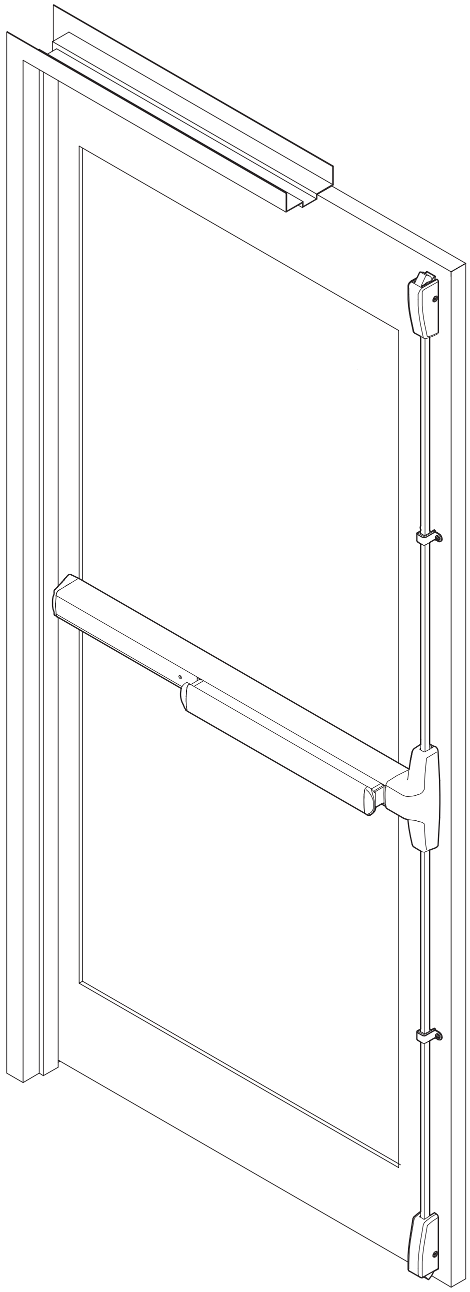
DOREX® DX2 PV/FV

Installation Instructions

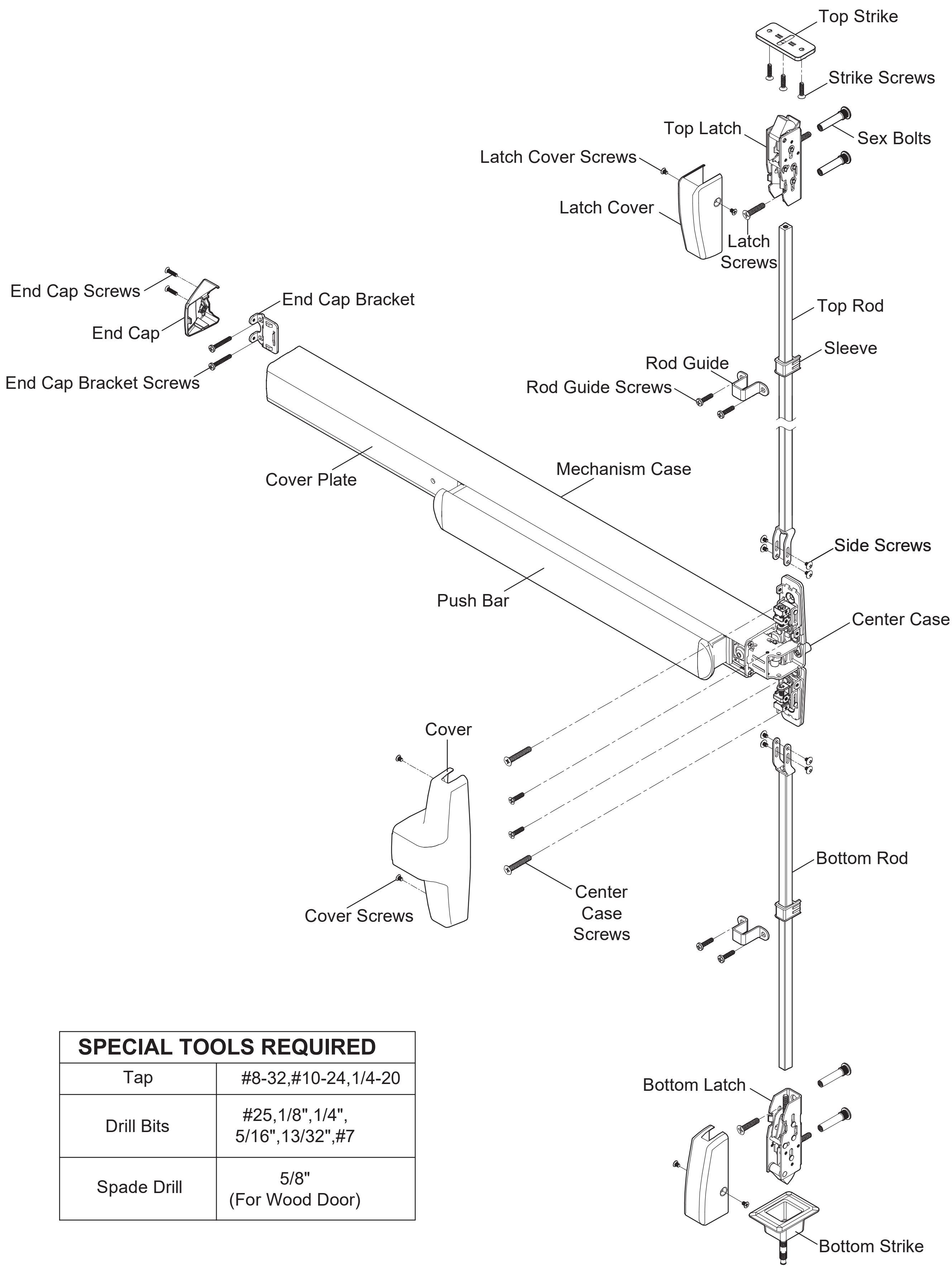
Grade 1, Surface vertical rod device (Panic or Fire Exit Hardware)



Installation Sequence

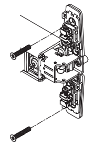
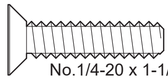
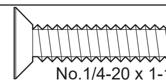
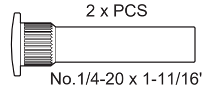
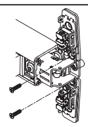
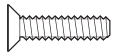
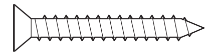
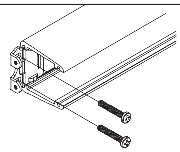
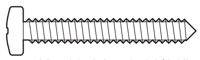
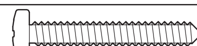
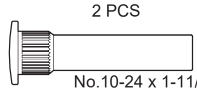
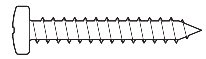
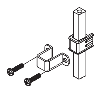
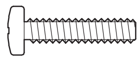
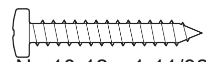
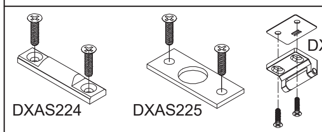
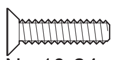
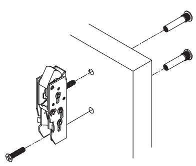
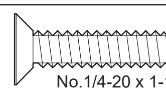
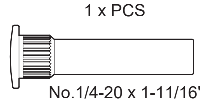
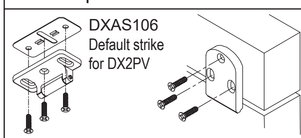
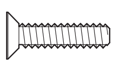
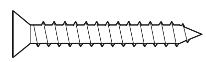
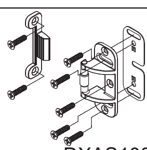
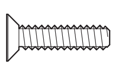
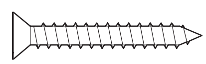
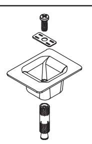
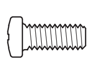
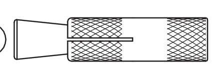
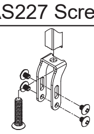
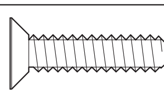
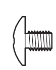
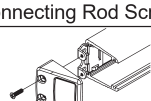
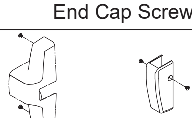
1. Carefully read and understand the installation instructions, templates and door preparation BEFORE starting any installation or door preparation.
2. Prepare door for the installation of the exit device and any applicable trim.
3. Follow exit device and trim installation steps using supplied components and mounting hardware.
4. Test function and performance after installing each component.
5. Perform a function and performance test at completion of installation.

COMPONENTS OVERVIEW



SPECIAL TOOLS REQUIRED	
Tap	#8-32,#10-24,1/4-20
Drill Bits	#25,1/8",1/4", 5/16",13/32",#7
Spade Drill	5/8" (For Wood Door)

SCREW CHART

APPLICATION	METAL	SEX BOLTS	WOOD
 Center Case Screws	F  No.1/4-20 x 1-1/8" 2 x PCS	F  No.1/4-20 x 1-1/8" 2 x PCS H  No.1/4-20 x 1-11/16" 2 x PCS	Trim mount or sex bolts
 Center Case Screws	E  No.10-24 x 11/16" 2 PCS		A  No.10-12 x 1-11/32" 2 PCS
 End Cap Bracket Screws	C  No.10-24 x 1-11/32" 2 PCS	C  No.10-24 x 1-11/32" 2 PCS G  No.10-24 x 1-11/16" 2 PCS	A  No.10-12 x 1-11/32" 2 PCS
 Rod Guide Screws	D  No.10-24 x 25/32" 2 x PCS		A  No.10-12 x 1-11/32" 2 x PCS
 DXAS203 DXAS224 DXAS225 Optional Strike Screws	E  No.10-24 x 11/16" 2 x PCS		
 Top / Bottom Latch Screws		F  No.1/4-20 x 1-1/8" 1 x PCS H  No.1/4-20 x 1-11/16" 2 x PCS	
 DXAS106 Default strike for DX2PV DXAS215 Optional strike for DX2PV DXAS 106 / 215 Screws	E  No.10-24 x 11/16" 3 x PCS		B  No.10-12 x 1-11/32" 3 x PCS
 Default top strike for DX2FV DXAS108 Screws	E  No.10-24 x 11/16" 7 PCS		B  No.10-12 x 1-11/32" 7 PCS
 Default bottom strike DXAS227 Screws	N  No.1/4-20 x 5/8" 1 PCS	O  No.1/4-20 x 5/8" 1 PCS	
 Connecting Rod Screws	F  No.1/4-20 x 1-1/8" 1 PCS	L  No.8-32 x 7/32" 4 PCS	
 End Cap Screws	J No.8-32 x 5/8" 2 PCS		
 Cover Screws	I  No.8-32 x 5/32" 2 PCS		

DOOR PREPARATION CHART

TOP STRIKE

METAL
#25 DRILL #10-24 TAP
WOOD
1/8" DRILL PILOT HOLE , 1" DEEP

FOR DOOR PREPARATION REFERENCE ONLY.
Verify that this is the latest version of this document. We recommend samples be used to verify preparation before door / frame manufacturing.

LATCHES

METAL
5/16" DRILL ON DEVICE SIDE 13/32" DRILL ON TRIM SIDE
WOOD
13/32" DRILL THRU

Fire Exit Hardware is to be installed on Fire Doors bearing the marking "Fire Door to be equipped with Fire Exit Hardware" Any retrofit or other field modification to a Fire Rated opening can potentially impact the Fire Rating of the opening.

IMPORTANT:

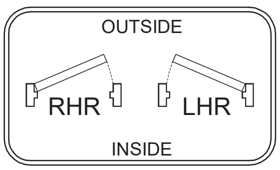
- Use supplied templates for field installations.
- Use door preparation documents for door/frame manufacturing.
- Door must be properly reinforced where the exit device chassis and latches are mounted. The surface must be flush and flat within 1/16" (1.5 mm).
- Prepare the interior of the door using the exit device template or door preparation and instructions.
- Prepare the exterior of door using the trim template or door preparation and installation instructions.
- All threaded holes require a minimum material thickness of 0.125" (3 mm).
- We recommend samples be used to verify preparation before mass door or frame manufacturing.
- NOT RESPONSIBLE for any physical or property damage due to incorrect / improper preparation or installation.

ROD GUIDES

METAL
#25 DRILL #10-24 TAP
WOOD
1/8" DRILL PILOT HOLE 1" DEEP

CENTER CASE 2-HOLES

SURFACE MOUNT	FOR THRU BOLTS OR TRIM
METAL	**METAL**
#7 DRILL #1/4"-20 TAP	5/16" DRILL ON DEVICE SIDE 13/32" DRILL ON EXTERIOR SIDE (FOR THRU BOLTS) 1/2" DRILL THRU HOLE (FOR TRIM POSTS)
N/A	**WOOD** 13/32" DRILL THRU (FOR THRU BOLTS) 1/2" DRILL THRU HOLE (FOR TRIM POSTS)



Level

RHR shown(LHR opposite)

CENTER CASE 2-HOLES

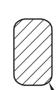
SURFACE MOUNT
METAL
#25 DRILL #10-24 TAP
WOOD
1/8" DRILL PILOT HOLE 1" DEEP

END CAP BRACKET 2-HOLES

SURFACE MOUNT	SEX BOLTS
METAL	**METAL**
#25 DRILL #10-24 TAP	1/4" DRILL (DEVICE SIDE) 13/32" DRILL (TRIM SIDE)
WOOD	**WOOD**
1/8" DRILL PILOT 1" DEEP	13/32" DRILL THRU

PREPARE HOLES FOR THE END CAP BRACKET MOUNTING HOLES AFTER THE EXIT DEVICE CENTER CASE INSTALLATION AND AFTER LEVELING THE EXIT DEVICE.

DOOR CUT-OUTS



CUT-OUT
DEVICE SIDE ONLY 5/8" DEEP FOR WOOD DOOR

1/4" Radius

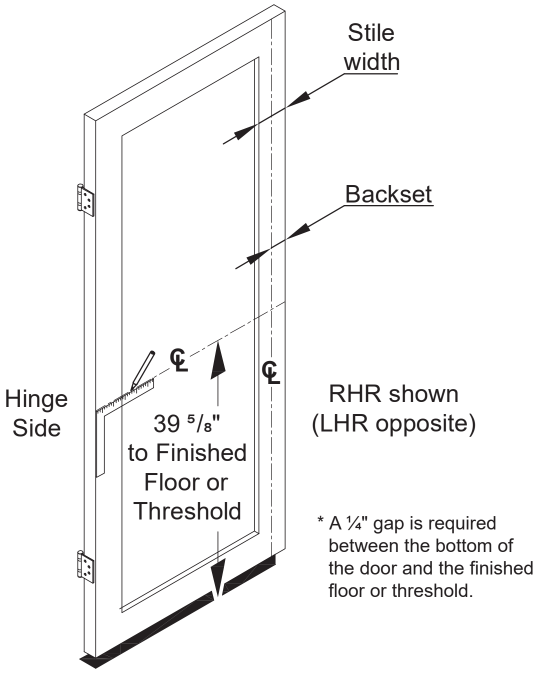
SEE TRIM INSTALLATION INSTRUCTIONS, TEMPLATES, OR DOOR PREPARATION DOCUMENTS FOR DETAILS.

BOTTOM STRIKE

USE APPROPRIATE TEMPLATE FOR THE SUPPLIED STRIKE

USE SUPPLIED MOUNTING HARDWARE OR APPROPRIATE FLOOR ANCHORS FOR THE APPROPRIATE BOTTOM STRIKE

01. DRAW HORIZONTAL CENTERLINE (℄)



Mark horizontal centerline on inside face of door 39 ⁵/₈" from finished floor as shown. (Continue horizontal center line to outside face of door if trim is used)

The BACKSET and STILE widths are directly related to:

1. Door Construction: door material, single door, double doors with or without mullion.
2. Frame Construction: frame material, type and size of door stop on frame.
3. Top strike length.

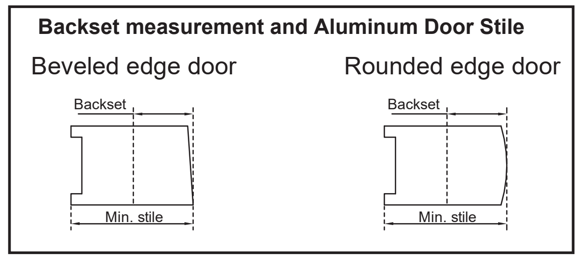
Before preparing the door for the exit device center case (chassis), study the position of the top and bottom latches and the top and bottom strikes.

Refer to the supplied templates or consult with your sales representative for additional data for door/frames configurations that it are not shown in the installation instructions.

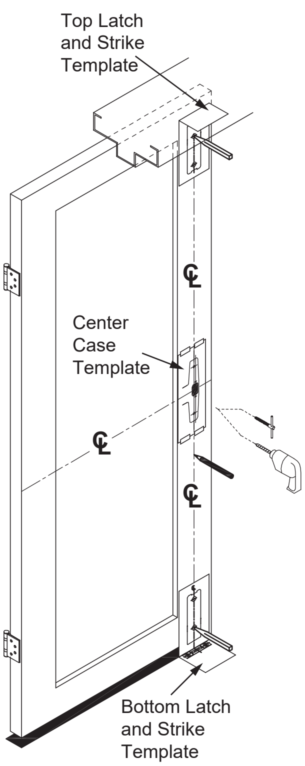
The backset is measured from the edge of the door as shown below.

The required minimum stile is 2-1/8" with (additional) 1/2" glass stop.

Aluminum doors with a 2-1/8" stile width cannot have a door stop on the door lock side edge.

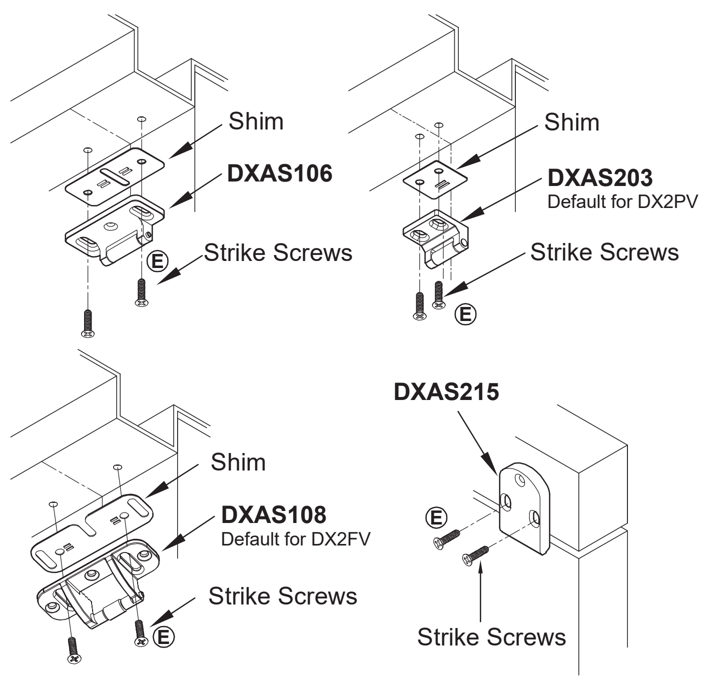


02. LOCATE TEMPLATES AND PREPARE DOOR



1. CAUTION: Prior to using supplied templates, verify that the templates are printed to full scale, by measuring some of the indicated dimensions.
2. Position the center case template in line with the marked horizontal and vertical centerlines as shown. Tape the template on the door and mark the cut-out and mounting holes centers on the door's interior side.
3. If trim is used, prepare the door exterior side using the template and installation instructions for that trim.
4. With door closed, fold the appropriate top latch and strike template on the door stop and inside door surface as shown, ensuring the vertical centerline aligns with the exit device vertical centerline. Tape template on the door and frame, then mark the mounting hole centers.
5. Fold the appropriate bottom latch and strike template on the door bottom surface and floor as shown, ensuring the vertical centerline aligns with the exit device vertical centerline. Tape template on the door and floor and mark the mounting hole centers.
6. Drill and tap required holes and cut the required cut-outs as indicated on page 4 of the door preparation document.
7. Attach appropriate strikes as per step 3.

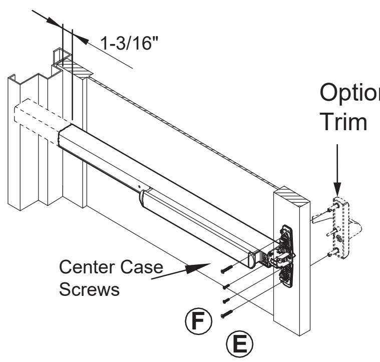
03. INSTALL TOP STRIKE AND SHIM

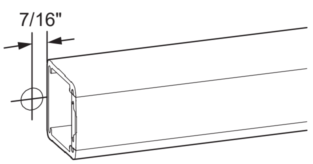


Install a screw through each slot.

04. CENTER CASE INSTALLATION

1. Verify if exit device rail length needs be shortened. If yes, refer to step 6. The exit device requires a minimum clearance of 1-3/16” between the frame’s door stop and the rail end (with end cover removed). Otherwise install the exit device on door as required with a trim or without a trim.
2. If exit device is used with a trim, attach the exit device and the appropriate trim using instructions and hardware supplied with the trim and the exit device.
3. If no trim is used and the exit device is surface mounted on the door, used supplied mounting hardware as indicated on pages 2, 3, and 4.
4. Fire exit devices must be installed with through-bolts when installed without a trim.

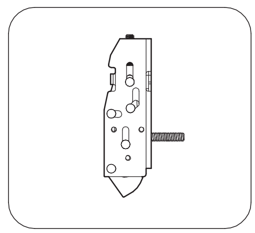




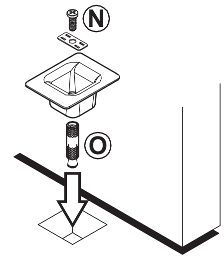
If a 5/8" diameter hole is required for the electrified exit device, the hole must be positioned as shown

05. INSTALL BOTTOM LATCH

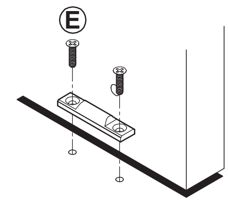
1. Following the marking of the bottom strike in step 2, prepare the floor for the appropriate strike and mounting screws
2. If strike is installed on a threshold, provide the required holes and attach strike with supplied screws.
3. Bottom strike can be installed after bottom latch installation to ensure a proper alignment.



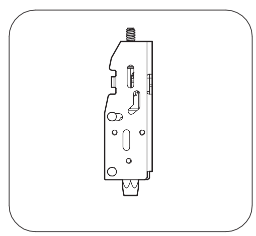
Pullman Latch
(Defaut)



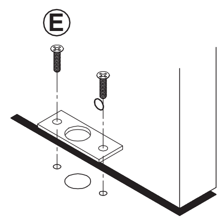
DXAS227
(Default)



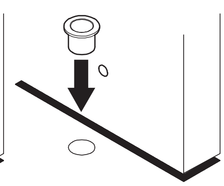
DXAS224



Round Bottom Latch



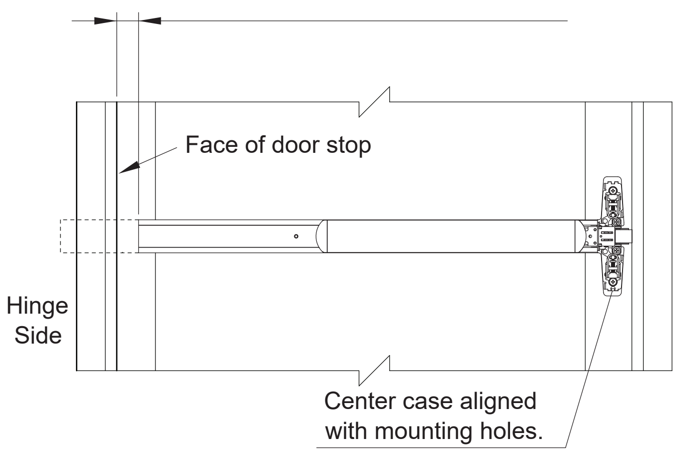
DXAS225

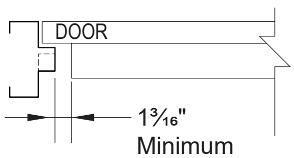


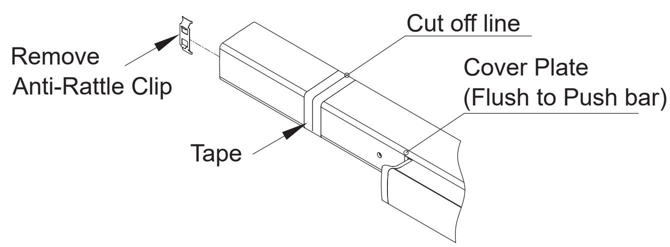
DXAS226

06. CUT DEVICE (IF REQUIRED)

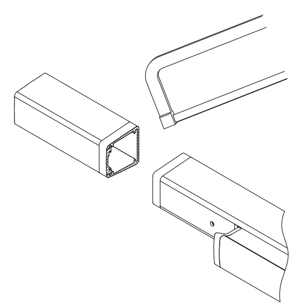
Recommended minimum clearance between door frame stop and device end (with cap removed) is 1³⁄₁₆"

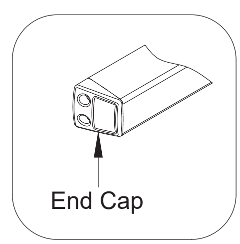






1. With anti-rattle clip removed, tape and mark area being cut.

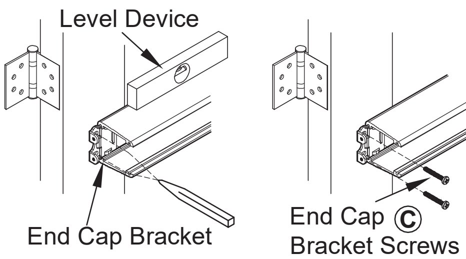




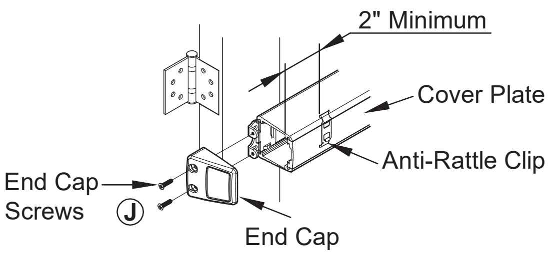
2. Cut off device and deburr.

NOTE:
Device rail cut must be square, smooth and clean for proper fit with end cap

07. INSTALL MOUNTING BRACKET AND END CAP



1. Remove cover plate, insert end cap bracket into the push bar rail assembly as shown.
2. Level exit device, then mark both mounting hole centers. Drill and tap, then fasten bracket with the appropriate mounting screws.



3. Insert cover plate, then slide anti-rattle clip into position (minimum 2" from end) before fixing end cap with supplied screws.

08. INSTALL TOP LATCH AND ROD

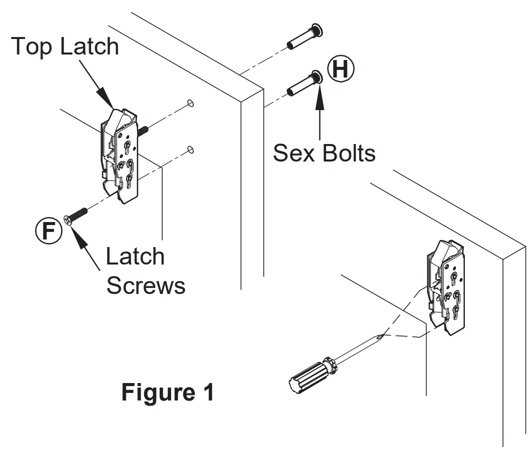


Figure 1

1. Align top latch with top strike then install top latch with two mounting screws (and through-bolts for Fire). Adjust strike for proper engagement. (Figure 1.)
2. Supplied rods are for 7 ft (84") door height. if door height is less than 7 ft, shorten the top rod by the difference (Figure 2). Refer to page 10.

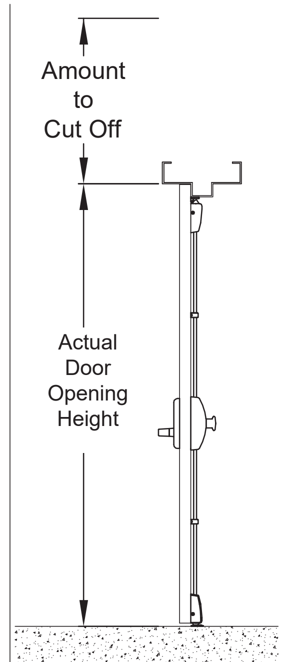


Figure 2

08. INSTALL TOP LATCH AND ROD (CONTINUED)

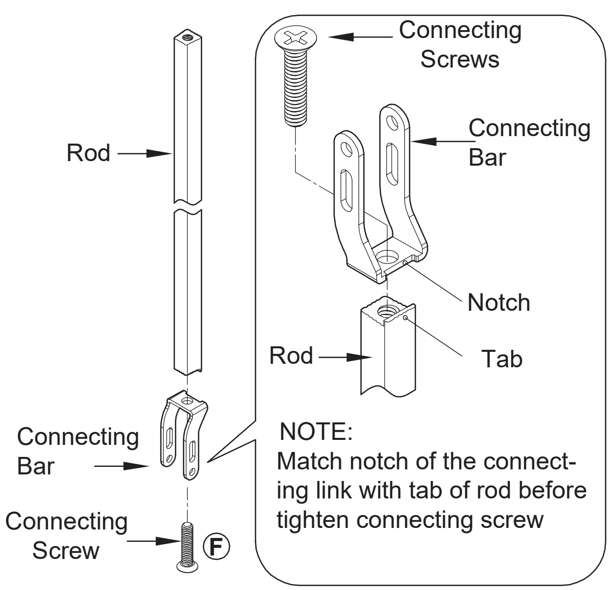
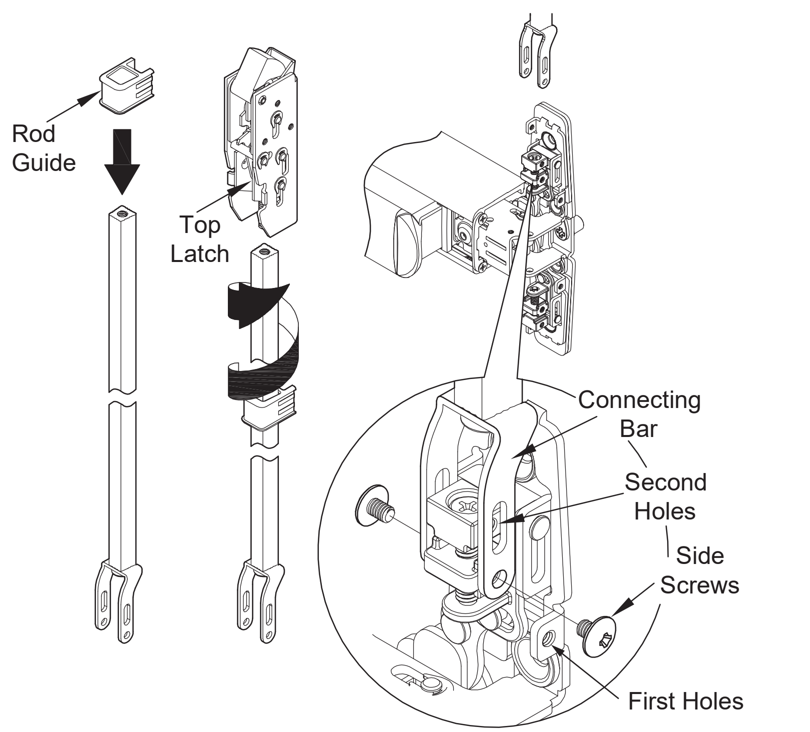


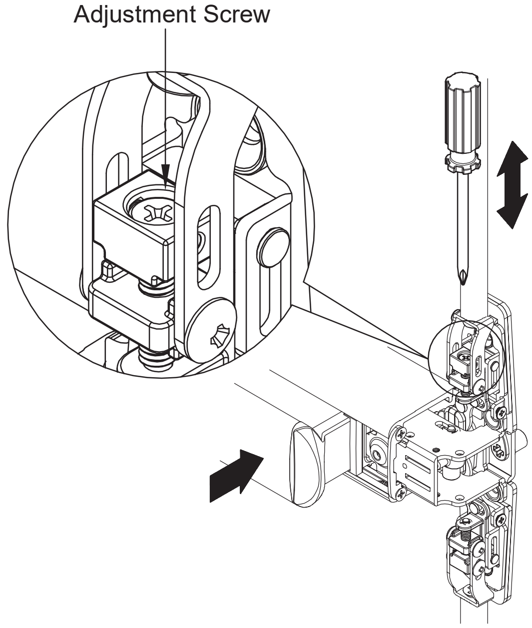
Figure 3

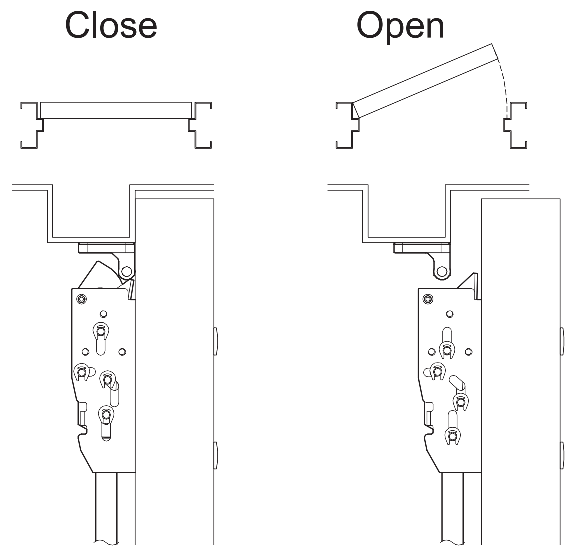


3. Attach the connecting Bar to the bottom of the top rod with supplied screw (Figure 3)

4. Assemble rod guide with rod, thread rod into top latch until first hole in connecting bar align with first hole in retractor and fasten with side screws.

09. CHECK TOP LATCH FOR HOLDBACK AND DEADLOCK

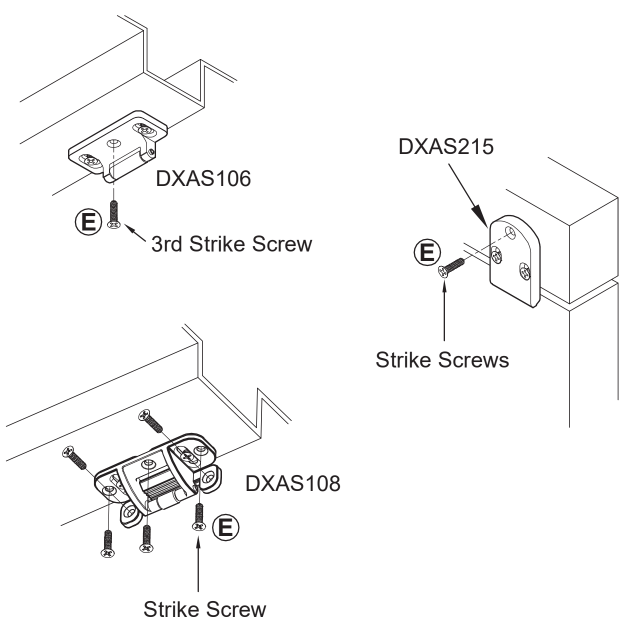




1. Pushing on push bar will retract the latchbolt and allow the door to open. Latchbolt will stay retracted, if not adjust the screw on top of the retractor with a screw driver.

2. Once the door is closed, the strike will engage with the deadlock, which will allow the latchbolt to extend and engage behind the strike. The latchbolt cannot be retracted when the door is closed and the deadlock depressed. If not, adjust the strike position to engage with the device deadlock.

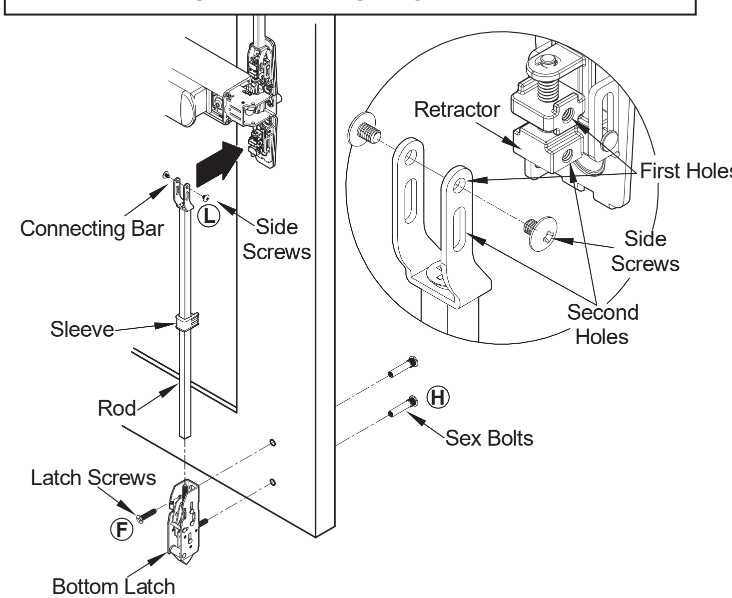
09. CHECK TOP LATCH FOR HOLDBACK AND DEADLOCK (SECURE TOP STRIKE)



Once the latchbolt is adjusted properly and engages with the strike when the door is closed and retracts when the door is opened; install any additional screw(s) required to firmly secure the strike used.

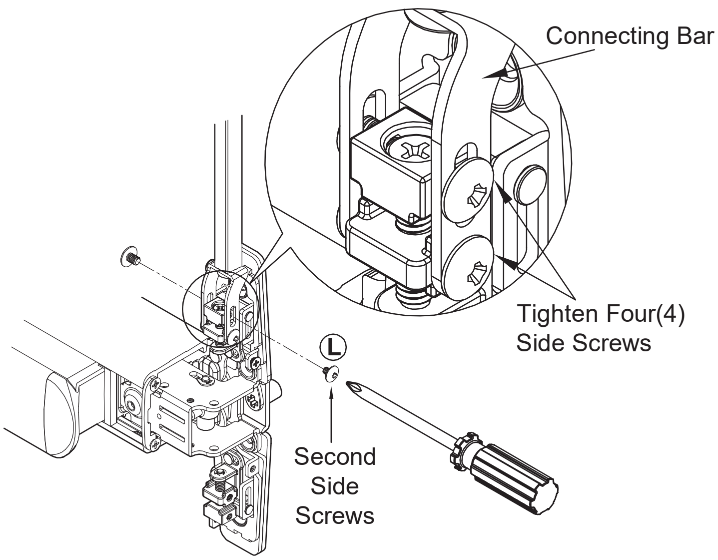
10. INSTALL BOTTOM LATCH AND ROD

FOR LESS BOTTOM ROD MODELS (LBR) OMIT THIS STEP AND INSTALL AUXILIARY LATCH BOLT.



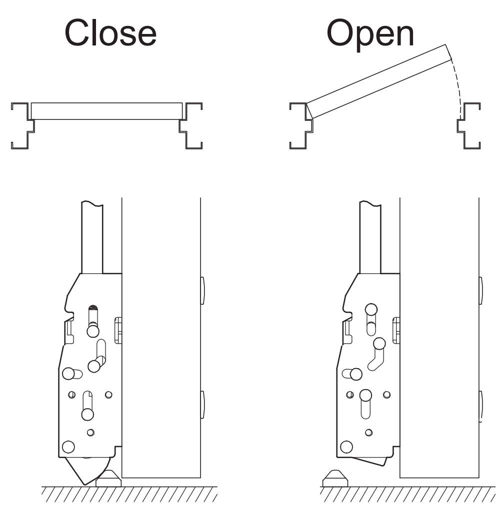
1. Install bottom latch with two screws (or with through-bolts for fire model).
2. Pass bottom rod through rod guide and attach connecting bar to top of rod
3. Thread the bottom of the rod into the stud of the bottom latch until the first holes in the end of the connecting bar align with the first holes in the retractor and fasten with side screws
4. Ensure the bottom strike is properly aligned to engage with the bottom latchbolt.

11. SECURE TWO (2) SIDE SCREWS



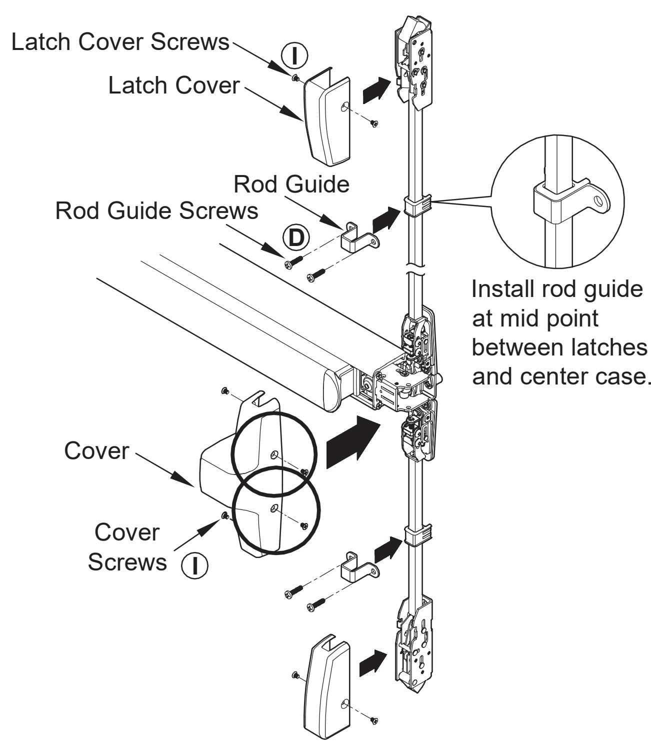
Fasten two additional side screws through the second holes in the connecting bar and in the retractor for both the bottom and top connecting bars.

12. ADJUST BOTTOM ROD WITH DOOR OPEN (TOP LATCH RETRACTED)



1. Depress exit device push bar and ensure that the bottom latch is retracted and stays retracted after the door is opened. Adjust the retractor screw if needed.
2. Close the door and ensure that the bottom latch engages in the bottom strike. Adjust strike on the floor or threshold to ensure proper latchbolt/strike engagement.
3. Open and close door few times and verify that both latches are engaged and the latch bolt is deadlocked.
4. Secure side screws firmly when final adjustments are completed.

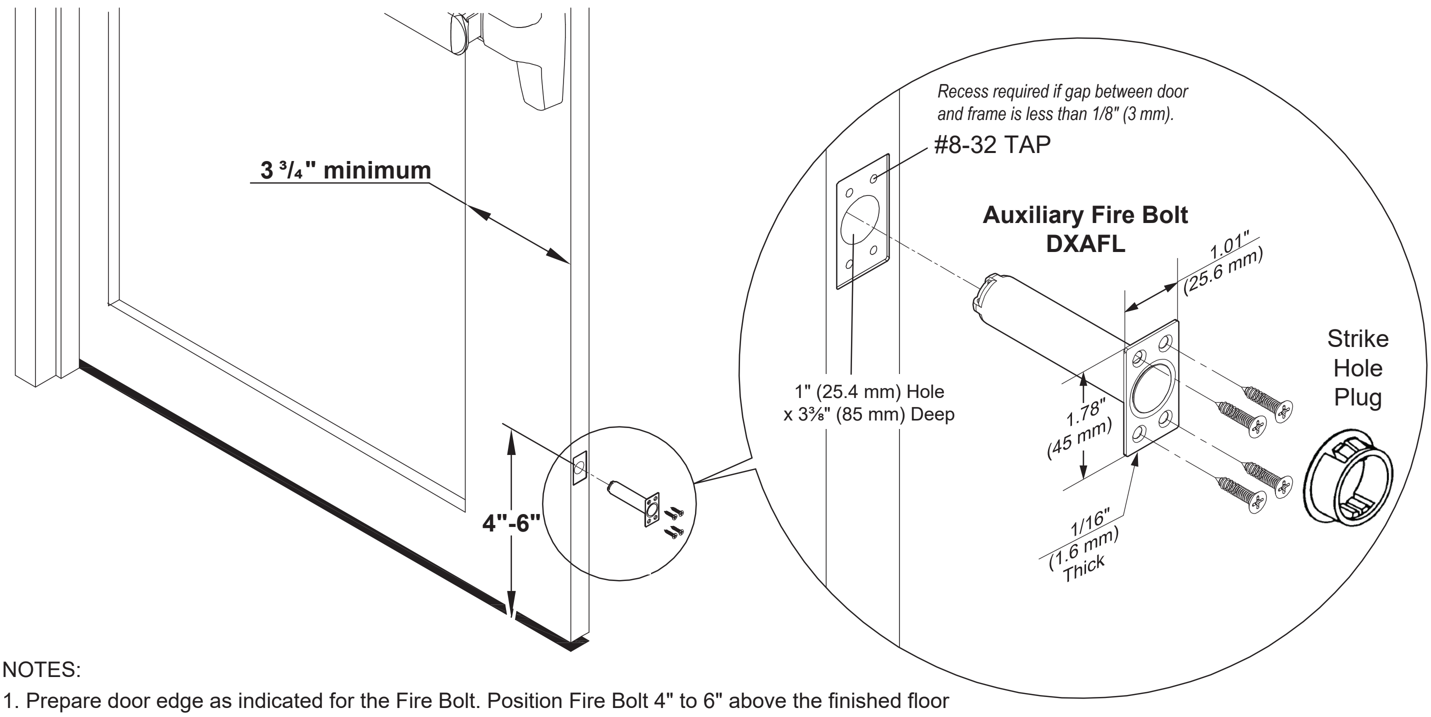
13. INSTALL ROD GUIDES AND COVERS WITH SCREWS



1. Position rod guides midway between the latches and the centercase, centered on rods. Mark mounting holes, then drill pilot hole or drill and tap for fasteners. Secure rod guides with screws.
2. Install covers on the center case and latches and secure with screws.

INSTALL FIRE BOLT

NOTE: Fire rated exit device with Less Bottom Rod (LBR) application must use a FIRE BOLT

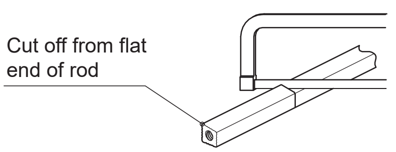


NOTES:

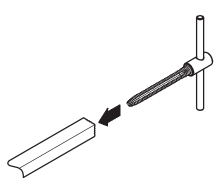
1. Prepare door edge as indicated for the Fire Bolt. Position Fire Bolt 4" to 6" above the finished floor
2. Drill 1" hole in the door edge as indicated and drill and tap for #8-32 machine screws
3. Install Fire Bolt on edge of door and fasten with supplied screws
4. Mark the plug hole on the frame in line with the fire bolt. Drill 1" diameter hole x 1¾" deep on frame or inactive door edge at same height as the Fire bolt and install strike hole plug

SHORTEN TOP ROD / EXTEND TOP ROD

CUT TOP ROD

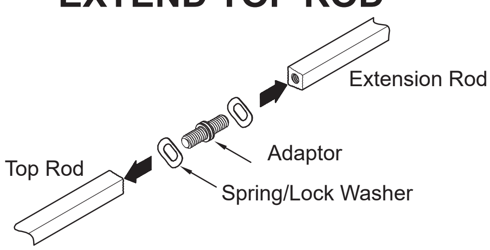


Step 1: Rod must be shortened if door height is less than 84". Make sure that the rod is shortened (cut-off) on the flat end of the rod.

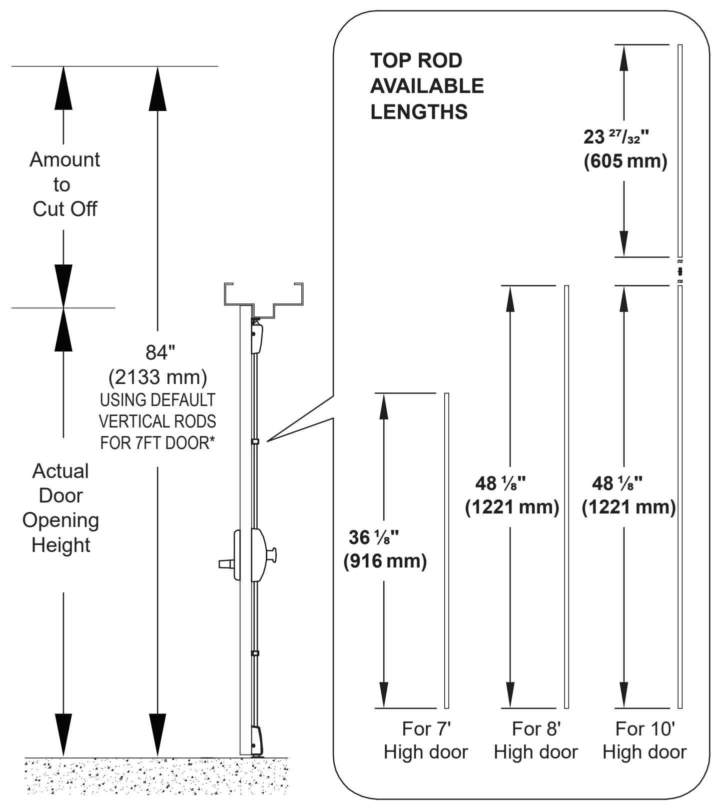


Step 2: Tap #1/4-20; 1" deep.

EXTEND TOP ROD



If door height is more than 84", the top rod can be extended (special order) using an rod extension adaptor, two spring washers and a second rod with threaded holes at both ends.

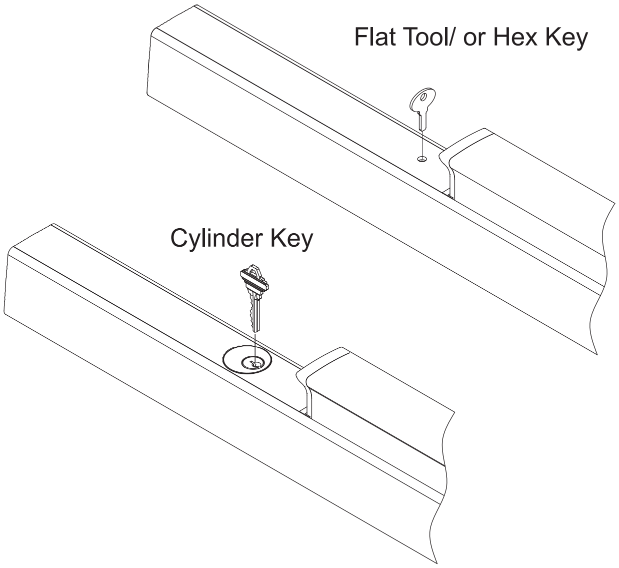


Example:
Amount to cut-off = 84" - (Actual Door Height)

(*) If exit device is installed at location as shown on p.5

DOGGING (PANIC EXIT DEVICES ONLY)

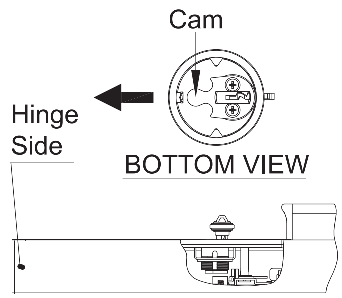
DOGGING ACTIVATION



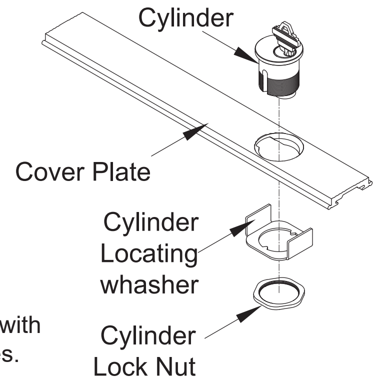
Depress push bar and turn flat/hex key or cylinder key one full turn for dogging check.

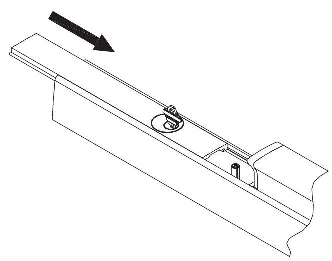
CYLINDER DOGGING INSTALLATION

If cylinder is not installed, remove cover plate and install cylinder with cam orientation as shown below.



Install cylinder to the cover plate with the cam facing towards the hinges.





Slide cover in to position on the rail.

⚠ For Alarm (AL) or Latch Monitoring (LM) panel installations, follow the instructions supplied with those porducts.