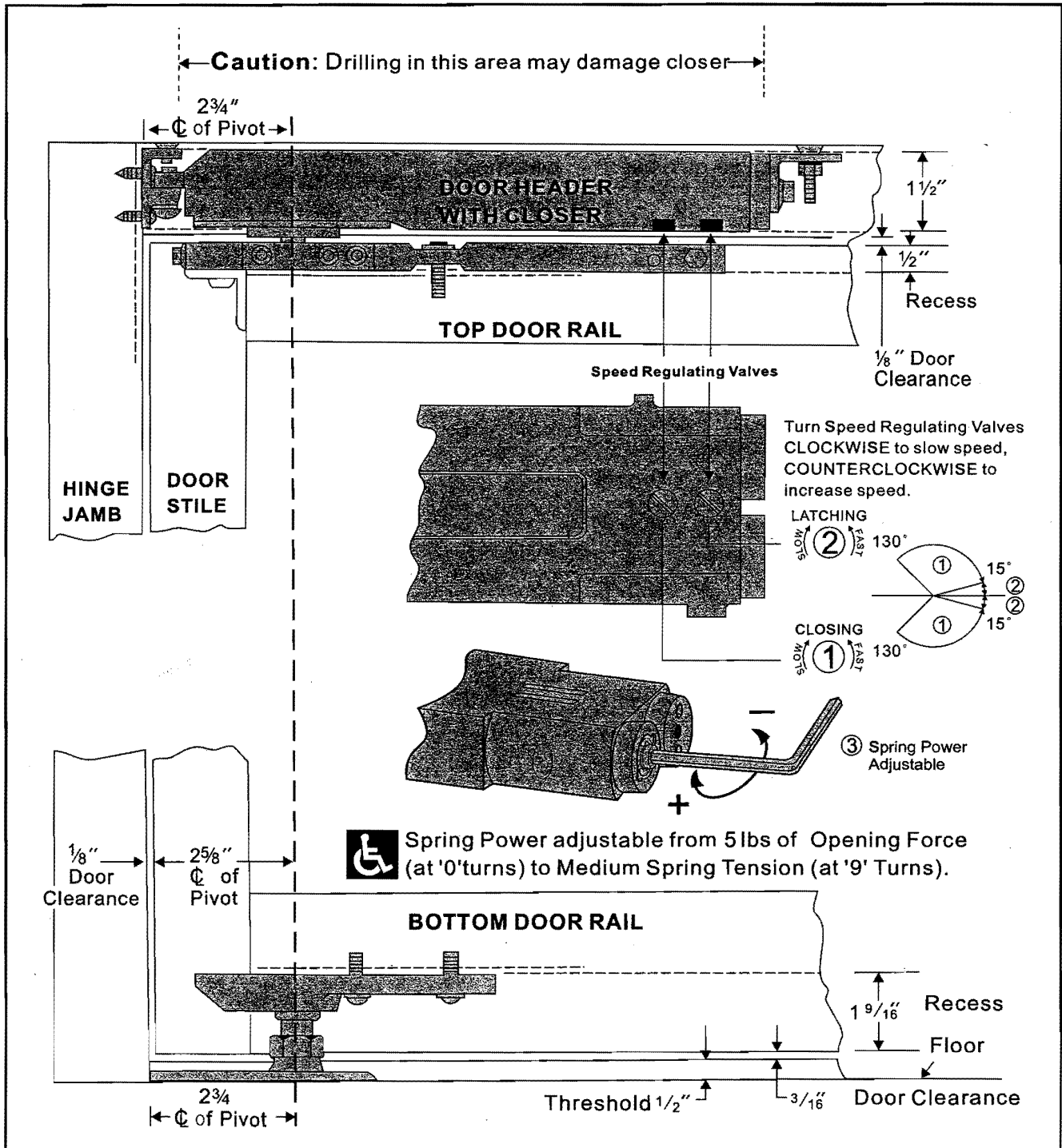


**"ADJUSTABLE POWER" Concealed Overhead Door Closer**  
**Series 400BF**  
**MODEL 410,412,413**  
 Center Hung  
 Double or Single Acting  
 Side and End Loading



Installation Instructions

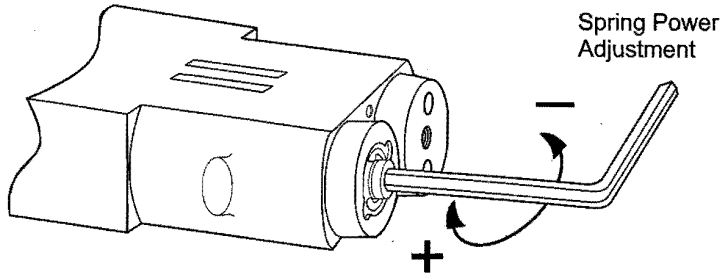


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East: 1920 Air Lane Drive, Nashville, Tennessee 37210 ■ 615/885-7060  
 West: 1140 N. Kraemer Pl. ■ Anaheim, Calif. 92806 ■ 714/666-0390

### ③ Spring Power



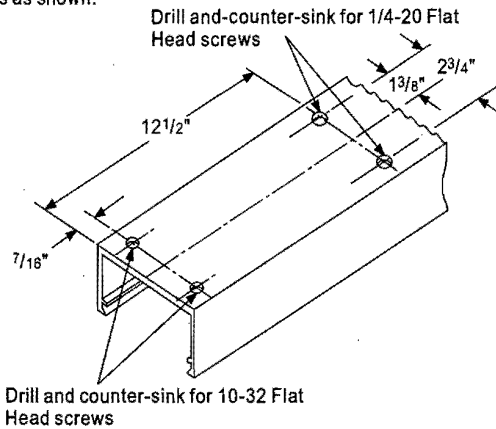
**Spring power VS door size chart**

SIZE	NO. OF TURNS	DIRECTION	INTERIOR MAXIMUM WIDTH	EXTERIOR DOOR MAXIMUM WIDTH
1	0	FACTORY PRESET	30"	5lb OPENING FORCE
2	3	CLOCKWISE (+)	34"	30"
3	9	CLOCKWISE (+)	38"	34"

### HEADERS & JAMBS

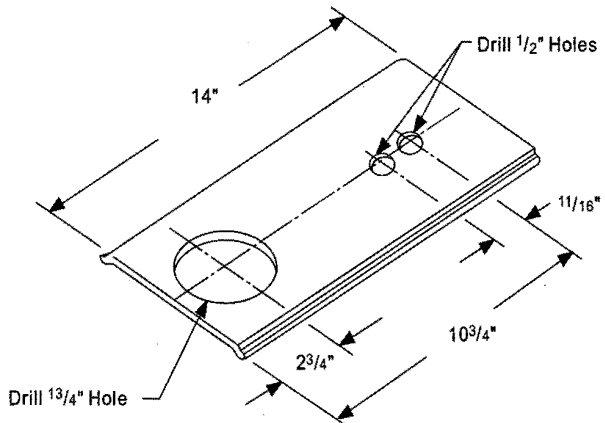
#### DOOR HEADER

Drill and counter-sink outside top surface for 10-32x 7/16" and 1/4-20x 11/4" flat head screws as shown.



#### COVER PLATE

Drill 13/4" hole as shown. Drill 1/2" hole as shown.

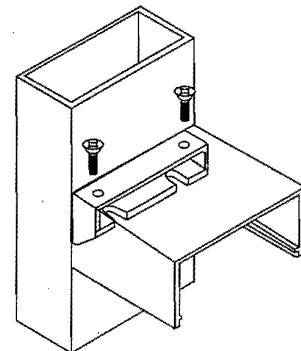
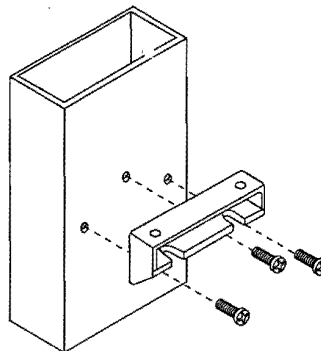
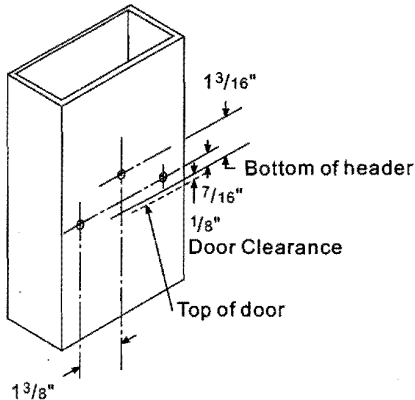


#### HINGE JAMB

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

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

Mount door header on anchor using 10-32 x 7/16" flat head self-tapping screws.



**TOP DOOR RAIL**

**"S" Type Side Loading Arm**

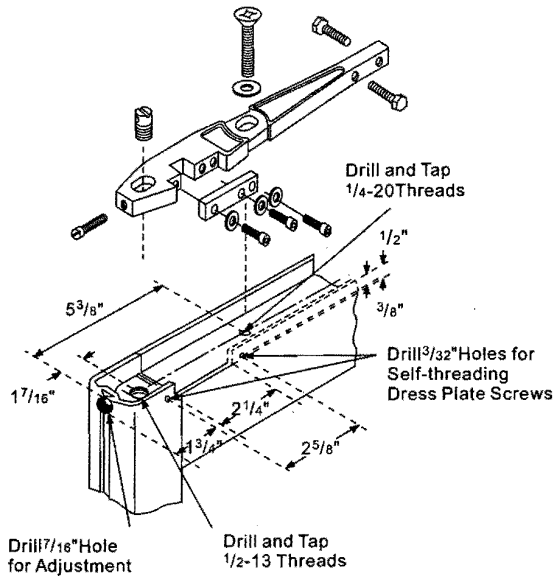
Drill or drill and tap holes in top of door as shown.

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 1 1/4" flat head machine screw and 7/8" washer. Install 1/2-13 X 3/4" arm stud and 1/4-20 X 1 1/8" dome head arm adjustment screw. Laterally adjust center of the arm spindle retainer 2 5/8" from hinge edge of door (not including weatherstripping). Center arm in the top rail by adjusting the two 1/4-20 X 1" hex head centering bolts.

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

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

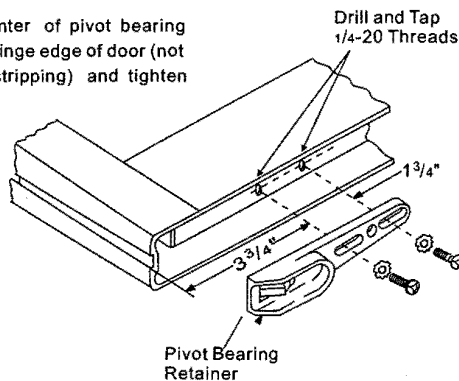


**BOTTOM DOOR RAIL**

**Side Loading**

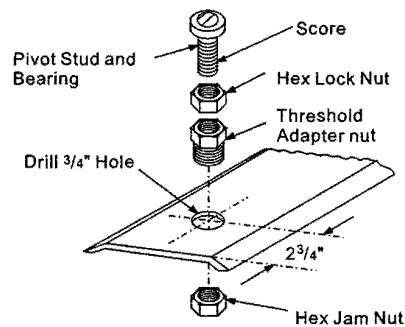
Drill and tap 1/4-20 holes in bottom rail of door as shown. Install pivot bearing retainer in bottom of door using two 1/4-20 X 5/8" pan head machine screws and lock washers.

Laterally adjust center of pivot bearing retainer 2 5/8" from hinge edge of door (not including weatherstripping) and tighten screws securely.



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



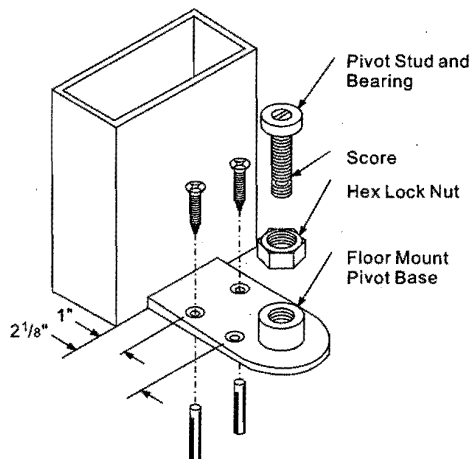
**FLOOR MOUNT PIVOT**

Center 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 X 1 1/4" flat head all-purpose screws.

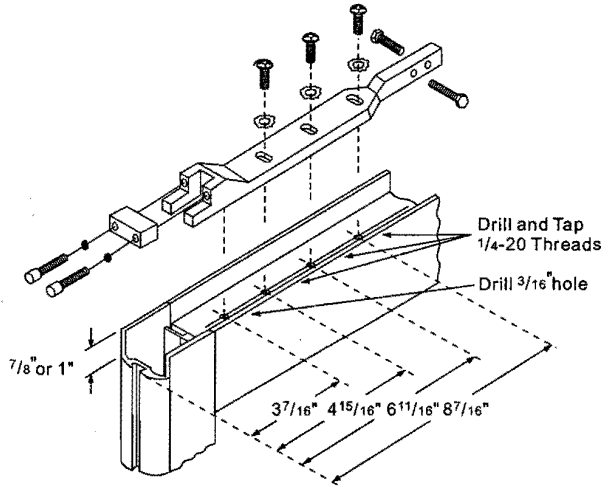
Install pivot stud and bearing with 1/2-20 hex lock nut as shown, and adjust bearing height for proper door clearance and firmly tighten lock nut.

When using threshold, drill 1 1/4" hole for clearance of pivot base on center line 2 3/4" 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



## END LOADING



### TOP DOOR RAIL

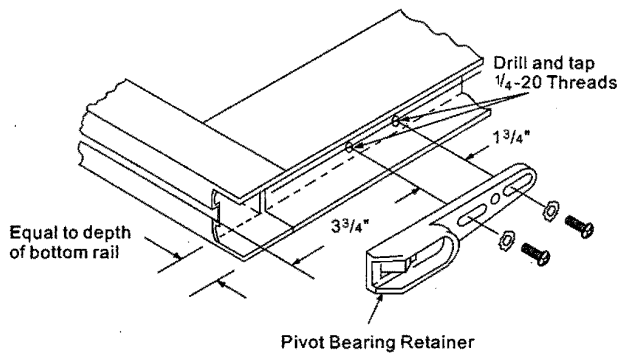
**"A" Type End Loading Arm** - Make a 1" deep cut-out in hinge edge of door as shown.

**"PT" Type End Loading Arm** - Make a 7/8" deep cut-out in hinge edge 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 3/16" hole. Install arm using three 1/4-20 X 5/8" pan head machine screws and lock washers. Center arm in the top rail by adjusting the two 1/4-20 X 1" hex head centering 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.



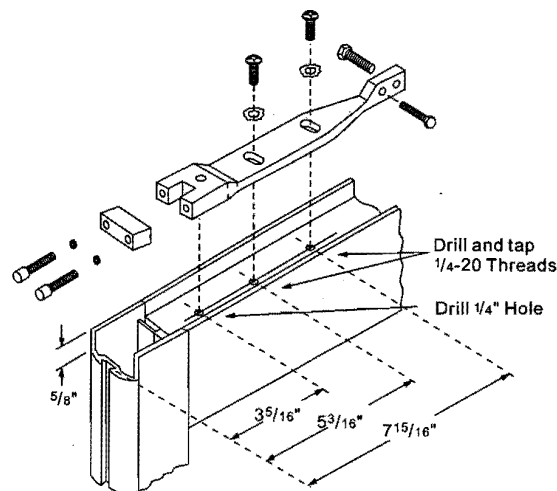
### BOTTOM DOR RAIL End Loading

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 center of pivot bearing retainer 2 5/8" 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 5/8" pan head machine screws and lock washers. Center arm in the top rail by adjusting the two 1/4 X 20 X 1" hex head centering 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.