

# Installation Instructions



ASSA ABLOY

## Trident TEL-MD20

### Trident Series Models

**Use with Series:** Trident Series Models.

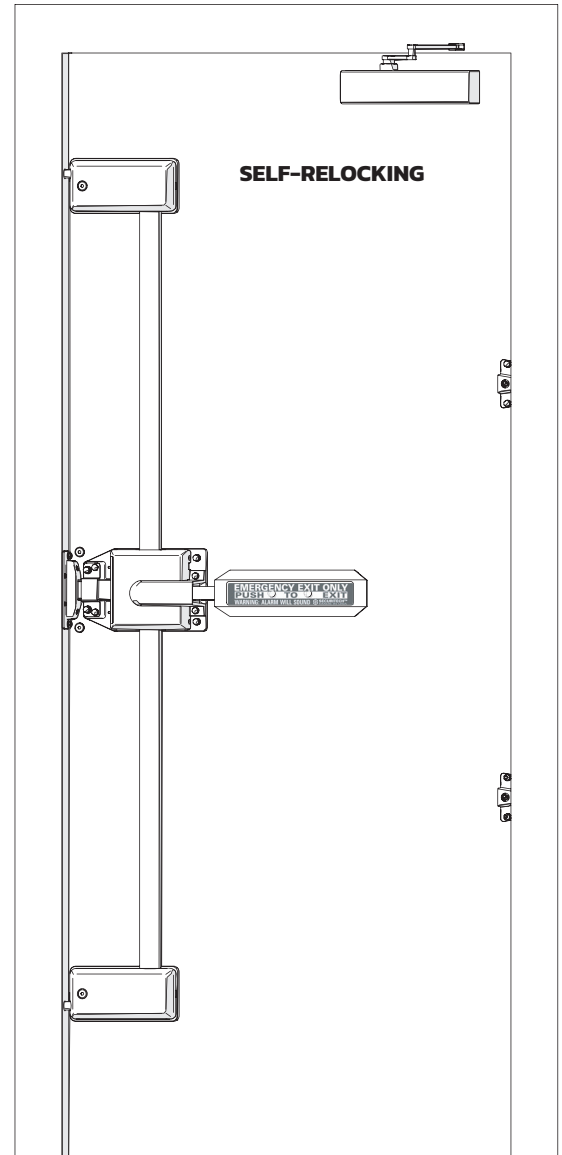
#### Tools Required:

- Hex key (#5mm)
- Phillips head screw drivers
- Nut drivers
- Drill with drill bits\*
- \*see templates for all sizes of drill bits needed
- Water level
- Marking putty, grease pencil, or equivalent

**Damage caused by misuse of power tools is not covered under warranty.**

Before beginning the installation:

- Check that everything in the parts list was received. Parts received may be slightly different from parts shown in instructions. Please refer to packing list for details on parts and fasteners received.
- Read all of the installation instruction steps.



#### **WARNING**

This product can expose you to lead which is known to the state of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65warnings.ca.gov](http://www.P65warnings.ca.gov).

#### **WARNING**

Attention Installer: Improper installation may result in damage to the product and void the factory warranty. **Damage caused by misuse of power tools is not covered under warranty.**

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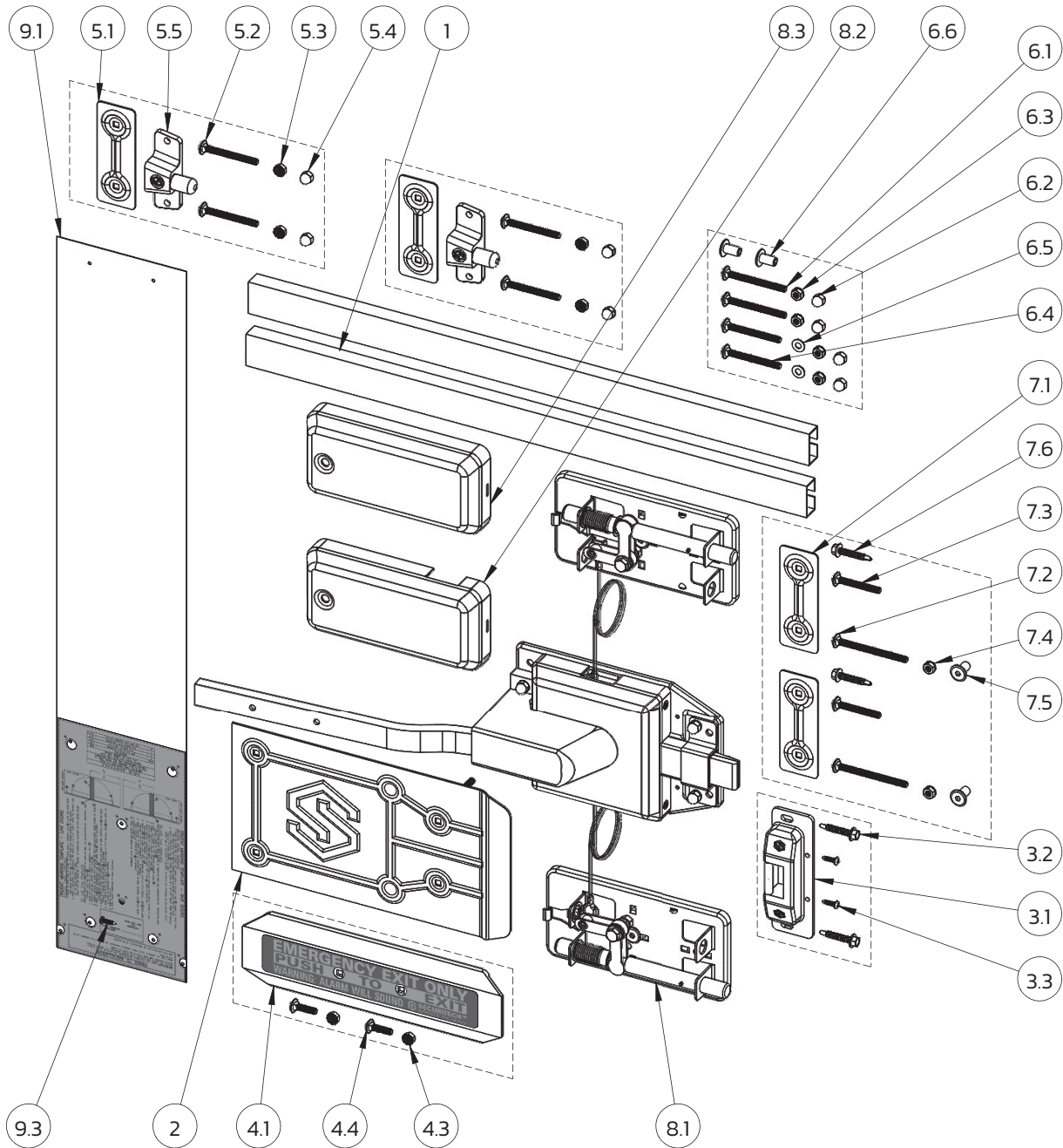
O. Reinforcement Templates ..... 15

**MAKE LIFE EASY. READ THROUGH THE ENTIRE INSTALLATION INSTRUCTIONS FIRST.**

- A. Before attempting to install this device make sure that door frame is square and plumb, door is not sagging, and clearances between door and frame are within acceptable tolerances per standards corresponding to door type.
- B. Make sure any exposed holes left from previous hardware are completely covered after installation.
- C. Lock edge of door needs to be free of insulation, debris, and weather stripping. Remove any weather stripping on the door or frame.
- D. Make all door adjustments before starting the lock installation.
- E. Remove all burrs. All holes must be smooth.
- F. Insert material into the mortise opening to prevent collapsing or squeezing.

**TEL-200 SERIES SELF-LOCKING TRIDENTS REQUIRE A DOOR CLOSER TO BE INSTALLED.**

 **If installing on double door, refer to the TEL-IAL/IAT instructions now.**



**NOTE: FOR MODELS WITH KEYED LEVER TRIM, ITEMS 2 AND 6 ARE REPLACED BY TRIM ANTI-PRY PLATE AND FASTENERS**

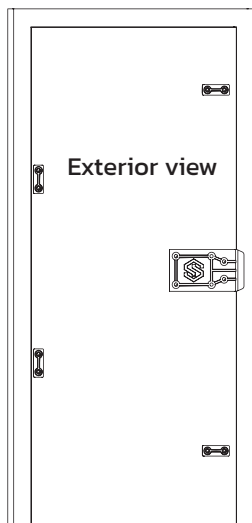
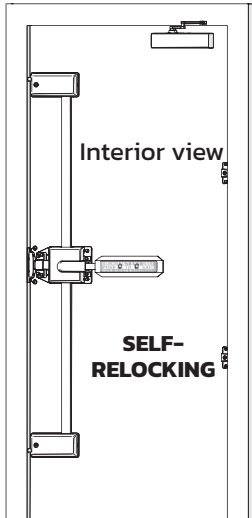
SHEET: 1/1

**PACKING LIST DETAILS:**

LEVER: N/A  
 HANDING: O9 [LHR/RHR]  
 DOOR TYPE: HOLLOW METAL  
 FINISH: 689 [Aluminum Painted Any US28]

ITEM	PART NUMBER	DESCRIPTION	QTY
1	100798-01-150	WIRE CHANNEL, TRIDENT	2
2	101593-01-000	ANTI-PRY PLATE ASSEMBLY, LARGE, TEL	1
3	102850-04-000	HARDWARE KIT D, STRIKE PLATE WITH FASTENERS	1
3.1	101144-01-000	MAIN STRIKE ASSEMBLY	1
3.2	102593-01-102	#1/4 X 1-1/2", SELF DRILLING, HEX WASHER, HEX, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL	2
3.3	102609-01-102	#8 X 5/8", SHEET METAL, TYPE AB, PAN, PHILLIPS, ZINC PLATED, LOW CARBON STEEL	2
4	102850-05-000	HARDWARE KIT E, PADDLE	1
4.1	100172-01-146	PADDLE, 12 IN LENGTH, 4900, TRIDENT	1
4.2	101845-01-000	LABEL, RED STANDARD FOR PADDLE	1
4.3	101513-01-102	#1/4-20, K-LOCK NUT, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL	2
4.4	101696-08-102	#1/4-20 X 1", BOLT, FULL THREAD, CARRIAGE, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL, GRADE 2	2
5	102850-23-000	HARDWARE KIT G, HINGE SIDE BOLT	2
5.1	100756-01-114	THRU-BOLT PLATE, TRIDENT, 4900	1
5.2	101696-02-102	#1/4-20 X 2-1/2", BOLT, FULL THREAD, CARRIAGE, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL, GRADE 5	2
5.3	101513-01-102	#1/4-20, K-LOCK NUT, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL	2
5.4	101265-02-105	#1/4-20, ACORN NUT, SATIN NICKEL PLATED, LOW CARBON STEEL	2
5.5	100805-02-103	HINGE SIDE BOLT, SILVER PAINTED	1
6	102850-01-000	HARDWARE KIT A, ANTI-PRY PLATE FASTENERS	1
6.1	101696-01-102	#1/4-20 X 2-3/4", BOLT, FULL THREAD, CARRIAGE, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL, GRADE 5	2
6.2	101265-02-105	#1/4-20, ACORN NUT, SATIN NICKEL PLATED, LOW CARBON STEEL	4
6.3	101513-01-102	#1/4-20, K-LOCK NUT, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL	4
6.4	101696-02-102	#1/4-20 X 2-1/2", BOLT, FULL THREAD, CARRIAGE, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL, GRADE 5	2
6.5	106287-01-102	.562 X .266 X .047 X FLAT WASHER, ZINC PLATED, LOW CARBON STEEL	2
6.6	100824-01-102	#1/4-20, T NUT, ZINC PLATED, LOW CARBON STEEL	2
7	102850-02-000	HARDWARE KIT B, TOP & BOTTOM THRU-BOLT PLATES	1
7.1	100756-01-114	THRU-BOLT PLATE, TRIDENT, 4900	2
7.2	101696-03-102	#1/4-20 X 3-1/4", BOLT, FULL THREAD, CARRIAGE, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL, GRADE 5	2
7.3	101696-09-102	#1/4-20 X 2", BOLT, FULL THREAD, CARRIAGE, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL, GRADE 5	2
7.4	101513-01-102	#1/4-20, K-LOCK NUT, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL	2
7.5	100824-01-102	#1/4-20, T NUT, ZINC PLATED, LOW CARBON STEEL	2
7.6	102593-01-102	#1/4 X 1-1/2", SELF DRILLING, HEX WASHER, HEX, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL	2
8	107119-01-FFF	FIELD REPLACEMENT ASSY WITH COVERS, TRIDENT SL	1
8.1	101527-01-FFF	FIELD REPLACEMENT ASSY, TRIDENT SL	1
8.2	100810-01-XXX	MODULE COVER, STYLE A, TRIDENT	1
8.3	100810-02-XXX	MODULE COVER, STYLE B, TRIDENT	1
9	102852-01-000	METAL MARKING TEMPLATE, TRIDENT, SHIPPING ASSY	1
9.1	100833-01-000	DOOR MARKING TEMPLATE, TRIDENT	1
9.2	101821-01-000	LABEL, TRIDENT METAL MARKING TEMPLATE	1
9.3	102609-01-102	#8 X 5/8", SHEET METAL, TYPE AB, PAN, PHILLIPS, ZINC PLATED, LOW CARBON STEEL	1

## A. TEL-MD20 Overview



### Highest Level of Protection Against Forced Entry for Exit Doors

Securitech's Trident™ has been protecting America's pharmaceutical and high end retail market since 2005 with thousands installed across the country offering the highest level of protection against forced entry with automatic deadbolt locking each time the door closes.

### Trident TEL-MD20 Features:

- 5 standard locking points located at pry points
- Automatic self-locking: hitting the trigger in the main bolt extends all bolts, relocking the door each time it closes
- All moving parts are protected
- Stainless steel primary deadbolt with 1" throw
- Bolts project into the frame: 3 horizontal locking points on lock side and 2 bolts on hinge side
- Two 5/8" diameter auxiliary bolts with 1" throw, free-spinning to resist sawing
- Stainless steel anti-pry plate, thru-bolted at 6 locations
- No bolts in the floor to prevent potential jamming
- Door closer required, not included

# Installation Instructions Trident TEL-MD20

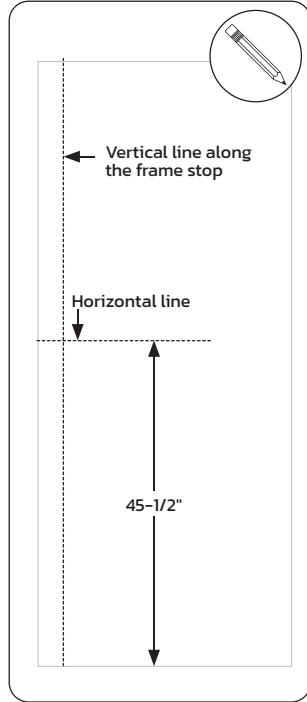
## Trident Series Models

### B. Door Preparation

#### 1.

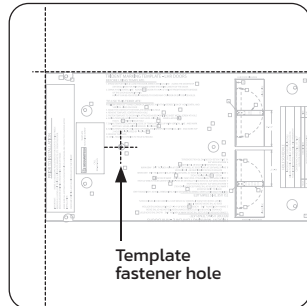
Draw a vertical line along the entire length of the frame stop on the interior side of the door. Draw a horizontal line 45-1/2" from the bottom edge of the door. For double doors, draw the line at least 4" across to the inactive leaf.

**Note: The Trident should always be installed at a height that meets applicable code. Horizontal line position can be adjusted to allow mechanism to cover any existing holes on the door. For double doors, horizontal line position MUST be set at 45-1/2".**



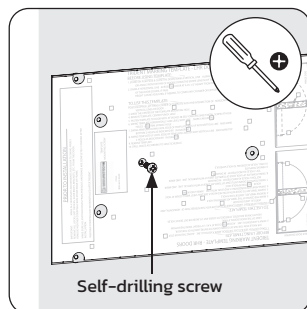
#### 2.

Place the top corner of the metal marking template at the intersection of the horizontal and vertical lines. Make sure template is level. Mark hole for template fastener (hole D).



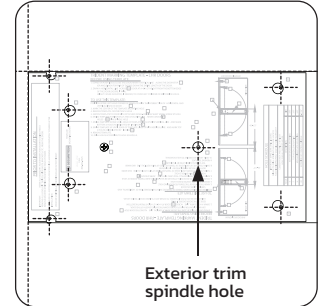
#### 3.

Remove template and drill pilot hole. Fasten template loosely to door with (1) self-drilling sheet metal screw through hole D in metal template and into the door.



#### 4.

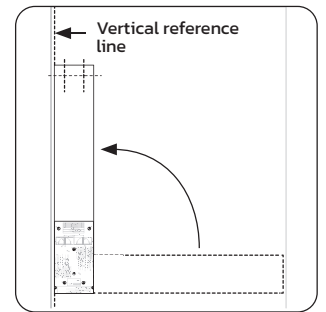
Align the top edge of the template with the horizontal line then mark 6 holes on lock edge and exterior trim spindle hole.



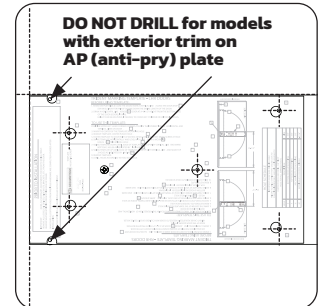
#### 5.

Rotate template up vertically and mark top 2 holes. Rotate template down vertically and mark bottom 2 holes.

**Note: Make sure template is always aligned with vertical reference line when marking top & bottom holes.**



**⚠ Note: If mounting exterior trim on AP (Anti-Pry) plate, refer to separate trim template now. Do not mark or drill 2 indicated holes at door edge.**



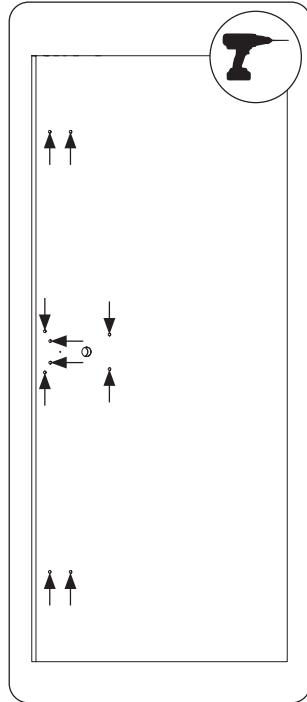
# Installation Instructions Trident TEL-MD20

## Trident Series Models

### 6.

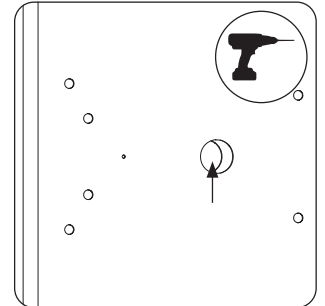
Remove the template. Drill ten holes 3/8" diameter through the door.

**Note: Make sure drill is level when drilling holes.**



### 7.

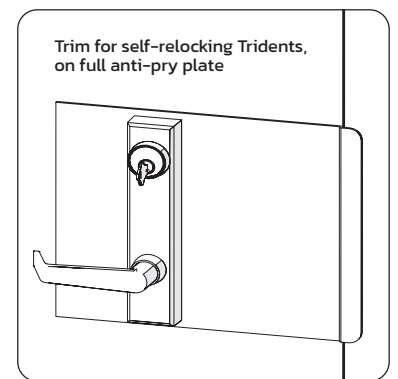
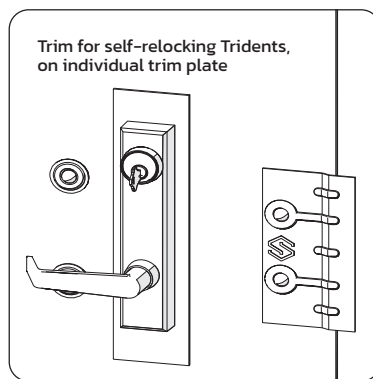
Drill 1-5/16" diameter hole through the door for exterior trim spindle or for future use even if not installing exterior trim at this time. The exterior anti-pry plate or exterior lever trim mounting plate will cover this hole.



## C. Exterior Trim Installation (Optional)

### 1.

Install exterior lever trim as per separate instructions at this time. Exterior entry trim can be added to the Trident model in field.



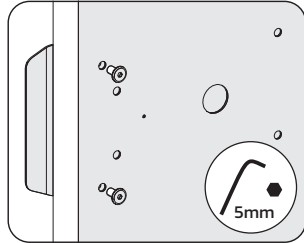
# Installation Instructions Trident TEL-MD20



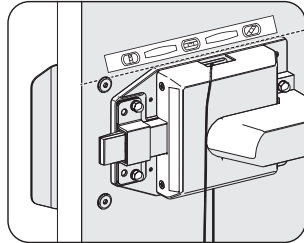
## Trident Series Models

### D. Mechanism Installation

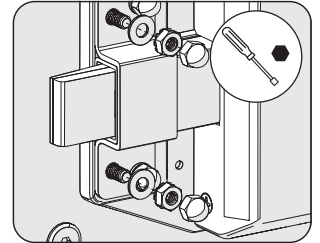
**1.**  
Fasten the anti-pry plate with (2) T-nuts. Do not tighten completely.



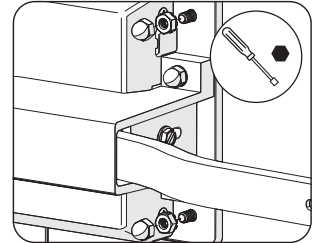
**2.**  
Align the top of the mechanism with the horizontal reference line. Use a level to ensure the mechanism is level.



**3.**  
Fasten mechanism with (2) 2-3/4" long carriage bolts, (2) flat washers, (2) K-lock nuts and (2) acorn caps on lockside holes.



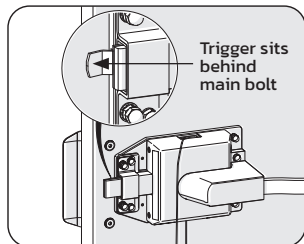
**4.**  
Fasten mechanism with (2) 2-1/2" long carriage bolts, (2) K-lock nuts and (2) acorn nuts on hingeside holes. Tighten T-nuts completely.



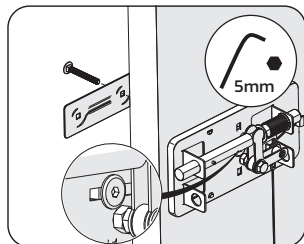
**Note: Do not overtighten. A compressed door can cause the mechanism to fail.**

### E. Top & Bottom Bolt Modules Installation

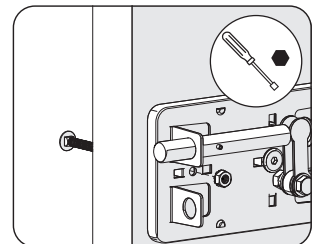
**1.**  
Extend main bolt by pressing trigger.



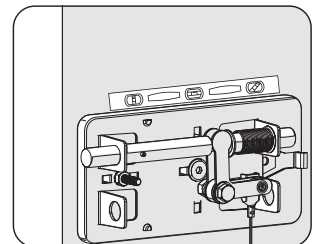
**2.**  
To install top bolt module, fasten (1) 2" carriage bolt through the thru-bolt plate with (1) T-nut. Fasten loosely.



**3.**  
Secure (1) 3-1/4" carriage bolt on lock edge opening with (1) K-lock and fasten loosely.



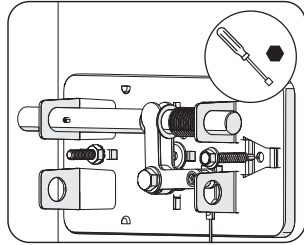
**4.**  
Use level to ensure bolt module is level. Tighten T-nut and K-lock nut securely.



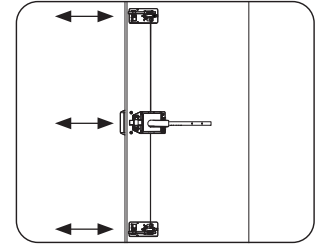
# Installation Instructions Trident TEL-MD20

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**5.**  
Secure module with (1) self-drilling screw.

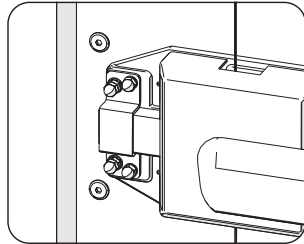


**6.**  
Repeat steps for bottom module.  
Check for smooth operation by pressing trigger and pushing paddle arm. Make sure bolts extend past vertical reference line.

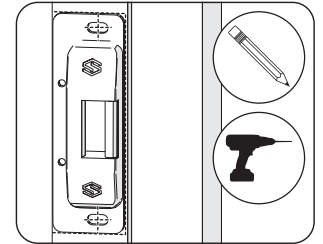


## F. Main Strike Installation

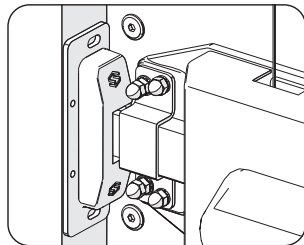
**1.**  
Retract the bolt by pressing the paddle arm. Close the door.



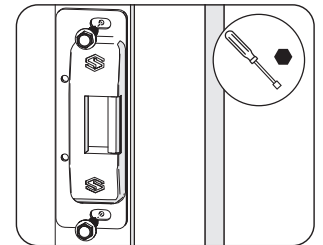
**4.**  
Mark centers of oval mounting holes at top and bottom of strike plate. Remove the strike plate. Drill 1/8" diameter pilot holes at center marks.



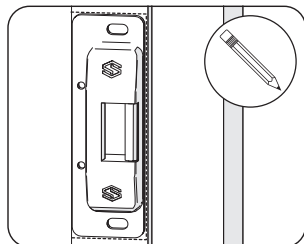
**2.**  
Hold the strike plate against the frame with roller facing towards the exterior. Extend bolt and center in strike box. Top of bolt should be approximately 1/8" from top of strike opening.



**5.**  
Fasten strike to door with (2) self-drilling screws. Test the operation and adjust the position of strike, as necessary.

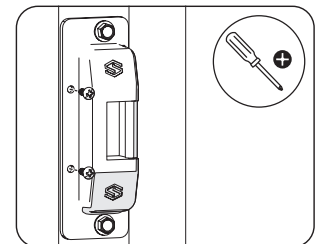


**3.**  
Trace the outline of strike box on frame. Open door and align strike in outline.



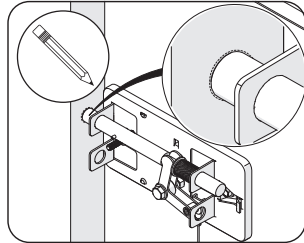
**Note: Make sure strike is level.**

**6.**  
After final adjustment, secure strike with (2) pan head screws.  
**Note: Make sure that the main deadbolt is centered in the strike before securing these screws.**

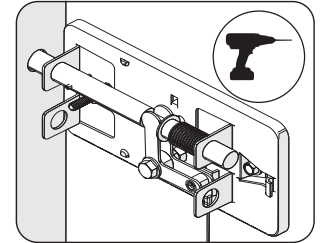


### G. Marking and Drilling Frame for Top and Bottom Bolts

**1.** Close the door and extend the bolts until horizontal bolts hit the frame stop. Keeping the door pulled against the frame stop, trace the outline of the top and bottom bolts. Open the door and mark the centers of the holes.

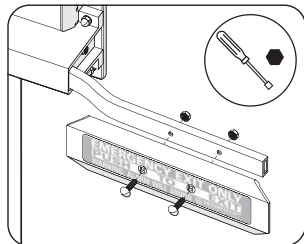


**2.** Drill 7/8" hole, starting with 1/8" and working up. Smooth the hole and remove any burrs. Test the bolts operation and make sure that they are not rubbing against hole or binding in any way. If needed, grind or enlarge side of the hole that is rubbing against bolt.



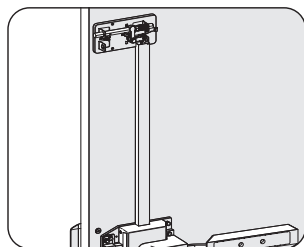
### H. Paddle Installation

**1.** Fasten the paddle to the paddle arm with (2) carriage bolts and (2) K-lock nuts.

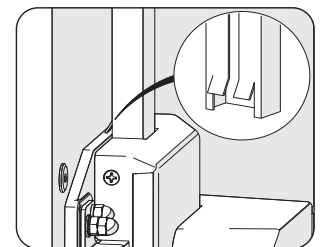


### I. Channels and Module Covers Installation

**1.** Slide upper channel into lock body, center on cable.  
**Note: When installing exterior trim, install channels last.**



**2.** The two tabs at the end of channel should rest on the main mechanism mounting plate.



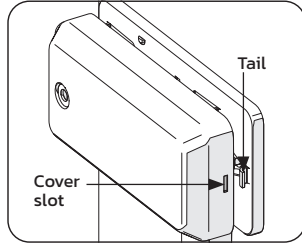
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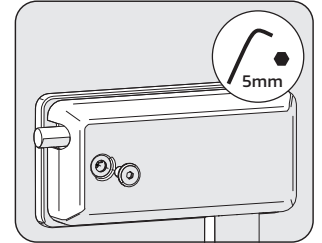


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**3.**  
Place cover over module and channel. Make sure tail fits into cover slot.

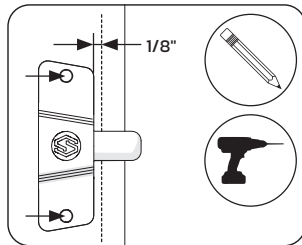


**4.**  
Insert (1) T-nut and fasten until secure. Repeat steps to install channel and cover for lower bolt module.  
  
Test operation, all bolts must operate smoothly.

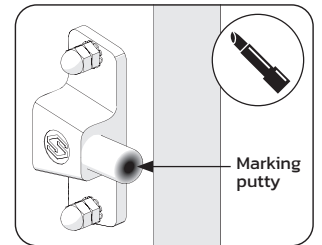


## J. Hinge Side Bolt Installation

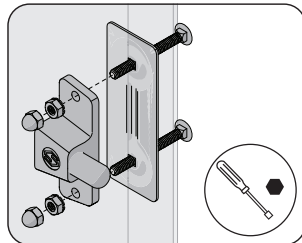
**1.**  
With door closed, mark frame stop on door. Height should be approximately 50" from floor (height can vary). Open door and position the hinge side bolt 1/8" from frame stop line. Mark and drill two 1/4" holes through the door at the indicated positions.



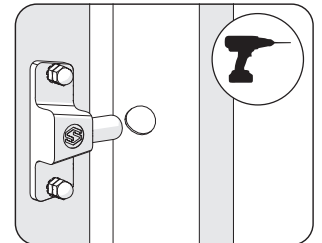
**3.**  
Mark the tip of the bolt with marking putty. Close the door just enough for the putty to leave a location mark on the frame.



**2.**  
Secure the hinge side bolt to the door with thru-bolt plate, (2) carriage bolts, (2) K-lock nuts and (2) acorn nuts.

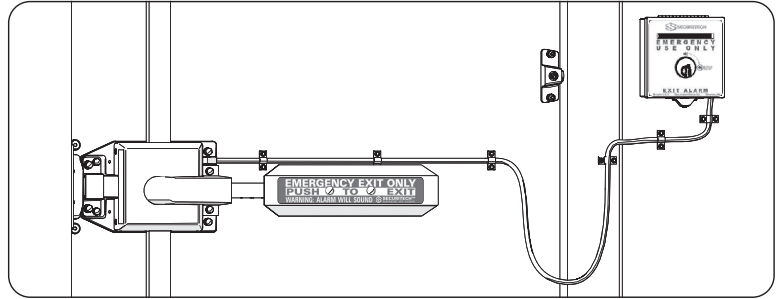


**4.**  
Drill 3/4" hole, starting with 1/8" and working up. If needed, make the hole egg-shaped toward exterior to prevent bolt from rubbing. Smooth the hole and remove any burrs. Test the bolt operation and make sure that it is not rubbing against hole or binding in any way.



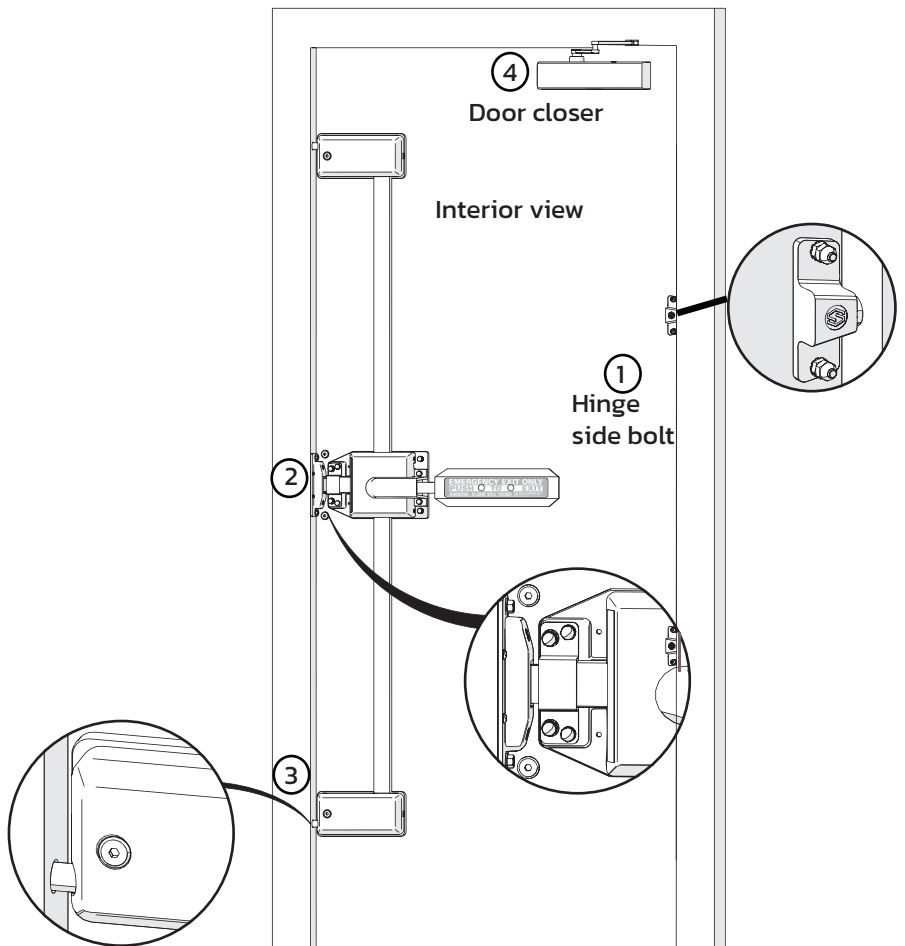
**K. Alarm Installation (Optional)**

- 1.**  
 Install alarm as per separate instructions.



**L. Installation Checklist**

- 1.**  
 Is the hinge side bolt installed?  
 Yes      No
- 2.**  
 Is there a 3/16" space between the strike and mechanism edge?  
 Yes      No
- 3.**  
 Are the bolts rubbing on the frame?  
 Holes should be large and smooth.  
 Yes      No
- 4.**  
 Does the door relock automatically when the door closes?  
**Note that a door closer is required for the door to relock automatically.**  
 Yes      No



## M. Operating Instructions

### USAGE INSTRUCTIONS

- 1.**  
Push emergency paddle fully to unlock the door.
- 2.**  
Wait for door closer to completely close door. If the door closer is not working properly, call a locksmith for repair.

**The Trident lock will relock automatically once the door is fully closed.**

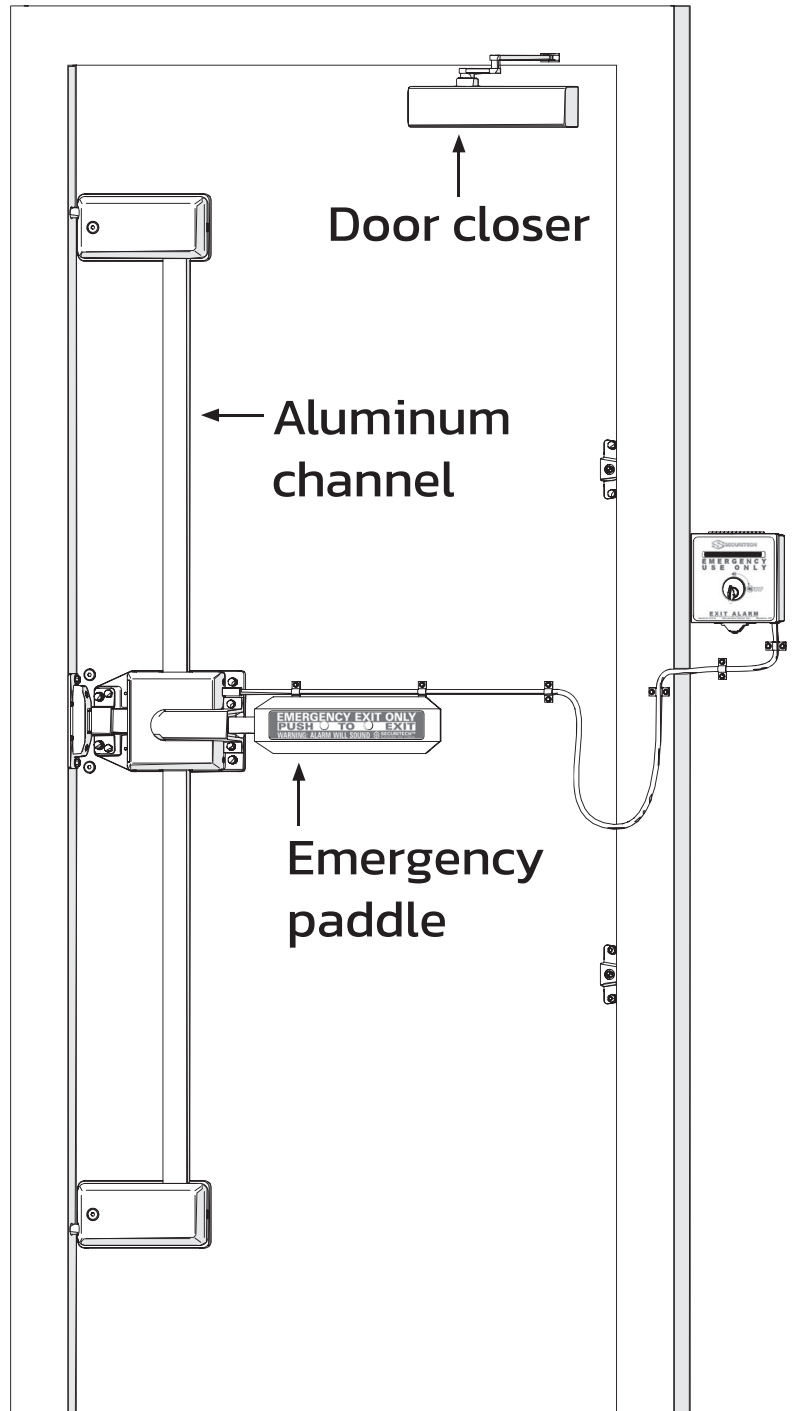
### INCORRECT USAGE

- 1.**  
Do not use the emergency exit paddle to pull the door closed. Damage may occur. Please add a door pull if needed (supplied by others).

**If the door closer is not working properly, call a locksmith for repair.**

- 2.**  
Do not use carts or other objects to unlock the door.
- 3.**  
Do not prop the door open by extending deadbolt. Use a door stop.

- 4.**  
Do not place any objects behind the vertical aluminum channels.



## N. Maintenance Information

### Maintenance:

All products must be installed in accordance with the instructions and templates and by employing professional good trade practices or the warranty shall be void.

### Recommended Method for Cleaning:

Use a mild soap and water with a soft cloth or brush to clean powder-coated or anodized aluminum surfaces. Avoid using hard abrasives, such as wire brush, steel wool, or scouring powder. Avoid using harsh chemical cleaners, such as solvents or petroleum-based cleaning products. Before using any cleaner, first try cleaning a small test area.

### Locksets and Exit Devices:

Lever trims/exit devices are designed for life safety first. Securitech lever trims/exit devices are built to require minimal maintenance; however factors such as installation, severity of use, environmental conditions, and changes in the door opening may require that maintenance and/or adjustments be performed.

The following steps are recommended to the building owner to ensure proper operation:

- Check that exposed screws are tight.
- Check lockset and lever trims/exit devices for smooth operation periodically.
- Check strikes and deadbolts to ensure they are secure and properly aligned.
- Check deadbolt and other moving parts for binding or sluggish operation due to dirt or chemical buildup.
- Check strikes for debris.
- Clean parts according to aforementioned cleaning methods. Lock mechanism is factory lubricated with white lithium grease and red high pressure lubricants. Lightly spray PTFE lubricant on moving parts. Do not use petroleum-based lubricant since it can dissolve grease. Do not over lubricate.

### Frequency:

The procedures mentioned above need to be carried out as often as is necessary to prevent deterioration in the installed environment, however we recommend the following minimum frequency of inspection:

- General environments: Every 3 months
- Marine and industrial environments: Every 2 months

A record of preventive maintenance and cleaning must be maintained and submitted with any warranty claims or service requests.

**TMP TRIDENT REINFORCEMENTS**  
**REFERENCE TEMPLATE FOR DOOR**  
**REINFORCEMENTS AND FRAME GROUT GUARDS**  
**PREPARATION**

**O. Reinforcement Templates**

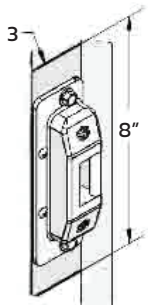
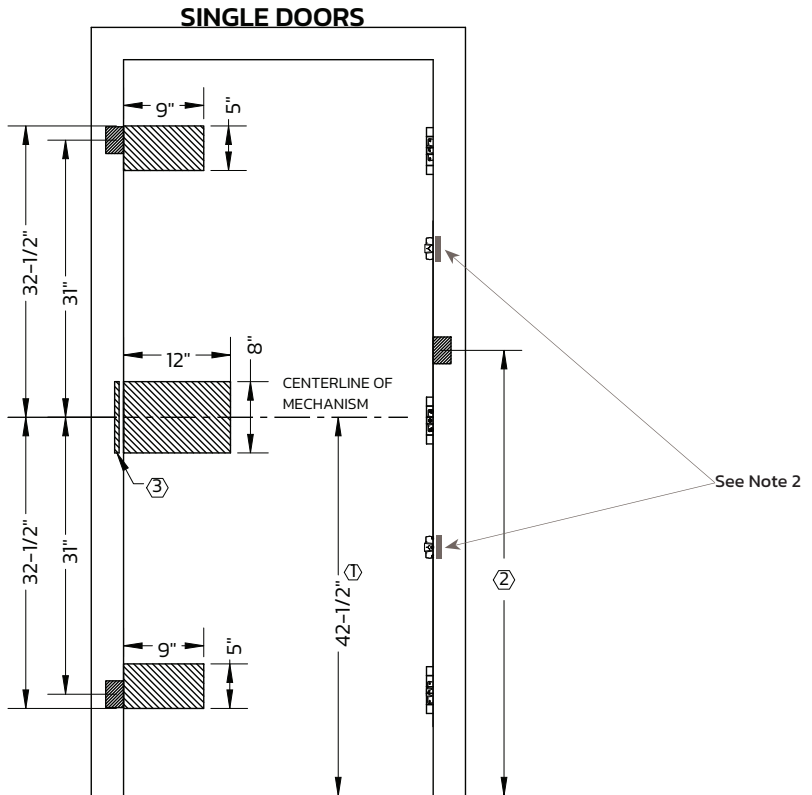
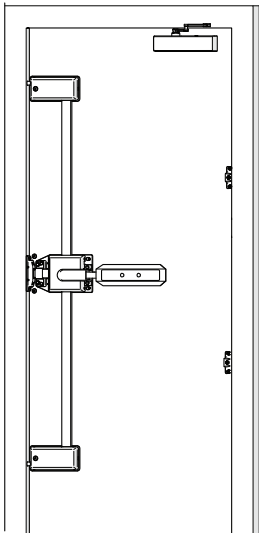
**TMP TRIDENT REINFORCEMENTS**  
**REFERENCE TEMPLATE FOR DOOR**  
**REINFORCEMENTS AND FRAME GROUT GUARDS**  
**PREPARATION**

**DOOR TYPE**  
HOLLOW METAL

**APPLIES TO:**  
TRIDENT MODELS – SINGLE DOOR

**ALL REINFORCEMENT DESIGNS AS PER DOOR/FRAME MANUFACTURER. REINFORCEMENTS SHALL PROVIDE ADEQUATE METAL THICKNESS FOR SHEET-METAL SCREWS AND SUPPORT THE DOOR AT THRU-BOLT LOCATIONS.**

**ALL METAL GROUT GUARDS SHALL BE INSTALLED IN FRAME PRIOR TO SHIPPING TO THE JOBSITE. ALL GUARDS WILL BE A MINIMUM OF 3" IN LENGTH x 1" IN DEPTH. PLACE GUARD WHERE BOLT ENGAGES FRAME.**



**NOT TO SCALE**

- NOTES:**
- ① THE TRIDENT SHOULD ALWAYS BE INSTALLED AT A HEIGHT THAT MEETS APPLICABLE CODE. HORIZONTAL LINE POSITION CAN BE ADJUSTED TO ALLOW MECHANISM TO COVER ANY EXISTING HOLES ON THE DOOR.
  - ② RECOMMENDED POSITION OF HINGE SIDE BOLT. FOR MODELS WITH 2 HINGE SIDE BOLTS, DISTRIBUTE GUARDS EVENLY ALONG HINGE SIDE OF DOOR.
  - ③ FRAME SOFFIT SHOULD HAVE SUFFICIENT METAL THICKNESS TO SUPPORT #1/4 SELF-DRILLING SCREWS. ALTERNATIVELY, REINFORCE SOFFIT AREA WITH 8" LONG PLATE.

**DOC #** TMP-01892  
**REV** B (06-13-24)  
**SHEET** 1/2

**Trident Series Models**

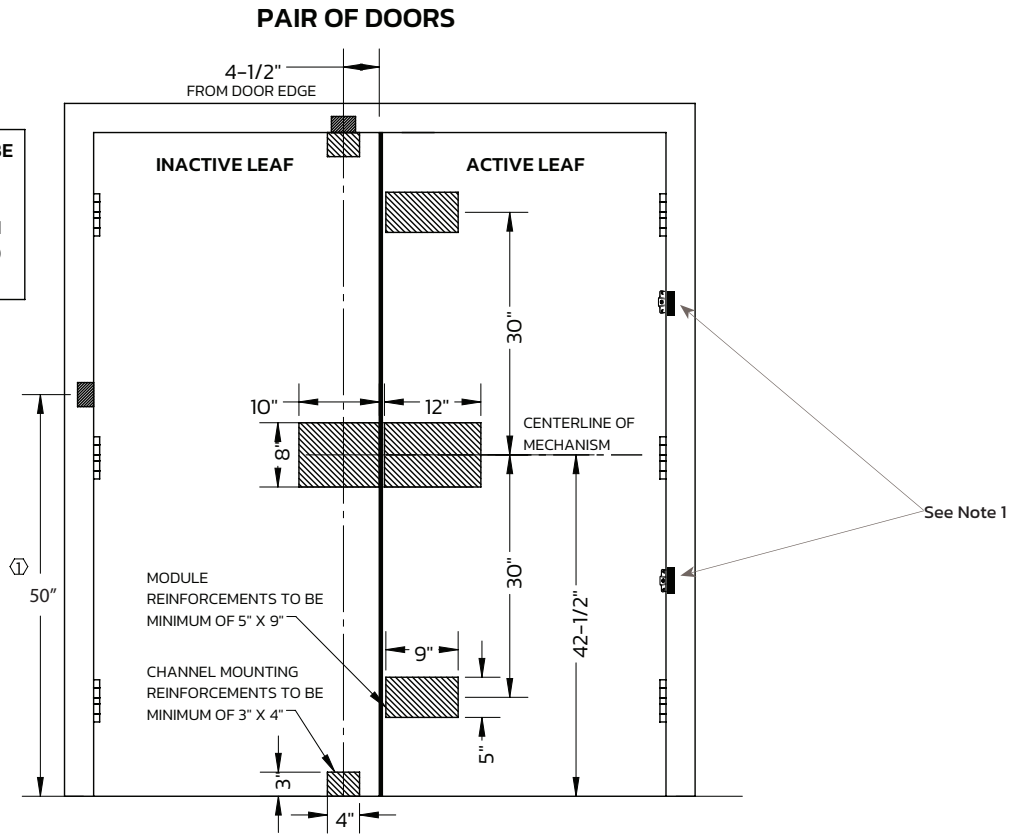
**TMP TRIDENT REINFORCEMENTS**  
**REFERENCE TEMPLATE FOR DOOR**  
**REINFORCEMENTS AND FRAME GROUT GUARDS**  
**PREPARATION**

**DOOR TYPE**  
 HOLLOW METAL

**APPLIES TO:**  
 TRIDENT MODELS - TEL-IAL/IAT

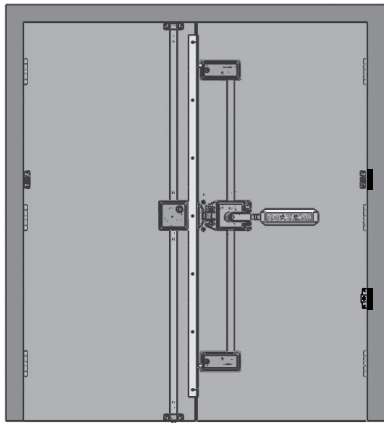
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ALL REINFORCEMENT DESIGNS AS PER DOOR/FRAME MANUFACTURER. REINFORCEMENTS SHALL PROVIDE ADEQUATE METAL THICKNESS FOR SHEET-METAL SCREWS AND SUPPORT THE DOOR AT THRU-BOLT LOCATIONS.



**NOT TO SCALE**

NOTES:  
 ① RECOMMENDED POSITION OF HINGE SIDE BOLT. FOR MODELS WITH 2 HINGE SIDE BOLTS, DISTRIBUTE GUARDS EVENLY ALONG HINGE SIDE OF DOOR.



DOC # TMP-01892  
 REV B (06-13-24)  
 SHEET 2/2

Installation Instructions  
Trident TEL-MD20

Trident Series Models



Installation Instructions  
Trident TEL-MD20  
Trident Series Models



Installation Instructions  
Trident TEL-MD20

Trident Series Models



