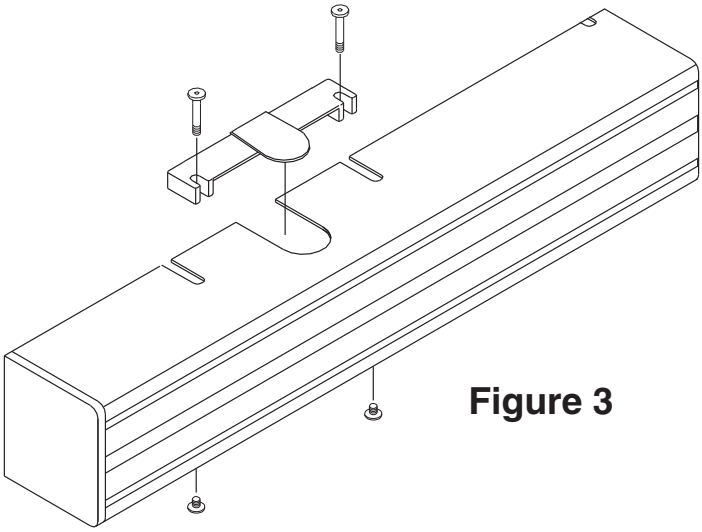


Figure 3

8 Locating The Caution/Automatic Door Decal

8a Local one decal on each side of the door near lock stile of door, approximately 18” min. to 42” max. above the floor. The decal location must be visible without interference from door trim, panic devices, etc.

8b Clean area 6” x 6” where decals will be placed.

8c Apply one decal (item 17 on page 5) on each side of door. Remove backing and “roll” onto door to avoid trapping air under decal.

9 Double Lever Arm Set Screw Adjustment

It may be necessary to adjust the fully open door position. Minor adjustment can be obtained by using the telescoping arm as follows (see Figure 4):

9a Shorten length of arm to decrease door opening. Lengthen arm to increase door opening.

9b Loosen arm set screw and adjust arm to preferred length.

9c Tighten arm set screw securely after adjustment.

9d After arm adjustment is made, cycle door to insure that it is operating properly.

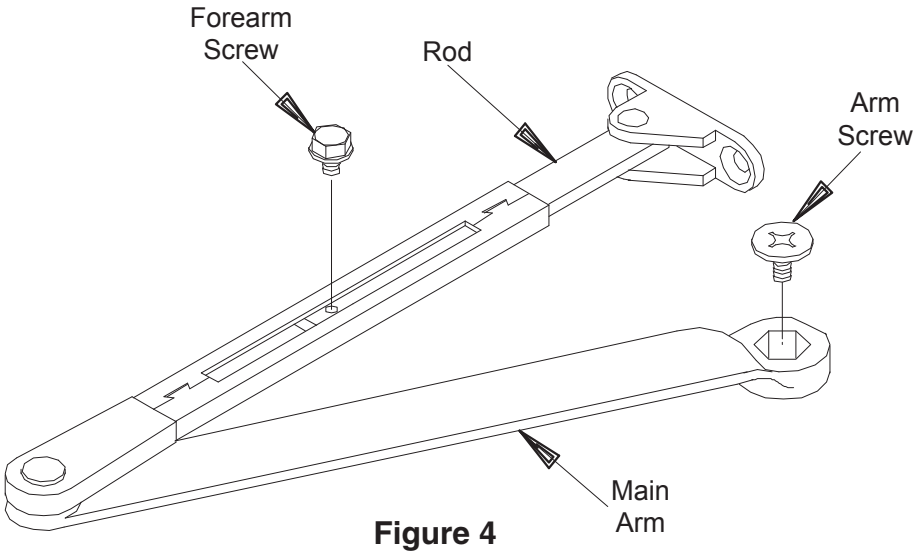
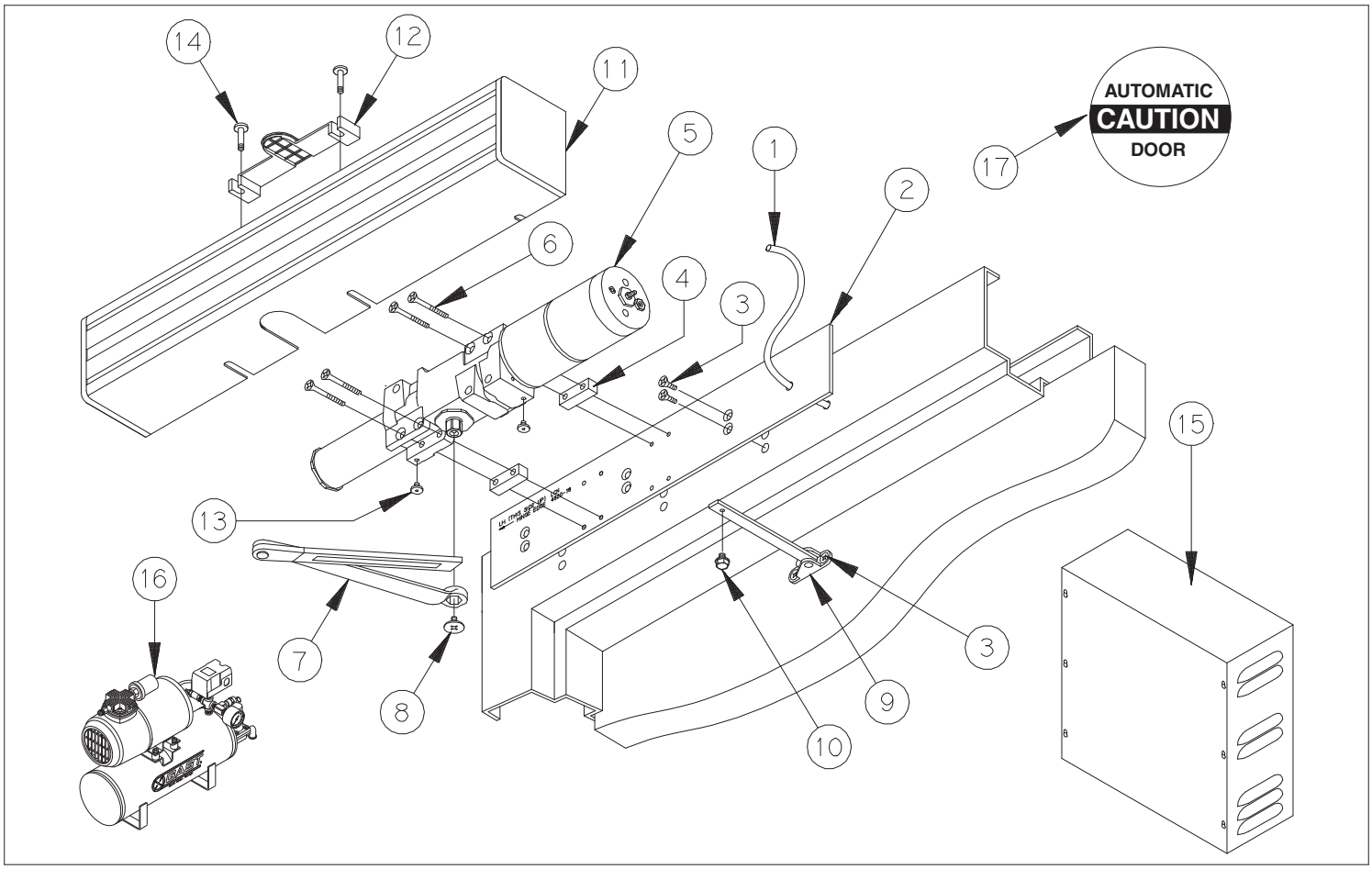


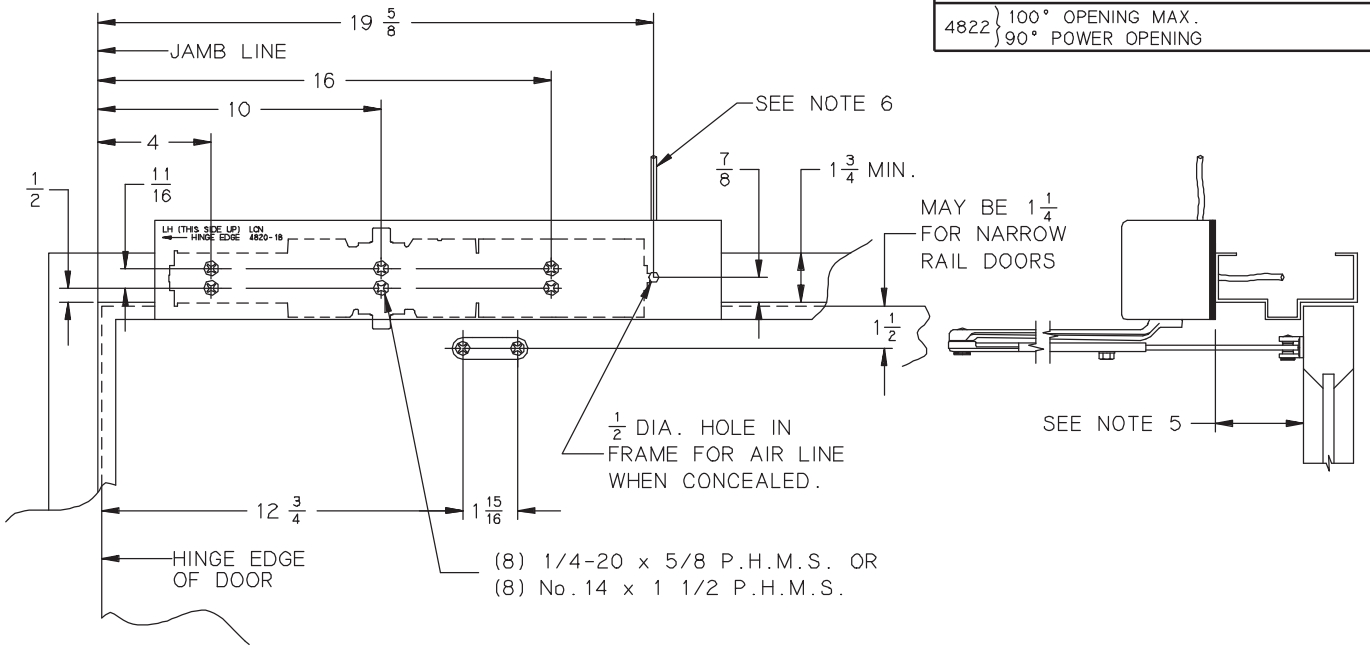
Figure 4



Item No.	Part No.	Description	Quantity
1	925	⅛" I.D. Pneumatic Tubing	Order Length Required
2	4810-18 4820-18G	Standard Mounting Plate Flush Ceiling Mounting Plate	1
3	No. 14 x 1½" 1/4-20 x 5/8"	Phillips Head Wood Screw or Phillips Head Machine Screw	8
4	4820-182	Standoff	2
5	4820-3071	LCN Switch-Actuated Auto Equalizer ®	1
6	1/4-20 x 2½"	Phillips Head Machine Screw	4
7	4820-77	Main Arm & Forearm	1
8	4020-159	Arm Screw	1
9	4820-79	Rod & Shoe	1
10	4820-83	Arm Set Screw	1
11	4820-72	Cover	1
12	4820-163	Cover Insert	1
13	4820-31	Cover Screw	2
14	4820-31L	Long Cover Screw	2
15	900 or 7980 Series	Control Box	1
16	900 or 921	Compressor (optional)	1
17	4820-155G	Decal	2

OVER DOOR ON 18 APPLIES TO:

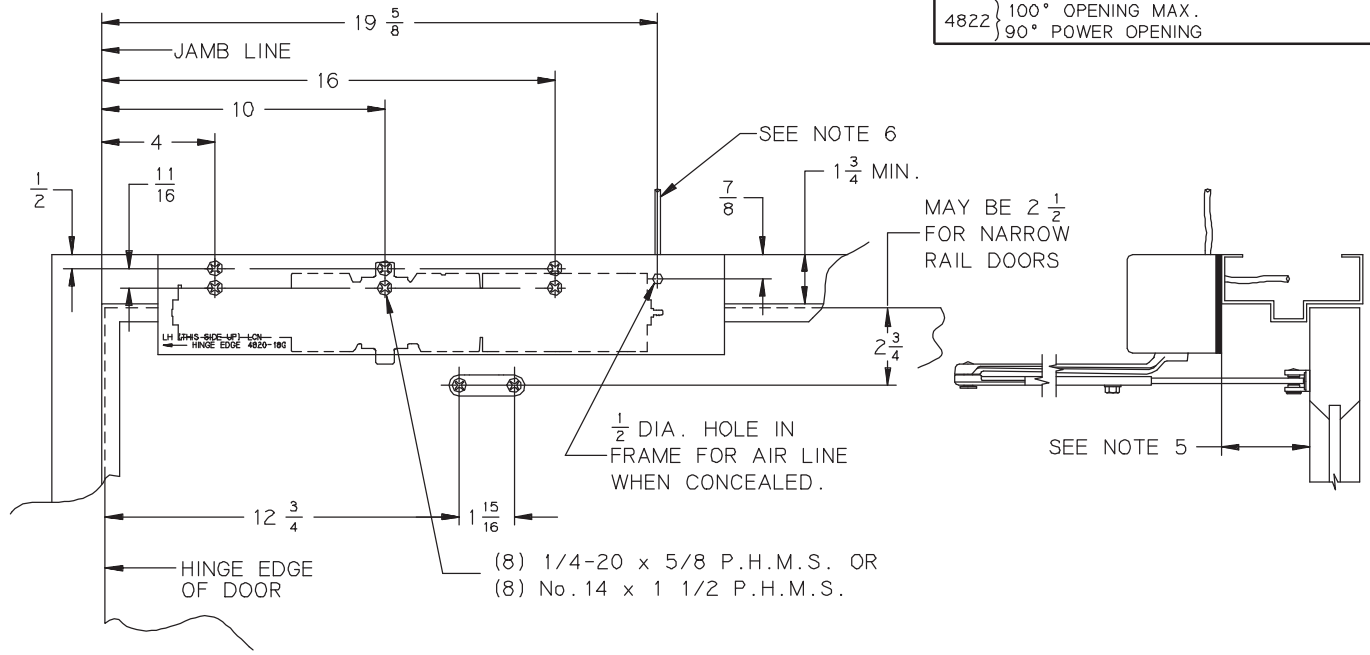
4822 } 100° OPENING MAX. / 90° POWER OPENING



LEFT HAND SHOWN, RIGHT HAND OPPOSITE

OVER DOOR ON 18G APPLIES TO:

4822 } 100° OPENING MAX. / 90° POWER OPENING



LEFT HAND SHOWN, RIGHT HAND OPPOSITE

GENERAL NOTES-

1. MOUNT PROPER SIDE OF MOUNTING PLATE PER HAND OF DOOR.
2. MOUNTING SCREWS No. 14 W.S. OR 1/4 - 20 M.S
3. CLOSER SIZE 20 x 3 1/2 x 3 5/16
4. LOCATE OPERATOR & SHOE FROM ℄ OF PIVOTS OR SWING CLEAR HINGE WHEN USED.
5. STANDARD ARM ACCOMMODATES REVEALS UP TO 4 1/2". REVEALS FROM 4 1/2" TO 8" USE OPTIONAL LONG ROD & SHOE.
6. 1/8" I.D. TUBING CONNECTED TO CONTROL BOX.
7. MAXIMUM BUTT SIZE 5"x 5"

INCH	1/2	11/16	7/8	1 1/4	1 1/2	1 3/4	1 15/16	2 1/2
M M	13	18	22	32	38	44	49	64

INCH	2 3/4	3 5/16	3 1/2	4	10	12 3/4	16	19 5/8	20
M.M.	70	84	89	102	254	324	406	498	508

No.	REVISION	BY	DATE
2	TEMPLATE UPDATE	JEJ	6/96

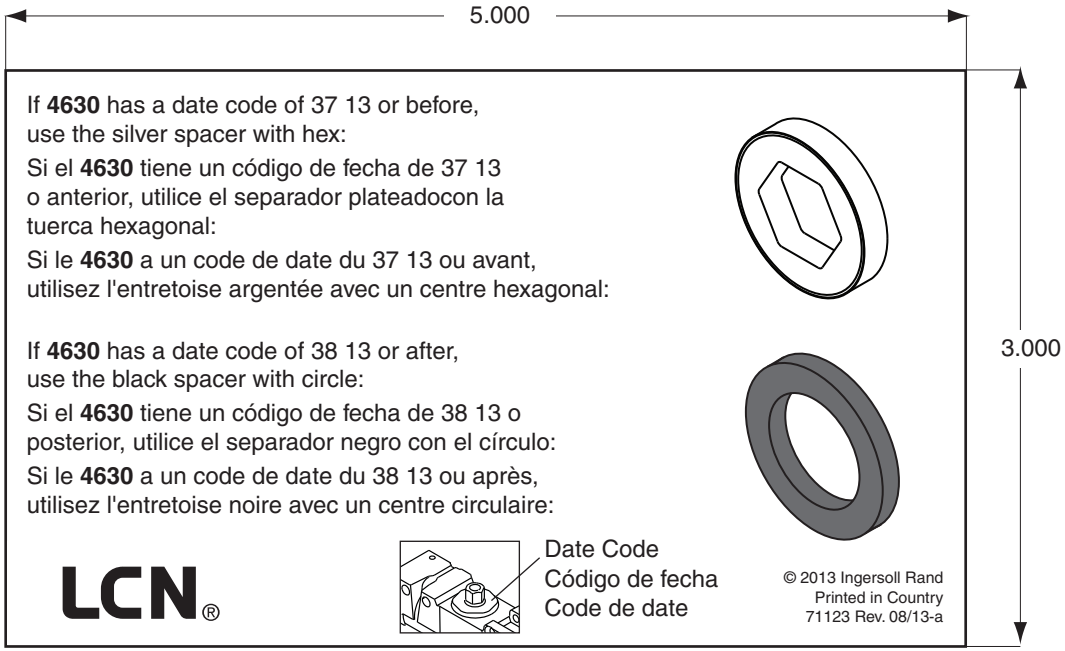
LCN®

APP BY JEJ 6/96

DO NOT SCALE

PUSH SIDE/TOP JAMB MOUNTED NON-HANDED AUTO-EQUALIZER® ON 18 OR 18G PLATE

4820



Additional Notes:
None

Revision History					
A	B	C	D	E	F
039376	EC #	EC #	EC #	EC #	EC #

Material: White Paper

Notes
1. printed one side
2. printed black
3. tolerance: ± .13
4. see sheet 2 for artwork
5. printed in country may vary
6. drawings not to scale

Revision Description:
A > Created Artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	Chaitanya Viswanadha	039376	08-13-13

Title: 4630 IS Insert

Creation Date	Number	Revision
08-13-13	71123	A

Created By: D. Myers
Software: Illustrator CS6

Activity
3899 Hancock Expwy
Security, CO 80911

Ingersoll Rand
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70954

240V Senior Swing Control Box

2800 Overhead Concealed Series
9500 Surface Applied Series

Installation Instructions

CAUTION

These instructions are presented in step-by-step sequence. It is very important that installation begins with “1. Pre-Installation Site and Product Check” (page 3), and continues as directed after each section.

WARNINGS

Always disconnect main power to the operator prior to replacing.

Control box contains no serviceable parts inside.

Table of Contents

General Information....2
Electrical Specifications....2
1 Pre-installation Site and Product Check....3
2 Installation....4
3 Wiring....4
4 Keypad Settings....8
5 System Test....12
6 Troubleshooting....13
7 Release for Service....14

General Information

The Senior Swing Control Box is for use with the Senior Swing Power Operator System. The system can operate a single door (2810, 9530, and 9540 Series), a simultaneous pair of doors (2850 and 9550 Series), or an independent pair of doors (2860 and 9560 Series).

ANSI/BHMA A156.19 Compliance

The Senior Swing Power Operator System is a low energy product and ***must*** conform to the latest version of ANSI/BHMA A156.19 (American National Standard for Power Assist and Low Energy Power Operated Doors).

Installation Instructions

All installation instructions are valuable references and should be given to the building owner or maintenance supervisor after installation is complete.

The Senior Swing Control Box installation instructions and the manufacturer's instruction manual accompanying any sensor must be referenced to ensure proper installation, setup, and operation.

Electrical Specifications

AC input voltage	240 VAC
AC fuse	250 VAC, 2.5 A time-delay fuse
Motor protection	Solid state failure detection and shutdown
Activate inputs	dry NO contacts (close contacts to open door)
Safety inputs	dry NO contacts (closed contacts indicate an obstruction)
Breakaway input	dry NC contacts (open contacts indicate breakaway)
3-position switch input	dry 3-position switch
Power Boost disable input	dry NO contacts (close contacts to disable Power Boost)
Lock output	Form C dry relay contacts rated 8 A, 30 VDC maximum
Accessory power output	24 VAC, 1.5 A (protected by resettable thermal fuse)
Logic power output	5 V, 50 mA (protected by resettable thermal fuse)

1 Pre-installation Site and Product Check

⚠ CAUTION ⚠

Factory Authorized Door Leaf Size and Weight

Type	Width per Leaf	Maximum Weight per Leaf
Single Door	36” to 48”	200 lb.
Simultaneous Pair	30” to 48”	200 lb.

1a All required installation steps listed before “8. Control Box Installation” in the Senior Swing installation instructions should be completed before installing the Senior Swing control box.

1b Check that the control box model (indicated on control box label; Figure 1-1) is correct for the application.

1c Check that the available AC voltage matches the control box voltage requirement (240 VAC).

1d Check that all accessories required for the application are on hand.

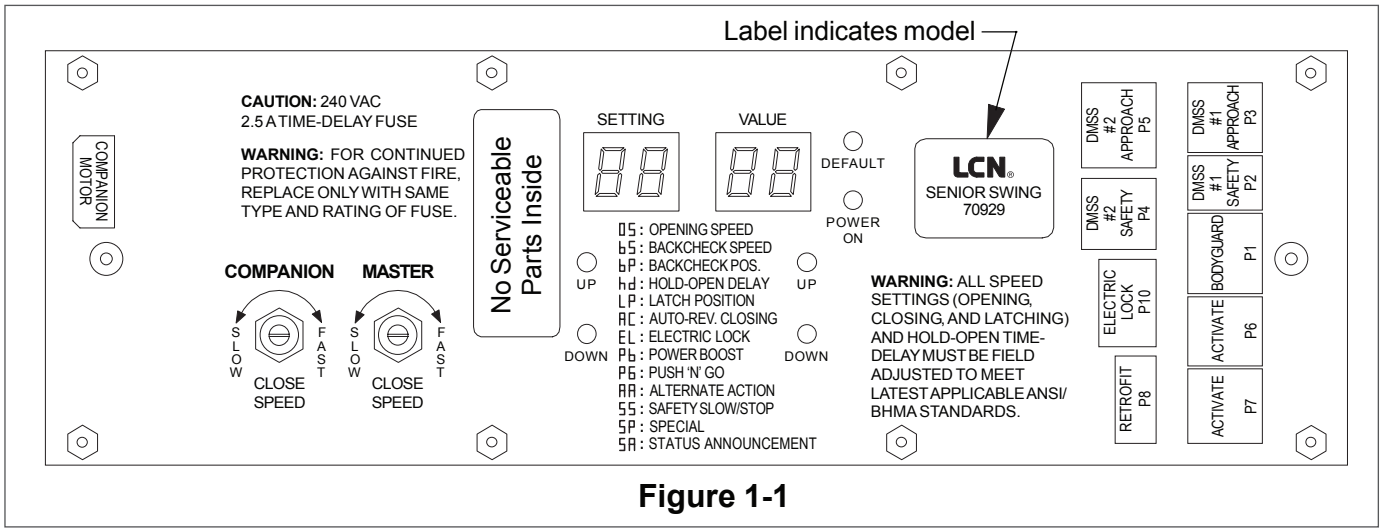


Figure 1-1

2 Installation

To install the Senior Swing Control Box, follow the Senior Swing installation instructions beginning with “8. Control Box Installation” on page 12 of those instructions.

⚠ CAUTION ⚠

Improper installation or set up may result in personal injury or property damage. Follow instructions carefully. For answers to questions, call 1-877-671-7011.

3 Wiring

- Review the separate wiring diagrams in the accessory instructions so that all wiring can be completed.
- See Figure 3-1 for system configuration terminology.
- See Figure 3-2, Figure 3-3, and Figure 3-4 for names and locations of control box connectors.
- See Figure 3-5 for control box plug and jack descriptions, wiring, and mating cables.
- See Figure 3-6 for electric strike locking device sample wiring.
- See Figure 3-7 for EL (electric latch retraction) locking device sample wiring.

⚠ CAUTION ⚠

When joining or separating a plug and receptacle, do not push or pull on wires. This may cause a wire to be pulled loose from a terminal, which may result in a malfunction.

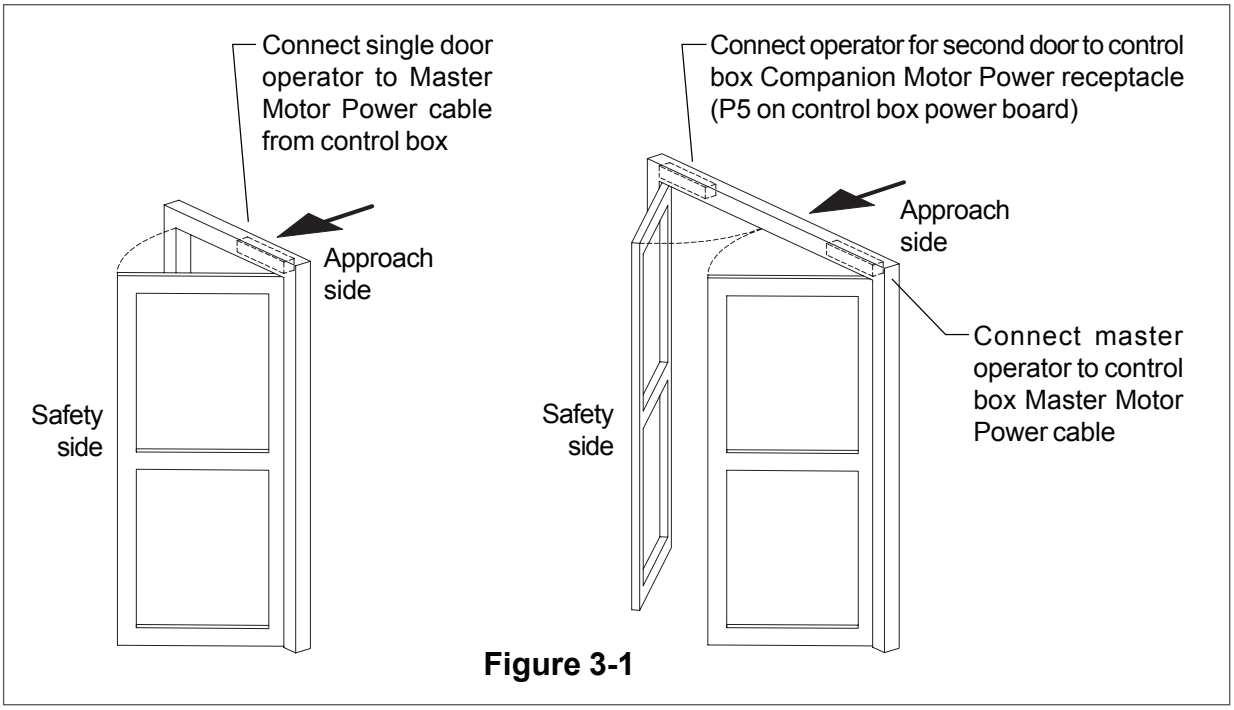


Figure 3-1

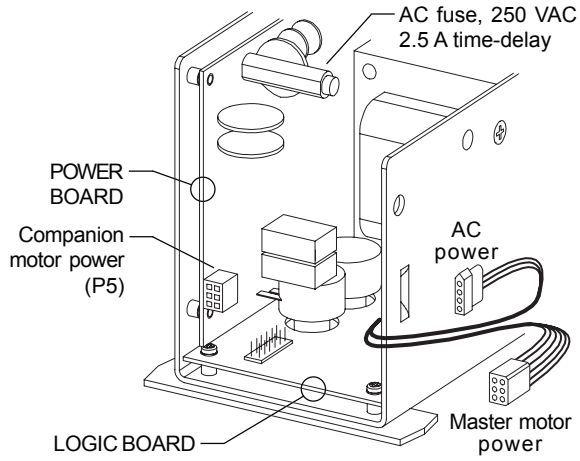


Figure 3-2. Control box power board connectors.

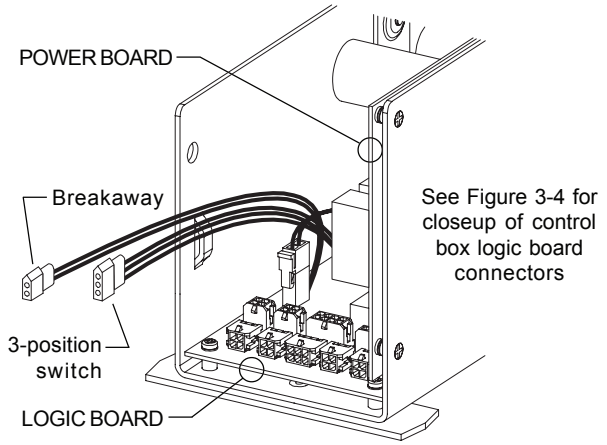


Figure 3-3. Control box logic board connectors.

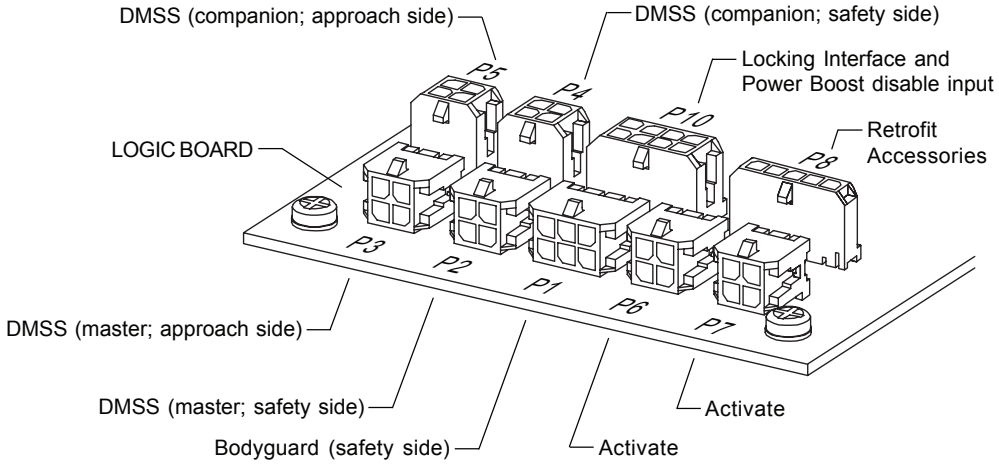


Figure 3-4. Closeup of control box logic board connectors.

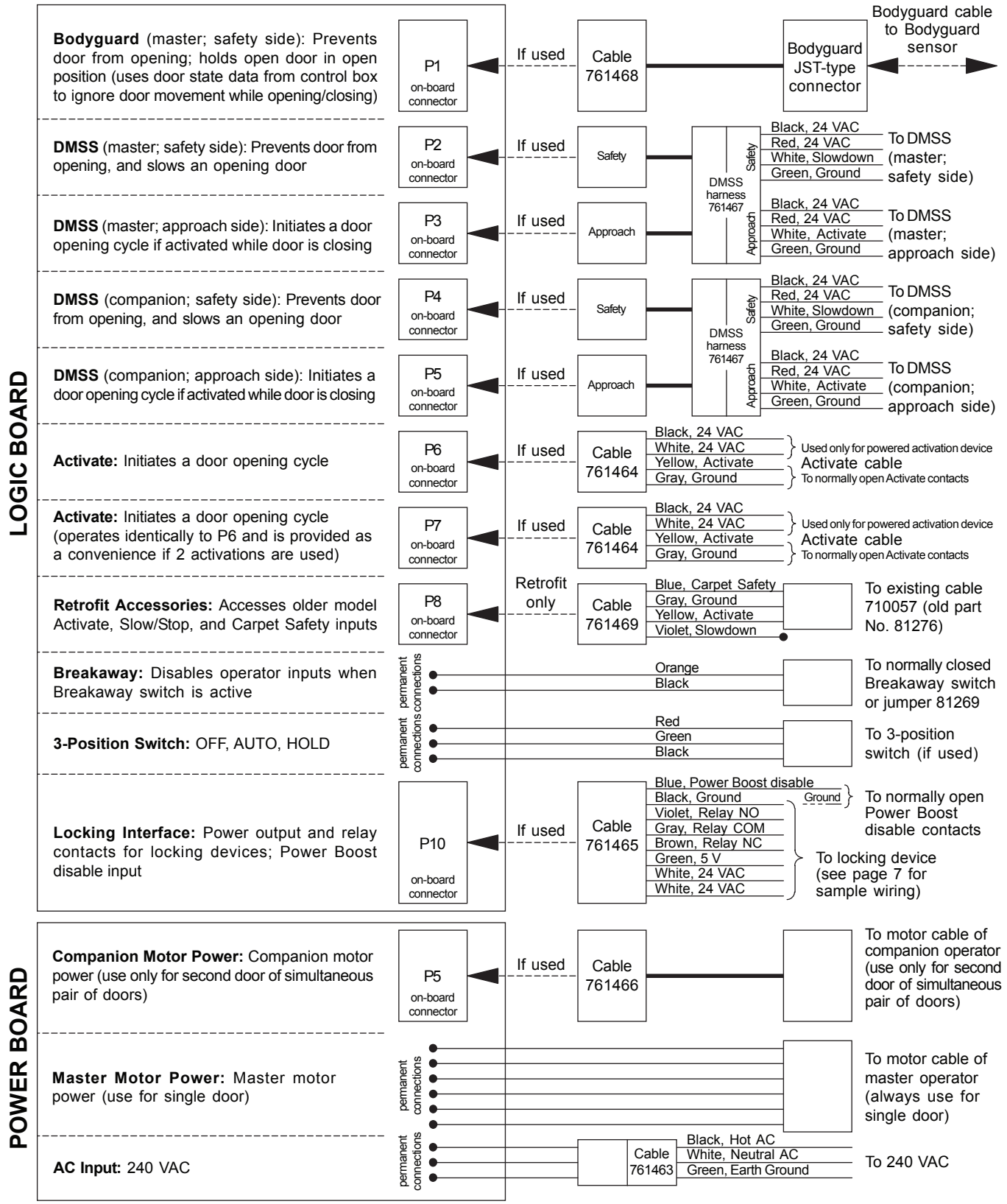
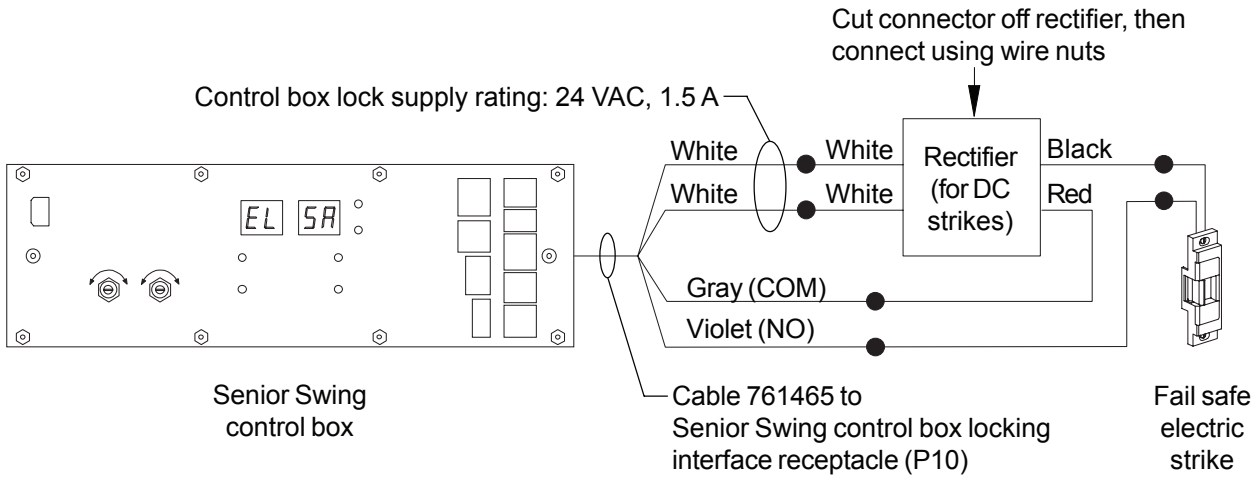

LOGIC BOARD
Bodyguard (master; safety side): Prevents door from opening; holds open door in open position (uses door state data from control box to ignore door movement while opening/closing)
P1 on-board connector
If used
Cable 761468
Bodyguard JST-type connector
Bodyguard cable to Bodyguard sensor
DMSS (master; safety side): Prevents door from opening, and slows an opening door
P2 on-board connector
If used
Safety
DMSS harness 761467
Safety
Black, 24 VAC
Red, 24 VAC
White, Slowdown
Green, Ground
To DMSS (master; safety side)
DMSS (master; approach side): Initiates a door opening cycle if activated while door is closing
P3 on-board connector
If used
Approach
Approach
Black, 24 VAC
Red, 24 VAC
White, Activate
Green, Ground
To DMSS (master; approach side)
DMSS (companion; safety side): Prevents door from opening, and slows an opening door
P4 on-board connector
If used
Safety
Safety
Black, 24 VAC
Red, 24 VAC
White, Slowdown
Green, Ground
To DMSS (companion; safety side)
DMSS (companion; approach side): Initiates a door opening cycle if activated while door is closing
P5 on-board connector
If used
Approach
Approach
Black, 24 VAC
Red, 24 VAC
White, Activate
Green, Ground
To DMSS (companion; approach side)
Activate: Initiates a door opening cycle
P6 on-board connector
If used
Cable 761464
Black, 24 VAC
White, 24 VAC
Yellow, Activate
Gray, Ground
Used only for powered activation device
Activate cable
To normally open Activate contacts
Activate: Initiates a door opening cycle (operates identically to P6 and is provided as a convenience if 2 activations are used)
P7 on-board connector
If used
Cable 761464
Black, 24 VAC
White, 24 VAC
Yellow, Activate
Gray, Ground
Used only for powered activation device
Activate cable
To normally open Activate contacts
Retrofit Accessories: Accesses older model Activate, Slow/Stop, and Carpet Safety inputs
P8 on-board connector
Retrofit only
Cable 761469
Blue, Carpet Safety
Gray, Ground
Yellow, Activate
Violet, Slowdown
To existing cable 710057 (old part No. 81276)
Breakaway: Disables operator inputs when Breakaway switch is active
permanent connections
Orange
Black
To normally closed Breakaway switch or jumper 81269
3-Position Switch: OFF, AUTO, HOLD
permanent connections
Red
Green
Black
To 3-position switch (if used)
Locking Interface: Power output and relay contacts for locking devices; Power Boost disable input
P10 on-board connector
If used
Cable 761465
Blue, Power Boost disable
Black, Ground
Violet, Relay NO
Gray, Relay COM
Brown, Relay NC
Green, 5 V
White, 24 VAC
White, 24 VAC
Ground
To normally open Power Boost disable contacts
To locking device (see page 7 for sample wiring)
POWER BOARD
Companion Motor Power: Companion motor power (use only for second door of simultaneous pair of doors)
P5 on-board connector
If used
Cable 761466
To motor cable of companion operator (use only for second door of simultaneous pair of doors)
Master Motor Power: Master motor power (use for single door)
permanent connections
To motor cable of master operator (always use for single door)
AC Input: 240 VAC
permanent connections
Cable 761463
Black, Hot AC
White, Neutral AC
Green, Earth Ground
To 240 VAC

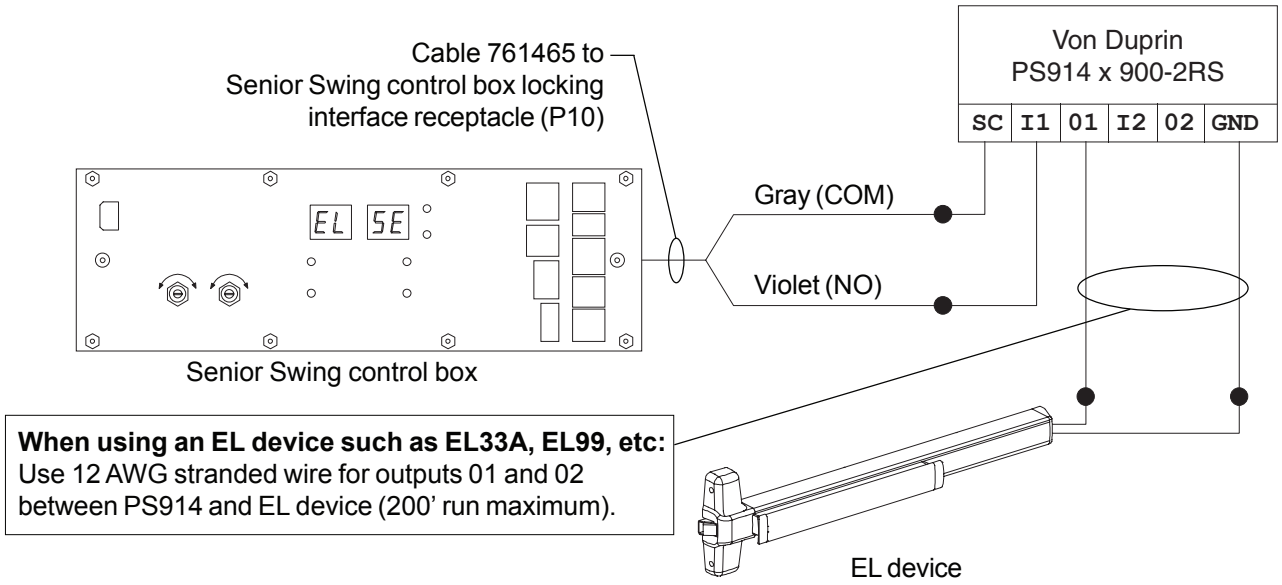
Figure 3-5

ⓘ **NOTE: Always wire the locking device to the NO (normally open) contact of the control box locking interface and use the keypad to set the EL (electric lock) setting to either SA (fail safe) or SE (fail secure).**



The keypad EL (electric lock) setting is SA (fail safe). When the operator is on, the strike is locked when the door is closed and unlocked when the door is opening. When the 3-position switch is set to OFF, the strike is unlocked.

Figure 3-6. Sample Wiring for a Fail Safe Electric Strike Locking Device



The keypad EL (electric lock) setting is SE (fail secure). The control box locking relay signals the PS914 x 900-2RS. When the operator is on, the EL device is locked when the door is closed and unlocked when the door is opening. When the 3-position switch is set to OFF, the EL device is locked.

Figure 3-7. Sample Wiring for a Fail Secure EL (Electric Latch Retraction) Locking Device

4 Keypad Settings

Settings (except for close speed) for the Senior Swing Power Operator System are changed using keypad pushbuttons and an alphanumeric display on the control box (Figure 4-1 and Figure 4-2). Close speed is changed using dials on the control box (Figure 4-1).

See page 9 and page 10 for directions for changing the values of settings.

⚠ CAUTION ⚠

Adjust the operator for the slowest operation practical in accordance with the latest revisions of Americans with Disabilities Act, ANSI/BHMA A156.19 (American National Standard for Power Assist and Low Energy Power Operated Doors), and local codes.

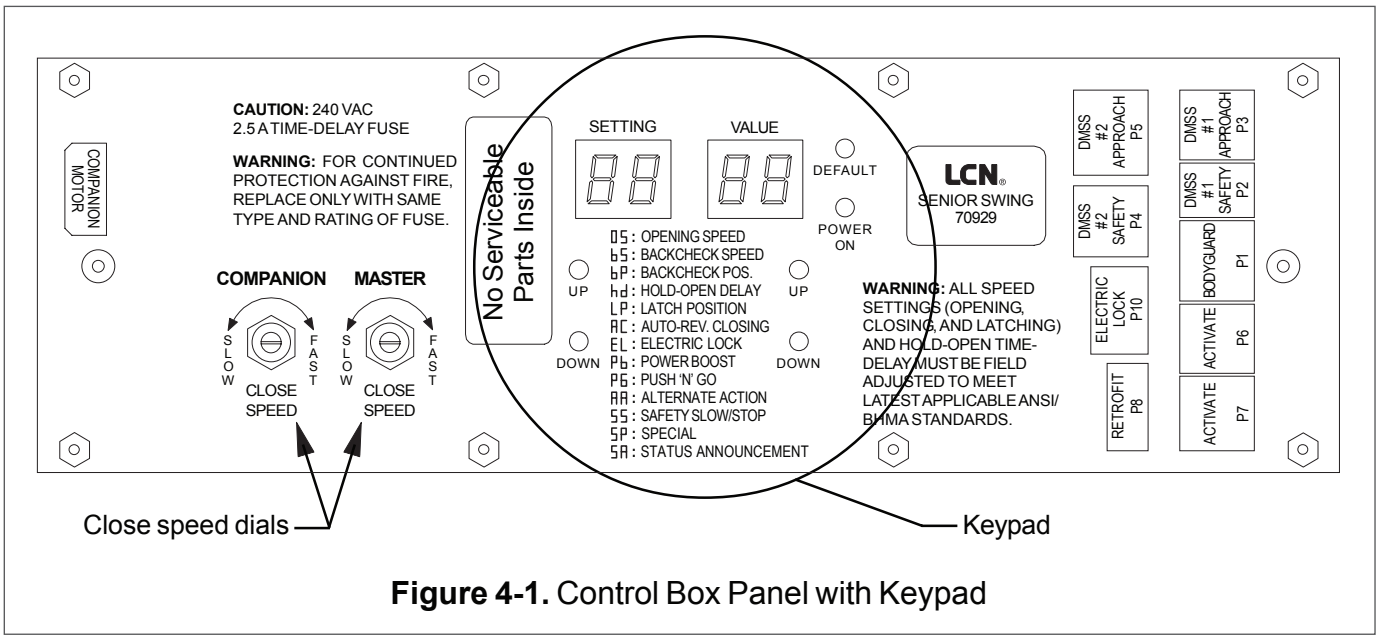


Figure 4-1. Control Box Panel with Keypad

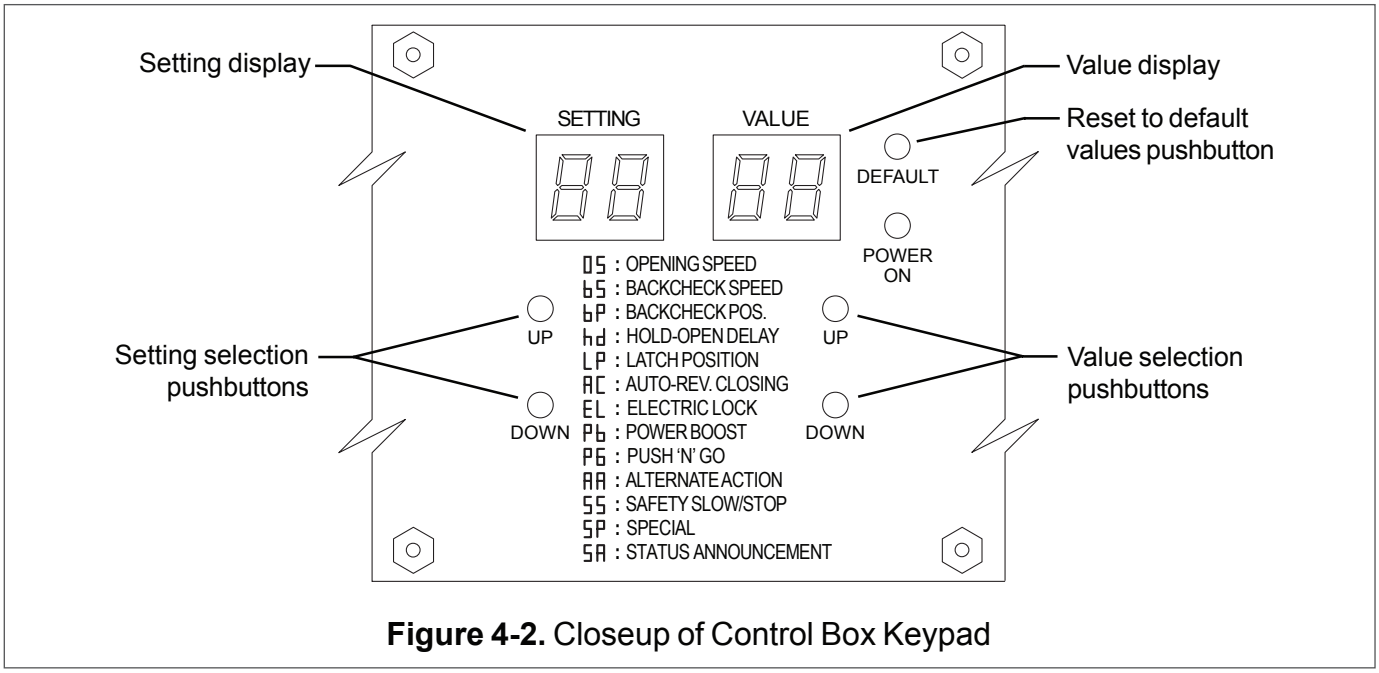


Figure 4-2. Closeup of Control Box Keypad

WARNING

KEEP HANDS, CLOTHING, WIRES, TOOLS, LADDERS, ETC. AWAY FROM THE DOOR WHEN THE OPERATOR IS INITIALLY TURNED ON.

See Figure 4-3 for definitions of te positions of the door throughout the opening and closing cycle.

See Table 4-1 for explanations of the keypad settings.

To change setting values:

1. Set the 3-position switch, if used, to OFF.
2. Apply AC power. The POWER light will illuminate and the display will remain blank.
3. Press any **two** pushbuttons at the same time for 1 second to turn on the keypad. The display will illuminate.
4. Press the UP or DOWN setting selection pushbutton to select the desired setting. The setting is shown in the VALUE display.
5. Press the UP or DOWN value selection pushbutton to select the desired value for the displayed setting. The value for the setting is indicated in the VALUE display.
6. The keypad will automatically turn off after 5 minutes of inactivity.

To reset all values to default (default values are listed in Table 4-1 under "Selectable Values"):

1. Set the 3-position switch, if used, to OFF.
2. Apply AC power. The POWER light will illuminate, and the display will remain blank.
3. Press any ***two*** pushbuttons at the same time for 1 second to turn on the keypad. The display will illuminate.
4. Press the DEFAULT pushbutton for 4 seconds.
5. The values are set to default, and the display will indicate the opening speed setting and value.
6. The keypad will automatically turn off after 5 minutes of inactivity.

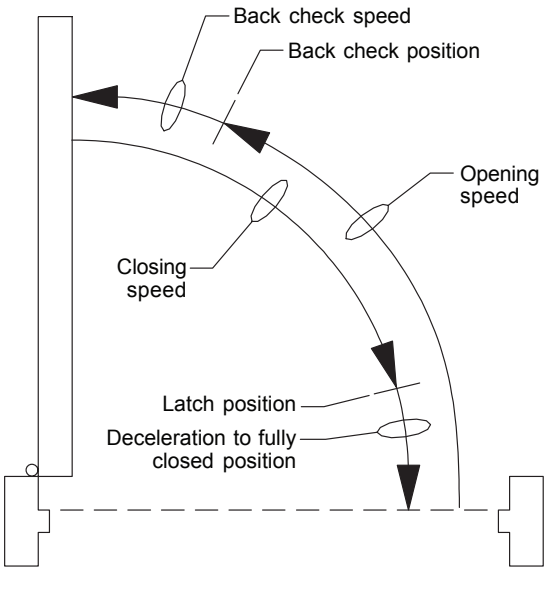


Figure 4-3. Door Position Definitions

Safety side Door Mounted Safety Sensor (DMSS) disable feature

Purpose:

Deactivate the Door Mounted Safety Sensor (DMSS) on safety side of door to eliminate nuisance detection of a wall or guard rail.

1. Install control box, all door hardware and safety devices per their instructions.
2. Setup DMSS sensors in accordance with ANSI standard 156.10.
3. Use keypad to set SAFETY SLOW/STOP (SS) value to STOP (SP).
4. Use keypad to set SLOWDOWN DISABLE (SD) value to 85.
5. Activate door opening cycle. If door does not open fully, use keypad to reduce SD value from 85 in 5 degree increments.
6. Repeat Step 5 until door opens fully.
7. Perform a complete system test as desribed in the section 5.

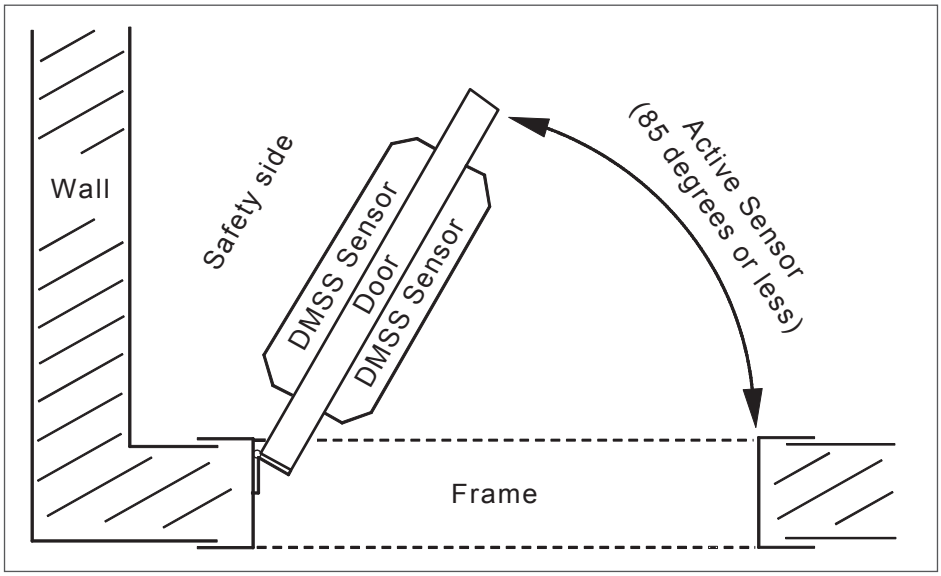


Table 4-1 Control Box Settings and Selectable Values

Setting	Setting Display	Selectable Values	Values as Displayed	Description
Opening Speed	OS	01 = slow 02 = medium 03 = fast (default = 01)	01 02 03	Controls opening speed of any normal weight and size door.
Back Check Speed	bS	01 = 1 door 02 = 2 doors (default = 01)	01 02	Controls speed of door near full open position to prevent door slamming open.
Back Check Position	bP	45 - 80 degrees (default = 70)	45-80	Approximate angle at which door begins to decelerate near the full open position.
Hold Open Delay	hd	01 - 32 seconds (default = 05)	01-32	Amount of time (in seconds) door remains fully open following an activate signal.
Latch Position	LP	00 - 23 degrees (default = 13)	00-23	Approximate angle at which door begins to decelerate near the full closed position.
Auto Reverse Closing	AC	off, on (default = off)	OF On	When on, door will re-open upon hitting an obstruction.
Electric Lock	EL	off SA = fail safe SE = fail secure (default = off)	OF SA SE	To turn on, set to SA (fail safe) or SE (fail secure) to match locking device connected to control box locking interface receptacle (P10); when on, causes a 1 second delay between activate signal and door locks to disengage before operator opens door.
Power Boost	Pb	off 5 seconds continuous (default = off)	OF 5S Cn	When on, increases closing force of door from 9 lbs to 18 lbs to close door against high winds or stack pressure; turns on for 5 seconds or continuously after door reaches latch position during closing cycle; disabled by Power Boost disable input.
Push 'N' Go	PG	off, on, fd (default = off)	OF On Fd	When set to On or Fd, pushing door open 5 degrees causes operator to open door remainder of way and hold open. Hold open time is same as hd setting when set to On. Hold open time is 1 second when set to Fd.
Alternate Activate	AA	off, on (default = off)	OF On	When on, door stays open until a second activate signal is received.
Safety Slow/Stop	SS	slow, stop (default = slow)	SL SP	Determines response to a DMSS on the safety side of the door; if SL (slow), door goes to back check speed; if SP (stop), door stops for 5 seconds, then continues opening at back check speed.
Special	Sd	off 30 - 85 (default = off)	OF 30-85	Deactivate the Door Mounted Safety Sensor (DMSS) on safety side of door to eliminate nuisance detection of a wall or guard rail.
Status Announcement	SA	Reserved	Reserved	Reserved

5 System Test

WARNING

KEEP HANDS, CLOTHING, WIRES, TOOLS, LADDERS, ETC. AWAY FROM THE DOOR WHEN THE OPERATOR IS INITIALLY TURNED ON.

ⓘ **If control box does not operate as expected during system test, see section 6 for troubleshooting tips.**

5a With the door closed, set the 3-position switch, if used, to AUTO and turn on all AC power. For applications using companion door, try to get both doors to open same amount of degrees before hitting hard stop (either internal gearbox stop or rubber bumper on wall).

5b Activate the operator using an activation device. The operator should perform one sizing cycle.

- **Sizing Cycle:** Occurs when the door is activated for the first time after power is turned on. During the sizing cycle, the door opens and closes once.

If the door sizes properly, go to step No. 5c.

If the door does not open at all during the sizing cycle:

- Check that the 3-position switch, if used, is not set to OFF.
- Check door for binds and proper mechanical installation.
- Verify that all safety sensors are inactive.
- If an electromechanical lock is used, check that the lock disengages before the operator opens the door.
- Verify that the Breakaway switch, if used, is connected to NC contacts. If a Breakaway switch is not used, check that the Breakaway cable coming from the control box logic board is jumpered (jumper part No. 761492-00).
- Check fuse, wiring, and connections.
- Adjust the operator as follows and check door operation:

Opening Speed:	01
Back check speed:	01 for one door, 02 for two doors
Hold open delay:	05
Back check position:	75
Latch position:	10
Close speed:	medium
Electric lock:	SA (fail safe) or SE (fail secure) to match lock

If the door does not open fully during the sizing cycle, check door for binds, obstructions, or items that could activate safety sensors.

5c After the sizing cycle is complete and the door is closed, apply a maintained activation signal and check that the door remains open while the activation signal is applied. Then release the activate signal and verify door closes after the open time delay expires.

5d To check the function of the door safety device:
- Activate the door and then activate the approach side safety device while the door is open. The door should not close while the safety device is activated. Next, deactivate the safety device. The door should close after the hold open time delay expires.
- With the door closed, activate the safety side safety device, then activate the door. The door should not open while the safety device is activated. Next, deactivate the safety device. The door should open when activated.

5e Set the 3-position switch, if used, to HOLD. Verify that the door opens and stays open.

5f Set the 3-position switch, if used, to OFF. Verify that the door closes. Verify that an activate signal does not open the door.

5g If a Breakaway switch is connected, set the 3-position switch, if used, to AUTO, then break open the door. Verify that an activate signal does not cause the door to move. Re-latch the door after testing.

5h Do not release the system for service until it is operating properly.

6 Troubleshooting

6a Identify all switch and sensor inputs that are currently active:
- Remove breakaway jumper to enter diagnostic mode.

ⓘ **Note: When in diagnostic mode, controller will not open door.**
- Keypad display shows each active input signal for 1 second. See table below:

(Key switch) set to Auto OR is not present	**SA80**
(Key switch) set to OFF	**SA81**
(Key switch) set to HOLD	**SA82**
(Activate) input is ON	**SA83**
(DMSS approach) activate input is ON	**SA84**
(DMSS safety) slowdown input is ON	**SA85**
(Carpet Safety) input is ON	**SA86**
(Bodyguard) input is ON	**SA87**
(Power Boost Disable) input is ON	**SA88**

For example, if key switch is set to Auto, Activate button is pressed, and DMSS sees something on the safety side, then display will repeat the sequence SA80, SA83, SA85 continuously until breakaway jumper is replaced.
- After completing diagnostics, reinstall breakaway jumper for normal operation.

6b If control box does not function and the error mesage **Er##** flashes on the control box Setting and Value displays, turn AC power off and on to reset the control box. The following are common errors and suggested fixes:
ER 06: Master motor problem - verify master motor cable is connected to motor.
ER 14: Companion door added to a setup that was already sized - turn AC power off, then on and resize with both doors connected.
If problem cannot be corrected by using suggested fixes, contact 1-877-671-7011.

7 Release for Service

7a Remove all tools, installation equipment, and debris from the vicinity of the door.

7b Install all safety, traffic control, and instruction decals on the door as required by the latest revision of ANSI/BHMA A156.19. **This is very important! Failure to do this leaves the installer LIABLE for any accident that might occur. This must be done!**

7c Verbally instruct the owner or person in charge of the proper operation of the door.

7d Instruct the owner or person in charge to routinely inspect the door for the following:
- Visible damage
- Developing problems
- Minor preventative maintenance

7e Instruct the owner or person in charge who and where to call for service when required.

⚠ WARNING ⚠

Make sure to install all safety, traffic control, and instruction decals on the door as required.

ALLEGION

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70954 Rev. 02/17-c

18762

4310ME Series

LCN®

Door closer with electronic release & Multi-point hold open

Installation Instructions

1 Closer Installation

1a Closer Information

Closer is handed at the factory. The hand of the closer must match the hand of the door (see the door handing diagram below).

1b Voltage

Voltage supplied to the door frame MUST match voltage of the solenoid.

1c Before beginning this step, determine which type of wiring option will be used, and follow the corresponding instructions:

Concealed Wiring: see Figure 3 on page 3.

a. Prepare the frame per the proper template on page 4. Be sure all the holes are dimensioned correctly before drilling and tapping.
b. Assemble the conduit connector provided to the flexible conduit, then attach to the hole in the mounting plate.
c. Secure the mounting plate to the frame with the screws provided.

⚠ WARNING ⚠

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.

Surface Wiring: see Figure 4 on page 3.

ⓘ **NOTE: Remove the knockout in the top of the cover.**

a. Prepare the frame per the proper template on page 4. Be sure all the holes are dimensioned correctly before drilling and tapping.
b. Secure the mounting plate to the frame with the screws provided.
c. Attach the surface run ½" EMT conduit to the hole in the bracket on the mounting plate. Be sure the conduit is securely attached to the bracket.

1d Wiring Connections

Make the wiring connections at this time. Connect the two black wires to the input voltage (polarity is not important). The green wire MUST be connected to an earth ground (see Figures 3 & 4 on page 3).

1e Spacer/Arm

Place the spacer on the closer shaft, slide the arm onto the closer shaft, and secure it with the arm shaft screw (see Figure 1 on page 3).

1f Track Roller

Insert the track roller into the track, and end caps into both ends of the track. Place track plugs in the track where needed. Using the fasteners provided, mount the track on the door per the template on page 4.

1g Set Screw

Loosen the set screw in the end of the arm, open the door approximately 30°, pull the arm over the top of the door and connect to the track roller. Tighten the set screw firmly.

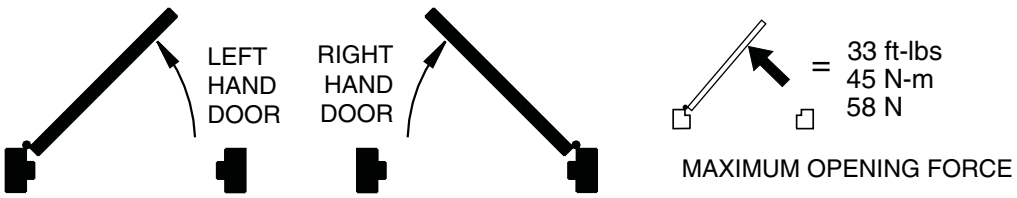
1h Electric Checkout

Regulate the closer and perform an electrical checkout, as instructed on page 2, before installing the closer cover.

1i Disengage the Swing Free Arm

To disengage the swing-free action of the arm, insert the locking screw (stored in the tube portion of the arm) into the shaft end of the arm, and tighten securely.

HOW TO TELL HAND OF DOOR:



Customer Service

1-877-671-7011 www.allegion.com/us

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18762 Rev. 06/16-n

2 Regulation Instructions

See Figure 2 on the opposite page for regulating screw location, door control diagram & spring power adjustment

2a Spring Power Adjustment

DO NOT ALLOW THE DOOR TO SLAM INTO THE FRAME. The spring power should be adjusted **only** if more power is needed to close the door. Turning the spring adjustment 5⁄32" Allen Wrench clockwise will increase the spring power. Maximum adjustment is six (6) turns.

2b Regulation

A "normal" closing time from a 90° position is five (5) to seven (7) seconds, equally divided between the **MAIN** and **LATCH SPEED**. If adjustments are needed, use 3⁄32" Allen Wrench. To adjust the **MAIN SPEED**, turn the regulating screw clockwise to slow the door speed, or counterclockwise to increase the door speed. **LATCH SPEED** is adjusted the same way. When adjusting the **BACKCHECK**, turn the regulating screw clockwise to increase the amount of force, or counterclockwise to reduce the amount of force. **DO NOT USE THE ABRUPT BACKCHECK SETTING OR EXPECT THE CLOSER TO ACT AS A STOP!**

⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions, call LCN at 877-671-7011

3 Electrical Checkout

After completion of installation & wiring, and with the unit properly powered, perform the following tests:

3a Hold Open

With power on, open the door any position and release. The door should remain in the hold-open position within 10°. For a bypass model to hold open, the door must be opened beyond the degree of the door swing indicated on the label.

3b Door

If the door does not remain in the hold open position, push the on/off switch. Open the door again. If the shaft end of the arm still does not hold open, verify the proper voltage input at the solenoid leads.

3c Power Release

Turn the power off. The shaft end of the arm should rotate and pick up the rest of the arm, closing the door completely. Push the on/off switch again to restore the power.

3d Put on Closer Cover

After the electrical checkout is complete, fit the closer cover onto the closer and insert cover screws in proper locations. Hold the cover firmly against the mounting plate while tightening the cover screws securely.

3e Rechecking the System

The system should be checked at regular intervals. It is recommended that steps 3a-3c be repeated every 90 days.

4 Electrical Data for Door Holder Solenoid

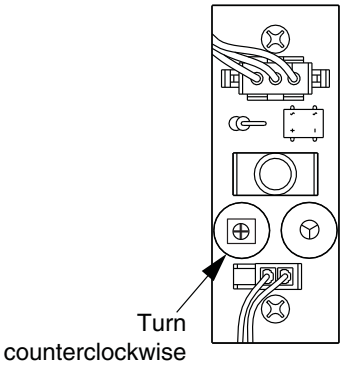
24V AC-DC Nominal +10% - 15% @ 0.075 Amp. Max.
120V AC-DC Nominal +10% - 15% @ 0.030 Amp. Max.

24 V Hold Open Force Adjustment

If the door is hard to pull out of the hold open position, adjust as shown.

IMPORTANT

The closer leaves the factory set at a maximum holding force. The holding force may be decreased and increased again, but it cannot be increased beyond the original setting.



Turn counterclockwise to decrease the holding force

Figure 1

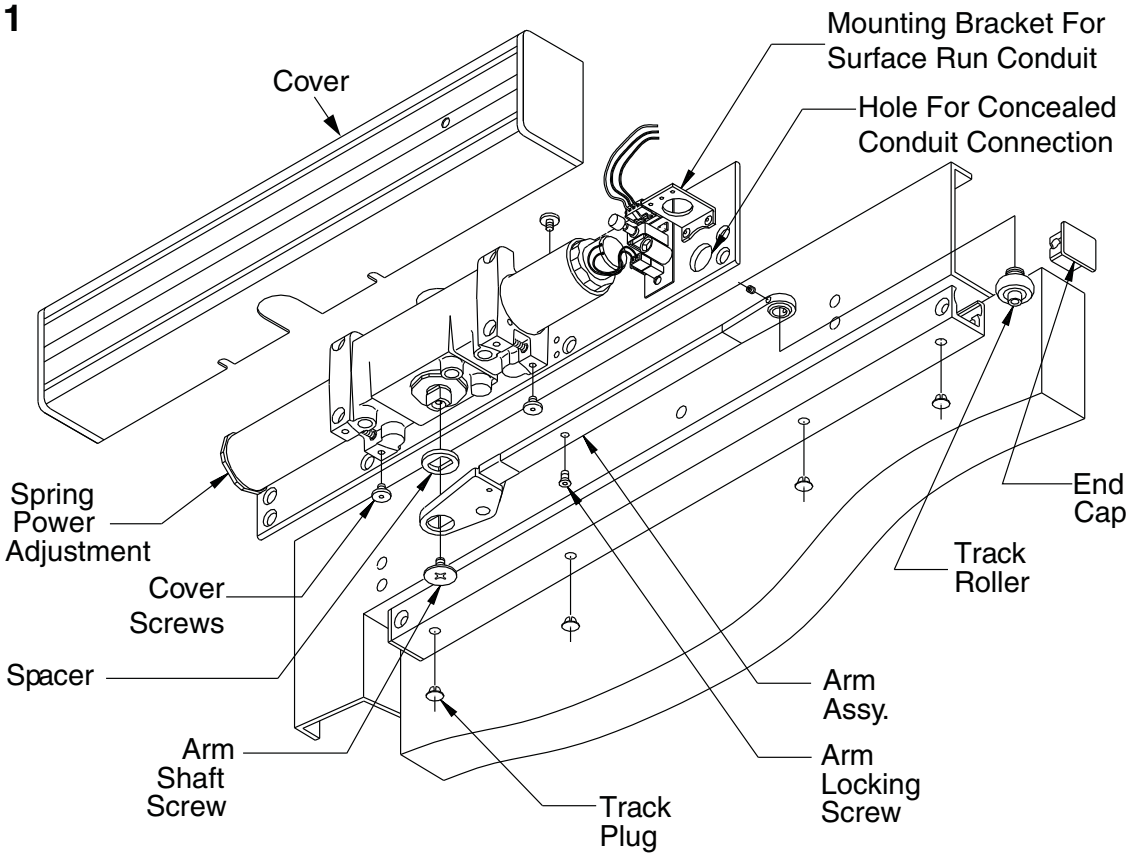
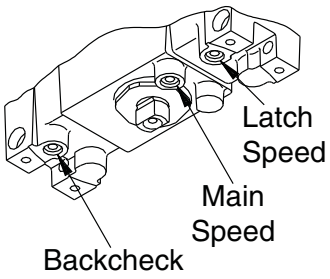
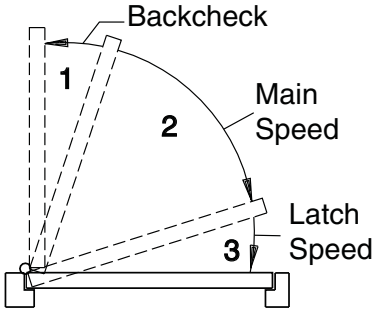
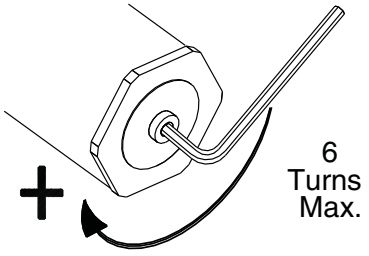


Figure 2







To Increase Closing Power

Figure 3

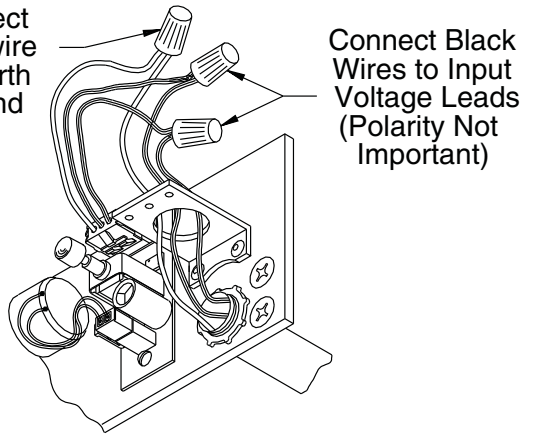
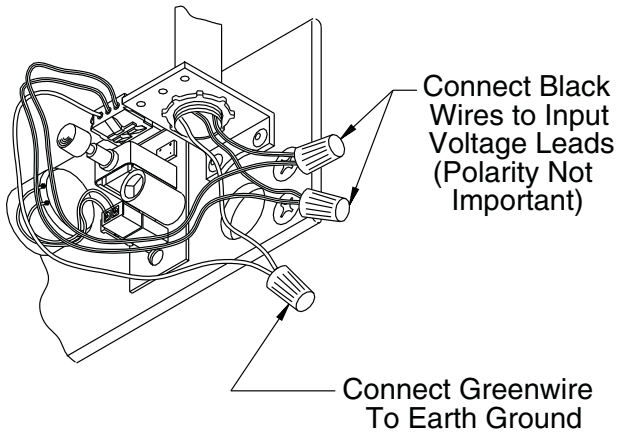
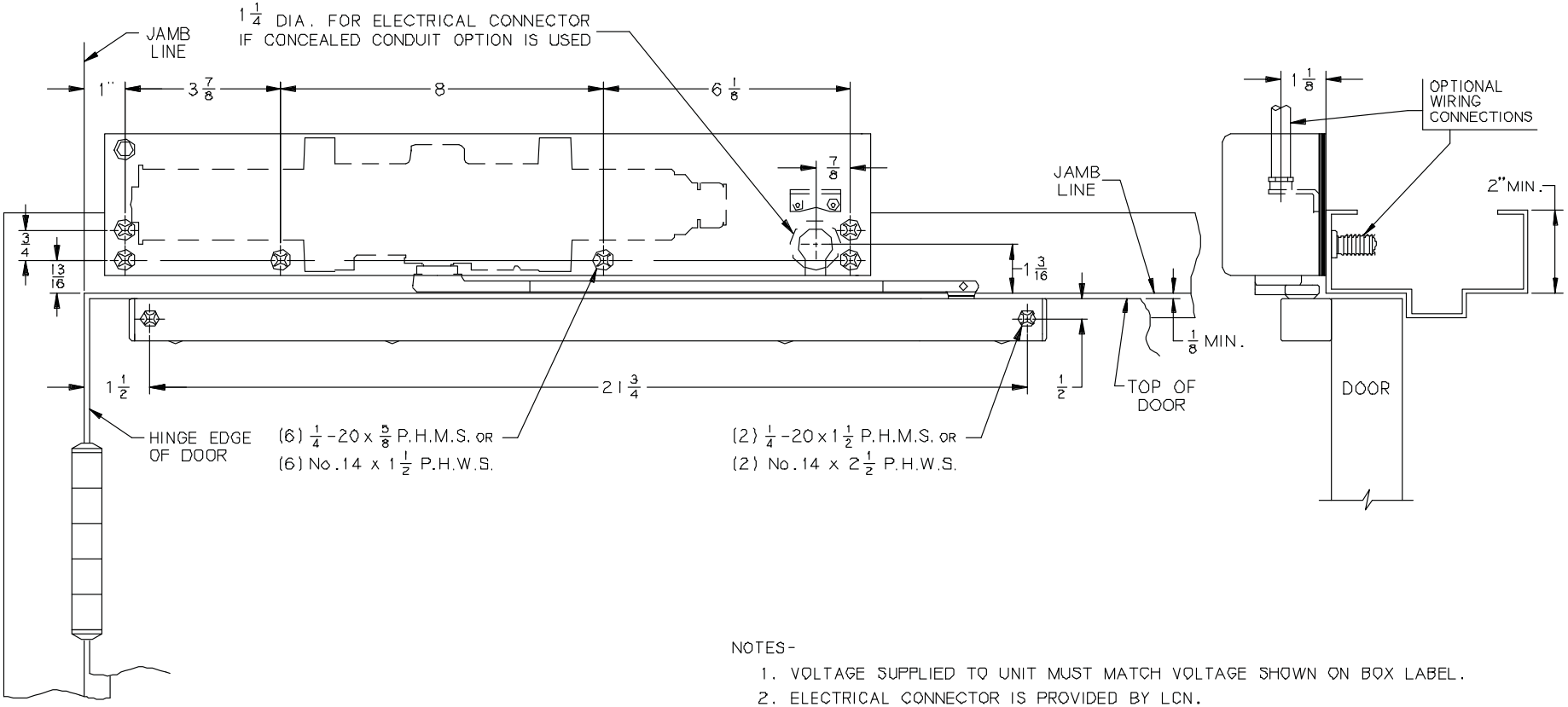


Figure 4



4310 ME

4314 ME } HOLD OPEN ANY POINT TO 160° } HOLD OPEN BYPASS 80° OR 140°	
AUXILIARY STOP RECOMMENDED	
RIGHT HAND DOOR AND CLOSER SHOWN, LEFT HAND OPPOSITE	12/96



NOTES-

1. VOLTAGE SUPPLIED TO UNIT MUST MATCH VOLTAGE SHOWN ON BOX LABEL.
2. ELECTRICAL CONNECTOR IS PROVIDED BY LCN.
3. IF DOOR IS HUNG ON PIVOTS, LOCATE CLOSER AND TRACK FROM CENTERLINE OF PIVOT.
4. IF DOOR IS HUNG ON SWING CLEAR HINGES, CONSULT FACTORY.
5. FLOOR OR WALL STOPS SHOULD BE USED.
6. FOR ADDITIONAL INFORMATION ON RECOMMENDED USE OF THIS UNIT CONSULT NFPA-72E PAMPHLET.
7. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.

INCH	1/8	1/4	1/2	5/8	3/4	13/16	7/8	1	1 1/8
M.M.	3	6	13	16	19	21	22	25	29

INCH	1 3/16	1 1/4	1 1/2	2	2 1/2	3 7/8	6 1/8	8	21 3/4
M.M.	30	32	38	51	64	98	156	203	553

LCN®

29285

8310-806K
Remote Key Switch

LCN®

Installation Instructions

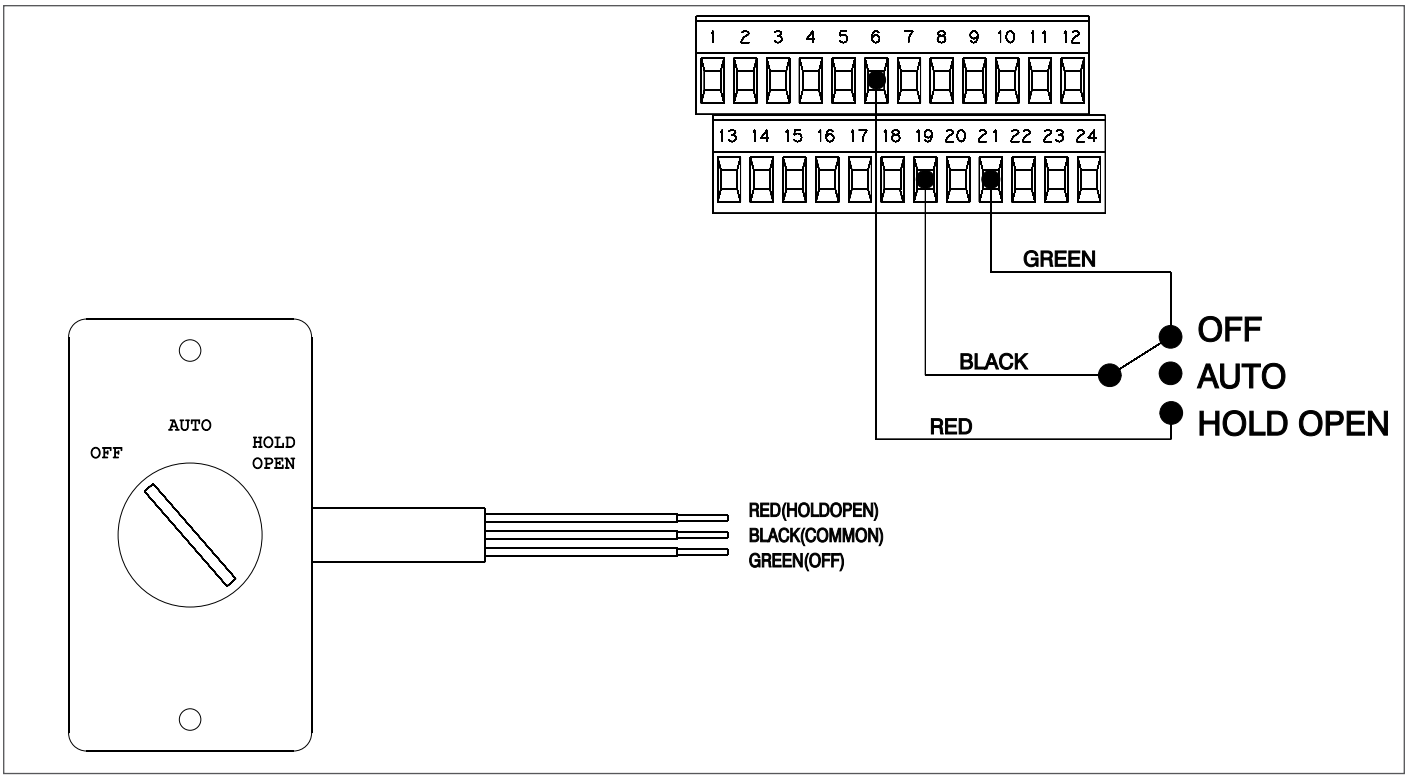
The 8310-806K allows the Electric Auto-Equalizer to be set to one of three modes.

- OFF - the operator will not respond to any input signals.
- AUTO - the operator will respond to input signals and open the door.
- HOLD OPEN - the operator will open the door to 90° and remain there until the key is turned to another position.

ⓘ **NOTE: the key can be removed in any position.**

To install:

1a	Use stick-on template (provided) and place at desired position. Drill the (2) .116” dia. holes and the (1) 1” dia. hole as shown.
1b	Route the 6’ wire cable to the operator.
1c	Connect the green wire to terminal 21.
1d	Connect the black wire to terminal 19.
1e	Connect the red wire to terminal 6.
1f	Use the key to put the operator in the desired mode.



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29285 Rev. 04/14-c

28990

4031 CUSH

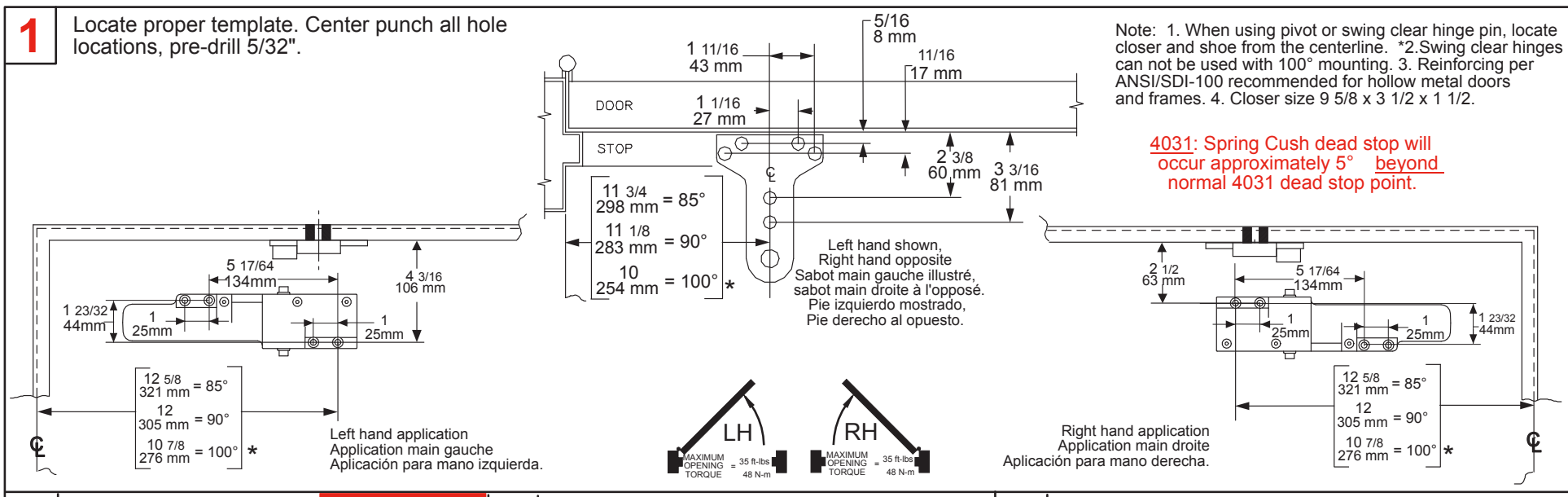
LCN®

85°, 90°, 100° Template, Push Side Mounting

Installation Instructions

1

Locate proper template. Center punch all hole locations, pre-drill 5/32".



Note: 1. When using pivot or swing clear hinge pin, locate closer and shoe from the centerline. *2.Swing clear hinges can not be used with 100° mounting. 3. Reinforcing per ANSI/SDI-100 recommended for hollow metal doors and frames. 4. Closer size 9 5/8 x 3 1/2 x 1 1/2.

4031: Spring Cush dead stop will occur approximately 5° beyond normal 4031 dead stop point.

2

Determine door width, adjust spring power, turn to match chart.

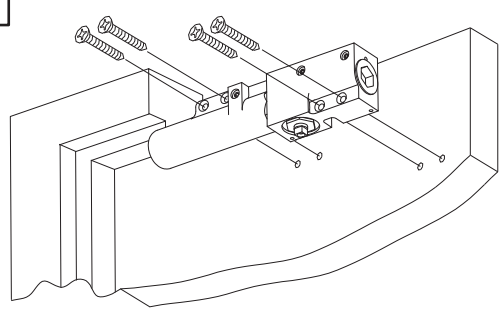
	4031
	♿ - 6
30"- 750mm	- 6
32"- 815mm	-4
36"- 915mm	0
42"- 1050mm	+ 6

⚠CAUTION

IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

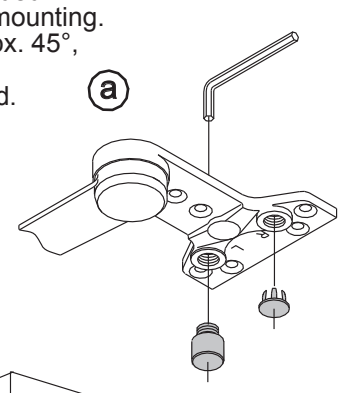
3

Using screws provided, secure closer to door.



4

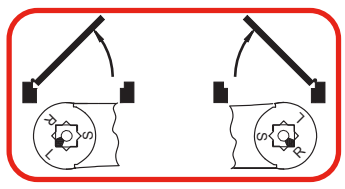
ⓐ Shoe must be "handed" to match door before mounting.
ⓑ Open door to approx. 45°, attach arm to frame with fasteners provided.

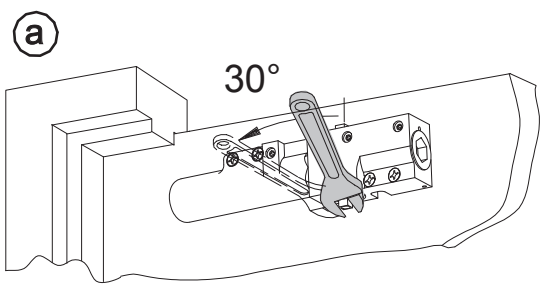


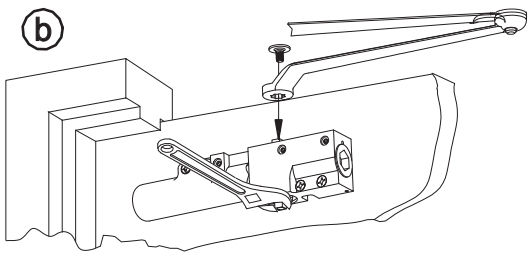
5

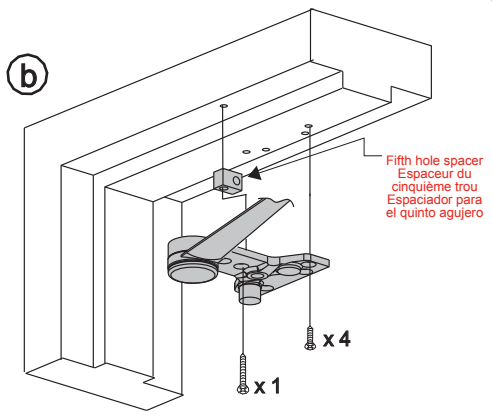
ⓐ Pre-load closer to 30°, as shown.

ⓑ Attach arm to closer, with provided fastener.









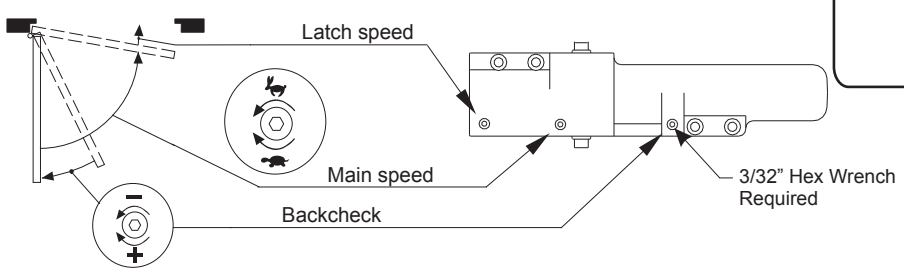
6

If necessary, adjust closer.

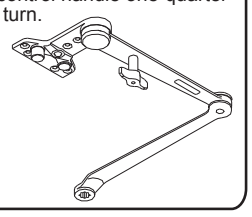
⚠CAUTION

OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

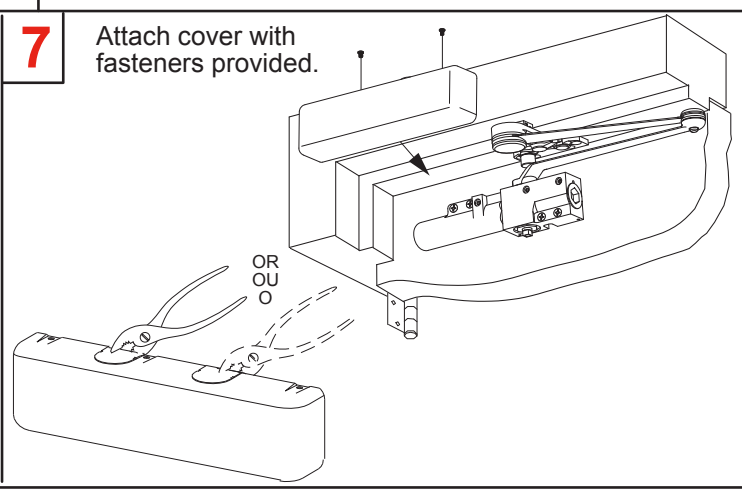


I HOLD OPEN ARM: To engage or disengage hold open feature, turn control handle one-quarter (1/4) turn.



7

Attach cover with fasteners provided.



4031 Instructions Cush et gabarit de 85°-90°-100° pour une installation sur le côté à pousser.

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percezdes trous de 5/32 po.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau

3 Fixez le ferme-porte sur la porteavec les attaches fournies.

4 ⓐ La main de la console doit être adaptée à celle de la porte avant l'installion.

ⓑ Ouvrez la porte à environ 45°, fixez le bras au cadre à l'aide des attaches fournies.

5 ⓐ Montez le bras sur la tige à 30° du ferme-porte, comme sur l'illustration.

ⓑ Fixez l'assemblage du bras au ferme-porte à l'aide des vis fournies.

6 Au besoin, réglez
vitesse de verrouillage
vitesse de fermeture
résistance d'ouverture

7 Fixez le boîtier avec les attaches fournies.

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

I BRAS DE RETENUE: Pour engager ou désengager le mécanisme de retenue, tournez la manette de contrôle d'un quart (1/4) de tour.

⚠DANGER

Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877 - 671 - 7011

⚠DANGER

UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4031 Instrucciones CUSH para plantilla 85°-90°-100° con montaje del lado del empuje.

1 Localice la plantilla apropiada. Marque el centro de todos los agujeros. Barrene agujeros de 5/32".

2 Determine la anchura de la puerta. Ajuste la fuerza del resorte según lo indicado en el gráfico.

3 Sujeta el cerrador a la puerta con los tornillos ya incluidos.

4 ⓐ Debe de hacerse coincidir el lado de la zapata con la puerta antes de montarla.

ⓑAbra la puerta hasta aprox. 45°, sujete el brazo al bastidor con los sujetadores ya incluidos.

5 ⓐ Monte el brazo en el eje a 30° del cerrador, tal como se muestra.

ⓑSujete el ensamblaje del brazo al cerrador con el tornillo piñión ya incluido.

6 Ajusta si es necesita
velocidad de seguro
velocidad principal
resistencia de apertura

7 Coloca la tapa con los sujetadores ya incluidos.

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

I BRAZO DE RETENCIÓN: Para embragar o desembragar la característica de retención, dar un cuarto de vuelta (1/4) al cabo.

⚠ADVERTENCIA

UNA INSTALACIÓN O UN AJUSTE INCORRECTOS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL 877 - 671 - 7011

⚠ADVERTENCIA

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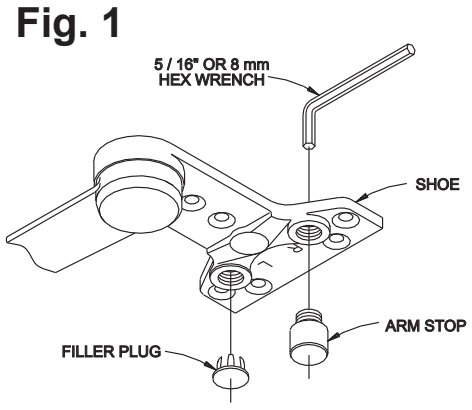
Fig. 1



Both Cush and H.O. Cush shoes must be "handed" to match door BEFORE mounting. See Fig. 1.

For Left Hand doors: All shoes are shipped assembled for left hand doors. Insert 5/16" (8mm) Hex wrench into arm stop and turn counter - clockwise to seat stop as tightly as possible.
For Right Hand doors: (see illustration) Push filler plug out of shoe. Using a 5/16" (8mm) Hex wrench, turn arm stop clockwise to remove from shoe. Thread arm stop into hole marked "R". Turn wrench counter - clockwise, seating stop as tightly as possible. Insert filler plug into other hole.

La main des sabots Cush ainsi que celle des sabots Cush avec retenue doit être adaptée à cette de la porte AVANT l'installation. Voir Fig. 1.

Portes main gauche: Tous les sabots sont expédiés assemblés pour main gauche. Insérez une clé hexagonale 5/16 ou 8mm dans la butée du bras et tournez en sens inverse des aiguilles d'une montre pour assurer une assise de butée solide.
Portes main droite: (voir l'illustration). Sortez le bouchon du sabot.
À l'aide d'une clé hexagonale 5/16 ou 8mm, tournez dans le sens des aiguilles d'une montre pour enlever le sabot. En alignant bien les filets, insérez la butée du bras dans le trou "R". Tournez la clé en sens inverse des aiguilles d'une montre, pour assurer une assise de butée solide. Insérez le bouchon dans l'autre trou.

Debe de hacerse coincidir el lado de la zapata Cush o de la zapata Cush con retención antes de montarla. Ver Figura 1.

Puertas mano izquierda: las zapatas se entregan todas en sambladas para puertas mano izquierda. Inserte una llave hex 5/16 (8 mm.) en el tope del brazo y gire en sentido contrario a las agujas del reloj para seguramente asentar el tope. Puertas mano derecha: (ver la ilustración). Quite el tapón de llenado de la zapata. Con una llave hez 5/16 (8 mm.), gire el tope del brazo en el sentido de las agujas del reloj para quitarlo de la zapata. Coloque el tope del brazo en el agujero marcado con "R", alineando bien las roscas. Gire la llave en el sentido contrario a las agujas del rejoj para asentar bien seguro el tope. Inserte el tapón de llenado en otro agujero.

INSTRUCTIONS FOR INSTALLING
CUSH SHOE SUPPORT

AFTER CUSH - N - STOP IS INSTALLED

1----Set Cush Shoe Support on top of Cush Shoe and hold against frame.
2---Assemble screw, washer, and nut as shown and tighten securely.
3---Using Shoe Support as Template drill & tap two 1/4-20 holes in frame.
4---Insert screw & tighten securely.

If frame is not wide enough to receive fifth screw, install Cush Shoe Support (available from Dealer) as shown below.

Should frames have 1/2" Blade Stop it is necessary to use 1/2" Blade stop Spacer (available from Dealer). Use both Blade Stop Spacer and Shoe Support wherever required.

Si le cadre a une butée de 1/2" il faut utiliser un espaceur de butée de 1/2" (offert chez le concessionnaire). Utilisez espaceur et support de sabot au besoin.

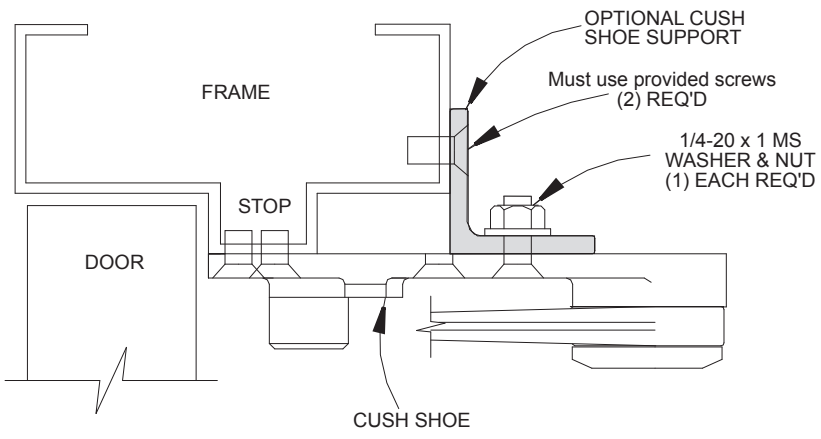
Si los bastidores tienen un tope de pala de 1/2", se debe utilizar un espaciador de tope de pala de 1/2" (disponible del representante). Utilice un espaciador de tope de pala y un soporte de zapata cuando sea necesario.

INSTRUCTIONS POUR INSTALLER
LE SUPPORT DU SABOT CUSH

APRÈS L'INSTALLATION DU CUSH - N - STOP

1----Mettez le support du sabot Cush sur le sabot Cush et appuyez-le contre le cadre.
2---Assemblez la vis, la rondelle et le boulon comme sur l'illustration et serrez fermement.
3---En utilisant le support du sabot comme gabarit, taraudez deux trous de 1/4-20 dans le cadre.
4---Insérez la vis et serrez fermement.

Si le cadre n'est pas assez large pour la cinquième vis, posez le support du sabot Cush (offert chez le concessionnaire) comme sur l'illustration.

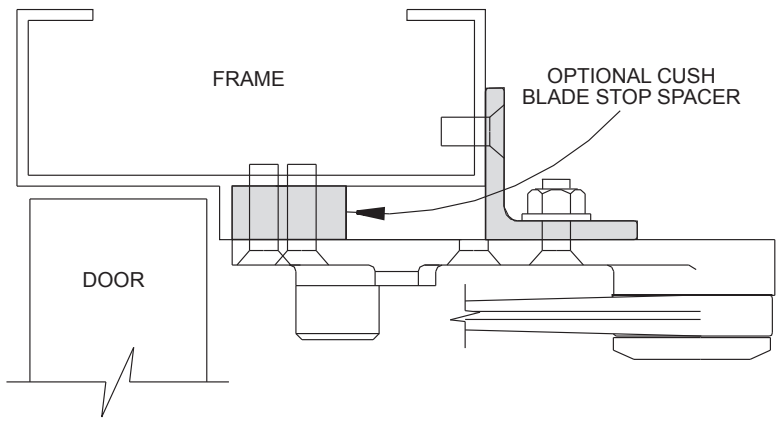


INSTRUCCIONES DE INSTALACIÓN
SOPORTE DE ZAPATA CUSH

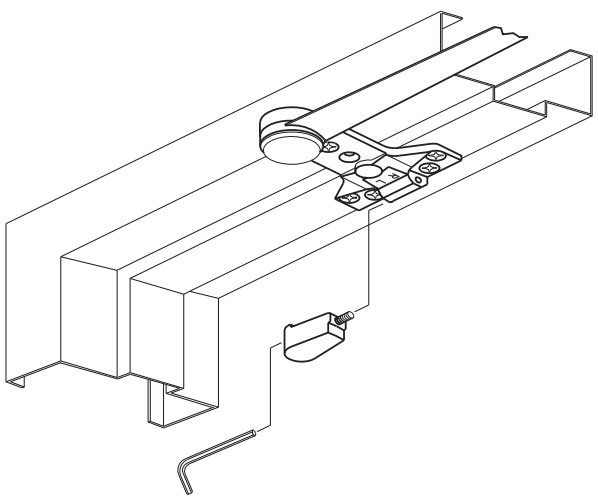
DESPUÉS DE HABER SIDO INSTALADO EL CUSH - N - STOP

1----Coloque el soporte de zapata Cush encima del zapata Cush y téngalo contra el bastidor.
2---Monte el tornillo, la arandela y la tuerca tal como se muestra y apriételos bien.
3---Usando el soporte de zapata como plantilla, taladre y rosque dos agujeros 1/4-20 en el bastidor.
4---Inserte el tornillo y apriételo bien.

Si el bastidor no es suficientemente ancho para recibir un quinto tornillo, instale un soporte de zapata Cush (disponible del representante) tal como se muestra abajo.



INSTRUCTIONS FOR INSTALLING
SPRING CUSH ARM



INSTALLATION
(Left hand shown; Right hand opposite)

1. LOCATING: See IMPORTANT INFORMATION below.
In new installations, use standard CUSH template. When replacing existing CUSH arm, use existing mounting holes.

2. INSTALLATION: Mount shoe on frame FIRST. After shoe is mounted, use a 5/32 or 4 mm hex wrench to install the contact block assembly as shown above. Make sure the screw is tightened securely into the shoe.

3. COMPLETING INSTALLATION: Complete the installation as directed for regular CUSH arms in the main instruction sheet.

IMPORTANT INFORMATION:

4031: Spring Cush dead stop will occur approximately 5° beyond normal 4031 dead stop point.

Backcheck: DO NOT reduce backcheck setting of door closer. Spring Cush arm function does not replace backcheck.

INSTRUCTIONS POUR INSTALLER
UN BRAS À RESSORT CUSH

INSTALLATION
(Main gauche illustrée; main droite à l'opposé)

1. SITUER: Voir RENSEIGNEMENTS IMPORTANTS. Pour une nouvelle installation, utilisez le gabarit CUSH standard. Pour remplacer un bras CUSH, utilisez les trous de montage déjà percés.

2. INSTALLATION: Montez le sabot sur le cadre EN PREMIER. Après avoir posé le sabot, utilisez une clé hexagonale 5/32 ou 4 mm pour installer l'assemblage comme sur l'illustration. Serrez la vis fermement dans le sabot.

3. TERMINER L'INSTALLATION: Terminer l'installation indiquée pour les bras CUSH sur la feuille d'instructions principale.

RENSEIGNEMENTS IMPORTANTS:
4031: L'arrêt du Cush à ressort se produira à environ 5° après celui du 4031 normal.
Résistance d'ouverture: NE PAS réduire la résistance d'ouverture du ferme-porte. La fonction du bras Cush à ressort ne remplace pas cette résistance.

INSTRUCCIONES DE INSTALACIÓN
DEL BRAZO DE RESORTE CUSH

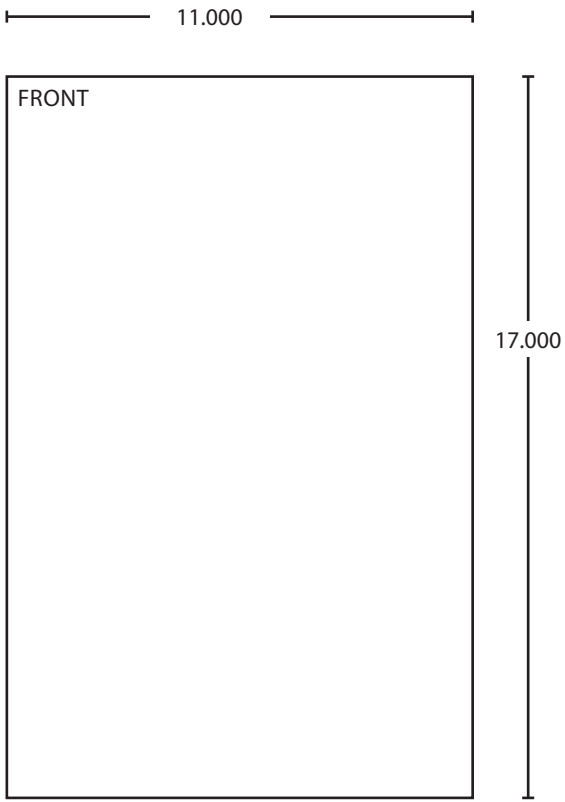
INSTALACIÓN
(A la izquierda: como se muestra; a la derecha: al opuesto)

1.LOCALIZACIÓN: Vea los DATOS IMPORTANTES abajo. Utilice la plantilla CUSH estándar en las nuevas instalaciones. Utilice los agujeros de montaje existentes cuando se reemplace un brazo CUSH existente.

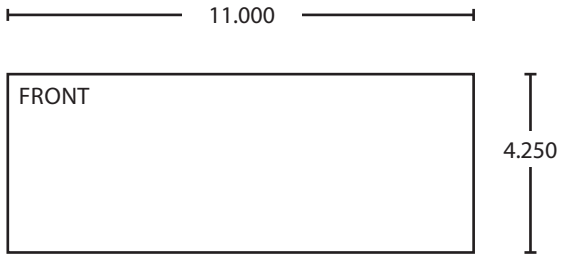
2. INSTALACIÓN: PRIMERO: Monte la zapata en el bastidor. Después de haber montado la zapata, utilice una llave de tuercas hexagonal 5/32 o 4 mm para instalar el ensamblaje de bloque de contacto como se muestra arriba. Asegúrese de apretar bien el tornillo en la zapata.

3. PARA COMPLETAR LA INSTALACIÓN: Complete la instalación como para los brazos CUSH regulares en la hoja de instrucciones principal.

DATOS IMPORTANTES:
4031: El paro en seco del resorte podrá ocurrir aproximadamente 5° después del punto del paro en seco 4031 normal.
Resistencia de apertura: NO reduzca el ajuste de resistencia de apertura del cerrador.
El funcionamiento del brazo de resorte Cush no reemplaza la resistencia de apertura.



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	N/A	N/A	N/A	043812	

Material
White Paper

Notes
1. printed two sides
2. printed black and PMS 485 (red)
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
E > Revised artwork

Edited By	Approved By	EC Number	Release Date
R. Byun	M. Sasso	043812	01-01-14

Title
4030 Series Cush Instruction Sheet

Creation Date	Number	Revision
04-27-10	28990	E

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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28988

4031

LCN®

180° Template, Push Side Mounting
Top Jamb

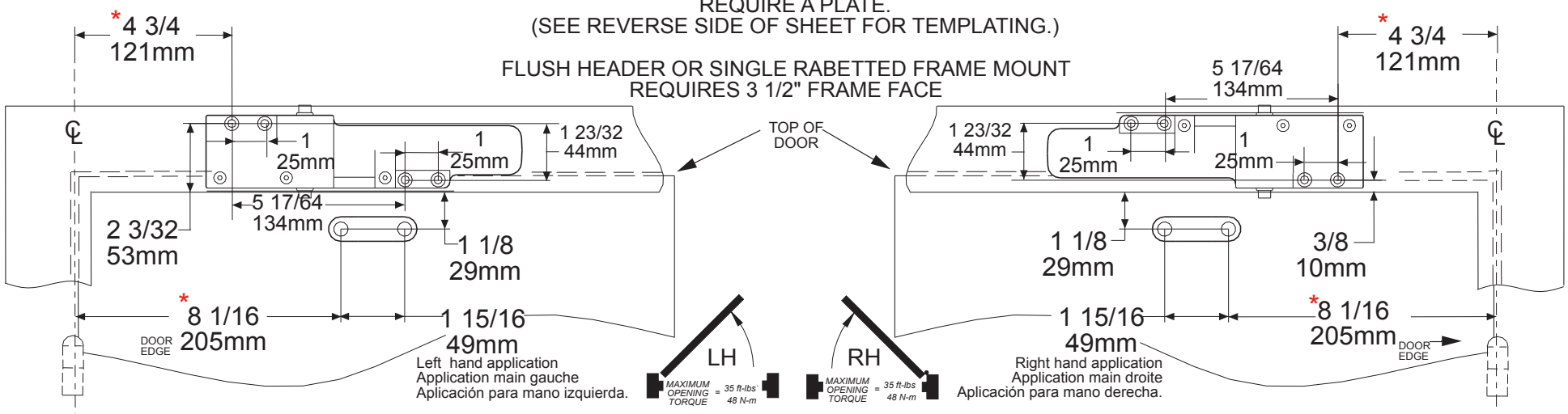
Installation Instructions

1 Locate proper template. Center punch all hole locations, pre-drill 5/32".

NOTE: MOST 4031 TOP JAMB INSTALLATIONS REQUIRE A PLATE.
(SEE REVERSE SIDE OF SHEET FOR TEMPLATING.)

FLUSH HEADER OR SINGLE RABETTED FRAME MOUNT REQUIRES 3 1/2" FRAME FACE

*** Locate closer & shoe from centerline of pivot or swing clear hinge pin when used.**

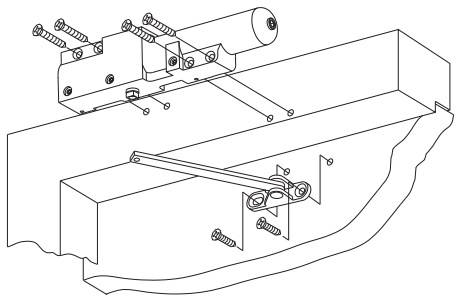


2 Determine door width, adjust spring power to match chart.

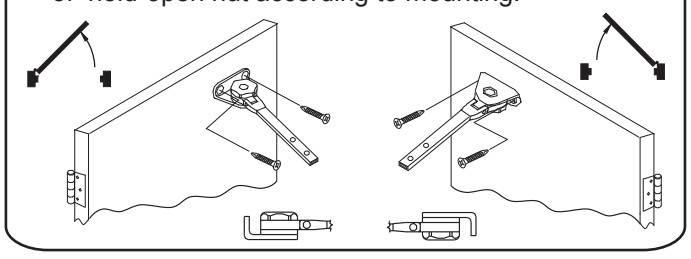
⚠CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT
877 - 671 - 7011

	4031
	♿ - 6
30"- 750mm	- 6
32"- 815mm	-4
36"- 915mm	0
42"- 1050mm	+ 6

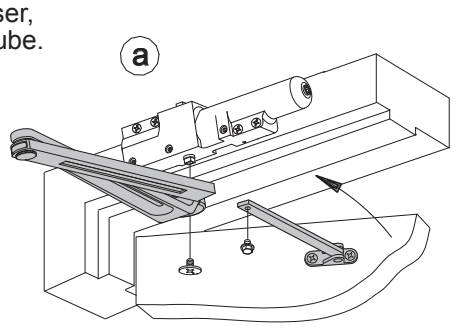
3 Secure closer and forearm with fasteners provided.

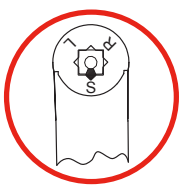


I Optional Hold-open arm. Identify direction of hold-open nut according to mounting.

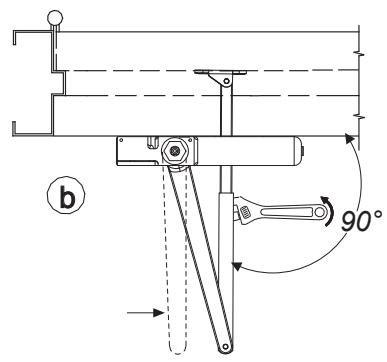


4 ⓐ Attach arm to closer, insert rod into arm tube.





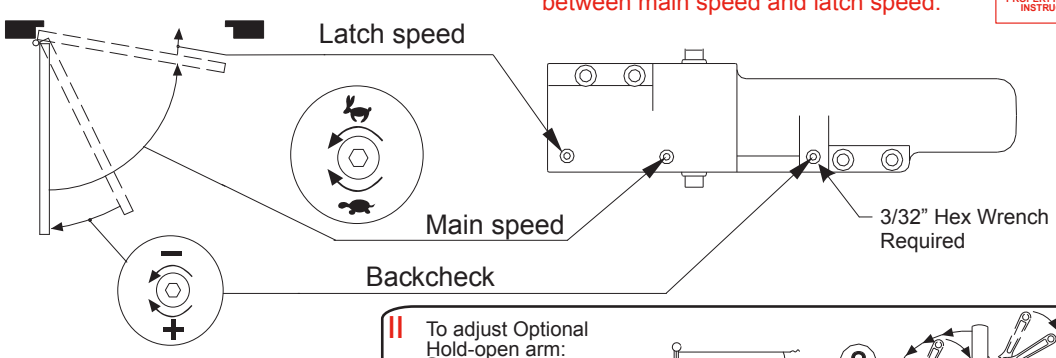
ⓑ Pre-load arm to 90°. Fasten with screws provided.



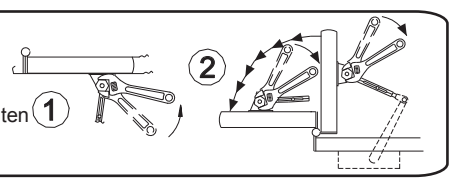
5 If necessary, adjust closer.

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

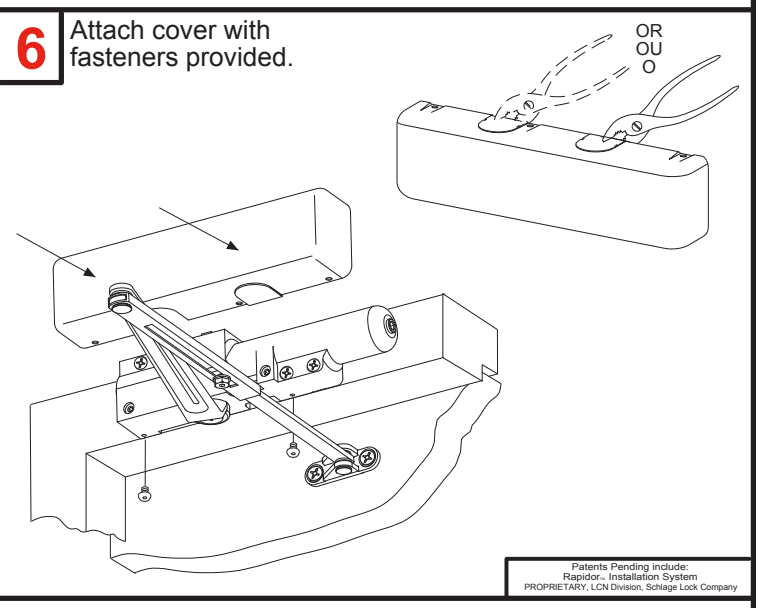
⚠CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



II To adjust Optional Hold-open arm:
① Loosen hold open nut.
② Open door 5° less than desired position and tighten hold open nut securely.



6 Attach cover with fasteners provided.



Patents Pending include:
Rapidor™ Installation System
PROPRIETARY, LCN Division, Schlage Lock Company

---

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percezdes trous de 5/32 po.

Note: La plupart des installations d'un 4031 sur le linteau requièrent une plaque. (Voir le gabarit à l'endos)

Une installation sur un cadre encastré ou biseauté nécessite une plaque frontale de 3 1/2".

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

3 Fixez le ferme-porte et l'avant-bras avec les attaches fournies.

I Bras de retenue optionnelle. Identifiez la direction du boulon de retenue selon l'ouverture de la porte.

4 ⓐ Attachez le bras au ferme-porte, insérez la tige dans le tube du bras.

ⓑ Préchargez le bras à 90°. Fixez-le avec les vis fournies.

5 Au besoin, réglez
vitesse de verrouillage
vitesse de fermeture
résistance d'ouverture

6 Fixez le boîtier avec les attaches fournies.

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

II Pour régler le bras de retenue optionnelle : 1. Desserrez la vis de retenue. 2. Ouvrez la porte 5° de moins que la position désirée et resserrez la vis.

⚠DANGER
Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le
877 - 671 - 7011

⚠DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4031

1 Localice la plantilla apropiada. Marque el centro de todos los agujeros. Barrene agujeros de 5/32".

Nota: La mayoría de las instalaciones 4031en la parte superior de la jamba necesitan una placa. (Ver al verso de la hoja para las plantillas)

El montaje sobre cabezal a ras o bastidor simple ranurado necesita una cara de bastidor de 3 ½".

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

3 Sujeta el cerrador y el antebrazo con los sujetadores ya incluidos.

I Brazo de retención opcional. Identifíca la dirección de la tuerca de retención según el montaje.

4 ⓐ Sujeta el brazo al cerrador, introduce la varilla en el tubo del brazo.

ⓑ Prearma el brazo a 90°. Sujétalo con el tornillo ya incluido.

5 Ajusta si es necesario.
velocidad de seguro
velocidad principal
resistencia de apertura

6 Coloca la tapa con los sujetadores ya incluidos.

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

II Para ajustar el brazo de retención opcional: 1. Afloja la tuerca de retención. 2. Abre la puerta a 5° de menos que la posición deseada y aprieta bien la tuerca de retención.

⚠ADVERTENCIA
UNA INSTALACIÓN O UN AJUSTE INCORRECTORS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL
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⚠ADVERTENCIA
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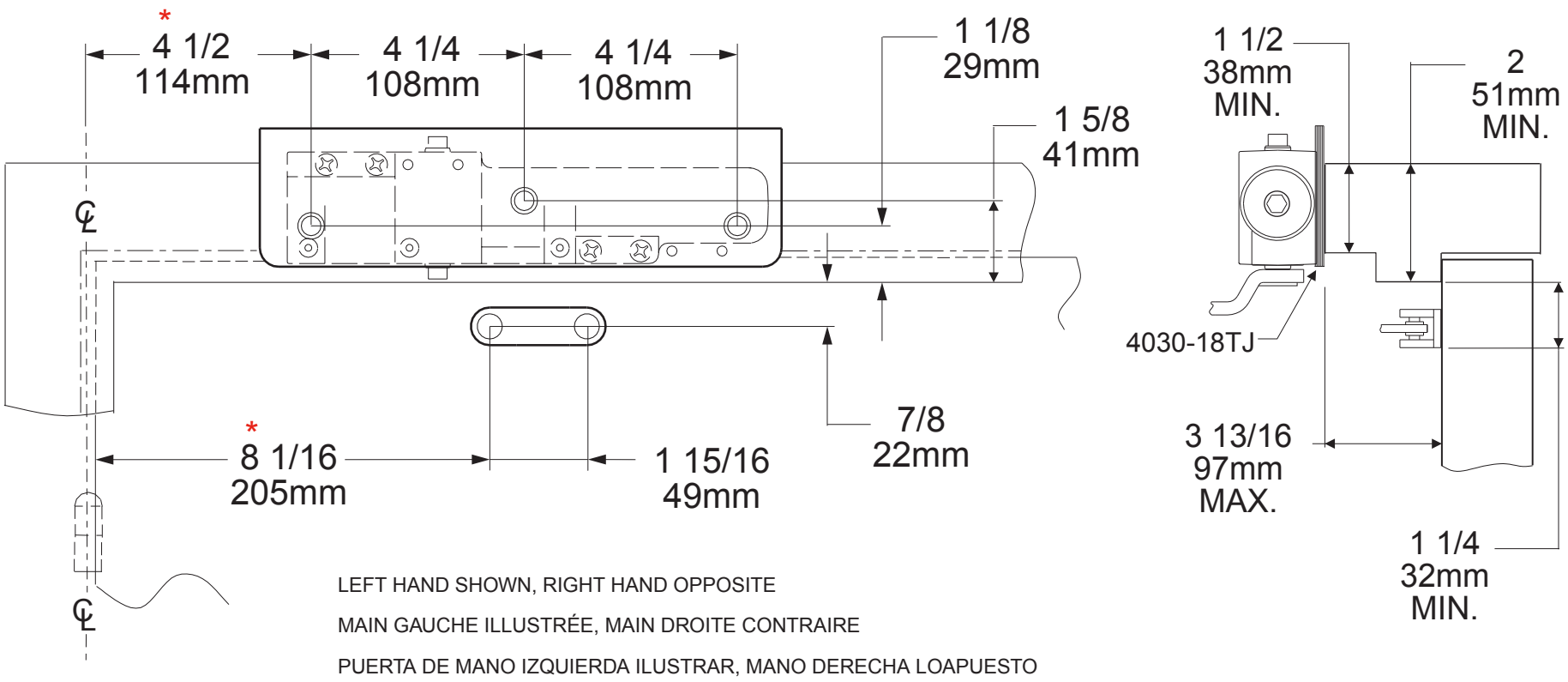
TOP JAMB MOUNTED ON 4030-18TJ ADAPTER PLATE

*** Locate drop plate & shoe from centerline of pivot or swing clear hinge pin when used.**



LEFT HAND SHOWN, RIGHT HAND OPPOSITE

MAIN GAUCHE ILLUSTRÉE, MAIN DROITE CONTRAIRE

PUERTA DE MANO IZQUIERDA ILUSTRAR, MANO DERECHA LOAPUESTO

Customer Service Servicio al cliente Service à la clientèle

1-877-671-7011 www.allegion.com/us

ALLEGION

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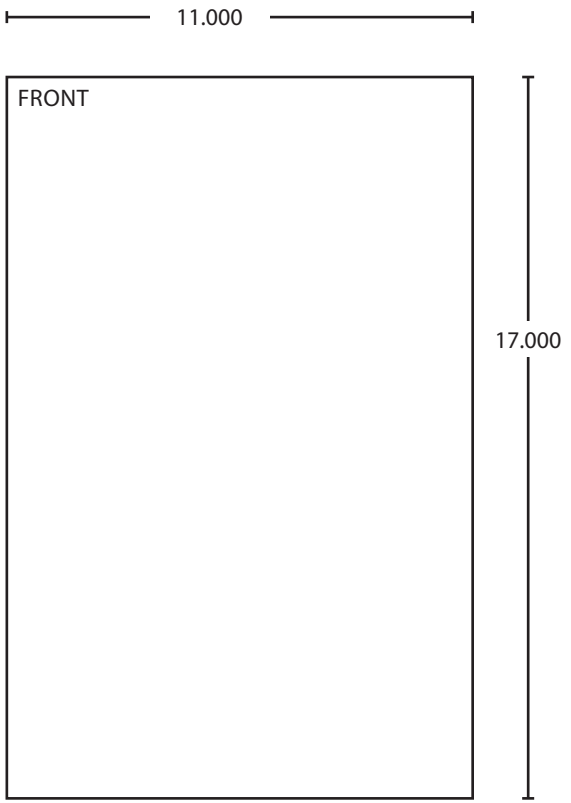
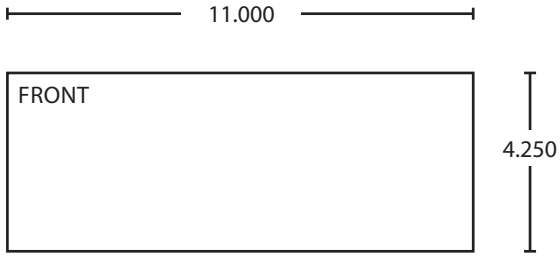


BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	N/A	046206			

Material
White Paper

Notes
1. printed two sides
2. printed black and PMS 485 (red)
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
C > Revised artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	046206	01-01-14

Title
4030 Series Push Side Instruction Sheet

Creation Date	Number	Revision
04-27-10	28988	C

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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25732

524 Series

LCN®

Installation Instructions
Instructions d'installation
Instrucciones de Instalación

Customer Service
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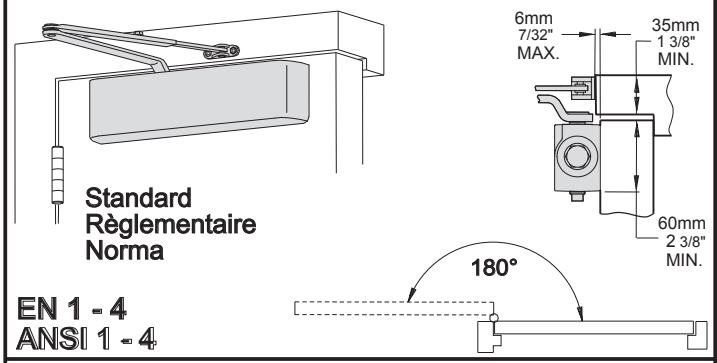
I Pull Side Mount
Montage Normal
Montaje En El Lado De Las Bisagras

(Fig. 1)

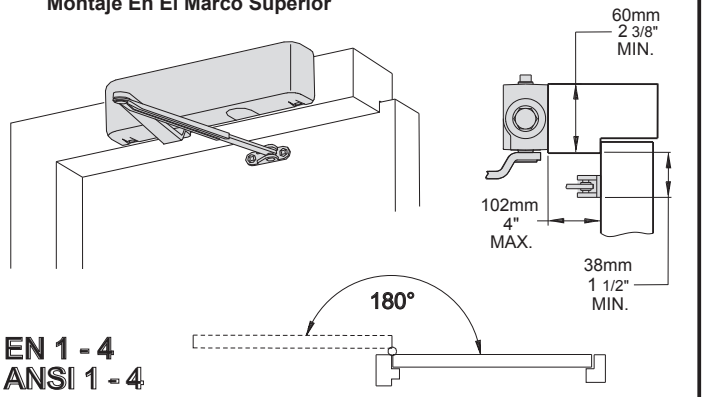


Standard
Règlementaire
Norma

EN 1 - 4
ANSI 1 - 4

II Top Jamb Mount
Montage Renversé
Montaje En El Marco Superior

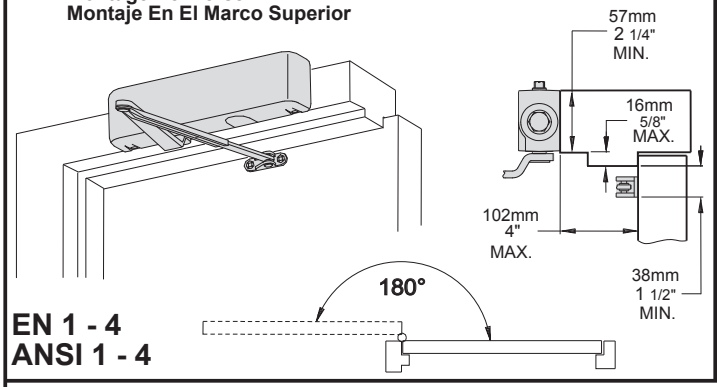
(Fig. 61)



EN 1 - 4
ANSI 1 - 4

III Top Jamb Mount
Montage Renversé
Montaje En El Marco Superior

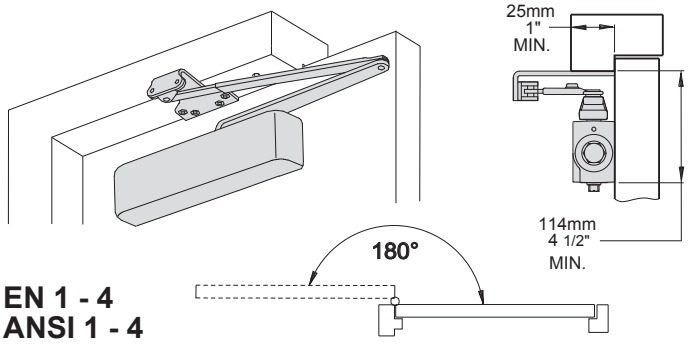
(Fig. 61)



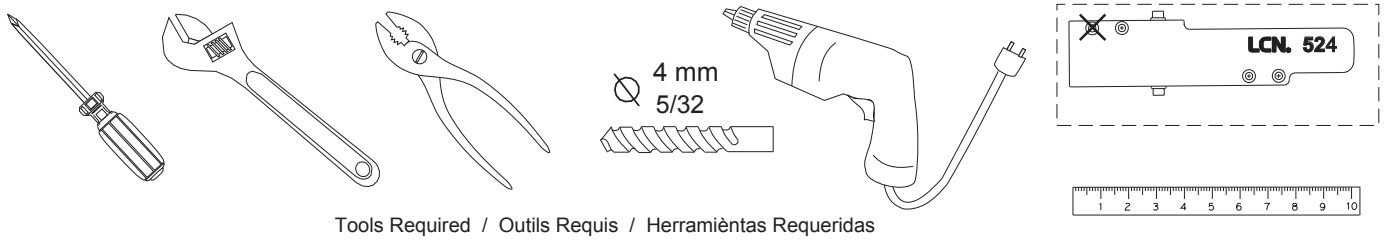
EN 1 - 4
ANSI 1 - 4

IV Push Side Mount - Parallel Arm
Montage Bras Parallele
Montaje En El Lado De Empuje

(Fig. 66)



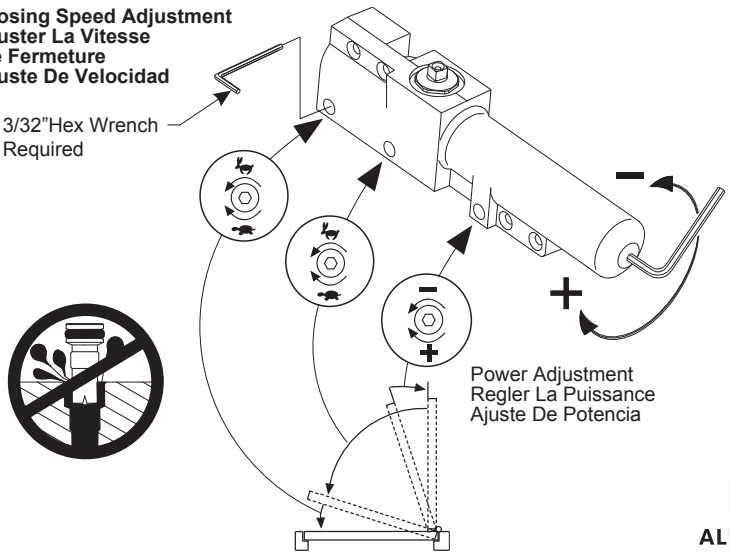
EN 1 - 4
ANSI 1 - 4

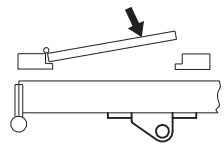


Tools Required / Outils Requis / Herramièntas Requeridas

Closing Speed Adjustment
Ajuster La Vitesse De Fermeture
Ajuste De Velocidad

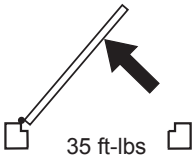
3/32"Hex Wrench Required





ALLEGION

Maximum Opening Force
Force D'ouverture Maximale
Abertura Resistencia Maximo



35 ft-lbs
= 48 N-m
62N

⚠ CAUTION

Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions, call LCN at 877 - 671 - 7011

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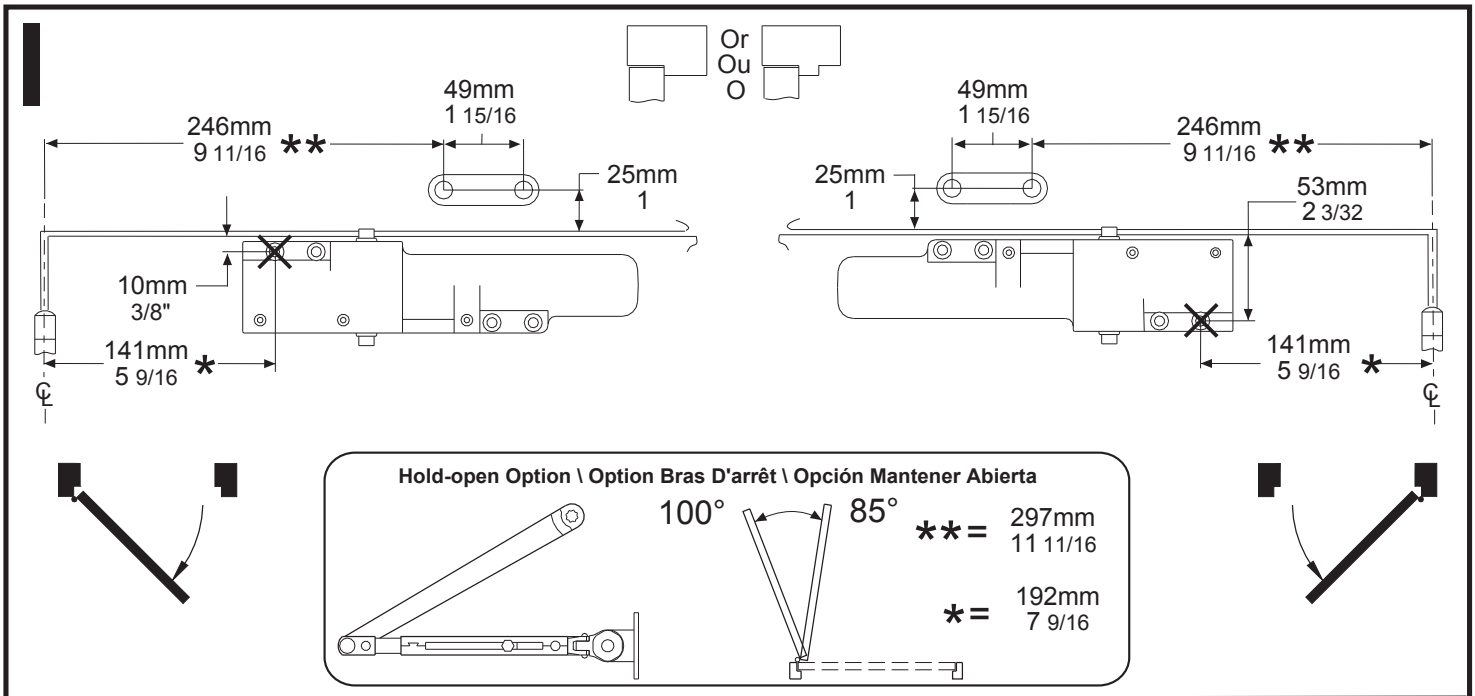
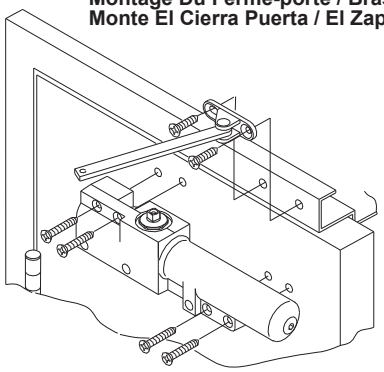


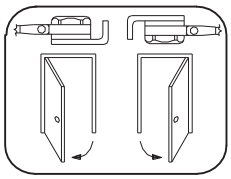
1.

?	
750mm -	- 6
850mm (32"- 34")	- 4
950mm (36")	0
1100mm (42")	+ 6

2.

Mount Door Closer / Rod & Shoe
Montage Du Ferme-porte / Bras Secondaire
Monte El Cierra Puerta / El Zapato

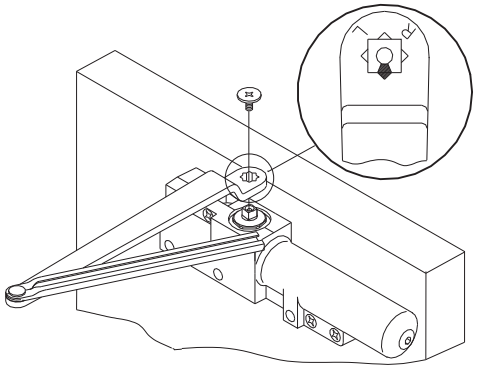




Hold-open Option
Option Bras D' Arrêt
Opción Mantener Abierta

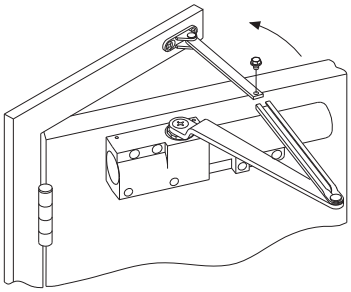
3.

Attach Arm, As Shown
Fixer Le Bras, Tel Qu'indiqué
Conecte El Brazo, Como Se Muestra

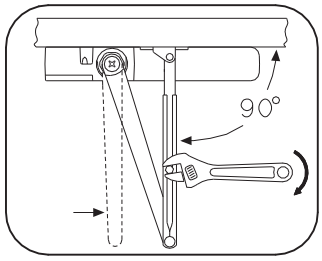


4.

Attach Arm And Rod & Shoe
Liaison Bras Principal Et Secondaire
Ensemble El Brazo Con La Varilla Y Zapata



Pre-load Arm
Regler Le Bras
Pre-cargue El Brazo



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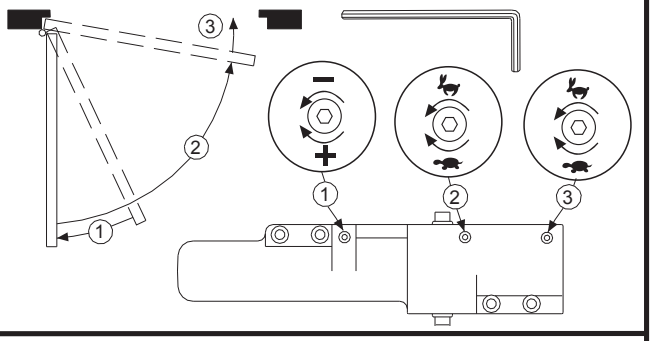
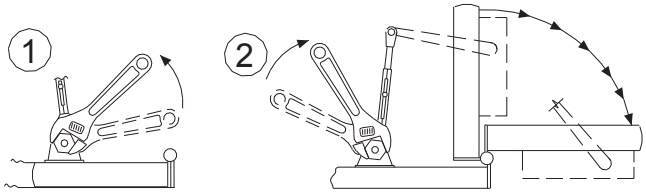


6.

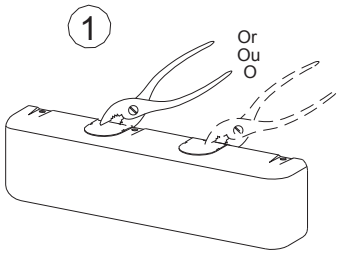
Hold-open Option
Option Bras D'arrêt
Opción Mantener Abierta

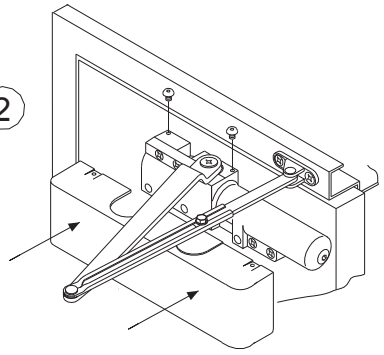


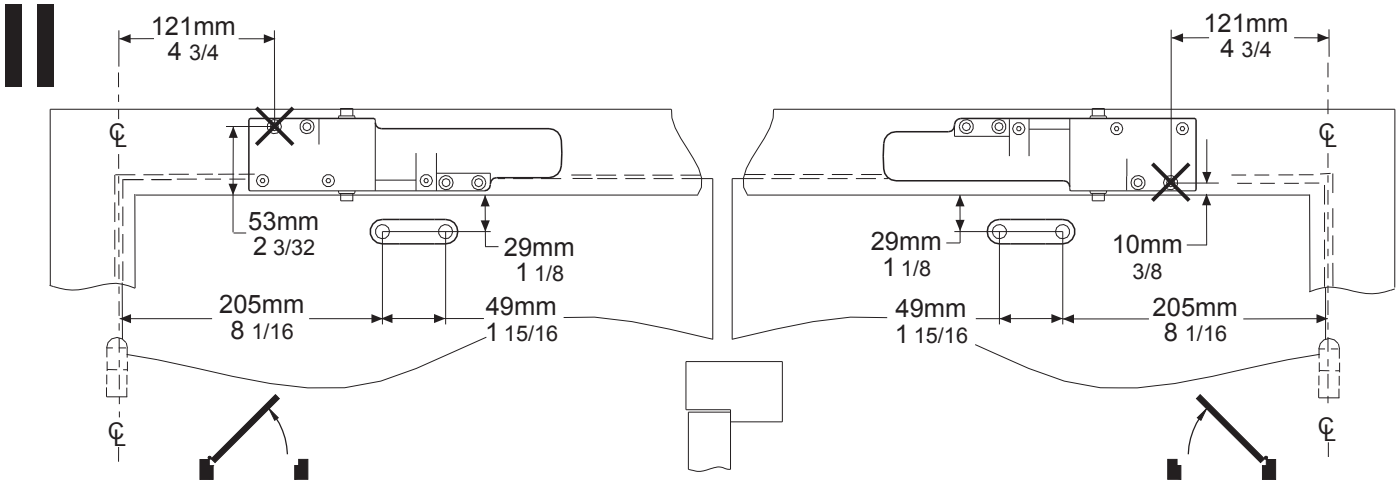
Adjust Hold Open Angle
Reglez L' Angle D' Arrêt
Ajuste Ángulo De Abertura

7.

Attach Cover
Fixer Le Cache
Conecte La Cubierta



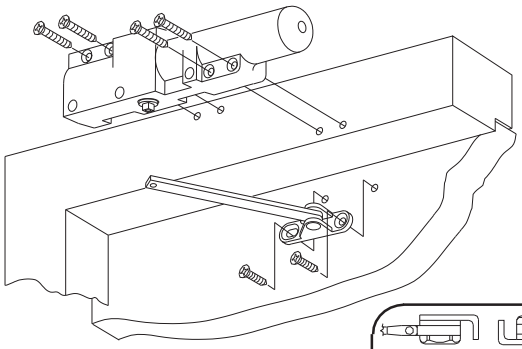




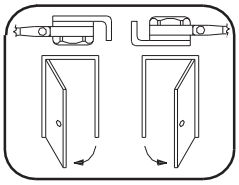
1.

?	
750mm -	- 6
850mm (32"- 34")	- 4
950mm (36")	0
1100mm (42")	+ 6

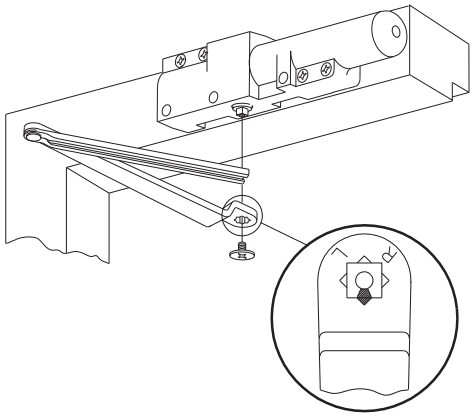
2. Mount Door Closer / Rod & Shoe
Montage Du Ferme-porte / Bras Secondaire
Monte El Cierra Puerta / El Zapato



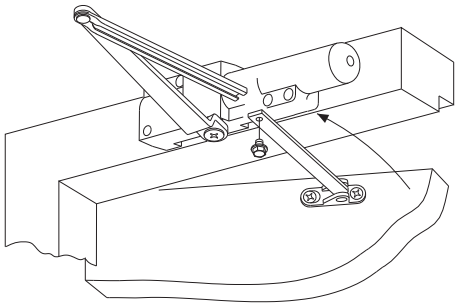
Hold-open Option
Option Bras D'arrêt
Opción Mantener Abierta



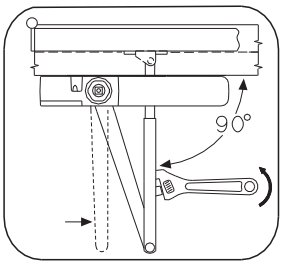
3. Attach Arm, As Shown
Fixer La Bras, Tel Qu'indiqué
Conecte El Brazo, Como Se Muestra



4. Attach Arm And Rod & Shoe
Liaison Bras Principal Et Secondaire
Ensamble El Brazo Con La Varilla Y El Zapata



Pre-load Arm
Regler La Bras
Pre-cargue El Brazo



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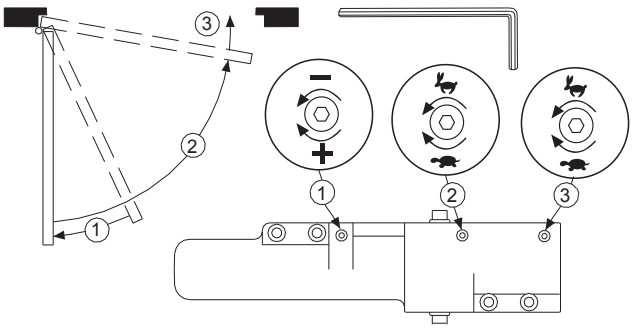
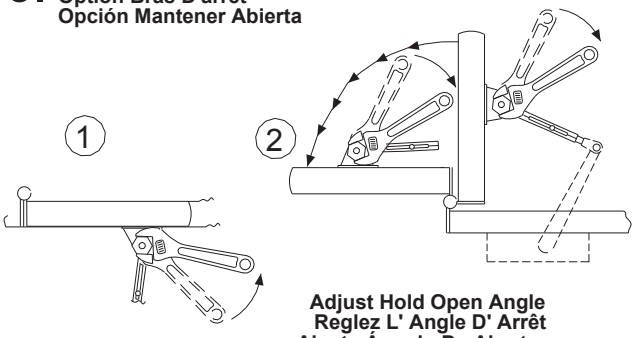
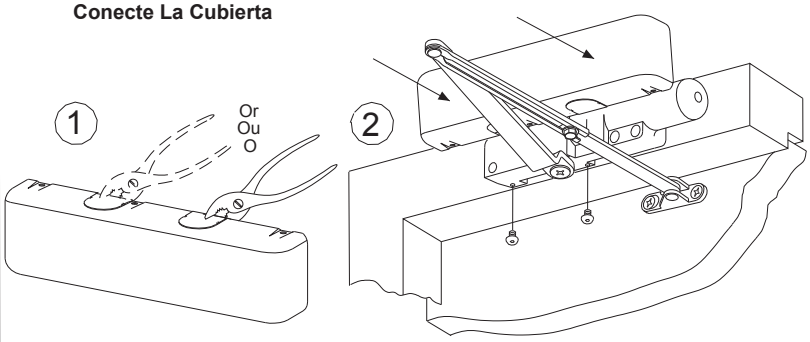


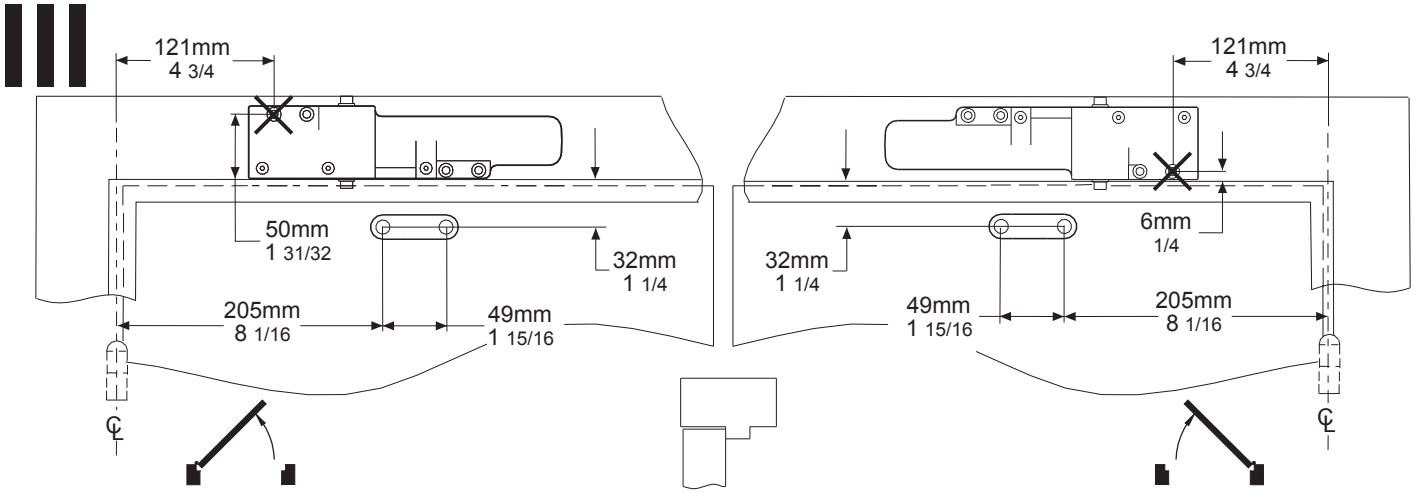
6. Hold-open Option
Option Bras D'arrêt
Opción Mantener Abierta



Adjust Hold Open Angle
Reglez L' Angle D' Arrêt
Ajuste Ángulo De Abertura

7. Attach Cover
Fixer Le Cache
Conecte La Cubierta

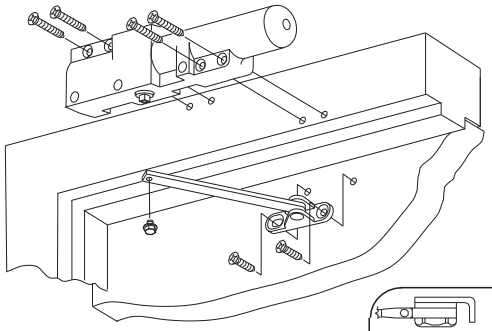


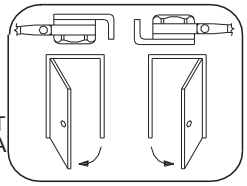


1.

?	
750mm -	- 6
850mm (32"- 34")	- 4
950mm (36")	0
1100mm (42")	+ 6

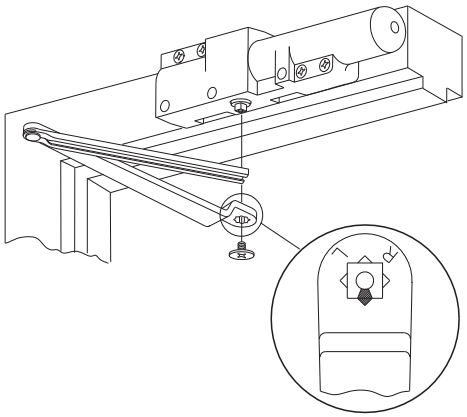
2. Mount Door Closer / Rod & Shoe
Montage Du Ferme-porte / Bras Secondaire
Monte El Cierra Puerta / El Zapato



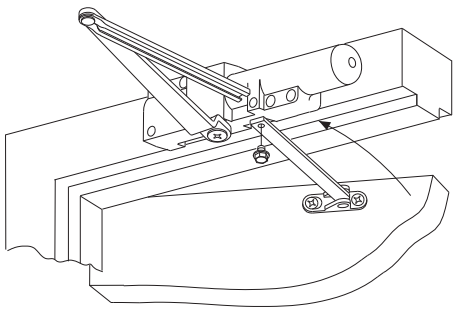


HOLD-OPEN OPTION
OPTION BRAS D'ARRÊT
OPCIÓN MANTENER ABIERTA

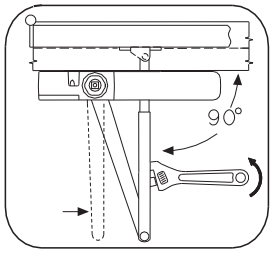
3. Attach Arm, As Shown
Fixer La Bras, Tel Qu'indiqué
Conecte El Brazo, Como Se Muestra



4. Attach Arm And Rod & Shoe
Liaison Bras Principal Et Secondaire
Ensamble El Brazo Con La Varilla Y El Zapata



Pre-load Arm
Regler La Bras
Pre-cargue El Brazo



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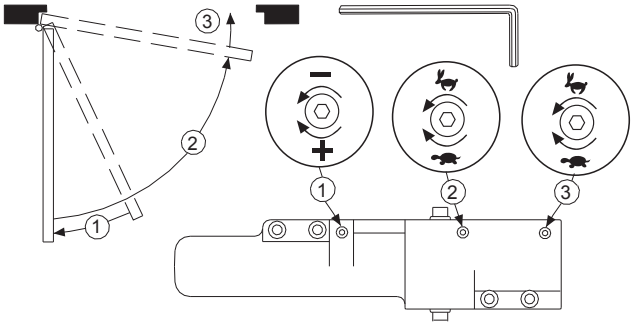
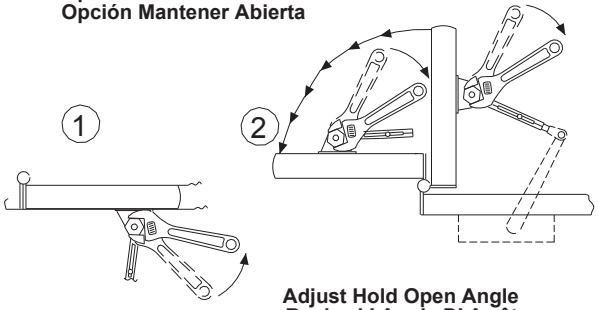
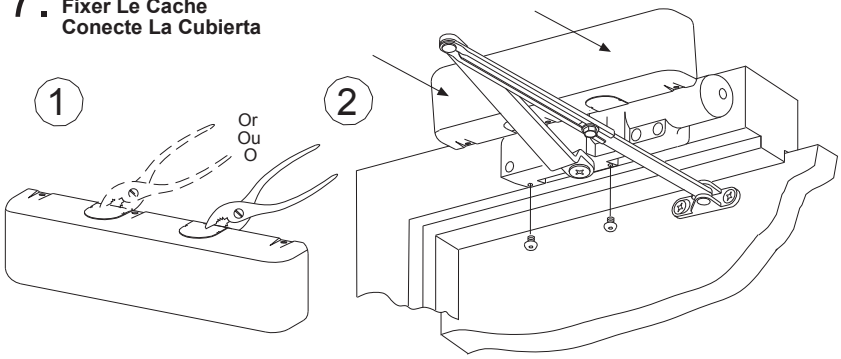


6. Hold-open Option
Option Bras D' Arrêt
Opción Mantener Abierta

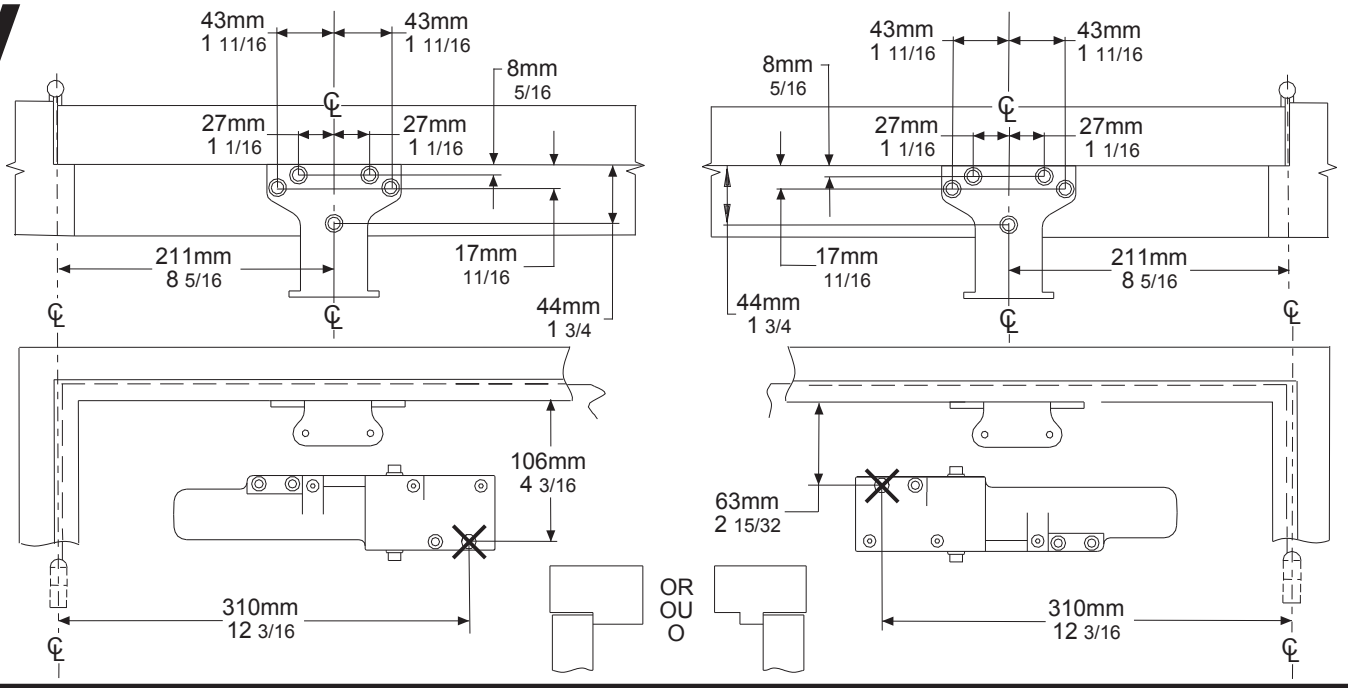


Adjust Hold Open Angle
Reglez L' Angle D' Arrêt
Ajuste Ángulo De Abertura

7. Attach Cover
Fixer Le Cache
Conecte La Cubierta



IV



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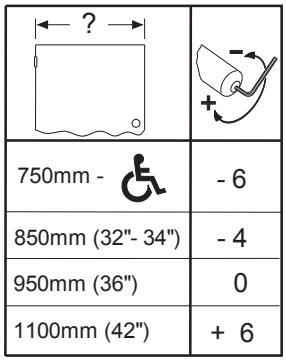
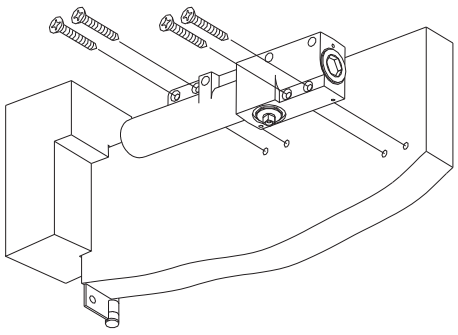
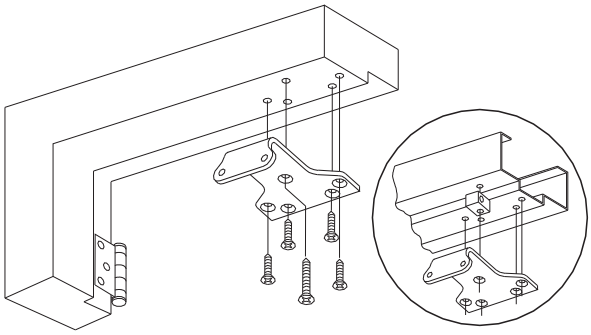


750mm -	- 6
850mm (32"- 34")	- 4
950mm (36")	0
1100mm (42")	+ 6

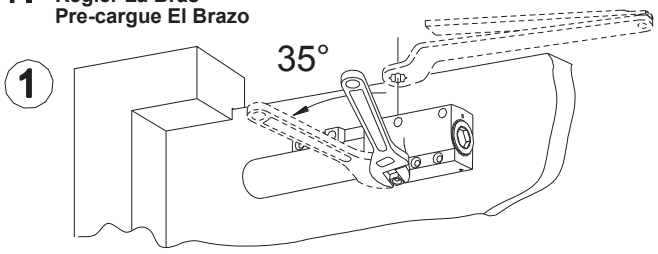
2. Mount Door Closer
Montage Du Ferme-porte
Monte El Cierra Puerta

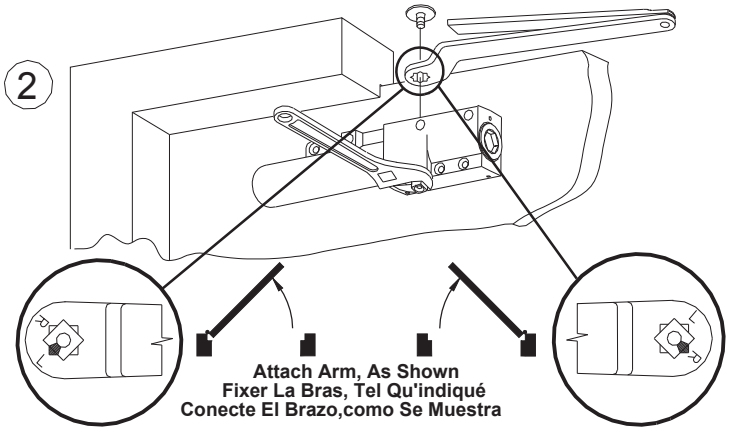


3. Attach Shoe To Stop
Attacher La Sabot
Conecte La Zapata Al Travesaño



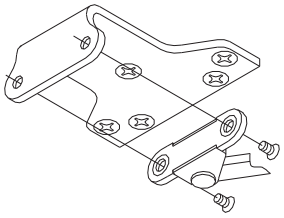
4. Pre-load Arm
Regler La Bras
Pre-cargue El Brazo



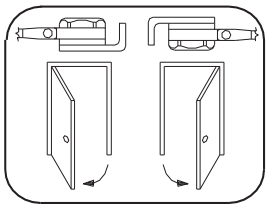


Attach Arm, As Shown
Fixer La Bras, Tel Qu'indiqué
Conecte El Brazo,como Se Muestra

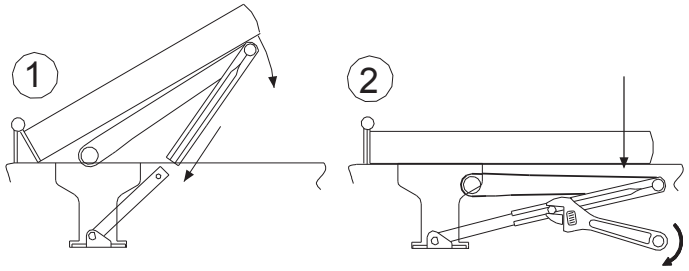
5. Attach Rod & Shoe To Shoe Bracket
Fixer La Patte Sur La Plaque
Ensamble La Zapata Con La Varilla Y Zapata Del Brazo



Hold-open Option
Option Bras D' Arrêt
Opción Mantener Abierta

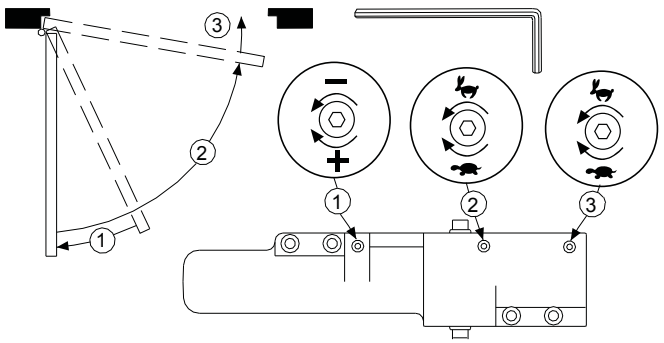


6. Attach Arm And Rod & Shoe
Liaison Bras Principal Et Secondaire
Ensamble El Brazo Con La Varilla Y Zapata

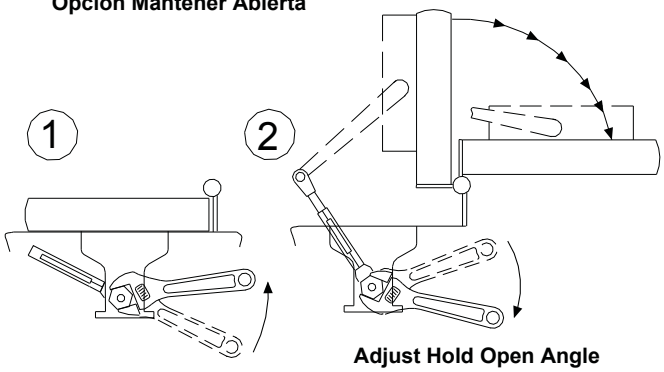


IV

7.

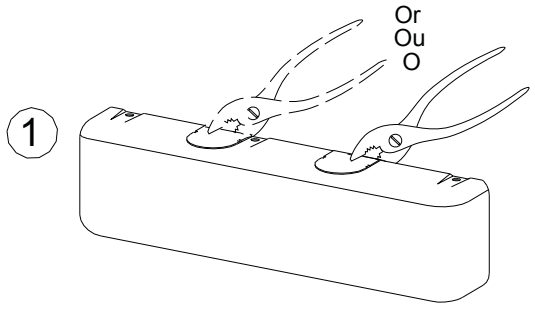


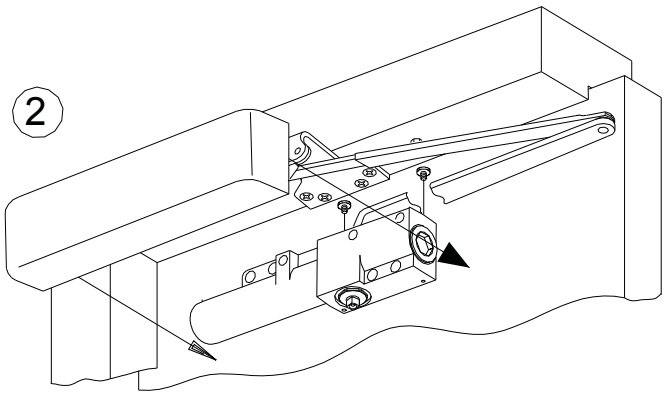
8. Hold-open Option
Option Bras D' Arrêt
Opción Mantener Abierta

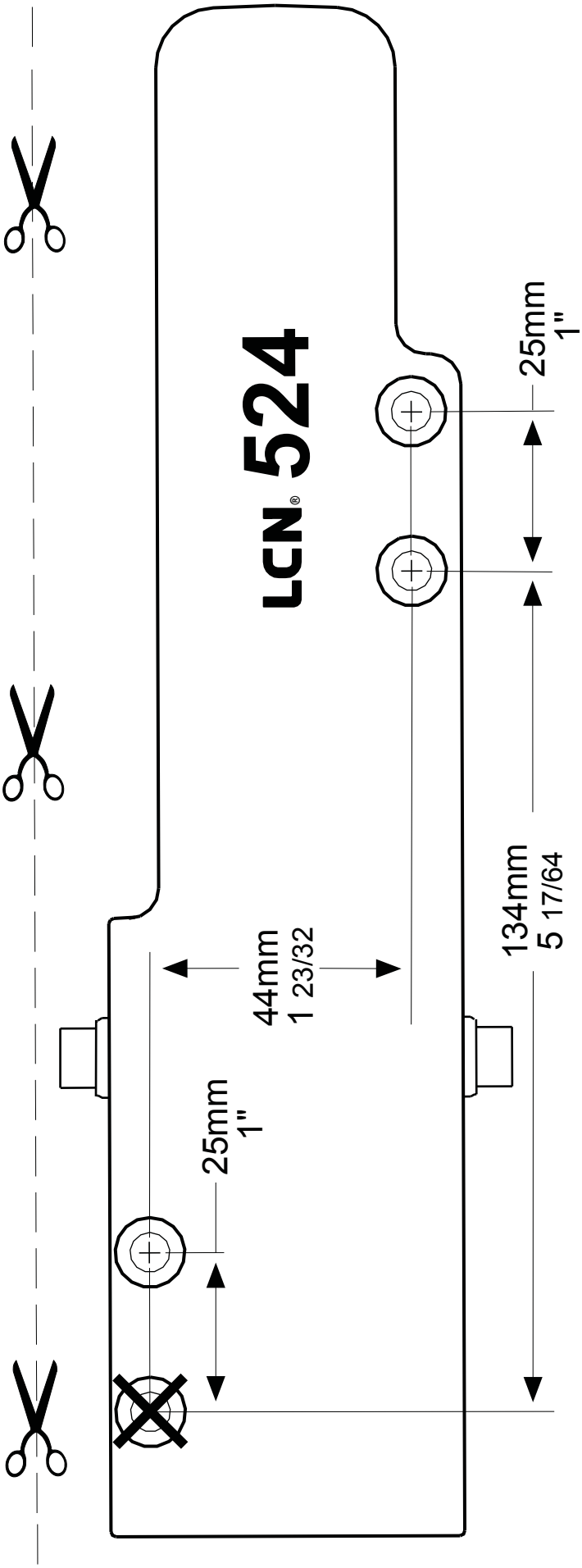


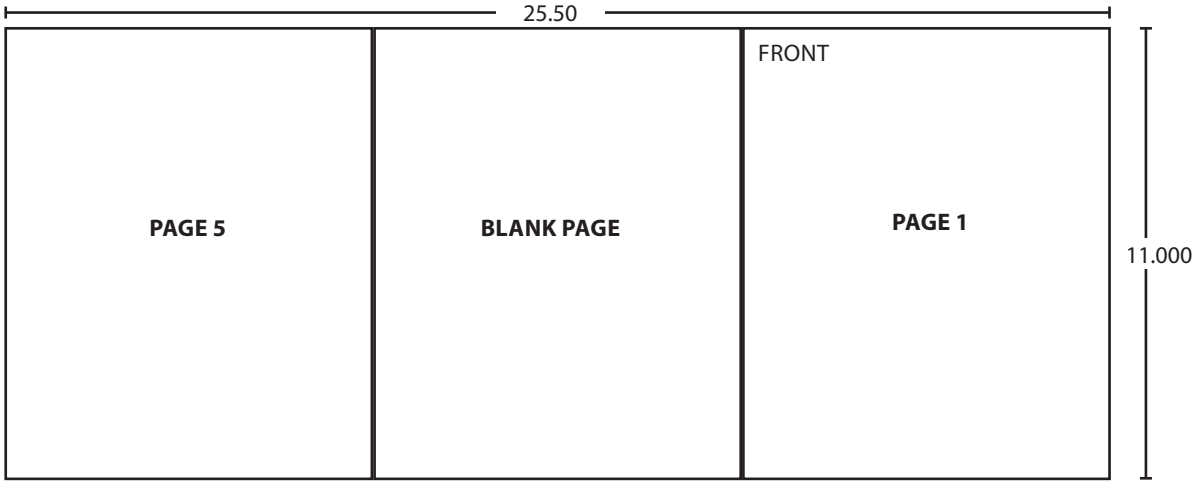
Adjust Hold Open Angle
Reglez L' Angle D' Arrêt
Ajuste Ángulo De Abertura

9. Attach Cover
Fixer Le Cache
Conecte La Cubierta

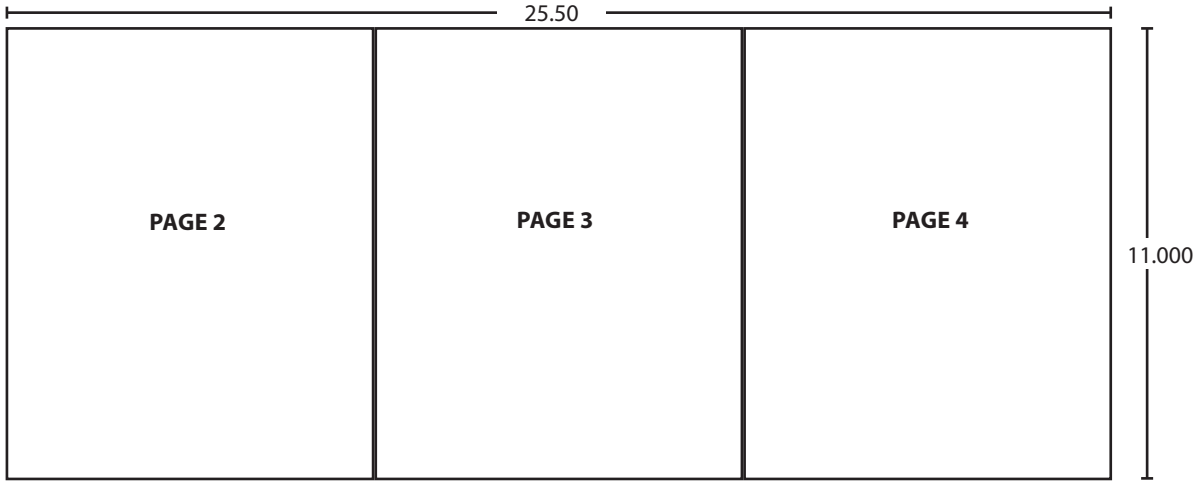


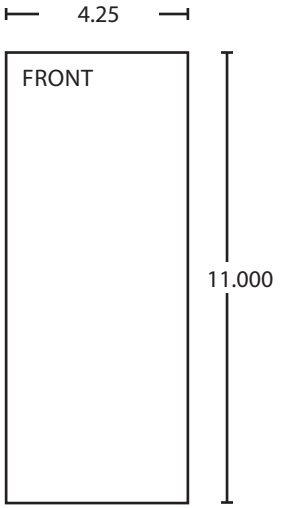






BEGINNING SHEET





FOLDED SHEET

Additional Notes:
1. None

Revision History					
C	D	E	F	G	H
N/A	N/A	N/A	N/A	N/A	043812

Revision Description:
H > Revised artwork

Material
White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043812	01-01-14

Title
524 Series Instruction Sheet

Creation Date	Number	Revision
04-27-10	25732	H

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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29808

1261 EDA

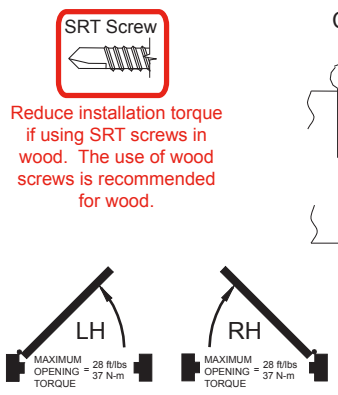
LCN®

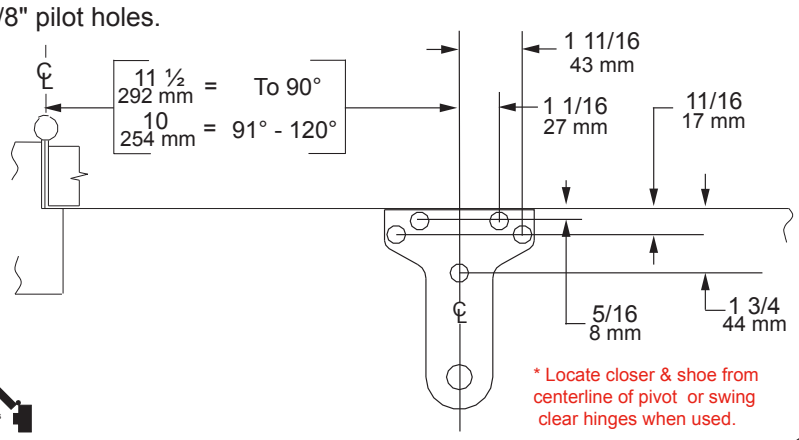
110° Template, Push Side

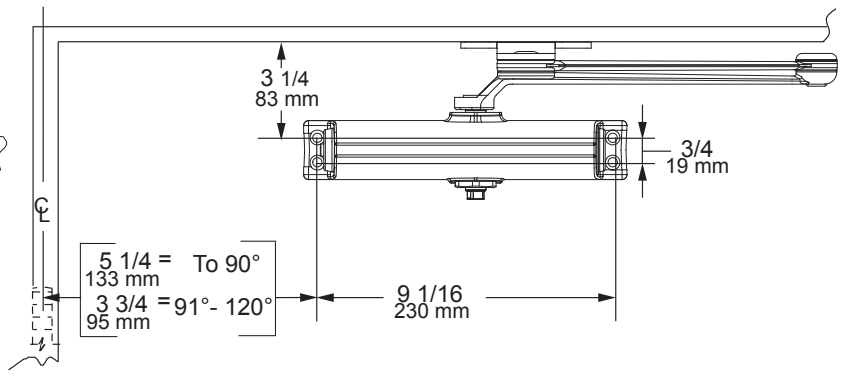
Installation Instructions

1 Locate proper template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes.

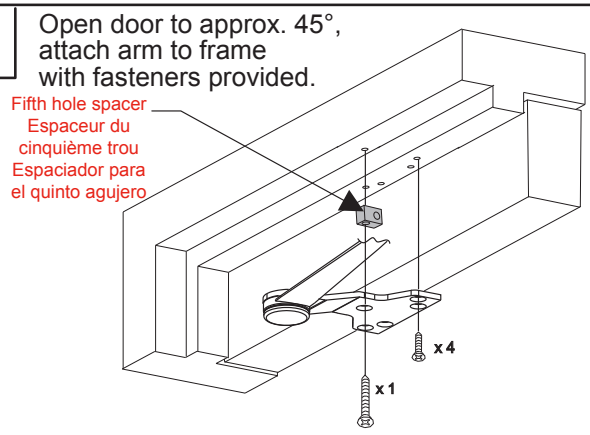
Note: Steps 1-7 show left hand door mount, right hand door is opposite.



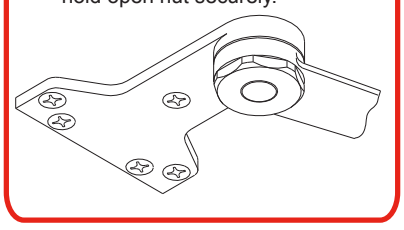


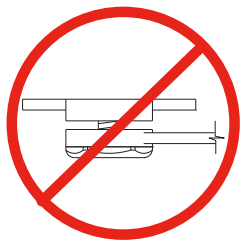


2 Open door to approx. 45°, attach arm to frame with fasteners provided.

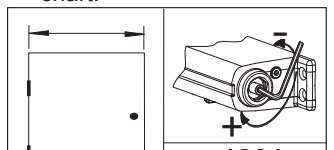


To adjust Optional Handed Hold-open arm:
①Loosen hold open nut.
②Open door 5° less than desired position and tighten hold open nut securely.





3 Determine door width, adjust spring power turns to match chart.

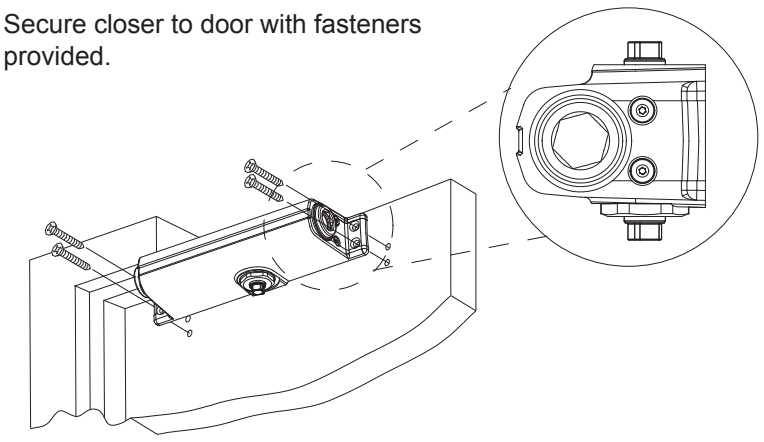


	1261
	- 5
30"- 750mm	- 3
32"- 815mm	0
36"- 915mm	+ 2
42"- 1050mm	+ 6

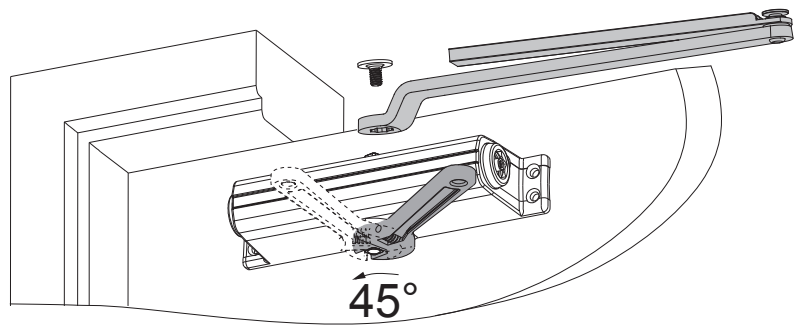
⚠CAUTION

IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

4 Secure closer to door with fasteners provided.



5 Rotate closer shaft 45°, and then attach main arm with provided fastener.

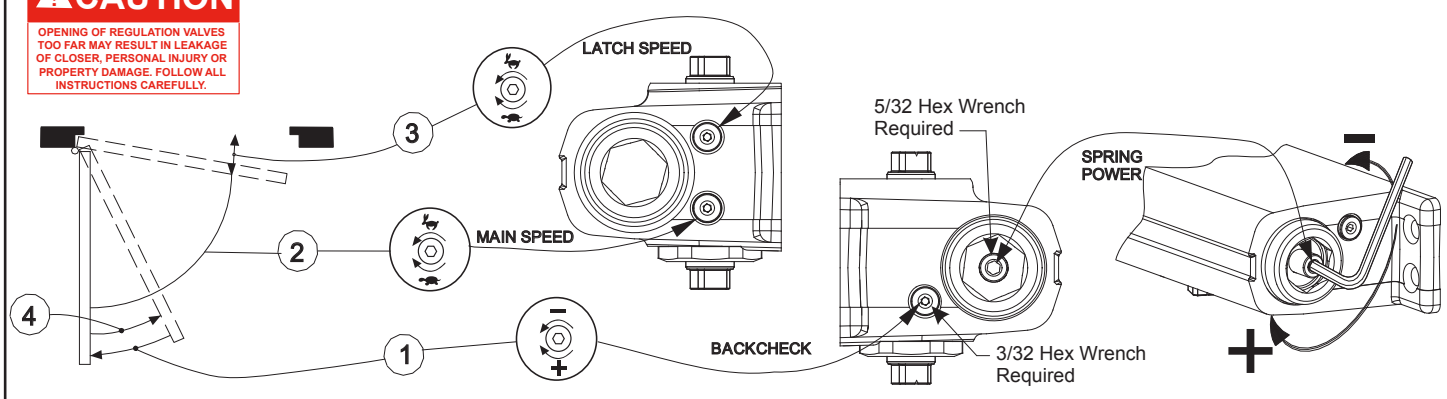


6 If necessary, adjust closer.

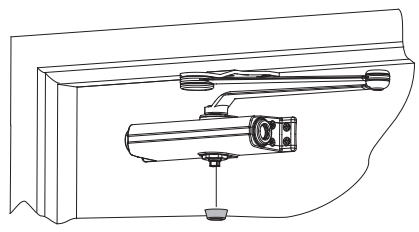
NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

⚠CAUTION

OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



7 Press cap onto shaft.



Patents Pending include:
Rapidor ~ Installation System
PROPRIETARY, LCN Division, Schlage Lock Company

1261 Instructions EDA et gabarit de 90°-120° pour une installation sur le côté à pousser.

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percezdes trous de 5/32 po.

Les étapes 1-7 illustrent une installation pour une porte main gauche, main droite à l'opposé.

Repérez le ferme-porte et la console de la ligne centrale du pivot ou de la charnière contre-coudées, lorsque celle-ci est utilisée.

2 Ouvrez la porte à environ 45°, fixez le bras au cadre à l'aide des attaches fournies.

3 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

4 Fixez le ferme-porte sur la porteavec les attaches fournies.

5 Faites pivoter l'arbre du ferme-porte 45°puis fixez le bras principal avec les attaches fournies.

6 Au besoin, réglez
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage

7 Emboitez le capuchon fermement sur la tige.

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

Pour régler le bras avec retenue à main optionnelle: 1. Desserrez la vis de retenue. 2. Ouvrez la porte 5° de moins que la position désirée et resserrez la vis.

⚠DANGER

Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877 - 671 - 7011

⚠DANGER

UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

1261 EDA Instrucciones para plantilla 90°-120° con montaje del lado del empuje.

1 Localice la plantilla apropiada. Marque el centro de todos los agujeros. Barrene agujeros de 5/32".

Nota: Las etapas 1-7 ilustran un montaje de puerta a la izquierda; una puerta a la derecha está al lado opuesto.

Localice el cerrador y la zapata a partir de la línea central del pivote o de la bisagra, cuando se utiliza.

2 Abra la puerta hasta aprox. 45°, sujete el brazo al bastidor con los sujetadores ya incluidos.

3 Determine la anchura de la puerta. Ajuste la fuerza del resorte según lo indicado en el gráfico.

4 Sujeta el cerrador a la puerta con los tornillos ya incluidos.

5 Gire el eje del cerrador a 45° y coloque el brazo principal con los sujetadores ya incluidos.

6 Ajusta si se necesario
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

7 Coloque la tapa sobre el eje.

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

Para ajustar el brazo de retención a mano opcional: 1. Afloja la tuerca de retención. 2. Abre la puerta a 5° de menos que la posición deseada y aprieta bien la tuerca de retención.

⚠ADVERTENCIA

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⚠ADVERTENCIA

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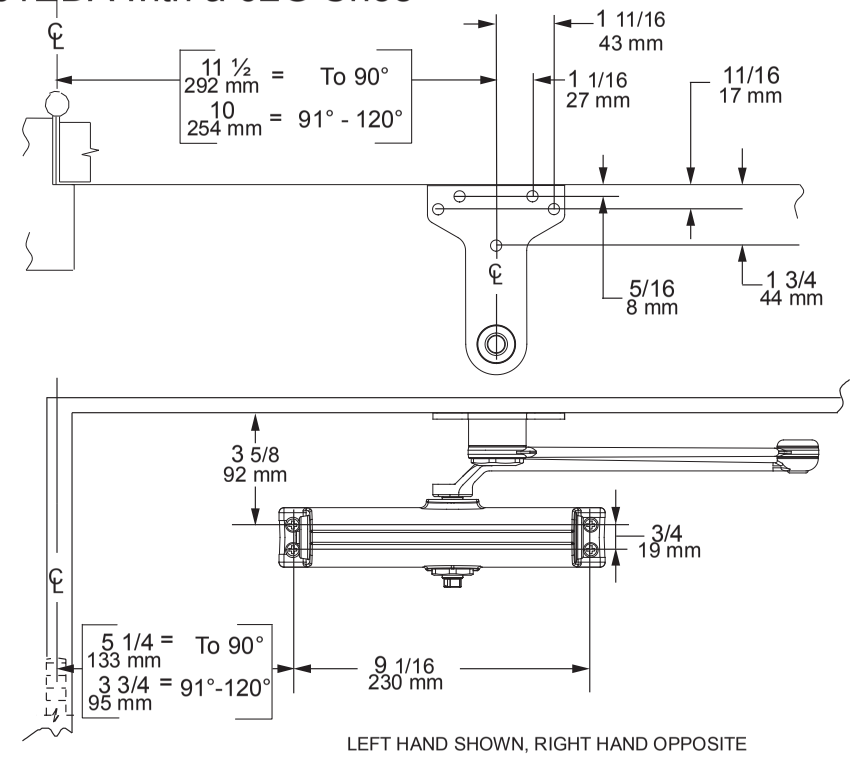
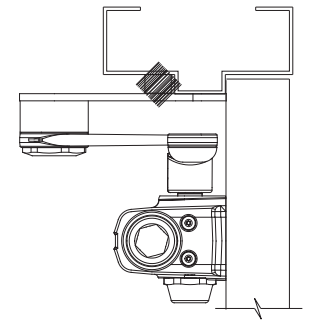
29808 Rev. 01/14-d

1261EDA with a 62G Shoe



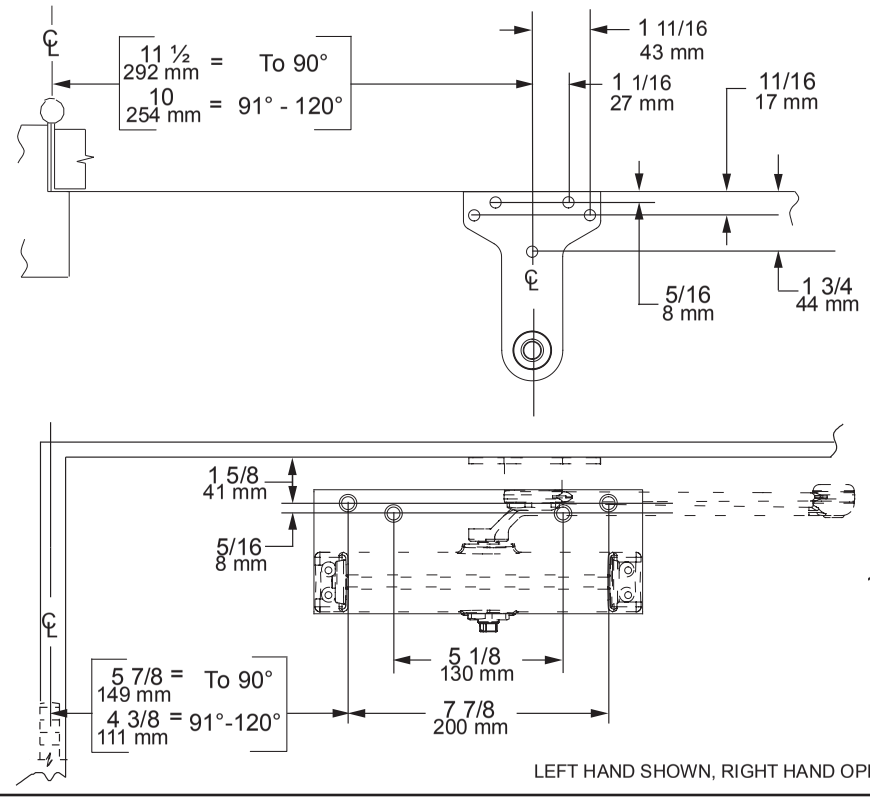
LEFT HAND SHOWN, RIGHT HAND OPPOSITE



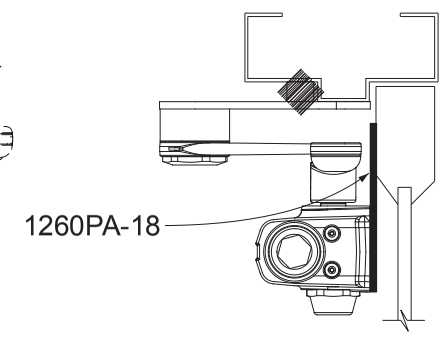
PUSH SIDE MTG. APPLIES TO:

1261 ♿ } MAX. OPENING 120°
NON HOLD OPEN (90°-120°)
H-120 (90°-120° HOLD OPEN)

MIN. TOP RAIL 4 3/4”



LEFT HAND SHOWN, RIGHT HAND OPPOSITE



PUSH SIDE ON 18PA APPLIES TO:

1261 ♿ } MAX. OPENING 120°
NON HOLD OPEN (90°-120°)
H-120 (90°-120° HOLD OPEN)

MIN. TOP RAIL 2 ½”

AUXILIARY STOP RECOMMENDED

GENERAL NOTES:
1. LOCATE CLOSER & SHOE FROM CENTERLINE OF PIVOT OR SWING CLEAR HINGE PIN WHEN USED.

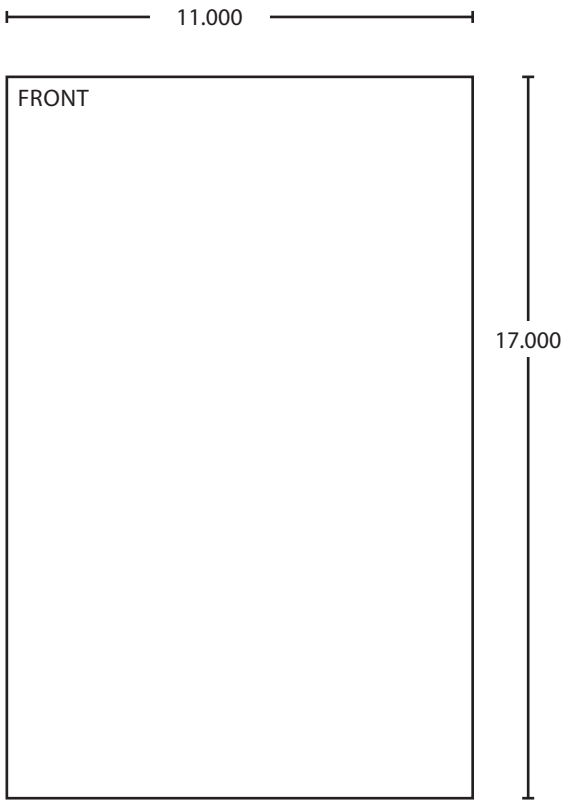
2. MINIMUM DISTANCE BETWEEN 2 DOORS ON THE SAME JAMB IS 5 ½”.

3. REINFORCING PER ANSI/SD1-100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.

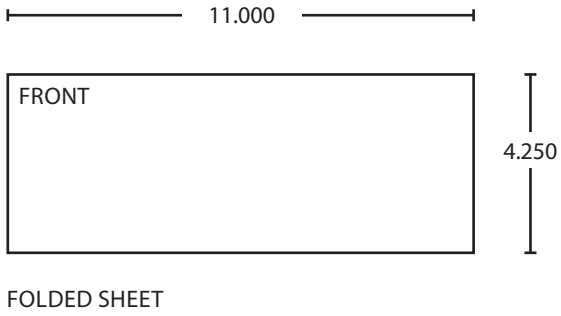
4. FOR 120° OPENING THE MAXIMUM ALLOWABLE BUTT SIZE IS 5” X 5”.

5. DELAY ACTION OPTIONAL.

LCN®



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	N/A	N/A	043812		

Material
White Paper

Notes
1. printed two sides
2. printed black and PMS 485 (red)
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
D > Revised artwork

Edited By	Approved By	EC Number	Release Date
R. Byun	M. Sasso	043812	01-01-14

Title
1260 Series EDA Instruction Sheet

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740132

Senior Swing

2800 Overhead Concealed Series
9500 Surface Applied Series

Installation Instructions

⚠ CAUTION ⚠

LCN Senior Swing

The Senior Swing Power Operator System is a low energy product and must conform to the latest version of ANSI/BHMAA156.19 (American National Standard for Power Assist and Low Energy Power Operated Doors).

Installation Instructions

All installation instructions are valuable references and should not be discarded. They should be given to the building owner or maintenance supervisor after installation is complete.

⚠ CAUTION ⚠

Improper installation or set up may result in personal injury or property damage. Follow all instructions carefully. For answers to questions, call:

Technical Support

1-877-671-7011

⚠ IMPORTANT ⚠

These instructions are presented in step-by-step sequence. It is very important that installation begins with "1. Pre-Installation Site and Product Check" (page 4) and continues as directed after each section.

⚠ WARNING ⚠

Always disconnect main power to the operator prior to replacing.

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General

The Senior Swing is an automatic electromechanical swinging door operator for a single door, simultaneously operated, or independently operated pair of doors. The concealed application operates center pivoted, offset pivoted, or butt hung/hinged doors. The surface application operates balanced (push side only), center pivoted, offset pivoted, or butt hung/hinged doors in either push or pull mode.

When activated, the Senior Swing drives the door to the full open position, then electrical power is turned off and the door is closed by spring force. The activating circuit opens the door from any position in the closing swing. During a power failure, the Senior Swing acts as a manual door closer (size 3). Door opening and closing cycles, including opening speed, back check speed, hold open time delay, closing speed, and latch position, are adjustable.

1 Pre-Installation Site and Product Check (Surface and Concealed)

⚠ IMPORTANT ⚠

Do not install the Senior Swing unless all of the following conditions are correct.

1a Check that the product model is correct for the required application.

1b Check that all parts listed on the bill of material are in the shipping container.

1c Check architectural and final approved shop drawings for position of frame and openings.

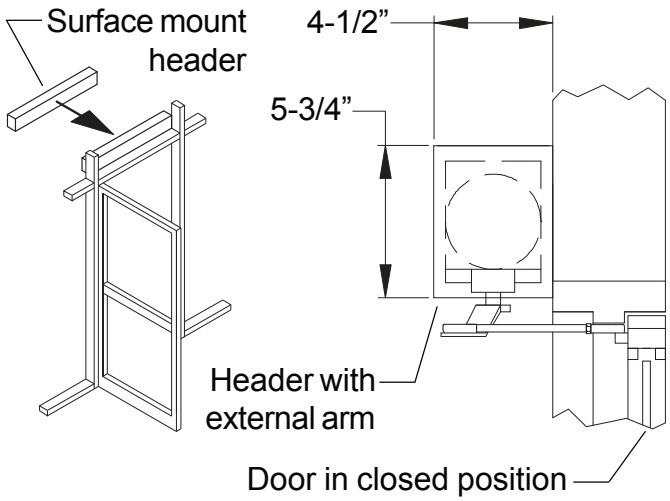
1d For concealed applications, check that the opening allows 1/4” at each side and at the top so that the frame and the header can be plumbed square and caulked.

1e For surface mount applications onto 2” frames, consult factory to determine if mounting plate is required.

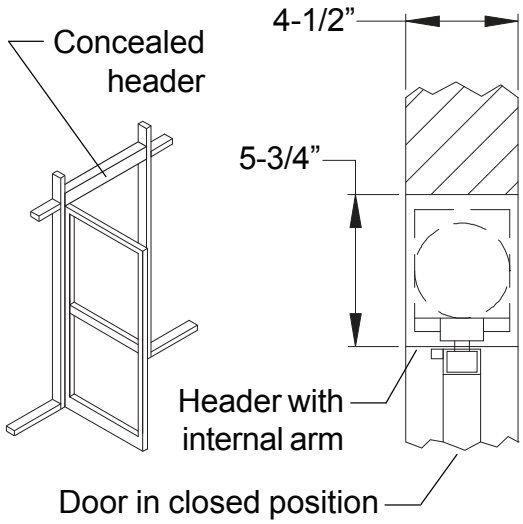
1f Special tool may be required for installation of rivet nuts.

1g Check for sufficient header clearances:

Surface Application (Push System Shown)



Concealed Application



1h For a ramped floor, check that the break in the grade occurs at the edge of the 2” threshold and slopes away from the entrance to allow proper door swing or panic breakaway.

1i Check that a 120 volt, single phase, 60 Hz, fused, 15 amp, 3-wire power supply is available at the side jamb with approximately 12” of wire available to connect to the operator. UL approved type flexible conduit is recommended for the 120 volt power line.
The 120 volt power supply must be a dedicated circuit from the main circuit breaker panel and must not be connected into a building lighting system operating fluorescent lights.

- For concealed applications, continue with “2. Header Installation (Concealed)” on page 5.
- For surface applications, continue with “3. Header Installation (Surface)” on page 6.

2 Header Installation (Concealed)

ⓘ **Note: Install concealed application headers so there is 1/8” between the bottom of the header and the top of the door.**

2a Prepare existing jamb tubes using template 740069, then install four 1/4-20 rivet nuts inside each jamb tube.

2b Align the header with the jamb tubes. For headers with a single operator, position the end of the header containing the operator brackets near the pivot side of the opening (Figure 2-1). Secure the header to the jamb tubes with four 1/4-20 hex head screws at each end (Figure 2-2).

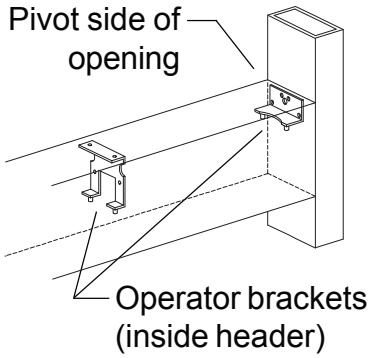


Figure 2-1

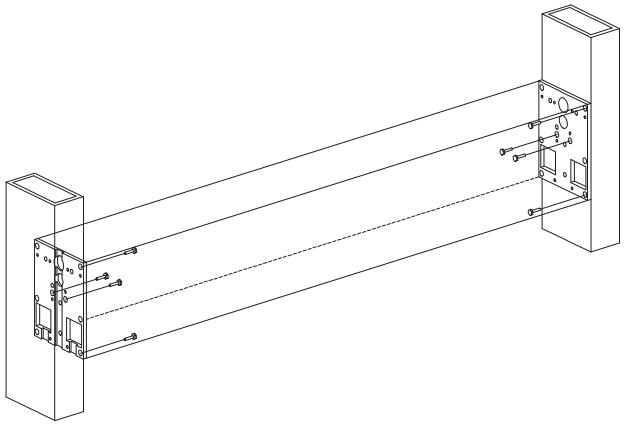


Figure 2-2

2c Stand the header/jamb tube assembly in the opening.

2d Feed the 120 volt power conduit into the header (Figure 2-3). Leave 12” minimum of wire inside the header for final hookup.

2e Shim and square the side jamb tubes in position, then secure the jamb tubes in the opening.

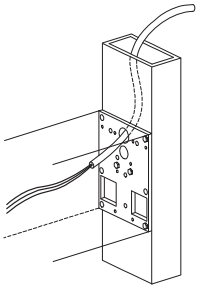


Figure 2-3

• Continue with “4. AC Power and Ground Wiring (Surface and Concealed)” on page 8.

3 Header Installation (Surface)

3a For a header with two operators (for a simultaneously operated pair of doors), designate one end of the header as the companion operator end. (It does not matter which end.)

3b Refer to Figure 3-1 and step 3.3 and prepare wire access holes appropriate for the application in the header using template 740070. Be sure to position edge “A” of template 740070 as shown in Figure 3-1.

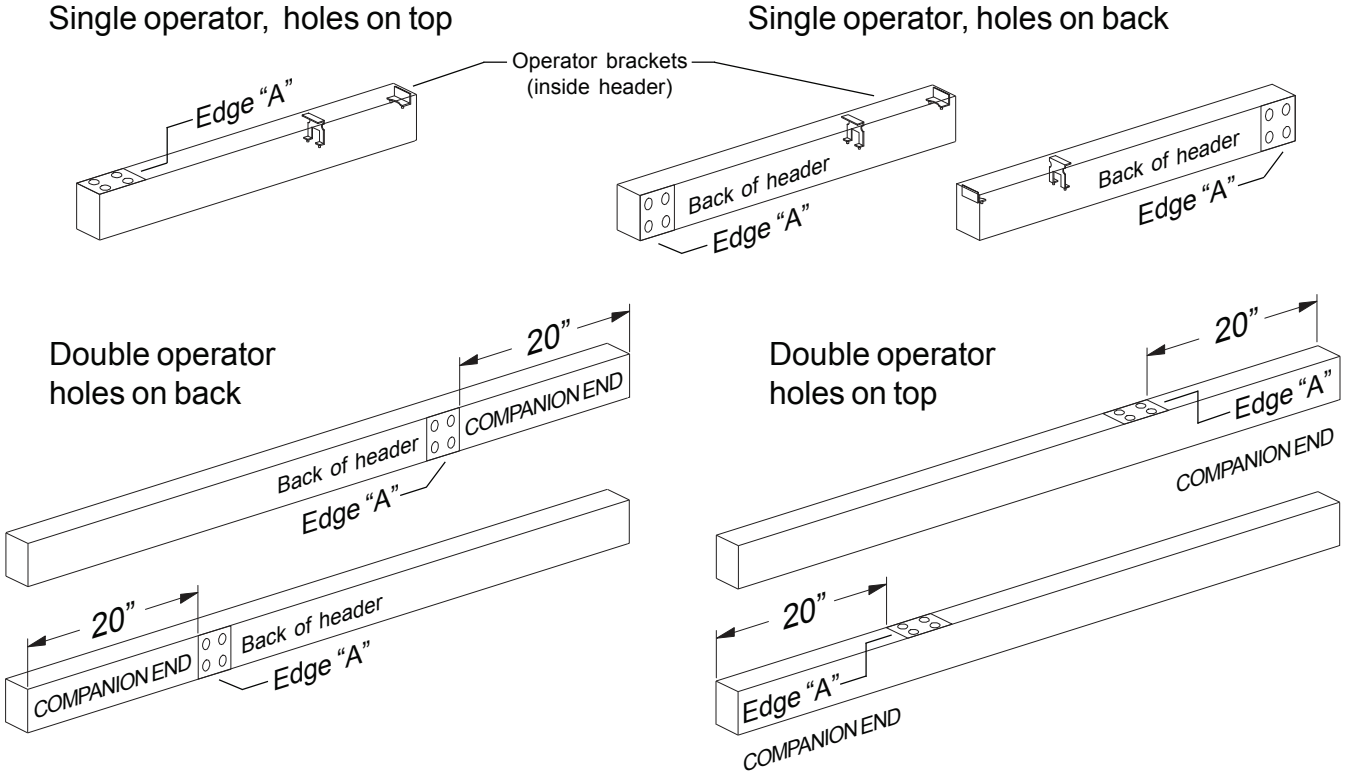


Figure 3-1

3c Install horizontal mounting brackets on the header per the instructions supplied with the brackets (Figure 3-2). Make sure the horizontal mounting brackets are oriented so the wire access holes in the header (see step 3.2) face up or face the door and, for single operator headers, the operator brackets inside the header are near the hinge side of the opening.

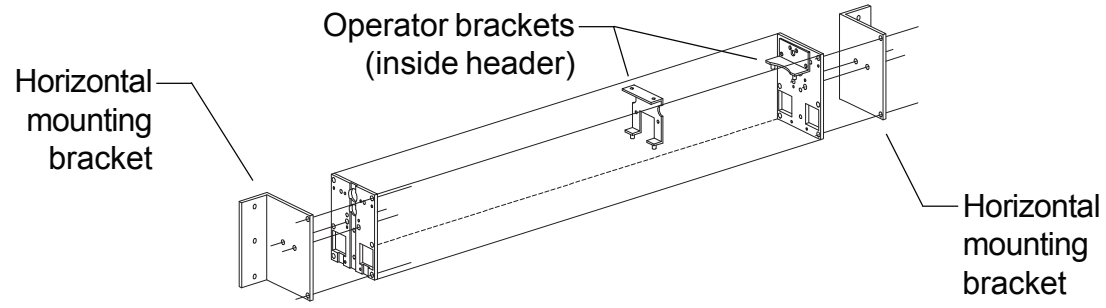


Figure 3-2

ⓘ **NOTE: Install surface applied headers with the following spacing between the bottom of the header and the top of the door:**
Pull arm application: 1-1/8”
Push arm application: 1”

3d For aluminum storefront or aluminum tube frame, install the header with horizontal mounting brackets to the jams per the instructions supplied with the horizontal mounting brackets (Figure 3-3).

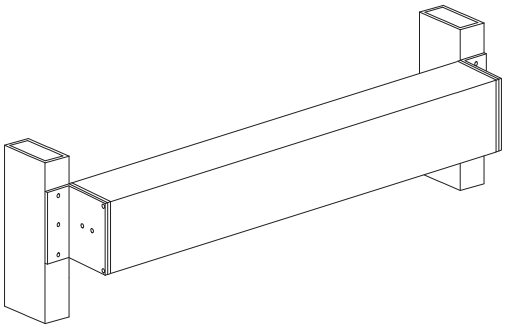


Figure 3-3

3e Hollow metal and wood frames require the use of a -18 mounting plate, sold separately (Figure 3-4).

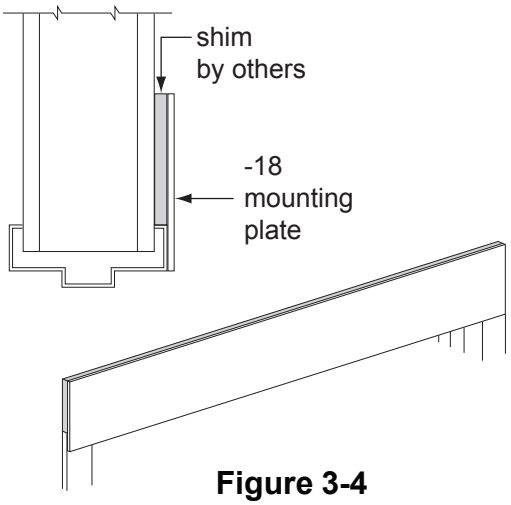


Figure 3-4

3f Feed the 120 volt power conduit into the header (Figure 3-5). Leave 12” minimum of wire inside the header for final hookup.

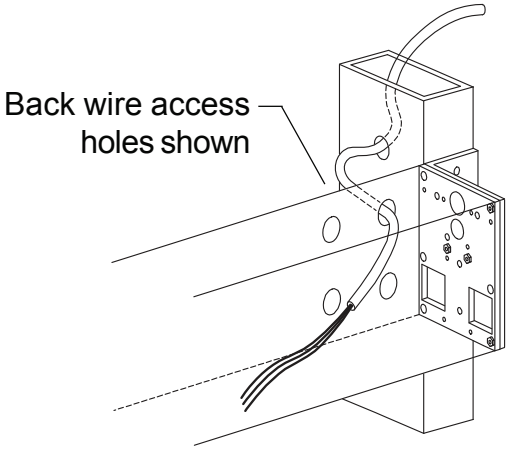


Figure 3-5

• Continue with “4. AC Power and Ground Wiring (Surface and Concealed)” on page 8.

4 AC Power and Ground Wiring (Surface and Concealed)

4a Connect the 120 volt power wires to the AC power cable (part number 761463) and header end plate as shown in Figure 4-1.

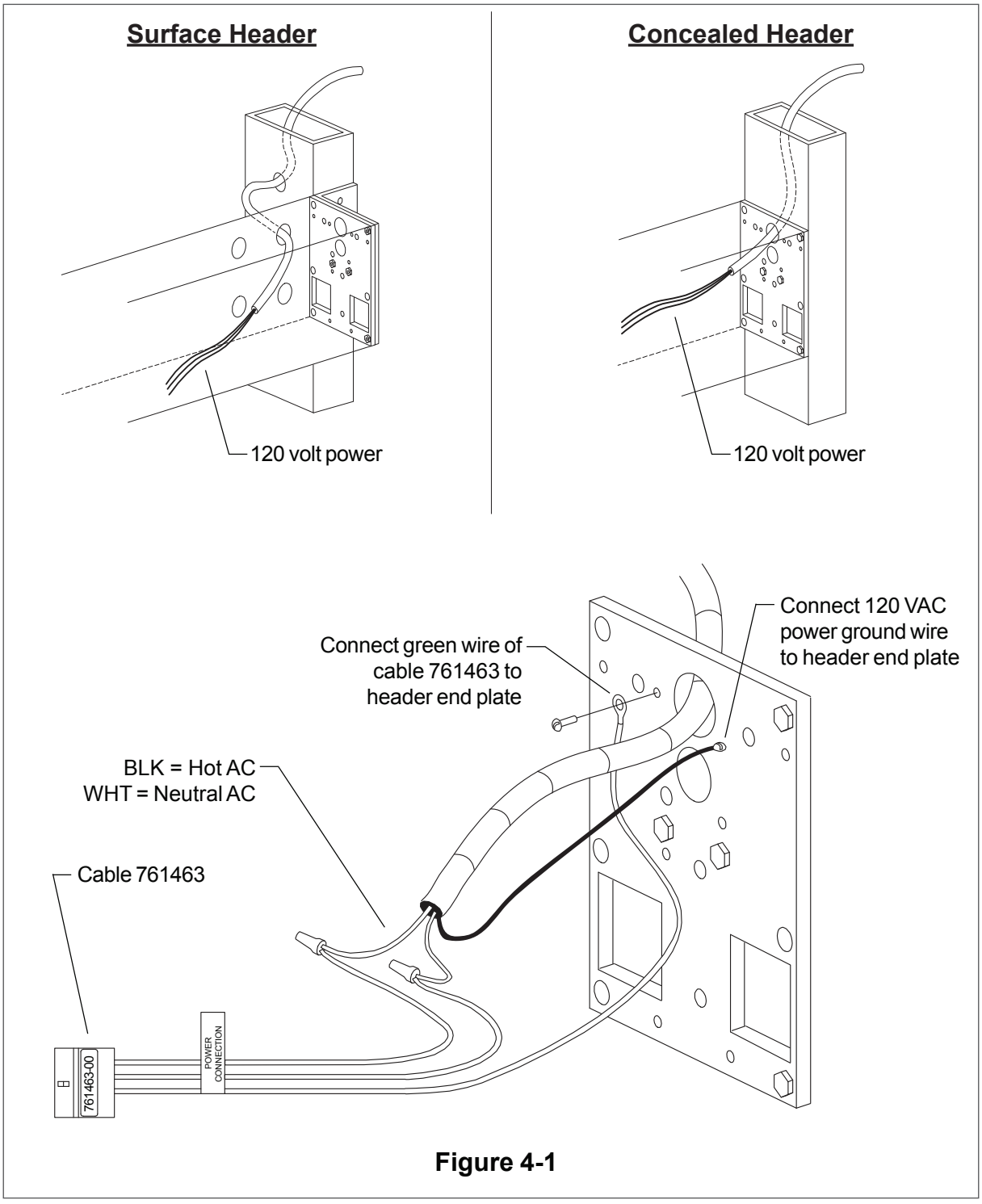


Figure 4-1

• Continue with “5. Operator Installation (Surface and Concealed)” on page 9.

5 Operator Installation (Surface and Concealed)

5a For double operator systems with differently handed operators, make sure that the correct operator is installed in each end of the header. The handing of the operator (R.H. or L.H.) is indicated on a label on the operator.

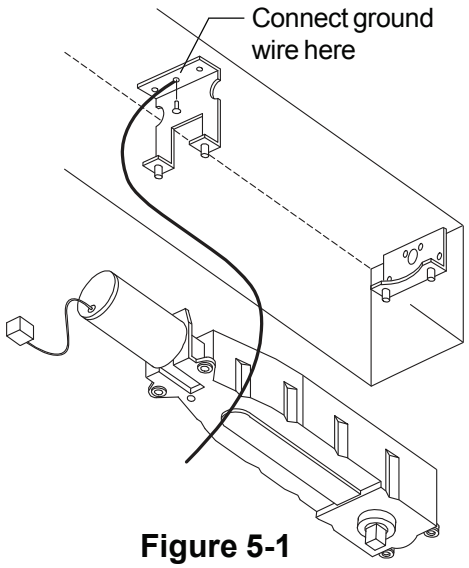


Figure 5-1

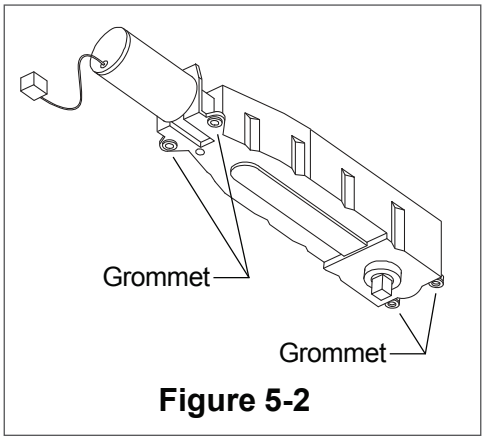


Figure 5-2

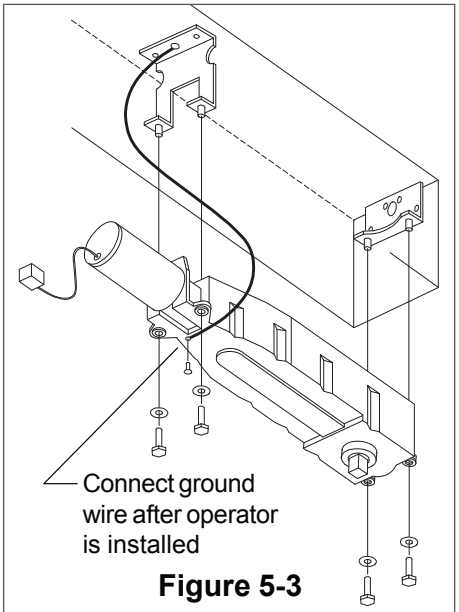


Figure 5-3

5b Connect the end of the green operator ground wire to the rear operator mounting bracket in the header (Figure 5-1) using the #10-32 hex head green ground screw supplied in the operator screw pack.

5c Make sure there is a rubber grommet inside each of the four operator mounting holes (Figure 5-2).

5d Line up the four mounting holes on the operator with the four mounting studs on the operator brackets (Figure 5-3). Make sure that the operator cable (with 6-pin connector) is hanging down freely and push the operator up onto the mounting studs. Make sure cables are not pinched when operator is installed. (The mounting studs fit snugly into the grommets, and firm pressure may be required to get the operator into position.)

5e Secure the operator to the header using four 5/16-18 hex head screws and washers (Figure 5-3). Tighten the screws until they make contact with the mounting studs on the operator brackets.

5f Connect the other end of the green ground wire to the small hole in the bottom of the operator (Figure 5-3).

5g For a header with two operators, install the second operator in the same manner.

- For center pivoted doors, continue with “6. Pivot Block Installation (Concealed, Center Pivoted)” on page 10.
- For other doors, continue with “8. Control Box Installation (Surface and Concealed)” on page 12.

6 Pivot Block Installation (Concealed, Center Pivoted)

ⓘ **NOTE: This section is applicable ONLY if using the factory supplied lower pivot block (with pivot post attached) on center pivoted doors. If not being used, continue with "7. Breakaway or Fixed Stop Installation (Concealed, Center Pivoted)" on page 11.**

6a Position the lower pivot block (Figure 6-1) as shown in Figure 6-2 oriented so the pivot post is 2-3/4" or 3-3/4" (nominal) from the jamb, as necessary.

6b Use the pivot block as a guide and mark and prepare four mounting holes for appropriate fasteners for the mounting surface.

6c Secure the pivot block in place with appropriate fasteners (Figure 6-3).

ⓘ **NOTE: Pivot block shown installed for a door with a 3-3/4" mounting point. For 2-3/4" mounting point, reverse pivot.**

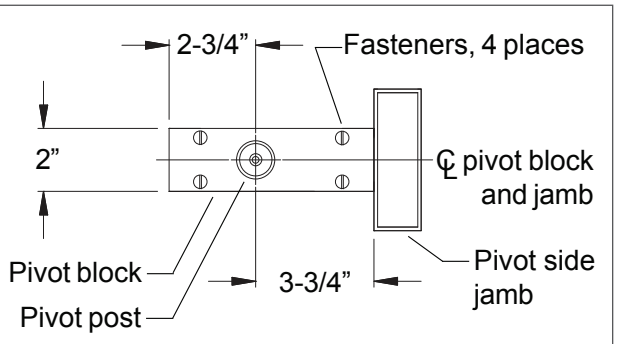


Figure 6-1. Top view of lower pivot block.

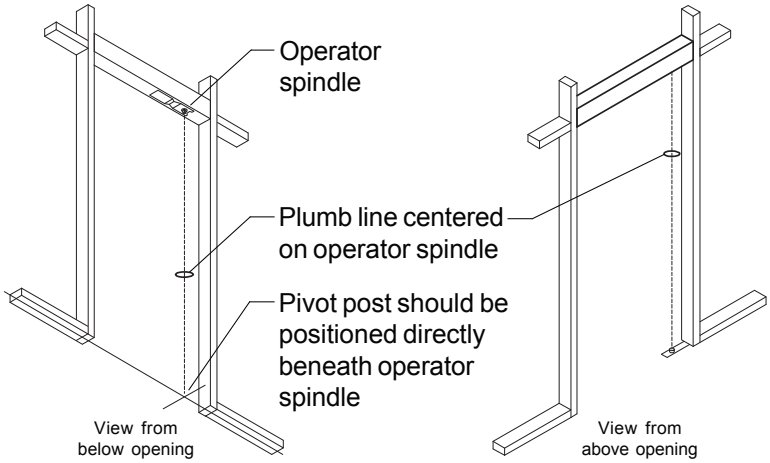


Figure 6-2

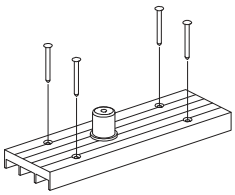


Figure 6-3

- Continue with "7. Breakaway or Fixed Stop Installation (Concealed, Center Pivoted)" on page 11.

7 Breakaway or Fixed Stop Installation (Concealed, Center Pivoted)

ⓘ **NOTE: This section is applicable ONLY to center pivoted doors using the factory supplied breakaway or fixed stop. If not being used, continue with "8. Control Box Installation (Surface and Concealed)" on page 12.**

Breakaway and Fixed Stop Operation

The function of the breakaway or fixed stop is to act as a mechanical stop on an inswinging door so the door cannot normally be opened in the outswinging direction.

The **breakaway stop** differs from the fixed stop in that, in a panic or fire condition, when approximately 50 lbs. of force is applied on the door from the inswinging side, the door will open in the outswinging direction. When this occurs, a switch in the breakaway stop disables the automatic operation of the door. The door then remains inoperative and in the breakaway position until it is manually pushed back through the opening to the inswinging side. This action resets the breakaway stop and restores automatic operation.

7a Orient the breakaway stop according to the directions on the switch label (Figure 7-1). The "OPENING DIRECTION OF DOOR" arrow should point in the direction that the door opens during normal operation.

Figure 7-1

7b Install the breakaway or fixed stop inside the header approximately 2-1/4" from the latch end using the four #8-32 x 3/4" screws supplied with the stop (Figure 7-2). Mounting holes for the stop have been prepared in the header at the factory.

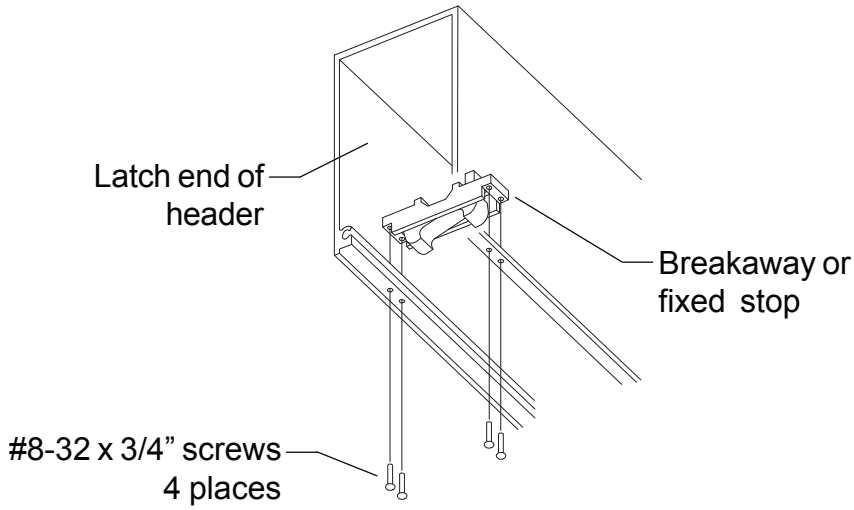


Figure 7-2

• Continue with "8. Control Box Installation (Surface and Concealed)" on page 12.

8 Control Box Installation (Surface and Concealed)

8a Orient the control box so the keypad faces down and the 6-pin Molex connector faces the operator for a single system or the master operator for a double system (Figure 8-1).

8b Raise the control box into the header and rotate the two mounting bars so they engage the slots that run the length of the header (Figure 8-2).

8c See Figure 8-3 for final positions of operator(s) and control box inside the header.

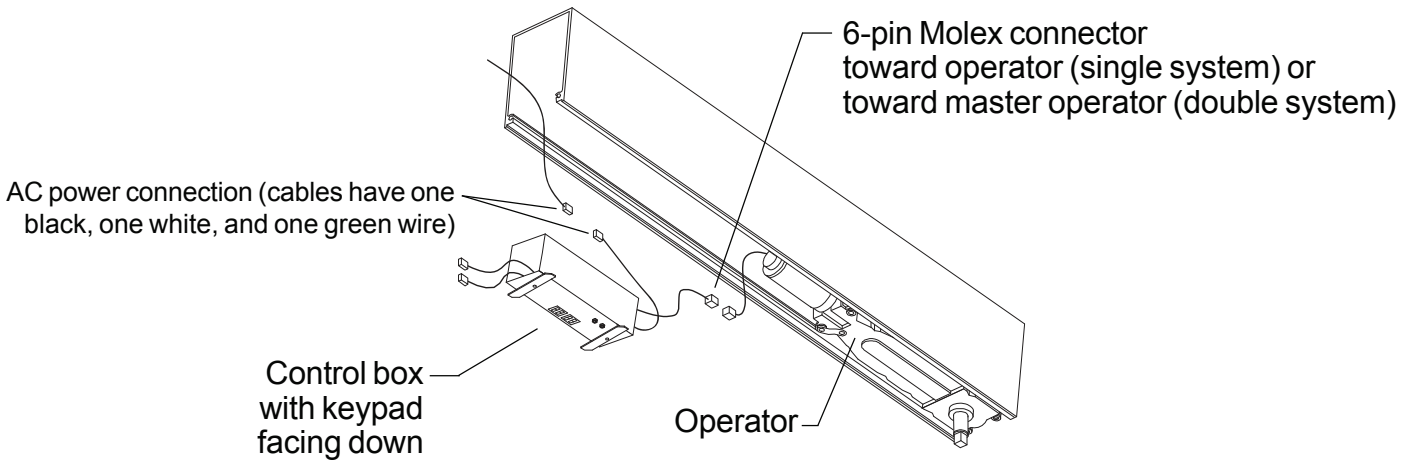


Figure 8-1

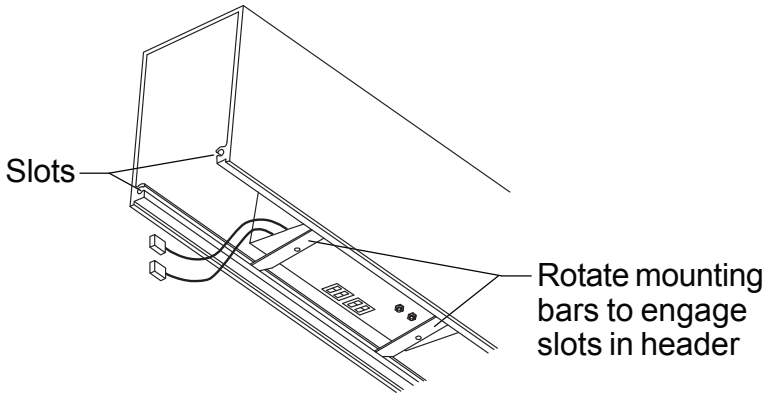
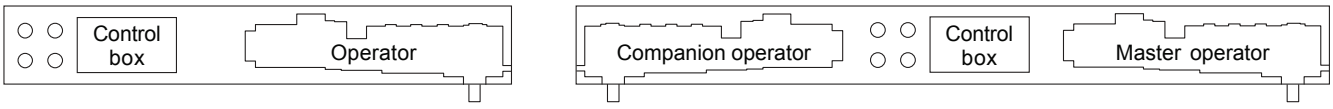


Figure 8-2



Views from front of header, wire access holes shown on back of header

Figure 8-3

• Continue with “9. Control Box Wiring (Surface and Concealed)” on page 13.

9 Control Box Wiring (Surface and Concealed)

⚠ CAUTION ⚠

High voltage wiring must be separated from low voltage wiring by UL listed wiring for the control box, operators, and low voltage accessories.

⚠ CAUTION ⚠

When joining or separating a Molex plug and receptacle, do not push or pull on any of the wires. This may cause a wire to be pulled loose from a terminal, which may result in a malfunction.

9a Single operator system minimum wiring requirements:

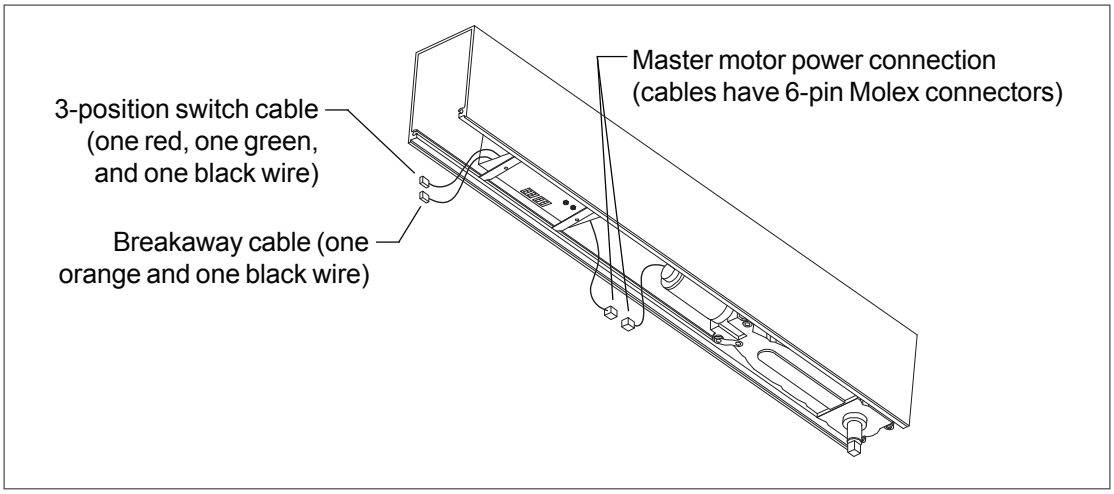
- AC power
- Master motor power
- Breakaway switch or jumper

Double operator system minimum wiring requirements:

- AC power
- Master motor power
- Companion motor power
- Breakaway switches or jumpers; if two Breakaway switches are used, wire switches in series

9b For wiring of companion operator and and additional accessories, see the Senior Swing Control Box installation instructions.

9c Dress all wires neatly together and use clips to retain wires in their proper locations.



- For center pivoted doors, continue with “10. Finger Guard Installation (Concealed, Center Pivoted)” on page 14.
- For other doors, continue with “12. Arm Installation (Surface and Concealed)” on page 17.

10 Finger Guard Installation (Concealed, Center Pivoted)

ⓘ **NOTE: This section is applicable ONLY to center pivoted doors using the factory supplied finger guard. If not being used, continue with "11. Door and Arm Installation (Concealed, Center Pivoted)" on page 15.**

10a Scribe a line down the center of the pivot side door jamb (Figure 10-1).

10b If necessary, cut down the finger guard to fit the installation.

10c Align the center of the finger guard over the scribed line. Use the screw holes in the finger guard as guides to locate the mounting holes, and drill #21 (0.159" dia.) mounting holes in the door jamb.

10d Secure the finger guard to the door jamb with #10 self-threading screws.

10e Make sure there is one mounting screw approximately 1" from each end of the finger guard. If necessary, drill additional mounting holes in the finger guard and door jamb in these locations and install #10 self-threading screws.

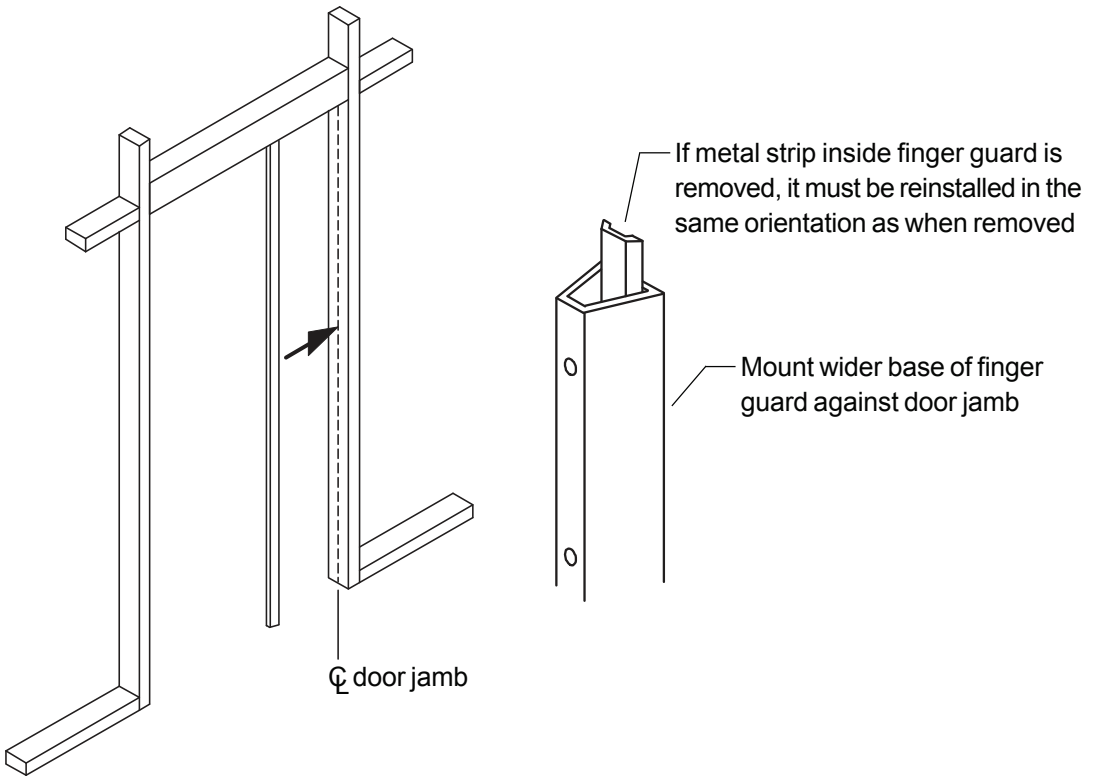


Figure 10-1

- Continue with "11. Door and Arm Installation (Concealed, Center Pivoted)" on page 15.

11 Door and Arm Installation (Concealed, Center Pivoted)

11a Prepare door for arm (Figure 11-1).

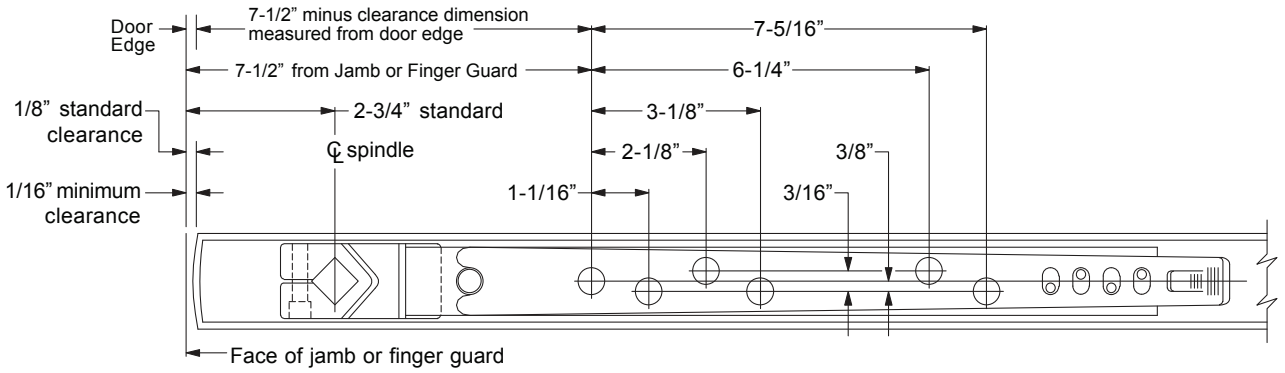


Figure 11-1

11b Install top arm and bottom pivot using screws supplied with those components (Figure 11-2). Use machine screws for metal door; use wood screws for wood door.

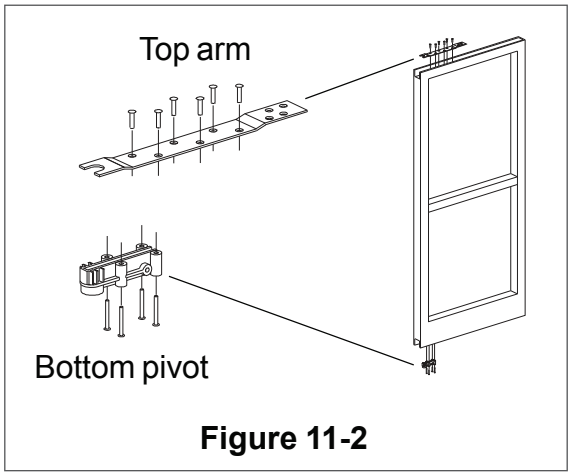


Figure 11-2

11c Orient the arm in the breakout position (Figure 11-3). Install the arm in the breakout position by pressing the arm onto the spindle until the end of the spindle is flush with the bottom surface of the arm (Figure 11-4). Tighten the Allen head cap screw on the arm (Figure 11-4).

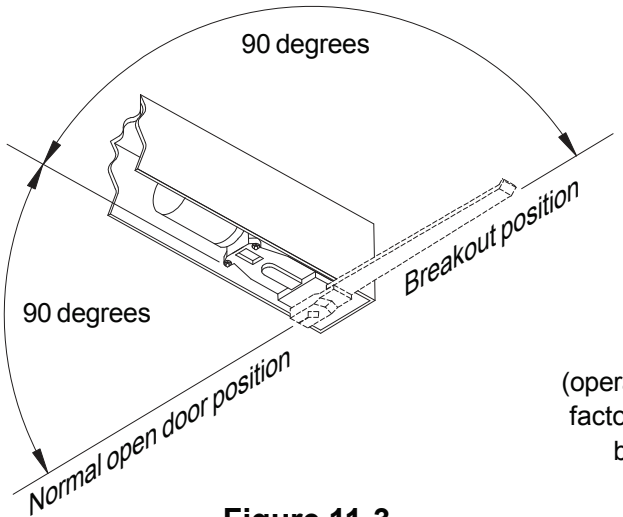


Figure 11-3

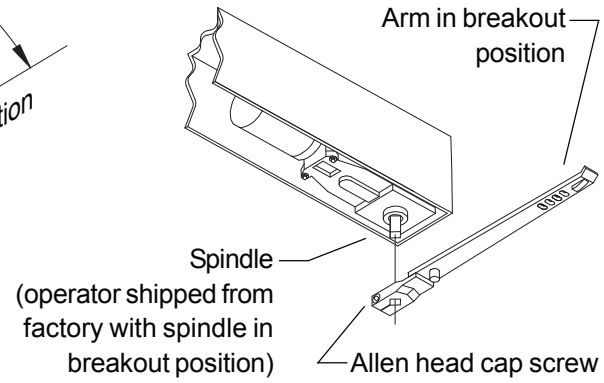


Figure 11-4

11d Position the door so the arm is in the top channel of the door and gently slide the door up against the lower pivot (Figure 11-5).

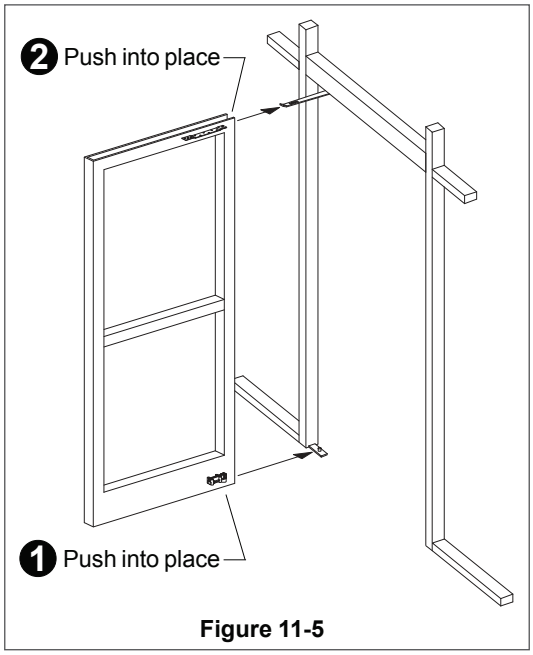


Figure 11-5

11e Lift the door slightly and push back until the bottom pivot locks into place.

11f Raise the nose of the door and push back until the top arm snaps into place.

11g Align the door in the open position (perpendicular to the opening).

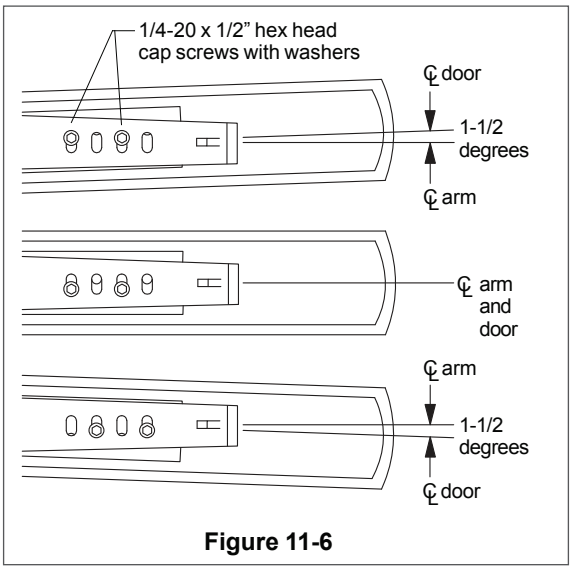


Figure 11-6

11h Install two 1/4-20 x 1/2" hex head cap screws and washers through two of the oval holes in the arm and into the top attachment arm (Figure 11-6).

11i Install screws in whichever of the positions shown align with the door in the open position (perpendicular to the opening).

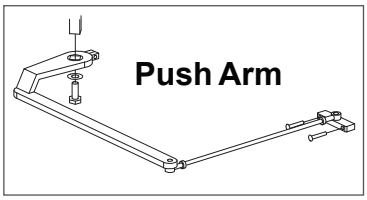
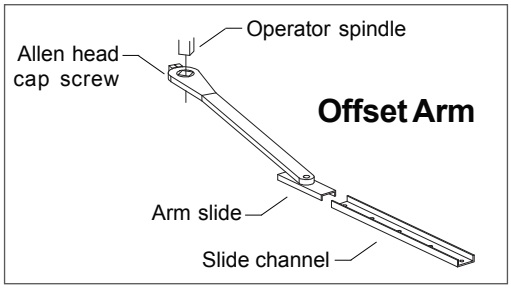
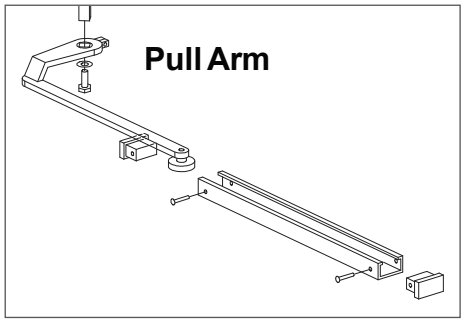
11j Check door operation by pushing door to normal closed position, continue pushing through breakaway stop to 90 degree open position, and then release door. Door should close.

⚠ CAUTION ⚠

If the operator is not connected to the control box, the door will slam closed when released.

• Continue with "13. Glazing (Surface and Concealed)" on page 17.

12 Arm Installation (Surface and Concealed)

Surface	Concealed
Push Arm: For surface header applications. To install, see separate instructions for Push Arm & Link Assembly.  	Offset Arm: For concealed header applications with butt hung and offset pivoted doors. To install: 1. Prepare door and install slide channel (see separate Installation Instructions for Offset Arm). 2. Note position of operator spindle. Turn on operator power. Momentarily short activation wires so spindle slowly rotates toward full open position and stops. Continue doing this until spindle reaches full open position (refer to Figure 11-3), then join activation wires together with a wire nut. 3. Insert arm slide into slide channel, slide arm onto spindle, and tighten arm Allen head cap screw. 4. Remove wire nut from activation wires; turn off power. 
Pull Arm: For surface header applications, see separate instructions for Pull Arm Assembly.  	

- Continue with “13. Glazing (Surface and Concealed)”

13 Glazing (Surface and Concealed)

⚠ CAUTION ⚠	⚠ CAUTION ⚠
Glazing material must comply with the ANSI standard specification.	**Operator speed adjustments cannot be set properly until after the door is glazed.**

- Continue with “14. Control Box Functions (Surface and Concealed)”

14 Control Box Functions (Surface and Concealed)

To set control box functions, see the Senior Swing Control Box installation instructions.

- Continue with “15. Plate Installation (Surface and Concealed)” on page 18.

15 Plate Installation (Surface and Concealed)

Surface	Concealed
1. Install spindle plate and filler plate (Figure 15-1). Spindle platecutout fits over operator spindle.	For concealed header applications using offset arm with butt hung and offset pivoted doors only: 1. Prepare header dress plates for concealing channel (Figure 15-2; see separate Installation Instructions for Offset Arm). 2. Install concealing channel (Figure 15-2).

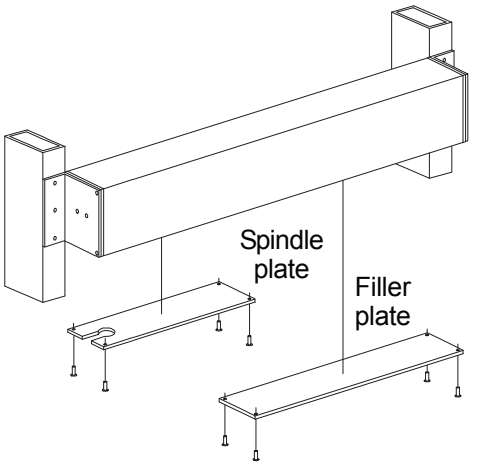


Figure 15-1

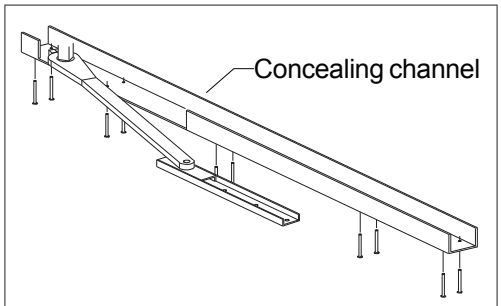


Figure 15-2

- Continue with "16. Release for Service (Surface and Concealed)"

16 Release for Service (Surface and Concealed)

16a Remove all tools, installation equipment, and debris from the vicinity of the door.

16b Install all safety, traffic control, and instruction decals on the door as required by the latest revision of ANSI/ BHMAA156.19 for the Senior Swing. This is very important! Failure to do this leaves the installer LIABLE for any accident that might occur. This must be done!

16c Verbally instruct the owner or person in charge of the proper operation of the door.

16d Instruct the owner or person in charge to routinely inspect the door for occasional damage, developing problems, minor preventive maintenance.

16e Instruct the owner or person in charge who and where to call for service when required.

⚠ IMPORTANT ⚠

Make sure to install all safety, traffic control, and instruction decals on the door as required.

Customer Service	
1-877-671-7011	www.allegion.com/us

ALLEGION

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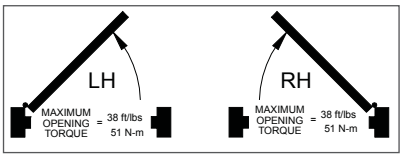
740132 Rev. 06/16-h

3030 Series

19623

Not for installation on UL rated 20 minute wood core doors per CAN/ULC-S104-10

Installation Instructions



⚠ CAUTION ⚠

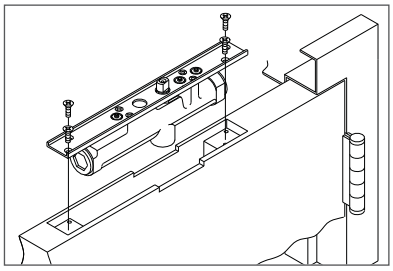
Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions, call LCN at 877-671-7011

1

Determine hand of door using diagram above. Hand of closer must match hand of door. The closer mtg. plate is marked with an "R" or "L". Determine desired degree of opening and prepare door & frame per template on reverse side. Proper mortising of door is required for closer to operate correctly.

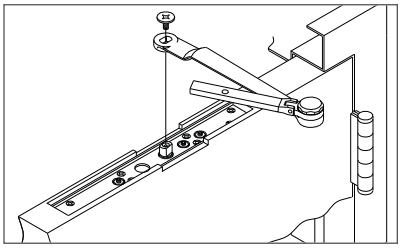
2

Install closer into door as shown below and secure with screws provided.



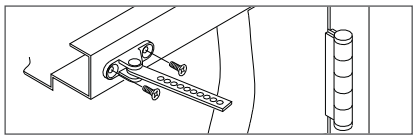
3

Attach arm to closer as shown below, then fasten with arm shaft screw.



4

Install rod & shoe assembly on frame as shown below. The longer part of the shoe should be towards hinge.



5

Open door far enough to insert rod (attached to frame) into arm tube, shown in Fig. 1. Close door completely.

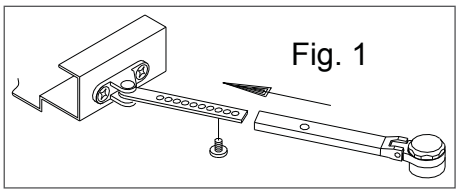


Fig. 1

6

Pre-load arm so that main arm is at a right angle (90°) to frame, as shown in Fig. 2 below. Holding arm in this position, insert and tighten arm screw.

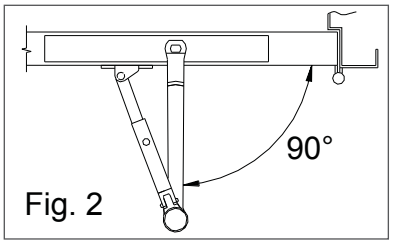


Fig. 2

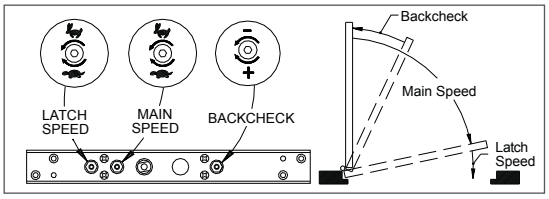
7

Adjustment of hold open arm (90°- 140°): The arm is preset at factory to hold open at approx. 90°. To adjust setting: Loosen hold open nut; open door to 3°- 5° before desired hold open position; then tighten hold open nut securely.

8

Closer Regulation:

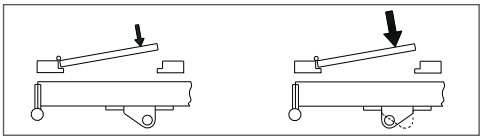
The 3030 series closer has been regulated prior to shipment. If adjustments are needed, use a 3/32" hex wrench and consult diagram below.



9

For Increased Closing Power:

Disconnect arm from rod & shoe. Remove screws holding rod & shoe to frame. Rotate shoe 180° and re-attach to frame with longer part of shoe toward latch as shown.



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ALLEGION

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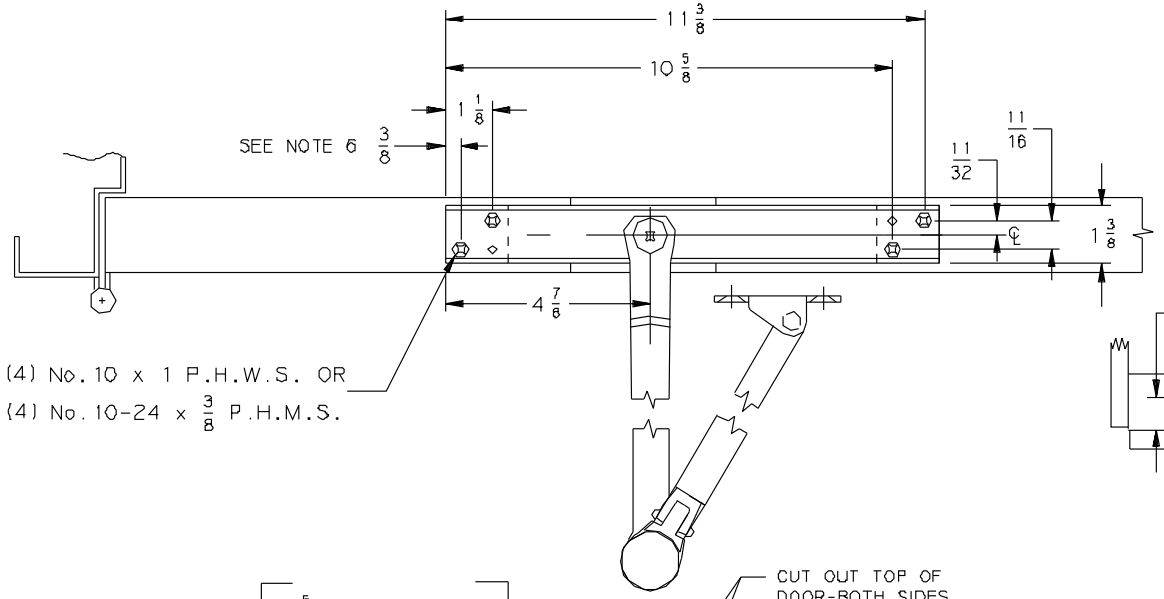
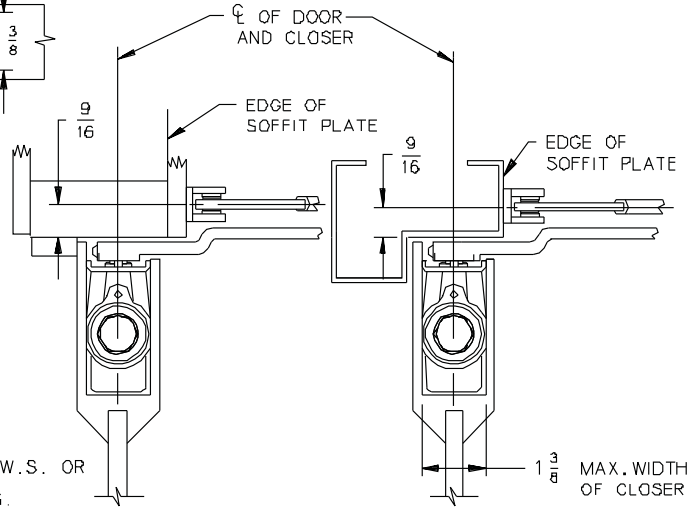
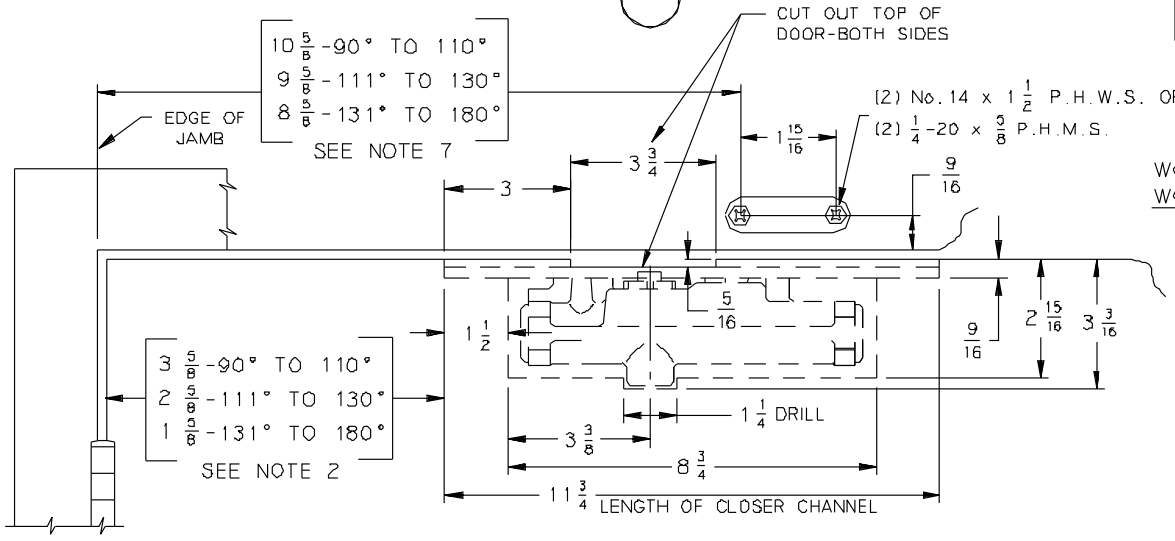
19623 Rev. 01/14-h

3031 3032 3033 3034	NON HOLD OPEN-(90°-180°] H90-(100°-140° HOLD OPEN)
AUXILIARY STOP RECOMMENDED	
RIGHT HAND DOOR AND CLOSER SHOWN. LEFT HAND OPPOSITE	5/97







GENERAL NOTES-

1. LOCATION OF CLOSER DEPENDS ON DEGREE OF DOOR OPENING AND HOLD OPEN DESIRED.
2. IF DOOR IS HUNG ON PIVOTS OR SWING CLEAR HINGES. CONSULT FACTORY.
3. ADJUSTMENT OF POWER: CLOSING POWER IS ADJUSTED BY ROTATING SHOE.
4. FOR INTERIOR DOORS ONLY.
5. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.
6. HOLE PATTERN FOR 4 CHANNEL SCREWS IDENTICAL FOR R.H.& L.H.
7. HOLD OPEN IS NOT EFFECTIVE BEYOND 140°

INCH	1/4	5/16	11/32	3/8	1/2	9/16	11/16	7/8	1	1 1/8	1 1/4
M.M.	6	8	9	10	13	14	17	22	25	29	32

INCH	1 3/8	1 1/2	1 9/16	1 5/8	1 3/4	1 7/8	2 5/8	2 7/8	2 15/16	3	3 3/16
M.M.	35	38	40	41	44	48	67	73	75	76	81

INCH	3 3/8	3 5/8	3 3/4	4 1/8	4 7/8	8 5/8	8 3/4	9 5/8	10 5/8	11 3/8	11 3/4
M.M.	86	92	95	105	124	219	222	245	270	289	299

No.	REVISION	BY	DATE
6	TEMPLATE UPDATE	JEJ	6/96
7	REVISED DIMENS.	AMM	2/98

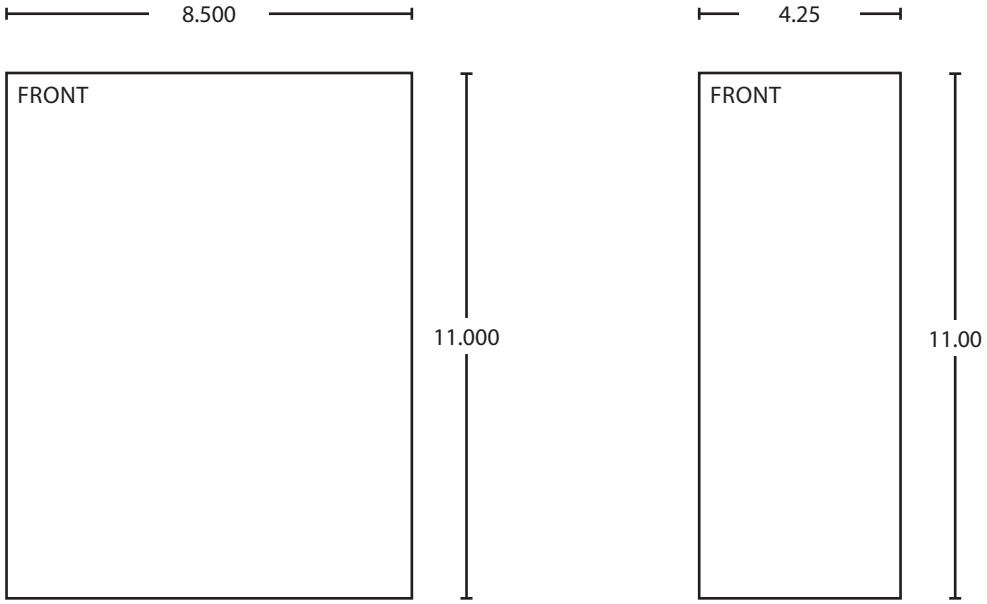
LCN

APP BY JEJ 6/96

DO NOT SCALE

CONCEALED DOOR CLOSER-EXPOSED ARMS WITH SURFACE APPLIED SHOE

3030



BEGINNING SHEET

FOLDED SHEET

Additional Notes:
1. None

Revision History					
H	J	K	L	M	N
043228					

Material
White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
H > Revised artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043228	01-01-14

Title
3030 Series Instruction Sheet

Creation Date	Number	Revision
05-10-10	19623	H

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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28011

1461

Peel-N-Stick

LCN®

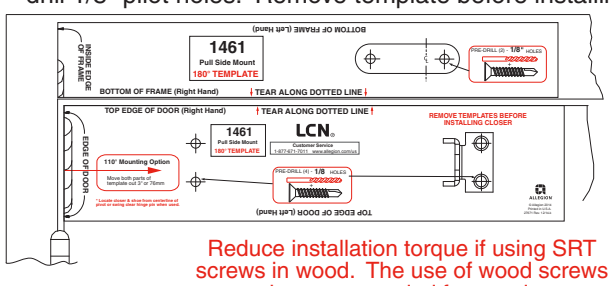
110° & 180° Template
Pull Side Mount & Top Jamb Mount

Installation Instructions

Pull Side Mount

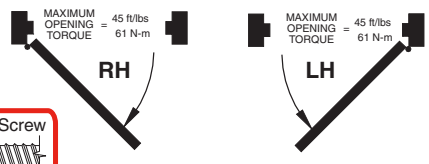
1 Locate proper template, tear along dotted line, peel template and apply. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes. Remove template before installing closer.

EN 2-5



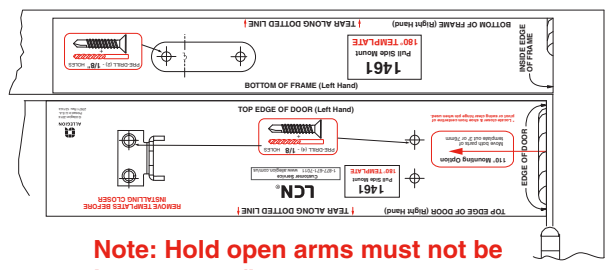
MOUNT 180° TO MEET ADA.

For 1461 Delay 110° Mounting provides additional delay time.



Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.

Note: Steps 2-8 show right hand door mount, left hand door is opposite.



Note: Hold open arms must not be installed on fire-rated doors

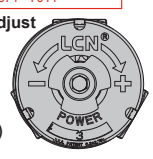
2 Determine door width, adjust spring power to match chart.

DOOR WIDTH	LCN FAST Power Adjust SET TO:
♿	1
30"	2
32"	3
36"	4
42"	5
48"	6

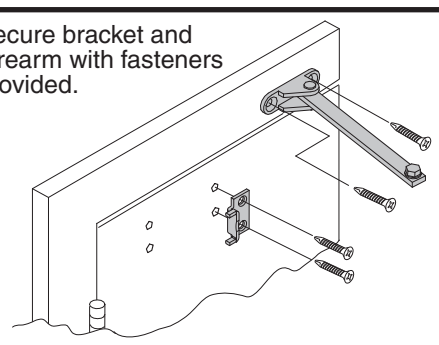
⚠CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

LCN FAST Power Adjust for Spring Power Adjustment

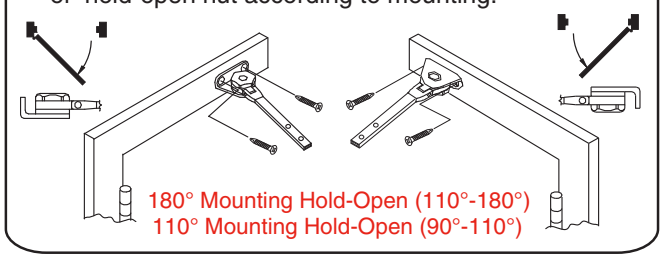
(Used only on non-sized closers)



3 Secure bracket and forearm with fasteners provided.

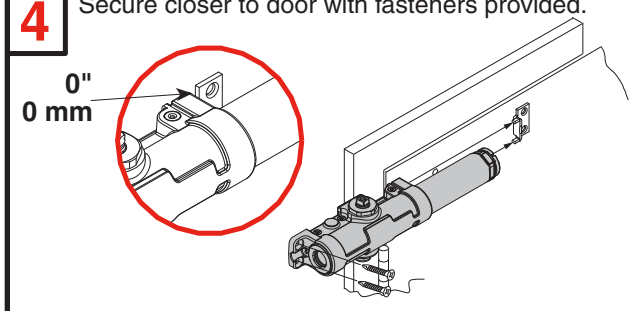


I Optional Hold-open arm. Identify direction of hold-open nut according to mounting.

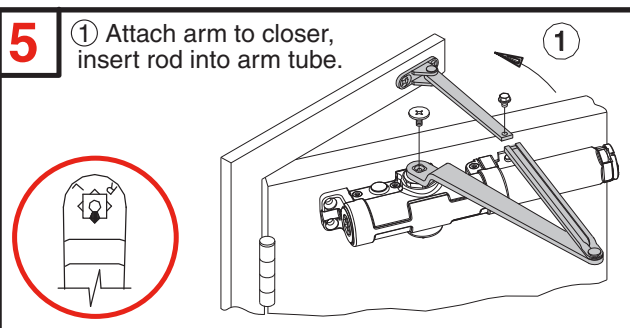


180° Mounting Hold-Open (110°-180°)
110° Mounting Hold-Open (90°-110°)

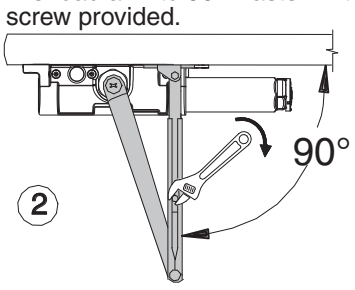
4 Secure closer to door with fasteners provided.



5 ① Attach arm to closer, insert rod into arm tube.



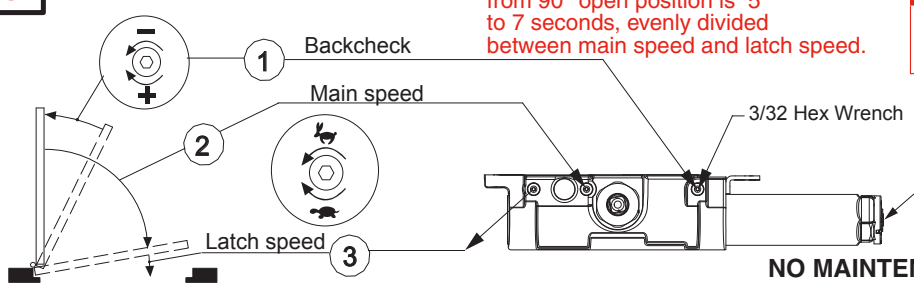
② Pre-load arm to 90°. Fasten with screw provided.



6 If necessary, adjust closer.

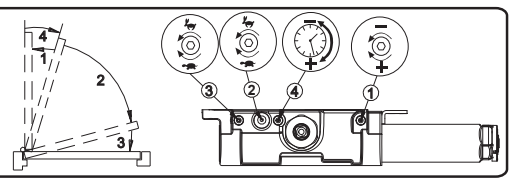
NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

⚠CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.

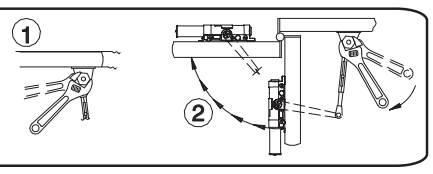


NO MAINTENANCE REQUIRED

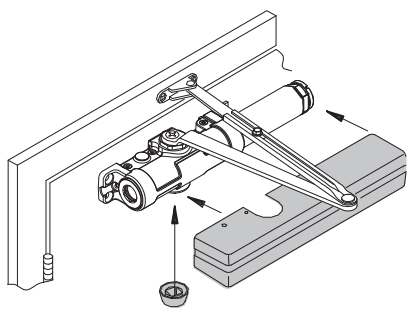
II Optional Delay Action
① - Backcheck
② - Main Speed
③ - Latch Speed
④ - Delay Speed



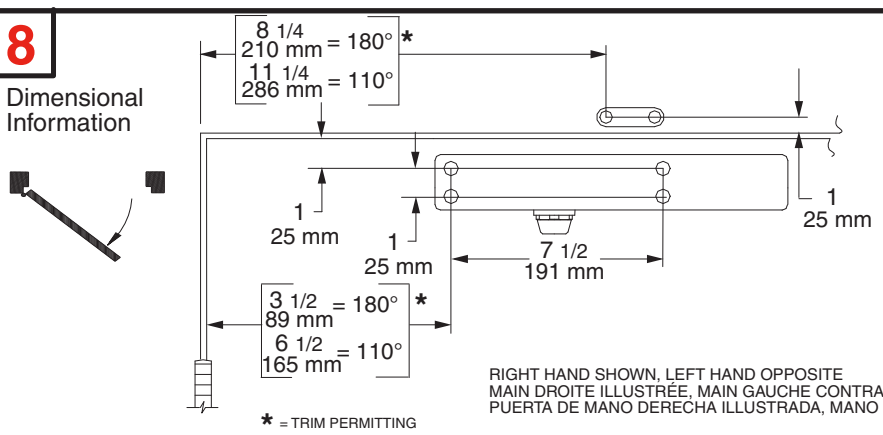
III To adjust Optional Hold-open arm:
①Loosen hold open nut.
②Open door to desired position and tighten hold open nut securely.



7 Snap on cover and shaft cap.



8 Dimensional Information



RIGHT HAND SHOWN, LEFT HAND OPPOSITE
MAIN DROITE ILLUSTRÉE, MAIN GAUCHE CONTRAIRE
PUERTA DE MANO DERECHA ILLUSTRADA, MANO IZQUIERDA AL OPUESTO

*** Locate closer & shoe from centerline of pivot or swing clear hinge pin when used.**

Patents Pending include:
Rapidor - Installation System
PROPRIETARY, LCN Division, Schlage Lock Company

1461 Instructions et gabarit autocollant pour une installation sur le côté à tirer de 110° & 180°.

1 Repérez le gabarit approprié, détachez-le, retirez la pellicule et appliquez. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds. Retirez le gabarit avant de poser le ferme-porte.

Installation 180° pour conformité à l'ADA
Pour le 1461 l'installation de la Retenue 110° permet un délai de retenue additionnel.

Note : Les étapes 2-8 illustrent une main droite. Le sens est inversé pour une main gauche.

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Indicateur rotatif de réglage du ressort.

3 Posez la console et le bras à l'aide des attaches fournies.

I Bras de retenue optionnelle. Identifiez la direction du boulon de retenue selon l'ouverture de la porte.

Installation 180° bras de retenue (110°-180°)
Installation 110° bras de retenue (90°-110°)

4 Fixez le ferme-porte sur la porte avec les attaches fournies.

5 ① Attachez le bras au ferme-porte, insérez la tige dans le tube du bras.
② Préchargez le bras à 90°. Fixez-le avec les vis fournies.

6 Au besoin, réglez
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage

II Action retardée optionnelle
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage
④ - vitesse de retenue

7 Placez le couvercle et le capuchon du pignon.

8 Dimensions

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

III Pour régler le bras de retenue optionnelle, desserrez la vis de retenue. Ouvrez la porte à la position désirée et resserrez la vis.

⚠DANGER
Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877-671-7011

⚠DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

1461 Instrucciones Pela y Pega para plantilla 110° & 180° montada lado de tirón.

1 Localiza la plantilla apropiada, rompe a lo largo de la línea de puntos, pela la plantilla y aplícala. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes. Quita la plantilla antes de instalar el cerrador.

Montar a 180° para cumplir con la norma ADA
Para la Retención del 1461, un montaje de 110° dará un tiempo de retención adicional.
Nota: Las etapas 2-8 indican un montaje de puerta a la izquierda**, una puerta a la** derecha **está al lado opuesto.**
Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

Indicador rotacional para el ajuste de la fuerza del resorte.

3 Sujeta el soporte y el antebrazo con los sujetadores incluidos.

I Brazo de retención opcional. Identifíca la dirección de la tuerca de retención según el montaje.

Brazo de retención opcional montado 180° (110°-180°) Brazo de retención opcional montado 90° (90°-110°)

4 Sujete el cerrador a la puerta con los sujetadores ya incluidos.

5 ① Sujeta el brazo al cerrador, introduce la varilla en el tubo del brazo.
② Prearma el brazo a 90°. Sujétalo con el tornillo ya incluido.

6 Ajusta si se necesario
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

II Acción retardada opcional
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro
④ - velocidad de retardo

7 Coloca la tapa y el tapón de tiro.

8 Datos dimensionales

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

III Para ajustar el brazo de retención opcional: Afloja la tuerca de retención. Abra la puerta a la posición deseada y aprietabien la tuerca de retención.

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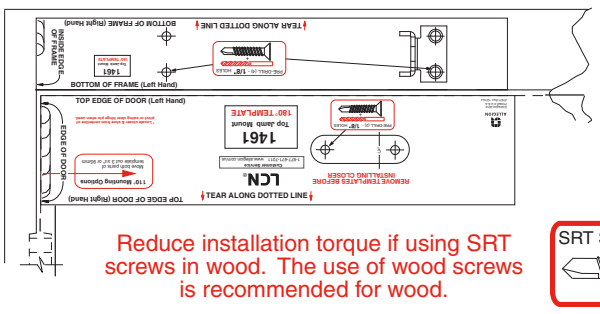
Top Jamb Mount
110° & 180° Template

1
Locate proper template, tear along dotted line, peel template and apply. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes. Remove template before installing closer.

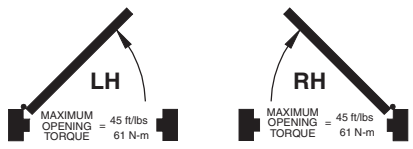


Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.

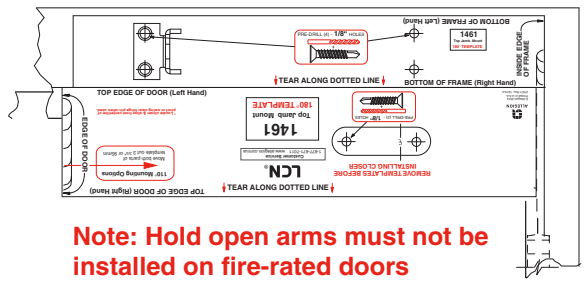
SRT Screw

EN 2-5
50mm Max Head Projection
MOUNT 180° TO MEET ADA

For 1461 Delay 110° Mounting provides additional delay time.



Note: Steps 2-8 show left hand door mount, right hand door is opposite.



Note: Hold open arms must not be installed on fire-rated doors

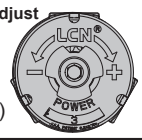
2
Determine door width, adjust spring power to match chart.

	1461
	1
30"- 750mm	2
32"- 815mm	3
36"- 915mm	4
42"- 1050mm	5
48"- 1220mm	6

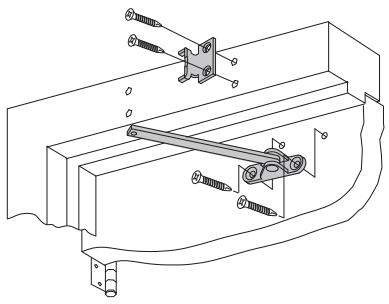
⚠CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

LCN FAST Power Adjust for Spring Power Adjustment

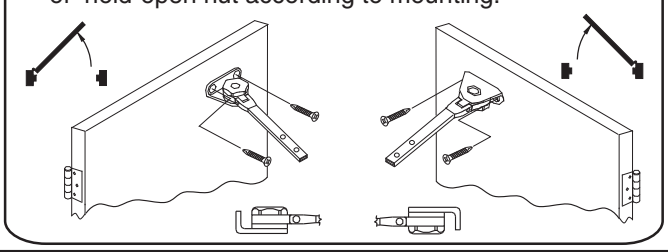
(Used only on non-sized closers)



3
Secure bracket and forearm with fasteners provided.

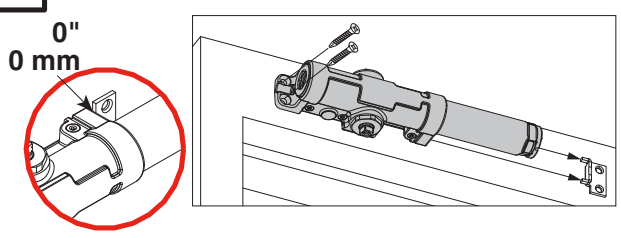


I Optional Hold-open arm. Identify direction of hold-open nut according to mounting.

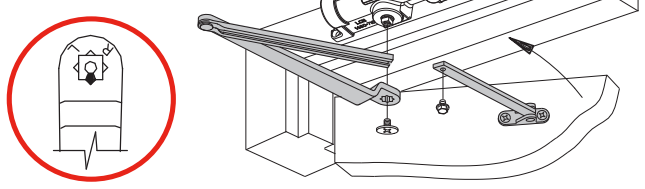


4
Secure closer to frame with fasteners provided.

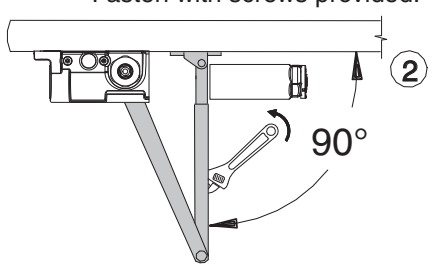
0"
0 mm



5
① Attach arm to closer, insert rod into arm tube.



② Pre-load arm to 90°. Fasten with screws provided.

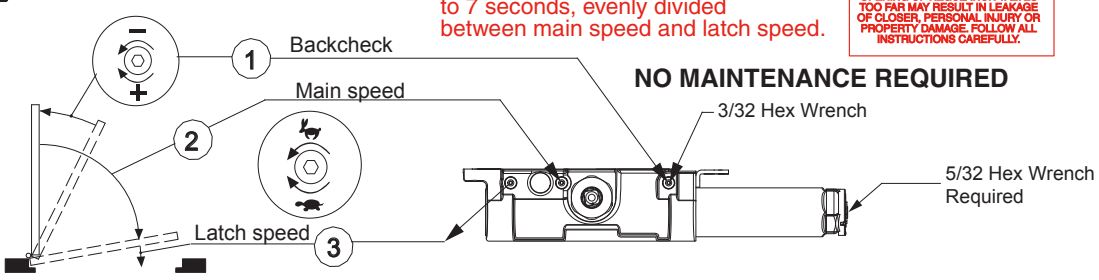


6
If necessary, adjust closer

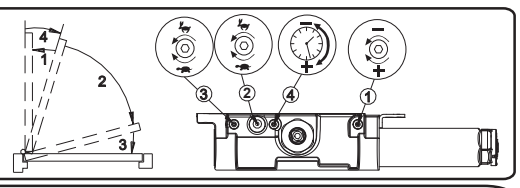
NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

⚠CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.

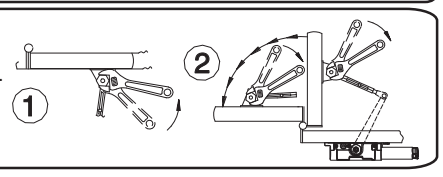
NO MAINTENANCE REQUIRED



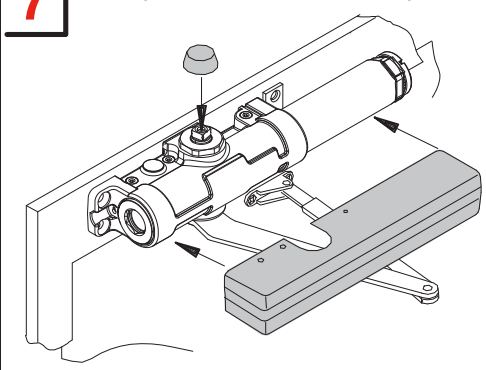
II Optional Delay Action
① - Backcheck
② - Main Speed
③ - Latch Speed
④ - Delay Speed



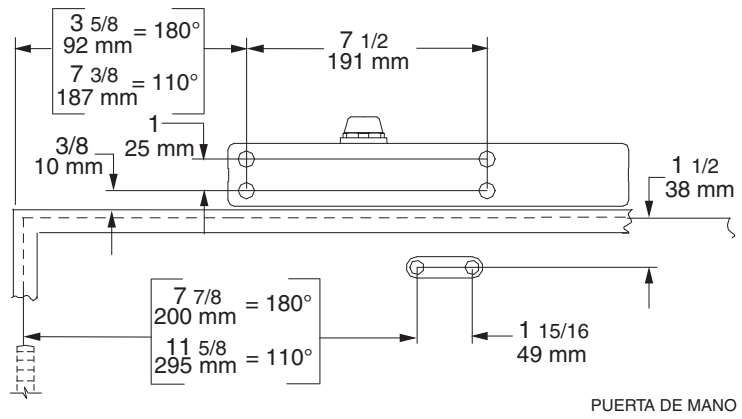
III To adjust Optional Hold-open arm:
①Loosen hold open nut.
②Open door to desired position and tighten hold open nut securely.



7
Snap on cover and shaft cap.



8
Dimensional Information



*** Locate closer & shoe from centerline of pivot or swing clear hinge pin when used.**

LEFT HAND SHOWN, RIGHT HAND OPPOSITE
MAIN GAUCHE ILLUSTRÉE, MAIN DROITE CONTRAIRE
PUERTA DE MANO IZQUIERDA ILUSTRADA, MANO DERECHA AL OPUESTO

1461 Instructions et gabarit autocollant pour une installation "sur le linteau" de 110° & 180°.

1 Repérez le gabarit approprié, détachez-le, retirez la pellicule et appliquez. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds. Retirez le gabarit avant de poser le ferme-porte.

Installation 180° pour conformité à l'ADA
Pour le 1461 l'installation de la Retenue 110° permet un délai de retenue additionnel.

Note : Les étapes 2-8 illustrent une main gauche. Le sens est inversé pour une main droite.

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Indicateur rotatif de réglage du ressort.

3 Posez la console et le bras à l'aide des attaches fournies.

I Bras de retenue optionnelle. Identifiez la direction du boulon de retenue selon l'ouverture de la porte.

4 Fixez le ferme-porte sur le cadre à l'aide des attaches fournies.

5 ① Attachez le bras au ferme-porte, insérez la tige dans le tube du bras.

② Préchargez le bras à 90°. Fixez-le avec les vis fournies.

6 Au besoin, réglez
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage

II Action retardée optionnelle
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage
④ - vitesse de retenue

7 Placez le couvercle et le capuchon du pignon.

8 Dimensions

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

III Pour régler le bras de retenue optionnelle, desserrez la vis de retenue. Ouvrez la porte à la position désirée et resserrez la vis.

⚠DANGER
Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877-671-7011

⚠DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

1461 Instrucciones Pela y Pega para plantilla 110° & 180° con montaje al lado de la jamba.

1 Localiza la plantilla apropiada, rompe a lo largo de la línea de puntos, pela la plantilla y aplícala. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes. Quita la plantilla antes de instalar el cerrador.

Montar a 180° para cumplir con la norma ADA
Para la Retención del 1461, un montaje de 110° dará un tiempo de retención adicional.

Nota: Las etapas 2-8 indican un montaje de puerta hacia la izquierda, una puerta a la derecha está al opuesto.
Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

Indicador rotacional para el ajuste de la fuerza del resorte.

3 Sujeta el soporte y el antebrazo con los sujetadores ya incluidos.

I Brazo de retención opcional. Identifíca la dirección de la tuerca de retención según el montaje.

4 Sujeta el cerrador a la armazón con los sujetadores ya incluidos.

5 ① Sujeta el brazo al cerrador, introduce la varilla en el tubo del brazo.

② Prearma el brazo a 90°. Sujétalo con el tornillo ya incluido.

6 Ajusta si se necesario
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

II Acción retardada opcional
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro
④ - velocidad de retardo

7 Coloca la tapa y el tapón de tiro.

8 Datos dimensionales

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

III Para ajustar el brazo de retención opcional: Afloja la tuerca de retención. Abre la puerta a la posición deseada y aprieta bien la tuerca de retención.

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Customer Service	Servicio al cliente	Service à la clientèle
1-877-671-7011	www.allegion.com/us	

ALLEGION

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28011 Rev. 11/15-t

2310ME-420 Sentronic

18766

LCN®

Installation Instructions

If closer has optional hold-open bypass feature, bypass label will be on cylinder.

⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions, call LCN at 877 - 671 - 7011

1 Installation

Closer handed at factory and must match hand of door.

2

Voltage shown on box label must match voltage supplied to door frame.

3

If door & frame are not prepared for closer & track, prepare according to details on opposite side.

4

a. Cut soffit from frame.
b. Assemble flexible conduit connector to conduit mounting bracket.
c. Connect input voltage to plug leads as shown in wiring diagram in Step 10.
d. Insert closer into frame and secure with proper screws.
e. Replace soffit.

5

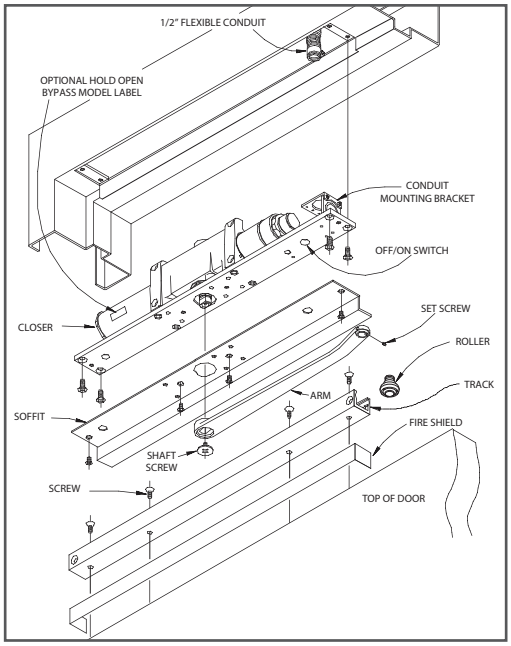
Insert track roller into track. Insert track and fire shield in door cut out and secure with proper screws.

6

Place arm on closer shaft and secure with shaft screw.

7

Loosen set screw in end of arm, open door part way (about 30°), pull arm over top of door and connect to track roller. Tighten set screw firmly.



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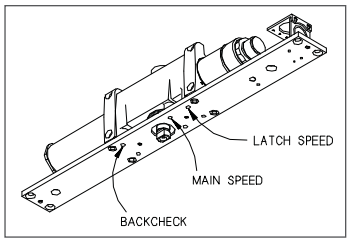
8

Regulation: Do not allow door to slam into frame. A "normal" closing time from 90° open position is 5 to 7 seconds. Use a 3/32" hex wrench. To slow MAIN SPEED of door, turn regulation screw (nearest arm) clockwise. To slow LATCH SPEED of door, turn regulating screw (nearest latch) clockwise.

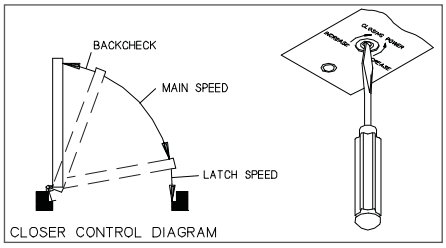


Backcheck: To increase BACKCHECK, turn regulating screw (nearest hinge) clockwise. Using lightest BACKCHECK that will retard door opening sufficiently.

DO NOT USE AN ABRUPT BACKCHECK NOR EXPECT DOOR CLOSER TO ACT AS DOOR STOP.

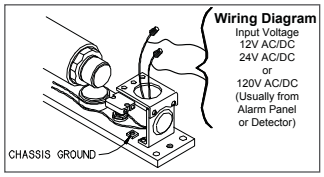
9 Closing Power

Adjust CLOSING POWER only if more power is needed. Closer is shipped with minimum closing power pre-set. To increase CLOSING POWER turn spring adjusting screw clockwise. Maximum adjustment of 18 turns.



10 Electrical Checkout

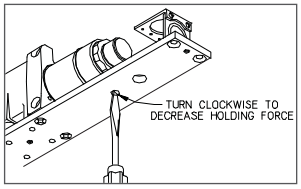
a. With power on, open the door any position and release. The door should remain in the hold-open position within 10°. For a bypass model to hold open, the door must be opened beyond degree of door swing indicated on label.
b. If not, push on/off switch.
c. If door does not stay open, verify electrical input in wiring diagram at right.



d. Turn power off, door should close completely.
e. To release hold open manually, pull door firmly. Door should close completely under power of closer.
f. System should be checked at regular intervals. It is suggested that steps A & D be repeated every 90 days.

11 Holding Force Adjustment

IF DOOR IS HARD TO PULL OUT OF HOLD OPEN, ADJUST AS SHOWN.
Holding Force is at maximum. This can be decreased and increased again but not increased beyond original setting.



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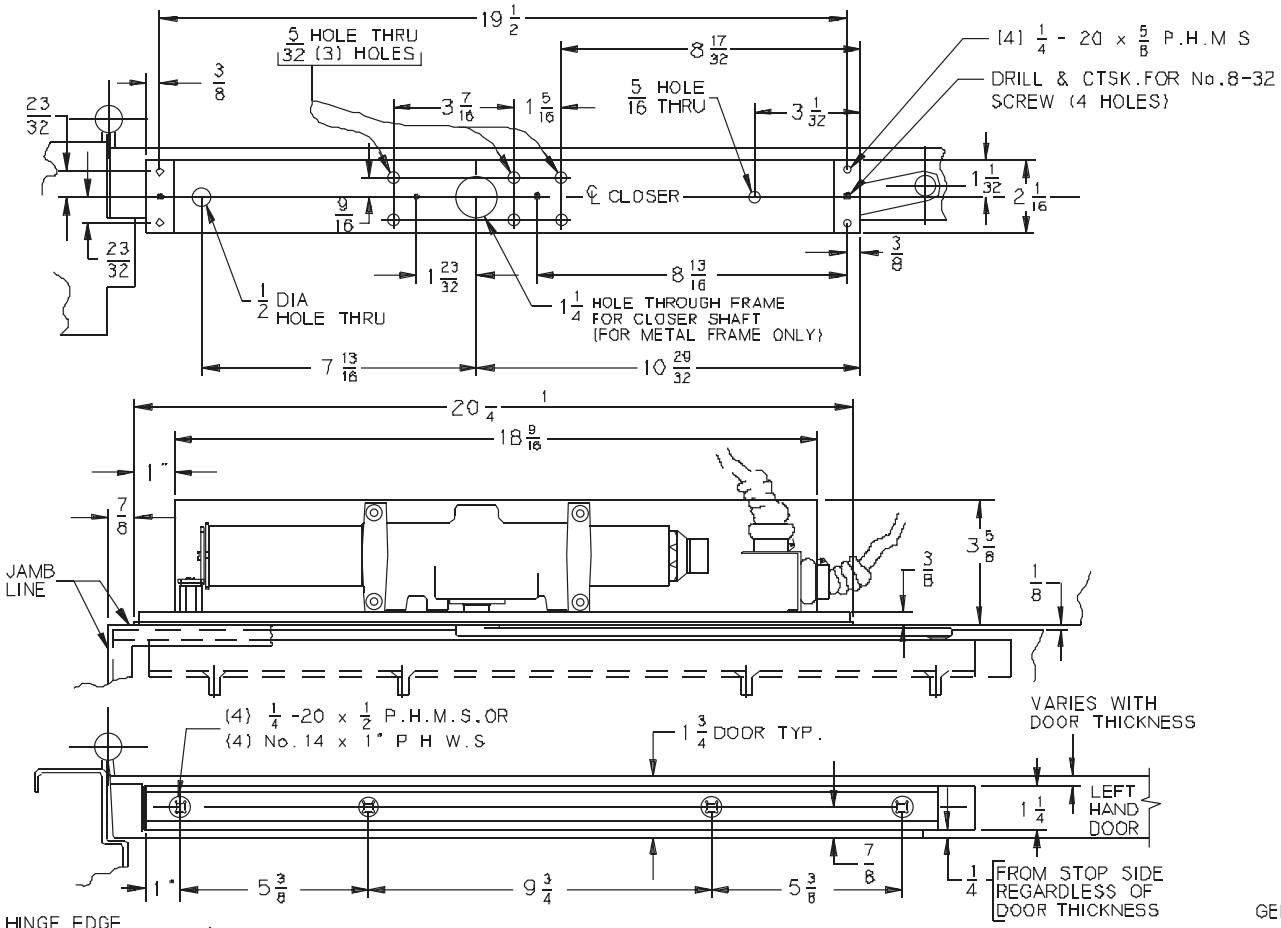
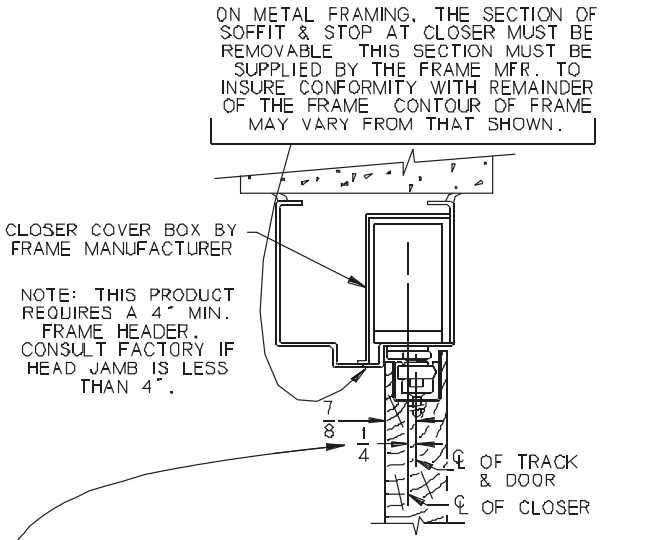
18766 Rev. 10/15-c

2310 ME 420

2314 ME	} HOLD OPEN ANY POINT TO 170° } HOLD OPEN BYPASS UP TO 160°
AUXILIARY STOP RECOMMENDED	
LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE	12/96



PLAN & ELEVATION OF TOP OF DOOR SHOWING PREPARATION FOR CLOSER TRACK



GENERAL NOTES:

1 - FOR 180° OPENINGS, MAX. ALLOWABLE BUTT SIZE IS 5"x5".
2 - MINIMUM STOP THICKNESS 1/2".
3 - 1/8" DOOR TO SOFFIT CLEARANCE REQUIRED.
4 - FOR METAL FRAMES ONLY.
5 - VOLTAGE SHOWN ON SENTRONIC LABEL MUST MATCH VOLTAGE SUPPLIED.
6 - FLOOR OR WALL STOP RECOMMENDED.
7 - REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOOR AND FRAMES

LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE

INCH	1/8	5/32	1/4	5/16	3/8	1/2	9/16	5/8	23/32	7/8	1	1 1/32	1 1/4	1 9/32	1 5/16	1 3/8	1 23/32
M M	3	3	6	8	10	13	14	16	18	22	25	26	32	33	33	35	44

INCH	1 3/4	2 1/16	3 1/32	3 7/16	3 5/8	5	5 3/8	7 13/16	8 17/32	8 13/16	9 3/4	10 29/32	18 1/4	19 1/2	20 1/4	22 1/2	23 5/8
M M	44	52	77	87	92	127	137	198	217	224	248	277	464	495	514	572	600

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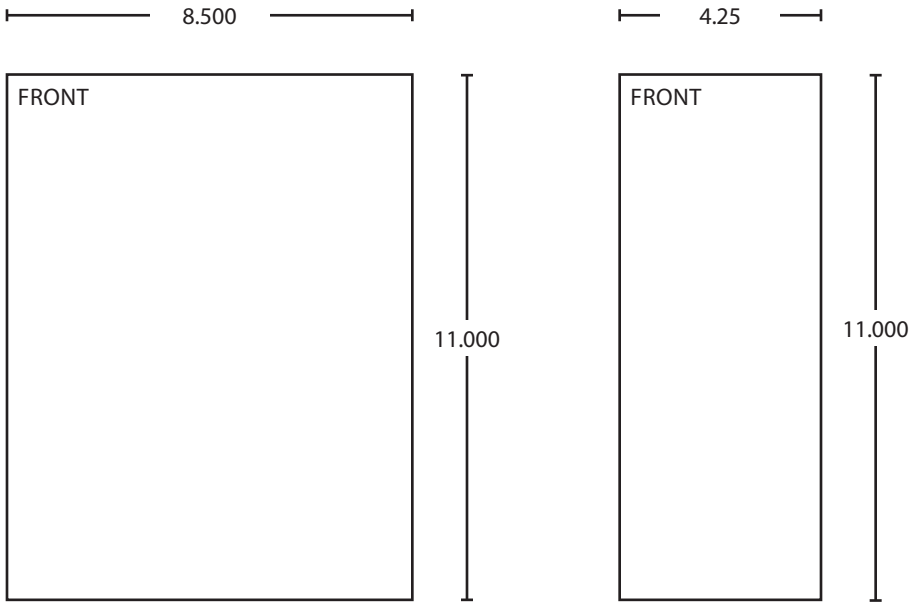

Additional Notes:
1. None

Revision History					
J	K	L	M	N	P
043228					

Material: White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
C > Revised artwork

Edited By	Approved By	EC Number	Release Date
J. Ellis	J. Pattar	xxxxxx	10-14-15

Title: 2310ME-420 Instruction Sheet

Creation Date	Number	Revision
05-10-10	18766	C

Created By: N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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28011

1461

Peel-N-Stick

LCN®

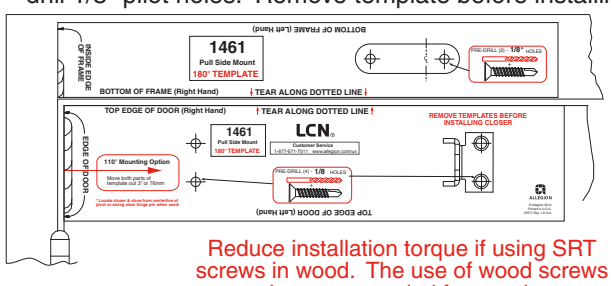
110° & 180° Template
Pull Side & Jamb Mount

Installation Instructions

Pull Side

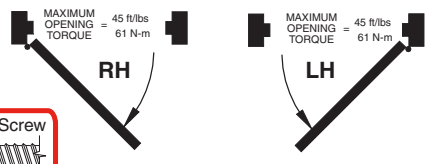
1 Locate proper template, tear along dotted line, peel template and apply. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes. Remove template before installing closer.

EN 2-5



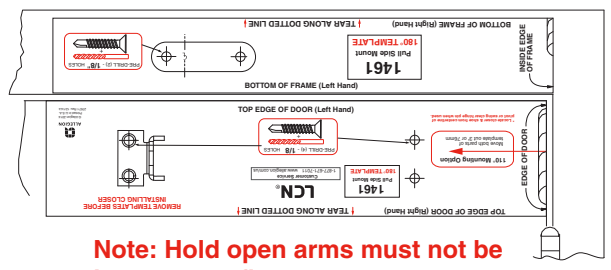
MOUNT 180° TO MEET ADA.

For 1461 Delay 110° Mounting provides additional delay time.



Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.

Note: Steps 2-8 show right hand door mount, left hand door is opposite.



Note: Hold open arms must not be installed on fire-rated doors

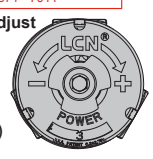
2 Determine door width, adjust spring power to match chart.

DOOR WIDTH	LCN FAST Power Adjust SET TO:
♿	1
30"	2
32"	3
36"	4
42"	5
48"	6

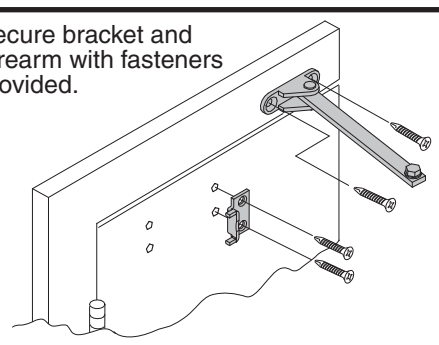
⚠CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

LCN FAST Power Adjust for Spring Power Adjustment

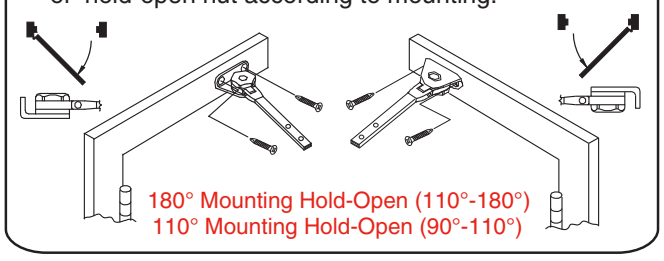
(Used only on non-sized closers)



3 Secure bracket and forearm with fasteners provided.

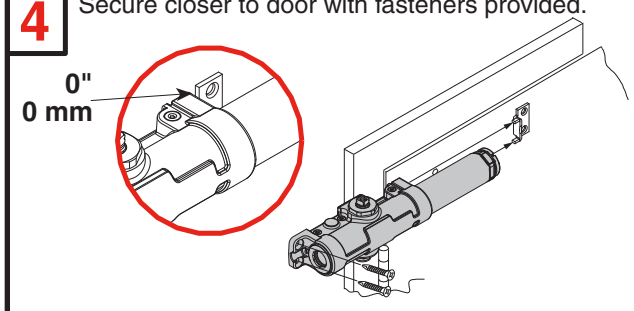


I Optional Hold-open arm. Identify direction of hold-open nut according to mounting.

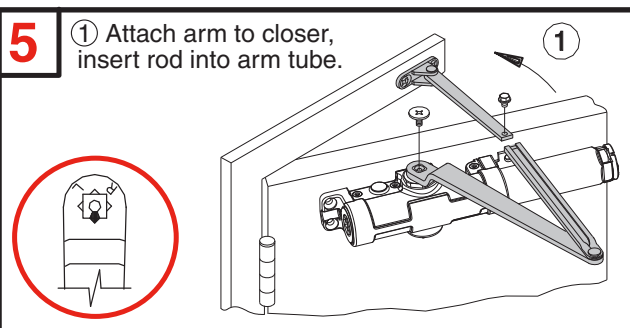


180° Mounting Hold-Open (110°-180°)
110° Mounting Hold-Open (90°-110°)

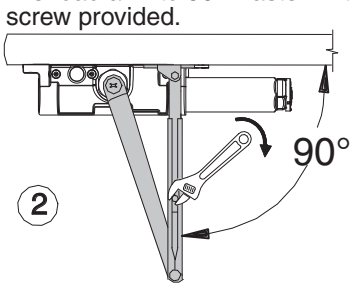
4 Secure closer to door with fasteners provided.



5 ① Attach arm to closer, insert rod into arm tube.



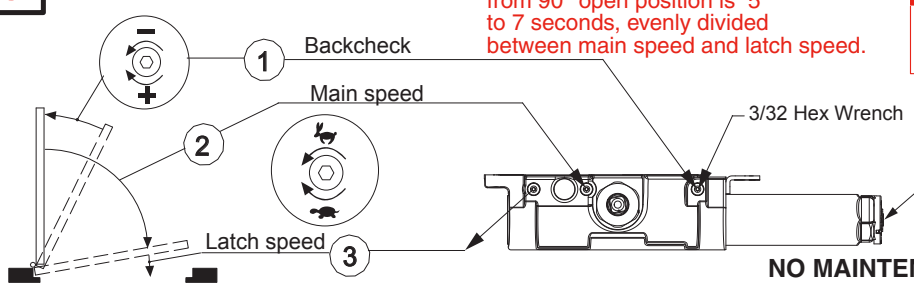
② Pre-load arm to 90°. Fasten with screw provided.



6 If necessary, adjust closer.

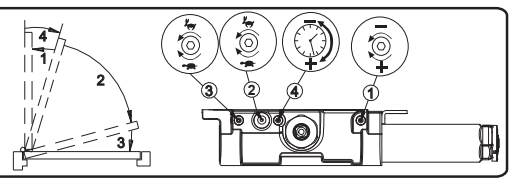
NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

⚠CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.

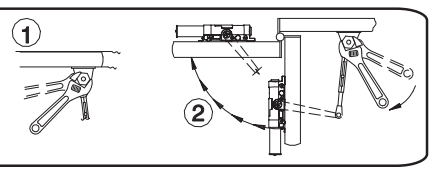


NO MAINTENANCE REQUIRED

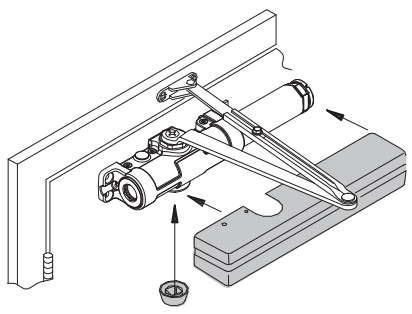
II Optional Delay Action
① - Backcheck
② - Main Speed
③ - Latch Speed
④ - Delay Speed



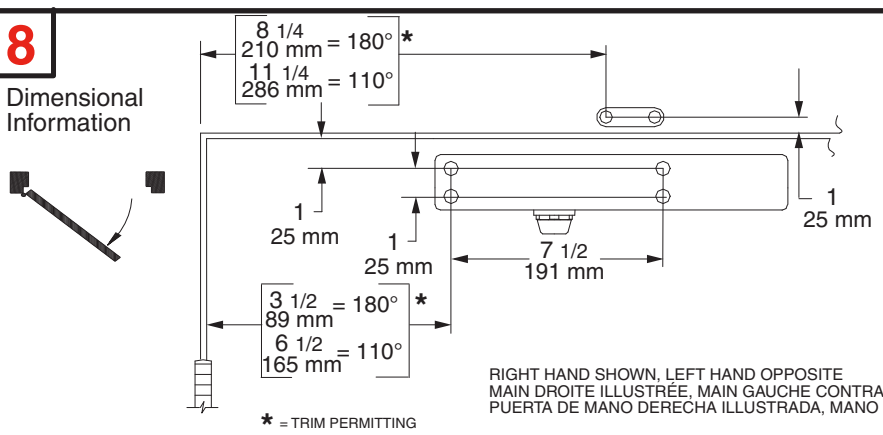
III To adjust Optional Hold-open arm:
①Loosen hold open nut.
②Open door to desired position and tighten hold open nut securely.



7 Snap on cover and shaft cap.



8 Dimensional Information



RIGHT HAND SHOWN, LEFT HAND OPPOSITE
MAIN DROITE ILLUSTRÉE, MAIN GAUCHE CONTRAIRE
PUERTA DE MANO DERECHA ILLUSTRADA, MANO IZQUIERDA AL OPUESTO

*** Locate closer & shoe from centerline of pivot or swing clear hinge pin when used.**

Patents Pending include:
Rapidor - Installation System
PROPRIETARY, LCN Division, Schlage Lock Company

1461 Instructions et gabarit autocollant pour une installation sur le côté à tirer de 110° & 180°.

1 Repérez le gabarit approprié, détachez-le, retirez la pellicule et appliquez. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds. Retirez le gabarit avant de poser le ferme-porte.

Installation 180° pour conformité à l'ADA
Pour le 1461 l'installation de la Retenue 110° permet un délai de retenue additionnel.

Note : Les étapes 2-8 illustrent une main droite. Le sens est inversé pour une main gauche.

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Indicateur rotatif de réglage du ressort.

3 Posez la console et le bras à l'aide des attaches fournies.

I Bras de retenue optionnelle. Identifiez la direction du boulon de retenue selon l'ouverture de la porte.

Installation 180° bras de retenue (110°-180°)
Installation 110° bras de retenue (90°-110°)

4 Fixez le ferme-porte sur la porte avec les attaches fournies.

5 ① Attachez le bras au ferme-porte, insérez la tige dans le tube du bras.
② Préchargez le bras à 90°. Fixez-le avec les vis fournies.

6 Au besoin, réglez
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage

II Action retardée optionnelle
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage
④ - vitesse de retenue

7 Placez le couvercle et le capuchon du pignon.

8 Dimensions

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

III Pour régler le bras de retenue optionnelle, desserrez la vis de retenue. Ouvrez la porte à la position désirée et resserrez la vis.

⚠DANGER
Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877-671-7011

⚠DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

1461 Instrucciones Pela y Pega para plantilla 110° & 180° montada lado de tirón.

1 Localiza la plantilla apropiada, rompe a lo largo de la línea de puntos, pela la plantilla y aplícala. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes. Quita la plantilla antes de instalar el cerrador.

Montar a 180° para cumplir con la norma ADA
Para la Retención del 1461, un montaje de 110° dará un tiempo de retención adicional.
Nota: Las etapas 2-8 indican un montaje de puerta a la izquierda**, una puerta a la** derecha **está al lado opuesto.**
Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

Indicador rotacional para el ajuste de la fuerza del resorte.

3 Sujeta el soporte y el antebrazo con los sujetadores incluidos.

I Brazo de retención opcional. Identifíca la dirección de la tuerca de retención según el montaje.

Brazo de retención opcional montado 180° (110°-180°) Brazo de retención opcional montado 90° (90°-110°)

4 Sujete el cerrador a la puerta con los sujetadores ya incluidos.

5 ① Sujeta el brazo al cerrador, introduce la varilla en el tubo del brazo.
② Prearma el brazo a 90°. Sujétalo con el tornillo ya incluido.

6 Ajusta si se necesario
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

II Acción retardada opcional
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro
④ - velocidad de retardo

7 Coloca la tapa y el tapón de tiro.

8 Datos dimensionales

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

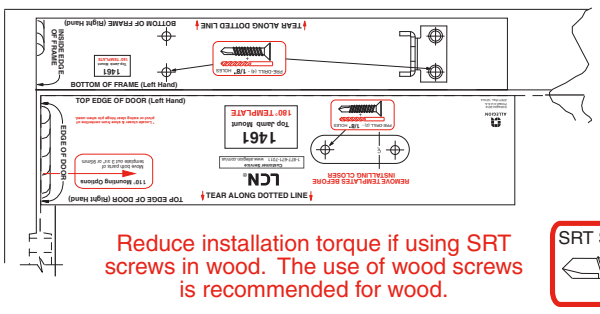
III Para ajustar el brazo de retención opcional: Afloja la tuerca de retención. Abra la puerta a la posición deseada y aprietabien la tuerca de retención.

⚠ADVERTENCIA
UNA INSTALACIÓN O UN AJUSTE INCORRECTOS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL 877-671-7011

⚠ADVERTENCIA
LA APERTURA DEMASIADO GRANDE DE LAS VÁLVULAS DE AJUSTE PUEDE OCASIONAR UN DERRAME, DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. APPELEZ LCN À 877-671-7011

Jamb Mount
110° & 180° Template

1
Locate proper template, tear along dotted line, peel template and apply. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes. Remove template before installing closer.

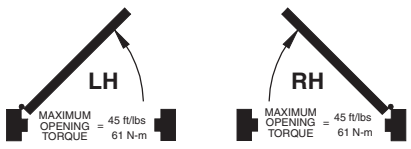


Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.

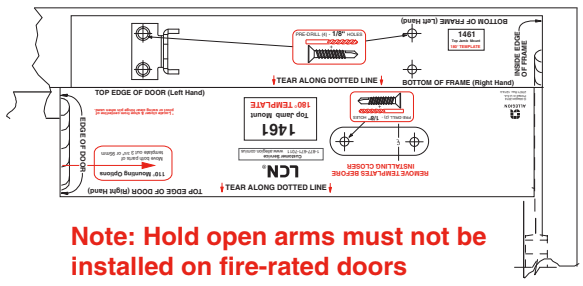
SRT Screw

EN 2-5
50mm Max Head Projection
MOUNT 180° TO MEET ADA

For 1461 Delay 110° Mounting provides additional delay time.



Note: Steps 2-8 show left hand door mount, right hand door is opposite.



Note: Hold open arms must not be installed on fire-rated doors

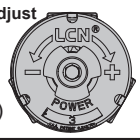
2
Determine door width, adjust spring power to match chart.

	1461
	1
30"- 750mm	2
32"- 815mm	3
36"- 915mm	4
42"- 1050mm	5
48"- 1220mm	6

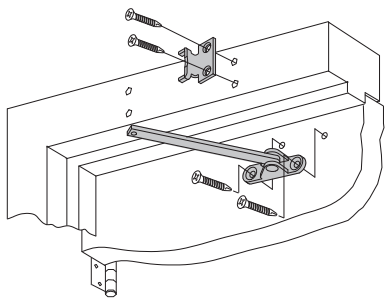
⚠CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

LCN FAST Power Adjust for Spring Power Adjustment

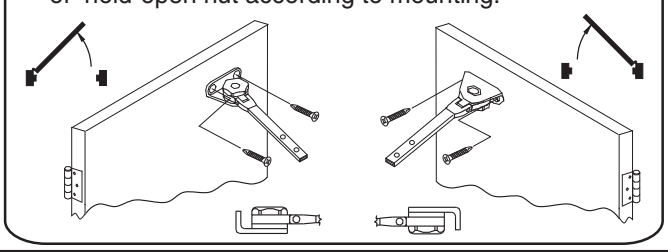
(Used only on non-sized closers)



3
Secure bracket and forearm with fasteners provided.

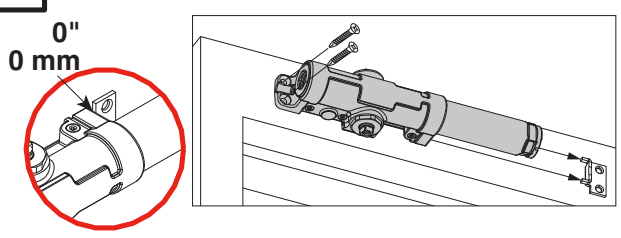


I Optional Hold-open arm. Identify direction of hold-open nut according to mounting.

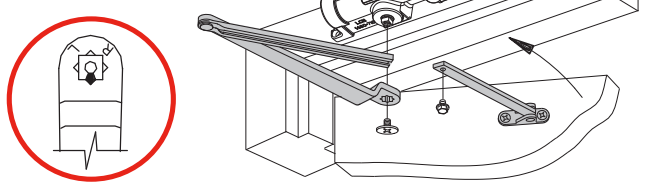


4
Secure closer to frame with fasteners provided.

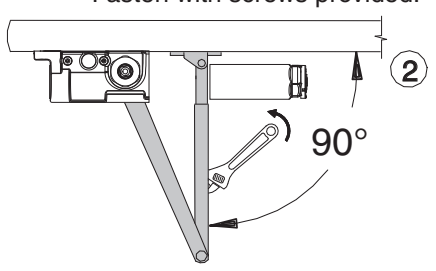
0"
0 mm



5
① Attach arm to closer, insert rod into arm tube.



② Pre-load arm to 90°. Fasten with screws provided.

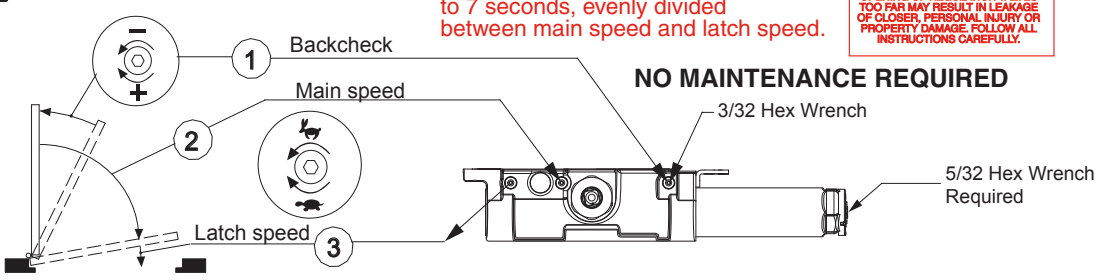


6
If necessary, adjust closer

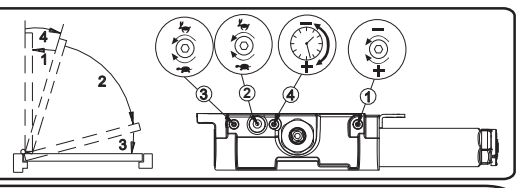
NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

⚠CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.

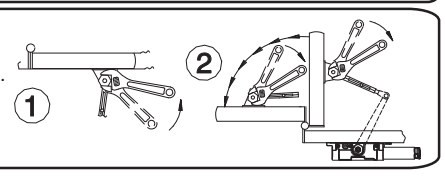
NO MAINTENANCE REQUIRED



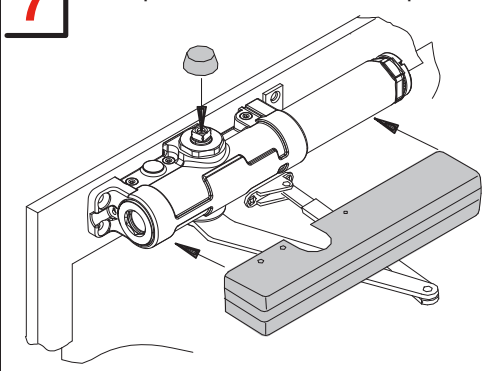
II Optional Delay Action
① - Backcheck
② - Main Speed
③ - Latch Speed
④ - Delay Speed



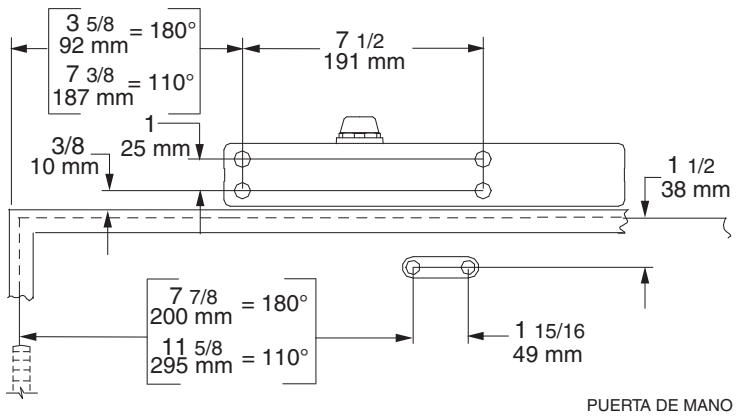
III To adjust Optional Hold-open arm:
①Loosen hold open nut.
②Open door to desired position and tighten hold open nut securely.



7
Snap on cover and shaft cap.



8
Dimensional Information



*** Locate closer & shoe from centerline of pivot or swing clear hinge pin when used.**

LEFT HAND SHOWN, RIGHT HAND OPPOSITE
MAIN GAUCHE ILLUSTRÉE, MAIN DROITE CONTRAIRE
PUERTA DE MANO IZQUIERDA ILUSTRADA, MANO DERECHA AL OPUESTO

1461 Instructions et gabarit autocollant pour une installation "sur le linteau" de 110° & 180°.

1 Repérez le gabarit approprié, détachez-le, retirez la pellicule et appliquez. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds. Retirez le gabarit avant de poser le ferme-porte.

Installation 180° pour conformité à l'ADA
Pour le 1461 l'installation de la Retenue 110° permet un délai de retenue additionnel.

Note : Les étapes 2-8 illustrent une main gauche. Le sens est inversé pour une main droite.

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Indicateur rotatif de réglage du ressort.

3 Posez la console et le bras à l'aide des attaches fournies.

I Bras de retenue optionnelle. Identifiez la direction du boulon de retenue selon l'ouverture de la porte.

4 Fixez le ferme-porte sur le cadre à l'aide des attaches fournies.

5 ① Attachez le bras au ferme-porte, insérez la tige dans le tube du bras.

② Préchargez le bras à 90°. Fixez-le avec les vis fournies.

6 Au besoin, réglez
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage

II Action retardée optionnelle
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage
④ - vitesse de retenue

7 Placez le couvercle et le capuchon du pignon.

8 Dimensions

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

III Pour régler le bras de retenue optionnelle, desserrez la vis de retenue. Ouvrez la porte à la position désirée et resserrez la vis.

⚠DANGER
Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877-671-7011

⚠DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

1461 Instrucciones Pela y Pega para plantilla 110° & 180° con montaje al lado de la jamba.

1 Localiza la plantilla apropiada, rompe a lo largo de la línea de puntos, pela la plantilla y aplícala. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes. Quita la plantilla antes de instalar el cerrador.

Montar a 180° para cumplir con la norma ADA
Para la Retención del 1461, un montaje de 110° dará un tiempo de retención adicional.

Nota: Las etapas 2-8 indican un montaje de puerta hacia la izquierda, una puerta a la derecha está al opuesto.
Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

Indicador rotacional para el ajuste de la fuerza del resorte.

3 Sujeta el soporte y el antebrazo con los sujetadores ya incluidos.

I Brazo de retención opcional. Identifíca la dirección de la tuerca de retención según el montaje.

4 Sujeta el cerrador a la armazón con los sujetadores ya incluidos.

5 ① Sujeta el brazo al cerrador, introduce la varilla en el tubo del brazo.

② Prearma el brazo a 90°. Sujétalo con el tornillo ya incluido.

6 Ajusta si se necesario
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

II Acción retardada opcional
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro
④ - velocidad de retardo

7 Coloca la tapa y el tapón de tiro.

8 Datos dimensionales

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

III Para ajustar el brazo de retención opcional: Afloja la tuerca de retención. Abre la puerta a la posición deseada y aprieta bien la tuerca de retención.

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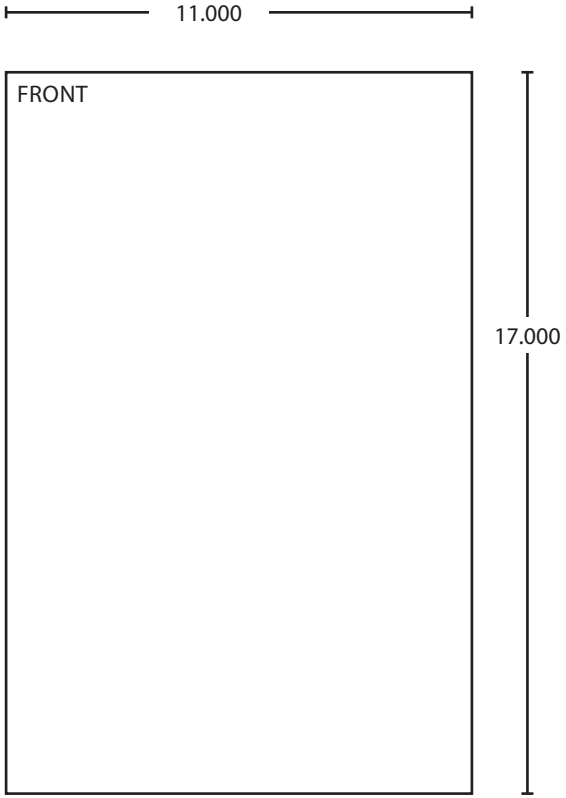
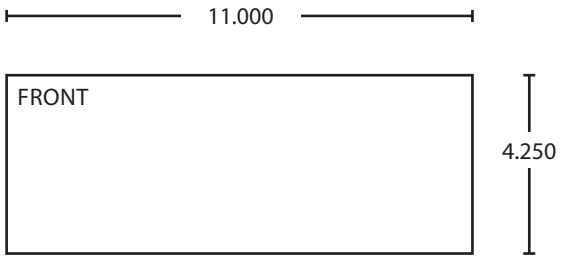


BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. Adhesive at top 1/2" of page (front and back)

Revision History					
M	N	P	R	T	U
042801	046691	060598	062883	064262	

Material
White Paper

Notes
2. printed two sides
3. printed black and PMS 485 (red)
4. tolerance ± .13
5. printed in country may vary
6. drawings not to scale

Revision Description:
T > Revised artwork

Edited By	Approved By	EC Number	Release Date
D. Toppins	G. Kalvelage	064262	10-14-15

Title
1460 Series Pull Side & Top Jamb Instruction Sheet

Creation Date	Number	Revision
04-27-10	28011	T

Created By	Activity	
N/A	3899 Hancock Expwy Security, CO 80911	
Software: InDesign CS6		© Allegion 2015

740100

Senior Swing Control Box

2800 Overhead Consealed Series
9500 Surface Applied Series

Installation Instructions

⚠ IMPORTANT ⚠

These instructions are presented in step-by-step sequence. It is very important that installation begins with "1. Pre-Installation Site and Product Check" (page 3) and continues as directed after each section.

⚠ WARNING ⚠

Always disconnect main power to the operator prior to replacing.

Control box contains no serviceable parts inside.

Table of Contents

General Information 1
Electrical Specifications 2
1 Pre-Installation Site and Product Check 2
2 Installation 3
3 Wiring 3
4 Keypad Settings 7
5 System Test 11
6 Troubleshooting 12
7 Release for Service 13

General Information

The Senior Swing Control Box is for use with the Senior Swing Power Operator System. The system can operate a single door (2810, 9530, and 9540 Series), a simultaneous pair of doors (2850 and 9550 Series), or an independent pair of doors (2860 and 9560 Series).

ANSI/BHMA A156.19 Compliance

The Senior S wing Power Operator System is a low energy product and must conform to the latest version of ANSI/BHMA A156.19 (American National Standard for Power Assist and Low Energy Power Operated Doors).

Installation Instructions

All installation instructions are valuable references and should be given to the building owner or maintenance supervisor after installation is complete.

The Senior Swing Control Box installation instructions and the manufacturer's instruction manual accompanying any sensor must be referenced to ensure proper installation, setup, and operation.

Electrical Specifications

AC input voltage ..... 120 VAC
AC fuse ..... 120 VAC, 2.5 A time-delay fuse
Motor protection ..... Solid state failure detection and shutdown
Activate inputs ..... dry NO contacts (close contacts to open door)
Safety inputs ..... dry NO contacts (closed contacts indicate an obstruction)
Breakaway input ..... dry NC contacts (open contacts indicate breakaway)
3-position switch input ..... dry 3-position switch
Power Boost disable input ..... dry NO contacts (close contacts to disable Power Boost)
Lock output ..... Form C dry relay contacts rated 8 A, 30 VDC maximum
Accessory power output ..... 24 VAC, 1.5 A (protected by resettable thermal fuse)
Logic power output ..... 5 V, 50 mA (protected by resettable thermal fuse)

1 Pre-Installation Site and Product Check

⚠ IMPORTANT ⚠

Factory Authorized Door Leaf Size and Weight		
Type	Width per Leaf	Maximum Weight per Leaf
Single Door	36” to 48”	200 lb.
Simultaneous Pair	30” to 48”	200 lb.

1a All required installation steps listed before “8. Control Box Installation” in the Senior Swing installation instructions should be completed before installing the Senior Swing control box.

1b Check that the control box model (indicated on control box label; Figure 1-1) is correct for the application.

1c Check that the available AC voltage matches the control box voltage requirement (120 VAC).

1d Check that all accessories required for the application are on hand.

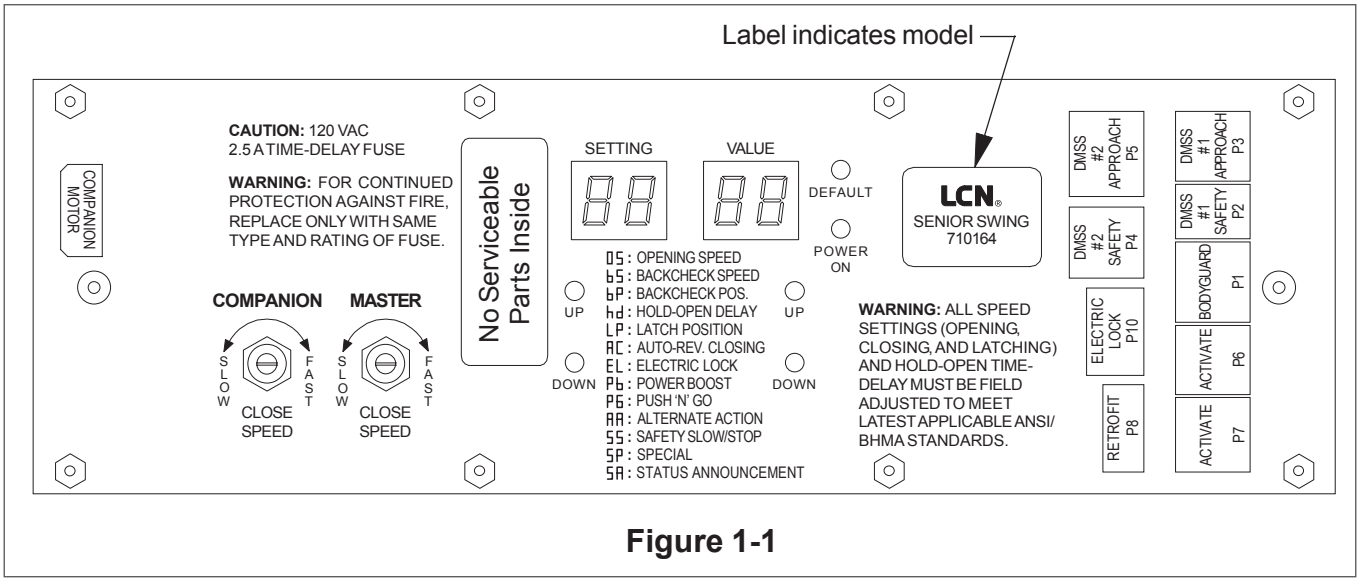


Figure 1-1

2 Installation

To install the Senior Swing Control Box, follow the Senior Swing installation instructions beginning with “8. Control Box Installation” on page 12 of those instructions.

⚠ CAUTION ⚠

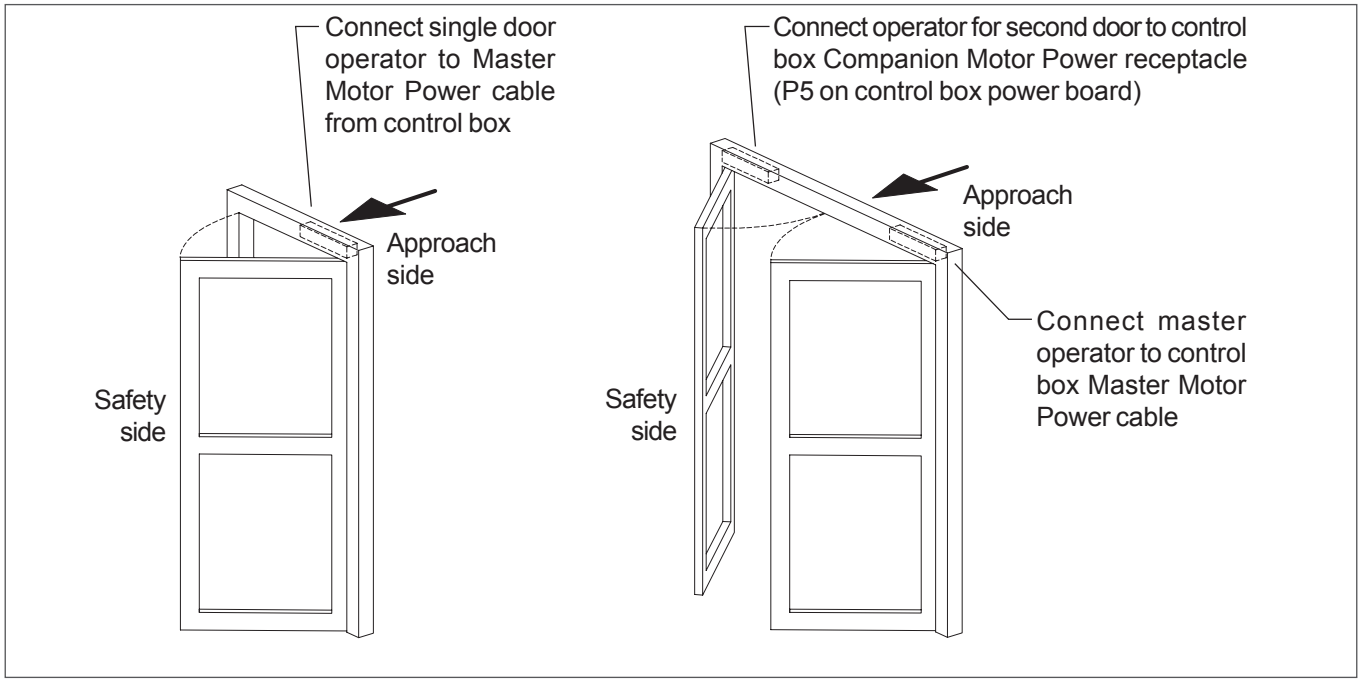
Improper installation or set up may result in personal injury or property damage. Follow instructions carefully. For answers to questions, call 1-877-671-7011

3 Wiring

- Review the separate wiring diagrams in the accessory instructions so that all wiring can be completed.
- See Figure 3-1 for system configuration terminology.
- See Figure 3-2, Figure 3-3, and Figure 3-4 for names and locations of control box connectors.
- See Figure 3-5 for control box plug and jack descriptions, wiring, and mating cables.
- See Figure 3-6 for electric strike locking device sample wiring.
- See Figure 3-7 for EL (electric latch retraction) locking device sample wiring.

⚠ CAUTION ⚠

When joining or separating a plug and receptacle, do not push or pull on wires. This may cause a wire to be pulled loose from a terminal, which may result in a malfunction.



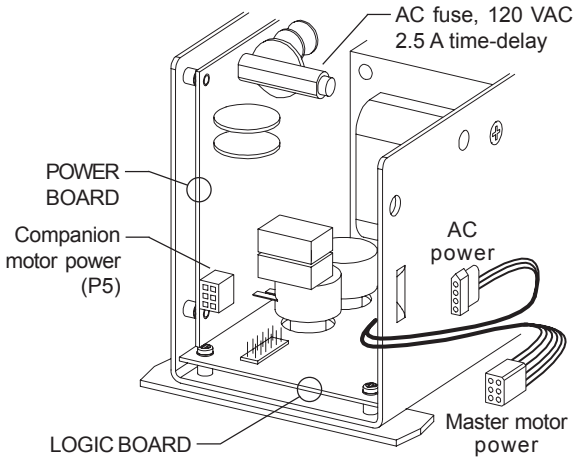


Figure 3-2. Control box power board connectors.

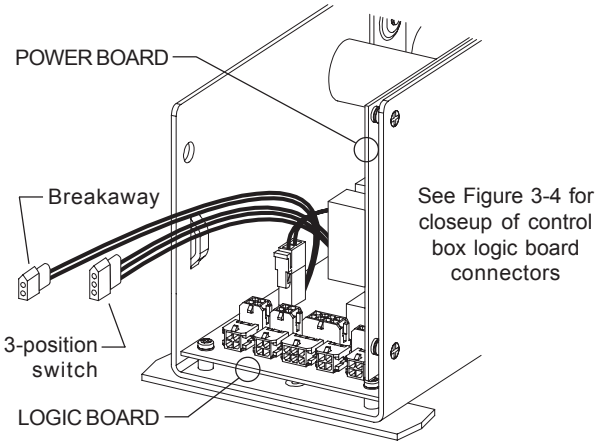


Figure 3-3. Control box logic board connectors.

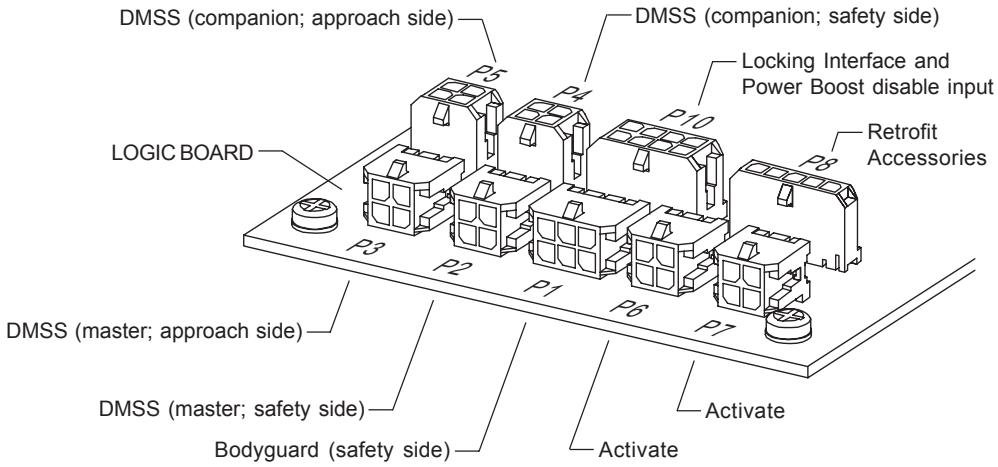


Figure 3-4. Closeup of control box logic board connectors.

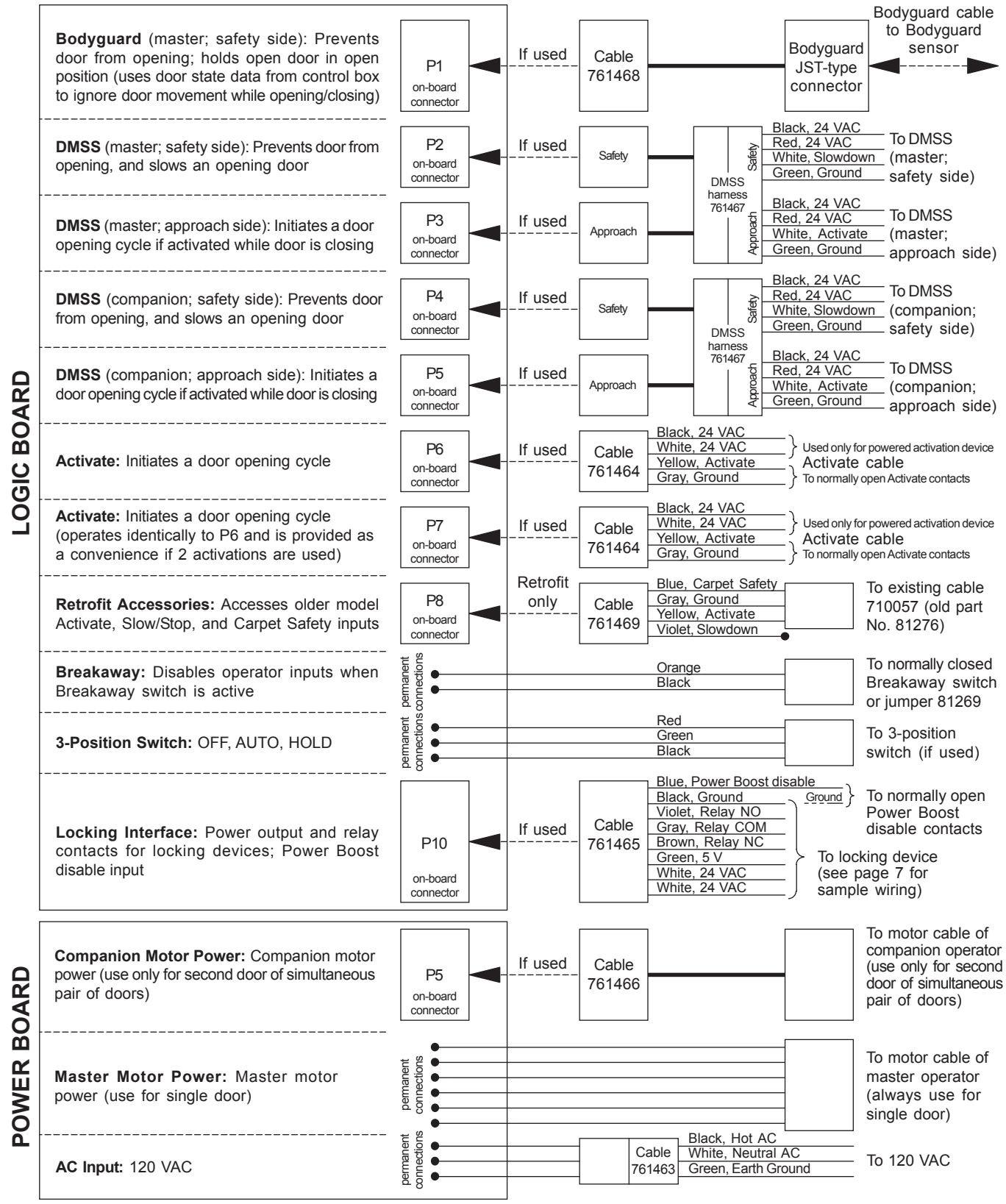
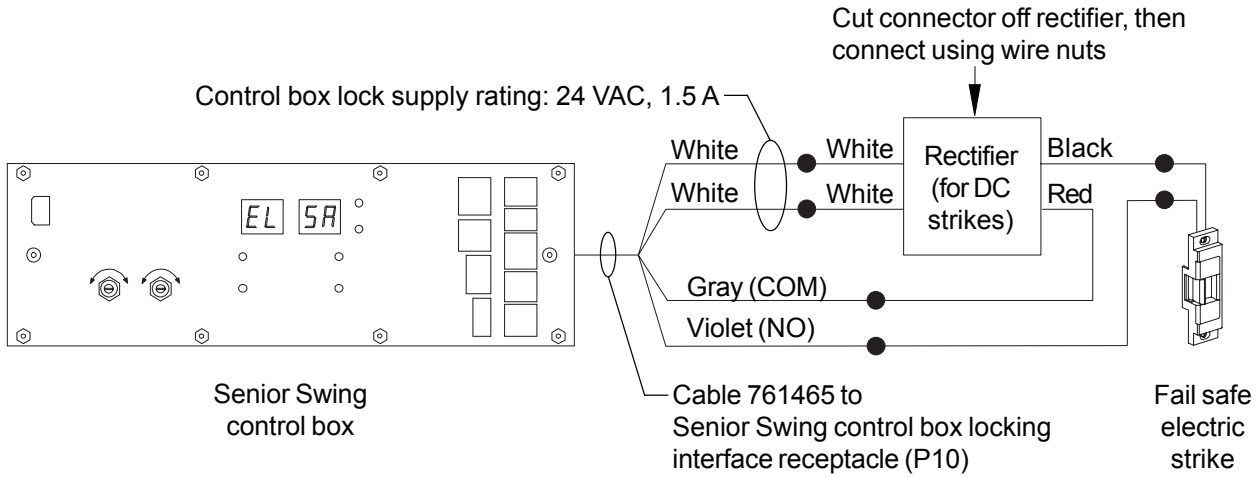

LOGIC BOARD
Bodyguard (master; safety side): Prevents door from opening; holds open door in open position (uses door state data from control box to ignore door movement while opening/closing)
P1 on-board connector
If used
Cable 761468
Bodyguard JST-type connector
Bodyguard cable to Bodyguard sensor
DMSS (master; safety side): Prevents door from opening, and slows an opening door
P2 on-board connector
If used
Safety
DMSS harness 761467
Safety
Black, 24 VAC
Red, 24 VAC
White, Slowdown
Green, Ground
To DMSS (master; safety side)
DMSS (master; approach side): Initiates a door opening cycle if activated while door is closing
P3 on-board connector
If used
Approach
Approach
Black, 24 VAC
Red, 24 VAC
White, Activate
Green, Ground
To DMSS (master; approach side)
DMSS (companion; safety side): Prevents door from opening, and slows an opening door
P4 on-board connector
If used
Safety
DMSS harness 761467
Safety
Black, 24 VAC
Red, 24 VAC
White, Slowdown
Green, Ground
To DMSS (companion; safety side)
DMSS (companion; approach side): Initiates a door opening cycle if activated while door is closing
P5 on-board connector
If used
Approach
Approach
Black, 24 VAC
Red, 24 VAC
White, Activate
Green, Ground
To DMSS (companion; approach side)
Activate: Initiates a door opening cycle
P6 on-board connector
If used
Cable 761464
Black, 24 VAC
White, 24 VAC
Yellow, Activate
Gray, Ground
Used only for powered activation device
Activate cable
To normally open Activate contacts
Activate: Initiates a door opening cycle (operates identically to P6 and is provided as a convenience if 2 activations are used)
P7 on-board connector
If used
Cable 761464
Black, 24 VAC
White, 24 VAC
Yellow, Activate
Gray, Ground
Used only for powered activation device
Activate cable
To normally open Activate contacts
Retrofit Accessories: Accesses older model Activate, Slow/Stop, and Carpet Safety inputs
P8 on-board connector
Retrofit only
Cable 761469
Blue, Carpet Safety
Gray, Ground
Yellow, Activate
Violet, Slowdown
To existing cable 710057 (old part No. 81276)
Breakaway: Disables operator inputs when Breakaway switch is active
permanent connections
Orange
Black
To normally closed Breakaway switch or jumper 81269
3-Position Switch: OFF, AUTO, HOLD
permanent connections
Red
Green
Black
To 3-position switch (if used)
Locking Interface: Power output and relay contacts for locking devices; Power Boost disable input
P10 on-board connector
If used
Cable 761465
Blue, Power Boost disable
Black, Ground
Ground
Violet, Relay NO
Gray, Relay COM
Brown, Relay NC
Green, 5 V
White, 24 VAC
White, 24 VAC
To normally open Power Boost disable contacts
To locking device (see page 7 for sample wiring)
POWER BOARD
Companion Motor Power: Companion motor power (use only for second door of simultaneous pair of doors)
P5 on-board connector
If used
Cable 761466
To motor cable of companion operator (use only for second door of simultaneous pair of doors)
Master Motor Power: Master motor power (use for single door)
permanent connections
To motor cable of master operator (always use for single door)
AC Input: 120 VAC
permanent connections
Cable 761463
Black, Hot AC
White, Neutral AC
Green, Earth Ground
To 120 VAC

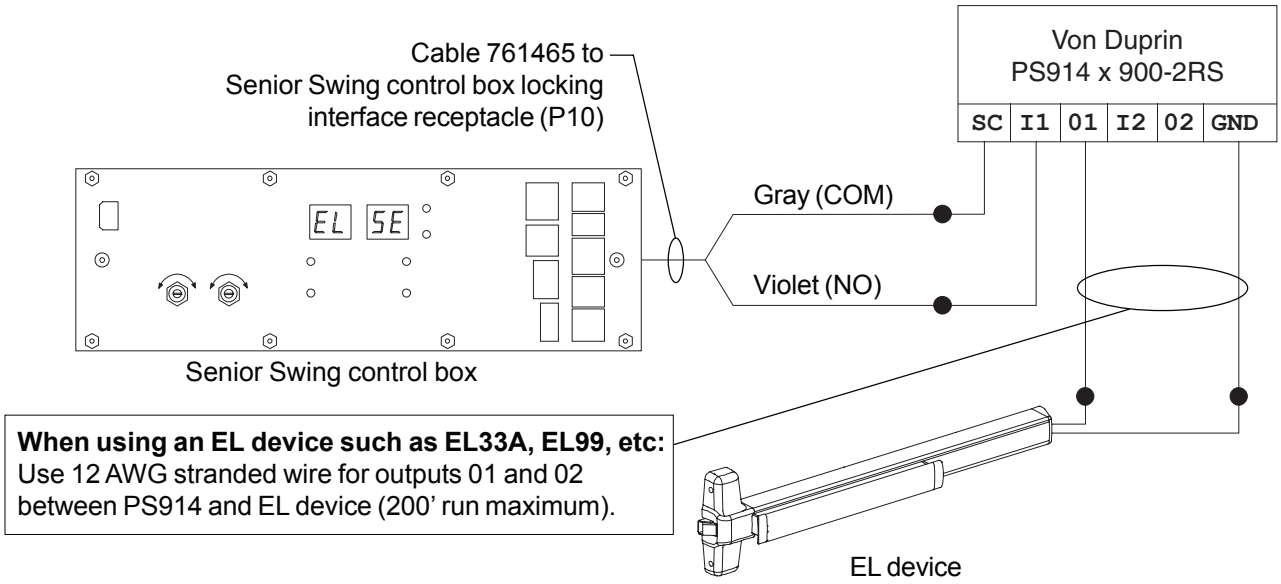
Figure 3-5

ⓘ **NOTE: Always wire the locking device to the NO (normally open) contact of the control box locking interface and use the keypad to set the EL (electric lock) setting to either SA (fail safe) or SE (fail secure).**



The keypad EL (electric lock) setting is SA (fail safe). When the operator is on, the strike is locked when the door is closed and unlocked when the door is opening. When the 3-position switch is set to OFF, the strike is unlocked.

Figure 3-6. Sample Wiring for a Fail Safe Electric Strike Locking Device



The keypad EL (electric lock) setting is SE (fail secure). The control box locking relay signals the PS914 x 900-2RS. When the operator is on, the EL device is locked when the door is closed and unlocked when the door is opening. When the 3-position switch is set to OFF, the EL device is locked.

Figure 3-7. Sample Wiring for a Fail Secure EL (Electric Latch Retraction) Locking Device

4 Keypad Settings

Settings (except for close speed) for the Senior Swing Power Operator System are changed using keypad pushbuttons and an alphanumeric display on the control box (Figure 4-1 and Figure 4-2). Close speed is changed using dials on the control box (Figure 4-1).

See page 9 and page 10 for directions for changing the values of settings.

⚠ CAUTION ⚠

Adjust the operator for the slowest operation practical in accordance with the latest revisions of Americans with Disabilities Act, ANSI/BHMA A156.19 (American National Standard for Power Assist and Low Energy Power Operated Doors), and local codes.

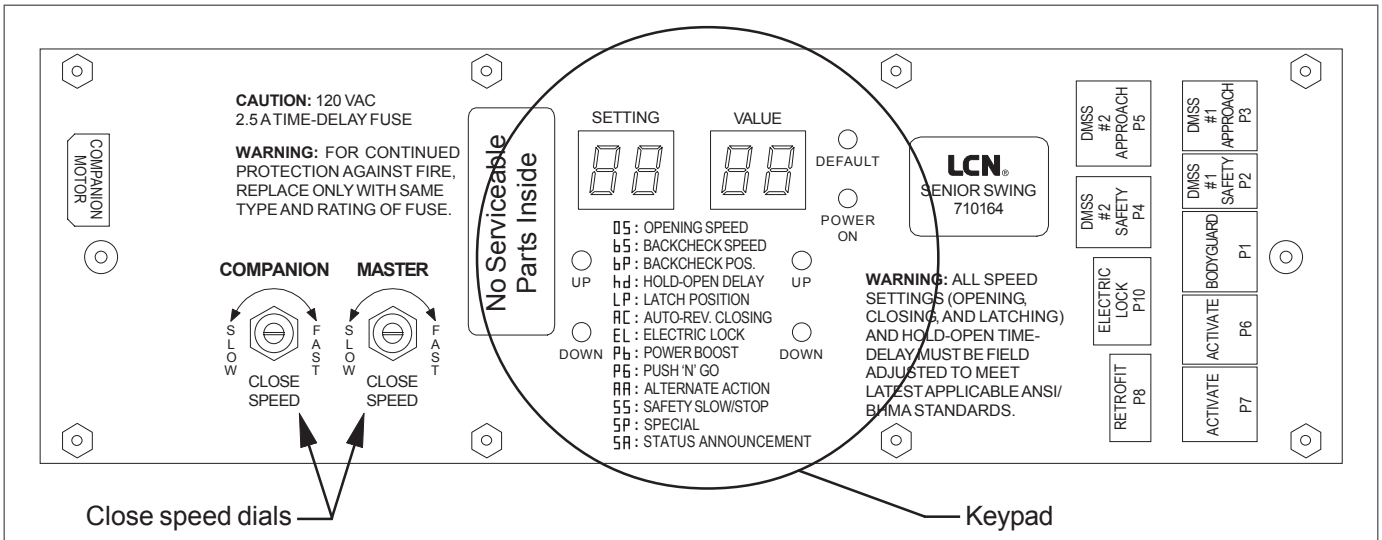


Figure 4-1. Control Box Panel with Keypad

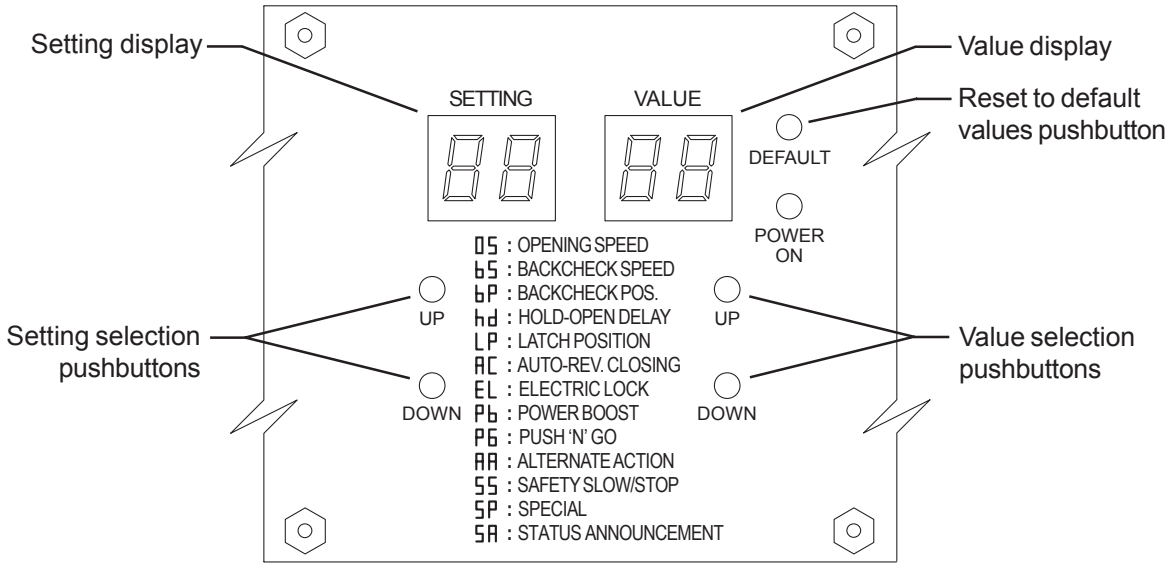


Figure 4-2. Closeup of Control Box Keypad

⚠ WARNING ⚠

KEEP HANDS, CLOTHING, WIRES, TOOLS, LADDERS, ETC. AWAY FROM THE DOOR WHEN THE OPERATOR IS INITIALLY TURNED ON.

See Figure 4-3 for definitions of the positions of the door throughout the opening and closing cycle.

See Table 4-1 for explanations of the keypad settings.

To change setting values:

1. Set the 3-position switch, if used, to OFF.
2. Apply AC power. The POWER light will illuminate and the display will remain blank.
3. Press any two pushbuttons at the same time for 1 second to turn on the keypad. The display will illuminate.
4. Press the UP or DOWN setting selection pushbutton to select the desired setting. The setting is shown in the SETTING display, and the current value for that setting is shown in the VALUE display.
5. Press the UP or DOWN value selection pushbutton to select the desired value for the displayed setting. The value for the setting is indicated in the VALUE display.
6. The keypad will automatically turn off after 5 minutes of inactivity.

To reset all values to default (default values are listed in Table 4-1 under "Selectable Values"):

1. Set the 3-position switch, if used, to OFF.
2. Apply AC power. The POWER light will illuminate, and the display will remain blank.
3. Press any two pushbuttons at the same time for 1 second to turn on the keypad. The display will illuminate.
4. Press the DEFAULT pushbutton for 4 seconds.
5. The values are set to default, and the display will indicate the opening speed setting and value.
6. The keypad will automatically turn off after 5 minutes of inactivity.

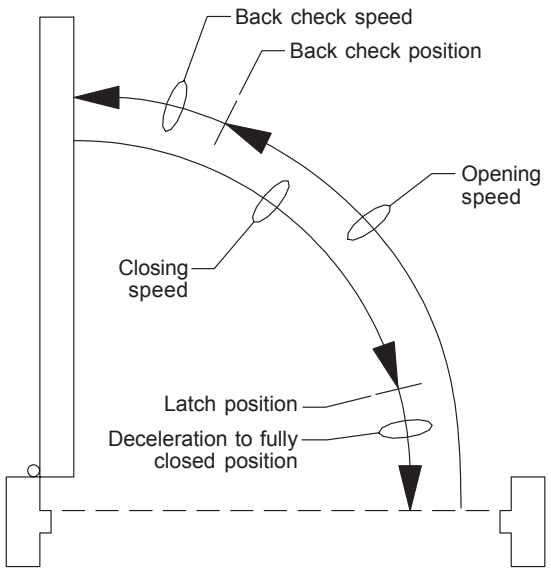


Figure 4-3. Door Position Definitions

Safety side Door Mounted Safety Sensor (DMSS) disable feature

Purpose:

Deactivate the Door Mounted Safety Sensor (DMSS) on safety side of door to eliminate nuisance detection of a wall or guard rail.

1. Install control box, all door hardware and safety devices per their instructions.
2. Setup DMSS sensors in accordance with ANSI standard 156.10.
3. Use keypad to set SAFETY SLOW/STOP (SS) value to STOP (SP).
4. Use keypad to set SLOWDOWN DISABLE (SD) value to 85.
5. Activate door opening cycle. If door does not open fully, use keypad to reduce SD value from 85 in 5 degree increments.
6. Repeat Step 5 until door opens fully.
7. Perform a complete system test as described in the section 5.

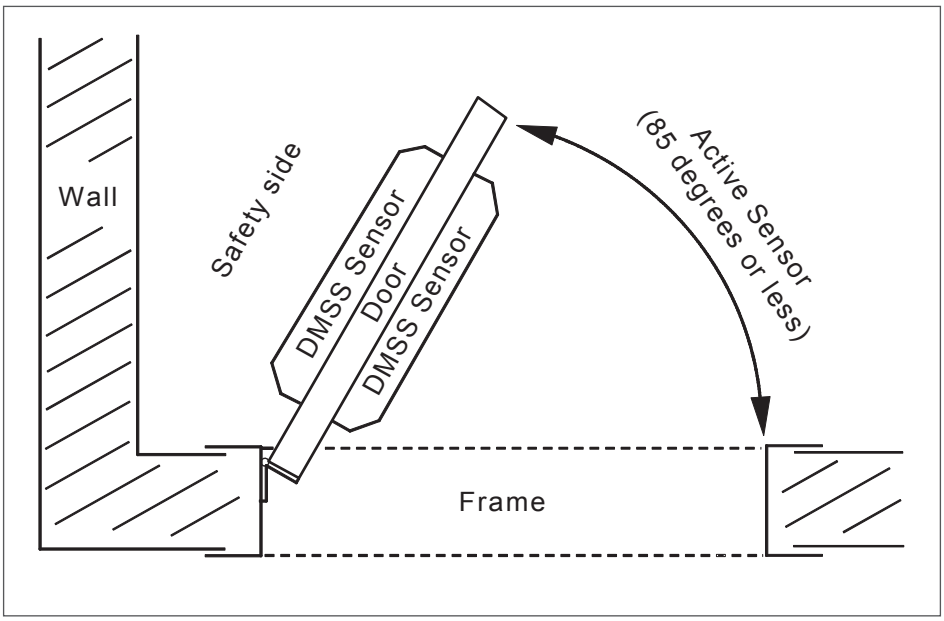


Table 4-1. Control Box Settings and Selectable Values

Setting	Setting Display	Selectable Values	Values as Displayed	Description
Opening Speed	OS	01 = slow 02 = medium 03 = fast (default = 01)	01 02 03	Controls opening speed of any normal weight and size door
Back Check Speed	bS	01 = 1 door 02 = 2 doors (default = 01)	01 02	Controls speed of door near full open position to prevent door slamming open
Back Check Position	bP	45-80 degrees (default = 70)	45-80	Approximate angle at which door begins to decelerate near the full open position
Hold Open Delay	hd	01-32 seconds (default = 05)	01-32	Amount of time (in seconds) door remains fully open following an activate signal
Latch Position	LP	00-23 degrees (default = 13)	00-23	Approximate angle at which door begins to decelerate near the full closed position
Auto Reverse Closing	AC	off, on (default = off)	OF On	When on, door will re-open upon hitting an obstruction
Electric Lock	EL	off SA = fail safe SE = fail secure (default = off)	OF SA SE	To turn on, set to SA (fail safe) or SE (fail secure) to match locking device connected to control box locking interface receptacle (P10); when on, causes a 1 second delay between activate signal and door opening to allow time for most electric locks to disengage before operator opens door
Power Boost	Pb	off 5 seconds continuous (default = off)	OF 5S Cn	When on, increases closing force of door from 9 lbs to 18 lbs to close door against high winds or stack pressure; turns on for 5 seconds or continuously after door reaches latch position during closing cycle; disabled by Power Boost disable input
Push 'N' Go	P6	off, on, fd (default = off)	OF On Fd	When set to On or Fd, pushing door open 5 degrees causes operator to open door remainder of way and hold open. Hold open time is same as hd setting when set to On. Hold open time is 1 second when set to Fd.
Alternate Activate	AA	off, on (default = off)	OF On	When on, door stays open until a second activate signal is received.
Safety Slow/Stop	SS	slow, stop (default = slow)	SL SP	Determines response to a DMSS on the safety side of the door; if SL (slow), door goes to back check speed; if SP (stop), door stops for 5 seconds, then continues opening at back check speed
Special	Sd	off 30-85 (default = off)	OF 30-85	Deactivate the Door Mounted Safety Sensor (DMSS) on safety side of door to eliminate nuisance detection of a wall or guard rail.
Status Announcement	SA	Reserved	Reserved	Reserved

5 System Test

⚠ WARNING ⚠

KEEP HANDS, CLOTHING, WIRES, TOOLS, LADDERS, ETC. AWAY FROM THE DOOR WHEN THE OPERATOR IS INITIALLY TURNED ON.

If control box does not operate as expected during system test, see section 6 for troubleshooting tips.

5a With the door closed, set the 3-position switch, if used, to AUTO and turn on all AC power. For applications using companion door, try to get both doors to open same amount of degrees before hitting hard stop (either internal gearbox stop or rubber bumper on wall).

5b Activate the operator using an activation device. The operator should perform one sizing cycle.

Sizing cycle: Occurs when the door is activated for the first time after power is turned on. During the sizing cycle, the door opens and closes once.

If the door sizes properly, go to step No. 5.3.

If the door does not open at all during the sizing cycle:

- Check that the 3-position switch, if used, is not set to OFF.
- Check door for binds and proper mechanical installation.
- Verify that all safety sensors are inactive.
- If an electromechanical lock is used, check that the lock disengages before the operator opens the door.
- Verify that the Breakaway switch, if used, is connected to NC contacts. If a Breakaway switch is not used, check that the Breakaway cable coming from the control box logic board is jumpered (jumper part No. 761492-00).
- Check fuse, wiring, and connections.
- Adjust the operator as follows and check door operation:

  Opening speed: 01
  Back check speed: ..... 01 for one door, 02 for two doors
  Hold open delay: 05
  Back check position: 75
  Latch position: 10
  Close speed: ..... medium
  Electric lock: ..... SA (fail safe) or SE (fail secure) to match lock

If the door does not open fully during the sizing cycle, check door for binds, obstructions, or items that could activate safety sensors.

5c After the sizing cycle is complete and the door is closed, apply a maintained activation signal and check that the door remains open while the activation signal is applied. Then release the activate signal and verify door closes after the open time delay expires.

5d To check the function of the door safety device:

1. Activate the door and then activate the approach side safety device while the door is open. The door should not close while the safety device is activated. Next, deactivate the safety device. The door should close after the hold open time delay expires.
2. With the door closed, activate the safety side safety device, then activate the door. The door should not open while the safety device is activated. Next, deactivate the safety device. The door should open when activated.

5e Set the 3-position switch, if used, to HOLD. Verify that the door opens and stays open.

5f Set the 3-position switch, if used, to OFF. Verify that the door closes. Verify that an activate signal does not open the door.

5g If a Breakaway switch is connected, set the 3-position switch, if used, to AUTO, then break open the door. Verify that an activate signal does not cause the door to move. Re-latch the door after testing.

5h Do not release the system for service until it is operating properly.

6 Troubleshooting

6a Identify all switch and sensor inputs that are currently active:

1. Remove breakaway jumper to enter diagnostic mode.

ⓘ **Note: When in diagnostic mode, controller will not open door.**

2. Keypad display shows each active input signal for 1 second. See table below:

(Key switch) set to Auto OR is not present	SA80
(Key switch) set to OFF	SA81
(Key switch) set to HOLD	SA82
(Activate) input is ON	SA83
(DMSS approach) activate input is ON	SA84
(DMSS safety) slowdown input is ON	SA85
(Carpet Safety) input is ON	SA86
(Bodyguard) input is ON	SA87
(Power Boost Disable) input is ON	SA88

For example, if key switch is set to Auto, Activate button is pressed, and DMSS sees something on the safety side, then display will repeat the sequence SA80, SA83, SA85 continuously until breakaway jumper is replaced.

3. After completing diagnostics, reinstall breakaway jumper for normal operation.

6b If control box does not function and the error message Er## flashes on the control box Setting and Value displays, turn AC power off and on to reset the control box. The following are common errors and suggested fixes:

ER 06: Master motor problem - verify master motor cable is connected to motor.
ER 14: Companion door added to a setup that was already sized - turn AC power off, then on and resize with both doors connected.

If problem cannot be corrected by using suggested fixes, contact 1-877-671-7011.

7 Release for Service

7a Remove all tools, installation equipment, and debris from the vicinity of the door.

7b Install all safety, traffic control, and instruction decals on the door as required by the latest revision of ANSI/BHMA A156.19. This is very important! Failure to do this leaves the installer LIABLE for any accident that might occur. This must be done!

7c Verbally instruct the owner or person in charge of the proper operation of the door.

7d Instruct the owner or person in charge to routinely inspect the door for the following:

- Visible damage
- Developing problems
- Minor preventive maintenance

7e Instruct the owner or person in charge who and where to call for service when required.

⚠ IMPORTANT ⚠

Make sure to install all safety, traffic control, and instruction decals on the door as required.

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740100 Rev. 02/17-j

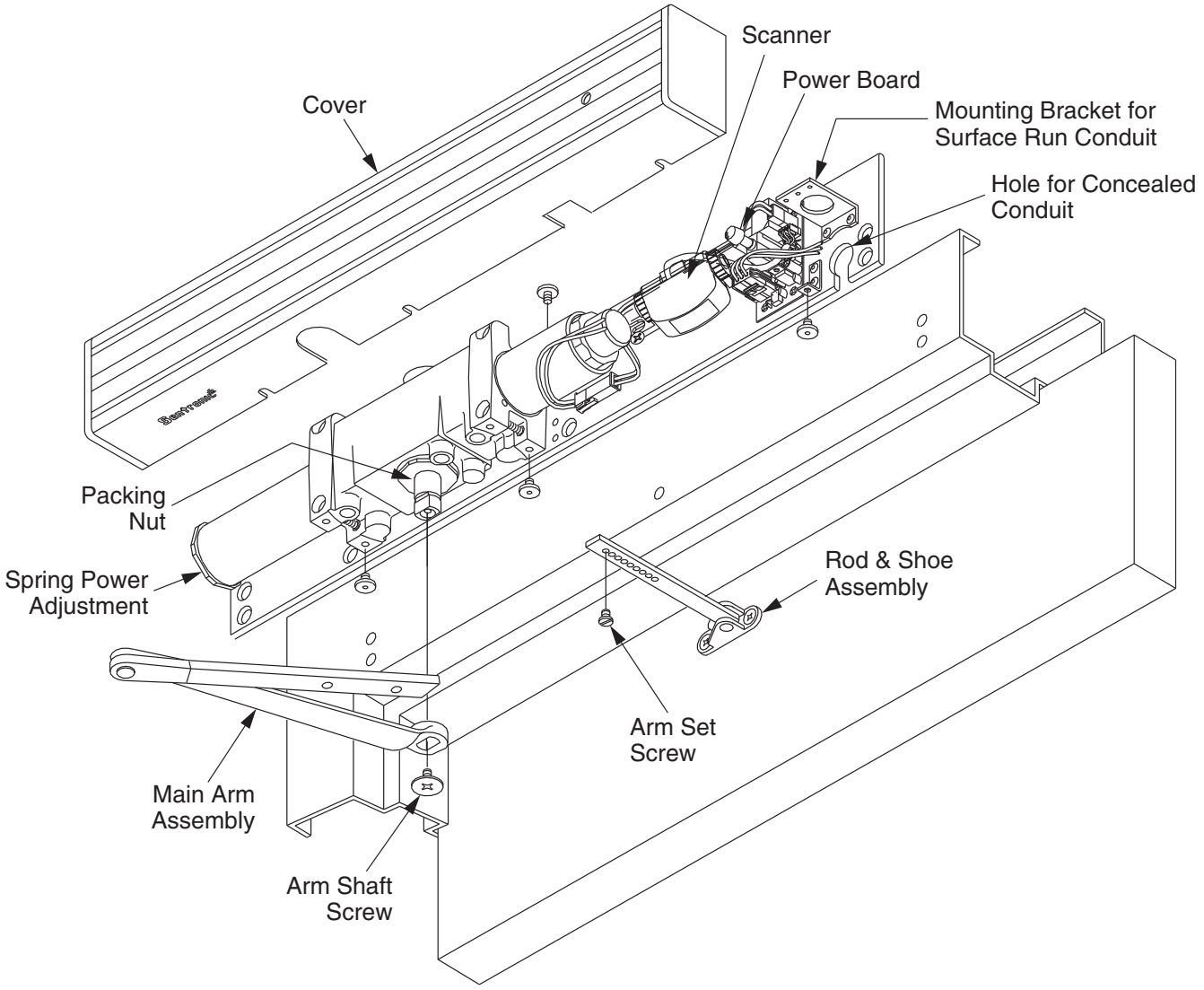
25074

4412 HSA

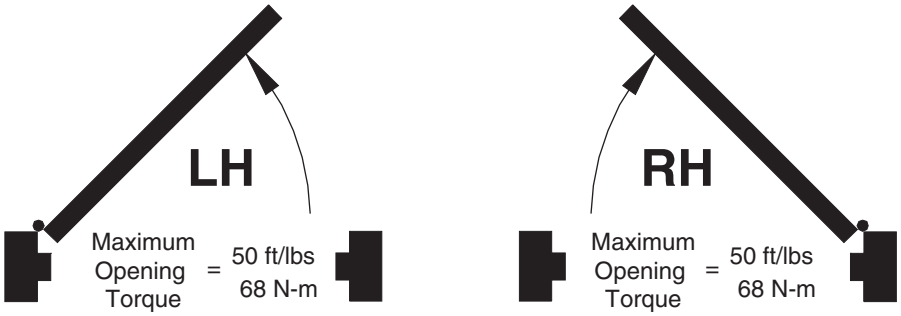
Door Closer With Scanner Activated Hold Open

Installation Instructions

The LCN Sentronic HSA (Holder Scanner Activated) is a door closer with a scanner activated hold open feature designed to hold the door open as there is traffic passing through the opening.



How To Tell Hand Of Door



Customer Service	
1-877-671-7011	www.allegion.com/us

Installation Instructions

⚠ WARNING ⚠

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.

1 Closer

The closer is handed at the factory, and marked with an “R” or “L” on top of the packing nut. The hand of the closer must match the handing of the door (see the door handing diagram on page 1).

2 Input Voltage

Input voltage supplied to the door frame must be 24V. Determine whether the wiring will be concealed or surface-run, and follow the remaining instructions carefully.

3 Wiring

3a For concealed wiring:

See Figure 2 on page 3.

1. Prepare the frame with the proper template on page 6. Be sure all of the holes are dimensioned correctly before drilling and tapping.
2. Assemble the conduit connector provided to the flexible conduit, then attache to the hole in the mounting plate.
3. Secure the mounting plate to the frame with the screws provided.

3b For surface wiring:

See Figure 3 on page 3.

ⓘ **NOTE: Remove the knockout in the top of the cover.**

1. Prepare the frame with the proper template on page 6. Be sure all of the holes are dimensioned correctly before drilling and tapping.
2. Secure the mounting plate to the frame with the screws provided.
3. Attach the surface run ½” EMT conduit to the hole in the bracket on the mounting plate. Be sure the conduit is securely attached to the bracket.

4 Wiring Connections

Make your wiring connections at this time. Connect two black wires to the 24V input voltage. The green wire MUST be connected to an earth ground. See Figures 2 & 3 on page 3.

5 Arm Shaft

Place the main arm on the closer shaft, 90° to the closer body, and secure with the arm shaft screw.

6 Track Setup

Attach the rod & shoe to the door (per the template on page 5) with the screws provided.

7 Set Screw

Open the door partway, insert the rod into the forearm, then close the door. With the main arm at a right angle (90°) to the door, insert the arm set screw, and tighten securely.

8 Spring Power Adjustment

See Figure 1 for the spring power adjustment diagram. To adjust the spring power, use a 5⁄32” allen wrench provided to turn the spring adjustment nut clockwise or counterclockwise the required number of turns to match the door width in the spring adjustment chart on page 6. DO NOT exceed 7 turns clockwise or 8 turns counterclockwise.

9 Closing Speed Regulation

The closing speed regulation is preset at the factory. Normally no adjustment is required. If adjustment is needed or desired, adjust the main speed and latch speed by turning the proper regulating screw for each (see Figure 1) clockwise to slow or counterclockwise to increase the speed. Do not allow the door to slam into the frame. A “normal” closing time from a 90° position is 5 to 7 seconds, equally divided between the main and latch speed. When adjusting the backcheck, use the least amount of force necessary to sufficiently slow the swing of the door. To adjust the backcheck, turn the regulating screw clockwise to increase the amount of force, or counterclockwise to reduce the amount of force. DO NOT USE AN ABRUPT BACKCHECK SETTING OR EXPECT THE CLOSER TO ACT AS A STOP!

10 Electrical Checkout

Perform the electrical checkout on page 4 before installing the closer cover.

⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage! Follow all instructions carefully.

For questions, call LCN at 1-877-671-7011.

Figure 1: Spring Power Adjustment & Closing Speed Regulation

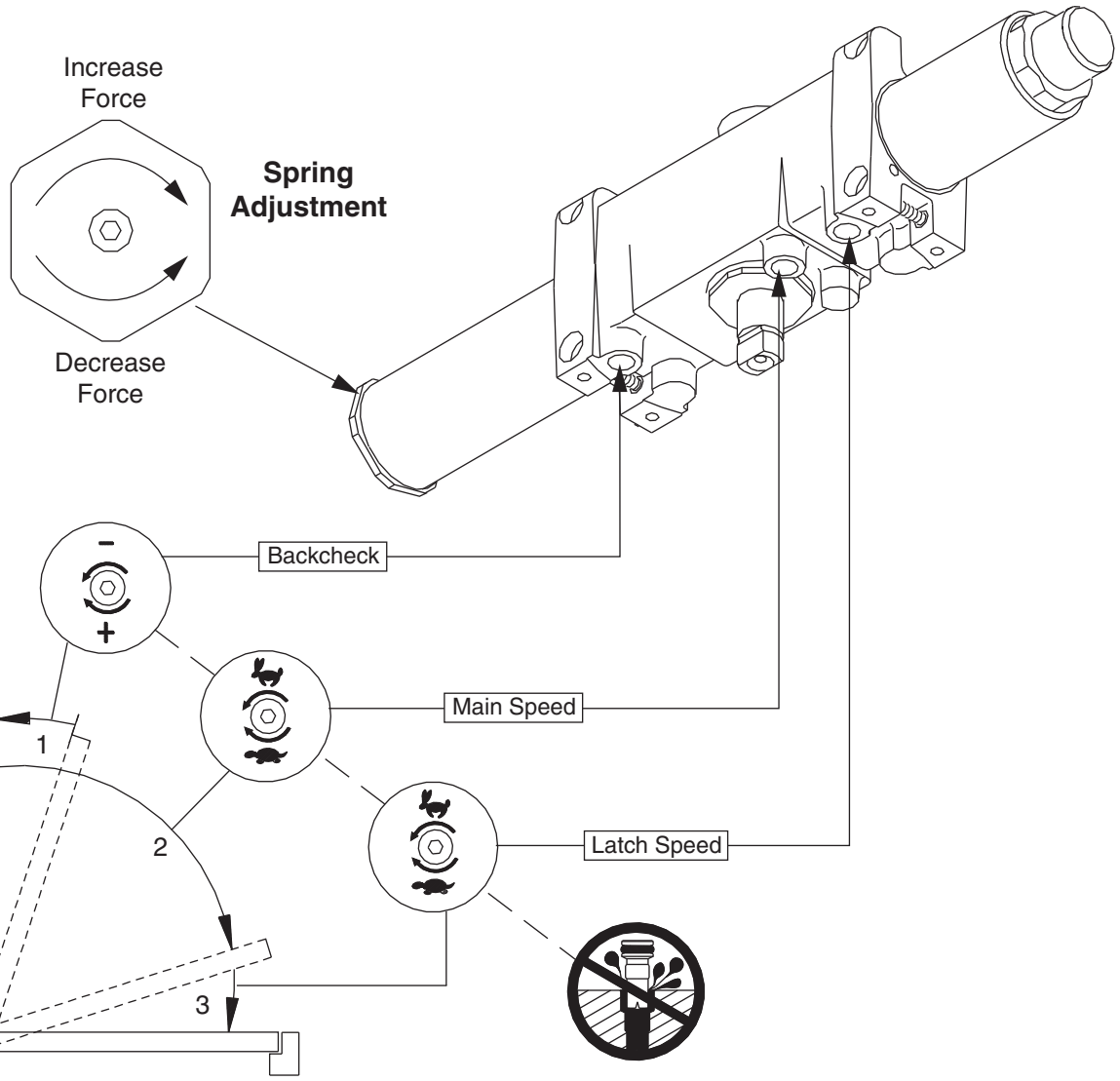


Figure 2 CONCEALED WIRING

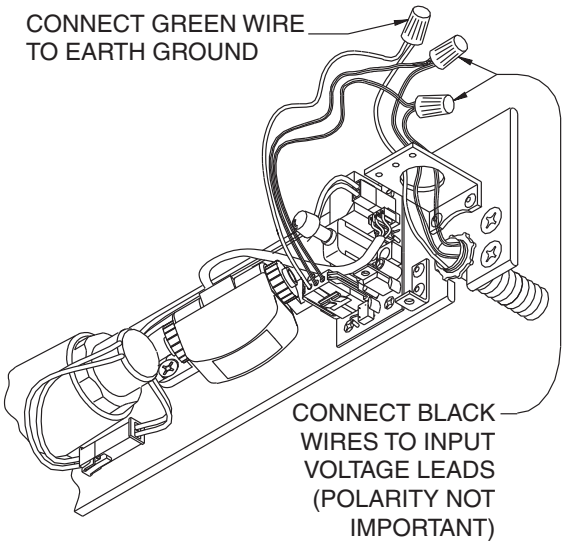
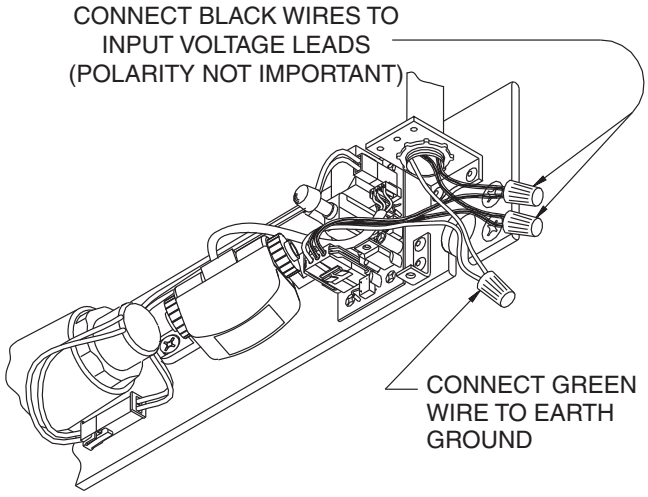


Figure 3 OPTIONAL SURFACE RUN WIRING



Electrical Checkout

ⓘ **After completion of installation & wiring, and with the unit properly powered, perform the following steps:**

1 LED

When 24V AC/DC power is applied, the LED on the scanner will flash on and off for 10 seconds, then turn off. The scanner LED will stay lit as long as any motion is detected. The scanner LED will remain lit for 15 seconds after motion has stopped, and then it turns off.

2 Scanner Sensitivity

Adjust the scanner sensitivity if required (Figure 4).

3 Door Hold Open Time

The door hold open time is controlled by the scanner, and it is set at 15 seconds. This time can be set at 30 seconds by setting switch 3 to “On” (see Figure 4).

4 Hold Open Operation

To check the hold open operation, open the door beyond 80°. The door should remain in the hold open position. The door should release and close 15 seconds after there is no motion at the door.

5 Continuous Hold Open

For continuous hold open, press the switch once to put the unit in the continuous hold open mode. Press the switch again to activate the timed hold open mode. The door must be opened beyond 80° for the hold open function to take effect.

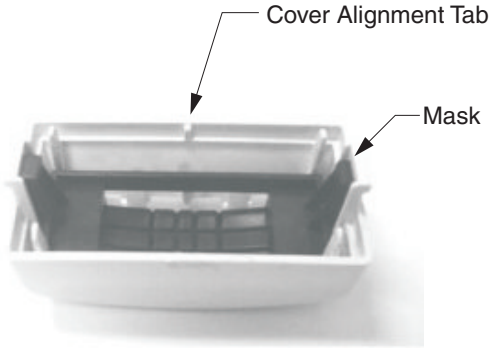
Electrical Data

4412 HSA Scanner Activated Hold Open:

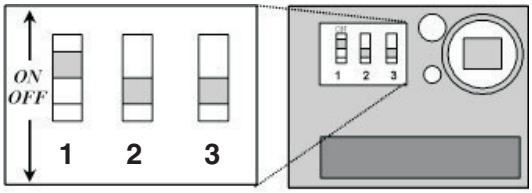
Voltage 24V AC/DC Nominal (+10% - 15%)
Standby Current **0.010A**
Hold Open Current **0.120A**

Figure 4: To Adjust Scanner Sensitivity

1. Insert a small screwdriver on the side of the housing and gently pry the cover off.
2. Keep mask and cover together as shown.
   Note: Cover alignment tab.



3. Set dip switch1 to ON to increase sensitivity.



ⓘ **Note: Leave switches 2 & 3 OFF.**

4. Snap mask and cover onto scanner housing.
   Note: Cover alignment tab fits into a notch on the bottom of the scanner housing.

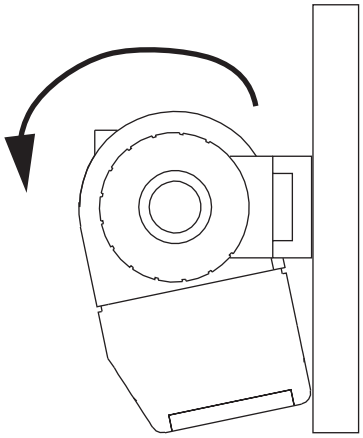
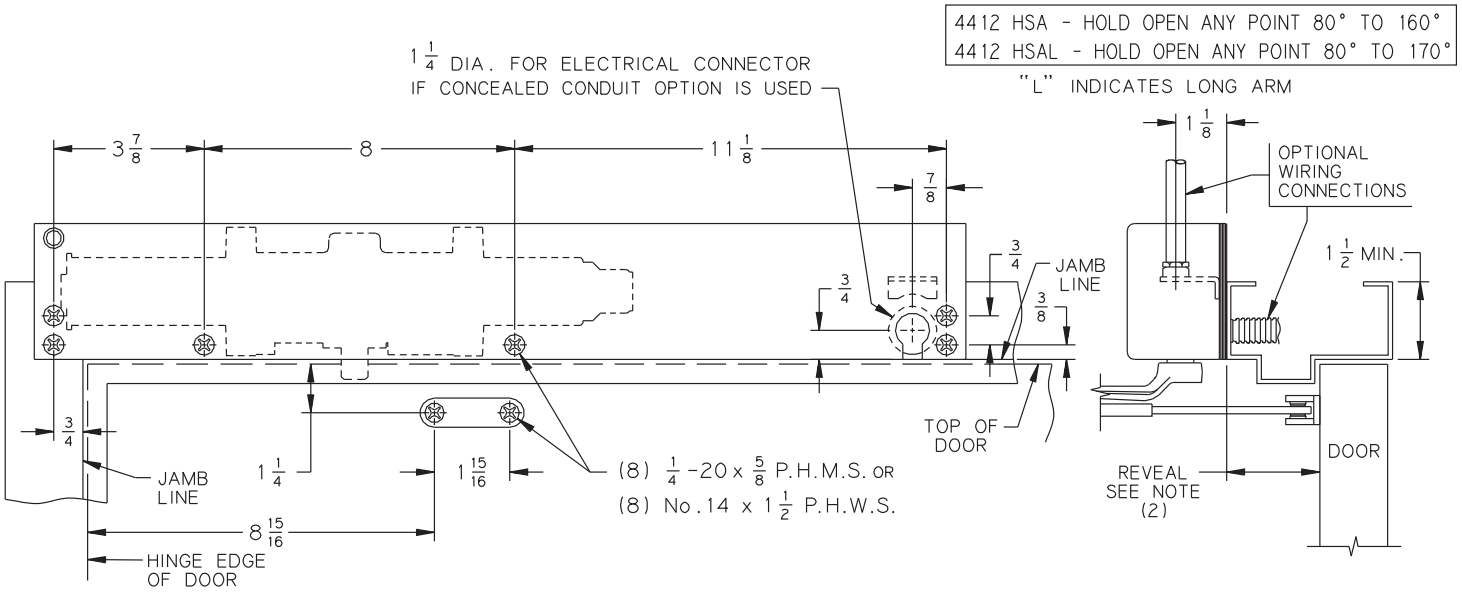


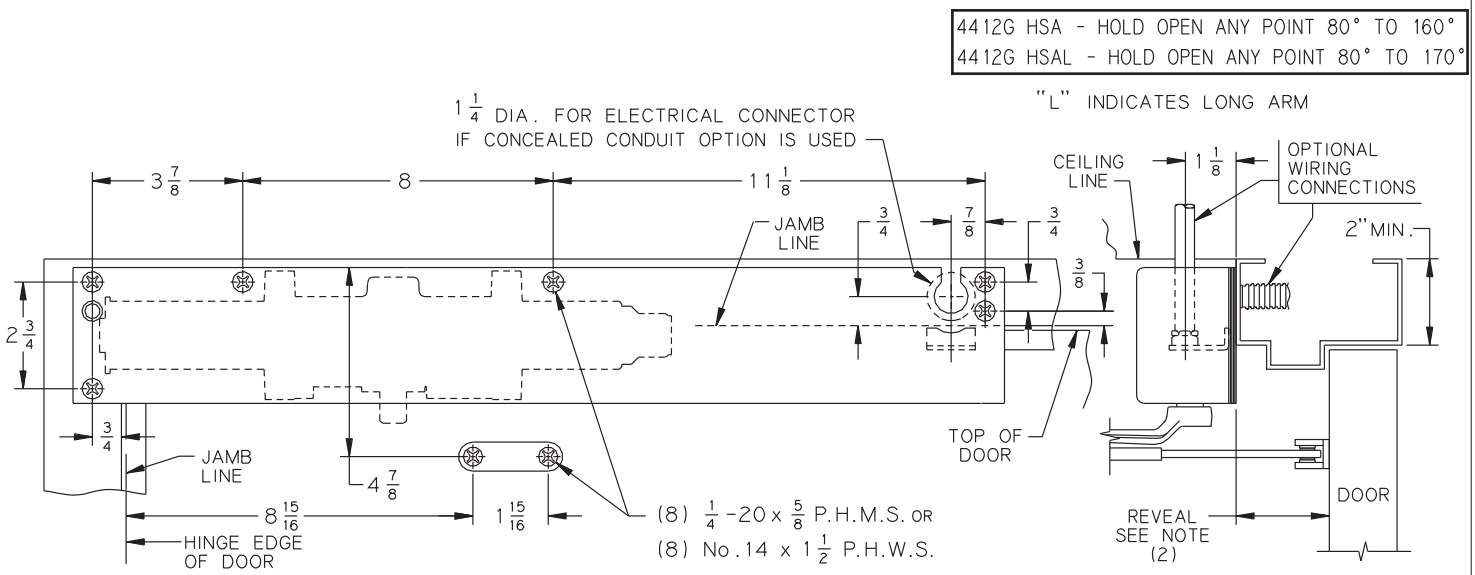
Figure 5

5. Rotate scanner towards mounting plate, as shown in Figure 5 (above).

4412 HSA Standard Mounting



4412 HSA Flush Ceiling Mounting



Notes:

1. The voltage supplied to the unit must be 24 volts.
2. Long arms are required for opening beyond 160°; the reveal is not to exceed 3⅞" (5¾" frame).
3. Maximum stop thickness is ⅝".
4. The electrical connector is provided by LCN.
5. If the door is hung on pivots, locate the closer and shoe from the centerline of pivot. if the door is hung on swing clear hinges, consult the factory.
6. Fllor or wall stops are recommended at maximum hold open.
7. For additional information on recommended use of this unit, consult the NFPA-72E pamphlet.
8. Reinforcing per ANSI/SDI-100 is recommended for hollow metal doors and frames.

Inch	¼	⅜	½	⅝	¾	⅞	1⅛	1¼	1½	1 15/16	2	2 9/16	2¾	3⅞	5¾	8	8 15/16	11⅛	2' 4"	3' 0"	3' 1"	4' 0"
M.M.	6	10	13	16	19	22	29	32	38	49	51	65	70	98	146	203	227	283	700	900	925	1200

ALLEGION

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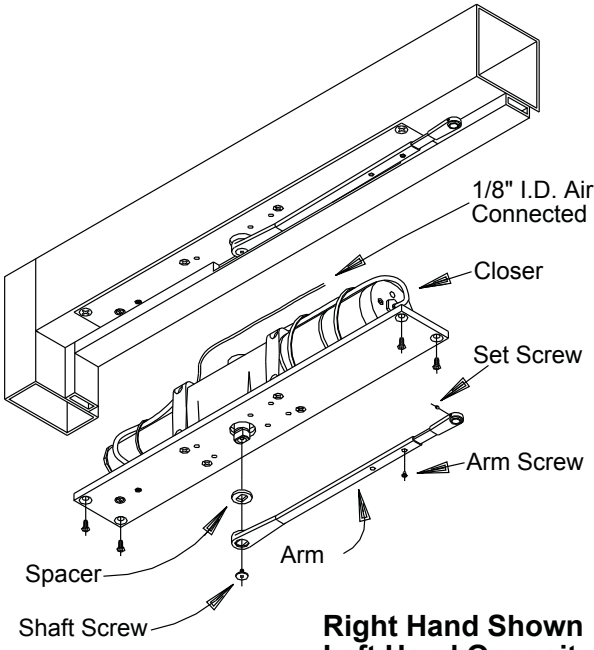
25074 Rev. 06/16-j

19963

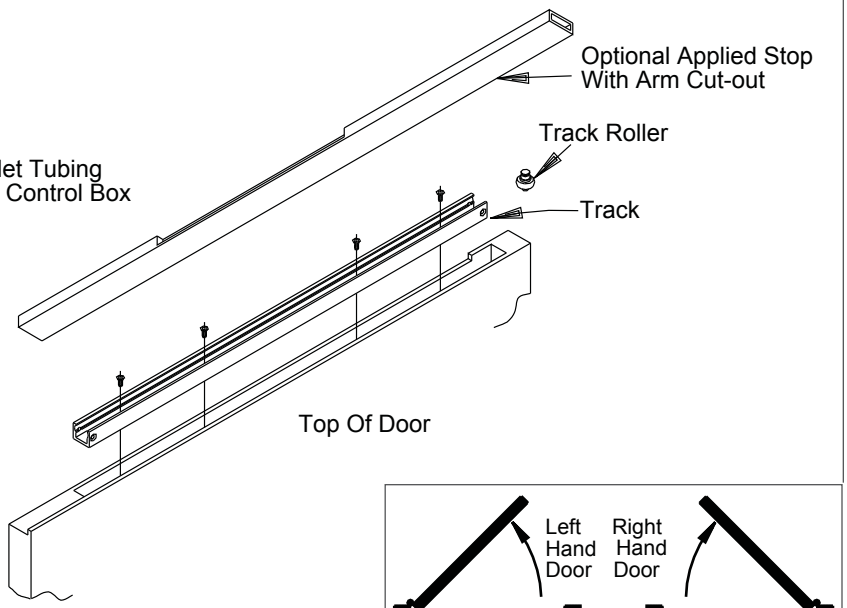
2610 Series

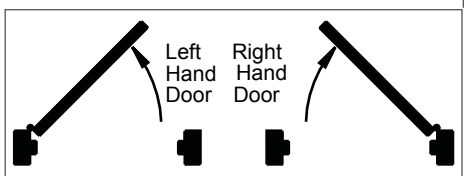
Auto-Equalizer Low Energy Door Operator

Installation Instructions



Right Hand Shown
Left Hand Opposite





How To Tell Hand Of Door

1 Installation

1a	Closer is handed at factory and must match hand of door. Hand of closer is stamped on mounting plate.
1b	If frame and door are not prepared for closer and track, see template (page 5) for required installation and prepare according to details shown.
1c	Connect air line to closer at speed control valve inlet fitting.
1d	Insert closer in prepared frame and fasten with screws provided.
1e	Insert track roller in track and mount track in prepared door opening with screws provided.
1f	Place spacer on closer shaft. Then push arm over shaft and secure with shaft screw.
1g	Loosen set screw in end of arm using a 3/32” hex wrench. Open door part way (30°-40°), pull arm over top of door and connect to track roller. Tighten set screw firmly.

ⓘ **NOTE: If door is hung on pivots, swing clear, or wide throw hinges, consult factory.**

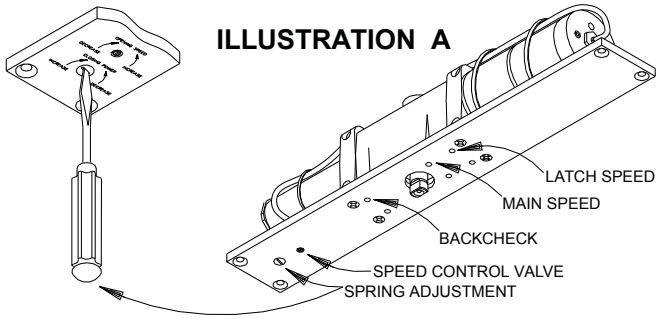
2 Closing Force Adjustment

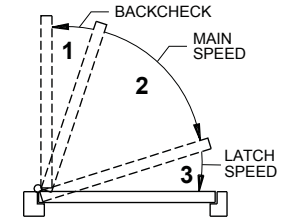
ⓘ **See Illustration A.**

2a Closer is shipped with minimum closing power pre-set. Adjust CLOSING POWER only if more power is needed.

2b To increase closing power turn spring adjustment screw, using regular screw driver, clockwise. Maximum adjustment is 18 turns.

ILLUSTRATION A





CLOSER CONTROL DIAGRAM

ILLUSTRATION B

3 Closing Speed Adjustment

3a Do not allow door to slam into frame.

3b A “normal” closing time from 90° open position is 5 to 7 seconds, evenly divided between MAIN SPEED and LATCH SPEED.

3c Use a 3/32” hex wrench to adjust speed.

3d To slow MAIN SPEED of door, turn regulating screw (nearest closer shaft) clockwise.

3e To slow LATCH SPEED of door, turn regulating screw (nearest latch) clockwise.

4 Opening Speed Adjustment

ⓘ **For air pressure regulation, see control box instruction sheet.**

4a The door opening speed must be adjusted to suit the width and weight of the door. The wider and/or heavier the door, the slower it should open. to determine opening speed, measure door leaf width and weight. If door weight cannot be measured, the weight can be estimated by finding the area of the door (length x width) and multiplying it by the weight per square foot for the door type that is being used as shown below in Table 2.

Table 2

Door Type	Weight per Sq. Ft.
Solid Core Wood 20 Ga. Flush Hollow Metal Aluminum x 1” Glass	5.5
Mineral Core Door 16 Ga. Flush Hollow Metal Aluminum x 1” Glass	7.0

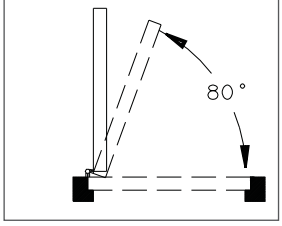
ⓘ **These weights are for 1 3/4” thick doors. If the doors are thicker or thinner, consult door manufacturer for proper weight OR weigh the door.**

4b The door opening speed is measured from closed door to 80° or backcheck (see closing speed adjustments). At 80°, the edge of a 36” door is approximately 6” from a right angle. (See Illustration C.)

4c The opening speed control adjusting screw is located near the end of the mounting plate directly below the tubing connections. (See Illustration A). Using a regular screwdriver, turn the speed control clockwise to slow the door speed, counter-clockwise to increase door speed. Set speed to open door from 0° to 80° as shown in Table 3 below.

ⓘ **NOTE: These weights are for 1 3/4” thick doors. If the doors are thicker or thinner, consult door manufacturer for proper weight OR weigh the door.**

ILLUSTRATION C



⚠ CAUTION ⚠

Do not set door speed faster than chart recommends!

Table 3

Door Weight in Pounds	Fastest Opening Time in Seconds to 80° Position		
	Door Width in Inches		
	36”	42”	48”
100 lbs.	3.0 sec	3.0 sec	3.0 sec
125 lbs.	3.5 sec	3.5 sec	3.5 sec
150 lbs.	3.5 sec	3.5 sec	3.5 sec
200 lbs.	4.0 sec	4.0 sec	4.0 sec

ⓘ **Note: If door width or weight is between the sizes and pounds listed, use time shown for the next wider or heavier door.**

5 Backcheck Adjustment

5a Backcheck slows down the door swing as it approaches full opening (See Illustration B on page 2).

5b Increase the resistance of backcheck ONLY if necessary to prevent the door from striking a wall. To do this, turn the regulating screw nearest the hinge clockwise by quarter turns. DO NOT USE AN ABRUPT BACKCHECK.

6 Hold Open Time Adjustment

6a After opening, the door should remain at the 90° position for no less than 5 seconds. This “Hold Open Time” can be increased to approx. 30 seconds by turning the timer adjustment wheel(s) clockwise. For the location of this wheel(s), refer to 7900 or 7980 series Control Box Instruction Sheet. Adjust “Hold Open Time” to maximum practical for the elderly or severely handicapped. Time cycle begins when the switch or scanner is released.

7 Door Signage

7a Refer to local approving authority for required signage (decals) and positioning.

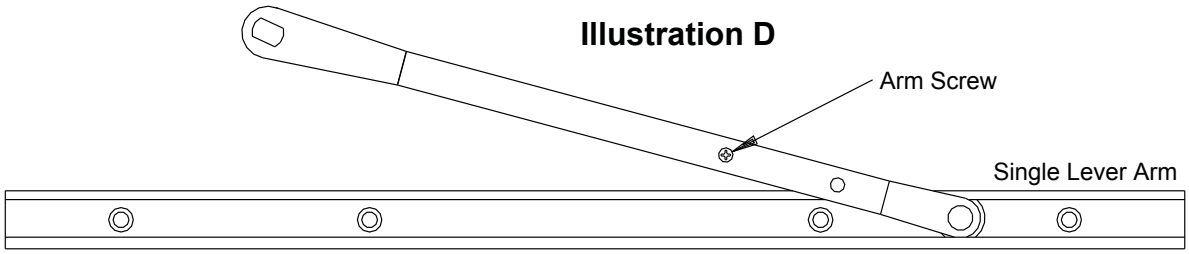
7b LCN’s recommendation is:

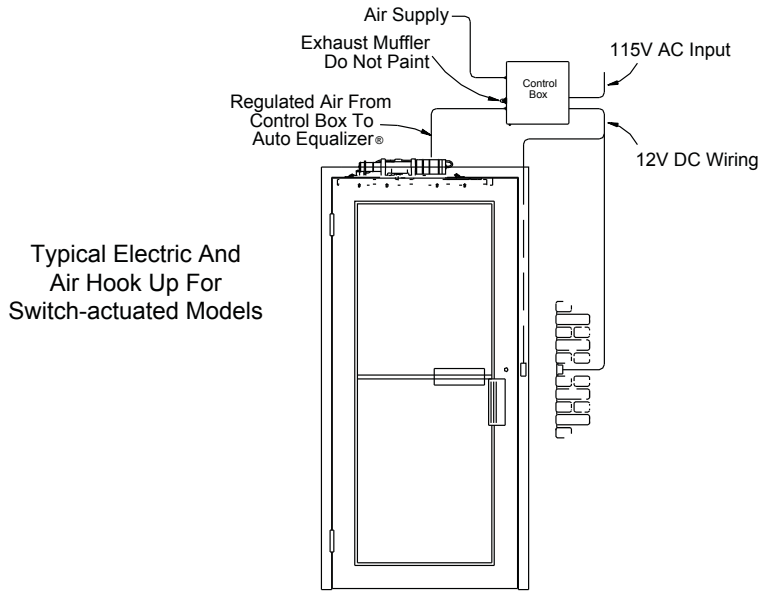
a. Position decal(s) furnished with actuator(s) where it can be viewed without interference from door trim, panic devices, etc. near the lock stile (48” max.-15” min.) above the floor.
b. Clean area 6” x 6” where decal(s) will be placed.
c. Apply decal(s) to same side of door where switch(s) will be installed. NOTE: DECALS MAY BE DIFFERENT. Remove backing and “roll” onto door to avoid trapping air under decal(s).

7c It may be necessary to adjust the fully open door position. Minor adjustment for more or less opening can be obtained by using the telescoping arm as follows: (See Illustration D)

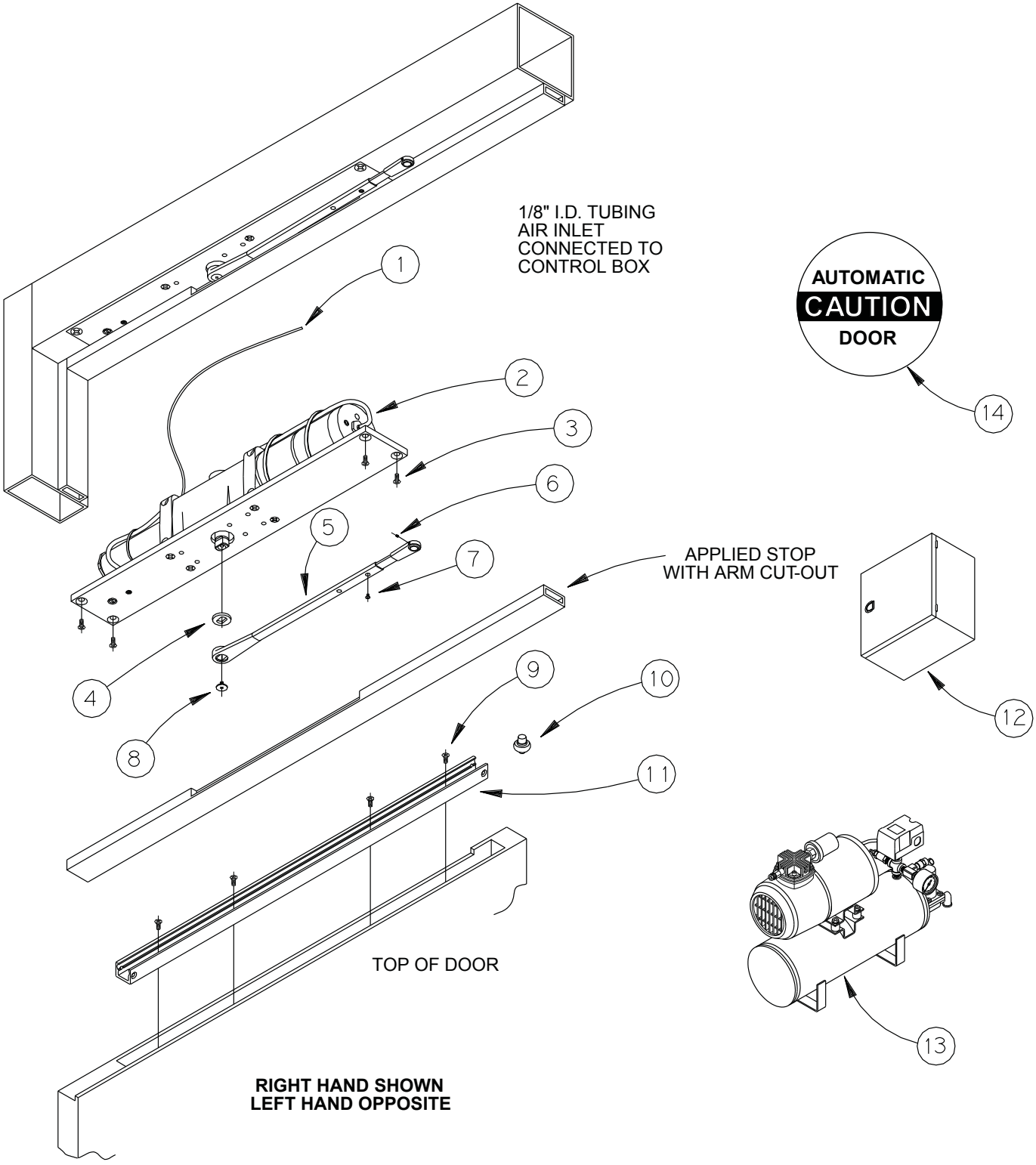
a. Shorten length of arm to decrease door opening.
b. Lengthen arm to increase door opening.
c. Tighten arm screw securely after adjustment.
d. After arm adjustment is made, cycle door to insure that it is operating properly.

Illustration D





Typical Electric And Air Hook Up For Switch-actuated Models



Parts Lists					
Item	Part Number	Description	Item	Part Number	Description
1	925	1/8” I.D. Pneumatic Tubing	8	2610-159	Shaft Screw
2	2613 or 2614	LCN switch-Activated Auto Equalizer	9	No. 14 x 1” No. 1/4-20 x 1/2”	Phillips Head Wood Screws Phillips Head Machine Screws
3	No. 1/4-20 x 5/8”	Phillips Head Machine Screw	10	2610-3034	Track Roller Assy.
4	2610-61	Spacer	11	2610-3038	Track
5	2610-3077T	Arm (Specify L.H. or R.H.)	12	7900 or 7980 Series	Control Box
6	2610-425	Set Screw	13	920 or 921	Compressor (Optional)
7	No. 10-24 x 3/8”	Arm Screw	14	2610-155-1	Decal

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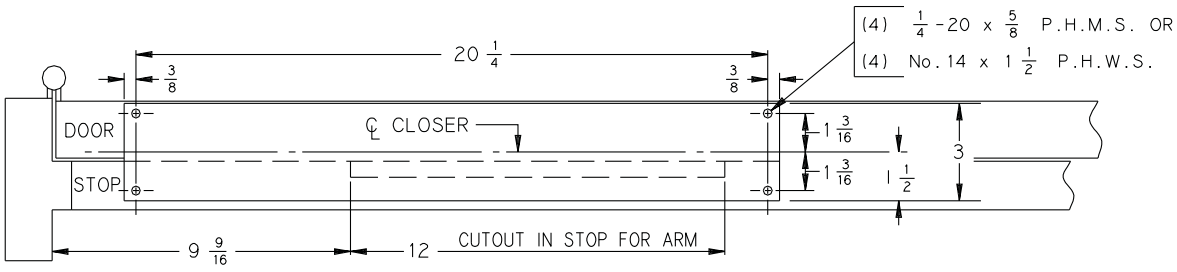
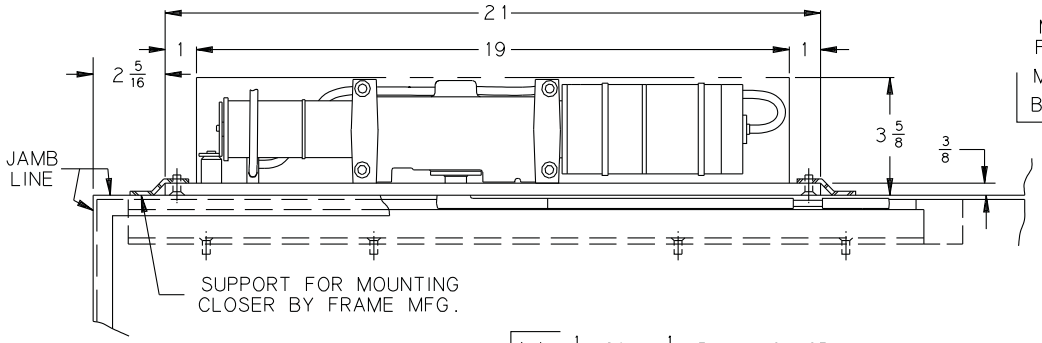
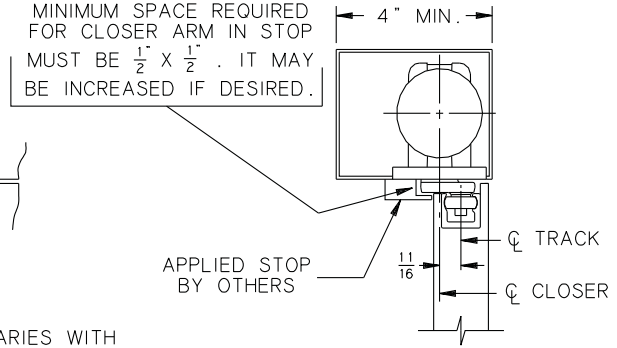
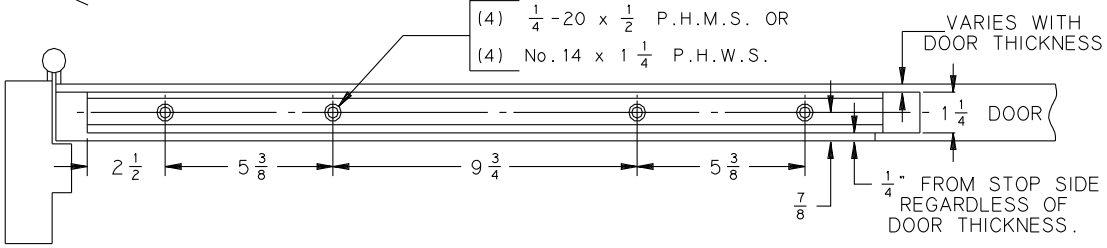
19963 Rev. 03/14-h

2613 2614	90° POWER OPENING 160° MAX. OPENING
AUXILIARY STOP RECOMMENDED	
LEFT HAND DOOR AND CLOSER SHOWN. RIGHT HAND OPPOSITE	6/96









NOTES-

1 - MINIMUM STOP THICKNESS 1/2".

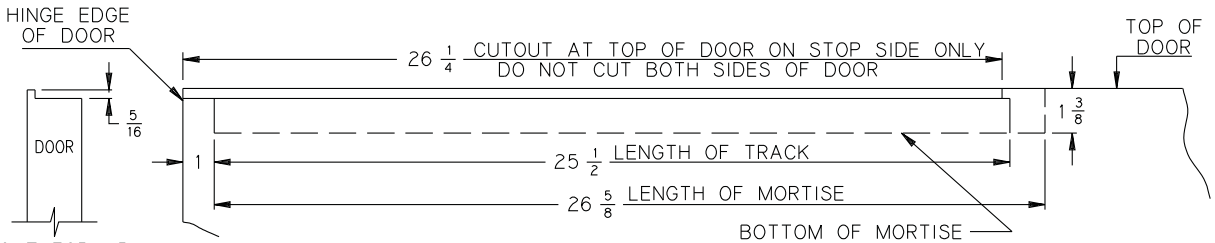
2 - 1/8" DOOR TO SOFFIT CLEARANCE REQUIRED.

3 - 1/8" I.D. TUBING CONNECTED TO CONTROL BOX.

4 - REINFORCING PER ANSI\SDI-100 RECOMMENDED FOR HOLLOW METAL DOOR & FRAMES.

5 - MAXIMUM ALLOWABLE BUTT SIZE IS 5" X 5".

6 - IF DOOR IS HUNG ON PIVOTS CONSULT FACTORY.



CUTOUT FOR ARM INCLUDES HEEL OF DOOR AS SHOWN

PLAN & ELEVATION OF TOP OF DOOR SHOWING PREPARATION FOR CLOSER TRACK

inch	1/8	1/4	5/16	3/8	1/2	5/8	11/16	7/8	1	1 3/16	1 1/4	1 3/8	1 1/2	2 5/16	2 1/2
mm	3	6	8	10	13	16	17	22	15	30	32	35	38	59	64

inch	3	3 5/8	4	5	5 3/8	9 9/16	9 3/4	12	19	20 1/4	21	25 1/2	26 1/4	26 5/8
mm	76	92	102	127	137	243	248	305	483	514	533	648	667	676

No.	REVISION	BY	DATE
2	TEMPLATE UPDATE	JEJ	6/96

LCN

APP BY JEJ 6/96

DO NOT SCALE

OVERHEAD CONCEALED / SINGLE LEVER ARM / AUTO-EQUALIZER® CLOSER

2610

TEMPLATE 2610-1

ALLEGION

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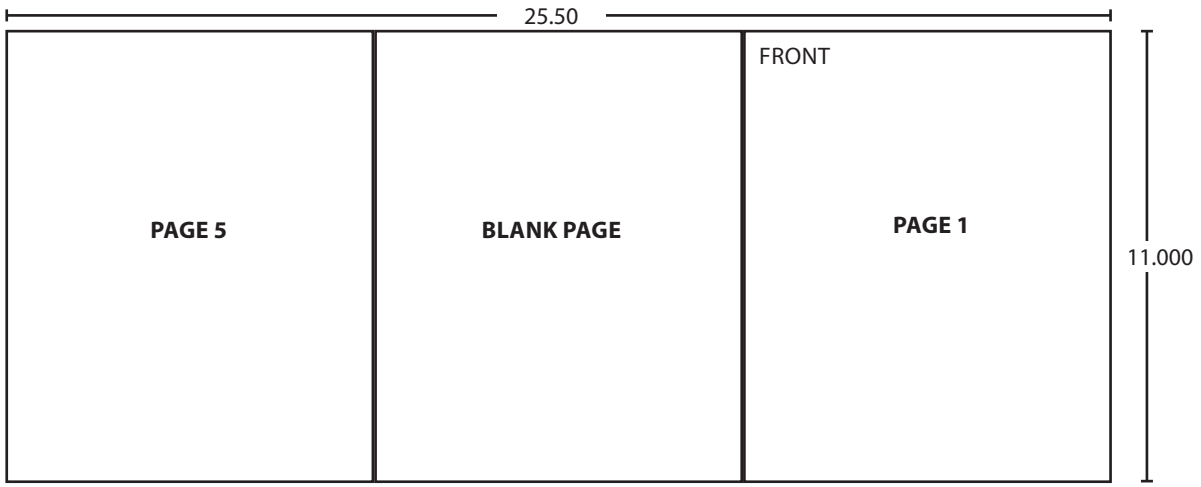
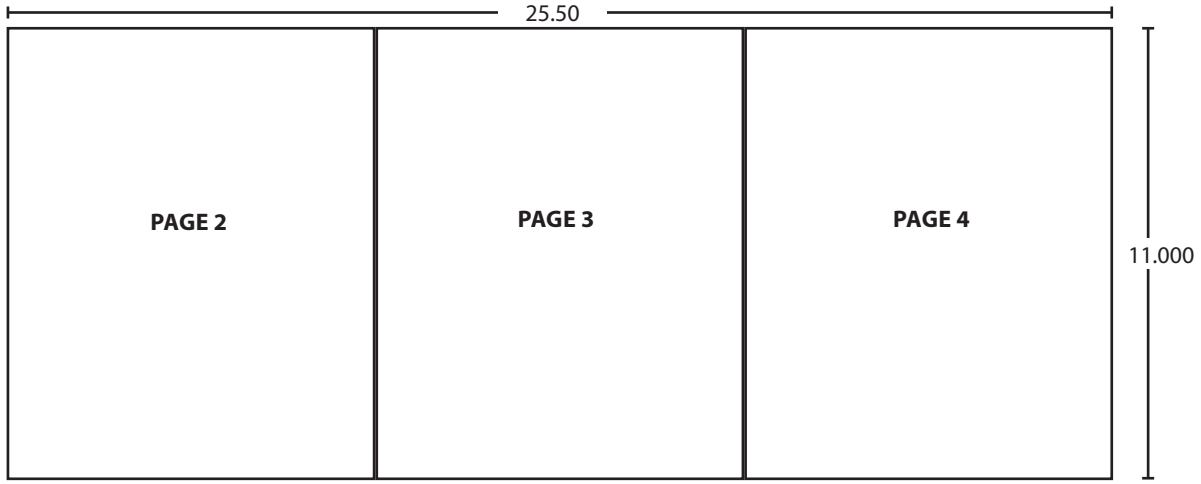
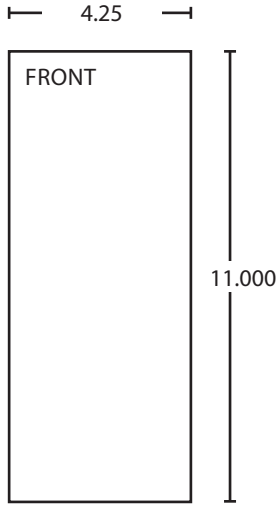
www.allegion.com/us



BEGINNING SHEET





FOLDED SHEET

Additional Notes:
1. None

Revision History					
G	H	J	K	L	M
043228					

Revision Description:
H > Revised artwork

Material	Edited By	Approved By	EC Number	Release Date
White Paper	D. Myers	D. Spence	xxxxxx	03-21-14

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Title
2610 Series Instruction Sheet

Creation Date	Number	Revision
05-10-10	19963	H

Created By	Activity
N/A	3899 Hancock Expwy Security, CO 80911
Software: InDesign CS6	

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23655

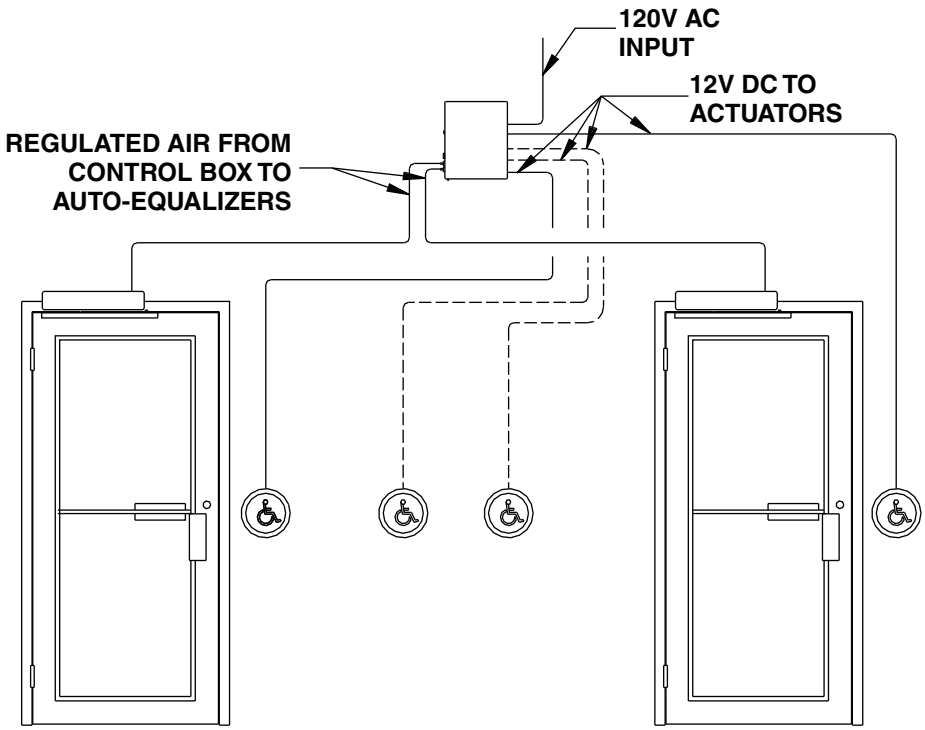
Control Box

Model ES7982

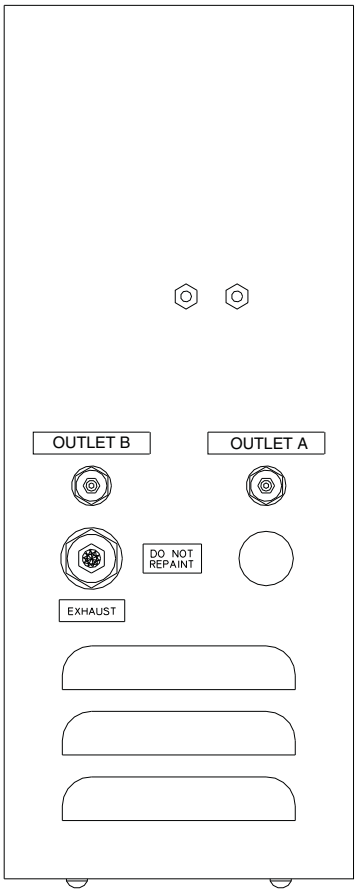
Installation Instructions

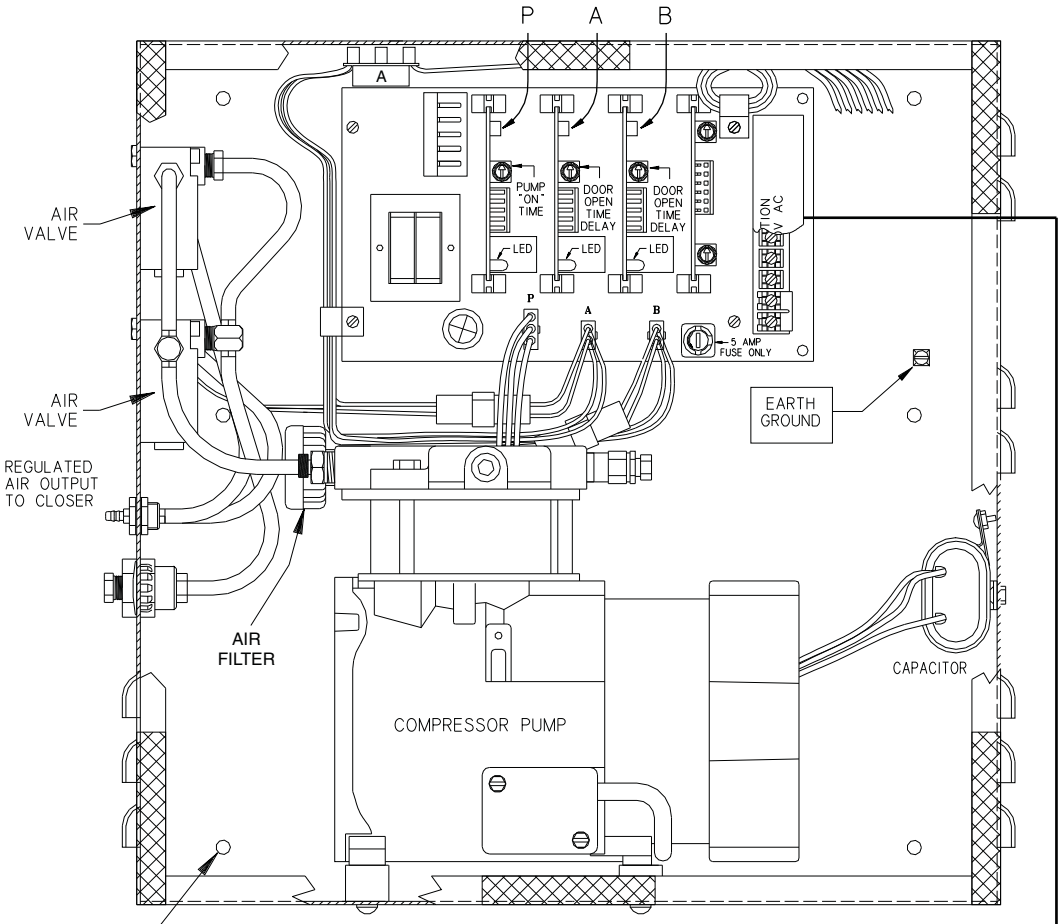
ⓘ **For closer information see closer installation instruction sheet**

Typical Electric & Air Supply Hook Up



1	Locate box on interior of building within 50 tubing feet of the farthest door to be controlled. **Box must be in a clean, dry, well ventilated place where temperatures do not exceed 120°F or fall below 35°F.**
2	Mount box to a structurally sound surface using screws provided as shown on page 2 with air fittings on left side as shown. **Do not mount box upside down or on a horizontal plane.**
3	Refer to instructions packed with actuators and connect leads to terminals 6, 8, 9, and 10 as required.
4	Connect unpowered 120V AC input to terminals 3, 4, and ground screw. (Line side to terminal 3, neutral side to terminal 4 and ground wire to ground screw). If door control is on a fire door, 120V AC input must be interrupted by the fire alarm panel when in alarm. When dry auxiliary fire alarm contacts are used, remove shunt from terminals 1 and 2 and connect to dry contacts of fire detector or alarm panel. Terminals 1 and 2 are in series with line side of 120V input.
5	Turn on power. Air valves and compressor will operate one cycle when power is applied.
6	Air pressure output has been preset at factory. If more air pressure is required to adequately open doors, regulate air adjustment valve on pump as shown on page 3.
7	Adjust time delay to keep air valve energized by turning adjustment wheel on timer modules “A” & “B” (CW to increase - CCW to decrease). The LED (light) on the timer module indicates the valve is energized. The time can be adjusted from 0-30 seconds. 10 seconds is a “normal” delay. ⓘ **TIMER MODULE “A” AND “B” MUST OPERATE LONGER THAN TIMER MODULE “P”.**
8	Adjust timer module “P” to keep compressor activated for the necessary amount of time to open the door. This can be done by rotating the adjusting wheel. (CW to increase - CCW to decrease). The LED (light) on the timer module indicates the compressor is energized. The compressor should not run more than 1-3 seconds longer than the time required to open the door.
9	Test actuators to ensure wiring and tubing are properly connected.





⚠ CAUTION

DO NOT MOUNT BOX UPSIDE DOWN OR IN HORIZONTAL POSITION. LOCATE WHERE TEMPERATURES DO NOT EXCEED 120°F OR FALL BELOW 35°F

INSTALL BOX WITH SIX TAPCON CONCRETE SCREWS 3/16 x 1 1/4 DRILL 5/32 HOLE 1 1/4 DEEP WITH CARBIDE TIPPED CONCRETE DRILL BIT

⚠ CAUTION

COMPONECTS INSIDE CONTROL BOX WILL BE HOT TO TOUCH UNDER NORMAL OPERATION. ALLOW BOX TO COOL DOWN BEFORE MAKING ADJUSTMENTS.

AIR FILTER SHOULD BE INSPECTED EVERY SIX MONTHS. IF FILTER IS DAMAGED, CONTACT LCN FOR REPLACEMENT.

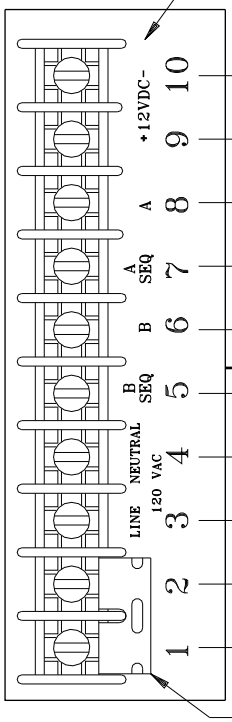
⚠ WARNING

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.

ELECTRICAL DATA

INPUT = 120V AC @ 5 AMPS
POWER CONSUMPTION 600 WATTS
OUTPUT IS 12V DC (250 mA MAX. LOAD)



TERMINAL "10" IS COMMON TO ALL ACTUATORS

12V DC OUTPUT

TRIGGER "A"

TRIGGER "B"

NEUTRAL

LINE

120V AC INPUT

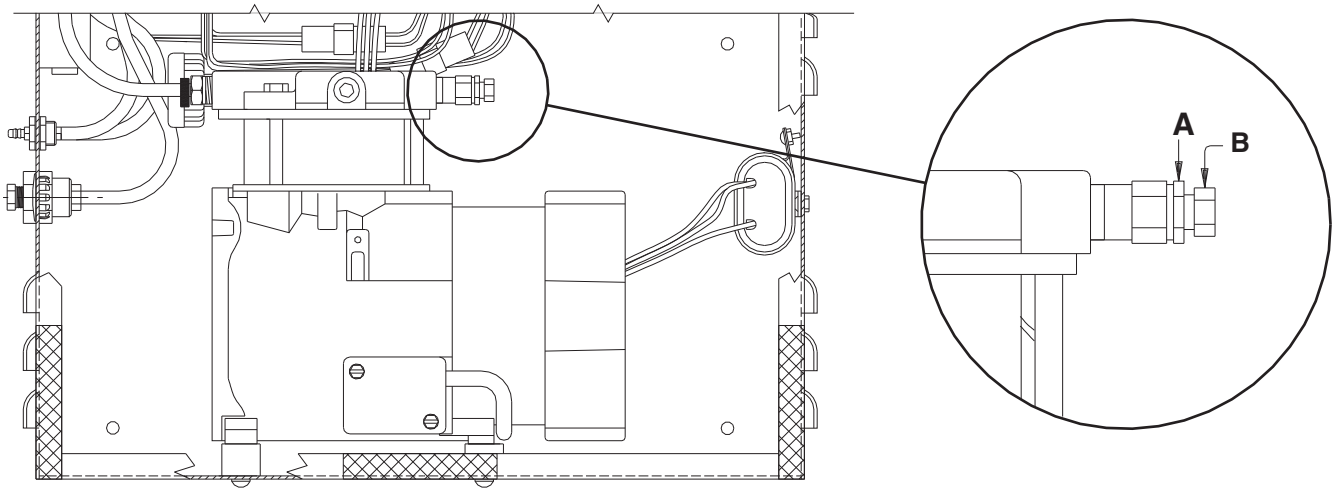
TO FIRE ALARM

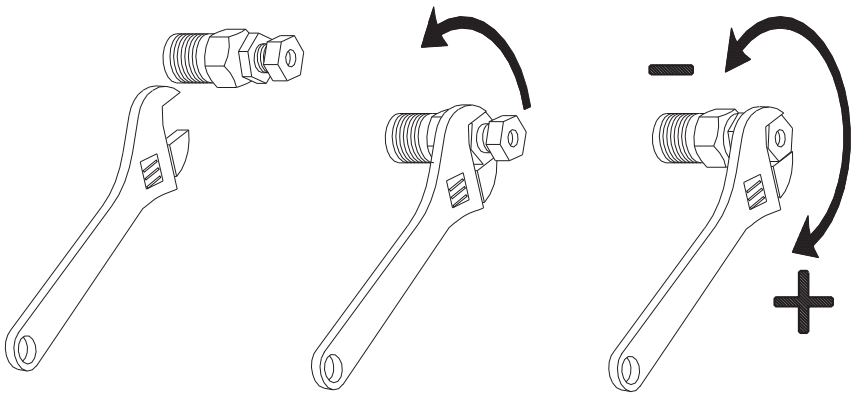
SHUNT

* REMOVE THIS SHUNT ONLY WHEN CONNECTING TO NORMALLY CLOSED FIRE ALARMS CONTACTS

⚠ DANGER CONTROL BOX **MUST** BE CONNECTED TO EARTH GROUND

Air Pressure Adjustment





1	Loosen lock nut. (A)
2	Turn outer valve (B) to regulate air pressure.
3	Tighten lock nut.

Installation Troubleshooting Chart

Symptom	Possible Cause	Suggested Remedy
No Power Opening.	No power to control box/blown fuse.	Verify 120VAC 60HZ power is present at terminals 3 & 4 on control box terminal strip. Check fuse. Replace only with 5 amp (3AG type) fuse.
	Actuator(s) not connected properly.	Be sure a timer module board is firmly in place in “A,” “B” & “P” slots. Operate actuator(s) LED on timer module should light when actuator is used. The LED on timer “P” should light whenever “A” or “B” is lit. If not, momentarily short actuator terminals 6 & 10 and 8 & 10 in the control box. If LED lights, check wiring to actuators for an open circuit. If it does not light, check for voltage at terminals 9 & 10. Voltage should read from 11.75 to 13.25V DC. If there is no reading, disconnect leads from terminals 9 & 10. Short actuator terminals 6 & 10 and 8 & 10. If LED lights, check for short circuit in actuators.
	Fire alarm system causing open circuit on terminals 1 & 2.	Shunt terminals 1 & 2 with power off. Restore power. If control operates when actuator terminals in the control box are shorted, an open circuit exist in wiring to fire alarm. When Auto-Equalizer is not used with fire alarms, terminals 1 & 2 must be permanently shorted with a shunt. **IMPORTANT!** When Auto-Equalizer is connected to fire alarm, make sure shunt is removed from terminals 1 & 2. Terminals 1 & 2 are one leg of 120V line.
	No input to Auto-Equalizer operator.	Disconnect tubing from Auto-Equalizer operator. Try actuator and verify that air is coming out of tubing. If not, trace tubing to control box, checking for breaks or kinks in air line.
	Air lines obstructed with dirt or ice.	Clean or thaw lines and reroute if necessary. Eliminate dips near cold zones.
	Air valves not working.	Make sure air valve leads are plugged into main board. (Be sure valves in system are plugged into connectors “A” & “B”).
	Compressor not working.	Make sure compressor leads are plugged into main board. (Be sure compressor is plugged into connector “P”).
Does not open or fully open.	Control box exhaust restricted.	Exhaust muffler may be clogged by dirty air or accidental painting. Clean in alcohol or mineral spirits.
Opens too slow or not at all.	Inlet filter clogged.	Replace filter element (Contact LCN for replacement).
Power opening will not time out.	Scanner maintaining signal to control box.	Make sure lenses are clean and there are no obstructions in front of scanner. Model 909 or 939 proximity scanner may “see” an opposite wall. Adjust range as described earlier.
	Switch circuit maintaining contact.	Check for short circuit or error in wiring to switch or scanner.
	Air valve blocked open with contaminant.	Cycle valve several times by momentarily shorting actuators in the control box. This should clear valve.
Power opening timing out too soon.	Air compressor needs readjustment.	See page 2 for regulation instructions.
	Timer cards not set properly.	Set timer cards “A” & “B” for max. time. Set timer card “P” for min. time. Slowly increase card “P” until “time-out” is 1-3 seconds after door is fully open. Decrease timer card “A” & “B” to achieve desired time delay before closing. (Make sure “P” times out before “A” & “B”).

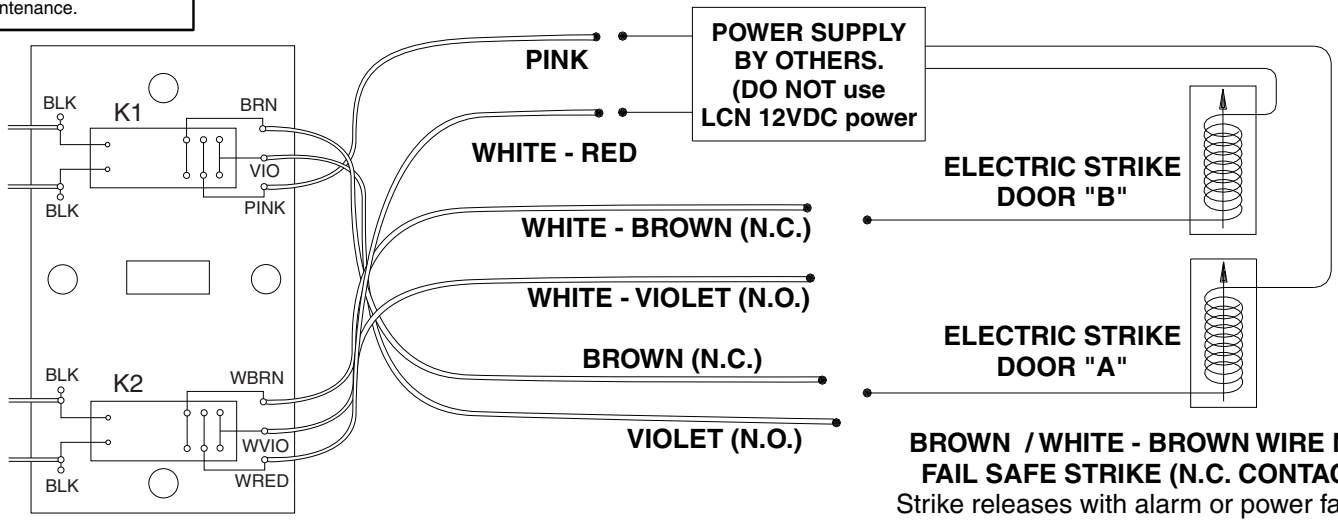
Model ES7982 for use with Electric Latching Hardware

ES7982 - 2 electric strikes maximum

⚠ WARNING

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.



VIOLET / WHITE - VIOLET WIRE N.O.
FAIL SECURE STRIKE (N.O. CONTACT)
Strike releases when energized. Remains locked in alarm or power failure. (Manual release hardware required to open door in alarm or power failure.)

BROWN / WHITE - BROWN WIRE N.C.
FAIL SAFE STRIKE (N.C. CONTACT)
Strike releases with alarm or power failure. Remains lached with power on. (Not compatible with UL listed fire door.)

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23655 Rev. 05/14-e

Drop Plates

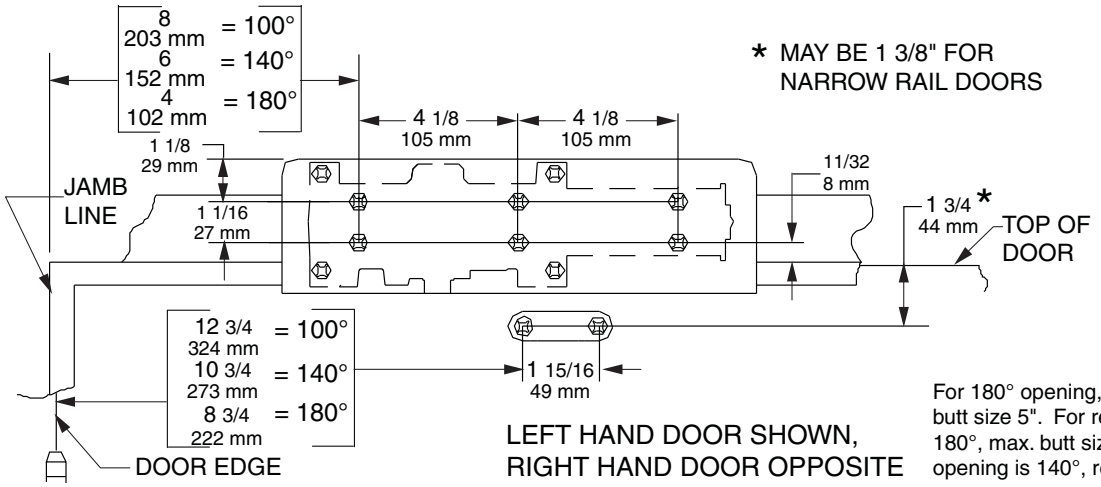
28500

4020, 4020T

Installation Instructions

4020 PUSH SIDE (TOP JAMB) DROP PLATE

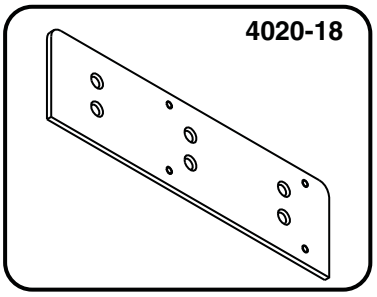
PERMITS 180° MAXIMUM OPENING



* MAY BE 1 3/8" FOR NARROW RAIL DOORS

LEFT HAND DOOR SHOWN, RIGHT HAND DOOR OPPOSITE

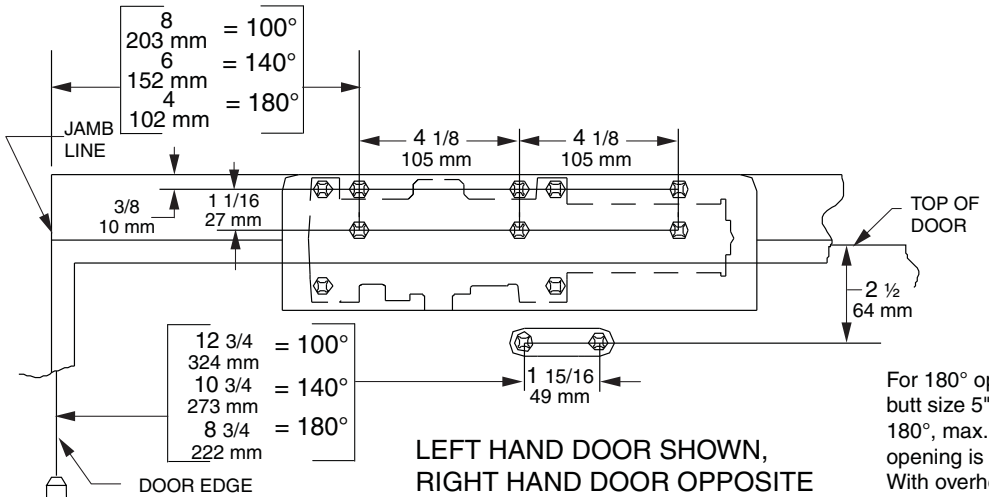
PUSH SIDE MOUNT ON: 4020-18 DROP PLATE



For 180° opening, frame width cannot exceed 4 1/2 max. butt size 5". For reveals up to 2 9/16 regular arm permits 180°, max. butt size 5". For reveals 2 9/16 to 4 13/16 max. opening is 140°, regular, H-90 & F.L. arms.

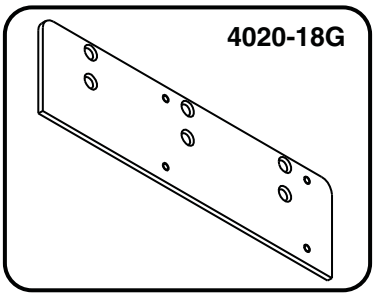
4020 PUSH SIDE (TOP JAMB) DROP PLATE

PERMITS 180° MAXIMUM OPENING



LEFT HAND DOOR SHOWN, RIGHT HAND DOOR OPPOSITE

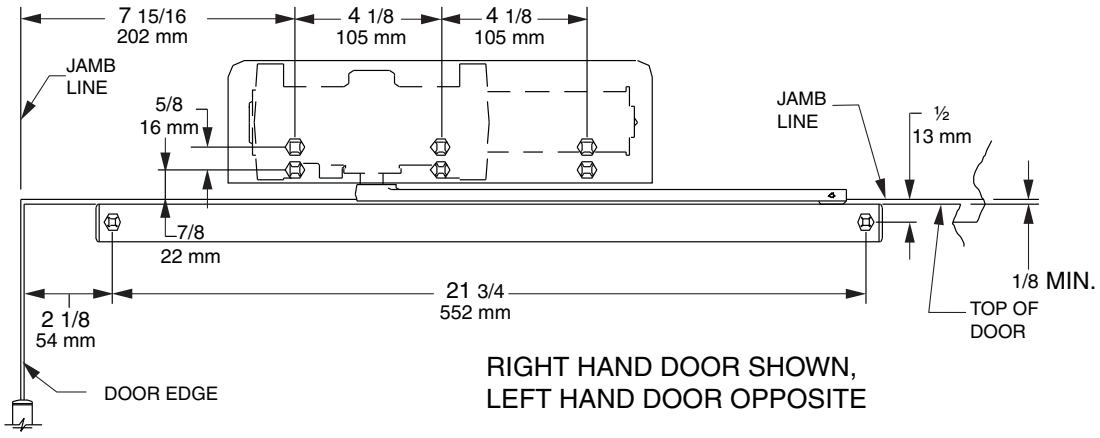
PUSH SIDE MOUNT ON: 4020-18G DROP PLATE



For 180° opening, frame width cannot exceed 4 1/2 max. butt size 5". For reveals up to 2 9/16 regular arm permits 180°, max. butt size 5". For reveals 2 9/16 to 4 13/16 max. opening is 140°, regular, H-90 & F.L. arms.
With overhead stops, shoe must be lowered to clear holder.

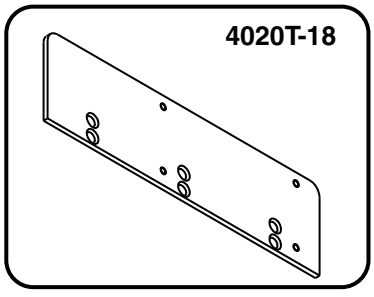
4020T PULL SIDE (TOP JAMB) DROP PLATE

PERMITS 180° MAXIMUM OPENING



RIGHT HAND DOOR SHOWN, LEFT HAND DOOR OPPOSITE

PULL SIDE MOUNT ON: 4020T-18 DROP PLATE



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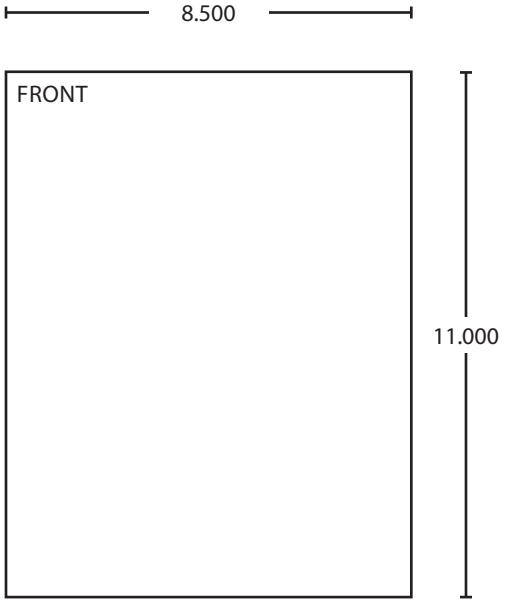
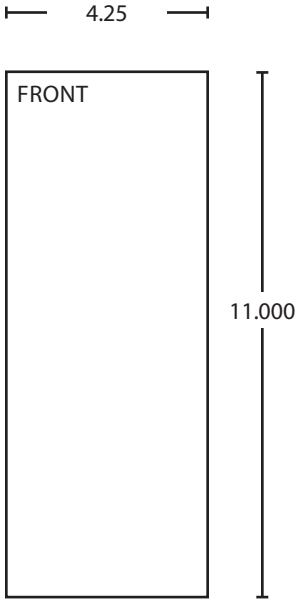
28500 Rev. 01/14-f



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	N/A	N/A	N/A	N/A	043812

Material
White Paper

Notes
1. printed one side
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
F > Revised artwork

Edited By	Approved By	EC Number	Release Date
R. Byun	M. Sasso	043812	01-01-14

Title
4020 Series Drop Plate Instruction Sheet

Creation Date	Number	Revision
04-27-10	28500	F

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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27176

ST-2701

LCN®

Installation Instructions

This product is not intended for use with conventional hinges or latching devices.

⚠ WARNING ⚠

Do not remove spring tube from this product. Extremely strong springs inside. If repairs are necessary, return to factory.

1

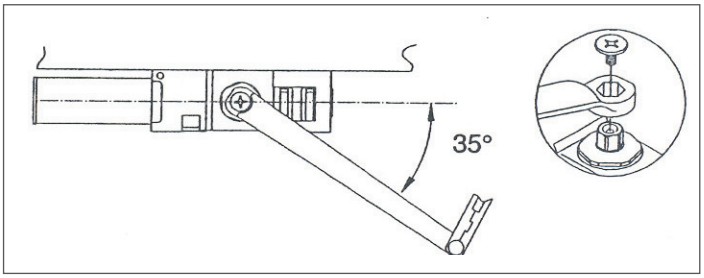
Mount closer body in pocket according to dimensions shown on template. Wall of pocket must be reinforced to ensure mounting of body.

2

Mount rod and shoe on door according to dimensions shown on template.

3

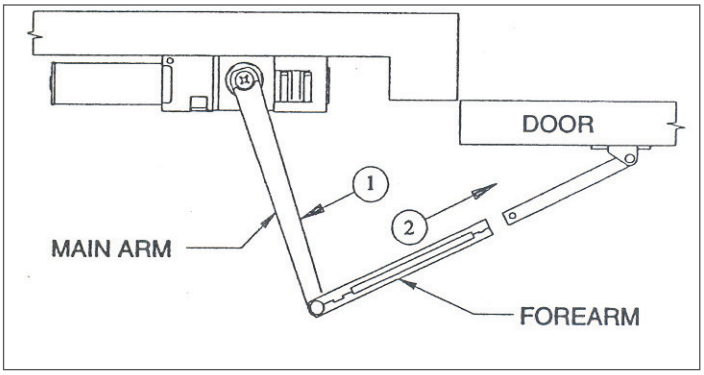
Place arm on closer shaft with main arm 35° to closer body (see illustration). Do not rotate closer shaft. Secure arm to shaft with arm screw.



4

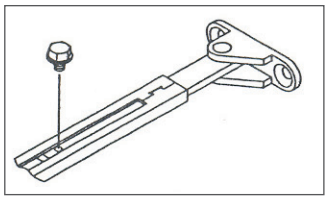
With door in closed position:

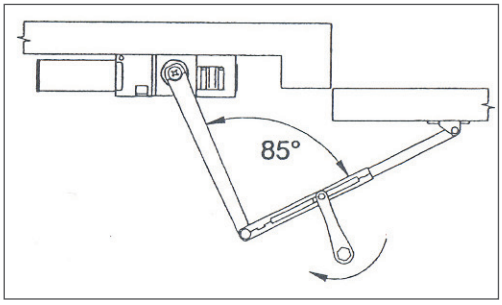
1. Pull closer main arm away from door.
2. Slowly release arm and insert rod into forearm (see illustration).



5

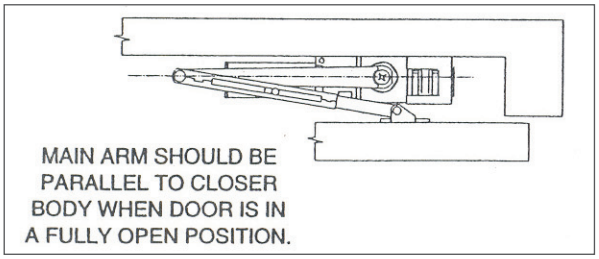
Adjust arm to form slightly less than a 90° angle with door in closed position. Secure with arm set screw. (see illustration)

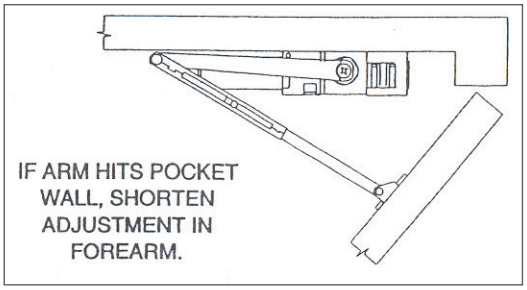




6

Slowly open door into pocket. DO NOT FORCE if door will not open completely. If door will not open completely into pocket, adjust arm as shown in below illustrations.





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27176 Rev. 01/14-b

7

Closing speed adjustment.

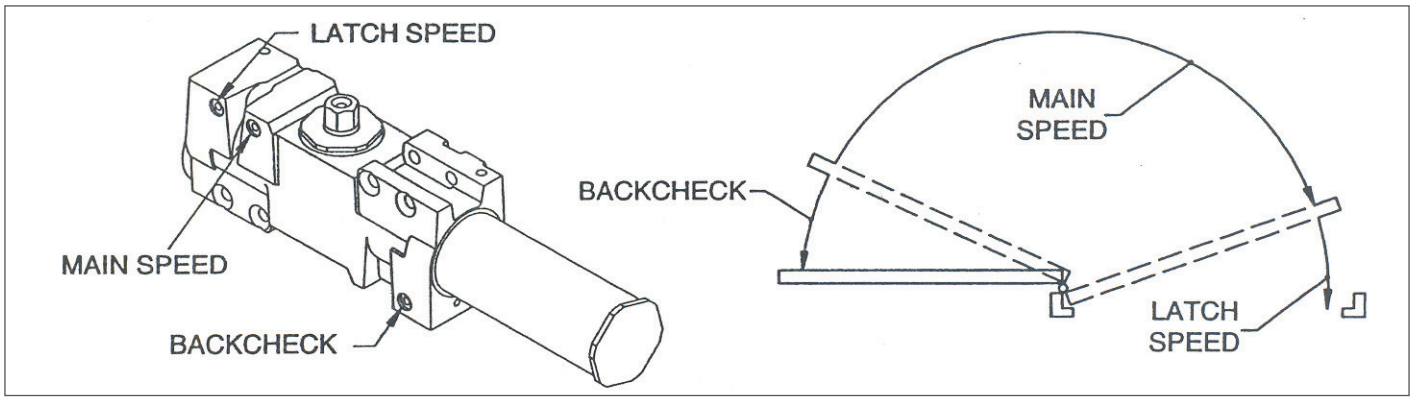
⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage.

ⓘ **Important**

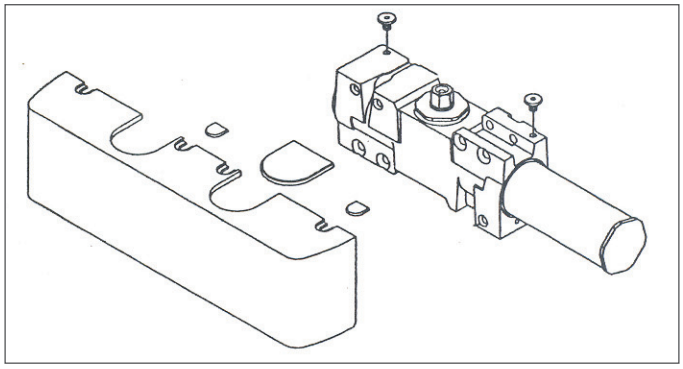
- Regulation: Do not allow door to slam into frame. A “normal” closing time from 90° open position is 5 to 7 seconds, evenly divided between main swing speed and latch swing speed. Use socket key furnished to adjust speed. To slow main speed of door, turn regulating screw nearest shaft clockwise. To slow latch speed, turn regulating screw nearest latch clockwise.
- Backcheck: To increase backcheck intensity turn regulating screw farthest from hinge clockwise.

ⓘ **DO NOT USE ABRUPT BACKHECK**



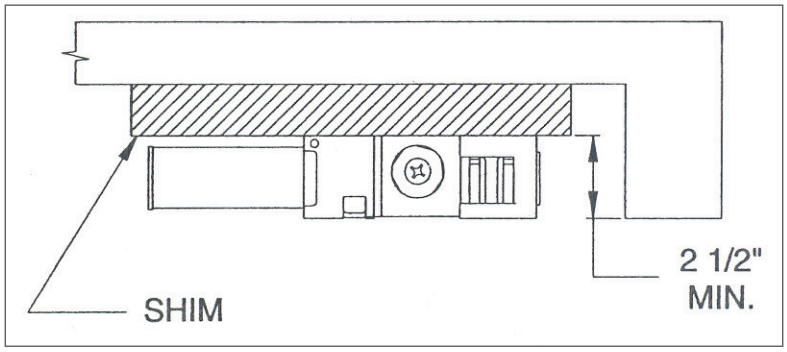
8

Mount cover on closer body and secure with two cover screws. Tighten screws firmly.



9

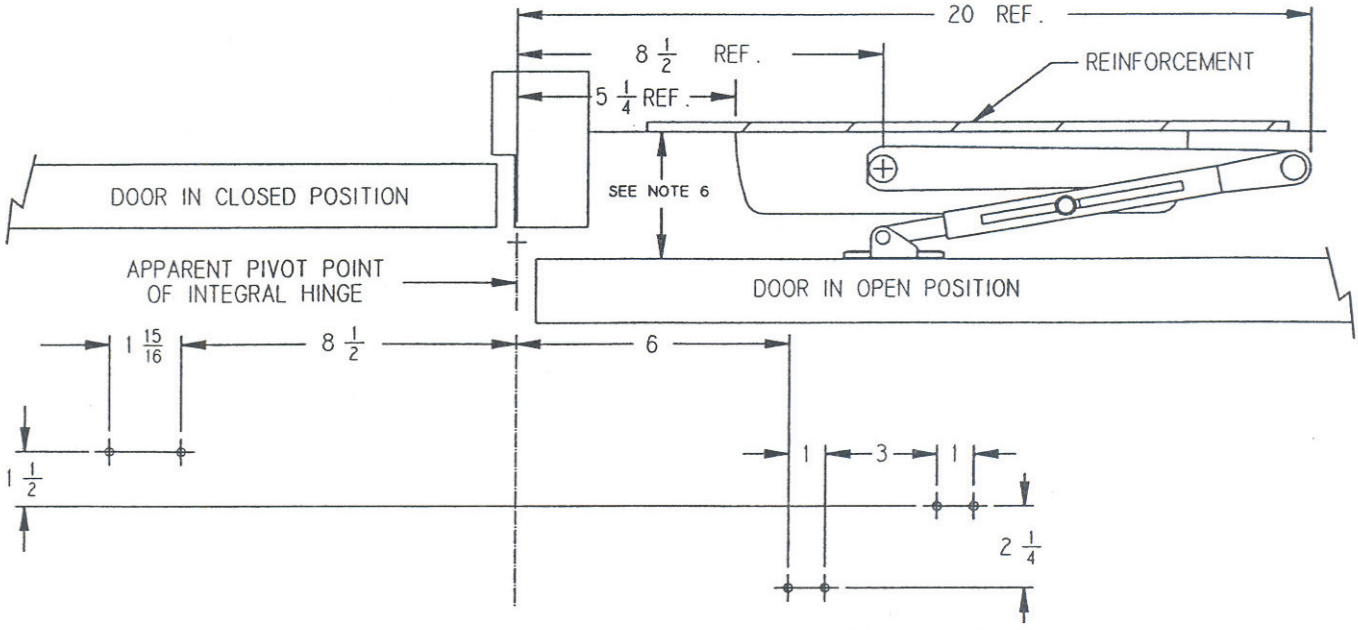
If closing power needs to be increased, shim closer out from wall to a minimum 2 ½” pocket depth. This will provide an extra ½ pound of closing force at latch.



SPECIAL 180° POCKET CLOSER FOR INTEGRAL HINGE TYPE DOORS ONLY.

SPECIAL CYLINDER AND ARM REQUIRED. THIS APPLICATION CAN NOT BE USED WITH THE STD. 4041

LEFT HAND POCKET CLOSER INSTALLATION SHOWN | ST-2701



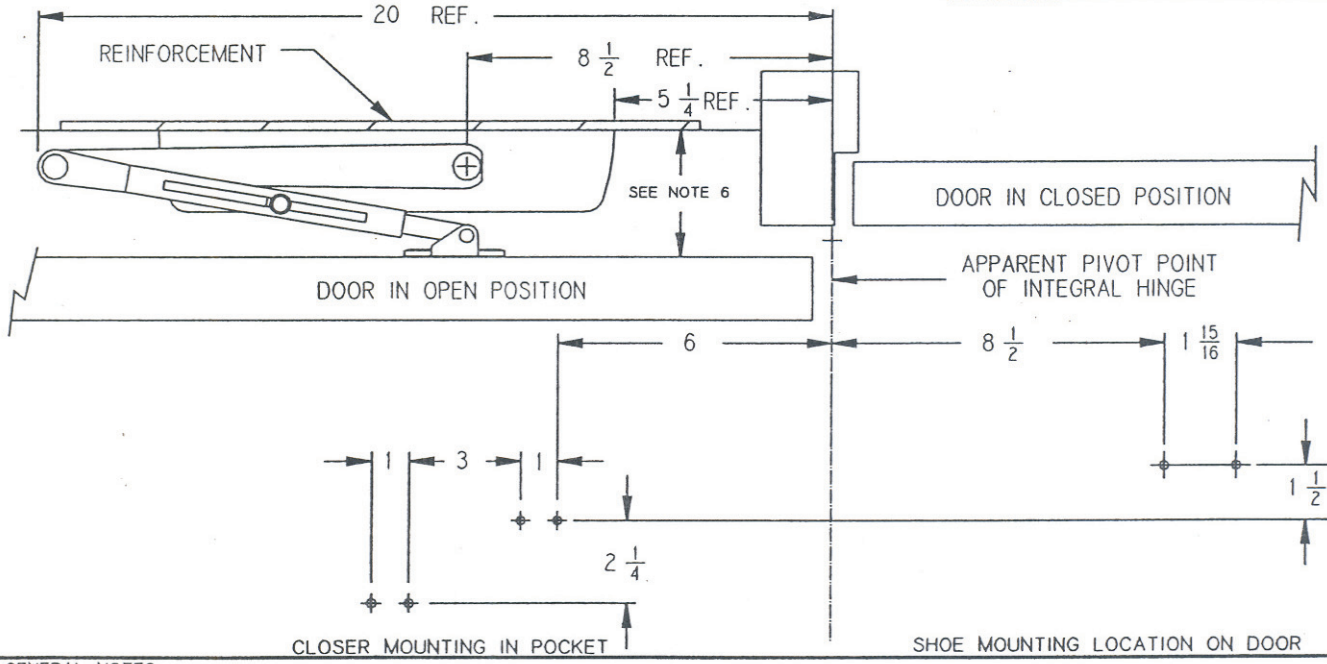
SHOE MOUNTING LOCATION ON DOOR

CLOSER MOUNTING IN POCKET

SPECIAL 180° POCKET CLOSER FOR INTEGRAL HINGE TYPE DOORS ONLY.

SPECIAL CYLINDER AND ARM REQUIRED. THIS APPLICATION CAN NOT BE USED WITH THE STD. 4041

RIGHT HAND POCKET CLOSER INSTALLATION SHOWN | ST-2701



CLOSER MOUNTING IN POCKET

SHOE MOUNTING LOCATION ON DOOR

GENERAL NOTES-

1. FOR USE WITH INTEGRAL HINGE AND LATCHING DOORS ONLY. NOT FOR USE WITH CONVENTIONAL HINGES OR LATCHING MECHANISMS.
2. LOCATE CLOSER AND SHOE FROM APPARENT ℄ OF INTEGRAL HINGE.
3. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.
4. CLOSER SIZE IS 12 1/4 x 3 1/2 x 2 5/32.
5. MOUNTING SCREWS ARE 1/4-20 M.S. OR 14 W.S.
6. MAXIMUM POCKET DEPTH IS 4". MINIMUM IS 2 1/2".
7. THIS APPLICATION CAN NOT BE USED WITH A STANDARD 4041 CLOSER. ST-2701 REQUIRES A SPECIAL CYLINDER AND ARM.

LCN No. ST-2701 has been assigned to these special details. All correspondence, orders, etc. must refer to this number.

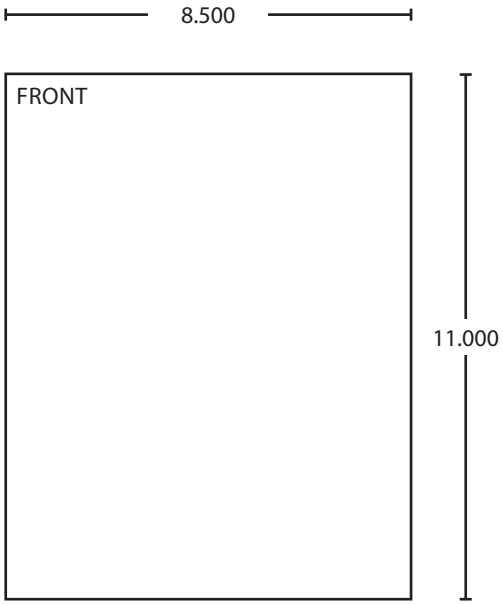
No.	REVISION	BY	DATE
1	CAD CONVERSION	TA	5/94
2	ADDED COVER DIM.	TA	3/96
3	8 1/2 was 6 3/8 change per openings	TA	12/97

APP BY TAA 5/95

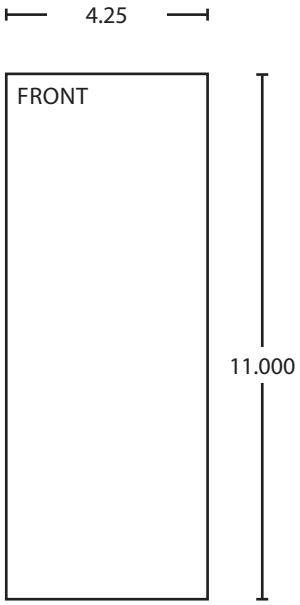
DO NOT SCALE

SPECIAL 180° POCKET CLOSER FOR INTEGRAL HINGE TYPE DOORS ONLY

ST-2701



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	043812				

Material
White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
B > Revised artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043812	01-01-14

Title
ST-2701 Instruction Sheet

Creation Date	Number	Revision
04-27-10	27176	B

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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28484

4210 Track Series

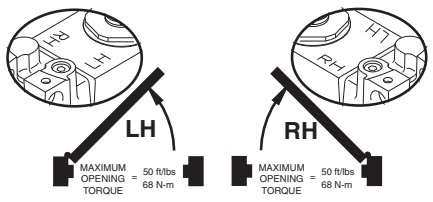
LCN®

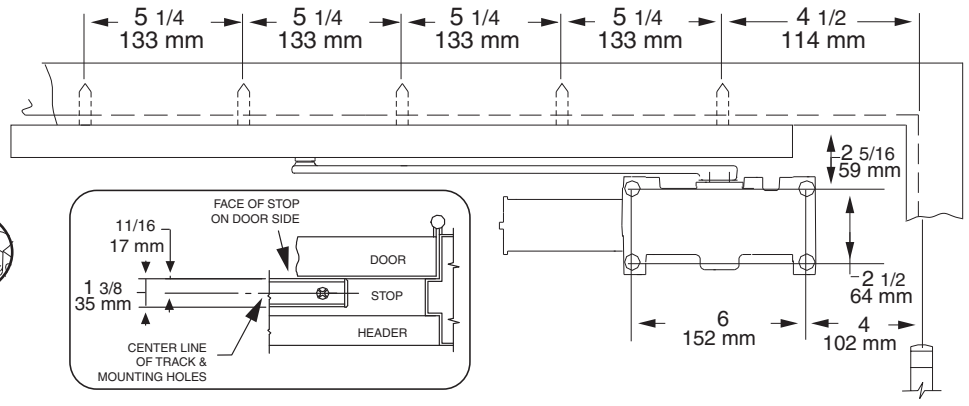
110° Template, Push Side

Installation Instructions

1 Locate proper template, Drill and tap pilot holes for 1/4 x 20 Security Torx Machine screws.

Verify hand of closer matches hand of door.





Notes: 1. Locate closer & track from centerline of pivot or swing clear hinge pin if used.
2. Reinforcing per ANSI/SDI-100 recommended for hollow doors and frames.
3. Closer size: 12 1/4 x 3 1/2 x 2 1/4.

RIGHT HAND SHOWN, LEFT HAND OPPOSITE

MAIN DROITE ILLUSTRÉE,
MAIN GAUCHE CONTRAIRE

PUERTA DE MANO DERECHA ILUSTRADA,
IZQUIERDA AL OPUESTO

2 Determine door width, adjust spring power to match chart.

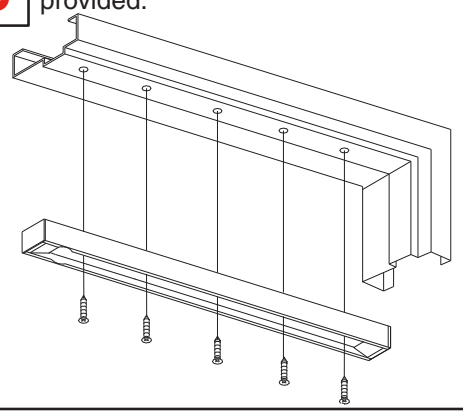
⚠CAUTION

IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

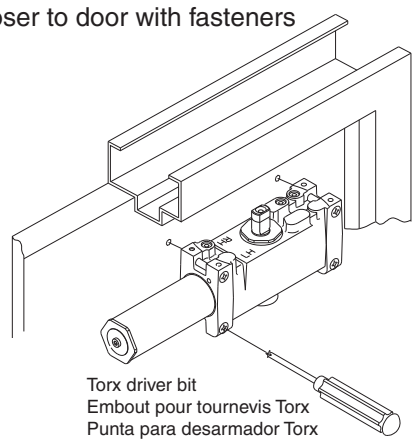
TABLE OF SIZES

DOOR WIDTH (INTERIOR DOORS ONLY)	CLOSER SIZE
♿ - ADA	4211T
UP TO 38"(914mm)	4213T
37"(940mm) - 48"(1219mm)	4214T

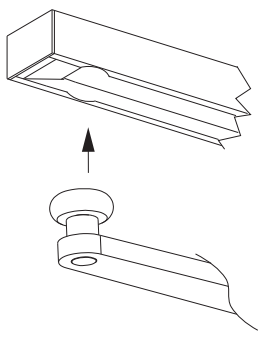
3 Secure track to frame with fasteners provided.



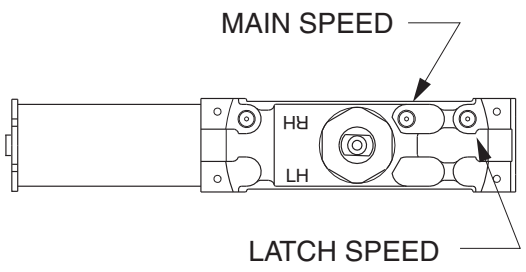
4 Secure closer to door with fasteners provided.



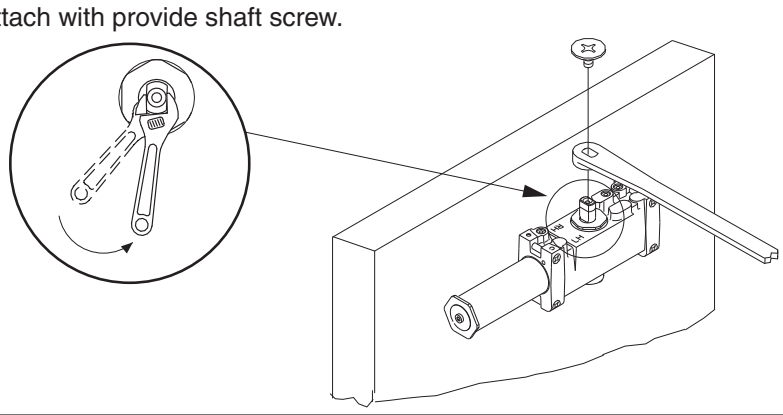
5 Insert track roller (of arm assembly) into access hole of track and temporarily let arm hang from track.



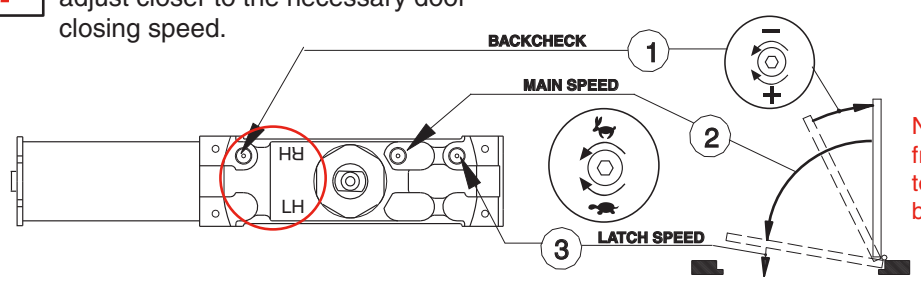
6 With 3/32 allen wrench provided, turn latch speed and main speed regulation screws clockwise to the complete SHUT OFF position. DO NOT FORCE SCREWS.



Open door out of working area. Rotate shaft on closer approximately 90°, align flats on arm to flats on shaft. Attach with provide shaft screw.



7 Open shut off regulation screws and adjust closer to the necessary door closing speed.



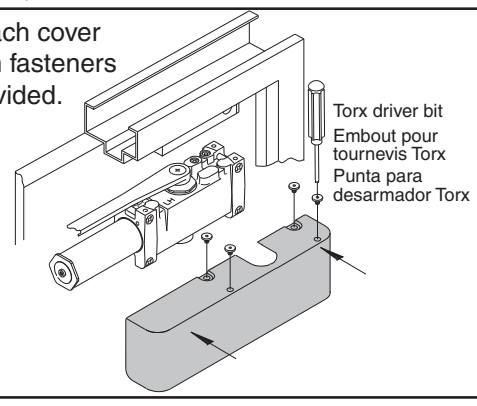
⚠CAUTION

OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

Patents Pending include:
Rapidor ™Installation System
PROPRIETARY, LCN Division, Schlage Lock Company

8 Attach cover with fasteners provided.



4210 Instructions du rail et gabarit de 110° pour une installation sur le linteau.

1 Localice la plantilla apropiada, taladra y rosca agujeros pilotos para tornillos de máquina de 1/4 x 20.

Vérifiez si la main du ferme-porte correspond à la main de la porte.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

3 Fixez le rail au cadre avec les attaches fournies.

4 Fixez le ferme-porte sur la porte avec les attaches fournies.

5 Insérez le rail de galet (de l'assemblage du bras) dans l'orifice d'accès du rail et laissez le bras pendre temporairement du rail.

6 À l'aide de la clé Allen 3/32 fournie, tournez les vis de réglage de la vitesse d'enclenchement et de la vitesse de fermeture dans le sens des aiguilles d'une montre jusqu'au point d'arrêt complet. NE FORCEZ PAS LES VIS.

Ouvrez la porte hors du zone d'opération. Tournez l'arbre du ferme-porte environ 90°, alignez les parties plates du bras avec les parties plates de l/arbre. Fixez à l'aide de la vis fournie.

7 Ouvrez les vis de réglage d'arrêt et ajustez le ferme-porte à la vitesse de fermeture requise.

① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

8 Fixez le boîtier avec les attaches fournies.

⚠DANGER

Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877 - 671 - 7011

⚠DANGER

UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4210 Instruccionde de rieles para plantilla 110° con montaje del lado del empuje.

1 Repérez le gabarit approprié, percez et taraudez des trous de guidage pour des vis à métal de 1/4 x 20.

Verifique que la mano del cerrador corresponda a la mano de la puerta.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

3 Sujete el riel al bastidor con los sujetadores ya incluidos.

4 Sujeta el cerrador a la puerta con los sujetadores ya incluidos.

5 Pone el riel de rodillo (del ensamblaje del brazo) en el orificio de aceso del riel y deje el brazo temporalment suspendido del riel.

6 Con la llave Allen ya incluida, apriete los tornillos de ajuste de la velocidad de seguro y de la velocidad principal en el sentido de las agujas del reloj hasta la posición de cierre completo. NO FUERCE LOS TORNILLOS.

Abre la puerta fuera de la zona de operación. Gire el eje del cerrador aproximadamente 90°, alinee las secciones planas del brazo con las secciones planas de eje. Coloque con el tornillo ya incluido.

7 Abre los tornillos de ajuste de cierre y ajuste el cerrador a la velocidad requerida.

① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

8 Coloca la tapa con los sujetadores ya incluidos.

⚠ADVERTENCIA

UNA INSTALACIÓN O UN AJUSTE INCORRECTOS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL 877 - 671 - 7011

⚠ADVERTENCIA

LA APERTURA DEMASIADO GRANDE DE LAS VÁLVULAS DE AJUSTE PUEDE OCASIONAR UN DERRAME, DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES.

Customer Service	Servicio al cliente	Service à la clientèle
1-877-671-7011	www.allegion.com/us	

ALLEGION

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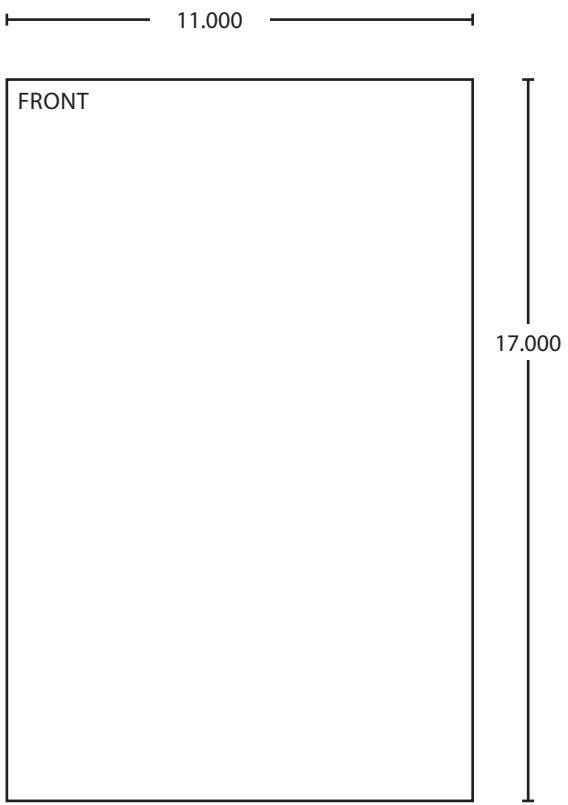
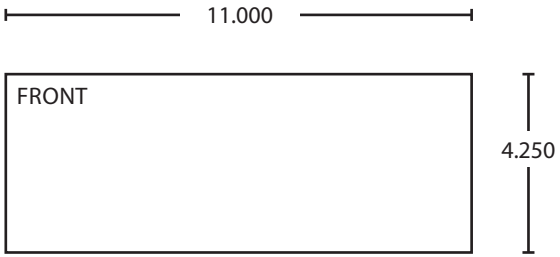
28484 Rev. 01/14-e



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	N/A	N/A	N/A	043812	

Revision Description:
E > Revised artwork

Material	Edited By	Approved By	EC Number	Release Date
White Paper	R. Byun	M. Sasso	043812	01-01-14

Notes
1. printed one side
2. printed black and PMS 485 (red)
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Title
4210T Series Instruction Sheet

Creation Date	Number	Revision
04-27-10	28484	E

Created By	Activity	
N/A	3899 Hancock Expwy Security, CO 80911	
Software: InDesign CS6		© Allegion 2014

18781

3130SE Sentronic

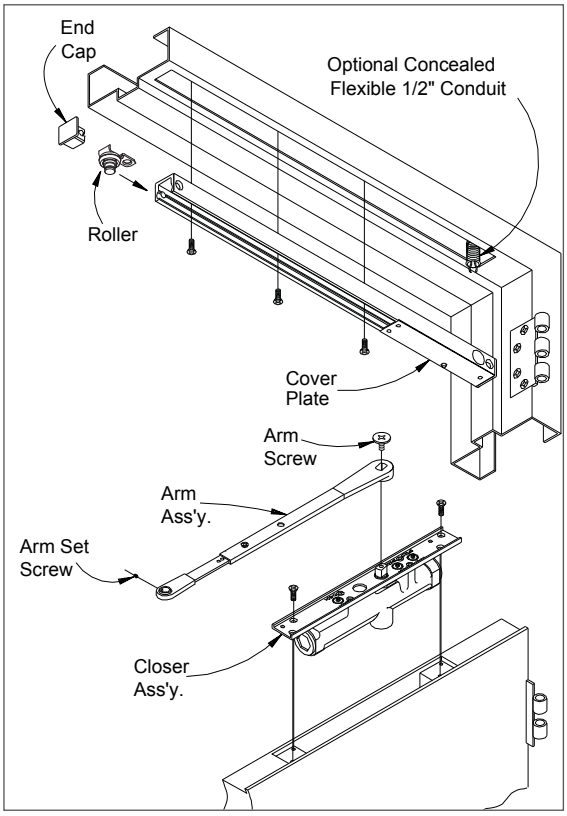
LCN®

Installation Instructions

Not for installation on UL rated 20 minute wood core doors per CAN/ULC-S104-10.

Installation

1. Closer is handed at factory and must match hand of door. Hand of closer shown on mounting channel.
2. Voltage shown on Sentronic cover plate must match voltage supplied to door frame (24V or 120V).
3. If door and frame are not prepared for closer and track then prepare in accordance with template on opposite side.
4. Remove cover plate from track. Assemble flexible conduit connector to tapped hole provided in top of track. Connect power supply wires to track terminal strip. See wiring diagram below. Insert track into frame and secure with proper screws as shown on opposite side. Replace cover plate, aligning hole with switch.
5. Insert closer into cut-out in door and secure with proper screws.
6. Place arm on closer shaft and secure with arm screw.
7. Loosen set screw in end of arm, open door part way(about 30°), pull arm away from top of door and connect to track roller. Tighten set screw firmly. Open door to hold open position.
8. To place door in desired hold open position, remove arm screw in adjustable arm and re-insert arm screw at new location and tighten.



⚠ CAUTION ⚠

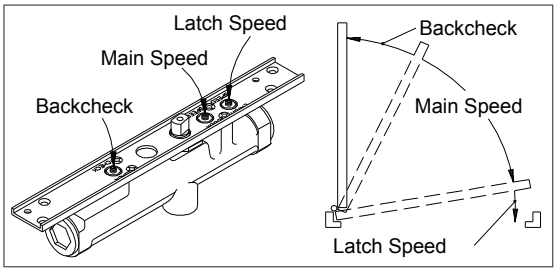
Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions, contact LCN Closers at: 877-671-7011

Customer Service

1-877-671-7011 www.allegion.com/us

Regulation

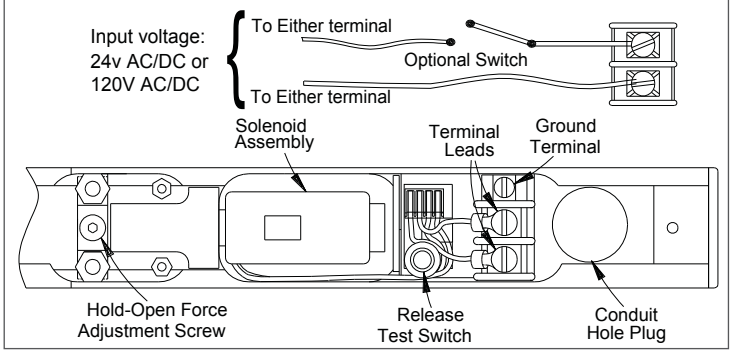
IMPORTANT: The 3130 SE door closer is regulated prior to shipment. If adjustments are necessary, use a 3/32" hex wrench to adjust speed. To slow **MAIN SPEED** of door turn **MAIN SPEED** screw clockwise. To slow **LATCH SPEED** of door turn **LATCH SPEED** screw clockwise. To increase **BACKCHECK** turn **BACKCHECK** screw clockwise. Use lightest **BACKCHECK** that will retard door opening sufficiently. Do not use an **ABRUPT BACKCHECK**, nor expect door closer to act as a door stop.



Electrical Checkout

1. With power on, open door completely. Door should remain in open position. if door does not stay open check electrical input.
2. Push release test switch. Door should close immediately. Open the door to hold-open position and let it remain there.
3. System should be checked at frequent intervals It is suggested that step 2 be repeated every 90 days.

Wiring Diagram - Polarity Not Important



Hold Open Force Adjustment

Locate hold-open adjustment screw in diagram above. For greater hold open force, insert socket screw key wrench (included in screwpack) and turn clockwise. To decrease amount of hold open force, turn screw counter-clockwise. Maximum of 4 turns.

⚠ WARNING ⚠

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY
Disconnect power before making any electrical connections or performing maintenance.

ALLEGION

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18781 Rev. 08/17-k

Conduit Quick Connector

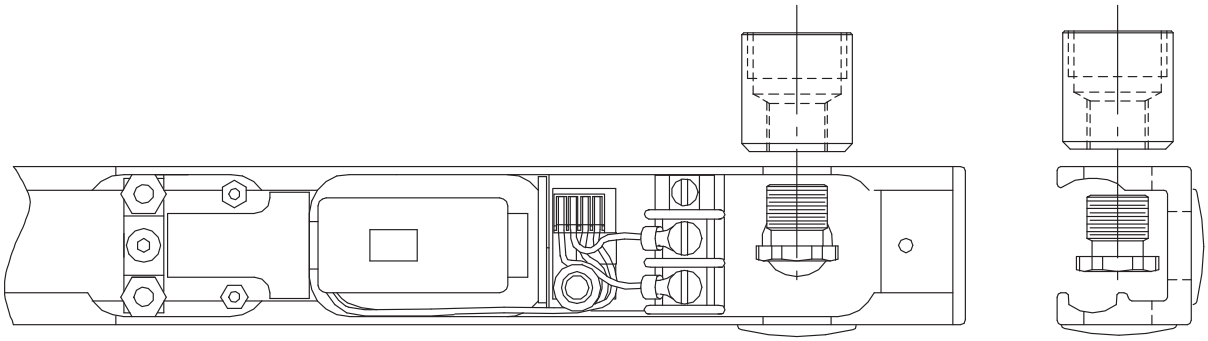


Fig. 1

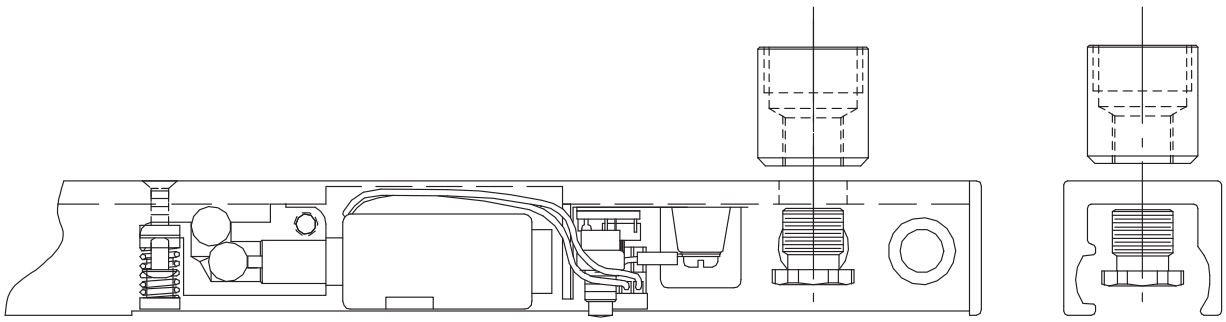


Fig. 2

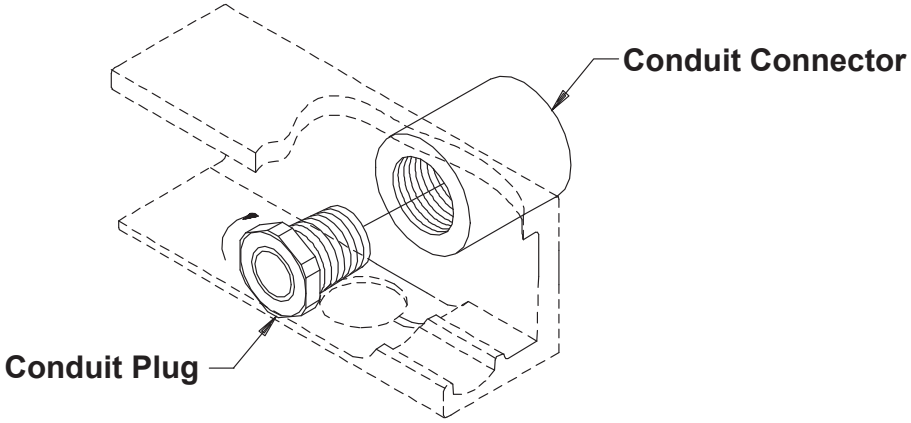
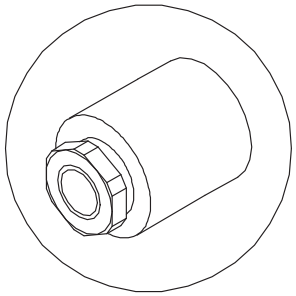


Fig. 3



Conduit Plug shown in Conduit Connector

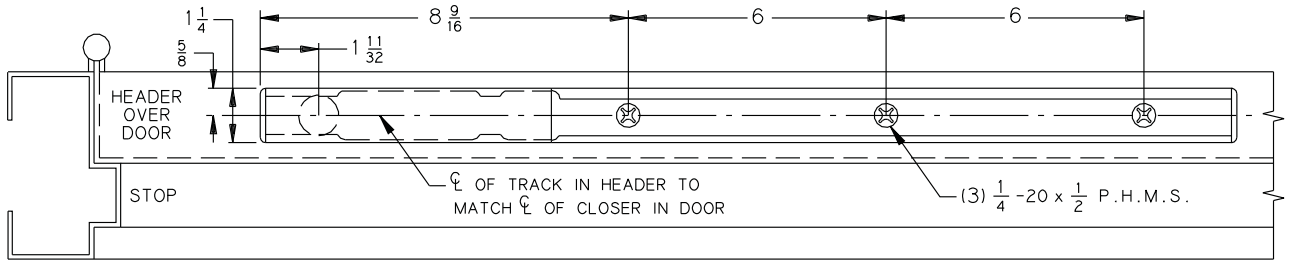
Installation Instructions

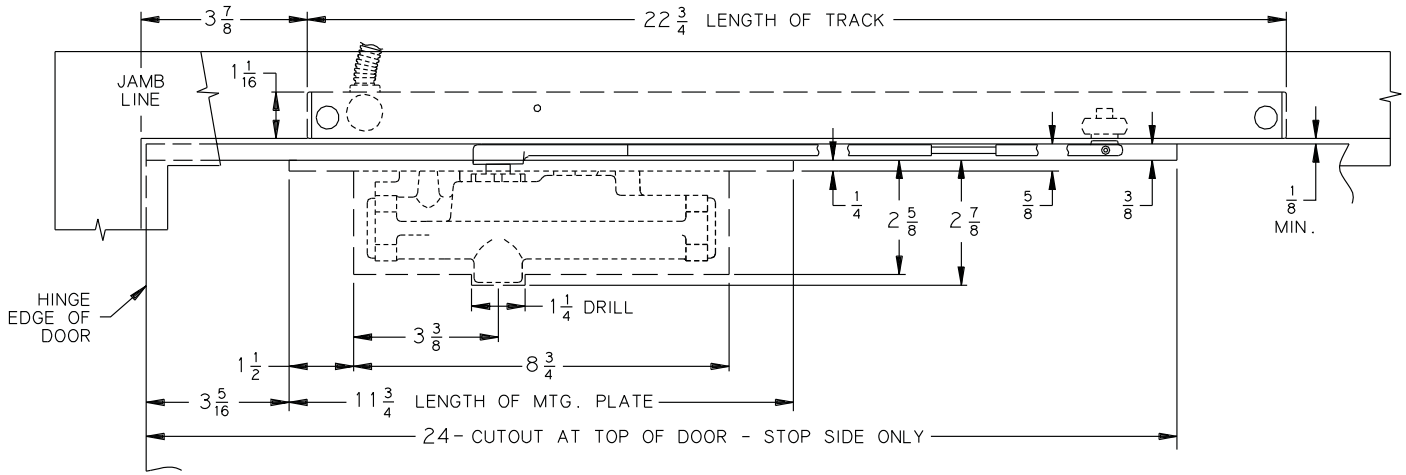
1a The Conduit Quick Connector and Plug can be found in the closer screwpack.

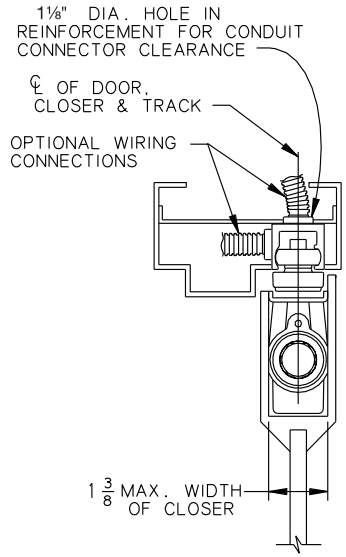
1b The Conduit Quick Connector should be fastened to the 1/2” concealed conduit prior to step 3 on the closer installation instructions.

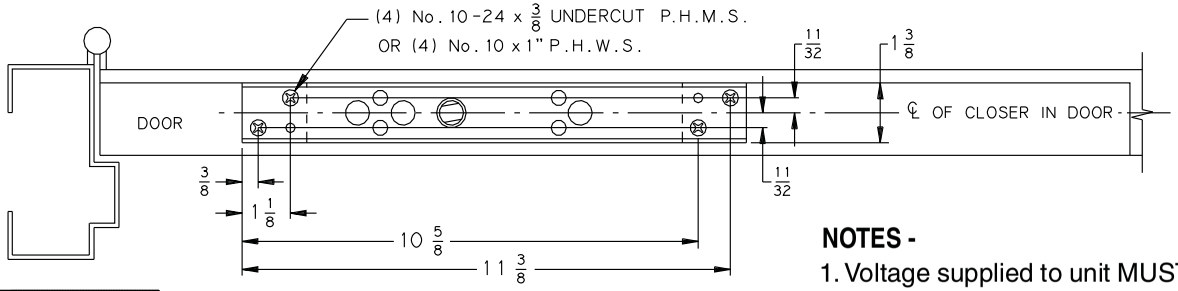
1c During step 3 on the closer installation instructions, make sure that the Conduit Connector is secured flush against the track surface. See option in Fig. 1 below that matches the mounting option selected for track surface. With the track mounted, take the Conduit Plug and slide it through the 1/2” hole in the track. (see Fig.2) Tighten the Plug into the Conduit Connector using a 5/8” wrench, until completely secure, as shown in Fig.3.

3130 SE } 85° to 110° HOLD OPEN	
AUXILIARY STOP RECOMMENDED	
LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE	8/95









DOOR HOLDER SOLENOID DATA

24 VAC - DC Nominal +10% - 15% @ .090 Amp. Max.

120 VAC - DC Nominal +10% - 15% @ .030 Amp. Max.

For 12V wiring consult factory.

NOTES -

1. Voltage supplied to unit MUST match voltage shown on Sentronic® label.
2. If door is hung on pivots or swing clear hinges consult factory.
3. Floor or wall stops must be used.
4. Reinforcing per ANSI\SDI-100 is recommended for hollow metal doors and frames.

⚠ WARNING

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.

INCH	1/8	1/4	11/32	3/8	1/2	5/8	11/16	3/4	1	1 1/16	1 1/8	1 1/4	1 11/32	1 3/8
M.M.	3	6	9	10	13	16	18	19	25	27	29	32	34	35
INCH	1 1/2	2 5/8	2 7/8	3 5/16	3 3/8	3 7/8	6	8 9/16	8 3/4	10 5/8	11 3/8	11 3/4	22 3/4	24
M.M.	38	67	73	84	86	98	152	217	222	270	289	298	578	610

No.	REVISION	BY	DATE
1	UPDATE CHART	AMM	03/98

LCN®

DRW BY CTB 5/94

DO NOT SCALE

3130 SE CONCEALED CLOSER \ HOLDER WITH ELECTRONIC RELEASE

3130 SE CONCEALED MOUNTING

28480

4110 Track Series

LCN®

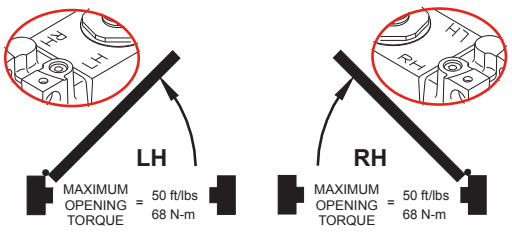
110° Template, Push Side Mounting

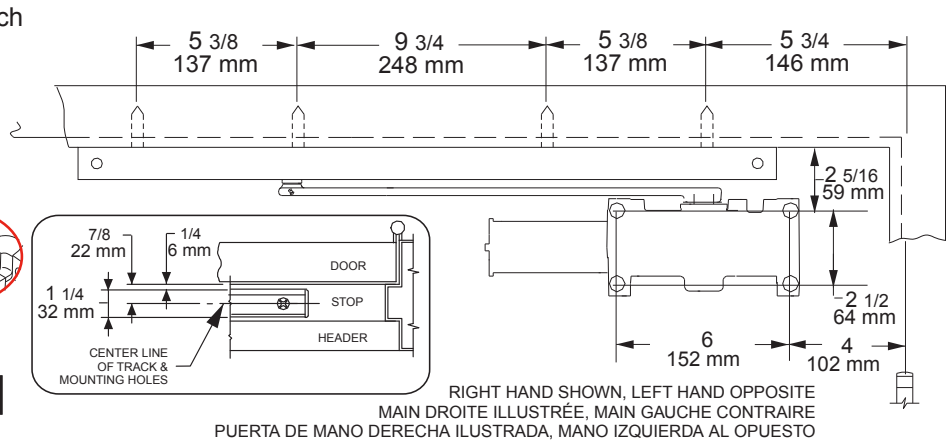
Installation Instructions

1

Locate proper template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes.

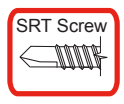
Verify hand of closer matches hand of door.





RIGHT HAND SHOWN, LEFT HAND OPPOSITE
MAIN DROITE ILLUSTRÉE, MAIN GAUCHE CONTRAIRE
PUERTA DE MANO DERECHA ILUSTRADA, MANO IZQUIERDA AL OPUESTO

Notes: 1. Locate closer & track from centerline of pivot or swing clear hinge pin if used.
2. Reinforcing per ANSI/SDI-100 recommended for hollow doors and frames.
3. Closer size: 12 1/4 x 3 1/2 x 2 1/4.



Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.

2

Determine door width, adjust spring power to match chart.

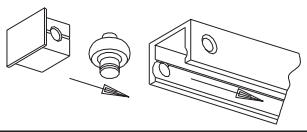
CAUTION

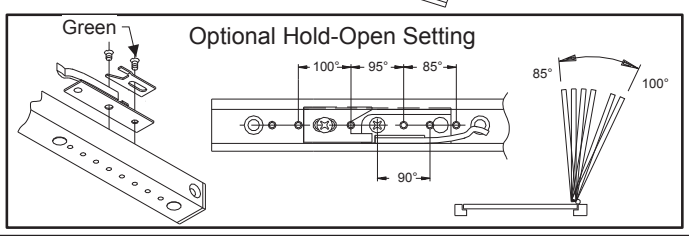
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

TABLE OF SIZES	
DOOR WIDTH (INTERIOR DOORS ONLY)	CLOSER SIZE
♿ - ADA	4111T
UP TO 36"(914mm)	4113T
37"(940mm) - 48"(1219mm)	4114T

3

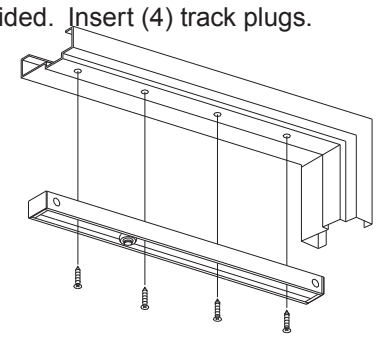
Assemble roller into track.





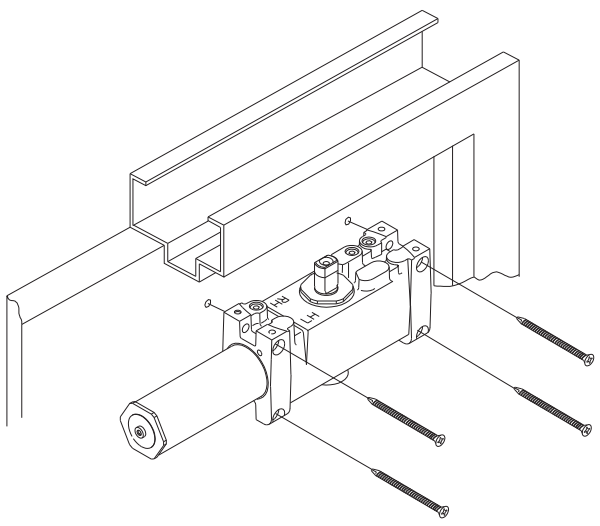
4

Secure track to frame with fasteners provided. Insert (4) track plugs.



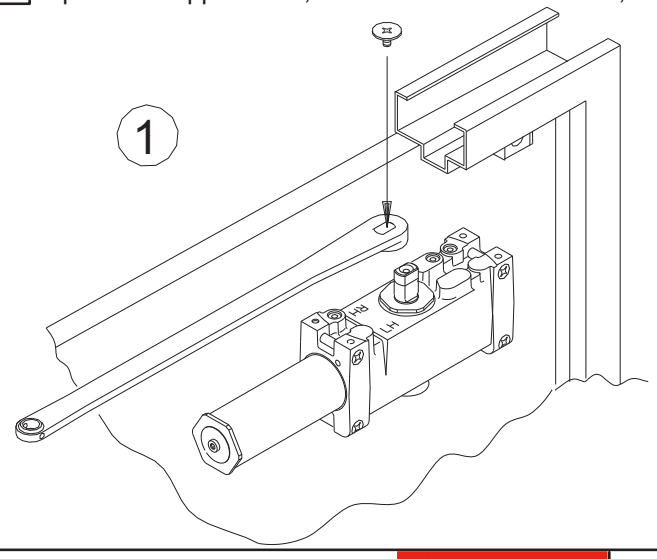
5

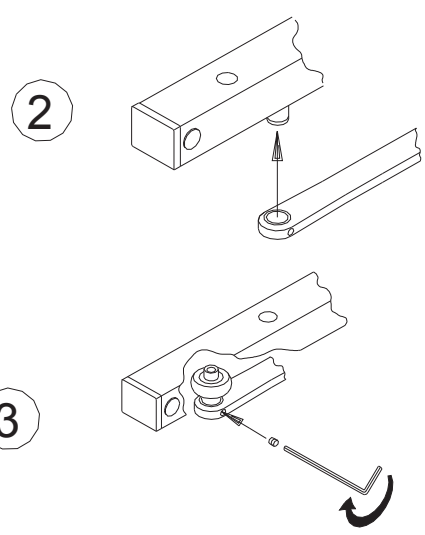
Secure closer to door with fasteners provided.



6

Attach arm to closer, with provided pinion screw.
Open door approx. 30°, connect arm to track roller, securing with set screw.

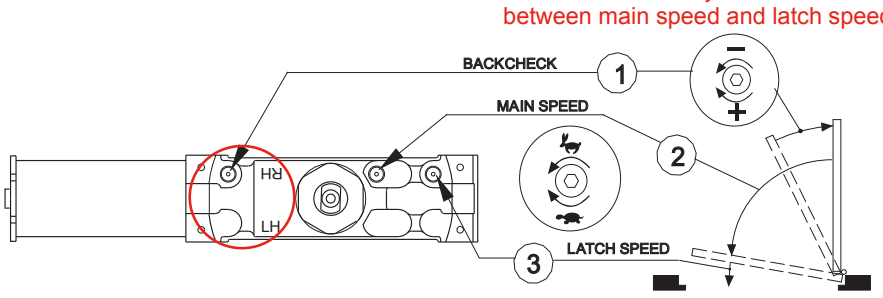




7

If necessary, adjust closer.

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.



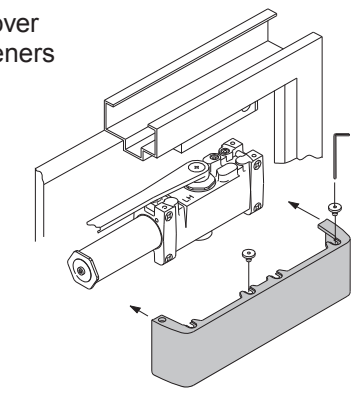
CAUTION

OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.

Patents Pending include:
Rapidor ™Installation System
PROPRIETARY, LCN Division, Schlage Lock Company

8

Attach cover with fasteners provided.



4110 Instructions du rail et gabarit de 110° pour une installation sur le linteau.

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds.

Vérifiez si la main du ferme-porte correspond à la main de la porte.

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

3 Glissez le galet dans le rail.
Réglage de l'angle d'ouverture optionnel

4 Fixez le rail au cadre avec les attaches fournies. Insérez les (4) bouchons du rail.

5 Fixez le ferme-porte sur la porte avec les attaches fournies.

6 Sujeta el brazo al cerrador con el tornillo ya incluido. Abre la puerta aprox. 30°, conecta el brazo al rodillo del riel, sujetándolo con el tornillo de ajuste.

7 Au besoin, réglez
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

8 Fixez le boîtier avec les attaches fournies.

DANGER

Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877 - 671 - 7011

DANGER

UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4110 Instrucciondes de rieles para plantilla 110° con montaje del lado del empuje.

1 Localice la plantilla apropiada. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes.

Verifique que la mano del cerrador corresponda a la mano de la puerta.

Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo `indicado en el gráfico.

3 Ponga el rodillo de ensamblaje en el riel.
Posición de retención opcional

4 Sujete el riel al bastidor con los sujetadores ya incluidos. Inserte dos (4) tapones de rieles.

5 Sujeta el cerrador a la puerta con los sujetadores ya incluidos.

6 Fixez le bras sur le ferme-porte avec les vis fournies. Ouvrez la porte à environ 30°, fixez le bras sur le galet du rail avec la vis calante.

7 Ajusta si se necesita
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

8 Coloca la tapa con los sujetadores ya incluidos.

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ADVERTENCIA

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ALLEGION

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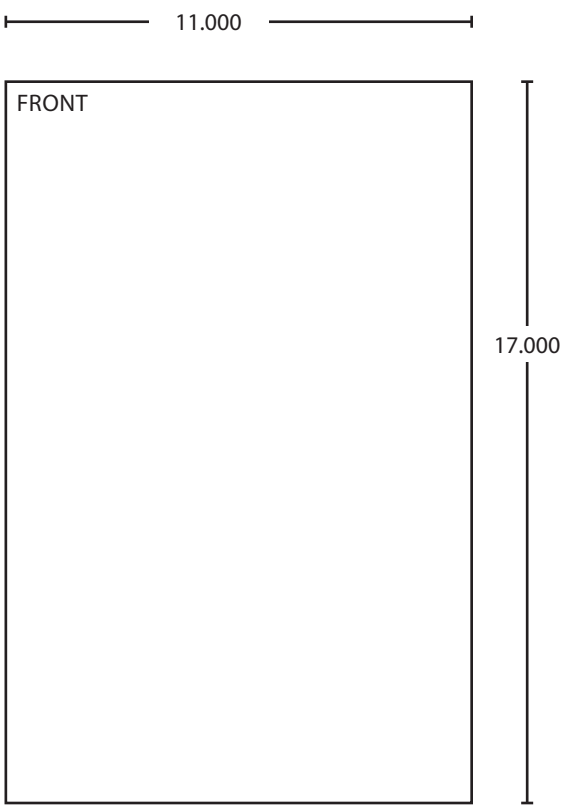
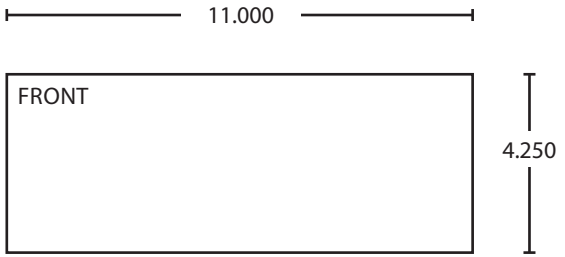


BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	N/A	N/A	N/A	043812	

Revision Description:
E > Revised artwork

Material
White Paper

Edited By	Approved By	EC Number	Release Date
R. Byun	M. Sasso	043812	01-01-14

Notes
1. printed one side
2. printed black and PMS 485 (red)
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Title
4110T Series Instruction Sheet

Creation Date	Number	Revision
04-27-10	28480	E

Created By	Activity	
N/A	3899 Hancock Expwy Security, CO 80911	
Software: InDesign CS6		© Allegion 2014

72012

1250, 1450, & 4050 Series

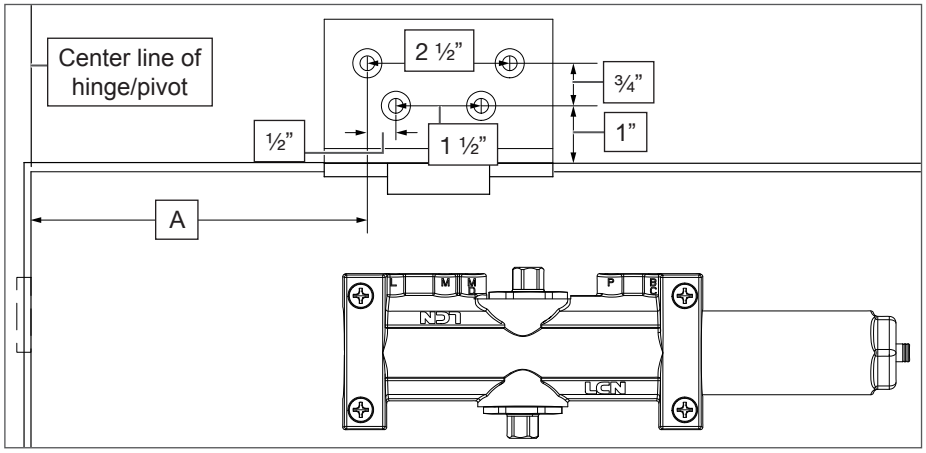
419 Flush Panel Adapter Bracket

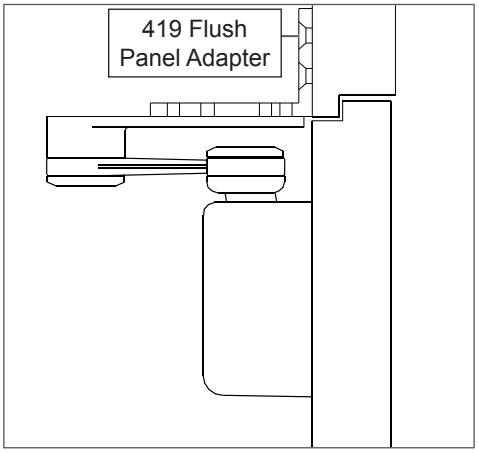
Installation Instructions

ⓘ **LH mounting shown in installation instructions. RH is opposite.**

Notes:

1. See appropriate instruction sheet for closer model and arm being used for mounting dimensions and instructions.
2. EDA arm and shoe shown for reference only.





1250 Series		
Mounting Type	**Opening**	**Dimension A**
PA Mount	To 100°	9 3/8”
	101° to 130°	7 7/8”
	131° to 180°	5 7/8”
EDA Mount	To 100°	9 3/4”
	101° to 130°	8 1/4”
	131° to 180°	6 1/4”
CUSH/ SCUSH Mount	85°	11 1/4”
	90°	10 1/2”
	95°	9 3/4”
	100°	9 1/8”
	105°	8 1/2”
	110°	7 7/8”

1450 Series		
Mounting Type	**Opening**	**Dimension A**
PA Mount	To 120°	9 5/8”
	121° to 180°	7 1/8”
EDA Mount	To 120°	9 5/8”
	121° to 180°	7 1/8”
CUSH/ SCUSH Mount	85°	11 1/8”
	90°	10 3/8”
	95°	9 5/8”
	100°	9”
	105°	8 3/8”
	110°	7 3/4”

4050 Series		
Mounting Type	**Opening**	**Dimension A**
PA Mount	To 100°	9 3/8”
	101° to 130°	7 7/8”
	131° to 150°	6 7/8”
	151° to 180°	5 7/8”
EDA Mount	To 100°	9 3/8”
	101° to 130°	7 7/8”
	131° to 150°	6 7/8”
	151° to 180°	5 7/8”
CUSH/ SCUSH Mount	85°	10 3/4”
	90°	9 7/8”
	95°	9 1/4”
	100°	8 1/2”
	105°	8”
	110°	7 3/8”

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71690

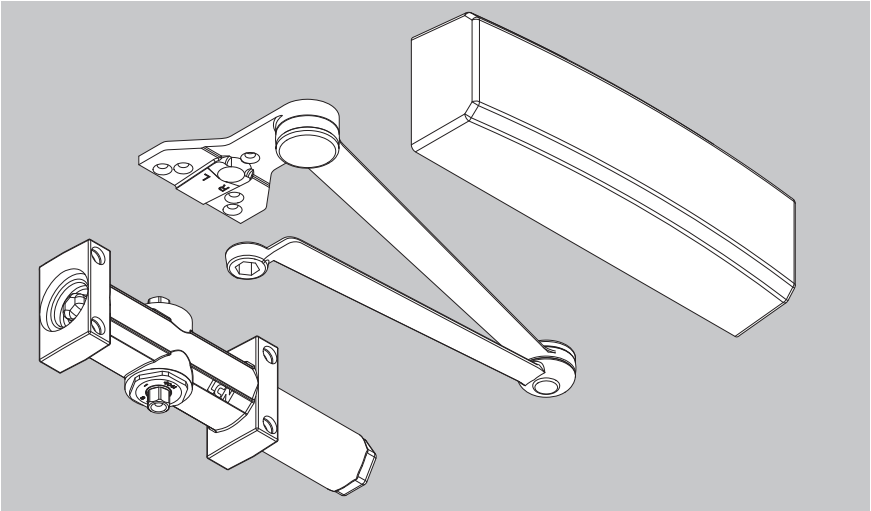
4050 & 4050 DA Series

LCN®

EDA & HEDA Mount

Installation Instructions

PARTS

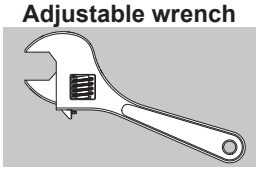


ⓘ **Screw pack information is on page 3.**

TOOLS

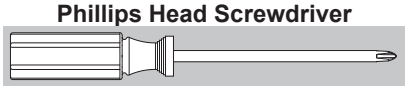
3⁄32" Hex Wrench

Adjustable wrench



1⁄8" Drill Bit

Phillips Head Screwdriver



5⁄32"" Hex Wrench

⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage.
Follow all instructions carefully.
For questions, call LCN at 877 - 671 - 7011

Hold open arms must not be installed on fire rated doors.

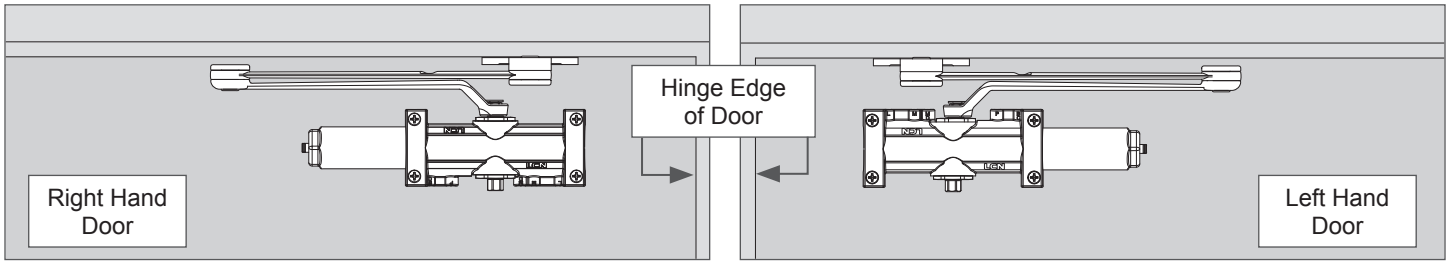
Opening the regulation valves (described below) too far may result in the closer leaking oil!
This may result in closer and property damage, and personal injury.

FOLLOW ALL INSTRUCTIONS CAREFULLY.

DO NOT USE THE CLOSER AS A DOOR STOP!
An auxiliary stop is recommended at the hold-open point or where the door cannot swing 180º.

Choose Installation Type

EDA (see page 2)



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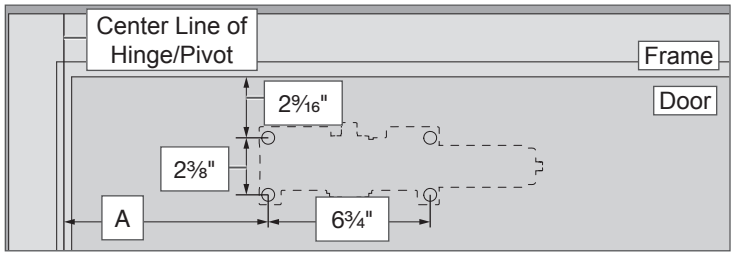
71690 Rev. 08/17-c

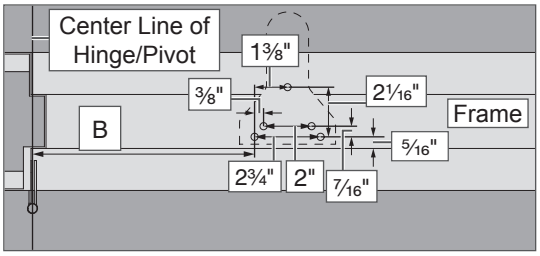
Patent Pending

EDA

Mounting Dimensions

Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.



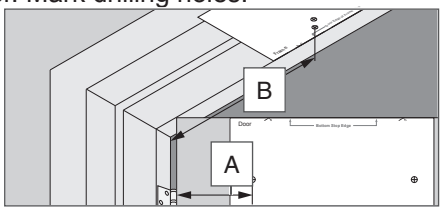


1 Determine the degree of door opening required and find dimension “A” and “B” on the chart below.

A	Opening	Measurement from Door Edge
Closer	To 100°	8 3/4”
	101° to 130°	7 1/4”
	131° to 150°	6 1/4”
	151° to 180°	5 1/4”

B	Opening	Measurement from Door Edge
Shoe	To 100°	9 1/4”
	101° to 130°	7 3/4”
	131° to 150°	6 3/4”
	151° to 180°	5 3/4”

2 Measure from hinge/pivot centerline and stick template on door. Mark drilling holes.



3 Remove template, and drill holes where marked with a 1/8” drill bit for SRT screws.

ⓘ **SRT screws are used on metal doors.**
Wood screws are used and recommended on wood doors.
Reduce installation torque if using SRT screws in wood.

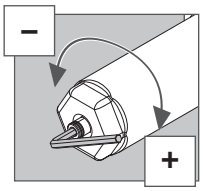
4 Measure and determine your door’s width. Use 5/32” hex wrench to adjust the closer spring power. Use the table below to determine number of turns required.

Turn counterclockwise for “-”; turn clockwise for “+”

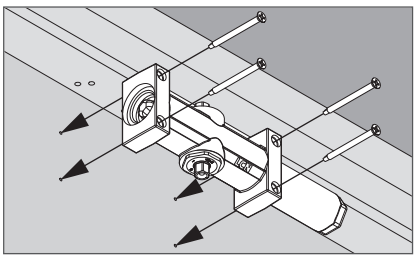
ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

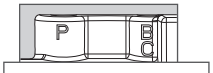
ⓘ **Do not use power drill to adjust spring force! It may cause damage and void the warranty.**

Door Width	Number of Turns
ADA Setting	-9
32” - 815 mm	-4
36” - 915 mm	0
42” - 1050 mm	+4
48” - 1220 mm	+9
54” - 1372mm	+13



5 Screw in valve on top of closer, install closer onto door.



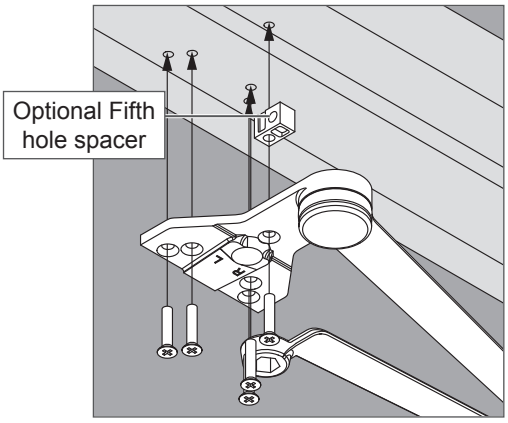


Screw in the PA Selector Valve.

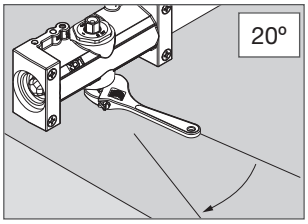
6 Install EDA shoe & fifth hole spacer onto frame.

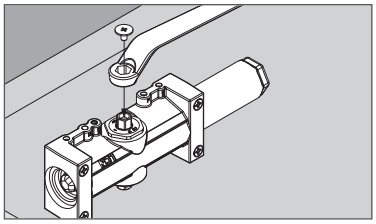
ⓘ **Use the fifth hole spacer only if there is a space between the frame and the shoe.**

ⓘ **Intallation limited to reveals greater than 2 11/16”.**



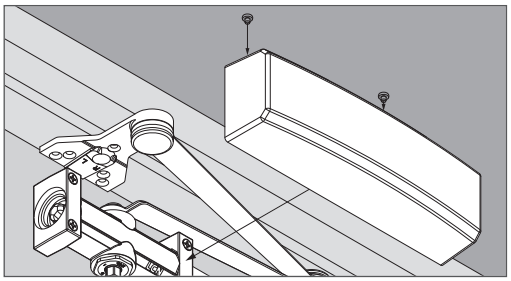
7 Rotate closer shaft 20°, attach main arm with provided fastener.





8 Adjust the closer, if necessary. See page 3 for closer adjustment instructions.

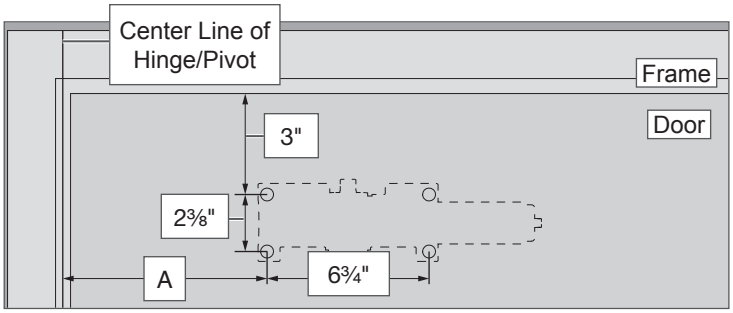
9 Install cover.

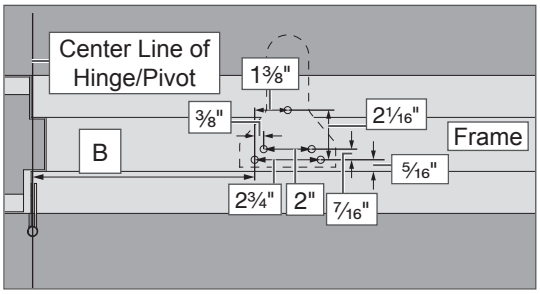


EDA 62G Shoe

Follow EDA instructions for installation using the dimensions listed below. The only difference between EDA and EDA 62G is location of the closer on the door.

EDA-62G Shoe:





Closer Valve Adjustment

Check closing time, and adjust closer if needed.

⚠ CAUTION ⚠

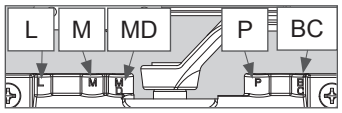
Opening the regulation valves (described below) too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.

FOLLOW ALL INSTRUCTIONS CAREFULLY.

ⓘ **Valve must be closed CW to seat, never more than 3 turns CCW from seated position. Adjust the valves in 1/4 turn increments or less at a time. DO NOT TURN MORE THAN 3 FULL ROTATIONS. THIS WILL CAUSE THE CLOSER TO LEAK OIL!**

ⓘ **DO NOT ADJUST THE LATCH SPEED IF THE DOOR DOES NOT LATCH. If this occurs, adjust the spring force.**

1. Open the door to 90°, measure how long the door takes to close and latch. A typical closing time is 5 to 7 seconds, evenly divided between main speed and latch speed.
2. If the closing time needs to be adjusted, use a 3/32" hex wrench to adjust the closer valves described below.
   a. Backcheck (BC)- this controls door s peed opening as the door angle approaches 90°. **Do not use as a door stop.**
   b. Main Speed (MD)- this controls main speed for standard cylinders and the delay speed for delay (DA) cylinders.
   c. DA Main Speed (M)- this controls the main speed for DA cylinders. **This valve is present on DA cylinders only.**
   d. Latch Speed (L)- this controls door speed during the last few degrees of door closing.
   e. PA Selector (P)- this needs to be turned in completely for Parallel Arm (PA) mounting.
3. Turn the valves clockwise to decrease door speed, and counterclockwise to increase door speed. The latch speed and main speed should be adjusted together.

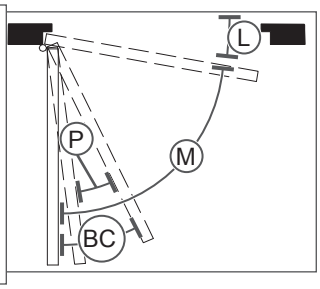


BC = Backcheck valve

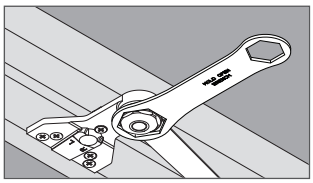
M MD = Main speed valve

L = Latch speed valve

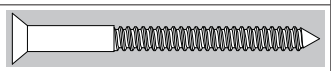
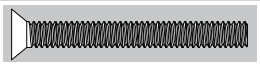
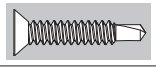
P = PA selector valve



Optional Hold Open Arms



To adjust Optional Hold-open arm:
1. Loosen hold open nut.
2. Open door to 5° less than desired hold position and tighten hold open nut securely.

Screw Type	Screw Pack	Picture	Cylinder Mounting	PA Shoe Mounting	5th Hole Mounting (PA Shoe Only)
Wood (for wood doors & frames)	Wood & Machine Screw Pack (WMS)		4 @ 2 ⅞"	2 @ 1 ½"	1 @ 2"
Machine (for metal doors & frames) Requires hole drilling & tapping; best hold.	Standard		4 @ 2 ¼"	4 @ ⅝"	1 @ 1 ½"
SRT - Self Reaming & Tapping (for metal doors & frames)	Standard		4 @ 3"	4 @ 1 ½"	1 @ 2"

Screw Type	Screw Pack	Picture	Notes
Fifth Hole Spacer	Standard		
Arm Screw	Standard		
Pinion Attachment Screw	Standard		¼-20 for attachment of the arm (see step 6).
Thru Bolt	Order TB Screw pack		1 9⁄32" or 1 17⁄32" or 1 21⁄32"

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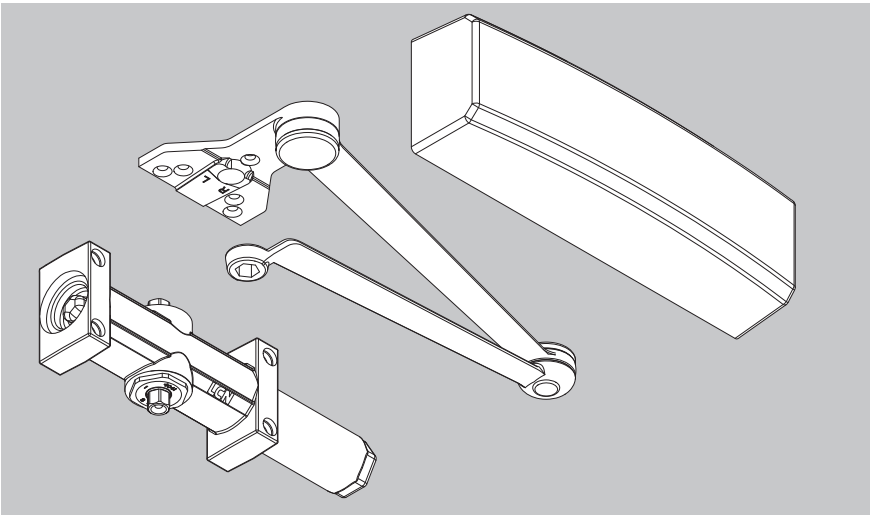
Serie DA 4050 y 4050

LCN®

Montaje EDA/HEDA

Instrucciones de Instalación

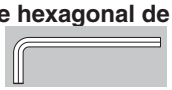
PIEZAS



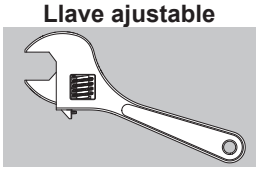
ⓘ **La información sobre el paquete de tornillos se encuentra en la página 7.**

HERRAMIENTAS

Llave hexagonal de 3⁄32"

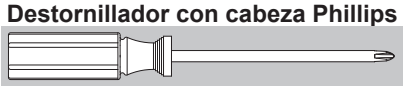


Llave ajustable

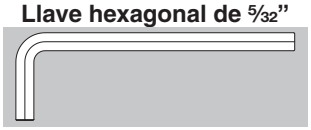


Broca de taladro de 1⁄8"

Destornillador con cabeza Phillips



Llave hexagonal de 5⁄32"



⚠ PRECAUCIÓN ⚠

La instalación o regulación incorrecta puede resultar en lesiones personales o daño a los bienes.
Siga todas las instrucciones con atención.
En caso de duda, llame a LCN al 877-671-7011

Los brazos para mantener abierto no deben instalarse en puertas con clasificación ignífuga.

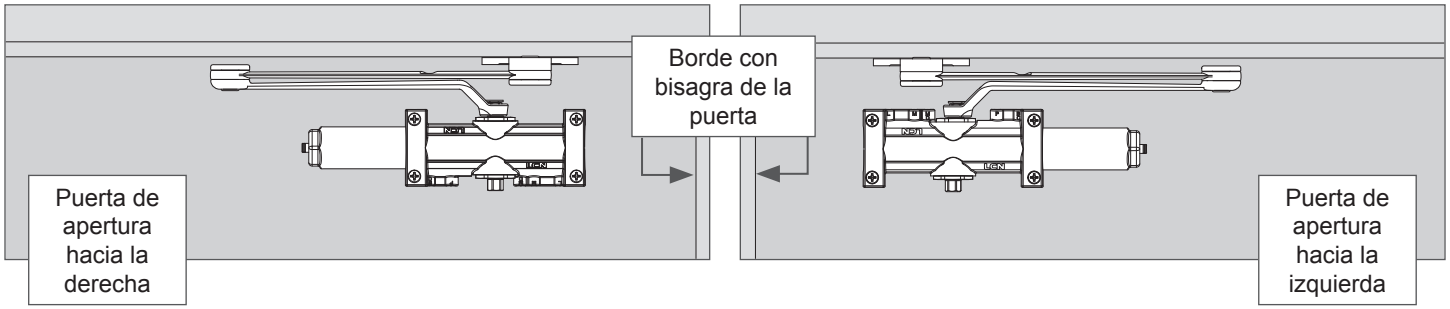
¡Abrir demasiado las válvulas de regulación puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultaren daño al mecanismo de cierre y a los bienes, y lesiones personales.

SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

¡NO USE EL MECANISMO DE CIERRE COMO TOPE DE LA PUERTA!
Se recomienda el uso de un tope auxiliar en el punto de mantener abierto o donde la puerta no puede girar 180°.

Seleccione el tipo de instalación

EDA (vea la página 6)



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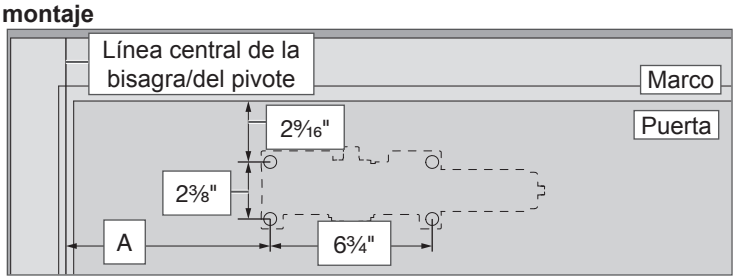
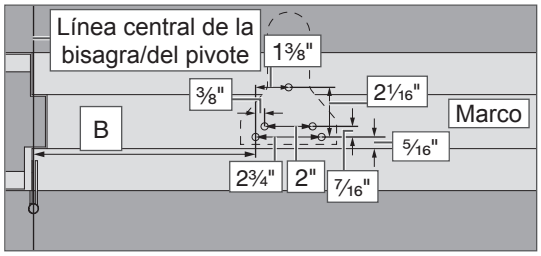
Montage en EDA

Dimensiones de montaje

Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.



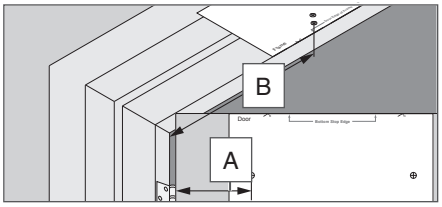


1 Determine el grado de apertura de la puerta requerido y busque las dimensiones “A” y “B” en el cuadro siguiente.

A	Apertura	Medición desde el borde de la puerta
El mecanismo de cierre	Hasta 100°	8 3/4”
	101° a 130°	7 1/4”
	131° a 150°	6 1/4”
	151° a 180°	5 1/4”

B	Apertura	Medición desde el borde de la puerta
El zócalo	Hasta 100°	9 1/4”
	101° a 130°	7 3/4”
	131° a 150°	6 3/4”
	151° a 180°	5 3/4”

2 Mida desde la línea central de la bisagra/del pivote y adhiera la plantilla en la puerta. Marque los orificios de perforación.



3 Retire la plantilla y perfore orificios donde está marcadocon una broca de taladro de ⅛” para tornillos SRT.

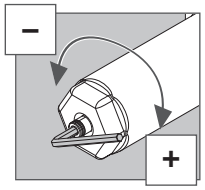
- **Los tornillos SRT se usan en puertas de metal.**
- **Se recomienda usar los tornillos de madera en puertas de madera. Reduzca la torsión de la instalación si utiliza tornillos SRT en madera.**

4 Mida y determine el ancho de su puerta. Con una llave hexagonal, ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

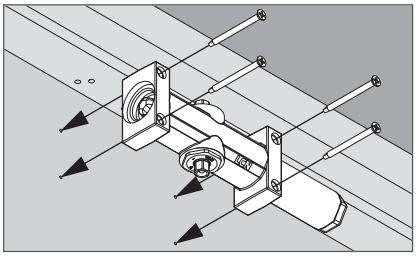
Gire en sentido antihorario para “-”; gire en sentido horario para “+”.

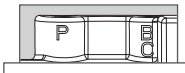
- **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**
- **¡No utilice un taladro eléctrico para ajustar la fuerza del resorte! Podría causar daños y anular la garantía.**

Ancho de la puerta	Número de giros
Configuración de ADA	-9
32” - 815 mm	-4
36” - 915 mm	0
42” - 1050 mm	+4
48” - 1220 mm	+9
54” - 1372mm	+13



5 Instale el mecanismo de cierre en la puerta.

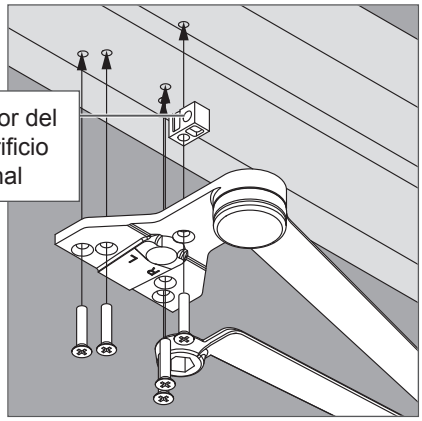




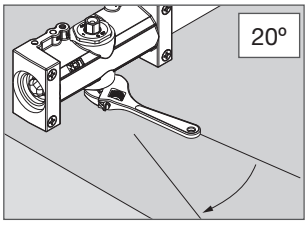
Atornille la válvula del selector del PA.

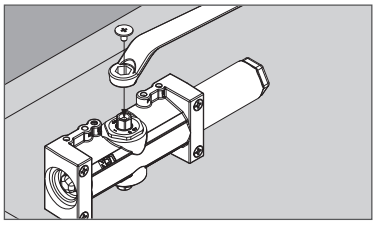
6 Instale el zócalo del EDA en el marco, luego en la varilla y el zócalo.

- **Use el espaciador del quinto orificio si hay un espacio entre el marco y el zócalo del EDA.**
- **Instalación limitada a listones de más de 2 11/16”.**



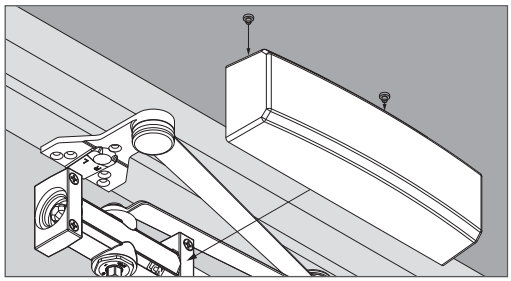
7 Gire el eje del cerrador a 20°, coloque el brazo principal con los sujetadores ya incluidos.





8 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 7 para ver las instrucciones de ajuste del mecanismo de cierre.

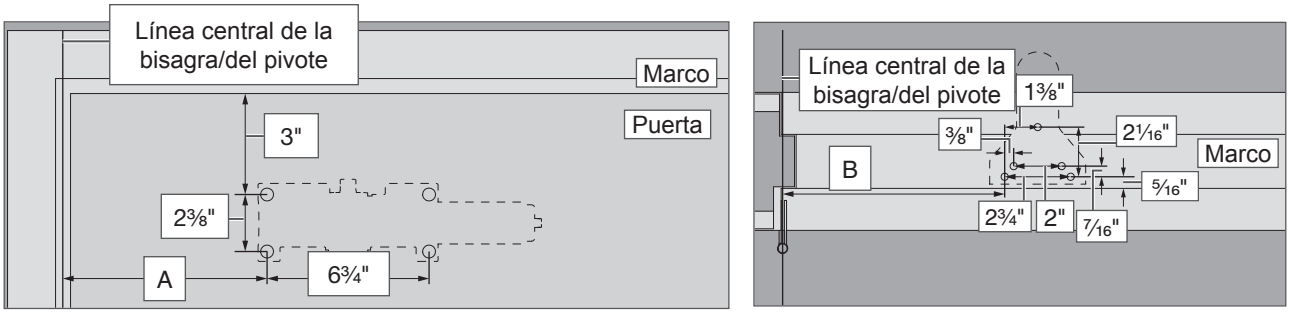
9 Atornille la tapa en el eje e instale la cubierta.



Zapata EDA-62G

Siga las instrucciones de EDA para la instalación usando las dimensiones que figuran a continuación. La única diferencia entre EDA y EDA 62G es la ubicación del cierrapuertas en la puerta.

Zapata EDA-62G:



Ajuste de la válvula del mecanismo de cierre

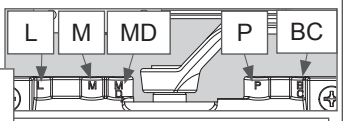
Compruebe el tiempo de cierre y ajuste el mecanismo de cierre de ser necesario.

⚠ PRECAUCIÓN ⚠

¡Abrir demasiado las válvulas de regulación (como se describe a continuación) puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales. SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

- ⓘ **La válvula debe cerrarse en sentido horario hasta fijarse y nunca exceder más de 3 vueltas en sentido antihorario de la posición fija. Ajuste las válvulas en incrementos de 1/4 de giro o menos a la vez. NO GIRE MÁS DE 3 ROTACIONES COMPLETAS. ¡ESTO CAUSARÁ QUE EL MECANISMO DE CIERRE PIERDA ACEITE!**
- ⓘ **NO AJUSTE LA VELOCIDAD DEL PASADOR SI LA PUERTA NO SE TRABA. Si esto sucede, ajuste la fuerza del resorte.**

1. Abra la puerta a 90°, mida cuánto tiempo tarda la puerta en cerrar y trabarse. Un tiempo típico de cierre es de 5 a 7 segundos, divido de manera uniforme entre velocidad principal y velocidad del pasador.
2. Si se necesita ajustar el tiempo de cierre, use una llave hexagonal de 3/32” para ajustar las válvulas del mecanismo de cierre descritas a continuación.
   a. Retención (BC): controla la velocidad de apertura de la puerta cuando el ángulo de la puerta se acerca a 90°. **No usar como tope de puerta.**
   b. Velocidad principal (MD): controla la velocidad principal para los cilindros estándares y la velocidad de retardo para cilindros de retardo (DA).
   c. Velocidad principal de DA (M): controla la velocidad principal de los cilindros DA. **Esta válvula se encuentra solo en cilindros DA.**
   d. Velocidad del pasador (L): controla la velocidad de la puerta durante los últimos grados del cierre de la puerta.
   e. Selector de PA (P): necesita cambiarse completamente para el montaje del brazo paralelo (PA).
3. Gire las válvulas en sentido horario para reducir la velocidad de la puerta y en sentido antihorario para aumentar la velocidad de la puerta. La velocidad del pasador y la velocidad principal deben ajustarse conjuntamente.

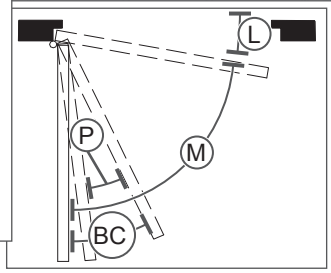


BC = válvula de retención

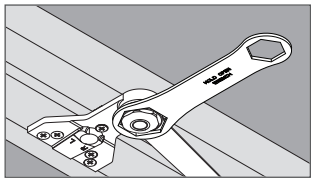
M MD = válvula de velocidad principal

L = válvula de velocidad del pasador

P = Válvula del selector de PA

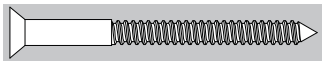
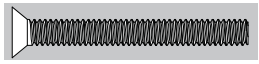
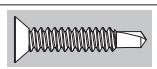


Brazos opcionales para mantener abierto (HEDA)



Para ajustar el brazo opcional para mantener abierto:

1. Afloje la tuerca del brazo para mantener abierto.
2. Abra la puerta a 5° menos que la posición deseada para mantener abierto y ajuste la tuerca del mecanismo para mantener abierto firmemente.

Tipo de tornillo	Paquete de tornillos	Imagen	Montaje en el cilindro	Montaje en el zócalo del PA	Montaje en el 5to orificio (solo zócalo del PA)
Madera (para puertas y marcos de madera)	Paquete de tornillos para madera y maquinados (WMS)		4 @ 2 ⅞"	2 @ 1 ½”	1 @ 2"
Máquina (para puertas y marcos de metal) Requiere perforación de orificio y formación de rosca; mejor sujeción	Estándar		4 @ 2 ¼"	4 @ ⅝”	1 @ 1 ½”
SRT: autoperforación y formación de rosca (para puertas y marcos de metal)	Estándar		4 @ 3"	4 @ 1 ½”	1 @ 2"

Tipo de tornillo	Paquete de tornillos	Imagen	Notas
Espaciador del quinto orificio	Estándar		
Tornillo de brazo	Estándar		
Tornillo de sujeción del piñón	Estándar		¼-20 para la sujeción del brazo (ver el paso 6).
Pernos pasantes	Solicite el paquete de tornillos TB		1 9⁄32” o 1 17⁄32” o 1 21⁄32”

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4050 & 4050 DA Series

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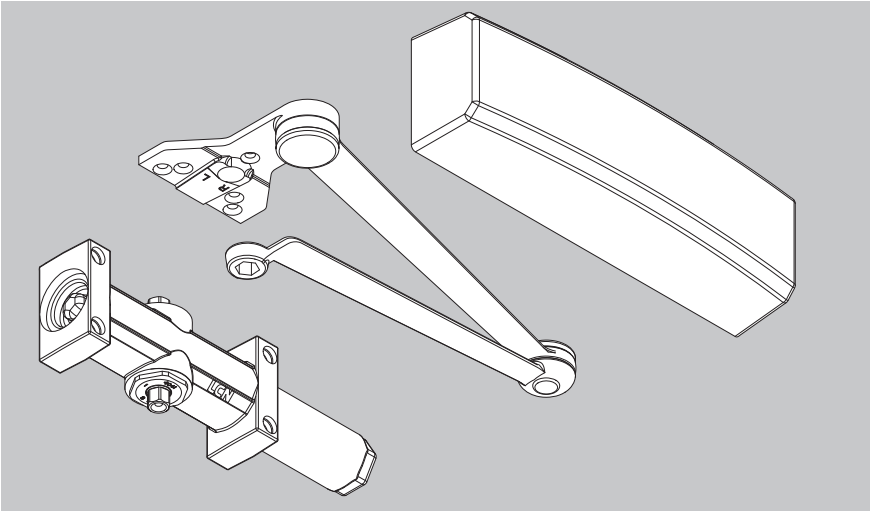
Montage du EDA/HEDA

Instructions d'installation

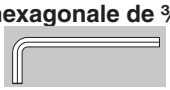
PIÈCES



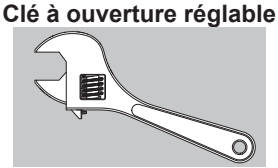
ⓘ **Informations sur l'ensemble de vis à la page 15.**

OUTILS

Clé hexagonale de 3⁄32 po

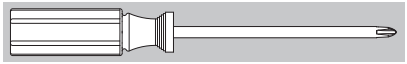


Clé à ouverture réglable

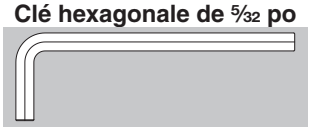


Mèche de 1⁄8 po

Tournevis cruciforme



Clé hexagonale de 5⁄32 po



⚠ MISE EN GARDE ⚠

Une installation inadéquate ou le non-respect des règlements peut causer des blessures ou des dommages matériels.
Suivez attentivement toutes les instructions.
Pour toute question, appelez LCN au 877 - 671 - 7011.

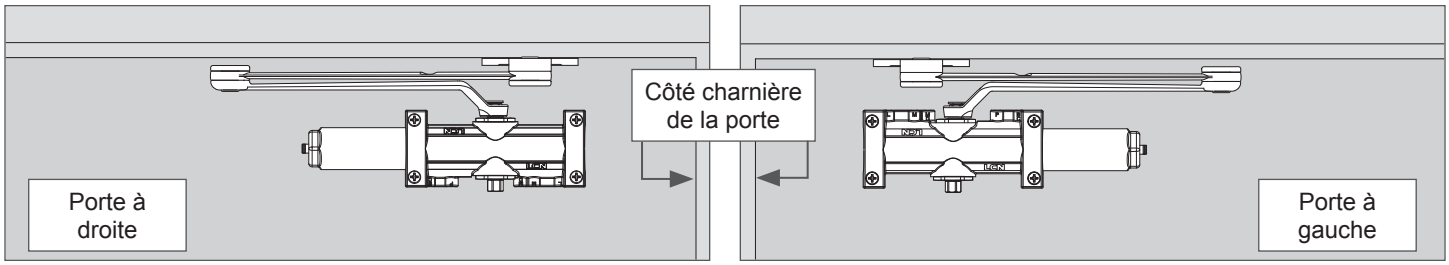
Les bras de retenue ne doivent pas être installés sur les portes coupe-feu.

Une trop grande ouverture des soupapes de régulation peut entraîner une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

N'UTILISEZ PAS LE DISPOSITIF DE FERMETURE EN TANT QUE BUTOIR!
Il est recommandé d'utiliser un butoir auxiliaire au point de retenue ou à l'endroit où la porte ne peut s'ouvrir à 180°.

Choisissez le type d'installation

Montage du EDA (voir page 10)



Service à la clientèle

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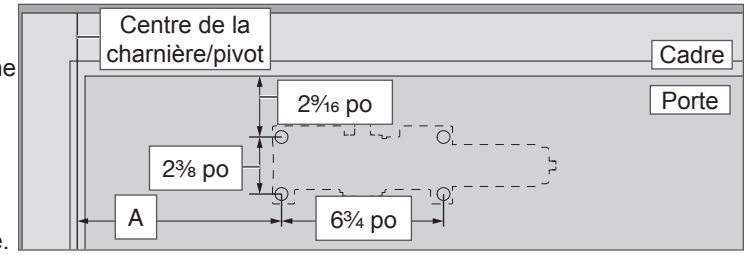
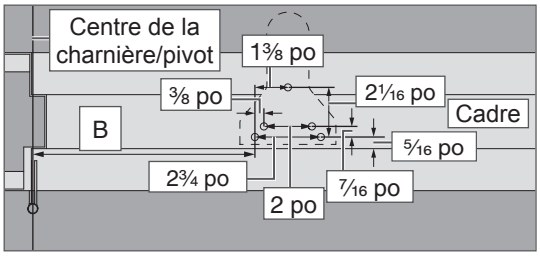
Montage du EDA

Dimensions de montage

Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.





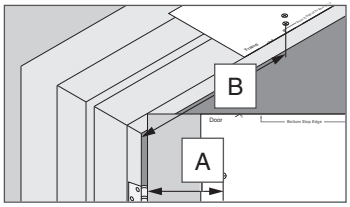
1 Déterminez le degré d'ouverture de la porte requis et trouvez les dimensions « A » et « B » dans les tableaux ci-dessous.

	Opening	Mesure à partir du centre de la charnière/pivot
A	Jusqu'à 100°	8 3/4 po
	101° à 130°	7 1/4 po
	131° à 150°	6 1/4 po
Dispositif de fermeture	151° à 180°	5 1/4 po

	Opening	Mesure à partir du centre de la charnière/pivot
B	Jusqu'à 100°	9 1/4 po
	101° à 130°	7 3/4 po
	131° à 150°	6 3/4 po
Sabot	151° à 180°	5 3/4 po

2 Mesurez à partir du centre de la charnière/pivot et collez le gabarit sur la porte. Faites des marques pour les trous à percer.

3 Retirez le gabarit et percez des trous de 1/8 po aux endroits marqués avec une mèche pour les vis SRT.



ⓘ **Les vis SRT sont utilisées sur les portes en métal. Les vis à bois sont utilisées et recommandées sur les portes en bois. Réduisez le couple d'installation si vous utilisez des vis SRT dans du bois.**

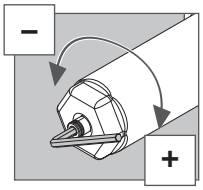
4 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé de 5/32 po, réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.

Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

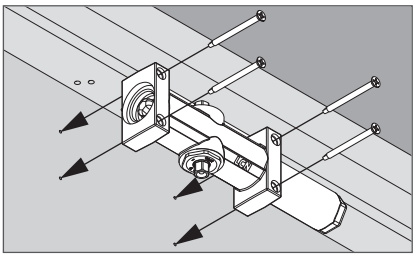
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

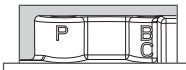
ⓘ **N'utilisez pas de perceuse électrique pour régler la force du ressort! Cela pourrait causer des dommages et annuler la garantie.**

Door Width	Number of Turns
ADA Setting	-9
32" - 815 mm	-4
36" - 915 mm	0
42" - 1050 mm	+4
48" - 1220 mm	+9
54" - 1372mm	+13



5 Installez le dispositif de fermeture sur la porte.



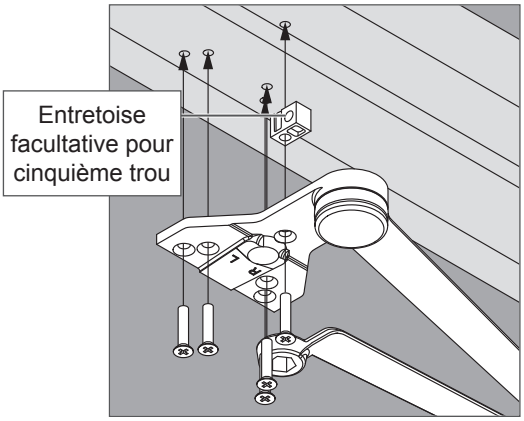


Vissez la soupape du sélecteur du BP.

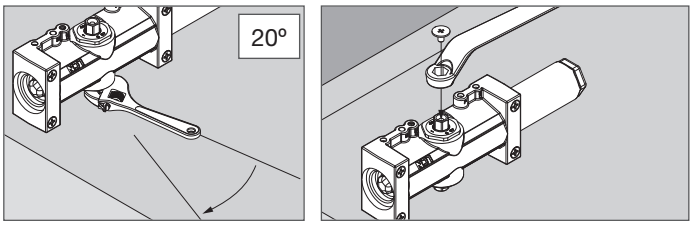
6 Installez le sabot du EDA sur le cadre.

ⓘ **Utilisez l'entretoise facultative du cinquième trou seulement s'il y a un espace entre le cadre et le sabot du EDA.**

ⓘ **Installation limitée pour révéler plus de 6,8 cm (2 11⁄16 po).**

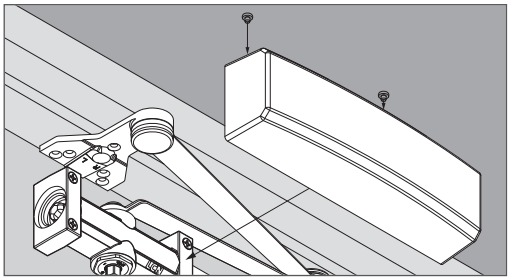


7 Faire pivoter l'arbre du dispositif de fermeture 20°, installez et serrez la vis du bras principal.



8 Réglez le dispositif de fermeture au besoin. Consultez la page 11 pour les instructions de réglage du dispositif de fermeture.

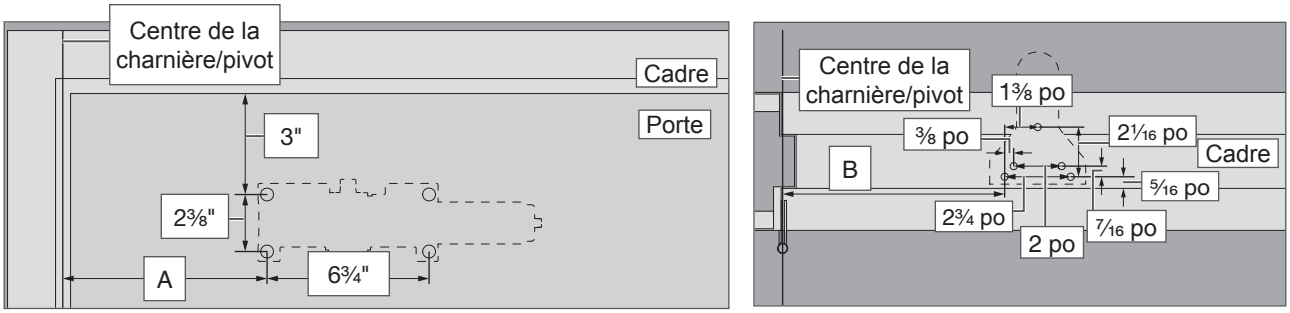
9 Installer le couvercle.



Sabot EDA-62G

Respectez les instructions du bras EDA pour l'installation selon les dimensions indiquées ci-dessous. La seule différence entre les bras EDA et EDA 62G est l'emplacement du système de fermeture sur la porte.

Sabot EDA-62G:



Réglage de la soupape du dispositif de fermeture

Vérifiez le temps de fermeture et réglez le dispositif de fermeture au besoin.

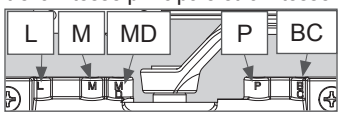
⚠ MISE EN GARDE ⚠

Trop ouvrir les soupapes de régulation (décrites ci-dessous) peut causer une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

ⓘ **La soupape doit être fermée dans le sens horaire pour être bien en place. Ne jamais faire plus de 3 tours dans le sens antihoraire lorsqu'elle est bien en place. Réglez les soupapes en effectuant 1/4 de tour ou moins à la fois. N'EFFECTUEZ PAS PLUS DE 3 ROTATIONS COMPLÈTES. CELA POURRAIT ENTRAÎNER UNE FUITE D'HUILE DANS LE DISPOSITIF DE FERMETURE!**

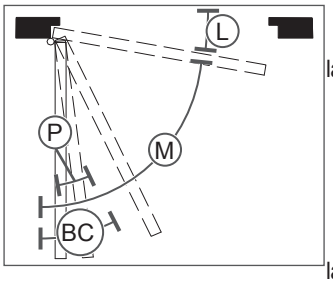
ⓘ **NE RÉGLEZ PAS LA VITESSE D'ENCLENCHEMENT SI LA PORTE NE S'ENCLENCHE PAS. Si cela se produit, réglez la force du ressort.**

1. Ouvrez la porte à 90° et comptez le temps nécessaire pour que la porte se ferme et s'enclenche. Le temps de fermeture typique est de 5 à 7 secondes et est divisé également entre la vitesse principale et la vitesse d'enclenchement.
2. Si vous devez régler le temps de fermeture, utilisez une clé hexagonale de 3/32 po pour régler les soupapes du dispositif de fermeture décrit ci-dessous.



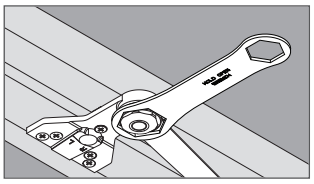
   a. Retenue (BC)- contrôle la vitesse d'ouverture de la porte lorsque l'angle s'approche de 90°. N'utilisez pas de butoir.
   b. Vitesse principale (MD)- contrôle la vitesse principale pour les cylindres standard et la vitesse de retardement pour les cylindres à retardement.
   c. Vitesse principale du cylindre à retardement (M)- contrôle la vitesse principale des cylindres à retardement. Cette soupape est présente sur les cylindres à retardement seulement.
   d. Vitesse d'enclenchement (L)- contrôle la vitesse de la porte durant les derniers degrés de fermeture.
   e. Sélecteur du BP (P)- doit être complètement tourné vers l'intérieur pour le montage du bras parallèle (BP).

(BC)	= soupape de retenue
(M) (MD)	= soupape de la vitesse principale
(L)	= soupape de la vitesse d'enclenchement
(P)	= Soupape du sélecteur du BP

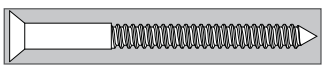
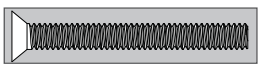
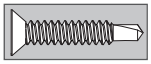


3. Faites tourner les soupapes dans le sens horaire pour faire diminuer la vitesse de la porte, et dans le sens antihoraire pour la faire augmenter. La vitesse d'enclenchement et la vitesse principale doivent être réglées ensemble.

Bras de retenue facultatifs



Pour régler le bras de retenue facultatif:
1. Desserrez l'écrou de retenue.
2. Ouvrez la porte de 5° de moins que la position de retenue désirée puis serrez bien l'écrou de retenue.

Type de vis	Lot de vis	Image	Montage du cylindre	Montage du sabot du BP	Montage du 5e trou (sabot du BP uniquement)
Bois (pour les portes et les cadres en bois)	Lot de vis à bois et à métaux (WMS)		4 @ 2 ⅞"	2 @ 1 ½"	1 @ 2"
De mécanique (pour les portes et les cadres en métal) Nécessite de percer des trous et de tarauder; meilleure retenue	Standard		4 @ 2 ¼"	4 @ ⅝"	1 @ 1 ½"
SRT - Auto taraudeuse et à alésage automatique (pour les portes et les cadres en métal)	Standard		4 @ 3"	4 @ 1 ½"	1 @ 2"

Type de vis	Lot de vis	Image	Remarques
Entretoise pour cinquième trou	Standard		
Vis du bras	Standard		

Type de vis	Lot de vis	Image	Remarques
Vis de fixation du pignon	Standard		¼--20 x 1 rondelle et écrou MS (voir etape 6).
Boulons traversants	Commander un lot de vis bois-métal		1⁹⁄₃₂ po ou, 1¹⁷⁄₃₂ po ou, 1²¹⁄₃₂ po

23665

Models 7981/ES7981

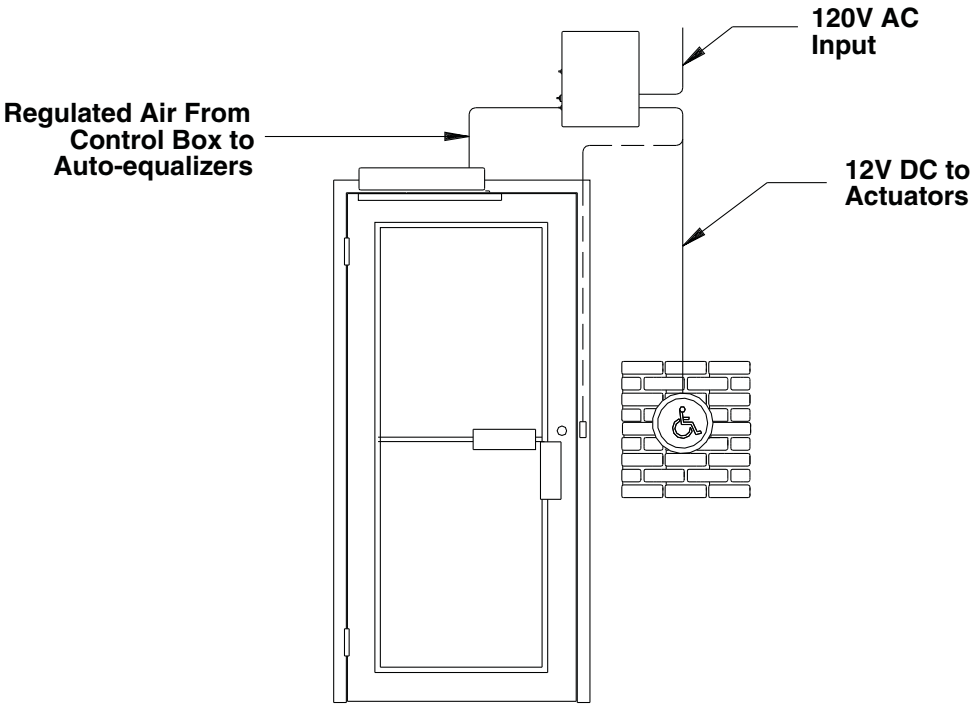
LCN®

Control Box

Installation Instructions

For closer information see closer installation instruction sheet

Typical Electric & Air Supply Hook Up



Installation

1a Locate box on interior of building within 50 tubing feet of the door to be controlled. **Box must be in a clean, dry, well ventilated place where temperatures do not exceed 120°F or fall below 35°F.**

1b Mount box to a structurally sound surface using screws provided as shown on page 2 with air fittings on left side as shown. **Do not mount box upside down or on a horizontal plane.**

1c Refer to instructions packed with actuators and connect leads to terminals 8, 9, and 10 as required.

1d Connect unpowered 120V AC input to terminals 3, 4, and ground screw. (Line side to terminal 3, neutral side to terminal 4 and ground wire to ground screw.) If door control is on a fire door, 120V AC input must be interrupted by the fire alarm panel when in alarm. When dry auxiliary fire alarm contacts are used, remove shunt from terminals 1 and 2 and connect to dry contacts of fire detector or alarm panel. Terminals 1 and 2 are in series with line side of 120V input.

1e Turn on power. Air valves and compressor will operate one cycle when power is applied.

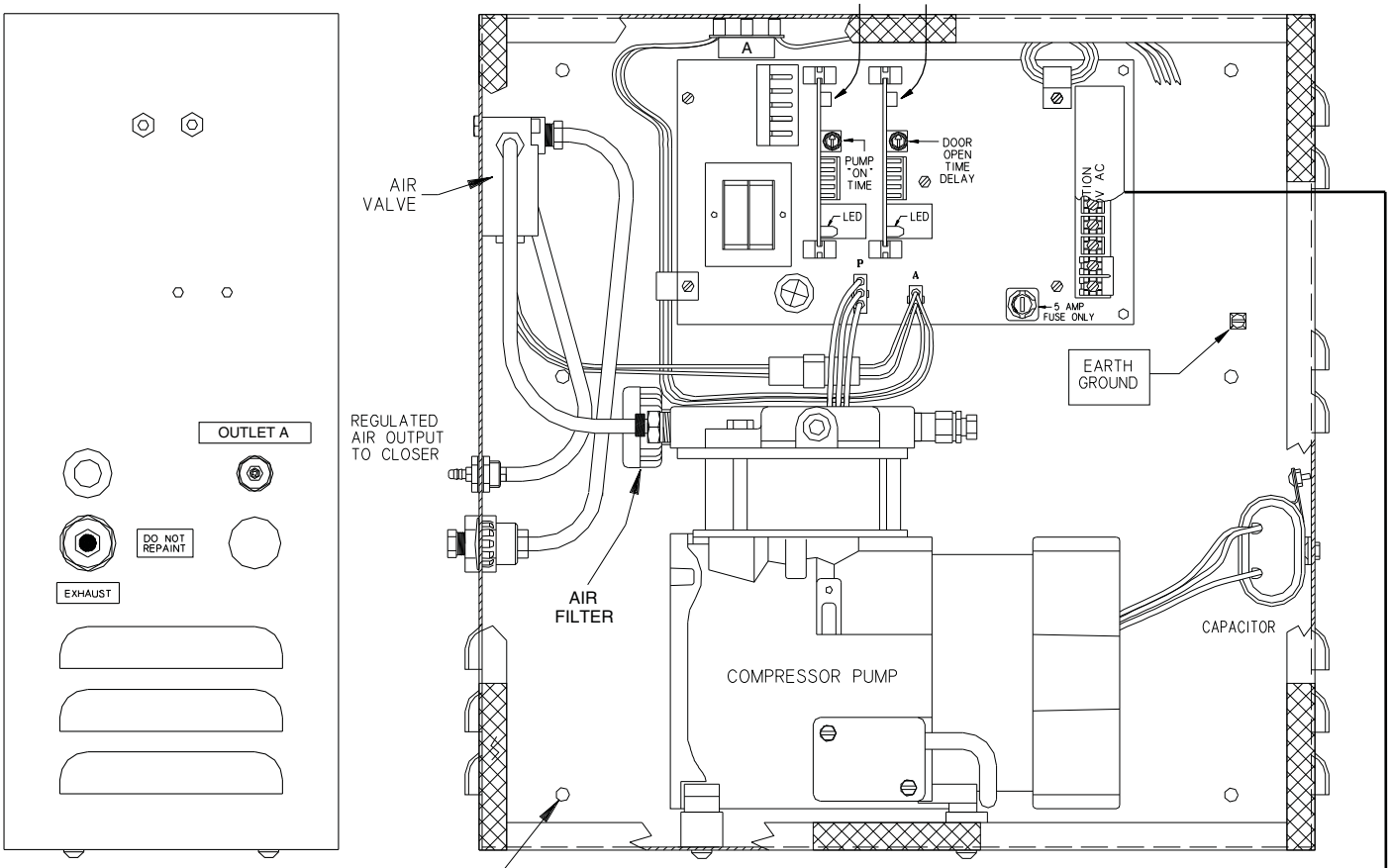
1f Air pressure output has been preset at factory. If more air pressure is required to adequately open door, regulate air adjustment valve on pump, as shown on page 3.

1g Adjust time delay to keep air valve energized by turning adjustment wheel on timer modules “A” (CW to increase - CCW to decrease). The LED (light) on the timer module indicates the valve is energized. The time can be adjusted from 0-30 seconds. 10 seconds is a “normal” delay.

ⓘ **NOTICE: Timer Module “A” must operate longer than Timer Module “P”.**

1h Adjust timer module “P” to keep compressor activated for the necessary amount of time to open the door. This can be done by rotating the adjusting wheel. (CW to increase - CCW to decrease). The LED (light) on the timer module indicates the compressor is energized. The compressor should not run more than 1-3 seconds longer than the time required to open the door.

1i Test actuators to insure wiring and tubing are properly connected.



⚠ CAUTION

DO NOT MOUNT BOX UPSIDE DOWN OR IN HORIZONTAL POSITION.LOCATEWHERE TEMPERATURES DO NOT EXCEED 120°F OR FALL BELOW 35°F

Install Box With Six Tapcon Concrete Screws 3/16 X 1 1/4 Drill 5/32 Hole 1 1/4 Deep With Carbide Tipped Concrete Drill Bit

⚠ CAUTION

COMPONECTS INSIDE CONTROL BOXWILL BE HOTTOTOUCH UNDER NORMAL OPERATION. ALLOW BOXTO COOL DOWN BEFORE MAKING ADJUSTMENTS.

Air Filter Should Be Inspected Every Six Months. If Filter Is Damaged,contact LCN For Replacement.

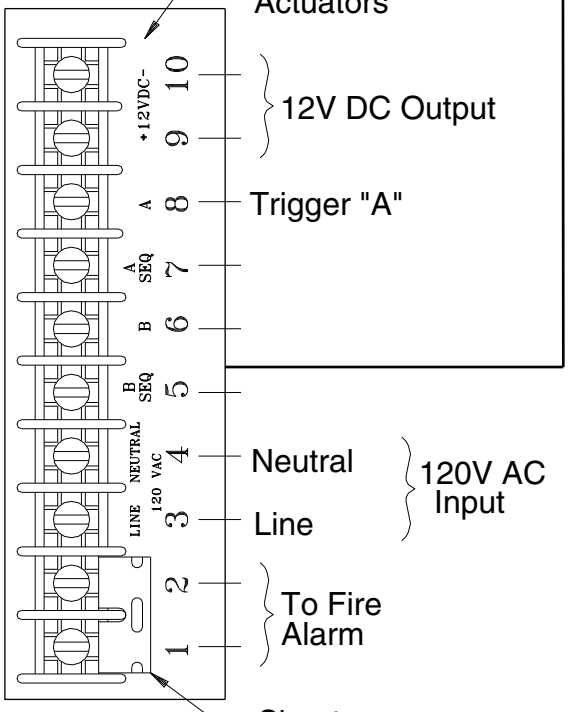
⚠ WARNING

HAZARDOUSVOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.

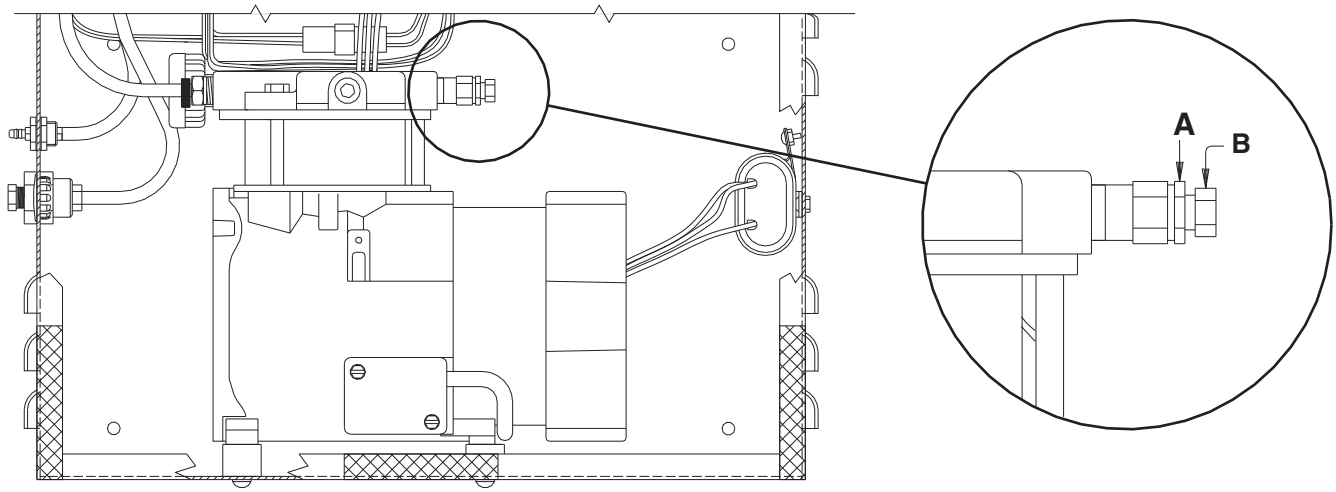
ELECTRICAL DATA

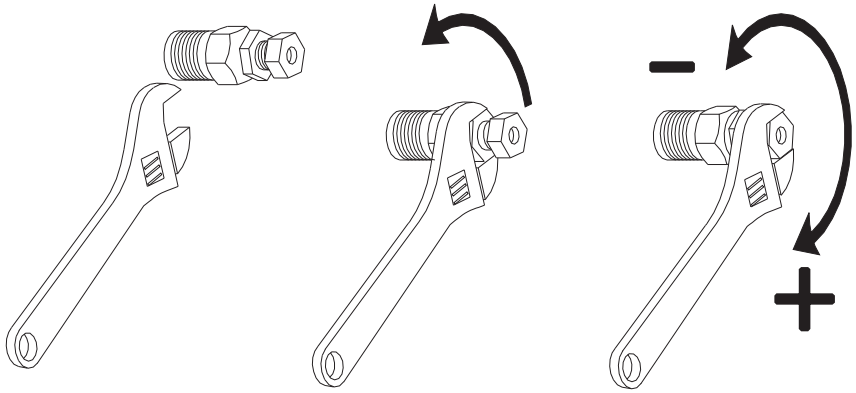
Input = 120V AC @ 5 amps
Power consumption 600 watts
Output is 12V DC (250 ma max.Load)



⚠ DANGER Control Box **MUST** be connected to earth ground

Air Pressure Adjustment





Air Pressure Adustment	
1a	Loosen lock nut.(A)
1b	Turn outer valve (B) to regulate air pressure.
1c	Tighten lock nut.

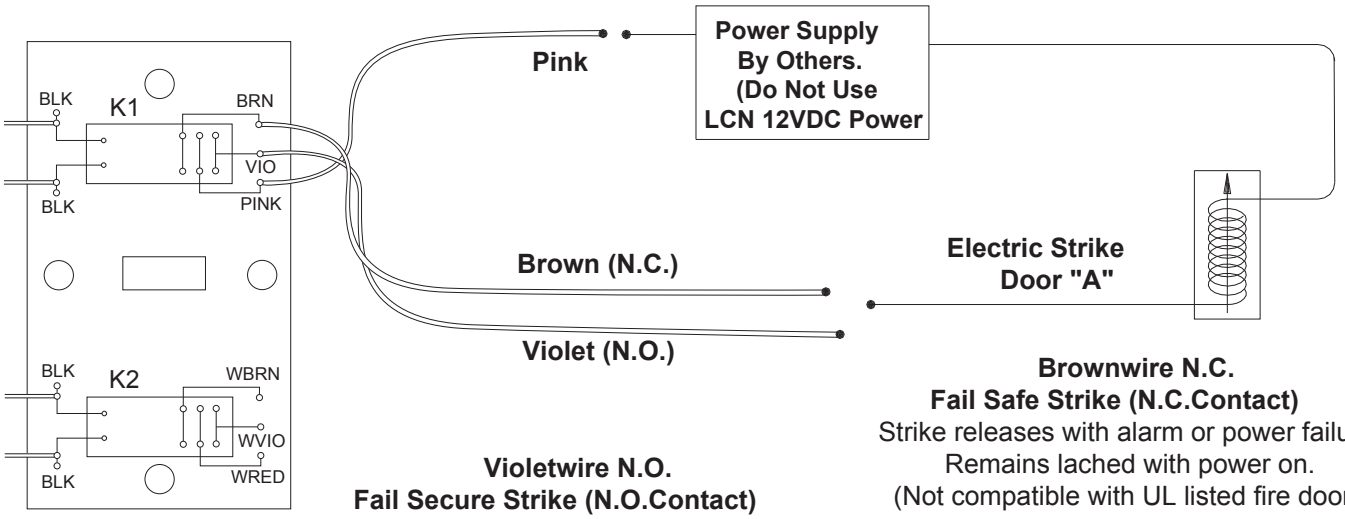
Installation Troubleshooting Chart

Symptom	Possible Cause	Suggested Remedy
No Power Opening	No power to control box / blown fuse	Verify 120VAC 60HZ power is present at terminals 3 & 4 on control box terminal strip. Check fuse. Replace only with 5 amp (3AG type) fuse.
	Actuator(s) not connected properly	Be sure a timer module board is firmly in place in “A” & “P” slots. Operate actuator(s). LED on timer module should light when actuator is used. The LED on timer “P” should light whenever “A” is lit. If not, momentarily short actuator terminals 8 & 10 in the control box. If LED lights, check wiring to actuators for an open circuit. If it does not light, check for voltage at terminals 9 &10. Voltage should read from 11.75 to 13.25V DC. If there is no reading, disconnect leads from terminals 9 & 10. Short actuator terminals 8 & 10. If LED lights, check for short circuit in actuators.
	Fire alarm system causing open circuit on terminals 1 & 2	Shunt terminals 1 & 2 with power off. Restore power. If control operates when actuator terminals 8 & 10 in the control box are shorted, an open circuit exist in wiring to fire alarm. When Auto-Equalizer is not used with fire alarms, terminals 1 & 2 must be permanently shorted with a shunt. IMPORTANT! When Auto-Equalizer is connected to fire alarm, make sure shunt is removed from terminals 1 & 2. Terminals 1 & 2 are one leg of 120V line.
	No input to Auto-Equalizer operator	Disconnect tubing from Auto-Equalizer operator. Try actuator and verify that air is coming out of tubing. If not, trace tubing to control box, checking for breaks or kinks in air line.
	Air lines obstructed with dirt or ice.	Clean or thaw lines and reroute if necessary. Eliminate dips near cold zones.
	Air valves not working	Make sure air valve leads are plugged into main board. (Be sure valves in system are plugged into connector “A”.)
	Compressor not working	Make sure compressor leads are plugged into main board. (Be sure compressor is plugged into connector “P”).
Does not open or fully open	Control box exhaust restricted.	Exhaust muffler may be clogged by dirty air or accidental painting. Clean in alcohol or mineral spirits.
Opens too slow or not at all	Inlet filter clogged	Replace filter element (Contact LCN for replacement)

Symptom	Possible Cause	Suggested Remedy
Power opening will not time out.	Scanner maintaining signal to control box.	Make sure lenses are clean and there are no obstructions in front of scanner. Model 909 or 939 proximity scanner may “see” an opposite wall. Adjust range as described earlier.
	Switch circuit maintaining contact.	Check for short circuit or error in wiring to switch or scanner.
	Air valve blocked open with contaminant.	Cycle valve several times by momentarily shorting actuators in the control box. This should clear valve.
Power opening timing out too soon.	Air compressor needs readjustment.	See page 2 for regulation instructions.
	Timer cards not set properly	Set timer cards “A” for Max. time. Set timer card “P” for Min. time. Slowly increase card “P” until “time-out” is 1-3 seconds after door is fully open. Decrease timer card “A” to achieve desired time delay before closing. (Make sure “P” times out before “A”.)

Model ES7981 For Use with Electric Latching Hardware

Es7981 - 1 Electric Strike Maximum



Violetwire N.O.
Fail Secure Strike (N.O.Contact)
Strike releases when energized.Remains locked in alarm or power failure.(Manual release hardware required to open door in alarm or power failure.)

Brownwire N.C.
Fail Safe Strike (N.C.Contact)
Strike releases with alarm or power failure. Remains lached with power on.
(Not compatible with UL listed fire door.)

⚠ WARNING

HAZARDOUSVOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.

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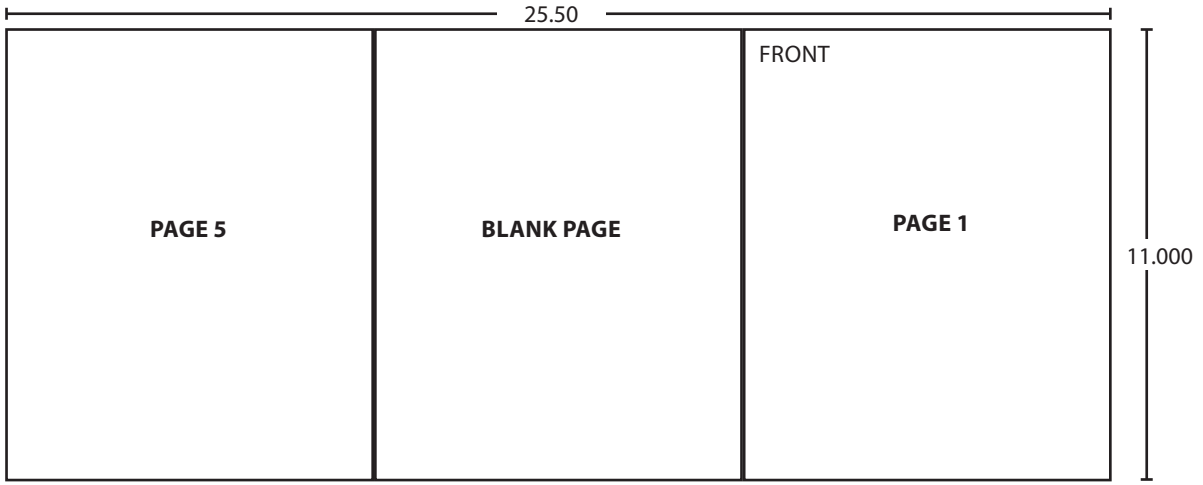
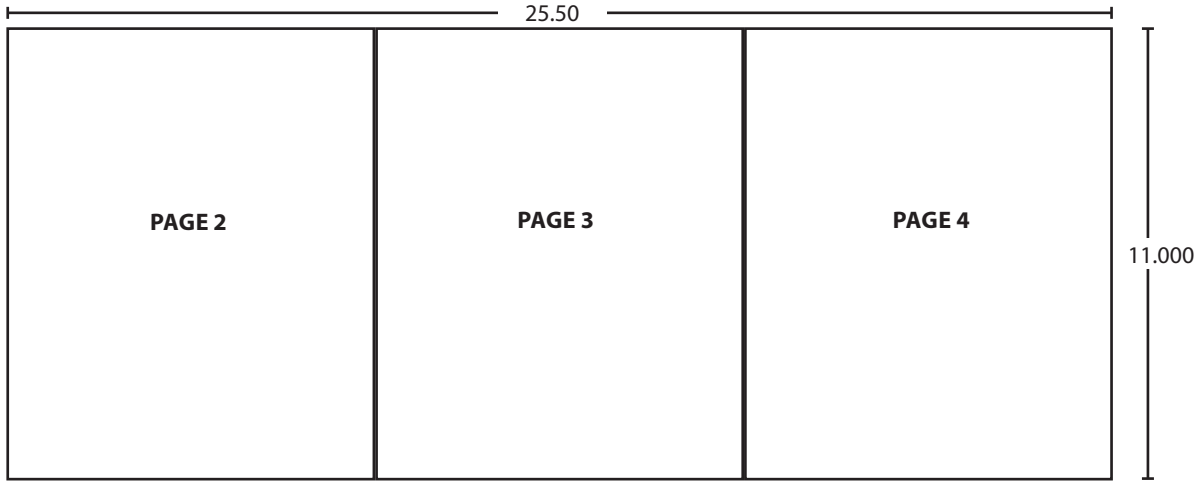
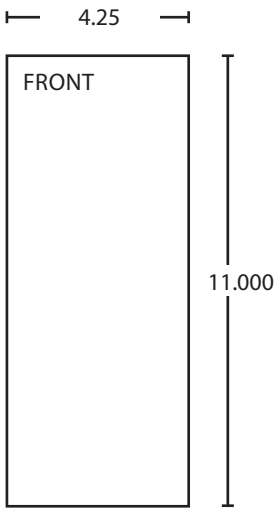
23665 Rev. 01/14-e



BEGINNING SHEET





FOLDED SHEET

Additional Notes:
1. None

Revision History					
E	F	G	H	J	K
043228					

Revision Description:
E > Revised artwork

Material	Edited By	Approved By	EC Number	Release Date
White Paper	D. Myers	M. Sasso	043228	01-01-14

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Title
7981/ES7981 Series Control Box Instruction Sheet

Creation Date	Number	Revision
01-02-13	23665	E

Created By	Activity
N/A	3899 Hancock Expwy Security, CO 80911
Software: InDesign CS6	

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28477

4020 Series

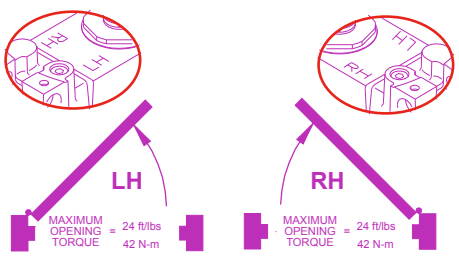
LCN®

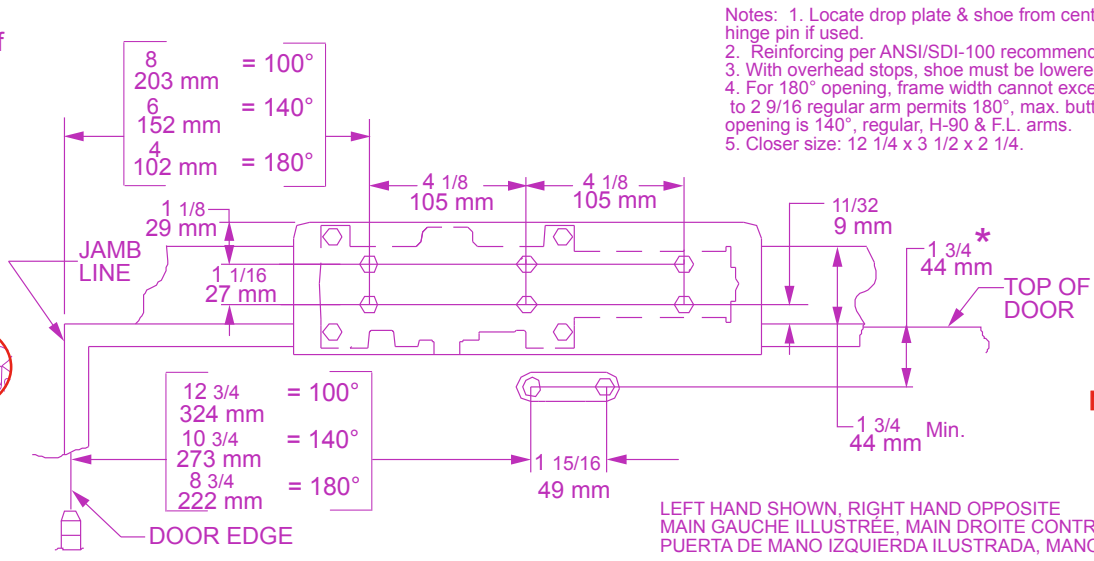
100°, 140°,180° Template Push Side

Installation Instructions

1 Locate proper template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes.

Verify hand of closer matches hand of door.





Notes: 1. Locate drop plate & shoe from centerline of pivot or swing clear hinge pin if used.
2. Reinforcing per ANSI/SDI-100 recommended for hollow doors and frames.
3. With overhead stops, shoe must be lowered to clear holder.
4. For 180° opening, frame width cannot exceed 4 1/2 max. butt size 5". For reveals up to 2 9/16 regular arm permits 180°, max. butt size 5". For reveals 2 9/16 to 4 13/16 max. opening is 140°, regular, H-90 & F.L. arms.
5. Closer size: 12 1/4 x 3 1/2 x 2 1/4.

(Fig. 61)
4021 EN 1-4

* MAY BE 1 3/8" FOR NARROW RAIL DOORS

Note: Standard template can not be used with Fusible Link Arm!

LEFT HAND SHOWN, RIGHT HAND OPPOSITE
MAIN GAUCHE ILLUSTRÉE, MAIN DROITE CONTRAIRE
PUERTA DE MANO IZQUIERDA ILUSTRADA, MANO DERECHA AL OPUESTO

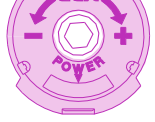
2 Determine door width, adjust spring power to match chart.

DOOR WIDTH		LCN FAST™ Power Adjust
INTERIOR	EXTERIOR	SET TO:
♿	——	1
34"	*8.5 lb-f	2
38"	30"	3
48"	36"	4
54"	42"	5

* Opening force on 36" door.

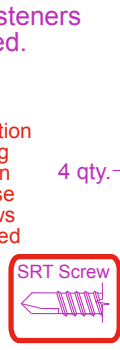
⚠CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

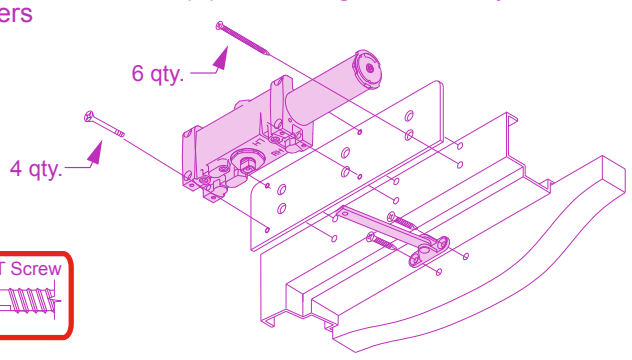
LCN® FAST™ Power Adjust for Spring Power Adjustment (Used only on non-sized closers)



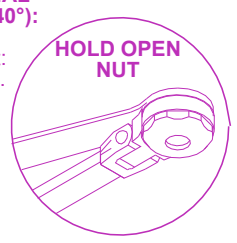
3 Mount rod & shoe on door and drop plate on frame as shown. Attach closer to drop plate and tighten securely with fasteners provided.

Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.

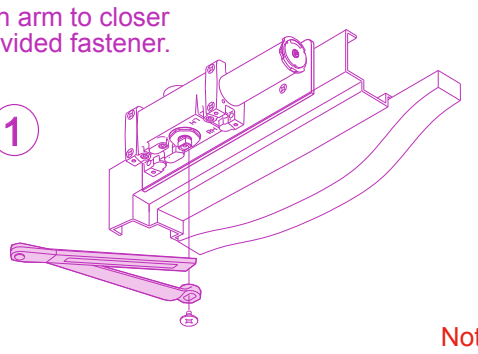




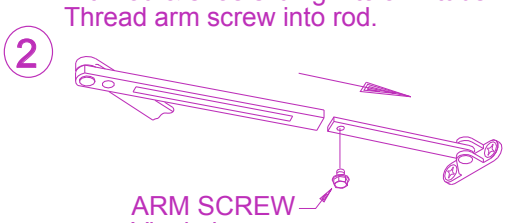
I TO ADJUST OPTIONAL HOLD-OPEN (90°- 140°): Arm is preset to hold open at 90°. To adjust: Loosen hold open nut. Open door to a few degrees before the desired hold open position, and tighten hold open nut securely.



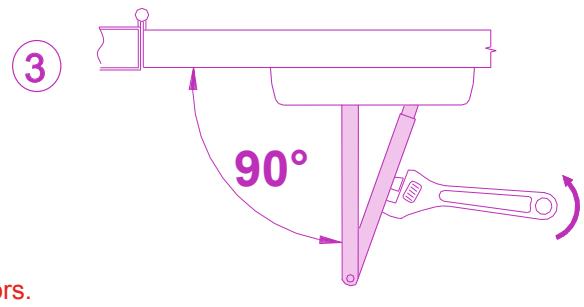
4 ① Attach arm to closer with provided fastener.



② Open door approximently 45°, close door with rod & shoe sliding into arm tube. Thread arm screw into rod.



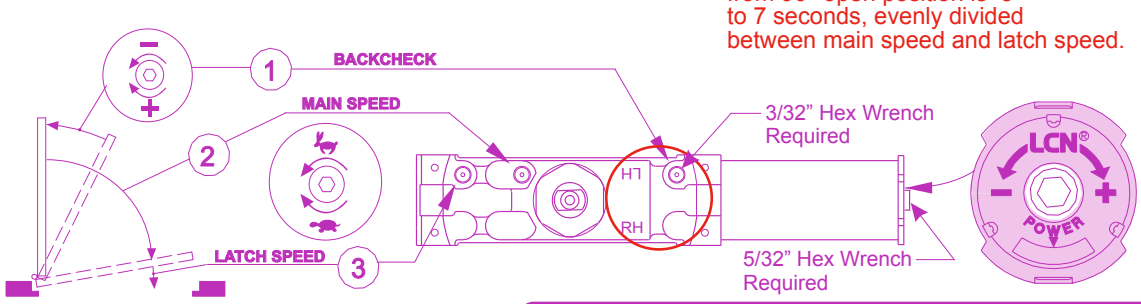
③ Pre-load arm to 90°. Tighten arm screw.



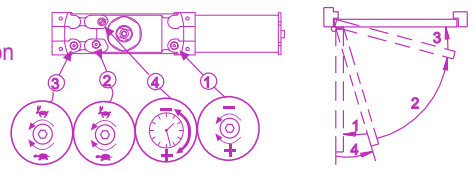
Note: Hold open arms must not be installed on fire rated doors.

5 If necessary, adjust closer.

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.



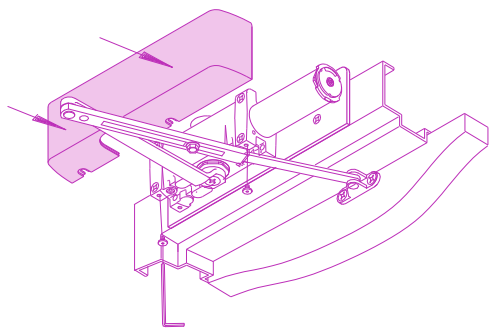
II Optional Delay Action
① - Backcheck
② - Main Speed
③ - Latch Speed
④ - Delay Speed



⚠CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.

NO MAINTENANCE REQUIRED

6 Attach cover with fasteners provided.



4020 Instructions et gabarit pour une installation sur le côté à pousser de 100°-140°-180°

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds.

Vérifiez si la main du ferme-porte correspond à la main de la porte.

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Réglage de force LCN® FAST™ pour régler la force du ressort

3 Montez la tige et le sabot sur la porte et la cadre, comme sur l'illustration. Attachez le ferme-porte à la cale. Fixez à l'aide des vis fournies.

I Pour régler la retenue optionnelle (90°-140°): Le bras est préréglé pour une retenue à 90°. Pour modifier: Desserrez la vis de retenue, ouvrez la porte à quelques degrés avant la position de retenue désirée. Resserrez la vis.

4 ① Attachez le bras au ferme-porte avec l'attache fournie.

② Ouvrez la porte à environ 45°, fermez la porte avec la tige et le sabot glissant dans le tube du bras. Serrez la vis du bras dans la tige.

③ Préchargez le bras à 90°, serrez la vis du bras.

5 Au besoin, réglez
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage

II Action retardée optionnelle
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage
④ - vitesse de retenue

6 Fixez le boîtier avec les attaches fournies.

Note: Ne pas utiliser le gabarit standard pour le bras avec élément fusible.

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

⚠DANGER
Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877 - 671 - 7011

⚠DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4020 Instrucciones para plantilla 100°-140°-180° montaje del lado de empuje.

1 Localice la plantilla apropiada. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes. Verifique que la mano del cerrador corresponda a la mano de la puerta.

Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

LCN® FAST™ cuadrante de ajuste para ajustar la potencia del resorte

3 Monte la varilla y el zapata en la puerta y el calce en el bastidor como se muestra. Coloque el cerrador al calce y apriétalo seguramente con los sujetarores que se incluyen.

I Para ajustar la retención opcional (90°-140°): El brazo está prefijado para retener a 90°. Para ajustar: Afloje la tuerca de retención, abra la puerta hasta unos grados antes de la posición de retención deseada. Apriete suficientemente la tuerca de retención.

4 ① Coloque el brazo al cerrador con el sujetador ya incluido

② Abre la puerta aprox. 45°, cierre la puerta con la varilla y el zapata deslizando en el tubo del brazo.

③ Prearme el brazo a 90°, y apriete el tornillo del brazo.

5 Ajusta si es necesario.
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

II Acción retardada opcional.
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro
④ - velocidad de retardo

6 Coloca la tapa con los sujetadores ya incluidos.

Nota: No se usa la plantilla estándar con el Brazo de eslabón fusible.

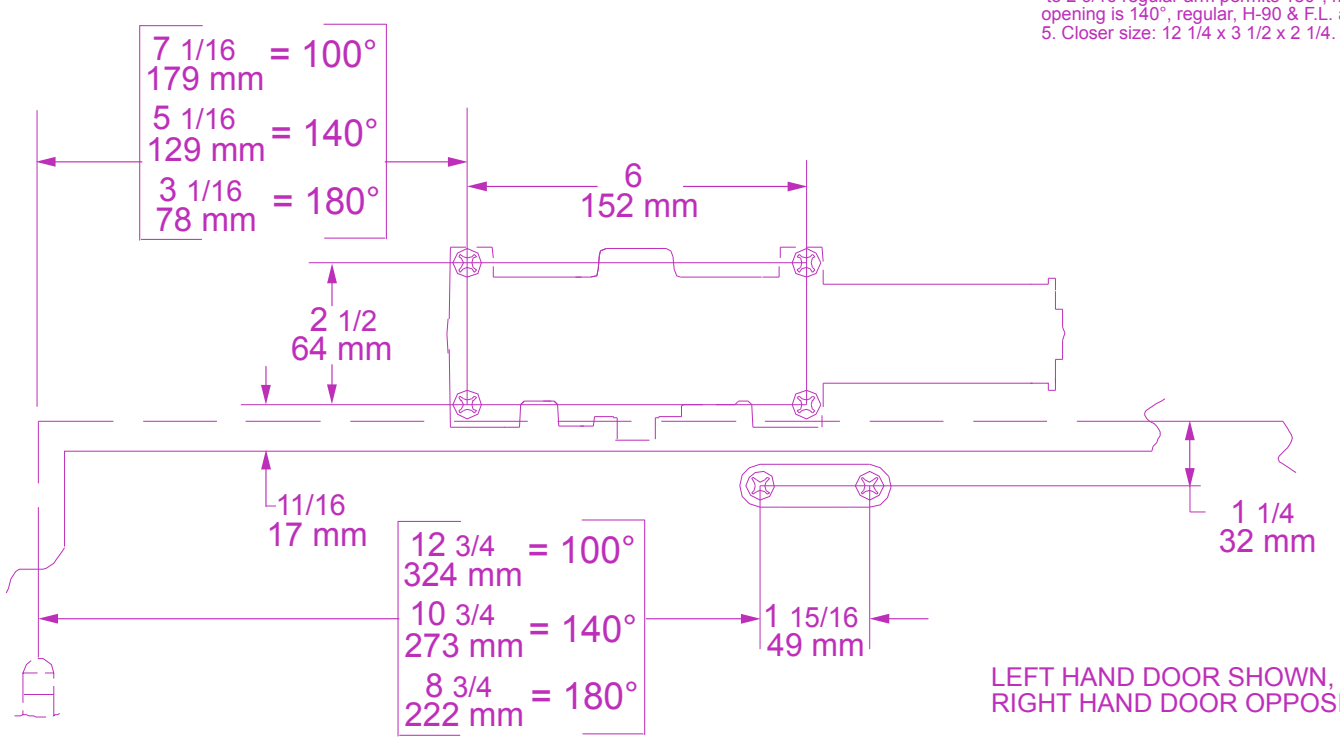
NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

⚠ADVERTENCIA
UNA INSTALACIÓN O UN AJUSTE INCORRECTORS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL 877 - 671 - 7011

⚠ADVERTENCIA
LA APERTURA DEMASIADO GRANDE DE LAS VÁLVULAS DE AJUSTE PUEDE OCASIONAR UN DERRAME, DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES.

4020 PUSH SIDE (TOP JAMB) SINGLE RABBETTED FRAME PERMITS 180° MAXIMUM OPENING

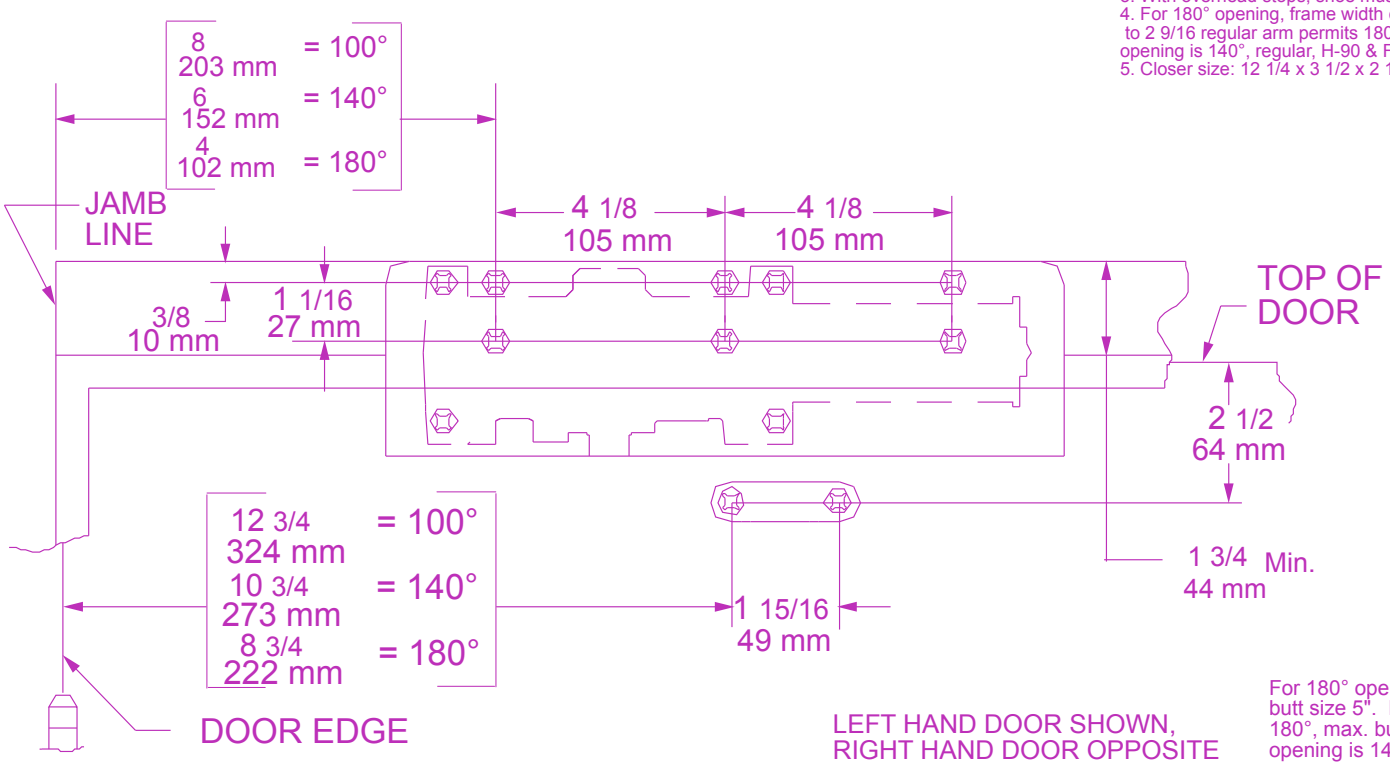
Notes: 1. Locate closer & shoe from centerline of pivot or swing clear hinge pin if used.
2. Reinforcing per ANSI/SDI-100 recommended for hollow doors and frames.
3. With overhead stops, shoe must be lowered to clear holder.
4. For 180° opening, frame width cannot exceed 4 1/2 max. butt size 5". For reveals up to 2 9/16 regular arm permits 180°, max. butt size 5". For reveals 2 9/16 to 4 13/16 max. opening is 140°, regular, H-90 & F.L. arms.
5. Closer size: 12 1/4 x 3 1/2 x 2 1/4.



LEFT HAND DOOR SHOWN,
RIGHT HAND DOOR OPPOSITE

4020 PUSH SIDE (TOP JAMB) 4020-18G PERMITS 180° MAXIMUM OPENING

Notes: 1. Locate drop plate & shoe from centerline of pivot or swing clear hinge pin if used.
2. Reinforcing per ANSI/SDI-100 recommended for hollow doors and frames.
3. With overhead stops, shoe must be lowered to clear holder.
4. For 180° opening, frame width cannot exceed 4 1/2 max. butt size 5". For reveals up to 2 9/16 regular arm permits 180°, max. butt size 5". For reveals 2 9/16 to 4 13/16 max. opening is 140°, regular, H-90 & F.L. arms.
5. Closer size: 12 1/4 x 3 1/2 x 2 1/4.



LEFT HAND DOOR SHOWN,
RIGHT HAND DOOR OPPOSITE

For 180° opening, frame width cannot exceed 4 1/2 max. butt size 5". For reveals up to 2 9/16 regular arm permits 180°, max. butt size 5". For reveals 2 9/16 to 4 13/16 max. opening is 140°, regular, H-90 & F.L. arms.

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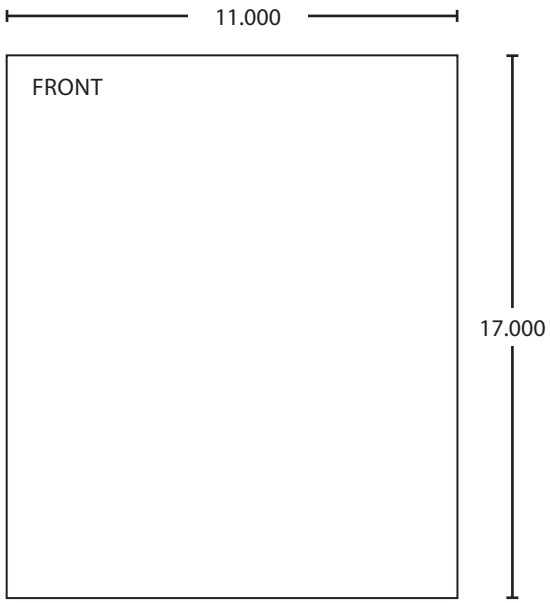
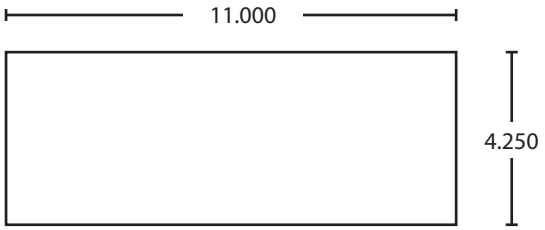
28477 Rev. 01/14-k



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
K	L	M	N	P	R
043228					

Material
White Paper

Notes
1. printed two sides
2. printed PMS 485 (red) & Pantone Purple
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
K > Revised artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043228	01-01-14

Title
4020 Series Instruction Sheet

Creation Date	Number	Revision
04-27-10	28477	K

Created By	Activity	
N/A	3899 Hancock Expwy Security, CO 80911	
Software: InDesign CS6		© Allegion 2014

Drop Plates

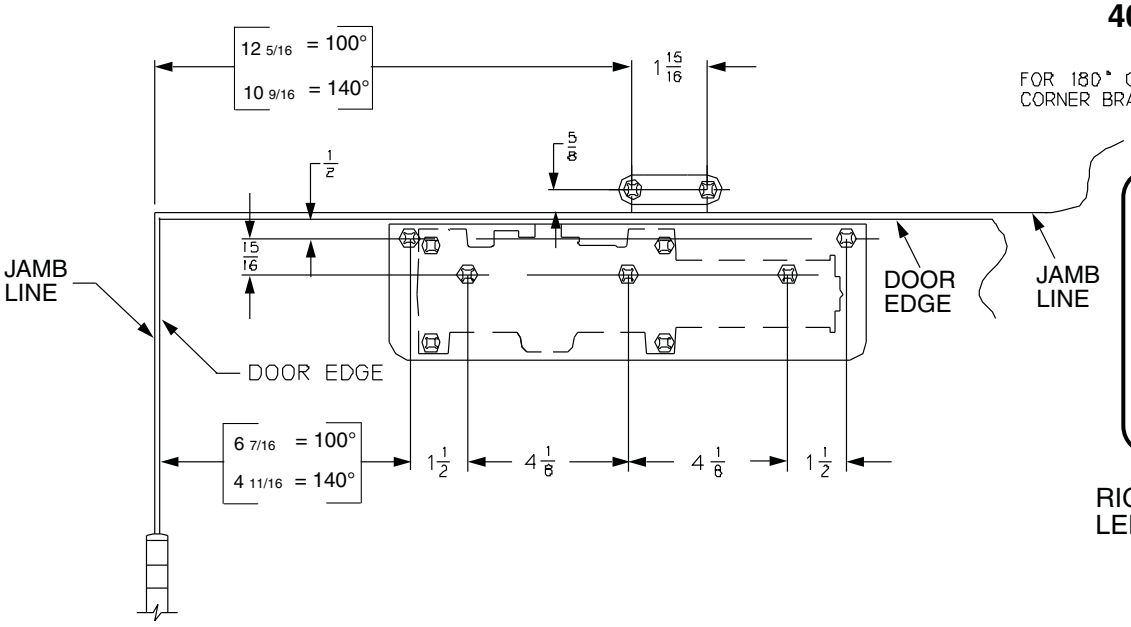
28499

4010, 4510

Templates

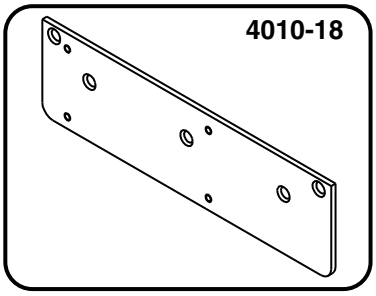
4010 PULL SIDE (DOOR MOUNT) DROP PLATE

PERMITS 140° MAXIMUM OPENING



FOR 180° OPENING, MOUNT CLOSER ON No. 11 CORNER BRACKET SEE TEMPLATE 4010-CB.

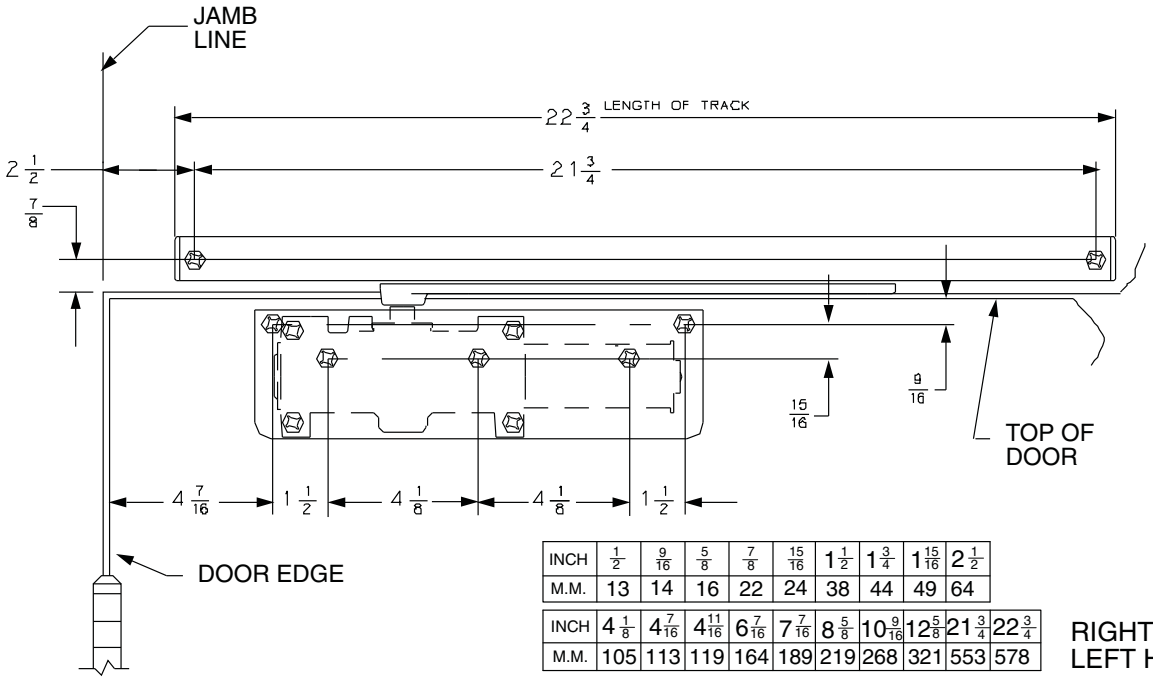
PULL SIDE MOUNT ON: 4010-18 DROP PLATE



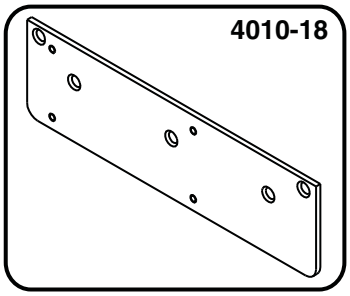
RIGHTHAND DOOR SHOWN, LEFT HAND DOOR OPPOSITE

4010 TRACK PULL SIDE DROP PLATE

PERMITS 180° MAXIMUM OPENING



PULL SIDE MOUNT ON: 4010-18 DROP PLATE



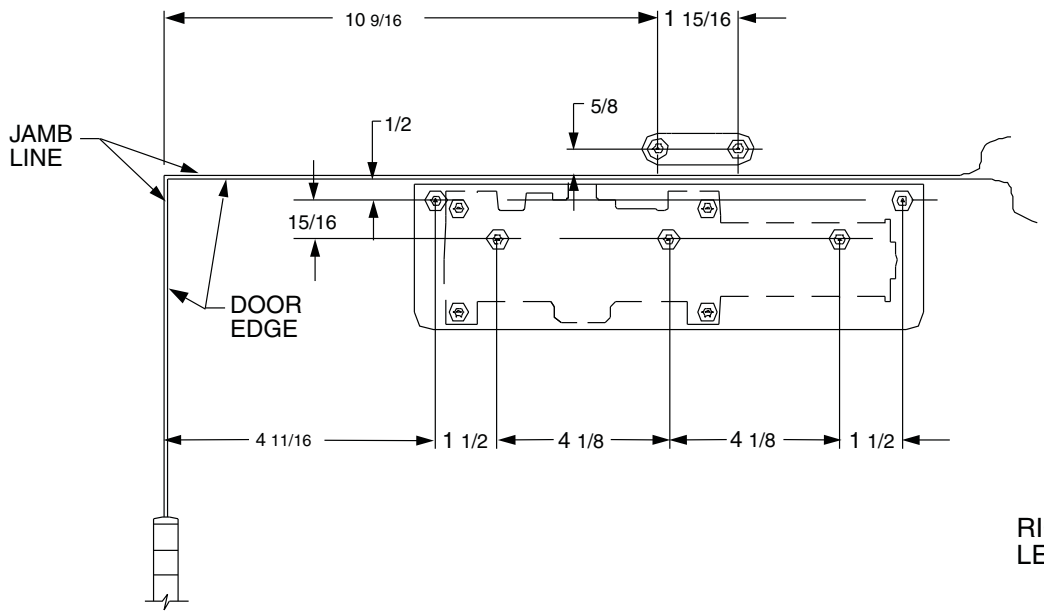
INCH	1/2	9/16	5/8	7/8	15/16	1 1/2	1 3/4	1 15/16	2 1/2
M.M.	13	14	16	22	24	38	44	49	64

INCH	4 1/8	4 7/16	4 11/16	6 7/16	7 7/16	8 5/8	10 9/16	12 5/8	21 3/4	22 3/4
M.M.	105	113	119	164	189	219	268	321	553	578

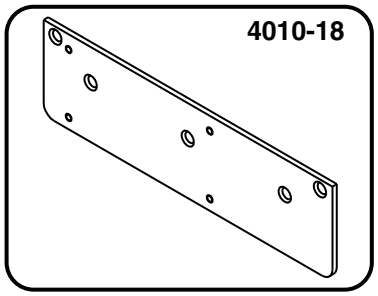
RIGHTHAND DOOR SHOWN, LEFT HAND DOOR OPPOSITE

4510 PULL SIDE (DOOR MOUNT) DROP PLATE

PERMITS 140° MAXIMUM OPENING



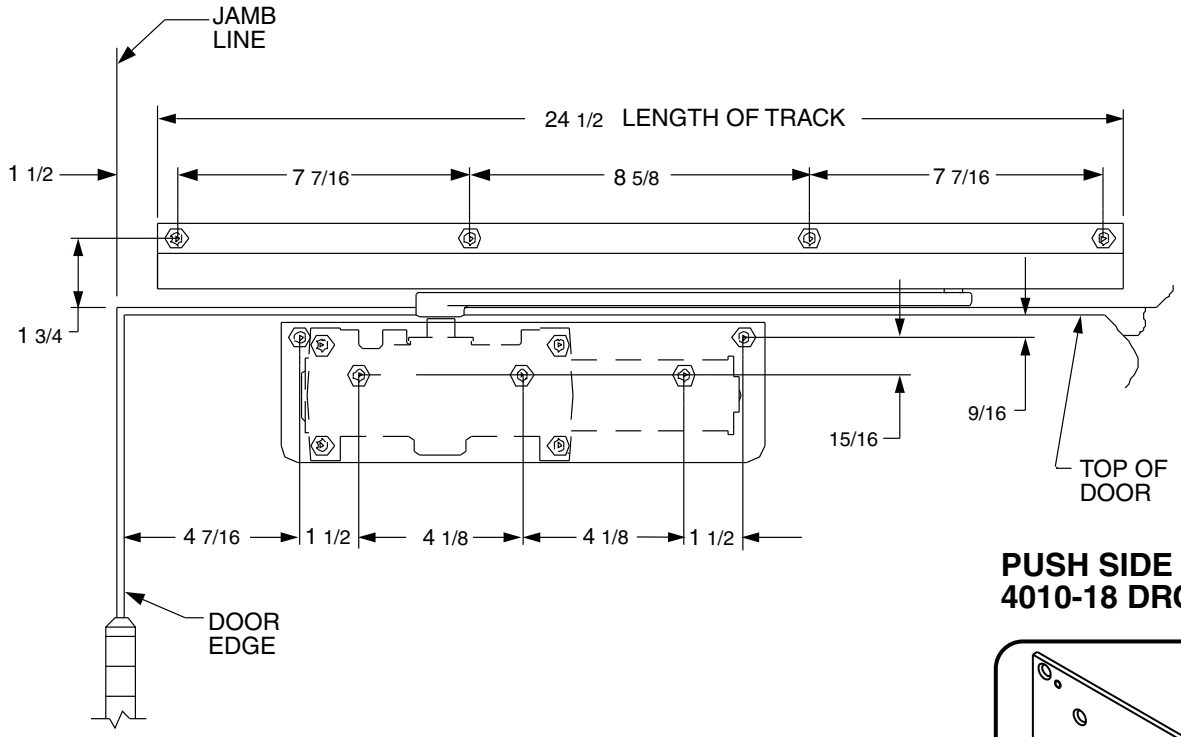
PUSH SIDE MOUNT ON: 4010-18 DROP PLATE



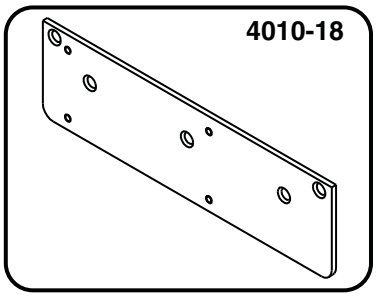
RIGHTHAND DOOR SHOWN,
LEFT HAND DOOR OPPOSITE

4510 TRACK PULL SIDE DROP PLATE

PERMITS 180° MAXIMUM OPENING



PUSH SIDE MOUNT ON: 4010-18 DROP PLATE



INCH	1/2	9/16	5/8	7/8	15/16	1 1/2	1 3/4	1 15/16	2 1/2
M.M.	13	14	16	22	24	38	44	49	64

INCH	4 1/8	4 7/16	4 11/16	6 7/16	7 7/16	8 5/8	10 9/16	12 5/8	21 3/4	22 3/4
M.M.	105	113	119	164	189	219	268	321	553	578

RIGHTHAND DOOR SHOWN,
LEFT HAND DOOR OPPOSITE

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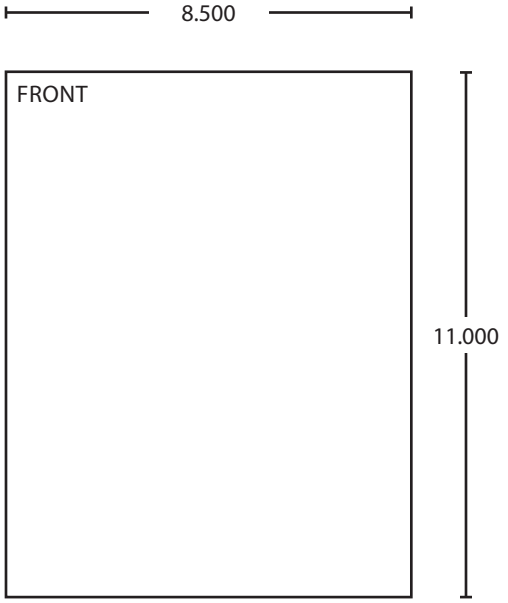
28499 Rev. 06/15-e



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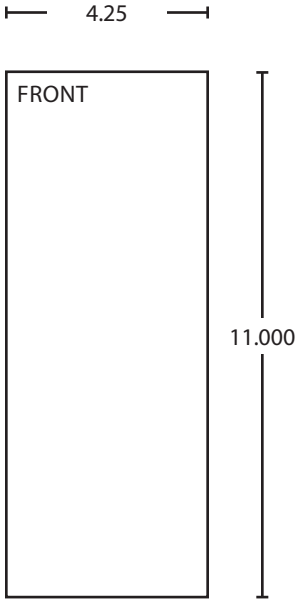

FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	N/A	N/A	043812		

Material
White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
E > Revised artwork

Edited By	Approved By	EC Number	Release Date
J. Ellis	M. Roberts		06-09-15

Title
4010 & 4510 Series Drop Plate Instruction Sheet

Creation Date	Number	Revision
04-27-10	28499	E

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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24213

4040-SE Sentronic

LCN®

Installation Instructions

This closer features two mounting options. Before beginning, determine which type of mounting best applies to your application, or had been specified for the job; then be sure to use the proper template.

1 Voltage

The voltage shown on the track cover plate must match voltage supplied to door frame (24V or 120V). If concealed wiring is wanted, prepare the frame to specifications shown on the corresponding template (pull side or push side). If surface wiring is desired, be sure to mount track on frame before running any EMT/ conduit.

2 Tracking

Depending on mounting used, insert proper track plugs into the side or top of the track. Using fasteners provided, mount track on frame to the dimensions of the template being used. Remove solenoid cover plate and make electrical connections (see pg. 2).

ⓘ **NOTE: Switch hole in the cover plate MUST be aligned with the test/release switch when reattaching the plate to the track.**

3 Spring Power

Before mounting closer, the spring power may need adjusting. Refer to the label on the closer spring tube. The 4040 SE comes preset at size 3. This will control a door up to 38" wide. If your door is wider than 38", adjust closer as shown (see illustration to the right), up to 7 full turns. Starting the cover screws at this point is recommended. Using fasteners provided, mount the closer onto the door to the template dimensions being used.

4 Arm Installation

Place the arm spacer over the top shaft of the closer. Install the arm as follows:

4a Push Side Mounting

Place the arm hub over the top closer shaft, parallel with your door. Place a wrench on the bottom shaft of the closer, and rotate away from the door. When flats in the arm hub line up with the first available flats of the shaft, slide the arm hub onto the shaft. Insert the shaft screw and tighten securely.

4b Pull Side Mounting

Place the arm hub over the top closer shaft, parallel with the door. Rotate the arm away from the door until flats in the arm hub line up with first available flats of the shaft. Slide the arm hub onto the closer shaft. Insert the shaft screw and tighten securely.

5 Set Screw in Arm

Loosen the set screw in the arm. Connect the art to the track roller, and tighten the set screw firmly.

6 Adjusting Hold-Open Door Position

Remove the screw in the adjustable arm, and open the door to the desired position. Reinsert the screw and tighten securely.

7 Regulation

Do not allow the door to slam into the frame. A "normal" closing time from a 90°position is 5 to 7 seconds, evenly divided between MAIN and LATCH SPEED. If adjustments are needed, use a 3/32" hex wrench. To adjust the MAIN SPEED, turn regulating screw (see illustration below) clockwise to slow the speed or c.c.w. to increase the speed. LATCH SPEED is adjusted in the same way. When adjusting BACKCHECK, turn the regulating screw clockwise to increase the amount of force or c.c.w. to reduce the amount of force.

ⓘ **NOTE: Do not use an abrupt backcheck setting or expect the door closer to act as a stop!**

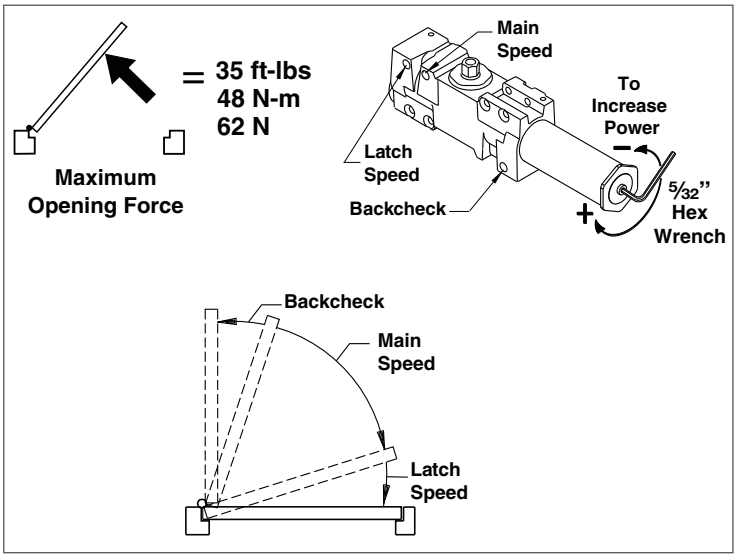
8 Door Closer Cover

With regulation done, place snap-on clip insert into the proper cutout, then snap the cover assembly onto the spring tube.

⚠ CAUTION ⚠

IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTION CAREFULLY.

For questions, call LCN at 877-671-7011.



NO MAINTENANCE REQUIRED

Conduit Quick Connector

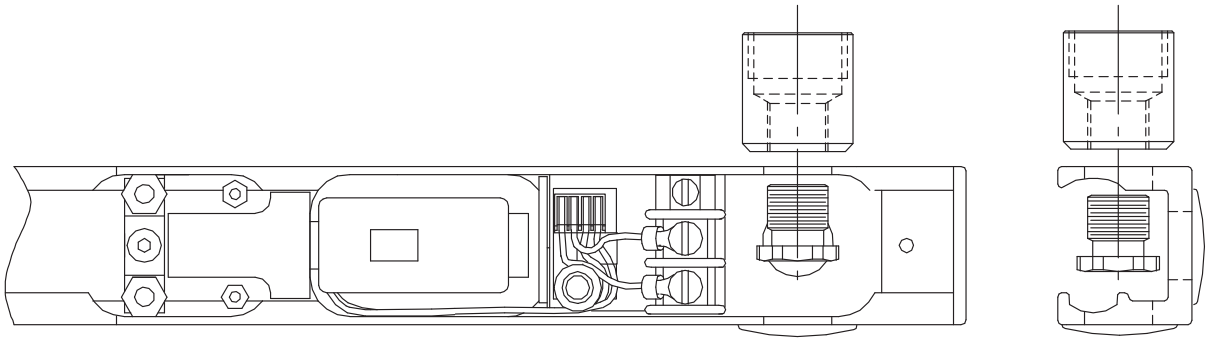


Fig. 1

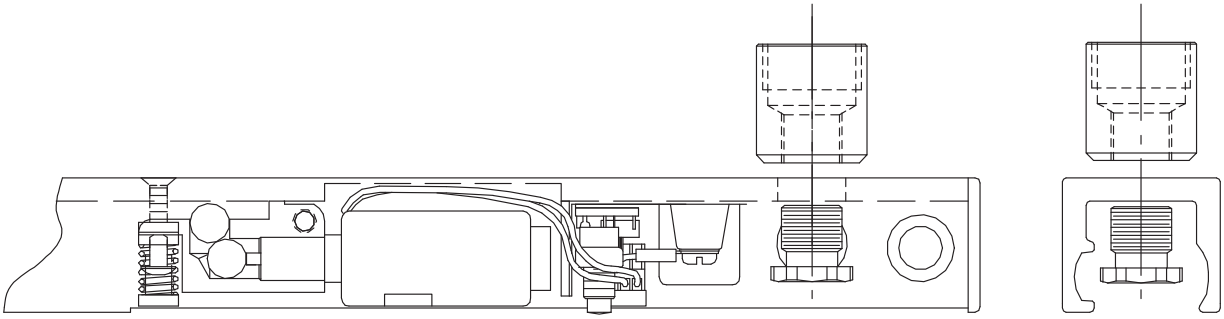


Fig. 2

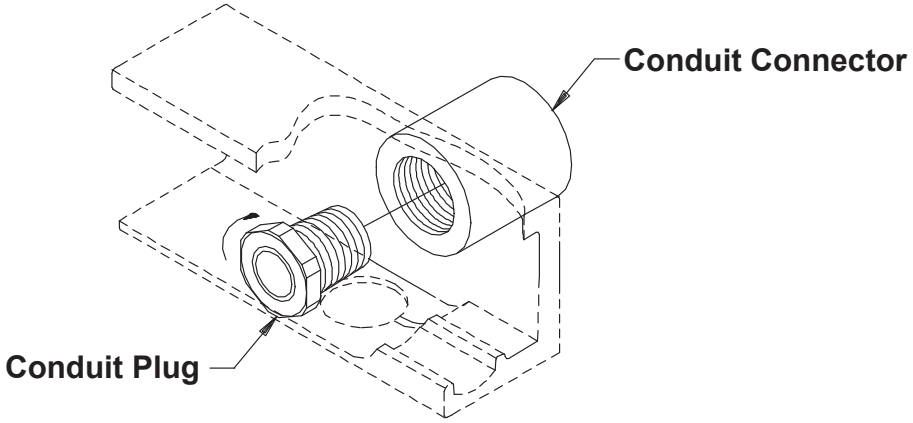
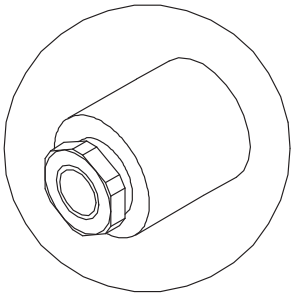


Fig. 3



Conduit Plug shown in Conduit Connector

Installation Instructions

1a The Conduit Quick Connector and Plug can be found in the closer screwpack.

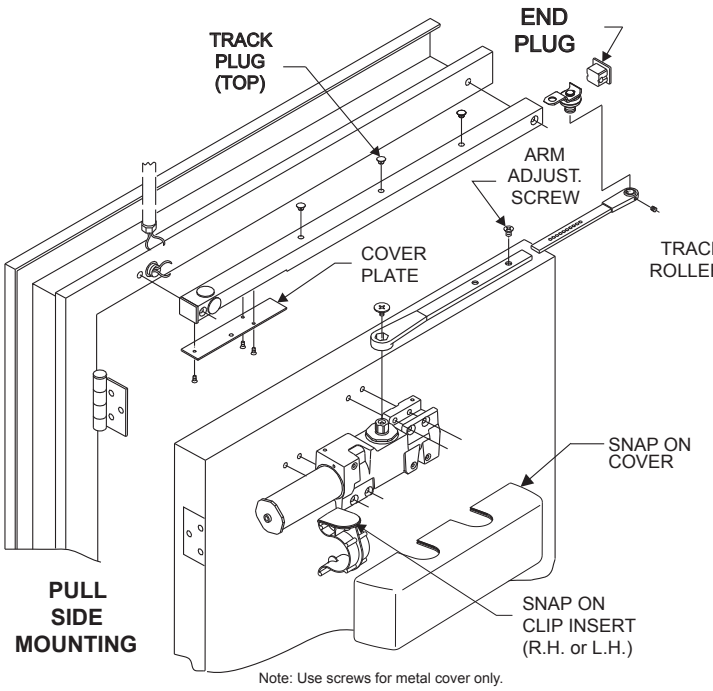
1b The Conduit Quick Connector should be fastened to the 1/2” concealed conduit prior to step 3 on the closer installation instructions.

1c During step 3 on the closer installation instructions, make sure that the Conduit Connector is secured flush against the track surface. See option in Fig. 1 below that matches the mounting option selected for track surface. With the track mounted, take the Conduit Plug and slide it through the 1/2” hole in the track. (see Fig.2) Tighten the Plug into the Conduit Connector using a 5/8” wrench, until completely secure, as shown in Fig.3.

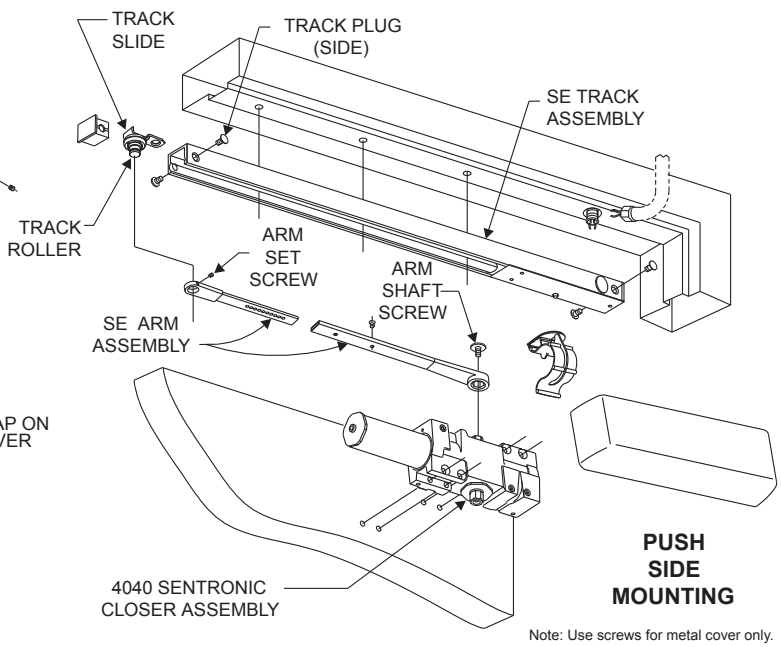
⚠ WARNING ⚠

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY!

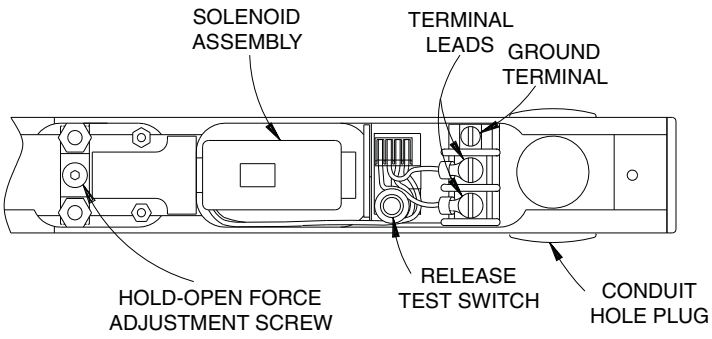
Disconnect the power before making any electrical connections or performing maintenance.



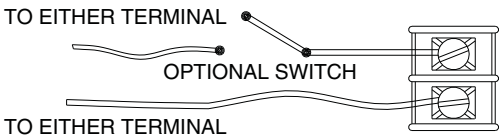
Note: Use screws for metal cover only.



Note: Use screws for metal cover only.



WIRING DIAGRAM - POLARITY NOT IMPORTANT



INPUT VOLTAGE:
24V AC/DC OR 120V AC/DC
(usually from alarm panel or detector)

Hold Open Force Adjustment:

Locate the hold-open adjustment screw in the diagram above. For greater hold-open force, insert a socket screw key wrencyh (included in the screwpack), and turn clockwise. To decrease the amount of hold-open force, turn the screw counter-clockwise. Turn a maximum of 4 turns.

Electrical checkout

1. With power on, open the door complete. The door should remain in the open position. If the door does not stay open, Check the electrical input.
2. Push the release test switch. The door should close immediately. Open the door to the hold-open position, and let it remain there.
3. The system should be checked at frequent intervals.

4040SE Hinge Face Mounted

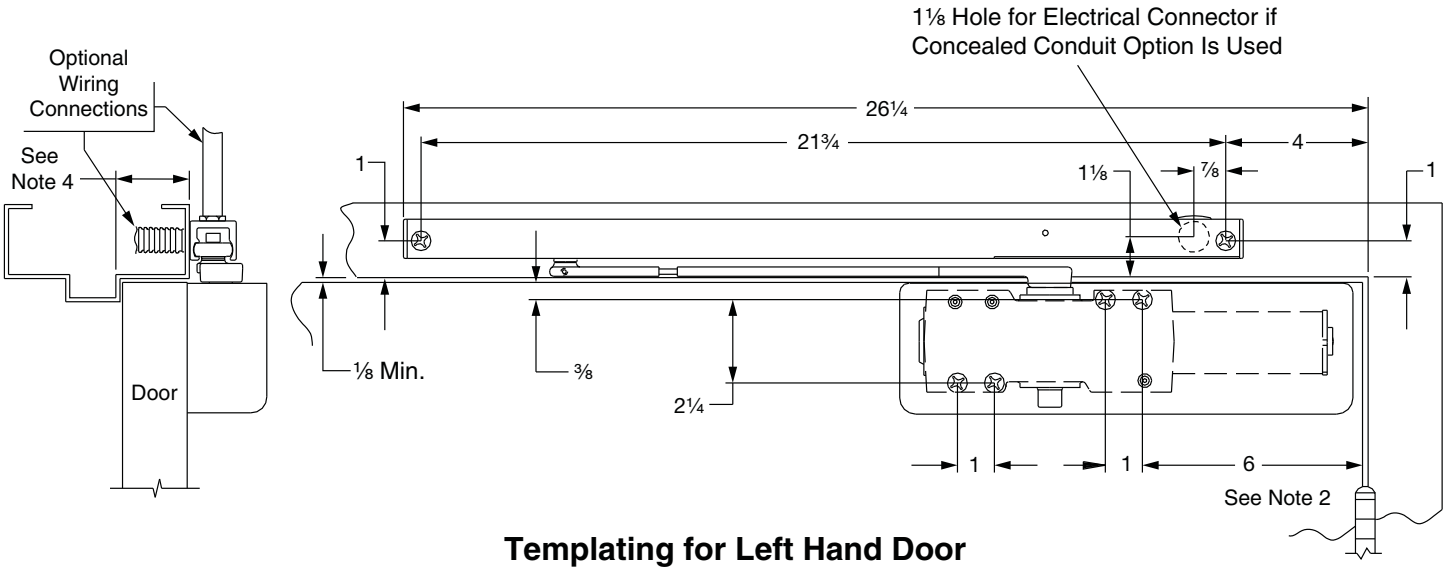
⚠ WARNING ⚠

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY!

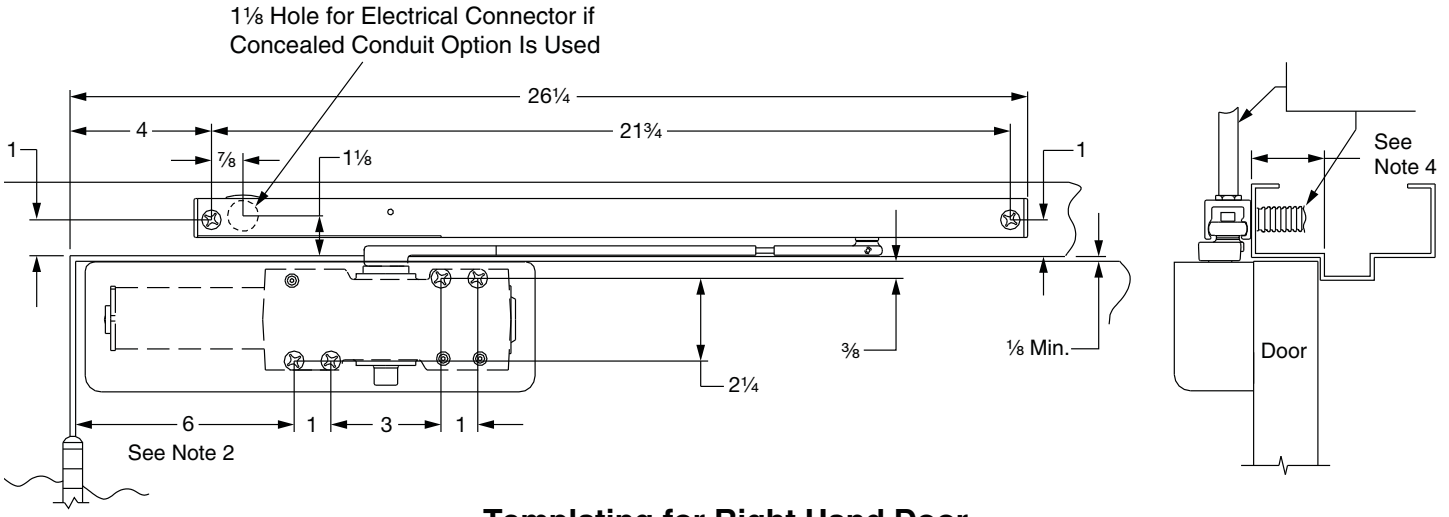
Disconnect the power before making any electrical connections or performing maintenance.

DOOR HOLDER SOLENOID DATA
24 VAC - DC Nominal =10% - 15% @ .090 Amp.Max.
120VAC - DC Nominal =10% - 15% @ .030 Amp. Max.

4040SE } 85° to 110° Hold Open
Auxiliary Stop Recommended



Templating for Left Hand Door



Templating for Right Hand Door

Notes:

1. Voltage supplied to the unit MUST match the voltage shown on the Sentronic label.
2. If the door is hung on pivots: Locate the closer and track from the pivot point of the center pivotj. For offset pivots: Locate from the pivot point and and add ⅜".
3. The floor or wall stops should be used.
4. If this dimension is greater than 1 15/16", consult the factory.
5. Reinforcing per ANSI/SDI-100 is recommended for hollow metal doors and frames.
6. If the swing clear hinges are being used, consult the factory.

Inch	¼	9/16	⅝	1	1 ⅛	1 ¼	1 11/32	1 ½	2 ⅛	2 ¼	2 ⅞	3	4	5	6	8 9/16	26 ⅜
M.M.	6	14	16	25	29	32	34	28	54	57	73	76	102	127	152	217	670

4040SE Stop-Side Mounted

⚠ WARNING ⚠

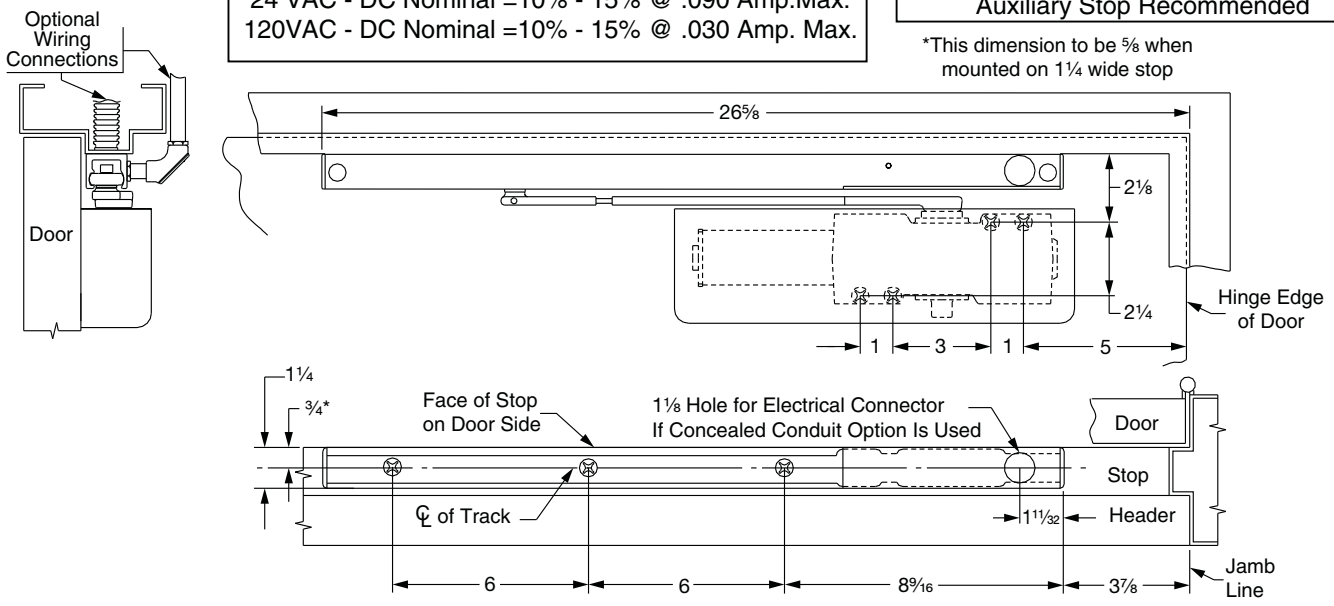
HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY!

Disconnect the power before making any electrical connections or performing maintenance.

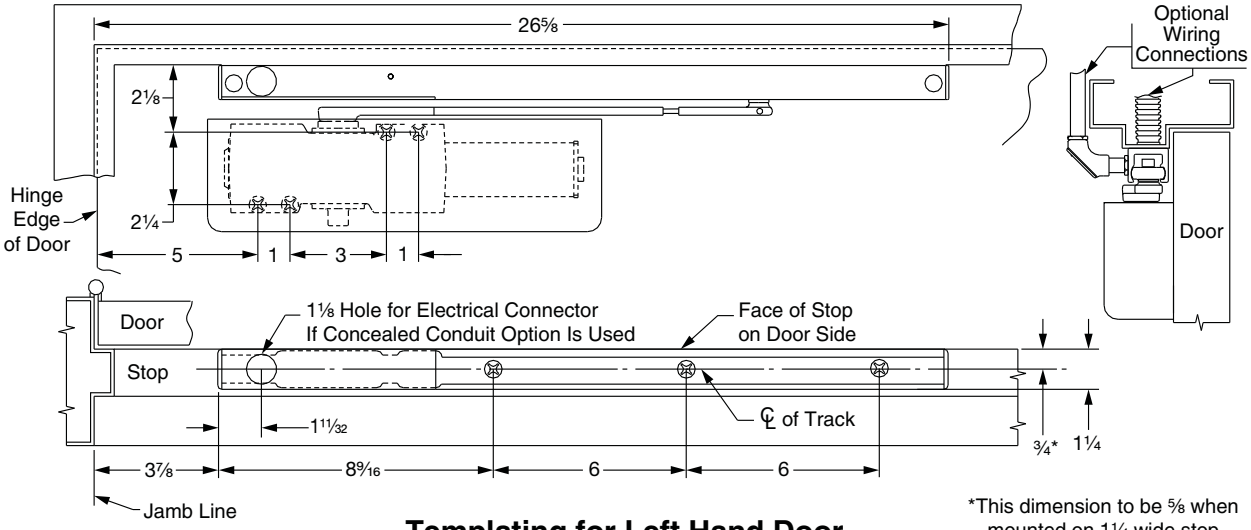
DOOR HOLDER SOLENOID DATA
24 VAC - DC Nominal =10% - 15% @ .090 Amp.Max.
120VAC - DC Nominal =10% - 15% @ .030 Amp. Max.

4040SE } 85° to 110° Hold Open
Auxiliary Stop Recommended

*This dimension to be 5/8 when mounted on 1¼ wide stop



Templating for Right Hand Door



*This dimension to be 5/8 when mounted on 1¼ wide stop

Templating for Left Hand Door

Notes:

1. Voltage supplied to the unit MUST match the voltage shown on the Sentronic label.
2. The Electrical connector is provided by LCN.
3. Locate the closer and track from the center line of the pivot or swing - clear the hing pin, if used.
4. Floor or wall stops should be used.
5. Reinforcing per ANSI/SDI-100 is recommended for hollow metal doors and frames.

Inch	¼	9/16	5/8	1	1 ⅛	1 ¼	1 11/32	1 ½	2 ⅛	2 ¼	2 ⅞	3	4	5	6	8 9/16	26 ⅜
M.M.	6	14	16	25	29	32	34	28	54	57	73	76	102	127	152	217	670

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24213 Rev. 08/17-t

23657

Model 7982 SEQ

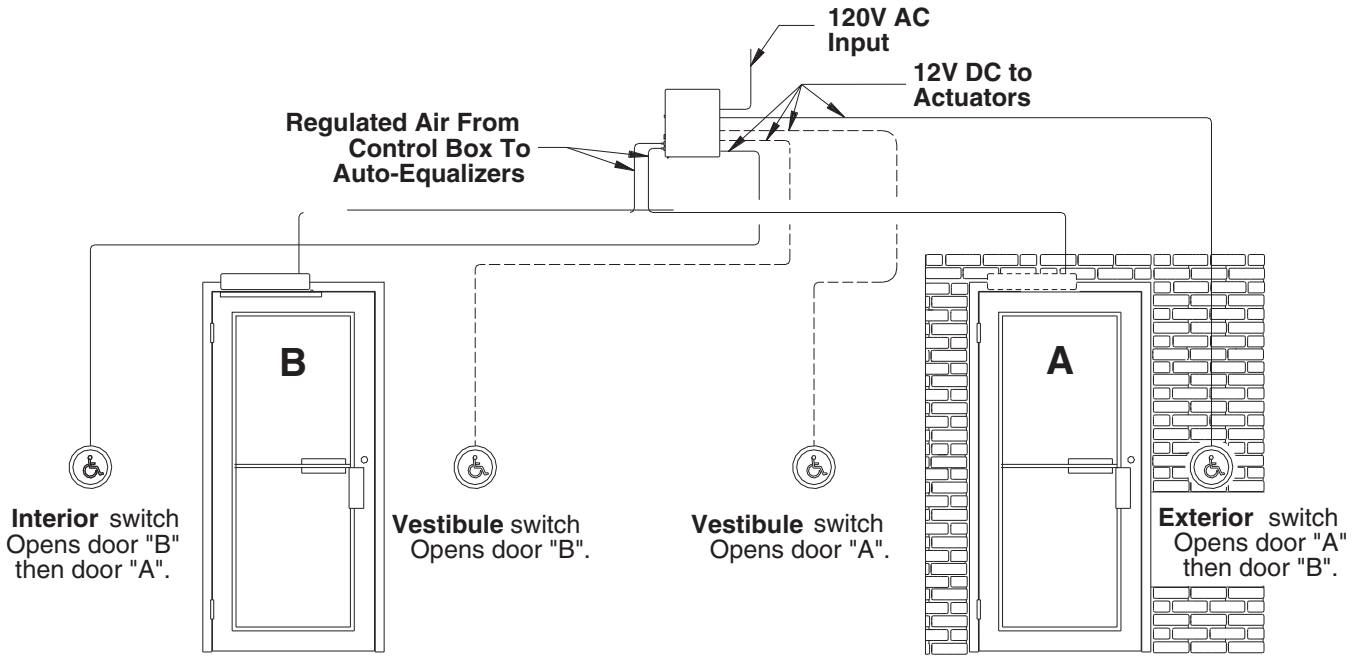
LCN®

Control Box

Installation Instructions

For closer information see closer installation instruction sheet

Typical Electric & Air Supply Hook Up



Installation

1a Locate box on interior of building within 50 tubing feet of the farthest door to be controlled. **Box must be in a clean, dry, well ventilated place where temperatures do not exceed 120°F or fall below 35°F.**

1b Mount box to a structurally sound surface using screws provided as shown on page 2 with air fittings on left side as shown. **Do not mount box upside down or on a horizontal plane.**

1c Refer to instructions packed with actuators and connect leads to terminals 5 through 10 as required.

1d Connect unpowered 120V AC input to terminals 3, 4, and ground screw. (Line side to terminal 3, neutral side to terminal 4 and ground wire to ground screw.) If door control is on a fire door, 120V AC input must be interrupted by the fire alarm panel when in alarm. When dry auxiliary fire alarm contacts are used, remove shunt from terminals 1 and 2 and connect to dry contacts of fire detector or alarm panel. Terminals 1 and 2 are in series with line side of 120V input.

1e Turn on power. Air valves and compressor will operate one cycle when power is applied.

1f Air pressure output has been preset at factory. If more air pressure is required to adequately open door, regulate air adjustment valve on pump, as shown on page 3.

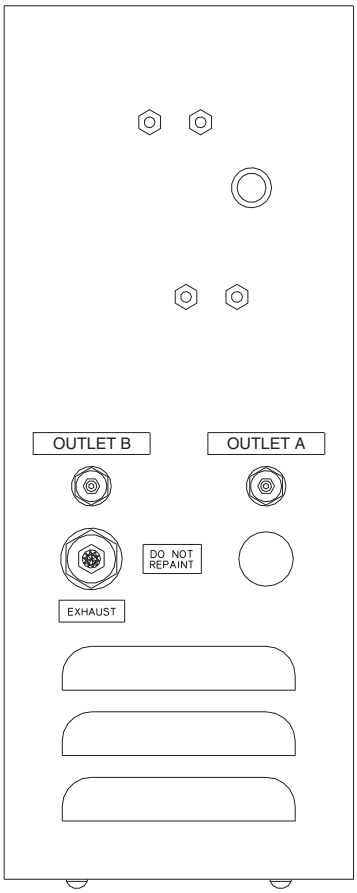
1g Adjust time delay to keep air valve energized by turning adjustment wheel on timer modules “A” & “B” (CW to increase - CCW to decrease). The LED (light) on the timer module indicates the valve is energized. The time can be adjusted from 0-30 seconds. 10 seconds is a “normal” delay.

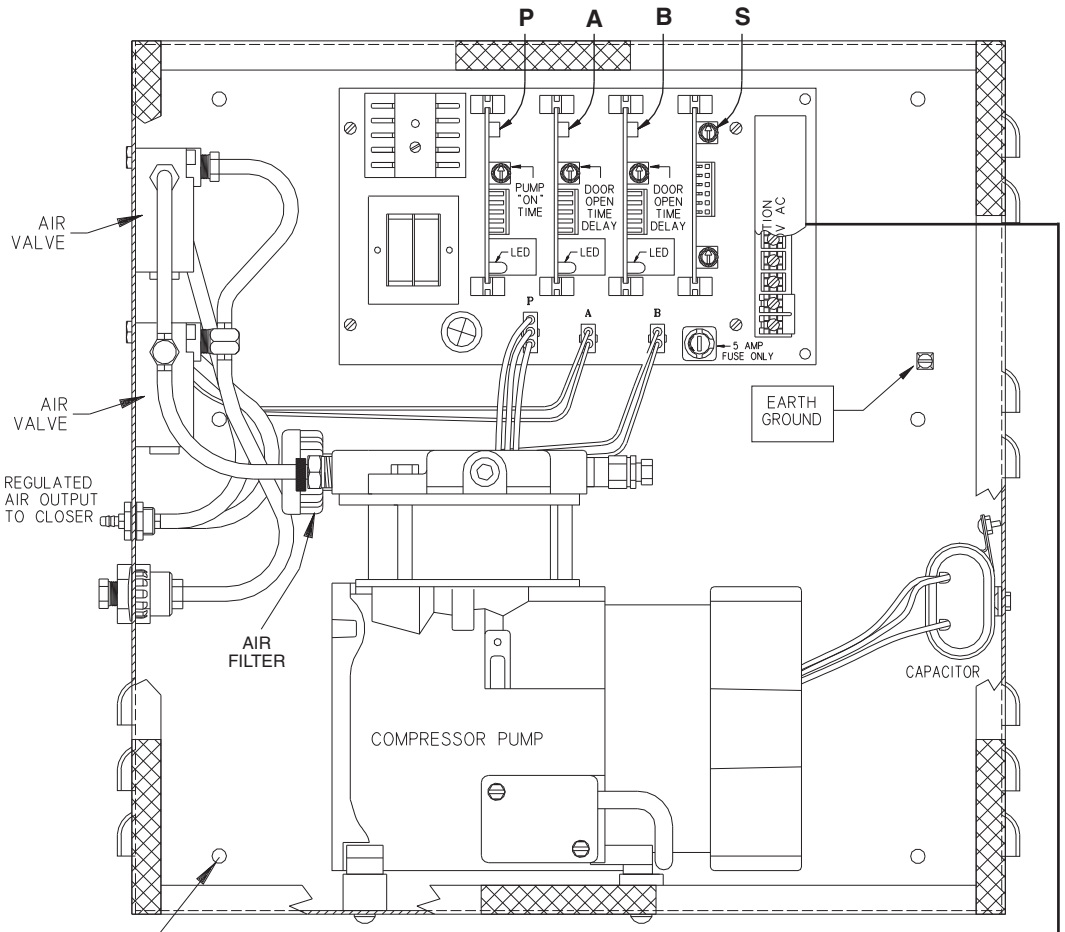
ⓘ **NOTICE: Timer Module “A” and “B” must operate longer than Timer Module “P”.**

1h Adjust timer module “P” to keep compressor activated for the necessary amount of time to open the door. This can be done by rotating the adjusting wheel. (CW to increase - CCW to decrease). The LED (light) on the timer module indicates the compressor is energized. The compressor should not run more than 1-3 seconds longer than the time required to open the door.

1i When using sequential operation, adjust dual timer module “S” for desired delay between door operation. (CW to increase delay; CCW to decrease delay.) Top timer delays “A” to “B” operation; the bottom timer delays “B” to “A” operation.

1j Test actuators to insure wiring and tubing are properly connected.





⚠ CAUTION

DO NOT MOUNT BOX UPSIDE DOWN OR IN HORIZONTAL POSITION. LOCATE WHERE TEMPERATURES DO NOT EXCEED 120°F OR FALL BELOW 35°F

INSTALL BOX WITH SIX TAPCON CONCRETE SCREWS 3/16 x 1 1/4 DRILL 5/32 HOLE 1 1/4 DEEP WITH CARBIDE TIPPED CONCRETE DRILL BIT

⚠ CAUTION

COMPONECTS INSIDE CONTROL BOX WILL BE HOT TO TOUCH UNDER NORMAL OPERATION. ALLOW BOX TO COOL DOWN BEFORE MAKING ADJUSTMENTS.

AIR FILTER SHOULD BE INSPECTED EVERY SIX MONTHS. IF FILTER IS DAMAGED, CONTACT LCN FOR REPLACEMENT.

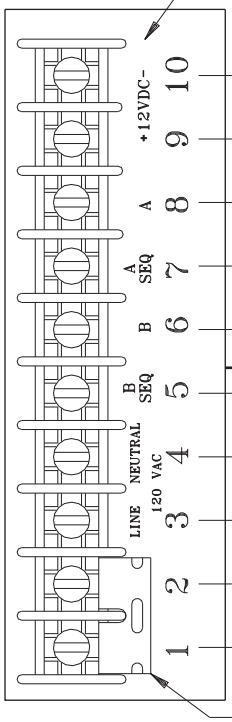
⚠ WARNING

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.

ELECTRICAL DATA

INPUT = 120V AC @ 5 AMPS
POWER CONSUMPTION 600 WATTS
OUTPUT IS 12V DC (250 mA MAX. LOAD)



TERMINAL "10" IS COMMON TO ALL ACTUATORS

12V DC OUTPUT

TRIGGER "A"

TRIGGER "A" SEQ.

TRIGGER "B"

TRIGGER "B" SEQ.

NEUTRAL

LINE

120V AC INPUT

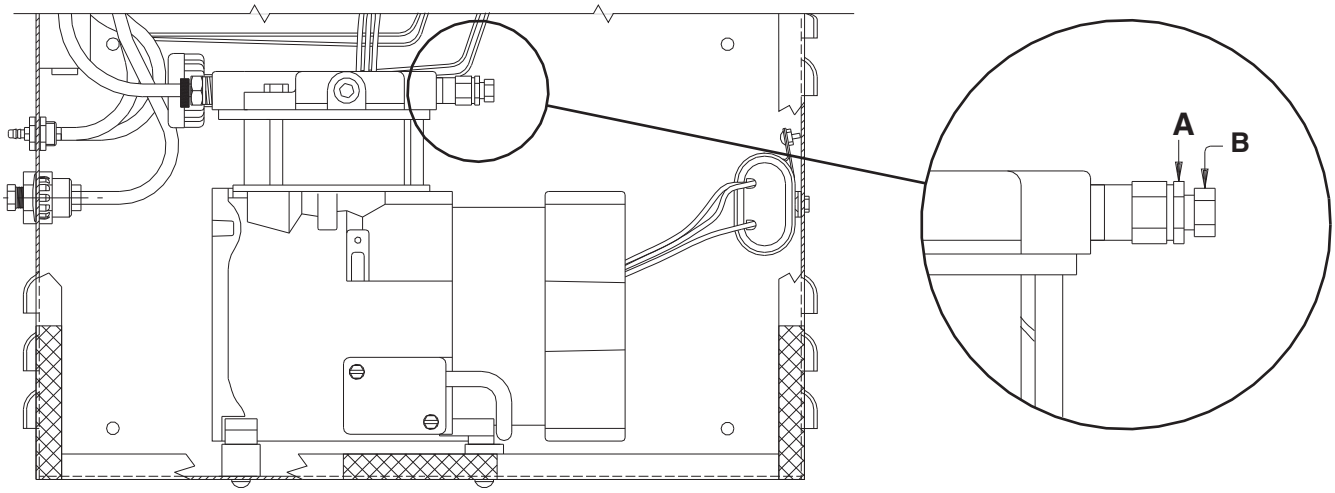
TO FIRE ALARM

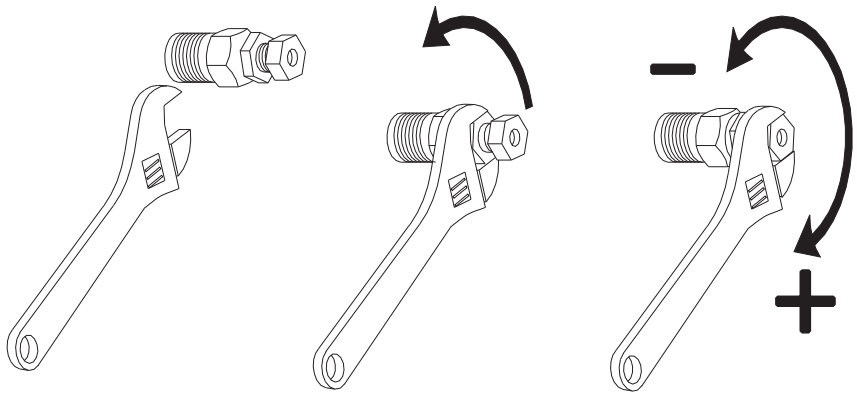
SHUNT

* REMOVE THIS SHUNT ONLY WHEN CONNECTING TO NORMALLY CLOSED FIRE ALARMS CONTACTS

⚠ DANGER CONTROL BOX **MUST** BE CONNECTED TO EARTH GROUND

Air Pressure Adjustment





Air Pressure Adjustment	
1a	Loosen lock nut. (A)
1b	Turn outer valve (B) to regulate air pressure.
1c	Tighten lock nut.

Installation Troubleshooting Chart

Symptom	Possible Cause	Suggested Remedy
No Power Opening	No power to control box / blown fuse	Verify 120VAC 60HZ power is present at terminals 3 & 4 on control box terminal strip. Check fuse. Replace only with 5 amp (3AG type) fuse.
	Actuator(s) not connected properly	Be sure a timer module board is firmly in place in “A”. “B” & “P” slots. Timer “S” must be in place for sequential operation. Operate actuator(s). LED on timer module should light when actuator is used. The LED on timer “P” should light whenever “A” or “B” is lit. If not, momentarily short actuator terminals 6 & 10 and 8 & 10 in the control box. If LED lights, check wiring to actuators for an open circuit. If it does not light, check for voltage at terminals 9 & 10. Voltage should read from 11.75 to 13.25V DC. If there is no reading, disconnect leads from terminals 9 & 10. Short actuator terminals. If LED lights, check for short circuit in actuators.
	Fire alarm system causing open circuit on terminals 1 & 2	Shunt terminals 1 & 2 with power off. Restore power. If control operates when actuator terminals in the control box are shorted, an open circuit exist in wiring to fire alarm. When Auto-Equalizer is not used with fire alarms, terminals 1 & 2 must be permanently shorted with a shunt. IMPORTANT! When Auto-Equalizer is connected to fire alarm, make sure shunt is removed from terminals 1 & 2. Terminals 1 & 2 are one leg of 120V line.
	No input to Auto-Equalizer operator	Disconnect tubing from Auto-Equalizer operator. Try actuator and verify that air is coming out of tubing. If not, trace tubing to control box, checking for breaks or kinks in air line.
	Air lines obstructed with dirt or ice.	Clean or thaw lines and reroute if necessary. Eliminate dips near cold zones.
	Air valves not working	Make sure air valve leads are plugged into main board. (Be sure valves in system are plugged into connectors “A” & “B”.)
	Compressor not working	Make sure compressor leads are plugged into main board. (Be sure compressor is plugged into connector “P”).
Does not open or fully open	Control box exhaust restricted.	Exhaust muffler may be clogged by dirty air or accidental painting. Clean in alcohol or mineral spirits.
Opens too slow or not at all	Inlet filter clogged	Replace filter element (Contact LCN for replacement)

Symptom	Possible Cause	Suggested Remedy
Power opening will not time out.	Scanner maintaining signal to control box.	Make sure lenses are clean and there are no obstructions in front of scanner. Model 909 or 939 proximity scanner may “see” an opposite wall. Adjust range as described earlier.
	Switch circuit maintaining contact.	Check for short circuit or error in wiring to switch or scanner.
	Air valve blocked open with contaminant.	Cycle valve several times by momentarily shorting actuators in the control box. This should clear valve.
Power opening timing out too soon.	Air compressor needs readjustment.	See page 2 for regulation instructions.
	Timer cards not set properly	Set timer cards “A” & “B” for Max. time. Set timer card “P” for Min. time. Slowly increase card “P” until “time-out” is 1-3 seconds after door is fully open. Decrease timer card “A” & “B” to achieve desired time delay before closing. (Make sure “P” times out before “A” & “B”.)

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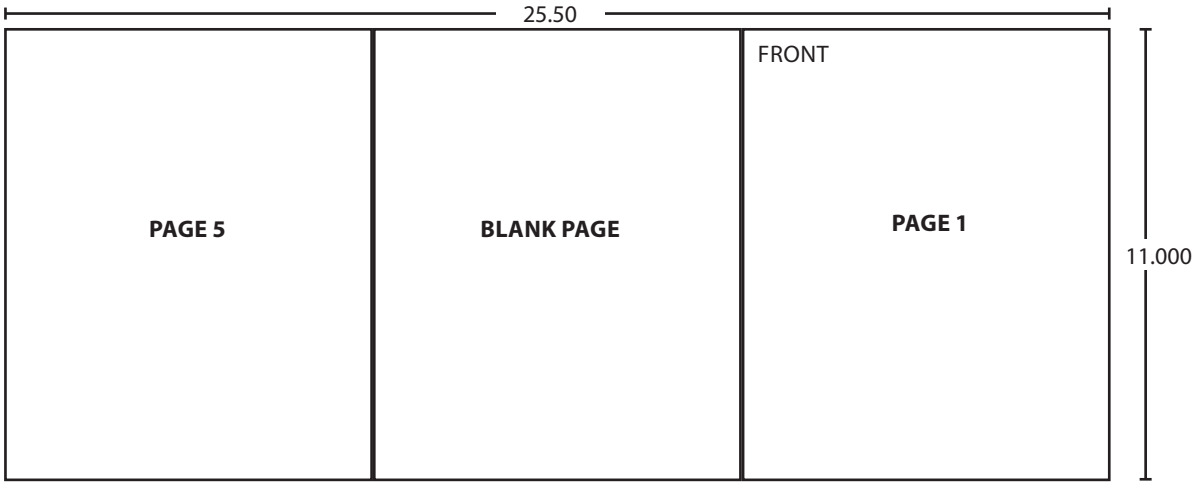
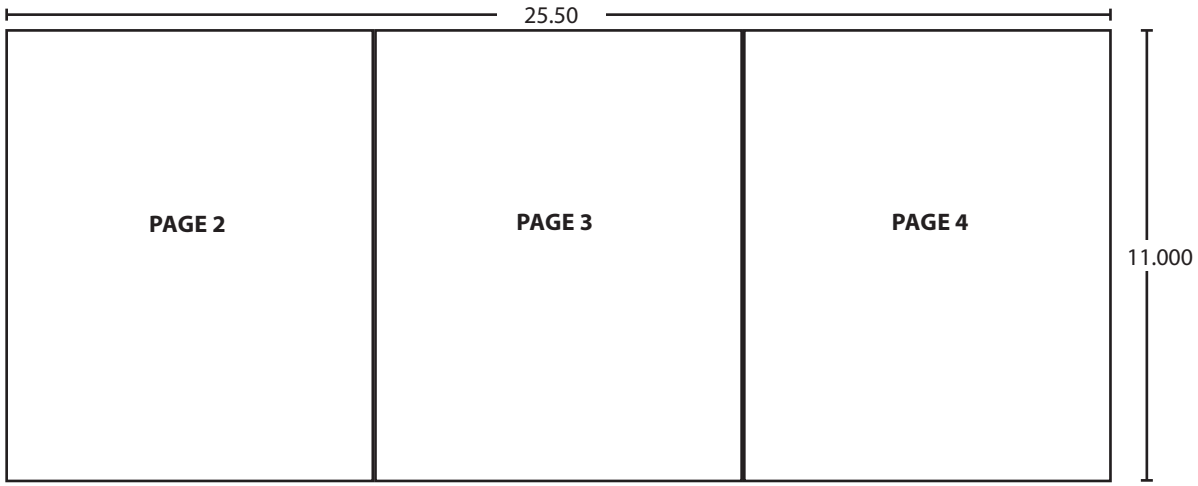
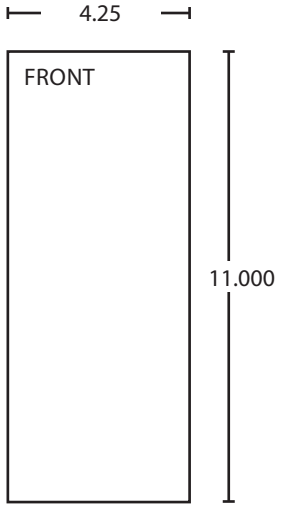


BEGINNING SHEET





FOLDED SHEET

Additional Notes:
1. None

Revision History					
E	F	G	H	J	K
043228					

Revision Description:
E > Revised artwork

Material	Edited By	Approved By	EC Number	Release Date
White Paper	D. Myers	M. Sasso	043228	01-01-14

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Title
7982 Series Sequential Contol Box Instruction Sheet

Creation Date	Number	Revision
04-27-10	23657	E

Created By	Activity	
N/A	3899 Hancock Expwy Security, CO 80911	
Software: InDesign CS6		© Allegion 2014

28989

4031 EDA

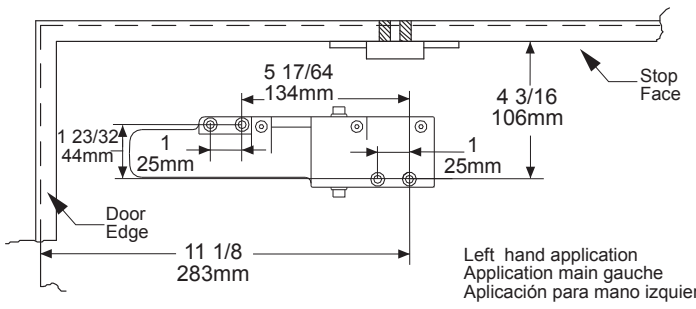
LCN®

110° Template, Push Side

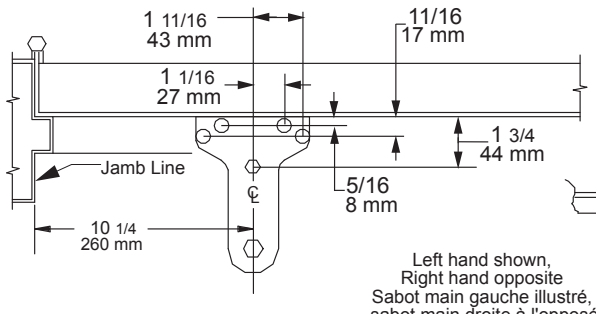
Installation Instructions

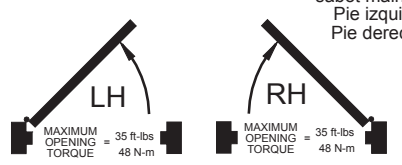
1 Locate proper template. Center punch all hole locations, pre-drill 5/32".

* Locate closer & shoe from centerline of pivot or swing clear hinge pin when used.



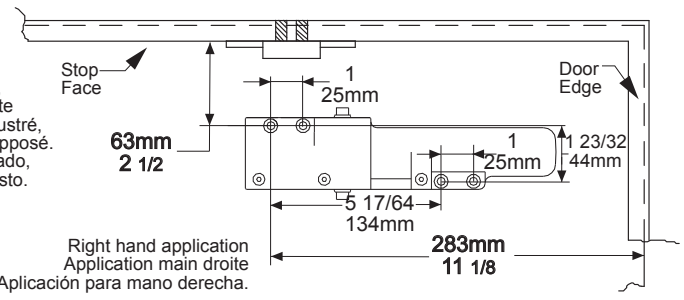
Left hand application
Application main gauche
Aplicación para mano izquierda.





Left hand shown,
Right hand opposite
Sabot main gauche illustré,
sabot main droite à l'opposé.
Pie izquierdo mostrado,
Pie derecho al opuesto.

Note: 1. When using pivot or swing clear hinge pin, locate closer and shoe from the centerline. 2. Reinforcing per ANSI/SDI-100 recommended for hollow metal doors and frames.
3. Closer size 9 5/8 x 3 1/2 x 1 1/2.



Right hand application
Application main droite
Aplicación para mano derecha.

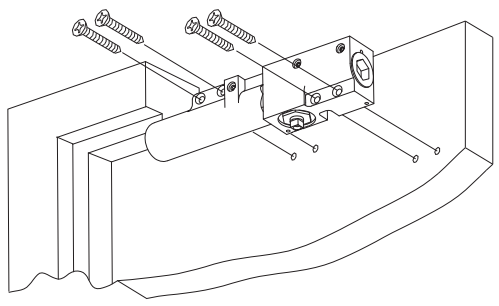
2 Determine door width, adjust spring power to match chart.

	4031
	♿ - 6
30"- 750mm	- 6
32"- 815mm	-4
36"- 915mm	0
42"- 1050mm	+ 6

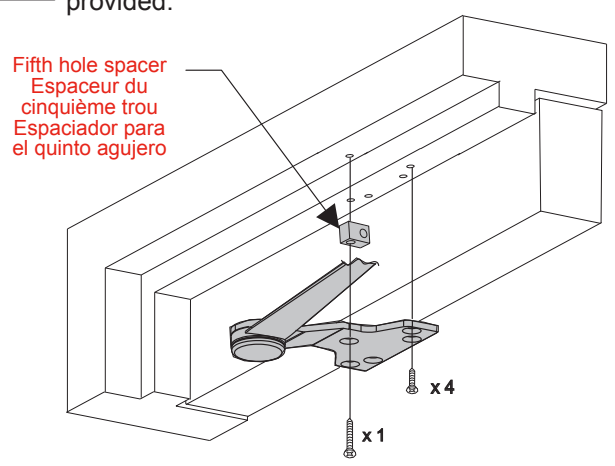
⚠CAUTION

IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

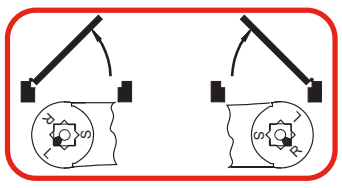
3 Using screws provided, secure closer to door.



4 Open door to approx. 45°, attach arm to frame with fasteners provided.



5 ⓐ Pre-load closer to 30°, as shown. ⓑ Attach arm to closer, with provided fastener.



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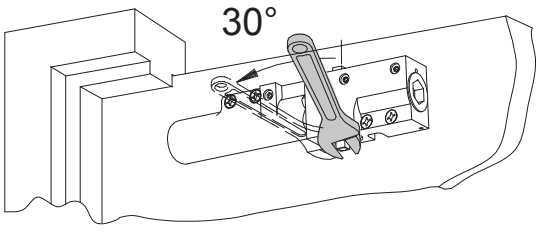

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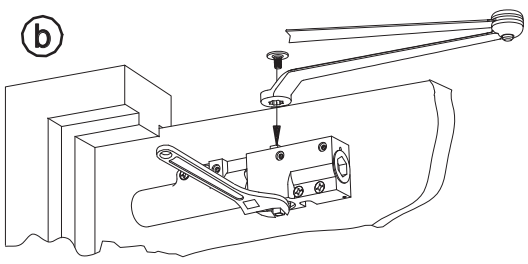
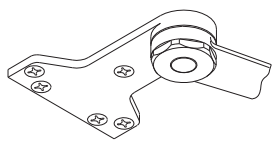


II To adjust Optional Hold-open arm:
①Loosen hold open nut.
②Open door 5° less than desired position and tighten hold open nut securely.

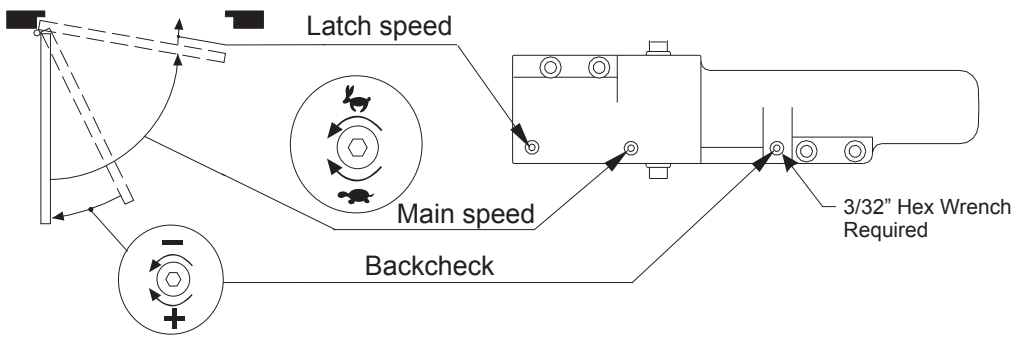


6 If necessary, adjust closer.

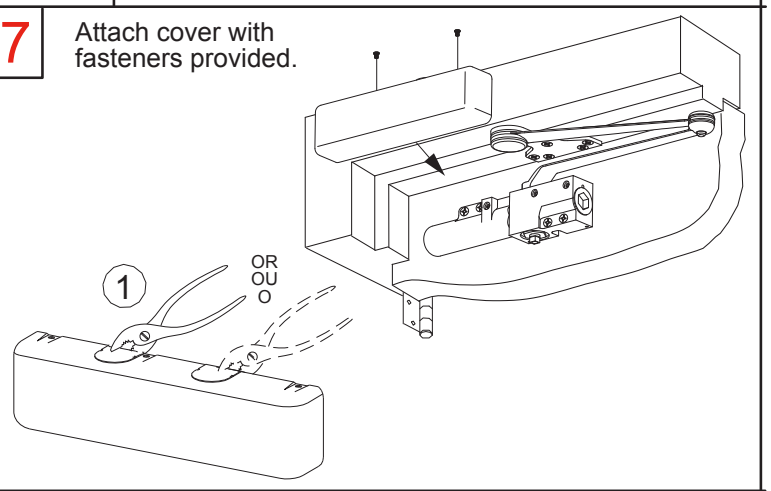
NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

⚠CAUTION

OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



7 Attach cover with fasteners provided.



---

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percezdes trous de 5/32 po.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

3 Fixez le ferme-porte sur la porteavec les attaches fournies.

4 Cuvrez la porte à environ 45°, fixez le bras au cadre à l'aide des attaches fournies.

5 ⓐ Montez le bras sur la tige à 30° du ferme-porte, comme sur l'illustration.
ⓑ Fixez l'assemblage du bras au ferme-porte à l'aide des vis fournies.

6 Au besoin, réglez
vitesse de verrouillage
vitesse de fermeture
résistance d'ouverture

7 Fixez le boîtier avec les attaches fournies.

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

Pour régler le bras de retenue optionnelle : 1. Desserrez la vis de retenue. 2. Ouvrez la porte 5° de moins que la position désirée et resserrez la vis.

⚠DANGER

Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877 - 671 - 7011

⚠DANGER

UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

---

1 Localice la plantilla apropiada. Marque el centro de todos los agujeros. Barrene agujeros de 5/32".

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

3 Sujeta el cerrador a la puerta con los tornillos ya incluidos.

4 Abra la puerta hasta aprox. 45°, sujete el brazo al bastidor con los sujetadores ya incluidos.

5 ⓐ Monte el brazo en el eje a 30° del cerrador, tal como se muestra.
ⓑSujete el ensamblaje del brazo al cerrador con el tornillo piñión ya incluido.

6 Ajusta si es necesario
velocidad de seguro
velocidad principal
resistencia de apertura

7 Coloca la tapa con los sujetadores ya incluidos.

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

Para ajustar el brazo de retención opcional: 1. Afloja la tuerca de retención. 2. Abre la puerta a 5° de menos que la posición deseada y aprieta bien la tuerca de retención.

⚠ADVERTENCIA

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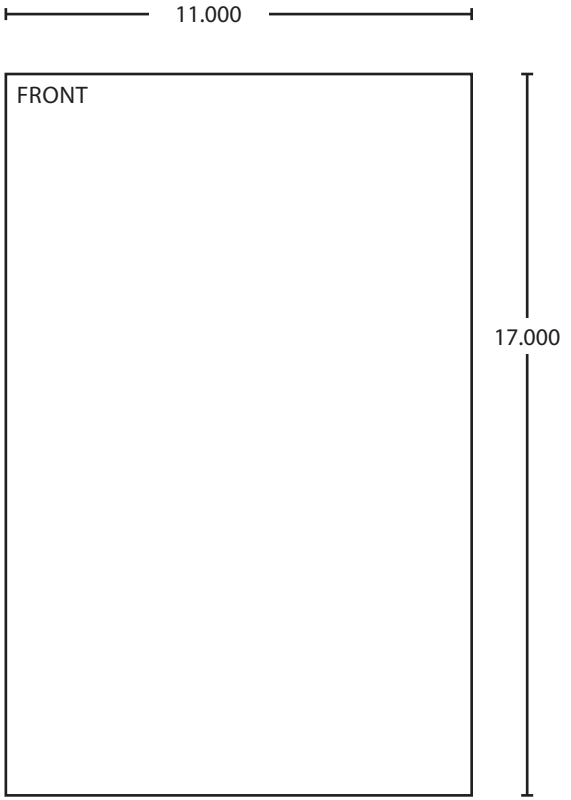
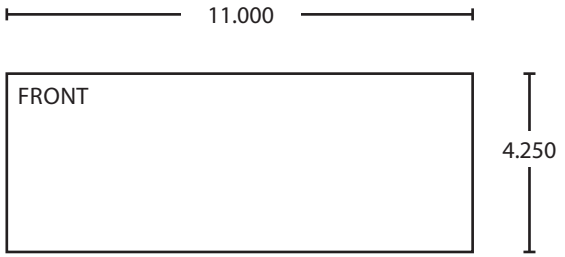


BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	N/A	043812			

Material
White Paper

Notes
1. printed one side
2. printed black and PMS 485 (red)
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
C > Revised artwork

Edited By	Approved By	EC Number	Release Date
R. Byun	M. Sasso	043812	01-01-14

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Creation Date	Number	Revision
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LCN®

70955

240V Senior Swing

2800 Overhead Concealed Series
9500 Surface Applied Series

Installation Instructions

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1-877-671-7011
70955 Rev. 6/11_a

Ingersoll Rand
Security Technologies

IMPORTANT

LCN Senior Swing

The Senior Swing Power Operator System is a low energy product and ***must*** conform to the latest version of ANSI/BHMAA156.19 (American National Standard for Power Assist and Low Energy Power Operated Doors).

Installation Instructions

All installation instructions are valuable references and should not be discarded. They should be given to the building owner or maintenance supervisor after installation is complete.

CAUTION

Improper installation or set up may result in personal injury or property damage. Follow all instructions carefully. For answers to questions, call:

Technical Support
1-877-671-7011

IMPORTANT

These instructions are presented in step-by-step sequence. It is very important that installation begins with "1. Pre-Installation Site and Product Check" (page 4) and continues as directed after each section.

WARNING

Always disconnect main power to the operator prior to replacing.

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General 3
Pre-Installation Site and Product Check (Surface and Concealed) 4
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Pivot Block Installation (Concealed, Center Pivoted) 10
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GENERAL

The Senior Swing is an automatic electromechanical swinging door operator for a single door, simultaneously operated, or independently operated pair of doors. The concealed application operates center pivoted, offset pivoted, or butt hung/hinged doors. The surface application operates balanced (push side only), center pivoted, offset pivoted, or butt hung/hinged doors in either push or pull mode.

When activated, the Senior Swing drives the door to the full open position, then electrical power is turned off and the door is closed by spring force. The activating circuit opens the door from any position in the closing swing. During a power failure, the Senior Swing acts as a manual door closer (size 3). Door opening and closing cycles, including opening speed, back check speed, hold open time delay, closing speed, and latch position, are adjustable.

1. PRE-INSTALLATION SITE AND PRODUCT CHECK (Surface and Concealed)

⚠ IMPORTANT

Do not install the Senior Swing unless all of the following conditions are correct.

1.1. Check that the product model is correct for the required application.

1.2. Check that all parts listed on the bill of material are in the shipping container.

1.3. Check architectural and final approved shop drawings for position of frame and openings.

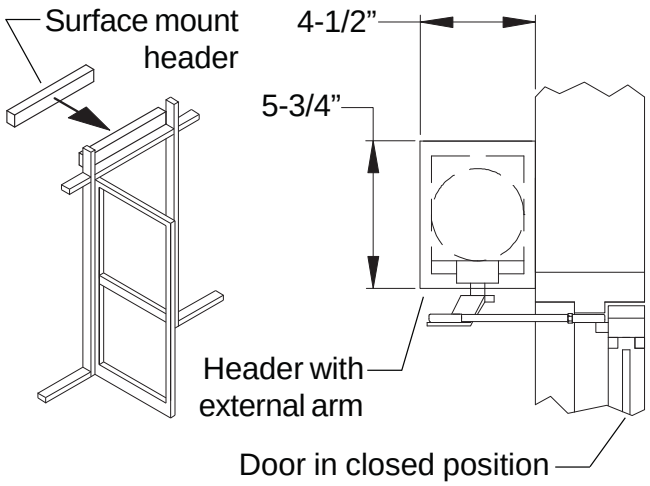
1.4. For concealed applications, check that the opening allows 1/4" at each side and at the top so that the frame and the header can be plumbed square and caulked.

1.5. For surface mount applications onto 2" frames, consult factory to determine if mounting plate is required.

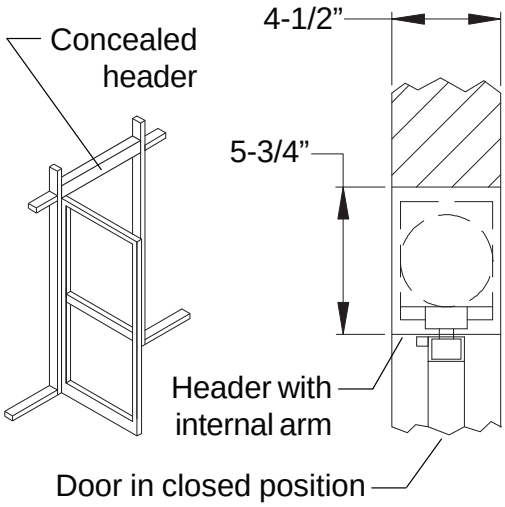
1.6. Special tool may be required for installation of rivet nuts.

1.7. Check for sufficient header clearances:

Surface Application (Push System Shown)



Concealed Application



1.8. For a ramped floor, check that the break in the grade occurs at the edge of the 2" threshold and slopes away from the entrance to allow proper door swing or panic breakaway.

1.9. Check that a 240 volt, single phase, 50/60 Hz, fused, 15 amp, 3-wire power supply is available at the side jamb with approximately 12" of wire available to connect to the operator. UL approved type flexible conduit is recommended for the 240 volt power line.

The 240 volt power supply must be a dedicated circuit from the main circuit breaker panel and **must not** be connected into a building lighting system operating fluorescent lights.

• For concealed applications, continue with "2. Header Installation (Concealed)" on page 5.

• For surface applications, continue with "3. Header Installation (Surface)" on page 6.

2. HEADER INSTALLATION (Concealed)

NOTE

Install **concealed application** headers so there is 1/8" between the bottom of the header and the top of the door.

2.1. Prepare existing jamb tubes using template 740069, then install four 1/4-20 rivet nuts inside each jamb tube.

2.2. Align the header with the jamb tubes. For headers with a single operator, position the end of the header containing the operator brackets near the pivot side of the opening (Figure 2-1). Secure the header to the jamb tubes with four 1/4-20 hex head screws at each end (Figure 2-2).

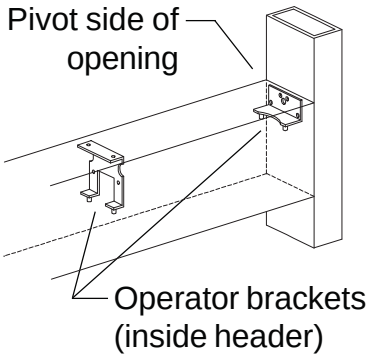


Figure 2-1

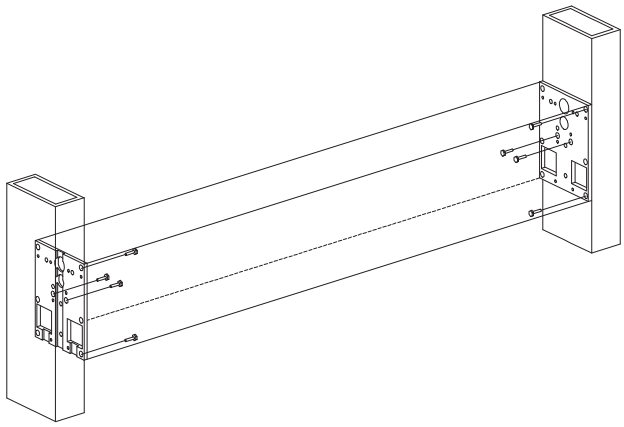


Figure 2-2

2.3. Stand the header/jamb tube assembly in the opening.

2.4. Feed the 240 volt power conduit into the header (Figure 2-3). Leave 12" minimum of wire inside the header for final hookup.

2.5. Shim and square the side jamb tubes in position, then secure the jamb tubes in the opening.

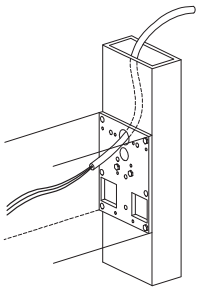


Figure 2-3

• Continue with "4. AC Power and Ground Wiring (Surface and Concealed)" on page 8.

3. HEADER INSTALLATION (Surface)

3.1. For a header with two operators (for a simultaneously operated pair of doors), designate one end of the header as the companion operator end. (It does not matter which end.)

3.2. Refer to Figure 3-1 and step 3.3 and prepare wire access holes appropriate for the application in the header using template 740070. Be sure to position edge “A” of template 740070 as shown in Figure 3-1.

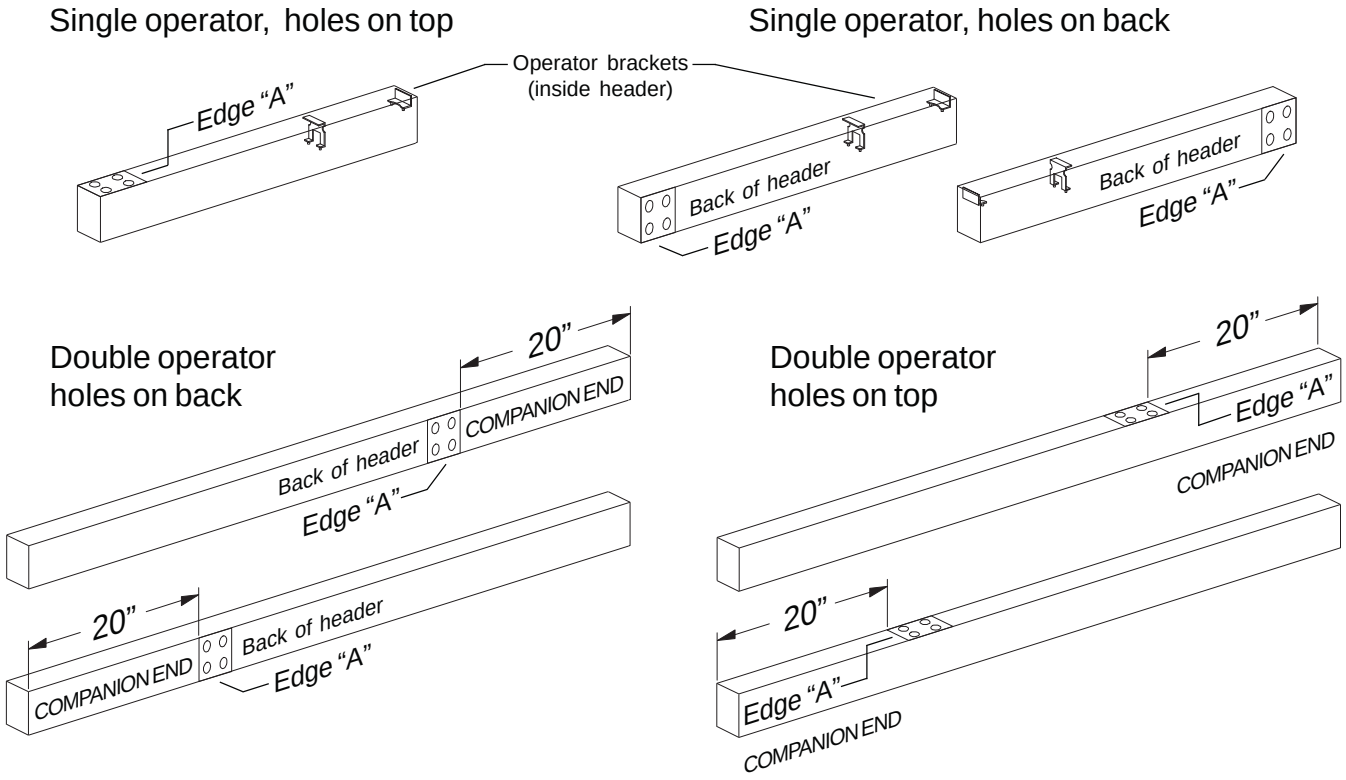


Figure 3-1

3.3. Install horizontal mounting brackets on the header per the instructions supplied with the brackets (Figure 3-2). Make sure the horizontal mounting brackets are oriented so the wire access holes in the header (see step 3.2) face up or face the door and, for single operator headers, the operator brackets inside the header are near the hinge side of the opening.

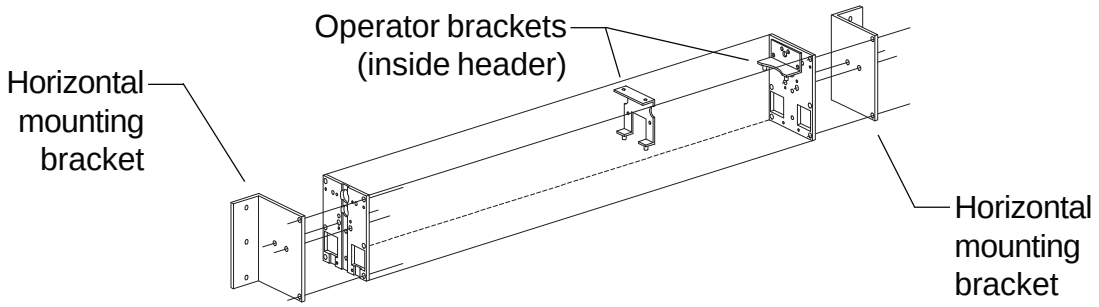


Figure 3-2

NOTE

Install surface applied headers with the following spacing between the bottom of the header and the top of the door:

Pull arm application: 1-1/8”

Push arm application: 1”

3.4. For aluminum storefront or aluminum tube frame, install the header with horizontal mounting brackets to the jams per the instructions supplied with the horizontal mounting brackets (Figure 3-3).

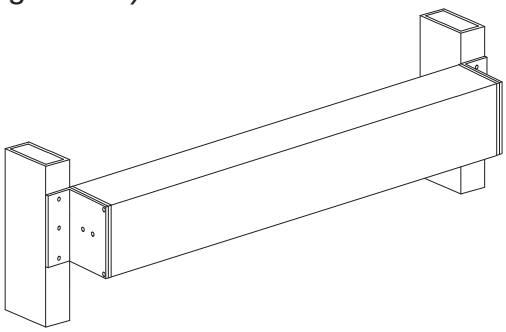


Figure 3-3

3.5. Hollow metal and wood frames require the use of a -18 mounting plate, sold separately (Figure 3-4).

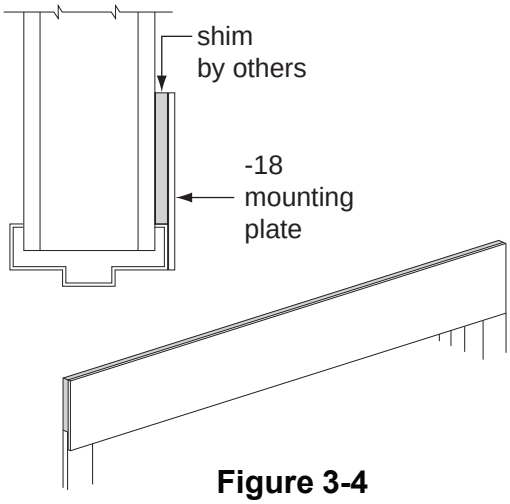


Figure 3-4

3.6. Feed the 240 volt power conduit into the header (Figure 3-5). Leave 12” minimum of wire inside the header for final hookup.

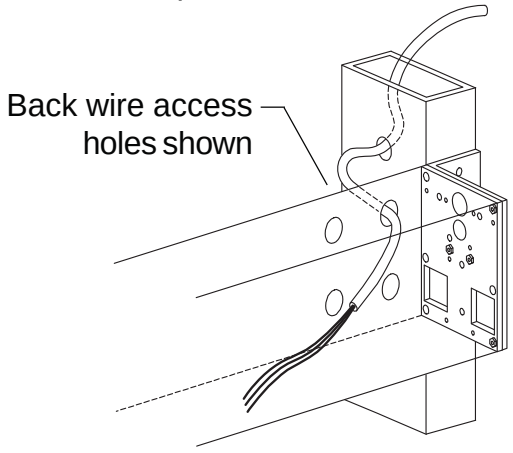


Figure 3-5

• Continue with “4. AC Power and Ground Wiring (Surface and Concealed)” on page 8.

4. AC POWER AND GROUND WIRING (Surface and Concealed)

4.1. Connect the 240 volt power wires to the AC power cable (part number 761463) and header end plate as shown in Figure 4-1.

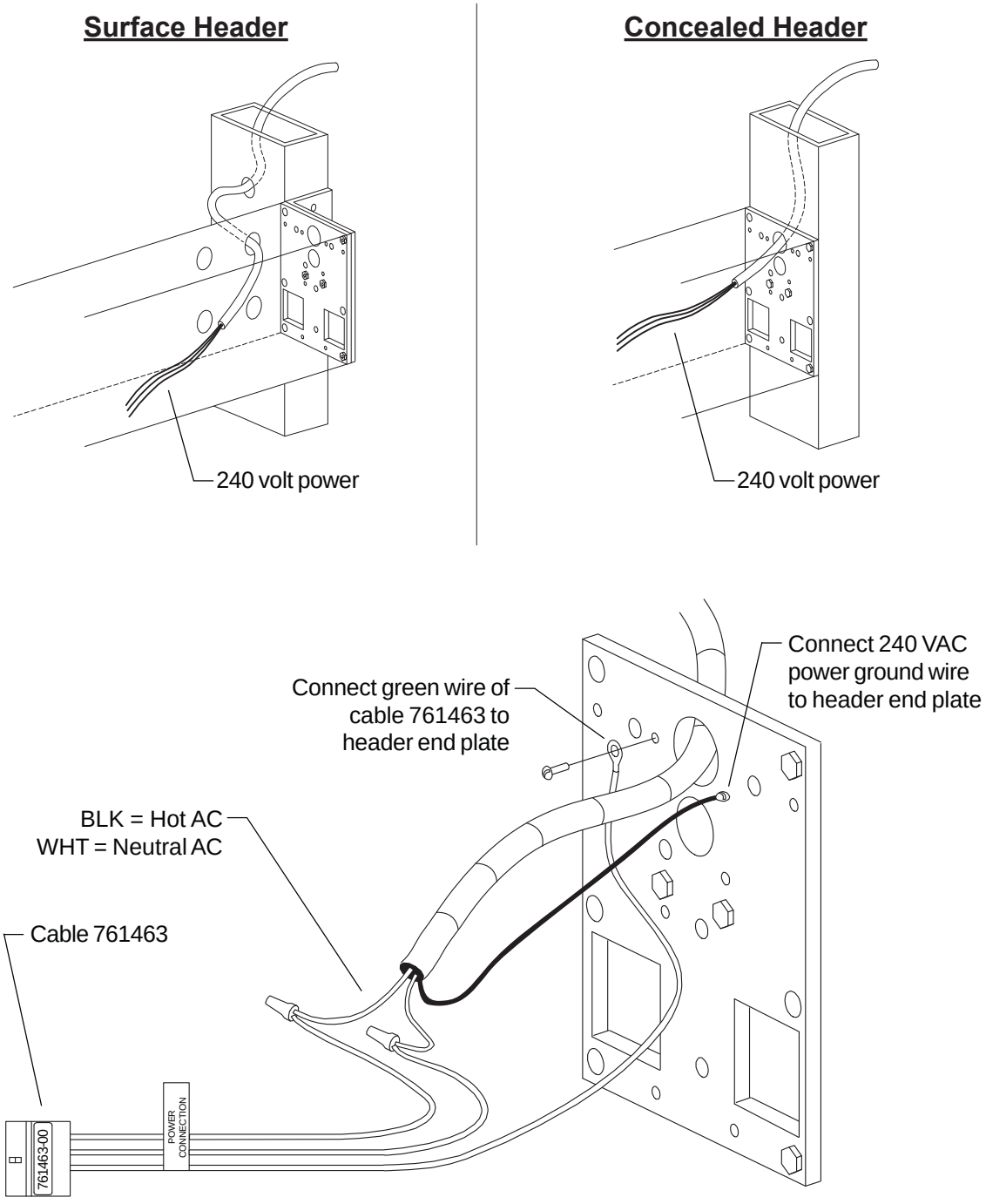


Figure 4-1

• Continue with "5. Operator Installation (Surface and Concealed)" on page 9.

5. OPERATOR INSTALLATION (Surface and Concealed)

5.1. For double operator systems with differently handed operators, make sure that the correct operator is installed in each end of the header. The handing of the operator (R.H. or L.H.) is indicated on a label on the operator.

5.2. Connect the end of the green operator ground wire to the rear operator mounting bracket in the header (Figure 5-1) using the #10-32 hex head green ground screw supplied in the operator screw pack.

5.3. Make sure there is a rubber grommet inside each of the four operator mounting holes (Figure 5-2).

5.4. Line up the four mounting holes on the operator with the four mounting studs on the operator brackets (Figure 5-3). Make sure that the operator cable (with 6-pin connector) is hanging down freely and push the operator up onto the mounting studs. Make sure cables are not pinched when operator is installed. (The mounting studs fit snugly into the grommets, and firm pressure may be required to get the operator into position.)

5.5. Secure the operator to the header using four 5/16-18 hex head screws and washers (Figure 5-3). Tighten the screws until they make contact with the mounting studs on the operator brackets.

5.6. Connect the other end of the green ground wire to the small hole in the bottom of the operator (Figure 5-3).

5.7. For a header with two operators, install the second operator in the same manner.

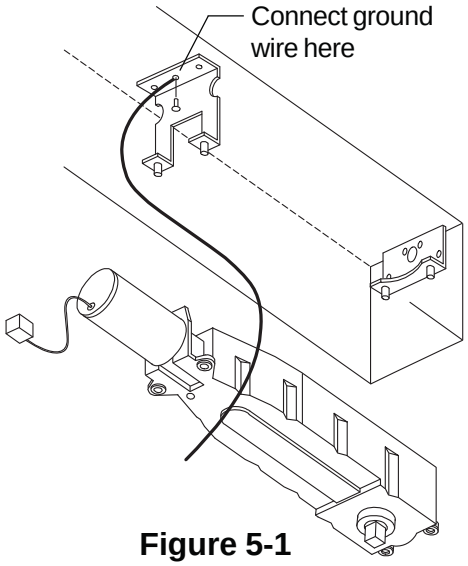


Figure 5-1

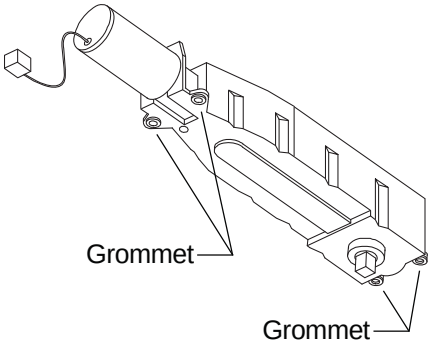


Figure 5-2

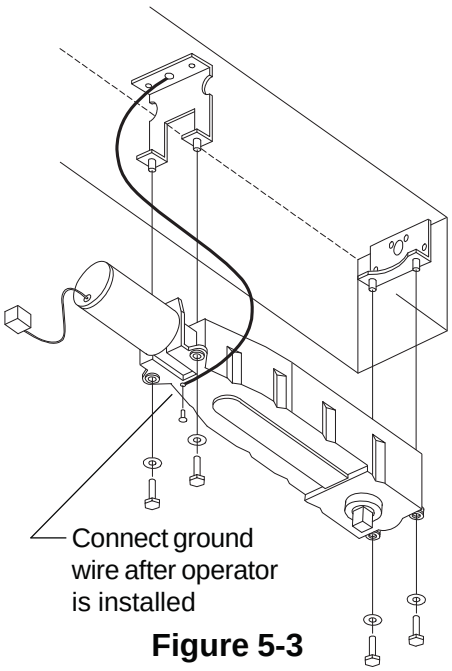


Figure 5-3

- **For center pivoted doors, continue with "6. Pivot Block Installation (Concealed, Center Pivoted)" on page 10.**
- **For other doors, continue with "8. Control Box Installation (Surface and Concealed)" on page 12.**

6. PIVOT BLOCK INSTALLATION (Concealed, Center Pivoted)

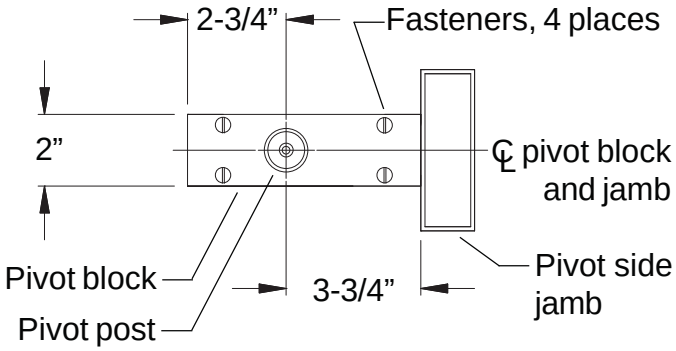
NOTE

This section is applicable ONLY if using the factory supplied lower pivot block (with pivot post attached) on center pivoted doors. If not being used, continue with "7. Breakaway or Fixed Stop Installation (Concealed, Center Pivoted)" on page 11.

6.1. Position the lower pivot block (Figure 6-1) as shown in Figure 6-2 oriented so the pivot post is 2-3/4" or 3-3/4" (nominal) from the jamb, as necessary.

6.2. Use the pivot block as a guide and mark and prepare four mounting holes for appropriate fasteners for the mounting surface.

6.3. Secure the pivot block in place with appropriate fasteners (Figure 6-3).



NOTE

Pivot block shown installed for a door with a 3-3/4" mounting point. For 2-3/4" mounting point, reverse pivot.

Figure 6-1. Top view of lower pivot block.

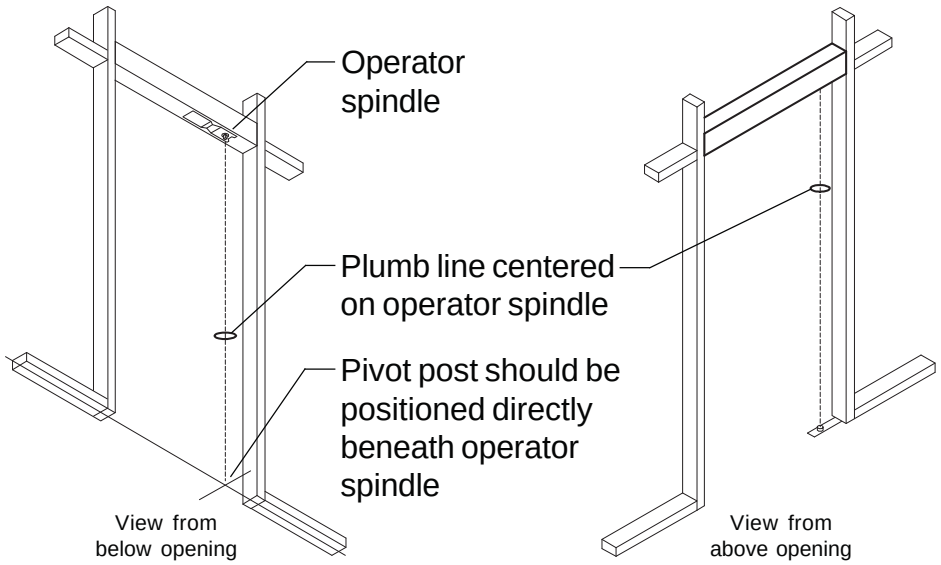


Figure 6-2

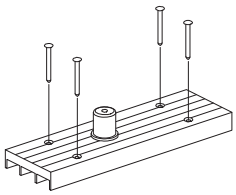


Figure 6-3

• Continue with "7. Breakaway or Fixed Stop Installation (Concealed, Center Pivoted)" on page 11.

7. BREAKAWAY OR FIXED STOP INSTALLATION (Concealed, Center Pivoted)

⚠ NOTE

This section is applicable ONLY to center pivoted doors using the factory supplied breakaway or fixed stop. If not being used, continue with "8. Control Box Installation (Surface and Concealed)" on page 12.

Breakaway and Fixed Stop Operation

The function of the breakaway or fixed stop is to act as a mechanical stop on an inswinging door so the door cannot normally be opened in the outswinging direction.

The **breakaway stop** differs from the fixed stop in that, in a panic or fire condition, when approximately 50 lbs. of force is applied on the door from the inswinging side, the door will open in the outswinging direction. When this occurs, a switch in the breakaway stop disables the automatic operation of the door. The door then remains inoperative and in the breakaway position until it is manually pushed back through the opening to the inswinging side. This action resets the breakaway stop and restores automatic operation.

7.1. Orient the breakaway stop according to the directions on the switch label (Figure 7-1). The "OPENING DIRECTION OF DOOR" arrow should point in the direction that the door opens during normal operation.

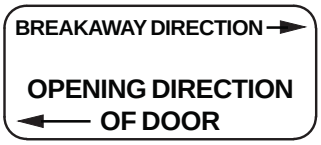


Figure 7-1

7.2. Install the breakaway or fixed stop inside the header approximately 2-1/4" from the latch end using the four #8-32 x 3/4" screws supplied with the stop (Figure 7-2). Mounting holes for the stop have been prepared in the header at the factory.

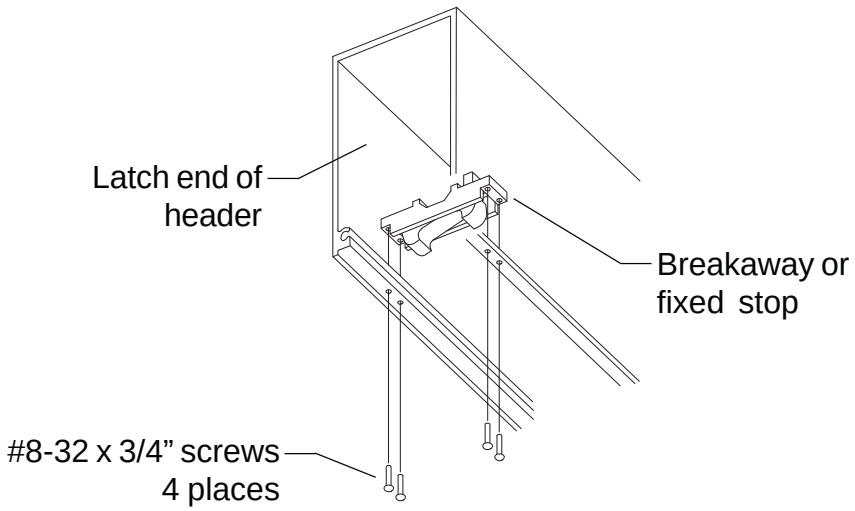


Figure 7-2

• Continue with "8. Control Box Installation (Surface and Concealed)" on page 12.

8. CONTROL BOX INSTALLATION (Surface and Concealed)

8.1. Orient the control box so the keypad faces down and the 6-pin Molex connector faces the operator for a single system or the master operator for a double system (Figure 8-1).

8.2. Raise the control box into the header and rotate the two mounting bars so they engage the slots that run the length of the header (Figure 8-2).

8.3. See Figure 8-3 for final positions of operator(s) and control box inside the header.

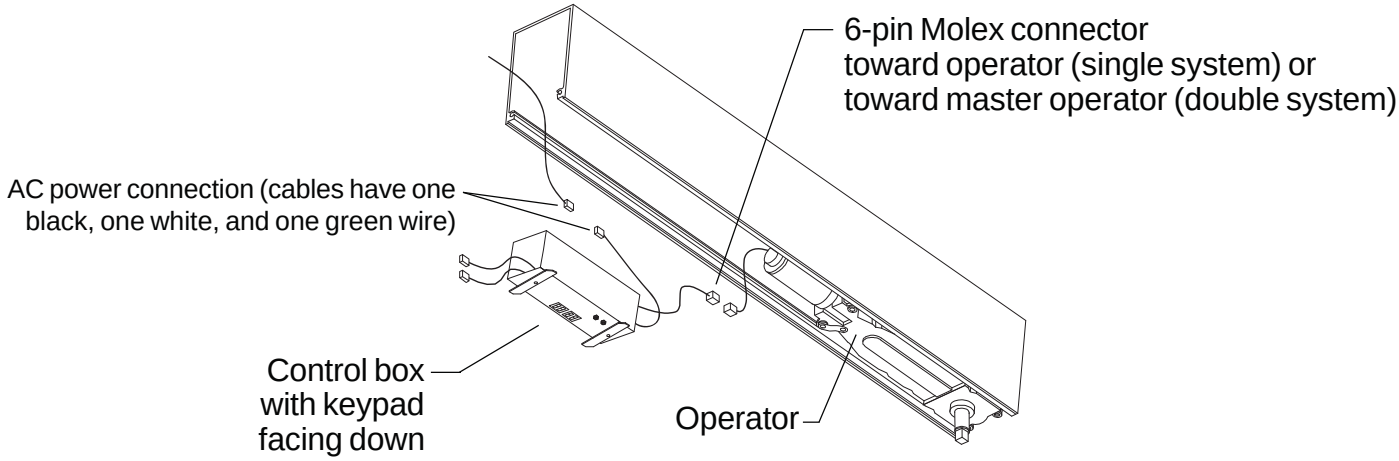


Figure 8-1

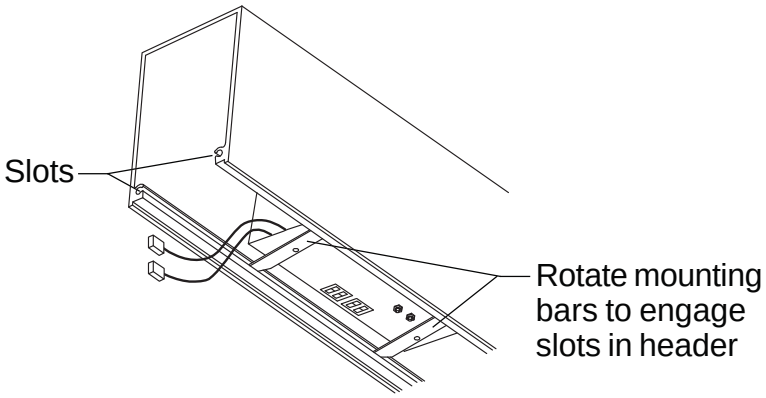
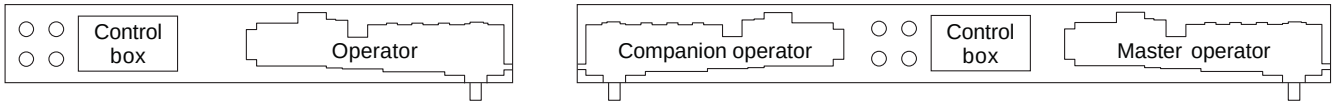


Figure 8-2



Views from front of header, wire access holes shown on back of header

Figure 8-3

• Continue with "9. Control Box Wiring (Surface and Concealed)" on page 13.

9. CONTROL BOX WIRING (Surface and Concealed)

⚠ CAUTION

High voltage wiring must be separated from low voltage wiring by UL listed wiring for the control box, operators, and low voltage accessories.

⚠ CAUTION

When joining or separating a Molex plug and receptacle, do not push or pull on any of the wires. This may cause a wire to be pulled loose from a terminal, which may result in a malfunction.

9.1. Single operator system minimum wiring requirements:

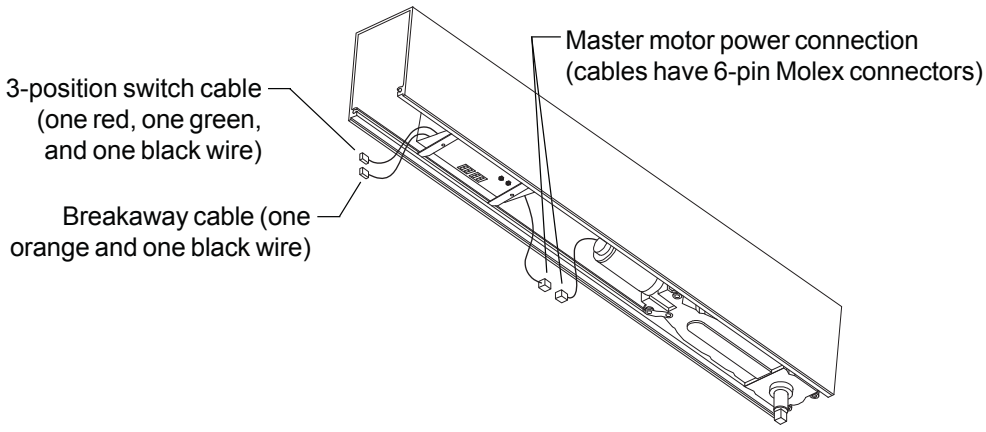
- AC power
- Master motor power
- Breakaway switch or jumper

Double operator system minimum wiring requirements:

- AC power
- Master motor power
- Companion motor power
- Breakaway switches or jumpers; if two Breakaway switches are used, wire switches in series

9.2. For wiring of companion operator and and additional accessories, see the Senior Swing Control Box installation instructions.

9.3. Dress all wires neatly together and use clips to retain wires in their proper locations.



• For center pivoted doors, continue with "10. Finger Guard Installation (Concealed, Center Pivoted)" on page 14.

• For other doors, continue with "12. Arm Installation (Surface and Concealed)" on page 17.

10. FINGER GUARD INSTALLATION (Concealed, Center Pivoted)

NOTE

This section is applicable ONLY to center pivoted doors using the factory supplied finger guard. If not being used, continue with "11. Door and Arm Installation (Concealed, Center Pivoted)" on page 15.

10.1. Scribe a line down the center of the pivot side door jamb (Figure 10-1).

10.2. If necessary, cut down the finger guard to fit the installation.

10.3. Align the center of the finger guard over the scribed line. Use the screw holes in the finger guard as guides to locate the mounting holes, and drill #21 (0.159" dia.) mounting holes in the door jamb.

10.4. Secure the finger guard to the door jamb with #10 self-threading screws.

10.5. Make sure there is one mounting screw approximately 1" from each end of the finger guard. If necessary, drill additional mounting holes in the finger guard and door jamb in these locations and install #10 self-threading screws.

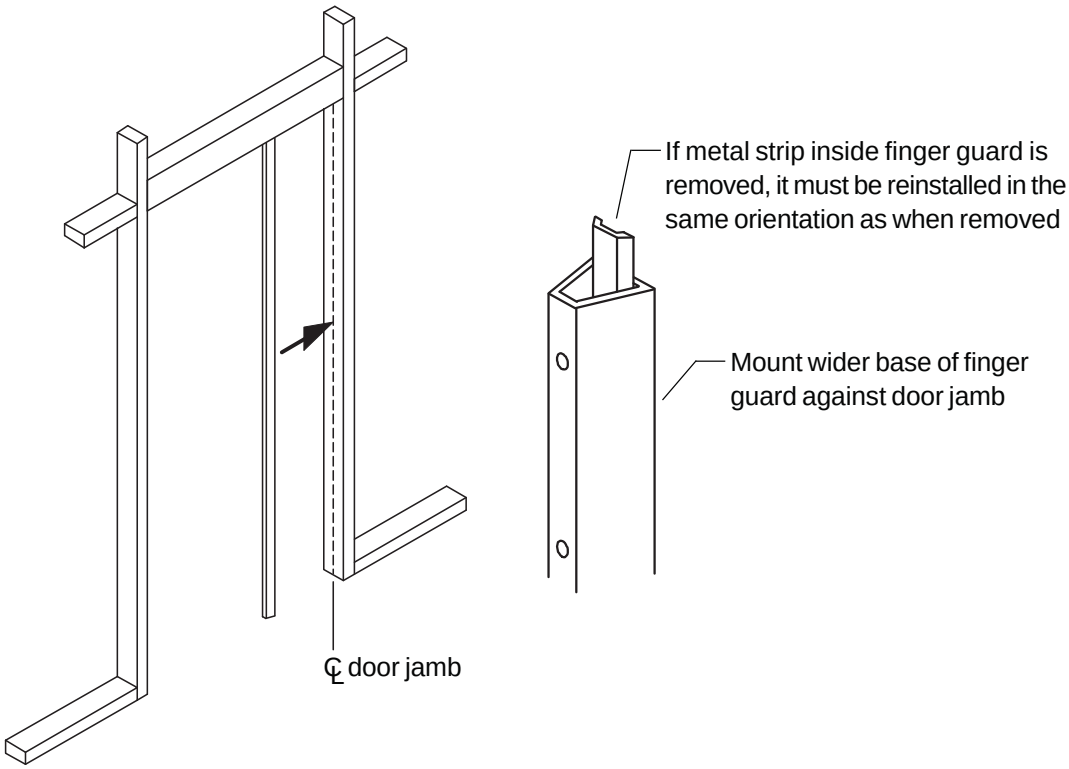


Figure 10-1

• Continue with "11. Door and Arm Installation (Concealed, Center Pivoted)" on page 15.

11. DOOR AND ARM INSTALLATION (Concealed, Center Pivoted)

11.1. Prepare door for arm (Figure 11-1).

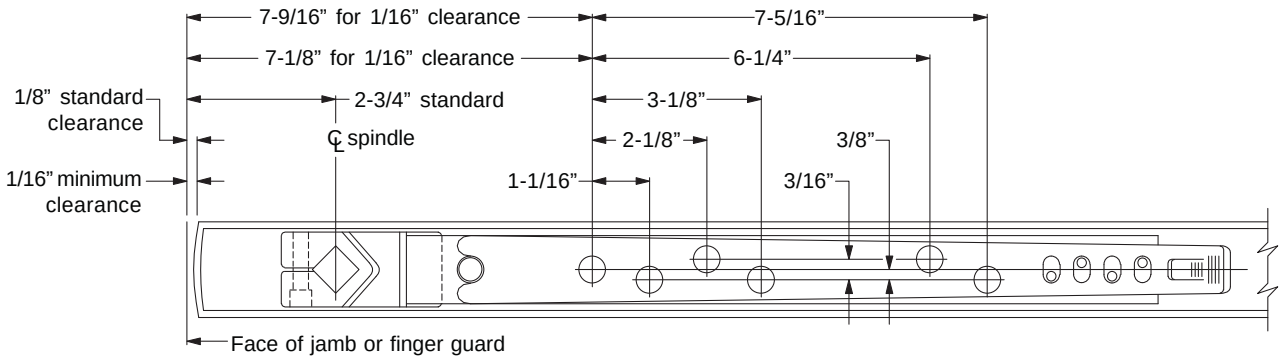


Figure 11-1

11.2. Install top arm and bottom pivot using screws supplied with those components (Figure 11-2). Use machine screws for metal door; use wood screws for wood door.

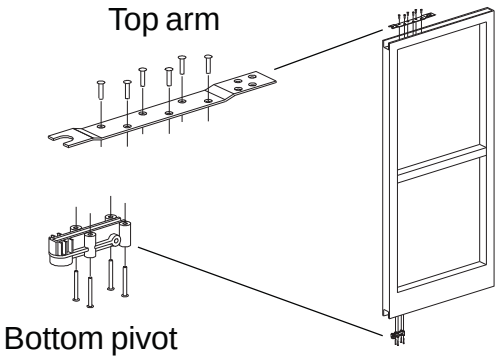


Figure 11-2

11.3. Orient the arm in the breakout position (Figure 11-3). Install the arm in the breakout position by pressing the arm onto the spindle until the end of the spindle is flush with the bottom surface of the arm (Figure 11-4). Tighten the Allen head cap screw on the arm (Figure 11-4).

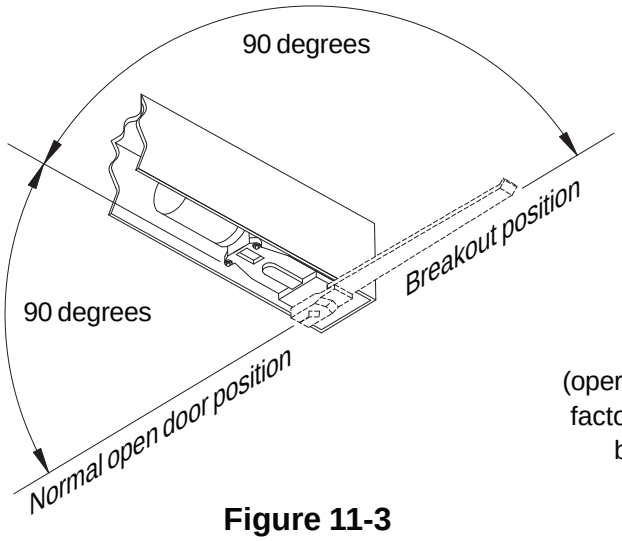


Figure 11-3

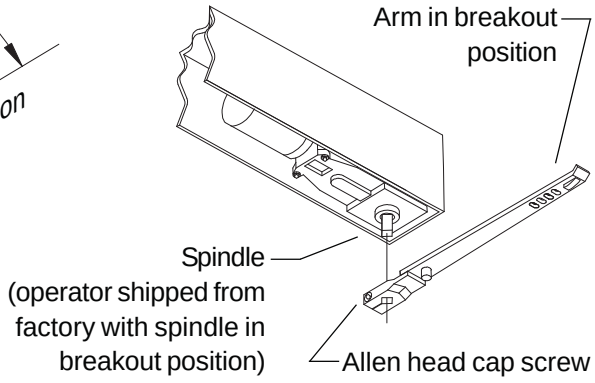


Figure 11-4

11.4. Position the door so the arm is in the top channel of the door and gently slide the door up against the lower pivot (Figure 11-5).

11.5. Lift the door slightly and push back until the bottom pivot locks into place.

11.6. Raise the nose of the door and push back until the top arm snaps into place.

11.7. Align the door in the open position (perpendicular to the opening).

11.8. Install two 1/4-20 x 1/2" hex head cap screws and washers through two of the oval holes in the arm and into the top attachment arm (Figure 11-6). Install screws in whichever of the positions shown align with the door in the open position (perpendicular to the opening).

11.9. Check door operation by pushing door to normal closed position, continue pushing through breakaway stop to 90 degree open position, and then release door. Door should close.

CAUTION

If the operator is not connected to the control box, the door will slam closed when released.

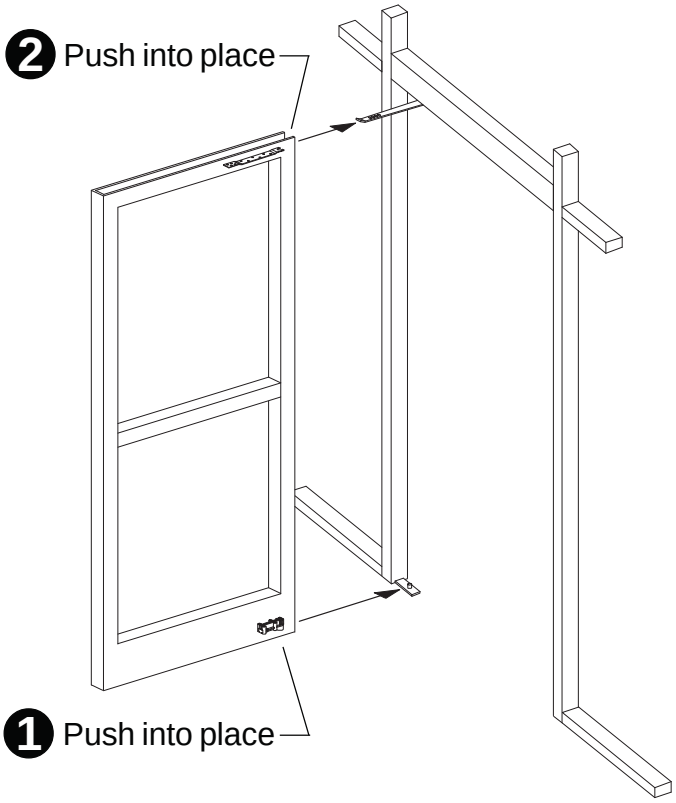


Figure 11-5

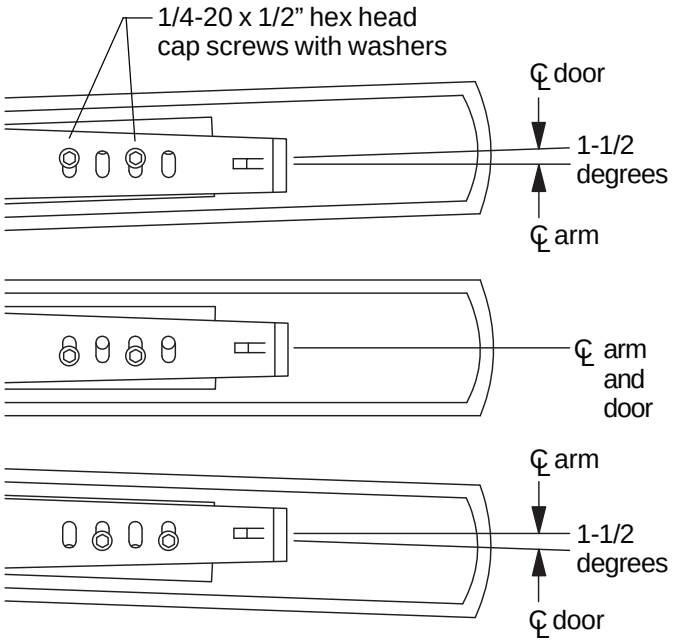


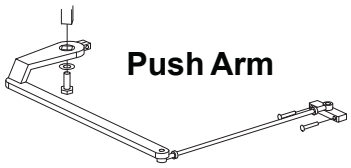
Figure 11-6

• Continue with "13. Glazing (Surface and Concealed)" on page 17.

12. ARM INSTALLATION (Surface and Concealed)

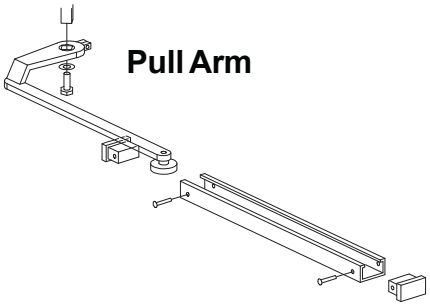
Surface

Push Arm: For surface header applications. To install, see separate instructions for Push Arm & Link Assembly.



Push Arm

Pull Arm: For surface header applications, see separate instructions for Pull Arm Assembly.



Pull Arm

Concealed

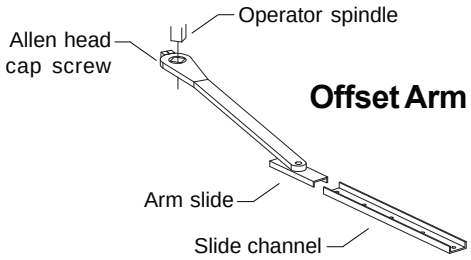
Offset Arm: For concealed header applications with butt hung and offset pivoted doors. To install:

1. Prepare door and install slide channel (see separate Installation Instructions for Offset Arm).

2. Note position of operator spindle. Turn on operator power. Momentarily short activation wires so spindle slowly rotates toward full open position and stops. Continue doing this until spindle reaches full open position (refer to Figure 11-3), then join activation wires together with a wire nut.

3. Insert arm slide into slide channel, slide arm onto spindle, and tighten arm Allen head cap screw.

4. Remove wire nut from activation wires; turn off power.



• Continue with "13. Glazing (Surface and Concealed)"

13. GLAZING (Surface and Concealed)

⚠ CAUTION

Glazing material must comply with the ANSI standard specification.

⚠ CAUTION

Operator speed adjustments cannot be set properly until after the door is glazed.

• Continue with "14. Control Box Functions (Surface and Concealed)"

14. CONTROL BOX FUNCTIONS (Surface and Concealed)

To set control box functions, see the Senior Swing Control Box installation instructions.

• Continue with "15. Plate Installation (Surface and Concealed)" on page 18.

15. PLATE INSTALLATION (Surface and Concealed)

Surface

1. Install spindle plate and filler plate (Figure 15-1). Spindle plate cutout fits over operator spindle.

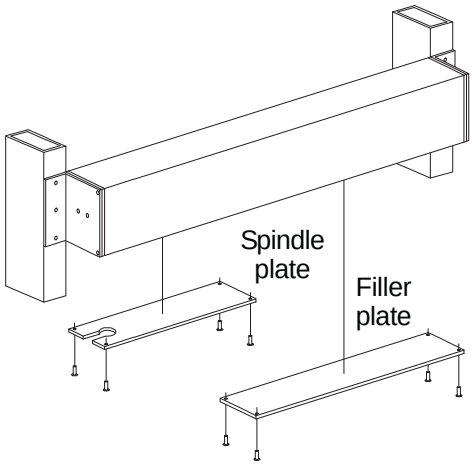


Figure 15-1

Concealed

For concealed header applications using offset arm with butt hung and offset pivoted doors **only**:

1. Prepare header dress plates for concealing channel (Figure 15-2; see separate Installation Instructions for Offset Arm).

2. Install concealing channel (Figure 15-2).

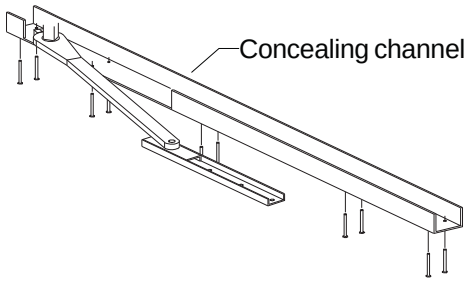


Figure 15-2

• Continue with "16. Release for Service (Surface and Concealed)"

16. RELEASE FOR SERVICE (Surface and Concealed)

16.1. Remove all tools, installation equipment, and debris from the vicinity of the door.

16.2. Install all safety, traffic control, and instruction decals on the door as required by the latest revision of ANSI/BHMAA156.19 for the Senior Swing.
This is very important! Failure to do this leaves the installer LIABLE for any accident that might occur. This must be done!

16.3. Verbally instruct the owner or person in charge of the proper operation of the door.

16.4. Instruct the owner or person in charge to routinely inspect the door for occasional damage, developing problems, minor preventive maintenance.

16.5. Instruct the owner or person in charge who and where to call for service when required.

⚠ IMPORTANT

Make sure to install all safety, traffic control, and instruction decals on the door as required.

29810

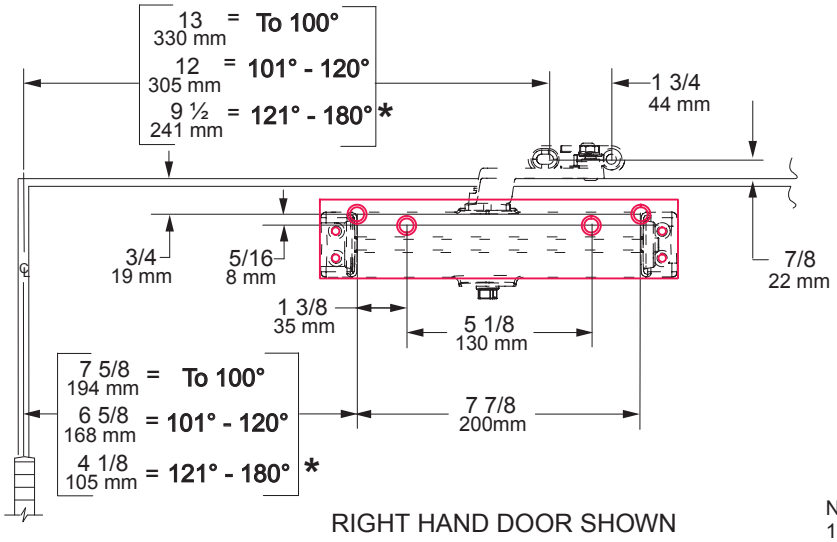
1260 Series

LCN®

Installation Instructions

1260 PULL SIDE (DOOR MOUNT) DROP PLATES

PULL SIDE ARM MOUNTED ON: 1260-18 DROP PLATE

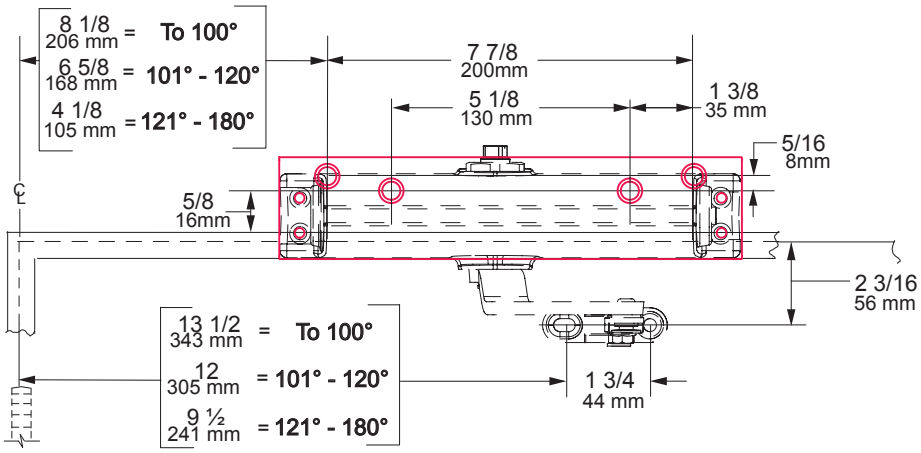


RIGHT HAND DOOR SHOWN
LEFT HAND DOOR OPPOSITE

NOTES -
1. MINIMUM TOP RAIL HEIGHT IS 1 ½".
* 2. TRIM PERMITTING.

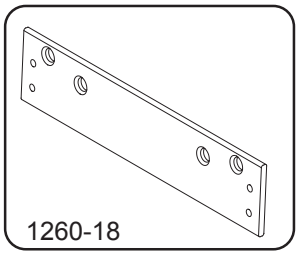
1260 PUSH SIDE (TOP JAMB) DROP PLATES

PUSH SIDE ARM MOUNTED ON: 1260-18 DROP PLATE



LEFT HAND DOOR SHOWN
RIGHT HAND DOOR OPPOSITE

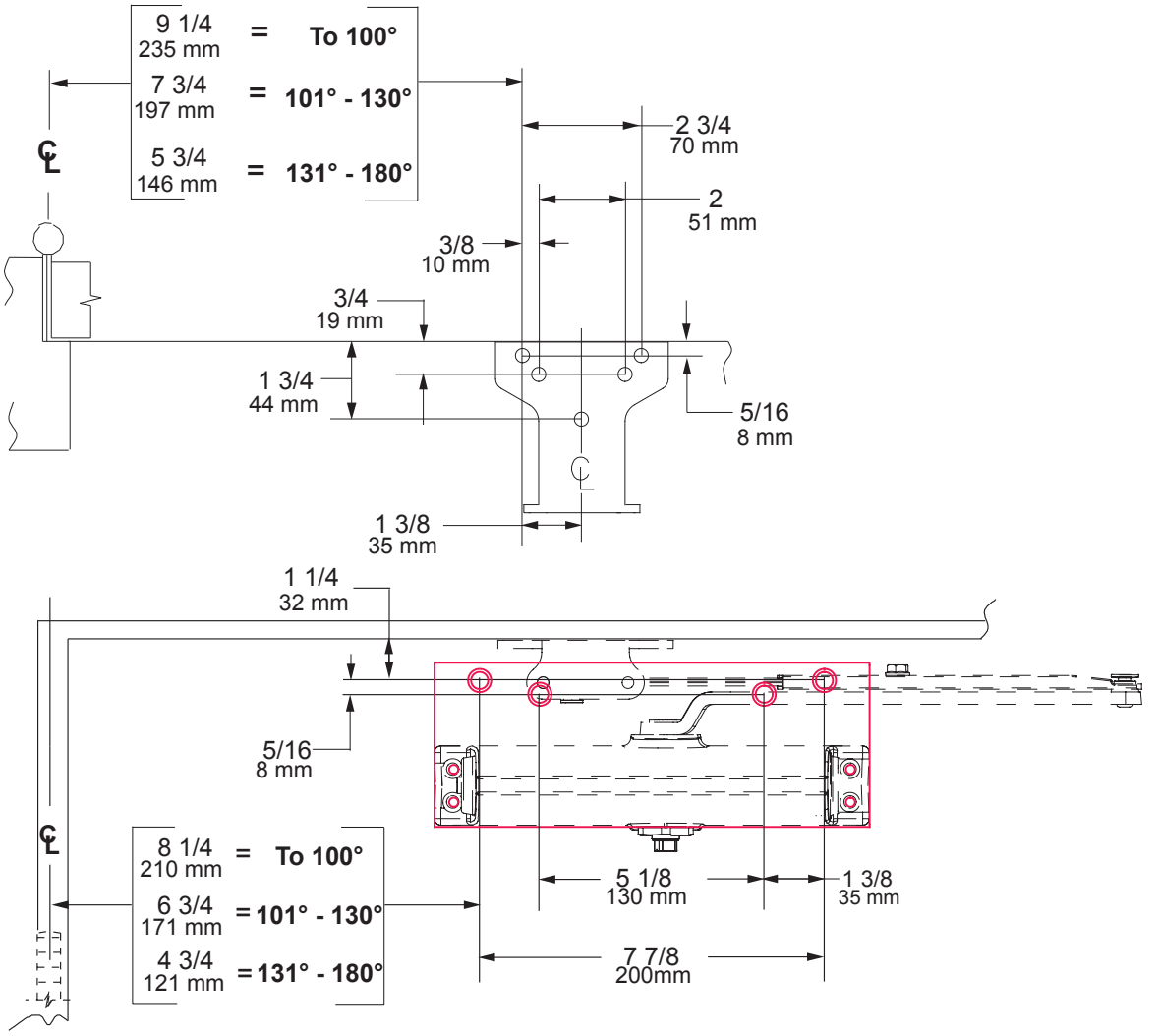
NOTES -
1. MINIMUM FACE FRAME IS 1 3/8".



GENERAL NOTES:
1. ON TOP JAMB & HINGE FACE MOUNTS. LOCATE CLOSER & SHOE FROM CENTERLINE OF PIVOT OR SWING CLEAR HINGE PIN WHEN USED.
2. ON TOP JAMB MOUNTING WHEN OVERHEAD STOP IS USED, SHOE MUST BE LOWERED TO CLEAR HOLDER.
3. FOR 180° OPENING, MAX BUTT SIZE IS 5" X 5"
4 REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.
5. CLOSER SIZE IS 10" x 2 1/4" x 2 7/8".

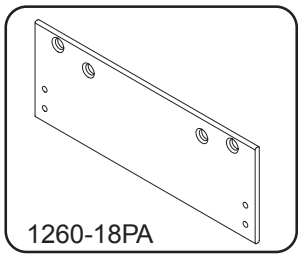
P1260 PUSH SIDE (DOOR MOUNT) DROP PLATES

PUSH SIDE PARALLEL ARM MOUNTED ON: 1260-18PA DROP PLATE



LEFT HAND DOOR SHOWN
RIGHT HAND DOOR OPPOSITE

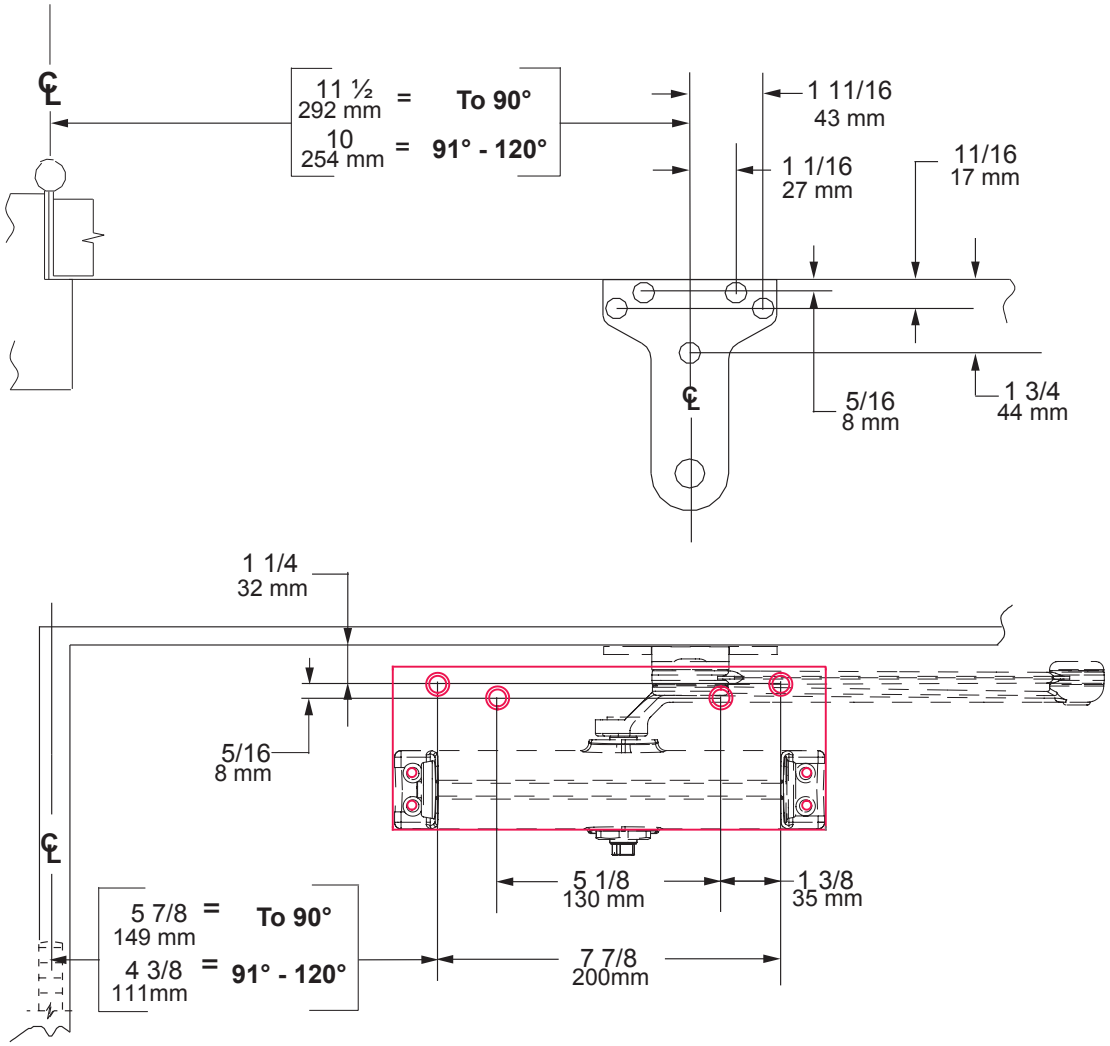
NOTES -
1. MINIMUM TOP RAIL 2 ½".



GENERAL NOTES:
1. LOCATE CLOSER & SHOE FROM CENTERLINE OF PIVOT OR SWING CLEAR HINGE PIN WHEN USED.
2. FOR 180° OPENING ON HINGE FACE MOUNTS, MAX BUTT SIZE IS 5" X 5"
3 REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.
4. CLOSER SIZE IS 10" x 2 1/4" x 2 7/8".

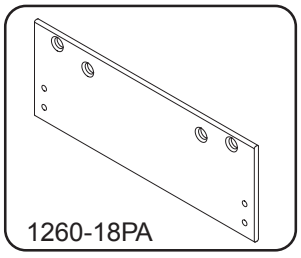
1260 EDA
DROP PLATES

PUSH SIDE, PARALLEL ARM MOUNTED ON:
1260-18PA DROP PLATE



LEFT HAND DOOR SHOWN
RIGHT HAND DOOR OPPOSITE

NOTES -
1. MINIMUM TOP RAIL 2 ½".

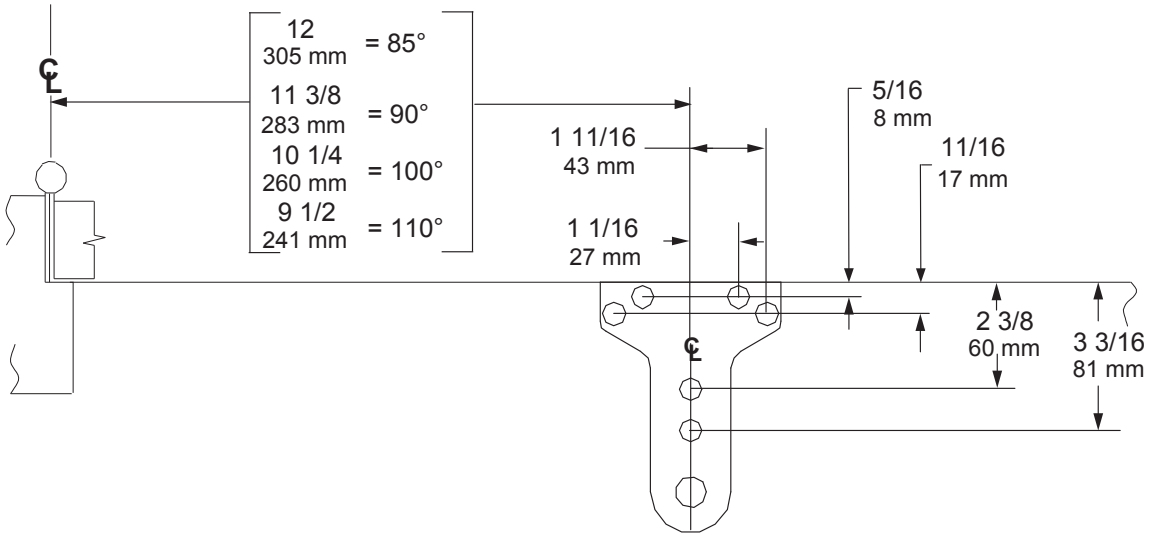


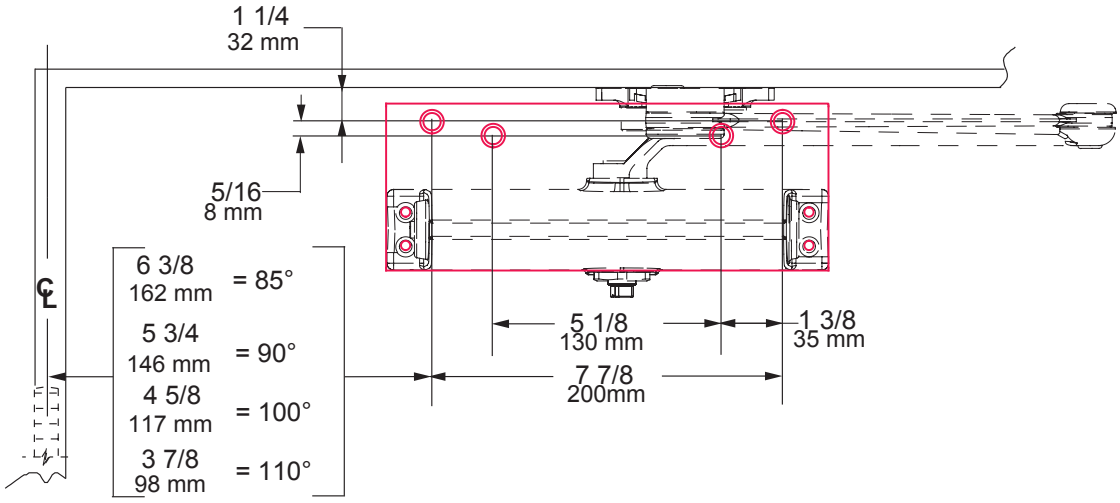
GENERAL NOTES:

1. IF DOOR IS HUNG ON PIVOTS OR SWING CLEAR HINGES LOCATE CLOSER AND SHOE FROM CENTER LINE OF PIVOT POINT.
2. CLOSER SIZE 10" x 2 1/4" x 2 7/8".
3. TOP RAIL LESS THAN 4 3/4 REQUIRES DROP PLATE.
4. ALL DIMENSIONS APPLICABLE FOR HOLD OPEN.
5. DELAYED ACTION OPTIONAL.
6. REINFORCING PER. ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOOR AND FRAMES.
7. USING FASTERS PROVIDED MOUNT DROP PLATE WITH (4) 1/4 - 14 X 1 3/8 S.R.T. MOUNT CLOSER TO DROP PLATES WITH (4) 1/4 - 20 X 1/2 P.H.M.S. MAX. BUTT HINGE SIZE 5 x 5.

1260 CUSH DROP PLATES

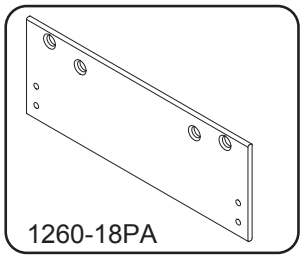
PUSH SIDE, PARALLEL ARM MOUNTED ON: 1260-18PA DROP PLATE





LEFT HAND DOOR SHOWN
RIGHT HAND DOOR OPPOSITE

NOTES -
1. MINIMUMTOP RAIL 2 ½".



GENERAL NOTES:

1. IF DOOR IS HUNG ON PIVOTS OR SWING CLEAR HINGES LOCATE CLOSER AND SHOE FROM CENTER LINE OF PIVOT POINT.
2. CLOSER SIZE. 10"x 2 1/4"x 2 7/8"
3. TOP RAIL LESSTHAN 4 3/4 REQUIRES DROP PLATE.
4. ALL DIMENSIONS APPLICABLE FOR HOLD OPEN OR DEAD STOP.
5. DELAYED ACTION OPTIONAL.
6. REINFORCING PER. ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOOR AND FRAMES.

Customer Service
1-877-671-7011 www.allegion.com/us

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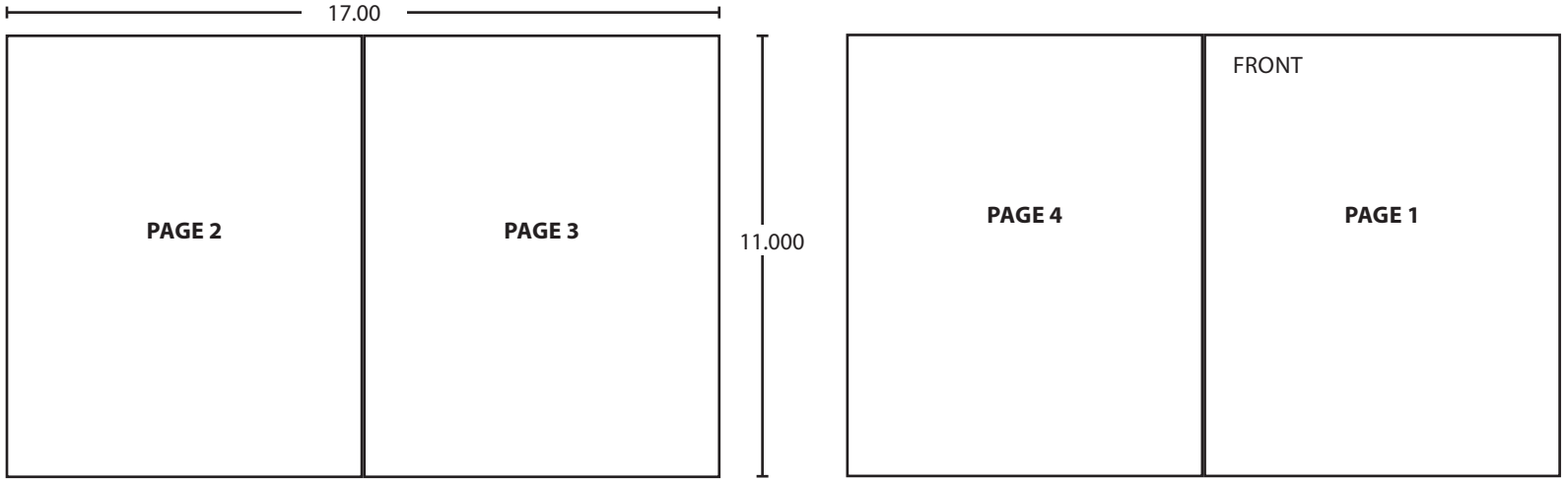
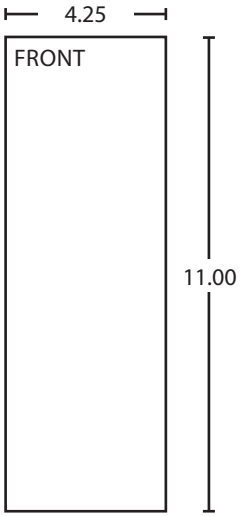


BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	043812				

Revision Description:
B > Revised artwork

Material	Edited By	Approved By	EC Number	Release Date
White Paper	D. Myers	M. Sasso	043812	01-01-14

Notes
1. printed two sides
2. printed black and pink
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Title
1260 Series Drop Plate Instruction Sheet

Creation Date	Number	Revision
04-27-10	29810	B

Created By	Activity	
N/A	3899 Hancock Expwy Security, CO 80911	
Software: InDesign CS6		© Allegion 2014

71930

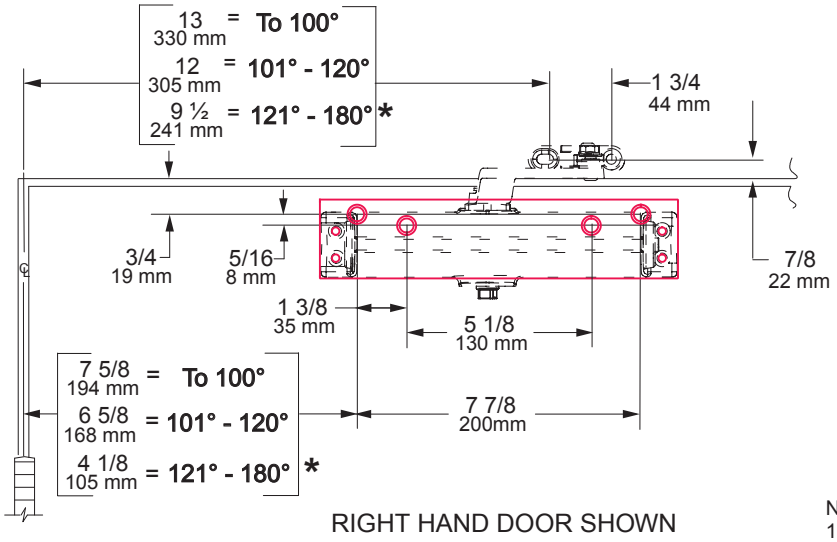
1250 Series

LCN®

Installation Instructions

1250 PULL SIDE (DOOR MOUNT) DROP PLATES

PULL SIDE ARM MOUNTED ON: 1250-18 DROP PLATE

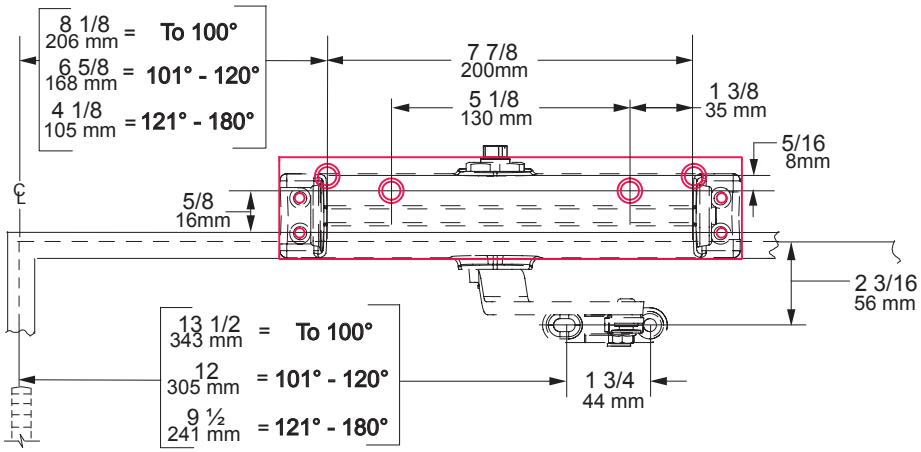


RIGHT HAND DOOR SHOWN
LEFT HAND DOOR OPPOSITE

NOTES -
1. MINIMUM TOP RAIL HEIGHT IS 1 ½".
* 2. TRIM PERMITTING.

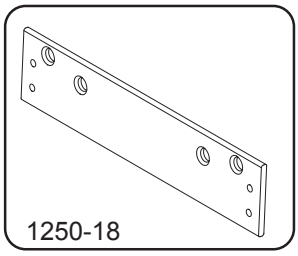
1250 PUSH SIDE (TOP JAMB) DROP PLATES

PUSH SIDE ARM MOUNTED ON: 1250-18 DROP PLATE



LEFT HAND DOOR SHOWN
RIGHT HAND DOOR OPPOSITE

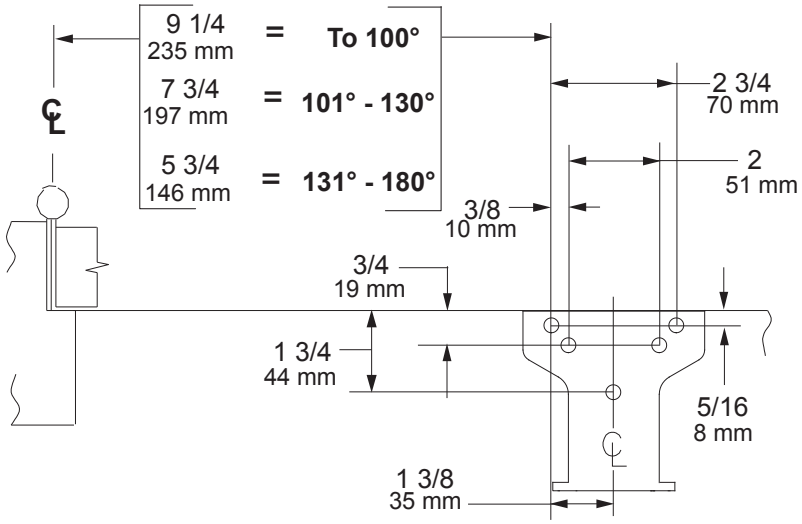
NOTES -
1. MINIMUM FACE FRAME IS 1 3/8".

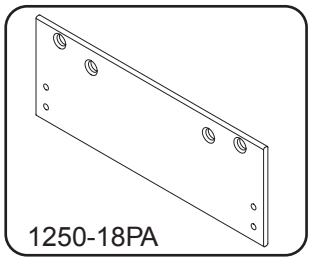


GENERAL NOTES:
1. ON TOP JAMB & HINGE FACE MOUNTS. LOCATE CLOSER & SHOE FROM CENTERLINE OF PIVOT OR SWING CLEAR HINGE PIN WHEN USED.
2. ON TOP JAMB MOUNTING WHEN OVERHEAD STOP IS USED, SHOE MUST BE LOWERED TO CLEAR HOLDER.
3. FOR 180° OPENING, MAX BUTT SIZE IS 5" X 5"
4 REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.

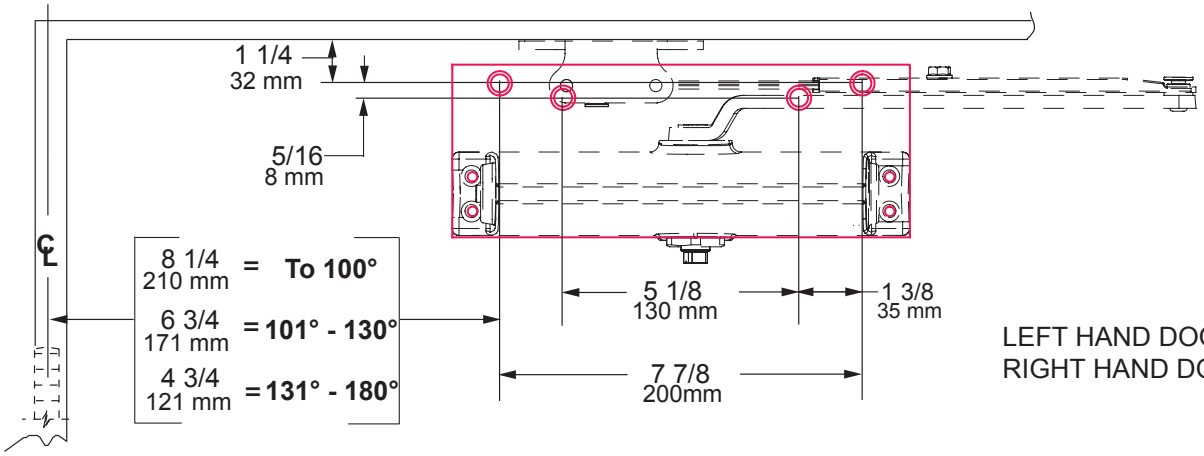
1250 PUSH SIDE (DOOR MOUNT) DROP PLATES

PUSH SIDE PARALLEL ARM MOUNTED ON: 1250-18PA DROP PLATE





NOTES -
1. MINIMUM TOP RAIL 2 ½".



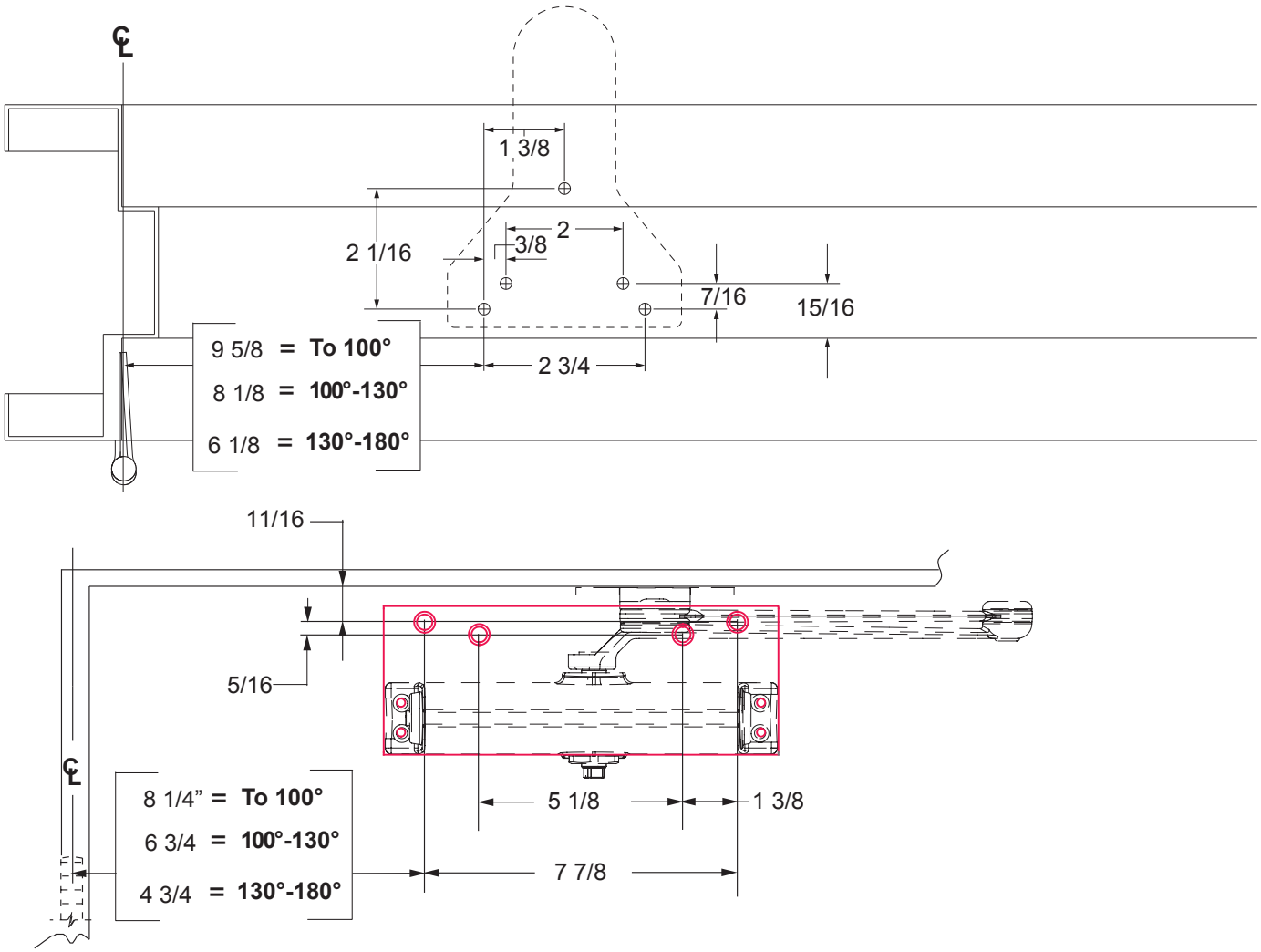
LEFT HAND DOOR SHOWN
RIGHT HAND DOOR OPPOSITE

GENERAL NOTES:

1. Locate closer & shoe from centerline of pivot or swing clear hinge pin when used.
2. For 180° opening on hinge face mounts, max butt size is 5" x 5".
3. Reinforcing per ANSI/SDI-100 recommended for hollow metal doors and frames.

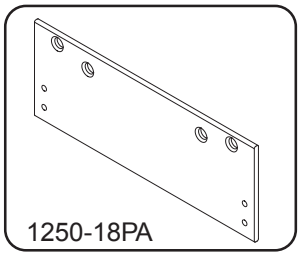
1250 EDA
DROP PLATES

PUSH SIDE, PARALLEL ARM MOUNTED ON: 1250-18PA DROP PLATE



LEFT HAND DOOR SHOWN
RIGHT HAND DOOR OPPOSITE

NOTES -
1. MINIMUM TOP RAIL 2 ½".

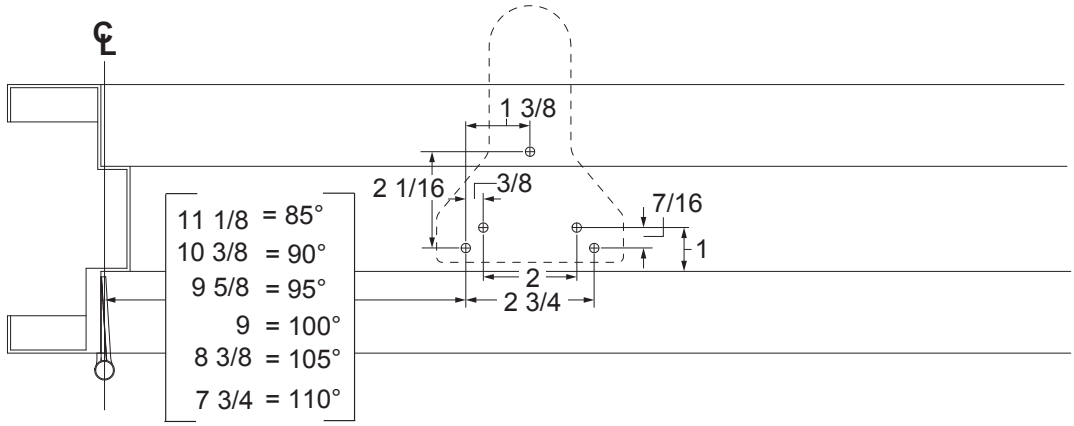


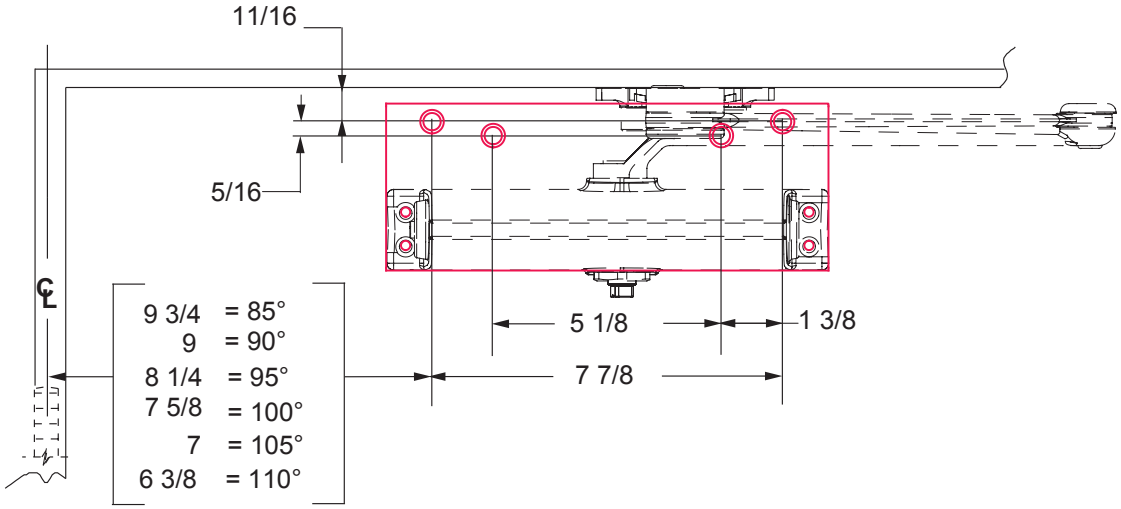
GENERAL NOTES:

1. IF DOOR IS HUNG ON PIVOTS OR SWING CLEAR HINGES LOCATE CLOSER AND SHOE FROM CENTER LINE OF PIVOT POINT.
2. TOP RAIL LESS THAN 4 3/4 REQUIRES DROP PLATE.
3. ALL DIMENSIONS APPLICABLE FOR HOLD OPEN.
4. REINFORCING PER. ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOOR AND FRAMES.
5. USING FASTERS PROVIDED MOUNT DROP PLATE WITH (4) 1/4 - 14 X 1 3/8 S.R.T. MOUNT CLOSER TO DROP PLATES WITH (4) 1/4 - 20 X 1/2 P.H.M.S. MAX. BUTT HINGE SIZE 5 x 5.

1250 CUSH
DROP PLATES

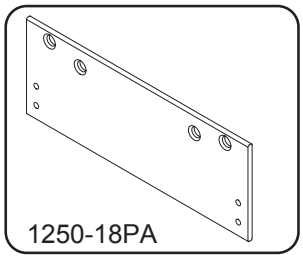
PUSH SIDE, PARALLEL ARM MOUNTED ON: 1250-18PA DROP PLATE





LEFT HAND DOOR SHOWN
RIGHT HAND DOOR OPPOSITE

NOTES -
1. MINIMUMTOP RAIL 2 ½".



GENERAL NOTES:

1. IF DOOR IS HUNG ON PIVOTS OR SWING CLEAR HINGES LOCATE CLOSER AND SHOE FROM CENTER LINE OF PIVOT POINT.
2. TOP RAIL LESSTHAN 4 3/4 REQUIRES DROP PLATE.
3. ALL DIMENSIONS APPLICABLE FOR HOLD OPEN OR DEAD STOP.
4. REINFORCING PER. ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOOR AND FRAMES.

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71930 Rev. 01/16-a

18363

2210DPS Series

LCN®

Door Closers

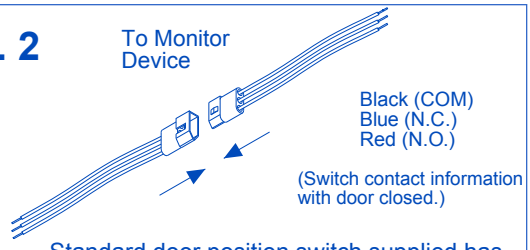
Installation Instructions

1a	Make sure hand of closer matches hand of door. Remove finish plates. Hand of closer is printed on the mounting plate label. Hand of closer **cannot** be reversed. See diagram above to determine hand of door.
1b	Prepare and mortise door & frame per template on pg. 4.
1c	For 2210DPS: connect wire leads to monitor device as shown in Fig. 2. **Do not pinch wires when installing closer into headframe.** (Switch contact information with door closed and switch closed.)
1d	Install closer in prepared headframe, as shown in Fig. 1, with spring tube pointing away from hinge. Fasten mounting plate to jamb with ¼-20 x ⅝ PHMS provided.
1e	Install track in door. Roller access hole must be toward latch edge of door, as shown in Fig. 1. Fasten with ¼-20 x ½ TORX MS provided.
1f	Connect arm assembly to track by placing plastic roller at end of arm into the roller access hole in track. See Fig. 1. Let arm assembly rest on top of installed track.

1g To attach arm to closer:

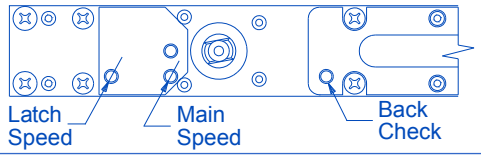
1. Open door out of working area.
2. With a 3⁄32" hex wrench, turn latch & main speed regulating screws all the way in (clockwise). See Fig. 3. **DO NOT FORCE SCREWS.**
3. Using an adjustable wrench, rotate door closer shaft approximately 90°. See Fig. 4. (R.H. - clockwise/L.H. - counterclockwise).

Fig. 2



Standard door position switch supplied has contacts rated at 10.1 amp 125/250 VAC

Fig. 3



How To Tell Hand Of Door

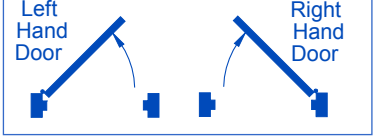


Fig. 1

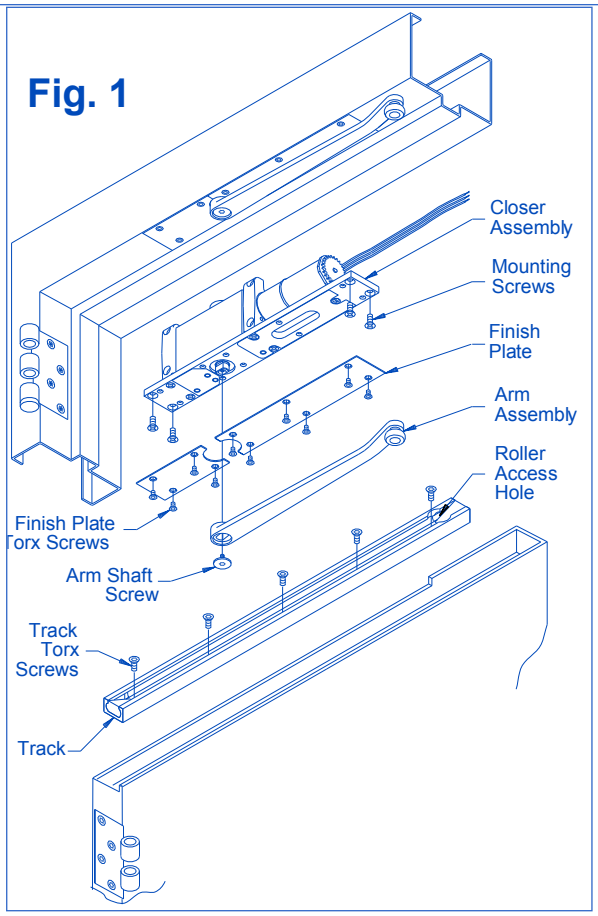
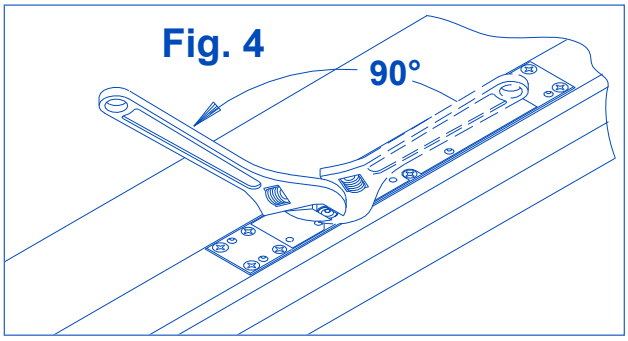


Fig. 4



⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions contact LCN Closers: 877-671-7011

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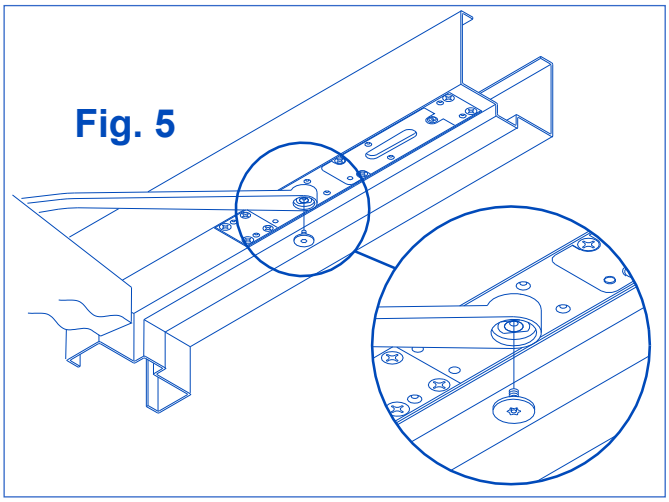
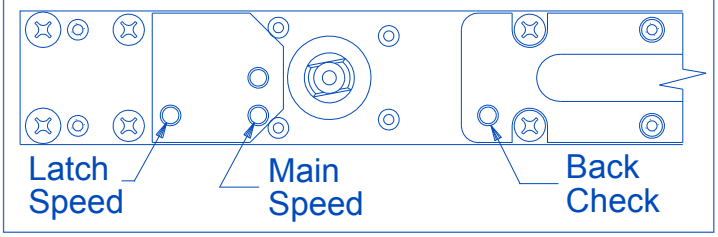
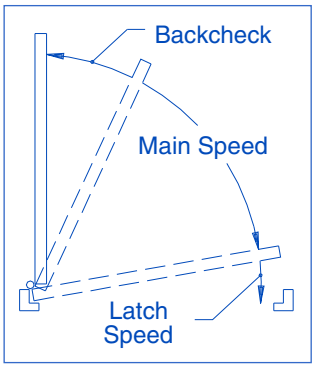
4. With closer shaft now stationary, move the end of the arm to shaft of closer. Slowly move door so hole in arm lines up correctly with closer shaft. Push arm up into position and insert arm shaft screw, as shown in Fig.5.



1h To Regulate Closing Speed & Backcheck: See Fig. 6 below Use a 3/32" hex wrench to re-adjust MAIN & LATCH speed screws (closed in step 7A). Turn both MAIN & LATCH speed screws 2 full turns counterclockwise. Open door and observe closing cycle. A normal closing time from a 90° position is 5 to 7 seconds, equally divided between MAIN & LATCH speeds. If further adjustment is required, turn regulating screws clockwise to SLOW door speed / counterclockwise to INCREASE door speed. BACKCHECK is a feature that slows the speed of door at approximately 70°. To INCREASE force turn BACKCHECK screw clockwise. To REDUCE force turn BACKCHECK screw counterclockwise. **Do not use an abrupt BACKCHECK setting, nor expect closer to act as a door stop!**





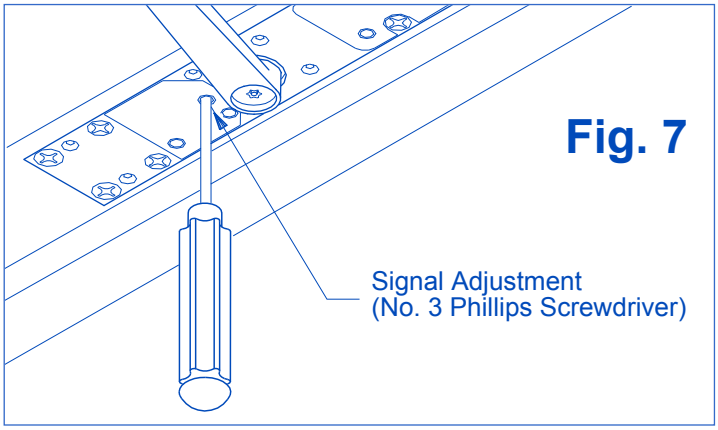
1i For 2210DPS: Signal Response Point Verification

If door silencers are to be used, they should be installed prior to this step. Close the door slowly and note where the switch response signal occurs. The factory setting should provide a signal response between 1/4" & 3/4" off the stop for a 36" door.

Only if a different signaling point is necessary, perform steps a - c using a No. 3 Phillips screwdriver (5/16" shank). **If the switch is giving an "open" signal when the door is fully closed, follow steps 9D through 9F.**

To adjust the signaling point for the door **nearer** to the closed position:

a. Open the door approximately 20°, or enough to access the signal adjustment hole in mounting plate (See Fig. 7, below). Prevent door from moving during the adjustment. Insert the No. 3 Phillips screwdriver into the signal adjustment hole to engage the trigger gear.
b. **For Right Hand Door:** turn the screwdriver clockwise **VERY SLIGHTLY**
For Left Hand Door: turn the screwdriver counterclockwise **VERY SLIGHTLY**
c. **REMOVE SCREWDRIVER BEFORE ALLOWING DOOR TO MOVE.** Allow the door to close completely. Check the signal activation point. If still too far from the "door closed" position, repeat steps a, b & c.



To adjust the signaling point for the door **farther** from the closed position:

d. Open the door approximately 20°, or enough to access the signal adjustment hole in mounting plate (See Fig. 7, on previous page). Prevent door from moving during the adjustment. Insert the No. 3 Phillips screwdriver into the signal adjustment hole to engage the trigger gear.
e. **For Right Hand Door:** turn the screwdriver counterclockwise **VERY SLIGHTLY**
For Left Hand Door: turn the screwdriver clockwise **VERY SLIGHTLY**
f. **REMOVE SCREWDRIVER BEFORE ALLOWING DOOR TO MOVE.** Allow the door to close completely. Check the signal activation point. If still too close to the "door closed" position, repeat steps d, e & f.

1j CLOSING POWER ADJUSTMENT:

Depending on width of door, the 2210DPS has been ordered as one of three sizes: 2213, 2214 or 2215. Determine closer size from either label on box or UL label on mounting plate.

Adjustment can be made with a flat head screwdriver (see Fig. 8). Adjustment range for each size is as follows:

- 2213: Closer is shipped at minimum closing power. If MORE closing power is required, turn adjusting screw counterclockwise, but not more than 36 full turns. DO NOT turn adjusting screw clockwise.

- 2214: If **MORE** power is required, turn adjusting screw **counterclockwise**, but not more than 18 full turns. If **LESS** power is required, turn adjusting screw **clockwise**, but not more than 18 full turns. **Do not** turn adjusting screw more than 18 full turns in either direction.
- 2215: Closer is shipped at maximum closing power. If LESS power is required, turn adjusting screw clockwise, but not more than 36 full Turns. Do not turn adjusting screw counterclockwise.

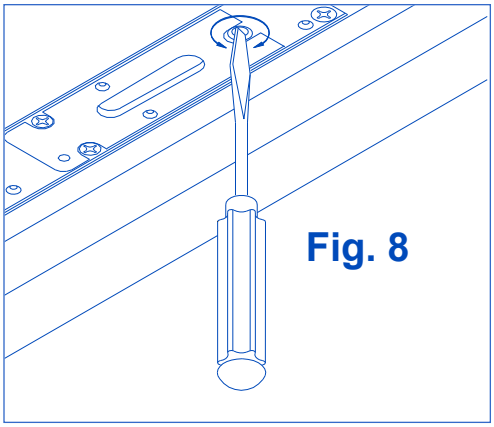


Fig. 8

1k Once proper operation has been verified, secure finish plates with No. 10-24 x 3/8” Torx security screws, as shown in Fig. 9 below.

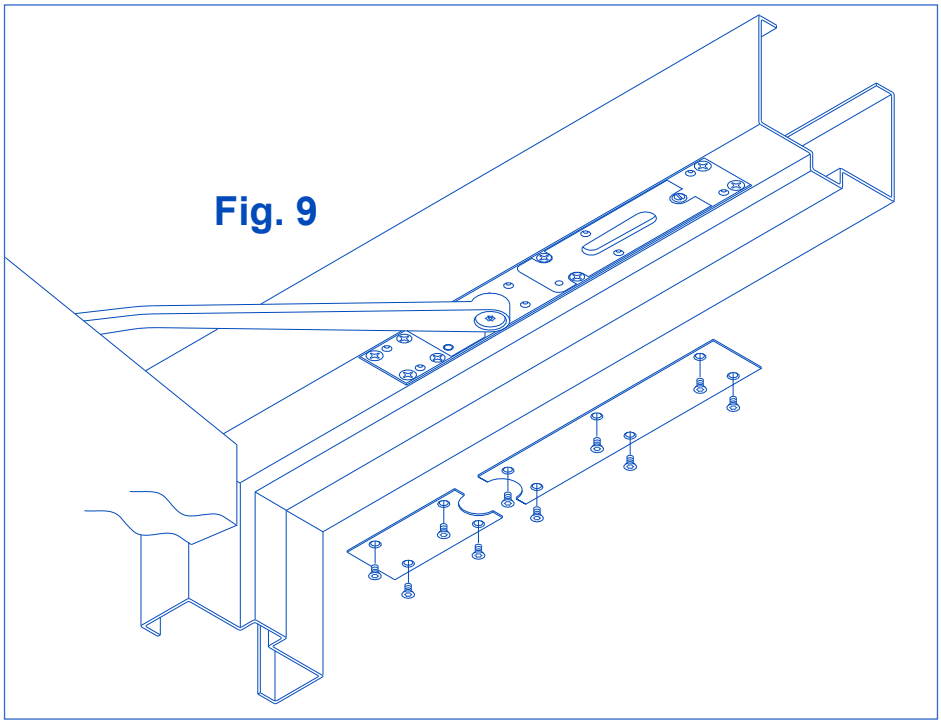
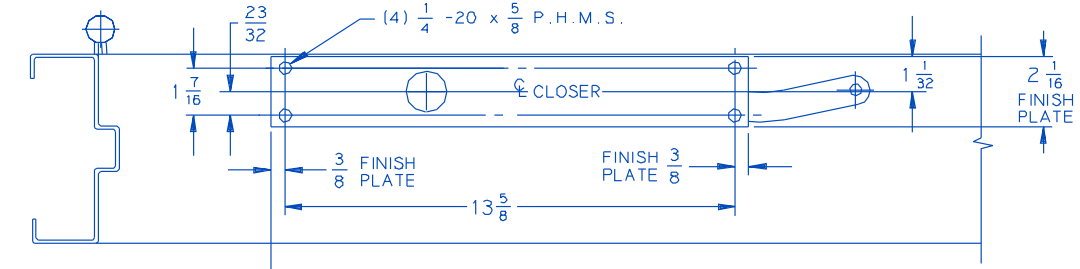


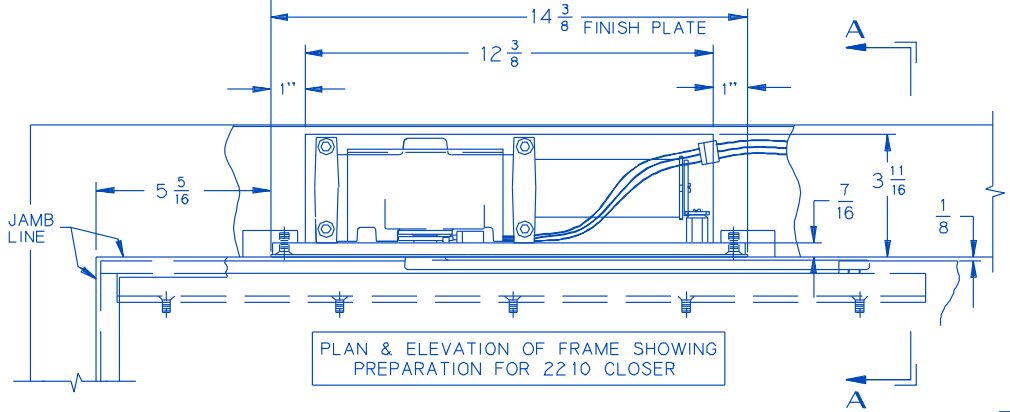
Fig. 9

2210/2210DPS -THRU 180°OPENING	
AUXILIARY STOP RECOMMENDED	
LEFT HAND DOOR AND CLOSER SHOWN. RIGHT HAND OPPOSITE	6/96

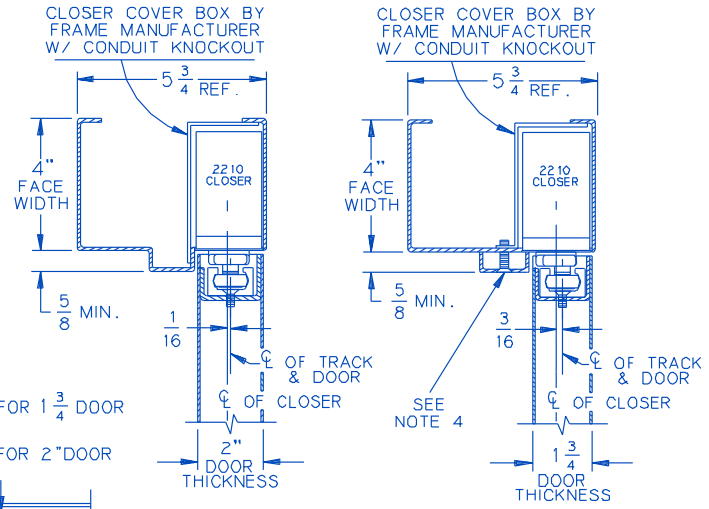


GENERAL NOTES-

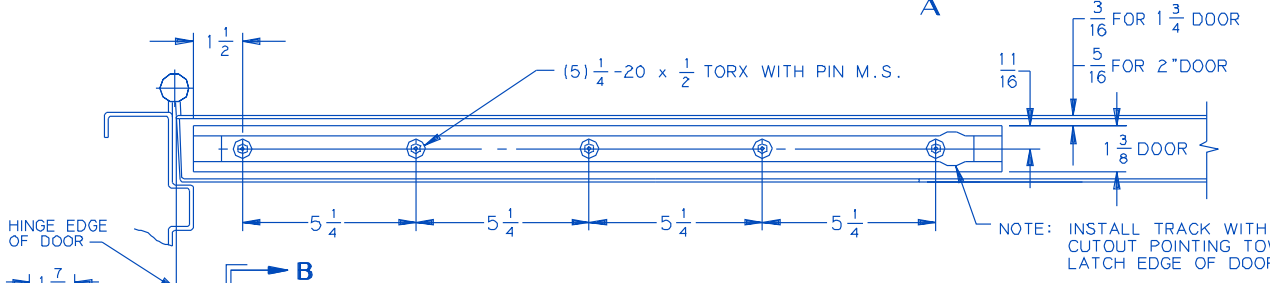
1 - FOR 180° OPENINGS, MAXIMUM ALLOWABLE BUTT SIZE IS 4 1/2" x 4 1/2" OPEN WIDTH.
2 - MINIMUM STOP THICKNESS 5/8".
3 - 1/8" DOOR TO SOFFIT CLEARANCE REQUIRED.
4 - RECOMMEND CASED FRAME AND APPLIED STOP FOR 1 3/4" DOOR. MOUNT APPLIED STOP WITH TORX WITH PIN MACHINE SCREWS.
5 - THIS TEMPLATE SHOWS A 4" FACE WIDTH FRAME HEAD WITH A 2" AND 1 3/4" DOOR THICKNESS ANY OTHER DEVIATION CONSULT FACTORY.
6 - REINFORCING PER.ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOOR AND FRAMES.

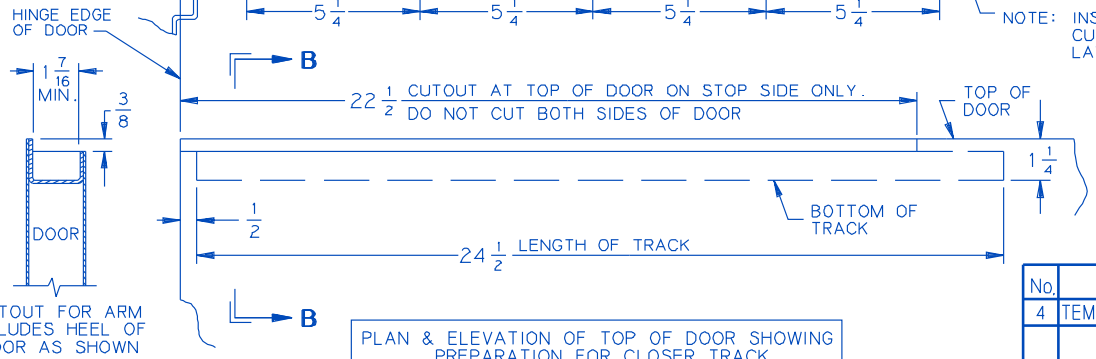


PLAN & ELEVATION OF FRAME SHOWING PREPARATION FOR 2210 CLOSER



SECTION A - A





CUTOUT FOR ARM INCLUDES HEEL OF DOOR AS SHOWN

SECTION B - B

PLAN & ELEVATION OF TOP OF DOOR SHOWING PREPARATION FOR CLOSER TRACK

AUXILIARY STOP RECOMMENDED

INCH	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	11/16
M.M.	2	3	5	6	8	10	11	13	16	17

INCH	23/32	1	1 1/32	1 1/4	1 7/16	1 1/2	1 3/4	2	2 1/16	3 11/16
M.M.	18	25	26	32	37	38	45	51	52	94

INCH	4	4 1/2	5 1/4	5 5/16	5 3/4	12 3/8	13 5/8	14 3/8	22 1/2	24 1/2
M.M.	102	114	133	135	146	314	346	365	572	622

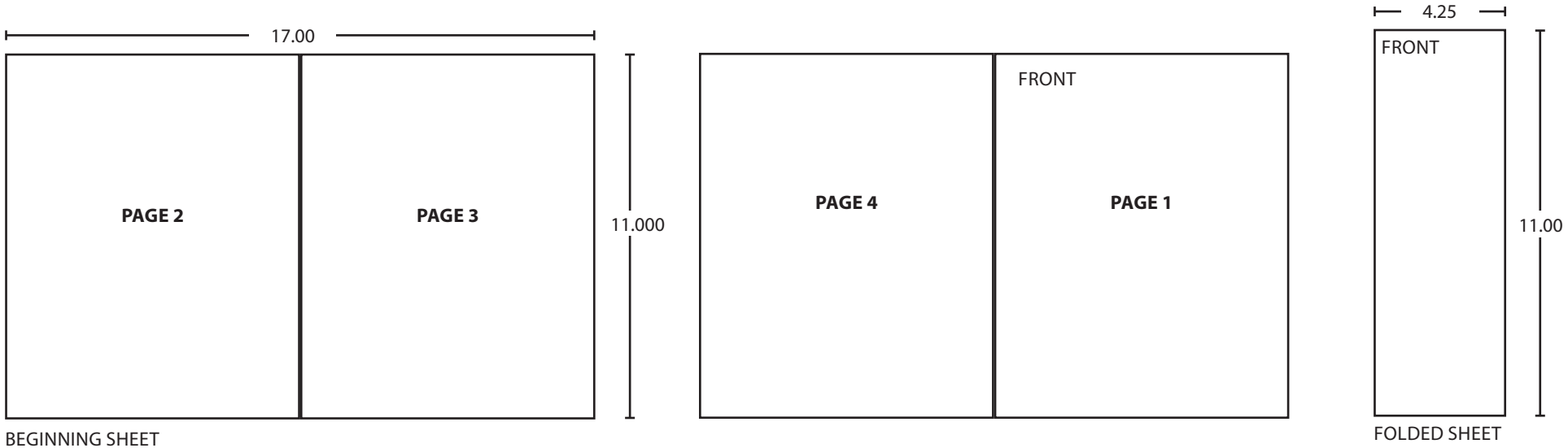
No.	REVISION	BY	DATE
4	TEMPLATE UPDATE	JEJ	6/96

APP BY JEJ 6/96

DO NOT SCALE

OVERHEAD CONCEALED CLOSER WITH CONCEALED ARM
(WITH OR WITHOUT DOOR POSITION SWITCH)

2210/2210DPS



Additional Notes:
1. None

Revision History					
G	H	J	K	L	M
043228					

Material
White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
G > Revised artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043228	01-01-14

Title
2210DPS Series Instruction Sheet

Creation Date	Number	Revision
05-10-10	18363	G

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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1460 Series

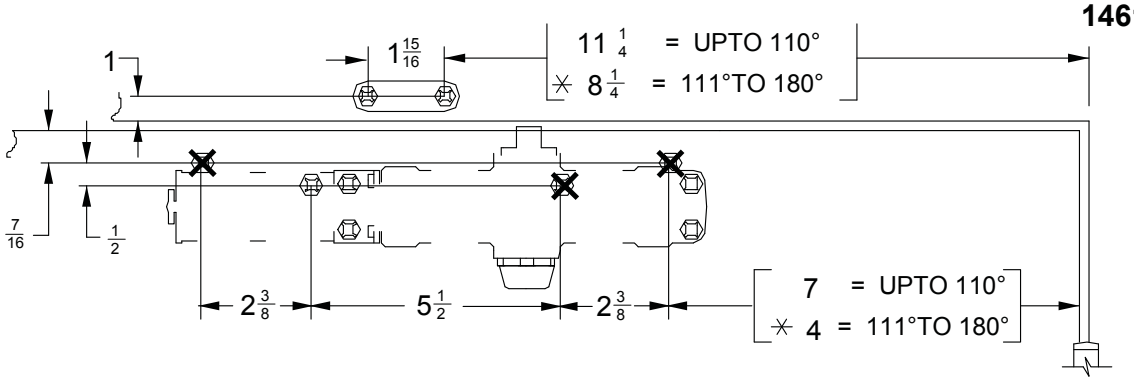
28460

Drop Plate

Installation Instructions

1461 PULL SIDE (DOOR MOUNT) DROP PLATES

Pull side Arm Mounted On:
1461-18 Drop Plate
1461-18FC Drop Plate
1461-18DS1 Drop Plate

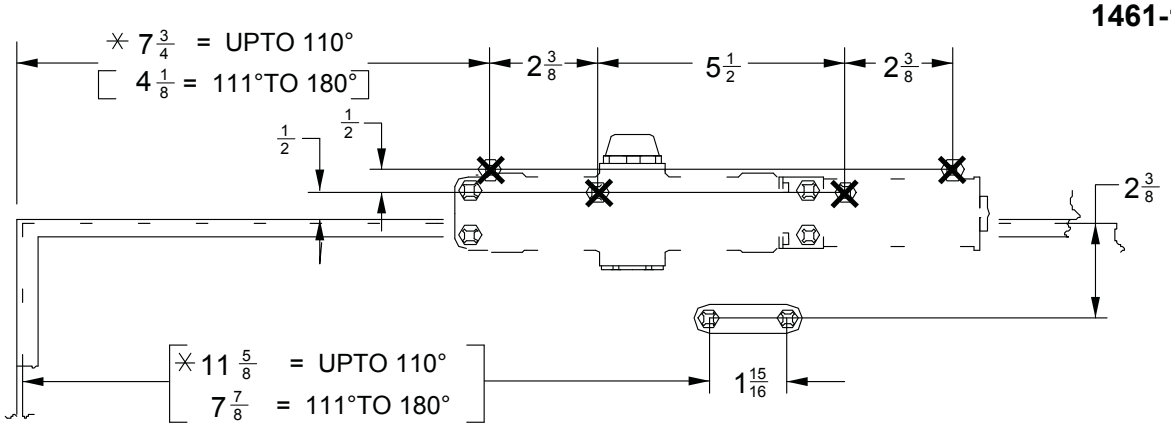


Left Hand Door Shown
Right Hand Door Opposite

NOTES-
1. MINIMUM TOP RAIL WIDTH IS 1 1/2".
✳ 2. TRIM, FRAME, AND HINGE PERMITTING

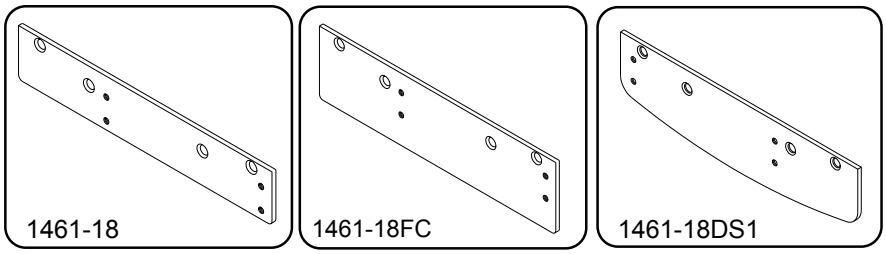
1461 PUSH SIDE (TOP JAMB) DROP PLATES

Push Side Arm Mounted On:
1461-18 Drop Plate



Left Hand Door Shown
Right Hand Door Opposite

NOTES-
1. MINIMUM FRAME FACE OF 1 1/4" REQUIRED.
✳ 2. INCREASE THIS DIMENSION 1 1/2" FOR DELAYED ACTION WHEN DOOR CAN ONLY OPEN 90°.



INCH	7/16	1/2	1	1 1/4	1 1/2	1 15/16	2 3/8	2 3/4	4
M.M.	11	13	25	32	38	49	60	70	102

INCH	4 1/8	5 1/2	7	7 3/4	7 7/8	8 1/4	11 1/4	11 5/8	12 3/4
M.M.	105	140	178	197	200	210	286	295	324

General Notes:
1. On Top Jamb & Hinge Face Mounts. Locate Closer & Shoe From ℄ Of Pivot or Swing Clear Hinge Pin When Used.
2. On Top Jamb Mounting When Overhead Stop is Used, Shoe Must Be Lowered To Clear Holder.
3. For 180° Opening On Hinge Face Mounts, Max Buttsize Is 5" X 5"
4 Reinforcing Per ANSI/SDI-100 Recommended For Hollow Metal Doors and Frames.
5. Closer Size Is 12 3/4 x 2 3/4 x 2 3/8

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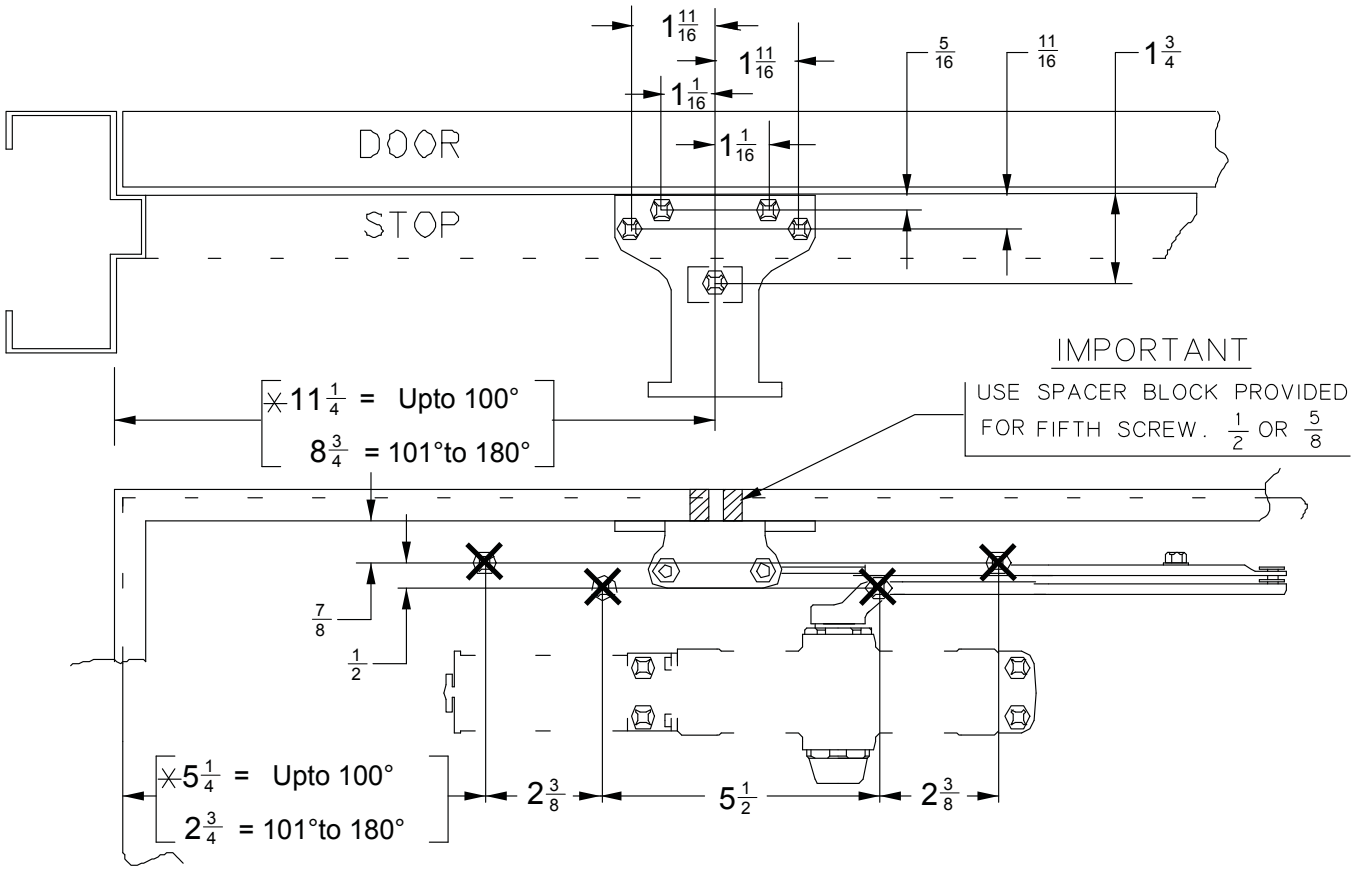
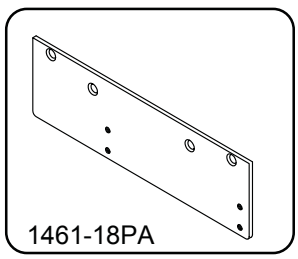
P1461 Push Side (Door Mount) Drop Plates

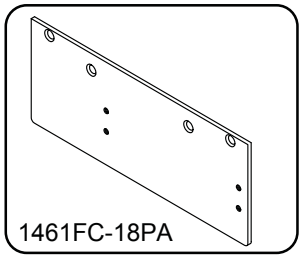
Push Side Parellel Arm Mounted On:
1461-18PA Drop Plate
1461FC-18PA Drop Plate
1461-PADS1 Drop Plate

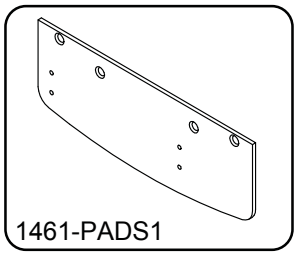


Left Hand Door Shown
Right Hand Door Opposite

NOTES -
1. MINIMUM TOP RAIL WIDTH IS 2 1/4".
* 2. INCREASE THIS DIMENSION 1 1/2" FOR DELAYED ACTION WHEN DOOR CAN ONLY OPEN 90°.


1461-18PA


1461FC-18PA

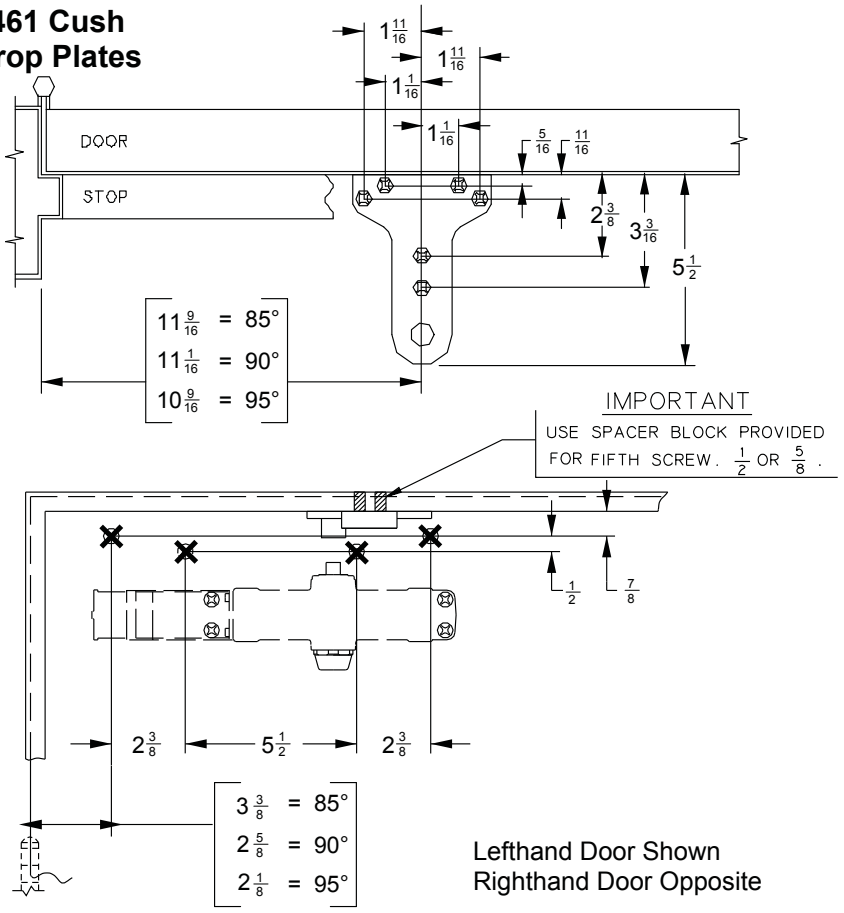

1461-PADS1

INCH	5/16	1/2	11/16	7/8	1 1/16	1 11/16	1 3/4	2 3/8	2 3/4
M.M.	8	13	17	22	27	43	44	60	70

INCH	3 1/2	5 1/4	5 1/2	8 3/4	11 1/2	12 3/4
M.M.	89	133	140	222	292	324

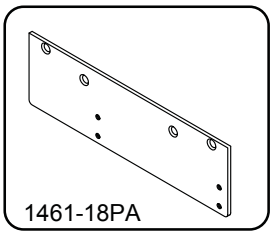
General Notes:
1. On Top Jamb & Hinge Face Mounts. Locate Closer & Shoe From ℄ Of Pivot Or Swing Clear Hinge Pin When Used.
2. On Top Jamb Mounting When Overhead Stop Is Used, Shoe Must Be Lowered To Clear Holder.
3. For 180° Opening On P1460, Max Butt Size Is 5" X 5", Max. Reveal For P1460 Mount Is 3 1/2.
4 Reinforcing Per ANSI/SDI-100 Recommended For Hollow Metal Doors And Frames.
5. Closer Size Is 12 3/4 X 2 3/4 X 2 3/8

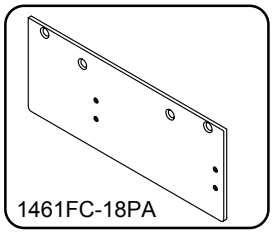
1461 Cush Drop Plates

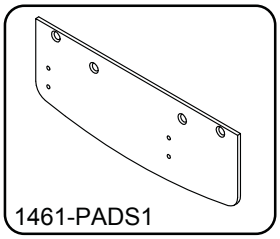


Lefthand Door Shown
Righthand Door Opposite

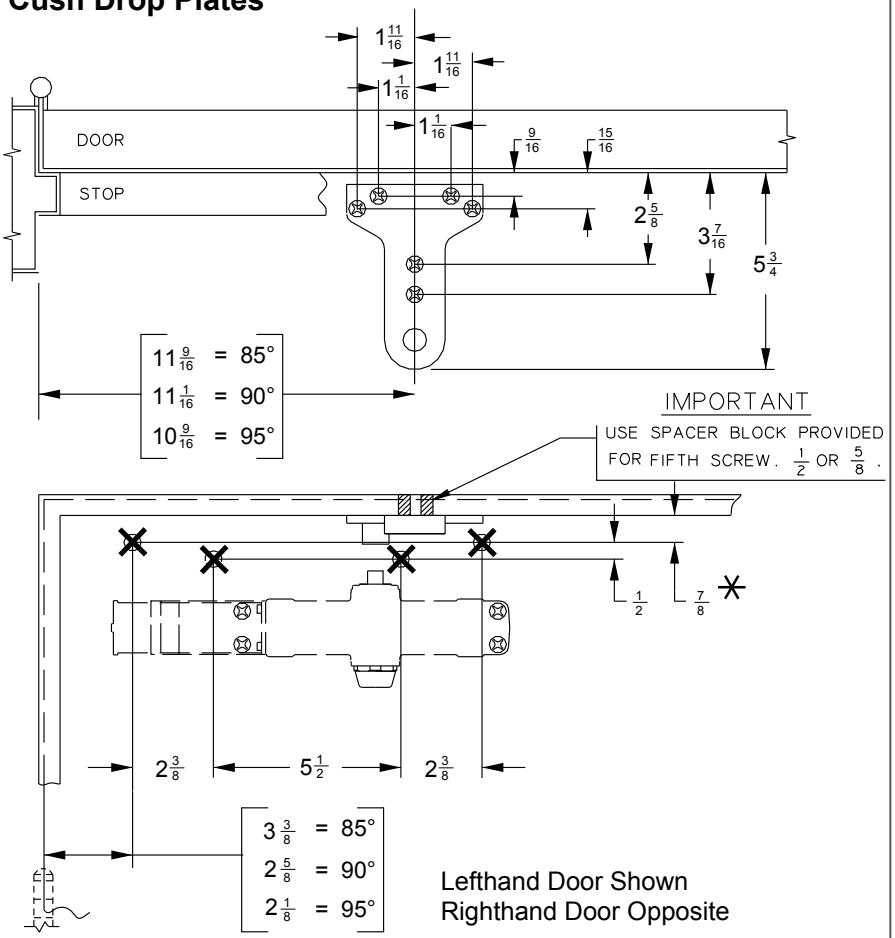
Push Side, Parellelarm Mounted On:
1461-18PA Drop Plate
1461FC-18PA Drop Plate
1461-PADS1 Drop Plate


1461-18PA


1461FC-18PA


1461-PADS1

Push Side, Parallel Arm Mounted For Spring Cush Drop Plates



Lefthand Door Shown
Righthand Door Opposite

INCH	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{11}{16}$	$\frac{7}{8}$	1	$1\frac{1}{16}$	$1\frac{1}{2}$	$1\frac{5}{8}$
M.M.	6	8	10	13	16	18	22	25	27	38	41

INCH	$1\frac{11}{16}$	2	$2\frac{3}{8}$	$2\frac{5}{8}$	$2\frac{3}{4}$	$2\frac{7}{8}$	$3\frac{3}{16}$	$3\frac{3}{8}$	$4\frac{3}{4}$	$4\frac{7}{8}$	$5\frac{1}{2}$
M.M.	43	51	60	66	70	73	81	86	120	123	139

INCH	$5\frac{7}{8}$	$6\frac{5}{8}$	$7\frac{1}{2}$	$10\frac{1}{16}$	$11\frac{1}{16}$	$11\frac{9}{16}$	$12\frac{1}{4}$
M.M.	149	168	190	255	281	293	311

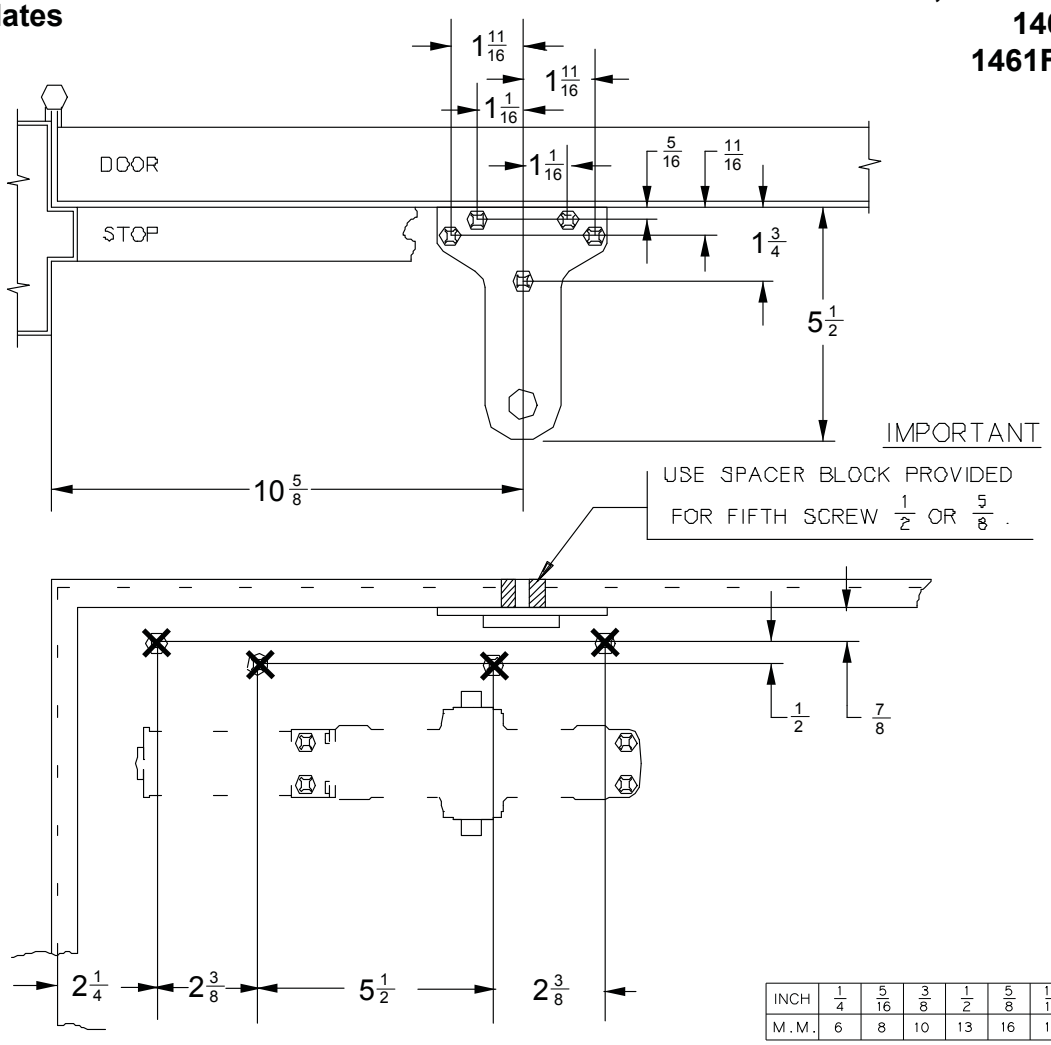
General Notes:

1. If door is hung on pivots Locate closer and shoe from ℄ of pivot point.
2. Closer size 12 1/4 x 2 3/4 x 2 3/8.
3. Top rail less than 4 3/4 Requires drop plate.
4. All dimensions applicable For hold open or dead stop.
5. Delayed action optional.
6. Reinforcing per. ANSI/SDI-100 Recommended for hollow Metal door and frames.
7. 5/8 maximum allowable side Stop.
8. Using fasters prodvided Mount drop plate with (4) 1/4 - 14 x 1 3/8 S.R.T. Mount closer to drop plates (4) 1/4 - 20 x 1/2 P.H.M.S.

✱ Increase this dimension to 15/16 for spring cush FC

1461 EDA
Drop Plates

Push Side, Parellel Arm Mounted On:
1461-18PA Drop Plate
1461FC-18PA Drop Plate
1461-PADS1

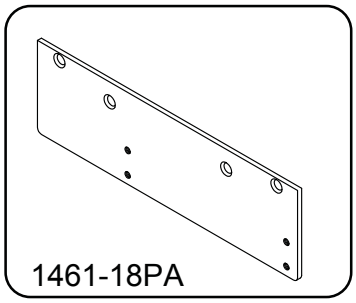


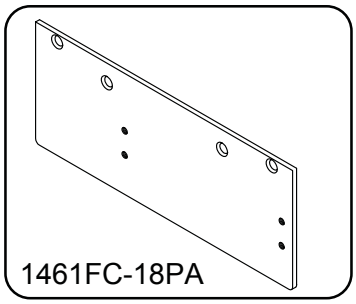
INCH	1/4	5/16	3/8	1/2	5/8	11/16	7/8	1	1 1/16	1 1/2	1 5/8
M.M.	6	8	10	13	16	18	22	25	27	38	41

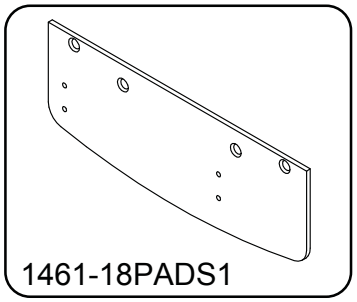
INCH	1 11/16	2	2 3/8	2 5/8	2 3/4	2 7/8	3 3/16	3 3/8	4 3/4	4 7/8	5 1/2
M.M.	43	51	60	66	70	73	81	86	120	123	139

INCH	5 7/8	6 5/8	7 1/2	10 1/16	11 1/16	11 9/16	12 1/4
M.M.	149	168	190	255	281	293	311

Left Hand Door Shown
Right Hand Door Opposite


1461-18PA

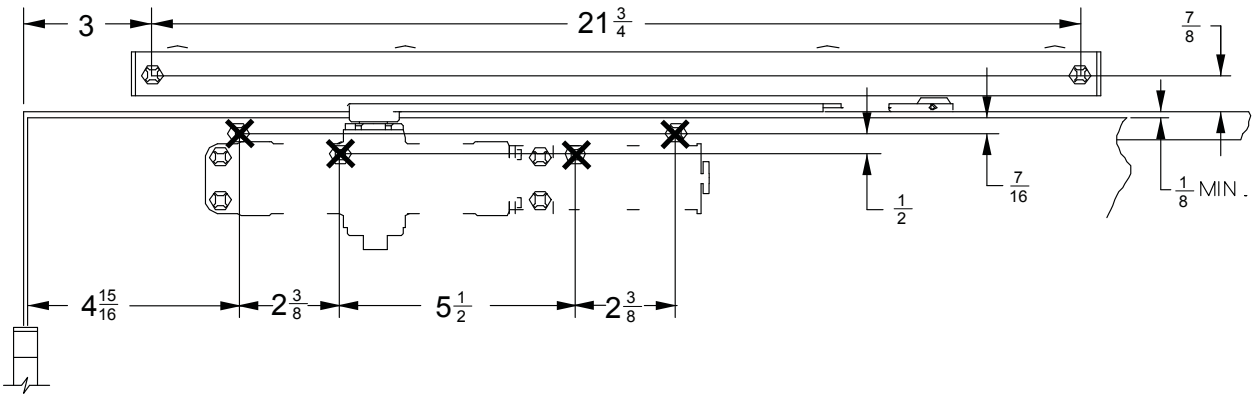

1461FC-18PA


1461-18PADS1

General Notes:
1. If door is hung on pivots locate closer and shoe from c of pivot point. (consult factory if using swing clear hinges.)
2. Closer size 12 1/4 x 2 3/4 x 2 3/8.
3. Top rail less than 4 3/4 requires drop plate.
4. All dimensions applicable for hold open.
5. Delayed action optional.
6. Reinforcing per ANSI/SDI-100 recommended for hollow metal door and frames.
7. 5/8 maximum allowable side stop.
8. Using fasters provided mount drop plate with (4) 1/4 - 14 x 1 3/8 S.R.T. mount closer to drop plates with (4) 1/4 - 20 x 1/2 p.H.M.S. Max. Butt hinge size 5 x 5.

1460T/1461T Pull Side (Door Mount) Drop Plates

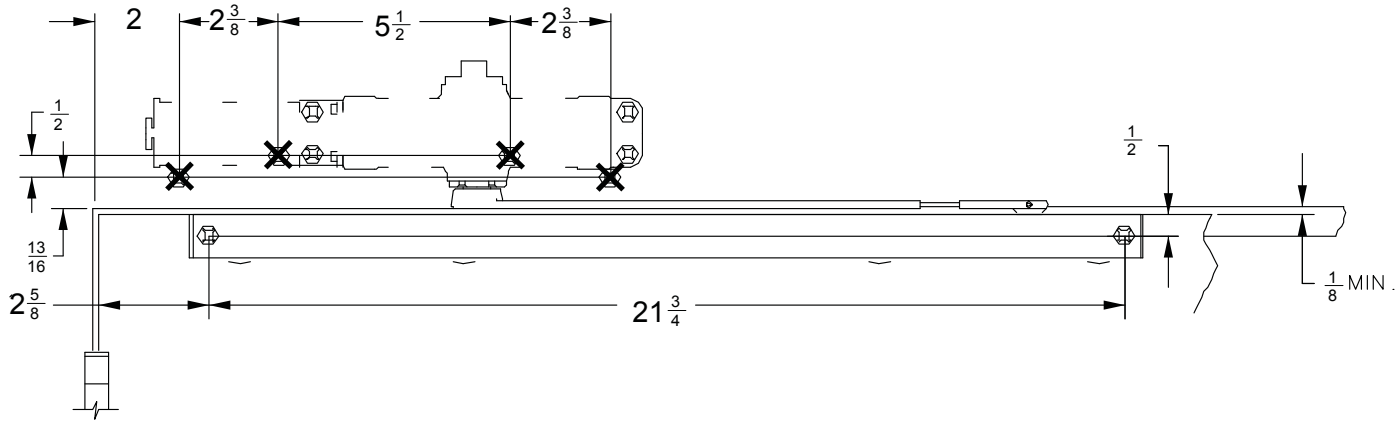
Pull Side Arm Mounted On:
1461-18 Drop Plate
1461-18FC Drop Plate
1461-18DS1 Drop Plate



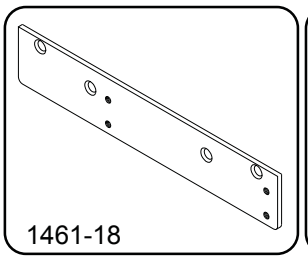
Right Hand Door Shown
Left Hand Door Opposite

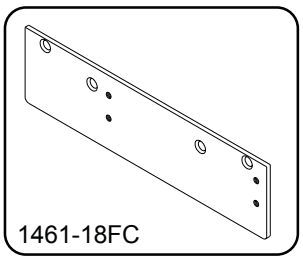
1461 Pull Side (Top Jamb) Drop Plates

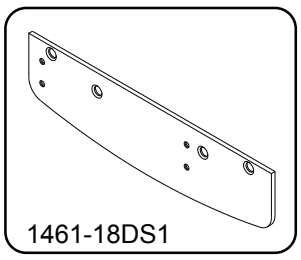
Push Side Arm Mounted On:
1461-18 Drop Plate
1461-18FC Drop Plate



Right Hand Door Shown
Left Hand Door Opposite


1461-18


1461-18FC


1461-18DS1

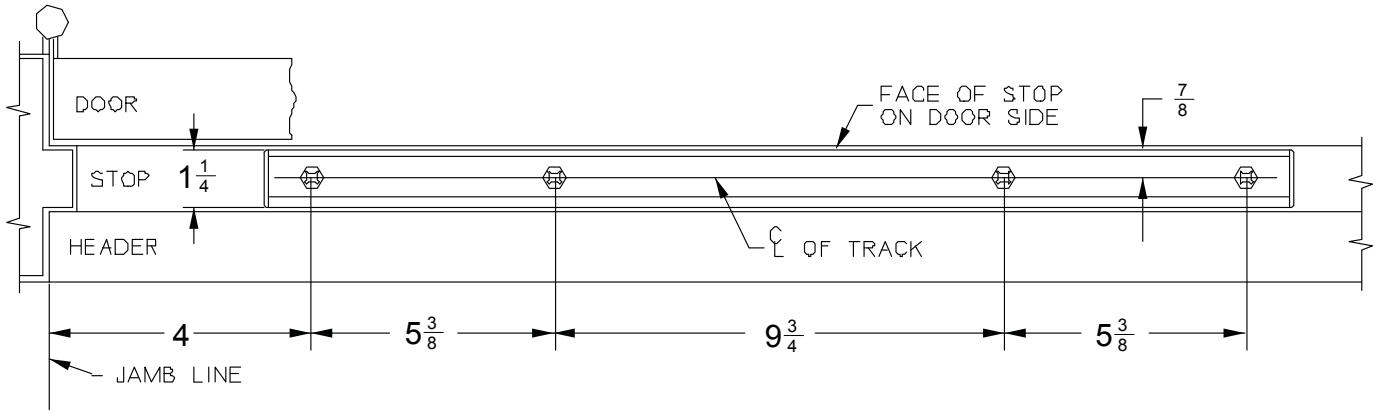
INCH	1/8	7/16	1/2	13/16	7/8	1	2 3/8	2 5/8	2 3/4
M.M.	3	11	13	21	22	51	60	67	70

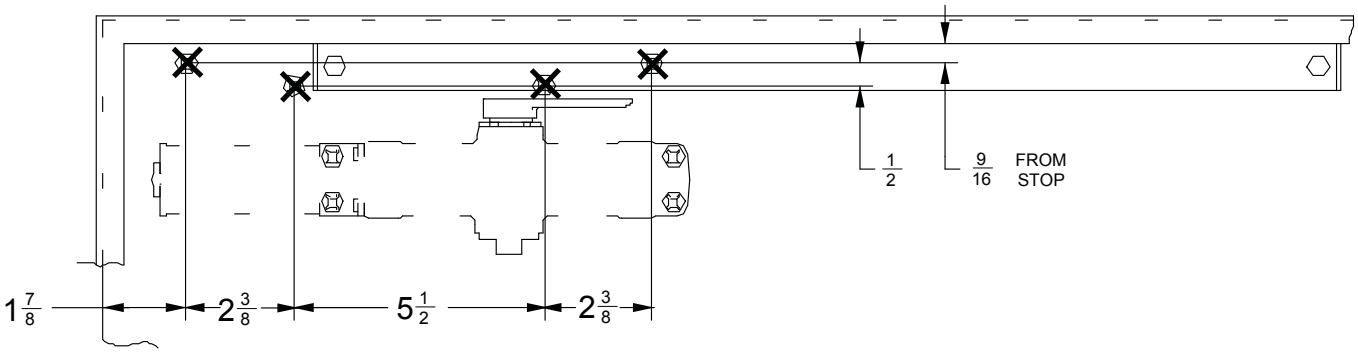
INCH	3	4 15/16	5 1/2	12 3/4	21 3/4
M.M.	76	125	140	324	552

General Notes:
1. Locate closer & track from ℄ of pivot or swing clear hinge pin when used.
2. If butt, frame and wall conditions permit. Pull side mountings allow 180° of opening.
3. Optional hold-open available. Adjustable from 85° - 100°.
4 Reinforcing per ANSI/SDI-100 recommended for hollow metal doors and frames.
5. Closer size is 12 3/4 x 2 3/4 x 2 3/8
6. Delay action optional.

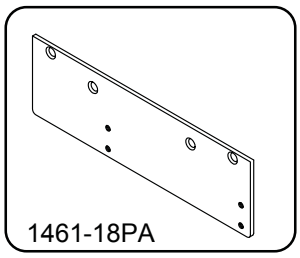
1460T/1461T Push Side (Door Mount) Drop Plates

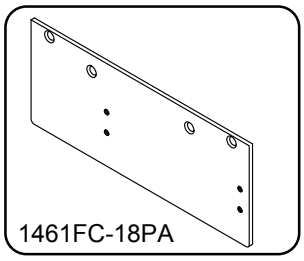
Push Side Parellel Arm Mounted On:
1461-18PA Drop Plate
1461FC-18PA Drop Plate
1461-PADS1 Drop Plate

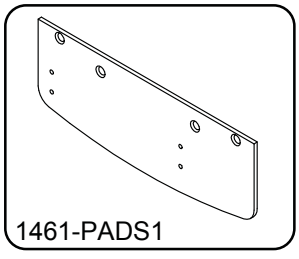




Left Hand Door Shown
Right Hand Door Opposite


1461-18PA


1461FC-18PA


1461-PADS1

INCH	1/2	9/16	7/8	1 1/4	1 7/8	2 3/8	2 3/4
M.M.	13	14	22	32	44	60	70

INCH	4	5 3/8	5 1/2	9 3/4	12 3/4
M.M.	102	137	140	248	324

General notes:
1. Locate closer & track from ℄ of pivot or swing clear hinge pin when used.
2. If butt, frame and wall conditions permit. Pull side mountings allow 180° of opening.
3. Optional hold-open available. Adjustable from 85° - 100°.
4 Reinforcing per ANSI/SDI-100 recommended for hollow metal doors and frames.
5. Closer size is 12 3/4 x 2 3/4 x 2 3/8
6. Delay action optional.

ALLEGION

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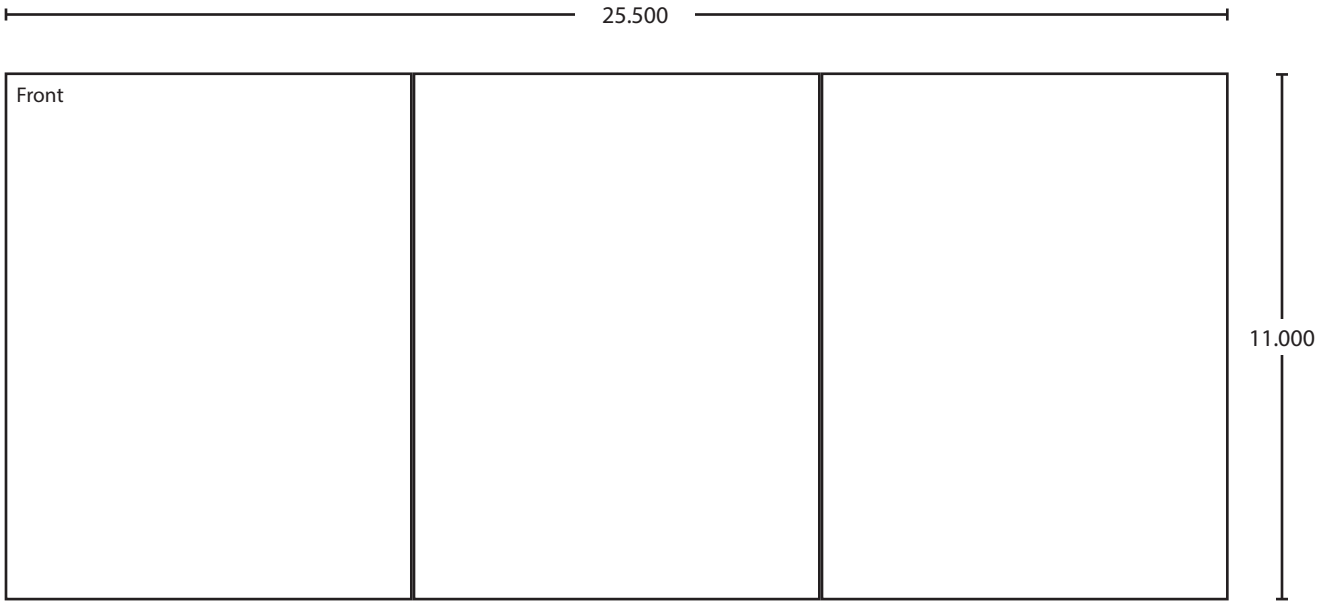
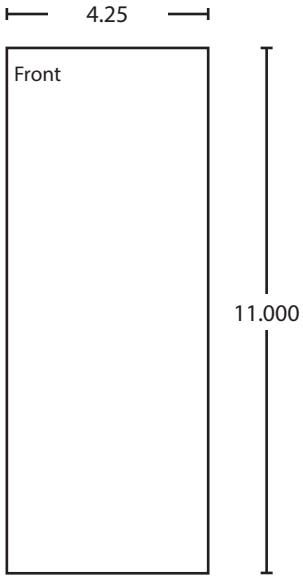
28460 Rev. 01/14-c



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
C	D	E	F	G	H
042801					

Material
White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
A > Revised Artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	042801	01-01-14

Title
1461 Drop Plate Installation Instructions

Creation Date	Number	Revision
09-21-11	28460	C

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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28103

4040XP/4041 DA

LCN®

120° Template
Top Jamb Push Side Mounting

Installation Instructions

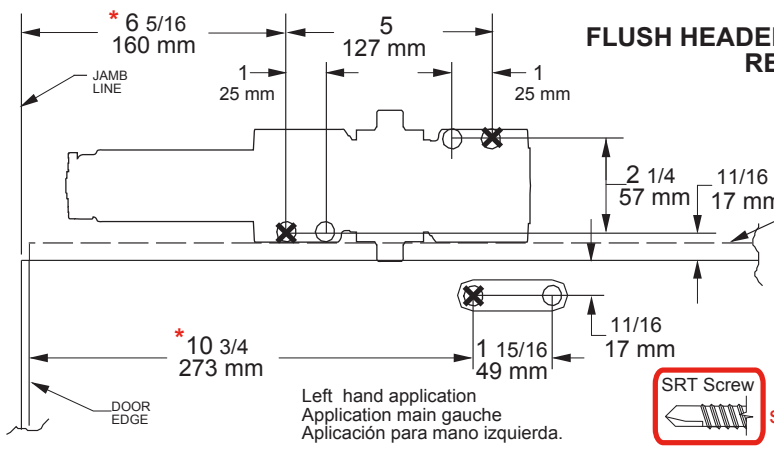
(Fig. 61)
4040XP EN 1-5

1 Locate proper template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes.

NOTE: MOST 4040XP TOP JAMB INSTALLATIONS REQUIRE A PLATE.
(SEE REVERSE SIDE OF SHEET FOR TEMPLATING.)

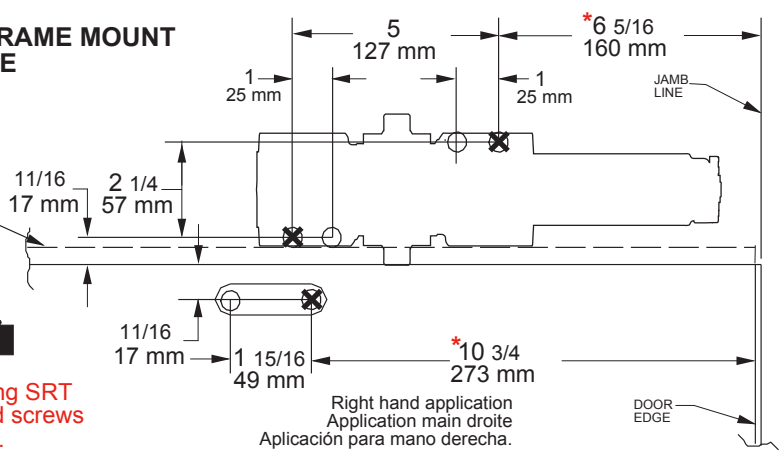
FLUSH HEADER OR SINGLE RABETTED FRAME MOUNT REQUIRES 3 1/2" FRAME FACE

*** Locate closer & shoe from centerline of pivot or swing clear hinge pin when used.**



SRT Screw

Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.



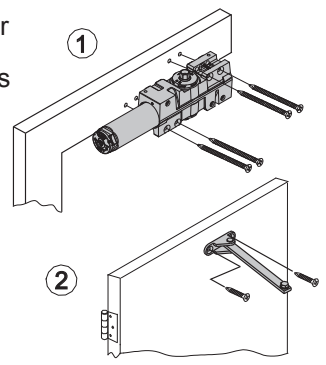
2 Determine door width, adjust spring power to match chart.

CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

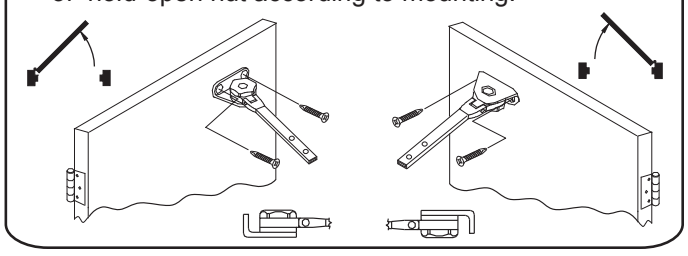
DOOR WIDTH INTERIOR	EXTERIOR	LCN FAST™ Power Adjust SET TO:
♿	———	1
34"	8.5 lb-f	2
38"	30"	3
48"	36"	4
54"	42"	5
60"	48"	6

LCN® FAST™ Power Adjust for Spring Power Adjustment

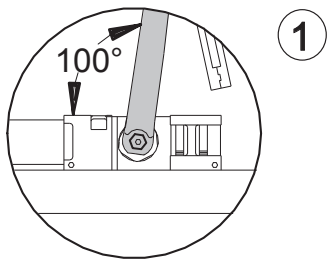
3 Secure closer and forearm with fasteners provided.



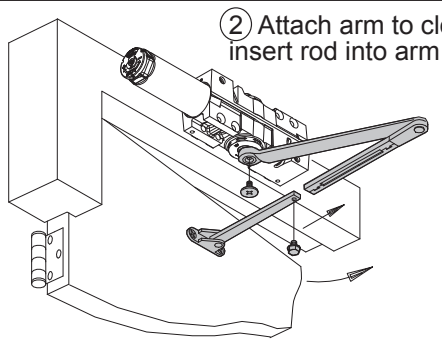
I Optional Hold-open arm. Identify direction of hold-open nut according to mounting.



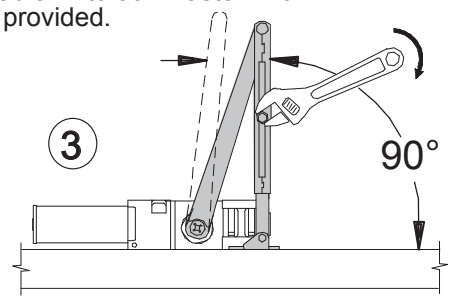
4 ① Mount arm on shaft at 100° to closer, as shown.



② Attach arm to closer, insert rod into arm tube.



③ Pre-load arm to 90°. Fasten with screw provided.

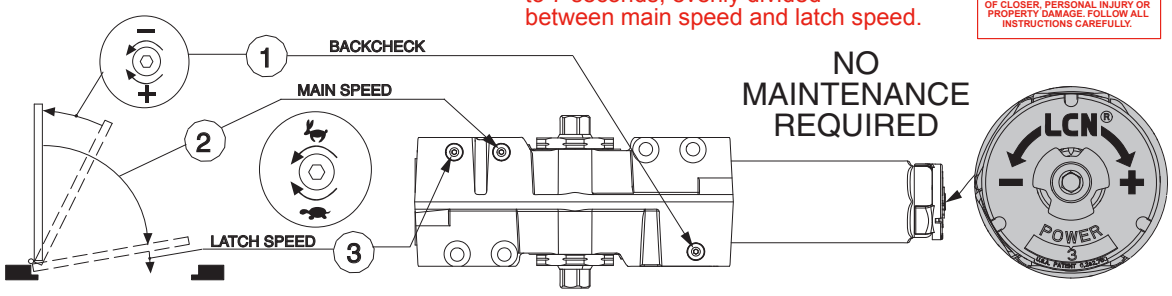


Note: Hold open arms must not be installed on fire rated doors.

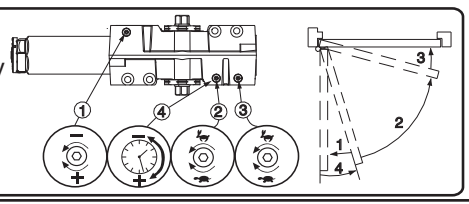
5 If necessary, adjust closer.

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

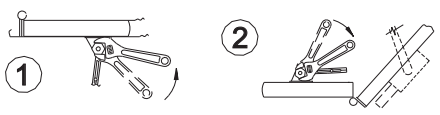
CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



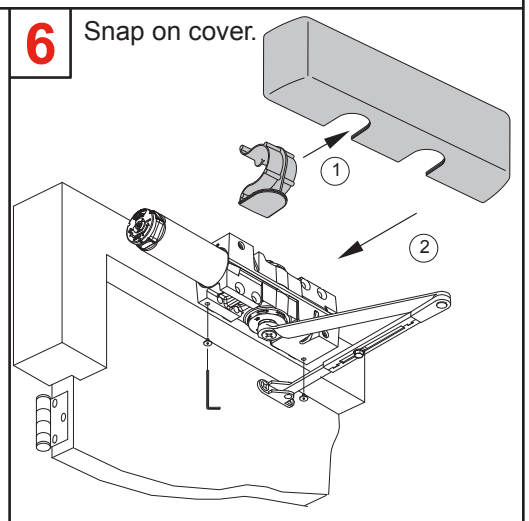
II Optional 4041 Delay
① - Backcheck
② - Main Speed
③ - Latch Speed
④ - Delay Speed



III To adjust Optional Hold-open arm: Loosen hold open nut. Open door to desired position and tighten hold open nut securely.



6 Snap on cover.



Note: Use screws to attach cover.

4040XP Instructions et gabarit de 120° pour une installation sur le linteau du côté à pousser.

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds.

Note: La plupart des installations d'un 4041 sur le linteau requièrent une plaque. (Voir le gabarit à l'endos)

Une installation sur un cadre encastré ou biseauté nécessite une plaque frontale de 3 1/2".

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Réglage de force LCN® FAST™ pour régler la force du ressort

3 Fixez le ferme-porte et l'avant-bras avec les attaches fournies.

I Bras de retenue optionnelle. Identifiez la direction du boulon de retenue selon l'ouverture de la porte.

4 ① Montez le bras sur la tige à 100° du du ferme-porte, comme sur l'illustration.

② Rattachez le bras au ferme-porte, insérez la tige dans le tube du bras.

③ Préchargez le bras à 90°. Fixez avec la vis fournie.

5 Au besoin, réglez
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage

II 4041 Action retardée optionnelle
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage
④ - vitesse de retenue

6 Fixez le couvercle.

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

III Pour régler le bras de retenue optionnelle, desserrez la vis de retenue. Ouvrez la porte à la position désirée et resserrez la vis.

DANGER
Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877 - 671 - 7011

DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4040XP Instrucciones para plantilla 120° con montaje en la parte superior de la jamba, del lado del empuje.

1 Localice la plantilla apropiada. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes.

Nota: La mayoría de las instalaciones 4041en la parte superior de la jamba necesitan una placa. (Ver al verso de la hoja para las plantillas)

El montaje sobre cabezal a ras o bastidor simple ranurado necesita una cara de bastidor de 3 ½".
Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

LCN® FAST™ cuadrante de ajuste para ajustar la potencia del resorte

3 Sujeta el cerrador y el antebrazo con los sujetadores ya incluidos.

I Brazo de retención opcional. Identifíca la dirección de la tuerca de retención según el montaje.

4 ① Monte el brazo en el eje a 100° del cerrador, tal como se muestra.

② Coloca el brazo al cerrador, inserta la varilla en el tubo del brazo.

③ Prearma el brazo a 90°. Sujeta con el tornillo ya incluido.

5 Ajusta si es necesario.
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

II 4041 Acción retardada opcional.
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro
④ - velocidad de retardo

6 Encaje la tapa.

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

III Para ajustar el brazo de retención opcional: Afloja la tuerca de retención. Abra la puerta a la posición deseada y aprieta bien la tuerca de retención.

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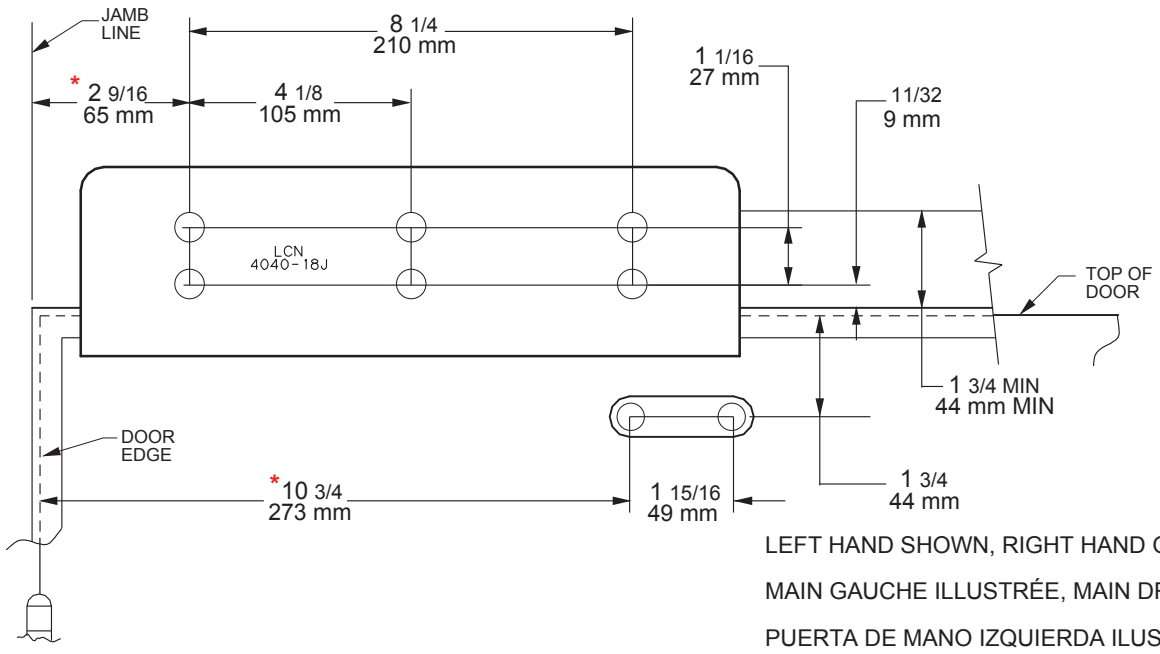
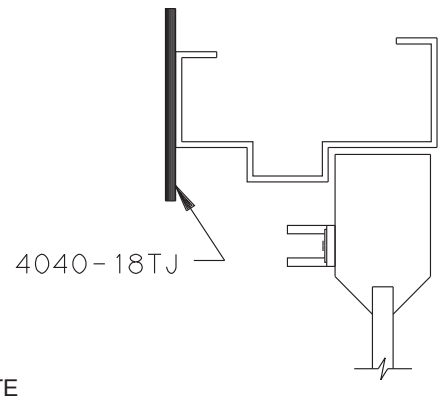
TOP JAMB MOUNTED ON 4040-18TJ ADAPTER PLATE

*** Locate drop plate & shoe from centerline of pivot or swing clear hinge pin when used.**





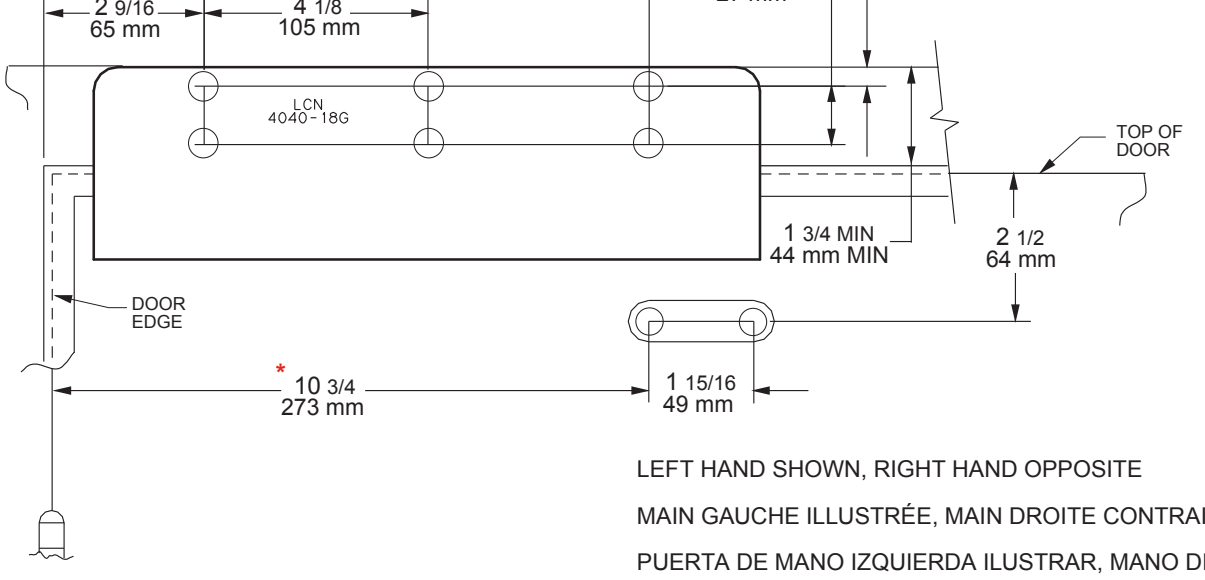
LEFT HAND SHOWN, RIGHT HAND OPPOSITE

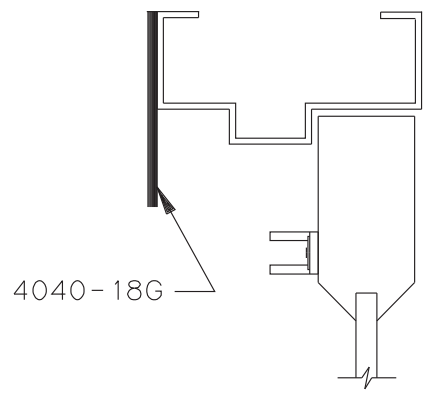
MAIN GAUCHE ILLUSTRÉE, MAIN DROITE CONTRAIRE

PUERTA DE MANO IZQUIERDA ILUSTRAR, MANO DERECHA LOAPUESTO

TOP JAMB MOUNTED ON 4040-18G ADAPTER PLATE

*** Locate drop plate & shoe from centerline of pivot or swing clear hinge pin when used.**





LEFT HAND SHOWN, RIGHT HAND OPPOSITE

MAIN GAUCHE ILLUSTRÉE, MAIN DROITE CONTRAIRE

PUERTA DE MANO IZQUIERDA ILUSTRAR, MANO DERECHA LOAPUESTO

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4810

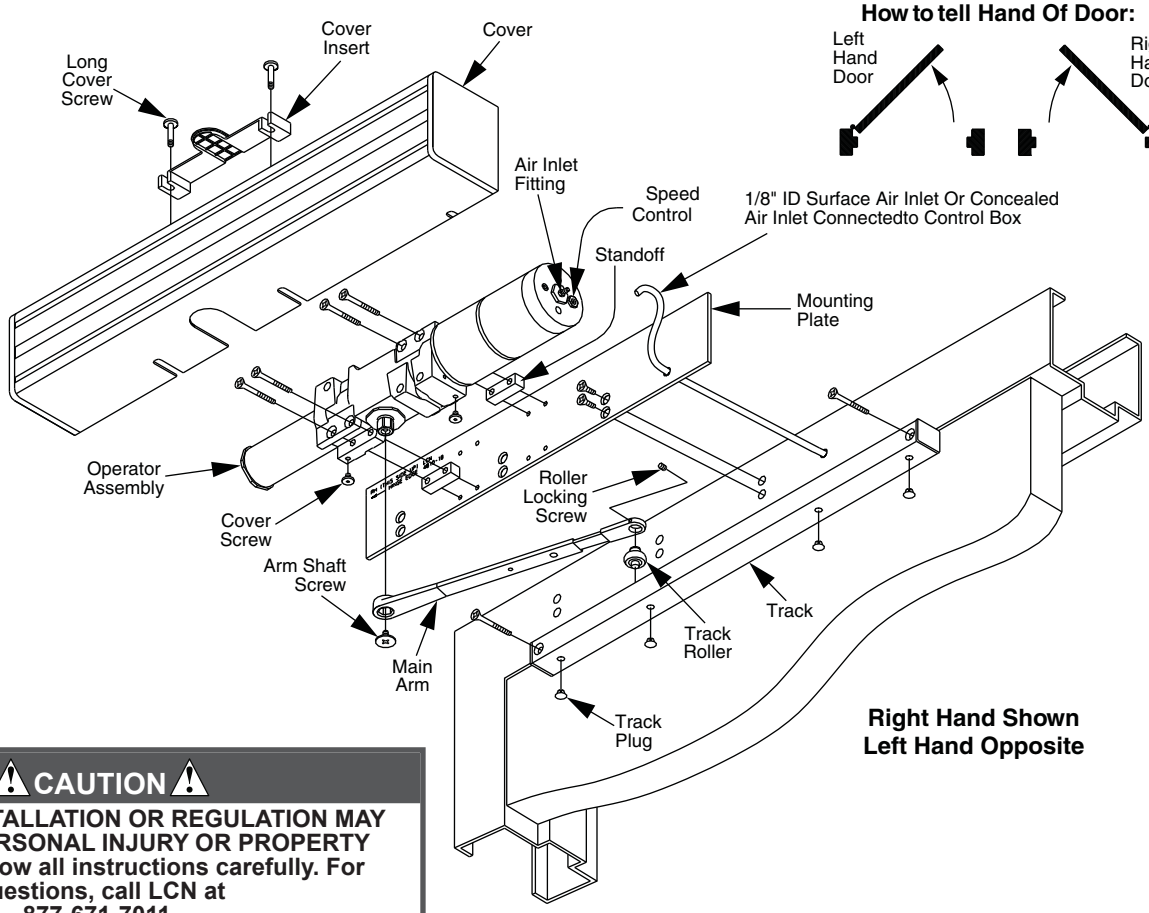
24827

Non-Handed/Non-Sized Auto Equalizer

Installation Instructions

Installation and adjustment instructions of low energy door operator

ⓘ **Note: This door operator requires additional system components. Please see the LCN Closer Catalog.**



⚠ CAUTION ⚠

IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. Follow all instructions carefully. For questions, call LCN at 877-671-7011.

Installation

1. Prepare the frame via the template (see page 5), then secure the mounting plate to the frame with the screws provided.
2. Secure the operator assembly to the mounting plate with 4 ¼-20 x 2½ screws.
3. Connect the air line to the air inlet fitting.
4. Place the spacer on the operator shaft, then push the arm onto the operator shaft at approximately 30° to the door. Secure it with the arm shaft screw.
5. Remove the end cap from the track, insert the track roller, mount the track on the door, and secure with the screws provided.
6. Loosen the roller-locking screw in the end of the arm, open the door part-way (about 30°), pull the arm over the top of the door, and connect to the track roller. Tighten the arm-set screw firmly.

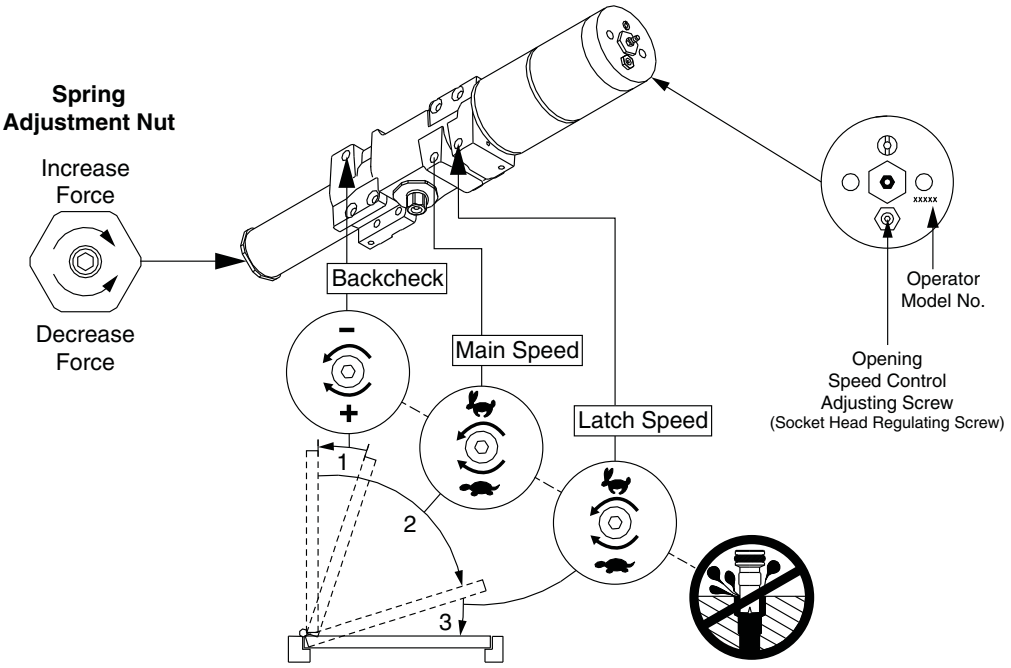


Figure 1

Closing Force Adjustment

To adjust the closing force, turn the spring adjustment nut clockwise or counterclockwise the required number of turns to match the door widths in Tables 1 & 2. For maximum adjustment, turn clockwise 5 turns, and counterclockwise 7 turns.

Closing Speed Adjustment

1. A "normal" closing time from a 90° open position is 5 to 7 seconds, and evenly divided between the main speed and the latch speed.
2. Use the 3⁄32" Allen wrench provided.
3. To slow the main speed of the door, turn the regulating screw nearest to the arm clockwise.
4. To slow the latch speed of the door, turn the regulating screw nearest to the latch clockwise.
5. Do not allow the door to slam into the frame.

Opening Speed Adjustment

ⓘ **Note: For air pressure regulation, see the control box instructions.**

The door opening speed must be adjusted to suit the width and weight of the door. The wider or heavier the door, the slower it should open.

1. To determine the opening speed, measure the door leaf width and weight.
2. Set the set speed to open the door from 0° to 80° form the time shown in Table 3.
3. Using the 3⁄32" Allen wrench provided, turn the speed control clockwise to slow the door, or counterclockwise to increase the speed. The opening speed control adjusting screw is located at the end of the door operator, near the tubing connection (see Figure 1).
4. If the door weight cannot be measured, the weight can be estimated by finding the area of the door (area= length x width), and multiplying the area by the weight per square foot for the door type being used (shown in Table 4).

Reference Tables

Exterior Door	
Maximum Door Width	Number of Turns
30"	0 Turns
36"	2 Turns Clockwise
42"	7 Turns Clockwise

Table 1

Interior Door	
Maximum Door Width	Number of Turns
34"	5 Turns Counterclockwise
38"	0 Turns
48"	2 Turns Clockwise

Table 2

Fastest Opening Time in Seconds to 80° Position			
Door Weight in Pounds	Door Width in Inches		
	36"	42"	48"
100 lbs.	3.0 sec.	3.0 sec.	3.0 sec.
125 lbs.	3.5 sec.	3.5 sec.	3.5 sec.
150 lbs.	3.5 sec.	3.5 sec.	3.5 sec.
200 lbs.	4.0 sec.	4.0 sec.	4.0 sec.

Table 3

ⓘ **Note: If the door width or weight is between the sizes listed, use the time shown for the next wider or heavier door.**

⚠ CAUTION ⚠

DO NOT SET THE DOOR SPEED FASTER THAN THE CHART RECOMMENDS!

Door Weight	
Door Type	Weight per Sq. Ft.
Solid Core Wood 20 Ga. Flush Hollow Metal Aluminum x 1” Glass	5.5
Mineral Core Door 16 Ga. Flush Hollow Metal Aluminum x 1” Glass	7.0

Table 4

ⓘ **Note: These weights are for 1¾” thick doors. If the doors are thicker or thinner than 1¾”, consult the door manufacturer for proper weight, or weigh the door.**

Backcheck Adjustment

1. Backcheck slows the door swing as it approaches to a full opening position (see Figures 1 & 2).
2. If necessary, increase the resistance of backcheck to prevent the door from striking a wall. To increase the resistance, turn the regulating screw nearest to the hinge clockwise by quarter turns. **DO NOT USE AN ABRUPT BACKCHECK.**

Delay Adjustment

After opening, the door should remain at the 90° position for no less than 5 seconds. This “delay time” can be increased to approximately 30 seconds by turning the timer adjustment wheel(s) in the control box clockwise. For the location of this wheel(s), refer to the 7900 or 7980 Series Control Box instruction sheet. Adjust the “delay time” to a maximum that is practical for the elderly or handicapped. The time cycle begins when the switch or scanner is activated.

Attach the Cover

1. Slide the cover insert into the top cutout in the cover (see Figure 2).
2. Push the cover over the operator assembly and against the mounting plate.
3. Insert the cover screws, and tighten securely.

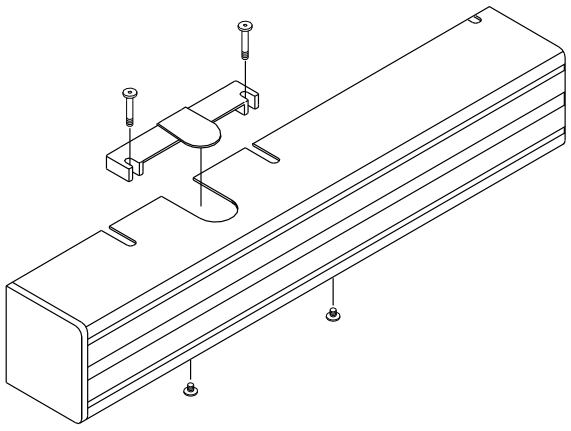


Figure 2

Locate the Caution/Automatic Door Decal

1. Locate one decal on each side of the door, near the lock stile, approximately 53” minimum to 63” maximum above the floor. The decal location must be visible without interference from the door trim, panic devices, etc.
2. Clean a 6” x 6” area where decals will be placed.
3. Apply one decal (Item 20 on page 4) on each side of the door.
4. Remove the backing and “roll” the decal onto the door to avoid trapping any air under the decal.

Set Screw Adjustment For Single Lever Arm

It may be necessary to adjust the fully open door position. Minor adjustments can be made by using the telescoping arm by:

1. Shorten the arm length to decrease the door to decrease the door opening. Lengthen the arm to increase it.
2. Remove the set screw and adjust the arm to the preferred length.
3. Replace the set screw and tighten securely after adjustment.
4. After adjusting the arm, cycle the door to ensure that it operates properly.

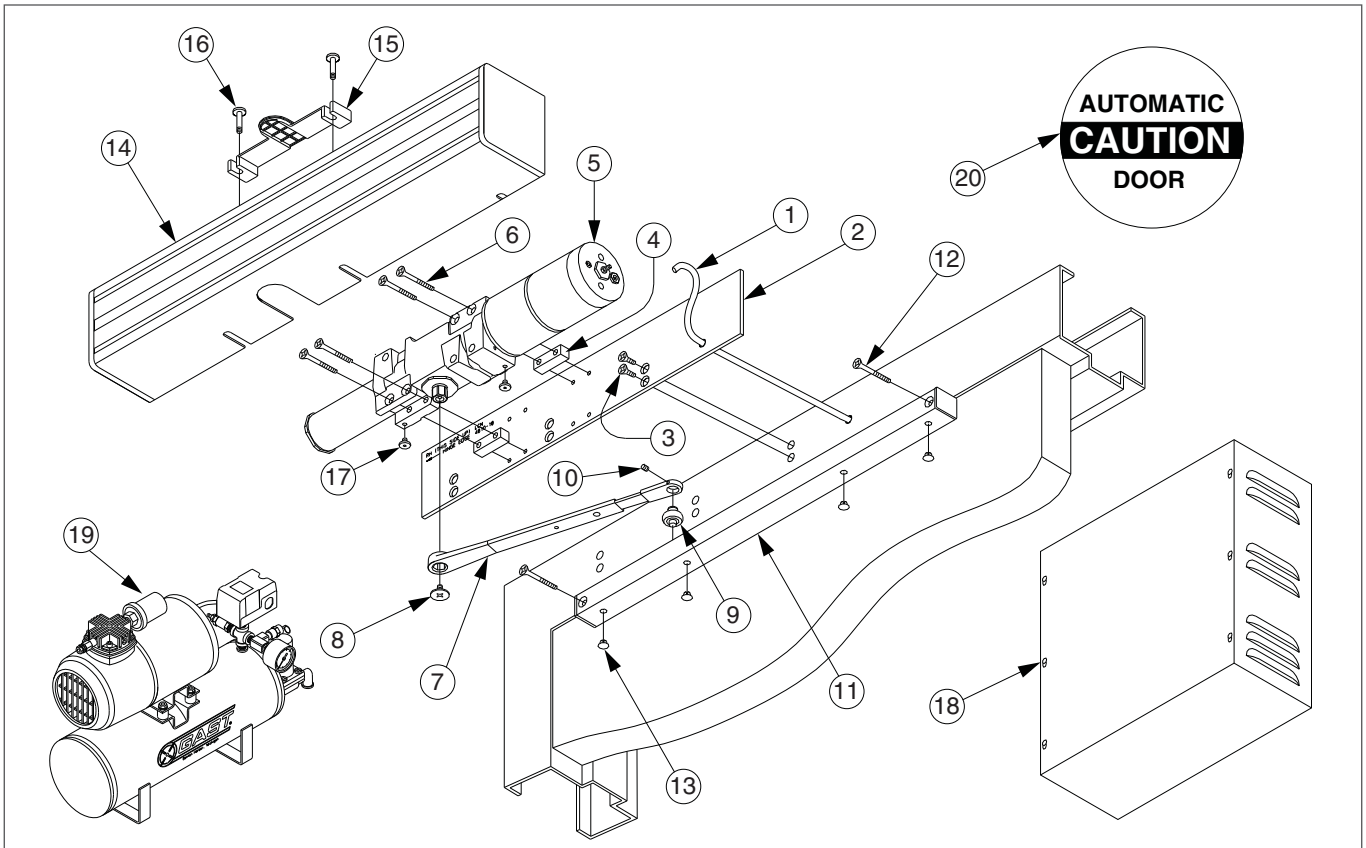


Figure 3

Item Number	Part Number	Description	Quantity
1	925	⅛" I.D. Pneumatic Tubing	Order Length Required
2	4810-18	Standard Mounting Plate	1
3	No. 14 x 1½" ¼-20 x 5/8"	Phillips Head Wood Screw or Phillips Head Machine Screw	6 2
4	4810-182	Standoff	1
5	4810-3071	LCN Switch-Actuated Auto Equalizer	4
6	No. ¼-20 x 2½"	Phillips Head Machine Screw	1
7	4810-61	Spacer	1
8	4810-3077	Arm	1
9	4810-159	Arm Shaft Screw	1
10	4810-3034	Track Roller	1
11	4810-425	Roller Locking Screw	1
12	4810-3038	Track	2
13	No. 14 x 2½" No. ¼-20 x 1½"	Phillips Head Wood Screw Phillips Head Machine Screw	4 1
14	4810-141	Track Plug	1
15	4810-72	Cover	2
16	4810-163	Cover Insert	2
17	4810-31L	Long Cover Screw	1
18	4810-31	Cover Screw	1
19	7900 or 7980 Series	Control Box	2
20	920 Series	Compressor (Optional)	
21	4810-155G	Decal	

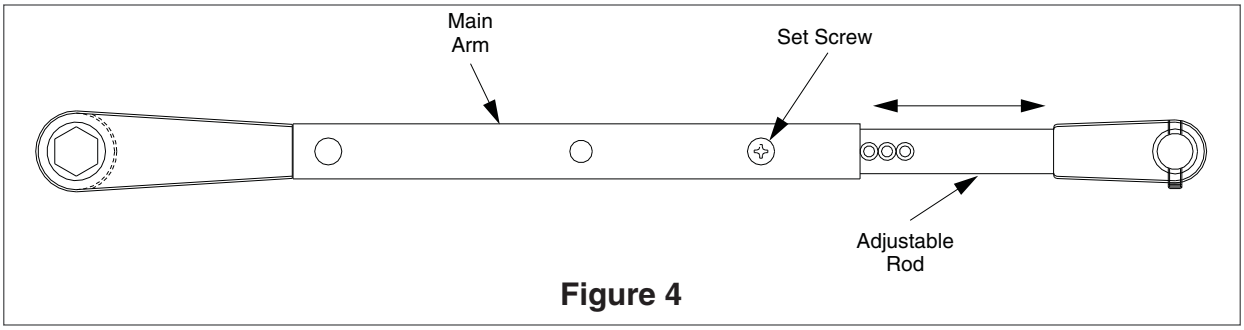


Figure 4

Adjust The Single Lever Arm Set Screw

It may be necessary to adjust the fully open door position. A minor adjustment can be made by using the telescoping arm as follows (see Figure 4):

1. Shorten the length of the arm to decrease the door opening. Lengthen the arm to increase the door opening.
2. Remove the set screw, and adjust the arm to the preferred length.
3. Replace the set screw, and tighten securely after adjustment.
4. After the arm adjustment is made, cycle the door to ensure that it is operating properly.

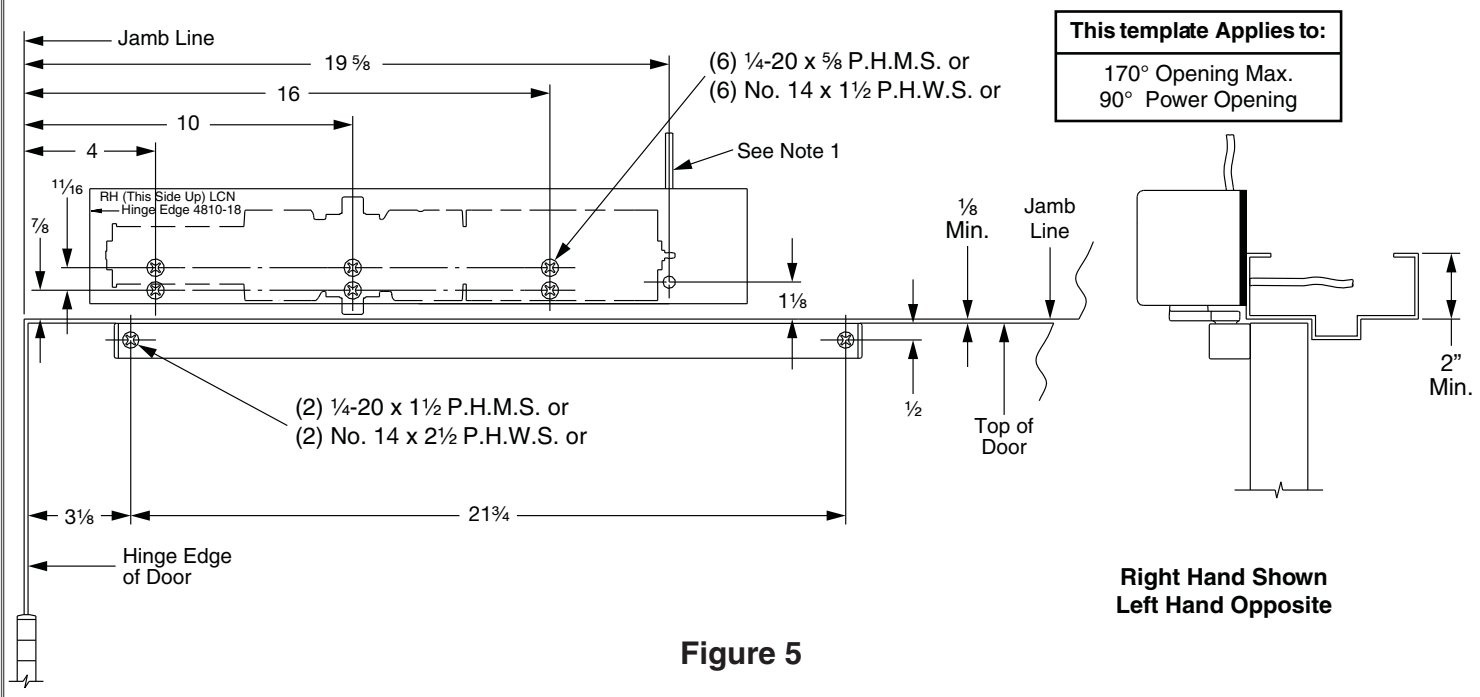


Figure 5

Notes:

1. The ¼" I.D. tubing is connected to the control box.
2. Locate the closer & track from the center line of the pivot or swing clear hinges when used.
3. Auxiliary stops are recommended at the maximum opening.
4. The closer size is 20" x 3½" x 3 5/16".
5. Reinforcing per ANSI/SDI-100 is recommended for hollow metal doors & frames.

Inch	1/8	1/4	1/2	5/8	11/16	7/8	1 1/8	1 1/2	2	2 1/2	3 1/8	4	10	16	19 5/8	21 3/4
M.M.	3	6	13	16	18	22	29	38	51	64	79	102	254	406	498	552

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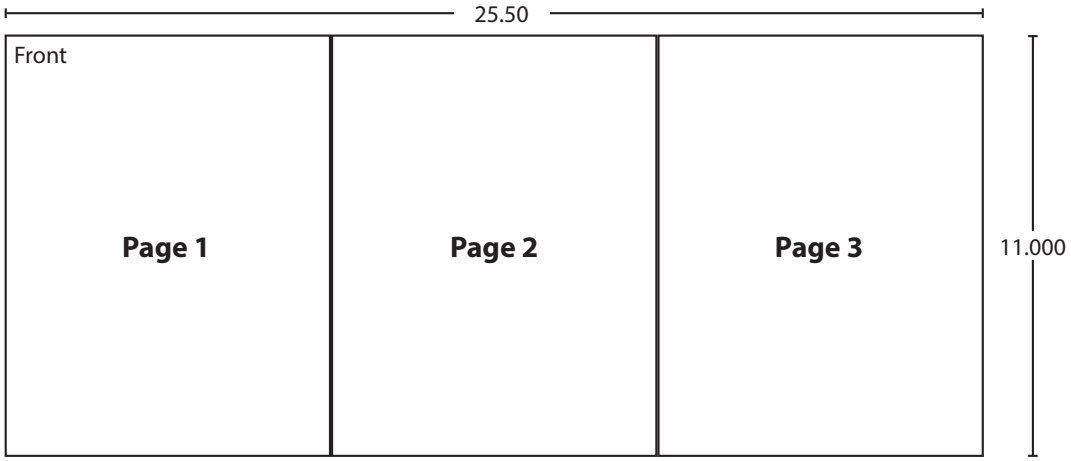
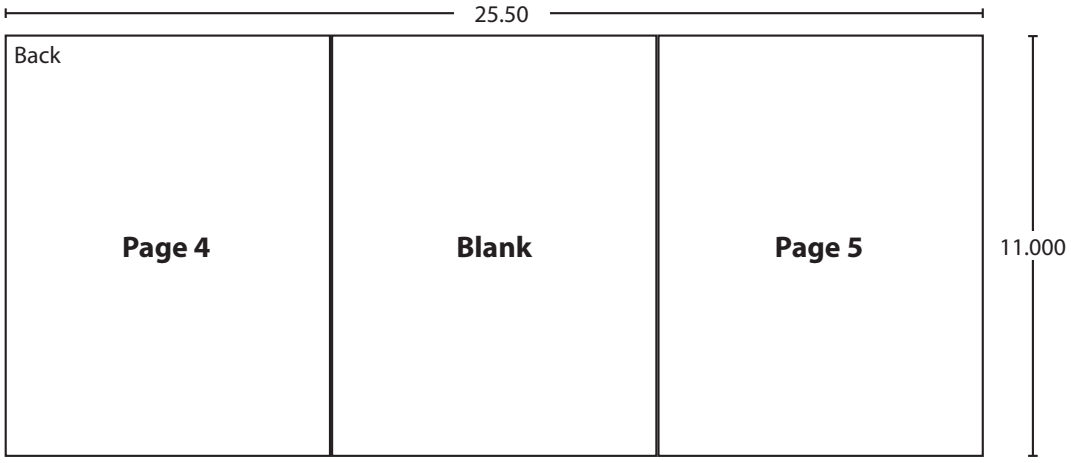


BEGINNING SHEET



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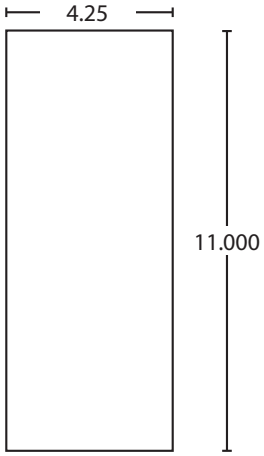

FOLDED SHEET

Additional Notes:
1. None

Revision History					
D	E	F	G	H	J
043228					

Revision Description:
D > Revised artwork

Material
White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043228	01-01-14

Title
4810 Series Instruction Sheet

Creation Date	Number	Revision
03-24-11	24827	D

Created By
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Software: InDesign CS6

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3899 Hancock Expwy
Security, CO 80911

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25073

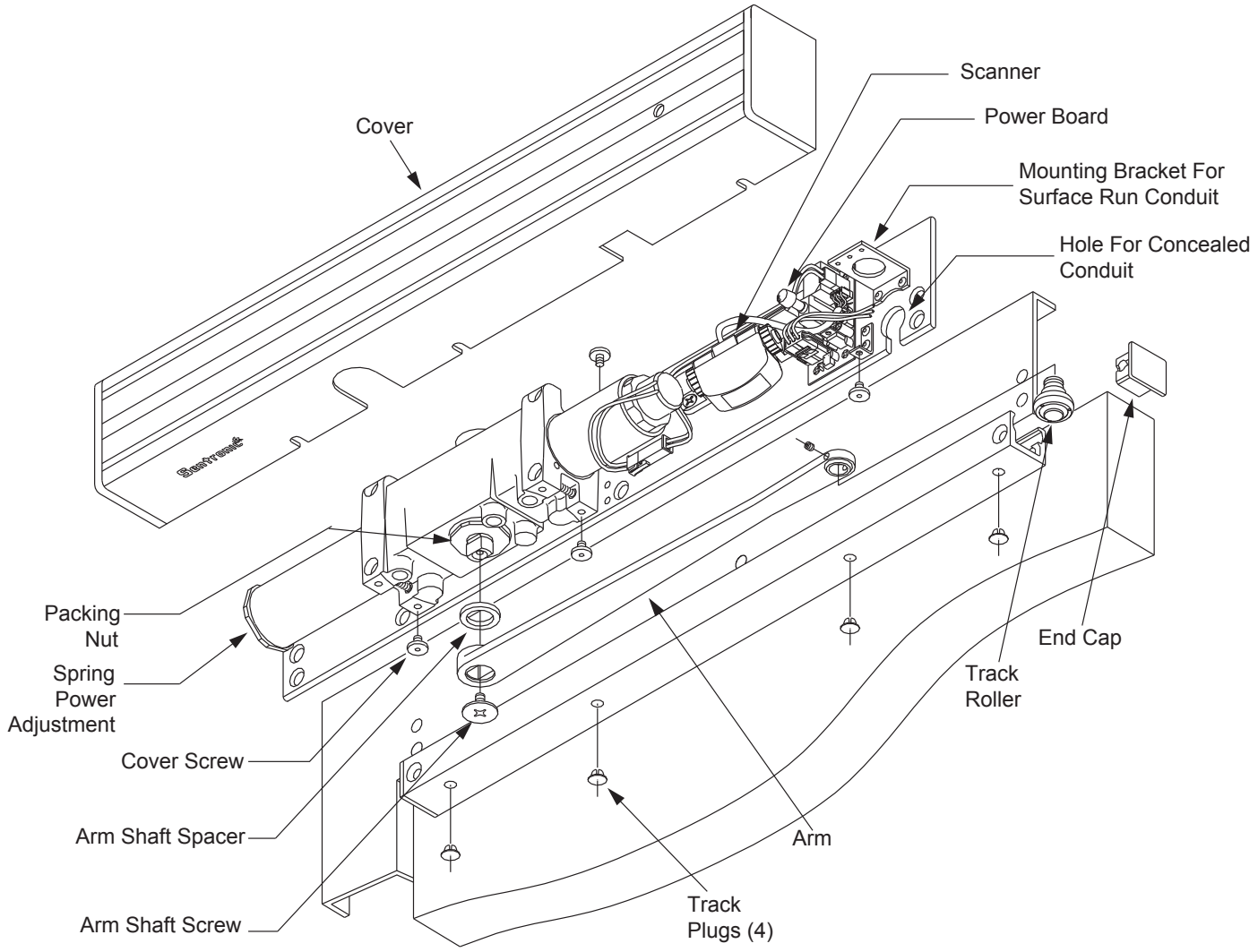
4311 HSA

LCN®

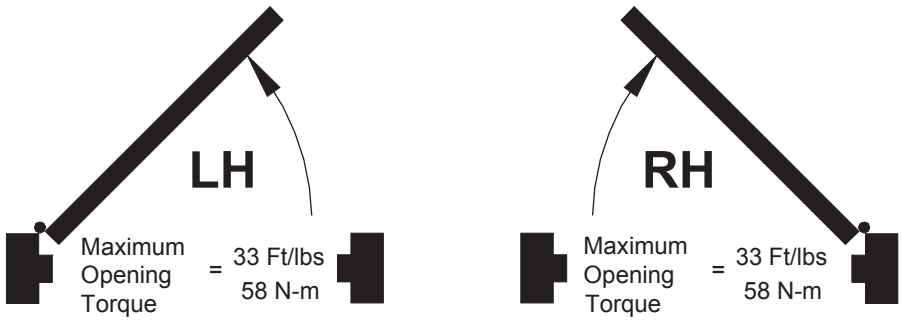
Door Closer With Scanner Activated Hold Open

Installation Instructions

The LCN Sentronic HSA (**H**older **S**canner **A**ctivated) is a door closer with a scanner activated hold open feature designed to hold the door open as long as there is traffic passing through the opening.



How To Tell Hand Of Door:



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1 Installation Instructions

⚠ WARNING ⚠

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.

1a Closer is handed at factory and marked with an “R” or “L” on top of packing nut. The hand of closer must match hand of door (See door handing diagram on page 1).

1b Input voltage supplied to door frame must be 24V. Determine whether the wiring will be concealed or surface run, and follow the remaining instructions carefully.

1c FOR CONCEALED WIRING: See **Figure 2** on page 3.

a. Prepare frame per proper template on page 6. Be sure all the holes are dimensioned correctly before drilling and tapping.
b. Assemble conduit connector provided to flexible conduit, then attach to hole in mounting plate.
c. Secure mounting plate to frame with screws provided.

1d FOR SURFACE WIRING: See **Figure 3** on page 3.

ⓘ **NOTE: Remove knockout in top of cover.**

a. Prepare frame per proper template on page 6. Be sure all holes are dimensioned correctly before drilling and tapping.
b. Secure mounting plate to frame with screws provided.
c. Attach the surface run 1/2” EMT conduit to hole in bracket on mounting plate. Be sure conduit is securely attached to bracket.

1e Make wiring connections at this time. Connect two black wires to 24V input voltage. Green wire MUST be connected to an earth ground. See **Figure 2 or 3** on page 3.

1f Place arm shaft spacer on closer shaft, then place arm on closer shaft and secure with arm shaft screw.

1g Remove end cap from track and insert track roller. Reinsert end cap into end of track and insert track plugs. Using fasteners provided, mount track to door per template on page 6.

1h Loosen set screw in end of arm, open door approx. 30°, pull ar m over top of door and connect to track roller. Tighten set screw firmly.

1i Spring Power Adjustment: See **Figure 1** for spring power adjustment diagram. To adjust spring power, use a 5/32” allen wrench provided to turn spring adjustment nut clockwise or counter clockwise the required number of turns to match the door width in Spring Adjustment chart on page 6. **DO NOT** exceed 7 turns c.w. or 8 turns c.c.w. direction.

⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions, call LCN at 877 - 671 - 7011

1j Closing Speed Regulation is preset at factory. Normally no adjustment is required, if desired: adjust **Main** and **Latch Speed** by turning proper regulating screw (see **Figure 1**) clockwise to slow speed or c.c.w. to increase speed. Do not allow door to slam into frame. A “normal” closing time from a 90° position is 5 to 7 seconds, equally divided between **Main** and **Latch Speed**. When adjusting the **Backcheck** use the least amount of force necessary to sufficiently retard the swing of the door. To adjust **Backcheck,** turn regulating screw clockwise to increase amount of force or c.c.w. to reduce the amount of force. **Do not use abrupt backcheck setting or expect closer to act as a stop!**

1k Perform electrical checkout on page 4 before installing closer cover.

Figure 1 Spring Power Adjustment & Closing Speed Regulation

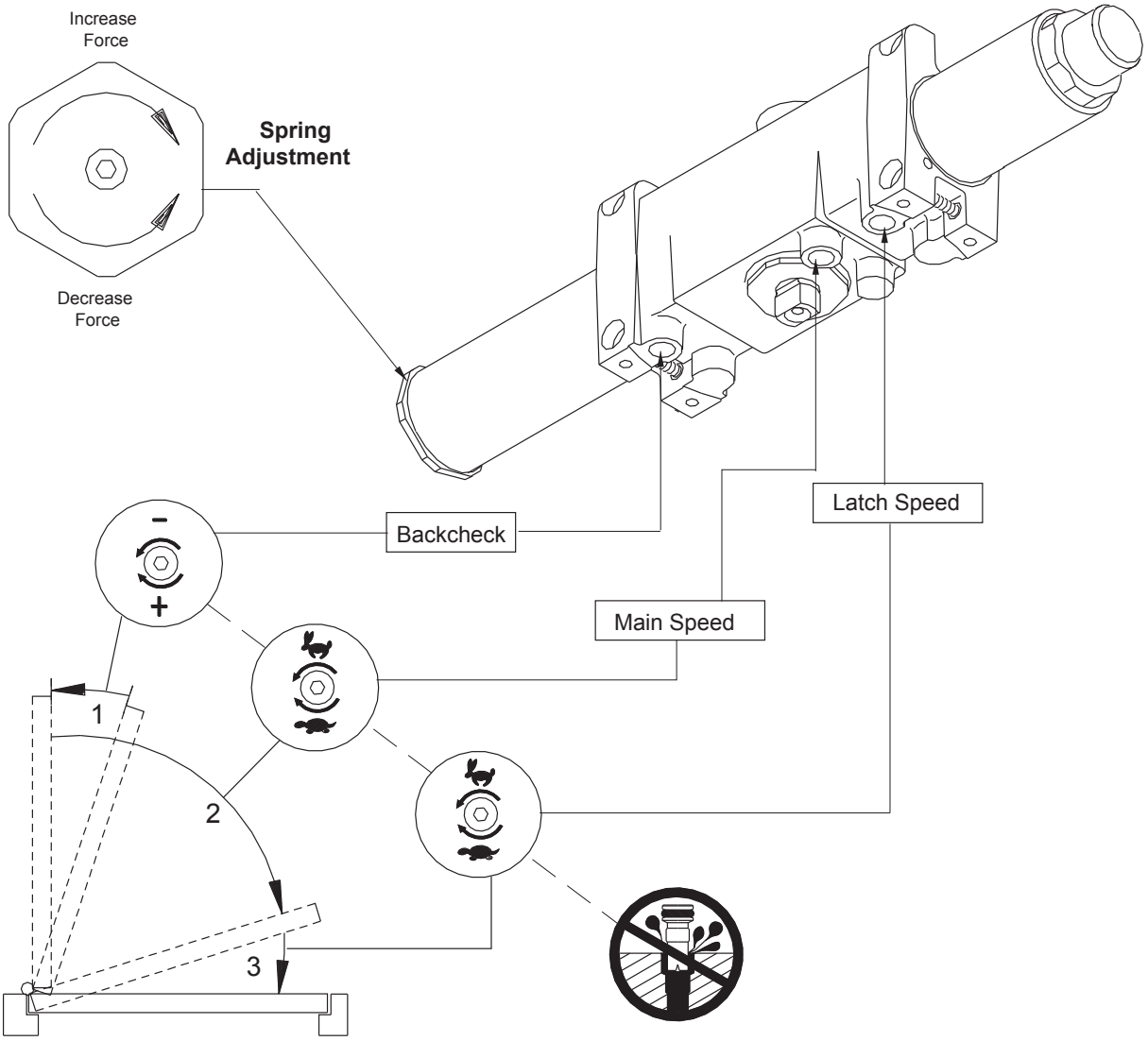


Figure 2 Concealed Wiring

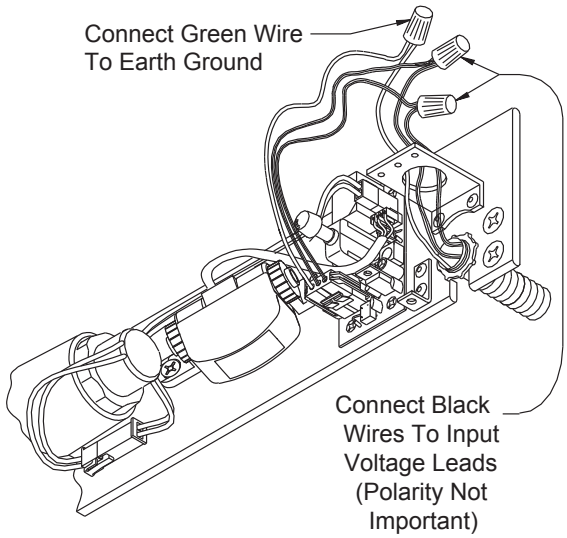
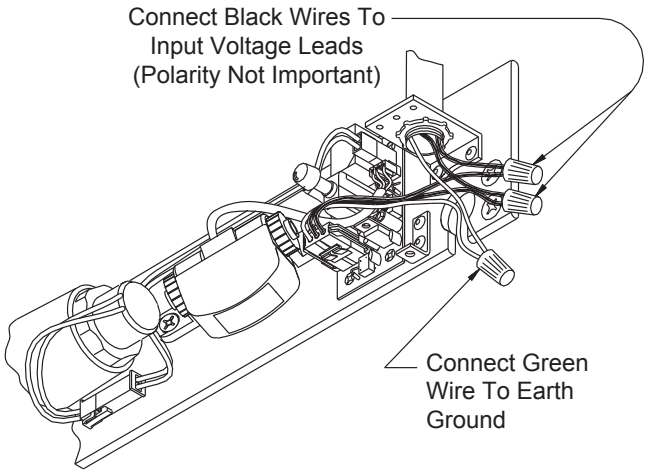


Figure 3 Optional Surface Run Wiring



2 Electrical Checkout

ⓘ **After completion of installation & wiring, and with the unit properly powered, perform the following steps:**

2a When 24V AC-DC power is applied, LED on scanner will flash on and off for 10 seconds, then turn off. Scanner LED will stay lit as long as motion is detected. Scanner LED will remain lit for 15 seconds after motion has stopped and then turn off.

2b Adjust scanner sensitivity if required (figure 4).

2c Door hold open time is controlled by the scanner and is set at 15 seconds. This time can be set at 30 seconds by setting switch 3 to on (see figure 4).

2d To check hold open operation, open door beyond 80°. The door should remain in hold open. 15 seconds after there is no motion at the door, the door should release and close.

2e Continuous hold open - Press switch once to put unit in continuous hold open mode. Press the switch again to activate the timed hold open mode. Door must be opened beyond 80° for hold open function to take effect.

3 Electrical Data

4311 HSA SCANNER ACTIVATED HOLD OPEN:

Voltage..... 24V AC-DC Nominal (+10% - 15%)

Standby Current **0.010A**

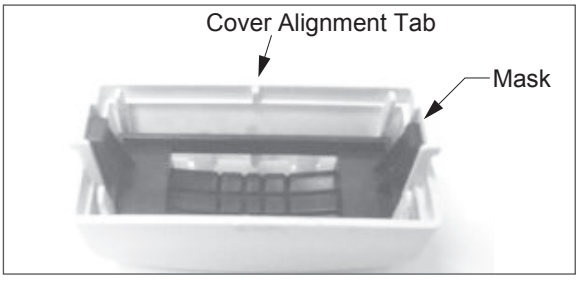
Hold Open Current **0.120A**

Figure 4:To Adjust Scanner Sensitivity

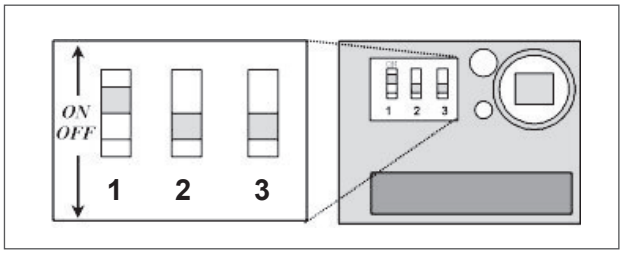
3a Insert a small screwdriver on the side of the housing and gently pry the cover off.

3b Keep mask and cover together as shown.

ⓘ **Note: Cover alignment tab.**



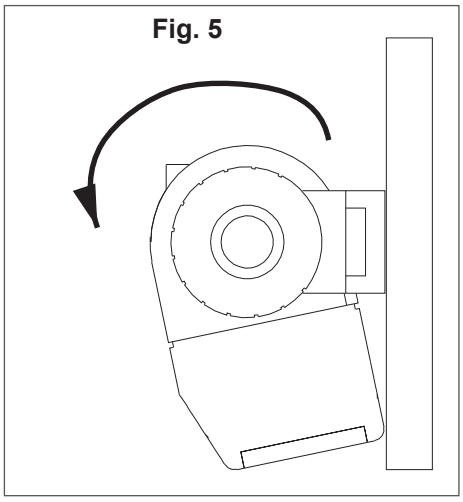
3c Set dip switch 1 to ON to increase sensitivty.



ⓘ **NOTE: Leave switches 2 & 3 OFF.**

3d Snap mask and cover onto scanner housing.

Fig. 5



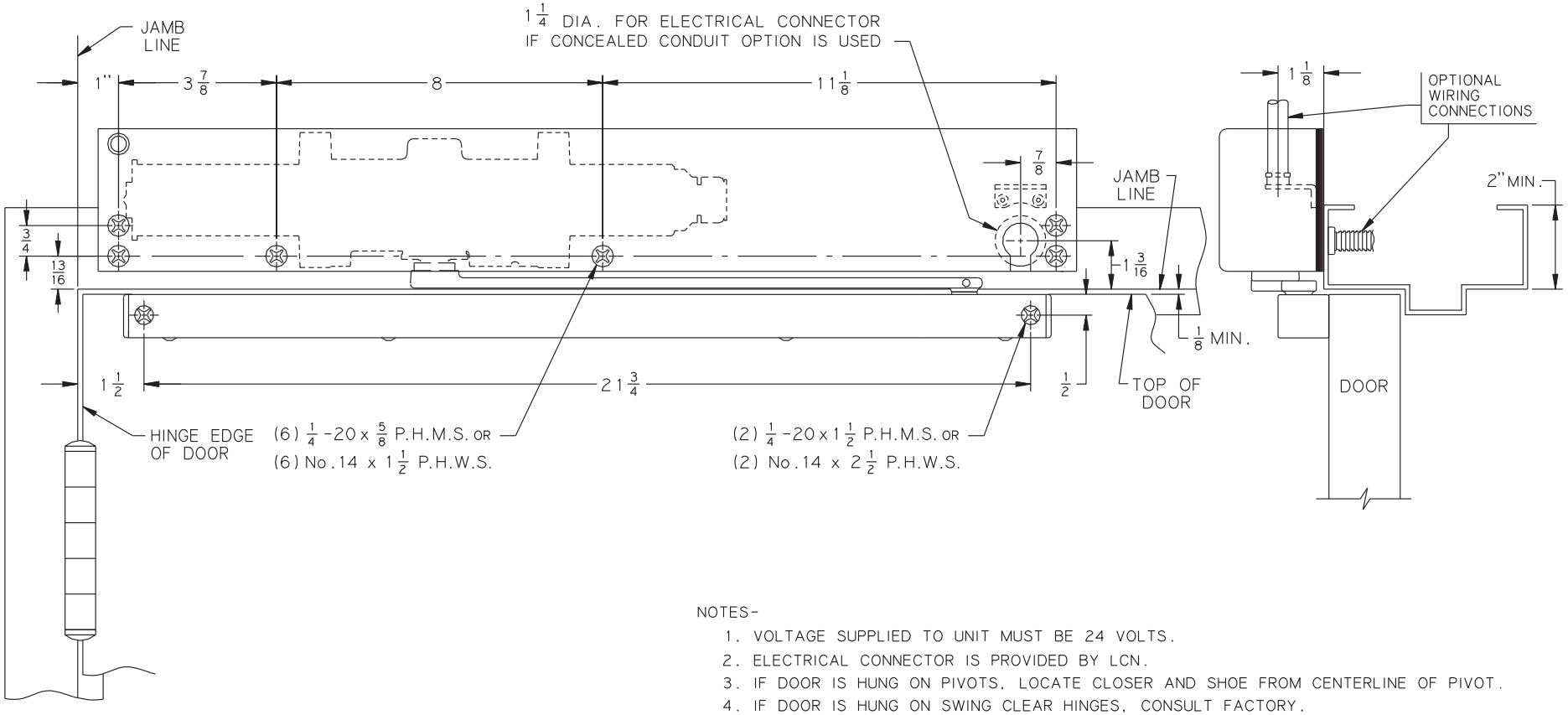
ⓘ **Note: Cover alignment tab fits into a notch on the bottom of the scanner housing.**

3e Rotate scanner towards mounting plate, as shown in Fig. 5.

4311 HSA

4311 HSA - HOLD OPEN ANY POINT 80° TO 160°

AUXILIARY STOP RECOMMENDED AT MAXIMUM HOLD OPEN



NOTES-

1. VOLTAGE SUPPLIED TO UNIT MUST BE 24 VOLTS.
2. ELECTRICAL CONNECTOR IS PROVIDED BY LCN.
3. IF DOOR IS HUNG ON PIVOTS, LOCATE CLOSER AND SHOE FROM CENTERLINE OF PIVOT.
4. IF DOOR IS HUNG ON SWING CLEAR HINGES, CONSULT FACTORY.
5. FLOOR OR WALL STOPS MUST BE USED AT MAXIMUM HOLD OPEN.
6. FOR ADDITIONAL INFORMATION ON RECOMMENDED USE OF THIS UNIT CONSULT NFPA-72E PAMPHLET.
7. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.

INCH	1/8	1/4	1/2	5/8	3/4	13/16	7/8	1	1 1/8	1 3/16	1 1/4	1 1/2
M.M.	3	6	13	16	19	21	22	25	29	30	32	38

INCH	2	2 1/2	2 3/4	3 7/8	8	11 1/8	21 3/4	2'4"	3'0"	3'1"	4'0"
M.M.	51	64	70	98	203	283	553	700	900	925	1200

LCN®

71378

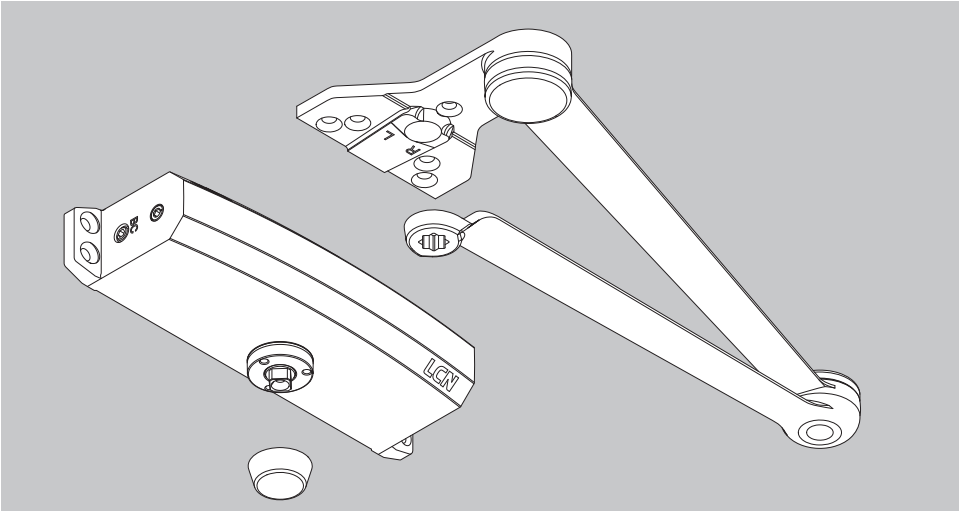
1250 Series

LCN®

EDA/HEDA Mount

Installation Instructions

PARTS

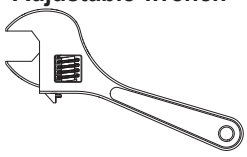


ⓘ **Screw pack information is on page 4.**

TOOLS

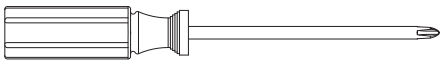
5⁄32" or 4mm Hex Wrench

Adjustable wrench



1⁄8" Drill Bit

Phillips Head Screwdriver



ⓘ **Hold Open wrench info is on page 4.**

⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage.
Follow all instructions carefully.
For questions, call LCN at 877 - 671 - 7011

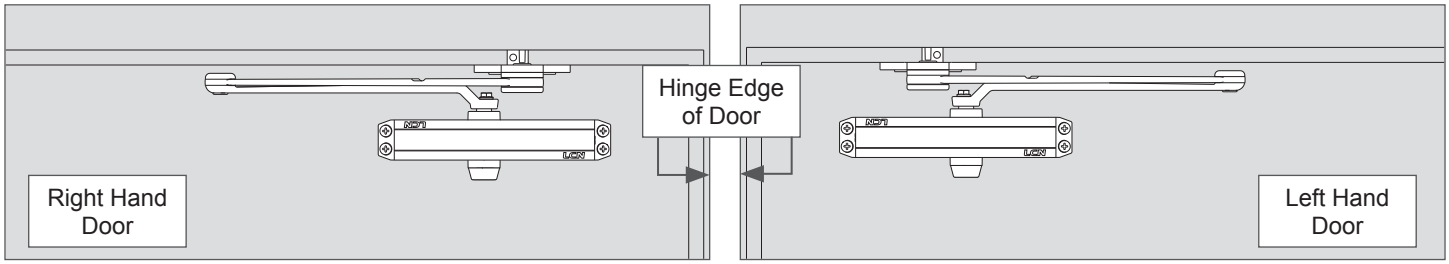
Hold open arms must not be installed on fire rated doors.

Opening the regulation valves too far may result in the closer leaking oil!
This may result in closer and property damage, and personal injury.
FOLLOW ALL INSTRUCTIONS CAREFULLY.

DO NOT USE THE CLOSER AS A DOOR STOP!
An auxiliary stop is recommended at the hold-open point or where the door cannot swing 180º.

Choose Installation Type

EDA (see page 2)



Customer Service

1-877-671-7011 www.allegion.com/us

ALLEGION

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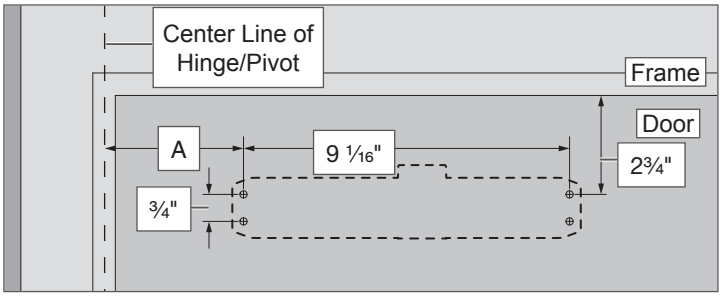
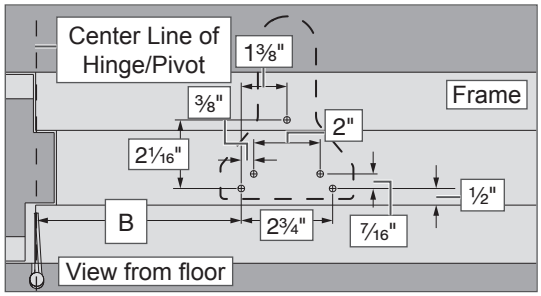
71378 Rev. 07/17-c
Patent Pending

Mounting Dimensions

ⓘ **Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.**





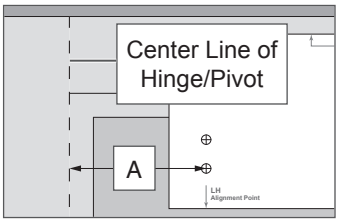
1 Determine the degree of door opening required and find dimensions “A” and “B” on the chart below.

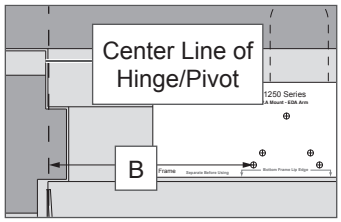
A Closer	Opening	Measurement from Door Edge
	100°	7 5/8”
	130°	6 1/8”
	180°	4 1/8”

B PA Shoe	Opening	Measurement from Door Edge
	100°	9 5/8”
	130°	8 1/8”
	180°	6 1/8”

2 Measure from center line of hinge/pivot and stick template on door. Mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**





3 Remove template, and drill holes where marked with a 1/8” drill bit for SRT screws.

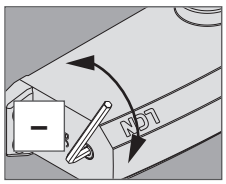
ⓘ **SRT screws are used on metal doors.**
Wood screws are used on wood doors.

4 Measure and determine your door’s width. Using a hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.

Turn counterclockwise for “-”; turn clockwise for “+”

ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

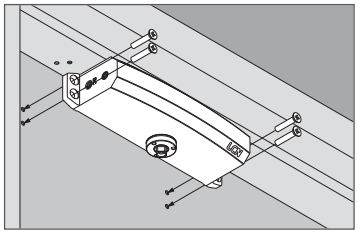
Door Width	Number of Turns
ADA Setting	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



+

5 Install closer onto door.

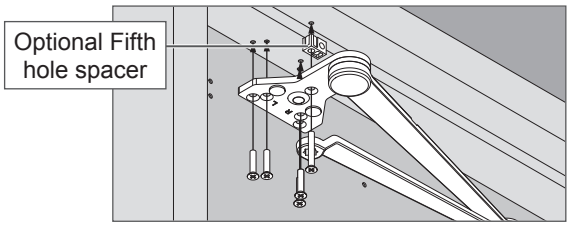
ⓘ **Speed regulation valve goes away from the hinge.**



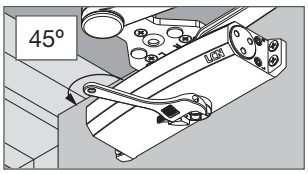
6 Install EDA shoe & fifth hole spacer onto frame.

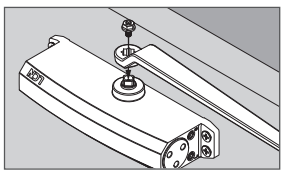
ⓘ **Use the fifth hole spacer only if there is a space between the frame and the shoe.**

ⓘ **Intallation limited to reveals greater than 2 11⁄16”.**



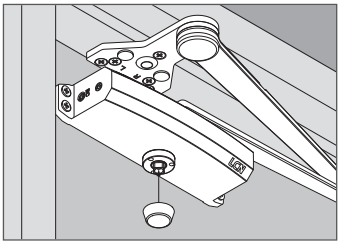
7 Rotate closer shaft 45°, attach main arm with provided fastener.

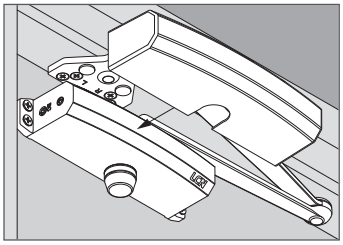




8 Adjust the closer, if necessary. See page 4 for closer adjustment instructions.

9 Screw cap onto shaft, and install cover (optional).





Closer Valve Adjustment

Check closing time, and adjust closer if needed.

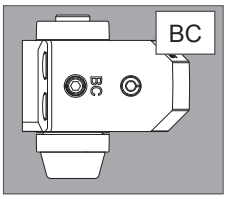
⚠ CAUTION ⚠

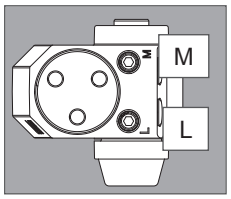
Opening the regulation valves (described below) too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.

FOLLOW ALL INSTRUCTIONS CAREFULLY.

- ⓘ **Valve must be closed CW to seat, never more than 3 turns CCW from seated position. Adjust the valves in 1/4 turn increments or less at a time. DO NOT TURN MORE THAN 3 FULL ROTATIONS. THIS WILL CAUSE THE CLOSER TO LEAK OIL!**
- ⓘ **DO NOT ADJUST THE LATCH SPEED IF THE DOOR DOES NOT LATCH. If this occurs, adjust the spring force.**

1. Open the door to 90°, measure how long the door takes to close and latch. A typical closing time is 5 to 7 seconds, evenly divided between main speed and latch speed.
2. If the closing time needs to be adjusted, use the closer valves described below.
   a. Backcheck- this controls door opening speed as the door angle approaches 90°. **Do not use as a door stop.**
   b. Main Speed- this controls door speed during most of the closing motion.
   c. Latch Speed- this controls door speed during the last few degrees of door closing.
3. Turn the valves clockwise to decrease door speed, and counterclockwise to increase door speed. The latch speed and main speed should be adjusted together.

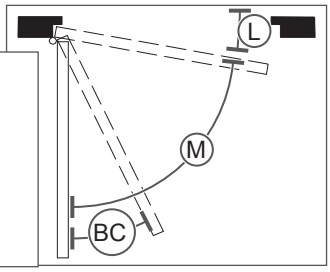




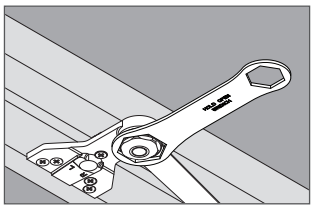
BC = Backcheck valve

M = Main speed valve

L = Latch speed valve

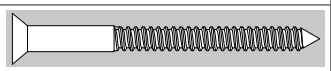
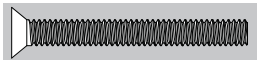
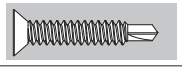


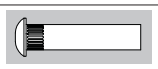
Optional Hold Open Arms (HEDA)



To adjust Optional Hold-open arm:

1. Loosen hold open nut.
2. Open door to 5° less than desired hold position and tighten hold open nut securely.

Screw Type	Picture	Cylinder Mounting	Shoe Mounting	5th Hole Mounting
Wood (for wood doors & frames)		4 @ 1 3⁄16"	4 @ 1 3⁄8"	1 @ 2"
Machine (for metal doors & frames) Requires hole drilling & tapping; best hold.		4 @ 1"	4 @ 5⁄8"	1 @ 1 ½"
SRT - Self Reaming & Tapping (for metal doors & frames)		4 @ 1 ½"	4 @ 1 ½"	1 @ 2"

Screw Type	Picture	Notes
Fifth Hole Spacer		
Thru Bolts		Used when mounting through door.
Pinion Attachment Screw		1 M6 x 10mm for attachment of the arm (see step 6).

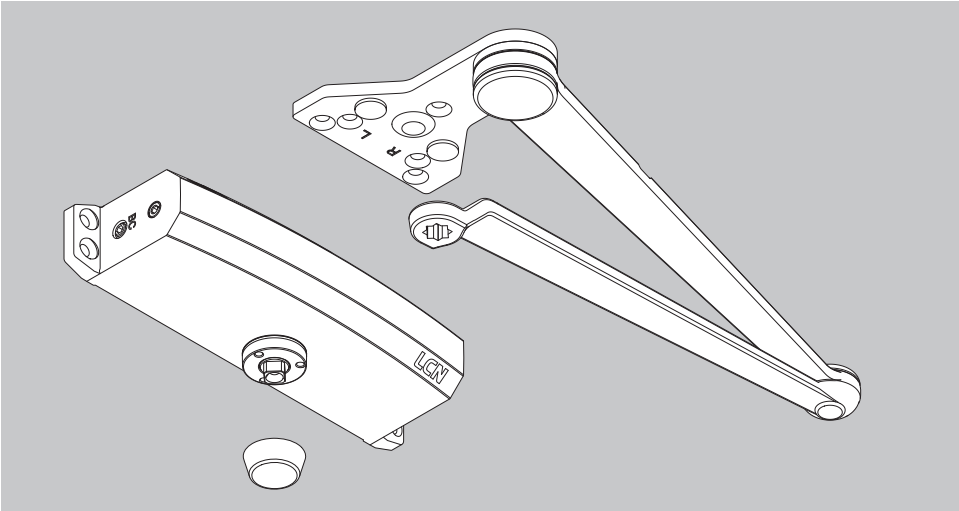
Serie 1250

LCN®

Montaje EDA/HEDA

Instrucciones de Instalación

PIEZAS

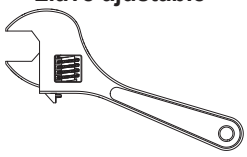


ⓘ **La información sobre el paquete de tornillos se encuentra en la página 8.**

HERRAMIENTAS

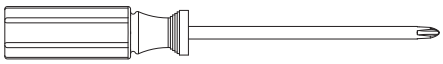
Llave hexagonal de 5⁄32" o 4 mm

Llave ajustable



Broca de taladro de ⅛"

Destornillador con cabeza Phillips



ⓘ **Información sobre la llave para mantener abierto en la página 8.**

⚠ PRECAUCIÓN ⚠

La instalación o regulación incorrecta puede resultar en lesiones personales o daño a los bienes.
Siga todas las instrucciones con atención.
En caso de duda, llame a LCN al 877-671-7011

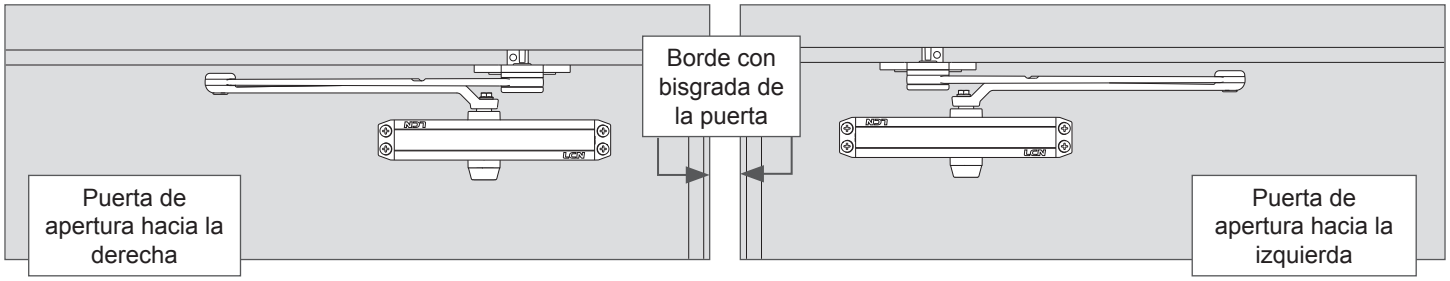
Los brazos para mantener abierto no deben instalarse en puertas con clasificación ignífuga.

¡Abrir demasiado las válvulas de regulación puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales.
SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

¡NO USE EL MECANISMO DE CIERRE COMO TOPE DE LA PUERTA!
Se recomienda el uso de un tope auxiliar en el punto de mantener abierto o donde la puerta no puede girar 180°.

Seleccione el tipo de instalación

EDA (vea la página 6)



Servicio al cliente

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ALLEGION

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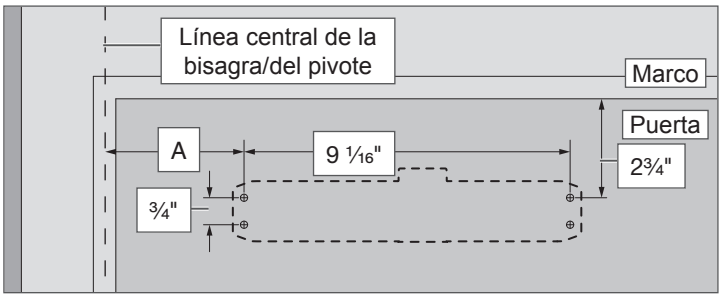
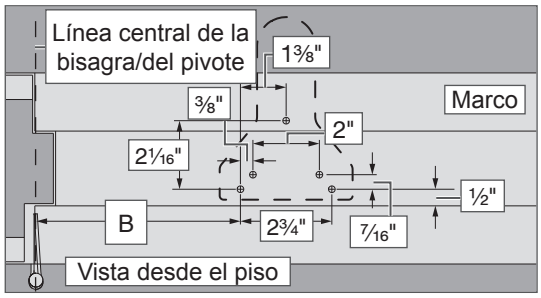
71378 Rev. 08/17-c
Patent Pending

Montage en EDA

Dimensiones de montaje

ⓘ **Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.**





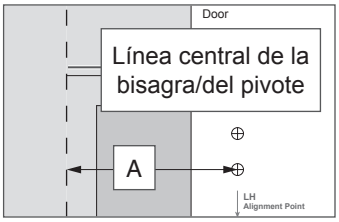
1 Determine el grado de apertura de la puerta requerido y busque las dimensiones “A” y “B” en el cuadro siguiente.

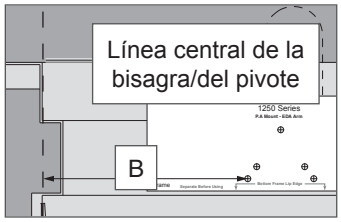
A El mecanismo de cierre	Apertura	Medición desde el borde de la puerta
	100°	7 5/8”
	130°	6 1/8”
	180°	4 1/8”

B El zócalo	Apertura	Medición desde el borde de la puerta
	100°	9 5/8”
	130°	8 1/8”
	180°	6 1/8”

2 Mida desde la línea central de la bisagra/del pivote y adhiera la plantilla en la puerta. Marque los orificios de perforación

ⓘ **Vea las Dimensiones de montaje anteriores según sea necesario.**





3 Retire la plantilla y perfore orificios donde está marcado con una broca de taladro de ⅛” para tornillos SRT.

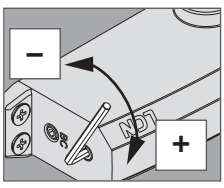
ⓘ **Los tornillos SRT se usan en puertas de metal.**
Los tornillos de madera se usan en puertas de madera.

4 Mida y determine el ancho de su puerta. Con una llave hexagonal, ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

Gire en sentido antihorario para “-”; gire en sentido horario para “+”.

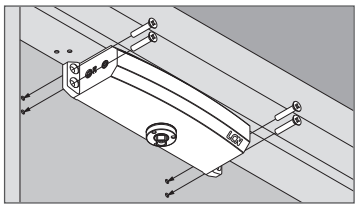
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

Ancho de la puerta	Número de giros
Configuración de ADA	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Instale el mecanismo de cierre en la puerta.

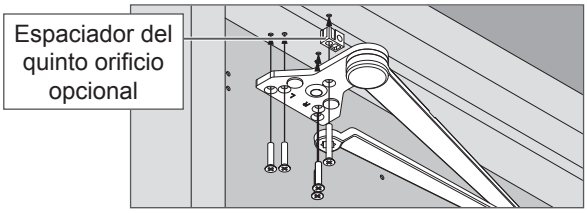
ⓘ **La vàlvula de regulaciòn de velocidad va con direction opuesta de la bisagra.**



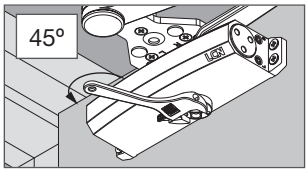
6 Instale el zócalo del EDA en el marco, luego en la varilla y el zócalo.

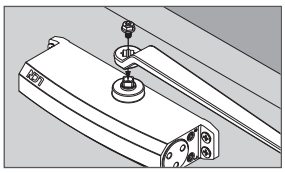
ⓘ **Use el espaciador del quinto orificio si hay un espacio entre el marco y el zócalo del EDA.**

ⓘ **Instalación limitada a listones de más de 2 11⁄16”.**



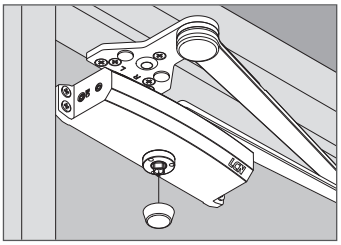
7 Gire el eje del cerrador a 45° y coloque el brazo principal con los sujetadores ya incluidos.

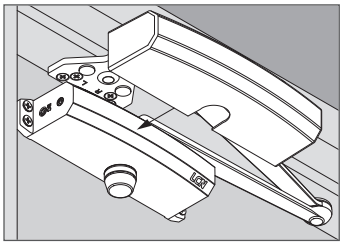




8 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 8 para ver las instrucciones de ajuste del mecanismo de cierre.

9 Atornille la tapa en el eje e instale la cubierta (opcional).





Ajuste de la válvula del mecanismo de cierre

Compruebe el tiempo de cierre y ajuste el mecanismo de cierre de ser necesario.

⚠ PRECAUCIÓN ⚠

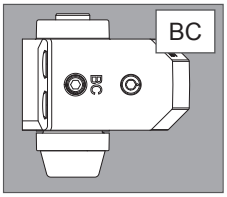
¡Abrir demasiado las válvulas de regulación (como se describe a continuación) puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales.

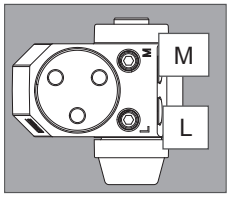
SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

ⓘ **La Vàlvula se Cierra hacia el lado dercho(en direction de las agujas del reloj) hasta que tope,nunca mas de tres vueltas al lado izquierdo(en contra de las manesillas del reloj) del tope. Ajuste las válvulas en incrementos de 1/4 de giro o menos a la vez. ¡NO GIRE MÁS DE 4 ROTACIONES COMPLETAS - ESTO OCASIONARÁ QUE EL MECANISMO DE CIERRE TENGA UNA FUGA DE ACEITE!**

ⓘ **NO AJUSTE LA VELOCIDAD DEL PASADOR SI LA PUERTA NO SE TRABA. Si esto sucede, ajuste la fuerza del resorte.**

1. Abra la puerta a 90°, mida cuánto tiempo tarda la puerta en cerrar y trabarse. Un tiempo típico de cierre es de 5 a 7 segundos, divido de manera uniforme entre velocidad principal y velocidad del pasador.
2. Si se necesita ajustar el tiempo de cierre, use las válvulas del mecanismo de cierre como se describe a continuación.
   a. Retención: controla la velocidad de apertura de la puerta cuando el ángulo de la puerta se acerca a 90°. **No usar como tope de puerta.**
   b. Velocidad principal: controla la velocidad de la puerta durante la mayor parte del movimiento de cierre.
   c. Velocidad del pasador: controla la velocidad de la puerta durante los últimos grados del cierre de la puerta.
3. Gire las válvulas en sentido horario para reducir la velocidad de la puerta y en sentido antihorario para aumentar la velocidad de la puerta. La velocidad del pasador y la velocidad principal deben ajustarse conjuntamente.

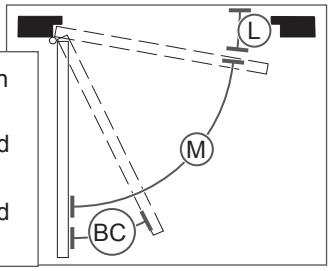




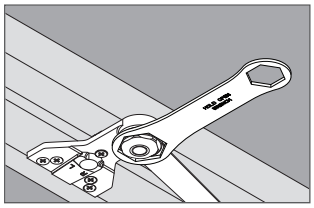
BC = válvula de retención

M = válvula de velocidad principal

L = válvula de velocidad del pasador

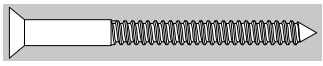
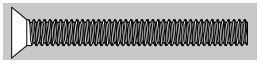
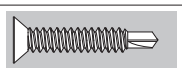


Brazos opcionales para mantener abierto (HEDA)



Para ajustar el brazo opcional para mantener abierto:

1. Afloje la tuerca del brazo para mantener abierto.
2. Abra la puerta a 5° menos que la posición deseada para mantener abierto y ajuste la tuerca del mecanismo para mantener abierto firmemente.

Tipo de tornillo	Imagen	Montaje en el cilindro	Montaje en el soporte	Montaje en el 5.° orificio
Madera (para puertas y marcos de madera)		4 @ 1 3⁄16"	4 @ 1 3⁄8"	1 @ 2"
Máquina (para puertas y marcos de metal) Requiere perforación de orificio y formación de rosca; mejor sujeción		4 @ 1"	4 @ 5⁄8"	1 @ 1 ½"
SRT: autoperforación y formación de rosca (para puertas y marcos de metal)		4 @ 1 ½"	4 @ 1 ½"	1 @ 2"

Tipo de tornillo	Imagen	Notas
Espaciador del quinto orificio		
Pernos pasantes		Se utiliza al montar a través de la puerta
Tornillo de sujeción del piñón		1 M6 x 10 mm para la sujeción del brazo (ver el paso 6)

71378

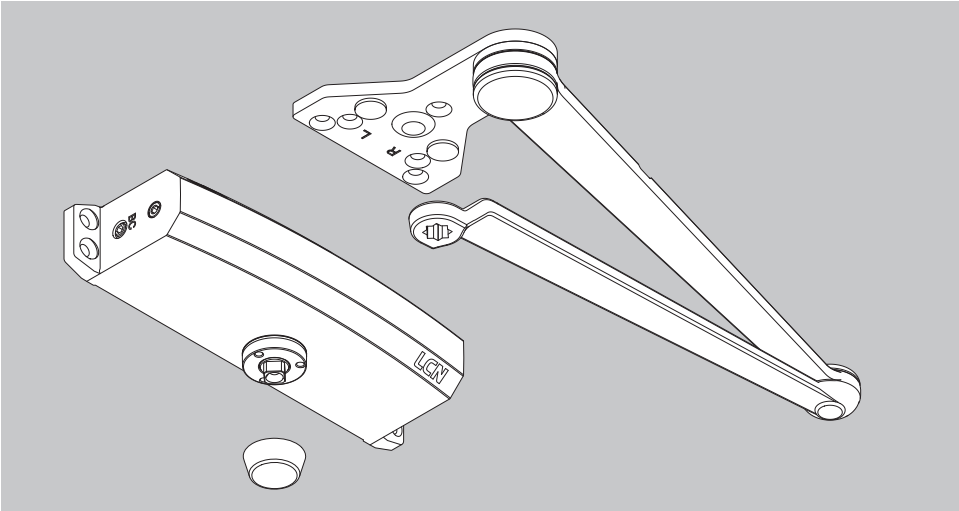
Série 1250

LCN®

Montage EDA/HEDA

Instructions d'installation

PIÈCES

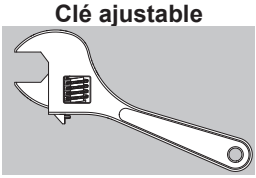


ⓘ **Informations sur l'ensemble de vis à la page 12.**

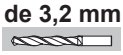
OUTILS

Clé Allen de 4 mm ou 5⁄32 po

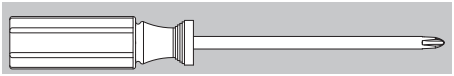
Clé ajustable



Mèche de 3,2 mm (1⁄8 po)



Tournevis cruciforme



ⓘ **Informations sur la clé ouverte à la page 12.**

⚠ MISE EN GARDE ⚠

Une installation inadéquate ou le non-respect des règlements peut causer des blessures ou des dommages matériels.
Suivez attentivement toutes les instructions.
Pour toute question, appelez LCN au 877-671-7011.

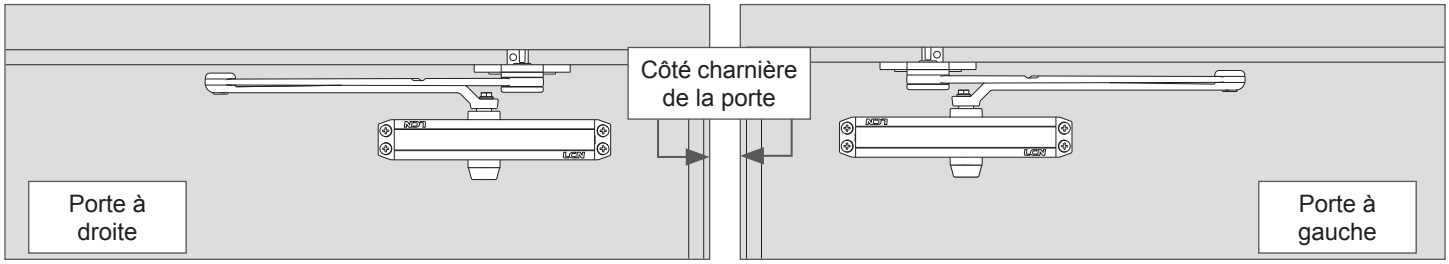
Les bras de retenue ne doivent pas être installés sur les portes coupe-feu.

Une trop grande ouverture des soupapes de régulation peut entraîner une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

ÉVITEZ D'UTILISER LE DISPOSITIF DE FERMETURE COMME BUTOIR DE PORTE!
Il est recommandé d'utiliser un butoir auxiliaire au point de retenue ou à l'endroit où la porte ne peut s'ouvrir à 180°

Choisissez le type d'installation

Montage du EDA (voir page 10)



Service à la clientèle

1-877-671-7011 www.allegion.com/us

ALLEGION

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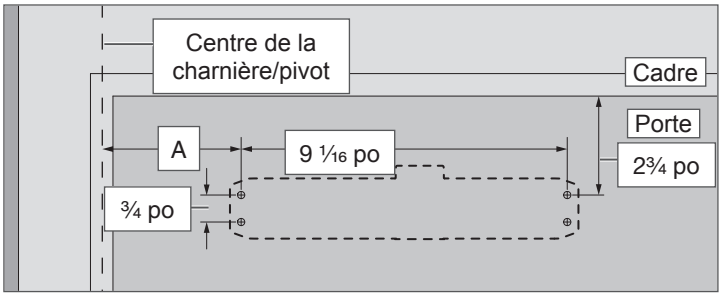
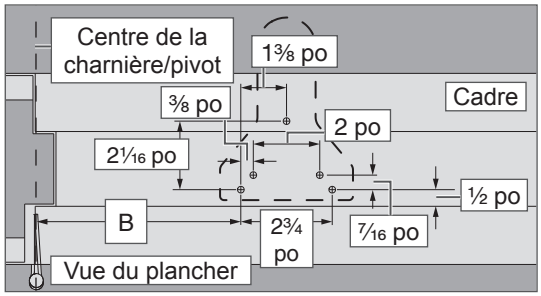
Patent Pending

Montage du EDA

Dimensions de montage

ⓘ **Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.**





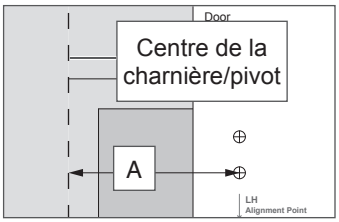
1 Déterminez le degré d'ouverture de la porte requis et trouvez les dimensions « A » et « B » dans les tableaux ci-dessous.

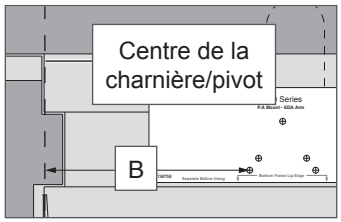
A	Ouverture	Mesure à partir du bord de la porte
Dispositif de fermeture	100°	7 5/8 po
	130°	6 1/8 po
	180°	4 1/8 po

B	Ouverture	Mesure à partir du bord de la porte
Sabot du EDA	100°	9 5/8 po
	130°	8 1/8 po
	180°	6 1/8 po

2 Mesurez à partir du centre de la charnière/pivot et collez le gabarit sur la porte. Faites des marques pour les trous à percer.

ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**





3 Retirez le gabarit et percez des trous de 3,2 mm (1/8 po) aux endroits marqués avec une mèche pour les vis SRT.

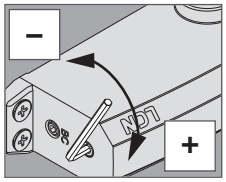
ⓘ **Les vis SRT sont utilisées sur les portes en métal. Les vis à bois sont utilisées sur les portes en bois.**

4 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé Allen, réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.

Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

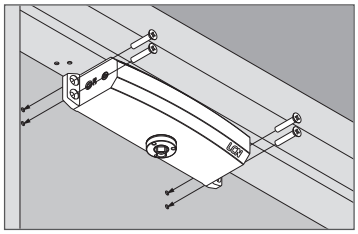
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

Largeur de la porte	Nombre de tours
Réglage de l'ADA	-12
32" - 815 mm	-6
36" - 915 mm	0
42" - 1050 mm	+6
48" - 1220 mm	+13



5 Installez le dispositif de fermeture sur la porte.

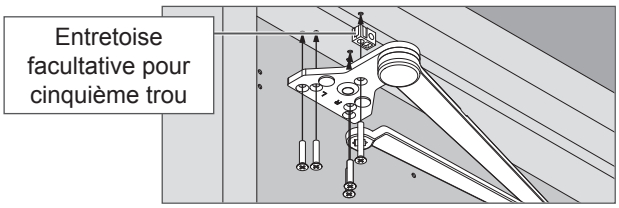
ⓘ **La valve d'ajustement de le vitesse va du côté opposé aux charnières.**



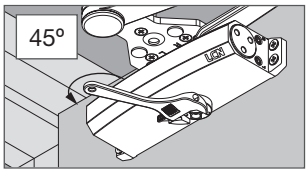
6 Installez le sabot du EDA sur le cadre.

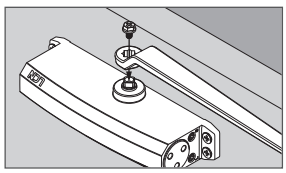
ⓘ **Utilisez l'entretoise facultative du cinquième trou seulement s'il y a un espace entre le cadre et le sabot du EDA.**

ⓘ **Installation limitée pour révéler plus de 2 11⁄16 po.**



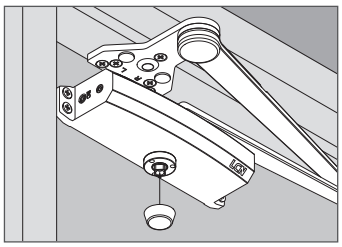
7 Faire pivoter l'arbre du dispositif de fermeture 45°, installez et serrez la vis du bras principal.

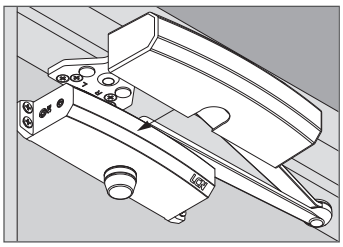




8 Réglez le dispositif de fermeture au besoin. Consultez la page 12 pour les instructions de réglage du dispositif de fermeture.

9 Tournez le capuchon sur l'arbre et installez le couvercle (en optional).





Réglage de la soupape du dispositif de fermeture

Vérifiez le temps de fermeture et réglez le dispositif de fermeture au besoin.

⚠ MISE EN GARDE ⚠

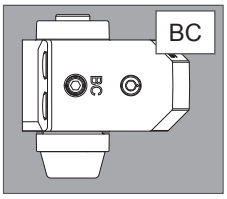
Trop ouvrir les soupapes de régulation (décrites ci-dessous) peut causer une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.

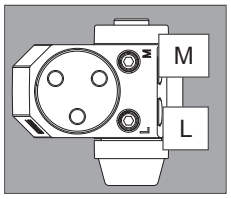
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

ⓘ **La valve se ferme en tournant dans le sens des aiguilles d'une montre; ne jamais faire plus de 3 tours dans le sens opposé aux aiguilles d'une montre à partir de la position fermée. Réglez les soupapes en effectuant 1/4 de tour ou moins à la fois. N'EFFECTUEZ PAS PLUS DE 3 ROTATIONS COMPLÈTES - CELA CAUSERA UNE FUITE D'HUILE DANS LE DISPOSITIF DE FERMETURE!**

ⓘ **NE RÉGLEZ PAS LA VITESSE D'ENCLENCHEMENT SI LA PORTE NE S'ENCLENCHE PAS. Si cela se produit, réglez la force du ressort.**

1. Ouvrez la porte à 90° et comptez le temps nécessaire pour que la porte se ferme et s'enclenche. Le temps de fermeture typique est de 5 à 7 secondes et est divisé également entre la vitesse principale et la vitesse d'enclenchement.
2. Si le temps de fermeture doit être réglé, utilisez les soupapes du dispositif de fermeture décrites ci-dessous.
   a. Retenue - contrôle la vitesse d'ouverture de la porte lorsque l'angle s'approche de 90°. **N'utilisez pas de butoir.**
   b. Vitesse principale - contrôle la vitesse de la porte durant presque tout le mouvement de fermeture.
   c. Vitesse d'enclenchement - contrôle la vitesse de la porte durant les derniers degrés de la fermeture.
3. Faites tourner les soupapes dans le sens horaire pour faire diminuer la vitesse de la porte, et dans le sens antihoraire pour la faire augmenter. La vitesse d'enclenchement et la vitesse principale doivent être réglées ensemble.

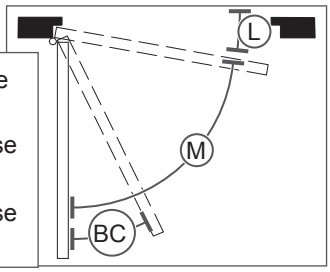




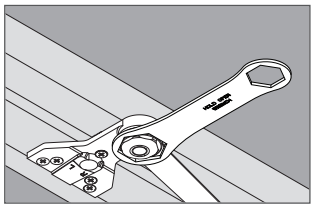
BC = soupape de retenue

M = soupape de la vitesse principale

L = soupape de la vitesse d'enclenchement

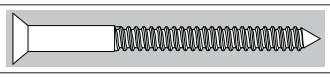
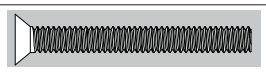
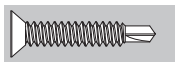


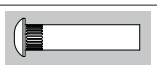
Bras de retenue facultatifs (HEDA)



Pour régler le bras de retenue facultatif :

1. Desserrez l'écrou de retenue.
2. Ouvrez la porte de 5° de moins que la position de retenue désirée puis serrez bien l'écrou de retenue.

Type de vis	Image	Montage du cylindre	Montage du sabot	Montage du 5e trou
Bois (pour les portes et les cadres en bois)		4 @ 1 3⁄16 po	4 @ 1 3⁄8 po	1 @ 2 po
De mécanique (pour les portes et les cadres en métal) Nécessite de percer des trous et de tarauder; meilleure retenue		4 @ 1 po	4 @ 5⁄8 po	1 @ 1 ½ po
SRT - Auto taraudeuse et à alésage automatique (pour les portes et les cadres en métal)		4 @ 1 ½ po	4 @ 1 ½ po	1 @ 2 po

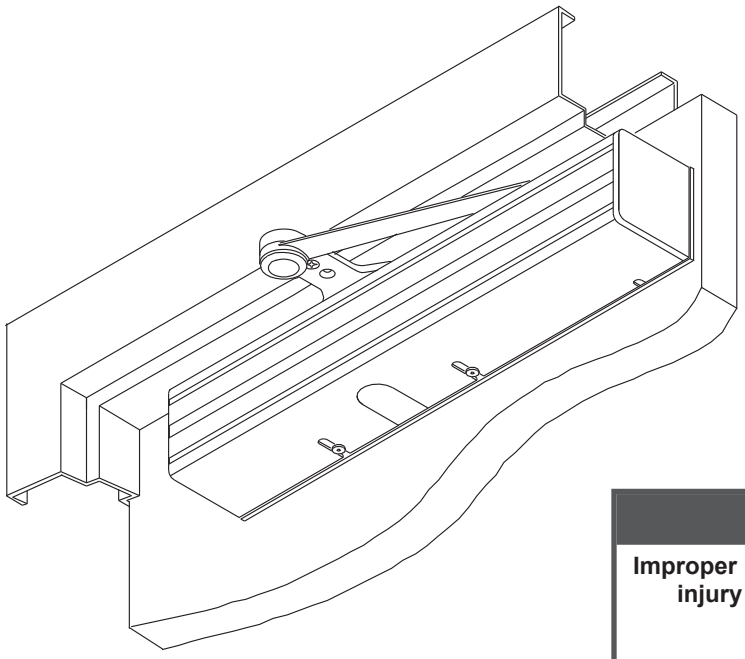
Type de vis	Image	Remarques
Entretoise pour cinquième trou		
Boulons traversants		Utilisée lors du montage à travers la porte
Vis de fixation du pignon		1 M6 x 10 mm pour la fixation du bras (voir étape 6)

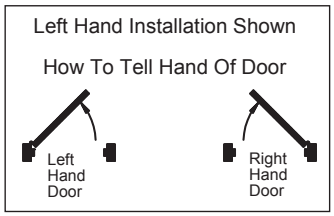
4840 Auto-Equalizer

25381

Non-Handed/Non-Sized/Low Energy
Installation And Adjustment Of Door Operator

Installation Instructions





⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions, call LCN at 877 - 671 - 7011

1 General Information

This door operator requires these additional system components:

7900 or 7980 series Control Box
- 459 Pnuematic Door Loop Kit, (4 1/2 " maximum reveal depth, see page 6) or
- 460 Pnuematic Transfer Hinge Kit (see page 6)

Push & Pull side actuator devices (switches)

ⓘ **NOTE: 460 Transfer Hinge requires an interior door raceway between transfer hinge and 4840 Auto - Equalizer®**

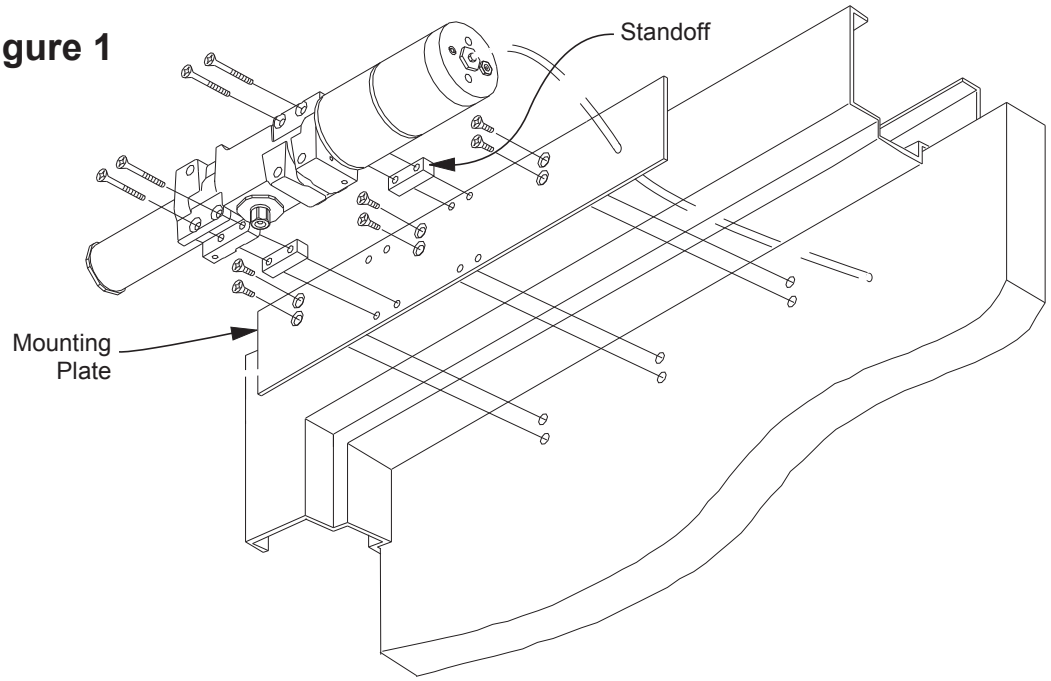
Requirements:

Minimum door width is 24"
Minimum door top rail is 4 1/2"
Minimum stop width is 1"
Flush or single rabbeted frames require a - 418 FPA

Arm Options:

EDA (standard), Cush N Stop or Spring Cush

Figure 1



2 Operator Installation

ⓘ **NOTE: If using the 460 transfer hinge, install at this time. See page 6 for details.**

2a Prepare door & frame per template on page 7. Drill and/or tap holes to receive 1/4 - 20 machine screws or No. 14 wood screws. Use fasteners provided by LCN to keep warranty valid.

2b Remove operator assembly from mounting plate, as shown in **Figure 1** above. Install mounting plate on door using (6) 1/4 - 20 x 5/8" machine screws or (6) No. 14 x 1 1/2" wood screws provided. Reattach operator assembly.

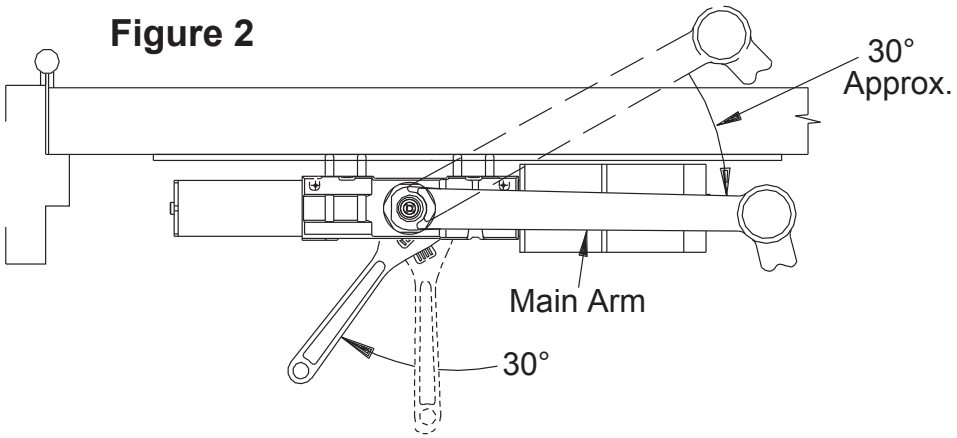
2c Place arm on the top of closer shaft with main arm parallel to the door. Place wrench on the bottom of the closer shaft and rotate toward hinge approx. 30°. See **Figure 2**. Main arm can now be placed on to closer shaft. Secure with arm screw.

ⓘ **NOTE: If installed properly, main arm will rest against door.**

2d Swing door open about 45°. Using the fasteners provided, mount shoe to frame stop per proper templating on page 7. Be sure to install the "fifth" screw. If stop is not wide enough, use spacer block provided or cush shoe support shown on page 7.

2e Connect air line to air inlet fitting, then feed other end toward control box by either using the 15" pneumatic door loop or the pneumatic transfer hinge (see page 6).

Figure 2



3 Closing Force Adjustment (see Figure 3)

3a To adjust **Closing Force**, turn the spring adjustment nut clockwise or counter-clockwise the required number of turns to match the door width in **Tables 1 & 2**. Maximum adjustment, 5 turns counterclockwise and 7 turns clockwise.

⚠ CAUTION ⚠

Do not set door speed faster than chart recommends.

4 Closing Speed Adjustment (See Figure 3)

4a **THE 4840 SERIES CLOSER HAS BEEN REGULATED PRIORTO SHIPMENT.** If regulation adjustments are needed use 3/32 Hex wrench furnished, and refer below.

4b A “normal” closing time from 90° open position is 5 to 7 seconds, evenly divided between **Main Speed** and **Latch Speed**.

4c To slow **Main Speed** of door, turn regulating screw (nearest to arm) clockwise.

4d To slow **Latch Speed** of door, turn regulating screw (nearest to latch) clockwise.

4e Do not allow door to slam into frame.

5 Backcheck Adjustment

5a Backcheck slows the door swing as it approaches full opening **(see Figure 3)**.

5b Increase the resistance of backcheck only if necessary to prevent the door from striking a wall. To do this, turn the regulating screw (nearest to hinge) clockwise by quarter turns. **DO NOT USE AN ABRUPT BACKCHECK**.

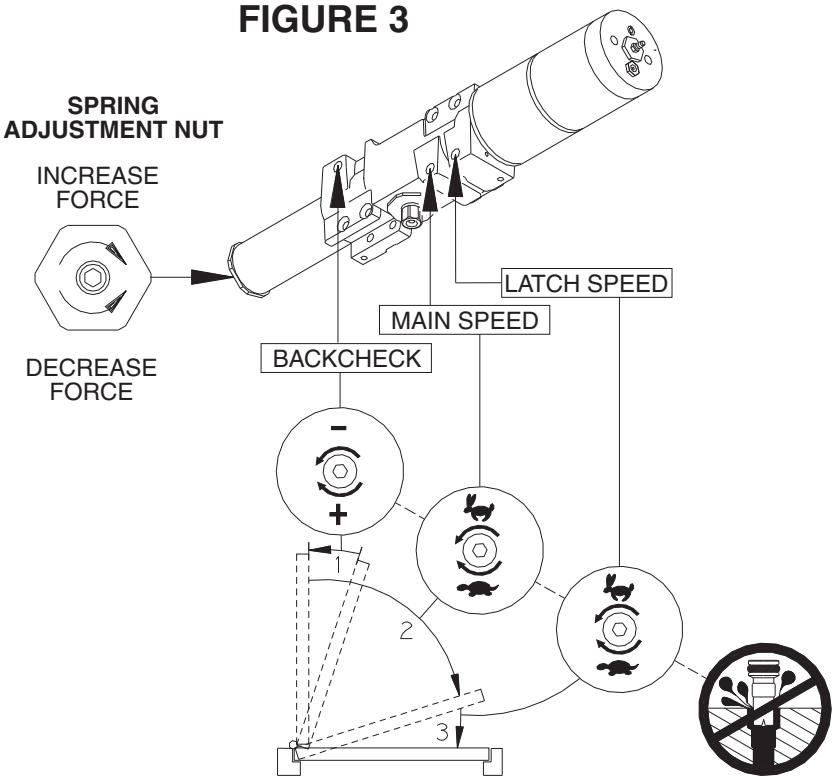
Table 1

Exterior Door	
Maximum Door Width	Number of Turns
30”	0 Turns
36”	2 Turns C.W.
42”	7 Turns C.W.

Table 2

Interior Door	
Maximum Door Width	Number of Turns
34”	5 Turns C.C.W.
38”	0 Turns
48”	2 Turns C.W.
54”	7 Turns C.W.

FIGURE 3



6 Opening Speed Adjustment

ⓘ **NOTE: For air pressure regulation, see control box instructions.**

6a The door opening speed must be adjusted to suit the width and weight of door. The wider and / or heavier the door, the slower it should open. To determine opening speed, measure door width and weight and set speed to open door from 0° to 80° for the time shown in **Table 3** below. The opening speed control adjusting screw is located in the end of the door operator near the tubing connection **(see Figure 4)**. Using a 3/32" hex wrench (provided), turn the speed control clockwise to slow the door, counterclockwise to increase door speed.

Figure 4

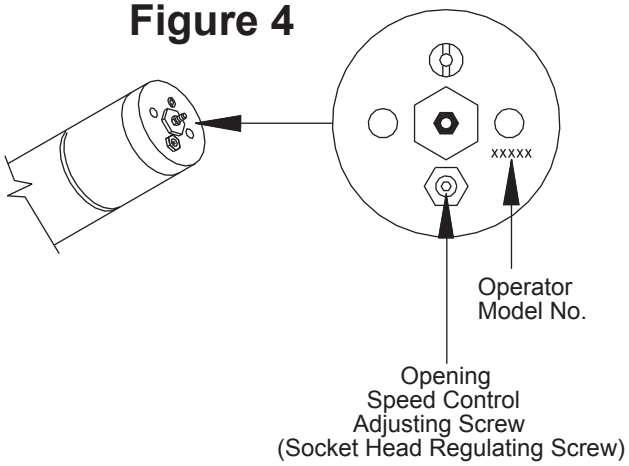


Table 3

Door Weight in Pounds	Fastest Opening Time in Seconds to 80° Position Door Width in Inches		
	36"	42"	48"
100 lbs.	3.0 sec.	3.0 sec.	3.0 sec.
125 lbs.	3.5 sec.	3.5 sec.	3.5 sec.
150 lbs.	3.5 sec.	3.5 sec.	3.5 sec.
200 lbs.	4.0 sec.	4.0 sec.	4.0 sec.

ⓘ **NOTE: If door width or weight is between the sizes and pounds listed, use the time shown for the next wider or heavier door.**

6b If door weight cannot be measured, the weight can be estimated by finding the area of the door (length x width) and multiplying it by the weight per square foot for the door type that is being used, as shown in **Table 4** below.

Table 4

Door Type	Weight per Sq. Ft.
Solid Core Wood 20 Ga. Flush Hollow Metal Aluminum x 1" Glass	5.5
Mineral Core Door 16 Ga. Flush Hollow Metal Aluminum x 1" Glass	7.0

7 Delay Time Adjustment

After opening, the door should remain at the 90° position for no less than 5 seconds. This “Delay Time” can be increased to approximately 30 seconds by turning the timer adjustment wheel(s) clockwise. For the location of this wheel(s), refer to 7900 or 7980 Series Control Box Instruction Sheet. Adjust “Delay Time” to maximum practical for the elderly or handicapped. Time cycle begins when switch or scanner is activated.

8 Attach Cover

8a Slide cover insert into the bottom cutout in cover **(see Figure 5)**.

8b Push cover over the operator assembly and against mounting plate.

8c Insert cover screws and tighten securely.

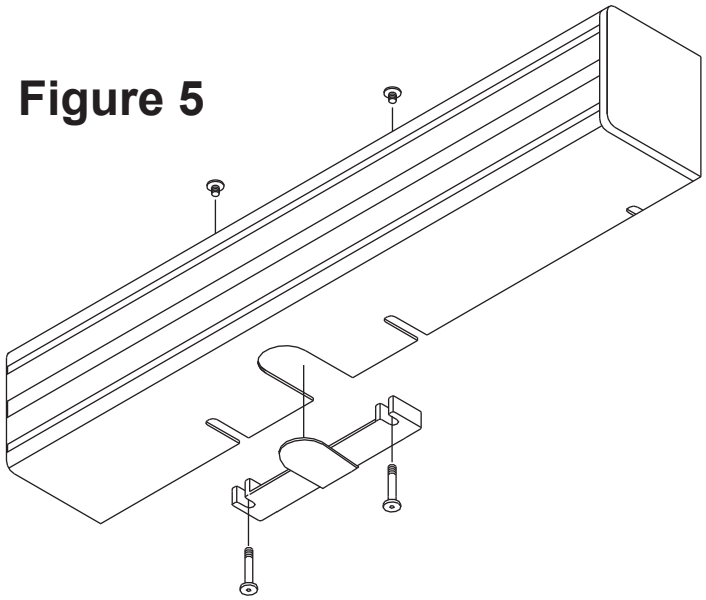
9 Locating the Caution/Automatic Door Decal

9a Locate one decal on each side of door near lock stile of door, approximately 18” min. to 42” max. above the floor. The decal location must be visible without interference from door trim, panic devices, etc.

9b Clean a 6” x 6” area where decals will be placed.

9c Apply one decal **(item 16 on page 10)** on each side of the door. Remove backing and “roll” onto door to avoid trapping air under decal.

Figure 5



Concealed or Surface Air Transfer Options

10 Pneumatic Door Loop Installation (see Figure 6)

- ⓘ **See page 8 for template**
- ⓘ **Reveal must be less than 4 ½”**

10a Remove the cover end cap (closest to hinge stile of door) by removing the (2) Phillips head screws from inside the cover.

10b Place the proper hand template (see cutouts on page 11) over the end cap and tape down securely.

10c Once the template is in place, drill (1) 3/8” hole, and (2) 1/16” holes in the proper location.

10d After holes are drilled, remove template and place end cap back on the cover.

10e Feed 1/4” tubing through the drilled end cap and also through the 15” aluminum tubing supplied with kit.

10f Place 90° door loop cap on cover end cap (making sure to line up slots over the ends of the 15” tubing) and secure with No.6-32 screws provided.

10g Feed the 1/4” tubing (either 180° up the frame, or 90° into the frame), place the concealed 90° or the surface 180° (depending on the installation) door loop cap over end of the 15” aluminum tubing and secure to the frame of the door. **(See Figure 6).**

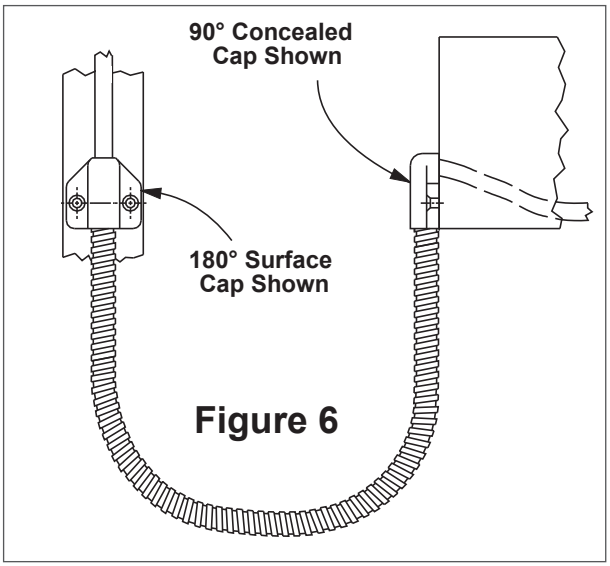


Figure 6

11 Pneumatic Transfer Hinge Installation (see Figure 7)

- ⓘ **A INTERIOR RACEWAY FROM TRANSFER HINGE TO 4840 CLOSER IS REQUIREDTO USE THIS PRODUCT, SEE PAGE 9 FOR TEMPLATE.**

11a Apply pneumatic transfer hinge housing using No. 8-32 machine screws provided.

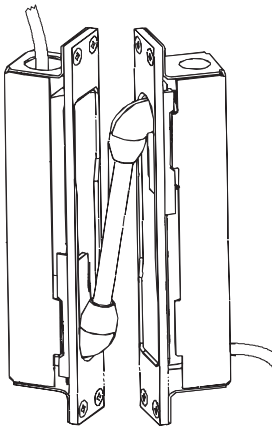
11b Connect tubing using the inline tubing splice provided

11c Apply transfer hinge unit using No.10-24 machine screws provided.

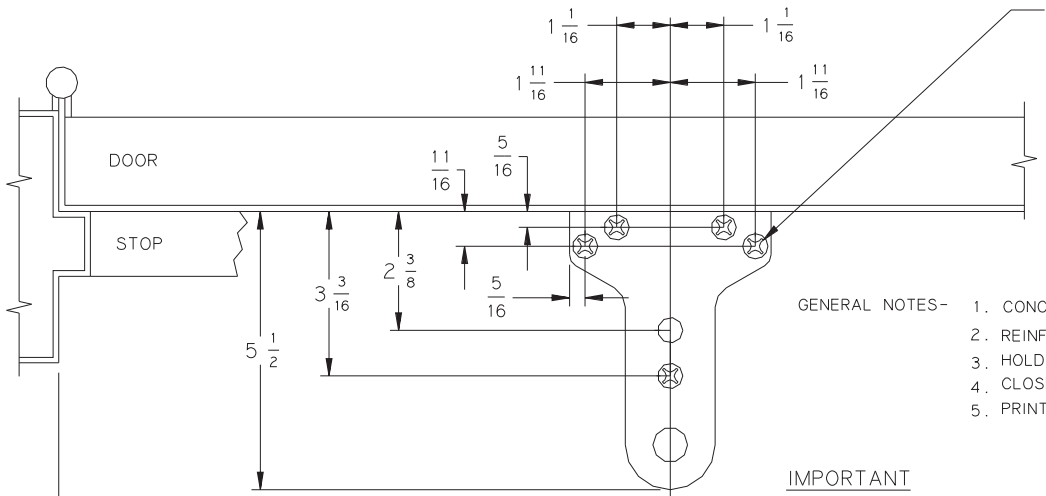
11d Check operation of pneumatic transfer hinge unit.

- ⓘ **NOT FOR USE WITH SWING CLEAR HINGES OR CENTER PIVOTS!**

Figure 7

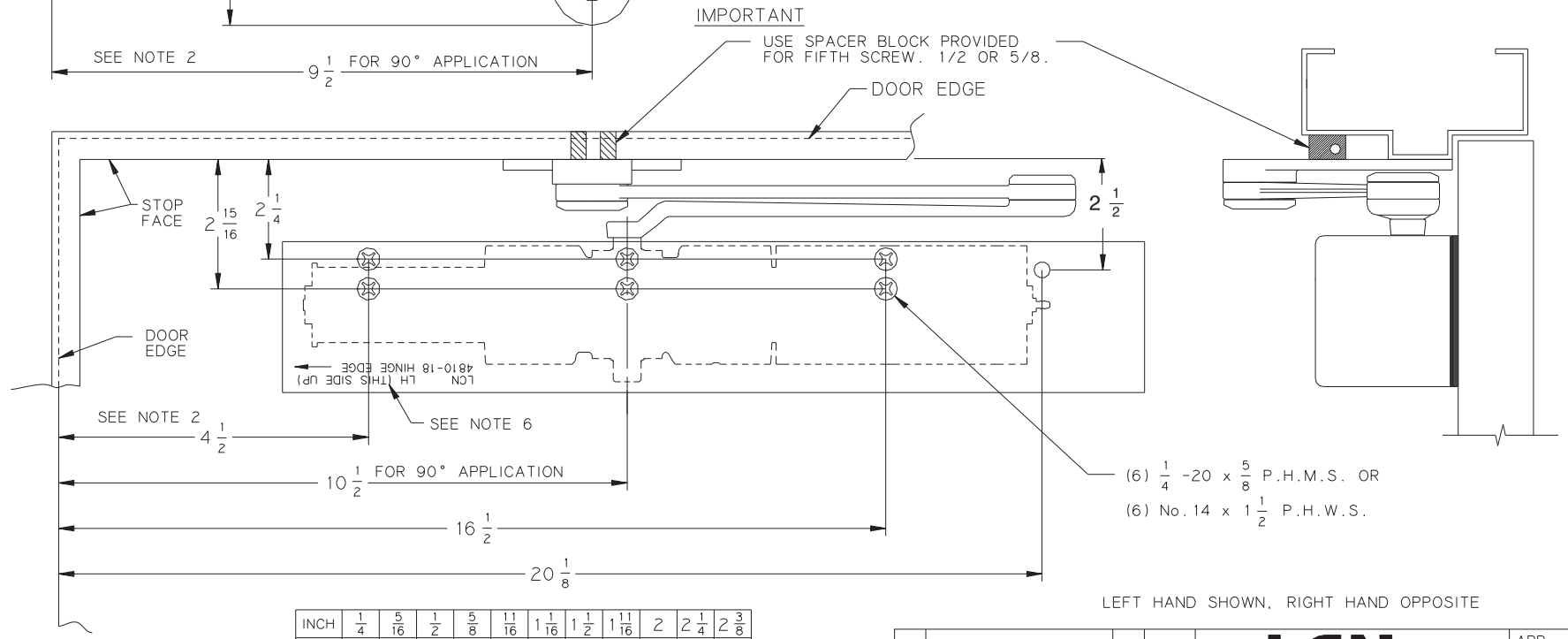


4840 AUTO-EQUALIZER
POWER OPENING 90° CUSH MAX. OPENING 100° SPRING CUSH MAX. OPENING 105° EDA MAX. OPENING 105°



GENERAL NOTES-

1. CONCEALED OR SURFACE AIR TRANSFER BY OTHERS REQUIRED.
2. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.
3. HOLD OPEN SPRING CUSH ARM NOT AVAILABLE.
4. CLOSER SIZE 20" x 3 1/2" x 3 5/16".
5. PRINT ON PLATE WILL BE UPSIDE DOWN IN THIS INSTALLATION.



LEFT HAND SHOWN, RIGHT HAND OPPOSITE

INCH	1/4	5/16	1/2	5/8	11/16	1 1/16	1 1/2	1 11/16	2	2 1/4	2 3/8
M.M.	6	8	13	16	17	27	38	43	51	57	60

INCH	2 15/16	3 3/16	3 5/16	3 1/2	4 1/2	5 1/2	9 1/2	10 1/2	16 1/2	20	20 1/8
M.M.	75	81	84	89	114	140	241	267	419	508	511

No.	REVISION	BY	DATE
0	RELEASE NEW DRAWING	JEJ	7/1/95
1	FIXED DIMENSION	AMM	06/06

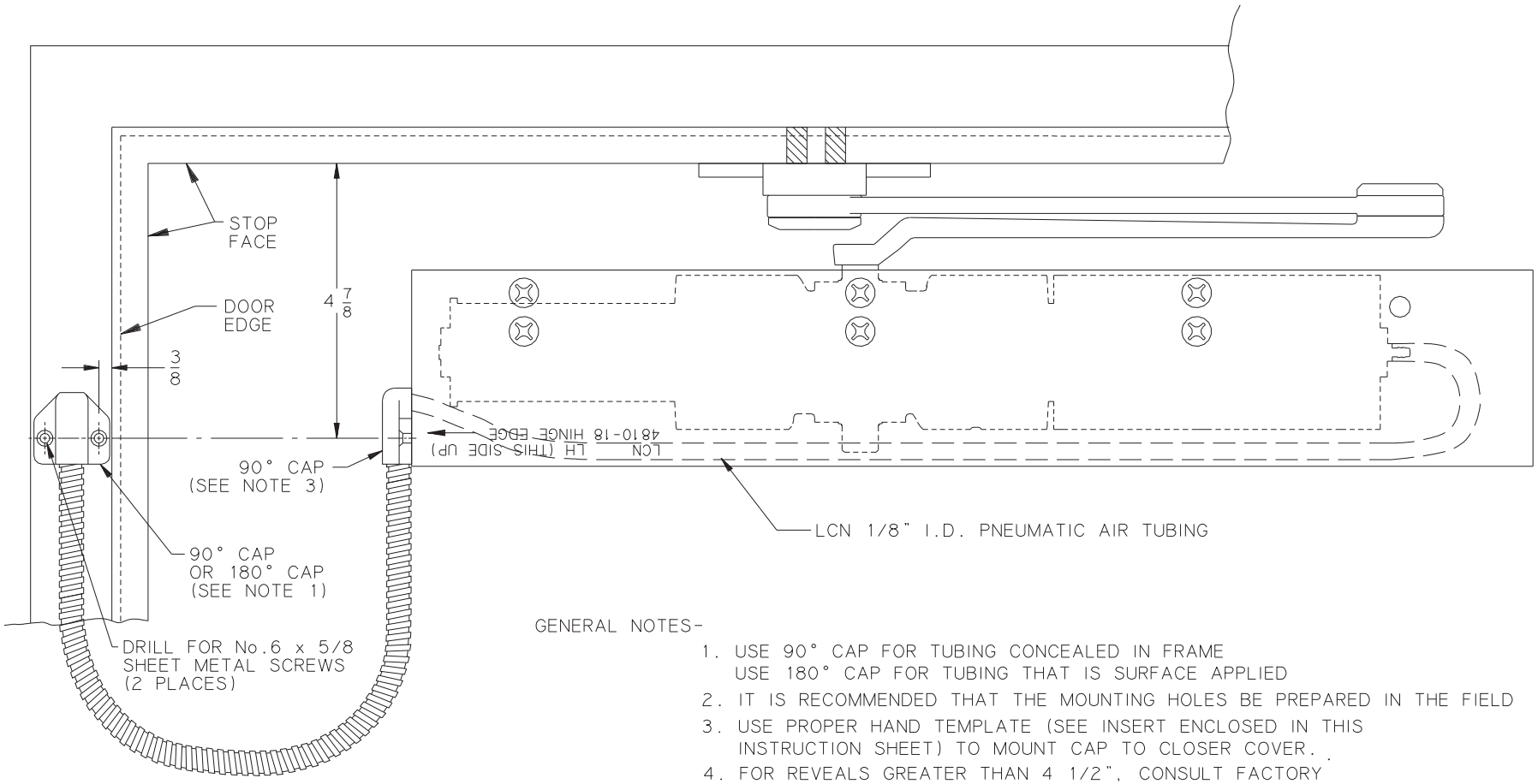
LCN®

APP BY JEJ 7/95

DO NOT SCALE

PUSH SIDE MOUNTED AUTO-EQUALIZER® WITH 4040 EDA, CUSH, OR SPR. CUSH ARM

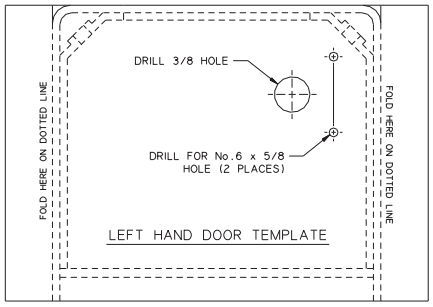
4840

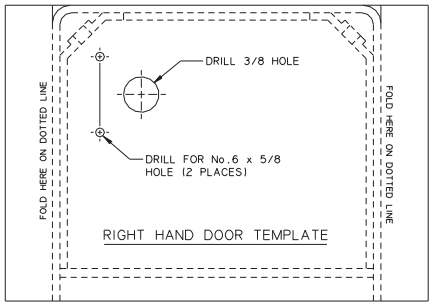


GENERAL NOTES-

1. USE 90° CAP FOR TUBING CONCEALED IN FRAME
   USE 180° CAP FOR TUBING THAT IS SURFACE APPLIED
2. IT IS RECOMMENDED THAT THE MOUNTING HOLES BE PREPARED IN THE FIELD
3. USE PROPER HAND TEMPLATE (SEE INSERT ENCLOSED IN THIS INSTRUCTION SHEET) TO MOUNT CAP TO CLOSER COVER.
4. FOR REVEALS GREATER THAN 4 1/2", CONSULT FACTORY

SEE NOTE 3





LEFT HAND SHOWN, RIGHT HAND OPPOSITE

No.	REVISION	BY	DATE
0	RELEASE NEW DRAWING	JEJ	8/15/95

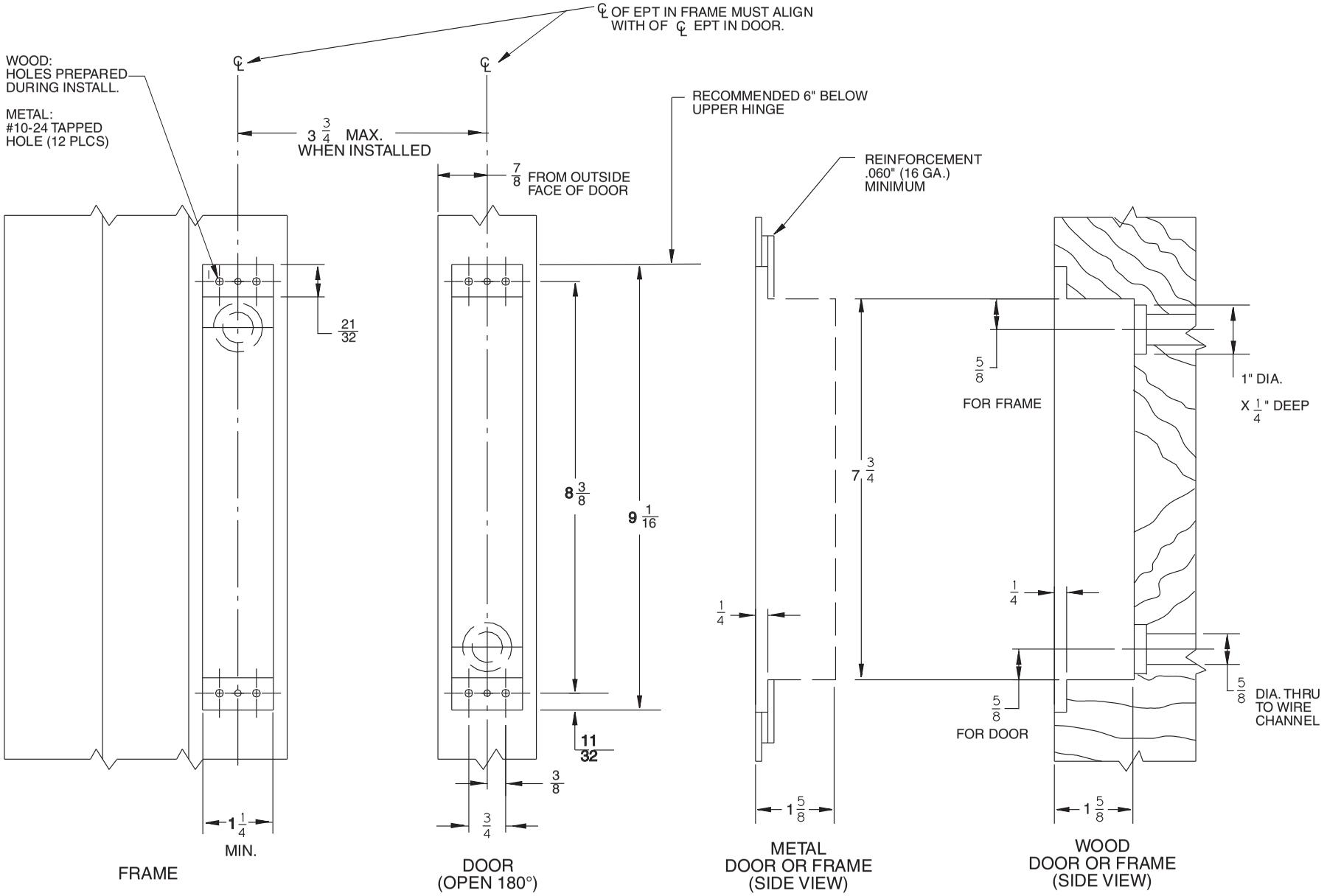
LCN®

APP BY JEJ 8/95

DO NOT SCALE

PUSH SIDE MOUNTED AUTO-EQUALIZER® MOUNTED WITH PNEUMATIC DOOR LOOP

4840-459



No.	REVISION	BY	DATE
1	REDRAWN ON CAD	JEJ	8/1/95
2	REVISED FOR INSTRUCTION SHEET	AMM	1/20/98
3	7/8 FROM OUTSIDE FACE OF DOOR	JDT	9/17/09

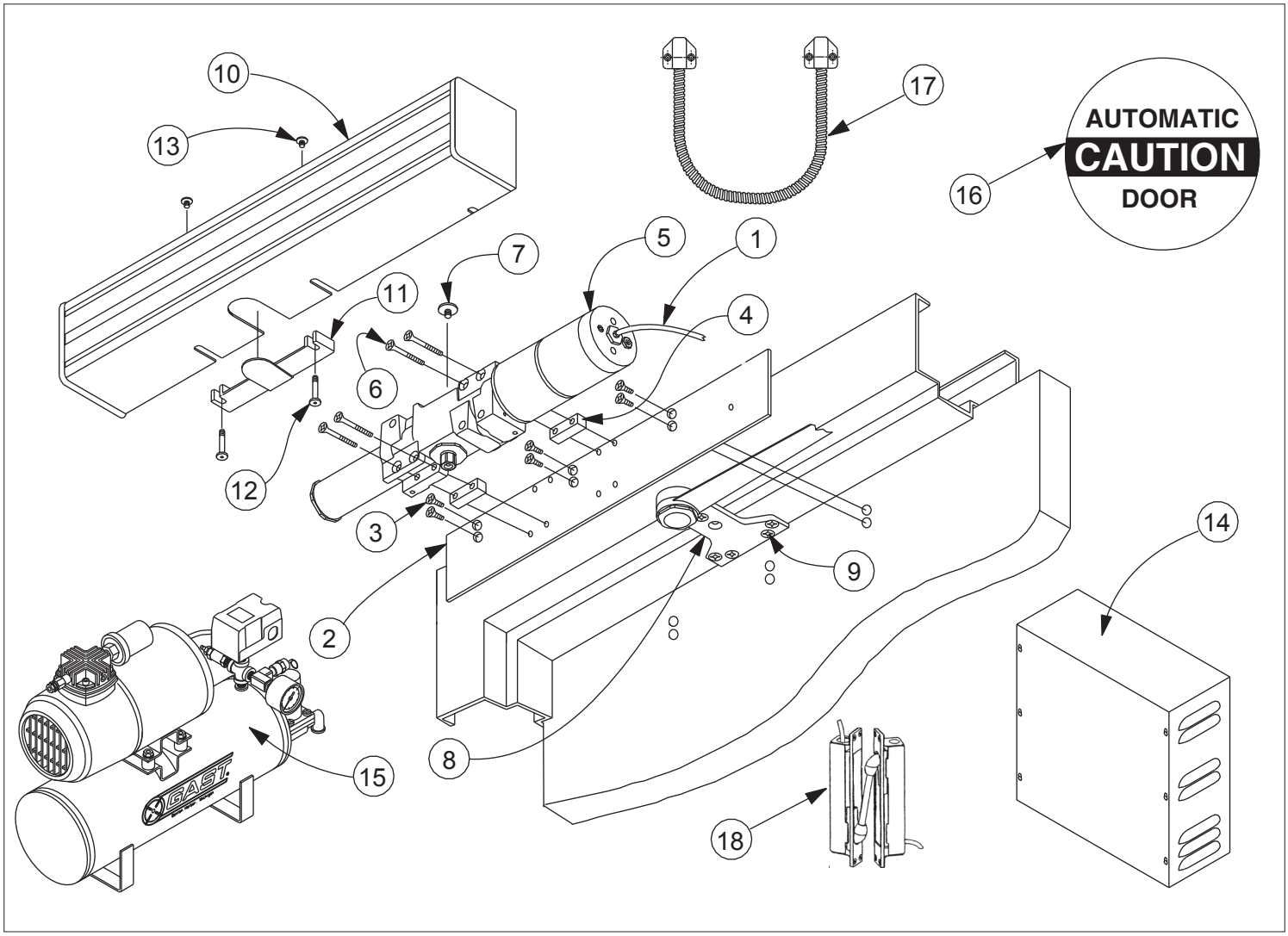
LCN®

APP BY KRF 9/09

DO NOT SCALE

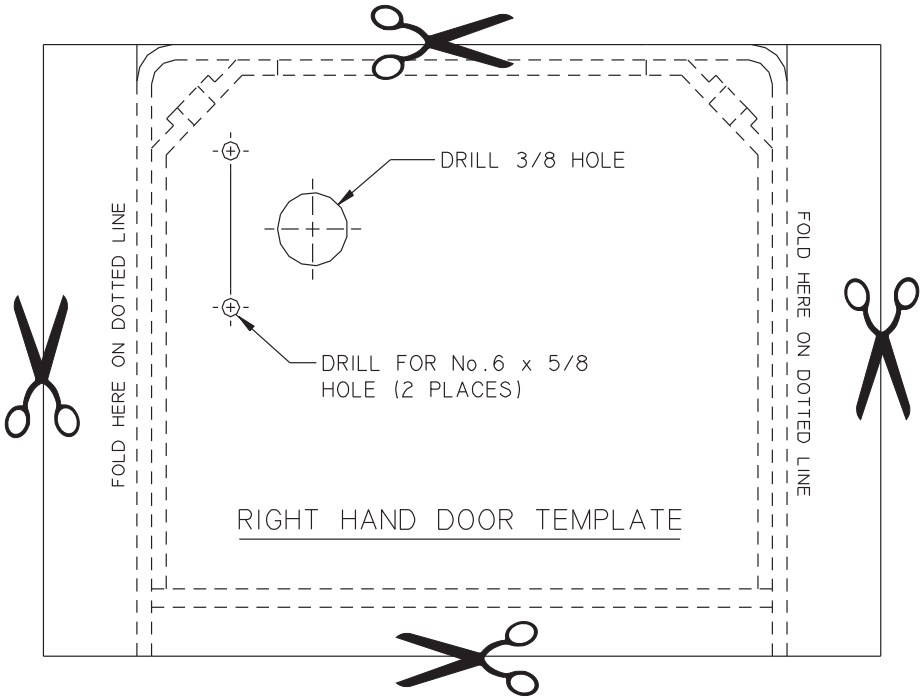
PNEUMATIC TRANSFER HINGE IN HOLLOW METAL DOOR AND FRAME

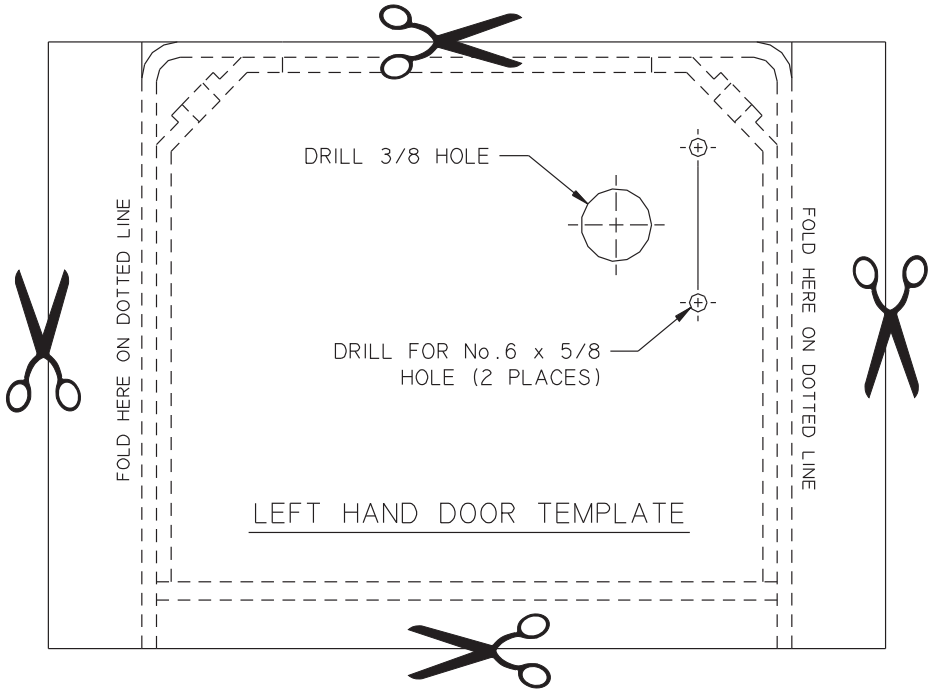
4840-460



Item No.	Part No.	Description	Quantity
1	925	1/8 " I.D. Pneumatic Tubing	5' or 12' Section
2	4810-18	Standard Mounting Plate	1
3	No. 14 x 1 1/2" 1/4-20 x 5/8"	Phillips Head Wood Screw or Phillips Head Machine Screw	6
4	4810-182	Standoff	2
5	4840-3071	LCN Switch-Actuated Auto Equalizer	1
6	1/4-20 x 2 1/2"	Phillips Head Machine	4
7	4810-159	Arm Shaft S	1
8	4040SC-3035 4040EDA-3035 4040CNS-3035G	Spring Cush Arm Assy. Extra Duty Parallel Arm Assy. Nonhanded Cush-N-Stop Assy.	1
9	1/4-20 x 5/8" 1/4-20 x 1 1/2" No.14 x 2 "	Phillips Head Machine Screw Phillips Head Machine Screw or Phillips Head Wood Screw	4 1 5
10	4840-72	Cover	1
11	4840-163	Cover Insert	1
12	4810-31L	Long Cover Screw	2
13	4810-31	Cover Screw	2
14	7900 or 7980	Control Box	1
15	920 Series	Compressor (optional)	1
16	4820-155G	Decal	2
17	4840-459	Pneumatic Door Loop Kit (optional)	1 or
18	4840-460	Pneumatic Transfer Hinge Kit (optional)	1

If the proper hand door has been determined, cut out the appropriate template and place on the end cap.





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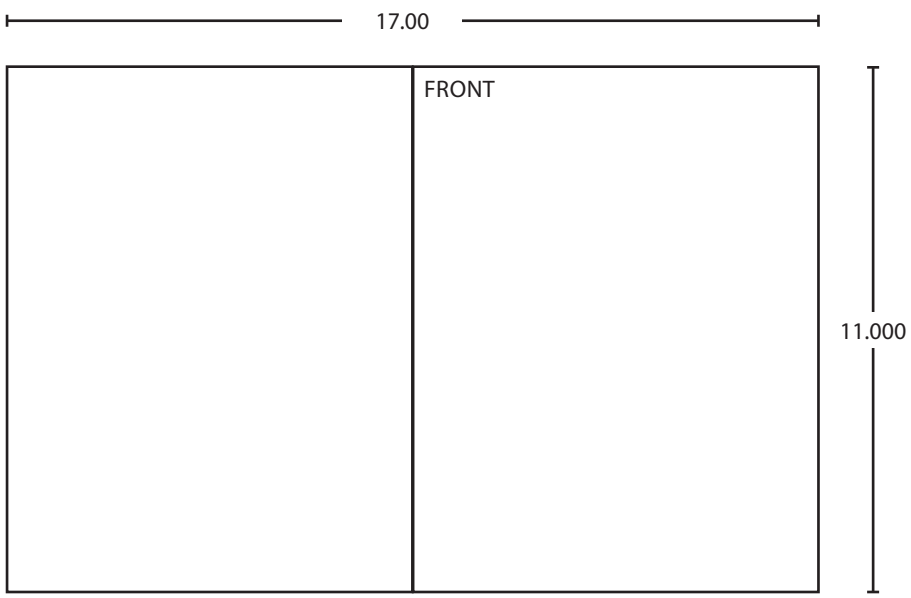
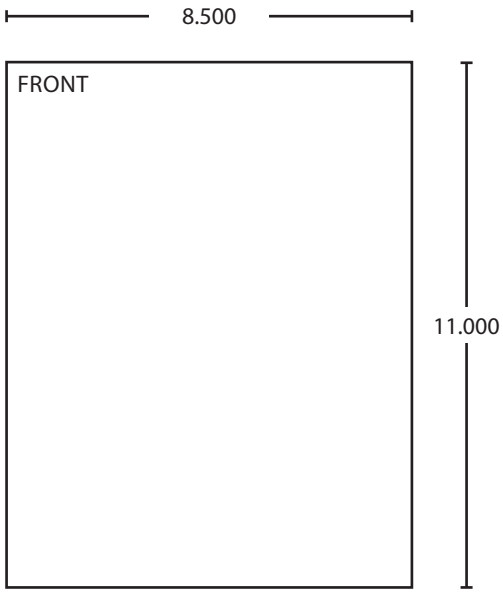
25381 Rev. 01/14-g



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
G	H	J	K	L	M
043812					

Revision Description:
G > Revised artwork

Material
White Paper

Notes
1. printed two sides
2. 12-Page Saddle-Stitched booklet
3. printed black
4. tolerance ± .13
5. printed in country may vary
6. drawings not to scale

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043812	01-01-14

Title
4840 Series Instruction Manual

Creation Date	Number	Revision
04-27-10	25381	G

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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24746

Conduit Quick Conductor

LCN®

Installation Instructions

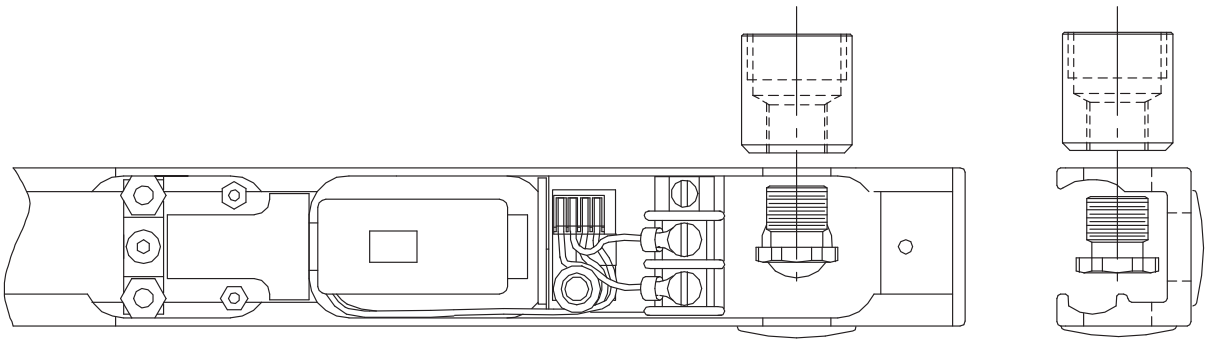


Fig. 1

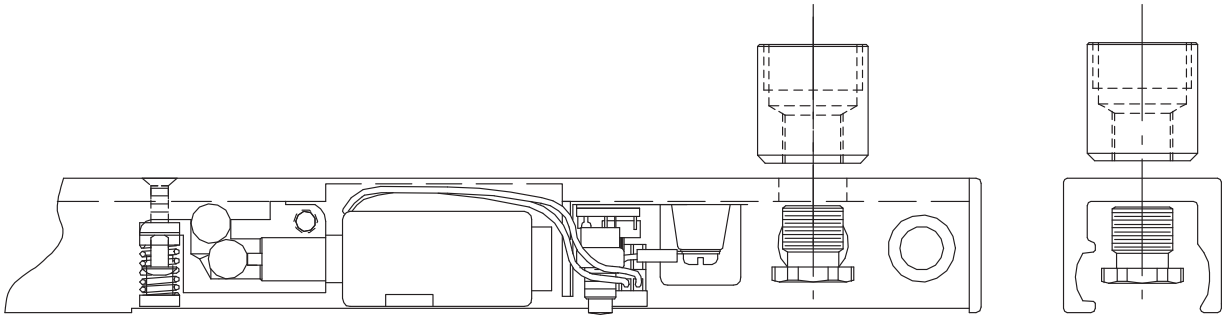


Fig. 2

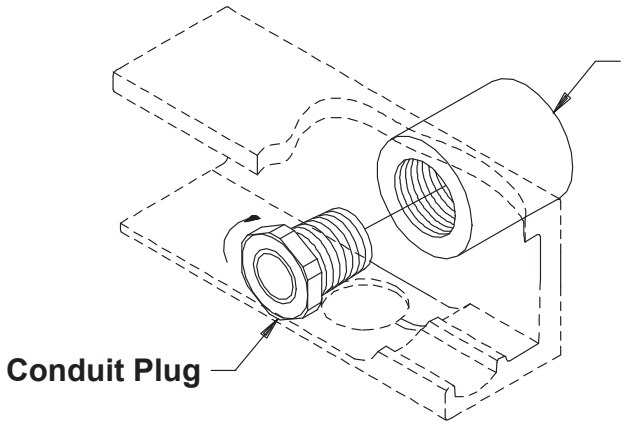
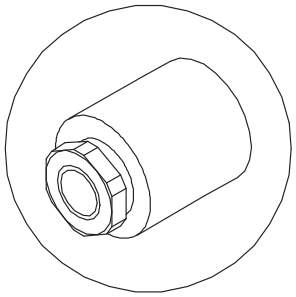


Fig. 3



Conduit Plug shown in Conduit Connector

Installation Instructions	
1a	The Conduit Quick Connector and Plug can be found in the closer screwpack.
1b	The Conduit Quick Connector should be fastened to the 1/2” concealed conduit prior to step 3 on the closer installation instructions.
1c	During step 3 on the closer installation instructions, make sure that the Conduit Connector is secured flush against the track surface. See option in Fig. 1 below that matches the mounting option selected for track surface. With the track mounted, take the Conduit Plug and slide it through the 1/2” hole in the track. (see Fig.2) Tighten the Plug into the Conduit Connector using a 5/8” wrench, until completely secure, as shown in Fig.3.

Customer Service
1-877-671-7011 www.allegion.com/us

ALLEGION

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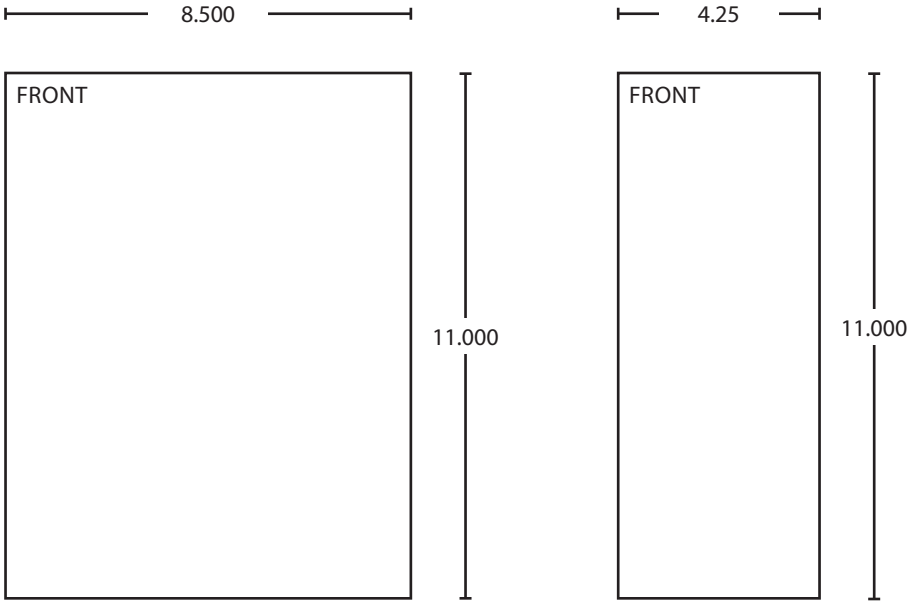

Additional Notes:
1. None

Revision History					
D	E	F	G	H	J
043228					

Material
White Paper

Notes
1. printed one side
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
D > Revised artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043228	01-01-14

Title
Conduit Quick Connector Instruction Sheet

Creation Date	Number	Revision
04-27-10	24746	D

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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29805

100°, 130° & 180° Template
PA Mounting

1261

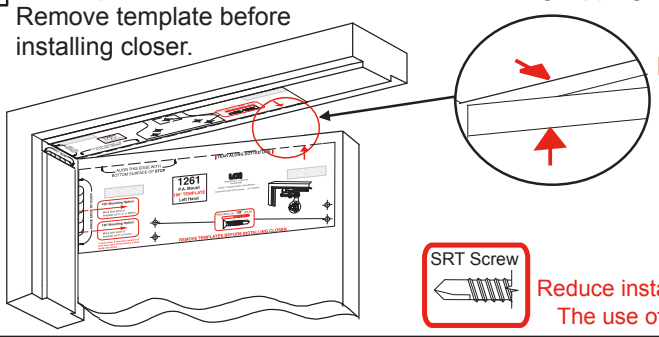
Peel-N-Stick

LCN®

Installation Instructions

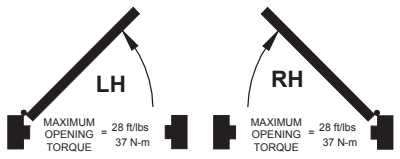
1

Locate proper template, tear along dotted line. Peel template and apply so red arrows align. Center punch all hole locations. For self reaming tapping screws (SRT)drill 1/8" pilot holes. Remove template before installing closer.



MOUNT 180° TO MEET ADA.

For 1261 Delay 100° Mounting provides additional delay time.

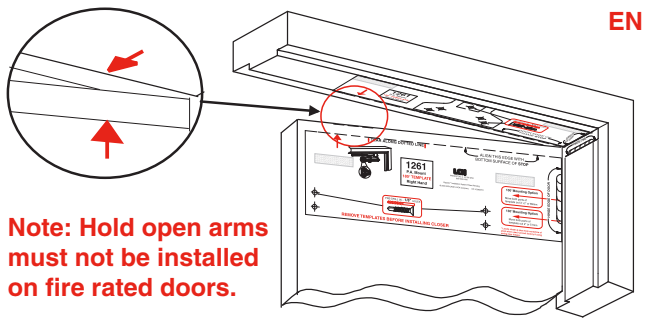


SRT Screw

Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.

Note: Steps 3-8 show left hand door mount, right hand door is opposite.

EN 1-3



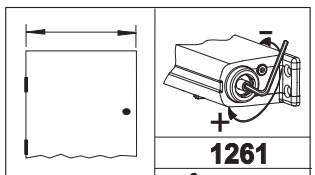
Note: Hold open arms must not be installed on fire rated doors.

2

Determine door width, adjust spring power to match chart.

⚠CAUTION

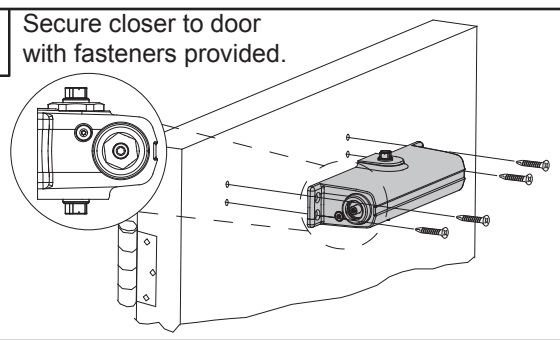
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011



	1261
	♿ - 5
30"- 750mm	- 3
32"- 815mm	0
36"- 915mm	+ 2
42"- 1050mm	+ 6

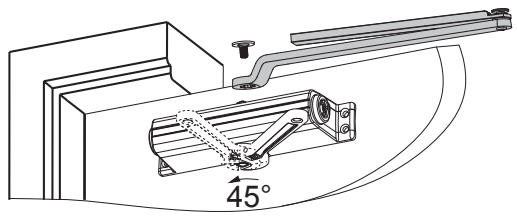
3

Secure closer to door with fasteners provided.



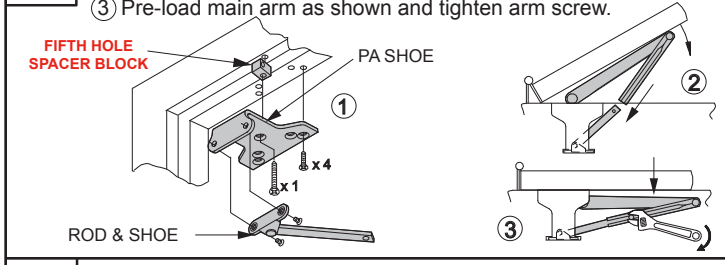
4

Rotate closer shaft 45°, and then attach main arm with provided fastener.

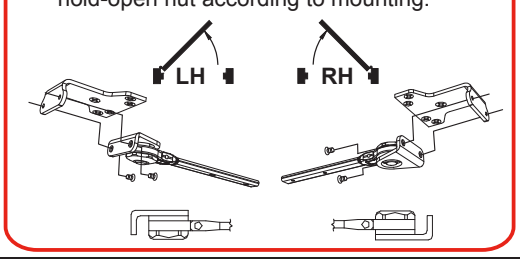


5

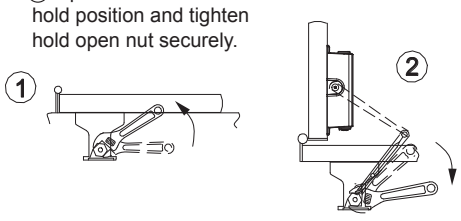
① Attach PA shoe to frame and fasten rod & shoe to PA shoe.
② Connect forearm to rod & shoe.
③ Pre-load main arm as shown and tighten arm screw.



I Optional Hold-open arm. Identify direction of hold-open nut according to mounting.

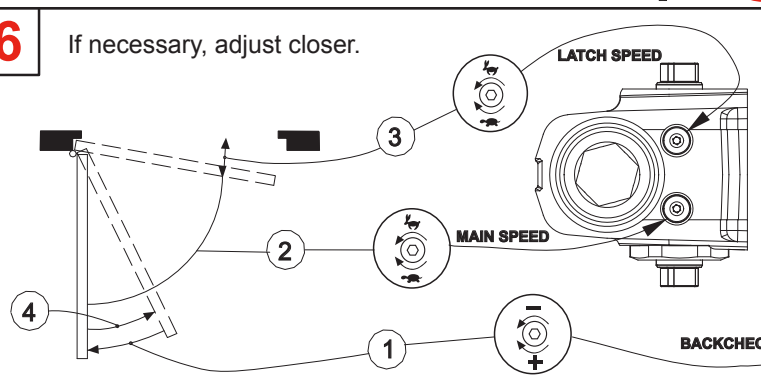


II To adjust Optional Hold-open arm:
① Loosen hold open nut.
② Open door to 5° less than desired hold position and tighten hold open nut securely.



6

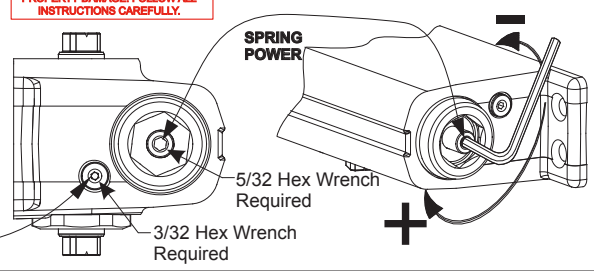
If necessary, adjust closer.



⚠CAUTION

OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.

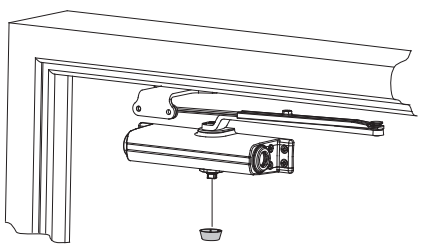
NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.



NO MAINTENANCE REQUIRED

7

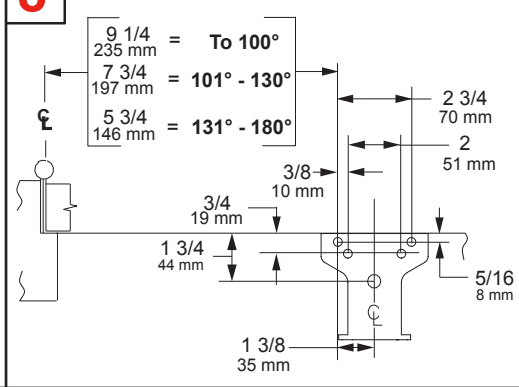
Press cap onto shaft.

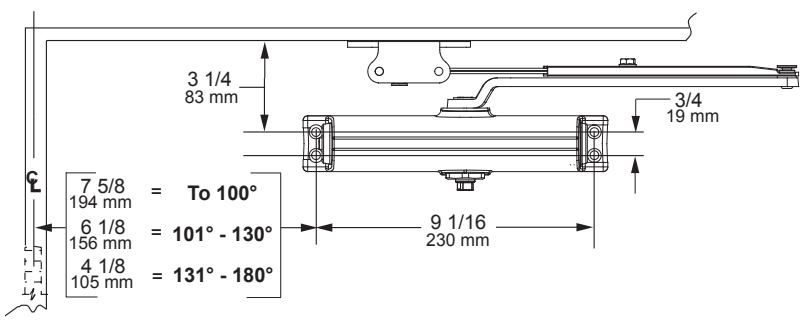


8

Dimensional Information

*** Locate closer & shoe from centerline of pivot when used. Consult factory if using swing clear hinges.**





LEFT HAND SHOWN, RIGHT HAND OPPOSITE
MAIN GAUCHE ILLUSTRÉE, MAIN DROITE CONTRAIRE
PUERTA DE MANO IZQUIERDA ILUSTRAR, MANO DERECHA LOAPUESTO

Patents Pending include:
Rapidor-Installation System
PROPRIETARY, LCN Division, Schlage Lock Company

1261 Instructions et gabarit autocollant pour une installation "bras parallèle" de 100°, 130° & 180°.

1 Repérez le gabarit approprié, détachez-le sur la ligne pointillée. Retirez la pellicule et appliquez-le pour que les flèches rouges soient alignées. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds. Retirez le gabarit avant de poser le ferme-porte.

Installation 180° pour conformité à l'ADA
Pour le 1261 l'installation de la Retenue 100° permet un délai de retenue additionnel.
Note : Les étapes 3-8 illustrent une main gauche. Le sens est inversé pour une main droite.
Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.
Indicateur rotatif de réglage du ressort.

3 Fixez le ferme-porte à la porte avec les attaches fournies.

4 Faites pivoter l'arbre du ferme-porte 45° puis fixez le bras principal avec les attaches fournies.

5 ①Posez le sabot de bras parallèle sur le cadre et fixez la tige et la console à la console du bras parallèle.

②Réunissez l'avant-bras, la tige et le sabot.

③Pré-chargez le bras principal tel qu'illustré puis serrez la vis du bras.

6 Au besoin, réglez
① - résistance d'ouverture
② - vitesse de fermeture
③ - vitesse de verrouillage

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

7 Emboitez le capuchon fermement sur la tige.

8 Dimensions

I Bras de le retenue optionnelle. Identifiez la direction du boulon de retenue selon l'ouverture de la porte.

II Pour régler le bras avec retenu optionnel :
① Desserrez la vis de retenue.
② Ouvrez la porte à 5° de moins que la position de retenue désirée puis resserrez la vis.

⚠DANGER

Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877 - 671 - 7011

⚠DANGER

UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

1261 Instrucciones de Pela y Pega para plantilla 100°, 130° & 180° con montaje del brazo paralelo.

1 Localiza la plantilla apropiada, rompe a lo largo de la línea de puntos, pela la plantilla y aplícala, alineando las flechas rojas. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes. Quita la plantilla antes de instalar el cerrador.

Montar a 180° para cumplir con la norma ADA
Para la Retención del 1261, un montaje de 100° dará un tiempo de retención adicional.
Nota: Las etapas 3-8 indican un montaje de puerta hacia la izquierda, una puerta a la derecha está al opuesto.
Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.
Indicador rotacional para el ajuste de la fuerza del resorte.

3 Coloque el cerrador a la puerta con los sujetadores ya incluidos.

4 Gire el eje del cerrador a 45° y coloque el brazo principal con los sujetadores ya incluidos

5 ①Sujete el pie del brazo paralelo al marco y coloque la varilla y la zapata al pie del brazo paralelo.

②Conecte el antebrazo a la varilla y la zapata

③Precargue el brazo principal tal como se muestra y apriete el tornillo del brazo.

6 Ajusta si se necesario
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

7 Coloque la tapa sobre el eje.

8 Datos dimensionales

I Brazo de retención opcional. Identifíca la dirección de la tuerca de retención según el montaje.

II Para ajustar el brazo de retención opcional:
① Afloje la tuerca de retención.
② Abre la puerta a 5° menos de la posición de retención deseada, y apriete la tuerca de retención.

⚠ADVERTENCIA

UNA INSTALACIÓN O UN AJUSTE INCORRECTOS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL 877 - 671 - 7011

⚠ADVERTENCIA

LA APERTURA DEMASIADO GRANDE DE LAS VÁLVULAS DE AJUSTE PUEDE OCASIONAR UN DERRAME, DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES.

Customer Service	Servicio al cliente	Service à la clientèle
1-877-671-7011	www.allegion.com/us	

ALLEGION

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29805 Rev. 03/14-g

18758

2030 Series

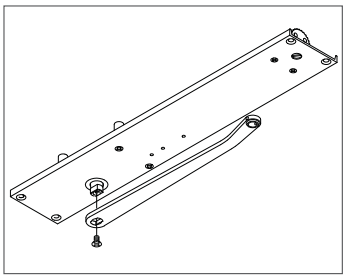
LCN®

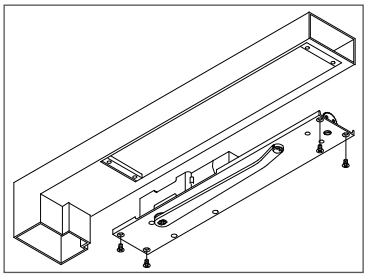
No maintenance required. 2035 EN 4

Installation Instructions

1 Installation

1a The hand of the door and the closer must be the same. RH or LH will be stamped on the mounting plate. See the proper template for your application.

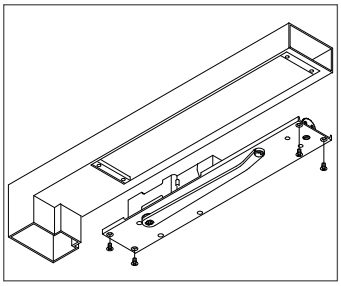


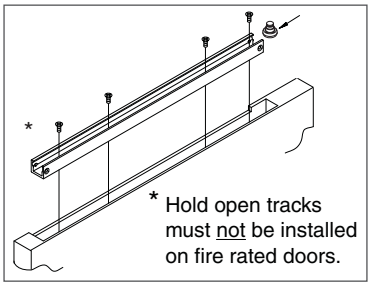


1b Attach the arm to the closer. The bend in the arm will always point towards the door.

1c Install the closer including the arm in the prepped frame with mounting screws provided. Be sure the mounting plate is flush with the soffit.

1d After the closer is mounted in the door jamb, attach the applied stop to the head frame, as shown below. The stop section must have an access hole to allow for door closer adjustment.

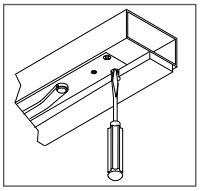




1e The track mortise in the top of the door must match the proper template. Place the roller in the track. Mount the track in the door. Fasten with the provided screws.

1f Open the door approximately 45°. Pull the arm over the top of the door. Align the hole in the end of the arm with the roller stud. Fit the closer arm completely onto the roller stud and tighten the arm set screw securely.

1g Adjust the closing power only if more power is needed. The closer is shipped with minimum closing power preset. To increase the closing power turn the spring adjusting screw clockwise. Maximum adjustment is 36 turns.



Customer Service
1-877-671-7011 www.allegion.com/us

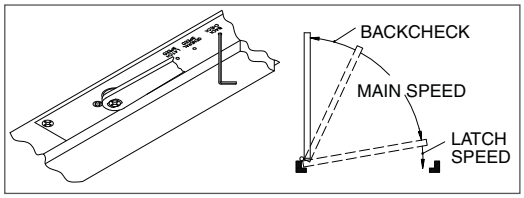
2 Adjustment

The 2030 Series closer has been regulated prior to shipment. If adjustments are necessary, carefully follow instructions **DO NOT REMOVE THE COVER PLATE TO MAKE ADJUSTMENTS.**

2a **Closing Speed:** See Closer Control Diagram below. Regulating screw locations are shown in illustration at left and also on door closer label. To adjust Main Speed, turn regulating screw clockwise to decrease or counter-clockwise to increase. To adjust Latch Speed, turn regulating screw clockwise to decrease or counter-clockwise to increase.

2b **Backcheck:** This control hydraulically dampens the opening speed of doors. Use enough backcheck to sufficiently slow the doors opening speed. To increase resistance, turn regulating screw clockwise.

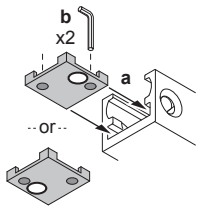
ⓘ **NOTE: DO NOT USE AN ABRUPT BACKCHECK OR EXPECT THE DOOR CLOSER TO ACT AS A DOOR STOP!**



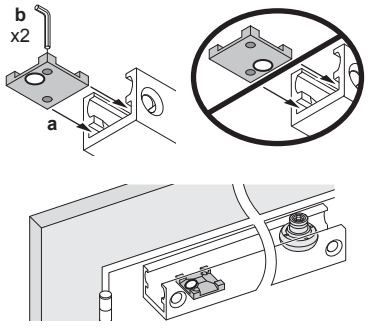
3 Hold-Open Information

HOLD-OPEN OPTION

LIGHT HOLD-OPEN FORCE



STRONG HOLD-OPEN FORCE



⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions, call LCN at 877-671-7011.

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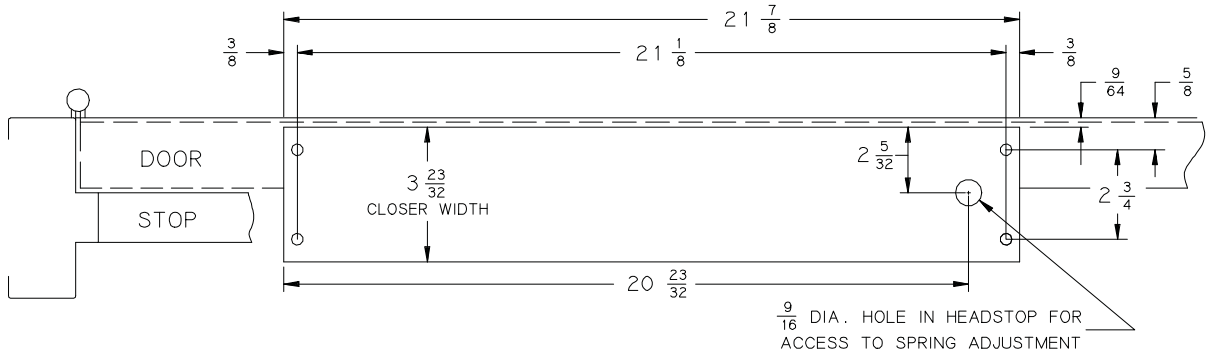
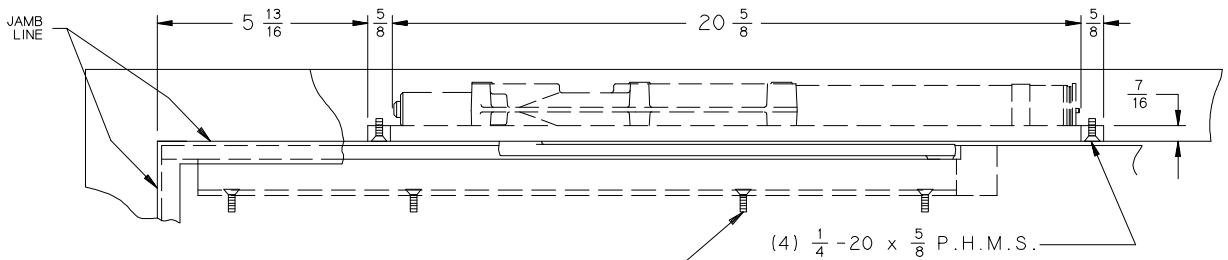
18758 Rev. 06/16-m

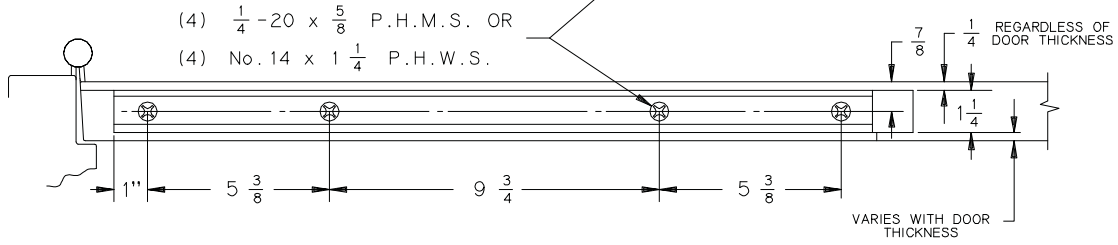
2031, 2033, 2034, 2035 } NON HOLD OPEN (90°-180°)
H 90 (85°-110°)
MAX. OPENING 180°

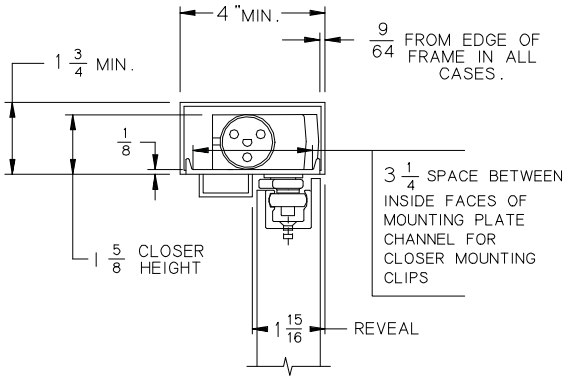
AUXILIARY STOP RECOMMENDED



AN ALUMINUM COMBINATION MOUNTING AND FINISH PLATE IS INCLUDED AS PART OF THE CLOSER. AN APPLIED REMOVABLE HEADSTOP MUST BE USED AND MOUNTED BETWEEN SIDE STOPS FOR REMOVABILITY. MOUNTING SCREW HOLES FOR REMOVABLE HEADSTOP MUST SPAN CLOSER MOUNTING/FINISH PLATE

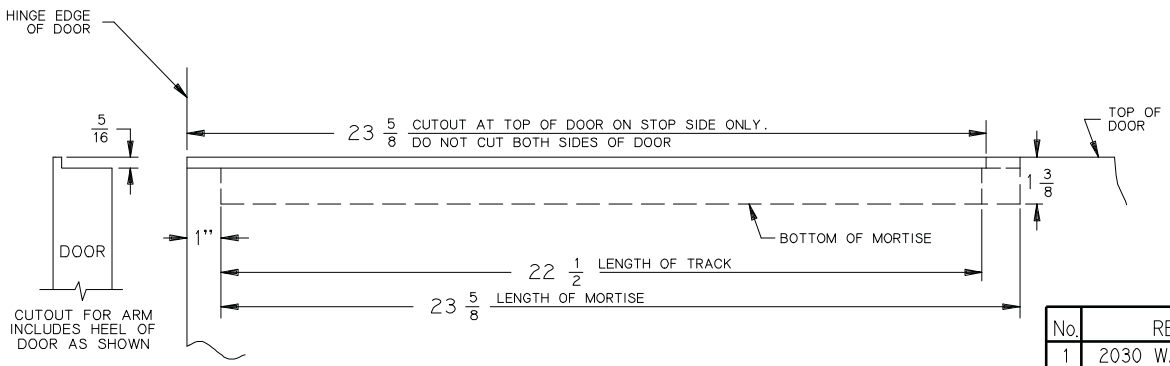






NOTES-

1. FOR 180° OPENINGS, MAX. ALLOWABLE BUTT SIZE IS 5" x 5".
2. MINIMUM STOP THICKNESS 1/2".
3. 1/8" DOOR TO SOFFIT CLEARANCE REQUIRED.
4. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS & FRAMES.



LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE

inch	1/8	9/64	1/4	5/16	3/8	7/16	1/2	9/16	5/8	7/8	1	1 1/4	1 3/8	1 5/8	1 3/4
mm	3	4	6	8	10	11	13	14	16	22	25	32	35	41	44

inch	1 15/16	2 5/32	2 3/4	3 1/4	3 23/32	4	5 3/8	5 13/16	9 3/4	20 5/8	20 23/32	21 1/8	21 7/8	22 1/2	23 5/8
mm	49	55	70	79	94	102	137	148	248	524	526	537	556	572	600

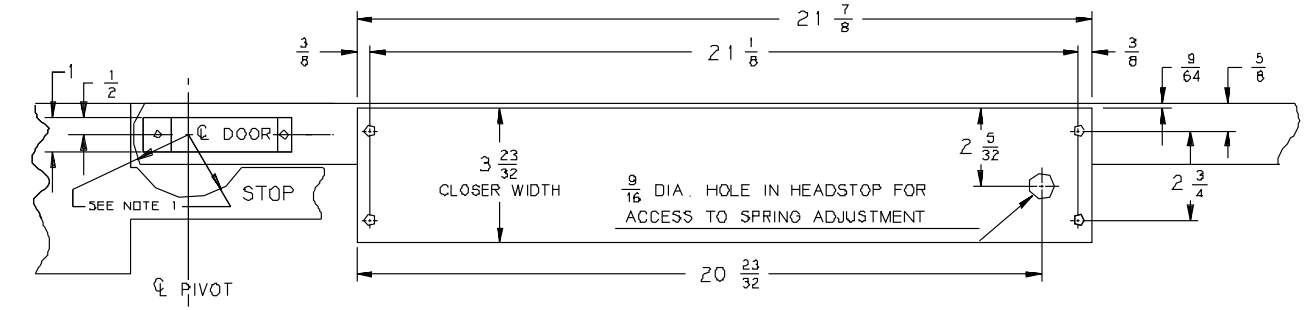
No.	REVISION	BY	DATE
1	2030 WAS 2030-101	RJS	3/78
2	CHANGED LOGO	RJS	7/80
3	CHANGE TO UNIV. TRACK	DRM	10/89
4	TRACK HOLES RELOCATED	DRM	6/90
5	CAD CONV./ADDED SIZE 1	CTB	1/94

DRW BY CTB 1/94
DO NOT SCALE

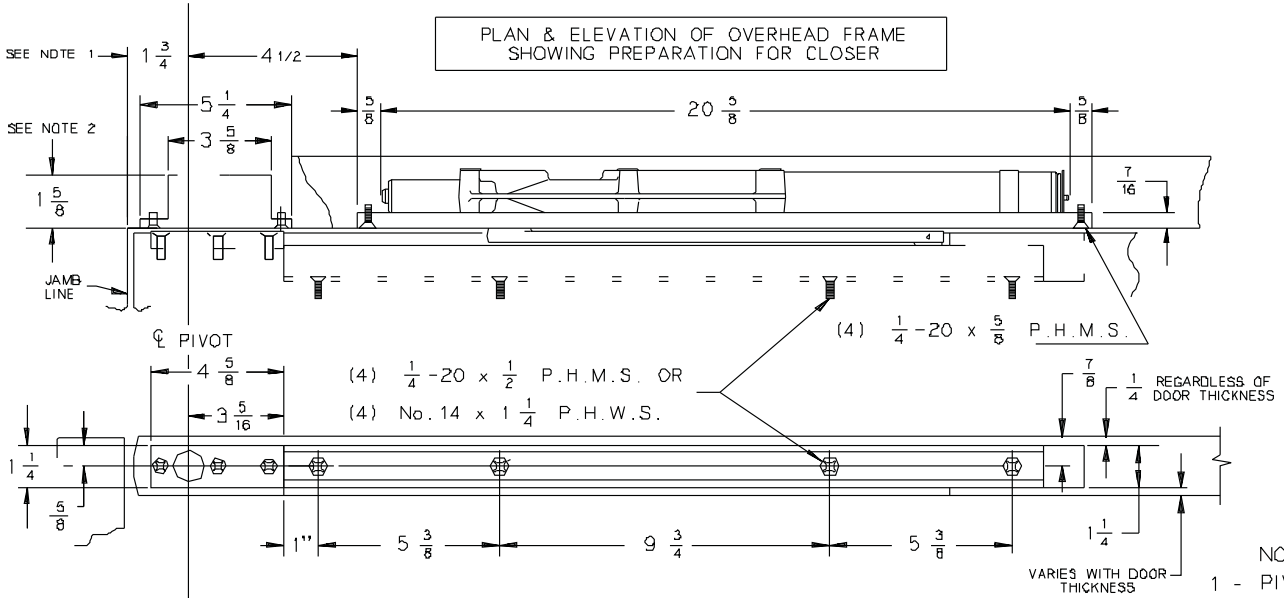
OVERHEAD CONCEALED CLOSER WITH CONCEALED ARM & TRACK

2030 INST.

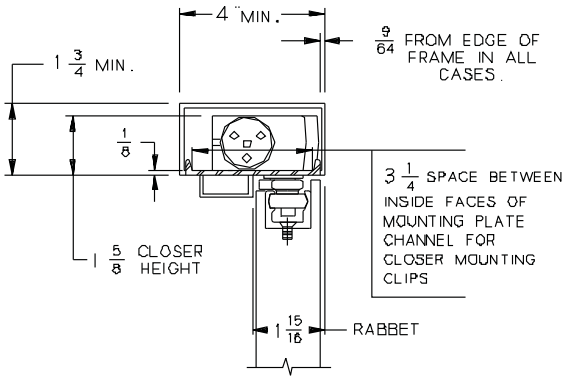
2031 CP 2032 CP 2033 CP 2034 CP 2035 CP	NON HOLD OPEN (UP TO 120°) H-90 (80° TO 100°) MAX. OPENING 120°
AUXILIARY STOP RECOMMENDED	
LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE	6/96



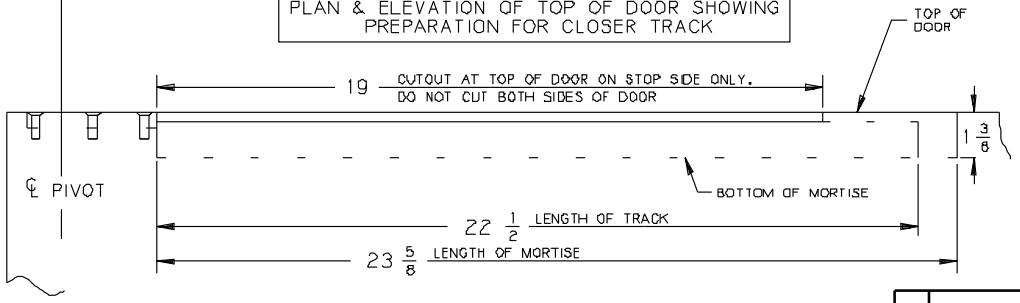
PLAN & ELEVATION OF OVERHEAD FRAME SHOWING PREPARATION FOR CLOSER



AN ALUMINUM COMBINATION MOUNTING AND FINISH PLATE IS INCLUDED AS PART OF THE CLOSER. AN APPLIED REMOVABLE HEADSTOP MUST BE USED AND MOUNTED BETWEEN SIDE STOPS FOR REMOVABILITY. MOUNTING SCREW HOLES FOR REMOVABLE HEADSTOP MUST SPAN CLOSER MOUNTING/FINISH PLATE



PLAN & ELEVATION OF TOP OF DOOR SHOWING PREPARATION FOR CLOSER TRACK



NOTES :

1 - PIVOT CENTER MAY BE VARIED AS DESIRED. MINIMUM ALLOWABLE IS 1 3/4". AS SHOWN. CUTOUT IN HEADSTOP & VERTICAL JAMB TO CLEAR HEEL OF DOOR. HEEL OF DOOR RADIUS MUST NOT EXCEED ℄ OF PIVOT TO JAMB DISTANCE

2 - FOR PIVOT INSTALLATION DETAILS, SEE 7250 SERIES PIVOT TEMPLATE.

3 - MINIMUM STOP THICKNESS 1/2".

4 - 1/8" DOOR TO SOFFIT CLEARANCE REQUIRED.

5 - REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOOR AND FRAMES.

inch	1/8	9/64	1/4	5/16	3/8	7/16	1/2	9/16	5/8	7/8	1	1 1/4	1 3/8	1 5/8	1 3/4	1 15/16	2 5/32
mm	3	4	6	8	10	11	13	14	16	22	25	32	35	41	44	49	55

inch	2 3/4	3 1/4	3 5/16	3 5/8	3 23/32	4	4 1/2	4 5/8	5 1/4	5 3/8	9 3/4	19	20 5/8	20 23/32	21 1/8	21 7/8	22 1/2
mm	70	79	84	92	94	102	114	117	133	137	248	483	524	526	537	556	572

inch	23 5/8
mm	600

No.	REVISION	BY	DATE
1	CAD CONVERSION	CTB	8/93
2	TEMPLATE UPDATE	JEJ	6/96
3	TEMPLATE UPDATE	AMM	2/98

APP BY JEJ 6/96

DO NOT SCALE

OVERHEAD CONCEALED CLOSER, ARM & TRACK WITH CENTER PIVOTS

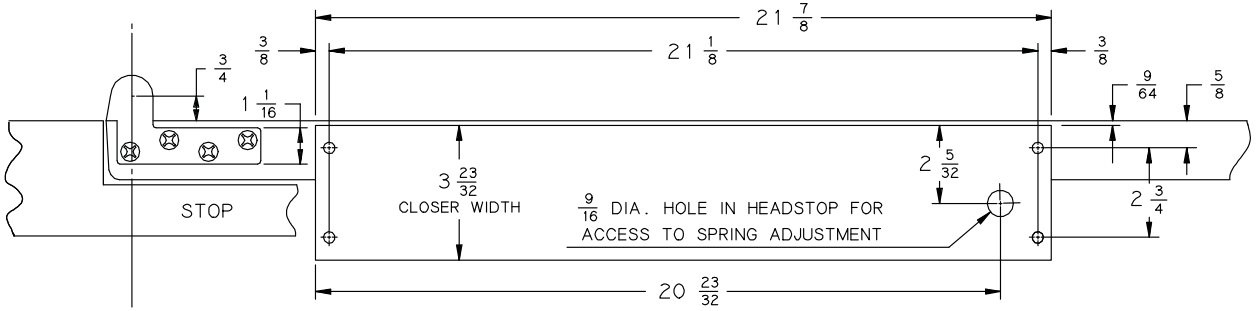
2030-CP

2031 OP
2032 OP
2033 OP
2034 OP
2035 OP
NON HOLD OPEN (UP TO 115°)
H-90 (85°)
MAX. OPENING 115°

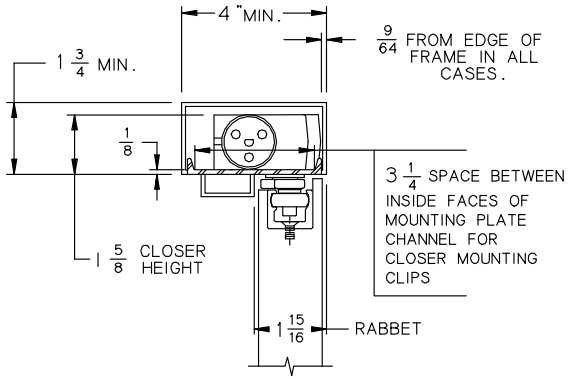
AUXILIARY STOP RECOMMENDED

LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE

6/96

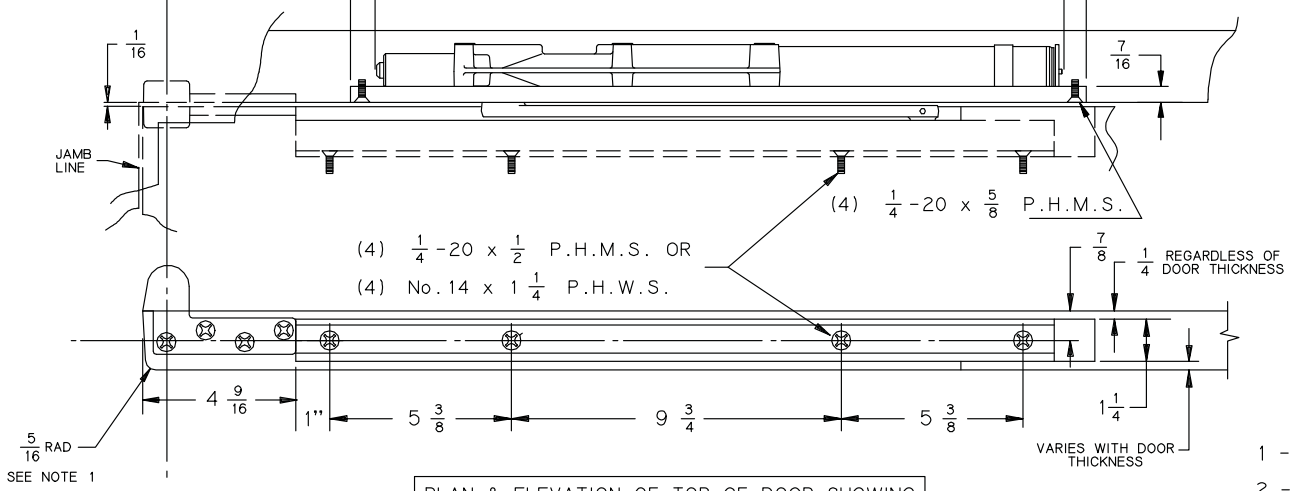


AN ALUMINUM COMBINATION MOUNTING AND FINISH PLATE IS INCLUDED AS PART OF THE CLOSER. AN APPLIED REMOVABLE HEADSTOP MUST BE USED AND MOUNTED BETWEEN SIDE STOPS FOR REMOVABILITY. MOUNTING SCREW HOLES FOR REMOVABLE HEADSTOP MUST SPAN CLOSER MOUNTING/FINISH PLATE



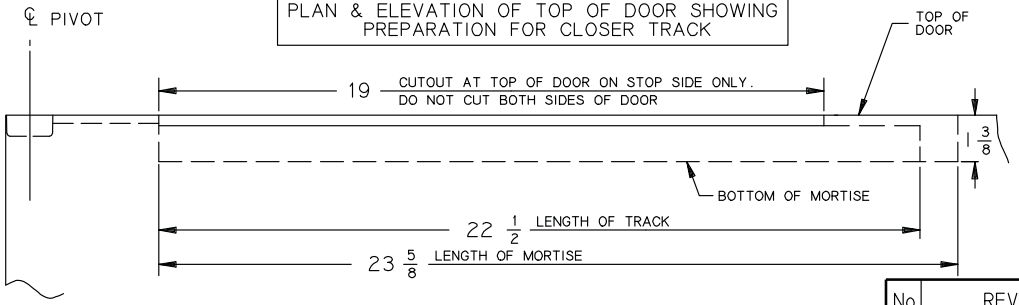
℄ PIVOT

PLAN & ELEVATION OF OVERHEAD FRAME SHOWING PREPARATION FOR CLOSER



℄ PIVOT

PLAN & ELEVATION OF TOP OF DOOR SHOWING PREPARATION FOR CLOSER TRACK



NOTES :

1 - BEVEL HEEL EDGE OF DOOR 1/8" IN 2".

2 - FOR PIVOT INSTALLATION DETAILS, SEE PIVOT TEMPLATE. FOR USE WITH PIVOT SETS: 7212, 7215, 7222, 7226 AND 7227.

3 - MINIMUM STOP THICKNESS 1/2".

4 - 1/8" DOOR TO STOP CLEARANCE REQUIRED.

5 - REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOOR AND FRAMES.

inch	1/16	1/8	9/64	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1	1 1/16	1 1/4	1 3/8	1 5/8
mm	2	3	4	6	8	10	11	13	14	16	19	22	25	27	32	35	41

inch	1 3/4	1 15/16	2	2 5/32	2 3/4	3 1/4	3 23/32	4	4 9/16	5 3/8	5 7/16	9 3/4	19	20 5/8	20 23/32	21 1/8	21 7/8
mm	44	49	51	55	70	79	94	102	116	137	138	248	483	524	526	537	556

inch	22 1/2	23 5/8
mm	572	600

No.	REVISION	BY	DATE
1	CAD CONVERSION	CTB	8/93
2	TEMPLATE UPDATE	JEJ	6/96
3	TEMPLATE UPDATE	AMM	11/97
4	TEMPLATE UPDATE	AMM	09/06

APP BY JEJ 6/96

DO NOT SCALE

OVERHEAD CONCEALED CLOSER, ARM & TRACK WITH OFFSET PIVOTS

2030-OP

28478

4020 Track Series

LCN®

180° Template, Top Jamb

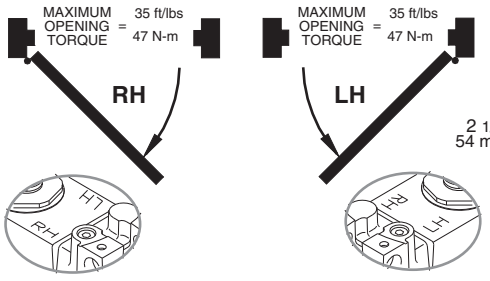
Installation Instructions

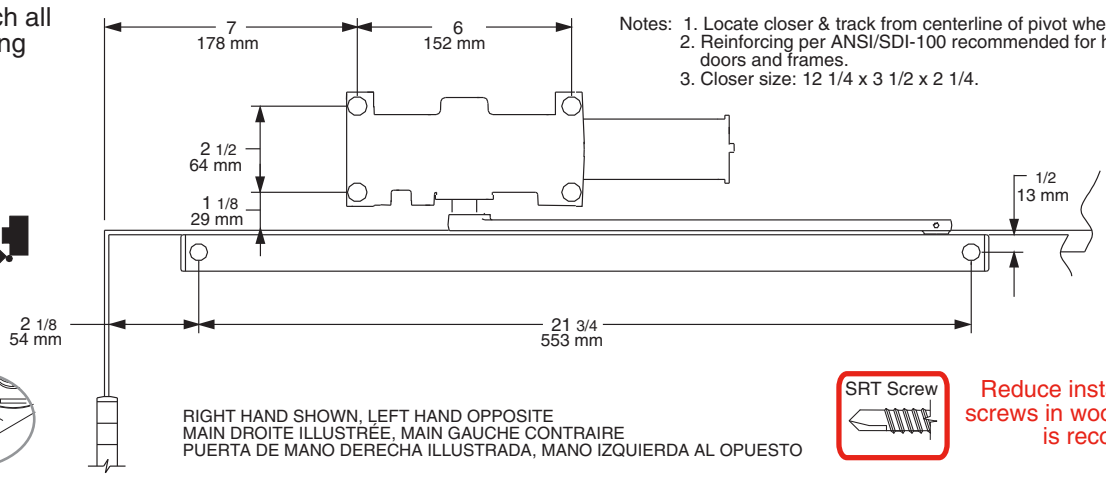
4023T EN 3

1

Locate proper template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes.

Verify hand of closer matches hand of door.





Notes: 1. Locate closer & track from centerline of pivot when used.
2. Reinforcing per ANSI/SDI-100 recommended for hollow doors and frames.
3. Closer size: 12 1/4 x 3 1/2 x 2 1/4.

RIGHT HAND SHOWN, LEFT HAND OPPOSITE
MAIN DROITE ILLUSTRÉE, MAIN GAUCHE CONTRAIRE
PUERTA DE MANO DERECHA ILLUSTRADA, MANO IZQUIERDA AL OPUESTO

Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.

2

Determine door width, adjust spring power to match chart.

⚠CAUTION

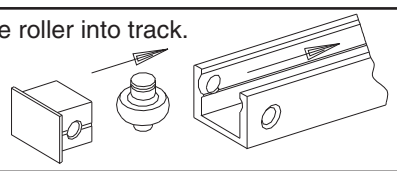
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877 - 671 - 7011

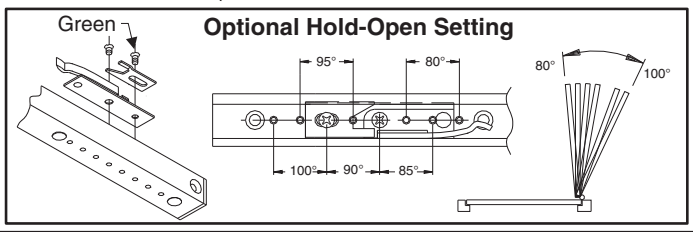
TABLE OF SIZES

DOOR WIDTH (INTERIOR DOORS ONLY)	CLOSER SIZE
♿ - ADA	4021T
UP TO 36" (914mm)	4023T
37" (940mm) - 48" (1219mm)	4024T

3

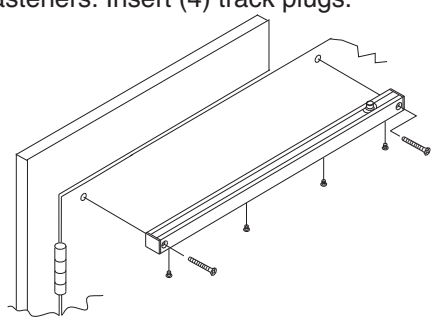
Assemble roller into track.





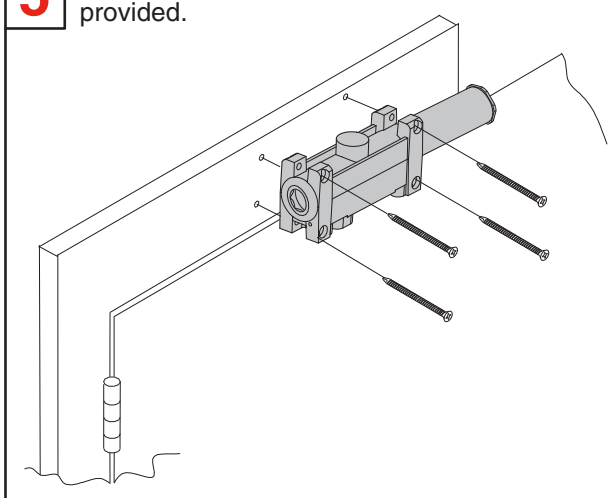
4

Secure track to door with provided fasteners. Insert (4) track plugs.



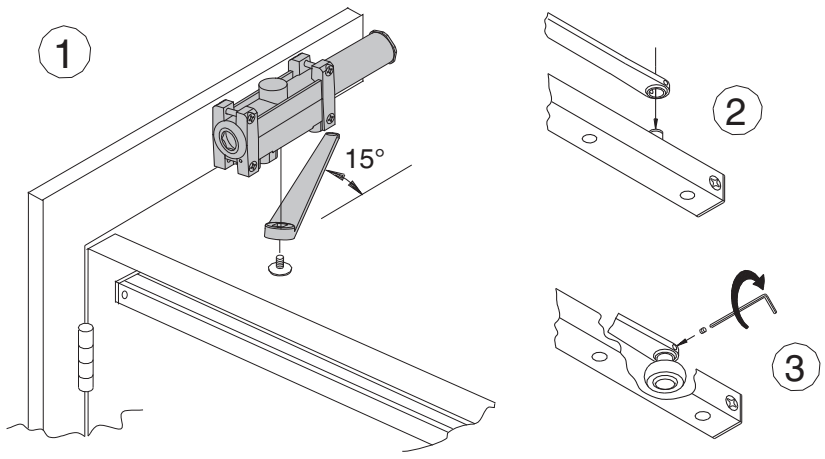
5

Secure closer to frame with fasteners provided.



6

Attach arm to closer at pre-load position of 15°. Secure with provided pinion screw. Open door approx. 30°, pull arm over top of door and connect to track roller as shown in Fig. 2. Tighten set screw as shown in Fig. 3.



Note: Hold open tracks must not be installed on fire rated doors.

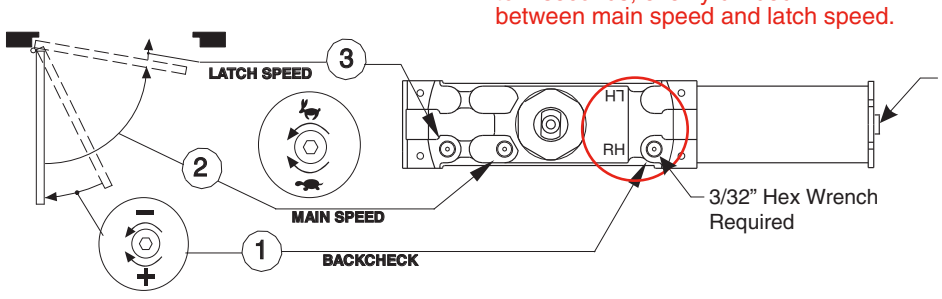
7

If necessary, adjust closer.

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

⚠CAUTION

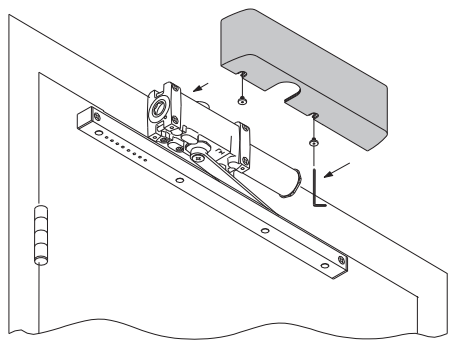
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



NO MAINTENANCE REQUIRED

8

Attach cover with fasteners provided.



4020 Instructions du rail et gabarit de 180° pour une installation sur le côté à pousser.

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds.

Vérifiez si la main du ferme-porte correspond à la main de la porte.

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

3 Glissez le galet dans le rail.
Réglage de l'angle d'ouverture optionnel

4 Fixez le rail sur la porte avec les attaches fournies. Insérez les (4) bouchons du rail.

5 Fixez le ferme-porte sur le cadre avec les attaches fournies.

6 Attachez le bras au ferme-porte à la position préchargée de 15°. Fixez à l'aide es vis fournies. Ouvrez la porte à environ 30°, tirez le bras au-dessus de la porte et attachez-le au galet du rail comme sur l'illustration 2. Serrez la vis comme sur l'illustration 3.

7 Au besoin, réglez
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

8 Fixez le boîtier avec les attaches fournies.

⚠DANGER

Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 877 - 671 - 7011

⚠DANGER

UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4020 Instrucciones de rieles para plantilla 180° con montaje en la parte superior de la jamba.

1 Localice la plantilla apropiada. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes.

Verifique que la mano del cerrador corresponda a la mano de la puerta.

Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

3 Ponga el rodillo de ensamblaje en el riel.
Posición de retención opcional

4 Asegure el riel a la puerta con los sujetadores ya incluidos. Inserte quatro (4) tapones de riel.

5 Sujeta el cerrador a la armazón con los sujetadores ya incluidos.

6 Coloque el brazo al cerrador a la posición de precarga de 15°. Sujete con el tornillo de piñón ya incluída. Abre la puerta aprox. 30°, tire el brazo encima de la puerta y conecte a los rodillos del riel tal como se muestra en la Fig. 2. Apriete el opresor tal como se muestra en la Fig. 3.

7 Ajusta si se necesita
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

8 Coloca la tapa con los sujetadores ya incluidos.

⚠ADVERTENCIA

UNA INSTALACIÓN O UN AJUSTE INCORRECTOS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL 877 - 671 - 7011

⚠ADVERTENCIA

LA APERTURA DEMASIADO GRANDE DE LAS VÁLVULAS DE AJUSTE PUEDE OCASIONAR UN DERRAME, DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES.

Customer Service	Servicio al cliente	Service à la clientèle
1-877-671-7011	www.allegion.com/us	

ALLEGION

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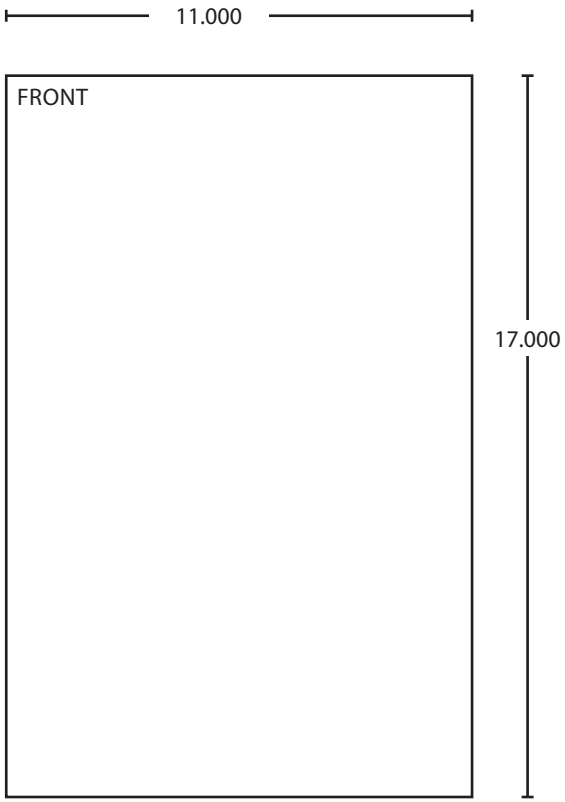
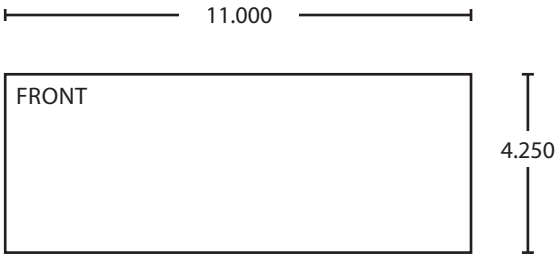
28478 Rev. 01/14-g



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
B	C	D	E	F	G
N/A	N/A	N/A	N/A	N/A	043812

Material
White Paper

Notes
1. printed one side
2. printed black and PMS 485 (red)
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
G > Revised artwork

Edited By	Approved By	EC Number	Release Date
R. Byun	M. Sasso	043812	01-01-14

Title
4020T Series Instruction Sheet

Creation Date	Number	Revision
04-27-10	28478	G

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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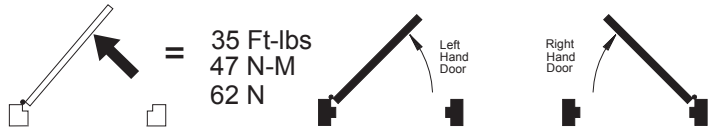
23652

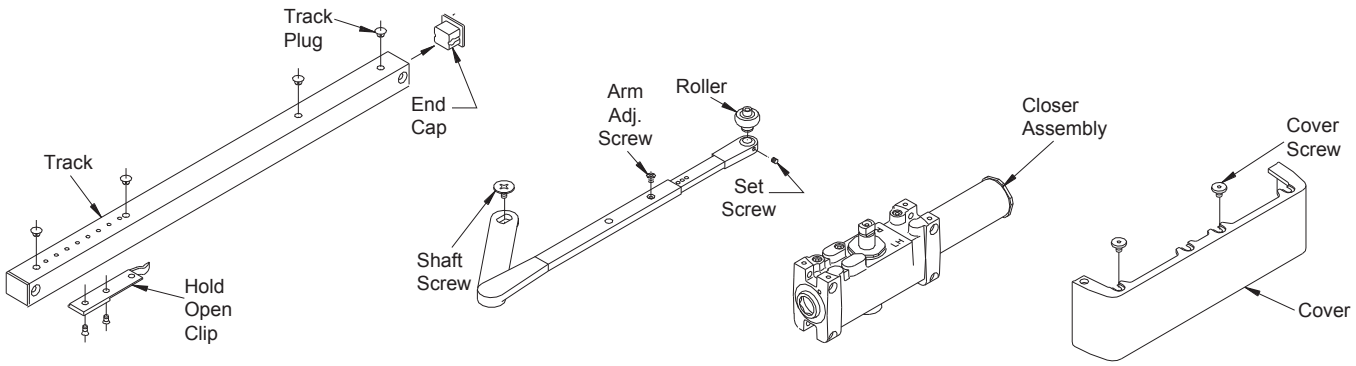
4010T DE

LCN®

Installation Instructions



Maximum Opening Force



1 Installation

1a	Closer is handed at factory and must match hand of door. Hand of closer appears in line with three regulating screws.
1b	Prepare door & frame per proper template. Using fasteners provided, mount closer on door to proper dimensions.
1c	Place arm on closer shaft & secure with shaft screw.
1d	Remove end cap from track. Insert roller into track and replace end cap. Put track hole plugs into holes on top of track. Using fasteners provided, mount track on frame.
1e	Loosen set screw in end of arm; open door to approximately 30° and pull arm over top of door. Connect arm to track roller and tighten set screw firmly.
1f	Open door slightly and place cover on closer. Hold cover firmly against door while tightening cover screws securely with 3/32” hex wrench.

2 Regulation

Door closer regulation is preset at the factory. Adjust as follows only if necessary: A “normal” closing time from a 90° open position is 5 to 7 seconds, evenly divided between main speed & latch speed (see figure below). Use a 3/32” hex wrench to adjust regulating screws. To slow main speed of door, turn regulating screw closest to shaft clockwise. To slow latch speed, turn regulating screw closest to hinge clockwise.

⚠ CAUTION ⚠

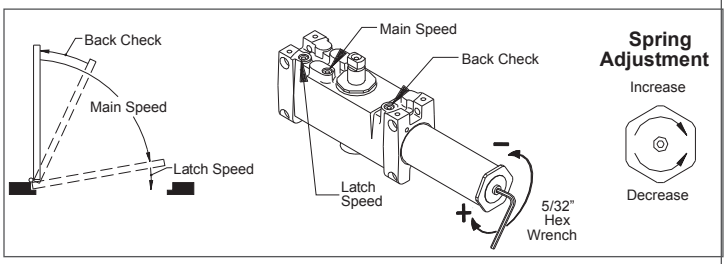
Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions, call LCN at 877 - 671 - 7011

Customer Service

1-877-671-7011 www.allegion.com/us

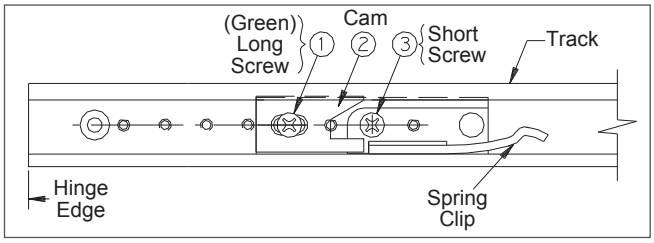
3 Backcheck

To increase backcheck intensity, turn regulating screw closest to the latch clockwise. **DO NOT USE ABRUPT BACKCHECK. DO NOT USE DOOR CLOSER AS A DOOR STOP.**



4 To Install or Adjust Hold-Open

Hold-open track and spring clip assembly are non-handed. Illustration at right shows assembly in track. For 3/16“ - 3 5/16“ reveals, hold-open is available from 80° - 100° by adjusting arm length and/or location of clip assembly in track. Tip spring clip into track. Locate to desired position, and install screw (3) securely. Tip cam (2) into track. Locate as show. Install long (green) screw (1) securely. Push door into hold-open position. For MORE HOLDING POWER - loosen the long (green) screw (1), slide cam (2) toward LATCH; re-tighten long (green) screw (1) securely. For LESS HOLDING POWER - loosen long (green) screw (1), slide cam (2) toward HINGE edge of door; re-tighten long (green) screw (1) securely.



ALLEGION

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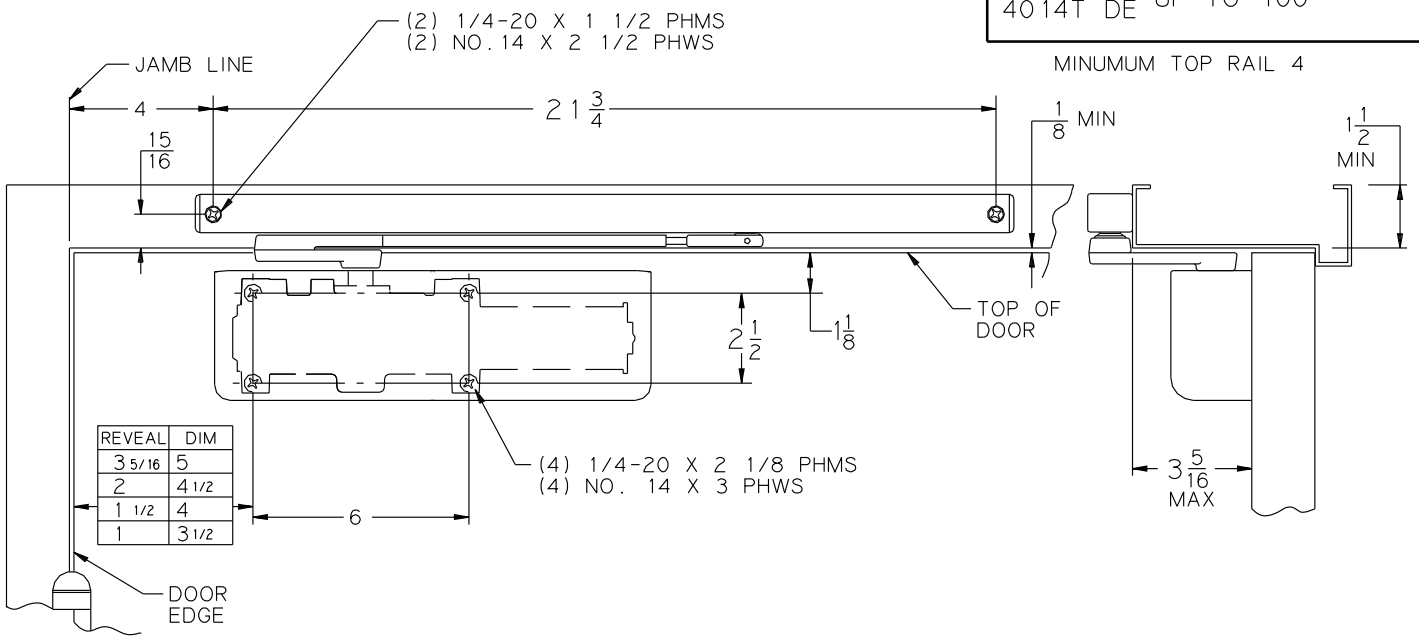
23652 Rev. 01/14-e

HINGE FACE MTG APPLIES TO

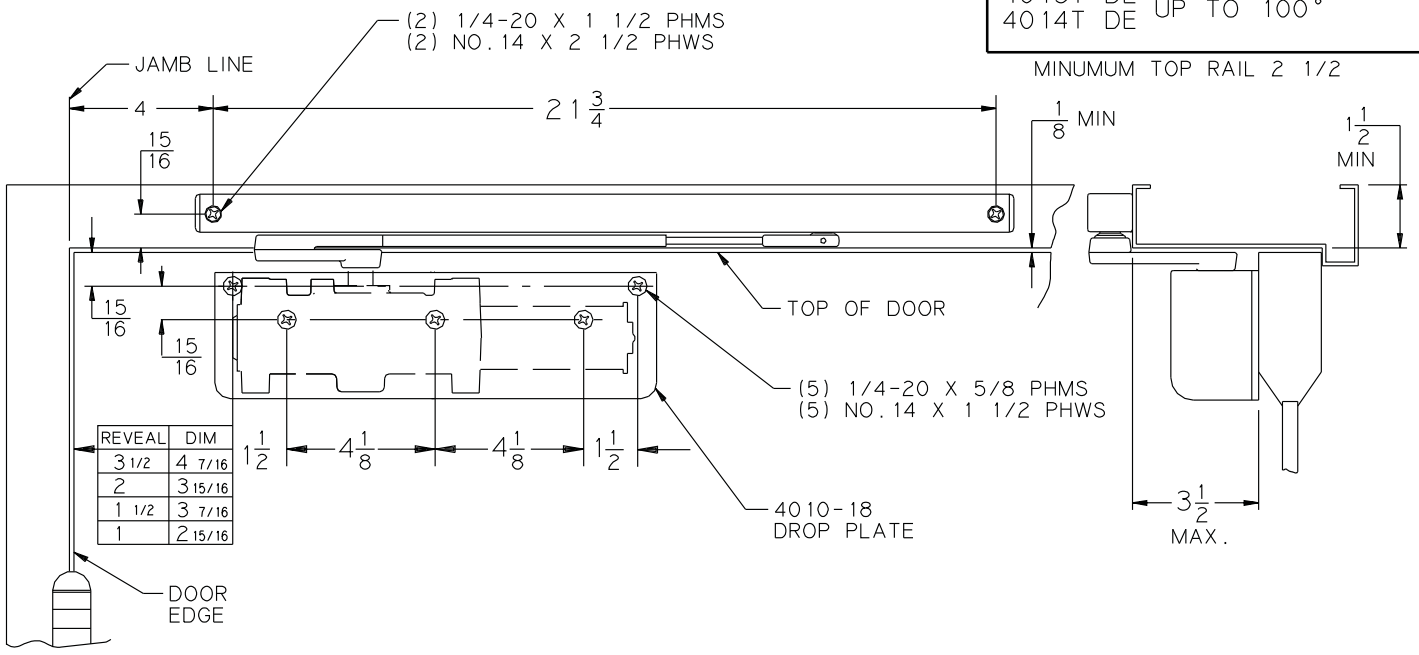
4013T DE
4014T DE UP TO 100°



REVEAL	DIM
3 5/16	5
2	4 1/2
1 1/2	4
1	3 1/2

HINGE FACE ON 18 APPLIES TO

4013T DE
4014T DE UP TO 100°



REVEAL	DIM
3 1/2	4 7/16
2	3 15/16
1 1/2	3 7/16
1	2 15/16

INCH	1/4	9/16	5/8	3/4	7/8	15/16	1 1/2	1 3/4	2	2 1/8	2 5/32	2 1/4	2 3/8	2 1/2	3	3 1/2	4	4 1/8	4 7/16	5	6	12 1/4	213/4
M.M.	6.4	14.3	15.9	19.1	22.2	23.8	38.1	44.5	50.8	54.0	54.8	57.2	60.3	63.5	76.2	88.9	101.6	104.8	112.7	127	152.4	311.2	552.5

NOTES:

1 - RIGHT HAND DOOR AND CLOSER SHOWN - LEFT HAND OPPOSITE.

2 - CLOSER SIZE 12 1/4" X 3 1/2" X 2 5/32" (2 3/8" WITH DROP PLATE 4010-18)

3 - LOCATE CLOSER AND TRACK FROM CL OF PIVOT OR SWING CLEAR HINGE WHEN USED.

4 - FOR 8 3/4" OR LESS DOUBLE EGRESS FRAMES, REVEAL NOT TO EXCEED 3 5/16" (3 1/2" WITH PLATE)

5 - REINFORCING PER ANSI/SDI 100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.

AUXILIARY STOP RECOMMENDED

DO NOT SCALE

NO	REVISIONS	BY	DATE

LCN®

SMOOTHEE CLOSER WITH TRACK AND DOUBLE EGRESS ARM, HINGE FACE MOUNTED ON DOOR OR DROP PLATE

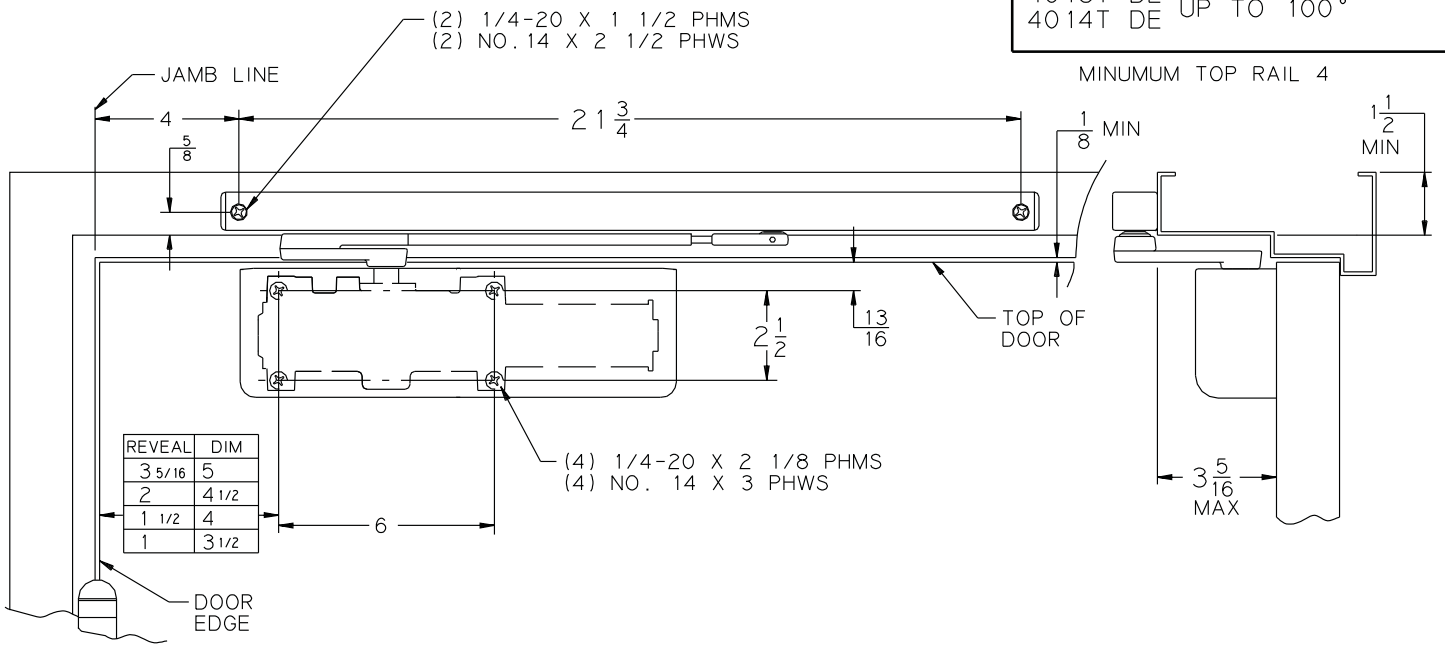
BY 2-19-93 LLZ

APPR. 2-19-93 GSN

NO. 4010T-DE

5/8 STEP DOWN FRAME

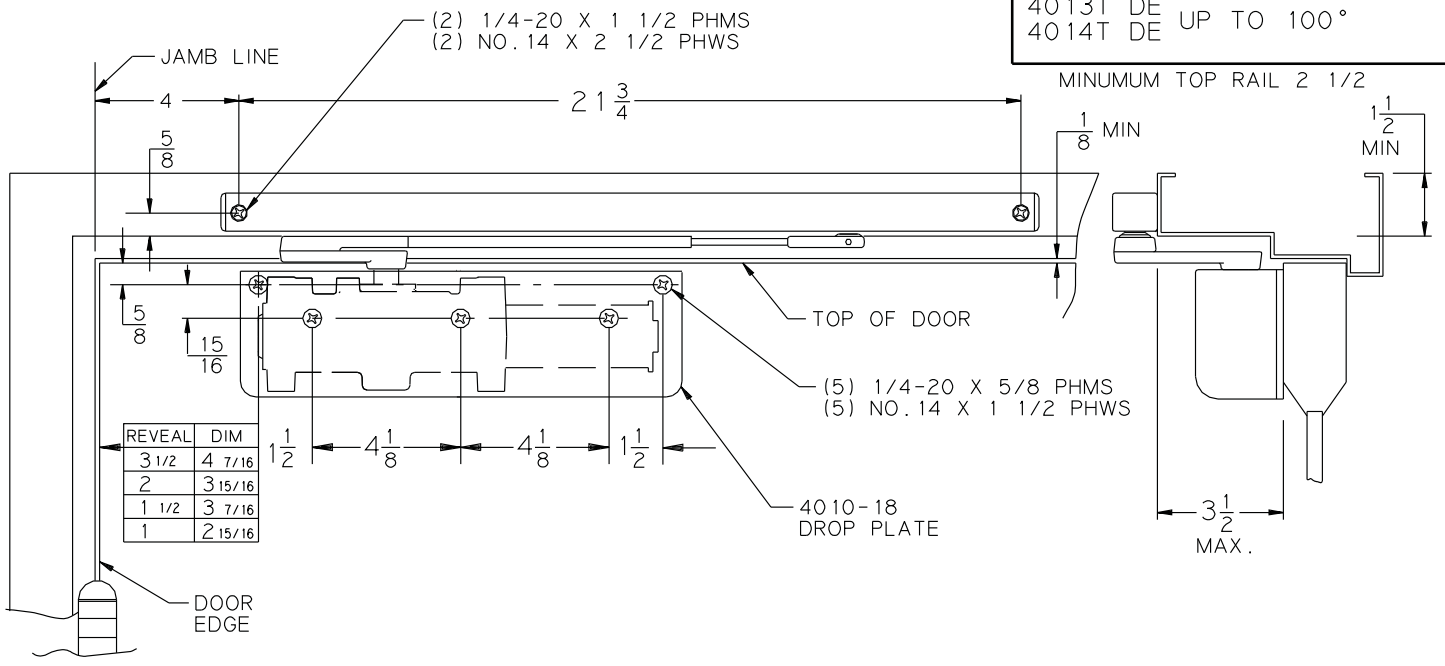
HINGE FACE MTG APPLIES TO
4013T DE 4014T DE UP TO 100°



REVEAL	DIM
3 5/16	5
2	4 1/2
1 1/2	4
1	3 1/2

5/8 STEP DOWN FRAME

HINGE FACE ON 18 APPLIES TO
4013T DE 4014T DE UP TO 100°



REVEAL	DIM
3 1/2	4 7/16
2	3 15/16
1 1/2	3 7/16
1	2 15/16

INCH	1/4	9/16	5/8	3/4	7/8	15/16	1 1/2	1 3/4	2	2 1/8	2 5/32	2 1/4	2 3/8	2 1/2	3	3 1/2	4	4 1/8	4 7/16	5	6	12 1/4	21 3/4
M.M.	6.4	14.3	15.9	19.1	22.2	23.8	38.1	44.5	50.8	54.0	54.8	57.2	60.3	63.5	76.2	88.9	101.6	104.8	112.7	127	152.4	311.2	552.5

NOTES:

1 - RIGHT HAND DOOR AND CLOSER SHOWN - LEFT HAND OPPOSITE.

2 - CLOSER SIZE 12 1/4" X 3 1/2" X 2 5/32" (2 3/8" WITH DROP PLATE 4010-18)

3 - LOCATE CLOSER AND TRACK FROM CL OF PIVOT OR SWING CLEAR HINGE WHEN USED.

4 - FOR 8 3/4" OR LESS DOUBLE EGRESS FRAMES, REVEAL NOT TO EXCEED 3 5/16" (3 1/2" WITH PLATE).

5 -REINFORCING PER ANSI/SDI 100 RECOMMENDED FOR HOLLOW METAL DOORS AND FRAMES.

AUXILIARY STOP RECOMMENDED

DO NOT SCALE

NO	REVISIONS	BY	DATE

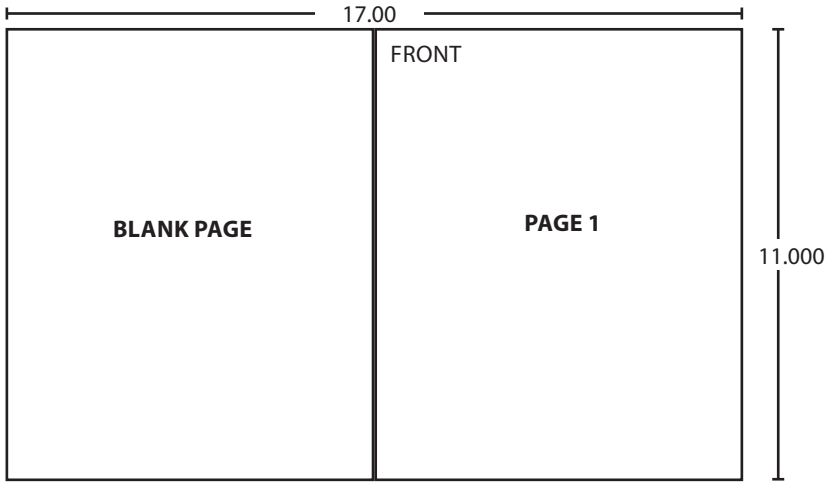
LCN®

SMOOTHEE CLOSER WITH TRACK AND DOUBLE EGRESS ARM. HINGE FACE MOUNTED ON DOOR OR DROP PLATE

BY 2-19-93 LLZ

APPR. 2-19-93 GSN

NO. 4010T-DE



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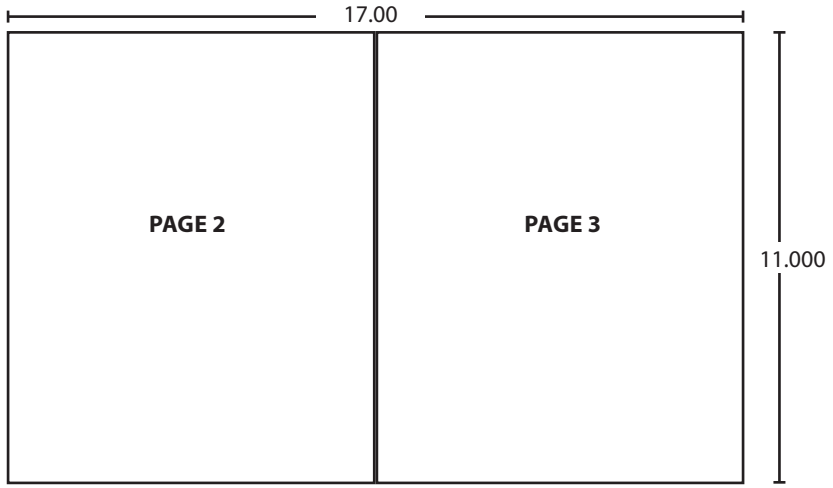

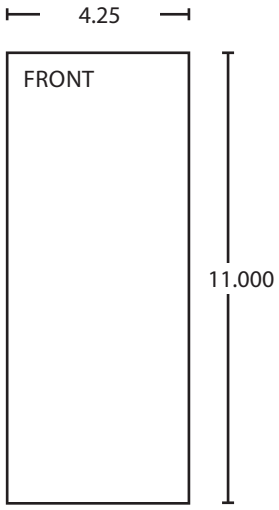

FOLDED SHEET

Additional Notes:
1. None

Revision History					
E	F	G	H	J	K
043228					

Revision Description:
E > Revised artwork

Material	Edited By	Approved By	EC Number	Release Date
White Paper	D. Myers	M. Sasso	043228	01-01-14

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Title
4010T DE Series Instruction Sheet

Creation Date	Number	Revision
04-27-10	23652	E

Created By	Activity
N/A	3899 Hancock Expwy Security, CO 80911
Software: InDesign CS6	

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26367

4010, 4020, & 4110 Series

LCN®

Door Closers with Fusible Link Arms

Installation Instructions

The Fusible Link Arm is handed and cannot be reversed. Hand of arm and hand of door must correspond. The hand of arm is stamped on the vertical part of the shoe facing the Hold Open Nut. (CAN ONLY BE USED WITH SIZE 1-5 CLOSERS)

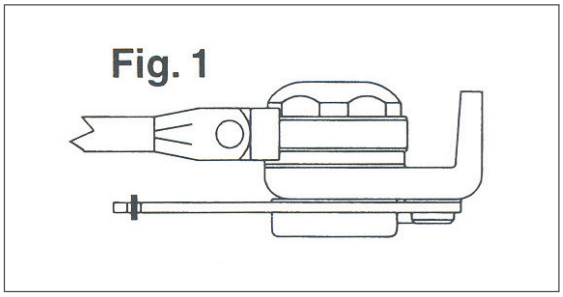
1 4010

1a For all degree's of door opening, increase the following dimension:

- Vertical distance from top jamb line to center of the shoe screw is **increased from ⅝" to 1"**.

1b For 90° to 100° opening, increase the following dimensions:

- (Reg & 4010-18 Drop Plate Mount) Distance from jamb edge to center of first screw on the shoe is **increased from 12 5/16" to 13 5/16"**.
- (Reg. Mount) Distance from door edge to center of the first screw on closer body is increased from 7" to 8"; (4010-18 Drop Plate Mount increase from 6 7/16" to 7 7/16".
- Hold open nut must be on top. (see Fig. 1)

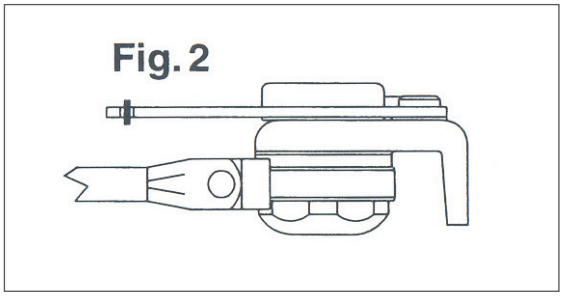


2 4020 (3 ⅞ Maximum Reveal)

2a Increase the vertical distance from the top door edge to the center of the shoe screw by the following dimensions:

- (No Drop Plate) **Increased from ⅝" to 1"**.
- (4020-18 Drop Plate) **Increased from 1 ¾" to 2 ⅛"**.
- (4020-18G Drop Plate) **Increased from 2 ½" to 2 ⅞"**.

2b Hold Open nut must be on bottom. (see Fig. 2)



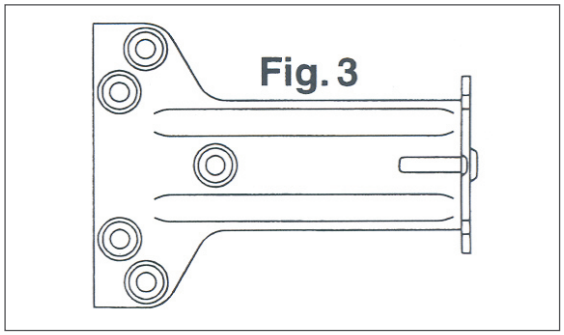
3 4110

3a (Reg. Mount) Vertical distance from stop face of frame to top screw on closer body is **increased from 2 3/16" to 2 ¾"**.

3b (4110-18 Drop Plate Mount) Vertical distance from stop face of frame to top screw on drop plate is **increased from ¾" to 1 5/16"**.

3c Hold open nut must be on top. (see Fig. 1)

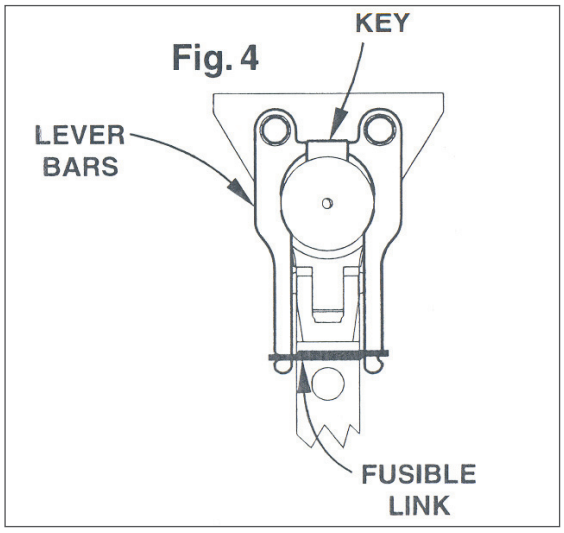
3d Requires installing the fusible link parallel arm soffit shoe (see Fig. 3) to standard shoe templating.



4 To Adjust Hold Open

4a Arm is pre-set to hold open at approximately 90°.

4b To change setting: Loosen adjusting nut; open door to 5° to 7° before the desired hold open position; **firmly tighten adjusting nut.**



5 If Fusible Link Requires Replacement, Reassemble As Follows

5a Return door to original hold open position. This will automatically line up key & lever bars. (see Fig.4)

5b With pliers, carefully squeeze lever bars together just enough to install fusible link. **DO NOT USE EXCESSIVE FORCE.**

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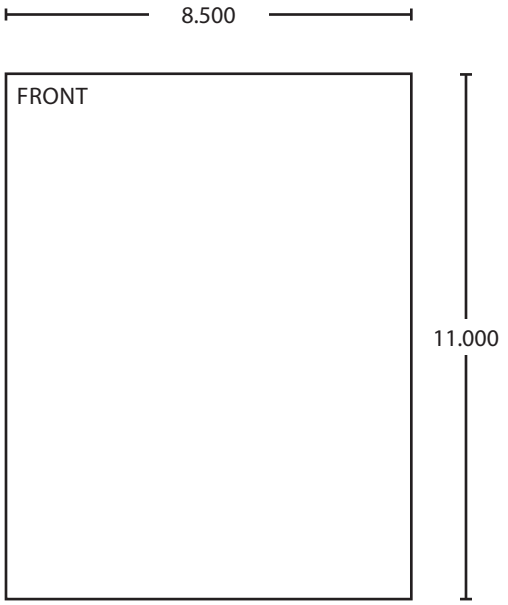
26367 Rev. 01/14-c



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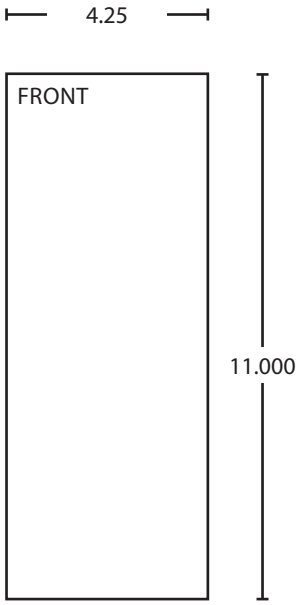

FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	N/A	043812			

Material
White Paper

Notes
1. printed one side
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
C > Revised artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043812	01-01-14

Title
4010, 4020 & 4110 Series Fusible Link Instruction Sheet

Creation Date	Number	Revision
04-27-10	26367	C

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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Model 7949/ES 7949

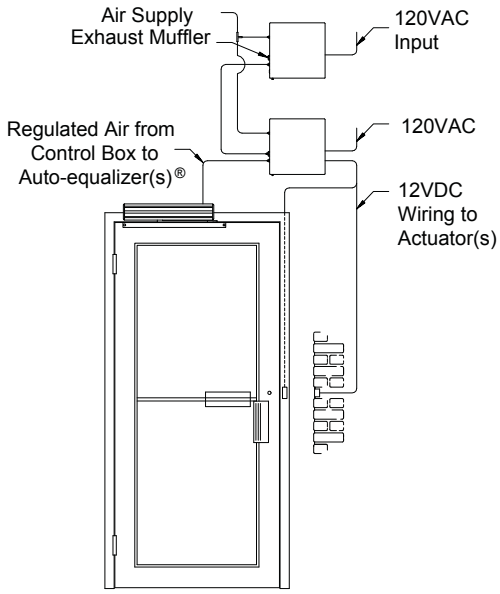
19282

Blow-Open Control Box

Installation Instructions

For Auto-Equalizer & Regular Control Box information, see installation instruction sheets packed with those products.

ⓘ **NOTE: The 7949 blow open control box is designed to assist in smoke evacuation from fire alarm systems with a normally closed dry contact output. Blow open installations are not listed under section GVEV of the UL *Building Materials Directory*. The 7949 blow open control boxes are assembled with UL recognized components, it should NOT be used on fire rated doors as described in GVEV of the UL *Building Materials Directory*.**



System Function

The 7949 series Blow-Open Box is designed for work witha 7901 or 7902 series closer control box and one or more LCN Auto-Equalizer(s) door closer. When power supply to the unit is interrupted by a smoke evacuation system, the 7949 Blow-Open Box overrides the closer control box, opening door(s) with the Auto-Equalizer(s) to allow fresh air into the building. This system is NOT to be used on fire rated doors.

Installing the Blow-Open Box

1. Locate box within 5 feet of 7900 series control box. It must be mounted in a clean, dry place where temperatures do not exceed 120°F or fall below 35°F.
2. Mount box to a structurally sound surface using screws provided, with air fittings on left side, as shown on page 4. Do not mount box upside down or horizontally.
3. Refer to closer control box instructions and actuator switch instructions. Connect switch leads to proper terminals in the closer control box at this time.
4. Connect all air lines to both boxes per required installation (see page 2 for options).
5. Connect non-powered 120 VAC line to terminals located in Blow-Open Control Box. If an electronic strikes or latching devices are being used, refer to teh ES7949 box diagram.
6. Turn on power to both boxes. Valves will cycle once when power is applied. After cycle is complete, turn on air supply to both boxes.
7. Set air pressure at 80 psi in both boxes. Turn regulator knob clockwise to increase pressure, counter-clockwise to decrease pressure. Cycle once with manual override and readjust air pressure if necessary.
8. Test actuator switches to ensure wiring and tubing are properly connected.

ⓘ **System Note: A minimum five second delay (by others) is required BEFORE smoke evacuation blowers start to allow doors to sufficiently begin to open.**

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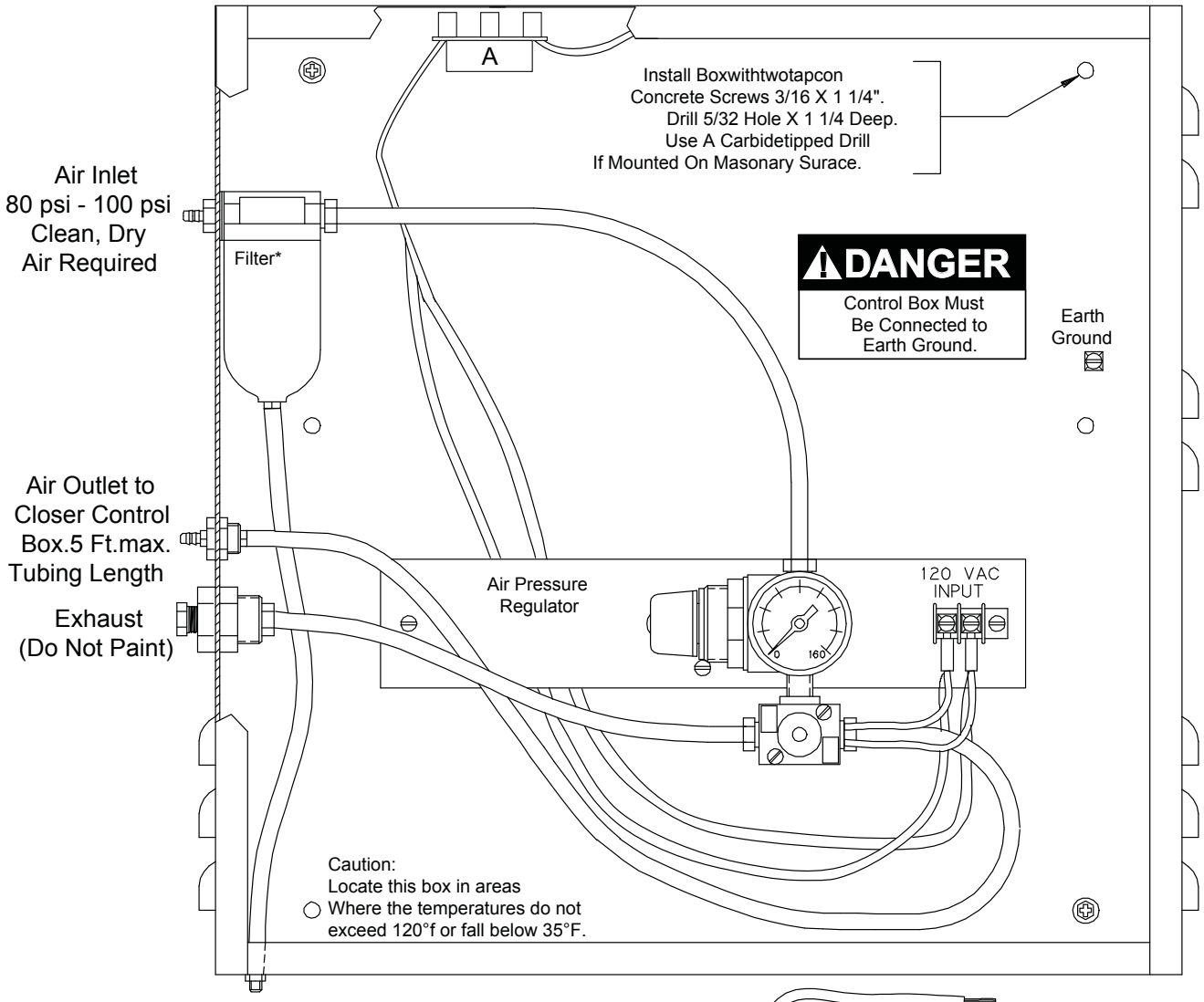
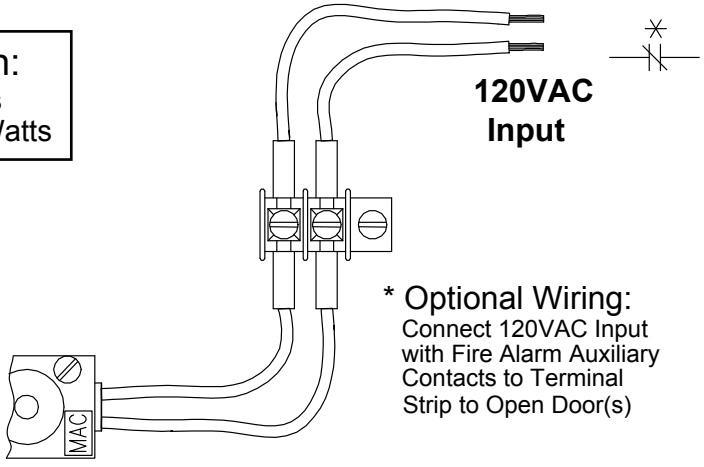
19282 Rev. 01/14-d

7949ES Blow - Open Control Box



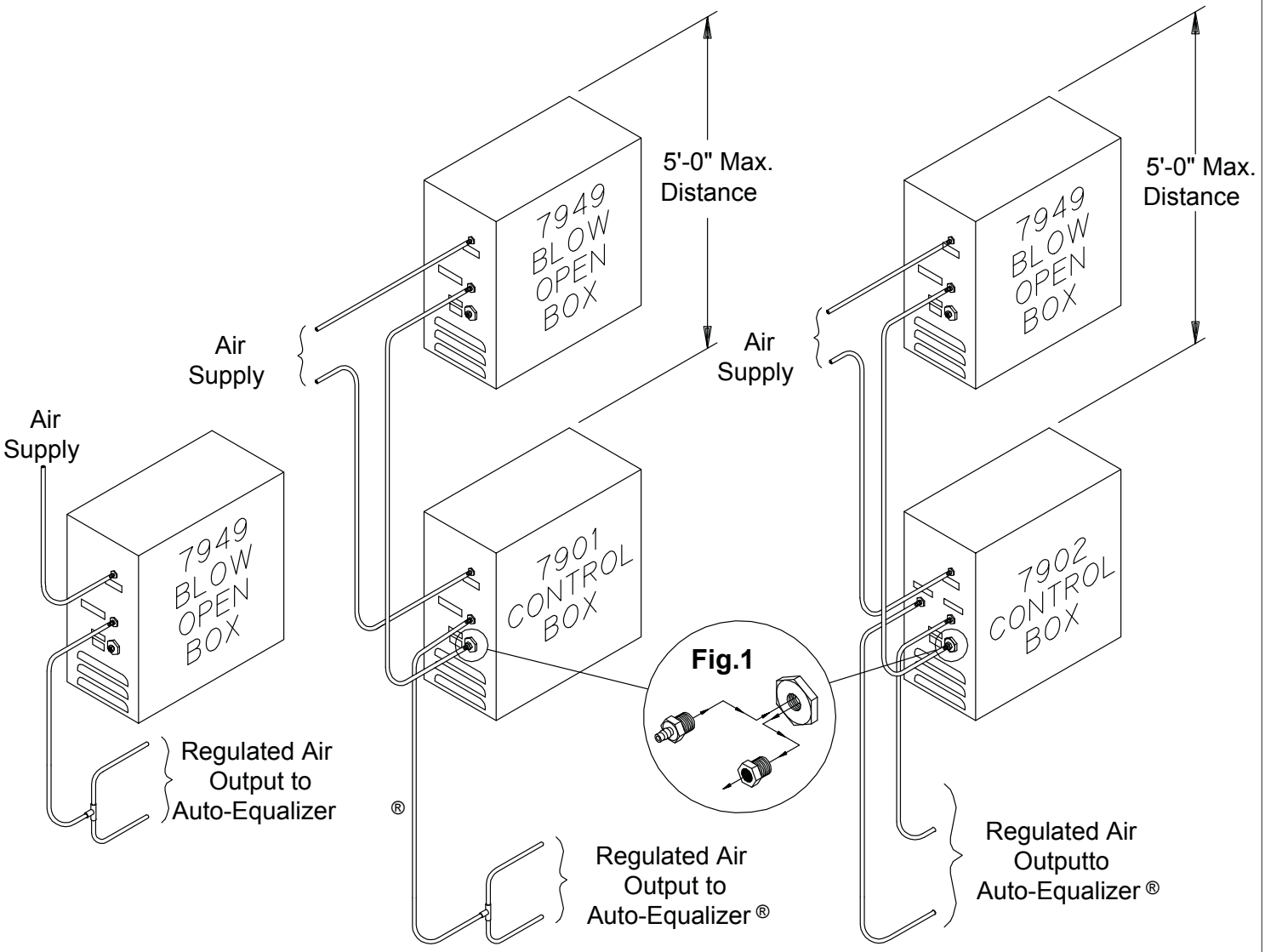


Electrical Information:
Input:120VAC .12 Amps
Power Consumption:14.4 Watts

* Optional Wiring:
Connect 120VAC Input with Fire Alarm Auxiliary Contacts to Terminal Strip to Open Door(s)

1a	EACH TIME THE BOWL IS CLEANED OR FILTER ELEMENT IS REPLACED: 1. Depressurize unit 2. Inspect seals and replace cracked, damaged or deteriorated seals with original manufacturers approved seals only.
1b	FILTER ELEMNT - Clean periodically by removing filter, tapping on a hard surface & blowing off with pressurized air.
1c	AUTOMATIC DRAIN - If drain fails to keep bowl sufficiently free of water, use a small screwdriver to push the piston up, allowing bowl to drain.
1d	Be sure bowl is securely reinstalled before putting the unit back into service.
1e	Replacement filters can be ordered from LCN.

Typical Airline Hook-up Application



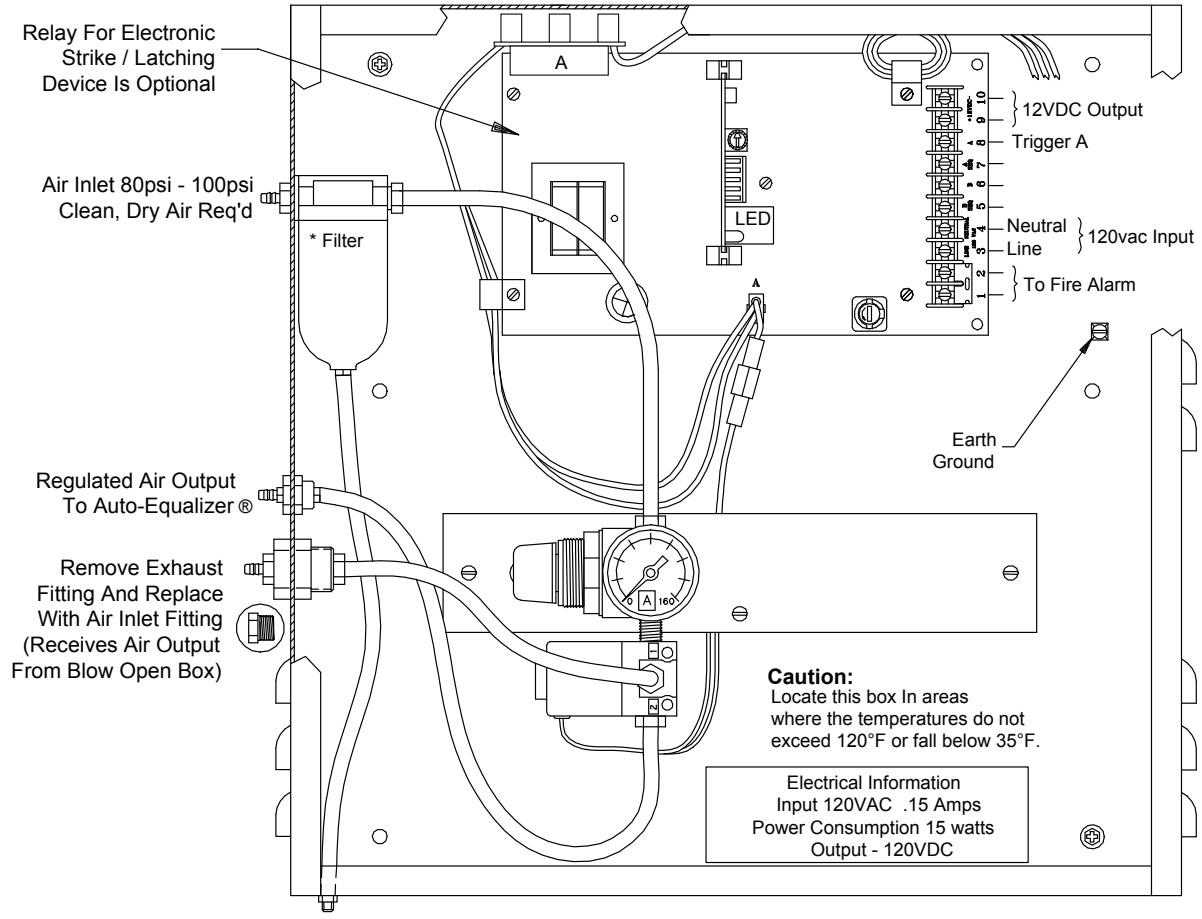
1a Connect 1/8” I.D. tubing from air source (providing 80psi to 100psi of clean, dry air) to air inlet fittings located on the side of both the control box & blow-open box.

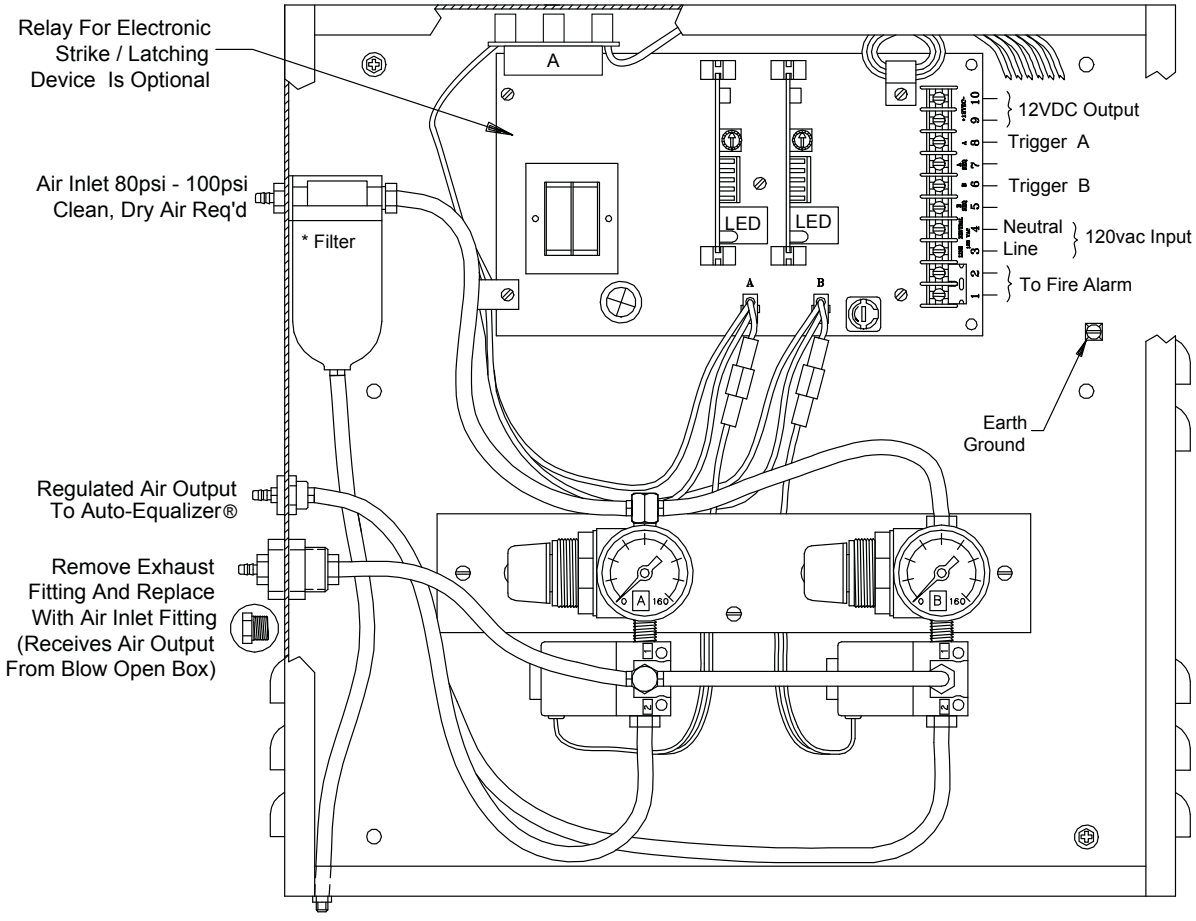
1b Removed exhaust muffler from 7901/ ES 7901 or 7902/ ES 7902 control box and install auxiliary air inlet fitting from hardware package shipped with blow-open box. See Fig. 1.

ⓘ **NOTE: when blow-open box is being used independently, connect 1/8” I.D. tubing from air outlet of blow-open box directly to Auto-Equalizer®.**

1c Connect 1/8” I.D. tubing from “exhaust” fitting on side of control box to outlet “A” fitting on the blow-open box.

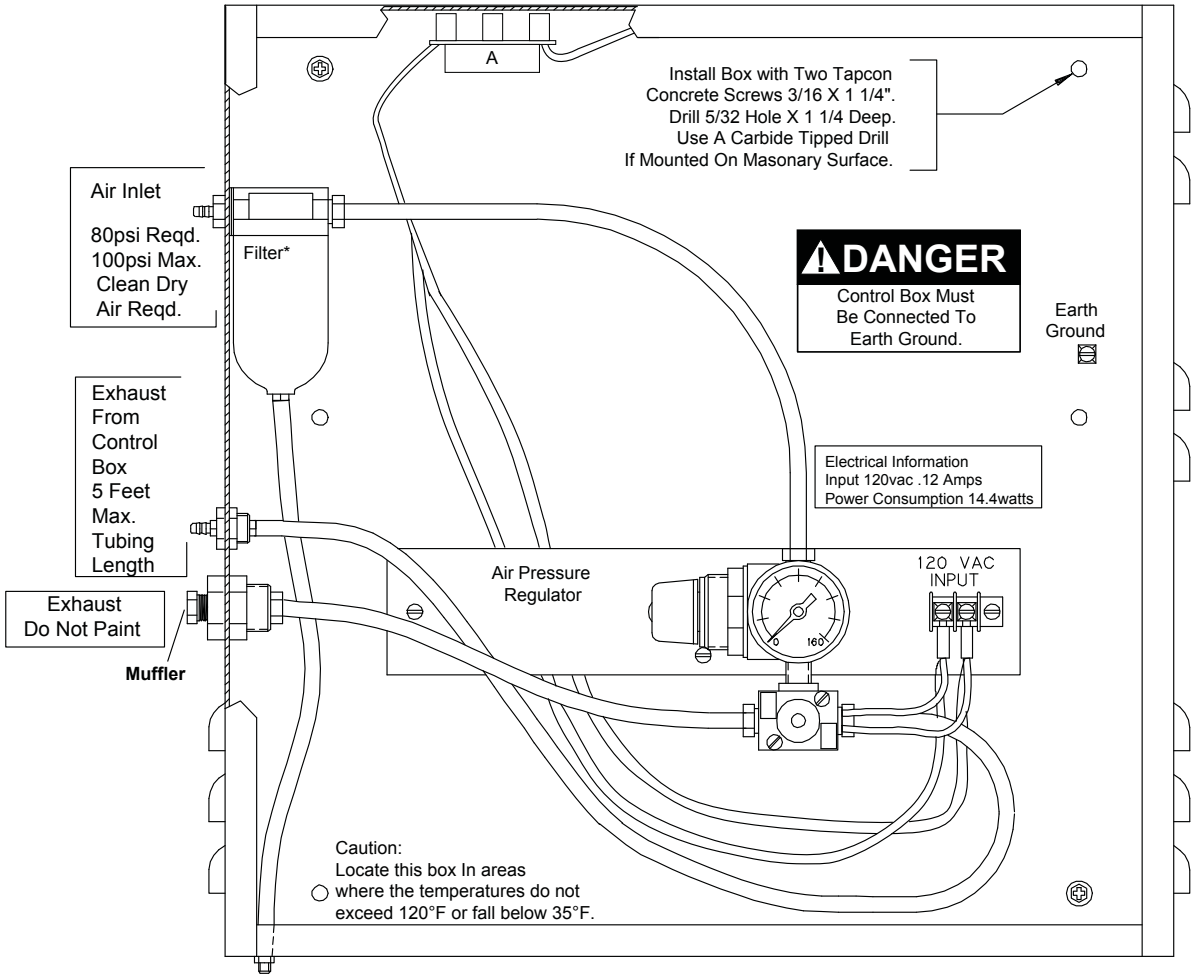
1d Connect 1/8” I.D. tubing from outlet fitting “A” and/or fitting “B” of the control box to corresponding Auto-Equalizer® unit.


Relay For Electronic Strike / Latching Device Is Optional
Air Inlet 80psi - 100psi Clean, Dry Air Req'd
* Filter
Regulated Air Output To Auto-Equalizer®
Remove Exhaust Fitting And Replace With Air Inlet Fitting (Receives Air Output From Blow Open Box)
A
LED
12VDC Output
Trigger A
Neutral
Line
120vac Input
To Fire Alarm
Earth Ground
Caution:
Locate this box In areas where the temperatures do not exceed 120°F or fall below 35°F.
Electrical Information
Input 120VAC .15 Amps
Power Consumption 15 watts
Output - 120VDC


Relay For Electronic Strike / Latching Device Is Optional
Air Inlet 80psi - 100psi Clean, Dry Air Req'd
* Filter
Regulated Air Output To Auto-Equalizer®
Remove Exhaust Fitting And Replace With Air Inlet Fitting (Receives Air Output From Blow Open Box)
A
B
LED
LED
12VDC Output
Trigger A
Trigger B
Neutral
Line
120vac Input
To Fire Alarm
Earth Ground

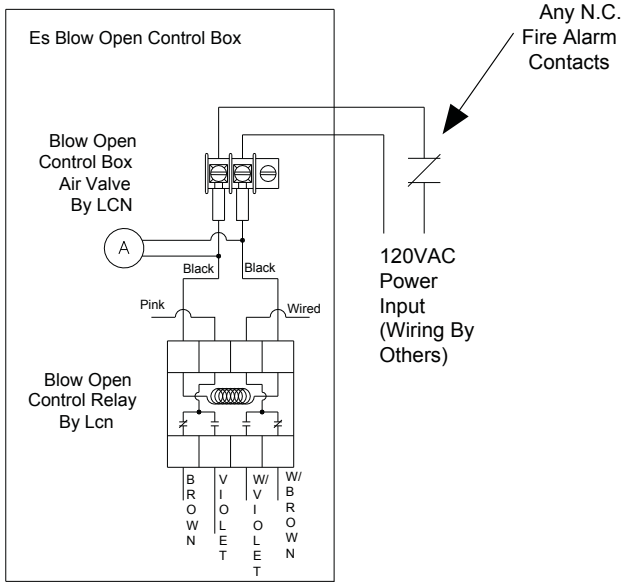
7949ES Blow Open Box

Refer to Instruction Sheet For ED wiring.
(6 Wires Used For ES Option Not Shown For Clarity)



*Filter Maintenance

1. Each Time Bowl Is Cleaned Or The Filter Element Replaced:
   A. Depressurize Unit.
   B. Inspect Seals And Replace Crazed, Cracked, Damaged Or Deteriorated Seals With Original Manufacturer's Approved Seals Only.
2. Filter Element -clean Periodically By Removing Filter, Tapping On Hard Surface And Blowing Off With Are Blow Gun.when Cleaning Or Replacing Element, Blow Off Louvers With Air Blow Gun.
3. Automatic Drain Models- If Automatic Drain Fails To Keep Bowl Sufficiently Drained Of Water, Carefully Unthread The Drain Fitting From The Filter Bowl And Use A Paper Clip To Push The Piston Up, Allowing Sediment Or Water To Drain From Bowl.
4. Before Placing Unit In Service Be Sure That The Bowl And Drain Line Are Securely Reinstalled.
5. Replace Filter With LCN Part No. 929.

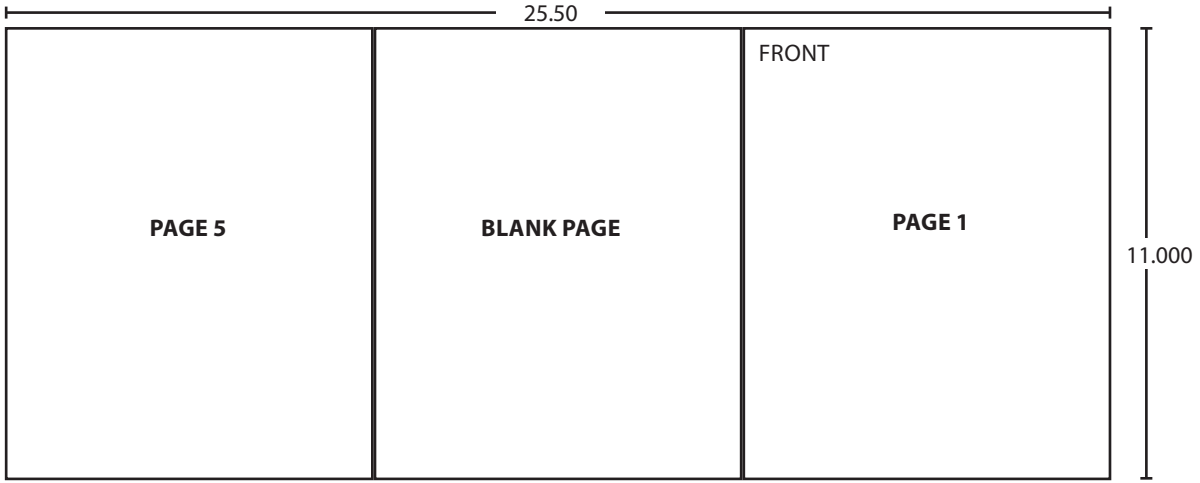


Function: Doors Are Manual Opening In Standby, When Fire Alarm Panel Opens Auxiliary Contacts. Doors Open By Air Pressure And Remain Open Until Auxiliary Contacts Close. Coordination With Panic Hardware By Others. This Is Not A UL Listed Application.

Connect Striketo N.O. Contacts On Relay. Contacts Closed With Power Applied. When Power Is Out Or Alarm Condition. Contacts Open And Strikes Release.

Note: Optional Exhaust Fans Or Blowers (By Others)

5 Second Delay (By Others) Required Before Fans Or Blowers Start Consult Factory For Other Applications



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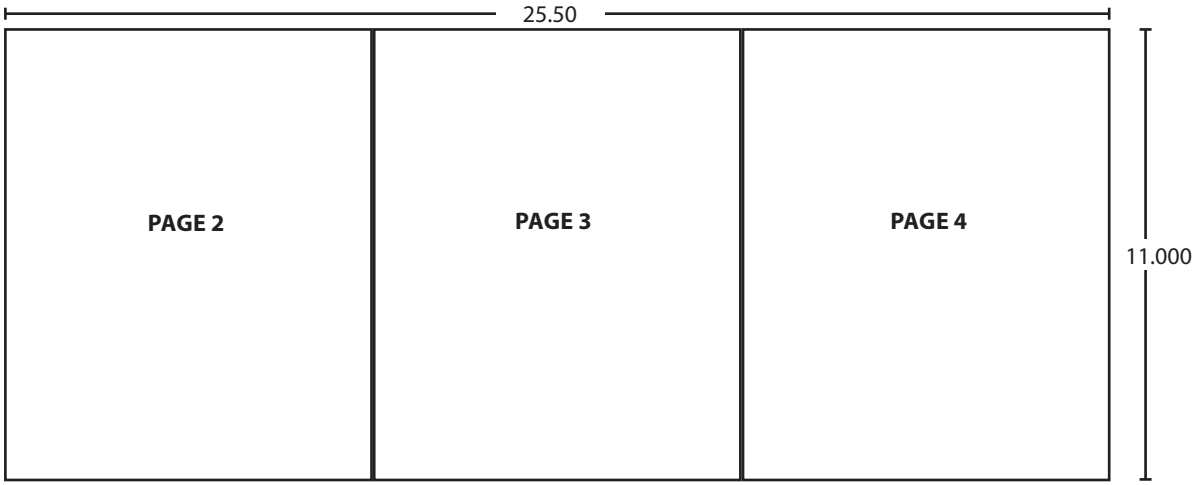

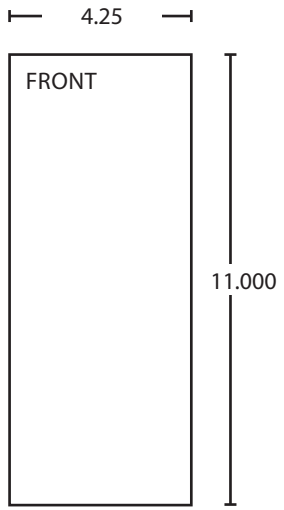

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Additional Notes:
1. None

Revision History					
D	E	F	G	H	J
043228					

Revision Description:
D > Revised artwork

Material
White Paper

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043228	01-01-14

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Title
7949/ES7949 Series Blow-Open Control Box Instruction Sheet

Creation Date	Number	Revision
01-02-13	19282	D

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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19371

Optional Bumper

LCN®

Installation Instructions

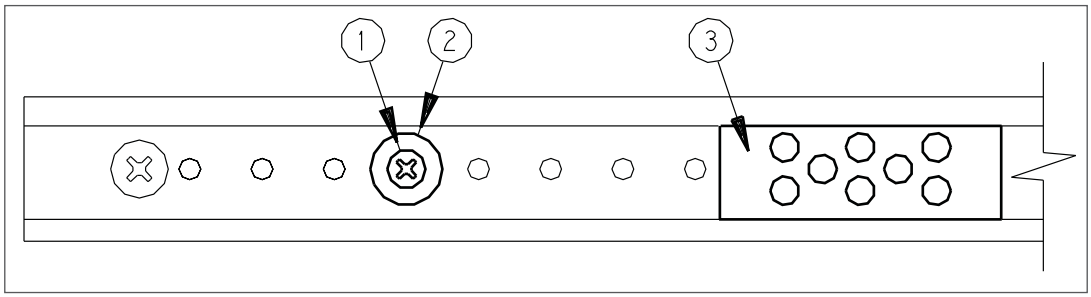
To locate required sete of holes for desired degree of door opening. See installation instruction/template.

⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions, call LCN at 877 - 671 - 7011

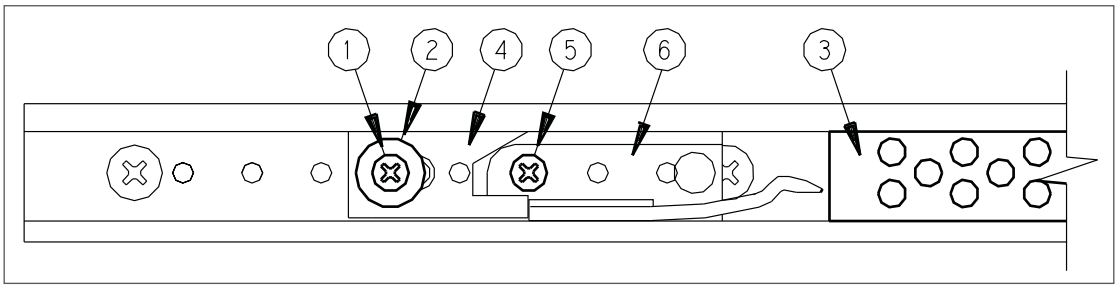
1 Relocation of Bumper, if Required

a. Slide bumper (3) away from post (2).
b. Remove screw (1) and post (2).
c. Reinstall in new hole location and tighten screw securely.
d. Slide bumper (3) against post (2).



2 Location Adjustment of Hold Open Device with Bumper Option

a. Slide bumper (3) away from post (2).
b. Remove screw (1), post (2), adjusting cam (4) and screw (5).
c. Slide hold open clip (6) to required hole location.
d. Reinstall screw (5) and tighten securely.
e. Replace cam (4), post (2), and screw (1) and tighten securely.
f. Slide bumper (3) against post (2).



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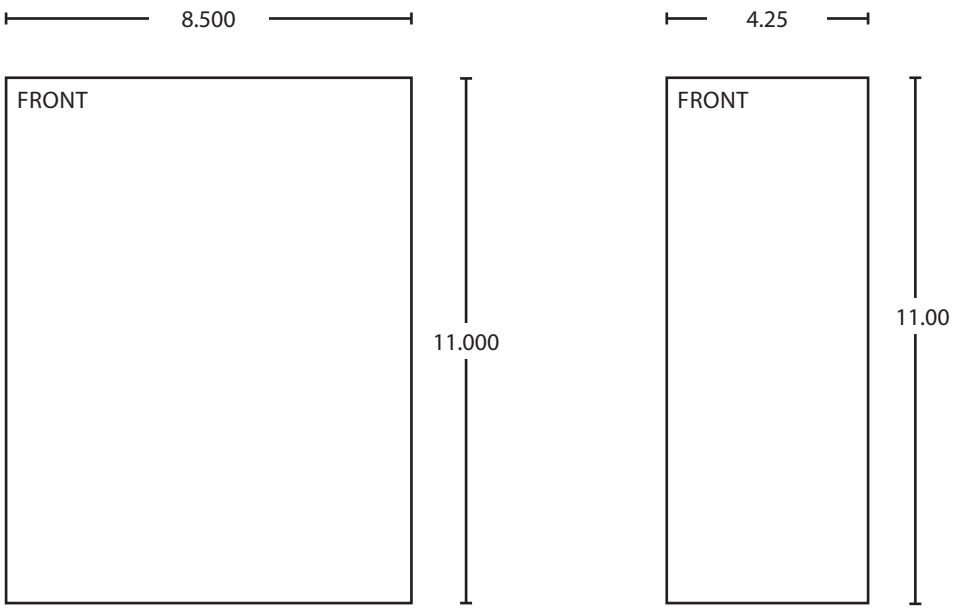
19371 Rev. 01/14-e



BEGINNING SHEET

FOLDED SHEET

Additional Notes:
1. None

Revision History					
E	F	G	H	J	K
043228					

Material
White Paper

Notes
1. printed one sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
E > Revised artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043228	01-01-14

Title
Optional Bumper Installation Instruction Sheet

Creation Date	Number	Revision
05-10-10	19371	E

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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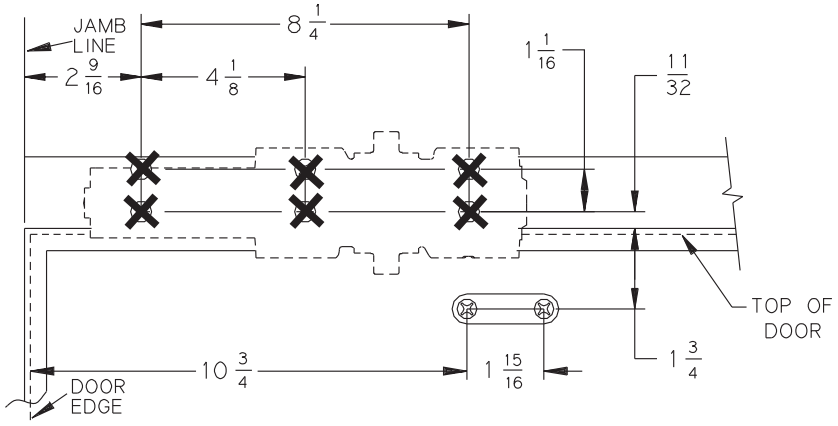
28466

4040XP/4041DA

Drop Plate

Installation Instructions

4040XP & 4041DA PUSH SIDE (TOP JAMB) DROP PLATE PERMITS 120° MAXIMUM OPENING

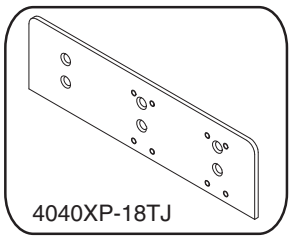


LEFT HAND DOOR SHOWN, RIGHT HAND OPPOSITE.

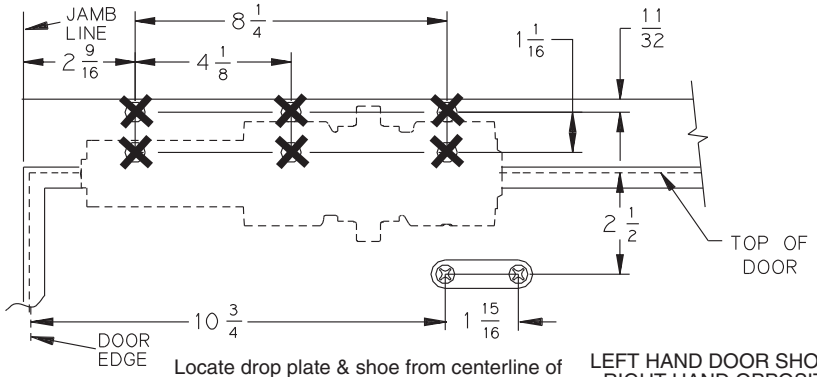
MAXIMUM REVEAL OF 2 9/16.
FOR REVEALS 2 5/8 - 4 13/16 SPECIFY LONG ROD.
FOR REVEALS 8" SPECIFY EXTRA LONG ROD.

Locate drop plate & shoe from centerline of pivot or swing clear hinge pin when used.

PUSH SIDE MOUNT ON: 4040XP-18TJ DROP PLATE



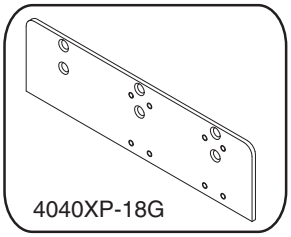
4040XP & 4041DA PUSH SIDE (TOP JAMB) DROP PLATE PERMITS 120° MAXIMUM OPENING FOR FLUSH CEILING



Locate drop plate & shoe from centerline of pivot or swing clear hinge pin when used.

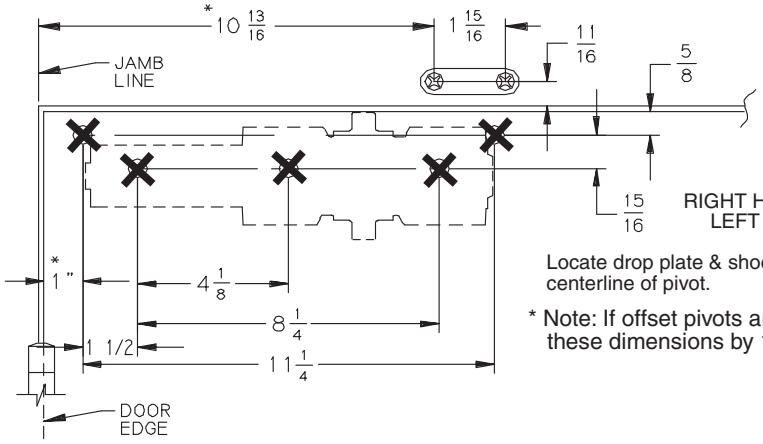
LEFT HAND DOOR SHOWN, RIGHT HAND OPPOSITE.

FLUSH CEILING PUSH SIDE MOUNT ON: 4040XP-18G DROP PLATE



MAXIMUM REVEAL OF 2 9/16.
FOR REVEALS 2 5/8 - 4 13/16 SPECIFY LONG ROD.
FOR REVEALS 8" SPECIFY EXTRA LONG ROD.

4040XP & 4041DA PULL SIDE (DOOR JAMB) DROP PLATE PERMITS 120° MAXIMUM OPENING

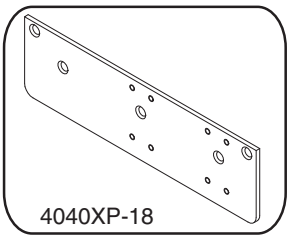


RIGHT HAND DOOR SHOWN, LEFT HAND OPPOSITE.

Locate drop plate & shoe from centerline of pivot.

* Note: If offset pivots are used. Increase these dimensions by 1/8".

PULL SIDE MOUNT ON: 4040XP-18 DROP PLATE

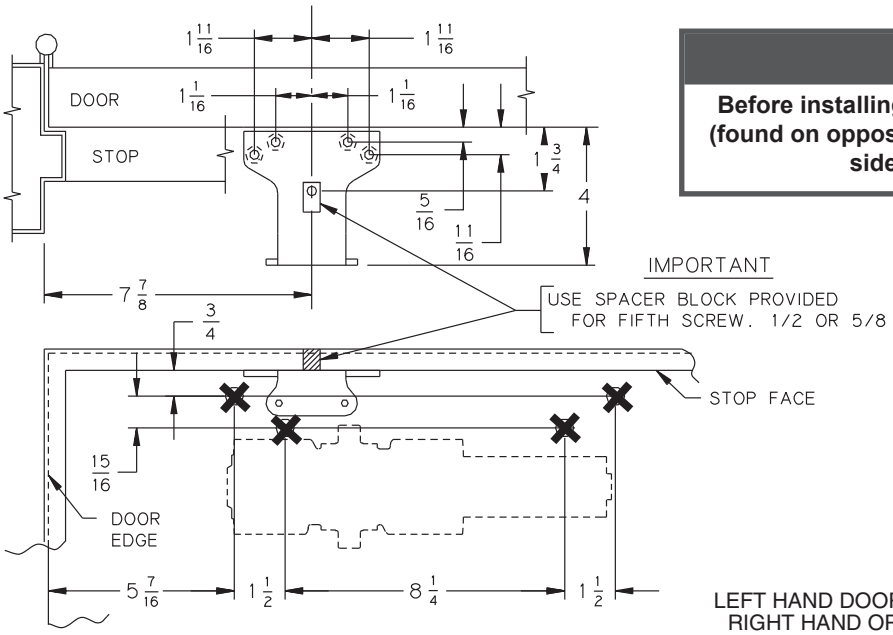


INCH	11/32	5/8	11/16	15/16	1	1 1/16	1 1/2	1 3/4
M.M.	9	16	17	24	25	27	38	44

INCH	1 15/16	2 1/2	2 9/16	4 1/8	8 1/4	10 3/4	10 13/16	11 1/4
M.M.	49	64	65	105	210	273	275	286

4040XP PA PUSH SIDE (DOOR MOUNT) DROP PLATE PERMITS 180° MAX. OPENING, BUTT SIZE 5x5 MAX.

PUSH SIDE MOUNT ON: 4040XP-18PA DROP PLATE



IMPORTANT

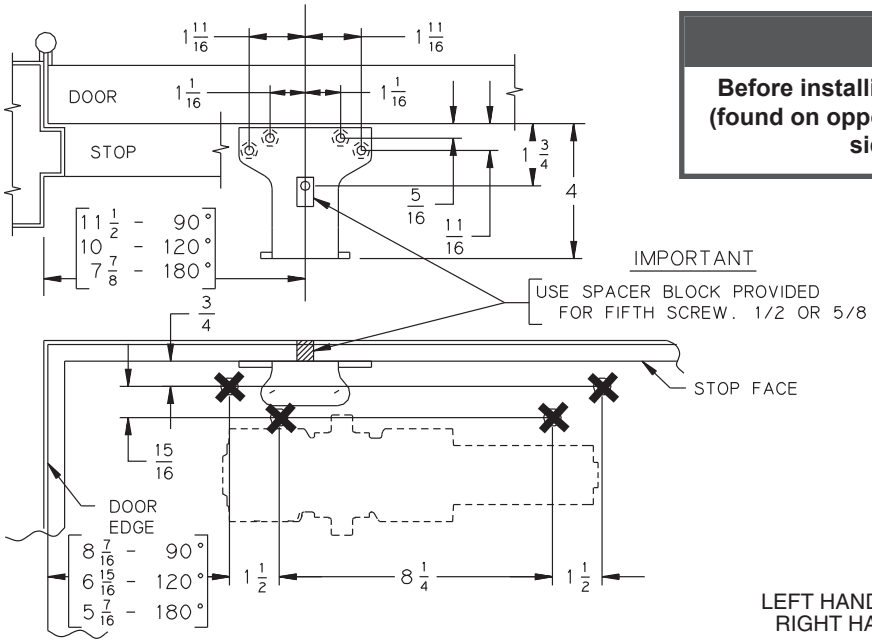
Before installing closer, turn backcheck selector valve (found on opposite side of closer from regulating screw side) all the way in (clockwise).

Locate drop plate & shoe from centerline of pivot or swing clear hinge pin when used.

LEFT HAND DOOR SHOWN, RIGHT HAND OPPOSITE.

4041PA DELAY PUSH SIDE (DOOR MOUNT) DROP PLATE

PUSH SIDE MOUNT ON: 4040XP-18PA DROP PLATE

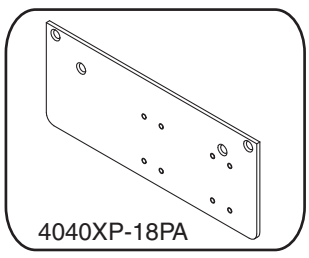


IMPORTANT

Before installing closer, turn backcheck selector valve (found on opposite side of closer from regulating screw side) all the way in (clockwise).

Locate drop plate & shoe from centerline of pivot or swing clear hinge pin when used.

LEFT HAND DOOR SHOWN, RIGHT HAND OPPOSITE.



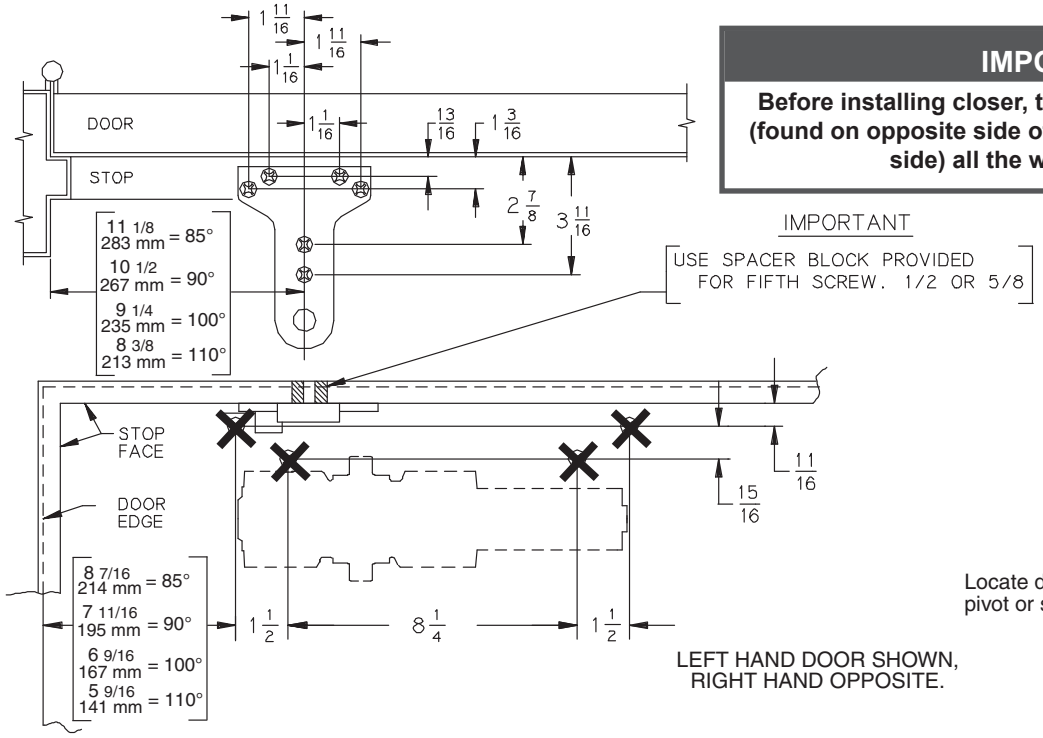
4040XP-18PA

INCH	5/16	11/16	3/4	15/16	1 1/16	1 1/2	1 11/16	1 3/4
M.M.	8	17	19	24	27	38	43	44

INCH	4	5 7/16	6 15/16	7 7/8	8 1/4	8 7/16	10	11 1/2
M.M.	102	138	176	200	210	214	254	292

4040XP CUSH PUSH SIDE (DOOR MOUNT) DROP PLATE PERMITS 110° MAX. OPENING, MIN. TOP RAIL 2 1/2".

PUSH SIDE MOUNT ON: 4040XP-18PA DROP PLATE



IMPORTANT

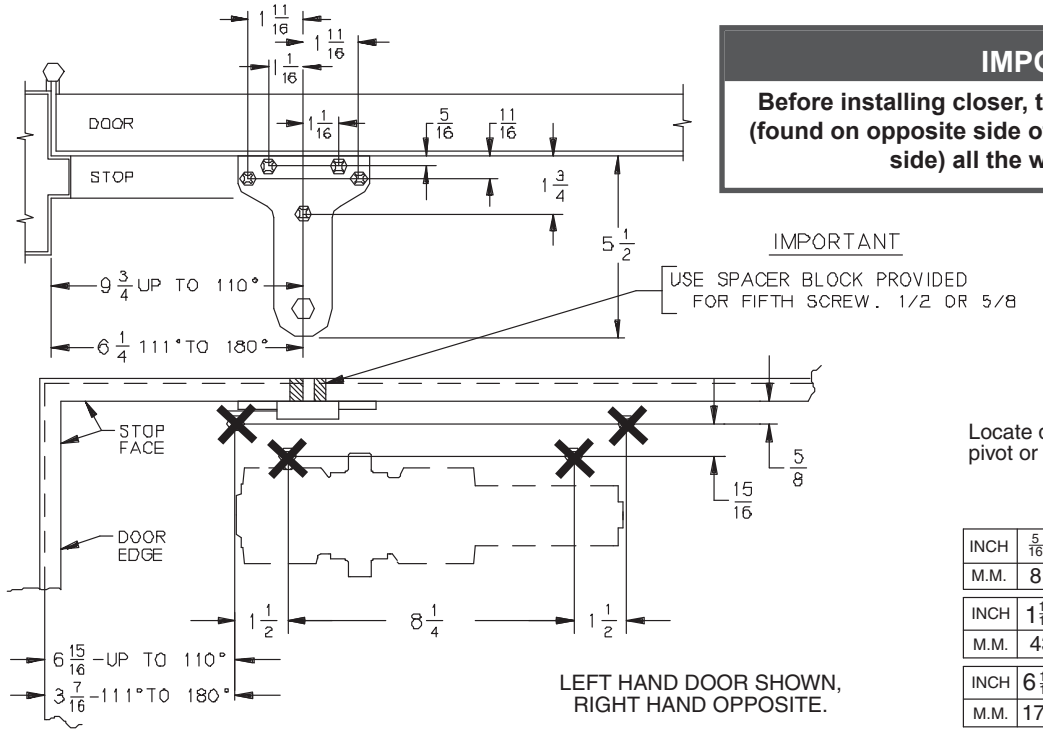
Before installing closer, turn backcheck selector valve (found on opposite side of closer from regulating screw side) all the way in (clockwise).

Locate drop plate & shoe from centerline of pivot or swing clear hinge pin when used.

LEFT HAND DOOR SHOWN, RIGHT HAND OPPOSITE.

4040XP EDA PUSH SIDE (DOOR MOUNT) DROP PLATE PERMITS 180° MAX. OPENING, MIN. TOP RAIL 2 1/2".

PUSH SIDE MOUNT ON: 4040XP-18PA DROP PLATE



IMPORTANT

Before installing closer, turn backcheck selector valve (found on opposite side of closer from regulating screw side) all the way in (clockwise).

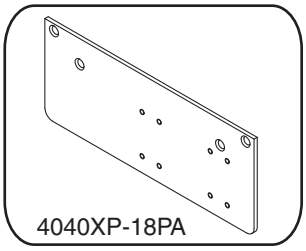
Locate drop plate & shoe from centerline of pivot or swing clear hinge pin when used.

LEFT HAND DOOR SHOWN, RIGHT HAND OPPOSITE.

INCH	5/16	1/2	5/8	11/16	13/16	15/16	1 1/16	1 3/16	1 1/2
M.M.	8	13	16	17	21	24	27	30	38

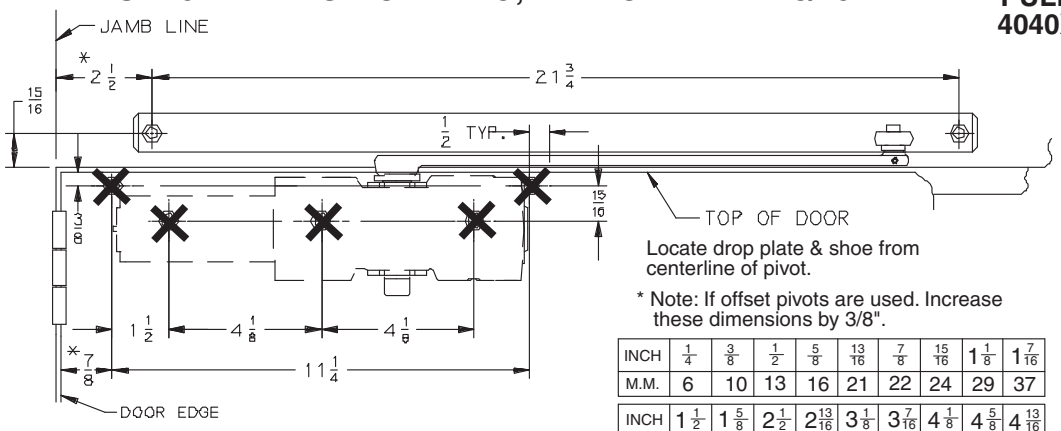
INCH	1 11/16	1 3/4	2 7/8	3 7/16	3 11/16	5 1/2	5 7/8	6 1/4	6 11/16
M.M.	43	44	73	87	94	140	149	159	170

INCH	6 15/16	8 1/16	8 1/4	8 9/16	8 5/8	9 1/2	9 3/4	10 13/16	11 1/4
M.M.	176	205	210	217	219	241	248	275	286



4040XP-18PA

4040XPT PULL SIDE (DOOR MOUNT) DROP PLATE
PERMITS 120° MAXIMUM OPENING, MIN. TOP RAIL 1 13/16"



Locate drop plate & shoe from centerline of pivot.

* Note: If offset pivots are used. Increase these dimensions by 3/8".

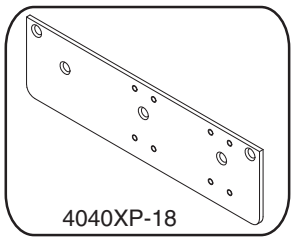
INCH	1/4	3/8	1/2	5/8	13/16	7/8	15/16	1 1/8	1 7/16
M.M.	6	10	13	16	21	22	24	29	37

INCH	1 1/2	1 5/8	2 1/2	2 13/16	3 1/8	3 7/16	4 1/8	4 5/8	4 13/16
M.M.	38	41	64	71	79	87	105	117	122

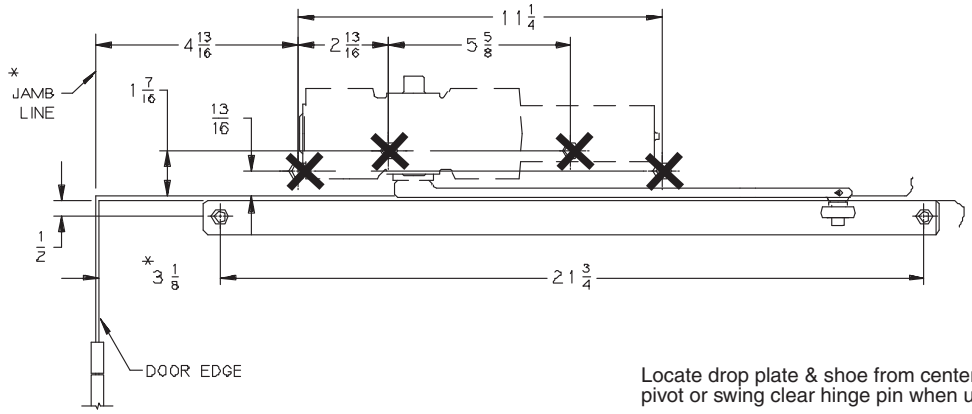
INCH	5 3/8	5 5/8	9 3/4	11 1/4	21 3/4
M.M.	137	143	248	286	553

RIGHT HAND DOOR SHOWN, LEFT HAND OPPOSITE.

PULL SIDE MOUNT ON: 4040XPT-18 DROP PLATE



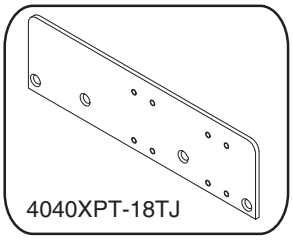
4040XPT PULL SIDE (TOP JAMB) DROP PLATE
PERMITS 180° MAXIMUM OPENING, MIN. FACE OF FRAME 1 3/4"



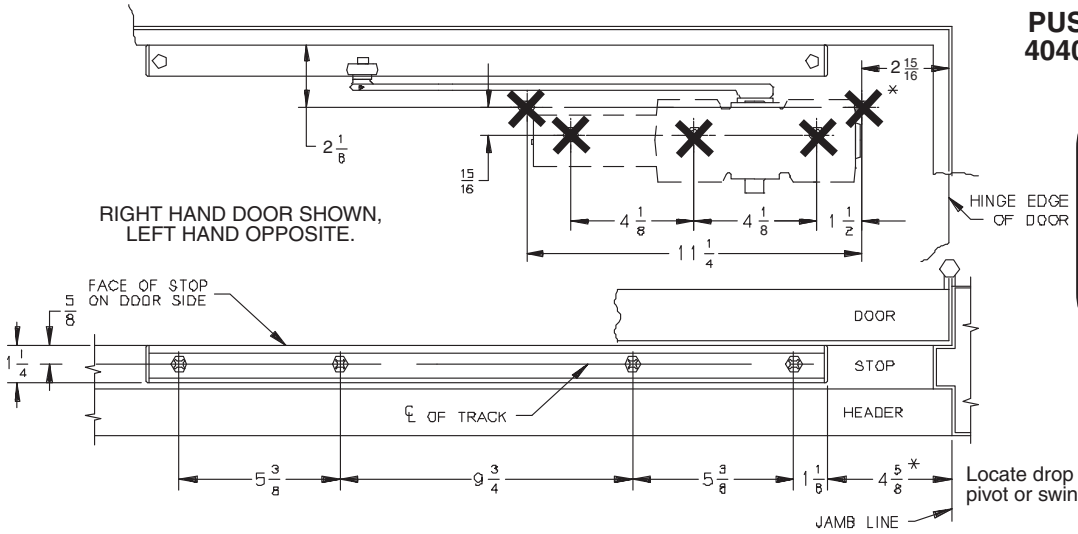
Locate drop plate & shoe from centerline of pivot or swing clear hinge pin when used.

RIGHT HAND DOOR SHOWN, LEFT HAND OPPOSITE.

PUSH SIDE MOUNT ON: 4040XPT-18TJ DROP PLATE



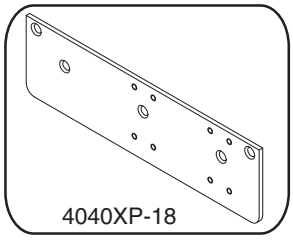
4040XPT PUSH SIDE (DOOR MOUNT) DROP PLATE
PERMITS 120° MAXIMUM OPENING, MIN. TOP RAIL 2 1/4"



RIGHT HAND DOOR SHOWN, LEFT HAND OPPOSITE.

Locate drop plate & shoe from centerline of pivot or swing clear hinge pin when used.

PUSH SIDE MOUNT ON: 4040XPT-18 DROP PLATE



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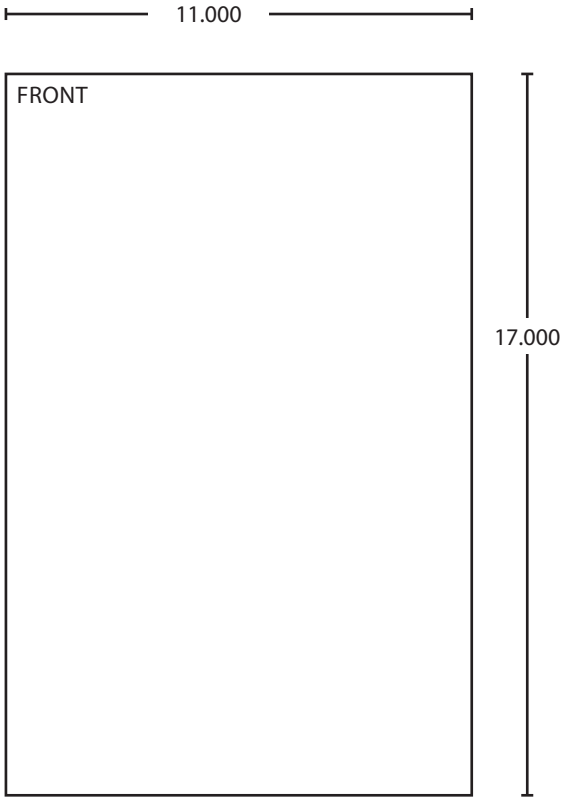
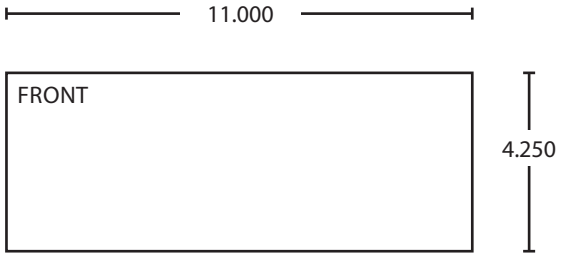
28466 Rev. 09/17-k



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
J	K	L	M	N	P
042801	073413				

Material
White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
J > Revised artwork.

Edited By	Approved By	EC Number	Release Date
D. Toppins	B. Grover	073413	09-01-17

Title
4040XP/4041DA Drop Plates Instruction Sheet

Creation Date	Number	Revision
04-27-10	28466	K

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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28482

4210 Series

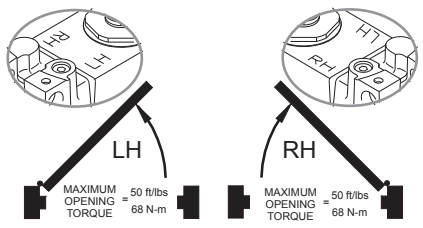
LCN®

100°, 140°, 180° Template, Push Side

Installation Instructions

1 Locate proper template, drill and tap pilot holes for 1/4 x 20 Machine screws.

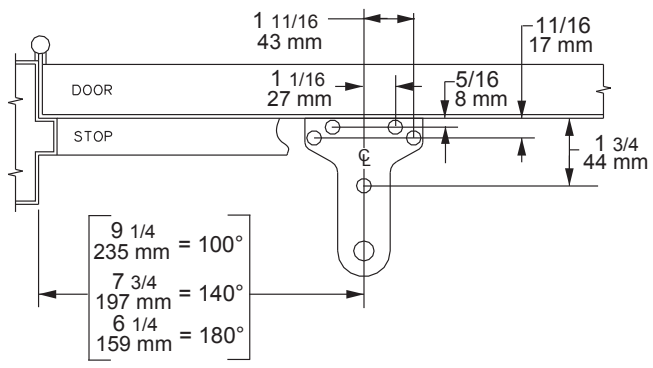
Verify hand of closer matches hand of door.



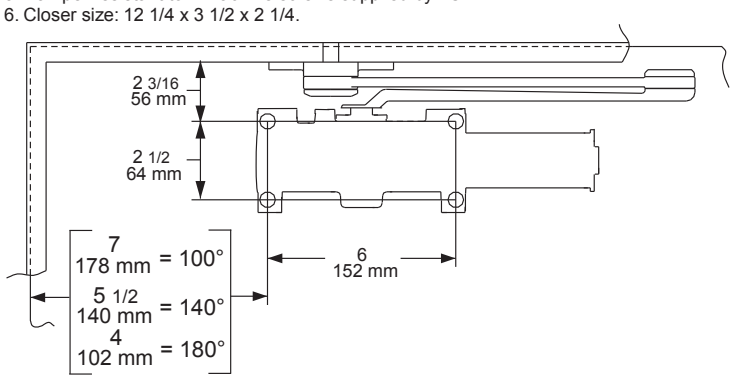
LEFT HAND SHOWN, RIGHT HAND OPPOSITE

MAIN GAUCHE ILLUSTRÉE,
MAIN DROITE CONTRAIRE

PUERTA DE MANO IZQUIERDA ILUSTRAR,
MANO DERECHA LOAPUESTO



Notes: 1. Locate closer & track from centerline of pivot or swing clear hinge pin if used.
2. Reinforcing per ANSI/SDI-100 recommended for hollow doors and frames.
3. Minimum distance between 2 doors on the same jamb is 5 1/2".
4. For 180° opening the maximum allowable butt size is 5" x 5".
5. Tamper resistant torx machine screws supplied by LCN.
6. Closer size: 12 1/4 x 3 1/2 x 2 1/4.



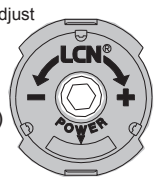
2 Determine door width, adjust spring power to match chart.

DOOR WIDTH		LCN FAST ™Power Adjust
INTERIOR	EXTERIOR	SET TO:
♿	——	1
34"	*8.5 lb-f	2
38"	30"	3
48"	36"	4
54"	42"	5

* Opening force on 36" door.

LCN® FAST ™Power Adjust for Spring Power Adjustment

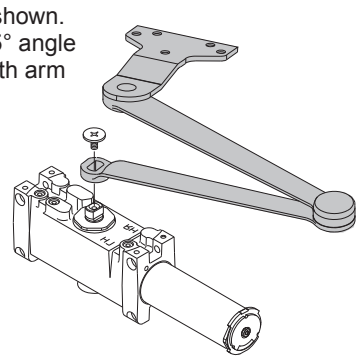
(Used only on non-sized closers)



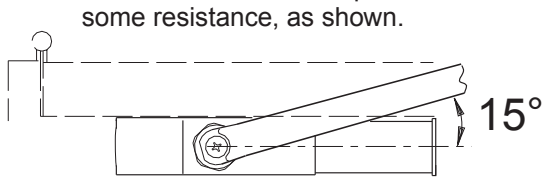
⚠CAUTION

IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 800 - 526 - 2400

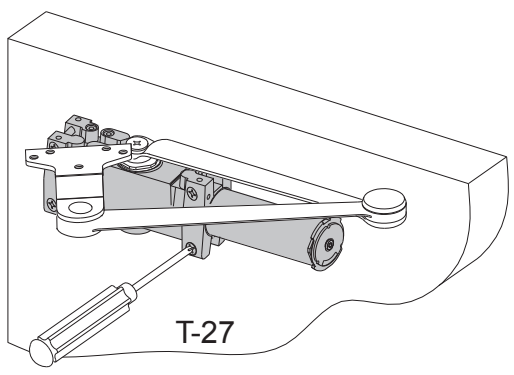
3 Attach arm to closer as shown. Arm will be at about a 15° angle to closer body. Fasten with arm shaft screw.



NOTE: Closer arm will provide some resistance, as shown.

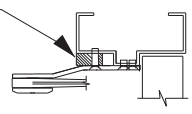


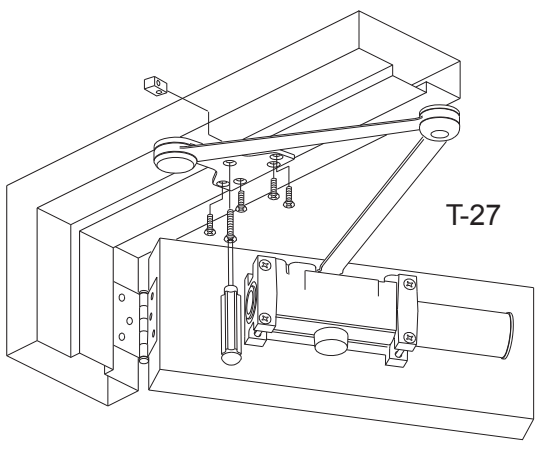
4 Secure closer to door with fasteners provided.



5 Open door to approx. 45°, attach arm to frame with fasteners provided.

Fifth hole spacer
Espaceur du cinquième trou
Espaciador para el quinto agujero





6 If necessary, adjust closer.

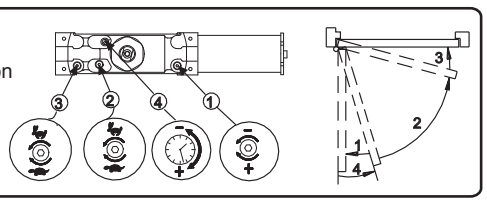
⚠CAUTION

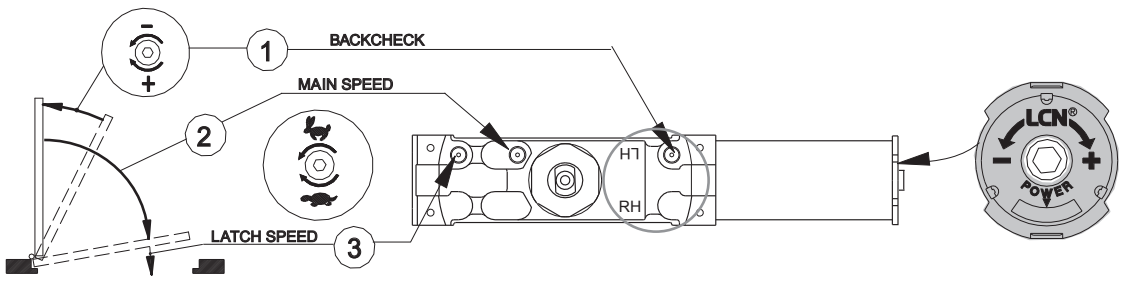
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER, PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

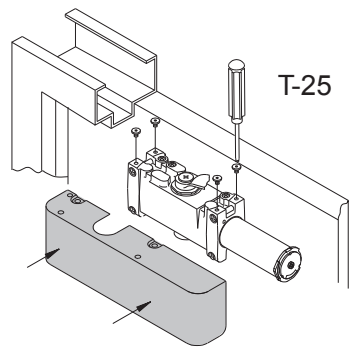
I

Optional Delay Action
① - Backcheck
② - Main Speed
③ - Latch Speed
④ - Delay Speed





7 Attach cover with fasteners provided.



Patents Pending include:
Rapidor ™Installation System
PROPRIETARY, LCN Division, Schlage Lock Company

4210 Instrucciones de seguridad para plantilla 100°-140°-180° montaje del lado de empuje

1 Localice la plantilla apropiada, taladra y rosca agujeros pilotos para tornillos de máquina de 1/4 x 20.

Vérifiez si la main du ferme-porte correspond à la main de la porte.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Réglage de force LCN®FAST™ pour régler la force du ressort

3 Coloca el brazo al cerrador tal como se muestra. El brazo estará a un ángulo de 15° del cuerpo del cerrador. Sujeta con el tornillo del eje del brazo.

NOTE: Le bras offrira une légère résistance, comme sur l'illustration.

4 Fixez le ferme-porte sur la porte avec les attaches fournies.

5 Cuvrez la porte à environ 45°, fixez le bras au cadre à l'aide des attaches fournies.

6 Au besoin, réglez
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement

I Action retardée optionnelle
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement
④ - vitesse de retenue

7 Fixez le boîtier avec les attaches fournies.

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

⚠DANGER

Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages.Veuillez suivre toutes les instructions avec soin.Pour plus de renseignements, composez le 877 - 671 - 7011

⚠DANGER

UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4210 Instrucciones de sécurité et gabarit pour une installation sur le côté à pousser de 100°-140°-180°

1 Repérez le gabarit approprié, percez et taraudez des trous de guidage pour des vis à métal de 1/4 x 20.

Verifique que la mano del cerrador corresponda a la mano de la puerta.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

LCN®FAST ™cuadrante de ajuste para ajustar la potencia del resorte

3 Fixez le bras sur le ferme-porte comme sur l'illustration. Le bras sera à un angle d'environ 15° du cylindre du ferme-porte. Fixez avec la vis de raccord.

NOTA: El brazo del cerrador ofrecerá cierta resistencia, tal como se muestra.

4 Sujeta el cerrador a la puerta con los tornillos ya incluidos.

5 Abra la puerta hasta aprox. 45°, sujete el brazo al bastidor con los sujetadores ya incluidos.

6 Ajusta si se necesita
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

I Acción retardada opcional
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro
④ - velocidad de retardo

7 Coloca la tapa con los sujetadores ya incluidos.

NOTE: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

⚠ADVERTENCIA

UNA INSTALACIÓN O UN AJUSTE INCORRECTOS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIENTODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL 877 - 671 - 7011

⚠ADVERTENCIA

LA APERTURA DEMASIADO GRANDE DE LAS VÁLVULAS DE AJUSTE PUEDE OCASIONAR UN DERRAME, DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES.

Customer Service	Servicio al cliente	Service à la clientèle
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ALLEGION

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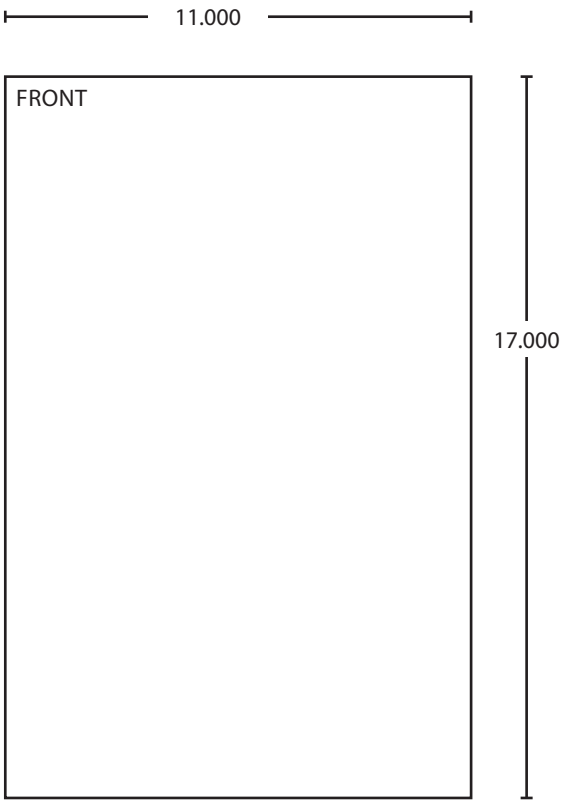
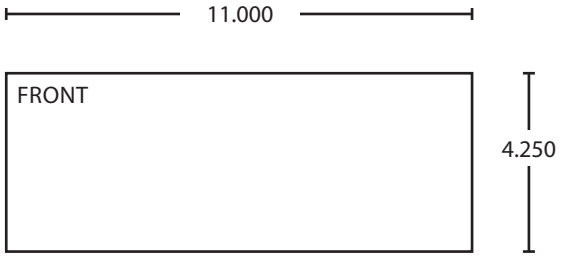


BEGINNING SHEET



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Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	N/A	N/A	043812		

Material
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Notes
1. printed one side
2. printed black and PMS 485 (red)
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
D > Revised artwork

Edited By	Approved By	EC Number	Release Date
R. Byun	M. Sasso	043812	01-01-14

Title
4210 Series Push Side Instruction Sheet

Creation Date	Number	Revision
04-27-10	28482	D

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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1-800-526-2400

FILTER SERVICE KIT 980 & 7980 SERIES CONTROL BOXES

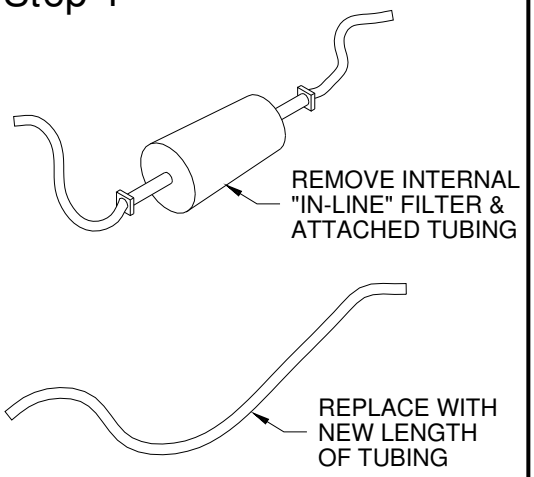
This kit replaces air filters found in original and early model LCN control boxes having the internal in-line filter (shown in Step 1), and in later model control boxes using an external filter (see Step 2).

Determine type of filter being replaced and follow the corresponding instructions below.

INTERNAL "IN-LINE" FILTER - Locate and remove filter & attached tubing inside control box, begin at Step 1.

EXTERNAL FILTER - Begin with Step 2, as shown below.

Step 1



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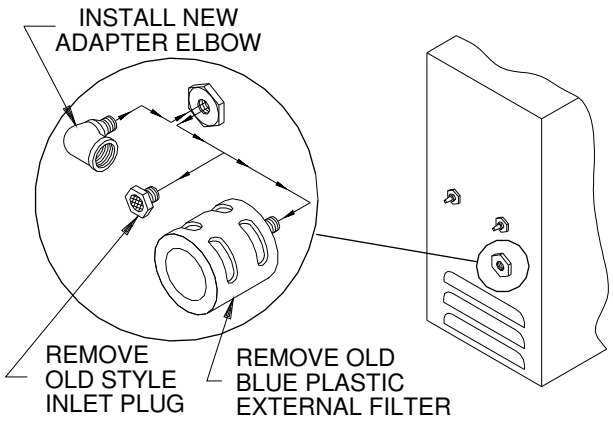
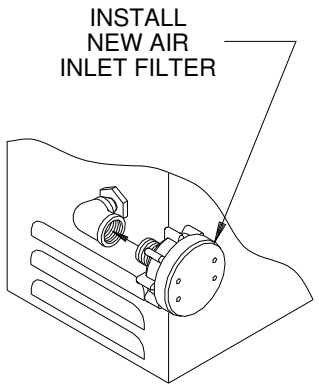


Step 3



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23760

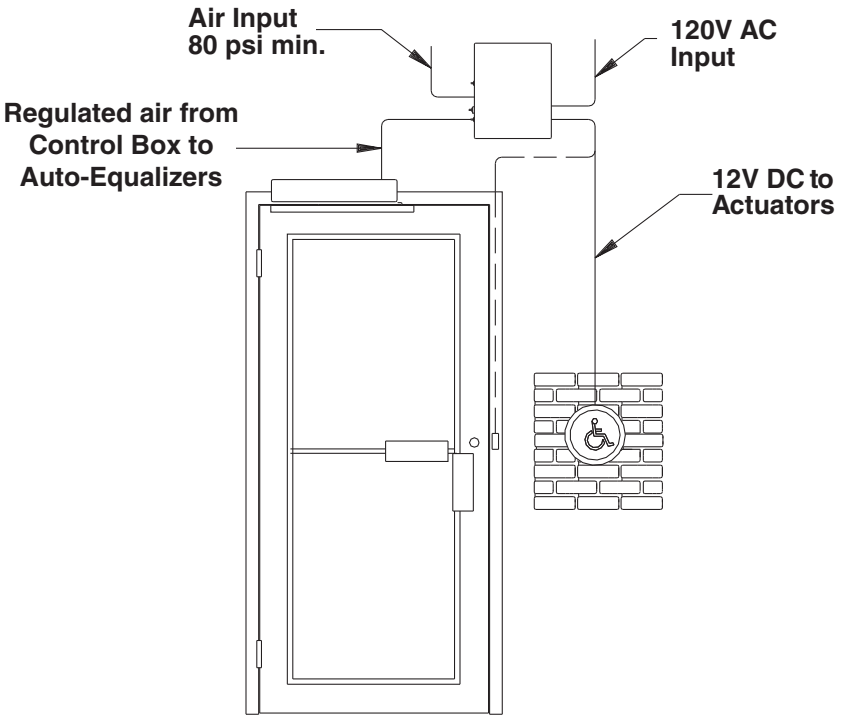
Models 7901/ES7901

Control Box

Installation Instructions

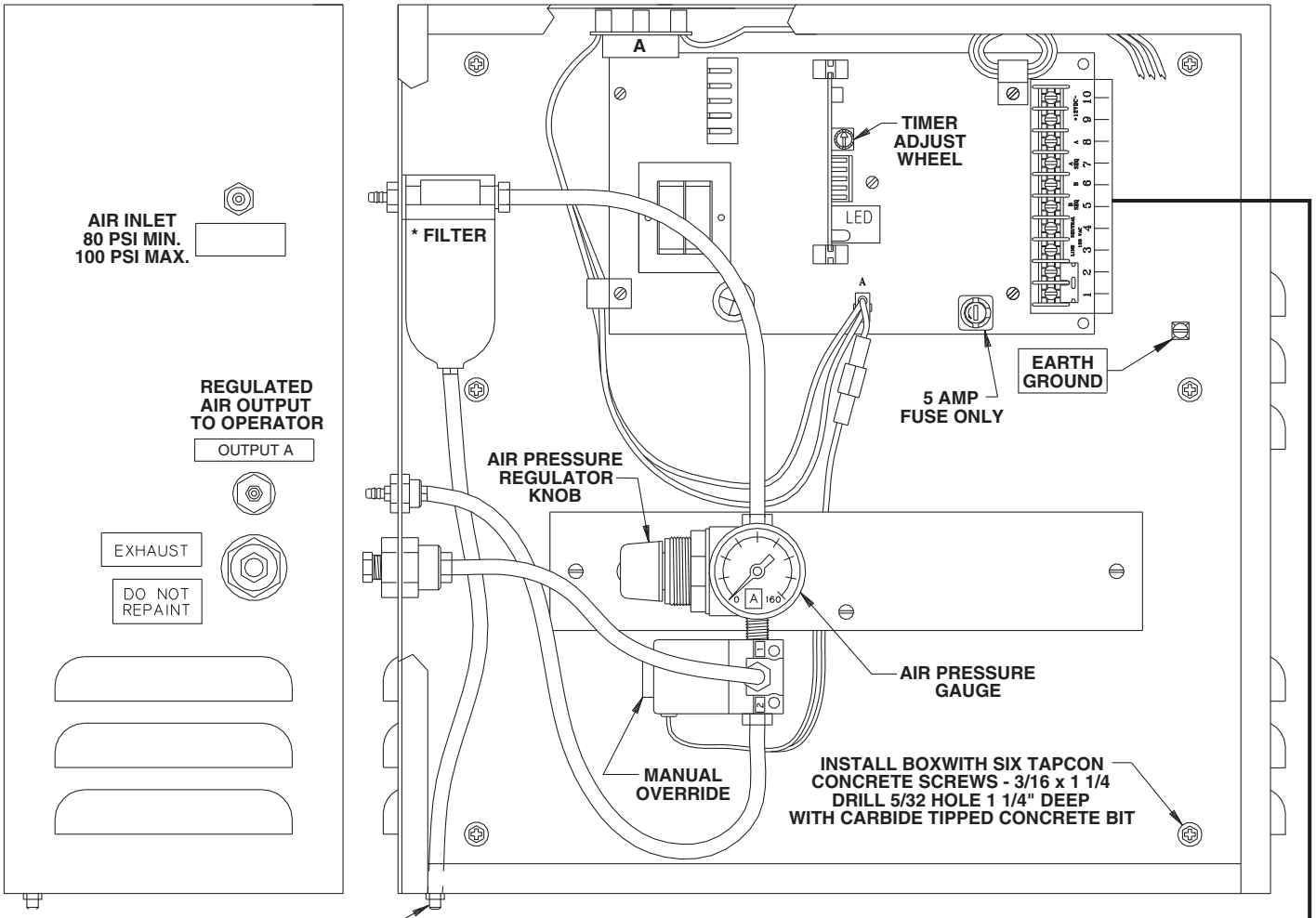
For closer information see closer installation instruction sheet.

Typical Electric & Air Supply Hook Up



Installation

1a	Locate box on interior of building within 100 tubing feet of the door to be controlled. **Box must be in a clean, dry, well ventilated place where temperatures do not exceed 120°F or fall below 35°F.**
1b	Mount box to a structurally sound surface using screws provided as shown on page 2 with air fittings on left side as shown. **Do not mount box upside down or on a horizontal plane.**
1c	Refer to instructions packed with actuators and connect leads to terminals 8, 9, and 10 as required.
1d	Connect 1/8 inch diameter air tubing from clean, dry air source to inlet on side of box. Connect 1/8 inch diameter air tubing from door control to output fitting “A” on side of the control box.
1e	Connect unpowered 120V AC input to terminals 3, 4, and ground screw. (Line side to terminal 3, neutral side to terminal 4 and ground wire to ground screw.) If door control is on a fire door, 120V AC input must be interrupted by the fire alarm panel when in alarm. When dry auxiliary fire alarm contacts are used, remove shunt from terminals 1 and 2 and connect to dry contacts of fire detector or alarm panel. Terminals 1 and 2 are in series with line side of 120V input.
1f	Turn on power. Air valve will operate one cycle when power is applied.
1g	Air pressure output has been preset at factory. If more air pressure is required to adequately open door, adjust regulator valve found inside control box.
1h	Adjust time delay to keep air valve energized by turning adjustment wheel on timer modules “A” (CW to increase - CCW to decrease). The LED (light) on the timer module indicates the valve is energized. The time can be adjusted from 0-30 seconds. 10 seconds is a “normal” delay.
1i	Test actuators to insure wiring and tubing are properly connected.



⚠ WARNING

HAZARDOUSVOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

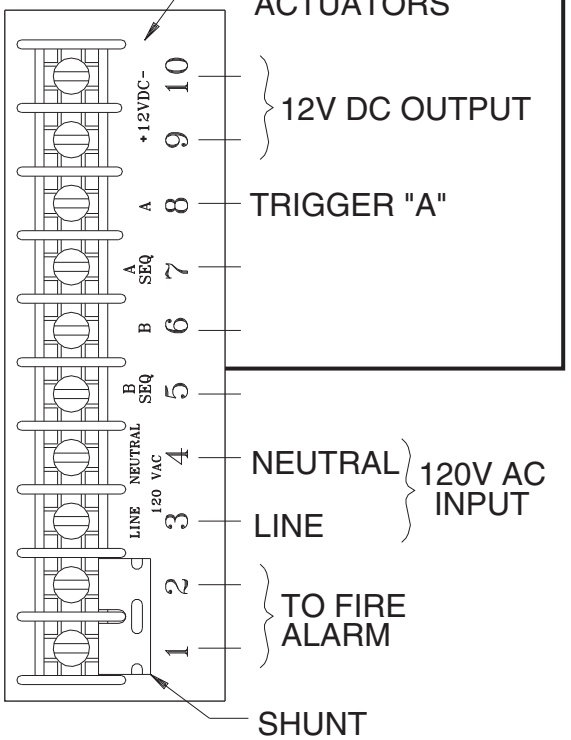
Disconnect power before making any electrical connections or performing maintenance.

Electrical Data

Input = 120V AC @ .15 amps
Power consumption 18 watts
Output is 12V DC

⚠ CAUTION

Do not mount box upside down or in horizontal position. Locate where temperatures do not exceed 120°F or fall below 35°F.



Air Filter Maintenance:

1. **Each Time Bowl Is Cleaned Or Filter Element Replaced:**
   A.) Depressurize unit
   B.) Inspect seals and replace cracked, deteriorated or damaged seals with original manufacturers approved seals only.

2. **Filter Element** -Clean periodically by removing filter, tapping on hard surface and blowing off with compressed air. When servicing element, blow off louvers with compressed air.

3. **Automatic Drain** -If automatic drain fails to keep filter bowl drained of water, use a pencil or small screwdriver to push the piston up, allowing filter to drain.

4. Be sure filter bowl assembly is firmly secured in place before reactivating unit.

5. Replace filter with LCN part #929.

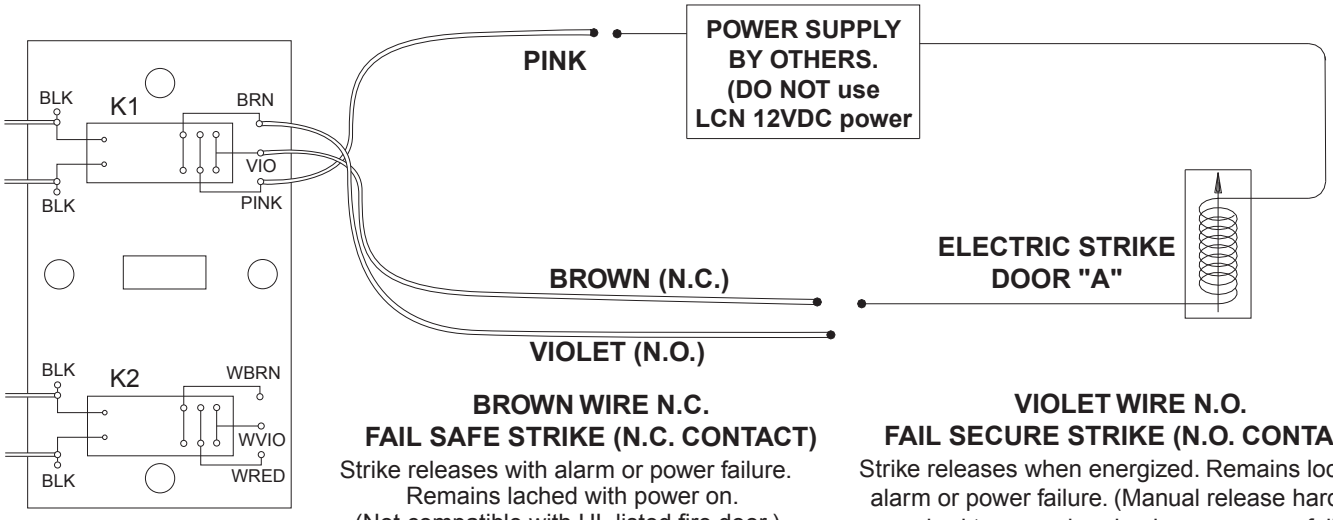
⚠ DANGER Control box **MUST** be connected to earth ground

Installation Troubleshooting Chart

Symptom	Possible Cause	Suggested Remedy
No power Opening	No power to control box / blown fuse	Verify 120VAC 60HZ power is present at terminals 3 & 4 on control box terminal strip. Check fuse. Replace only with 5 amp (3AG type) fuse.
	Actuator(s) not connected properly	Be sure a timer module board is firmly in place in “A” slot. Operate actuator(s). LED on timer module should light when actuator is used. If not, briefly short actuator terminals 8 & 10 in the control box. If LED lights, check wiring to actuators for an open circuit. If it does not light, check for voltage at terminals 9 &10. Voltage should read from 11.75 to 13.25V DC. If there is no reading, disconnect leads from terminals 9 & 10. Short actuator terminals 8 & 10. If LED lights, check for short circuit in actuators.
	Fire alarm system causing open circuit on terminals 1 & 2	Shunt terminals 1 & 2 with power off. Restore power. If control operates when actuator terminals 8 & 10 in the control box are shorted, an open circuit exist in wiring to fire alarm. When Auto-Equalizer is not used with fire alarms, terminals 1 & 2 must be permanently shorted with a shunt. **IMPORTANT!** When Auto-Equalizer is connected to fire alarm, make sure shunt is removed from terminals 1 & 2. Terminals 1 & 2 are one leg of 120V line.
	No input to Auto-Equalizer operator	Disconnect tubing from Auto-Equalizer operator. Try actuator and verify that air is coming out of tubing. If not, trace tubing to control box, checking for breaks or kinks in air line.
	Air lines obstructed with dirt or ice.	Clean or thaw lines and reroute if necessary. Eliminate dips near cold zones. If freezing is a repeated problem, desiccant filter may need to be changed.
	Air valves not working	Make sure air valve leads are plugged into main board. (Be sure valves in system are plugged into connector “A”.)
	Low or no air inlet pressure to control box.	Check compressor output to make sure air shut-off is open. 80 psi must be available at the control box. If not, check compressor and lines.
	No air output to Auto-Equalizer operator	Check pressure gauge in control box. Adjust as required, if necessary. Check for leaking or damaged lines in control box.
Power Opening will not time out.	Scanner maintaining signal to control box.	Make sure lenses are clean and there are no obstructions in front of scanner. Model 909 or 939 proximity scanner may “see” an opposite wall. Adjust range as described earlier.
	Switch circuit maintaining contact.	Check for short circuit or error in wiring to actuator.
	Air valve blocked open with contaminant.	Cycle valve several times by momentarily shorting terminals 8 & 10. This should clear valve.
	Control box exhaust restricted	Exhaust muffler may be clogged. Clean in alcohol or mineral spirits.

Model ES7901 For Use With Electric Latching Hardware

ES7901 - 1 electric strike maximum



BROWN WIRE N.C.
FAIL SAFE STRIKE (N.C. CONTACT)

Strike releases with alarm or power failure. Remains lached with power on. (Not compatible with UL listed fire door.)

VIOLET WIRE N.O.
FAIL SECURE STRIKE (N.O. CONTACT)

Strike releases when energized. Remains locked in alarm or power failure. (Manual release hardware required to open door in alarm or power failure.)

⚠ WARNING

HAZARDOUS VOLTAGE CAN SHOCK AND CAUSE SEVERE INJURY

Disconnect power before making any electrical connections or performing maintenance.

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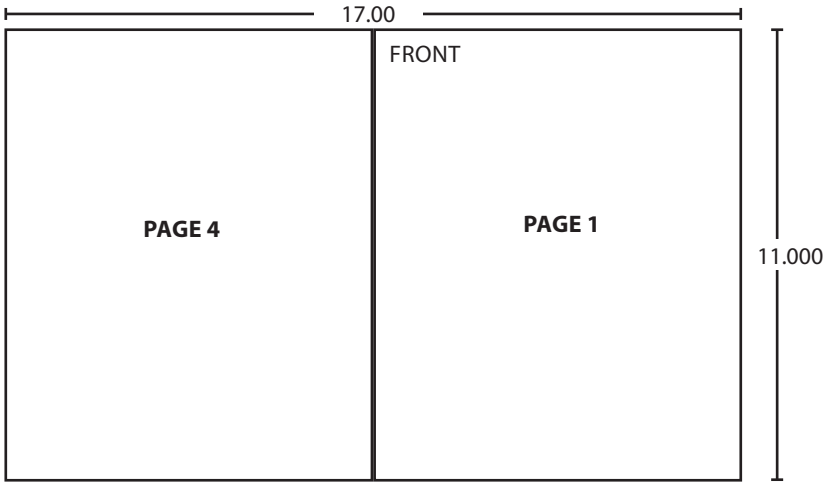
23760 Rev. 01/14-d



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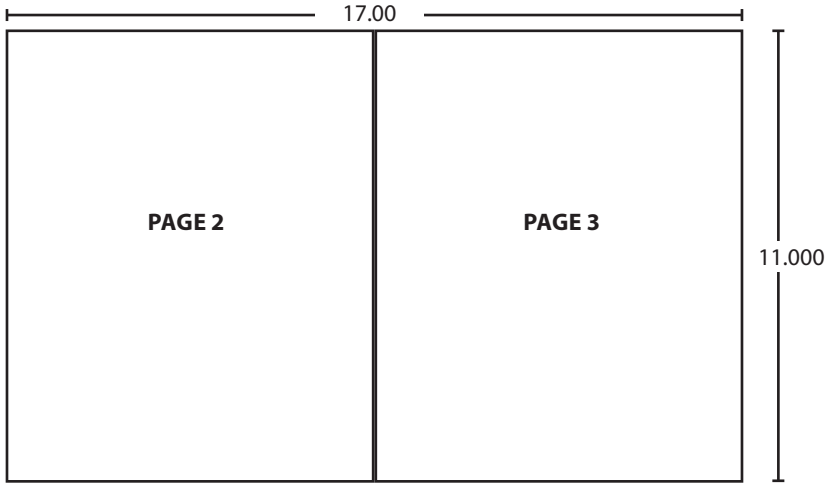

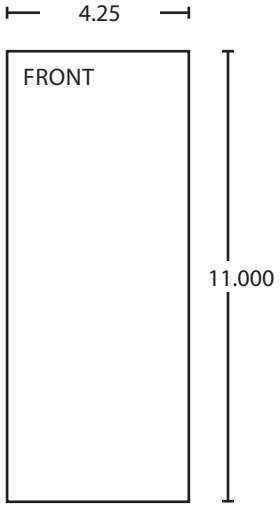

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Additional Notes:
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D	E	F	G	H	J
043228					

Revision Description:
D > Revised artwork

Material
White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	043228	01-01-14

Title
7901/ES7901 Series Control Box Instruction Sheet

Creation Date	Number	Revision
04-27-10	23760	D

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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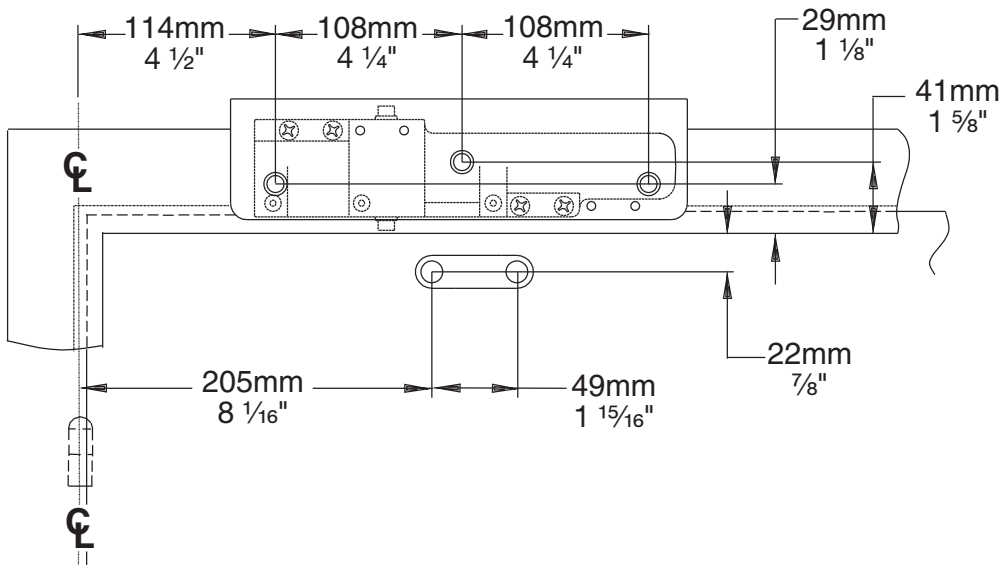
26125

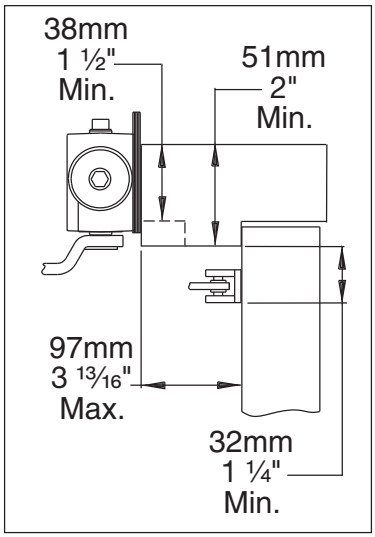
Drop Plate

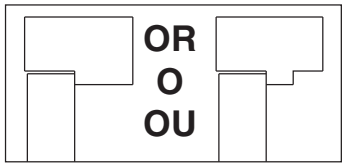
LCN®

Adapter Plate Template
Instalada en la placa inferior
Une plaque de plafond

Drop Plate







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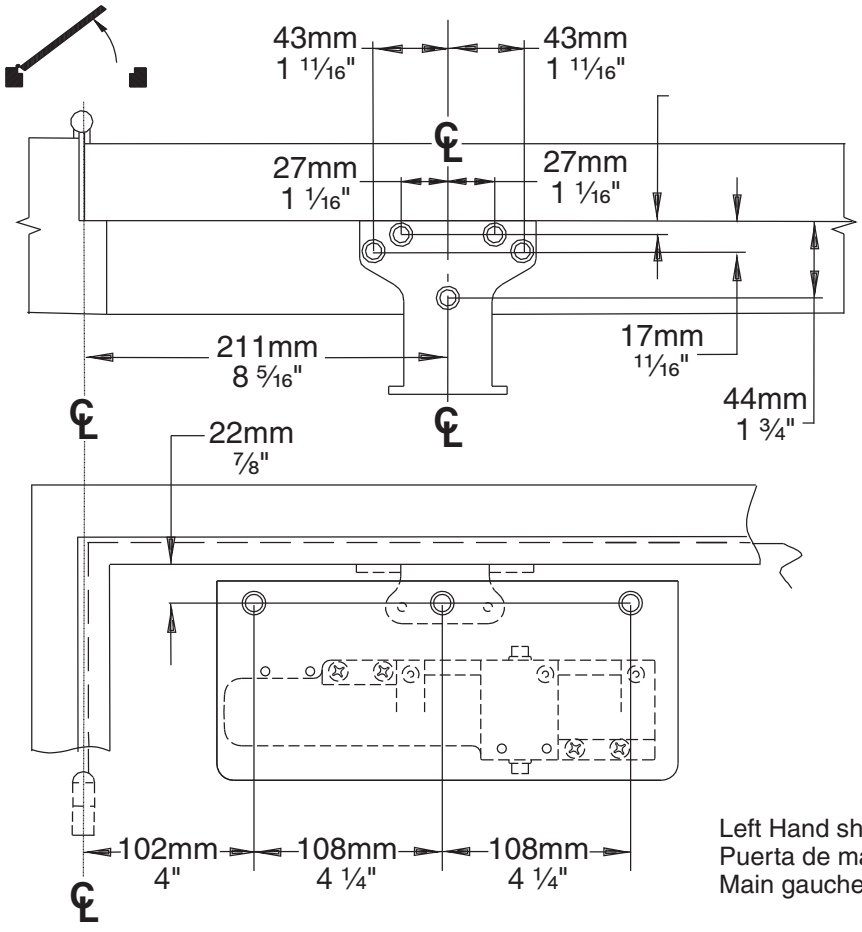
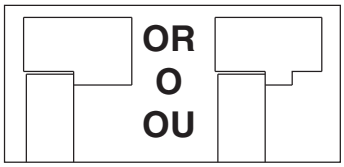
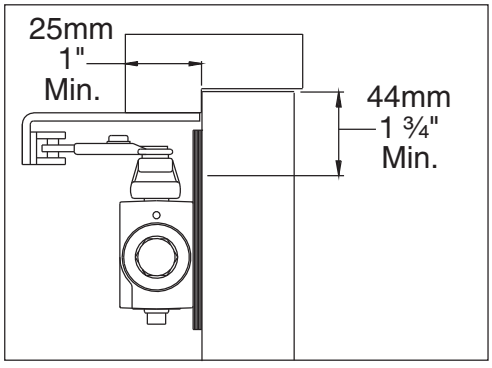
Main gauche illustrée, main droite contraire







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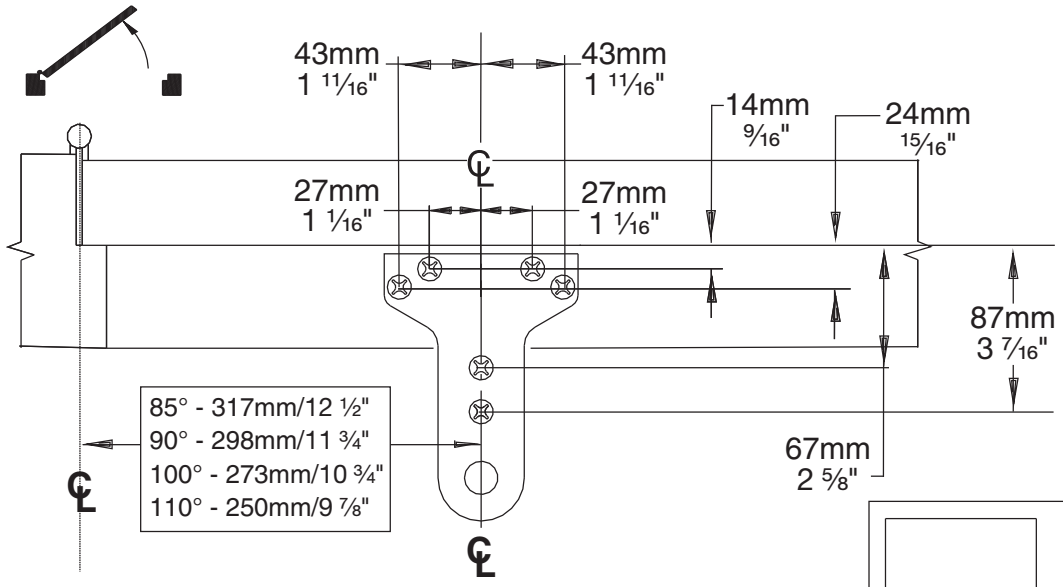
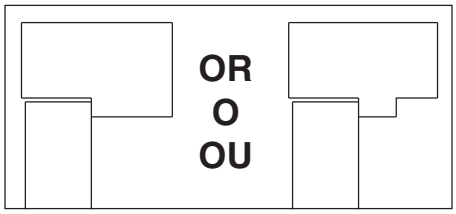
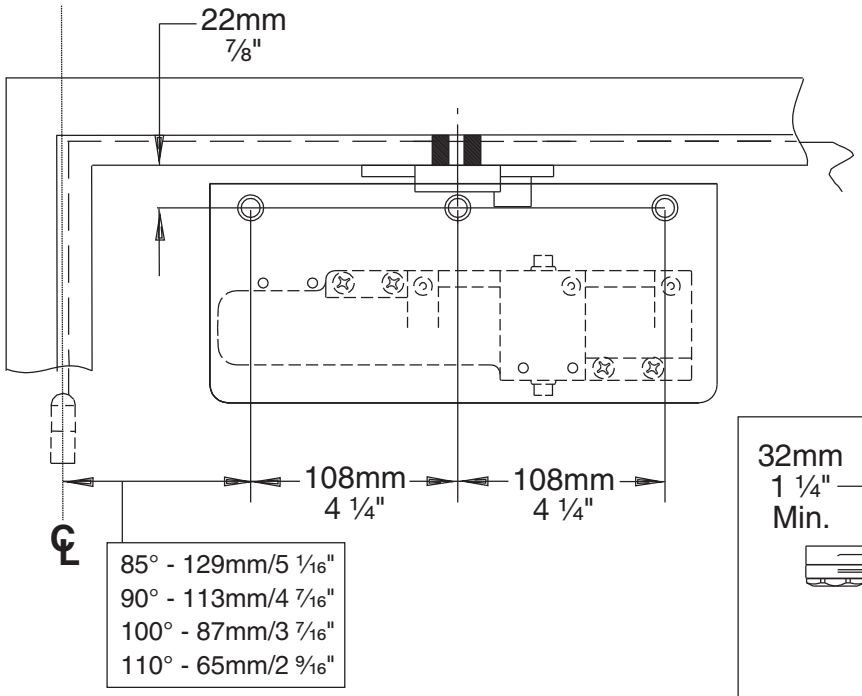
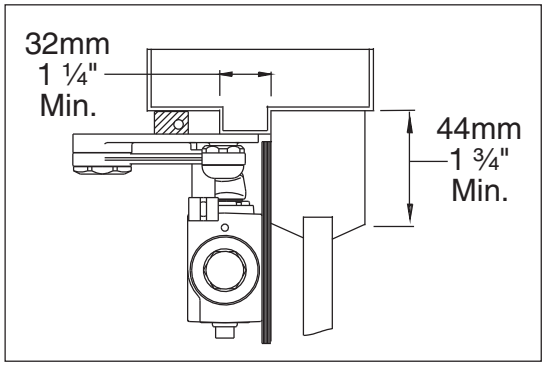
Main gauche illustrée, main droite contraire

Spring Cush









Left Hand shown, Right Hand opposite
Puerta de mano izquierda ilustrar, mano derecha lo apuesto
Main gauche illustrée, main droite contraire

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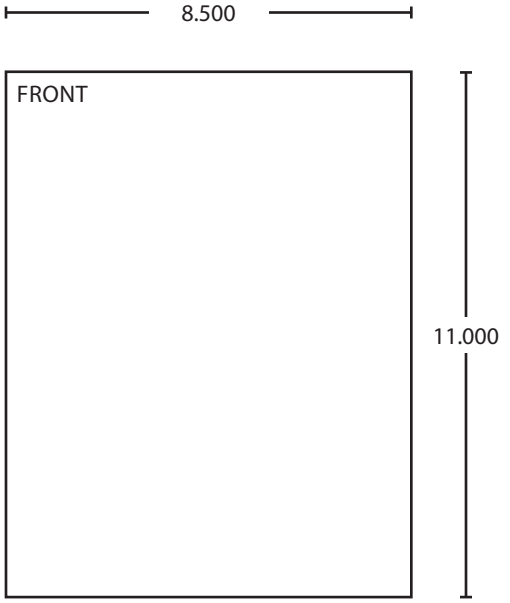

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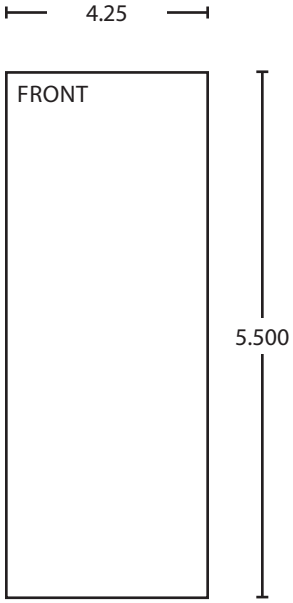

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Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	N/A	N/A	N/A	N/A	XXXXX

Material
White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
F > Revised artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	xxxxx	06-09-14

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Creation Date	Number	Revision
N/A	26125	F

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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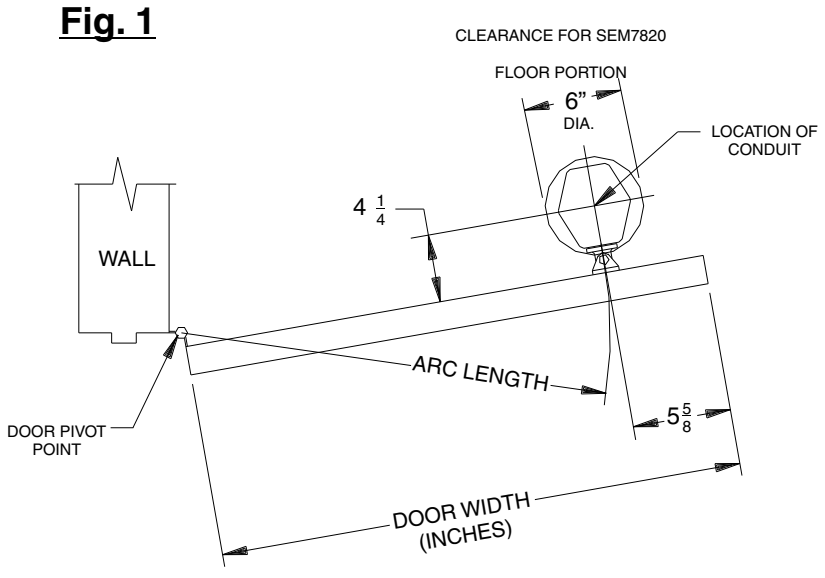
LCN®
1-800-526-2400

SEM 7820

Sentronic® Electro-Magnetic
Single Door Holder Floor Mounted

CAUTION
IMPROPER INSTALLATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 800 - 526 - 2400

Fig. 1



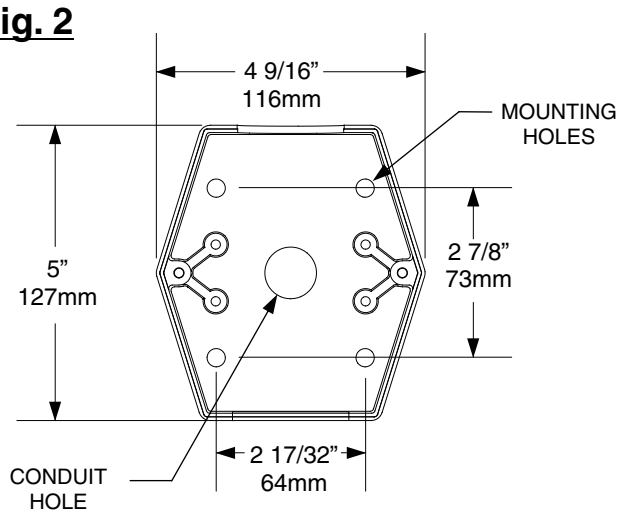
SINGLE DOOR INSTALLATION

Step 1: Plan the Installation

A. Measure the door width.
B. Calculate the arc length by subtracting 5 5/8″ from the door width. Draw an arc at the calculated length using the door pivot point as the center point. String and a pencil could be used to draw the arc on the floor.
C. Open the door to the desired position. On the pull side of the door, put a mark on the arc 4 ¼″ from the door. This is the center of the conduit hole.
D. Drill and install conduit as needed. Maximum conduit size is ½″. Maximum conduit height above the floor is 1″.
E. Pull wire in accordance with applicable codes, standards, and authorities having jurisdiction. Electrical specifications are shown below.

Input Voltage	Current Draw Max.
120VAC, 60Hz	.02A
24VAC, 60Hz/24VDC	.02A
12VDC	.03A

Fig. 2



FLOOR PORTION

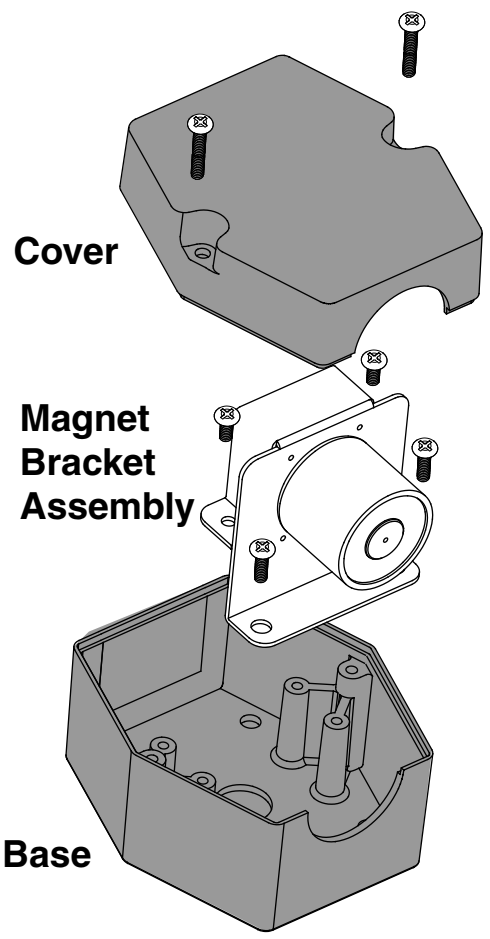
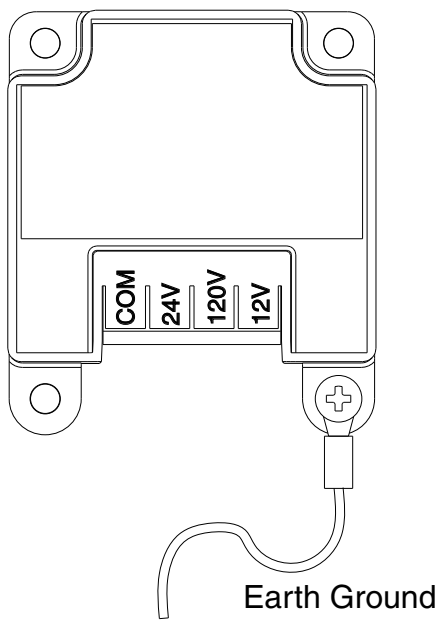


Fig. 3

Back view of magnet assembly



Step 2: Install the Magnet

A. The magnet is shipped partially assembled for protection. Unscrew the cover from the base, then unscrew the magnet bracket assembly from the base. Keep the screws for later reattachment.
B. Guide the conduit through the hole in the base and snug up the conduit nut. Square up the base to the door, with the door opened to the desired position, as shown in Fig.1.
C. See Fig. 2. Using the base as a template, mark the four mounting hole locations on the floor.
D. Remove the base and drill 3/8" holes in the floor at 1 1/4" deep. Install the cement anchors provided into the drilled holes, threaded ends up.
E. Reposition the base, aligning the mounting holes with the floor holes and the magnet opening facing the door. Tighten the conduit nut. Install (2) ¼-20 mounting screws that are furthest away from the magnet opening into the cement anchors. The magnet assembly must first be connected to power supply wires before the other two base housing mounting screws can be installed.
F. See Fig. 3. Connect the supply earth ground wire to the green wire on the magnet assembly bracket. Connect the power supply common wire to the screw terminal marked COM. If the supply voltage is 24V, connect the power supply hot wire to the screw terminal marked 24V. If the supply voltage is 120V, connect the power supply hot wire to the screw terminal marked 120V. If the supply voltage is 12V, connect the power supply hot wire to the screw terminal marked 12V. Polarity is important on the 12V input. There are protective plastic tabs over the terminal screws. Break off the two tabs that protect COM and the desired voltage so that the screw heads are exposed.
G. See Fig. 2. With the magnet wired, position the magnet bracket assembly over the two base mounting holes and the two base post holes. Insert (2) ¼-20 base mounting screws into the cement anchors and the (2) 10-24 shorter screws from step 2A into the post holes. Tighten firmly. Attach the cover using the (2) 10-24 longer screws from step 2A.

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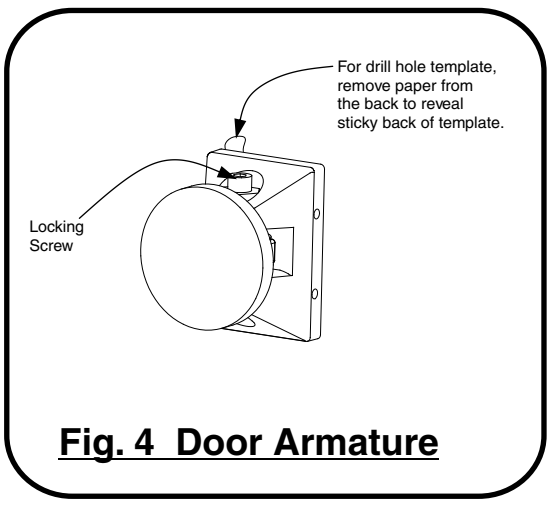


Fig. 4 Door Armature

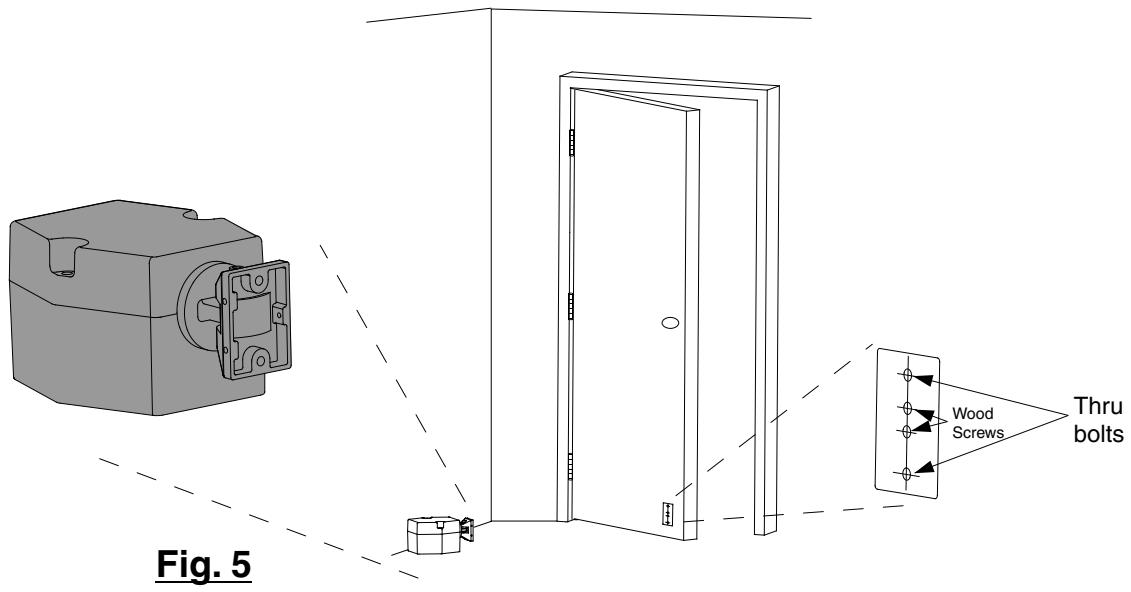


Fig. 5

Step 3: Install the Door Armature

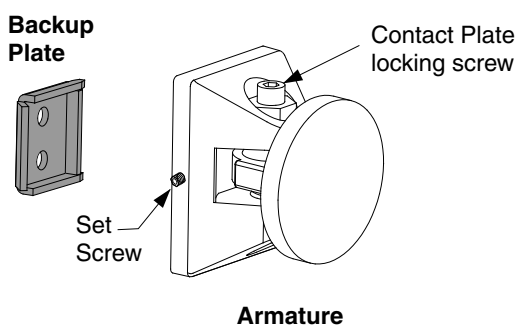
A. See Fig. 4. Slightly loosen the contact plate locking screw using a 5/32" Allen wrench so the contact plate can rotate with some resistance. Remove the protective paper from the drill template sticky-back label on the back of the door armature.
B. See Fig. 5. Place the armature against the floor magnet. This is best done with power applied to the magnet. If power is not available, hold the armature in place by hand. The armature contact plate must fully cover the magnet. If the contact plate is not centered and flat on the magnet, reduced holding force will result.
C. With the armature against the magnet, open the door and press it against the armature and magnet. Pull the door away to transfer the drill template to the door. Template may need assistance with transferring to door, using a flat blade screwdriver on the template tab that sticks out and push it onto the door while pulling the door away.
D. See Fig. 6 and 7. Determine if the armature will be mounted using the wood screw kit or the thru bolt kit. The thru bolt kit is recommended for 1 ¾" hollow metal, hollow core, or composite-type wood doors. If using the wood screw kit, drill the center two holes on the template using a 1/8" bit by 1 ¼" deep. If using the thru bolt kit, drill the outer two holes on the template using a 5/16" bit all the way through the door. Remove the template after the holes are drilled.
E. Attach the armature to the door using the appropriate plate and screws. If using the wood screws and backup plate, tighten the armature set screw against the backup plate as the last step using the 1/16" Allen wrench provided.

Fig. 6

WOOD SCREW MOUNTING

FOR SOLID WOOD CORE DOORS

This view shows the contact plate
locking screw accessible from the top.
Rotate backup plate 180° for underside access.



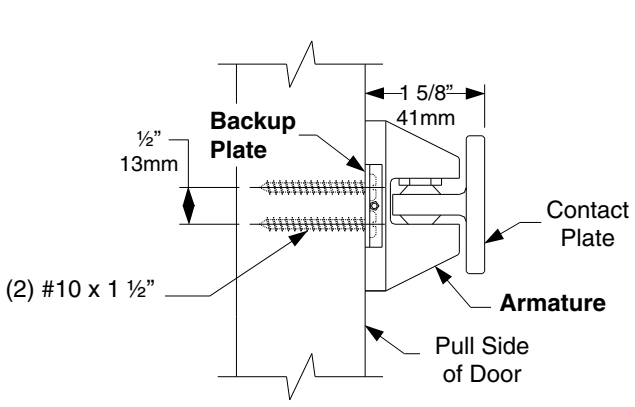
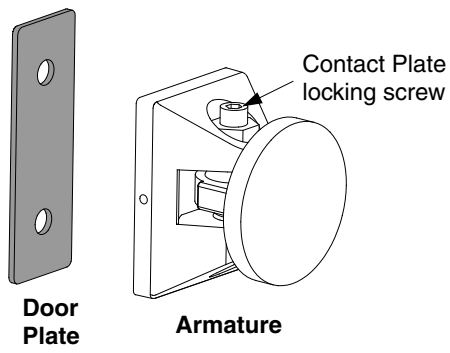
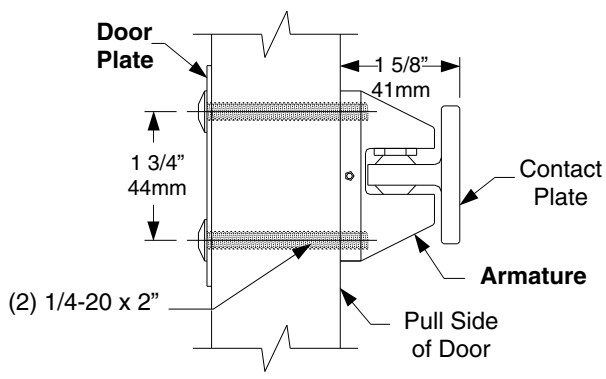


Fig. 7

THRU BOLT MOUNTING

RECOMMENDED FOR
HOLLOW METAL, HOLLOW CORE
OR COMPOSITE TYPE WOOD DOORS





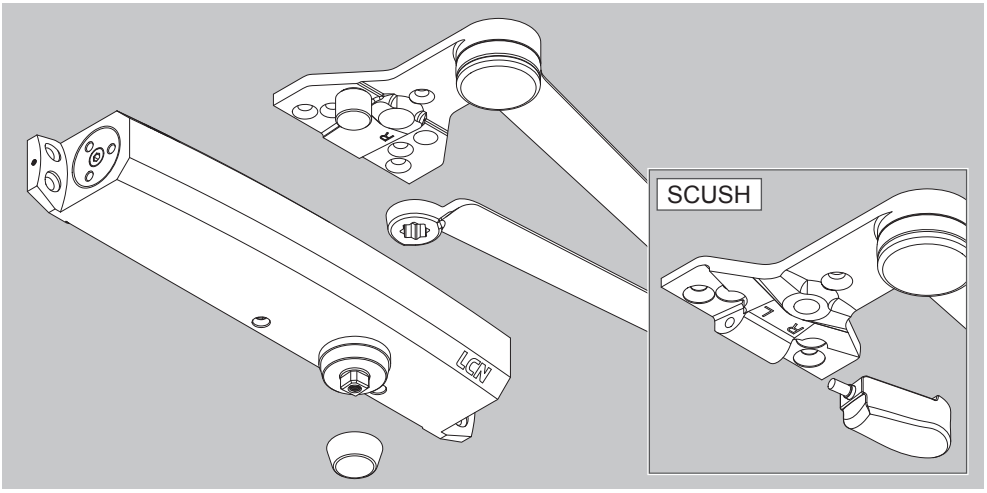
1450 & 1450DA Series

71932

CUSH & Spring CUSH (SCUSH) Mount

Installation Instructions

PARTS

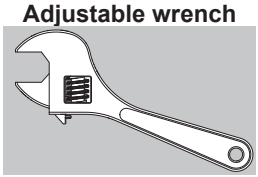


ⓘ **Screw pack information is on page 4.**

TOOLS

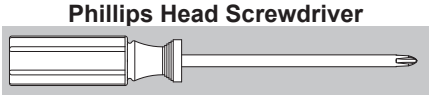
5/32" or 4mm Hex Wrench

Adjustable wrench



1/8" Drill Bit

Phillips Head Screwdriver



5/16" or 8mm Hex Wrench

⚠ CAUTION ⚠

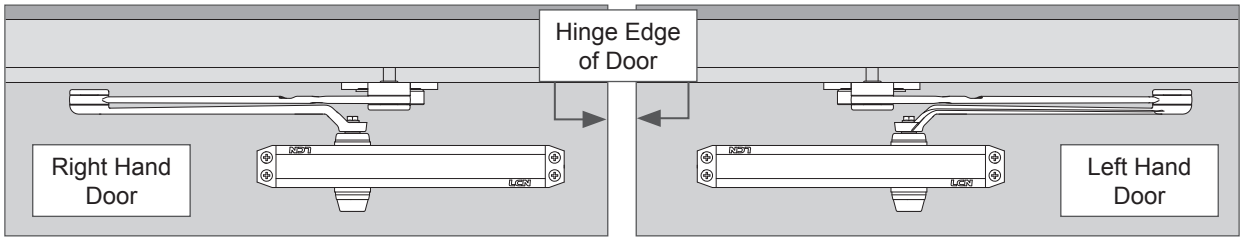
Improper installation or regulation may result in personal injury or property damage.
Follow all instructions carefully.
For questions, call LCN at 877 - 671 - 7011

Hold open arms must not be installed on fire rated doors.

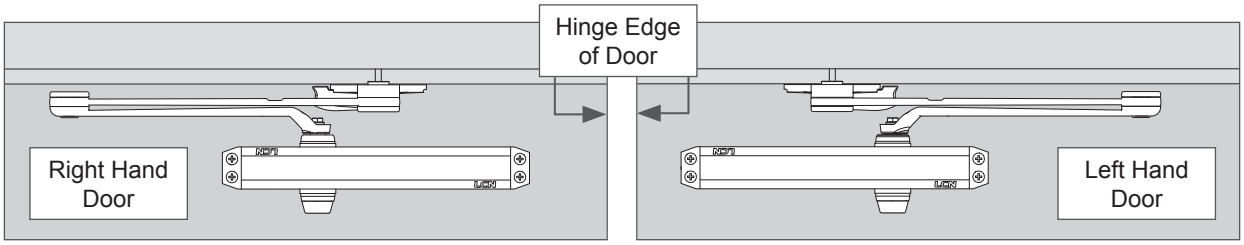
Opening the regulation valves too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.
FOLLOW ALL INSTRUCTIONS CAREFULLY.

Choose Installation Type

CUSH (see page 2)



Spring CUSH (SCUSH) (see page 3)



Customer Service

1-877-671-7011 www.allegion.com/us

ALLEGION

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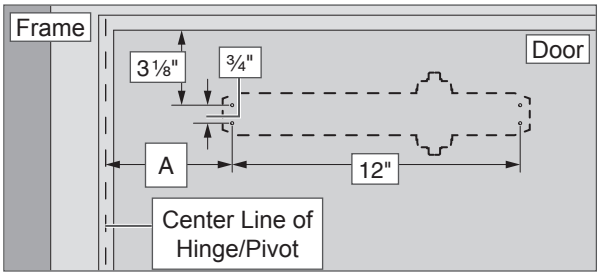
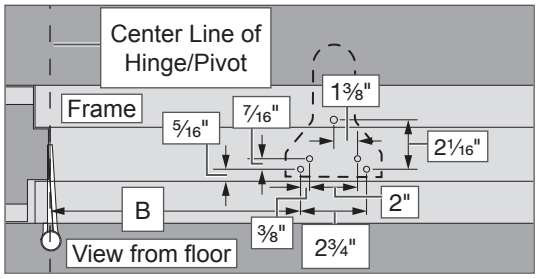
71932 Rev. 07/17-d

CUSH

Mounting Dimensions

ⓘ **Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.**





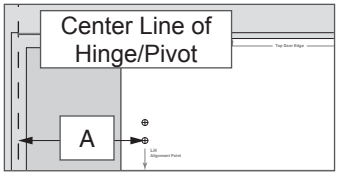
1 Determine the degree of door opening required and find dimensions “A” and “B” in the charts below.

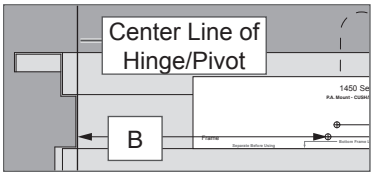
ⓘ **SCUSH dead stop will occur about 5° beyond normal dead stop point.**

Opening	Measurement from Center Line of Hinge/Pivot	
	A	B
85°	5 1/2”	11”
90°	4 3/4”	10 1/4”
95°	4”	9 1/2”
100°	3 3/8”	8 7/8”
105°	2 3/4”	8 1/4”
110°	2 1/8”	7 5/8”

2 Measure from centerline of hinge/pivot and stick template on door. Mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**





3 Remove template, and drill holes where marked with a 1/8” drill bit for SRT screws.

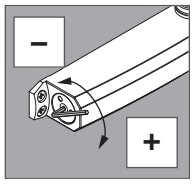
ⓘ **SRT screws are used on metal doors.**
Wood screws are used on wood doors.

4 Measure and determine your door’s width. Using a hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.

Turn counterclockwise for “-”; turn clockwise for “+”

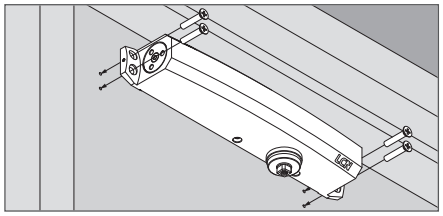
ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

Door Width	Number of Turns
ADA Setting	-5
32” - 815 mm	-3
36” - 915 mm	0
42” - 1050 mm	+5
48” - 1220 mm	+10
54” - 1372mm	+15



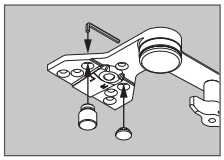
5 Install closer onto door.

ⓘ **Speed regulation valve goes away from the hinge.**



6 Adjust the shoe to match the door handing.

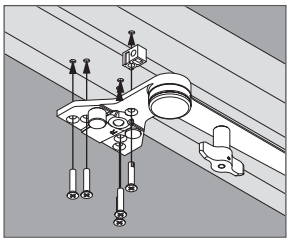
ⓘ **If RH door, do not adjust shoe. If LH door, change stop location to opposite side.**
For installing SCUSH contact block, see page 3.



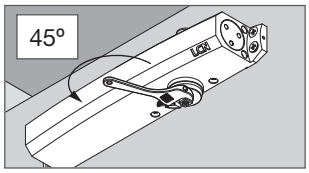
7 Install EDA shoe & fifth hole spacer onto frame.

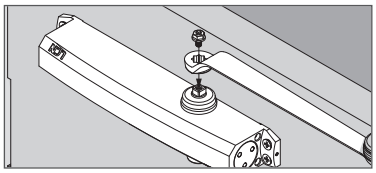
ⓘ **Use the fifth hole spaper only if there is a space between the frame and the shoe.**

ⓘ **Use of 5th Hole limited to reveals greater than 2 11/16”.**



8 Preload closer shaft to 45°, attach main arm to closer.

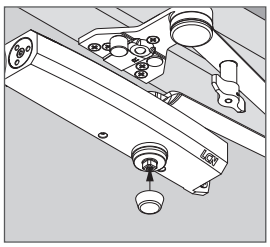


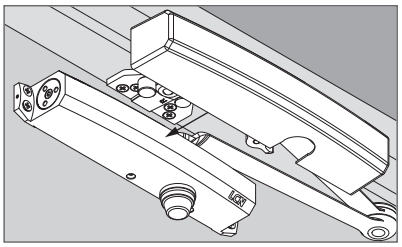


9 Adjust the closer, if necessary. See page 4 for closer adjustment instructions.

10 Screw cap onto shaft, or install cover.

ⓘ **Use screws for full plastic and metal covers.**





Spring CUSH (SCUSH)

Spring CUSH arms (SCUSH) have specific instructions for mounting the SCUSH shoe. Otherwise, SCUSH arms install like a regular CUSH arm.

⚠ IMPORTANT ⚠

DO NOT reduce the closer's backcheck setting! Spring CUSH arm function does not replace backcheck.

⚠ IMPORTANT ⚠

Spring CUSH dead stop will occur approximately 5° <u>beyond</u> normal 4050 dead stop point.

1 Locating

In new installations, use the standard CUSH template. When replacing an existing CUSH arm, use the existing mounting holes.

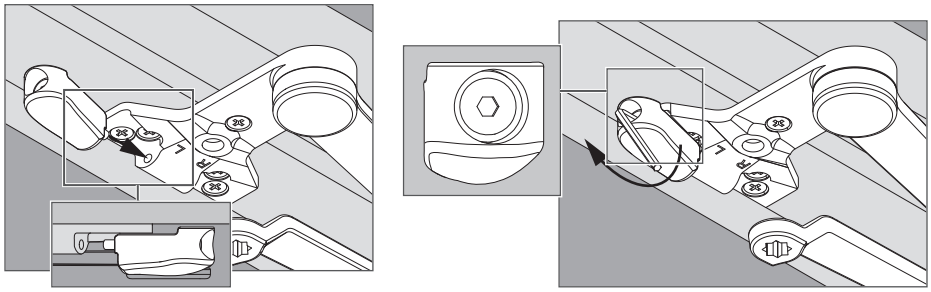
2 Installation

a. Mount the shoe onto the frame.
b. Use a 5/32" or 4mm hex wrench to install the contact block assembly, as shown below. Make sure the screw is tightened securely into the shoe.

3 Completing installation

Complete the closer installation as directed for regular CUSH arms on page 2.

ⓘ **Left Hand (LH) shown. Right Hand (RH) opposite.**



CUSH Shoe Support for After Installation

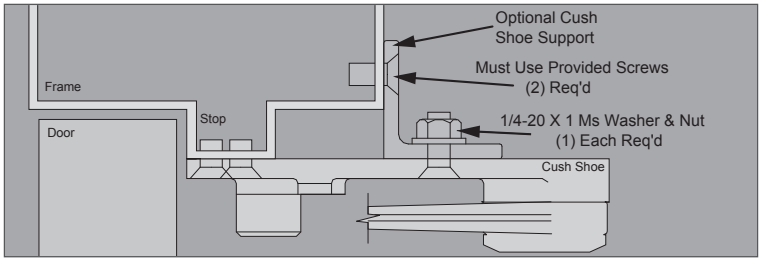
1 CUSH Shoe Support limited to reveals between 1 1⁄16" and 1 13⁄16".

2 Set CUSH Shoe Support on top of the shoe and hold against the frame.

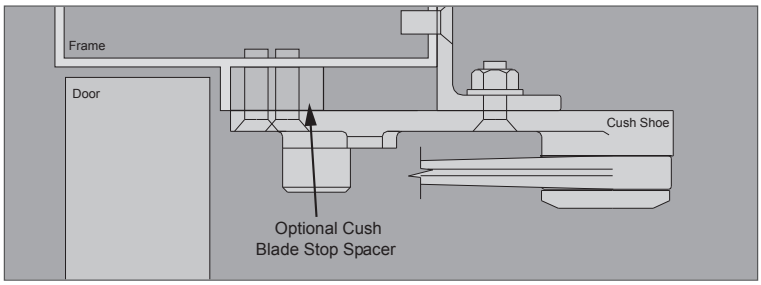
3 Assemble the screw, washer, and nut as shown below, and tighten securely.

4 Using the shoe support as a template, drill and tap two holes for 1/4-20 screws in the frame.

5 Insert the screws and tighten securely.



6 Should frames have 1/2" Blade Stop, it is necessary to use a 1/2" Blade Stop Spacer, available from your dealer. Use both the Blade Stop Spacer and Shoe Support wherever required.



Closer Valve Adjustment

Check closing time, and adjust closer if needed.

⚠ CAUTION ⚠

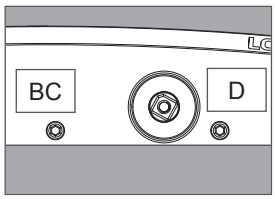
Opening the regulation valves (described below) too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.

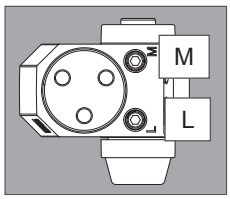
FOLLOW ALL INSTRUCTIONS CAREFULLY.

ⓘ **Valve must be closed CW to seat, never more than 3 turns CCW from seated position. Adjust the valves in 1/4 turn increments or less at a time. DO NOT TURN MORE THAN 3 FULL ROTATIONS. THIS WILL CAUSE THE CLOSER TO LEAK OIL!**

ⓘ **DO NOT ADJUST THE LATCH SPEED IF THE DOOR DOES NOT LATCH. If this occurs, adjust the spring force.**

1. Open the door to 90°, measure how long the door takes to close and latch. A typical closing time is 5 to 7 seconds, evenly divided between main speed and latch speed.
2. If the closing time needs to be adjusted, use the closer valves described below.
   a. Backcheck (BC)- this controls door speed opening as the door angle approaches 90°. **Do not use as a door stop.**
   b. Main Speed (M)- this controls door speed during most of the closing motion.
   c. Latch Speed (L)- this controls door speed during the last few degrees of door closing.
   d. DA Speed (D)- this controls the delay speed for DA cylinders. **This valve is present on DA cylinders only.**
3. Turn the valves clockwise to decrease door speed, and counterclockwise to increase door speed. The latch speed and main speed should be adjusted together.





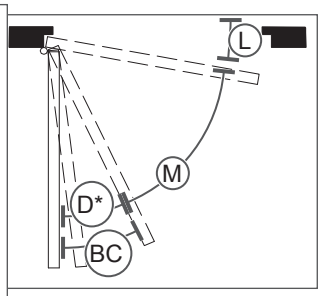
BC = Backcheck valve

M = Main speed valve

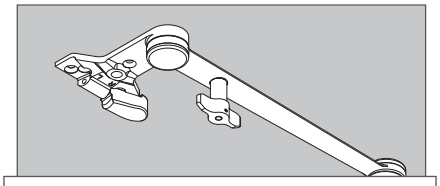
D = Delay speed valve*

L = Latch speed valve

* Optional

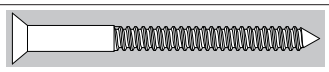
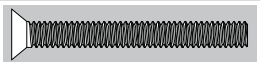
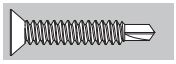


Optional Hold Open Arms



To adjust Optional Hold-open arm:

To engage or disengage hold open feature, turn control handle 1/4 turn.

Screw Type	Picture	Cylinder Mounting	Shoe Mounting	5th Hole Mounting
Wood (for wood doors & frames)		4 @ 1 3⁄16"	4 @ 1 3⁄8"	1 @ 2"
Machine (for metal doors & frames) Requires hole drilling & tapping; best hold.		4 @ 1"	4 @ 5⁄8"	1 @ 1 ½"
SRT - Self Reaming & Tapping (for metal doors & frames)		4 @ 1 ½"	4 @ 1 ½"	1 @ 2"

Screw Type	Picture	Notes
Fifth Hole Spacer		
Thru Bolts		Used when mounting through door.
Pinion Attachment Screw		1 M6 x 10mm for attachment of the arm (see step 6).
Cover Screws		

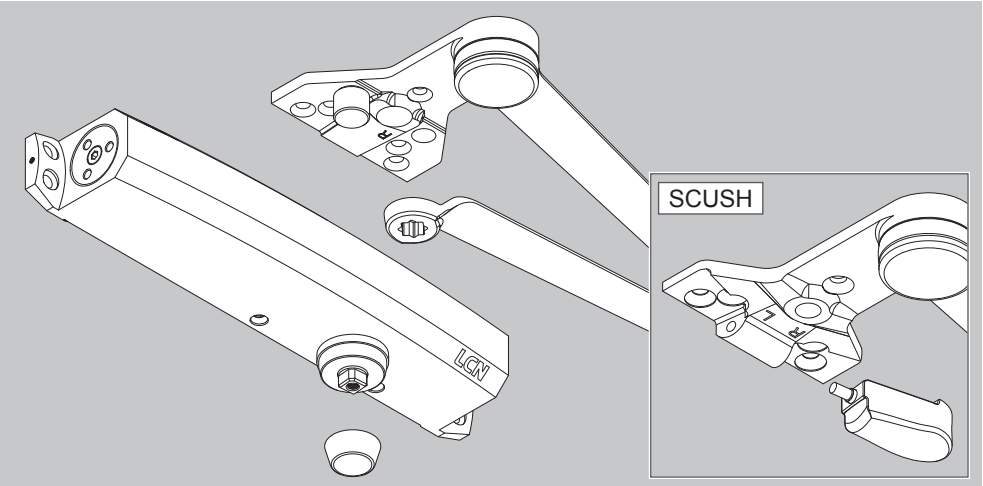
Serie DA 1450 y 1450

71932

Montaje en CUSH y Cierrapuertas de Resorte (SCUSH)

Instrucciones de Instalación

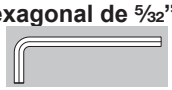
PIEZAS



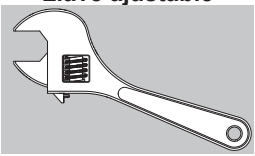
ⓘ **La información sobre el paquete de tornillos se encuentra en la página 8.**

HERRAMIENTAS

Llave hexagonal de 5⁄32" o 4 mm



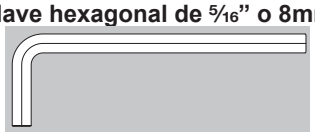
Llave ajustable



Broca de taladro de ⅛"

Destornillador con cabeza Phillips

Llave hexagonal de 5⁄16" o 8mm



⚠ PRECAUCIÓN ⚠

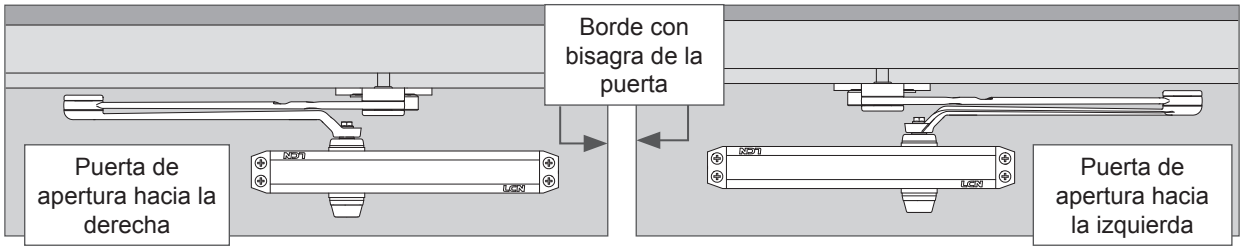
La instalación o regulación incorrecta puede resultar en lesiones personales o daño a los bienes.
Siga todas las instrucciones con atención.
En caso de duda, llame a LCN al 877-671-7011

Los brazos para mantener abierto no deben instalarse en puertas con clasificación ignífuga.

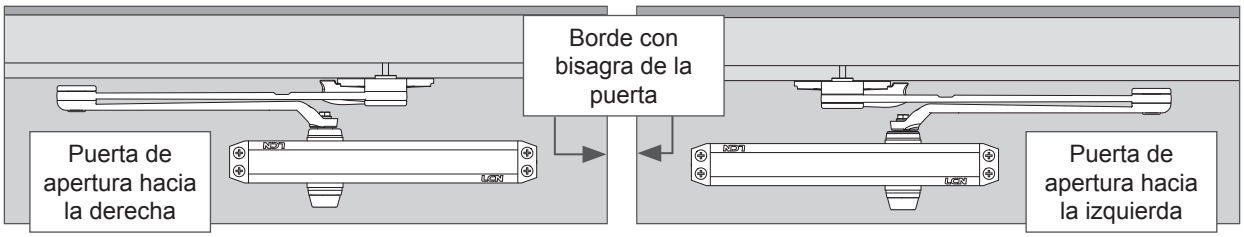
¡Abrir demasiado las válvulas de regulación puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales.
SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

Seleccione el tipo de instalación

CUSH (vea la página 6)



Spring CUSH (SCUSH) (see page 7)



Servicio al cliente

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ALLEGION

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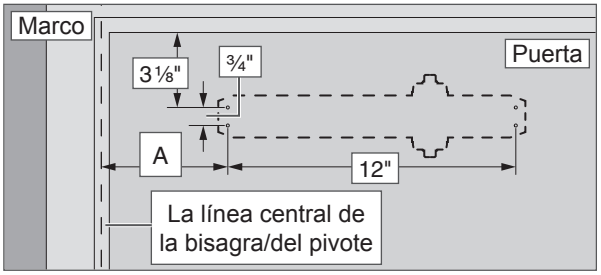
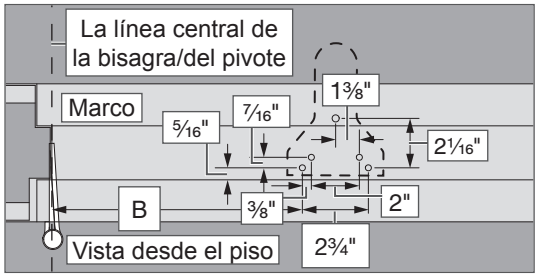
71932 Rev. 08/17-d

Montaje en CUSH

Dimensiones de montaje

ⓘ **Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.**





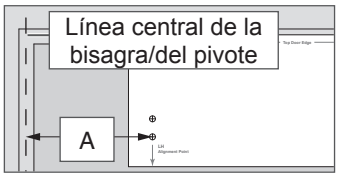
1 Determine el grado de apertura de la puerta requerido y busque las dimensiones “A” y “B” en el cuadro siguiente.

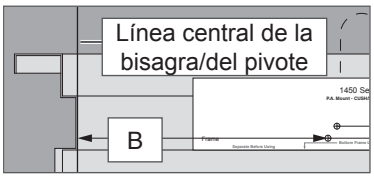
ⓘ **El cierrapuertas de resorte se detendrá a alrededor de 5 grados más allá del punto normal de detención.**

Apertura	Medición desde línea central de la bisagra/del pivote	
	A	B
85°	5 1/2”	11”
90°	4 3/4”	10 1/4”
95°	4”	9 1/2”
100°	3 3/8”	8 7/8”
105°	2 3/4”	8 1/4”
110°	2 1/8”	7 5/8”

2 Mida desde la línea central de la bisagra/del pivote y adhiera la plantilla en la puerta. Marque los orificios de perforación.

ⓘ **Vea las dimensiones de montaje anteriores según sea necesario.**





3 Retire la plantilla y perfore orificios donde está marcado con una broca de taladro de ⅛” para tornillos SRT.

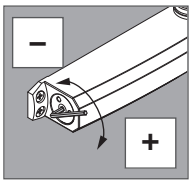
ⓘ **Los tornillos SRT se usan en puertas de metal.**
Los tornillos de madera se usan en puertas de madera.

4 Mida y determine el ancho de su puerta. Con una llave hexagonal, ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

Gire en sentido antihorario para “-”; gire en sentido horario para “+”.

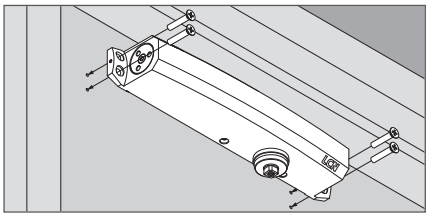
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

Ancho de la puerta	Número de giros
Configuración de ADA	-5
32” - 815 mm	-3
36” - 915 mm	0
42” - 1050 mm	+5
48” - 1220 mm	+10
54” - 1372mm	+15



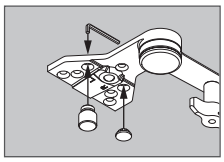
5 Instale el mecanismo de cierre en la puerta.

ⓘ **La vàlvula de regulaciòn de velocidad va con direction opuesta de la bisagra.**



6 Ajuste del zapato para que coincida con la orientación de la puerta.

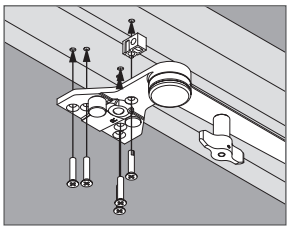
ⓘ **En caso de puerta que se abre hacia la derecha, no ajuste la zapata. En caso de puerta que se abre hacia la izquierda, cambie la ubicación del tope al lado opuesto. Para instalar el bloque de contacto con amortiguación por resorte, vea la página 7.**



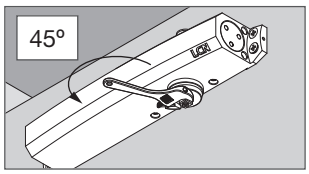
7 Instale el zócalo del EDA en el marco, luego en la varilla y el zócalo.

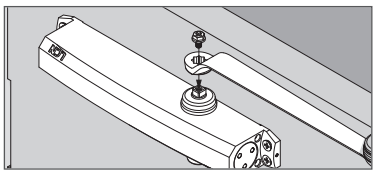
ⓘ **Use el espaciador del quinto orificio si hay un espacio entre el marco y el zócalo del EDA.**

ⓘ **El uso del 5.to orificio está limitado a listones de más de 2 11⁄16”.**



8 Cargue previamente el mecanismo de cierre a 45°, instale el brazo principal en el mecanismo de cierre.

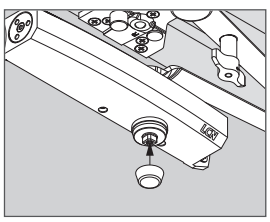


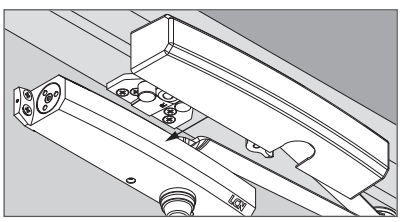


9 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 8 para ver las instrucciones de ajuste del mecanismo de cierre.

10 Atornille la tapa en el eje e instale la cubierta.

ⓘ **Use tornillos para las cubiertas completas de plástico y de metal.**





Cierrapuertas de Resorte (SCUSH)

Los brazos del cierrapuertas de resorte (SCUSH) cuentan con instrucciones específicas para el montaje de la zapata del cierrapuertas con resorte. De lo contrario, los brazos del cierrapuertas con resorte se instalan como los brazos de un cierrapuertas regular.

⚠ IMPORTANTE ⚠	⚠ IMPORTANT ⚠
¡NO reduzca la configuración de retención del cierrapuertas! La función del brazo del cierrapuertas con resorte no reemplaza la retención.	**El paro en seco del resorte podrá ocurrir aproximadamente 5° <u>después</u> del punto del paro en seco 4050 normal.**

1 Ubicación

En instalaciones nuevas, use la plantilla estándar del cierrapuertas. Al reemplazar el brazo de un cierrapuertas existente, use los orificios de montaje existentes.

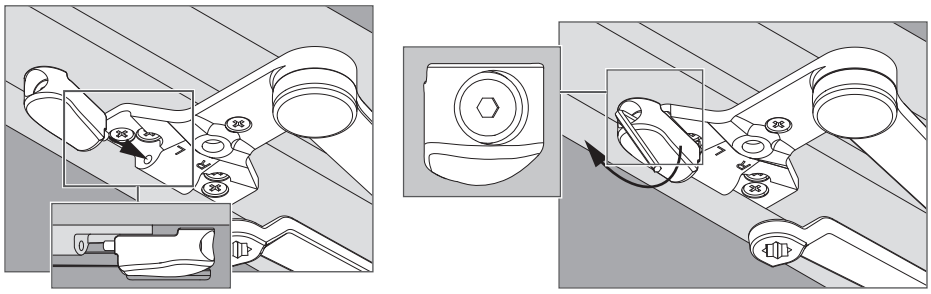
2 Instalación

a. Monte la zapata en el marco.
b. Use una llave hexagonal de 5/32” o 4 mm para instalar el ensamble del bloque de contacto, como se muestra a continuación. Asegúrese de que el tornillo esté ajustado firmemente en la zapata.

3 Finalización de la instalación

Complete la instalación del cierrapuertas tal como se indica para los brazos del cierrapuertas regular en la página 6.

ⓘ **Se muestra la apertura hacia la izquierda (LH). El procedimiento para apertura hacia la derecha (RH) es opuesto.**



Soporte de la zapata del cierrapuertas después de la instalación

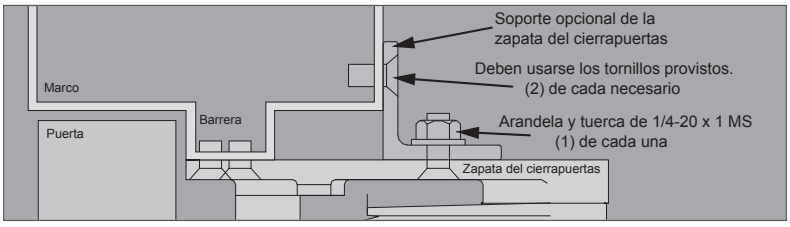
1 El soporte de zapata está limitado a listones de entre 1 1/16” y 1 13/16”.

2 Coloque el soporte de la zapata del cierrapuertas sobre la zapata y mantenga contra el marco.

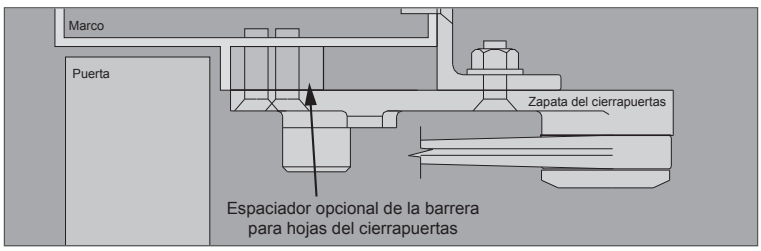
3 Ensamble el tornillo, la arandela y la tuerca como se muestra a continuación, y ajuste firmemente.

4 Usando el soporte de la zapata como plantilla, perfore y marque dos orificios para tornillos de 1/4-20 en el marco.

5 Inserte los tornillos y ajuste con firmeza.



6 Si los marcos tienen barreras para hojas de 1/2”, es necesario usar un espaciador de 1/2” para barreras para hojas, disponible a través de su distribuidor. Use el espaciador para barreras para hojas y el soporte de la zapata, de ser necesario.



Ajuste de la válvula del mecanismo de cierre

Compruebe el tiempo de cierre y ajuste el mecanismo de cierre de ser necesario.

⚠ PRECAUCIÓN ⚠

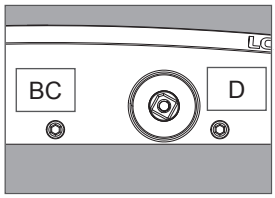
¡Abrir demasiado las válvulas de regulación (como se describe a continuación) puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales.

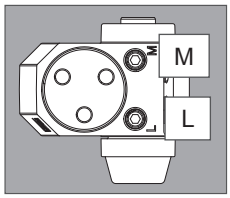
SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

ⓘ **La Vàlvula se Cierra hacia el lado dercho(en direction de las agujas del reloj) hasta que tope,nunca mas de tres vueltas al lado izquierdo(en contra de las manesillas del reloj) del tope. Ajuste las válvulas en incrementos de 1/4 de giro o menos a la vez. ¡NO GIRE MÁS DE 4 ROTACIONES COMPLETAS - ESTO OCASIONARÁ QUE EL MECANISMO DE CIERRE TENGA UNA FUGA DE ACEITE!**

ⓘ **NO AJUSTE LA VELOCIDAD DEL PASADOR SI LA PUERTA NO SE TRABA. Si esto sucede, ajuste la fuerza del resorte.**

1. Abra la puerta a 90°, mida cuánto tiempo tarda la puerta en cerrar y trabarse. Un tiempo típico de cierre es de 5 a 7 segundos, divido de manera uniforme entre velocidad principal y velocidad del pasador.
2. Si se necesita ajustar el tiempo de cierre, use las válvulas del mecanismo de cierre como se describe a continuación.
   a. Retención (BC): controla la velocidad de apertura de la puerta cuando el ángulo de la puerta se acerca a 90°. **No usar como tope de puerta.**
   b. Velocidad principal (M): controla la velocidad de la puerta durante la mayor parte del movimiento de cierre.
   c. Velocidad del pasador (L): controla la velocidad de la puerta durante los últimos grados del cierre de la puerta.
   d. Velocidad principal de DA (D): esto controla la velocidad de retardo de los cilindros de DA. **Esta válvula se encuentra solo en cilindros DA.**
3. Gire las válvulas en sentido horario para reducir la velocidad de la puerta y en sentido antihorario para aumentar la velocidad de la puerta. La velocidad del pasador y la velocidad principal deben ajustarse conjuntamente.





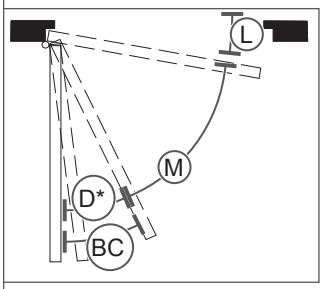
BC = válvula de retención

M = válvula de velocidad principal

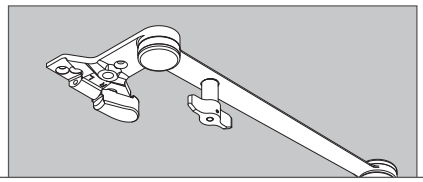
D = Válvula de velocidad de retardo*

L = válvula de velocidad del pasador

* Opcional

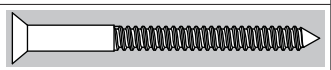
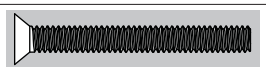
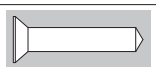


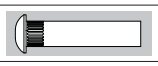
Brazos opcionales para mantener abierto



Para ajustar el brazo opcional para mantener abierto:

Para acoplar o desacoplar la función de mantener abierto, gire la manija de control en un 1/4 de vuelta.

Tipo de tornillo	Imagen	Montaje en el cilindro	Montaje en el soporte	Montaje en el 5.° orificio
Madera (para puertas y marcos de madera)		4 @ 1 3⁄16"	4 @ 1 3⁄8"	1 @ 2"
Máquina (para puertas y marcos de metal) Requiere perforación de orificio y formación de rosca; mejor sujeción		4 @ 1"	4 @ 5⁄8"	1 @ 1 ½"
SRT: autoperforación y formación de rosca (para puertas y marcos de metal)		4 @ 1 ½"	4 @ 1 ½"	1 @ 2"

Tipo de tornillo	Imagen	Notas
Espaciador del quinto orificio		
Pernos pasantes		Se utiliza al montar a través de la puerta
Tornillo de sujeción del piñón		1 M6 x 10 mm para la sujeción del brazo (ver el paso 6)
Tornillos de cubierta		

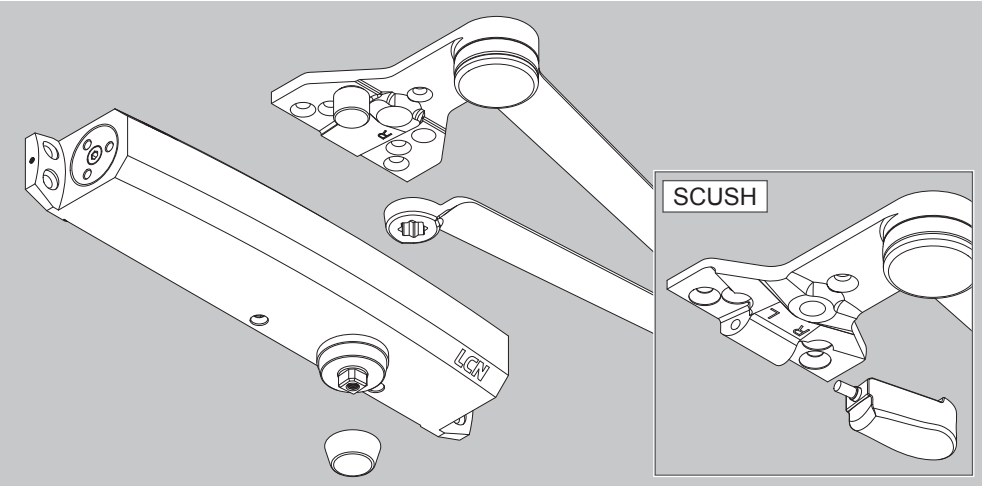
1450 et 1450 de la série DA

71932

Montage du CUSH et bras à ressort CUSH (SCUSH) Mount

Instructions d'installation

PIÈCES

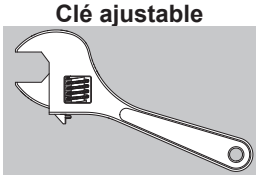


ⓘ **Informations sur l'ensemble de vis à la page 12.**

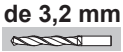
OUTILS

Clé Allen de 4 mm ou 5⁄32 po

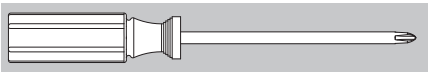
Clé ajustable



Mèche de 3,2 mm (⅛ po)



Tournevis cruciforme



Clé Allen de 8mm ou 5⁄16 po

⚠ MISE EN GARDE ⚠

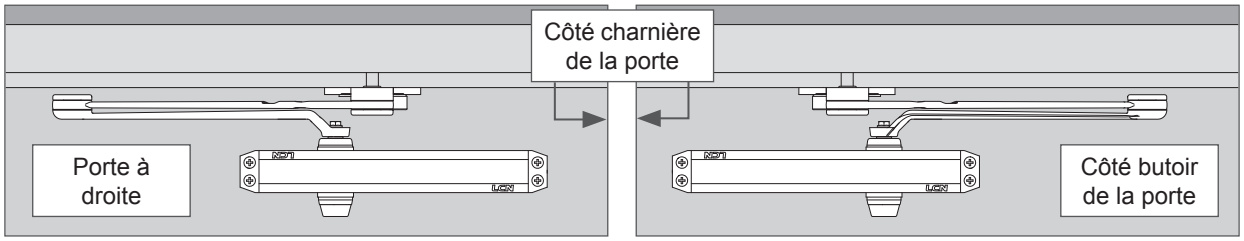
Une installation inadéquate ou le non-respect des règlements peut causer des blessures ou des dommages matériels.
Suivez attentivement toutes les instructions.
Pour toute question, appelez LCN au 877-671-7011.

Les bras de retenue ne doivent pas être installés sur les portes coupe-feu.

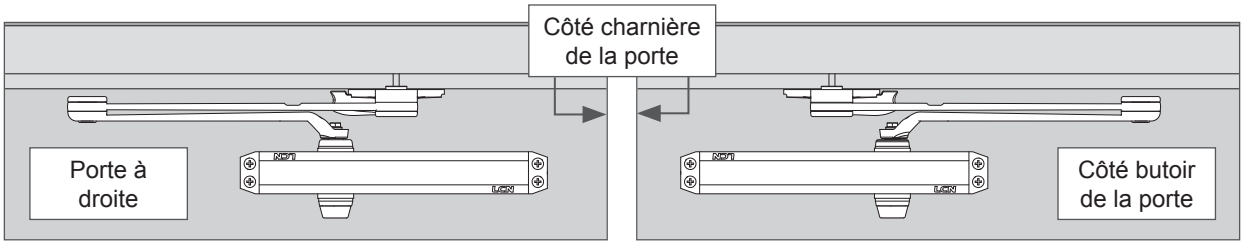
Une trop grande ouverture des soupapes de régulation peut entraîner une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

Choisissez le type d'installation

Montage du CUSH (voir page 10)



Montage du bras à ressort (SCUSH) (voir page 11)



Service à la clientèle

1-877-671-7011 www.allegion.com/us

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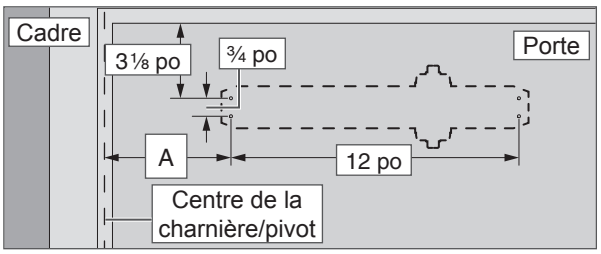
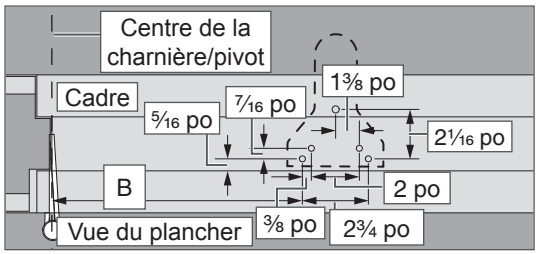
71932 Rev. 08/17-d

Montage du CUSH

Dimensions de montage

ⓘ **Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.**





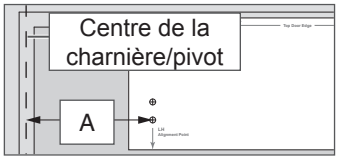
1 Déterminez le degré d'ouverture de la porte requis et trouvez les dimensions « A » et « B » dans les tableaux ci-dessous.

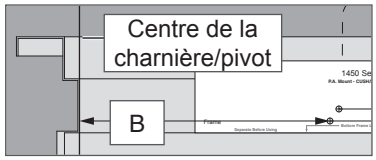
ⓘ **La butée fixe du ressort amortisseur se tiendra à environ 5 degrés au-delà du point d'arrêt normal.**

Ouverture	Mesure à partir du centre de la charnière/pivot	
	A	B
85°	5 1/2 po	11 po
90°	4 3/4 po	10 1/4 po
95°	4 po	9 1/2 po
100°	3 3/8 po	8 7/8 po
105°	2 3/4 po	8 1/4 po
110°	2 1/8 po	7 5/8 po

2 Mesurez à partir du centre de la charnière/pivot et collez le gabarit sur la porte. Faites des marques pour les trous à percer.

ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**





3 Retirez le gabarit et percez des trous de 3,2 mm (1/8 po) aux endroits marqués avec une mèche pour les vis SRT.

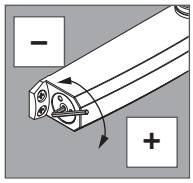
ⓘ **Les vis SRT sont utilisées sur les portes en métal. Les vis à bois sont utilisées sur les portes en bois.**

4 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé Allen, réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.

Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

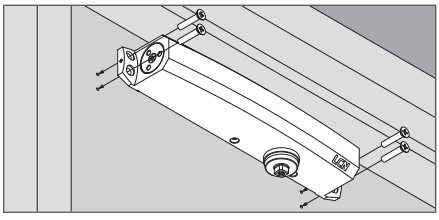
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

Largeur de la porte	Nombre de tours
Réglage de l'ADA	-5
32 po - 815 mm	-3
36 po - 915 mm	0
42 po - 1050 mm	+5
48 po - 1220 mm	+10
54 po - 1372mm	+15



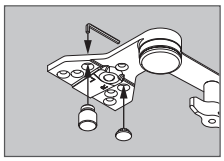
5 Installez le dispositif de fermeture sur la porte.

ⓘ **La valve d'ajustement de le vitesse va du côté opposé aux charnières.**



6 Régler le sabot pour correspondre à la position de la porte.

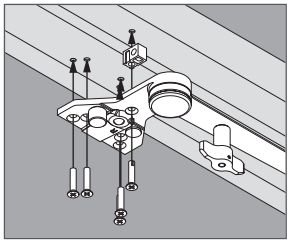
ⓘ **S'il s'agit d'une porte droite, n'ajustez pas le sabot. s'il s'agit d'une porte gauche, déplacez la butée du côté opposé. Pour installer l'ensemble de contact à ressort Cush, voir page 11.**



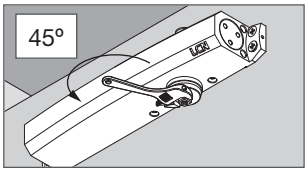
7 Installez le sabot du EDA sur le cadre.

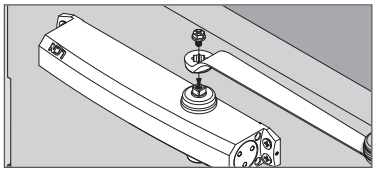
ⓘ **Utilisez l'entretoise facultative du cinquième trou seulement s'il y a un espace entre le cadre et le sabot du EDA.**

ⓘ **Utilisez le 5e trou limité pour révéler plus de 2 1⁄16 po.**



8 Faire pivoter l'arbre du dispositif de fermeture 45°, installez et serrez la vis du bras principal.

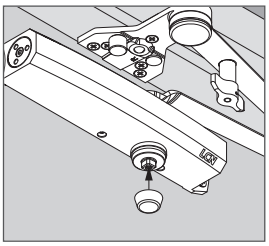


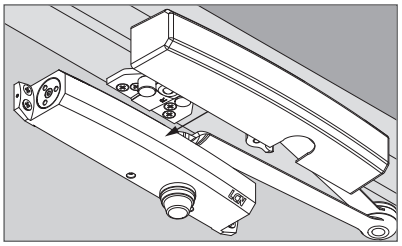


9 Réglez le dispositif de fermeture au besoin. Consultez la page 12 pour les instructions de réglage du dispositif de fermeture.

10 Tournez le capuchon sur l'arbre et installez le couvercle.

ⓘ **Utilisez des vis pour les couvercles entièrement en plastique et en métal.**





Montage du bras à ressort (SCUSH)

Les bras du ressort amortisseur (SCUSH) ont des instructions spécifiques pour le montage du sabot SCUSH. Autrement, les bras du SCUSH s'installent comme des bras CUSH réguliers.

⚠ IMPORTANT ⚠

NE PAS diminuer le réglage de retenue du dispositif de fermeture! La fonction de bras du ressort amortisseur ne remplace pas la retenue.

⚠ IMPORTANT ⚠

L'arrêt du CUSH à environ 5° <u>après</u> celui du 4050 normal.

1 Positionnement

Pour les nouvelles installations, utilisez le modèle standard CUSH. Pour le remplacement d'un bras CUSH existant, utilisez les trous de montage existants.

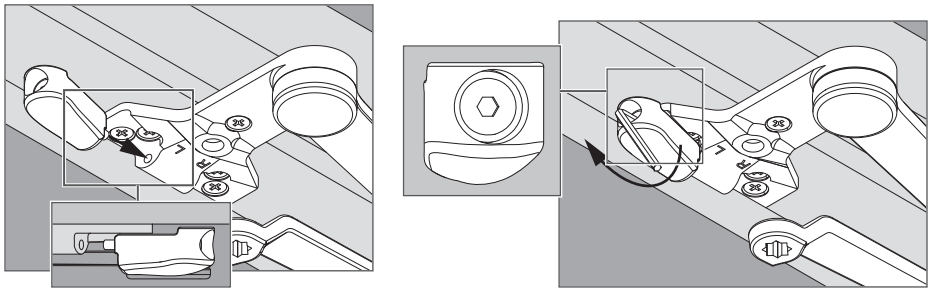
2 Installation

a. Montez le sabot sur l'encadrement.
b. Utilisez une clef hexagonale de 5/32 po ou 4 mm pour installer l'assemblage du bloc de contact, comme illustré. Assurez-vous que la vis est bien serrée sur le sabot.

3 Achèvement de l'installation

Terminez l'installation du dispositif de fermeture tel qu'indiqué pour les bras CUSH standard à la page 10.

ⓘ **Montage à gauche (MG) illustré. Le montage à droite (MD) se fait de manière opposée.**



Support du sabot CUSH après l'installation

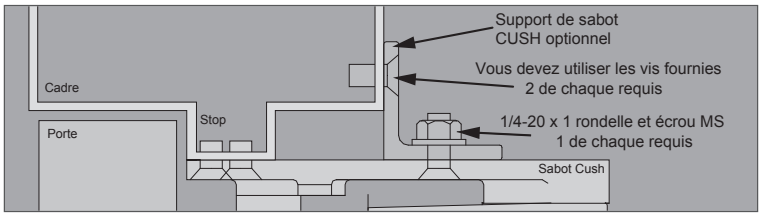
1 Sabot CUSH limité pour révéler entre 1 1⁄16 po et 1 13⁄16 po.

2 Placez le support du sabot CUSH au-dessus du sabot et tenez-le contre l'encadrement.

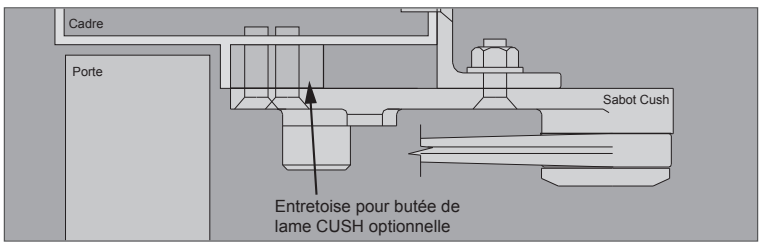
3 Assemblez la vis, la rondelle et l'écrou tel qu'illustré ci-dessous, puis serrez solidement.

4 En vous servant du support à sabot comme gabarit, percez et taraudez deux trous pouvant accueillir deux vis 1/4-20 dans l'encadrement.

5 Insérez les vis et serrez solidement.



6 Si les encadrements ont une butée de lame de 1/2 po, il est nécessaire d'utiliser une entretoise pour butée de lame de 1,27 cm (1/2 po), offerte chez votre fournisseur. Utilisez une entretoise pour butée de lame et un support de sabot, lorsque nécessaire.



Réglage de la soupape du dispositif de fermeture

Vérifiez le temps de fermeture et réglez le dispositif de fermeture au besoin.

⚠ MISE EN GARDE ⚠

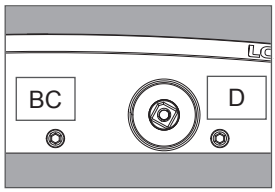
Trop ouvrir les soupapes de régulation (décrites ci-dessous) peut causer une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.

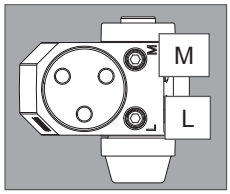
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

ⓘ **La valve se ferme en tournant dans le sens des aiguilles d'une montre; ne jamais faire plus de 3 tours dans le sens opposé aux aiguilles d'une montre à partir de la position fermée. Réglez les soupapes en effectuant 1/4 de tour ou moins à la fois. N'EFFECTUEZ PAS PLUS DE 3 ROTATIONS COMPLÈTES - CELA CAUSERA UNE FUITE D'HUILE DANS LE DISPOSITIF DE FERMETURE!**

ⓘ **NE RÉGLEZ PAS LA VITESSE D'ENCLENCHEMENT SI LA PORTE NE S'ENCLENCHE PAS. Si cela se produit, réglez la force du ressort.**

1. Ouvrez la porte à 90° et comptez le temps nécessaire pour que la porte se ferme et s'enclenche. Le temps de fermeture typique est de 5 à 7 secondes et est divisé également entre la vitesse principale et la vitesse d'enclenchement.
2. Si le temps de fermeture doit être réglé, utilisez les soupapes du dispositif de fermeture décrites ci-dessous.
   a. Retenue (BC) - contrôle la vitesse d'ouverture de la porte lorsque l'angle s'approche de 90°. **N'utilisez pas de butoir.**
   b. Vitesse principale (M) - contrôle la vitesse de la porte durant presque tout le mouvement de fermeture.
   c. Vitesse d'enclenchement (L) - contrôle la vitesse de la porte durant les derniers degrés de la fermeture.
   d. Vitesse DA (D) — contrôle la vitesse du retardement des cylindres DA. **Cette soupape est présente sur les cylindres à retardement seulement.**
3. Faites tourner les soupapes dans le sens horaire pour faire diminuer la vitesse de la porte, et dans le sens antihoraire pour la faire augmenter. La vitesse d'enclenchement et la vitesse principale doivent être réglées ensemble.





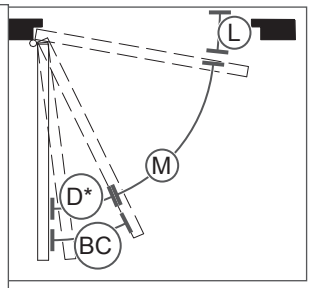
BC = soupape de retenue

M = soupape de la vitesse principale

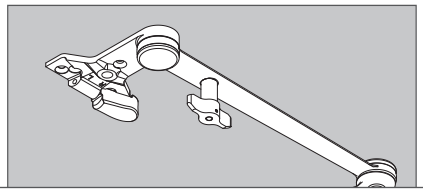
D = Valve de vitesse de délai*

L = soupape de la vitesse d'enclenchement

* Optionnel

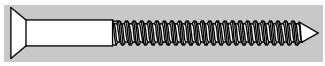
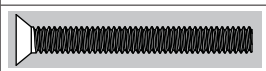


Bras de retenue facultatifs



Pour régler le bras de retenue facultatif:

Pour enclencher ou désengager une caractéristique ouverte, tournez la poignée de contrôle d'un quart de tour.

Type de vis	Image	Montage du cylindre	Montage du support du BP	Montage du 5e trou
Bois (pour les portes et les cadres en bois)		4 @ 1 3⁄16 po	4 @ 1 3⁄8 po	1 @ 2 po
De mécanique (pour les portes et les cadres en métal) Nécessite de percer des trous et de tarauder; meilleure retenue		4 @ 1 po	4 @ 5⁄8 po	1 @ 1 ½ po
SRT - Auto taraudeuse et à alésage automatique (pour les portes et les cadres en métal)		4 @ 1 ½ po	4 @ 1 ½ po	1 @ 2 po

Type de vis	Image	Remarques
Entretoise pour cinquième trou		
Boulons traversants		Utilisée lors du montage à travers la porte
Vis de fixation du pignon		1 M6 x 10 mm pour la fixation du bras (voir étape 6)
Vis du couverture		

LCN®
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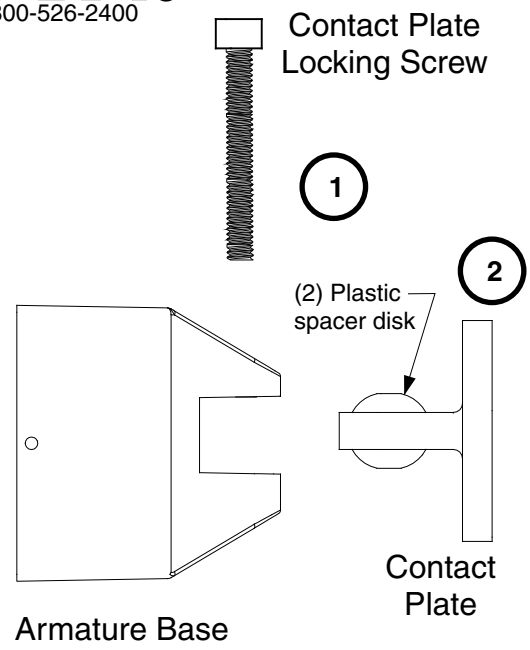
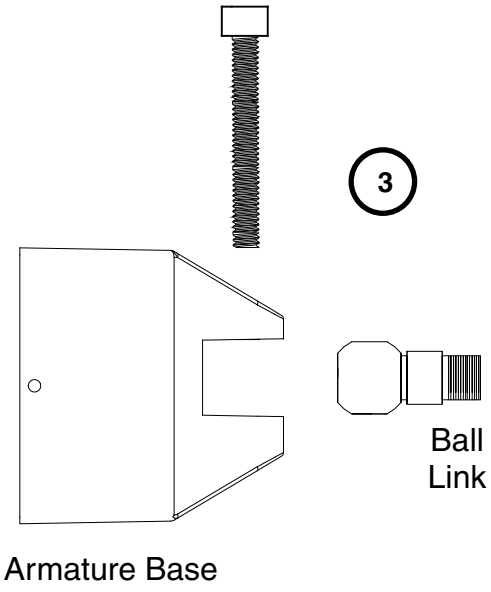
SEM 7810 Extension

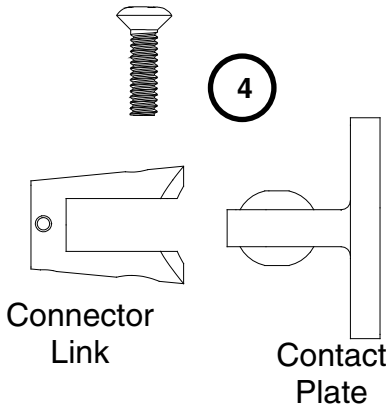
⚠CAUTION

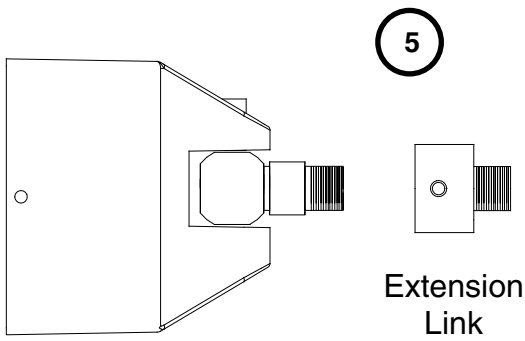
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 800 - 526 - 2400

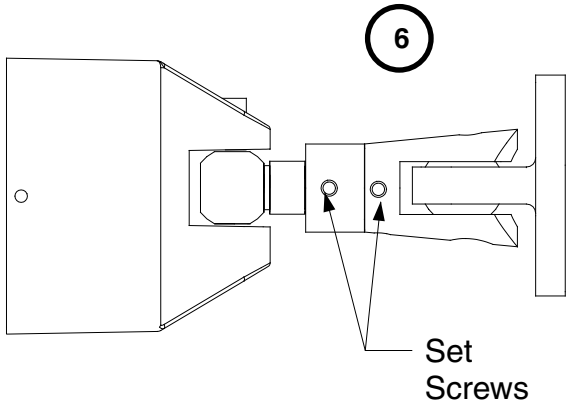


1. Remove contact plate locking screw.
2. Pull contact plate away from armature base. (Caution: the 2 plastic spacer disks on the contact plate may fall out.)
3. Insert ball link into armature base. Reinsert and tighten locking screw.
4. Insert contact plate with plastic spacer disks in place into connector link. Reinsert and tighten screw.
5. Attach extension link(s) as needed. (Note: Using just the ball link and connector link will create a 1 ½" link. Extension Links are available in different lengths and can be combined together to achieve the desired length.)
6. Attach contact plate and connector link assembly to extension link (s). Align contact plate with magnet and tighten all set screws.









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SEM 1960

29426

Sentronic Electro-Magnetic
Single Door Holder Surface Wall Mount

Installation Instructions

⚠ CAUTION ⚠

Improper Installation may result in personal injury or property damage. Follow all instructions carefully. For questions, call LCN at 877-671-7011

1 Locate the Surface Mount Box

1a The magnet is shipped partially assembled for protection. Unscrew the cover from the magnet bracket assembly. Unscrew the magnet bracket assembly from the surface mount box. Keep the screws for later reattachment.

1b See Fig. 1. Measure dimensions A and B. Find the intersection of those two dimensions in Table 1. The intersection is dimension C, the centerline of the surface mount box location. (For 180° installations, take B dimension and subtract 5 ⅝" to find the centerline of junction box.)

ⓘ **Note: Optional extensions may be needed.**

1c If dimension A or B is not shown on the chart, extrapolate to find dimension C as follows:

- If dimension A is 11" and dimension B is 36", then: Dimension C = 33 7/16 - ((33 7/16 - 33)/2) = 33 7/32
- If dimension A is 12" and dimension B is 35", then: Dimension C = 33 - ((33 - 30 7/8)/2) = 31 15/16
- If dimension A or B is beyond those listed in Table 1 or if they intersect in a blank area in Table 1, use optional extensions as needed to align contact plate and magnet.

1d See Fig. 2. The center of the surface mount box should be located about 5" from the top of the door. Using the 10 x 1 ½" PHWS screws, attach the surface mount box vertically to the wall with the surface conduit knockout pointing in the desired direction. Anchors to be provided by others to suit wall construction other than wood. The box must at least withstand a 50 pound pull.

1e Install the ½" x 11/32" surface conduit as needed.

1f Pull wire in accordance with applicable codes, standards, and authorities having jurisdiction. Electrical specifications are shown below.

Input Voltage	Current Draw Max.
120VAC, 60Hz	.02A
24VAC, 60Hz/24VDC	.02A
12VDC	.03A

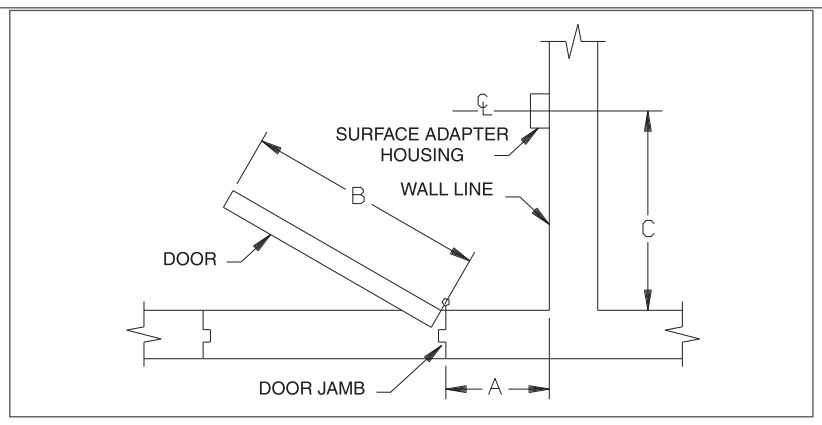


Figure 1

2 Install the Magnet

2a See Fig. 3. Connect the supply earth ground wire to the green wire on the magnet bracket assembly. Connect the power supply common wire to the screw terminal marked COM. If the supply voltage is 24V, connect the power supply hot wire to the screw terminal marked 24V. If the supply voltage is 120V, connect the power supply hot wire to the screw terminal marked 120V. If the supply voltage is 12V, connect the power supply hot wire to the screw terminal marked 12V. Polarity is important on the 12V input. There are protective plastic tabs over the terminal screws. Break off the two tabs that protect COM and the desired voltage so that the screw heads are exposed.

2b See Fig. 2. With the magnet wired, position the magnet bracket assembly into the surface mount box and attach it to the box using the (4) 10-24 shorter screws from step 1A. Tighten firmly. Attach the cover housing using the (2) 10-24 longer screws from step 1A.

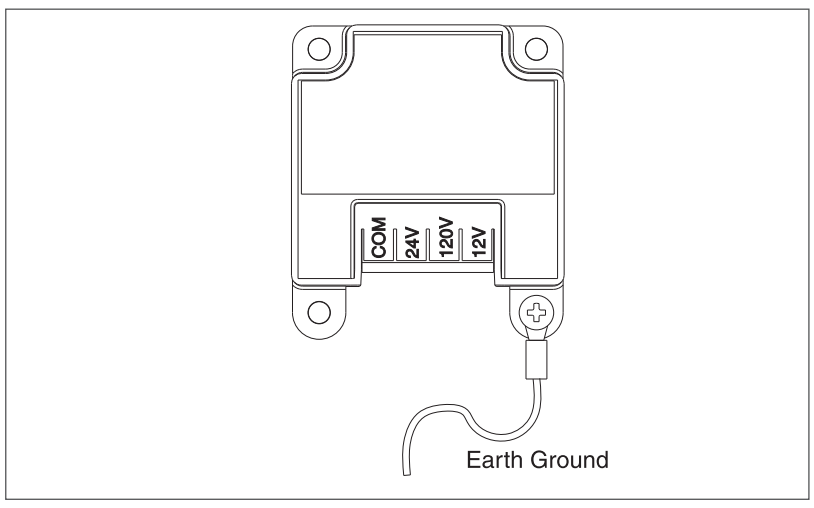


Figure 3

Magnetic Door Holder Placement Chart+
1960
B= dimension of door width (Inch)

A = Dimension of door jamb to wall (Inch)	Nearest Whole Number	28	30	32	34	36	38	40	42	44	46	48
	2	26	28	30	32	34	36	38	40	42	44	46
	4	26	28	30	32	34	36	38	40	42	44	46
	6	26	28	29 3/4	32	34	36	38	40	42	44	46
	8	25 11/16	27 11/16	29 3/4	31 3/4	33 3/4	35 13/16	37 13/16	39 13/16	41 13/16	43 13/16	45 7/8
	10	25 1/4	27 1/4	29 5/16	31 3/8	33 7/16	35 1/2	37 1/2	39 1/2	41 9/16	43 5/8	45 5/8
	12	24 9/16	26 11/16	28 3/4	30 7/8	33	35	37	39 1/8	41 3/16	43 1/4	45 1/4
	14	23 11/16	26	28	30 1/4	32 3/8	34 7/16	36 1/2	38 5/8	40 11/16	42 3/4	44 13/16
	16	22 11/16	25	27 1/4	29 7/16	31 9/16	33 3/4	35 7/8	38	40	42 3/16	44 5/16
	18	21 3/8	23 13/16	26 1/8	28 7/16	30 11/16	32 7/8	35	37 1/4	39 3/8	41 1/2	43 5/8
	20	19 13/16	22 3/8	23 7/8	27 1/4	29 5/8	31 7/8	34 1/8	36 3/8	38 9/16	40 3/4	43
	22		20 11/16	23 3/8	25 7/8	28 3/8	30 3/4	33	35 3/8	37 5/8	39 7/8	42
	24				24 1/4	26 7/8	29 3/8	31 11/16	34 1/4	36 1/2	38 13/16	41
	26						27 13/16	30 3/8	32 7/8	35 5/16	37 11/16	40
	28								31 3/8	33 7/8	36 3/8	38 3/4
	30								29 5/8	32 5/16	34 7/8	37 3/8
	32										33 1/4	35 13/16

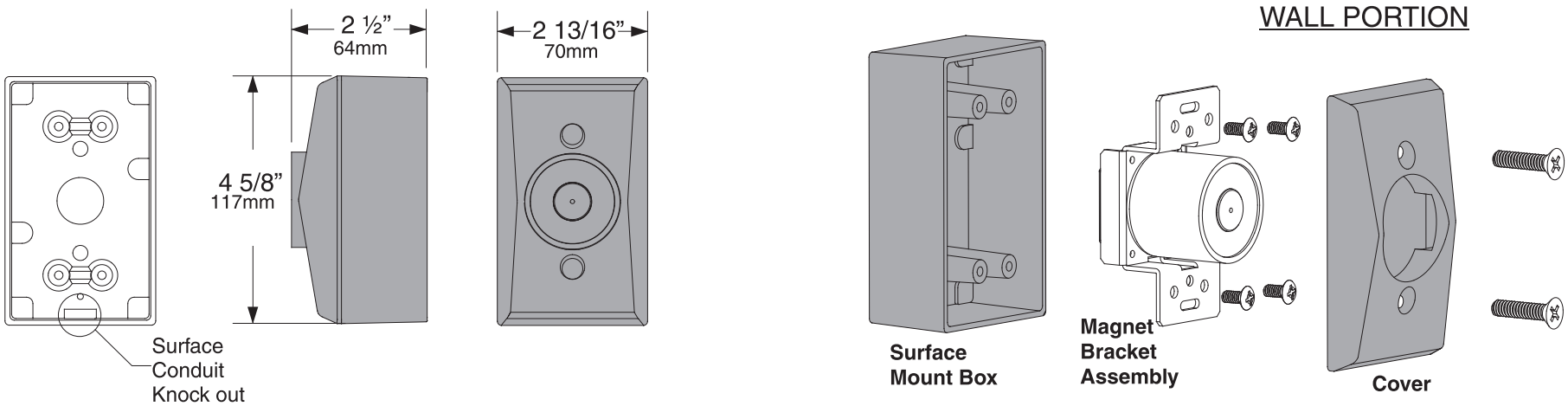
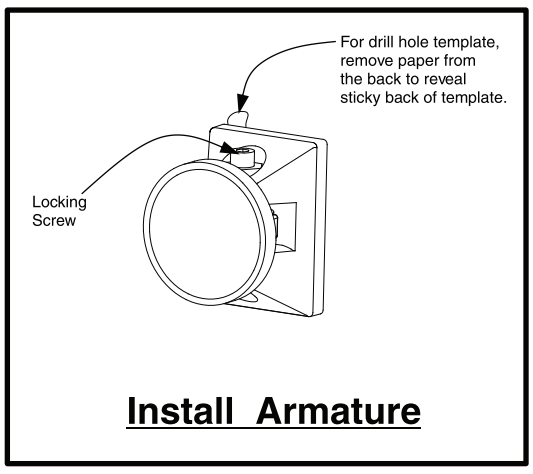


Figure 2



Install Armature

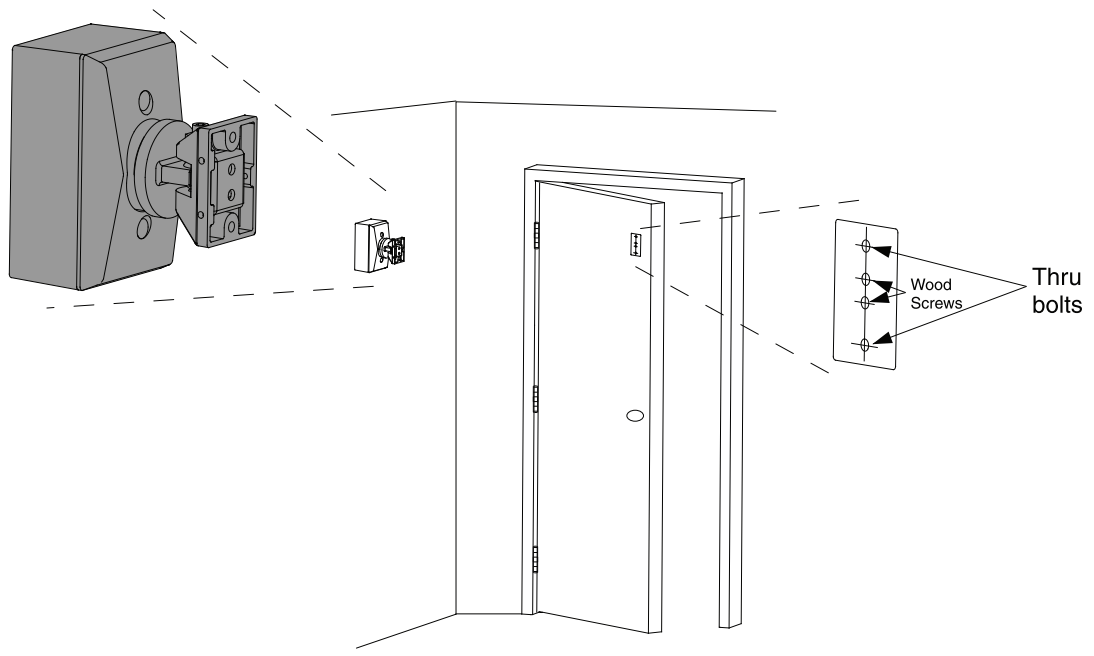
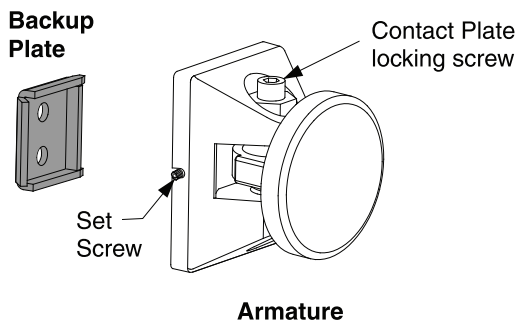


Figure 4

WOOD SCREW MOUNTING

FOR SOLID WOOD CORE DOORS

This view shows the contact plate locking screw accessible from the top. Rotate backup plate 180° for underside access.



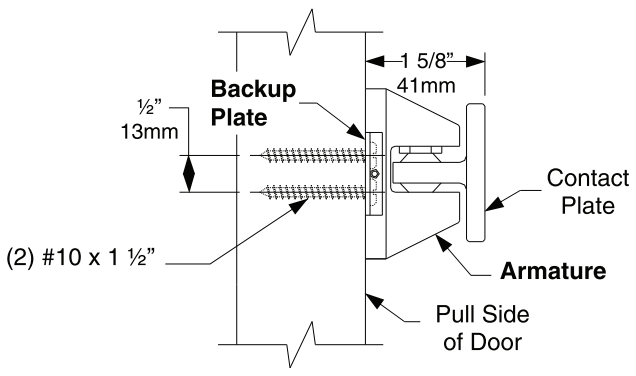
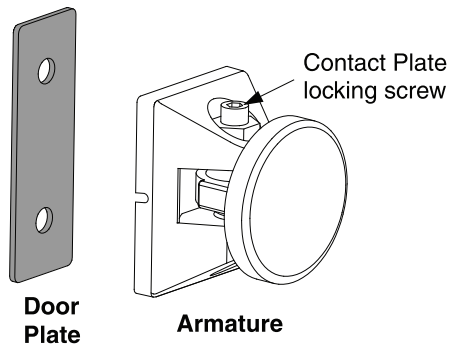


Figure 5

THRU BOLT MOUNTING

RECOMMENDED FOR HOLLOW METAL, HOLLOW CORE OR COMPOSITE TYPE WOOD DOORS



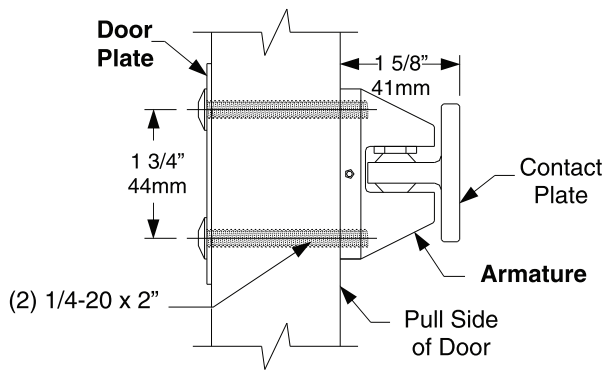


Figure 6

3	Install the Door Armature
3a	See Fig. 4. Slightly loosen the contact plate locking screw using a 5⁄32" Allen wrench so the contact plate can rotate with some resistance. Remove the protective paper from the drill template sticky-back label on the back of the door armature.
3b	Place the armature against the wall magnet. This is best done with power applied to the magnet. If power is not available, hold the armature in place by hand. The armature contact plate must fully cover the magnet. If the contact plate is not centered and flat on the magnet, reduced holding force will result.
3c	With the armature against the magnet, open the door and press it against the armature and magnet. Pull the door away to transfer the drill template to the door. Template may need assistance with transferring to door, using a flat blade screwdriver on the template tab that sticks out and push it onto the door while pulling the door away.
3d	See Fig. 5 and 6. Determine if the armature will be mounted using the wood screw kit or the thru bolt kit. The thru bolt kit is recommended for 1 ¾" hollow metal, hollow core, or composite-type wood doors. If using the wood screw kit, drill the center two holes on the template using a ⅛" bit by 1 ¼" deep. If using the thru bolt kit, drill the outer two holes on the template using a 5⁄16" bit all the way through the door. Remove the template after the holes are drilled.
3e	Attached the armature to the door using the appropriate plate and screws. If using the wood screws and backup plate, tighten the armature set screw against the backup plate as the last step using the 1⁄16" Allen wrench provided.

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29426 Rev. 01/14-c

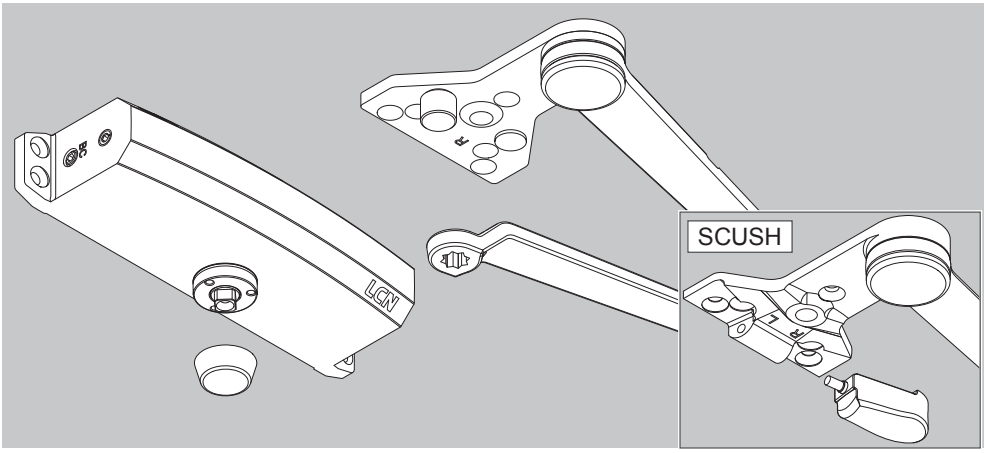
1250 Series

71379

CUSH & Spring CUSH (SCUSH) Mount

Installation Instructions

PARTS

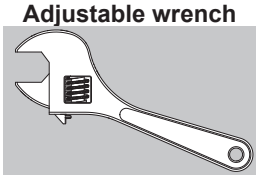


ⓘ **Screw pack information is on page 4.**

TOOLS

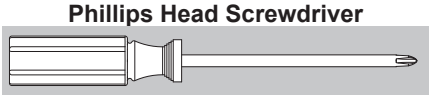
5/32" or 4mm Hex Wrench

Adjustable wrench



1/8" Drill Bit

Phillips Head Screwdriver



5/16" or 8mm Hex Wrench

⚠ CAUTION ⚠

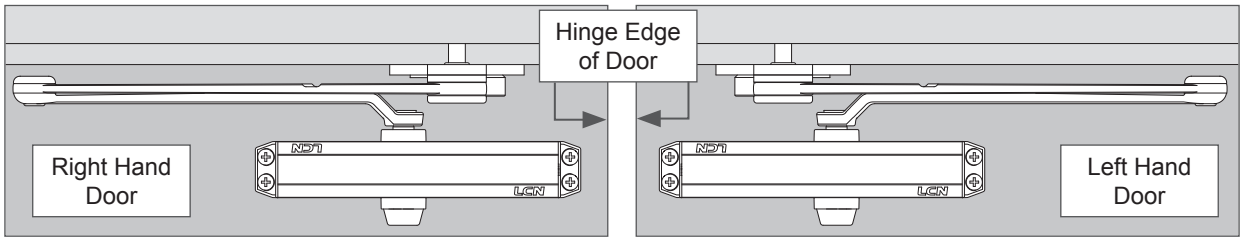
Improper installation or regulation may result in personal injury or property damage.
Follow all instructions carefully.
For questions, call LCN at 877 - 671 - 7011

Hold open arms must not be installed on fire rated doors.

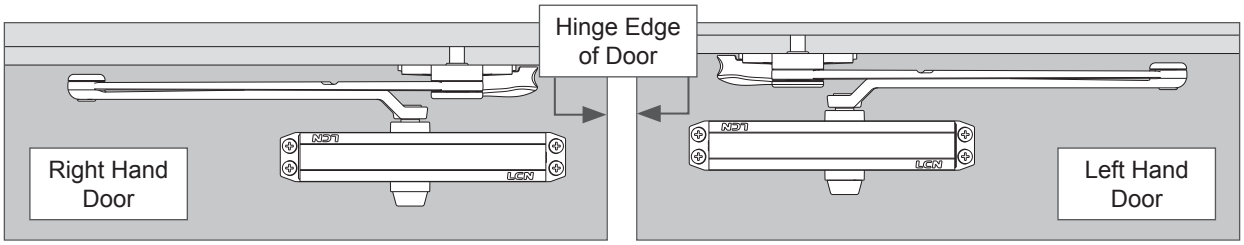
Opening the regulation valves too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.
FOLLOW ALL INSTRUCTIONS CAREFULLY.

Choose Installation Type

CUSH (see page 2)



Spring CUSH (SCUSH) (see page 3)



Customer Service

1-877-671-7011 www.allegion.com/us

ALLEGION

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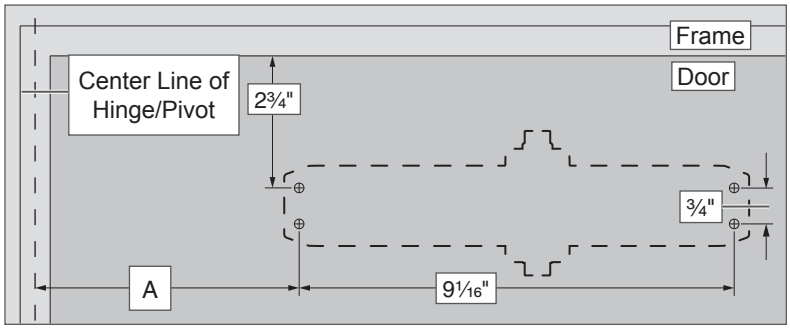
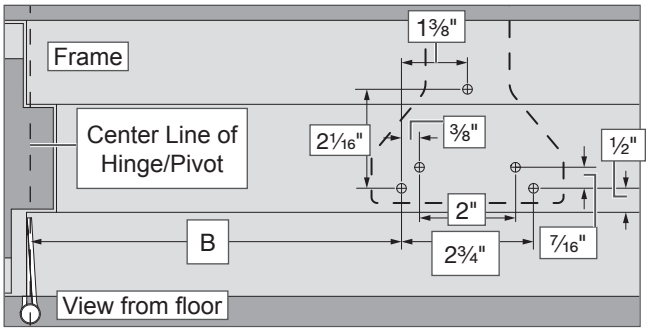
71379 Rev. 07/17-d

CUSH

Mounting Dimensions

ⓘ **Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.**





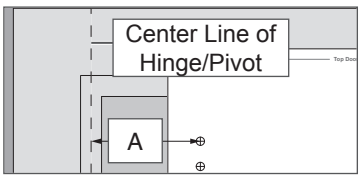
1 Determine the degree of door opening required and find dimensions “A” and “B” in the charts below.

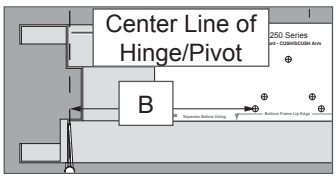
ⓘ **SCUSH dead stop will occur about 5° beyond normal dead stop point.**

Opening	Measurement from Door Edge	
	A	B
85°	9 1/8”	11 1/8”
90°	8 3/8”	10 3/8”
95°	7 5/8”	9 5/8”
100°	7”	9”
105°	6 3/8”	8 3/8”
110°	5 3/4”	7 3/4”

2 Measure from centerline of hinge/pivot and stick template on door. Mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**





3 Remove template, and drill holes where marked with a 1/8” drill bit for SRT screws.

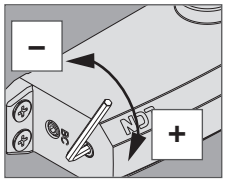
ⓘ **SRT screws are used on metal doors.**
Wood screws are used on wood doors.

4 Measure and determine your door’s width. Using a hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.

Turn counterclockwise for “-”; turn clockwise for “+”

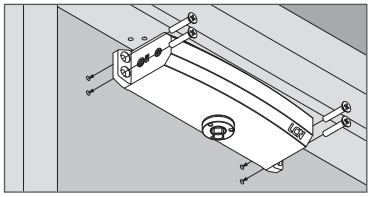
ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

Door Width	Number of Turns
ADA Setting	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Install closer onto door.

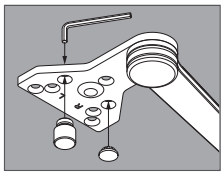
ⓘ **Speed regulation valve goes away from the hinge.**



6 Adjust the shoe to match the door handing.

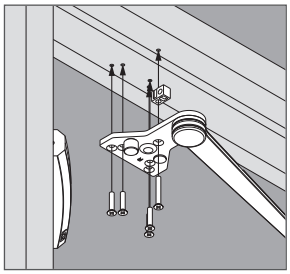
ⓘ **If RH door, do not adjust shoe. If LH door, change stop location to opposite side.**

ⓘ **For installing SCUSH Contact block, see page 3.**

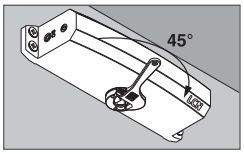


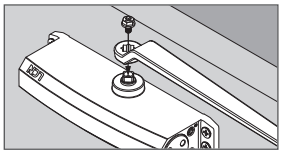
7 Open door to 45°, fasten CUSH shoe to frame with fasteners provided.

ⓘ **Use of 5th Hole limited to reveals greater than 2 11/16”.**



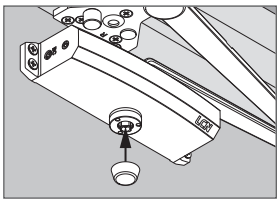
8 Preload closer shaft to 45°, attach main arm to closer.

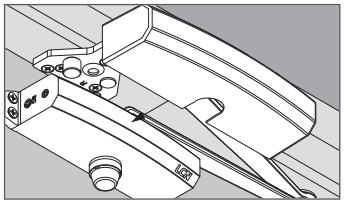




9 Adjust the closer, if necessary. See page 4 for closer adjustment instructions.

10 Screw cap onto shaft and install cover (optional).





Spring CUSH (SCUSH)

Spring CUSH arms (SCUSH) have specific instructions for mounting the SCUSH shoe. Otherwise, SCUSH arms install like a regular CUSH arm.

⚠ IMPORTANT ⚠

DO NOT reduce the closer's backcheck setting! Spring CUSH arm function does not replace backcheck.

⚠ IMPORTANT ⚠

Spring CUSH dead stop will occur approximately 5° <u>beyond</u> normal 4050 dead stop point.

1 Locating

In new installations, use the standard CUSH template. When replacing an existing CUSH arm, use the existing mounting holes.

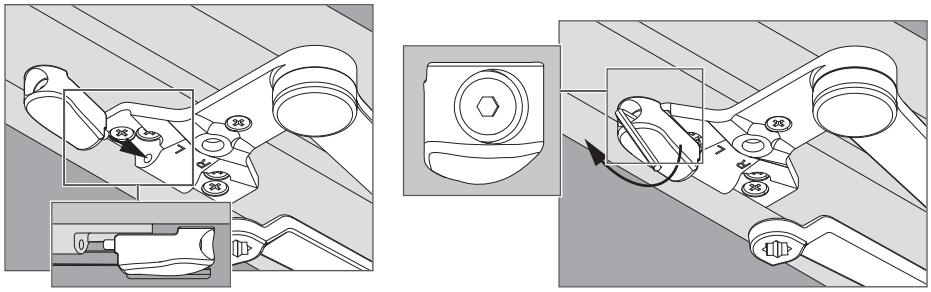
2 Installation

a. Mount the shoe onto the frame.
b. Use a 5/32" or 4mm hex wrench to install the contact block assembly, as shown below. Make sure the screw is tightened securely into the shoe.

3 Completing installation

Complete the closer installation as directed for regular CUSH arms on page 2.

ⓘ **Left Hand (LH) shown, Right Hand (RH) opposite.**



CUSH Shoe Support for After Installation

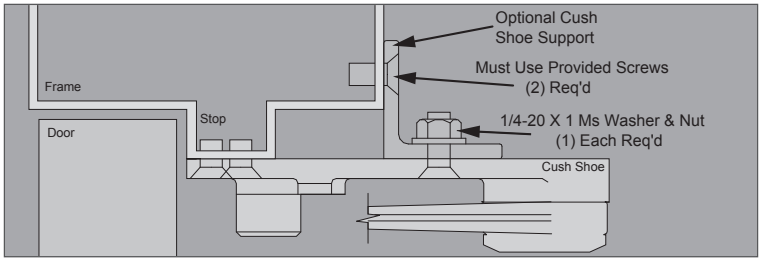
1 CUSH Shoe Support limited to reveals between 1 1/16" and 1 13/16".

2 Set CUSH Shoe Support on top of the shoe and hold against the frame.

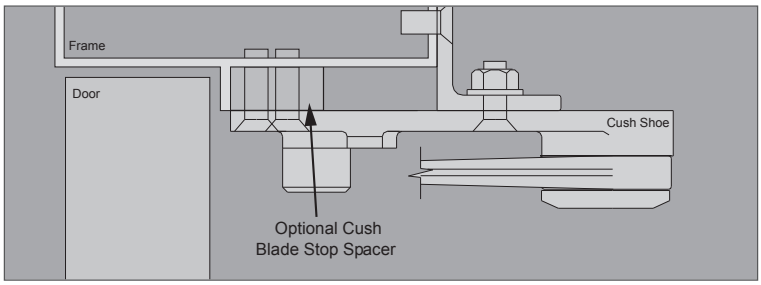
3 Assemble the screw, washer, and nut as shown below, and tighten securely.

4 Using the shoe support as a template, drill and tap two holes for 1/4-20 screws in the frame.

5 Insert the screws and tighten securely.



6 Should frames have 1/2" Blade Stop, it is necessary to use a 1/2" Blade Stop Spacer, available from your dealer. Use both the Blade Stop Spacer and Shoe Support wherever required.



Closer Valve Adjustment

Check closing time, and adjust closer if needed.

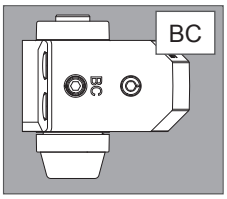
⚠ CAUTION ⚠

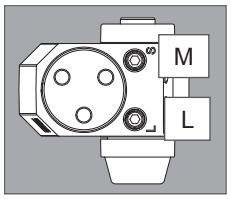
Opening the regulation valves (described below) too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.

FOLLOW ALL INSTRUCTIONS CAREFULLY.

- ⓘ **Valve must be closed CW to seat, never more than 3 turns CCW from seated position. Adjust the valves in 1/4 turn increments or less at a time. DO NOT TURN MORE THAN 3 FULL ROTATIONS. THIS WILL CAUSE THE CLOSER TO LEAK OIL!**
- ⓘ **DO NOT ADJUST THE LATCH SPEED IF THE DOOR DOES NOT LATCH. If this occurs, adjust the spring force.**

1. Open the door to 90°, measure how long the door takes to close and latch. A typical closing time is 5 to 7 seconds, evenly divided between main speed and latch speed.
2. If the closing time needs to be adjusted, use the closer valves described below.
   a. Backcheck- this controls door opening speed as the door angle approaches 90°. **Do not use as a door stop.**
   b. Main Speed- this controls door speed during most of the closing motion.
   c. Latch Speed- this controls door speed during the last few degrees of door closing.
3. Turn the valves clockwise to decrease door speed, and counterclockwise to increase door speed. The latch speed and main speed should be adjusted together.

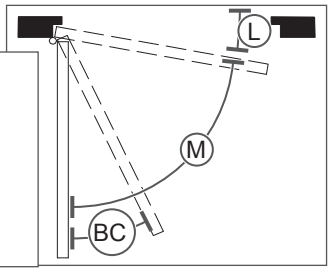




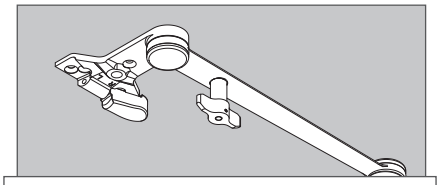
BC = Backcheck valve

M = Main speed valve

L = Latch speed valve

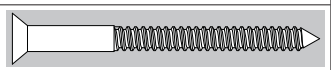
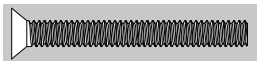
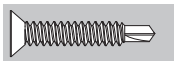


Optional Hold Open Arms



To adjtust Optional Hold-open arm:

To engage or disengage hold open feature, turn control handle 1/4 turn.

Screw Type	Picture	Cylinder Mounting	Shoe Mounting	5th Hole Mounting
Wood (for wood doors & frames)		4 @ 1 3⁄16"	4 @ 1 3⁄8"	1 @ 2"
Machine (for metal doors & frames) Requires hole drilling & tapping; best hold.		4 @ 1"	4 @ 5⁄8"	1 @ 1 ½"
SRT - Self Reaming & Tapping (for metal doors & frames)		4 @ 1 ½"	4 @ 1 ½"	1 @ 2"

Screw Type	Picture	Notes
Fifth Hole Spacer		
Thru Bolts		Used when mounting through door.
Pinion Attachment Screw		1 M6 x 10mm for attachment of the arm (see step 6).

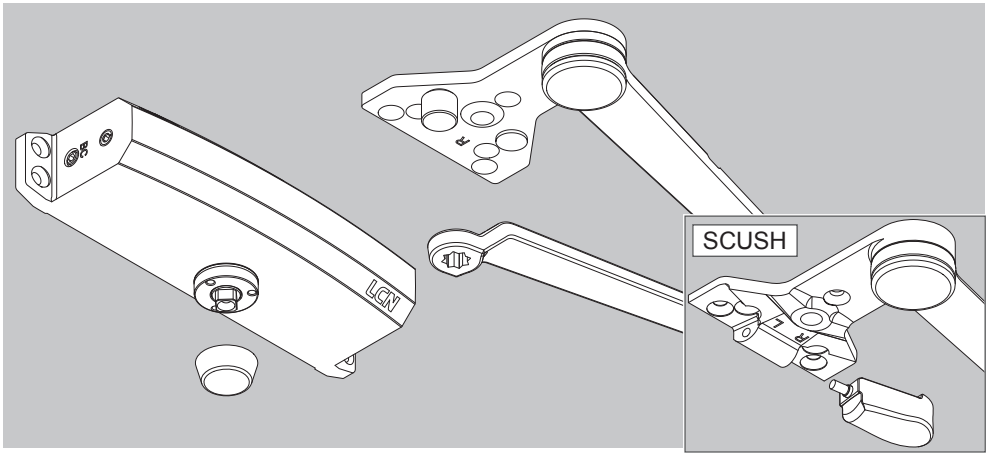
Serie 1250

71379

Montaje en CUSH y Cierrapuertas de Resorte (SCUSH)

Instrucciones de Instalación

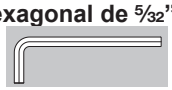
PIEZAS



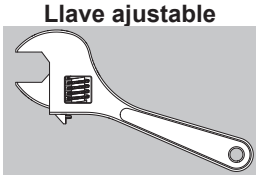
ⓘ **La información sobre el paquete de tornillos se encuentra en la página 8.**

HERRAMIENTAS

Llave hexagonal de 5⁄32" o 4 mm

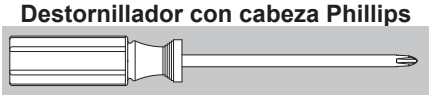


Llave ajustable

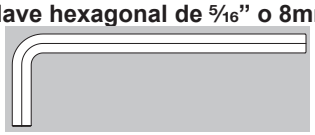


Broca de taladro de ⅛"

Destornillador con cabeza Phillips



Llave hexagonal de 5⁄16" o 8mm



⚠ PRECAUCIÓN ⚠

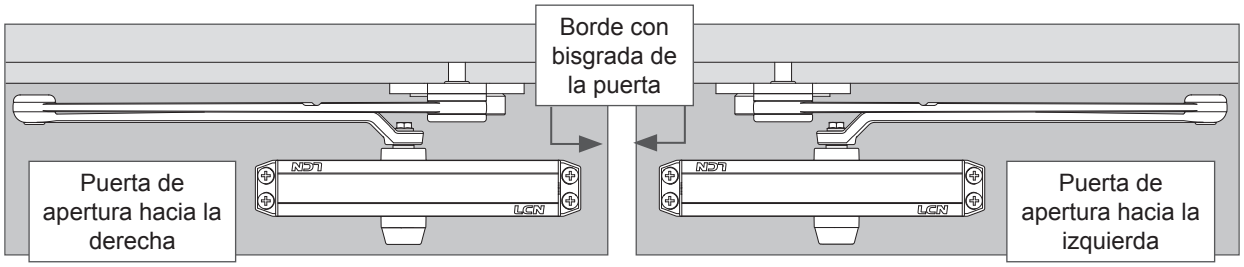
La instalación o regulación incorrecta puede resultar en lesiones personales o daño a los bienes.
Siga todas las instrucciones con atención.
En caso de duda, llame a LCN al 877-671-7011

Los brazos para mantener abierto no deben instalarse en puertas con clasificación ignífuga.

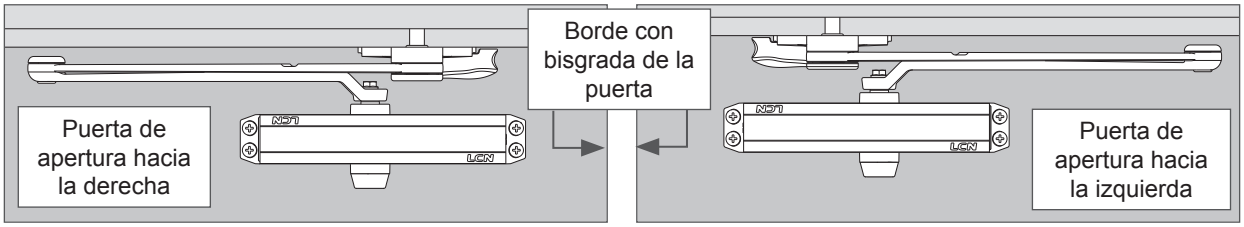
¡Abrir demasiado las válvulas de regulación puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales.
SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

Seleccione el tipo de instalación

Montaje en CUSH (vea la página 6)



Cierrapuertas de Resorte (SCUSH) (vea la página 7)



Servicio al cliente

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ALLEGION

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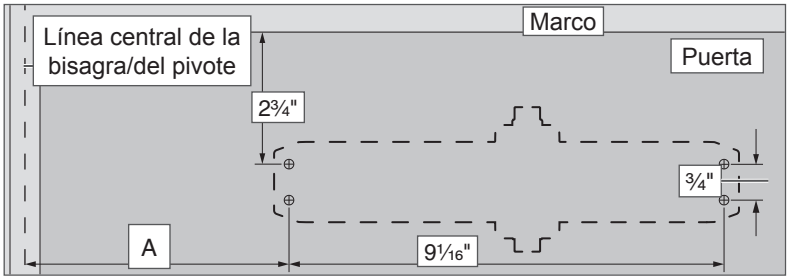
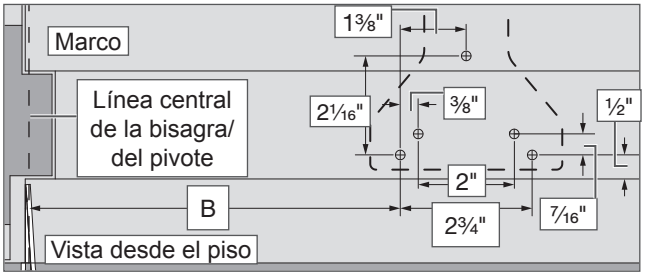
71379 Rev. 08/17-d

Montaje en CUSH

Dimensiones de montaje

ⓘ **Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.**





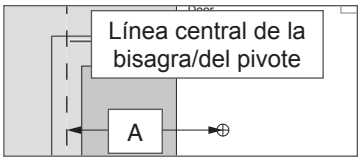
1 Determine el grado de apertura de la puerta requerido y busque las dimensiones “A” y “B” en el cuadro siguiente.

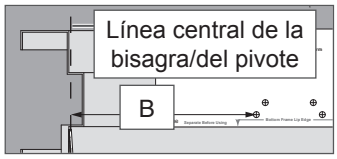
ⓘ **El cierrapuertas de resorte se detendrá a alrededor de 5 grados más allá del punto normal de detención.**

Apertura	Medición desde el borde de la puerta	
	A	B
85°	9 1/8”	11 1/8”
90°	8 3/8”	10 3/8”
95°	7 5/8”	9 5/8”
100°	7”	9”
105°	6 3/8”	8 3/8”
110°	5 3/4”	7 3/4”

2 Mida desde la línea central de la bisagra/del pivote y adhiera la plantilla en la puerta. Marque los orificios de perforación

ⓘ **Vea las dimensiones de montaje anteriores según sea necesario.**





3 Retire la plantilla y perfore orificios donde está marcado con una broca de taladro de ⅛” para tornillos SRT.

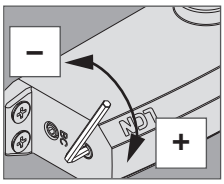
ⓘ **Los tornillos SRT se usan en puertas de metal.**
Los tornillos de madera se usan en puertas de madera.

4 Mida y determine el ancho de su puerta. Con una llave hexagonal, ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

Gire en sentido antihorario para “-”; gire en sentido horario para “+”.

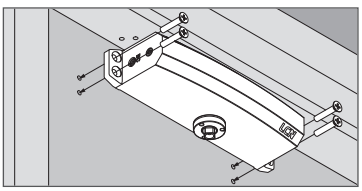
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

Ancho de la puerta	Número de giros
Configuración de ADA	-12
32” - 815 mm	-6
36” - 915 mm	0
42” - 1050 mm	+6
48” - 1220 mm	+13



5 Instale el mecanismo de cierre en la puerta.

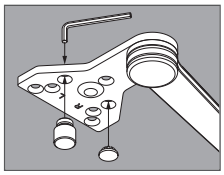
ⓘ **La vàlvula de regulaciòn de velocidad va con direction opuesta de la bisagra.**



6 Ajuste del zapato para que coincida con la orientación de la puerta

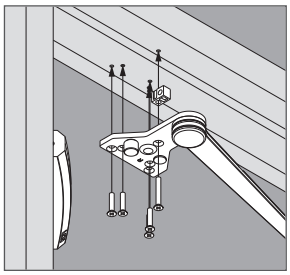
ⓘ **En caso de puerta que se abre hacia la derecha, no ajuste la zapata. En caso de puerta que se abre hacia la izquierda, cambie la ubicación del tope al lado opuesto.**

ⓘ **Para instalar el bloque de contacto con amortiguación por resorte, vea la página 7.**

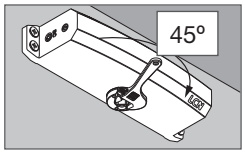


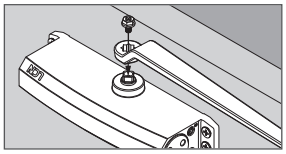
7 Gire el eje del cerrador a 45° y coloque la zapata del cierrapuertas con los sujetadores ya incluidos.

ⓘ **El uso del 5.to orificio está limitado a listones de más de 2 11⁄16”.**



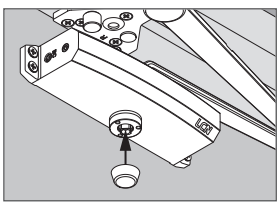
8 Cargue previamente el mecanismo de cierre a 45°, instale el brazo principal en el mecanismo de cierre.

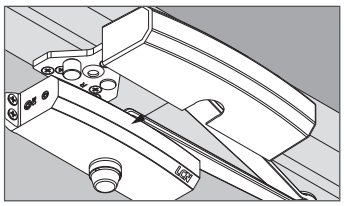




9 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 8 para ver las instrucciones de ajuste del mecanismo de cierre.

10 Atornille la tapa en el eje e instale la cubierta (opcional).





Cierrapuertas con resorte (SCUSH)

Los brazos del cierrapuertas de resorte (SCUSH) cuentan con instrucciones específicas para el montaje de la zapata del cierrapuertas con resorte. De lo contrario, los brazos del cierrapuertas con resorte se instalan como los brazos de un cierrapuertas regular.

⚠ IMPORTANTE ⚠

¡NO reduzca la configuración de retención del cierrapuertas! La función del brazo del cierrapuertas con resorte no reemplaza la retención.

⚠ IMPORTANT ⚠

El paro en seco del resorte podrá ocurrir aproximadamente 5° <u>después</u> del punto del paro en seco 4050 normal.

1 Ubicación

En instalaciones nuevas, use la plantilla estándar del cierrapuertas. Al reemplazar el brazo de un cierrapuertas existente, use los orificios de montaje existentes.

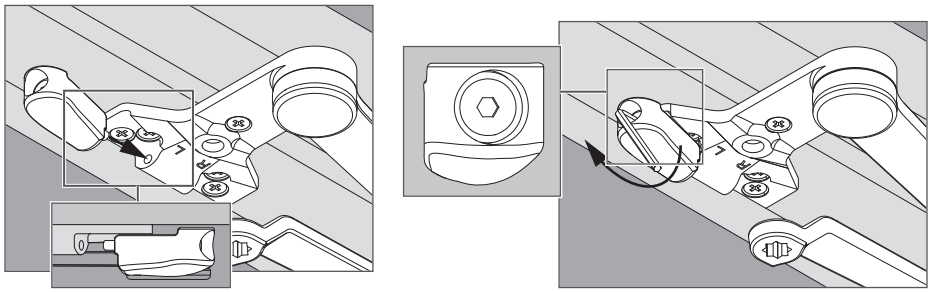
2 Instalación

a. Monte la zapata en el marco.
b. Use una llave hexagonal de 5/32” o 4 mm para instalar el ensamble del bloque de contacto, como se muestra a continuación. Asegúrese de que el tornillo esté ajustado firmemente en la zapata.

3 Finalización de la instalación

Complete la instalación del cierrapuertas tal como se indica para los brazos del cierrapuertas regular en la página 6.

ⓘ **Se muestra la apertura hacia la izquierda (LH). El procedimiento para apertura hacia la derecha (RH) es opuesto.**



Soporte de la zapata del cierrapuertas después de la instalación

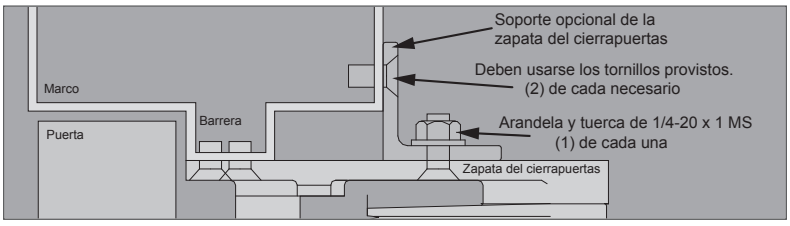
1 El soporte de zapata está limitado a listones de entre 1 1/16” y 1 13/16”.

2 Coloque el soporte de la zapata del cierrapuertas sobre la zapata y mantenga contra el marco.

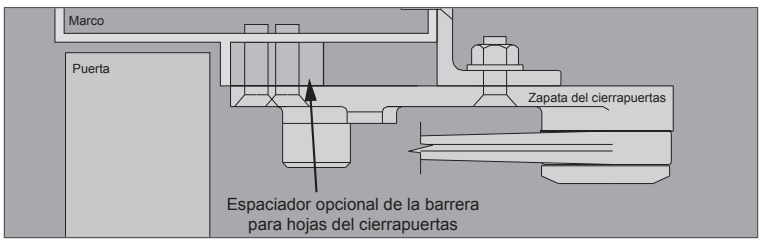
3 Ensamble el tornillo, la arandela y la tuerca como se muestra a continuación, y ajuste firmemente.

4 Usando el soporte de la zapata como plantilla, perfore y marque dos orificios para tornillos de 1/4-20 en el marco.

5 Inserte los tornillos y ajuste con firmeza.



6 Si los marcos tienen barreras para hojas de 1/2”, es necesario usar un espaciador de 1/2” para barreras para hojas, disponible a través de su distribuidor. Use el espaciador para barreras para hojas y el soporte de la zapata, de ser necesario.



Ajuste de la válvula del mecanismo de cierre

Compruebe el tiempo de cierre y ajuste el mecanismo de cierre de ser necesario.

⚠ PRECAUCIÓN ⚠

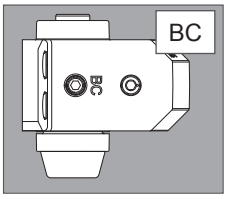
¡Abrir demasiado las válvulas de regulación (como se describe a continuación) puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales.

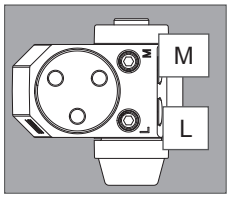
SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

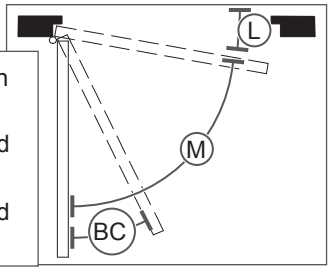
ⓘ **La Vàlvula se Cierra hacia el lado dercho(en direction de las agujas del reloj) hasta que tope,nunca mas de tres vueltas al lado izquierdo(en contra de las manesillas del reloj) del tope. Ajuste las válvulas en incrementos de 1/4 de giro o menos a la vez. ¡NO GIRE MÁS DE 3 ROTACIONES COMPLETAS - ESTO OCASIONARÁ QUE EL MECANISMO DE CIERRE TENGA UNA FUGA DE ACEITE!**

ⓘ **NO AJUSTE LA VELOCIDAD DEL PASADOR SI LA PUERTA NO SE TRABA. Si esto sucede, ajuste la fuerza del resorte.**

1. Abra la puerta a 90°, mida cuánto tiempo tarda la puerta en cerrar y trabarse. Un tiempo típico de cierre es de 5 a 7 segundos, divido de manera uniforme entre velocidad principal y velocidad del pasador.
2. Si se necesita ajustar el tiempo de cierre, use las válvulas del mecanismo de cierre como se describe a continuación.
   a. Retención: controla la velocidad de apertura de la puerta cuando el ángulo de la puerta se acerca a 90°. **No usar como tope de puerta.**
   b. Velocidad principal: controla la velocidad de la puerta durante la mayor parte del movimiento de cierre.
   c. Velocidad del pasador: controla la velocidad de la puerta durante los últimos grados del cierre de la puerta.
3. Gire las válvulas en sentido horario para reducir la velocidad de la puerta y en sentido antihorario para aumentar la velocidad de la puerta. La velocidad del pasador y la velocidad principal deben ajustarse conjuntamente.





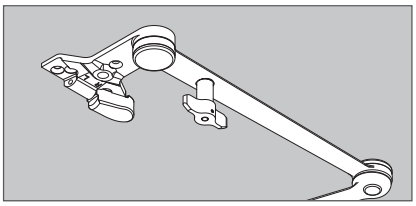


BC = válvula de retención

M = válvula de velocidad principal

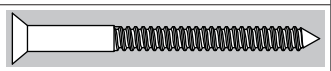
L = válvula de velocidad del pasador

Brazos opcionales para mantener abierto



Para ajustar el brazo opcional para mantener abierto:

Para acoplar o desacoplar la función de mantener abierto, gire la manija de control en un 1/4 de vuelta.

Tipo de tornillo	Imagen	Montaje en el cilindro	Montaje en el soporte	Montaje en el 5.° orificio
Madera (para puertas y marcos de madera)		4 @ 1 3⁄16"	4 @ 1 3⁄8"	1 @ 2"
Máquina (para puertas y marcos de metal) Requiere perforación de orificio y formación de rosca; mejor sujeción		4 @ 1"	4 @ 5⁄8"	1 @ 1 ½"
SRT: autoperforación y formación de rosca (para puertas y marcos de metal)		4 @ 1 ½"	4 @ 1 ½"	1 @ 2"

Tipo de tornillo	Imagen	Notas
Espaciador del quinto orificio		
Pernos pasantes		Se utiliza al montar a través de la puerta
Tornillo de sujeción del piñón		1 M6 x 10 mm para la sujeción del brazo (ver el paso 6)

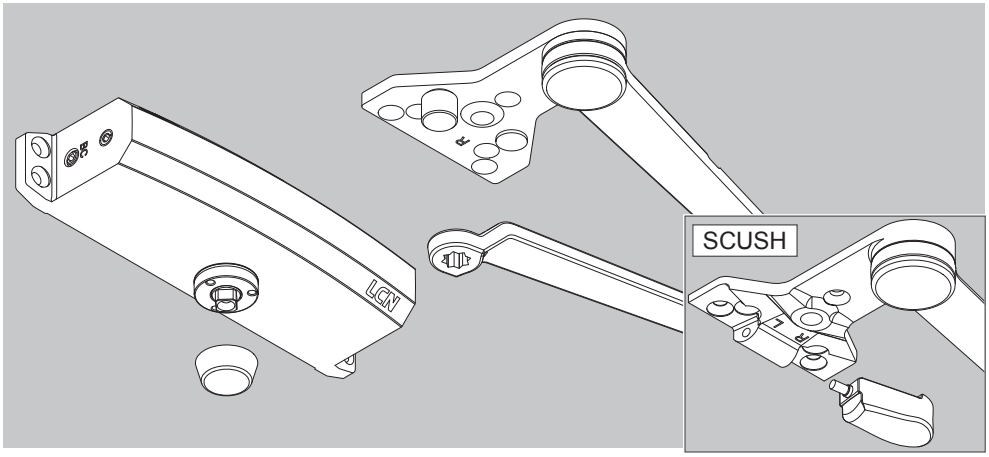
Série 1250

71379

Montage du CUSH et bras à ressort CUSH (SCUSH) Mount

Instructions d'installation

PIÈCES

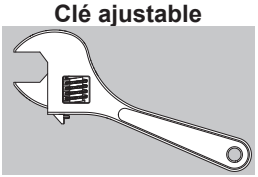


ⓘ **Informations sur l'ensemble de vis à la page 12.**

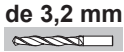
OUTILS

Clé Allen de 4 mm ou 5⁄32 po

Clé ajustable



Mèche de 3,2 mm (⅛ po)



Tournevis cruciforme

Clé Allen de 8mm ou 5⁄16 po

⚠ MISE EN GARDE ⚠

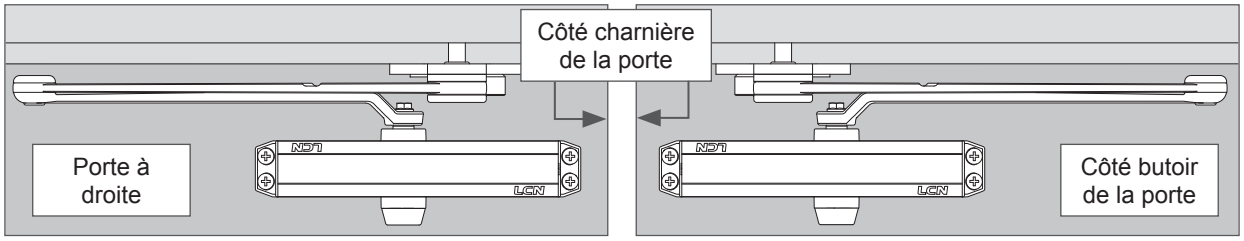
Une installation inadéquate ou le non-respect des règlements peut causer des blessures ou des dommages matériels.
Suivez attentivement toutes les instructions.
Pour toute question, appelez LCN au 877-671-7011.

Les bras de retenue ne doivent pas être installés sur les portes coupe-feu.

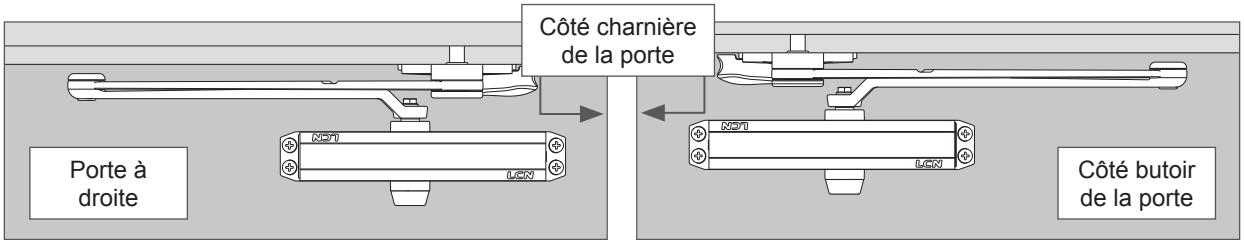
Une trop grande ouverture des soupapes de régulation peut entraîner une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

Choisissez le type d'installation

Montage du CUSH (voir page 10)



Montage du bras à ressort (SCUSH) (voir page 11)



Service à la clientèle

1-877-671-7011 www.allegion.com/us

ALLEGION

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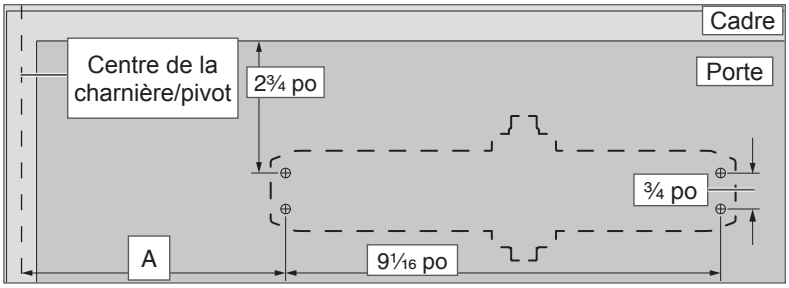
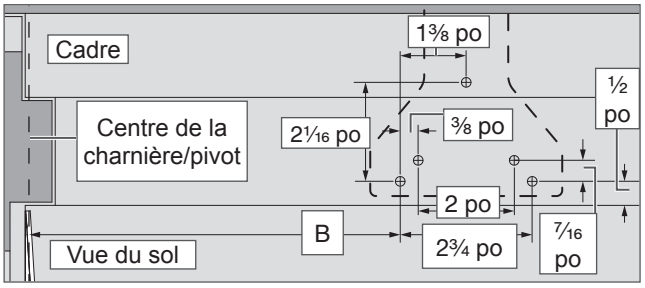
71379 Rev. 08/17-d

Montage du CUSH

Dimensions de montage

ⓘ **Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.**





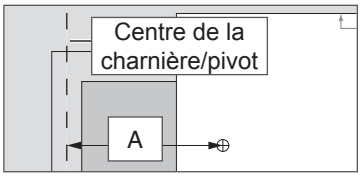
1 Déterminez le degré d'ouverture de la porte requis et trouvez les dimensions « A » et « B » dans les tableaux ci-dessous.

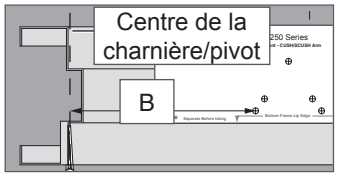
ⓘ **La butée fixe du ressort amortisseur se tiendra à environ 5 degrés au-delà du point d'arrêt normal.**

Ouverture	Mesure à partir du bord de la porte	
	A	B
85°	9 1/8 po	11 1/8 po
90°	8 3/8 po	10 3/8 po
95°	7 5/8 po	9 5/8 po
100°	7 po	9 po
105°	6 3/8 po	8 3/8 po
110°	5 3/4 po	7 3/4 po

2 Mesurez à partir du centre de la charnière/pivot et collez le gabarit sur la porte. Faites des marques pour les trous à percer.

ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**





3 Retirez le gabarit et percez des trous de 3,2 mm (1/8 po) aux endroits marqués avec une mèche pour les vis SRT.

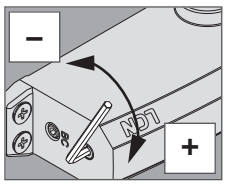
ⓘ **Les vis SRT sont utilisées sur les portes en métal.**
Les vis à bois sont utilisées sur les portes en bois.

4 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé Allen, réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.

Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

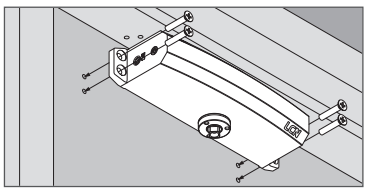
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

Largeur de la porte	Nombre de tours
Réglage de l'ADA	-12
32" - 815 mm	-6
36" - 915 mm	0
42" - 1050 mm	+6
48" - 1220 mm	+13



5 Installez le dispositif de fermeture sur la porte.

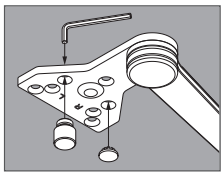
ⓘ **La valve d'ajustement de le vitesse va du côté opposé aux charnières.**



6 Régler le sabot pour correspondre à la position de la porte.

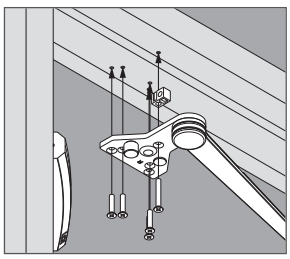
ⓘ **S'il s'agit d'une porte droite, n'ajustez pas le sabot. s'il s'agit d'une porte gauche, déplacez la butée du côté opposé.**

ⓘ **Pour installer l'ensemble de contact à ressort Cush, voir page 11.**

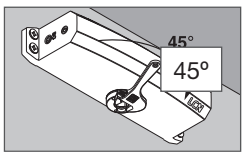


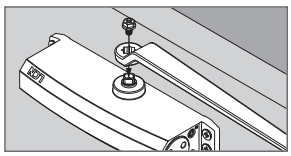
7 Ouvrez la porte à 45°, fixez le sabot CUSH au cadre avec des attaches fournies.

ⓘ **Utilisez le 5e trou limité pour révéler plus de 2 1⁄16 po.**



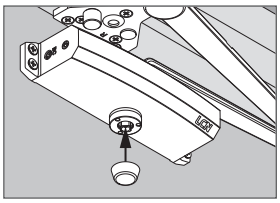
8 Faire pivoter l'arbre du dispositif de fermeture 45°, installez et serrez la vis du bras principal.

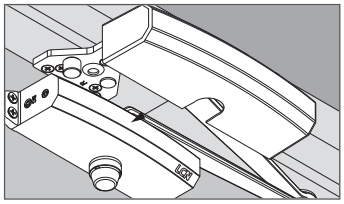




9 Réglez le dispositif de fermeture au besoin. Consultez la page 12 pour les instructions de réglage du dispositif de fermeture.

10 Tournez le capuchon sur l'arbre et installez le couvercle (en optional).





Montage du bras à ressort (SCUSH)

Les bras du ressort amortisseur (SCUSH) ont des instructions spécifiques pour le montage du sabot SCUSH. Autrement, les bras du SCUSH s'installent comme des bras CUSH réguliers.

⚠ IMPORTANT ⚠

NE PAS diminuer le réglage de retenue du dispositif de fermeture! La fonction de bras du ressort amortisseur ne remplace pas la retenue.

⚠ IMPORTANT ⚠

L'arrêt du CUSH à environ 5° <u>après</u> celui du 4050 normal.

1 Positionnement

Pour les nouvelles installations, utilisez le modèle standard CUSH. Pour le remplacement d'un bras CUSH existant, utilisez les trous de montage existants.

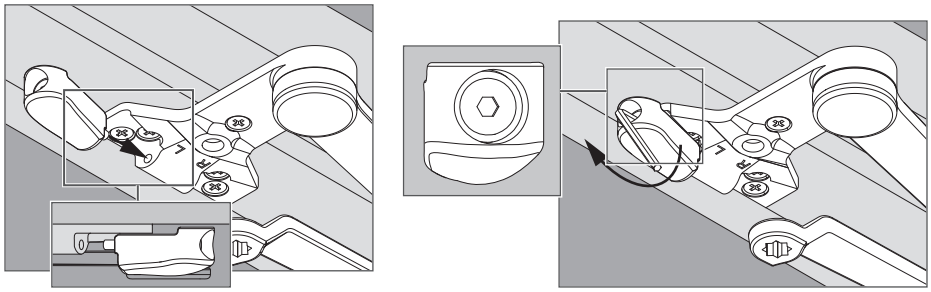
2 Installation

a. Montez le sabot sur l'encadrement.
b. Utilisez une clef hexagonale de 5/32 po ou 4 mm pour installer l'assemblage du bloc de contact, comme illustré. Assurez-vous que la vis est bien serrée sur le sabot.

3 Achèvement de l'installation

Terminez l'installation du dispositif de fermeture tel qu'indiqué pour les bras CUSH standard à la page 10.

ⓘ **Montage à gauche (MG) illustré. Le montage à droite (MD) se fait de manière opposée.**



Support du sabot CUSH après l'installation

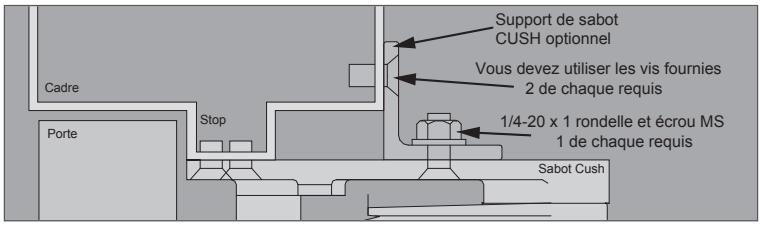
1 Sabot CUSH limité pour révéler entre 1 1⁄16 po et 1 13⁄16 po.

2 Placez le support du sabot CUSH au-dessus du sabot et tenez-le contre l'encadrement.

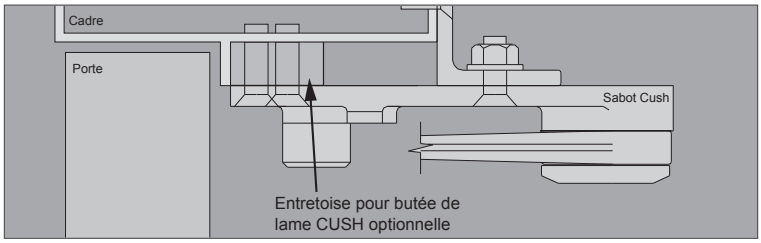
3 Assemblez la vis, la rondelle et l'écrou tel qu'illustré ci-dessous, puis serrez solidement.

4 En vous servant du support à sabot comme gabarit, percez et taraudez deux trous pouvant accueillir deux vis 1/4-20 dans l'encadrement.

5 Insérez les vis et serrez solidement.



6 Si les encadrements ont une butée de lame de 1,27 cm (1/2 po), il est nécessaire d'utiliser une entretoise pour butée de lame de 1,27 cm (1/2 po), offerte chez votre fournisseur. Utilisez une entretoise pour butée de lame et un support de sabot, lorsque nécessaire.



Réglage de la soupape du dispositif de fermeture

Vérifiez le temps de fermeture et réglez le dispositif de fermeture au besoin.

⚠ MISE EN GARDE ⚠

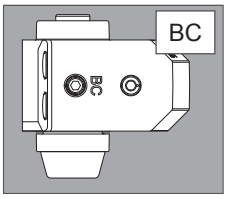
Trop ouvrir les soupapes de régulation (décrites ci-dessous) peut causer une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.

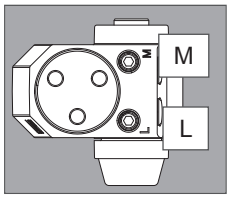
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

ⓘ **La valve se ferme en tournant dans le sens des aiguilles d'une montre; ne jamais faire plus de 3 tours dans le sens opposé aux aiguilles d'une montre à partir de la position fermée. Réglez les soupapes en effectuant 1/4 de tour ou moins à la fois. N'EFFECTUEZ PAS PLUS DE 3 ROTATIONS COMPLÈTES - CELA CAUSERA UNE FUITE D'HUILE DANS LE DISPOSITIF DE FERMETURE!**

ⓘ **NE RÉGLEZ PAS LA VITESSE D'ENCLENCHEMENT SI LA PORTE NE S'ENCLENCHE PAS. Si cela se produit, réglez la force du ressort.**

1. Ouvrez la porte à 90° et comptez le temps nécessaire pour que la porte se ferme et s'enclenche. Le temps de fermeture typique est de 5 à 7 secondes et est divisé également entre la vitesse principale et la vitesse d'enclenchement.
2. Si le temps de fermeture doit être réglé, utilisez les soupapes du dispositif de fermeture décrites ci-dessous.
   a. Retenue - contrôle la vitesse d'ouverture de la porte lorsque l'angle s'approche de 90°. **N'utilisez pas de butoir.**
   b. Vitesse principale - contrôle la vitesse de la porte durant presque tout le mouvement de fermeture.
   c. Vitesse d'enclenchement - contrôle la vitesse de la porte durant les derniers degrés de la fermeture.
3. Faites tourner les soupapes dans le sens horaire pour faire diminuer la vitesse de la porte, et dans le sens antihoraire pour la faire augmenter. La vitesse d'enclenchement et la vitesse principale doivent être réglées ensemble.

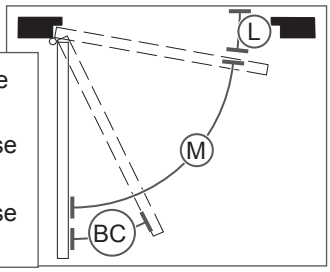




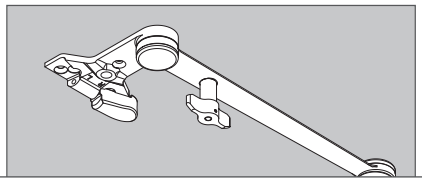
BC = soupape de retenue

M = soupape de la vitesse principale

L = soupape de la vitesse d'enclenchement

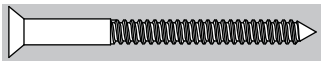
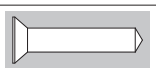


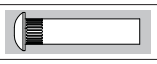
Bras de retenue facultatifs



Pour régler le bras de retenue facultatif:

Pour enclencher ou désengager une caractéristique ouverte, tournez la poignée de contrôle d'un quart de tour.

Type de vis	Image	Montage du cylindre	Montage du support du BP	Montage du 5e trou
Bois (pour les portes et les cadres en bois)		4 @ 1 3⁄16 po	4 @ 1 3⁄8 po	1 @ 2 po
De mécanique (pour les portes et les cadres en métal) Nécessite de percer des trous et de tarauder; meilleure retenue		4 @ 1 po	4 @ 5⁄8 po	1 @ 1 ½ po
SRT - Auto taraudeuse et à alésage automatique (pour les portes et les cadres en métal)		4 @ 1 ½ po	4 @ 1 ½ po	1 @ 2 po

Type de vis	Image	Remarques
Entretoise pour cinquième trou		
Boulons traversants		Utilisée lors du montage à travers la porte
Vis de fixation du pignon		1 M6 x 10 mm pour la fixation du bras (voir étape 6)

19580

4003T/4004T

LCN®

Installation Instructions

1 Installation

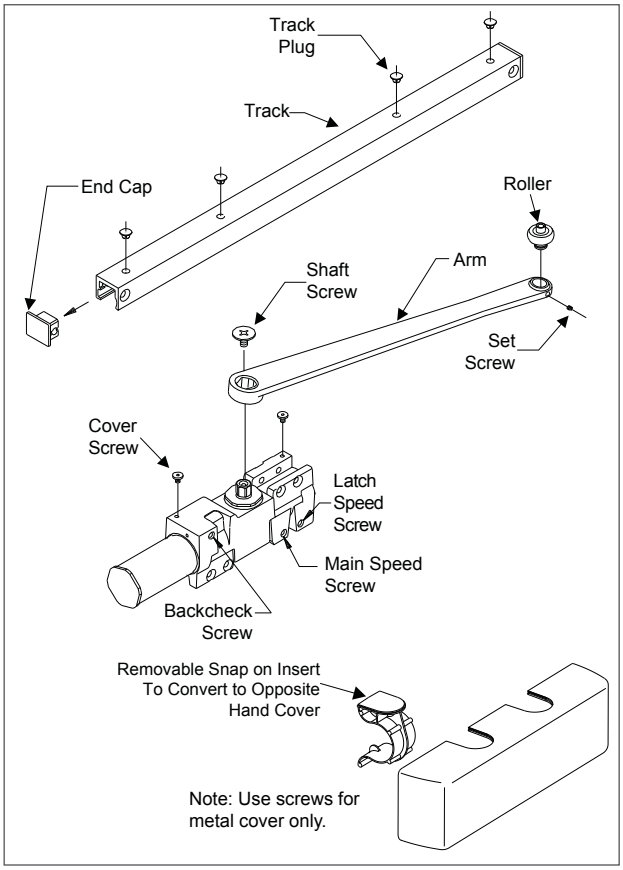
1a The 4000T Model is for a 90° Pocket Installation only. Determine required template for your installation, (see following pages) and mount closer on wall to dimensions shown. Secure with screws provided.

1b Remove end cap from track, and insert track roller. Replace end cap, then mount track on door to dimensions shown. Secure with screws provided. Place track plugs in holes on top of track.

1c Loosen set screw in arm. Connect arm to track roller, and tighten set screw firmly.
DOOR MUST REMAIN IN CLOSED POSITION FOR FOLLOWING ASSEMBLY STEPS.

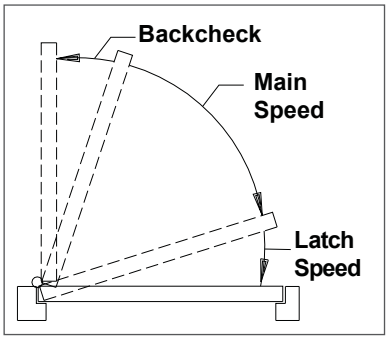
1d Swing arm toward closer and rest the hub of the arm on top of the closer shaft.

1e Place a wrench on the bottom shaft of the closer, and rotate away from the hinge (approx. 30°). When the flats in the arm line up with first available flats of the shaft, slide the arm hub over the shaft. Insert the shaft screw and tighten securely.



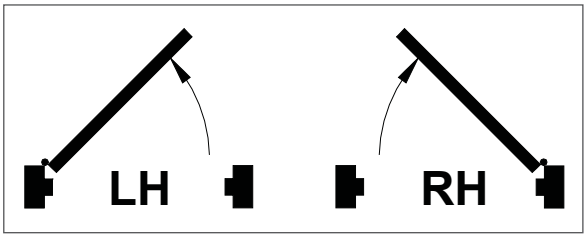
2 Regulation

2a Do not allow door to slam into frame. A “normal” closing time from a 90° position is 5 to 7 seconds, equally divided between **MAIN SPEED** and **LATCH SPEED**. If adjustments are needed, use a 3/32” hex wrench. To adjust **MAIN SPEED**, turn regulating screw clockwise to slow door speed or c.c.w. increase speed. **LATCH SPEED** is adjusted in the same way. When adjusting the **BACKCHECK**, turn regulating screw clockwise to increase amount of force or c.c.w. to reduce the amount of force.
DO NOT USE ABRUPT BACKCHECK SETTING OR EXCEPT CLOSER TO ACT AS A STOP!



3 Attach Cover

3a With regulation done, place snap on clip insert into proper cutout then snap cover assembly onto spring tube.



⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions, call LCN at 877 - 671 - 7011

⚠ WARNING ⚠

Do not remove spring tube from this product extremely strong springs inside if repairs as necessary return to factory.

Customer Service

1-877-671-7011 www.allegion.com/us

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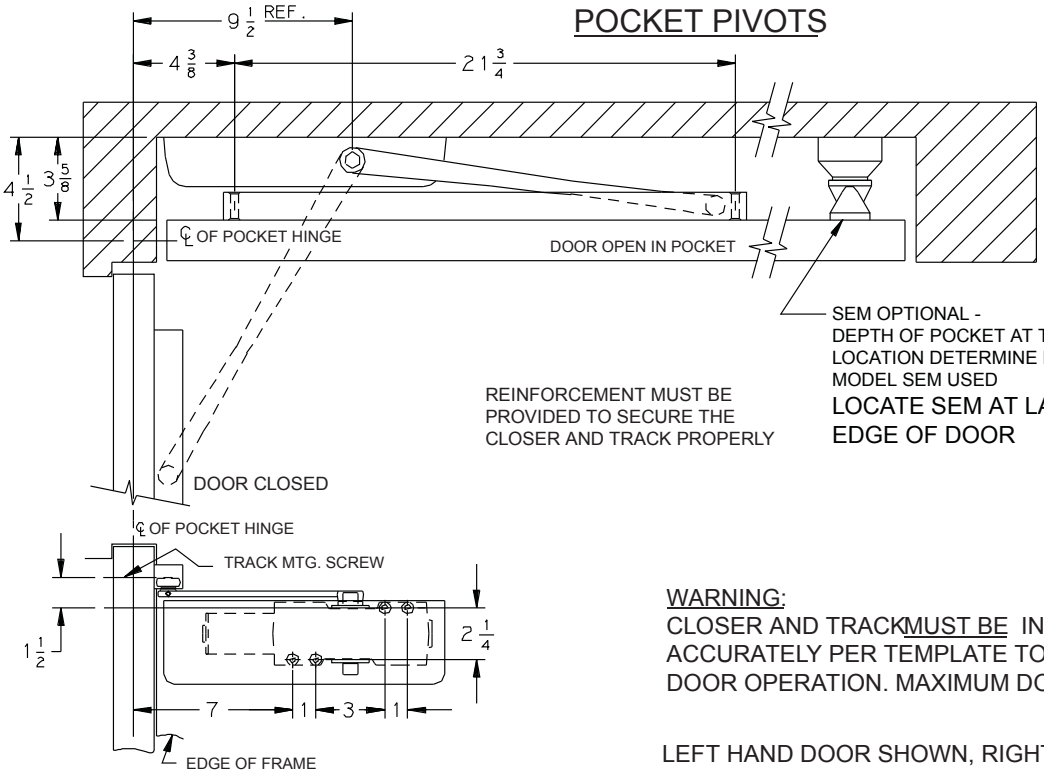
19580 Rev. 01/14-h

POCKET PIVOTS

POCKET INSTALLATION APPLIES TO	
4003T 4004T	MAX. OPENING 90° HOLD OPEN POINT 90° WITH MAGNET
AUXILIARY STOP RECOMMENDED	

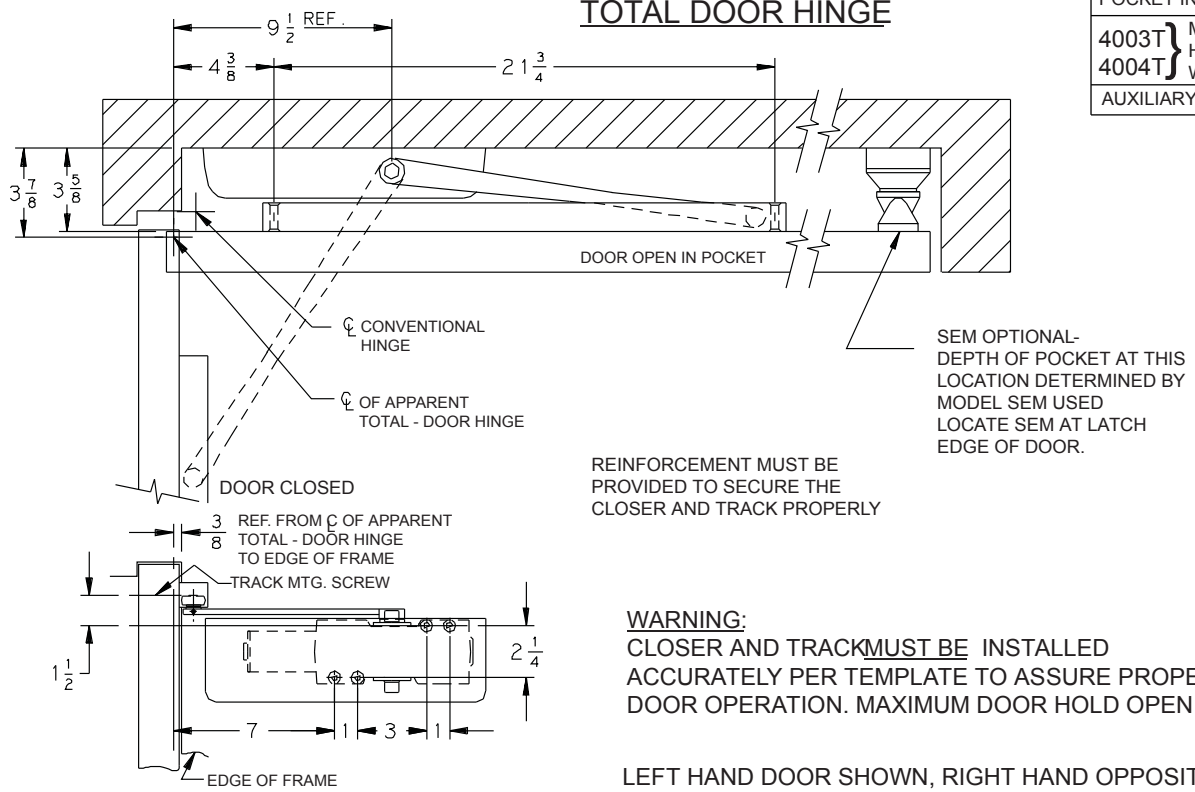


WARNING:
CLOSER AND TRACK MUST BE INSTALLED ACCURATELY PER TEMPLATE TO ASSURE PROPER DOOR OPERATION. MAXIMUM DOOR HOLD OPEN 90°

LEFT HAND DOOR SHOWN, RIGHT HAND OPPOSITE

TOTAL DOOR HINGE

POCKET INSTALLATION APPLIES TO	
4003T 4004T	MAX. OPENING 90° HOLD OPEN POINT 90° WITH MAGNET
AUXILIARY STOP RECOMMENDED	



WARNING:
CLOSER AND TRACK MUST BE INSTALLED ACCURATELY PER TEMPLATE TO ASSURE PROPER DOOR OPERATION. MAXIMUM DOOR HOLD OPEN 90°

LEFT HAND DOOR SHOWN, RIGHT HAND OPPOSITE

GENERAL NOTES:
1. CLOSER SIZE: 12 1/4 x 3 ½ x 2 5/32.
2. SPECIAL TEMPLATE FOR USE WITH SWING CLEAR HINGES.
3. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW DOORS AND FRAMES.

INCH	1/4	3/8	1	1 1/2	2 1/8	2 5/32	2 1/4	2 3/8	2 7/8
M.M.	6	10	25	38	54	55	57	60	73

INCH	3	3 1/2	3 5/8	3 7/8	4 3/8	4 1/2	7	9 1/2	12 1/4	21 3/4
M.M.	76	89	92	98	112	114	178	241	311	552

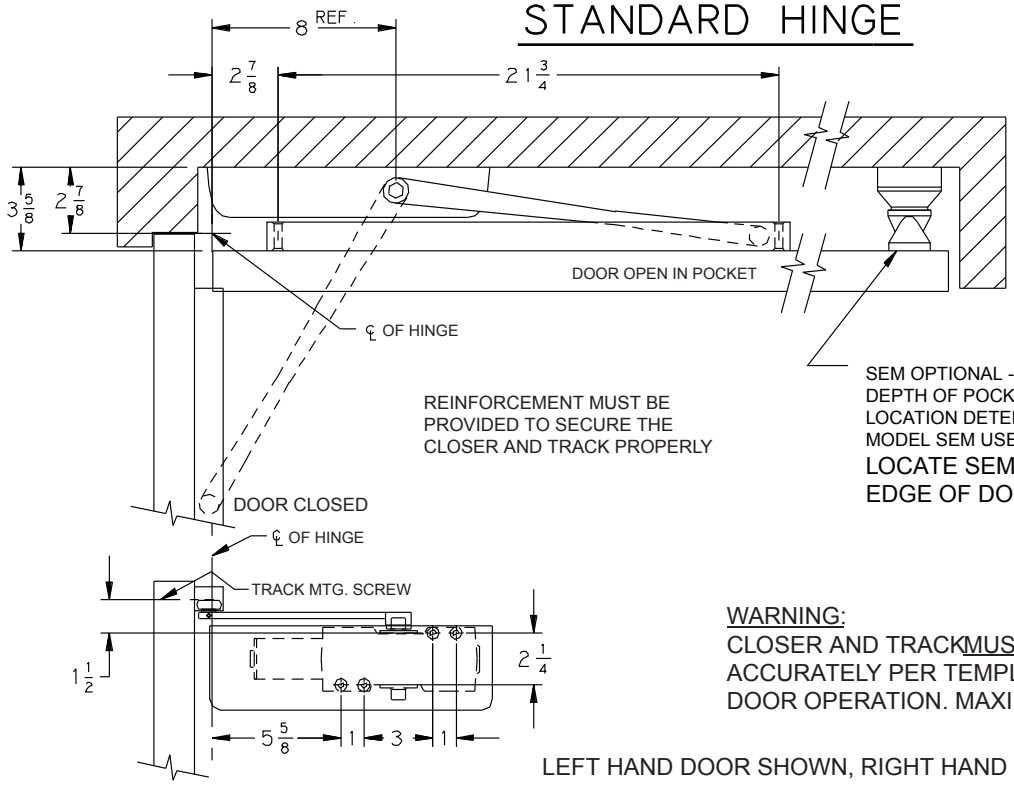
4000T

PULL SIDE MOUNT FOR 90° INSTALLATION

LCN®
1-877-671-7011

STANDARD HINGE

POCKET INSTALLATION APPLIES TO	
4003T 4004T	MAX. OPENING 90° HOLD OPEN POINT 90° WITH MAGNET
AUXILIARY STOP RECOMMENDED	

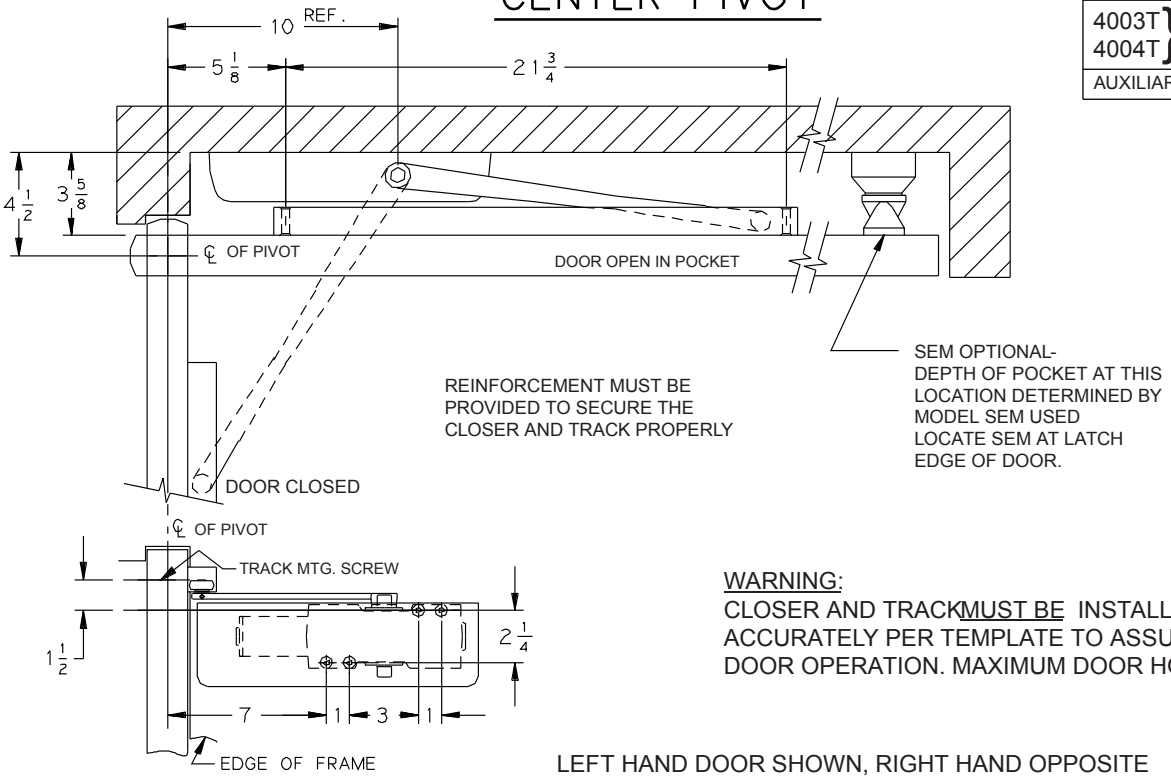


WARNING:
CLOSER AND TRACK MUST BE INSTALLED ACCURATELY PER TEMPLATE TO ASSURE PROPER DOOR OPERATION. MAXIMUM DOOR HOLD OPEN 90°

LEFT HAND DOOR SHOWN, RIGHT HAND OPPOSITE

CENTER PIVOT

POCKET INSTALLATION APPLIES TO	
4003T 4004T	MAX. OPENING 90° HOLD OPEN POINT 90° WITH MAGNET
AUXILIARY STOP RECOMMENDED	



WARNING:
CLOSER AND TRACK MUST BE INSTALLED ACCURATELY PER TEMPLATE TO ASSURE PROPER DOOR OPERATION. MAXIMUM DOOR HOLD OPEN 90°

LEFT HAND DOOR SHOWN, RIGHT HAND OPPOSITE

INCH	1/4	3/8	1	1 1/2	2 1/8	2 1/4	2 5/32	2 3/8	2 7/8	3
M.M.	6	10	25	38	54	57	55	60	73	76

INCH	3 1/2	3 5/8	4 3/8	4 1/2	5 1/8	5 5/8	7	8	10	12 1/4	21 3/4
M.M.	89	92	112	114	130	143	178	203	254	311	552

GENERAL NOTES:
1. CLOSER SIZE: 12 1/4 x 3 ½ x 2 5/32.
2. IF DOOR IS HUNG ON SWING CLEAR HINGES, CONSULT FACTORY.
3. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW DOORS AND FRAMES.

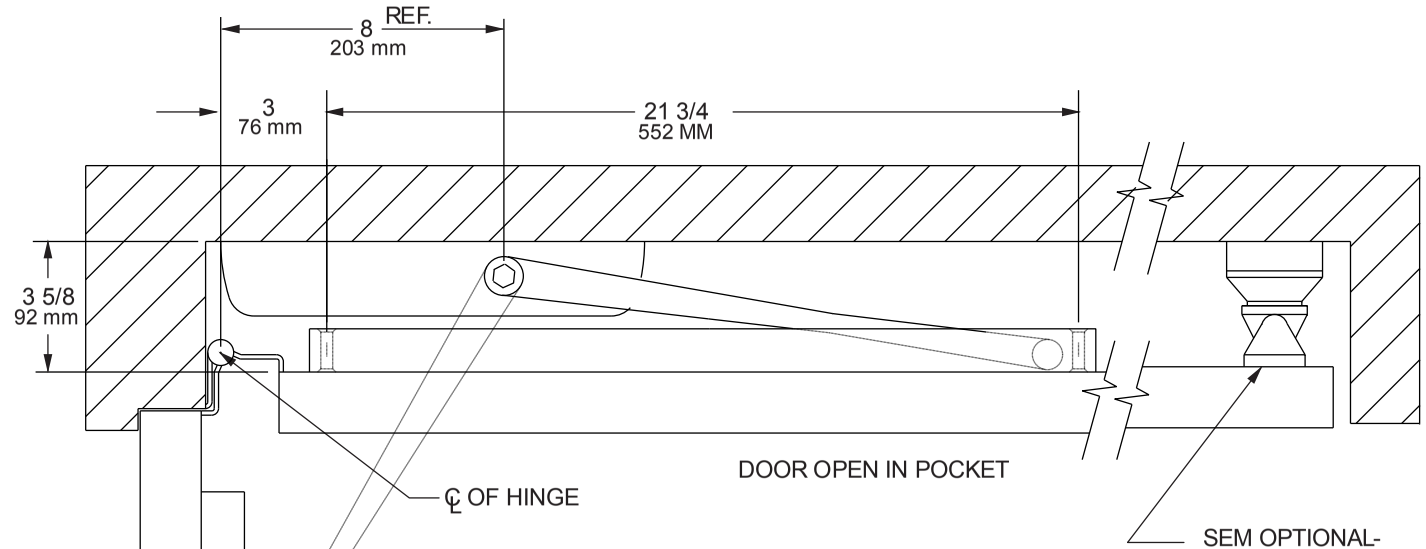
4000T

PULL SIDE MOUNT FOR 90° INSTALLATION

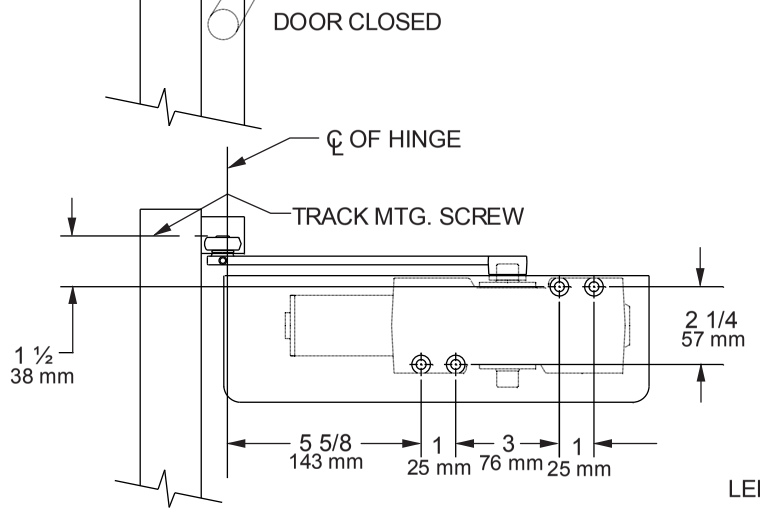
LCN®
1-877-671-7011

SWING CLEAR HINGE

POCKET INSTALLATION APPLIES TO:	
4003T 4004T	MAX. OPENING 90° HOLD OPEN POINT 90° WITH MAGNET
AUXILIARY STOP RECOMMENDED	



REINFORCEMENT MUST BE
PROVIDED TO SECURE THE
CLOSER AND TRACK PROPERLY



WARNING:
CLOSER AND TRACK MUST BE INSTALLED
ACCURATELY PER TEMPLATE TO ASSURE PROPER
DOOR OPERATION. MAXIMUM DOOR HOLD OPEN 90°

GENERAL NOTES:
1. CLOSER SIZE: 12 1/4 x 3 ½ x 2 5/32.
2. SPECIAL TEMPLATE FOR USE WITH SWING CLEAR HINGES.
3. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW DOORS AND FRAMES.

LEFT HAND DOOR SHOWN, RIGHT HAND OPPOSITE

LCN®
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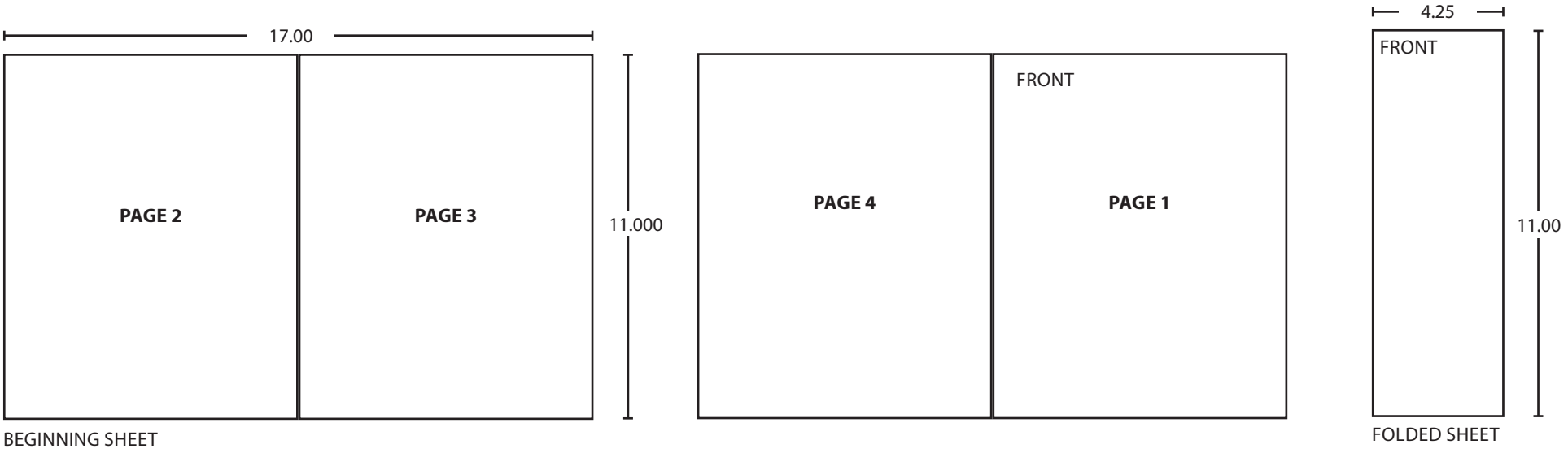

Additional Notes:
1. None

Revision History					
H	J	K	L	M	N
043228					

Revision Description:
H > Revised artwork

Material	Edited By	Approved By	EC Number	Release Date
White Paper	D. Myers	M. Sasso	043228	01-01-14

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Title
4000T Series Instruction Sheet

Creation Date	Number	Revision
04-12-11	19580	H

Created By	Activity
N/A	3899 Hancock Expwy Security, CO 80911
Software: InDesign CS6	

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X3030

Addendum Sheet

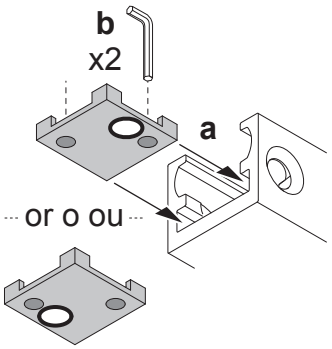
Track Closers: Hold-Open Option

LCN®

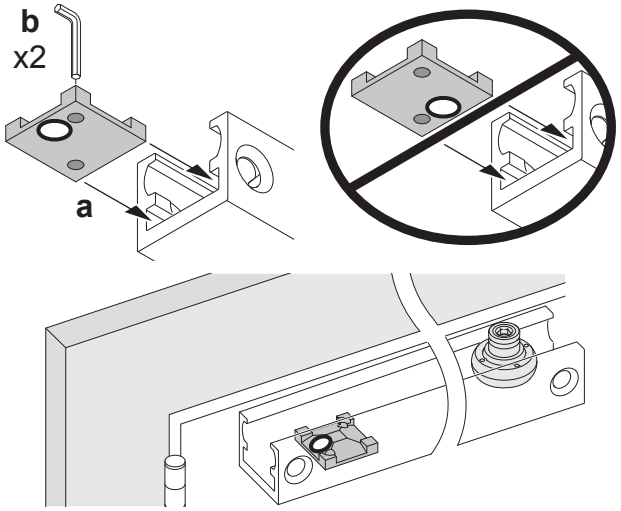
Installation Instructions

HOLD-OPEN OPTION
OPCIÓN DE MANTENER ABIERTO / OPTION DE RETENUE

LIGHT HOLD-OPEN FORCE
FUERZA LIGERA PARA MANTENER ABIERTO
FORCE DE RETENUE LÉGÈRE



STRONG HOLD-OPEN FORCE
FUERZA MAYOR
FORCE DE RETENUE MAXIMALE



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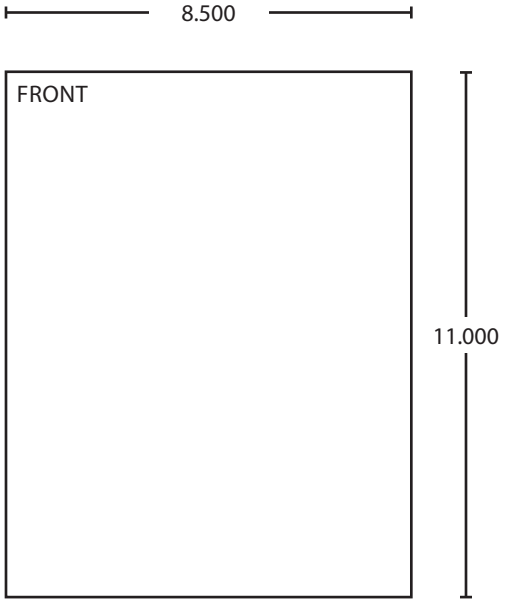
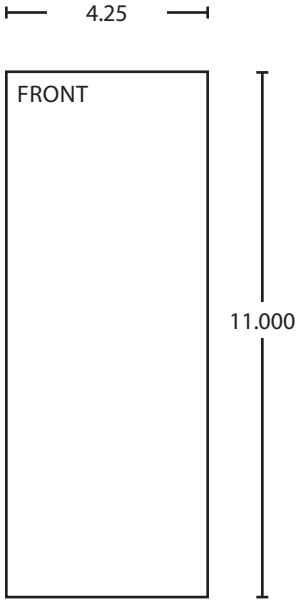


BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
xxxxx					

A > New sheet

Material	Edited By	Approved By	EC Number	Release Date
White Paper	J. Ellis	J. Pattar	xxxxx	01-13-16

Notes
1. printed one side
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Title
Hold-Open Option Addendum Sheet

Creation Date	Number	Revision
12-14-15	X3030	A

Created By	Activity	
J. Ellis	3899 Hancock Expwy Security, CO 80911	
Software: InDesign CS6		© Allegion 2016

4040XP/4041 DA CUSH

28266

85°- 90°- 100°- 110° Template
Push Side Mounting

Installation Instructions

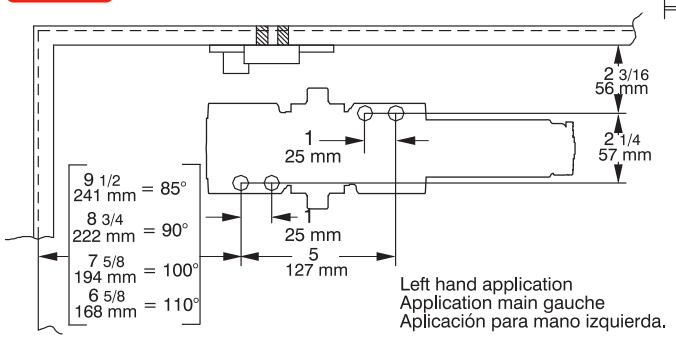
1

Locate proper template. Center punch all hole locations. For self reaming tapping screws (SRT) drill 1/8" pilot holes.

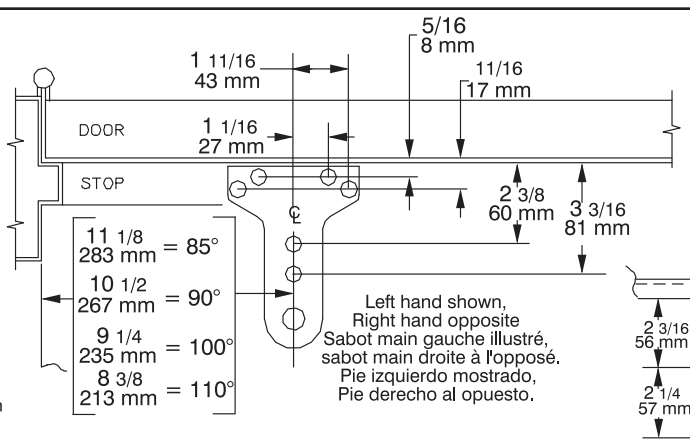
MOUNT 100° or 110° to meet ADA.

SRT Screw

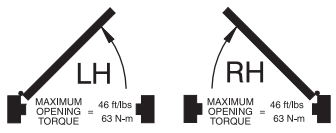
Reduce installation torque if using SRT screws in wood. The use of wood screws is recommended for wood.



Left hand application
Application main gauche
Aplicación para mano izquierda.

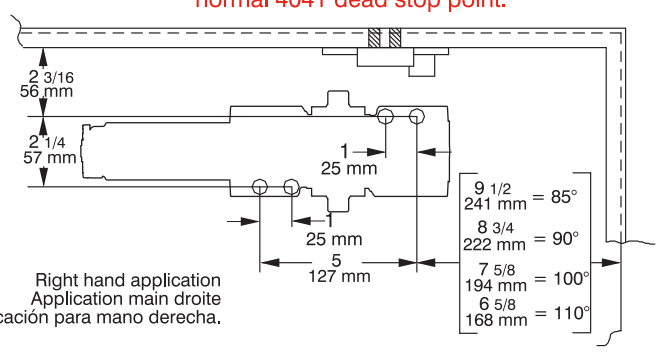


Left hand shown,
Right hand opposite
Sabot main gauche illustré,
sabot main droite à l'opposé.
Pie izquierdo mostrado,
Pie derecho al opuesto.



Note: 1. When using pivot or swing clear hinge pin, locate closer and shoe from the centerline. 2. Reinforcing per ANSI/SDI-100 recommended for hollow metal doors and frames. 3. Closer size 12 1/4 x 3 1/2 x 2 5/32.

4041: Spring Cush dead stop will occur approximately 5° beyond normal 4041 dead stop point.



Right hand application
Application main droite
Aplicación para mano derecha.

2

Determine door width, adjust spring power to match chart.

DOOR WIDTH		LCN FAST™Power Adjust
INTERIOR	EXTERIOR	SET TO:
♿	——	1
34"	8.5 lb-f	2+
38"	30"	3
48"	36"	4+
54"	42"	5+
60"	48"	6+

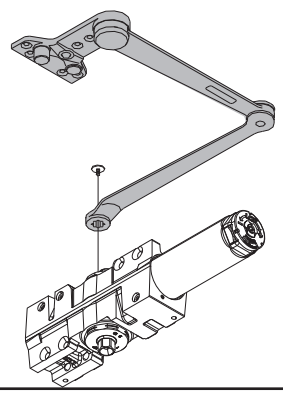
LCN® FAST™ Power Adjust
for Spring Power Adjustment

⚠CAUTION
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 1-877-671-7011

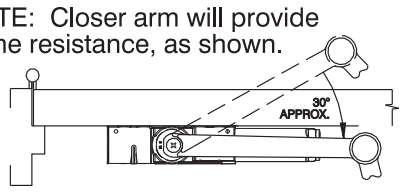
3

① Mount arm on shaft at 30° to closer, as shown.

② Secure arm assembly to closer with pinion screw provided.

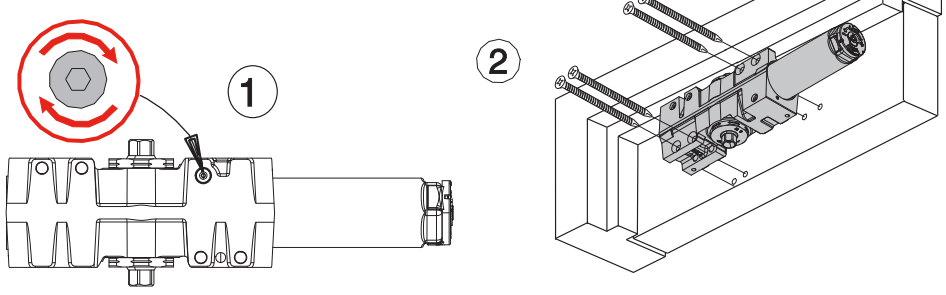


NOTE: Closer arm will provide some resistance, as shown.



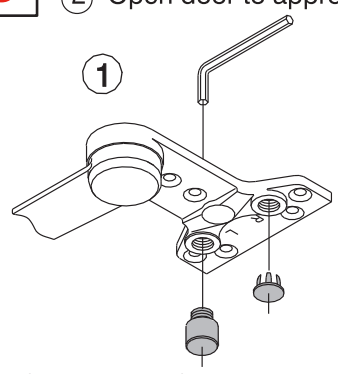
4

SCREW IN VALVE ON BACK OF CLOSER.
Using screws provided, secure closer to door.

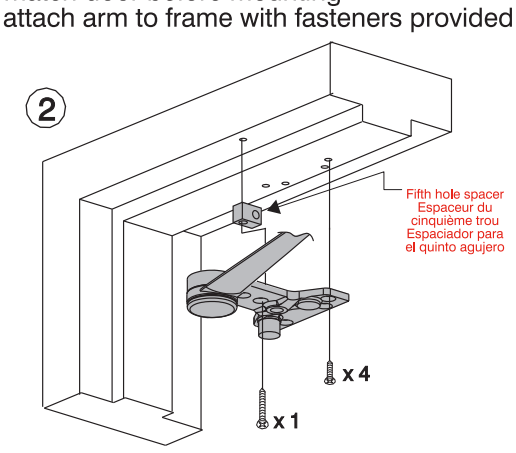


5

① Shoe must be "handed" to match door before mounting.
② Open door to approx. 45°, attach arm to frame with fasteners provided.



Refer to reverse side for instructions.
Instructions à lendos.
Vea al revés para las instrucciones.

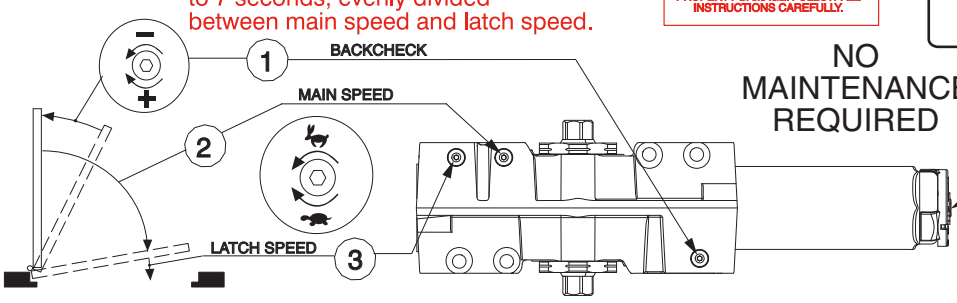


6

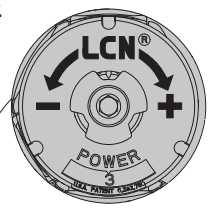
If necessary, adjust closer.

NOTE: A "Normal" closing time from 90° open position is 5 to 7 seconds, evenly divided between main speed and latch speed.

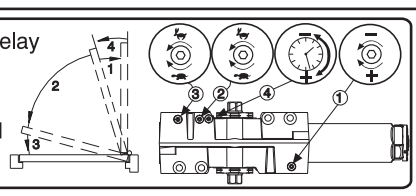
⚠CAUTION
OPENING OF REGULATION VALVES TOO FAR MAY RESULT IN LEAKAGE OF CLOSER. PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY.



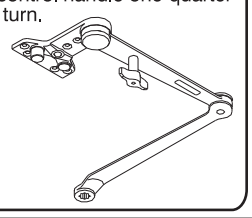
NO MAINTENANCE REQUIRED



I Optional 4041 Delay
① - Backcheck
② - Main Speed
③ - Latch Speed
④ - Delay Speed

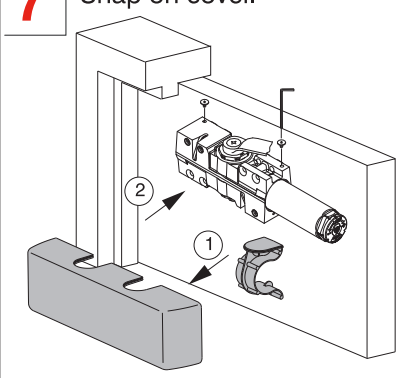


II HOLD OPEN ARM: To engage or disengage hold open feature, turn control handle one-quarter (1/4) turn.



7

Snap on cover.



Note: Use screws to attach cover.

4040XP Instructions Cush et gabarit de 85°-90°-100°-110° pour une installation sur le côté à pousser.

1 Repérez le gabarit approprié. Marquez le centre de tous les trous. Percez des trous de guidage de 1/8" pour les vis tarauds.

Réduisez le couple de serrage à l'installation des vis tarauds dans le bois. Les vis à bois sont recommandées pour le bois.

2 Mesurez la largeur de la porte. Réglez le ressort selon les indications du tableau.

Réglage de force LCN® FAST™ pour régler la force du ressort

3 ① Montez le bras sur la tige à 30° du ferme-porte, comme sur l'illustration.

② Fixez l'assemblage du bras au ferme-porte à l'aide des vis fournies.

NOTE: Le bras offrira une légère résistance, comme sur l'illustration.

4 **Vissez la soupape derrière le ferme-porte.**
Fixez le ferme-porte sur la porte avec les attaches fournies.

5 ① La main de la console doit être adaptée à celle de la porte avant l'installion.

5 ②Ouvrez la porte à environ 45°, fixez le bras au cadre à l'aide des attaches fournies.

6 Au besoin, réglez
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement

I 4041 Action retardée optionnelle
① - frein à l'ouverture
② - vitesse de fermeture
③ - vitesse d'enclenchement
④ - vitesse de retenue

7 Fixez le couvercle.

NOTE: la fermeture d'une porte ouverte à 90° prend normalement de 5 à 7 secondes, ce délai est réparti entre la vitesse de fermeture et la vitesse de verrouillage.

II BRAS DE RETENUE: Pour engager ou désengager le mécanisme de retenue, tournez la manette de contrôle d'un quart (1/4) de tour.

⚠DANGER
Une installation ou un réglage inadéquats peuvent entraîner des blessures ou des dommages. Veuillez suivre toutes les instructions avec soin. Pour plus de renseignements, composez le 800 - 526 - 2400

⚠DANGER
UNE OUVERTURE EXAGÉRÉE DES SOUPAPES DE RÉGLAGE PEUT ENTRAÎNER DES FUITES, DES BLESSURES OU DES DOMMAGES. VEUILLEZ SUIVRE LES INSTRUCTIONS AVEC SOIN.

4040XP Instrucciones CUSH para plantilla 85°-90°-100°-110° con montaje del lado del empuje.

1 Localice la plantilla apropiada. Marca el centro de cada agujero. Barrena agujeros pilotos de 1/8" para los tornillos autorroscantes.

Si se usan tornillos de rosca cortante en la madera, se deberá reducir el par de apretado. Con la madera, se recomienda utilizar tornillos para madera.

2 Determina la anchura de la puerta. Ajusta la fuerza del resorte según lo indicado en el gráfico.

LCN® FAST™ cuadrante de ajuste para ajustar la potencia del resorte

3 ① Monte el brazo en el eje a 30° del cerrador, tal como se muestra.

②Sujete el ensamblaje del brazo al cerrador con el tornillo piñión ya incluido.

NOTA: El brazo del cerrador ofrecerá cierta resistencia, tal como se muestra.

4 Atornilla la válvula al revés del cerrador. Sujeta el cerrador a la puerta con los tornillos ya incluidos.

5 ① Debe de hacerse coincidir el lado de la zapata con la puerta antes de montarla.

②Abra la puerta hasta aprox. 45°, sujete el brazo al bastidor con los sujetadores ya incluidos.

6 Ajusta si es necesita
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro

I 4041 Acción retardada opcional
① - resistencia de apertura
② - velocidad principal
③ - velocidad de seguro
④ - velocidad de retardo

7 Encaje la tapa.

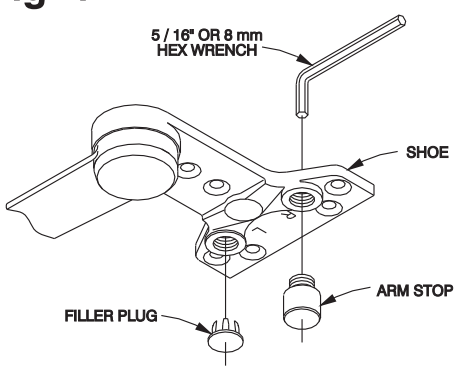
NOTA: El tiempo de cerrado "Normal" de una puerta abierta a 90° es de 5 hasta 7 segundos, dividido igualmente entre la velocidad principal y la velocidad de seguro.

II BRAZO DE RETENCIÓN: Para embragar o desembragar la característica de retención, dar un cuarto de vuelta (1/4) al cabo.

⚠ADVERTENCIA
UNA INSTALACIÓN O UN AJUSTE INCORRECTOS PUEDEN RESULTAR EN DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES. PARA MÁS INFORMACIONES, LLAMA A LCN AL 800 - 526 - 2400

⚠ADVERTENCIA
LA APERTURA DEMASIADO GRANDE DE LAS VÁLVULAS DE AJUSTE PUEDE OCASIONAR UN DERRAME, DAÑO PERSONAL O MATERIAL. SIGA BIEN TODAS LAS INSTRUCCIONES.

Fig. 1



Both Cush and H.O. Cush shoes must be "handed" to match door **BEFORE** mounting. See **Fig. 1**.

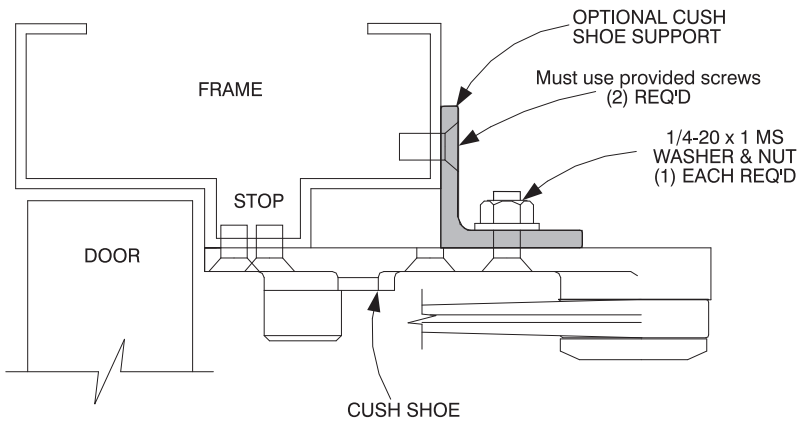
For Left Hand doors: All shoes are shipped assembled for left hand doors. Insert 5/16" (8mm) Hex wrench into arm stop and turn counter - clockwise to **seat stop as tightly as possible.**
For Right Hand doors: (see illustration) Push filler plug out of shoe. Using a 5/16" (8mm) Hex wrench, turn arm stop clockwise to remove from shoe. Thread arm stop into hole marked "R". Turn wrench counter - clockwise, **seating stop as tightly as possible.** Insert filler plug into other hole.

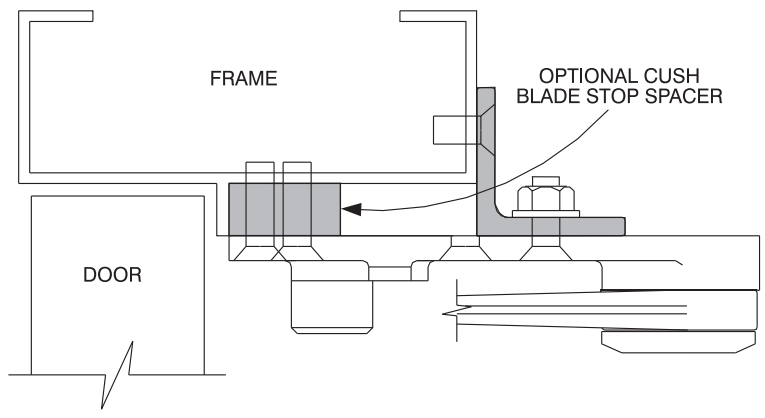
La main des sabots Cush ainsi que celle des sabots Cush avec retenue doit être adaptée à cette de la porte AVANT l'installation. Voir Fig. 1.

Portes main gauche: Tous les sabots sont expédiés assemblés pour main gauche. Insérez une clé hexagonale 5/16 ou 8mm dans la butée du bras et tournez en sens inverse des aiguilles d'une montre pour assurer une assise de butée solide.
Portes main droite: (voir l'illustration). Sortez le bouchon du sabot.
À l'aide d'une clé hexagonale 5/16 ou 8mm, tournez dans le sens des aiguilles d'une montre pour enlever le sabot. En alignant bien les filets, insérez la butée du bras dans le trou "R". Tournez la clé en sens inverse des aiguilles d'une montre, pour assurer une assise de butée solide. Insérez le bouchon dans l'autre trou.

Debe de hacerse coincidir el lado de la zapata Cush o de la zapata Cush con retención antes de montarla. Ver Figura 1.

Puertas mano izquierda: las zapatas se entregan todas en sambladas para puertas mano izquierda. Inserte una llave hex 5/16 (8 mm.) en el tope del brazo y gire en sentido contrario a las agujas del reloj para seguramente asentar el tope. Puertas mano derecha: (ver la ilustración). Quite el tapón de llenado de la zapata. Con una llave hez 5/16 (8 mm.), gire el tope del brazo en el sentido de las agujas del reloj para quitarlo de la zapata. Coloque el tope del brazo en el agujero marcado con "R", alineando bien las roscas. Gire la llave en el sentido contrario a las agujas del rejoj para asentar bien seguro el tope. Inserte el tapón de llenado en otro agujero.





INSTRUCTIONS FOR INSTALLING
CUSH SHOE SUPPORT

AFTER CUSH - N - STOP IS INSTALLED

1----Set Cush Shoe Support on top of Cush Shoe and hold against frame.
2---Assemble screw, washer, and nut as shown and tighten securely.
3---Using Shoe Support as Template drill & tap two 1/4-20 holes in frame.
4---Insert screw & tighten securely.

If frame is not wide enough to receive fifth screw, install Cush Shoe Support (available from Dealer) as shown above.

Should frames have 1/2" Blade Stop it is necessary to use 1/2" Blade stop Spacer (available from Dealer). Use both Blade Stop Spacer and Shoe Support wherever required.

Si le cadre a une butée de 1/2" il faut utiliser un espaceur de butée de 1/2" (offert chez le concessionnaire). Utilisez espaceur et support de sabot au besoin.

Si los bastidores tienen un tope de pala de 1/2", se debe utilizar un espaciador de tope de pala de 1/2" (disponible del representante). Utilice un espaciador de tope de pala y un soporte de zapata cuando sea necesario.

INSTRUCTIONS POUR INSTALLER
LE SUPPORT DU SABOT CUSH

APRÈS L'INSTALLATION DU CUSH - N - STOP

1----Mettez le support du sabot Cush sur le sabot Cush et appuyez-le contre le cadre.
2---Assemblez la vis, la rondelle et le boulon comme sur l'illustration et serrez fermement.
3---En utilisant le support du sabot comme gabarit, taraudez deux trous de 1/4-20 dans le cadre.
4---Insérez la vis et serrez fermement.

Si le cadre n'est pas assez large pour la cinquième vis, posez le support du sabot Cush (offert chez le concessionnaire) comme sur l'illustration.

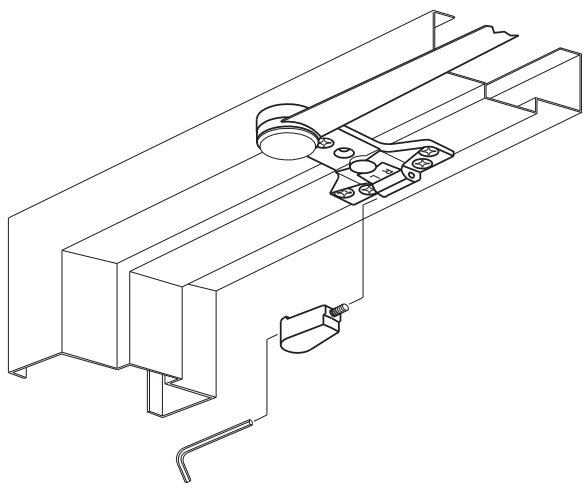
INSTRUCCIONES DE INSTALACIÓN
SOPORTE DE ZAPATA CUSH

DESPUÉS DE HABER SIDO INSTALADO EL CUSH - N - STOP

1----Coloque el soporte de zapata Cush encima del zapata Cush y téngalo contra el bastidor.
2---Monte el tornillo, la arandela y la tuerca tal como se muestra y apriételos bien.
3---Usando el soporte de zapata como plantilla, taladre y rosque dos agujeros 1/4-20 en el bastidor.
4---Inserte el tornillo y apriételo bien.

Si el bastidor no es suficientemente ancho para recibir un quinto tornillo, instale un soporte de zapata Cush (disponible del representante) tal como se muestra abajo.

INSTRUCTIONS FOR INSTALLING
SPRING CUSH ARM



INSTALLATION
(Left hand shown; Right hand opposite)

1. **LOCATING**: See IMPORTANT INFORMATION below. In new installations, use standard CUSH template. When replacing existing CUSH arm, use existing mounting holes.

*** See note 4 in Step 1 on front page. ***

2. **INSTALLATION**: Mount shoe on frame FIRST. After shoe is mounted, use a 5/32 or 4 mm hex wrench to install the contact block assembly as shown above. Make sure the screw is tightened securely into the shoe.

3. **COMPLETING INSTALLATION**: Complete the installation as directed for regular CUSH arms in the main instruction sheet.

IMPORTANT INFORMATION:

4040XP: Spring Cush dead stop will occur approximately 5° beyond normal 4041 dead stop point.

Backcheck: DO NOT reduce backcheck setting of door closer. Spring Cush arm function does not replace backcheck.

INSTRUCTIONS POUR INSTALLER
UN BRAS À RESSORT CUSH

INSTALLATION
(Main gauche illustrée; main droite à l'opposé)

1. SITUER: Voir RENSEIGNEMENTS IMPORTANTS. Pour une nouvelle installation, utilisez le gabarit CUSH standard. Pour remplacer un bras CUSH, utilisez les trous de montage déjà percés.

2. INSTALLATION: Montez le sabot sur le cadre EN PREMIER. Après avoir posé le sabot, utilisez une clé hexagonale 5/32 ou 4 mm pour installer l'assemblage comme sur l'illustration. Serrez la vis fermement dans le sabot.

3. TERMINER L'INSTALLATION: Terminer l'installation indiquée pour les bras CUSH sur la feuille d'instructions principale.

RENSEIGNEMENTS IMPORTANTS:
4040XP: L'arrêt du Cush à ressort se produira à environ 5° après celui du 4041 normal.
Résistance d'ouverture: NE PAS réduire la résistance d'ouverture du ferme-porte. La fonction du bras Cush à ressort ne remplace pas cette résistance.

INSTRUCCIONES DE INSTALACIÓN
DEL BRAZO DE RESORTE CUSH

INSTALACIÓN
(A la izquierda: como se muestra; a la derecha: al opuesto)

1.LOCALIZACIÓN: Vea los DATOS IMPORTANTES abajo. Utilice la plantilla CUSH estándar en las nuevas instalaciones. Utilice los agujeros de montaje existentes cuando se reemplace un brazo CUSH existente.

2. INSTALACIÓN: PRIMERO: Monte la zapata en el bastidor. Después de haber montado la zapata, utilice una llave de tuercas hexagonal 5/32 o 4 mm para instalar el ensamblaje de bloque de contacto como se muestra arriba. Asegúrese de apretar bien el tornillo en la zapata.

3. PARA COMPLETAR LA INSTALACIÓN: Complete la instalación como para los brazos CUSH regulares en la hoja de instrucciones principal.

DATOS IMPORTANTES:
4040XP: El paro en seco del resorte podrá ocurrir aproximadamente 5° después del punto del paro en seco 4041 normal.
Resistencia de apertura: NO reduzca el ajuste de resistencia de apertura del cerrador. El funcionamiento del brazo de resorte Cush no reemplaza la resistencia de apertura.

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1-877-671-7011	www.allegion.com/us	

ALLEGION

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28266 Rev. 04/17-w

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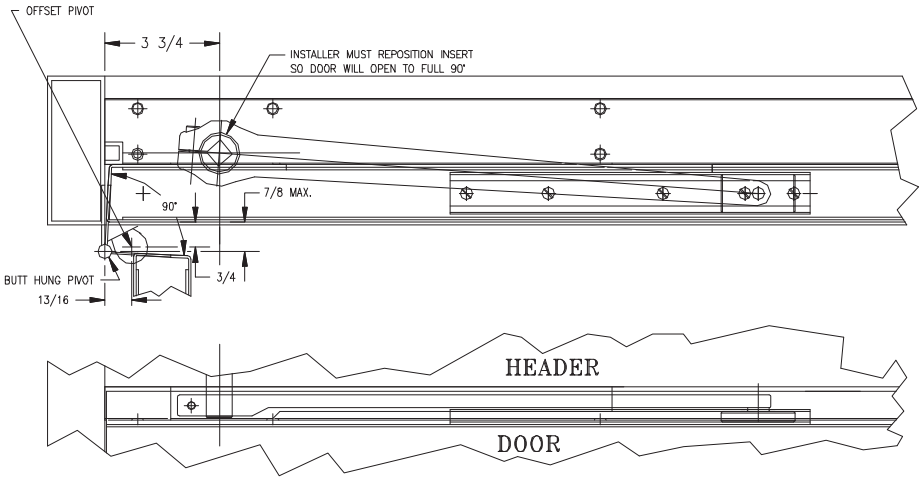
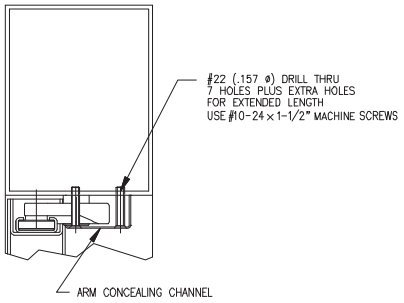
Offset Pivot Arm

LCN®

Installation Instructions

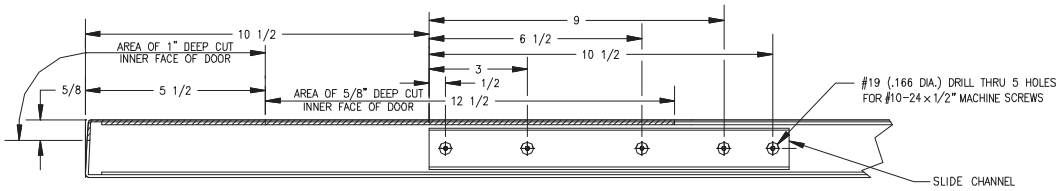


RIGHT HAND SHOWN
LEFT HAND OPPOSITE

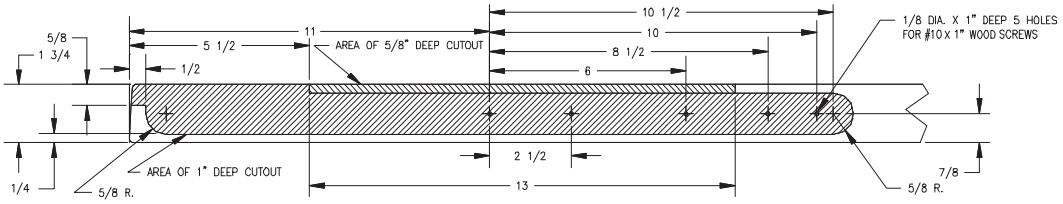


MUST USE
3 3/4" CENTER
HUNG OPERATOR

METAL DOOR



WOOD DOOR



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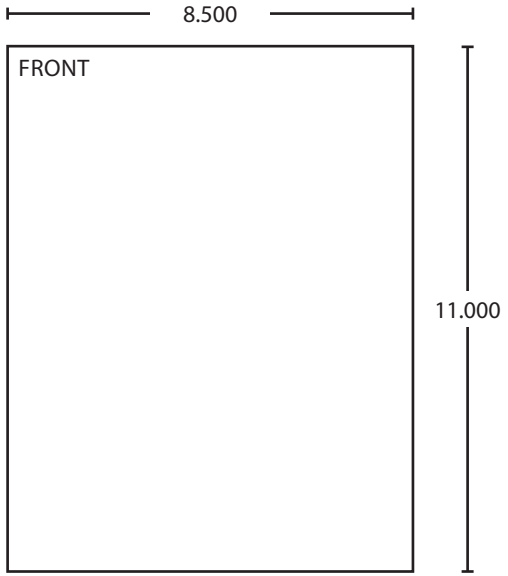
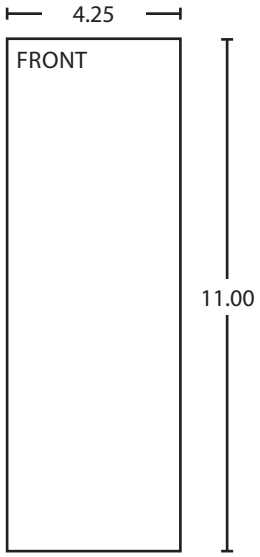
740013 Rev. 02/14-c



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
A	B	C	D	E	F
N/A	N/A	047232			

Revision Description:
C > Revised artwork

Material
White Paper

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	047232	02-18-14

Notes
1. printed one side
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Title
INSTALLATION INSTRUCTIONS FOR OFFSET PIVOT ARM

Creation Date	Number	Revision
08-30-08	740013	C

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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19911

2310ME Sentronic

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Installation Instructions

If closer has optional hold-open bypass feature, bypass label will be on cylinder.

⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage. Follow all instructions carefully. For questions, call LCN at 877 - 671 - 7011

1 Installation

Closer handed at factory and must match hand of door.

2

Voltage shown on box label must match voltage supplied to door frame.

3

If door & frame are not prepared for closer & track, prepare according to details on opposite side.

4

a. Remove finish plates from closer.
b. Assemble flexible conduit connector to conduit mounting bracket.
c. Connect input voltage to plug leads as shown in wiring diagram at bottom left.
d. Insert closer into frame and secure with proper screws.
e. Replace finish plates.

5

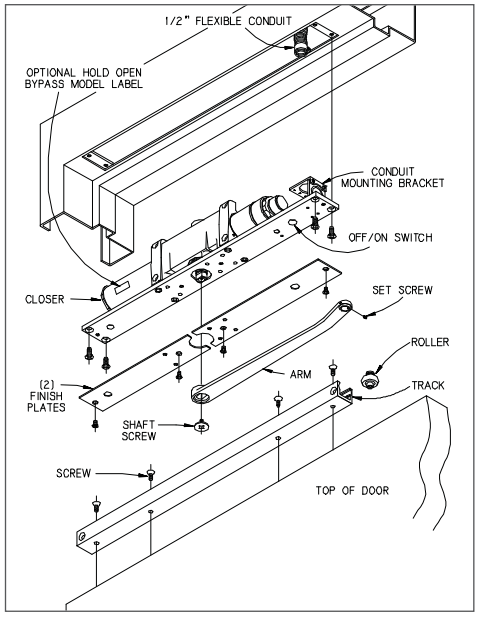
Insert track roller into track. Insert track in door cut out and secure with proper screws.

6

Place arm on closer shaft and secure with shaft screw.

7

Loosen set screw in end of arm, open door part way (about 30°), pull arm over top of door and connect to track roller. Tighten set screw firmly.



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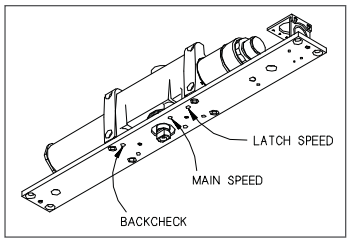
8

Regulation: Do not allow door to slam into frame. A “normal” closing time from 90° open position is 5 to 7 seconds. Use a 3/32” hex wrench. To slow MAIN SPEED of door, turn regulation screw (nearest arm) clockwise. To show LATCH SPEED of door, turn regulating screw (nearest latch) clockwise.

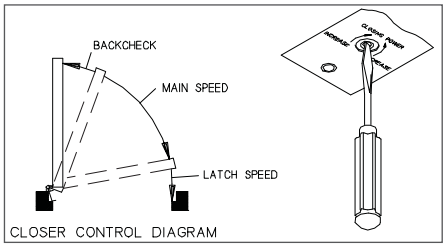


Backcheck: To increase BACKCHECK, turn regulating screw (nearest hinge) clockwise. Using lightest BACKCHECK that will retard door opening sufficiently.

DO NOT USE AN ABRUPT BACKCHECK NOR EXPECT DOOR CLOSER TO ACT AS DOOR STOP.

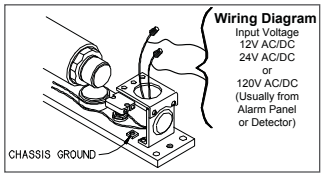
9 Closing Power

Adjust CLOSING POWER only if more power is needed. Closer is shipped with minimum closing power pre-set. To increase CLOSING POWER turn spring adjusting screw clockwise. Maximum adjustment of 18 turns.



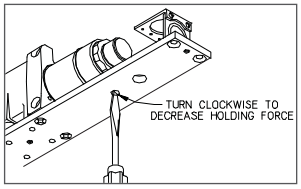
10 Electrical Checkout

a. With power on, open the door any position and release. The door should remain in the hold-open position within 10°. For a bypass model to hold open, the door must be opened beyond degree of door swing indicated on label.
b. If not, push on/off switch.
c. If door does not stay open, verify electrical input in wiring diagram at right.
d. Turn power off, door should close completely.
e. To release hold open manually, pull door firmly. Door should close completely under power of closer.
f. System should be checked at regular intervals. It is suggested that steps A & D be repeated every 90 days.



11 Holding Force Adjustment

IF DOOR IS HARD TO PULL OUT OF HOLD OPEN, ADJUST AS SHOWN.
Holding Force is at maximum. This can be decreased and increased again but not increased beyond original setting.



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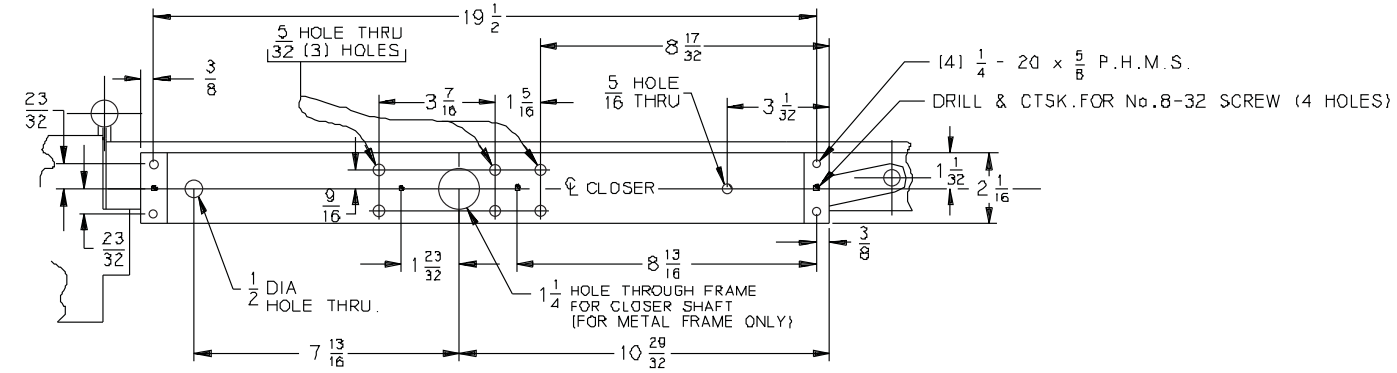
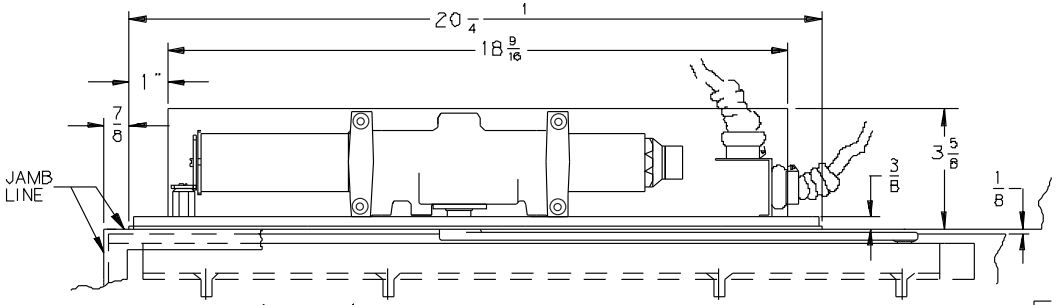
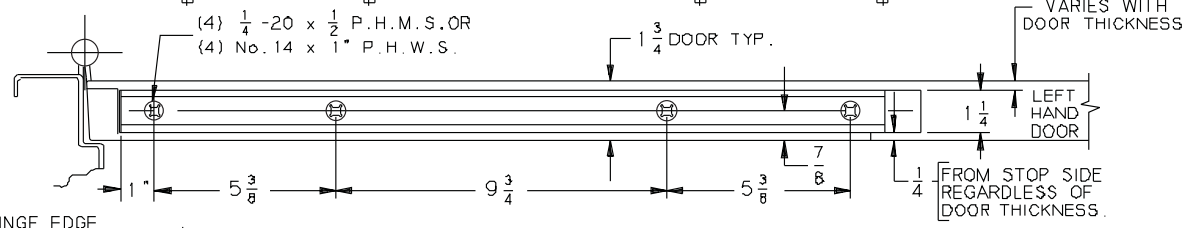
19911 Rev. 01/14-j

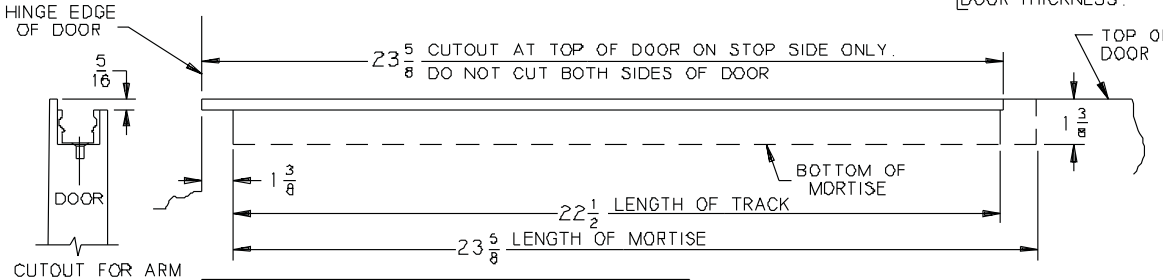
2310 ME

2314 ME	HOLD OPEN ANY POINT TO 170° HOLD OPEN BYPASS UP TO 160°
AUXILIARY STOP RECOMMENDED	
LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE	12/96

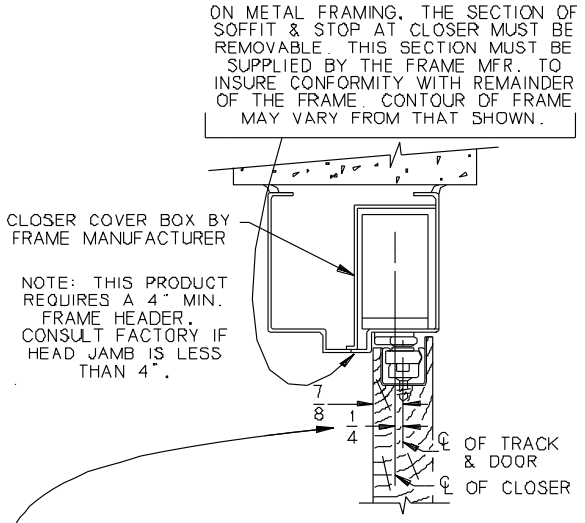








PLAN & ELEVATION OF TOP OF DOOR SHOWING PREPARATION FOR CLOSER TRACK



GENERAL NOTES:

1 - FOR 180° OPENINGS, MAX. ALLOWABLE BUTT SIZE IS 5"x5".
2 - MINIMUM STOP THICKNESS 1/2".
3 - 1/8" DOOR TO SOFFIT CLEARANCE REQUIRED.
4 - FOR METAL FRAMES ONLY.
5 - VOLTAGE SHOWN ON SENTRONIC LABEL MUST MATCH VOLTAGE SUPPLIED.
6 - FLOOR OR WALL STOP RECOMMENDED.
7 - REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOOR AND FRAMES.

LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE

INCH	1/8	5/32	1/4	5/16	3/8	1/2	9/16	5/8	23/32	7/8	1	1 1/32	1 1/4	1 9/32	1 5/16	1 3/8	1 23/32
M M	3	3	6	8	10	13	14	16	18	22	25	26	32	33	33	35	44

INCH	1 3/4	2 1/16	3 1/32	3 7/16	3 5/8	5	5 3/8	7 13/16	8 17/32	8 13/16	9 3/4	10 29/32	18 1/4	19 1/2	20 1/4	22 1/2	23 5/8
M M	44	52	77	87	92	127	137	198	217	224	248	277	464	495	514	572	600

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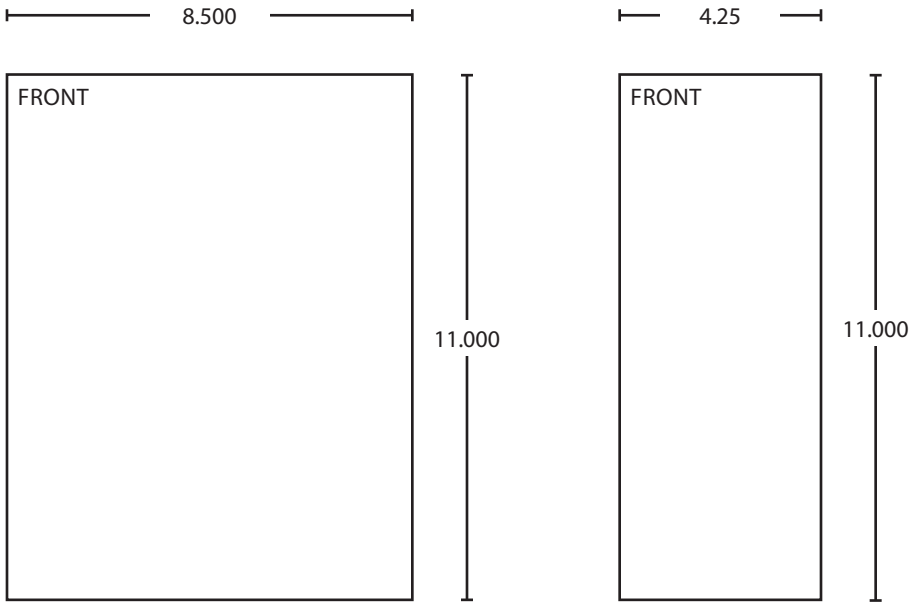


Additional Notes:
1. None

Revision History					
J	K	L	M	N	P
043228					

Revision Description:
J > Revised artwork

Material	Edited By	Approved By	EC Number	Release Date
White Paper	D. Myers	M. Sasso	043228	01-01-14

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Title
2310ME Series Instruction Sheet

Creation Date	Number	Revision
05-10-10	19911	J

Created By	Activity	
N/A	3899 Hancock Expwy Security, CO 80911	
Software: InDesign CS6		© Allegion 2014

27297

2210 Series

LCN®

Door Closers

Installation Instructions

1a Make sure hand of closer matches hand of door. Remove finish plates. Hand of closer is printed on the mounting plate label. Hand of closer cannot be reversed. See diagram above to determine hand of door.

1b Prepare and mortise door & frame per template on pg. 4.

1c Install closer in prepared headframe, as shown in Fig. 1, with spring tube pointing away from hinge. Fasten mounting plate to jamb with 1/4 - 20 x 5/8 PHMS provided.

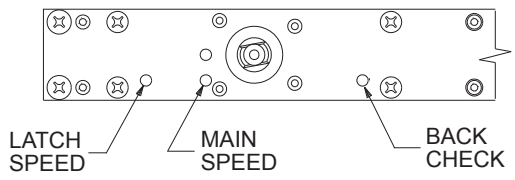
1d Install track in door. Roller access hole must be toward latch edge of door, as shown in Fig. 1. Fasten with 1/4 - 20 x 1/2 TORX MS provided.

1e Connect arm assembly to track by placing plastic roller at end of arm into the roller access hole in track. See Fig. 1. Let arm assembly rest on top of installed track.

1f To attach arm to closer:

a. Open door out of working area.
b. With a 3/32” hex wrench, turn latch & main speed regulating screws all the way in (clockwise). See Fig. 2. DO NOT FORCE SCREWS.
c. Using an adjustable wrench, rotate door closer shaft approximately 90°. See Fig. 3. (R.H. - clockwise / L.H. - counterclockwise).

Fig. 2



HOW TO TELL HAND OF DOOR

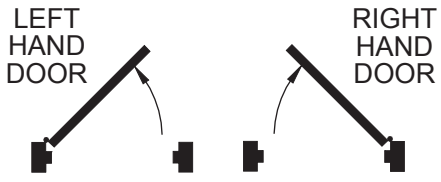


Fig. 1

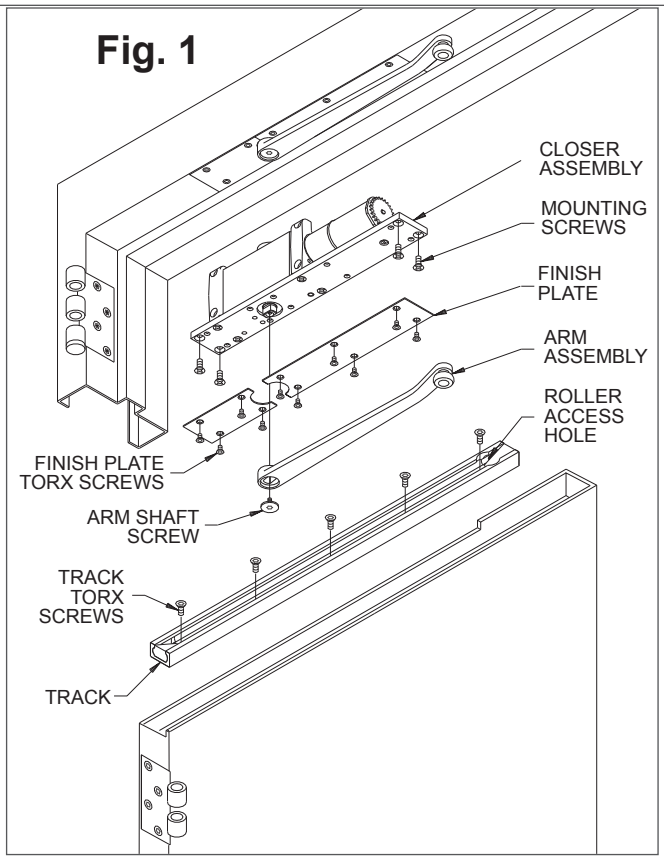
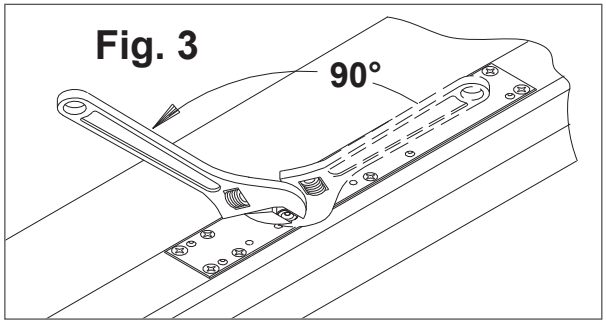


Fig. 3



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27297 Rev. 03/14-f

d. With closer shaft now stationary, move the end of the arm to shaft of closer. Slowly move door so hole in arm lines up correctly with closer shaft. Push arm up into position and insert arm shaft screw, as shown in Fig. 4.

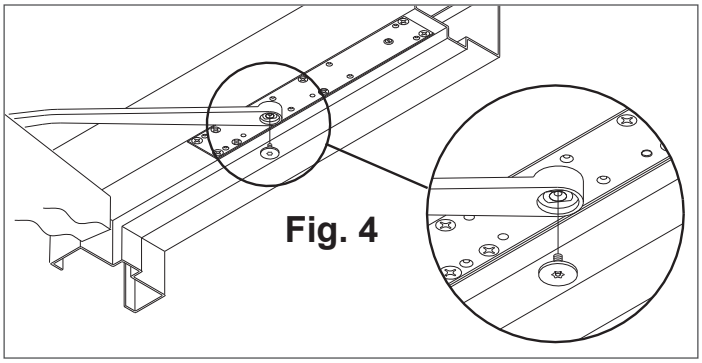
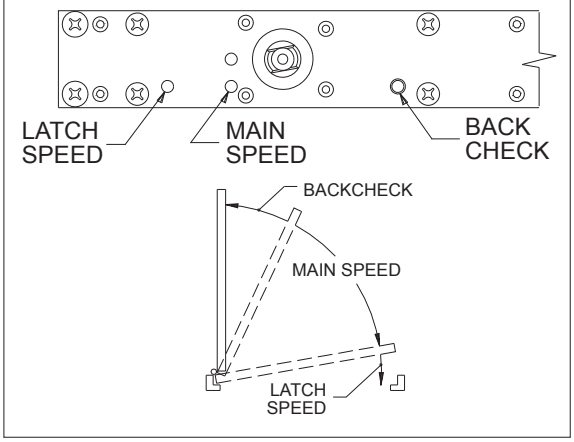


Fig. 4

1g TO REGULATE CLOSING SPEED & BACKCHECK:

See Fig. 5 below. Use a 3/32" hex wrench to re-adjust MAIN & LATCH speed screws (closed in step 7A). Turn both MAIN & LATCH speed screws 2 full turns counterclockwise. Open door and observe closing cycle. A normal closing time from a 90° position is 5 to 7 seconds, equally divided between MAIN & LATCH speeds. If further adjustment is required, turn regulating screws clockwise to SLOW door speed / counterclockwise to INCREASE door speed. BACKCHECK is a feature that slows the speed of door at approximately 70°. To INCREASE force turn BACKCHECK screw clockwise. To REDUCE force turn BACKCHECK screw counterclockwise. **Do not use an abrupt BACKCHECK setting, nor expect closer to act as a door stop!**

Fig. 5



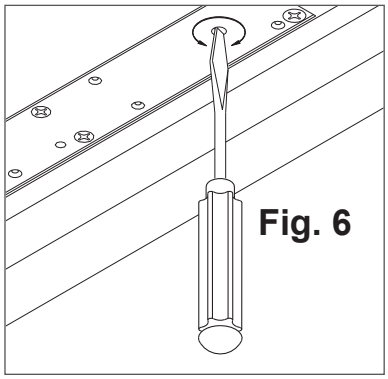


Fig. 6

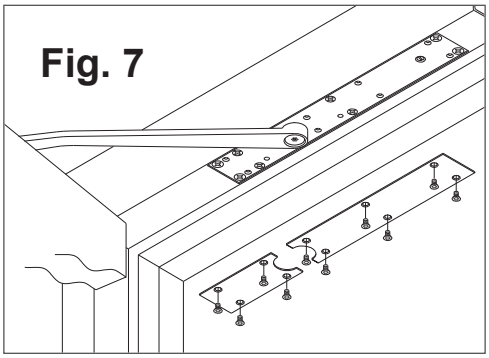


Fig. 7

1h CLOSING POWER ADJUSTMENT:

Depending on width of door, the 2210 has been ordered as one of three sizes: 2213, 2214 or 2215. Determine closer size from either label on box or UL label on mounting plate. Adjustment can be made with a flat head screwdriver (see Fig. 6). Adjustment range for each size is as follows:

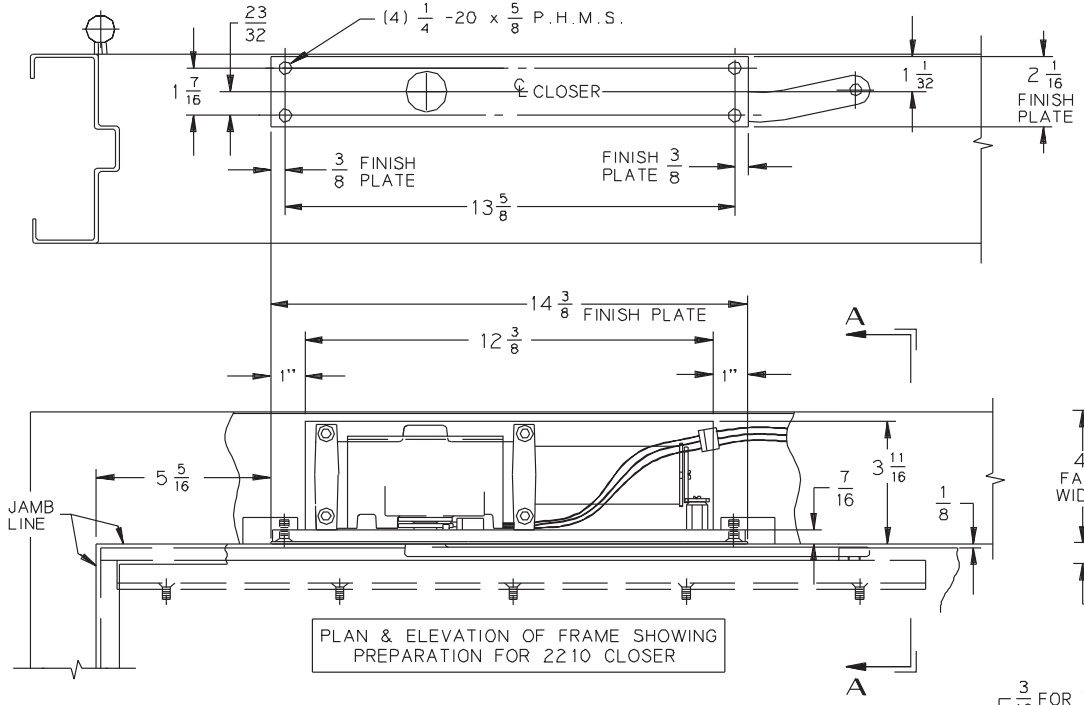
- 2213: Closer is shipped at minimum closing power. If MORE closing Power is required, turn adjusting screw counterclockwise, but not more than 36 full turns. Do not turn adjusting screw clockwise.
- 2214: If MORE power is required, turn adjusting screw counterclockwise, but not more than 18 full turns. If LESS power is required, turn adjusting screw clockwise, but not more than 18 full turns. Do not turn adjusting screw more than 18 full turns in either direction.
- 2215: Closer is shipped at maximum closing power. If LESS power required, turn adjusting screw clockwise, but not more than 36 full turns. Do not turn adjusting screw counterclockwise.

1i Once proper operation has been verified, secure finish plates with No. 10-24 x 3/8" Torx security screws, as shown in Fig. 7.

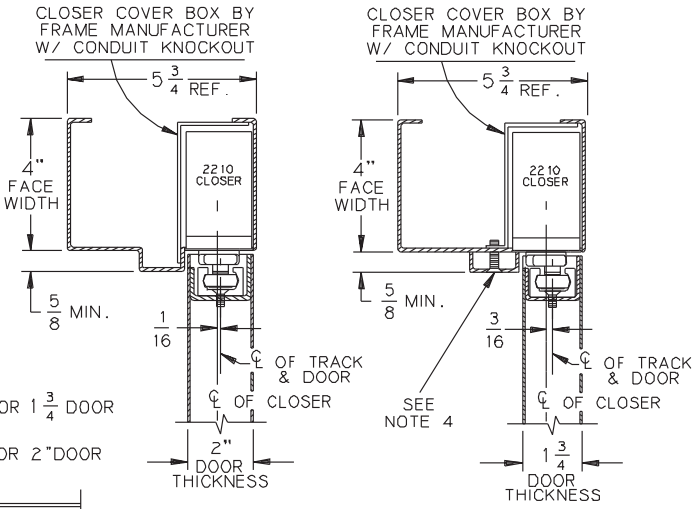
2210/2210DPS -THRU 180°OPENING	
AUXILIARY STOP RECOMMENDED	
LEFT HAND DOOR AND CLOSER SHOWN, RIGHT HAND OPPOSITE	6/96

GENERAL NOTES-

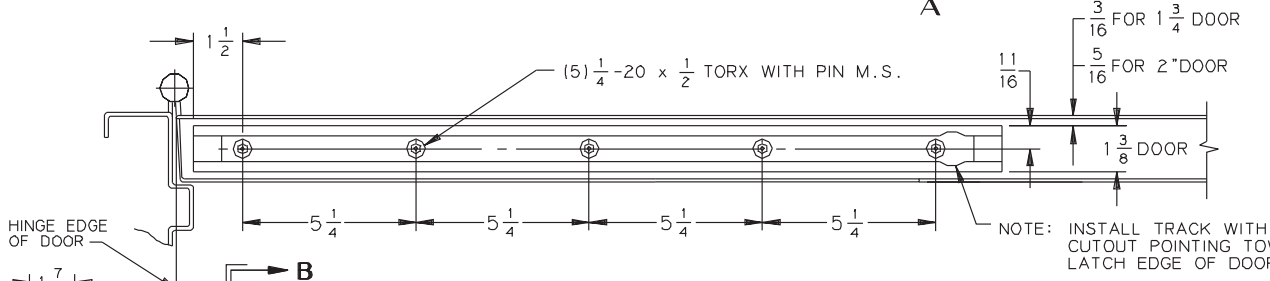
1 - FOR 180° OPENINGS, MAXIMUM ALLOWABLE BUTT SIZE IS 4 1/2" x 4 1/2" OPEN WIDTH.
2 - MINIMUM STOP THICKNESS 5/8".
3 - 1/8" DOOR TO SOFFIT CLEARANCE REQUIRED.
4 - RECOMMEND CASED FRAME AND APPLIED STOP FOR 1 3/4" DOOR. MOUNT APPLIED STOP WITH TORX WITH PIN MACHINE SCREWS.
5 - THIS TEMPLATE SHOWS A 4" FACE WIDTH FRAME HEAD WITH A 2" AND 1 3/4" DOOR THICKNESS ANY OTHER DEVIATION CONSULT FACTORY.
6 - REINFORCING PER.ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOOR AND FRAMES.

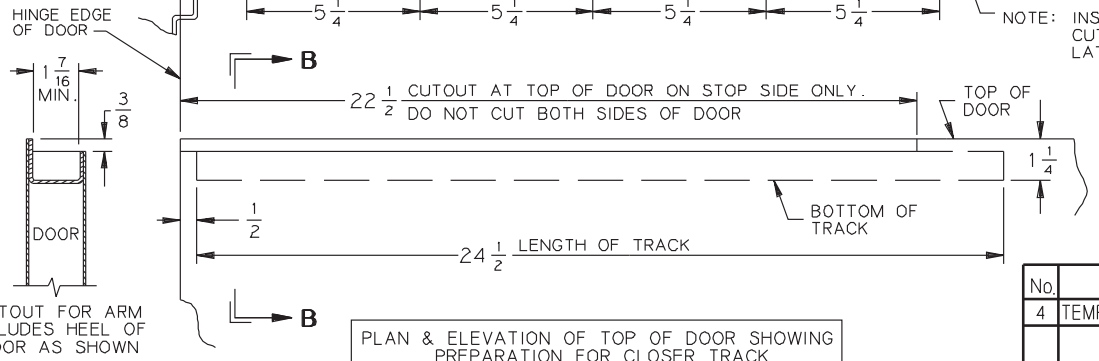


PLAN & ELEVATION OF FRAME SHOWING PREPARATION FOR 2210 CLOSER



SECTION A - A





SECTION B - B

PLAN & ELEVATION OF TOP OF DOOR SHOWING PREPARATION FOR CLOSER TRACK

AUXILIARY STOP RECOMMENDED

INCH	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	11/16
M.M.	2	3	5	6	8	10	11	13	16	17

INCH	23/32	1	1 1/32	1 1/4	1 7/16	1 1/2	1 3/4	2	2 1/16	3 11/16
M.M.	18	25	26	32	37	38	45	51	52	94

INCH	4	4 1/2	5 1/4	5 5/16	5 3/4	12 3/8	13 5/8	14 3/8	22 1/2	24 1/2
M.M.	102	114	133	135	146	314	346	365	572	622

No.	REVISION	BY	DATE
4	TEMPLATE UPDATE	JEJ	6/96

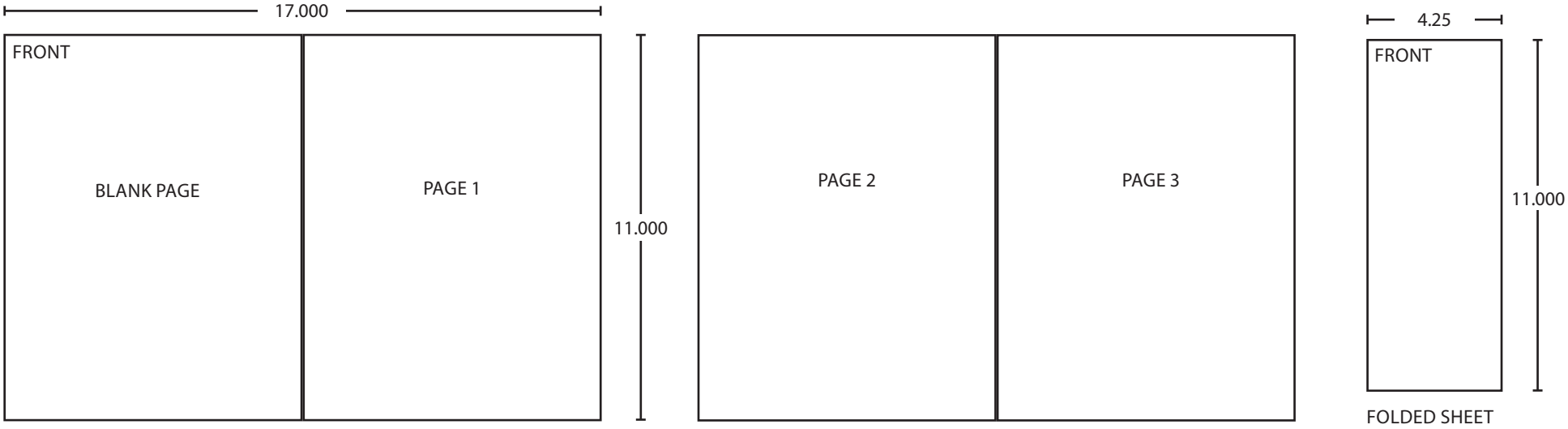
LCN®

APP BY JEJ 6/96

DO NOT SCALE

OVERHEAD CONCEALED CLOSER WITH CONCEALED ARM (WITH OR WITHOUT DOOR POSITION SWITCH)

2210/2210DPS



BEGINNING SHEET

FOLDED SHEET

Additional Notes:
1. None

Revision History					
F	G	H	J	K	L
xxxxx					

Material
White Paper

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Revision Description:
F > Revised artwork

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	xxxxx	03-13-14

Title
2210 Series Instruction Sheet

Creation Date	Number	Revision
11-15-08	27297	F

Created By
N/A

Software: InDesign CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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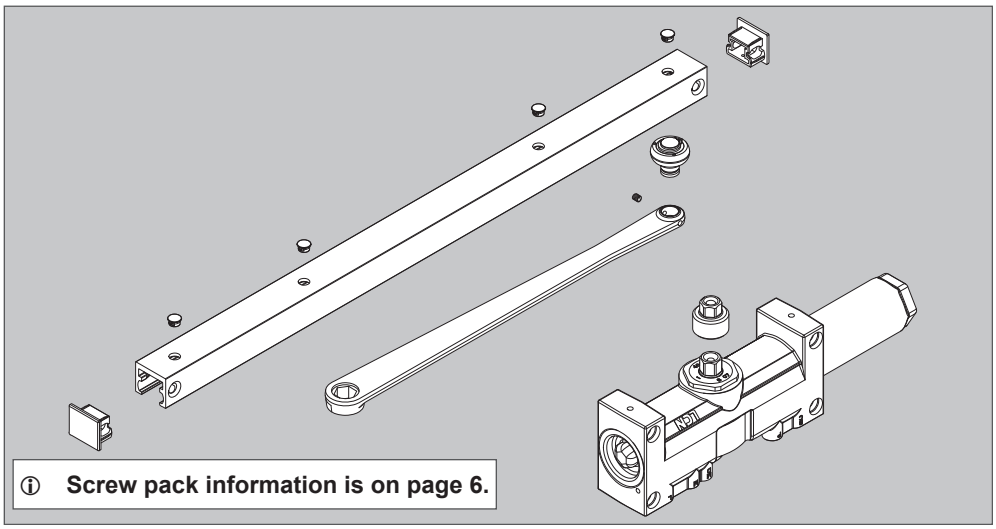
4050 Track Series

72779

Pull Side, Top Jamb Mount, Push Side, and Double Egress Mounts

Installation Instructions

PARTS

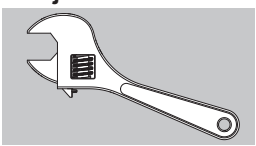


ⓘ **Screw pack information is on page 6.**

TOOLS

5⁄32" Hex Wrench

Adjustable wrench



1⁄8" Drill Bit

Phillips Head Screwdriver

3⁄32" Hex Wrench

⚠ CAUTION ⚠

Opening the regulation valves too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.
FOLLOW ALL INSTRUCTIONS CAREFULLY.

DO NOT USE THE CLOSER AS A DOOR STOP!
An auxiliary stop is recommended at the hold-open point or where the door cannot swing 180º.

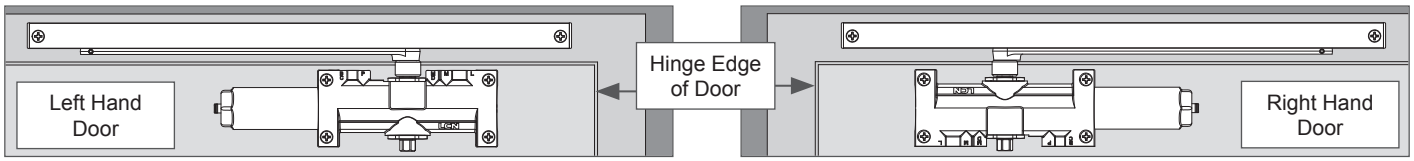
⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage.
Follow all instructions carefully.
For questions, call LCN at 877 - 671 - 7011

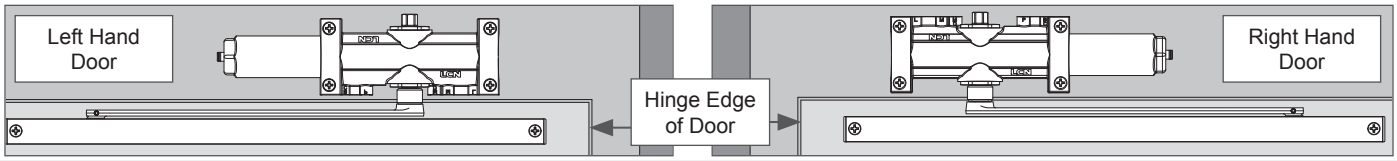
Hold open track arms must NOT be installed on fire rated doors.

Choose Installation Type

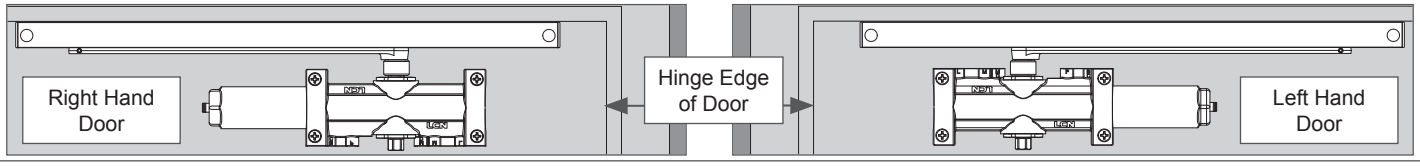
Pull Side 180° Mount (see page 2)



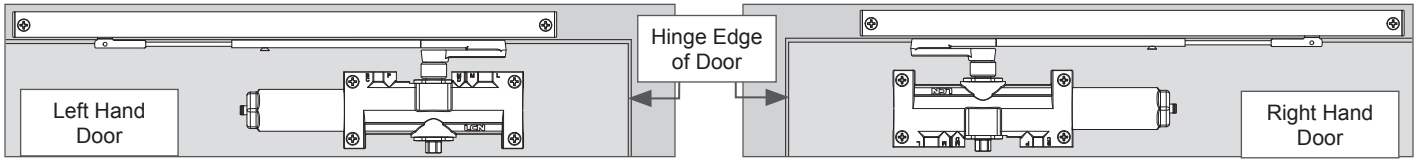
Top Jamb Pull Side 180° Mount (see page 3)



Push Side 120° Mount (see page 4)



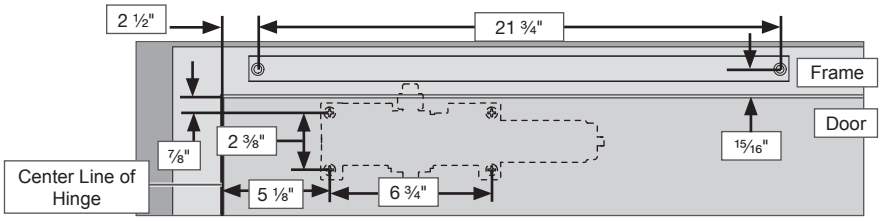
Double Egress (DE) Arm Pull Side Mount (see page 5)



Pull Side 180° Mount

Mounting Hole Dimensions

Right Hand (RH) shown throughout instructions. Left Hand (LH) opposite.



1 Measure from door edge and mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**

2 Drill holes where marked with a 1/8" drill bit.

ⓘ **SRT screws are used on metal doors.**
Wood screws are used and recommended on wood doors.
Reduce installation torque if using SRT screws in wood.

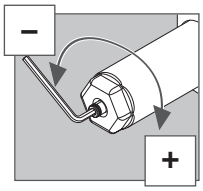
3 Measure and determine your door's width. Using a 5/32" hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.

Turn counterclockwise for "-"; turn clockwise for "+"

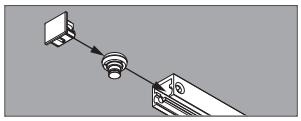
ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

ⓘ **Do not use power drill to adjust spring force! It may cause damage and void the warranty.**

Door Width	Number of Turns
ADA Setting	-16
34"	-8
38"	0
48"	+6



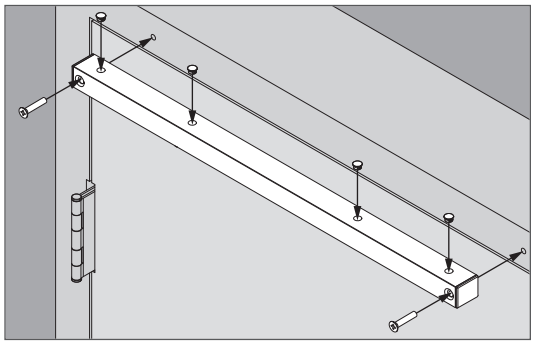
4 Install roller into track, then install end plugs.



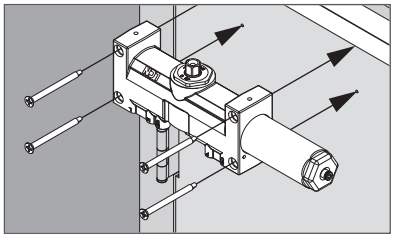
For Hold Open option, complete that assembly, on page 6, during this step.

5 Install track plugs onto track, install track onto frame.

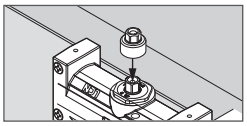
ⓘ **See page 6 for Optional Hold Open Arm installation and adjustment.**



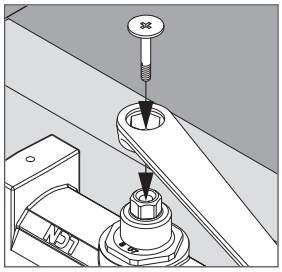
6 Install closer onto door using fasteners provided.



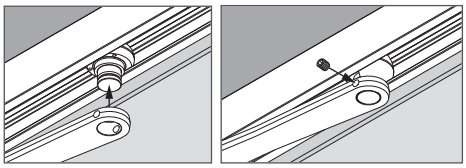
7 Install pinion spacer onto the closer cylinder.



8 Install arm to closer.
a. Place main arm onto the top closer shaft at a 30° angle.
b. Install and tighten arm screw.

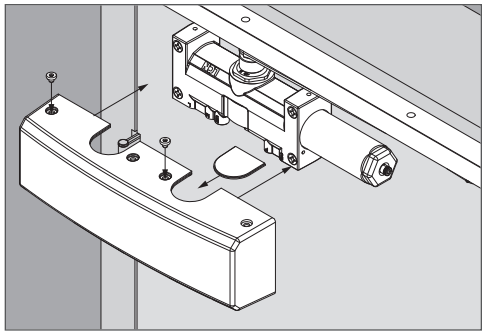


9 Install arm to track.
a. Place arm onto roller.
b. Install and tighten arm roller screw.



10 Adjust the closer, if necessary. See page 6 for closer adjustment instructions.

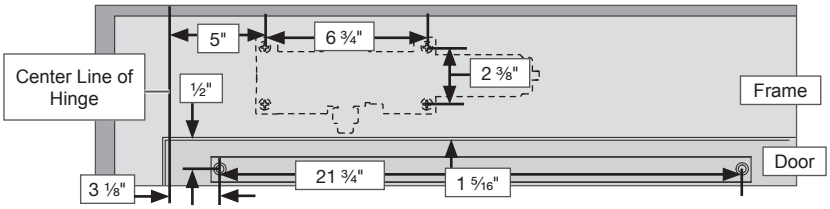
11 Install cover.



Top Jamb Pull Side 180° Mount

Mounting Hole Dimensions

Right Hand (RH) shown throughout instructions. Left Hand (LH) opposite.



1 Measure from door edge and mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**

2 Drill holes where marked with a 1/8” drill bit.

ⓘ **SRT screws are used on metal doors.**
Wood screws are used and recommended on wood doors.
Reduce installation torque if using SRT screws in wood.

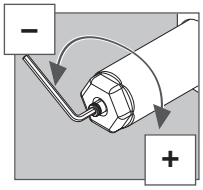
3 Measure and determine your door’s width. Using a 5/32” hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.

Turn counterclockwise for “-”; turn clockwise for “+”

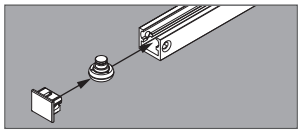
ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

ⓘ **Do not use power drill to adjust spring force! It may cause damage and void the warranty.**

Door Width	Number of Turns
ADA Setting	-16
34”	-8
38”	0
48”	+6



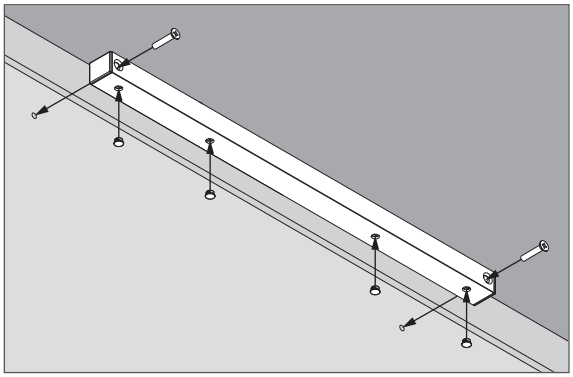
4 Install roller into track, then install end plugs.



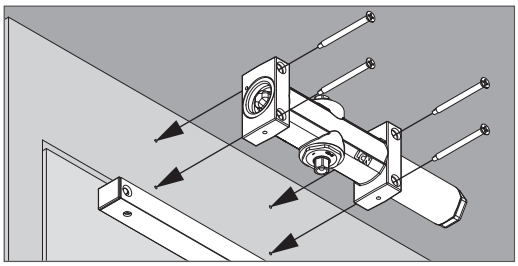
For Hold Open option, complete that assembly, on page 6, during this step.

5 Install track plugs onto track, install track onto door.

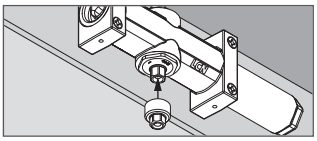
ⓘ **See page 6 for Optional Hold Open Arm installation and adjustment.**



6 Install closer onto frame using fasteners provided.

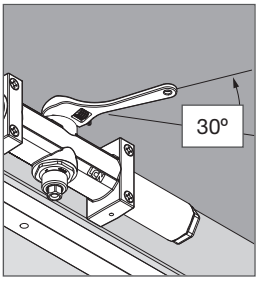


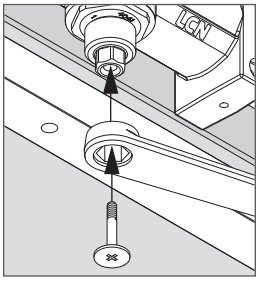
7 Install pinion spacer onto the closer cylinder.



8 Install arm to closer.

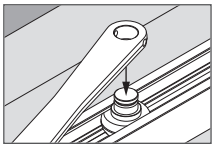
a. Use a wrench to turn the top closer shaft approximately 30°. **Hold the wrench at this angle for the next step.**
b. Place main arm onto the bottom closer shaft.
c. Install and tighten arm screw.

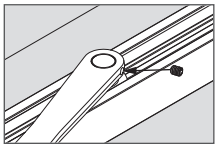




9 Install arm to track.

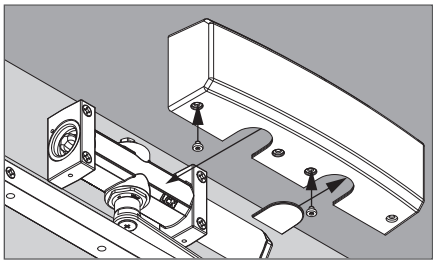
a. Place arm onto roller.
b. Install and tighten arm roller screw.





10 Adjust the closer, if necessary. See page 6 for closer adjustment instructions.

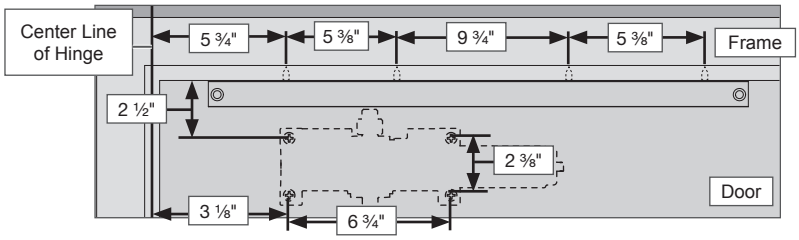
11 Install cover.

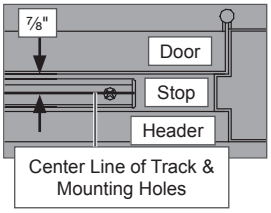


Push Side 120° Mount

Mounting Hole Dimensions

Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.





1 Measure from door edge and mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**

2 Drill holes where marked with a 1/8" drill bit.

ⓘ **SRT screws are used on metal doors.**
Wood screws are used and recommended on wood doors.
Reduce installation torque if using SRT screws in wood.

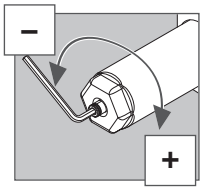
3 Measure and determine your door's width. Using a 5/32" hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.

Turn counterclockwise for "-"; turn clockwise for "+"

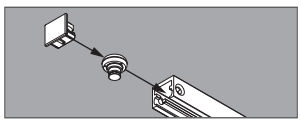
ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

ⓘ **Do not use power drill to adjust spring force! It may cause damage and void the warranty.**

Door Width	Number of Turns
ADA Setting	-16
34"	-8
38"	0
48"	+6



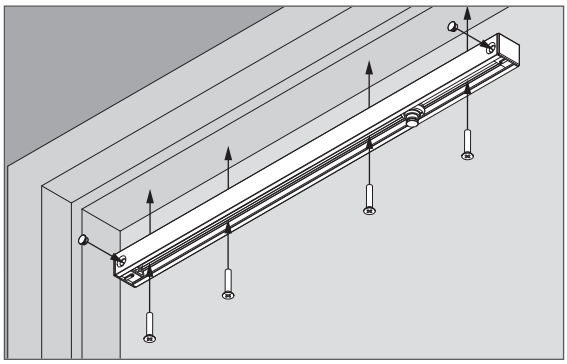
4 Install roller into track, then install end plugs.



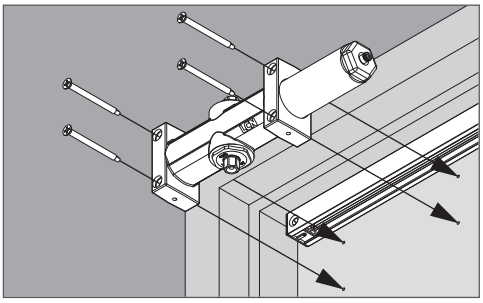
For Hold Open option, complete that assembly, on page 6, during this step.

5 Install track plugs onto track, install track onto frame.

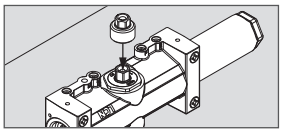
ⓘ **See page 6 for Optional Hold Open Arm installation and adjustment.**



6 Install closer onto door using fasteners provided.

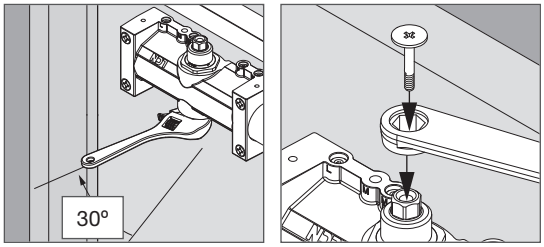


7 Install pinion spacer onto the closer cylinder.



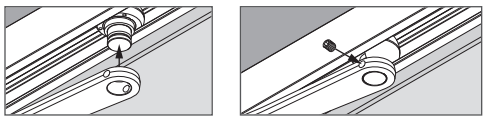
8 Install arm to closer.

a. Use a wrench to turn the bottom closer shaft approximately 30°. **Hold the wrench at this angle for the next step.**
b. Place main arm onto the top closer shaft.
c. Install and tighten arm screw.



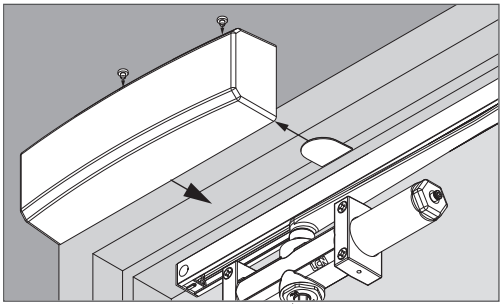
9 Install arm to track.

a. Place arm onto roller.
b. Install and tighten arm roller screw.



10 Adjust the closer, if necessary. See page 6 for closer adjustment instructions.

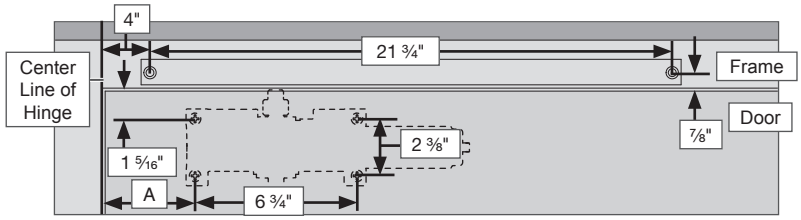
11 Install cover.



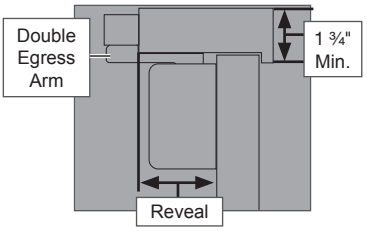
Double Egress (DE) Arm Pull Side Mount

Mounting Hole Dimensions

Right Hand (RH) shown throughout instructions. Left Hand (LH) opposite.



Reveal	Dim. A
3"	7"
2"	6 ½"
1 ½"	5 7/8"
1"	5 5/8"



1 Measure from door edge and mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**

2 Drill holes where marked with a 1/8" drill bit.

ⓘ **SRT screws are used on metal doors.**
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3 Measure and determine your door's width. Using a 5/32" hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.

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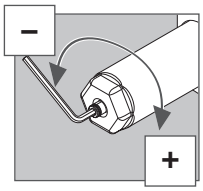
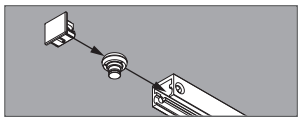
Door Width	Number of Turns
ADA Setting	-16
34"	-8
38"	0
48"	+6



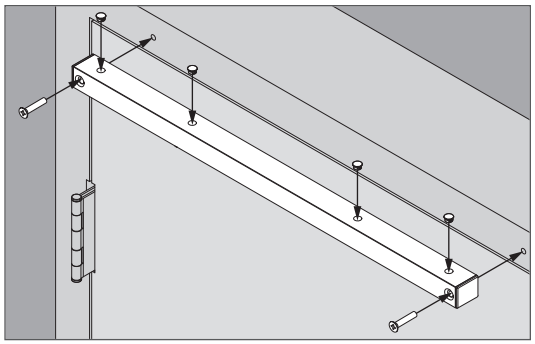
4 Install roller into track, then install end plugs.



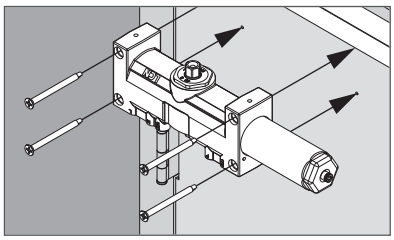
For Hold Open option, complete that assembly, on page 6, during this step.

5 Install track plugs onto track, install track onto frame.

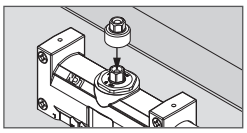
ⓘ **See page 6 for Optional Hold Open Arm installation and adjustment.**



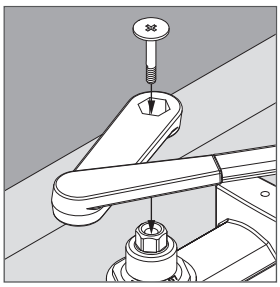
6 Install closer onto door using fasteners provided.



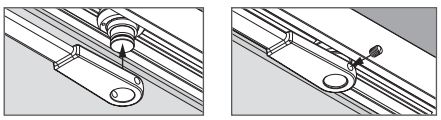
7 Install pinion extender onto the closer cylinder.



8 Install arm to closer.
a. Place main arm onto the top closer shaft at a 30° angle.
b. Install and tighten arm screw.

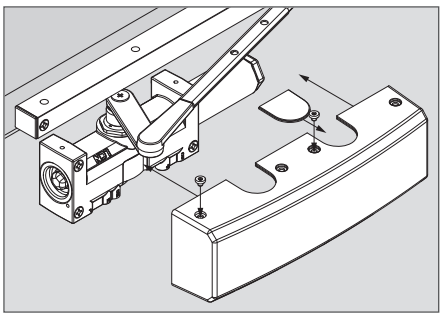


9 Install arm to track.
a. Place arm onto roller.
b. Install and tighten arm roller screw.



10 Adjust the closer, if necessary. See page 6 for closer adjustment instructions.

11 Install cover.



Closer Valve Adjustment

Check closing time, and adjust closer if needed.

⚠ CAUTION ⚠

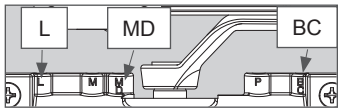
Opening the regulation valves (described below) too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.

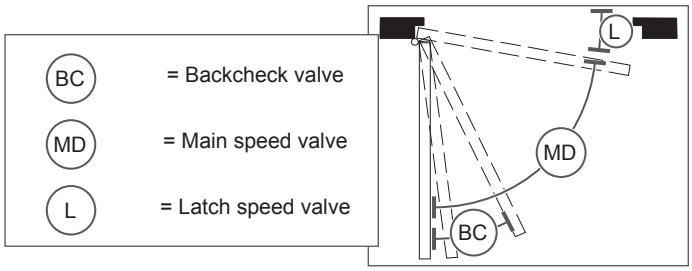
FOLLOW ALL INSTRUCTIONS CAREFULLY.

ⓘ **Valve must be closed CW to seat, never more than 3 turns CCW from seated position. Adjust the valves in 1/4 turn increments or less at a time. DO NOT TURN MORE THAN 3 FULL ROTATIONS. THIS WILL CAUSE THE CLOSER TO LEAK OIL!**

ⓘ **DO NOT ADJUST THE LATCH SPEED IF THE DOOR DOES NOT LATCH. If this occurs, adjust the spring force.**

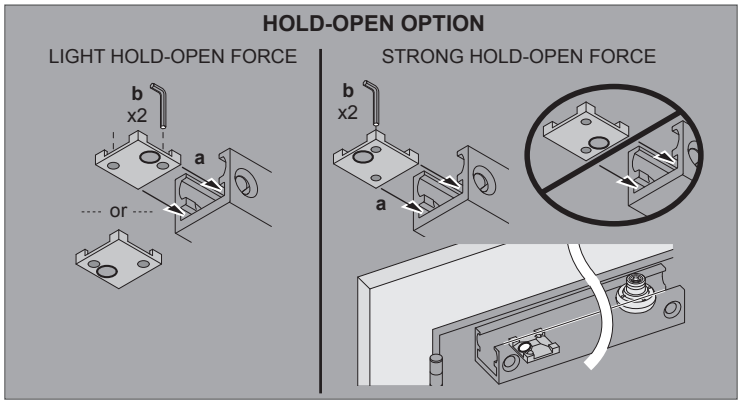
1. Open the door to 90°, measure how long the door takes to close and latch. A typical closing time is 5 to 7 seconds, evenly divided between main speed and latch speed.
2. If the closing time needs to be adjusted, use a 3/32" hex wrench to adjust the closer valves described below.
   a. Backcheck (BC)- this controls door speed opening as the door angle approaches 90°. **Do not use as a door stop.**
   b. Main Speed (MD)- this controls main speed for cylinders.
   c. Latch Speed (L)- this controls door speed during the last few degrees of door closing.
3. Turn the valves clockwise to decrease door speed, and counterclockwise to increase door speed. The latch speed and main speed should be adjusted together.

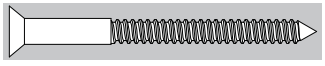
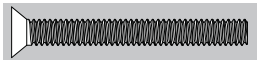
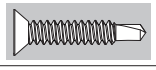


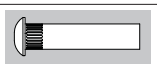


Optional Hold Open Track

1 See the image below to determine the direction of the Hold Open Block. This is determined by the door handing.



Screw Type	Screw Pack	Picture	Cylinder Mounting	Track Mounting	Track Mounting - Push Side
Wood (for wood doors & frames)	Wood & Machine Screw Pack (WMS)		4 @ #14 x 2 ⅞"	4 @ #14 x 2 ½"	4 @ #14 x 1 ½"
Machine (for metal doors & frames) Requires hole drilling & tapping; best hold.	WMS		4 @ ¼-20 x 2 ¼"	4 @ ¼-20 x 1 ¾"	4 @ ¼-20 x ½"
SRT - Self Reaming & Tapping (for metal doors & frames)	Standard		4 @ ¼-14 x 3 ⅛"	4 @ ¼-14 x 2 ½"	4 @ ¼-14 x 1 ⅜"

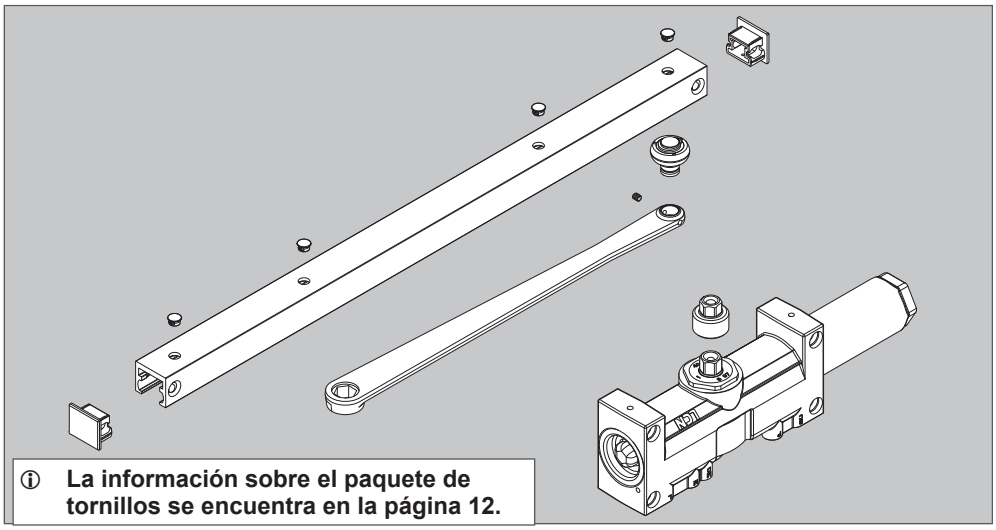
Screw Type	Screw Pack	Picture	Notes
Pinion Spacer	Standard		
Long Screw	Standard		¼-20 for attachment of the arm (see step 8).
Thru Bolt	Order TB Screw pack		1 9⁄32" or 1 17⁄32" or 1 21⁄32"

Serie de riel 4050

72779

Lado para tirar, montaje de la jamba superior, lado para empujar, montajes de doble egreso Instrucciones para la instalación

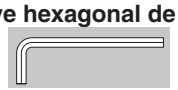
PIEZAS



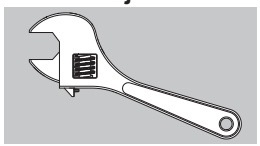
ⓘ **La información sobre el paquete de tornillos se encuentra en la página 12.**

HERRAMIENTAS

Llave hexagonal de 5⁄32"

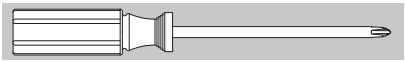


Llave ajustable

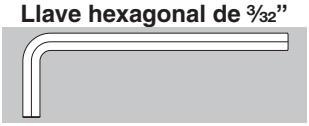


Broca de taladro de 1⁄8"

Destornillador con cabeza Phillips



Llave hexagonal de 3⁄32"



⚠ PRECAUCIÓN ⚠

¡Abrir demasiado las válvulas de regulación puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales.
Siga todas las instrucciones con atención.

¡No utilice el mecanismo de cierre como tope de puerta!
Se recomienda el uso de un tope auxiliar en el punto de mantener abierto o donde la puerta no puede girar 180º.

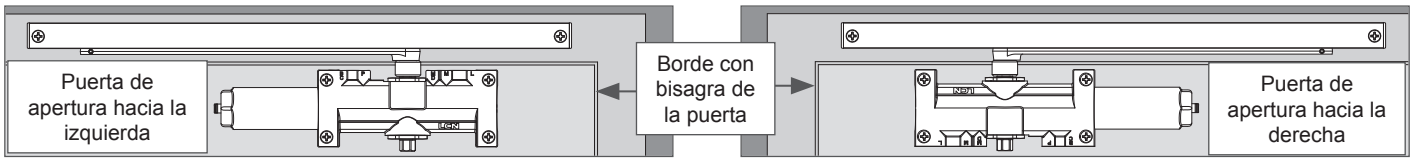
⚠ PRECAUCIÓN ⚠

La instalación o regulación incorrecta puede resultar en lesiones personales o daño a los bienes.
Siga todas las instrucciones con atención.
En caso de duda, llame a LCN al 877 - 671 - 7011.

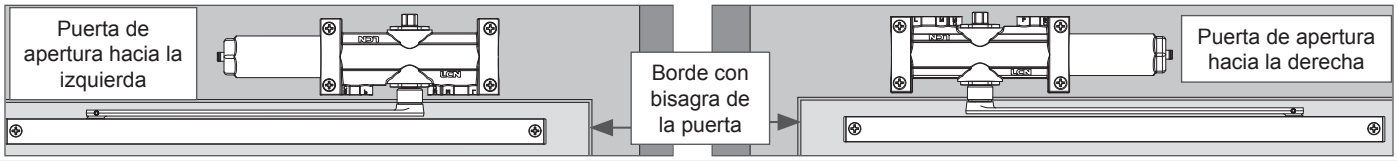
Los brazos del riel para mantener abierto no deben instalarse en puertas con clasificación ignífuga.

Seleccione el tipo de instalación

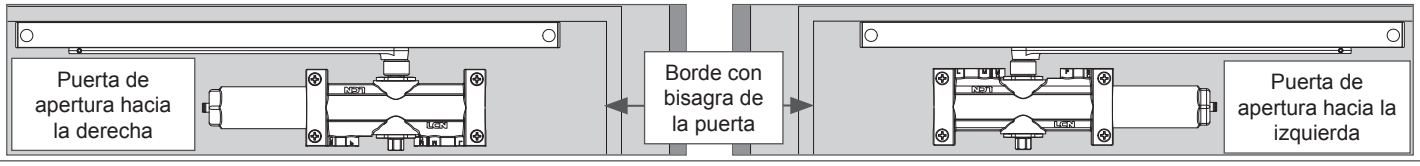
Tirar montaje lateral de 180 (ver página 8)



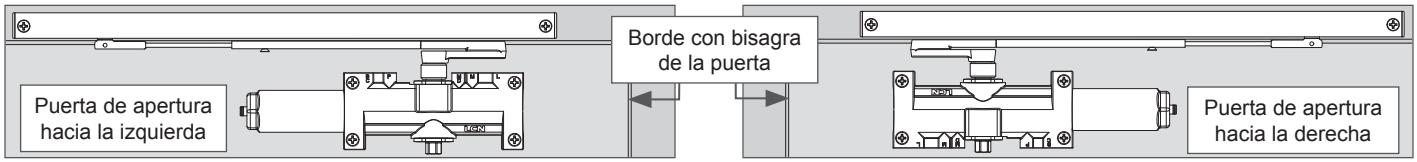
Montaje de 180° del lado para tirar de la jamba superior (ver página 9)



Montaje de 120° del lado para empujar (ver página 10)



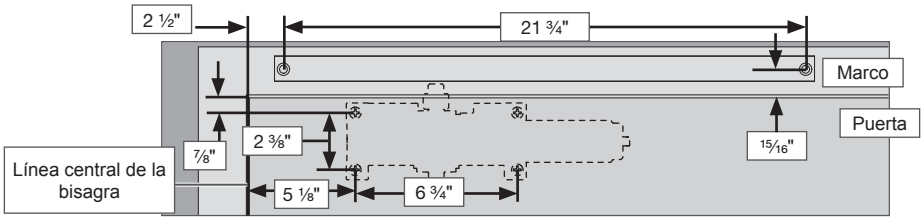
Montaje del lado para tirar del brazo de doble egreso (DE) (ver página 11)



Tirar montaje lateral de 180°

Dimensiones del orificio de montaje

Se muestra la apertura hacia la derecha (RH) en las instrucciones. La apertura hacia la izquierda (LH) es opuesta.



1 Mida desde el borde de la puerta y marque los orificios de perforación.

ⓘ **Vea las Dimensiones de montaje anteriores según sea necesario.**

2 Perfore los orificios donde esté marcado con una broca de taladro de 1/8".

ⓘ **Los tornillos SRT se usan en puertas de metal.**
Se recomienda usar los tornillos de madera en puertas de madera.
Reduzca la torsión de la instalación si utiliza tornillos SRT en madera.

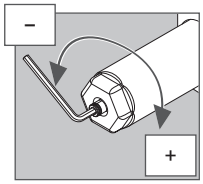
3 Mida y determine el ancho de su puerta. Con una llave hexagonal de 5/32", ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

Gire en sentido antihorario para "-"; gire en sentido horario para "+".

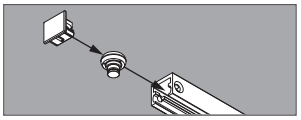
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

ⓘ **¡No utilice un taladro eléctrico para ajustar la fuerza del resorte! Podría causar daños y anular la garantía.**

Ancho de la puerta	Número de giros
Configuración de ADA	-16
34"	-8
38"	0
48"	+6



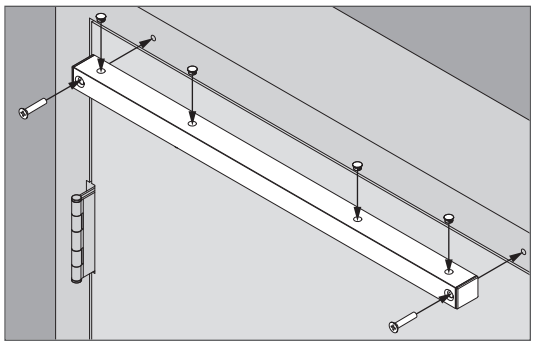
4 Instale el rodillo en el riel y, luego, instale los conectores finales.



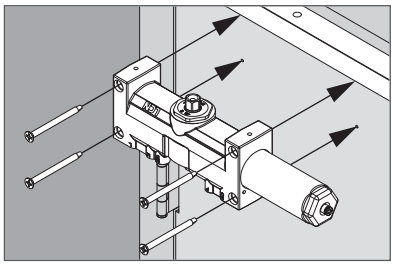
Para la opción de mantener abierto, complete ese ensamblaje, en la página 12, durante este paso.

5 Instale los conectores del riel en el riel, e instale el riel en el marco.

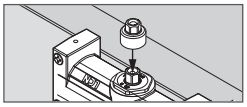
ⓘ **Consulte la página 12 para ver la instalación y el ajuste del brazo opcional para mantener abierto.**



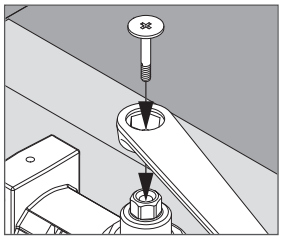
6 Instale el mecanismo de cierre de la puerta usando los tornillos provistos.



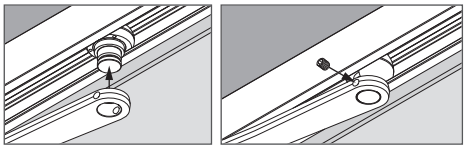
7 Instale el espaciador del piñón en el cilindro del mecanismo de cierre.



8 Instale el brazo en el mecanismo de cierre.
a. Coloque el brazo principal en eje superior del mecanismo de cierre a un ángulo de 30°.
b. Instale y ajuste el tornillo del brazo.

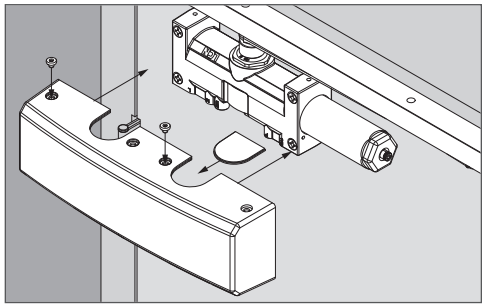


9 Instale el brazo en el riel.
a. Coloque el brazo en el rodillo.
b. Instale y ajuste el tornillo del rodillo del brazo.



10 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 12 para ver las instrucciones de ajuste del mecanismo de cierre.

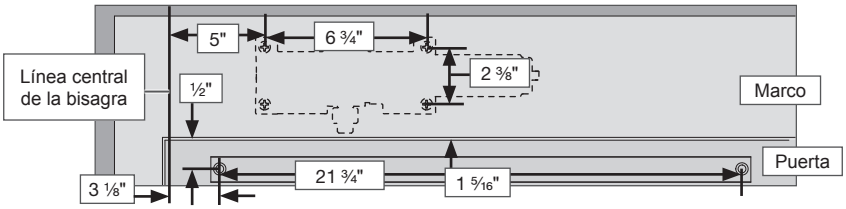
11 Instale la cubierta.



Montaje de 180° del lado para tirar de la jamba superior

Dimensiones del orificio de montaje

Se muestra la apertura hacia la derecha (RH) en las instrucciones. La apertura hacia la izquierda (LH) es opuesta.



1 Mida desde el borde de la puerta y marque los orificios de perforación.

ⓘ **Vea las Dimensiones de montaje anteriores según sea necesario.**

2 Perfore los orificios donde esté marcado con una broca de taladro de 1/8".

ⓘ **Los tornillos SRT se usan en puertas de metal.**
Se recomienda usar los tornillos de madera en puertas de madera.
Reduzca la torsión de la instalación si utiliza tornillos SRT en madera.

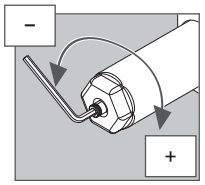
3 Mida y determine el ancho de su puerta. Con una llave hexagonal de 5/32", ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

Gire en sentido antihorario para "-"; gire en sentido horario para "+".

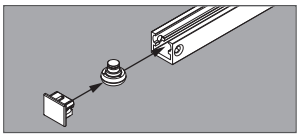
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

ⓘ **¡No utilice un taladro eléctrico para ajustar la fuerza del resorte! Podría causar daños y anular la garantía.**

Ancho de la puerta	Número de giros
Configuración de ADA	-16
34"	-8
38"	0
48"	+6



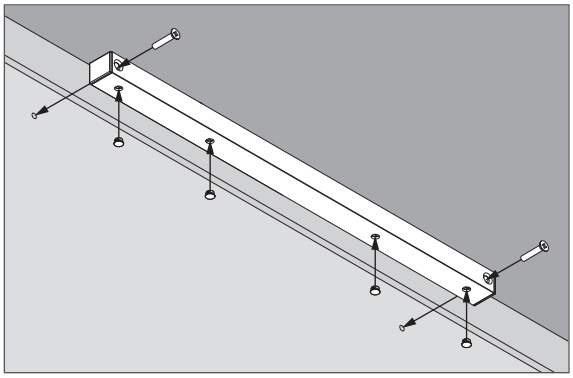
4 Instale el rodillo en el riel y, luego, instale los conectores finales.



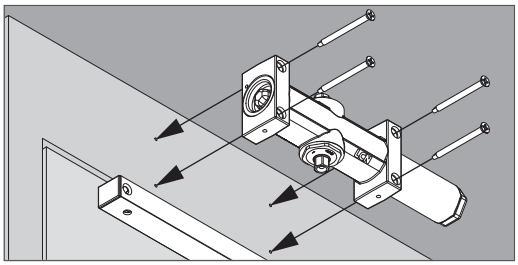
Para la opción de mantener abierto, complete ese ensamblaje, en la página 12, durante este paso.

5 Install track plugs onto track, install track onto door.

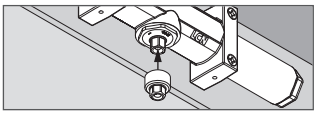
ⓘ **Consulte la página 12 para ver la instalación y el ajuste del brazo opcional para mantener abierto.**



6 Install closer onto frame using fasteners provided.

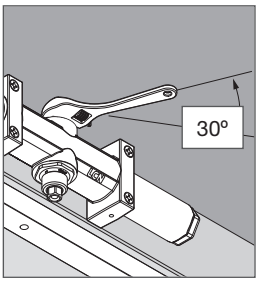


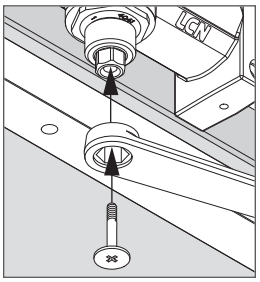
7 Instale el espaciador del piñón en el cilindro del mecanismo de cierre.



8 Instale el brazo en el mecanismo de cierre.

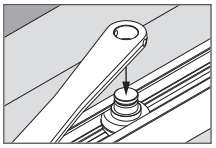
a. Use una llave para girar el eje superior del mecanismo de cierre aproximadamente 30°. **Sostenga la llave en este ángulo para el próximo paso.**
b. Coloque el brazo principal en el eje inferior del mecanismo de cierre.
c. Instale y ajuste el tornillo del brazo.

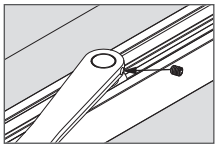




9 Instale el brazo en el riel.

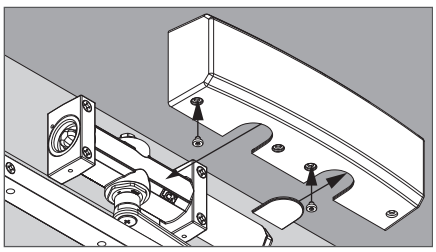
a. Coloque el brazo en el rodillo.
b. Instale y ajuste el tornillo del rodillo del brazo.





10 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 12 para ver las instrucciones de ajuste del mecanismo de cierre.

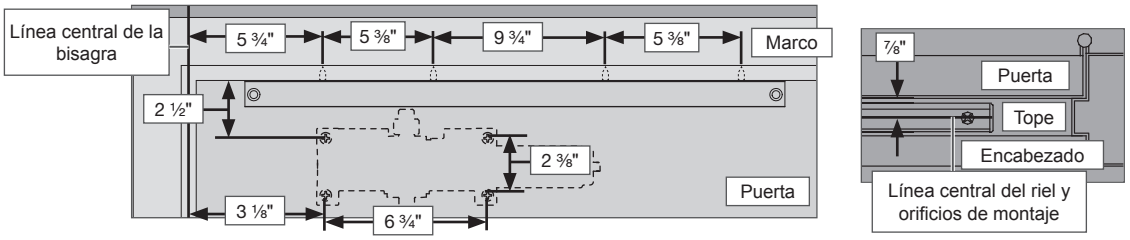
11 Instale la cubierta.



Montaje de 120° del lado para empujar

Dimensiones del orificio de montaje

Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.



1 Mida desde el borde de la puerta y marque los orificios de perforación.

ⓘ **Vea las Dimensiones de montaje anteriores según sea necesario.**

2 Perfore los orificios donde esté marcado con una broca de taladro de 1/8".

ⓘ **Los tornillos SRT se usan en puertas de metal.**
Se recomienda usar los tornillos de madera en puertas de madera.
Reduzca la torsión de la instalación si utiliza tornillos SRT en madera.

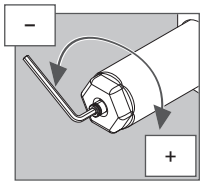
3 Mida y determine el ancho de su puerta. Con una llave hexagonal de 5/32", ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

Gire en sentido antihorario para "-"; gire en sentido horario para "+".

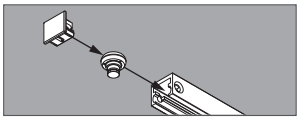
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

ⓘ **¡No utilice un taladro eléctrico para ajustar la fuerza del resorte! Podría causar daños y anular la garantía.**

Ancho de la puerta	Número de giros
Configuración de ADA	-16
34"	-8
38"	0
48"	+6



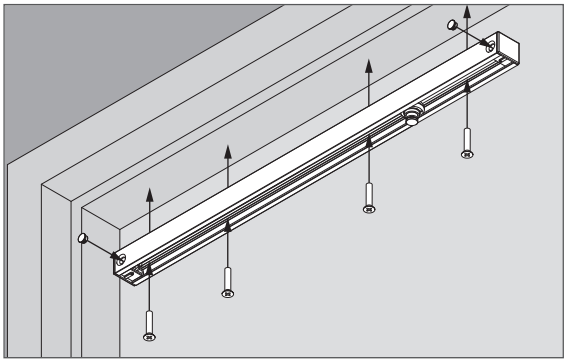
4 Instale el rodillo en el riel y, luego, instale los conectores finales.



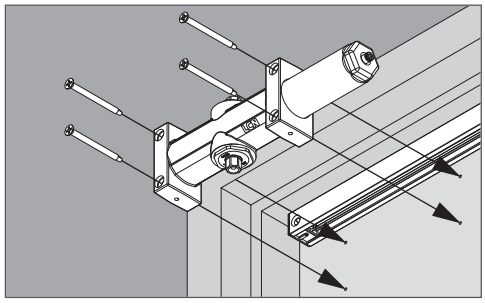
Para la opción de mantener abierto, complete ese ensamblaje, en la página 12, durante este paso.

5 Instale los conectores del riel en el riel, e instale el riel en el marco.

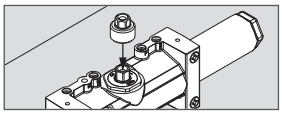
ⓘ **Consulte la página 12 para ver la instalación y el ajuste del brazo opcional para mantener abierto.**



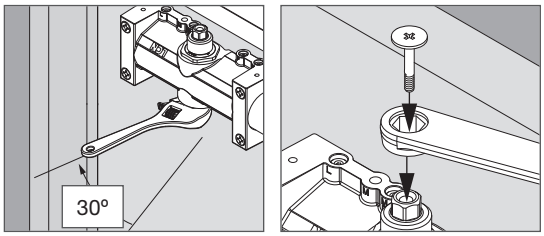
6 Instale el mecanismo de cierre de la puerta usando los tornillos provistos.



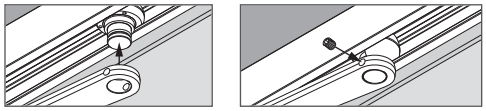
7 Instale el espaciador del piñón en el cilindro del mecanismo de cierre.



8 Instale el brazo en el mecanismo de cierre.
   a. Use una llave para girar el eje inferior del mecanismo de cierre aproximadamente 30°. **Sostenga la llave en este ángulo para el próximo paso.**
   b. Coloque el brazo principal en el eje superior del mecanismo de cierre.
   c. Instale y ajuste el tornillo del brazo.

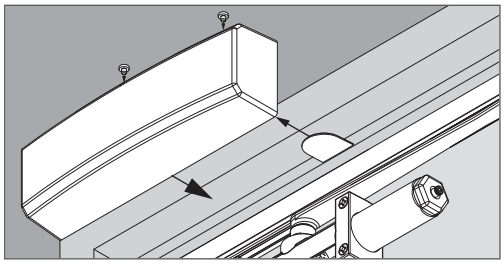


9 Instale el brazo en el riel.
   a. Coloque el brazo en el rodillo.
   b. Instale y ajuste el tornillo del rodillo del brazo.



10 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 12 para ver las instrucciones de ajuste del mecanismo de cierre.

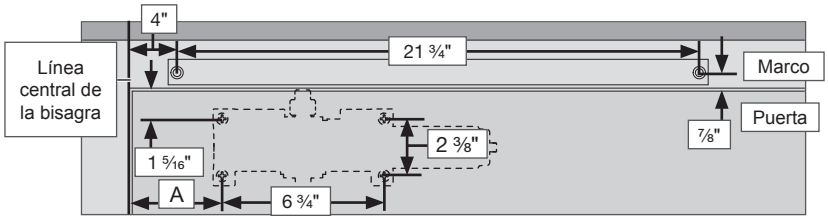
11 Instale la cubierta.



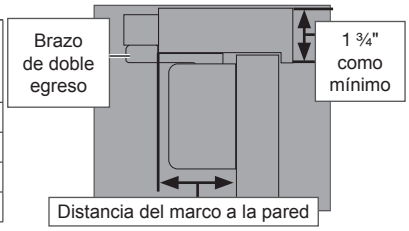
Montaje del lado para tirar del brazo de doble egreso (DE)

Dimensiones del orificio de montaje

Se muestra la apertura hacia la derecha (RH) en las instrucciones. La apertura hacia la izquierda (LH) es opuesta.



Distancia del marco a la pared	Dim. A
3"	7"
2"	6 ½"
1 ½"	5 7/8"
1"	5 5/8"



1 Mida desde el borde de la puerta y marque los orificios de perforación.

ⓘ **Vea las Dimensiones de montaje anteriores según sea necesario.**

2 Perfore los orificios donde esté marcado con una broca de taladro de 1/8".

ⓘ **Los tornillos SRT se usan en puertas de metal.**
Se recomienda usar los tornillos de madera en puertas de madera.
Reduzca la torsión de la instalación si utiliza tornillos SRT en madera.

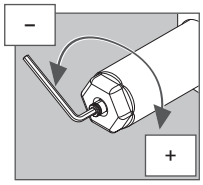
3 Mida y determine el ancho de su puerta. Con una llave hexagonal de 5/32", ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

Gire en sentido antihorario para "-"; gire en sentido horario para "+".

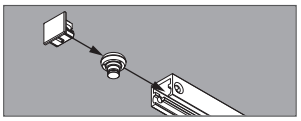
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

ⓘ **¡No utilice un taladro eléctrico para ajustar la fuerza del resorte! Podría causar daños y anular la garantía.**

Ancho de la puerta	Número de giros
Configuración de ADA	-16
34"	-8
38"	0
48"	+6



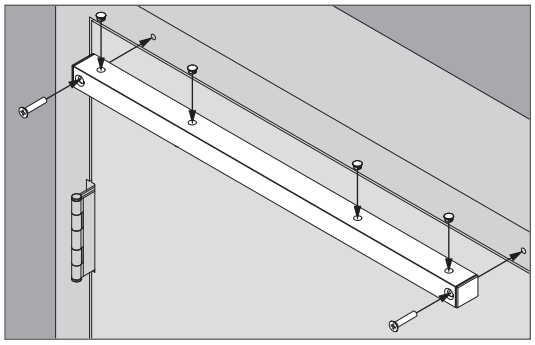
4 Instale el rodillo en el riel y, luego, instale los conectores finales.



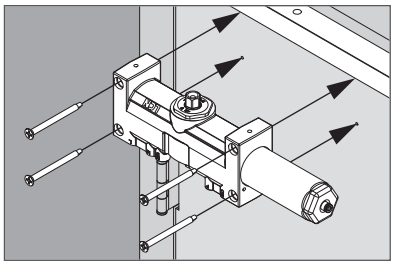
Para la opción de mantener abierto, complete ese ensamblaje, en la página 12, durante este paso.

5 Instale los conectores del riel en el riel, e instale el riel en el marco.

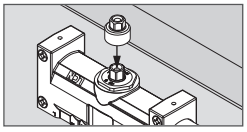
ⓘ **Consulte la página 12 para ver la instalación y el ajuste del brazo opcional para mantener abierto.**



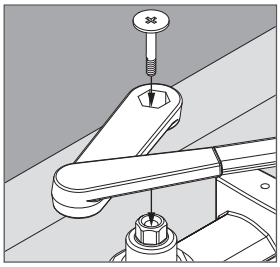
6 Instale el mecanismo de cierre de la puerta usando los tornillos provistos.



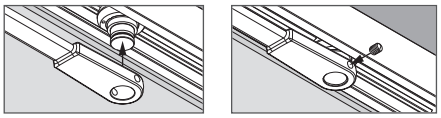
7 Instale el espaciador del piñón en el cilindro del mecanismo de cierre.



8 Instale el brazo en el mecanismo de cierre.
a. Coloque el brazo principal en eje superior del mecanismo de cierre a un ángulo de 30°.
b. Instale y ajuste el tornillo del brazo.

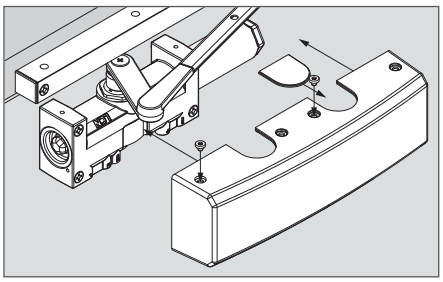


9 Instale el brazo en el riel.
a. Coloque el brazo en el rodillo.
b. Instale y ajuste el tornillo del rodillo del brazo.



10 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 12 para ver las instrucciones de ajuste del mecanismo de cierre.

11 Instale la cubierta.



Ajuste de la válvula del mecanismo de cierre

Compruebe el tiempo de cierre y ajuste el mecanismo de cierre de ser necesario.

⚠ PRECAUCIÓN ⚠

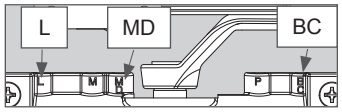
¡Abrir demasiado las válvulas de regulación (como se describe a continuación) puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales.

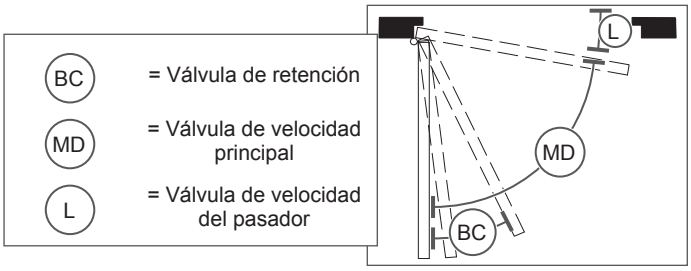
SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

ⓘ **La válvula debe cerrarse en sentido horario hasta fijarse y nunca exceder más de 3 vueltas en sentido antihorario de la posición fija. Ajuste las válvulas en incrementos de 1/4 de giro o menos a la vez. NO GIRE MÁS DE 3 ROTACIONES COMPLETAS. ¡ESTO CAUSARÁ QUE EL MECANISMO DE CIERRE PIERDA ACEITE!**

ⓘ **NO AJUSTE LA VELOCIDAD DEL PASADOR SI LA PUERTA NO SE TRABA. Si esto sucede, ajuste la fuerza del resorte.**

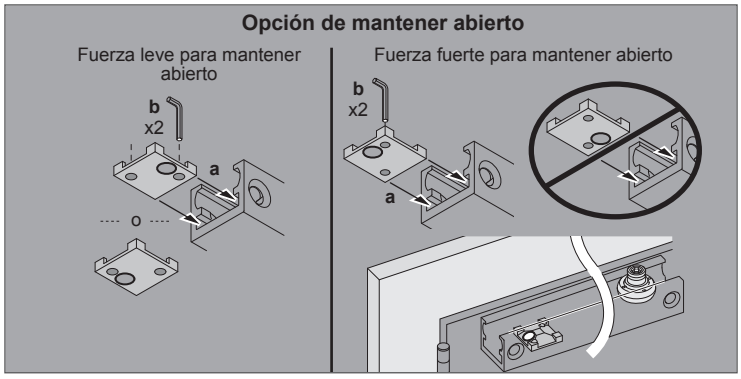
1. Abra la puerta a 90°, mida cuánto tiempo tarda la puerta en cerrar y trabarse. Un tiempo típico de cierre es de 5 a 7 segundos, divido de manera uniforme entre velocidad principal y velocidad del pasador.
2. Si se necesita ajustar el tiempo de cierre, use una llave hexagonal de 3/32" para ajustar las válvulas del mecanismo de cierre descritas a continuación.
   a. Retención (BC): controla la velocidad de apertura de la puerta cuando el ángulo de la puerta se acerca a 90°. **No usar como tope de puerta.**
   b. Velocidad principal (MD): controla la velocidad principal de los cilindros.
   c. Velocidad del pasador (L): controla la velocidad de la puerta durante los últimos grados del cierre de la puerta.
3. Gire las válvulas en sentido horario para reducir la velocidad de la puerta y en sentido antihorario para aumentar la velocidad de la puerta. La velocidad del pasador y la velocidad principal deben ajustarse conjuntamente.

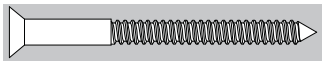
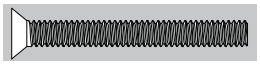
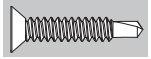




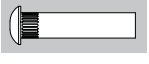
Riel opcional para mantener abierto

1 Vea la imagen siguiente para determinar la dirección del bloque para mantener abierto. Esto lo determina el lado en el que está la manija de la puerta.



Tipo de tornillo	Paquete de tornillos	Imagen	Montaje en el cilindro	Montaje del riel	Montaje del riel: lado para empujar
Madera (para puertas y marcos de madera)	Paquete de tornillos para madera y maquinados (WMS)		4 @ #14 x 2 7⁄8"	4 @ #14 x 2 ½"	4 @ #14 x 1 ½"
Máquina (para puertas y marcos de metal) Requiere perforación de orificio y formación de rosca; mejor sujeción.	WMS		4 @ ¼-20 x 2 ¼"	4 @ ¼-20 x 1 ¾"	4 @ ¼-20 x ½"
SRT: autoperforación y formación de rosca (para puertas y marcos de metal)	Estándar		4 @ ¼-14 x 3 1⁄8"	4 @ ¼-14 x 2 ½"	4 @ ¼-14 x 1 3⁄8"

Tipo de tornillo	Paquete de tornillos	Imagen	Notas
Espaciador del piñón	Estándar		
Tornillo largo	Estándar		¼-20 para la sujeción del brazo (ver el paso 8).

Tipo de tornillo	Paquete de tornillos	Imagen	Notas
Perno pasante	Solicite el paquete de tornillos TB		1 9⁄32" o 1 17⁄32" o 1 21⁄32"

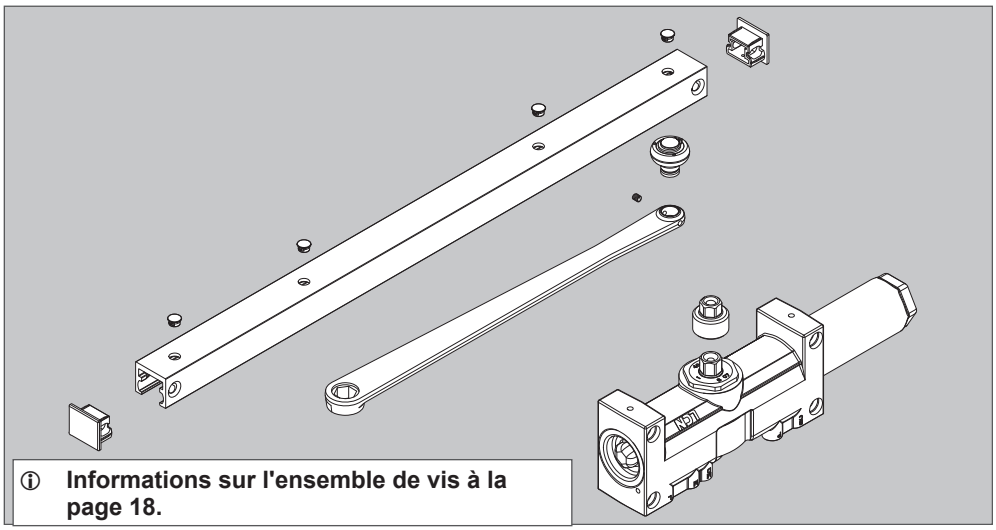
Série de rail 4050

72779

Montage linteau supérieur côté tiré et montages double sortie

Instructions d'installation

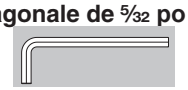
PIÈCES



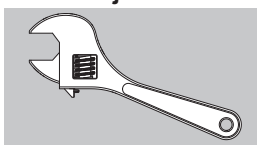
ⓘ **Informations sur l'ensemble de vis à la page 18.**

OUTILS

Clé hexagonale de 5⁄32 po ou 4mm

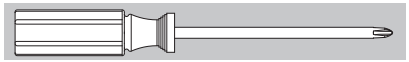


Clé ajustable

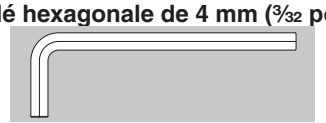


Mèche de 3,2 mm (⅛ po)

Tournevis cruciforme



Clé hexagonale de 4 mm (3⁄32 po)



⚠ MISE EN GARDE ⚠

Une trop grande ouverture des soupapes de régulation peut entraîner une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

N'UTILISEZ PAS LE DISPOSITIF DE FERMETURE EN TANT QUE BUTOIR! Il est recommandé d'utiliser un butoir auxiliaire au point de retenue ou à l'endroit où la porte ne peut s'ouvrir à 180°.

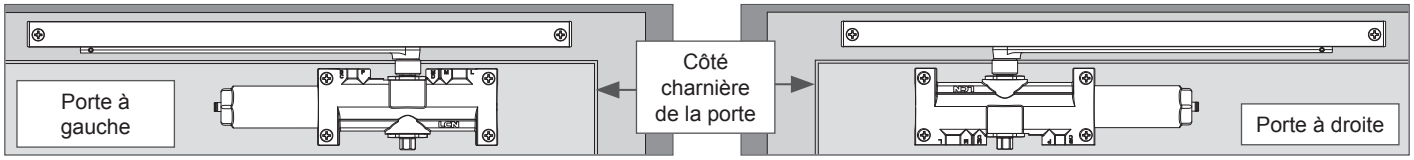
⚠ MISE EN GARDE ⚠

Une installation inadéquate ou le non-respect des règlements peut causer des blessures ou des dommages matériels.
Suivez attentivement toutes les instructions.
Pour toute question, appelez LCN au 877 - 671 - 7011.

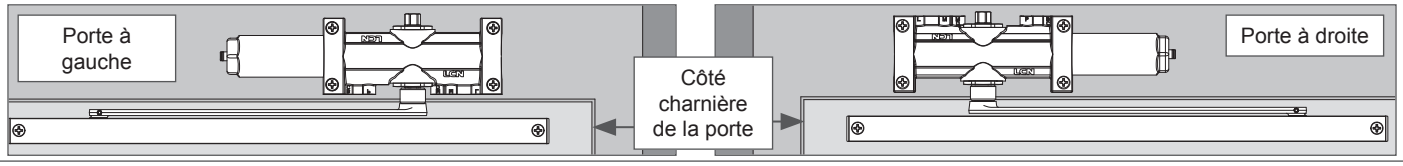
Les bras de retenue NE doivent PAS être installés sur les portes coupe-feu.

Choisissez le type d'installation

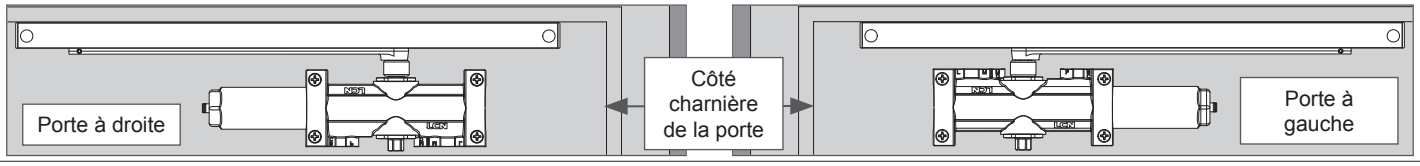
Montage côté tiré 180° (voir pageMontage côté tiré 180° (see page 14)



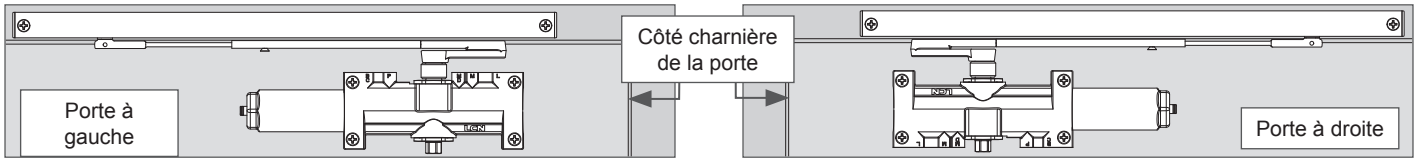
Montage linteau supérieur côté tiré 180°Montage linteau supérieur côté tiré 180° (see page 15)



Montage côté poussé 120°Montage côté poussé 120° (see page 16)

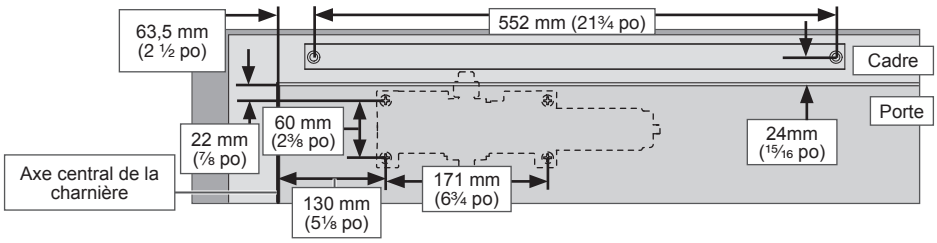


Montage de bras sortie double (SD) côté tiréMontage de bras sortie double (SD) côté tiré (see page 17)



Montage côté tiré 180°

Dimensions des trous de montage
Montage à droite (MD) illustré tout au long de ces instructions. Le montage à gauche (MG) se fait de manière opposée.



1 Prenez les mesures à partir de l'angle de la porte et marquez les trous pilotes.

ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**

2 Percez les trous au niveau des marques avec une mèche de 3,2 mm (1/8 po).

ⓘ **Les vis SRT sont utilisées sur les portes en métal.**
Les vis à bois sont utilisées et recommandées sur les portes en bois.
Réduisez le couple d'installation si vous utilisez des vis SRT dans du bois.

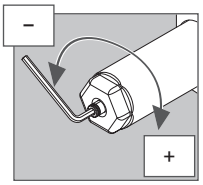
3 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé Allen de 4 mm (5/32 po), réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.

Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

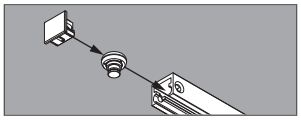
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

ⓘ **N'utilisez pas de perceuse électrique pour régler la force du ressort! Cela pourrait causer des dommages et annuler la garantie.**

Largeur de la porte	Nombre de tours
Réglage de l'ADA	-16
864 mm (34 po)	-8
965 mm (38 po)	0
1219 mm (48 po)	+6



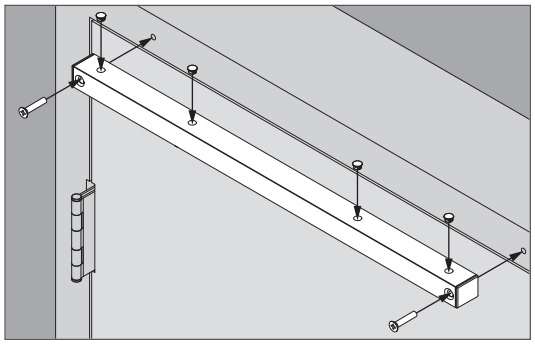
4 Installez le canal dans le rail, puis fixez les embouts d'extrémité.



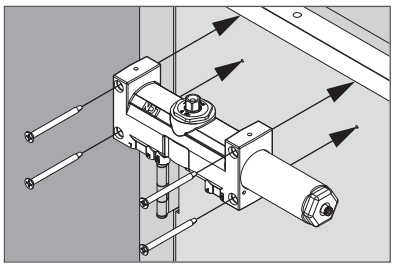
Pour l'option d'ouverture avec retenue, procédez à l'assemblage en suivant les instructions page 18.

5 Fixez les embouts de rail sur le rail, puis installez le rail au niveau du cadre.

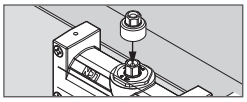
ⓘ **Consultez la page 18 pour l'installation et le réglage optionnels du bras de retenue.**



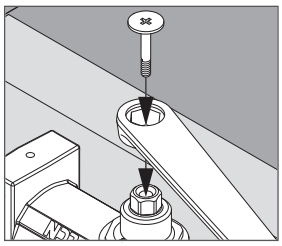
6 Fixez le dispositif de fermeture à la porte à l'aide des attaches fournies.



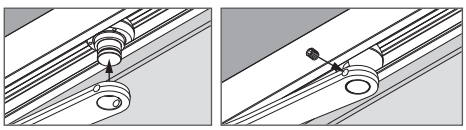
7 Installez l'entretoise de pignon au niveau du cylindre du dispositif de fermeture.



8 Fixez le bras sur le dispositif de fermeture.
a. Positionnez le bras principal au niveau de l'axe du dispositif de fermeture supérieur à un angle de 30°.
b. Installez et serrez la vis du bras.

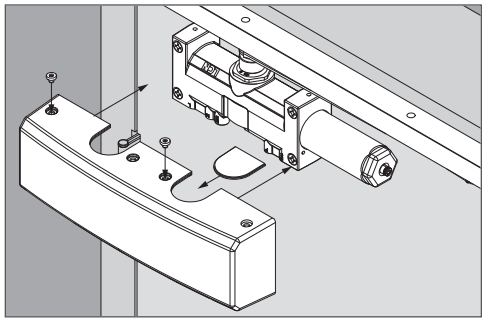


9 Fixez-le sur le rail.
a. Puis, positionnez-le au niveau du canal.
b. Installez et serrez la vis du bras du canal.



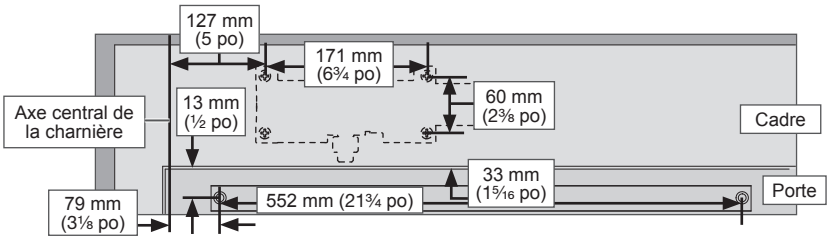
10 Réglez le dispositif de fermeture au besoin. Consultez la page 18 pour les instructions de réglage du dispositif de fermeture.

11 Installer le couvercle.



Montage linteau supérieur côté tiré 180°

Dimensions des trous de montage
Montage à droite (MD) illustré tout au long de ces instructions. Le montage à gauche (MG) se fait de manière opposée.



1 Prenez les mesures à partir de l'angle de la porte et marquez les trous pilotes.

ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**

2 Percez les trous au niveau des marques avec une mèche de 3,2 mm (1/8 po).

ⓘ **Les vis SRT sont utilisées sur les portes en métal.**
Les vis à bois sont utilisées et recommandées sur les portes en bois.
Réduisez le couple d'installation si vous utilisez des vis SRT dans du bois.

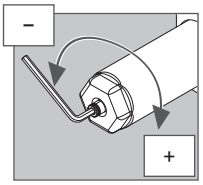
3 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé Allen de 4 mm (5/32 po), réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.

Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

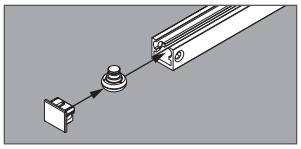
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

ⓘ **N'utilisez pas de perceuse électrique pour régler la force du ressort! Cela pourrait causer des dommages et annuler la garantie.**

Largeur de la porte	Nombre de tours
Réglage de l'ADA	-16
864 mm (34 po)	-8
965 mm (38 po)	0
1219 mm (48 po)	+6



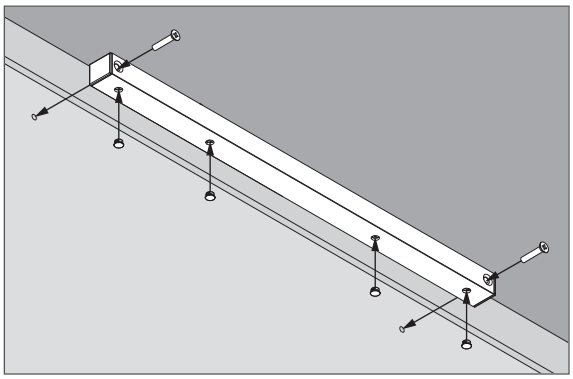
4 Installez le canal dans le rail, puis fixez les embouts d'extrémité.



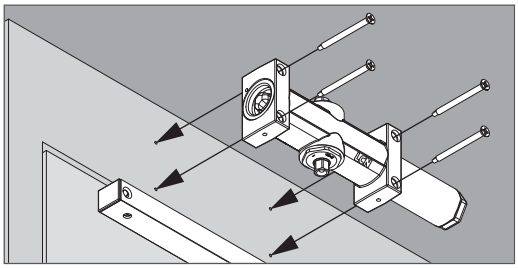
Pour l'option d'ouverture avec retenue, procédez à l'assemblage en suivant les instructions page 18.

5 Install track plugs onto track, install track onto door.

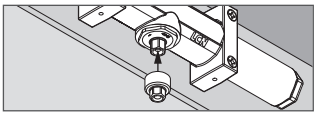
ⓘ **Consultez la page 18 pour l'installation et le réglage optionnels du bras de retenue.**



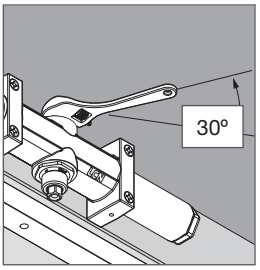
6 Install closer onto frame using fasteners provided.

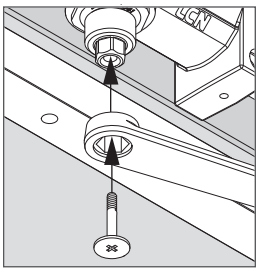


7 Installez l'entretoise de pignon au niveau du cylindre du dispositif de fermeture.

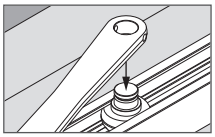


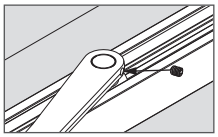
8 Fixez le bras sur le dispositif de fermeture.
a. Utilisez une clé pour faire pivoter l'arbre du dispositif de fermeture supérieur d'environ 30°. **Maintenez la clé dans cet angle pour la prochaine étape.**
b. Placez le bras principal sur l'arbre du dispositif de fermeture inférieur.
c. Installez et serrez la vis du bras.





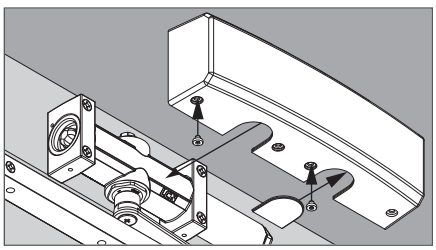
9 Fixez-le sur le rail.
a. Puis, positionnez-le au niveau du canal.
b. Installez et serrez la vis du bras du canal.





10 Réglez le dispositif de fermeture au besoin. Consultez la page 18 pour les instructions de réglage du dispositif de fermeture.

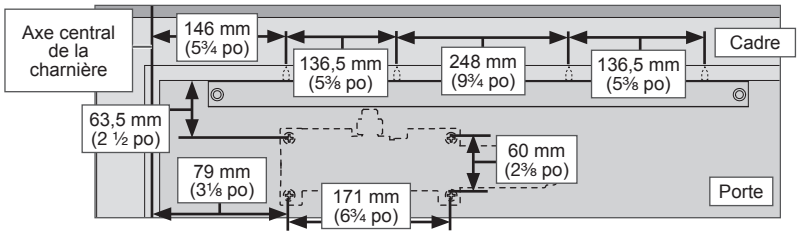
11 Installer le couvercle.

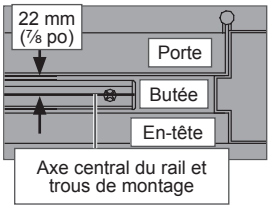


Montage côté poussé 120°

Dimensions des trous de montage

Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.





1 Prenez les mesures à partir de l'angle de la porte et marquez les trous pilotes.

ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**

2 Percez les trous au niveau des marques avec une mèche de 3,2 mm (1/8 po).

ⓘ **Les vis SRT sont utilisées sur les portes en métal.**
Les vis à bois sont utilisées et recommandées sur les portes en bois.
Réduisez le couple d'installation si vous utilisez des vis SRT dans du bois.

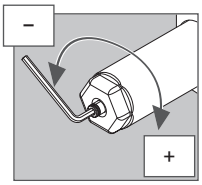
3 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé Allen de 4 mm (5/32 po), réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.

Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

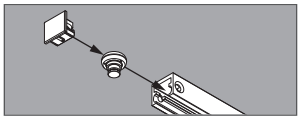
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

ⓘ **N'utilisez pas de perceuse électrique pour régler la force du ressort! Cela pourrait causer des dommages et annuler la garantie.**

Largeur de la porte	Nombre de tours
Réglage de l'ADA	-16
864 mm (34 po)	-8
965 mm (38 po)	0
1219 mm (48 po)	+6



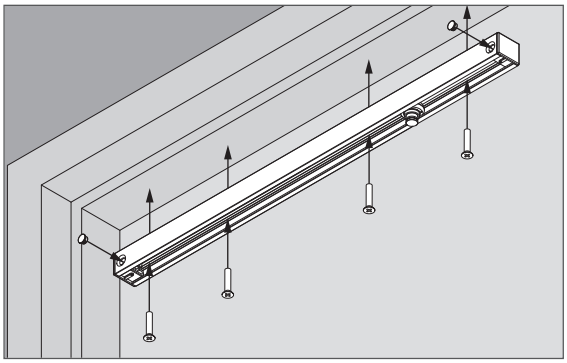
4 Installez le canal dans le rail, puis fixez les embouts d'extrémité.



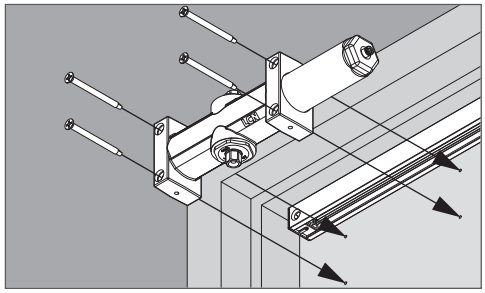
Pour l'option d'ouverture avec retenue, procédez à l'assemblage en suivant les instructions page 18.

5 Fixez les embouts de rail sur le rail, puis installez le rail au niveau du cadre.

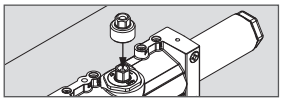
ⓘ **Consultez la page 18 pour l'installation et le réglage optionnels du bras de retenue.**



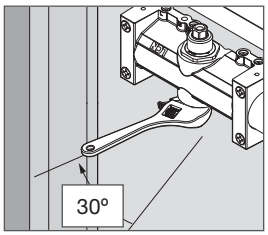
6 Fixez le dispositif de fermeture à la porte à l'aide des attaches fournies.

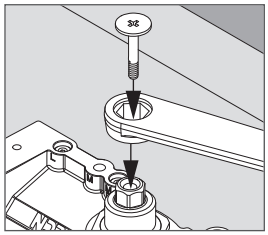


7 Installez l'entretoise de pignon au niveau du cylindre du dispositif de fermeture.

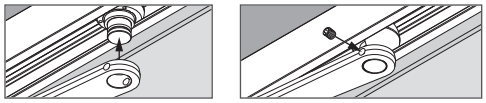


8 Fixez le bras sur le dispositif de fermeture.
a. Utilisez une clé pour faire pivoter l'arbre du dispositif de fermeture inférieur d'environ 30°. **Maintenez la clé dans cet angle pour la prochaine étape.**
b. Placez le bras principal sur l'arbre du dispositif de fermeture supérieur.
c. Installez et serrez la vis du bras.



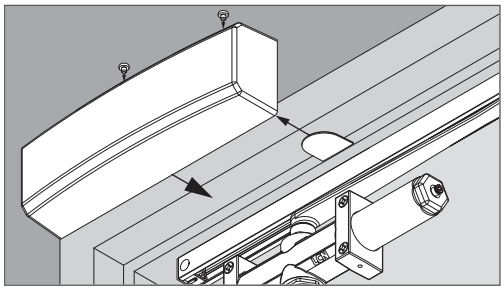


9 Fixez-le sur le rail.
a. Puis, positionnez-le au niveau du canal.
b. Installez et serrez la vis du bras du canal.



10 Réglez le dispositif de fermeture au besoin. Consultez la page 18 pour les instructions de réglage du dispositif de fermeture.

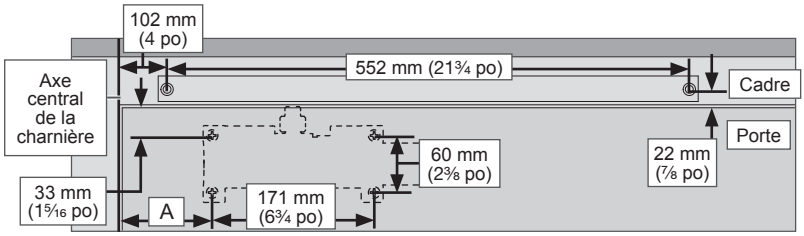
11 Installer le couvercle.



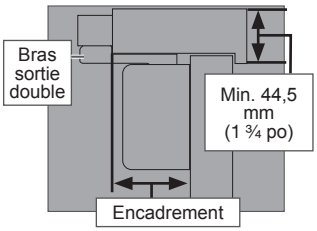
Montage de bras sortie double (SD) côté tiré

Dimensions des trous de montage

Montage à droite (MD) illustré tout au long de ces instructions. Le montage à gauche (MG) se fait de manière opposée.



Encadrement	Dim. A
76 mm (3 po)	178 mm (7 po)
51 mm (2 po)	165 mm (6½ po)
38 mm (1½ po)	149 mm (5⅞ po)
25 mm (1 po)	143 mm (5⅝ po)



1 Prenez les mesures à partir de l'angle de la porte et marquez les trous pilotes.

ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**

2 Percez les trous au niveau des marques avec une mèche de 3,2 mm (1/8 po).

ⓘ **Les vis SRT sont utilisées sur les portes en métal. Les vis à bois sont utilisées et recommandées sur les portes en bois. Réduisez le couple d'installation si vous utilisez des vis SRT dans du bois.**

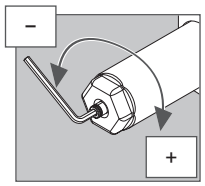
3 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé Allen de 4 mm (5/32 po), réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.

Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

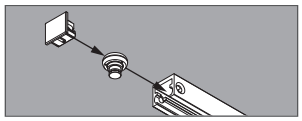
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

ⓘ **N'utilisez pas de perceuse électrique pour régler la force du ressort! Cela pourrait causer des dommages et annuler la garantie.**

Largeur de la porte	Nombre de tours
Réglage de l'ADA	-16
864 mm (34 po)	-8
965 mm (38 po)	0
1219 mm (48 po)	+6



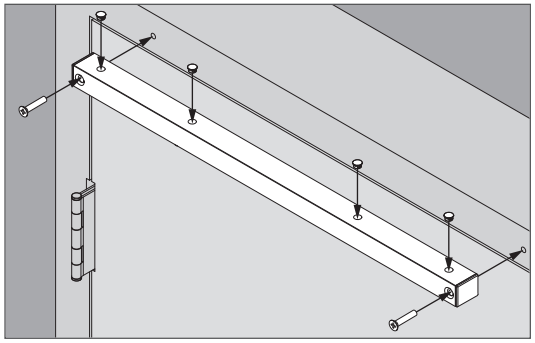
4 Installez le canal dans le rail, puis fixez les embouts d'extrémité.



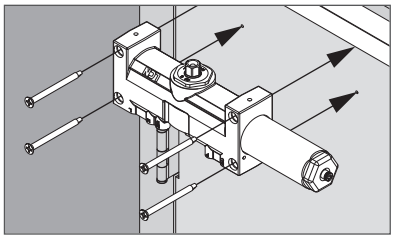
Pour l'option d'ouverture avec retenue, procédez à l'assemblage en suivant les instructions page 18.

5 Fixez les embouts de rail sur le rail, puis installez le rail au niveau du cadre.

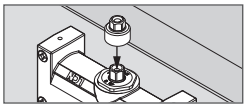
ⓘ **Consultez la page 18 pour l'installation et le réglage optionnels du bras de retenue.**



6 Fixez le dispositif de fermeture à la porte à l'aide des attaches fournies.

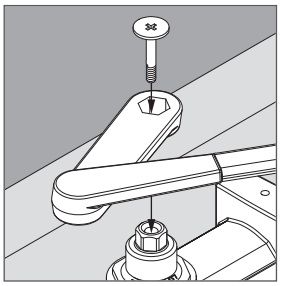


7 Installez l'entretoise de pignon au niveau du cylindre du dispositif de fermeture.



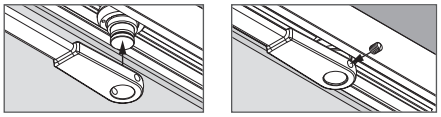
8 Fixez le bras sur le dispositif de fermeture.

a. Positionnez le bras principal au niveau de l'axe du dispositif de fermeture supérieur à un angle de 30°.
b. Installez et serrez la vis du bras.



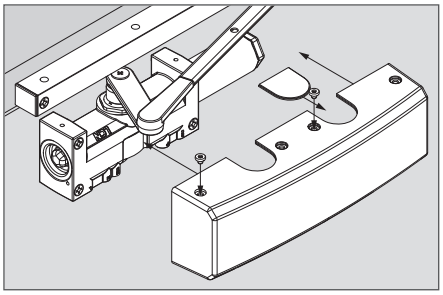
9 Fixez-le sur le rail.

a. Puis, positionnez-le au niveau du canal.
b. Installez et serrez la vis du bras du canal.



10 Réglez le dispositif de fermeture au besoin. Consultez la page 18 pour les instructions de réglage du dispositif de fermeture.

11 Installer le couvercle.



Réglage de la soupape du dispositif de fermeture

Vérifiez le temps de fermeture et réglez le dispositif de fermeture au besoin.

⚠ MISE EN GARDE ⚠

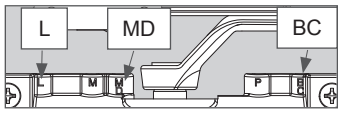
Trop ouvrir les soupapes de régulation (décrites ci-dessous) peut causer une fuite d'huile dans le dispositif de fermeture. Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.

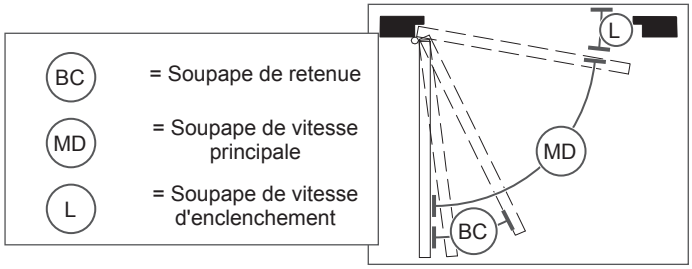
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

ⓘ **La soupape doit être fermée dans le sens horaire pour être bien en place. Ne jamais faire plus de 3 tours dans le sens antihoraire lorsqu'elle est bien en place. Réglez les soupapes en effectuant 1/4 de tour ou moins à la fois. N'EFFECTUEZ PAS PLUS DE 3 ROTATIONS COMPLÈTES. CELA POURRAIT ENTRAÎNER UNE FUITE D'HUILE DANS LE DISPOSITIF DE FERMETURE!**

ⓘ **NE RÉGLEZ PAS LA VITESSE D'ENCLENCHEMENT SI LA PORTE NE S'ENCLENCHE PAS. Si cela se produit, réglez la force du ressort.**

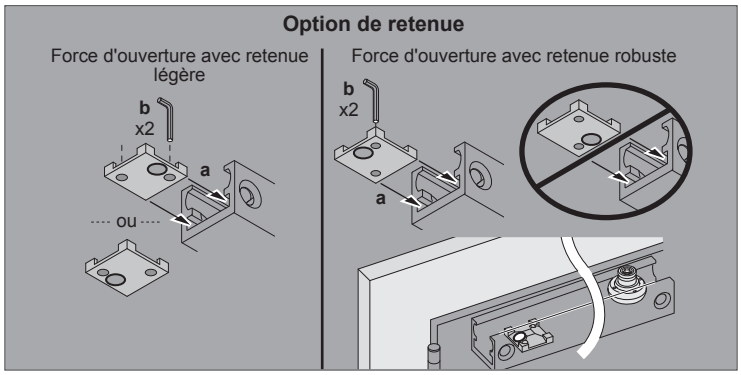
1. Ouvrez la porte à 90° et comptez le temps nécessaire pour que la porte se ferme et s'enclenche. Le temps de fermeture typique est de 5 à 7 secondes et est divisé également entre la vitesse principale et la vitesse d'enclenchement.
2. Si vous devez régler le temps de fermeture, utilisez une clé hexagonale de 3/32 po ou 4 mm pour régler les soupapes du dispositif de fermeture décrit ci-dessous.
   a. Retenue (BC)- contrôle la vitesse d'ouverture de la porte lorsque l'angle s'approche de 90°. **N'utilisez pas de butoir.**
   b. Vitesse principale (MD)- contrôle la vitesse principale des cylindres.
   c. Vitesse d'enclenchement (L)- contrôle la vitesse de la porte durant les derniers degrés de la fermeture.
3. Faites tourner les soupapes dans le sens horaire pour faire diminuer la vitesse de la porte, et dans le sens antihoraire pour la faire augmenter. La vitesse d'enclenchement et la vitesse principale doivent être réglées ensemble.

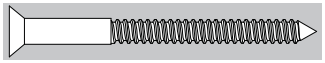
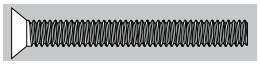
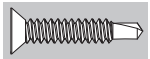




Rail d'ouverture avec retenue facultatif

1 Consultez l'image ci-dessous pour déterminer la direction du bloc de retenue. Elle est déterminée par le positionnement de la porte.



Type de vis	Lot de vis	Image	Montage du cylindre	Montage des rails	Montage des rails - côté poussé
Bois (pour les portes et les cadres en bois)	Lot de vis à bois et à métaux (WMS)		4 @ #14 x 73 mm (2⅞ po)	4 @ #14 x 63,5 mm (2½ po)	4 @ #14 x 38 mm (1½ po)
De mécanique (pour les portes et les cadres en métal) Nécessite de percer des trous et de tarauder; meilleure retenue.	WMS		4 @ ¼-20 x 57 mm (2¼ po)	4 @ ¼-20 x 44 mm (1¾ po)	4 @ ¼-20 x 13 mm (½ po)
SRT - Auto taraudeuse et à alésage automatique (pour les portes et les cadres en métal)	Standard		4 @ ¼-14 x 79 mm (3⅛ po)	4 @ ¼-14 x 63,5 mm (2½ po)	4 @ ¼-14 x 28,5 mm (1⅜ po)

Type de vis	Lot de vis	Image	Remarques
Entretoise de pignon	Standard		
Vis longue	Standard		¼-20 pour la fixation du bras (voir étape 8).
Boulon traversant	Commander un lot de vis bois-métal		32,5 mm (1 9⁄32 po) ou 39 mm (1 17⁄32 po) ou 42 mm (1 21⁄32 po)

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Patent Pending

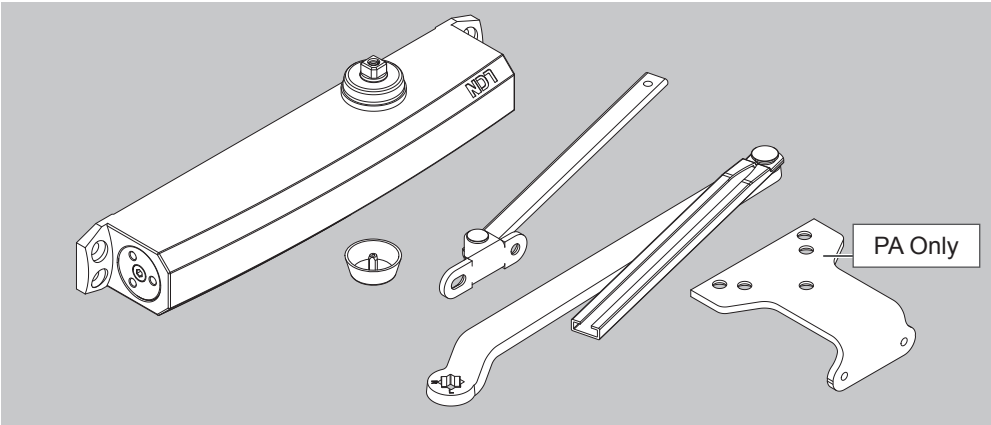
1450 & 1450DA Series

71928

Pull Mount, Jamb Mount, and PA Mount

Installation Instructions

PARTS

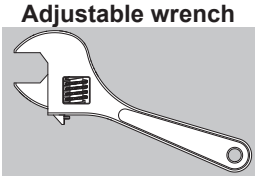


ⓘ **Screw pack information is on page 5.**

TOOLS

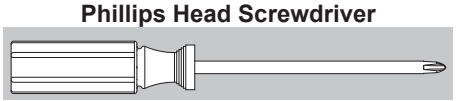
5⁄32" or 4mm Hex Wrench

Adjustable wrench



1⁄8" Drill Bit

Phillips Head Screwdriver



ⓘ **Hold Open wrench info on page 5.**

⚠ CAUTION ⚠

Improper installation or regulation may result in personal injury or property damage.
Follow all instructions carefully.
For questions, call LCN at 877 - 671 - 7011

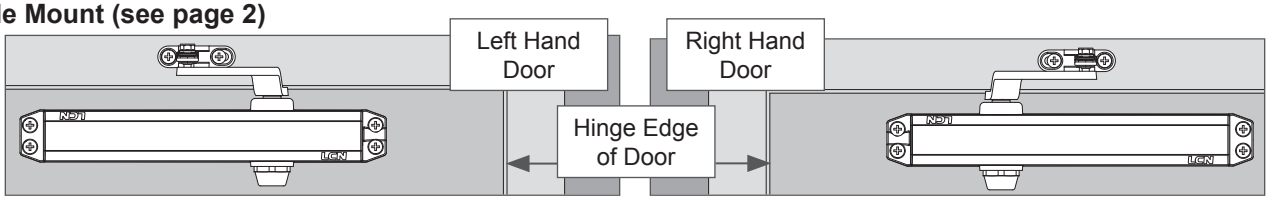
Hold open arms must not be installed on fire rated doors.

Opening the regulation valves too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.
FOLLOW ALL INSTRUCTIONS CAREFULLY.

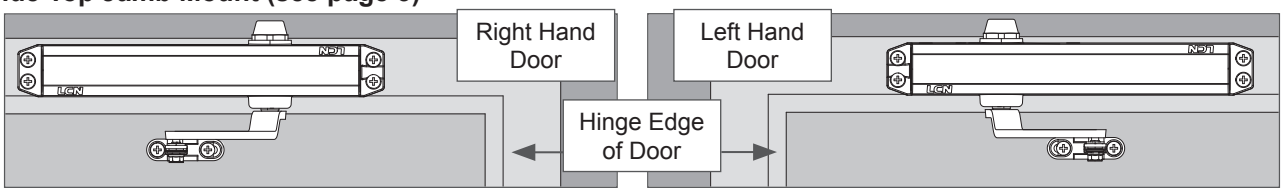
DO NOT USE THE CLOSER AS A DOOR STOP!
An auxiliary stop is recommended at the hold-open point or where the door cannot swing 180º.

Choose Installation Type

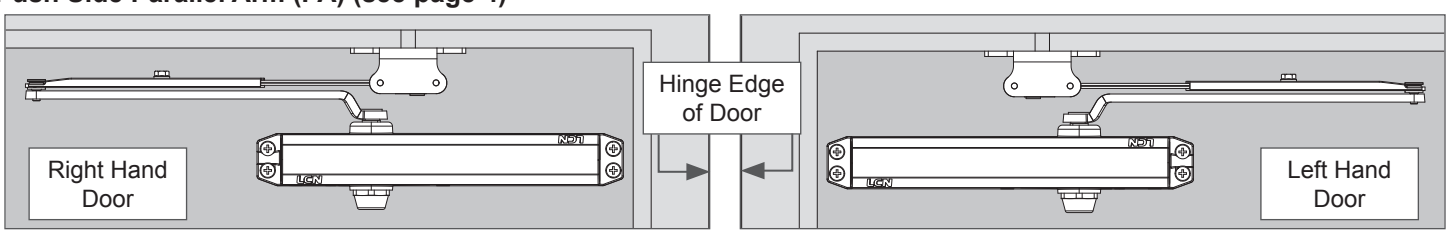
Pull Side Mount (see page 2)



Push Side Top Jamb Mount (see page 3)



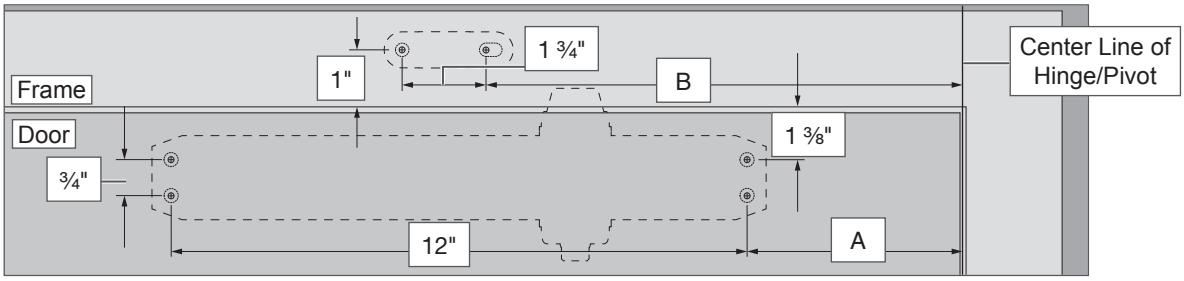
Push Side Parallel Arm (PA) (see page 4)



Pull Side Mount

Mounting Hole Dimensions

Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.



1 Determine the degree of door opening required and find dimension “A” on the chart below.

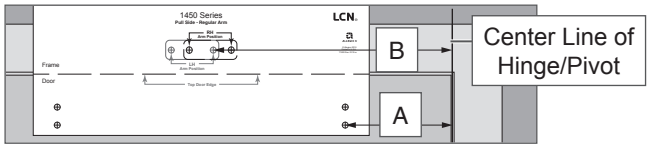
ⓘ **Opening angle of 180° is required to meet ADA.**

A	Opening	Measurement from Hinge/Pivot Centerline
Closer	To 100°	7 1/2”
	100° to 120°	6”
	120° to 180°	4 1/2”

B	Opening	Measurement from Hinge/Pivot Centerline
Shoe	To 100°	13”
	100° to 120°	11 1/2”
	120° to 180°	10”

2 Measure from hinge/pivot centerline and stick template on door. Mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**



3 Remove template, and drill holes where marked with a 1/8” drill bit for SRT screws.

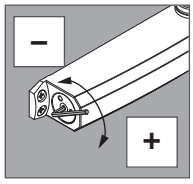
ⓘ **SRT screws are used on metal doors.**
Wood screws are used on wood doors.

4 Measure and determine your door’s width. Using a hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.

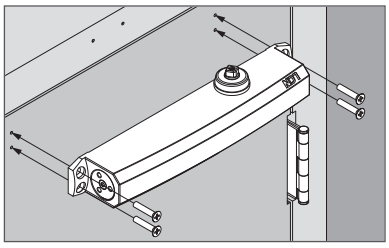
Turn counterclockwise for “-”; turn clockwise for “+”

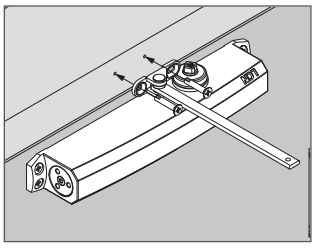
ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

Door Width	Number of Turns
ADA Setting	-5
32” - 815 mm	-3
36” - 915 mm	0
42” - 1050 mm	+5
48” - 1220 mm	+10
54” - 1372mm	+15



5 Install closer onto door and shoe onto frame using screws provided.

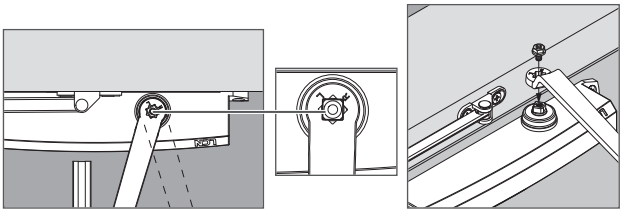




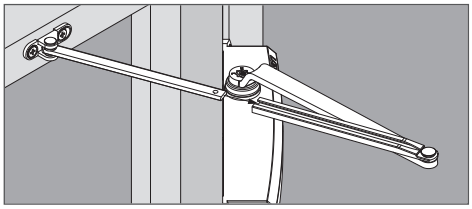
6 Install main arm to closer.

a. Place main arm onto the top closer shaft.
b. Install and tighten main arm screw.

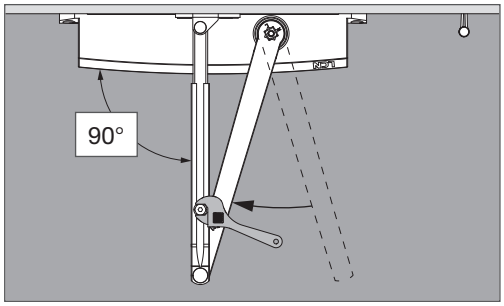
ⓘ **See page 5 for Optional Hold Open Arm installation and adjustment.**



7 Route the rod into the forearm.

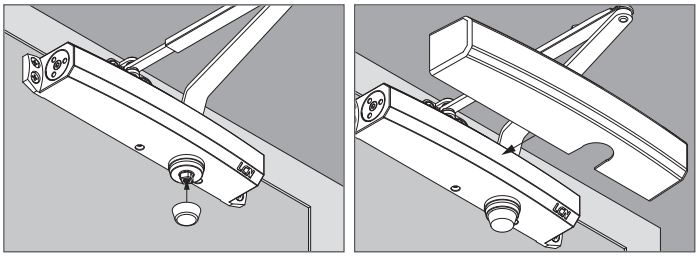


8 Preload the forearm to 90°. While the arm is still preloaded, install and tighten the arm screw.



9 Adjust the closer, if necessary. See page 5 for closer adjustment instructions.

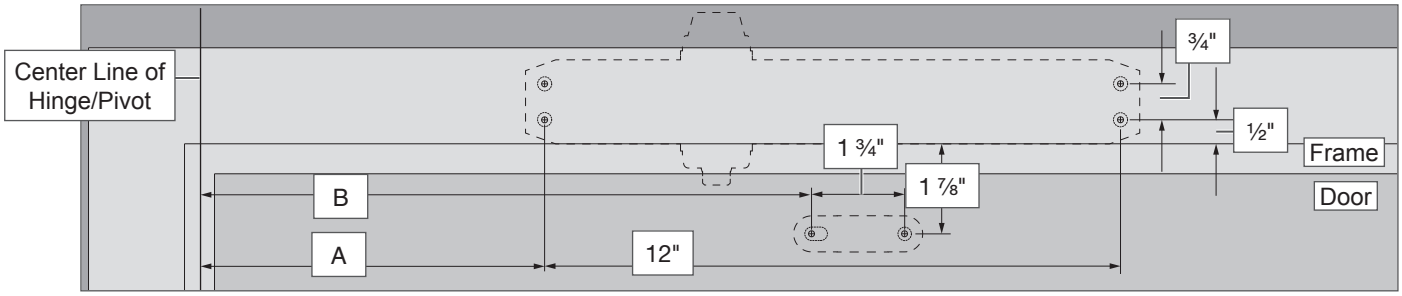
10 Screw cap onto shaft and install cover.



Push Side Top Jamb Mount

Mounting Hole Dimensions

Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.



1 Determine the degree of door opening required and find dimension "A" on the chart below.

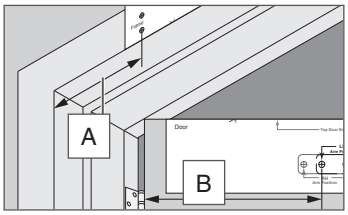
ⓘ **Opening angle of 180° is required to meet ADA.**

A Closer	Opening	Measurement from Hinge/Pivot Centerline
	To 100°	7 1/2"
	100° to 120°	6"
	120° to 180°	4 1/2"

B Shoe	Opening	Measurement from Hinge/Pivot Centerline
	To 100°	13"
	100° to 120°	11 1/2"
	120° to 180°	10"

2 Measure from hinge/pivot centerline and stick template on door. Mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**



3 Remove template, and drill holes where marked with a 1/8" drill bit.

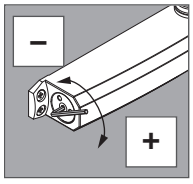
ⓘ **SRT screws are used on metal doors.**
Wood screws are used on wood doors.

4 Measure and determine your door's width. Using a hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.

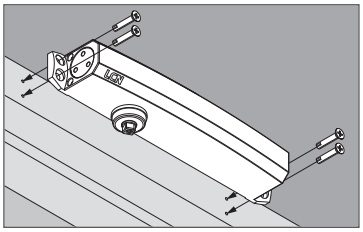
Turn counterclockwise for "-"; turn clockwise for "+"

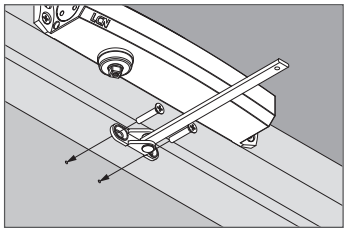
ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

Door Width	Number of Turns
Handicap Setting	-5
32" - 815 mm	-3
36" - 915 mm	0
42" - 1050 mm	+5
48" - 1220 mm	+10
54" - 1372mm	+15



5 Install closer onto frame and shoe onto door using screws provided.

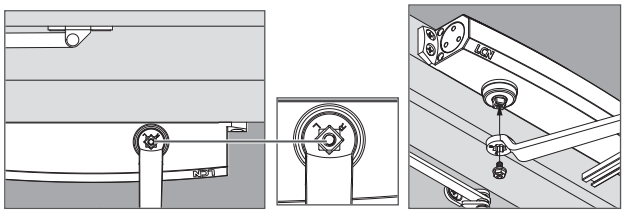




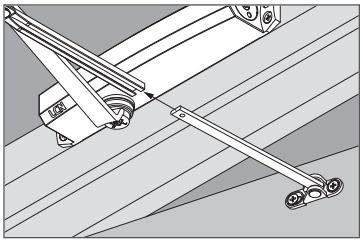
6 Install main arm to closer.

a. Place main arm onto the bottom closer shaft.
b. Install and tighten main arm screw.

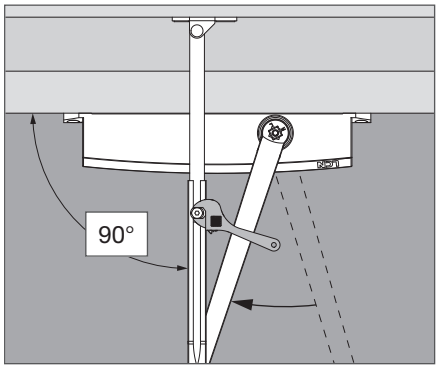
ⓘ **See page 5 for Optional Hold Open Arm installation and adjustment.**



7 Route the rod into the forearm.

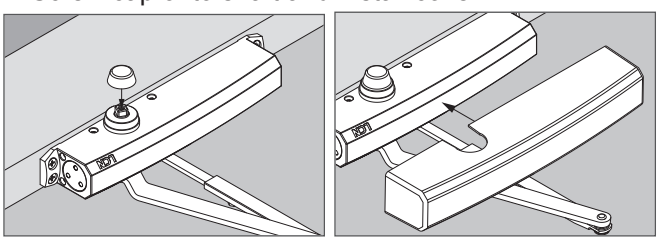


8 Preload the forearm to 90°. While the arm is still preloaded, install and tighten the arm screw.



9 Adjust the closer, if necessary. See page 5 for closer adjustment instructions.

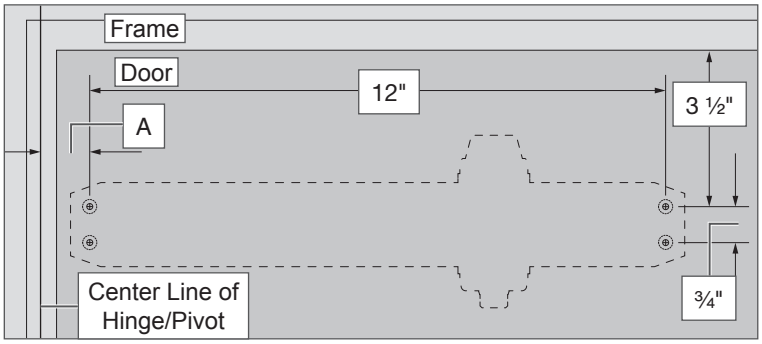
10 Screw cap onto shaft and install cover.

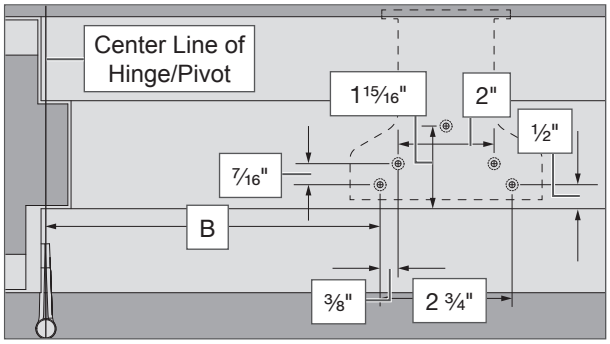


Push Side Parallel Arm (PA)

Mounting Hole Dimensions

Left Hand (LH) shown throughout instructions. Right Hand (RH) opposite.





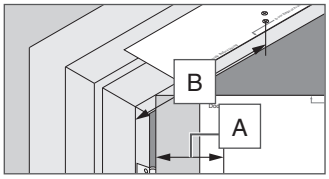
1 Determine the degree of door opening required and find dimensions “A” and “B” in the charts below.

A	Opening	Measurement from Hinge/Pivot Centerline
Closer	To 120°	3 3/4”
	120° to 180°	1 1/4”

B	Opening	Measurement from Hinge/Pivot Centerline
PA Shoe	To 120°	9 1/2”
	120° to 180°	7”

2 Measure from hinge/pivot centerline and stick template on door. Mark drilling holes.

ⓘ **See Mounting Dimensions above as needed.**



3 Remove template, and drill holes where marked with a 1/8” drill bit for SRT screws.

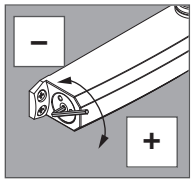
ⓘ **SRT screws are used on metal doors.**
Wood screws are used on wood doors.

4 Measure and determine your door’s width. Using a hex wrench, adjust the closer spring power. Use the table below to determine number of turns required.

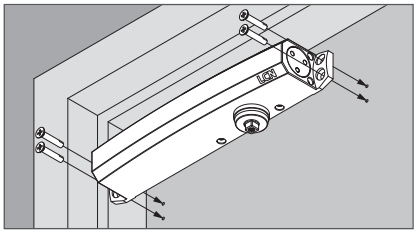
Turn counterclockwise for “-”; turn clockwise for “+”

ⓘ **These turns are recommended, but may change due to door weight and environmental conditions.**

Door Width	Number of Turns
Handicap Setting	-5
32” - 815 mm	-3
36” - 915 mm	0
42” - 1050 mm	+5
48” - 1220 mm	+10
54” - 1372mm	+15



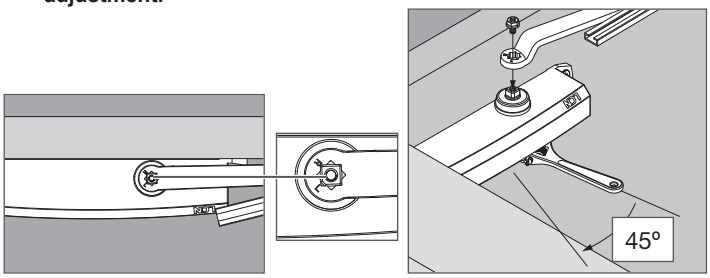
5 Install closer onto door.



6 Install main arm to closer.

a. Use a wrench on the bottom closer shaft to turn the top closer shaft approximately 45°. **Hold the wrench at this angle for the next step.**
b. Place main arm onto the top closer shaft.
c. Install and tighten main arm screw.

ⓘ **See page 5 for Optional Hold Open Arm installation and adjustment.**

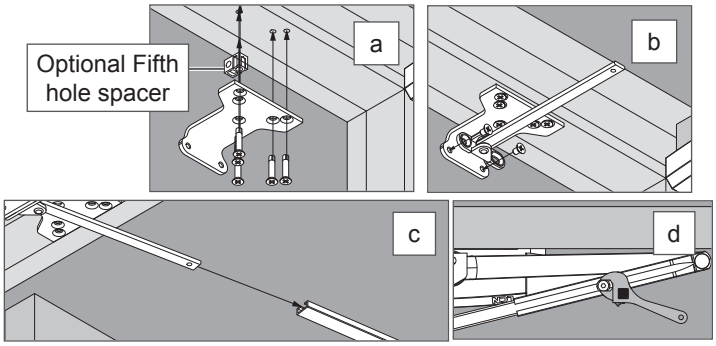


7 Install PA Shoe onto the frame, then into the rod & shoe.

a. Attach PA shoe, and optional fifth hole spacer if needed, to frame.

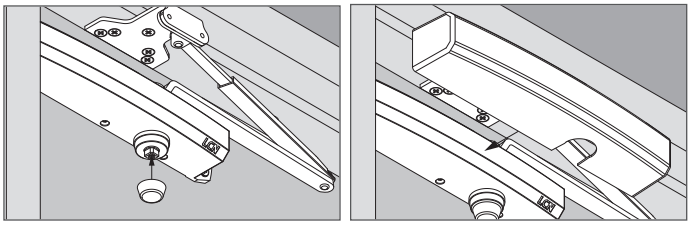
ⓘ **Use the fifth hole spaper only if there is a space between the frame and the PA shoe.**

b. Fasten rod & shoe to PA shoe.
c. Install rod into the forearm of the main arm.
d. Preload main arm to be parallel with frame, tighten arm screw.



8 Adjust the closer, if necessary. See page 5 for closer adjustment instructions.

9 Screw cap onto shaft and install cover.



Closer Valve Adjustment

Check closing time, and adjust closer if needed.

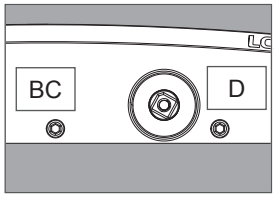
⚠ CAUTION ⚠

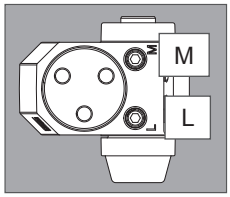
Opening the regulation valves (described below) too far may result in the closer leaking oil! This may result in closer and property damage, and personal injury.

FOLLOW ALL INSTRUCTIONS CAREFULLY.

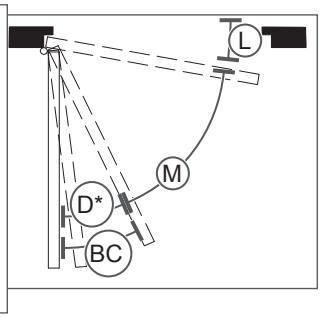
- ⓘ **Valve must be closed CW to seat, never more than 3 turns CCW from seated position. Adjust the valves in 1/4 turn increments or less at a time. DO NOT TURN MORE THAN 3 FULL ROTATIONS. THIS WILL CAUSE THE CLOSER TO LEAK OIL!**
- ⓘ **DO NOT ADJUST THE LATCH SPEED IF THE DOOR DOES NOT LATCH. If this occurs, adjust the spring force.**

1. Open the door to 90°, measure how long the door takes to close and latch. A typical closing time is 5 to 7 seconds, evenly divided between main speed and latch speed.
2. If the closing time needs to be adjusted, use the closer valves described below.
   a. Backcheck (BC)- this controls door speed opening as the door angle approaches 90°. **Do not use as a door stop.**
   b. Main Speed (M)- this controls door speed during most of the closing motion.
   c. Latch Speed (L)- this controls door speed during the last few degrees of door closing.
   d. DA Speed (D)- this controls the delay speed for DA cylinders. **This valve is present on DA cylinders only.**
3. Turn the valves clockwise to decrease door speed, and counterclockwise to increase door speed. The latch speed and main speed should be adjusted together.



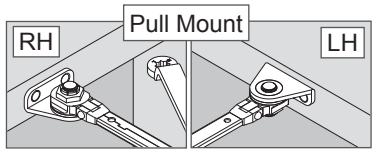


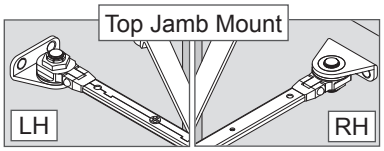
BC = Backcheck valve
M = Main speed valve
D = Delay speed valve*
L = Latch speed valve
* Optional

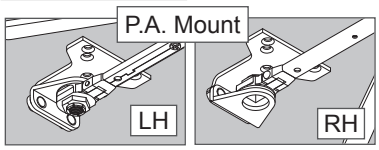


Optional Hold Open Arms

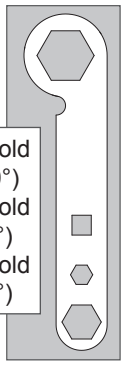
1 See the image below to determine the direction of the Hold Open nut. This is determined by the door handing.





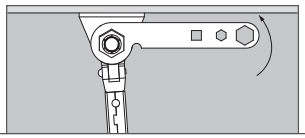


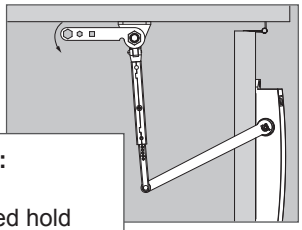
180° Mounting Hold Open (120°-180°)
120° Mounting Hold Open (95°-120°)
100° Mounting Hold Open (85°-100°)



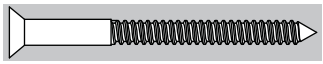
2 Hold Open Arm Adjustment.

- ⓘ **The Hold Open Arm installs like the regular closer arm. Follow steps 5 - 7 on pages 2, 3, and 4 for Hold Open Arm installation.**
- ⓘ **Top Jamb mount handing for Hold Open Arms is reverse of other mounts.**





To adjust Optional Hold-open arm:
1. Loosen hold open nut.
2. Open door to 5° less than desired hold position and tighten hold open nut securely.

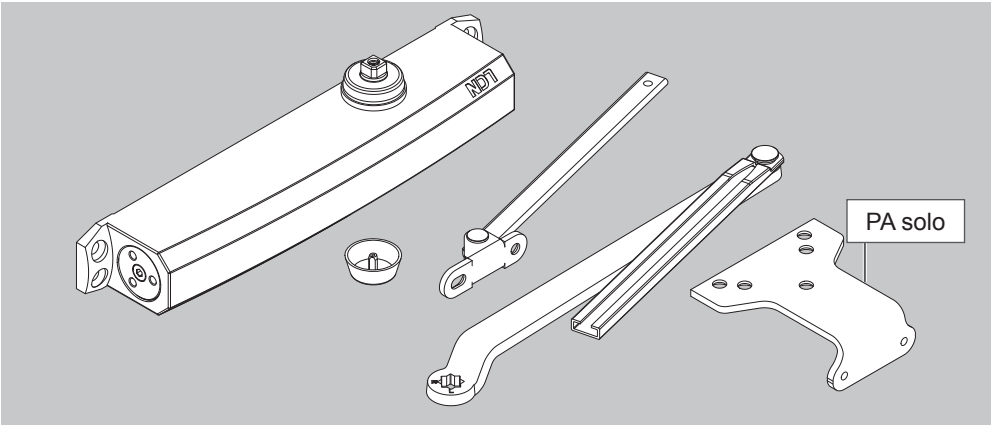
Screw Type	Picture	Cylinder Mounting	PA Bracket Mounting	PA Shoe Mounting	5th Hole Mounting (PA Shoe Only)
Wood (for wood doors & frames)		4 @ #14 x 1⅜"	4 @ #14- 1⅜"		1 @ #14 x 2"
Machine (for metal doors & frames) Requires hole drilling & tapping; best hold.		4 @ ¼-20 x 1"	4 @ ¼-20 x ⅝"	2 @ ¼-20 x ⅜"	1 @ ¼-20 x 1½"
SRT - Self Reaming & Tapping (for metal doors & frames)		4 @ #14 x 1½"	4 @ #14 x 1½"		1 @ #14 x 2"

Screw Type	Picture	Notes
Fifth Hole Spacer		
Thru Bolts		Used when mounting through door.
Pinion Attachment Screw		1 M6 x 10mm for attachment of the arm (see step 6).

Serie DA 1450 y 4050

Lado para tirar, montaje en jamba superior y montaje en brazo paralelo (PA) — Instrucciones de Instalación

PIEZAS

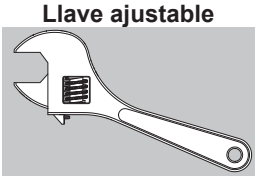


ⓘ **La información sobre el paquete de tornillos se encuentra en la página 10.**

HERRAMIENTAS

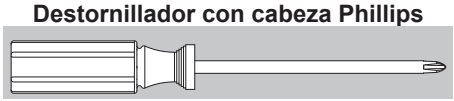
Llave hexagonal de 5⁄32" o 4 mm

Llave ajustable



Broca de taladro de ⅛"

Destornillador con cabeza Phillips



ⓘ **Información sobre la llave para mantener abierto en la página 10.**

⚠ PRECAUCIÓN ⚠

La instalación o regulación incorrecta puede resultar en lesiones personales o daño a los bienes.
Siga todas las instrucciones con atención.
En caso de duda, llame a LCN al 877-671-7011

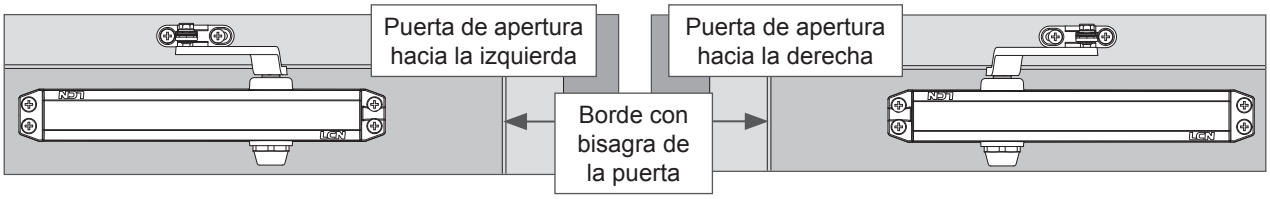
Los brazos para mantener abierto no deben instalarse en puertas con clasificación ignífuga.

¡Abrir demasiado las válvulas de regulación puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales.
SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

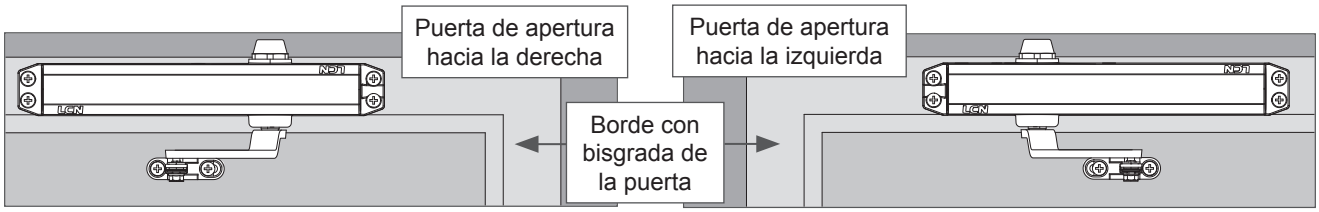
¡NO USE EL MECANISMO DE CIERRE COMO TOPE DE LA PUERTA!
Se recomienda el uso de un tope auxiliar en el punto de mantener abierto o donde la puerta no puede girar 180°.

Seleccione el tipo de instalación

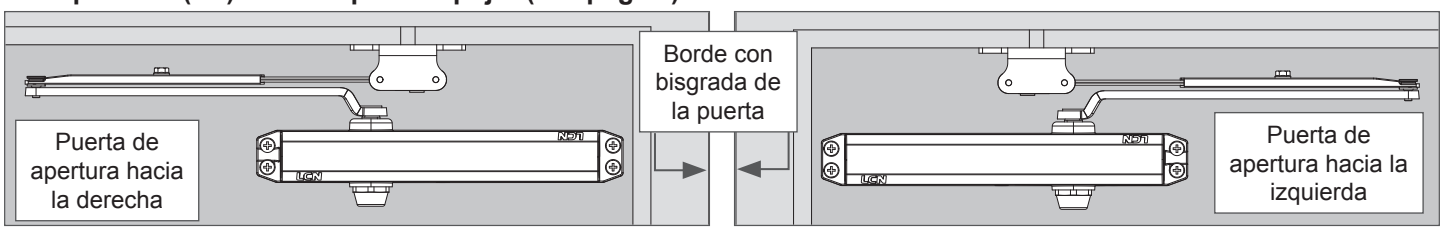
Montaje en el lado para tirar (see page 7)



Montaje en la jamba superior del lado para empujar (see page 8)



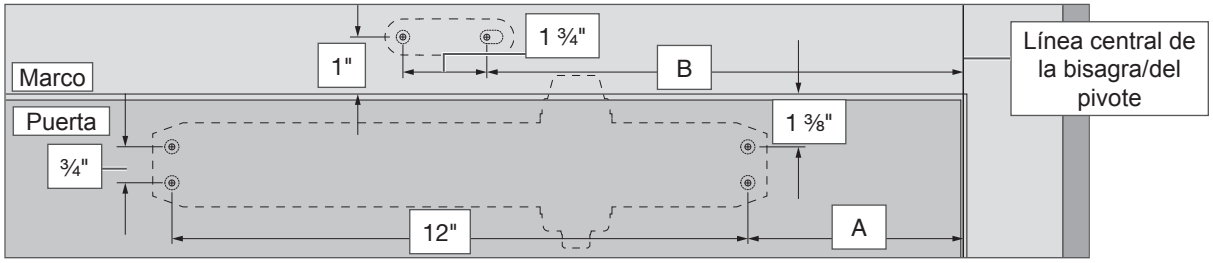
Brazo paralelo (PA) del lado para empujar (see page 9)



Montaje en el lado para tirar

Dimensiones de montaje

ⓘ **Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.**



1 Determine el grado de apertura de la puerta requerido y busque la dimensión "A" en al cuadro siguiente.

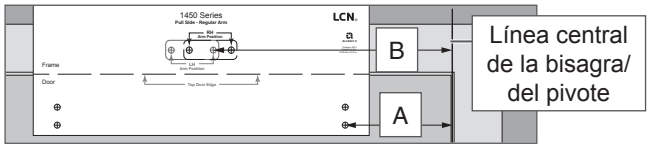
ⓘ **Se requiere un ángulo de apertura de 180° para cumplir con ADA.**

A	Apertura	Línea central de la bisagra/del pivote
El mecanismo de cierre	Hasta 100°	7 1/2”
	100° a 120°	6”
	120° a 180°	4 1/2”

B	Apertura	Línea central de la bisagra/del pivote
el zócalo	Hasta 100°	13”
	100° a 120°	11 1/2”
	120° a 180°	10”

2 Mida desde la línea central de la bisagra/del pivote y adhiera la plantilla en la puerta. Marque los orificios de perforación.

ⓘ **Vea las Dimensiones de montaje anteriores según sea necesario.**



3 Retire la plantilla y perfore orificios donde está marcado con una broca de taladro de ⅛" para tornillos SRT.

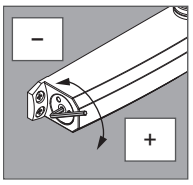
ⓘ **Los tornillos SRT se usan en puertas de metal.**
Los tornillos de madera se usan en puertas de madera.

4 Mida y determine el ancho de su puerta. Con una llave hexagonal, ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

Gire en sentido antihorario para “-”; gire en sentido horario para “+”.

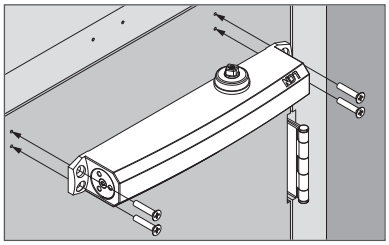
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

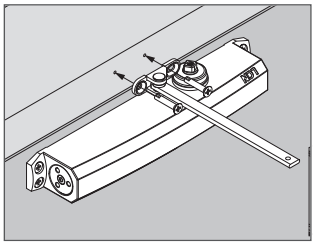
Ancho de la puerta	Número de giros
Configuración de ADA	-5
32” - 815 mm	-3
36” - 915 mm	0
42” - 1050 mm	+5
48” - 1220 mm	+10
54” - 1372 mm	+15



5 Instale el mecanismo de cierre en la puerta y el zócalo en el marco usando los tornillos provistos.

ⓘ **El extremo de retención (BC) del mecanismo de cierre va hacia el lado del marco.**

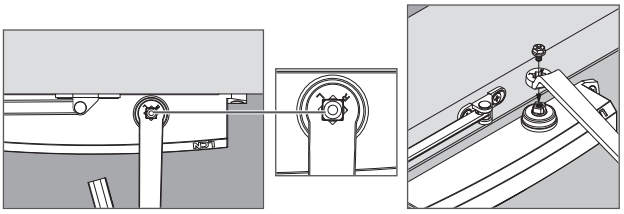




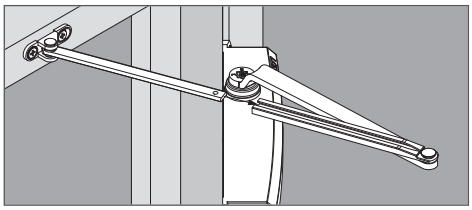
6 Instale el brazo principal en el mecanismo de cierre.

a. Coloque el brazo principal en el eje superior del mecanismo de cierre.
b. Instale y ajuste el tornillo del brazo principal.

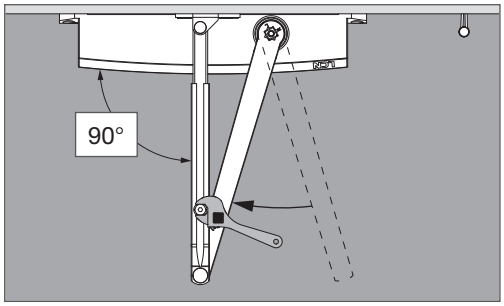
ⓘ **Consulte la página 10 para ver la instalación y el ajuste del brazo opcional para mantener abierto.**



7 Coloque la varilla en el brazo delantero.

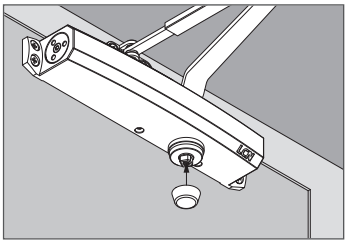


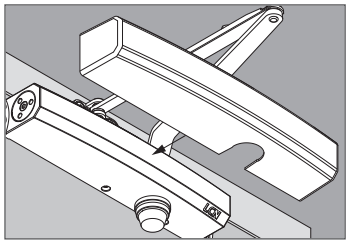
8 Cargue previamente el brazo delantero a 90°. Mientras el brazo aún está precargado, instale y ajuste el tornillo del brazo.



9 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 10 para ver las instrucciones de ajuste del mecanismo de cierre.

10 Atornille la tapa en el eje e instale la cubierta.

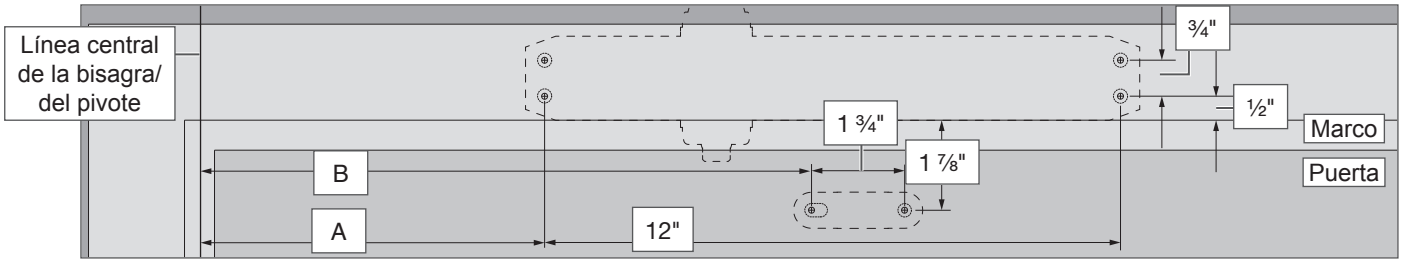




Montaje en la jamba superior del lado para empujar

Dimensiones de montaje

ⓘ **Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.**



1 Determine el grado de apertura de la puerta requerido y busque la dimensión "A" en al cuadro siguiente.

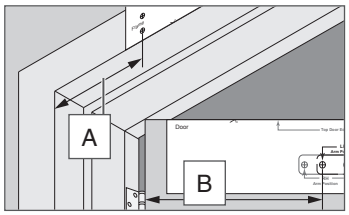
ⓘ **Se requiere un ángulo de apertura de 180° para cumplir con ADA.**

A	Apertura	Línea central de la bisagra/del pivote
El mecanismo de cierre	Hasta 100°	7 1/2”
	100° a 120°	6”
	120° a 180°	4 1/2”

B	Apertura	Línea central de la bisagra/del pivote
el zócalo	Hasta 100°	13”
	100° a 120°	11 1/2”
	120° a 180°	10”

2 Mida desde la línea central de la bisagra/del pivote y adhiera la plantilla en la puerta. Marque los orificios de perforación.

ⓘ **Vea las Dimensiones de montaje anteriores según sea necesario.**



3 Retire la plantilla y perfore orificios donde está marcado con una broca de taladro de ⅛" para tornillos SRT.

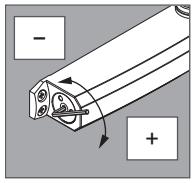
ⓘ **Los tornillos SRT se usan en puertas de metal.**
Los tornillos de madera se usan en puertas de madera.

4 Mida y determine el ancho de su puerta. Con una llave hexagonal, ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

Gire en sentido antihorario para “-”; gire en sentido horario para “+”.

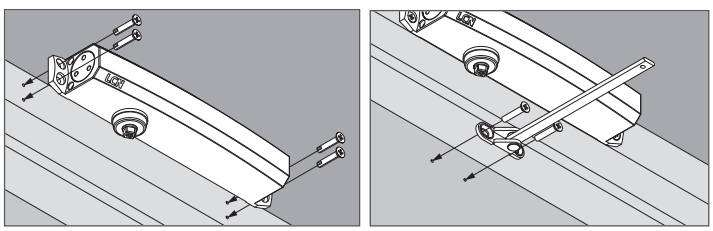
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

Ancho de la puerta	Número de giros
Configuración de ADA	-5
32” - 815 mm	-3
36” - 915 mm	0
42” - 1050 mm	+5
48” - 1220 mm	+10
54” - 1372 mm	+15



5 Instale el mecanismo de cierre en el marco y el zócalo en la puerta usando los tornillos provistos.

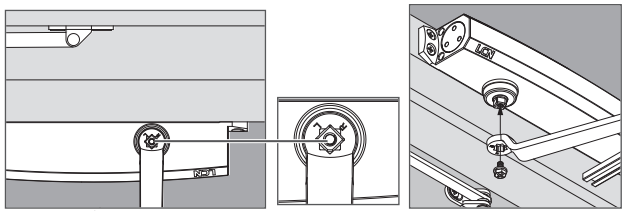
ⓘ **El extremo de retención (BC) del mecanismo de cierre va hacia el lado del marco.**



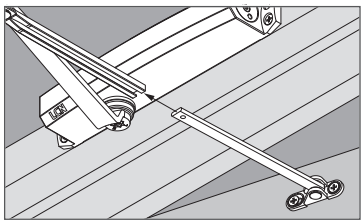
6 Instale el brazo principal en el mecanismo de cierre.

a. Coloque el brazo principal en el eje inferior del mecanismo de cierre.
b. Instale y ajuste el tornillo del brazo principal.

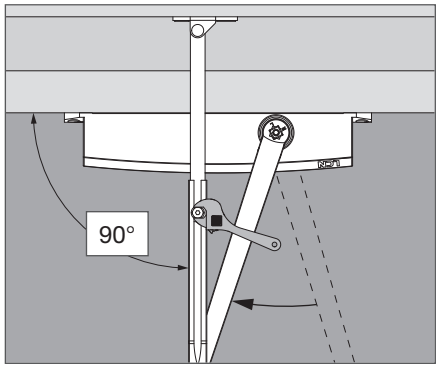
ⓘ **Consulte la página 10 para ver la instalación y el ajuste del brazo opcional para mantener abierto.**



7 Coloque la varilla en el brazo delantero.

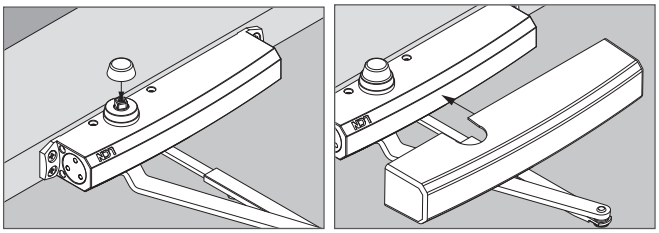


8 Cargue previamente el brazo delantero a 90°. Mientras el brazo aún está precargado, instale y ajuste el tornillo del brazo.



9 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 10 para ver las instrucciones de ajuste del mecanismo de cierre.

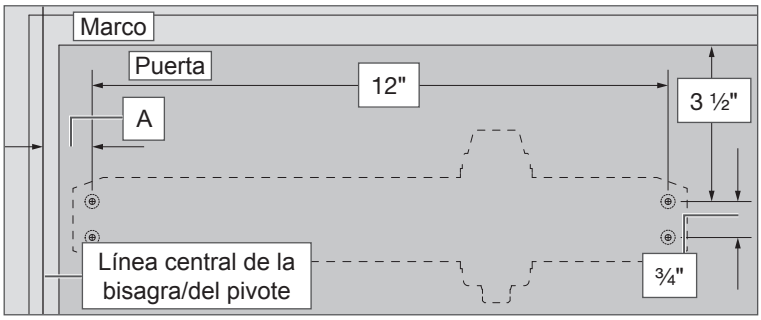
10 Atornille la tapa en el eje e instale la cubierta.

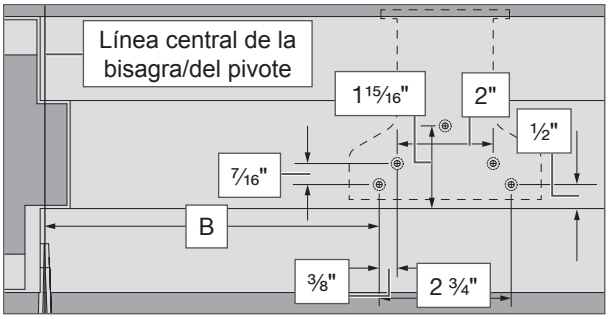


Brazo paralelo (PA) del lado para empujar

Dimensiones de montaje

ⓘ **Se muestra la apertura hacia la izquierda (LH) en las instrucciones. El procedimiento para apertura hacia la derecha (RH) es opuesto.**





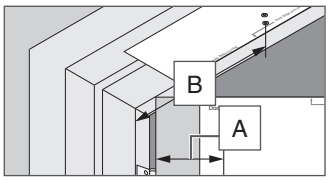
1 Determine el grado de apertura de la puerta requerido y busque las dimensiones "A" y "B" en el cuadro siguiente.

A	Apertura	Medición desde el borde de la puerta
El mecanismo de cierre	Hasta 120°	3 3/4"
	De 120° a 180°	1 1/4"

B	Apertura	Medición desde el borde de la puerta
el zócalo PA	Hasta 120°	9 1/2"
	De 120° a 180°	7"

2 Mida desde la línea central de la bisagra/del pivote y adhiera la plantilla en la puerta. Marque los orificios de perforación.

ⓘ **Vea las Dimensiones de montaje anteriores según sea necesario.**



3 Retire la plantilla y perfore orificios donde está marcado con una broca de taladro de ⅛" para tornillos SRT.

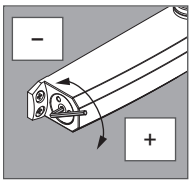
ⓘ **Los tornillos SRT se usan en puertas de metal.**
Los tornillos de madera se usan en puertas de madera.

4 Mida y determine el ancho de su puerta. Con una llave hexagonal, ajuste la potencia del resorte del mecanismo de cierre. Use la tabla siguiente para determinar el número de giros requeridos.

Gire en sentido antihorario para "-"; gire en sentido horario para "+".

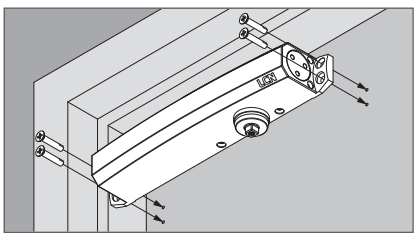
ⓘ **Se recomienda este número de giros, pero puede cambiar debido al peso de la puerta o condiciones ambientales.**

Ancho de la puerta	Número de giros
Configuración de ADA	-5
32" - 815 mm	-3
36" - 915 mm	0
42" - 1050 mm	+5
48" - 1220 mm	+10
54" - 1372 mm	+15



5 Instale el mecanismo de cierre en la puerta.

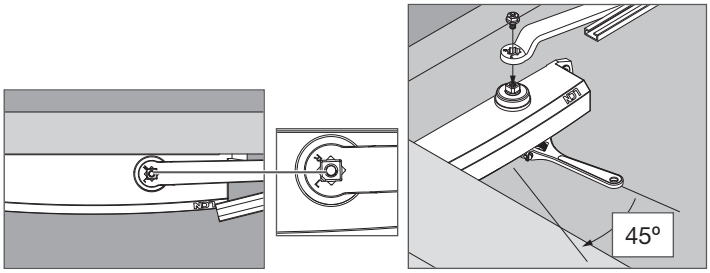
ⓘ **El extremo de retención (BC) del mecanismo de cierre va hacia el lado del marco.**



6 Instale el brazo principal en el mecanismo de cierre.

ⓘ **Consulte la página 10 para ver la instalación y el ajuste del brazo opcional para mantener abierto.**

a. Use una llave en el eje inferior del mecanismo de cierre para girar el eje superior del mecanismo de cierre aproximadamente 45°. **Sostenga la llave en este ángulo hasta el próximo paso.**
b. Coloque el brazo principal en el eje superior del mecanismo de cierre.
c. Instale y ajuste el tornillo del brazo principal.

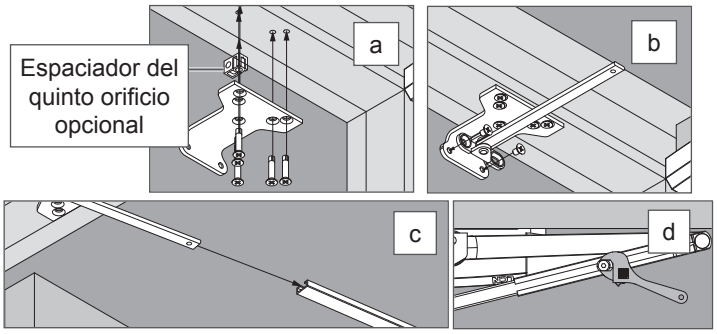


7 Instale el zócalo del PA en el marco, luego en la varilla y el zócalo.

a. Coloque el zócalo del PA y el espaciador del quinto orificio opcional, de ser necesario, en el marco.

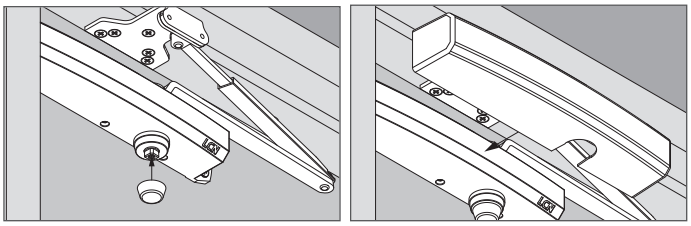
ⓘ **Use el espaciador del quinto orificio si hay un espacio entre el marco y el zócalo del PA.**

b. Ajuste la varilla y el zócalo en el zócalo del PA.
c. Instale la varilla en el brazo delantero del brazo principal.
d. Aplique una carga previa al brazo principal para que quede paralelo al marco, ajuste el tornillo del brazo.



8 Ajuste el mecanismo de cierre, si fuera necesario. Consulte la página 10 para ver las instrucciones de ajuste del mecanismo de cierre.

9 Atornille la tapa en el eje e instale la cubierta.



Ajuste de la válvula del mecanismo de cierre

Compruebe el tiempo de cierre y ajuste el mecanismo de cierre de ser necesario.

⚠ PRECAUCIÓN ⚠

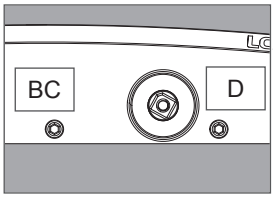
¡Abrir demasiado las válvulas de regulación (como se describe a continuación) puede resultar en fugas de aceite en el mecanismo de cierre! Esto puede resultar en daño al mecanismo de cierre y a los bienes, y lesiones personales.

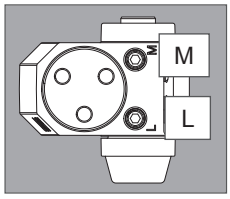
SIGA TODAS LAS INSTRUCCIONES CON ATENCIÓN.

ⓘ **La Vàlvula se Cierra hacia el lado dercho(en direction de las agujas del reloj) hasta que tope,nunca mas de tres vueltas al lado izquierdo(en contra de las manesillas del reloj) del tope. Ajuste las válvulas en incrementos de 1/4 de giro o menos a la vez. ¡NO GIRE MÁS DE 4 ROTACIONES COMPLETAS - ESTO OCASIONARÁ QUE EL MECANISMO DE CIERRE TENGA UNA FUGA DE ACEITE!**

ⓘ **NO AJUSTE LA VELOCIDAD DEL PASADOR SI LA PUERTA NO SE TRABA. Si esto sucede, ajuste la fuerza del resorte.**

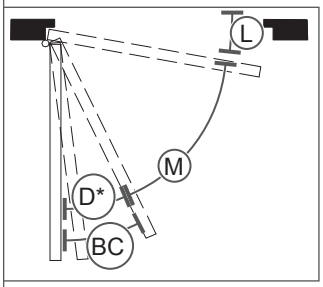
1. Abra la puerta a 90°, mida cuánto tiempo tarda la puerta en cerrar y trabarse. Un tiempo típico de cierre es de 5 a 7 segundos, divido de manera uniforme entre velocidad principal y velocidad del pasador.
2. Si se necesita ajustar el tiempo de cierre, use las válvulas del mecanismo de cierre como se describe a continuación.
   a. Retención (BC): controla la velocidad de apertura de la puerta cuando el ángulo de la puerta se acerca a 90°. **No usar como tope de puerta.**
   b. Velocidad principal (M): controla la velocidad de la puerta durante la mayor parte del movimiento de cierre.
   c. Velocidad del pasador (L): controla la velocidad de la puerta durante los últimos grados del cierre de la puerta.
   d. Velocidad principal de DA (D): esto controla la velocidad de retardo de los cilindros de DA. **Esta válvula se encuentra solo en cilindros DA.**
3. Gire las válvulas en sentido horario para reducir la velocidad de la puerta y en sentido antihorario para aumentar la velocidad de la puerta. La velocidad del pasador y la velocidad principal deben ajustarse conjuntamente.





BC	= válvula de retención
M	= válvula de velocidad principal
D	= Válvula de velocidad de retardo*
L	= válvula de velocidad del pasador

* Opcional



Brazos opcionales para mantener abierto

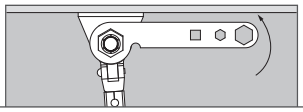
1 Vea la imagen siguiente para determinar la dirección de la tuerca para mantener abierto. Esto es determinado por el lado en el que está la manija de la puerta.

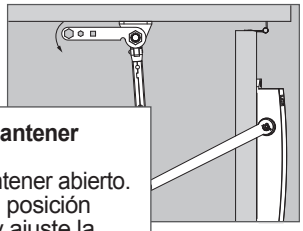
Montaje de 180° para mantener abierto (120-180°)
Montaje de 120° para mantener abierto (95°-120°)
Montaje de 100° para mantener abierto (85°-100°)

2 Ajuste del brazo para mantener abierto.

ⓘ **El brazo para mantener abierto se instala como el brazo regular del mecanismo de cierre. Siga los pasos 5 - 7 en las páginas 6, 7 y 8 para la instalación del brazo para mantener abierto.**

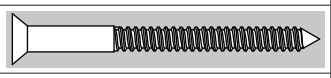
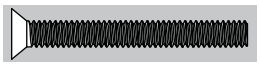
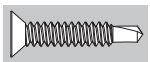
ⓘ **El lado de montaje en la jamba superior para los brazos para mantener abierto es inverso a los demás montajes.**

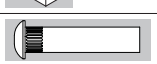




Para ajustar el brazo opcional para mantener abierto:

1. Afloje la tuerca del brazo para mantener abierto.
2. Abra la puerta a 5° menos que la posición deseada para mantener abierto y ajuste la tuerca del mecanismo para mantener abierto firmemente.

Tipo de tornillo	Imagen	Montaje en el cilindro	Montaje en el soporte del PA	Montaje en el zócalo del PA	Montaje en el 5.° orificio (solo zócalo del PA)
Madera (para puertas y marcos de madera)		4 @ #14 x 1⅜"	4 @ #14- 1⅜"		1 @ #14 x 2"
Máquina (para puertas y marcos de metal) Requiere perforación de orificio y formación de rosca; mejor sujeción		4 @ ¼-20 x 1"	4 @ ¼-20 x ⅝"	2 @ ¼-20 x ⅜"	1 @ ¼-20 x 1½"
SRT: autoperforación y formación de rosca (para puertas y marcos de metal)		4 @ #14 x 1½"	4 @ #14 x 1½"		1 @ #14 x 2"

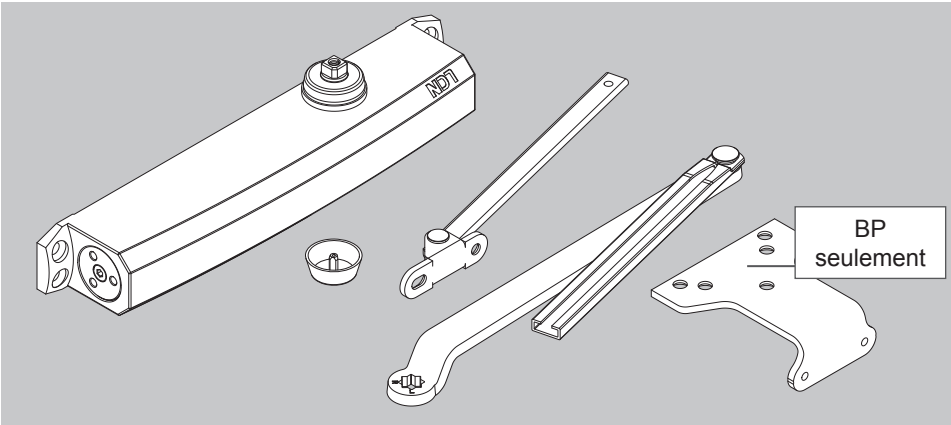
Tipo de tornillo	Imagen	Notas
Espaciador del quinto orificio		
Pernos pasantes		Se utiliza al montar a través de la puerta
Tornillo de sujeción del piñón		1 M6 x 10 mm para la sujeción del brazo (ver el paso 6)

1450 et 1450 de la série DA

Côté tirant, montage montant supérieur, montage bras parallèle (BP)

Instructions d'installation

PIÈCES

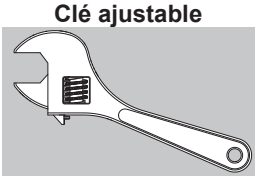


ⓘ **Informations sur l'ensemble de vis à la page 15.**

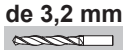
OUTILS

Clé Allen de 4 mm ou 5⁄32 po

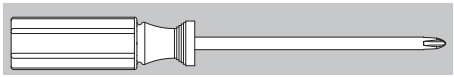
Clé ajustable



Mèche de 3,2 mm (⅛ po)



Tournevis cruciforme



ⓘ **Informations sur la clé ouverte à la page 15.**

⚠ MISE EN GARDE ⚠

Une installation inadéquate ou le non-respect des règlements peut causer des blessures ou des dommages matériels.
Suivez attentivement toutes les instructions.
Pour toute question, appelez LCN au 877-671-7011.

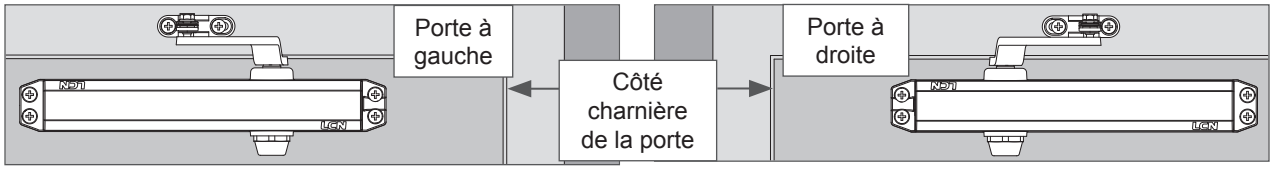
Les bras de retenue ne doivent pas être installés sur les portes coupe-feu.

Une trop grande ouverture des soupapes de régulation peut entraîner une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

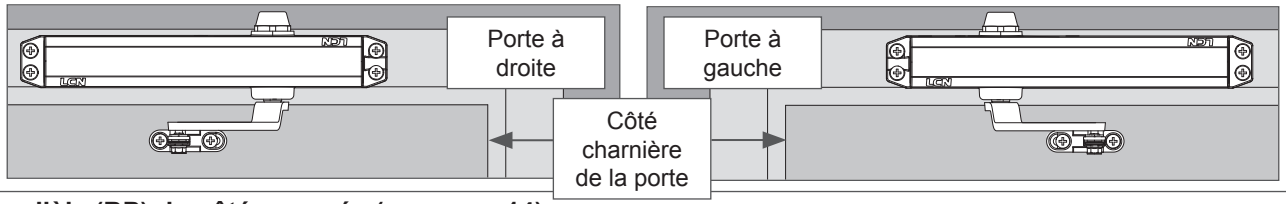
ÉVITEZ D'UTILISER LE DISPOSITIF DE FERMETURE COMME BUTOIR DE PORTE!
Il est recommandé d'utiliser un butoir auxiliaire au point de retenue ou à l'endroit où la porte ne peut s'ouvrir à 180°

Choisissez le type d'installation

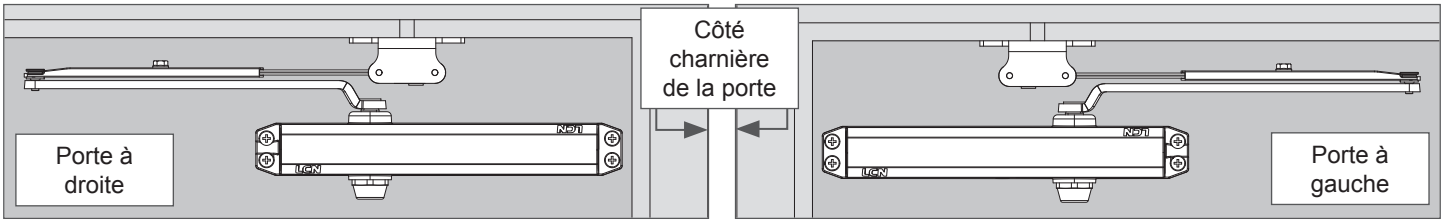
Montage du côté tirant (see page 12)



Montage du montant supérieur du côté poussée (see page 13)



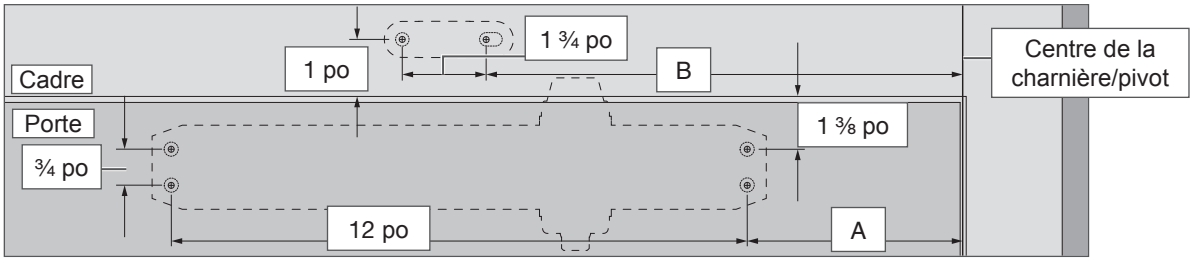
Bras parallèle (BP) du côté poussée (see page 14)



Montage du côté tirant

Dimensions de montage

ⓘ **Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.**



1 Déterminez le degré d'ouverture de la porte requis et trouvez la dimension « A » dans le tableau ci-dessous.

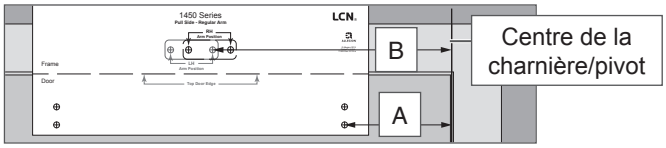
ⓘ **Un angle d'ouverture de 180° est requis pour respecter l'ADA.**

A	Ouverture	Centre de la charnière/pivot
Dispositif de fermeture	Jusqu'à 100°	7 1/2 po
	100° à 120°	6 po
	120° à 180°	4 1/2 po

B	Ouverture	Centre de la charnière/pivot
Sabot	Jusqu'à 100°	13 po
	100° à 120°	11 1/2 po
	120° à 180°	10 po

2 Mesurez à partir du centre de la charnière/pivot et collez le gabarit sur la porte. Faites des marques pour les trous à percer.

ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**



3 Retirez le gabarit et percez des trous de 3,2 mm (1/8 po) aux endroits marqués avec une mèche pour les vis SRT.

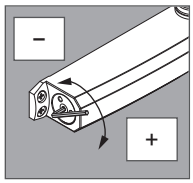
ⓘ **Les vis SRT sont utilisées sur les portes en métal.**
Les vis à bois sont utilisées sur les portes en bois.

4 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé Allen, réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.

Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

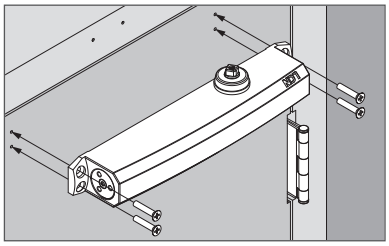
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

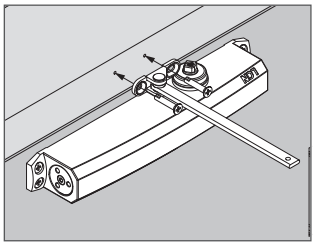
Largeur de la porte	Nombre de tours
Réglage de l'ADA	-5
32" - 815 mm	-3
36" - 915 mm	0
42" - 1050 mm	+5
48" - 1220 mm	+10
54" - 1372 mm	+15



5 Installez le dispositif de fermeture sur la porte et le sabot sur le cadre à l'aide des vis fournies.

ⓘ **L'extrémité de retenue (BC) du dispositif de fermeture s'installe vers le cadre.**

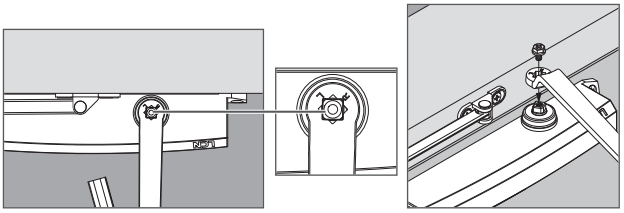




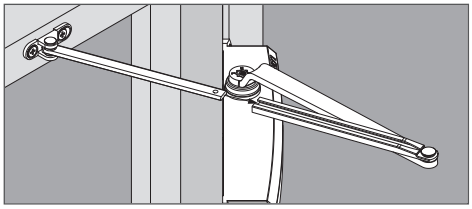
6 Installez le bras principal sur le dispositif de fermeture.

a. Placez le bras principal sur l'arbre du dispositif de fermeture supérieur.
b. Installez et serrez la vis du bras principal.

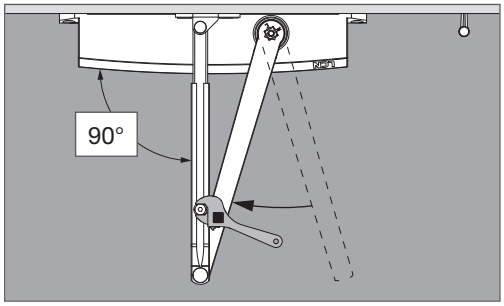
ⓘ **Consultez la page 15 pour l'installation et le réglage optionnels du bras de retenue.**



7 Insérez la tige dans l'avant-bras.

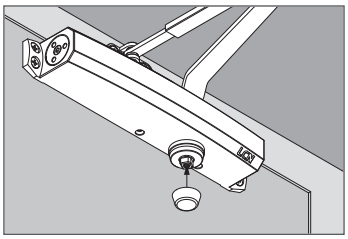


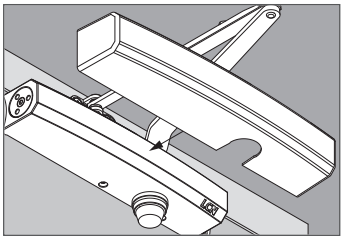
8 Préchargez l'avant-bras à 90°. Lorsque le bras est préchargé, installez et serrez la vis du bras.



9 Réglez le dispositif de fermeture au besoin. Consultez la page 15 pour les instructions de réglage du dispositif de fermeture.

10 Tournez le capuchon sur l'arbre et installez le couvercle.

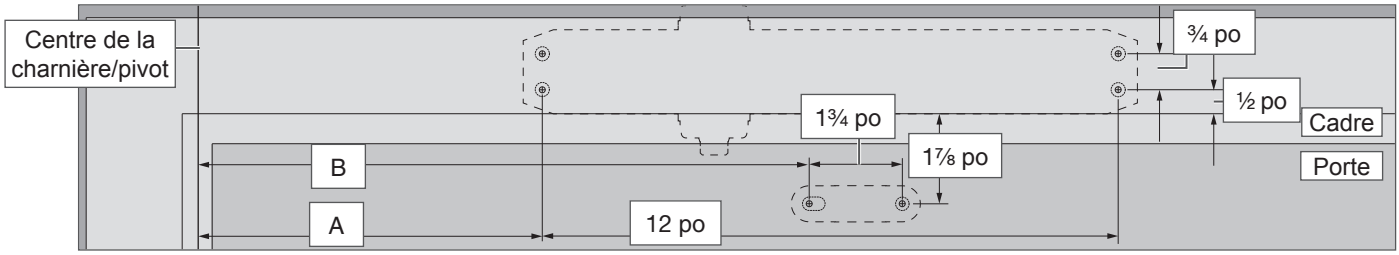




Montage du montant supérieur du côté poussée

Dimensions de montage

ⓘ **Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.**



1 Déterminez le degré d'ouverture de la porte requis et trouvez la dimension « A » dans le tableau ci-dessous.

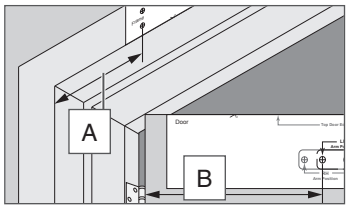
ⓘ **Un angle d'ouverture de 180° est requis pour respecter l'ADA.**

A	Ouverture	Centre de la charnière/pivot
Dispositif de fermeture	Jusqu'à 100°	7 1/2 po
	100° à 120°	6 po
	120° à 180°	4 1/2 po

B	Ouverture	Centre de la charnière/pivot
Sabot	Jusqu'à 100°	13 po
	100° à 120°	11 1/2 po
	120° à 180°	10 po

2 Mesurez à partir du centre de la charnière/pivot et collez le gabarit sur la porte. Faites des marques pour les trous à percer.

ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**



3 Retirez le gabarit et percez des trous de 3,2 mm (1/8 po) aux endroits marqués avec une mèche pour les vis SRT.

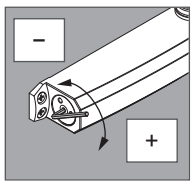
ⓘ **Les vis SRT sont utilisées sur les portes en métal.**
Les vis à bois sont utilisées sur les portes en bois.

4 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé Allen, réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.

Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

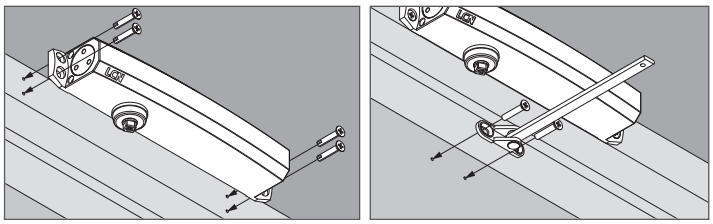
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

Largeur de la porte	Nombre de tours
Réglage de l'ADA	-5
32" - 815 mm	-3
36" - 915 mm	0
42" - 1050 mm	+5
48" - 1220 mm	+10
54" - 1372 mm	+15



5 Installez le dispositif de fermeture sur le cadre et le sabot sur la porte à l'aide des vis fournies.

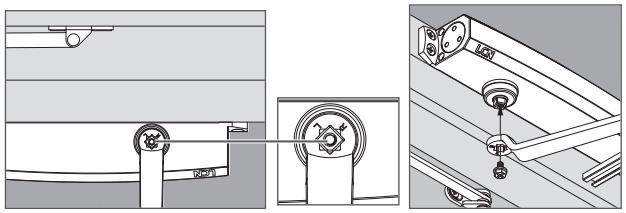
ⓘ **L'extrémité de retenue (BC) du dispositif de fermeture s'installe vers le cadre.**



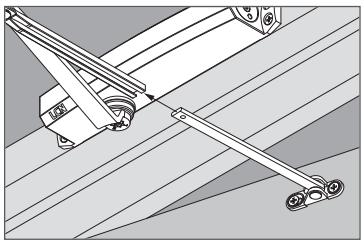
6 Installez le bras principal sur le dispositif de fermeture.

a. Placez le bras principal sur l'arbre du dispositif de fermeture inférieur.
b. Installez et serrez la vis du bras principal.

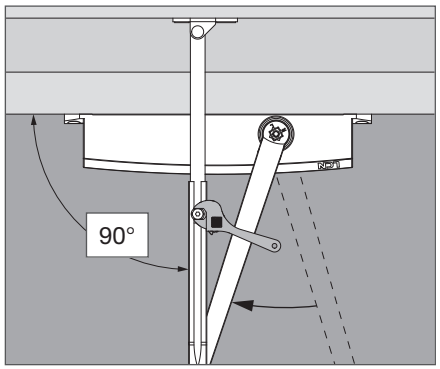
ⓘ **Consultez la page 15 pour l'installation et le réglage optionnels du bras de retenue.**



7 Insérez la tige dans l'avant-bras.

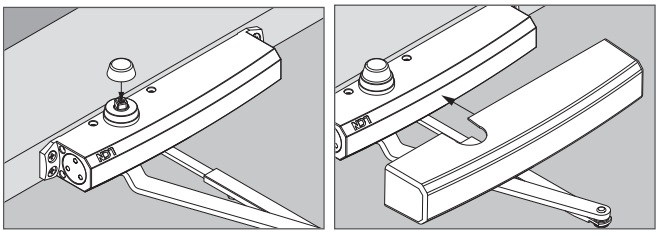


8 Préchargez l'avant-bras à 90°. Lorsque le bras est préchargé, installez et serrez la vis du bras.



9 Réglez le dispositif de fermeture au besoin. Consultez la page 15 pour les instructions de réglage du dispositif de fermeture.

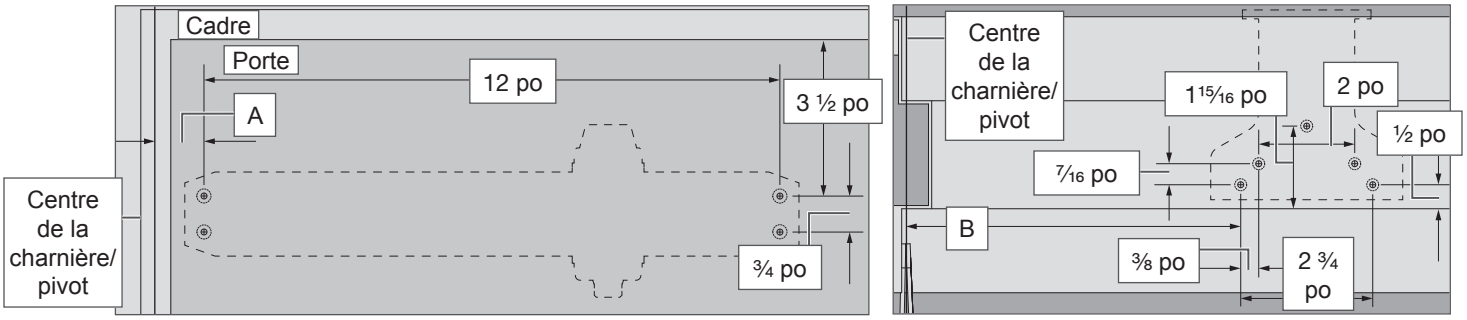
10 Tournez le capuchon sur l'arbre et installez le couvercle.



Bras parallèle (BP) du côté poussée

Dimensions de montage

ⓘ **Montage à gauche (MG) illustré tout au long de ces instructions. Le montage à droite (MD) se fait de manière opposée.**



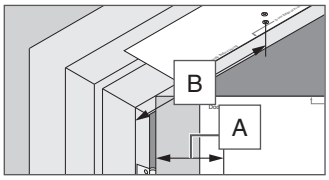
1 Déterminez le degré d'ouverture de la porte requis et trouvez les dimensions « A » et « B » dans les tableaux ci-dessous.

A	Ouverture	Mesure à partir du bord de la porte
Dispositif de fermeture	Jusqu'à 120°	3 ¾ po
	120° à 180°	1 ¼ po

B	Ouverture	Mesure à partir du bord de la porte
Sabot du BP	Jusqu'à 120°	9 ½ po
	120° à 180°	7 po

2 Mesurez à partir du centre de la charnière/pivot et collez le gabarit sur la porte. Faites des marques pour les trous à percer.

ⓘ **Consultez les dimensions de montage ci-dessous au besoin.**



3 Retirez le gabarit et percez des trous de 3,2 mm (1/8 po) aux endroits marqués avec une mèche pour les vis SRT.

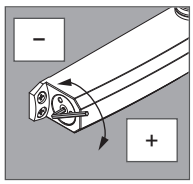
ⓘ **Les vis SRT sont utilisées sur les portes en métal.**
Les vis à bois sont utilisées sur les portes en bois.

4 Mesurez et déterminez la largeur de votre porte. À l'aide d'une clé Allen, réglez la puissance du ressort du dispositif de fermeture. Utilisez le tableau ci-dessous pour déterminer le nombre de tours requis.

Tournez dans le sens antihoraire pour « - » et dans le sens horaire pour « + ».

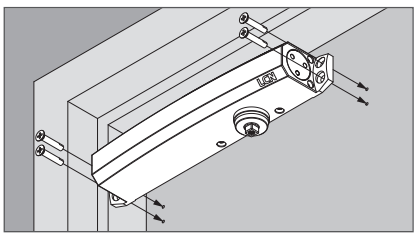
ⓘ **Ces tours sont recommandés, mais peuvent être modifiés selon le poids de la porte et les conditions environnementales.**

Largeur de la porte	Nombre de tours
Réglage de l'ADA	-5
32” - 815 mm	-3
36” - 915 mm	0
42” - 1050 mm	+5
48” - 1220 mm	+10
54” - 1372 mm	+15



5 Installez le dispositif de fermeture sur la porte.

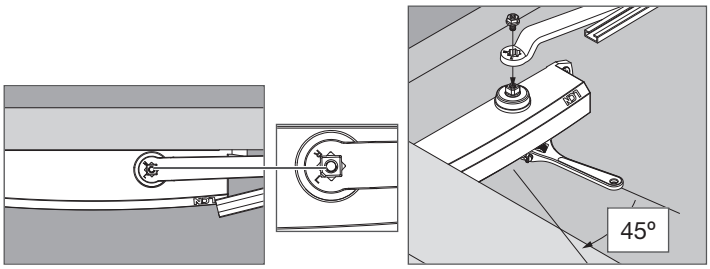
ⓘ **L'extrémité de retenue (BC) du dispositif de fermeture s'installe vers le cadre.**



6 Installez le bras principal sur le dispositif de fermeture.

ⓘ **Consultez la page 15 pour l'installation et le réglage optionnels du bras de retenue.**

a. Utilisez une clé sur l'arbre du dispositif de fermeture inférieur pour faire pivoter l'arbre du dispositif de fermeture supérieur d'environ 45°. **Maintenez la clé dans cet angle pour la prochaine étape.**
b. Placez le bras principal sur l'arbre du dispositif de fermeture supérieur.
c. Installez et serrez la vis du bras principal.

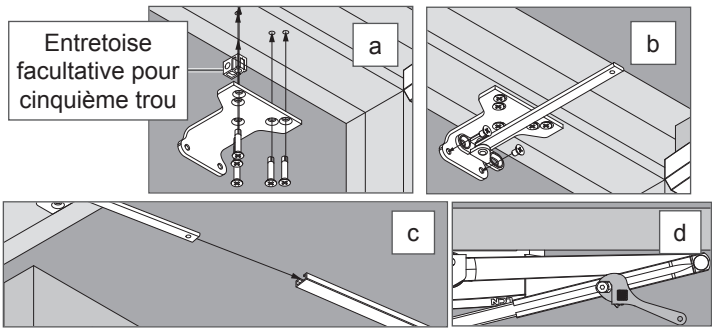


7 Installez le sabot du BP sur le cadre, puis dans la tige et le sabot.

a. Fixez le sabot du BP, et l'entretoise facultative du cinquième trou, au cadre.

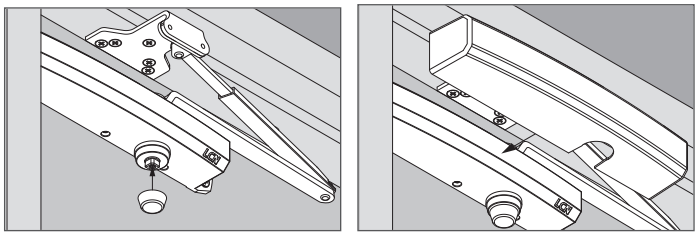
ⓘ **Utilisez l'entretoise facultative du cinquième trou seulement s'il y a un espace entre le cadre et le sabot du BP.**

b. Fixez la tige et le sabot au sabot du BP.
c. Installez la tige dans l'avant-bras du bras principal.
d. Préchargez le bras principal de manière à ce qu'il soit parallèle au cadre, puis serrez la vis du bras.



8 Réglez le dispositif de fermeture au besoin. Consultez la page 15 pour les instructions de réglage du dispositif de fermeture.

9 Tournez le capuchon sur l'arbre et installez le couvercle.



Réglage de la soupape du dispositif de fermeture

Vérifiez le temps de fermeture et réglez le dispositif de fermeture au besoin.

⚠ MISE EN GARDE ⚠

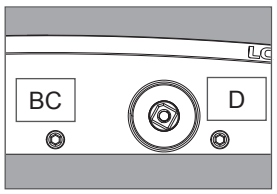
Trop ouvrir les soupapes de régulation (décrites ci-dessous) peut causer une fuite d'huile dans le dispositif de fermeture! Cela peut causer des dommages au dispositif de fermeture, des dommages matériels et des blessures.

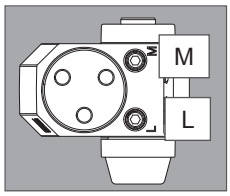
SUIVEZ ATTENTIVEMENT TOUTES LES INSTRUCTIONS.

ⓘ **La valve se ferme en tournant dans le sens des aiguilles d'une montre; ne jamais faire plus de 3 tours dans le sens opposé aux aiguilles d'une montre à partir de la position fermée. Réglez les soupapes en effectuant 1/4 de tour ou moins à la fois. N'EFFECTUEZ PAS PLUS DE 3 ROTATIONS COMPLÈTES - CELA CAUSERA UNE FUITE D'HUILE DANS LE DISPOSITIF DE FERMETURE!**

ⓘ **NE RÉGLEZ PAS LA VITESSE D'ENCLENCHEMENT SI LA PORTE NE S'ENCLENCHE PAS. Si cela se produit, réglez la force du ressort.**

1. Ouvrez la porte à 90° et comptez le temps nécessaire pour que la porte se ferme et s'enclenche. Le temps de fermeture typique est de 5 à 7 secondes et est divisé également entre la vitesse principale et la vitesse d'enclenchement.
2. Si le temps de fermeture doit être réglé, utilisez les soupapes du dispositif de fermeture décrites ci-dessous.
   a. Retenue (BC) - contrôle la vitesse d'ouverture de la porte lorsque l'angle s'approche de 90°. **N'utilisez pas de butoir.**
   b. Vitesse principale (M) - contrôle la vitesse de la porte durant presque tout le mouvement de fermeture.
   c. Vitesse d'enclenchement (L) - contrôle la vitesse de la porte durant les derniers degrés de la fermeture.
   d. Vitesse DA (D) — contrôle la vitesse du retardement des cylindres DA. **Cette soupape est présente sur les cylindres à retardement seulement.**
3. Faites tourner les soupapes dans le sens horaire pour faire diminuer la vitesse de la porte, et dans le sens antihoraire pour la faire augmenter. La vitesse d'enclenchement et la vitesse principale doivent être réglées ensemble.





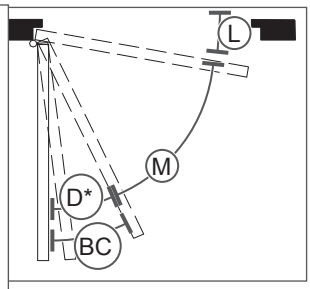
BC = soupape de retenue

M = soupape de la vitesse principale

D = Valve de vitesse de délai*

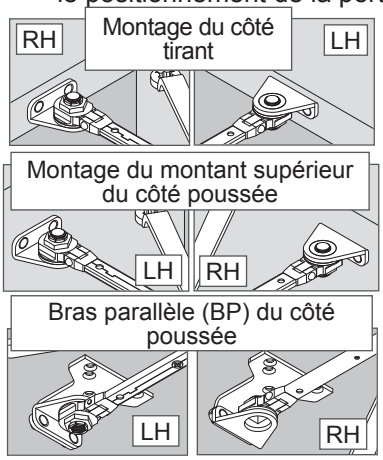
L = soupape de la vitesse d'enclenchement

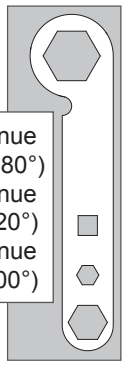
* Optionnel



Bras de retenue facultatifs

1 Consultez l'image ci-dessous pour déterminer la direction de l'écrou de retenue. Elle est déterminée par le positionnement de la porte.



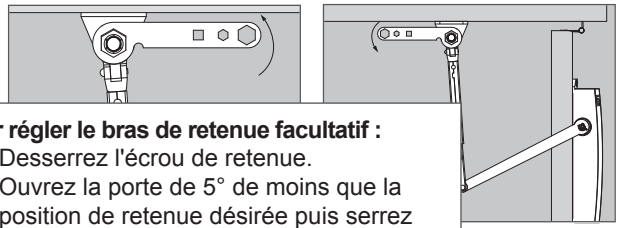


Montage de retenue de 180° (120° à 180°)
Montage de retenue de 120° (95° à 120°)
Montage de retenue de 100° (85° à 100°)

2 Réglage du bras de retenue.

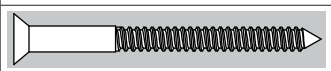
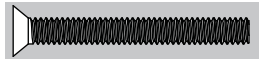
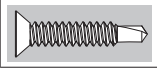
ⓘ **Le bras de retenue s'installe comme le bras du dispositif de fermeture régulier. Suivez les étapes 5 à 7 des pages 12, 13 et 14 pour l'installation du bras de retenue.**

ⓘ **Le montage du montant supérieur pour les bras de retenue se fait dans le sens inverse des autres montages.**



Pour régler le bras de retenue facultatif :

1. Desserrez l'écrou de retenue.
2. Ouvrez la porte de 5° de moins que la position de retenue désirée puis serrez bien l'écrou de retenue.

Type de vis	Image	Montage du cylindre	Montage du support du BP	Montage du sabot du BP	Montage du 5e trou (sabot du BP uniquement)
Bois (pour les portes et les cadres en bois)		4 @ #14 x 1⅜ po	4 @ #14-1⅜ po		1 @ #14 x 2 po
De mécanique (pour les portes et les cadres en métal) Nécessite de percer des trous et de tarauder; meilleure retenue		4 @ ¼-20 x 1 po	4 @ ¼-20 x ⅝ po	2 @ ¼-20 x ⅜ po	1 @ ¼-20 x 1½ po
SRT - Auto taraudeuse et à alésage automatique (pour les portes et les cadres en métal)		4 @ #14 x 1½ po	4 @ #14 x 1½ po		1 @ #14 x 2 po

Type de vis	Image	Remarques
Entretoise pour cinquième trou		
Boulons traversants		Utilisée lors du montage à travers la porte
Vis de fixation du pignon		1 M6 x 10 mm pour la fixation du bras (voir étape 6)

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71928 Rev. 07/16-d
Patent Pending

740068

Label Kit 740031-00

LCN®

For use with all low energy operators

Signage Instructions

ANSI A156.19-1997 requires these Applications for all low energy doors. Failure to do so leaves the installer LIABLE for any accident that might occur. THESE SIGNS MUST BE USED!

KIT CONTENTS:

PART #	KIT QTY.	DESCRIPTION	
27274	2	6 ½" YELLOW CIRCLE "CAUTION AUTOMATIC DOOR"	(2 SIDED)
740071-00	2	6 ½" x 1 ¾" BLUE RECTANGLE "ACTIVATE SWITCH TO OPERATE"	(2 SIDED)
740072-00	1	5" x 1 ¾" BLUE RECTANGLE "PUSH TO OPERATE"	(1 SIDED)
740073-00	1	5" x 1 ¾" BLUE RECTANGLE "PULL TO OPERATE"	(1 SIDED)

27274

740071-00

740072-00

740073-00

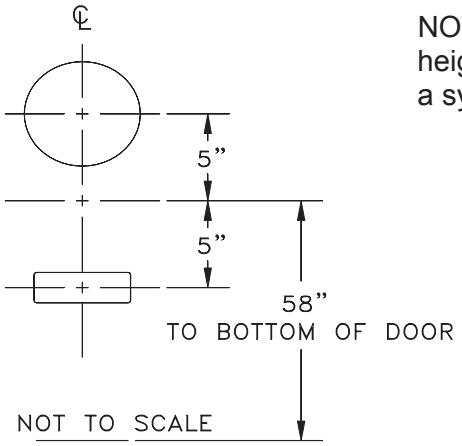
WHEN DOOR IS ACTIVATED BY SEPARATE WALL SWITCH, USE THE FOLLOWING:

CLEAR GLASS DOOR			SOLID OPAQUE DOOR	
QTY	LABEL		QTY	LABEL
1	27274		2	27274
1	740071-00		2	740071-00

WHEN DOOR IS ACTIVATED BY DOOR MOTION, USE THE FOLLOWING:

CLEAR GLASS DOOR			SOLID OPAQUE DOOR	
QTY	LABEL		QTY	LABEL
1	27274		2	27274
1	740072-00		1	740072-00
1	740073-00		1	740073-00

LABEL LOCATION:



NOTE: Mount sign on door at a height of 58" (+/- 5") in a symmetrical pattern.

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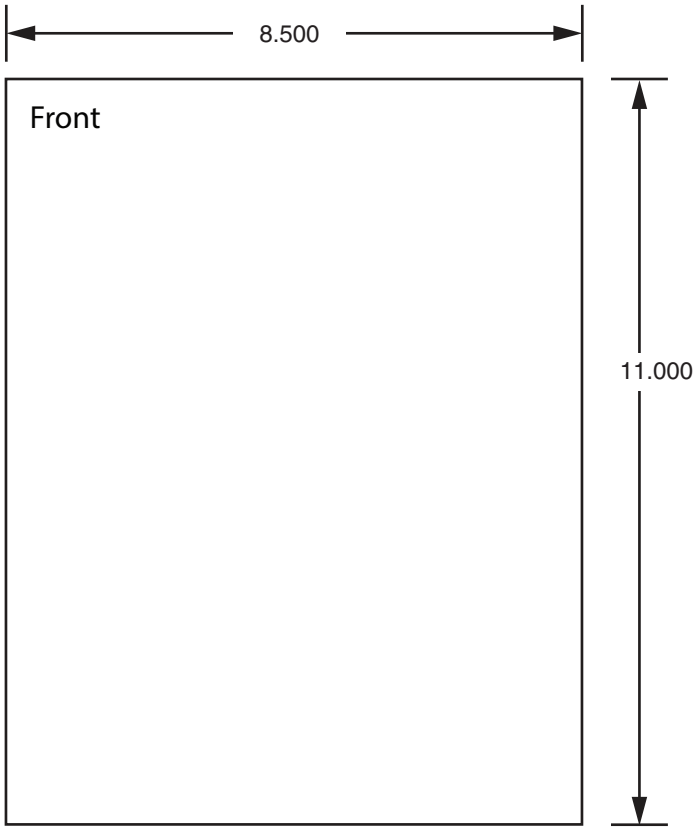
740068 Rev. 02/14-d



Beginning and Final Sheet

Additional Notes:
None

Revision History					
D	E	F	G	H	J
047232	EC #	EC #	EC #	EC #	EC #

Revision Description:
D > Revised Artwork

Material
Paper on Adhesive

Edited By	Approved By	EC Number	Release Date
D. Myers	M. Sasso	047232	02-27-14

Notes
1. printed one side
2. printed black
3. tolerance: ± .13
4. printed in country may vary
5. drawings to not scale

Title
SIGNAGE INSTRUCTION SHEET FOR LABEL KITS 740031-00 AND 7001

Creation Date	Number	Revision
04-27-10	740068	D

Created By
N/A

Software: Illustrator CS6

Activity
3899 Hancock Expwy
Security, CO 80911

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18503

6030 Series

LCN®

Installation Instructions

Fig. 1

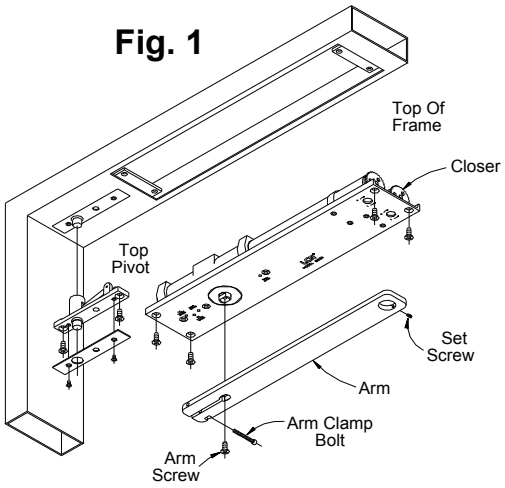


Fig. 2

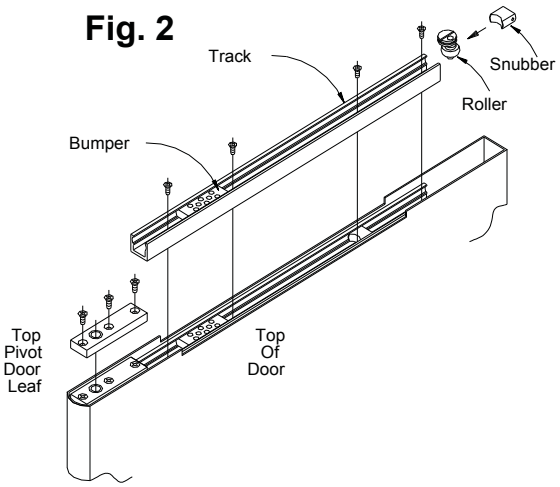
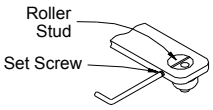


Fig. 3

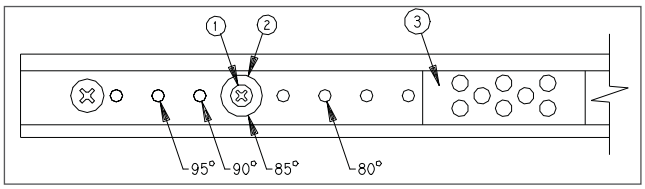


1

Prepare door and frame to recieve pivot and closer, per templates on pages 2 and 3. Install pivot and closer.

2

Bumper (and optional hold-open, when ordered) are factory installed. If a different degree of opening is required, follow step 2A. Insert roller first, then snubber in track as shown in FIG. 2. Install track in door mortise using screws provided. Tighten screws.



- Slide bumper 3 away from post 2. Remove screw 1 and post 2, and reinstall in hole indicated above, tighten screw. Slide bumper 3 against post 2.

3

Door should now be hung on pivots. Refer to pivot installation sheet for details.

4

Attach arm to closer shaft with arm screw. Tighten screw securely.

⚠ CAUTION ⚠

Closer arm is under strong pressure to return. Hold it firmly during the next step.

5

Open door to 45°. Pull arm toward door and slide roller stud under hole in arm. Install stud in arm with slot crosswise as shown in FIG. 3. Turn set screw in just enough to retain roller stud, but do not tighten firmly. Allow door to close, and with arm horizontal, tighten arm clamp bolt (at shaft end of arm) with hex key provided.

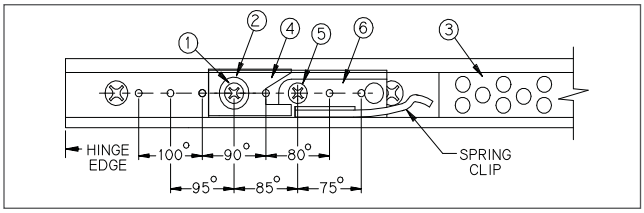
6

Closed door should be centered in frame. If not, open door part way and rotate roller stud about an eighth of a turn, using a screwdriver. (Set screw may need to be backed out slightly.) Repeat as needed till centered as required. When satisfied, tighten arm set screw securely. (When doors are paired, adjust both until edges match.) Open door, slide snubber into track at least 6” in from end. Allow door to close. This will automatically position the snubber correctly.

7

7a Location Adjustment of Hold Open Device

Slide bumper 3 away from pivot edge of door. Remove screw 1, post 2, adjusting cam 4, and screw 5. Slide holding clip 6 to locate screw holes over tapped holes in track as indicated below. Insert screw 5 and tighten securely. Replace cam 4, post 2, and screw1, tighten securely. Slide bumper 3 against post 2.

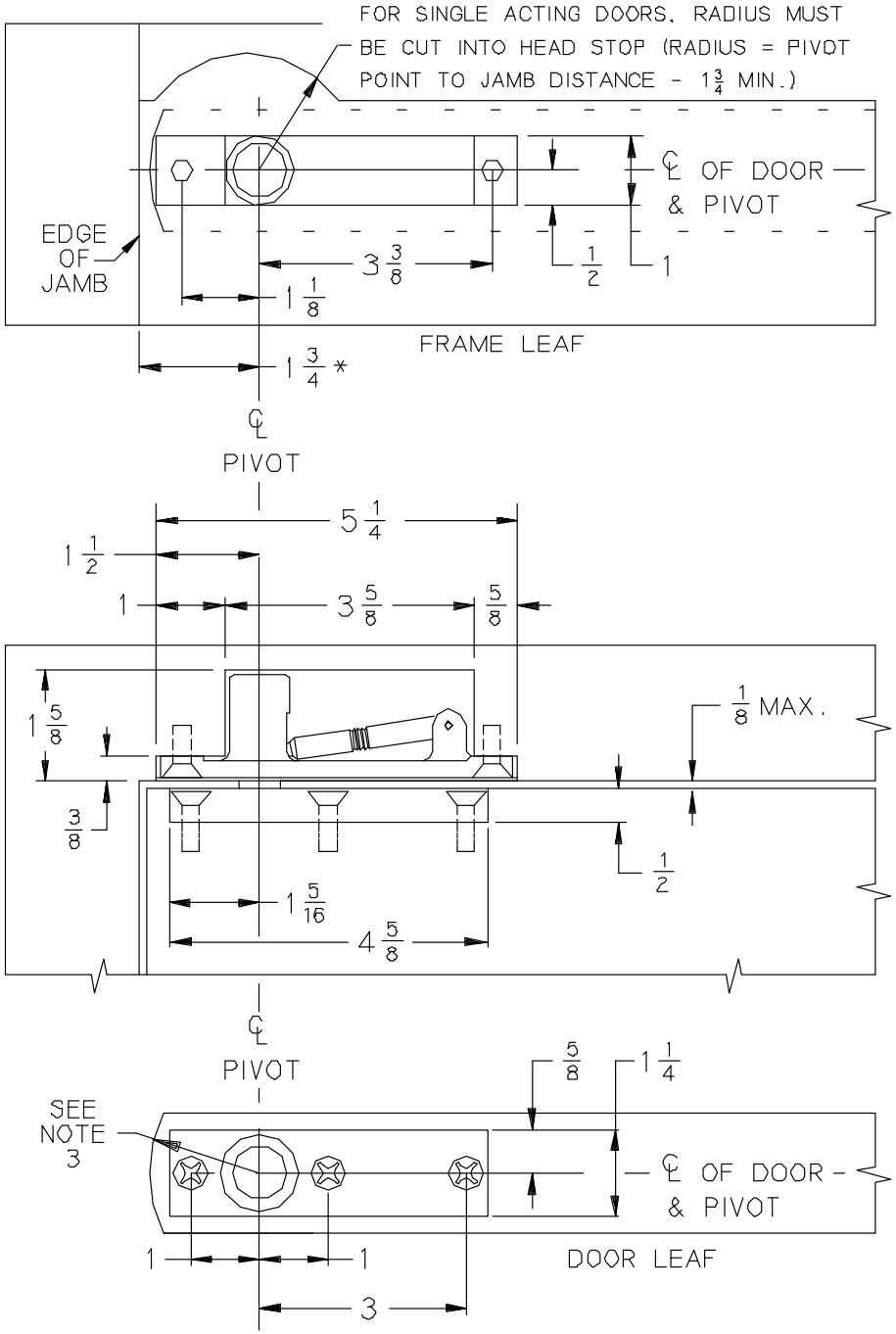


7b Intensity Adjustment of Hold Open Device

Test for release at hold open position. If holding force must be INCREASED, loosen screw 1 a quarter turn and slide cam 4 AWAY from pivot edge of door. Retighten screw 1 securely. For DECREASED holding force, cam 4 must be moved TOWARD pivot edge of door

7250-3101 TOP CENTER PIVOT

RIGHT HAND DOOR AND PIVOT SHOWN, LEFT HAND OPPOSITE | 11/96

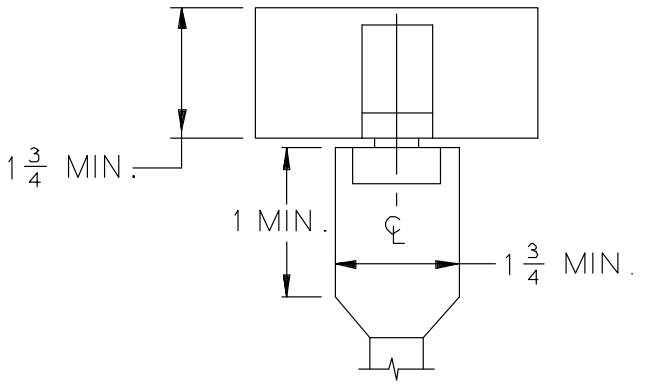


NOTES:

1. INSTALLER MUST VERIFY THAT CENTERLINE OF TOP PIVOT POINT LINES UP WITH CENTERLINE OF BOTTOM PIVOT POINT.
2. RADIUS OF HEEL EDGE OF DOOR MUST NOT EXCEED PIVOT POINT TO JAMB DISTANCE. STANDARD 2" RADIUS IS SHOWN.
3. PIVOTS MANUF. TO ACCEPT $\frac{1}{4}$-20 x $\frac{3}{4}$" SS PHMS OR OPTIONAL No. 14 x $1\frac{1}{2}$" PHWS.

* 4. PIVOT CENTER MAY BE VARIED AS DESIRED. MINIMUM DISTANCE IS $1\frac{3}{4}$ AS SHOWN.

5. REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOORS & FRAMES.



INCH	1/8	1/4	3/8	1/2	5/8	3/4	1	1 1/8	1 1/4	1 5/16	1 1/2	1 5/8	1 3/4	3	3 3/8	3 5/8	4 5/8	5 1/4
M.M.	3	6	10	12	16	19	25	29	32	33	38	41	44	76	86	92	117	133

No.	REVISION	BY	DATE
0	NEW TEMPLATE	CTB	9/96
1	REVISED TEMPLATE	AMM	9/99

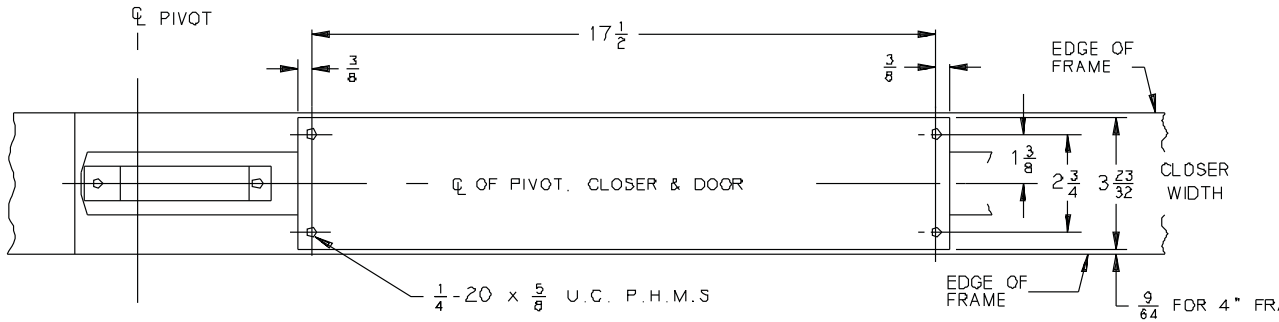
APP BY CTB 11/96

DO NOT SCALE

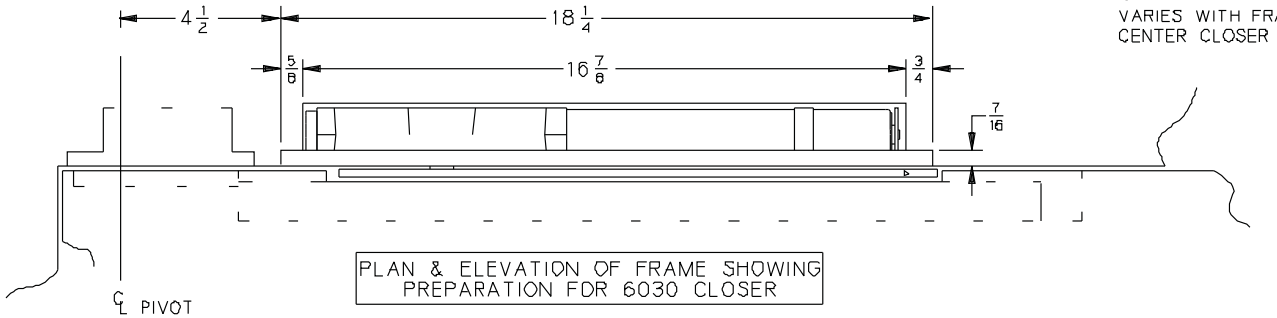
TOP CENTER PIVOT. USED IN SETS: 7253, 7255, 7255J & 7256

7250-3101 TOP PIVOT

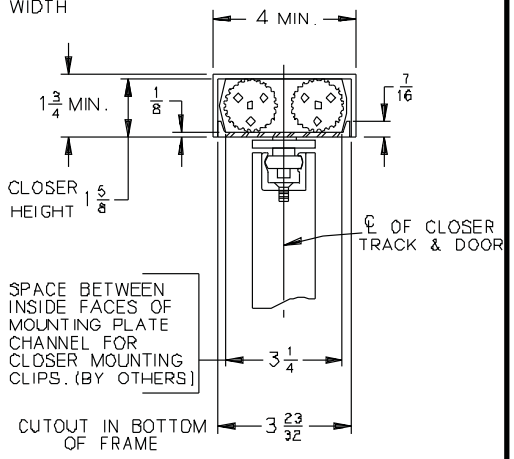
6031-CP 6032-CP 6033-CP 6034-CP 6035-CP	NON HOLD OPEN (UP TO 95°) H-90 (80° TO 95°) MAX. OPENING 95°
AUXILIARY STOP RECOMMENDED	
CONCEALED DOUBLE ACTING CLOSER	6/96

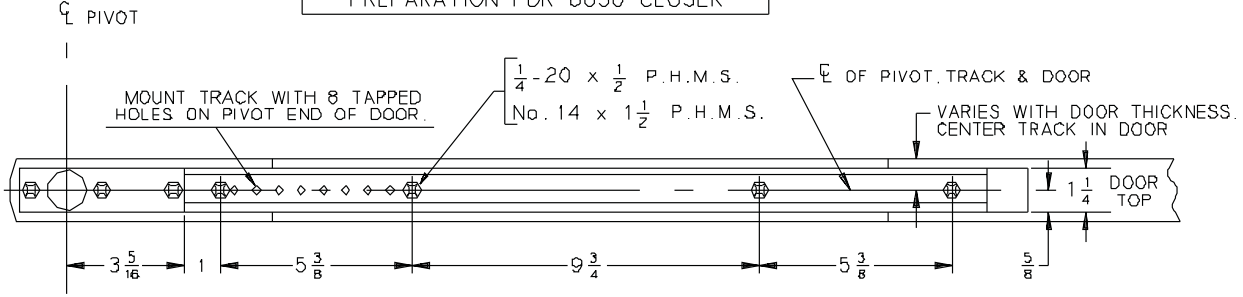


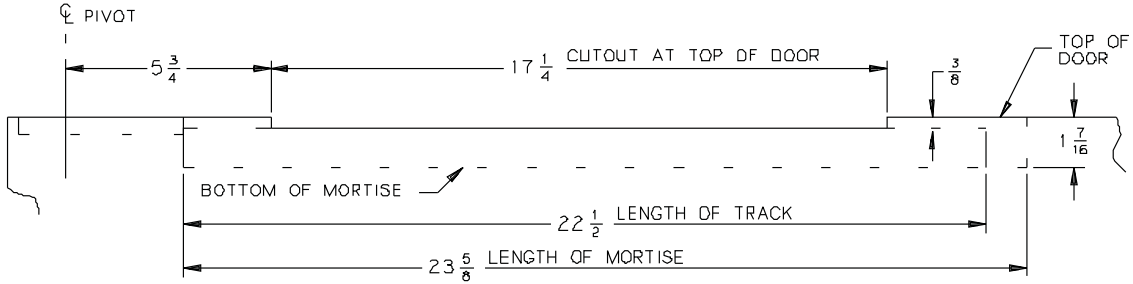
PIVOT, DOOR, TRACK AND CLOSER MUST ALL USE SAME CENTERLINE.



PLAN & ELEVATION OF FRAME SHOWING PREPARATION FOR 6030 CLOSER







PLAN & ELEVATION OF TOP OF DOOR SHOWING PREPARATION FOR CLOSER TRACK

NOTES :

1 - 1/8" DOOR TO SOFFIT CLEARANCE REQUIRED.

2 - REINFORCING PER ANSI/SDI-100 RECOMMENDED FOR HOLLOW METAL DOOR AND FRAMES.

inch	1/8	9/64	1/4	3/8	7/16	1/2	5/8	3/4	1	1 1/4	1 3/8	1 7/16	1 1/2	1 5/8	1 3/4
mm	3	4	6	10	11	13	16	19	25	32	35	37	38	41	44

inch	2 3/4	3 1/4	3 5/16	3 29/32	4	4 1/2	5 1/8	5 3/4	9 3/4	16 7/8	17 1/4	17 1/2	18 1/4	22 1/2	23 5/8
mm	70	83	84	94	102	114	137	146	248	429	438	445	464	572	600

No.	REVISION	BY	DATE
1	CAD CONVERSION	CTB	8/93
2	TEMPLATE UPDATE	JEJ	6/96
3	REMOVED PIVOT INFO.	AMM	5/01

APP BY JEJ 6/96

DO NOT SCALE

OVERHEAD CONCEALED DOUBLE ACTING CLOSER WITH CENTER PIVOTS

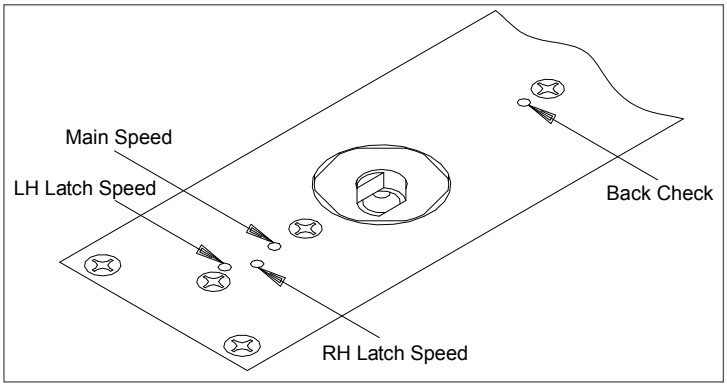
6030-CP

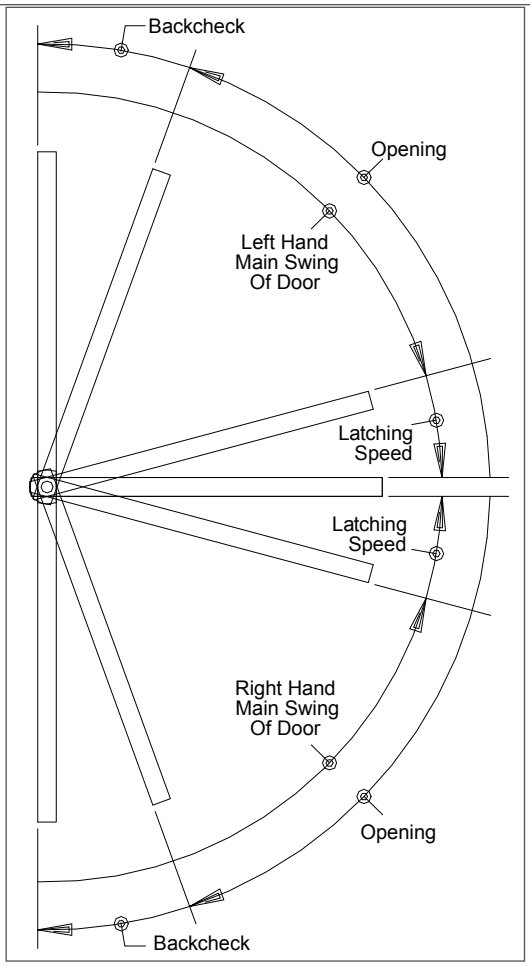
Regulation:

7c To regulate main swing speed: There is one main swing speed adjusting screw for both swings of door. If adjustment is required, turn screw clockwise to slow down main swing of door. To speed up main swing, turn screw counterclockwise. A normal closing time from 90° open position is 5 to 7 seconds, evenly divided between main swing speed and latch swing speed. Use a 3⁄32" hex wrench.

7d To regulate latch swing speed: There are two latch swing speed adjusting screws. Refer to diagram to identify hand of swing, and use screw marked LH (left hand) or RH (right hand). If adjustment is required, turn appropriate screw clockwise to slow down latch swing. To speed up latch swing, turn screw counterclockwise.

7e To adjust backcheck intensity: There is one backcheck adjustment screw for both swings of door. Adjust to lightest backcheck that will retard door opening speed during the last few degrees of opening. **CAUTION:** Do not set an abrupt backcheck or expect closer to act as a door stop. To increase backcheck, turn screw clockwise. To reduce backcheck, turn screw counterclockwise.





⚠ CAUTION ⚠

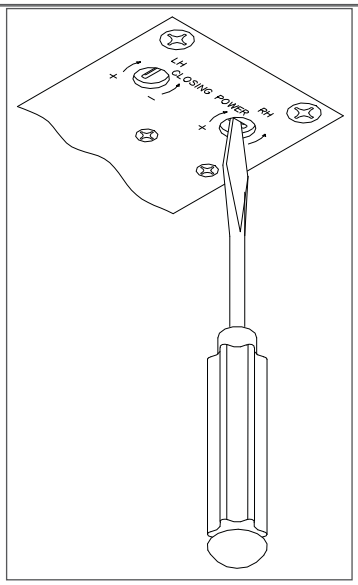
IMPROPER INSTALLATION OR REGULATION MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. FOLLOW ALL INSTRUCTIONS CAREFULLY. FOR QUESTIONS, CALL LCN AT 877-671-7011

Closing Power Adjustment

Closer is shipped with minimum closing power, and power of each swing can be individually increased. To adjust, use spring adjustment screw that corresponds with hand of swing in regulation diagram. To increase, turn screw clockwise. Maximum adjustment is 36 turns.

Table of Sizes		
Maximum width of doors		Catalog No. of Closer
Exterior	Interior	
----	38" (965 mm)	6033
36" (900 mm)	48" (1220 mm)	6034
42" (1065 mm)	54" (1370 mm)	6035

ⓘ **NOTE: Specify next higher closer where strong drafts exist.**



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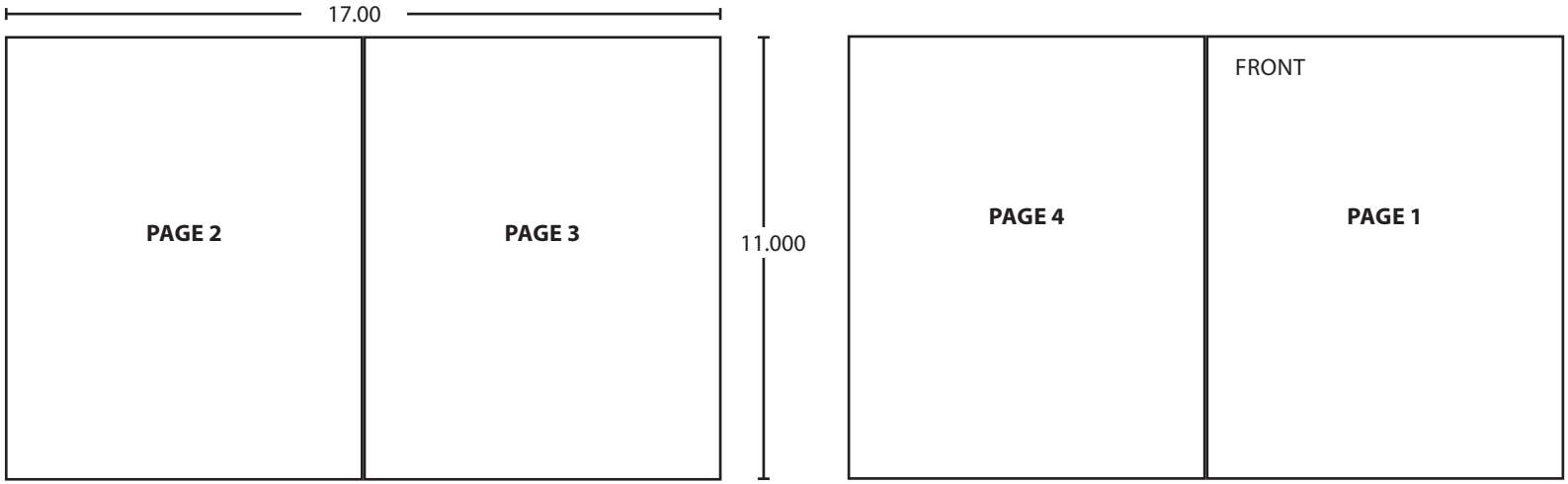
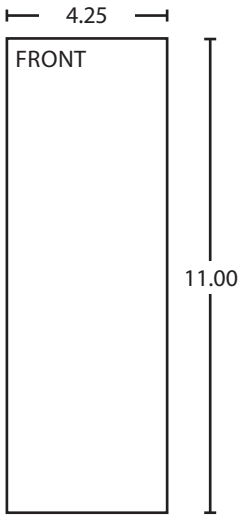
18503 Rev. 01/14-h



BEGINNING SHEET



FOLDED SHEET

Additional Notes:
1. None

Revision History					
H	J	K	L	M	N
043228					

Revision Description:
H > Revised artwork

Material	Edited By	Approved By	EC Number	Release Date
White Paper	D. Myers	M. Sasso	043228	01-01-14

Notes
1. printed two sides
2. printed black
3. tolerance ± .13
4. printed in country may vary
5. drawings not to scale

Title
6030 Series Instruction Sheet

Creation Date	Number	Revision
05-10-10	18503	H

Created By	Activity
N/A	3899 Hancock Expwy Security, CO 80911
Software: InDesign CS6	

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