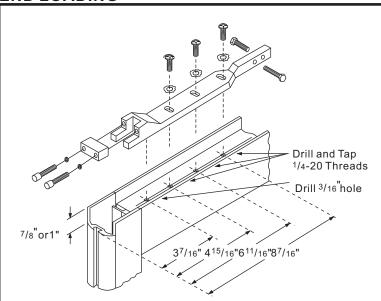
### **END LOADING**



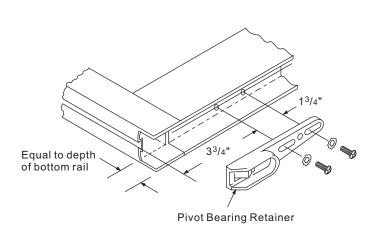
### **TOP DOOR RAIL**

"A" Type End Loading Arm Make A 1 "deep cut-out in hinge edge of door as shown.

"PT" Type End Loading Arm Make a 7/8" deep cut-out in hinge edge door

Position arm in door by placing arm pin in 3/16" hold. Install arm using three 1/4-20 x<sup>5</sup>/8" pan head machine screws and lock washers. Canter arm in the top rail by adjusting the two 1/4-20 x 1" hex head cantering bolts.

NOTE: After door is installed, the two <sup>1</sup>/4-20 x 1" locket head clamp bar cap screws with lock washers must be tightened securely.

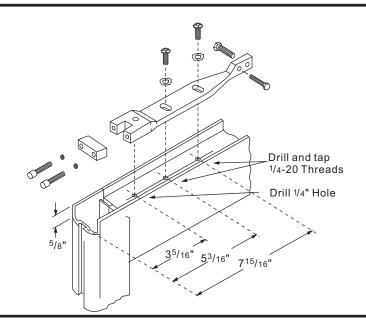


# **BOTTOM DOR RAIL**

Make cut out in hinge edge of door equal to depth of bottom rail as shown. Drill and tap 1/4-20 holes in bottom rail of door as shown. Install pivot bearing retainer in bottom of door using two 1/4-20 x 5/8" pan head machine screws and lock washers.

Laterally adjust canter of pivot bearing retainer 25/8"(or 211/16") from hinge edge of door (not including weatherstripping) and tighten screws securely.

**NOTE:** For doors with 1" bottom rail depth, pivot bearing stud must be shortened by sawing off at score 1/2" from bottom.



#### **TOP DOOR RAIL**

"K" Type End Loading Arm Make a 5/8" deep cut-out in hinge edge of door as shown.

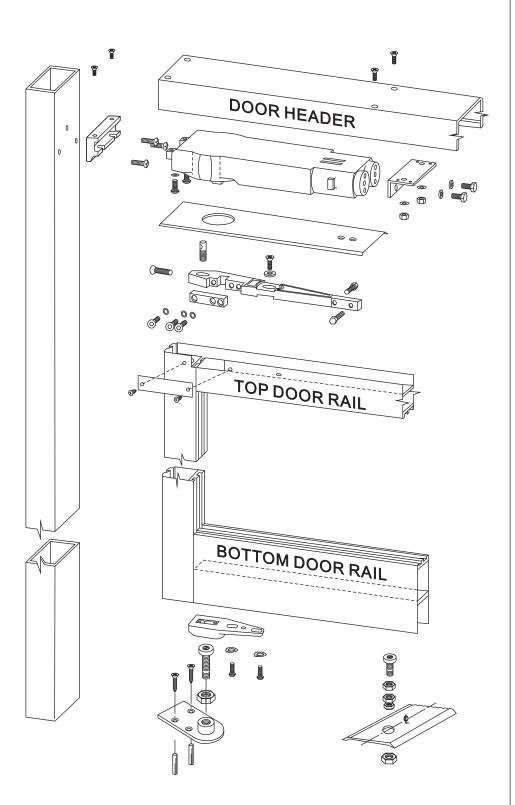
Drill or drill and tap holes in top of door as shown.

Position arm in door by placing arm pin in 1/4" hole. Install arm by using two 1/4-20 x<sup>5</sup>/8" pan head machine screws and lock washers. Canter arm in the top rail by adjusting the two 1/4 x 20 x1" hex head cantering bolts.

NOTE: After door is installed, the two 1/4-20 x 1" socket head clamp bar cap screws with lock washers must be tightened securely.

# CONCEALED OVERHEAD DOOR CLOSER **INSTALLATION INSTRUCTIONS**

- ♦ CENTER-HUNG FOR DOUBLE OR SINGLE ACTION DOORS
- ♦ SIDE LOADING AND END LOADING INSTALLATION
- DUAL VALVES FOR LATCHING AND CLOSING SPEED ADJUSTMENT



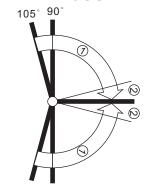
### **IMPORTANT**

- NO responsibility con be accepted by the manufacturers if these installation instructions are disregarded
- O After closer is installed into the DOOR HEADER, do not drill in this area for it may damage closer.

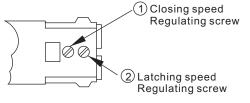
## **PROPOSAL** for **DOOR CLEARANCE**

Both of door stile 1/8"(3mm) 1/8"(3mm) top door rail <sup>3</sup>/16"(4.8mm) Bottom door rail

### **SPEED ADJUSTMENT**



- 1 CLOSING RANGE
- 2 LATCHING RANGE



(1) CLOSING/







Max. 2 turns in

### **HEADERS & JAMBS**

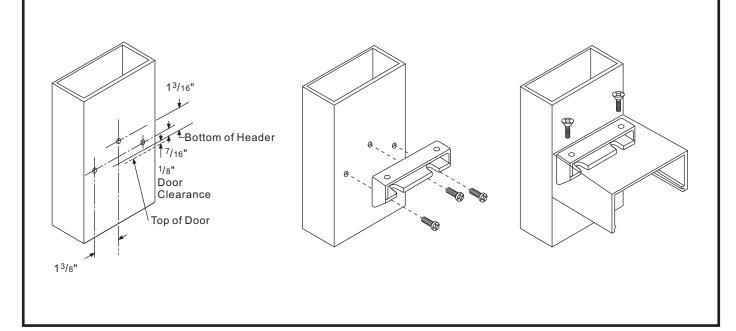
# **DOOR HEADER COVER PLATE** Drill and counter-sink outside top surface Drill 13/4" hole as shown. for 10-32 x $\frac{7}{16}$ " and $\frac{1}{4}$ -20 x $\frac{1}{4}$ " flat head Drill <sup>1</sup>/<sub>2</sub>" hole as shown. screws as shown. Drill and-Counter Sink for 1/4-20 Flat **Head Screws** Drill <sup>1</sup>/<sub>2</sub>" Holes 121/2" 14" 103/4" 23/4" Drill 13/4" Holes Drill and Counter-Sink 10-32 Flat **Head Screws**

### **HINGE JAMB**

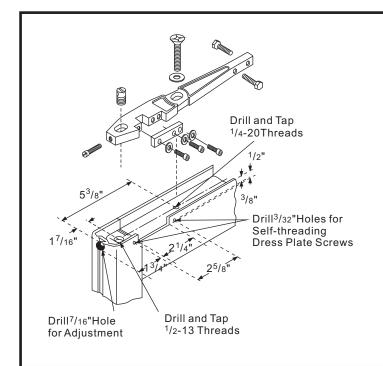
Drill holes for #10 pan head self-threading screws as shown.

Install anchor using #10 x 9/16" pan head self-threading screws.

Moun door header on anchor using 10-32  $\times$  7/16" flat head self-tapping screws.



### SIDE LOADING



### **TOP DOOR RAIL**

"S" Type Side Loading Arm
Drill or drill and tap holes in top of door
as shown.

Make  $2^{1/4}$ " x  $^{1/2}$ " cut-out in top of door as shown. Cut-out must be on the inside of the door.

Install arm using 1/4-20 x 11/4" flat head machine screw and 7/8" washer. Install 1/2-13 x 3/4" arm stud and 1/4-20 x 11/8" dome head arm adjustment screw. Laterally adjust canter of the arm spindle retainer 25/8" from hinge edge of door (not including weatherstripping). Canter arm in the top rail by adjusting the two 1/4-20 x 1" hex head cantering bolts.

After installation of door, attach dress pate with self-threading screws.

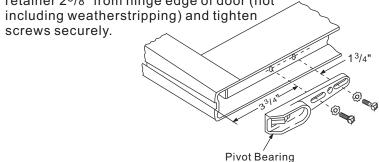
**NOTE:** before attaching dress plate, make certain the three 1/4-20 x<sup>7</sup>/8" socket head clamp bar screws with lock washers are tightened securely.

## **BOTTOM DOOR RAIL**

### Side Loading

Drill and tap 1/4-20 holes in bottom rail of door as shown. Install pivot bearing retainer in bottom of door using two 1/4-20  $x^5/8$ " pan head machine screws and lock washers.

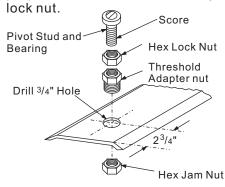
Laterally adjust canter of pivot bearing retainer 2<sup>5</sup>/8" from hinge edge of door (not including weatherstripping) and tighten

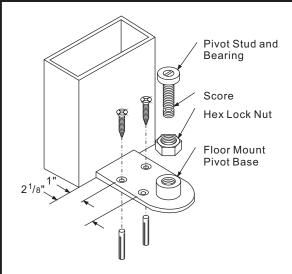


Retainer

# THRESHOLD MOUNT PIVOT

Drill hole in threshold as shown. Install threshold adapter nut from top and secure with  $^{3}/_{4}$ -16 hex jam nut underneath. Install pivot stud and bearing wit  $^{1}/_{2}$ -20 hex lock nut as shown and adjust bearing height for proper door clearance and firmly thighten lock nut





### FLOOR MOUNT PIVOT

Canter pivot base against door jamb on hinge side. Mark and drill  $^{1}/_{4}$ " holes  $1^{1}/_{2}$ " deep in floor for plastic expansion plugs. Mount base using #12 x  $1^{1}/_{4}$ " plastic expansion plugs and #12 x1 $^{1}/_{4}$ " flat head wood screws.

Install pivot stud and bearing with 1/2-20 hex lock nut as shown, and adjust bearing height for proper door clearance and firmly tighten lock nut.

When using threshold, drill 11/4" hole for clearance of pivot base on canter line 23/4" from hinge end of threshold.

**NOTE:** When threshold is not used, pivot bearing stud must be shortened by sawing off at score 1/2" from bottom