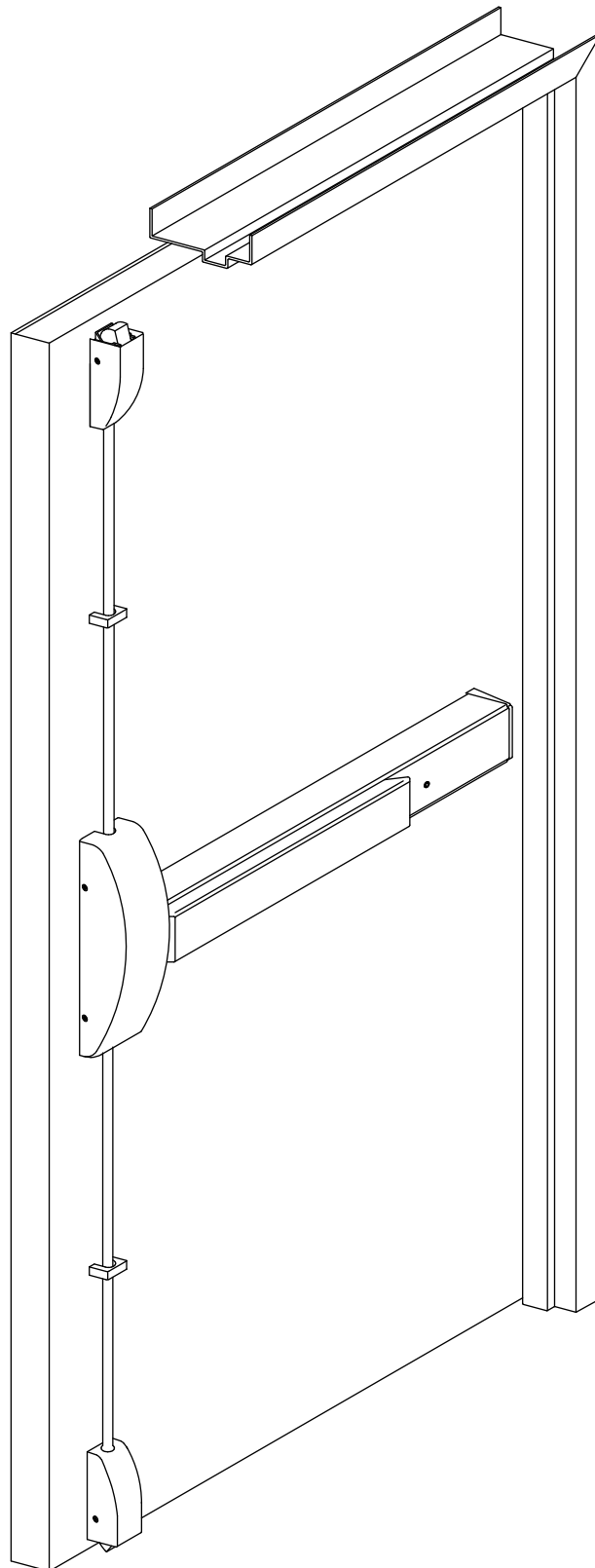
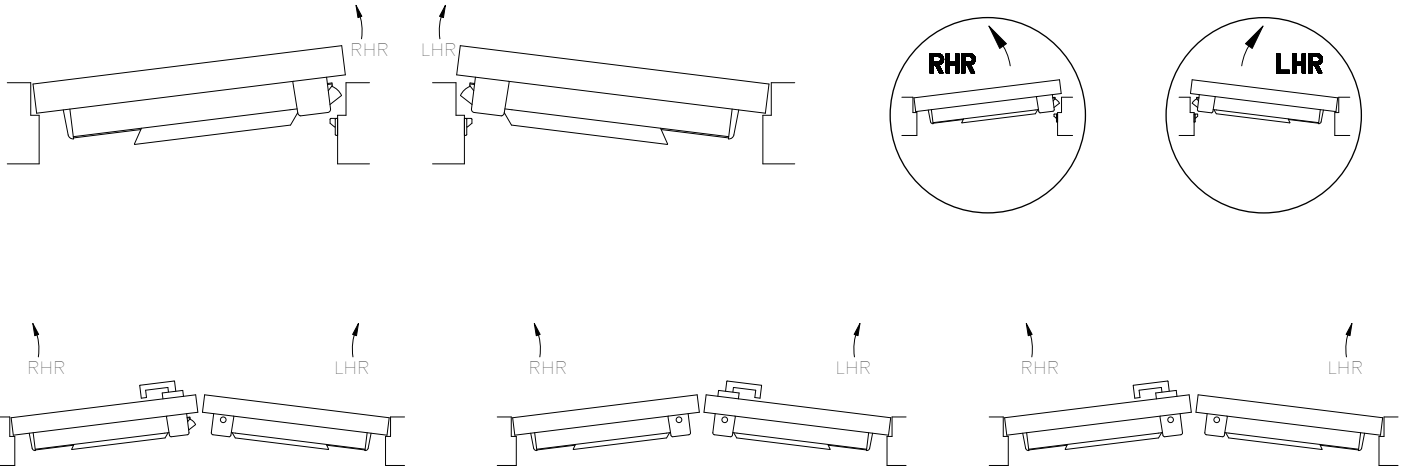


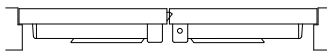
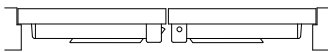
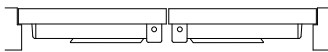
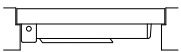
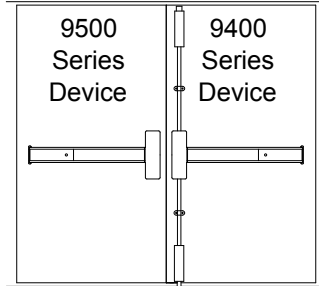
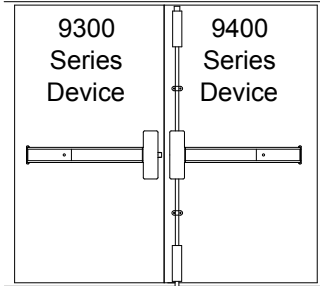
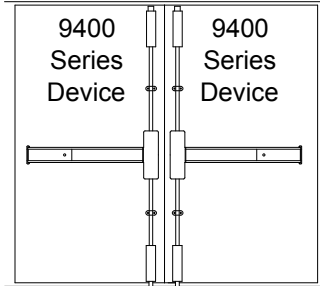
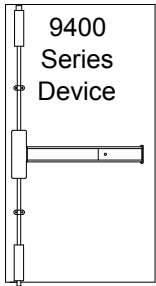
# 9400/F9400 SERIES SURFACE VERTICAL ROD EXIT DEVICE



# HANDING



# TYPICAL INSTALLATIONS



# SCREW CHART

⊕ All Screws Are Phillips Head

-  F.H.P.T.S. — Flat Head Phillips Tapping Screw
-  R.H.P.T.S. — Round Head Phillips Tapping Screw
-  R.H.P.M.S. — Round Head Phillips Machine Screw
-  R.H.P.M.S. — Round Head Phillips Machine Screw x Thru Bolt
-  F.H.P.M.S. — Flat Head Phillips Machine Screw
-  O.H.P.M.S. — Oval Head Phillips Machine Screw
-  F.H.P.U.C.M.S. — Flat Head Phillips Undercut Machine Screw

## 1 Installation

Read the entire instruction sheet prior to installation.

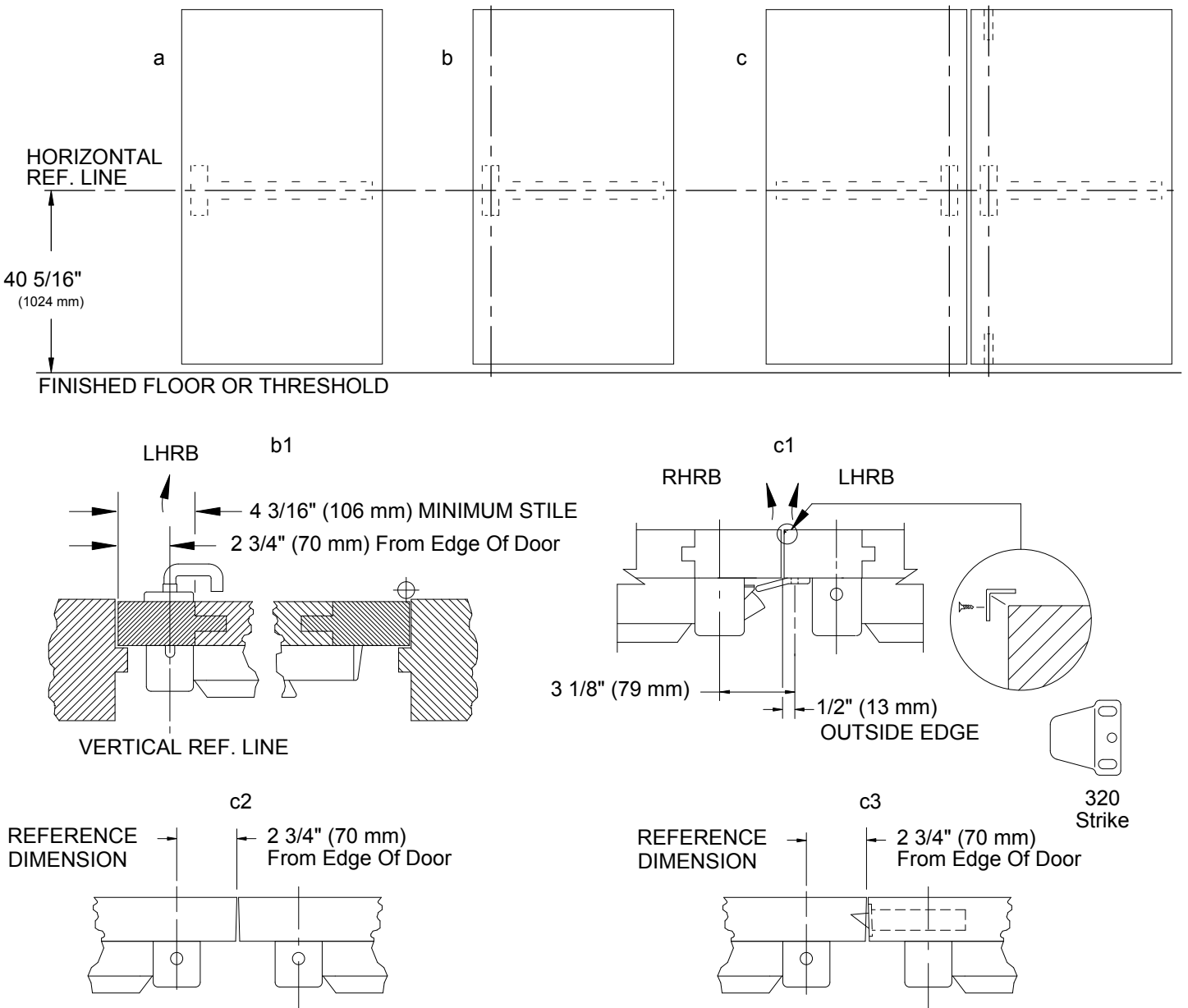
Before Installing Hardware:

1. Door should be fitted and hung.
2. Verify door width, with carton label for correct exit device length. (See Step 7)
3. For hand reversal of chassis assembly see Step 3.
4. For hand reversal of trim assembly see Step 4.

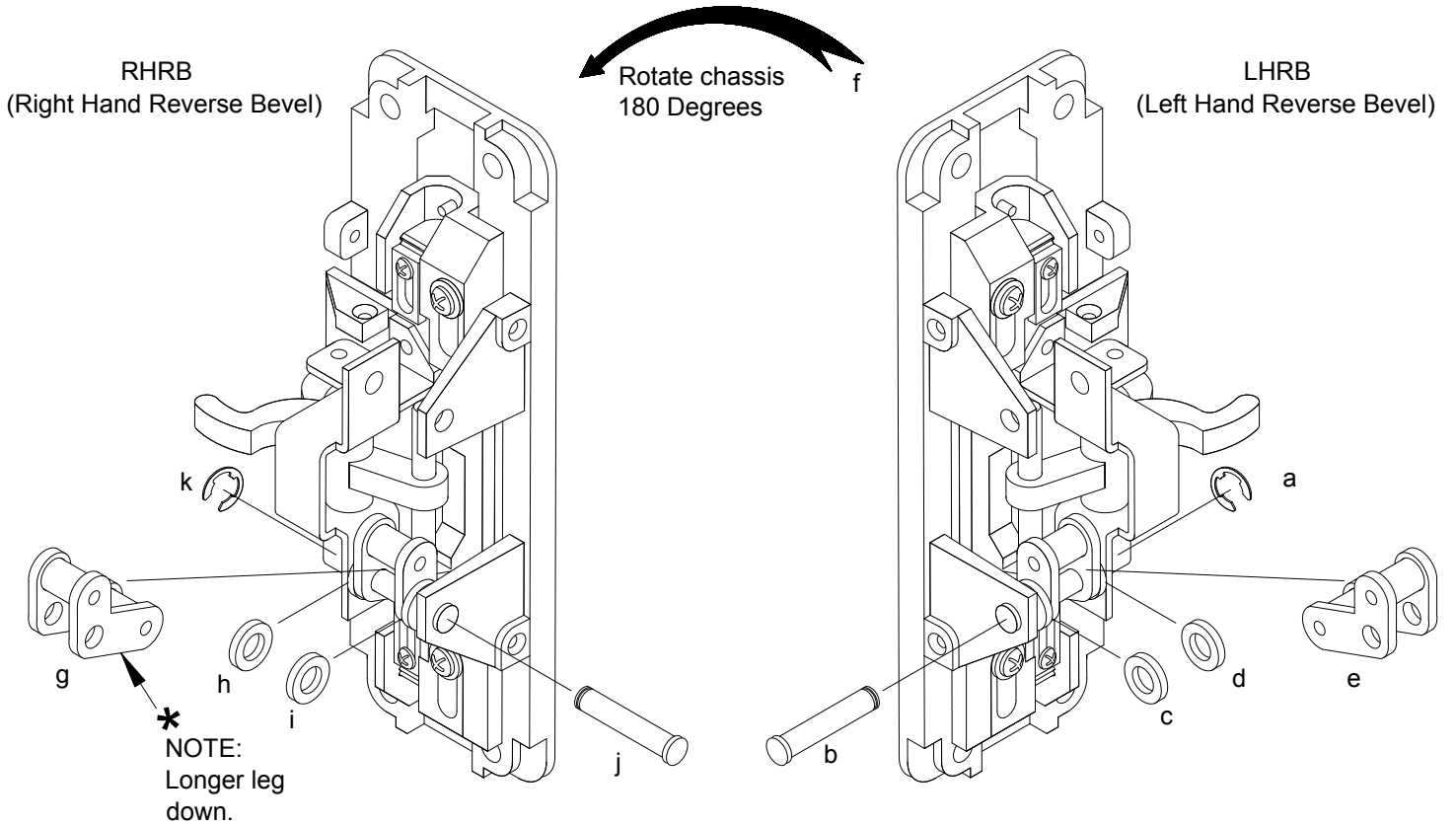
Note: If device is to be installed over glass lite panels, shim kit may be required. Order GK9000.

Note: Device shipped standard for 7' (2133 mm) high door opening. Optional 8' (2438 mm) available. (must be specified when ordering) For doors up to but not over 10' (3048 mm) order "ETR" (Extended top rod) package.

## 2 Door preparation

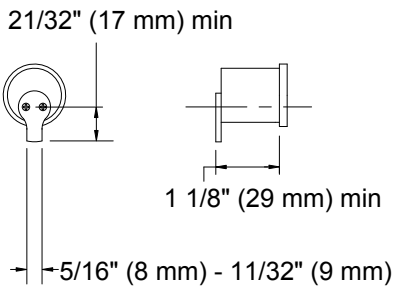


3 If hand reversal of chassis is required follow steps below in alphabetical sequence.



4 Handing change of trim, and cylinder specifications and installation.

Note: For specific trim functions, cylinder type, and handing information; see additional instructions packed with trim.



Standard "V" Trim

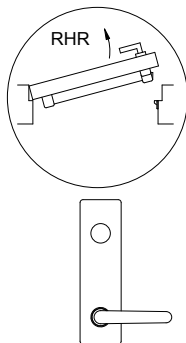
Standard "T" Trim

Standard "R" Trim

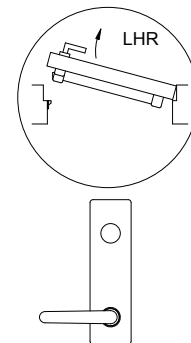
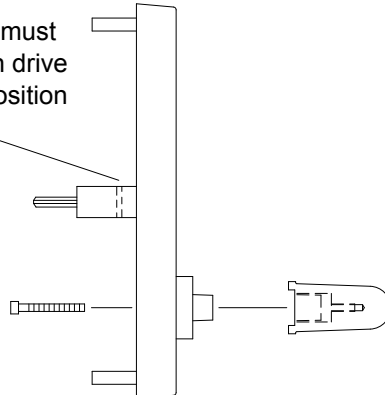
Standard "Y" Trim

Standard "C" Trim

Standard "K" Trim

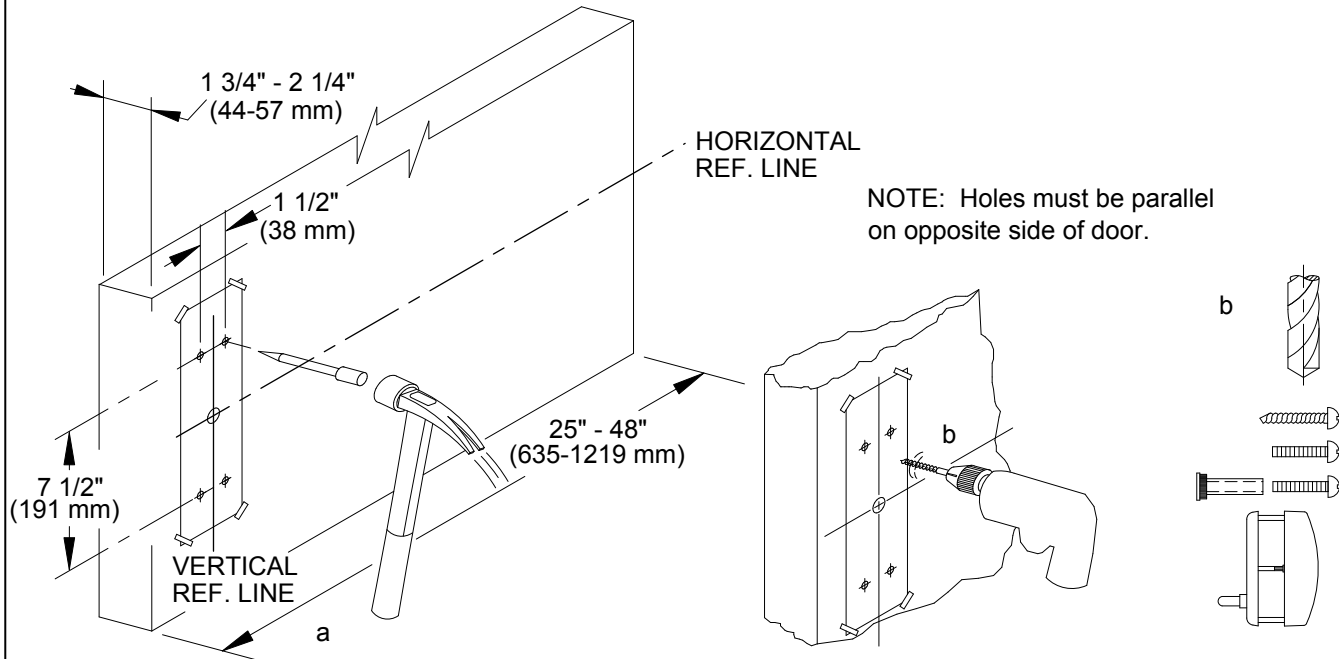


NOTE: Spindle must be installed with drive pin in vertical position as shown.

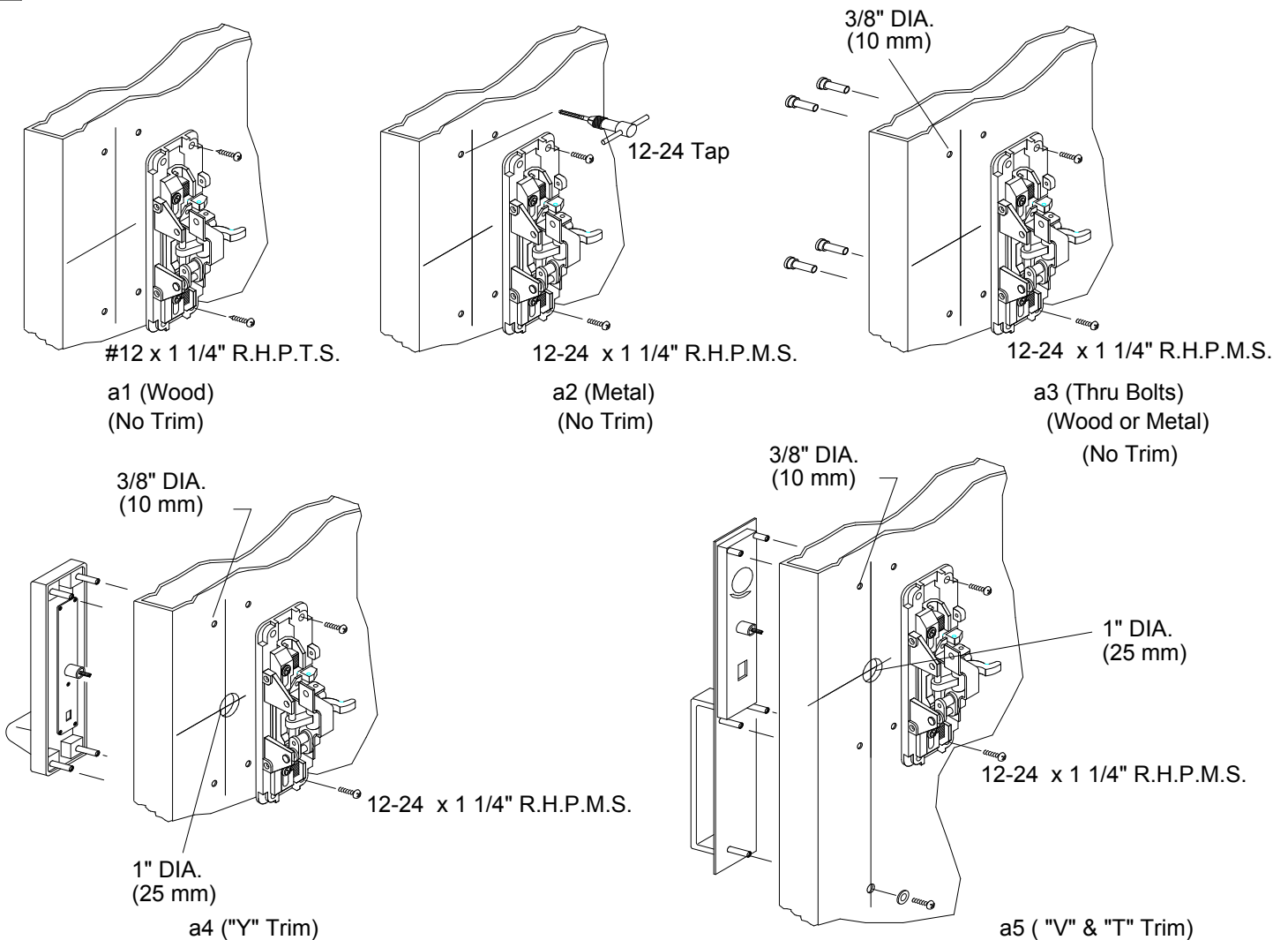


5 Refer to carton label for model and trim number prior to drilling.

Refer to Template T9400, located at rear of instruction booklet for specific hole locations, drill size and screw sizes.



6 Chassis installation. If using GK9000, install shims at this time.

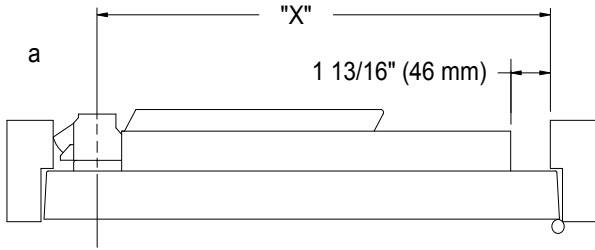


7 Cutting touch bar to length

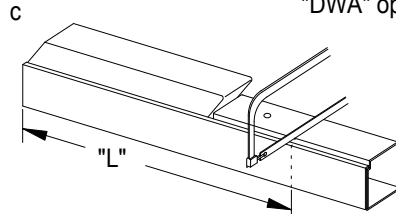
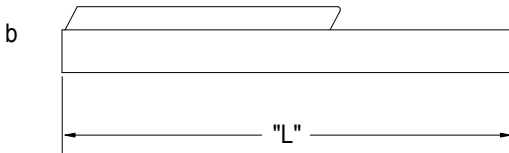
SIZE A:  
Will fit 48" (1219 mm) door opening without cutting.  
Can be cut to fit a 34" (864 mm) minimum door opening.

SIZE B:  
Will fit 36" (914 mm) door opening without cutting.  
Can be cut to fit a 28" (711 mm) minimum door opening.

SIZE C:  
Will fit 30" (762 mm) door opening without cutting.  
Can be cut to fit a 25" (635 mm) minimum door opening.



"L" = "X" - 2 1/2" (64 mm)



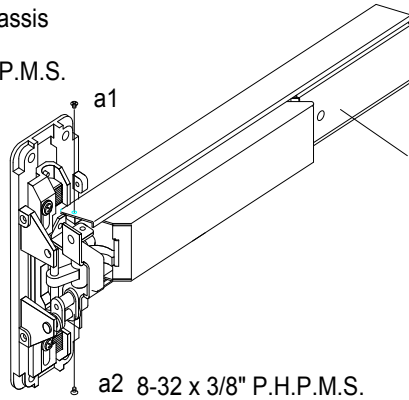
## IMPORTANT

NOTE: Use caution when cutting touchbar to size on units with "ES", "MS", "BPA", "BPAR", "LM", "MD" or "DWA" options. "DO NOT CUT WIRES."

8 Installation of touch bar to chassis

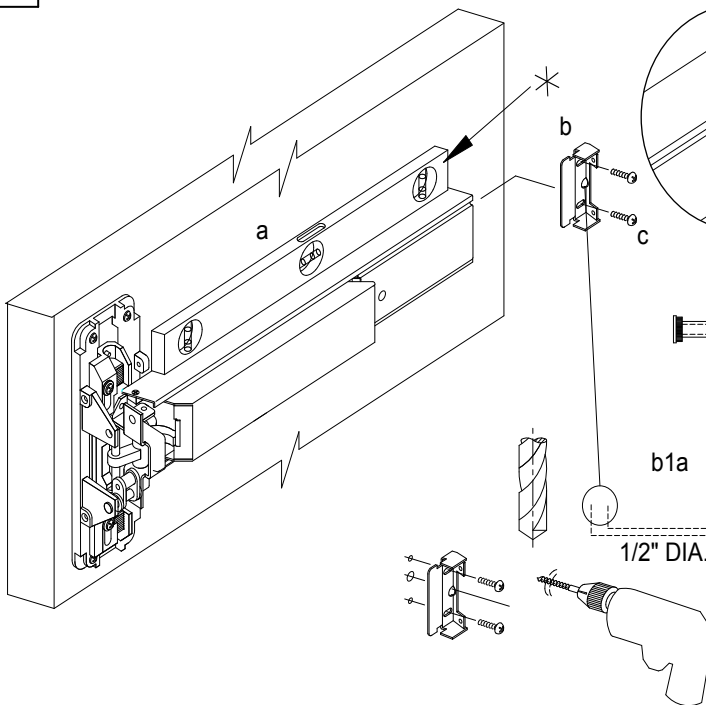
8-32 x 3/8" P.H.P.M.S.

NOTE:  
Chassis screws are shipped in chassis assembly.



NOTE:  
For optional "Filler" installations see "Options" pages (17 & 18) at rear.

9 Standard installation of end cap mounting bracket



NOTE:  
An additional screw may be installed if door is warped or bowed. (Not supplied)

1/8" (3 mm) Drill 1" (25 mm) Deep (Wood)

No. 14 Drill - 12-24 Tap (Metal)

3/8" (10 mm) Dia. (Thru bolts)

**OPTIONAL INSTALLATIONS  
ADDITIONAL HOLE REQUIRED:**



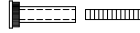
- ES(Electric Latch Retraction)
- MS(Micro Switch)
- LM(Latch Monitor)
- MD (Magnetic Dogging)
- DWA(Direct Wired Alarm)

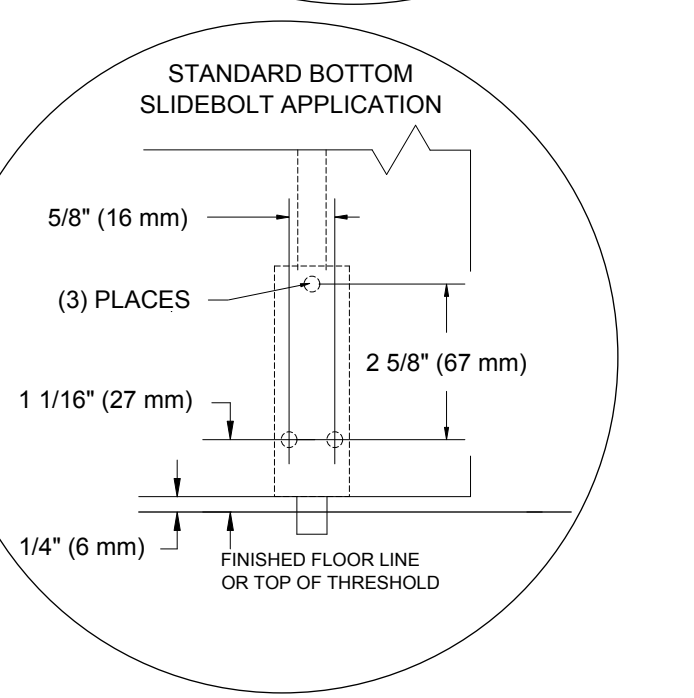
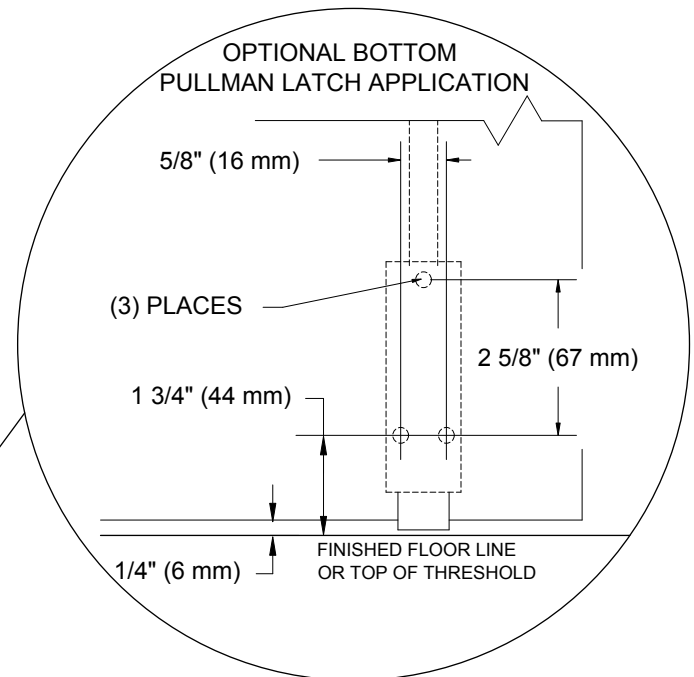
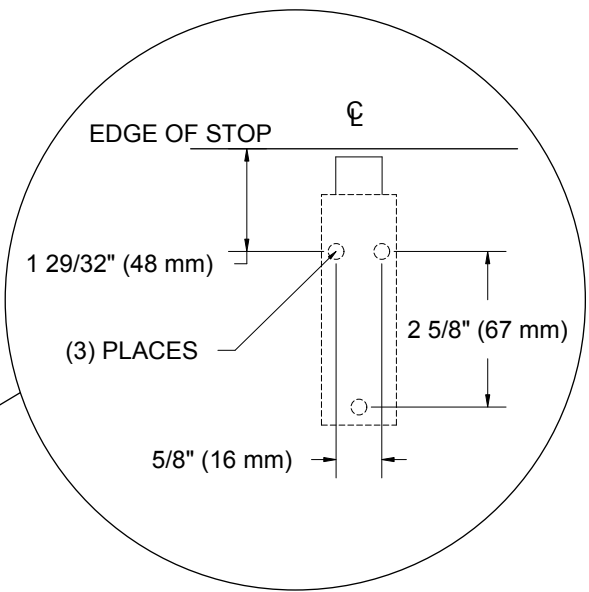
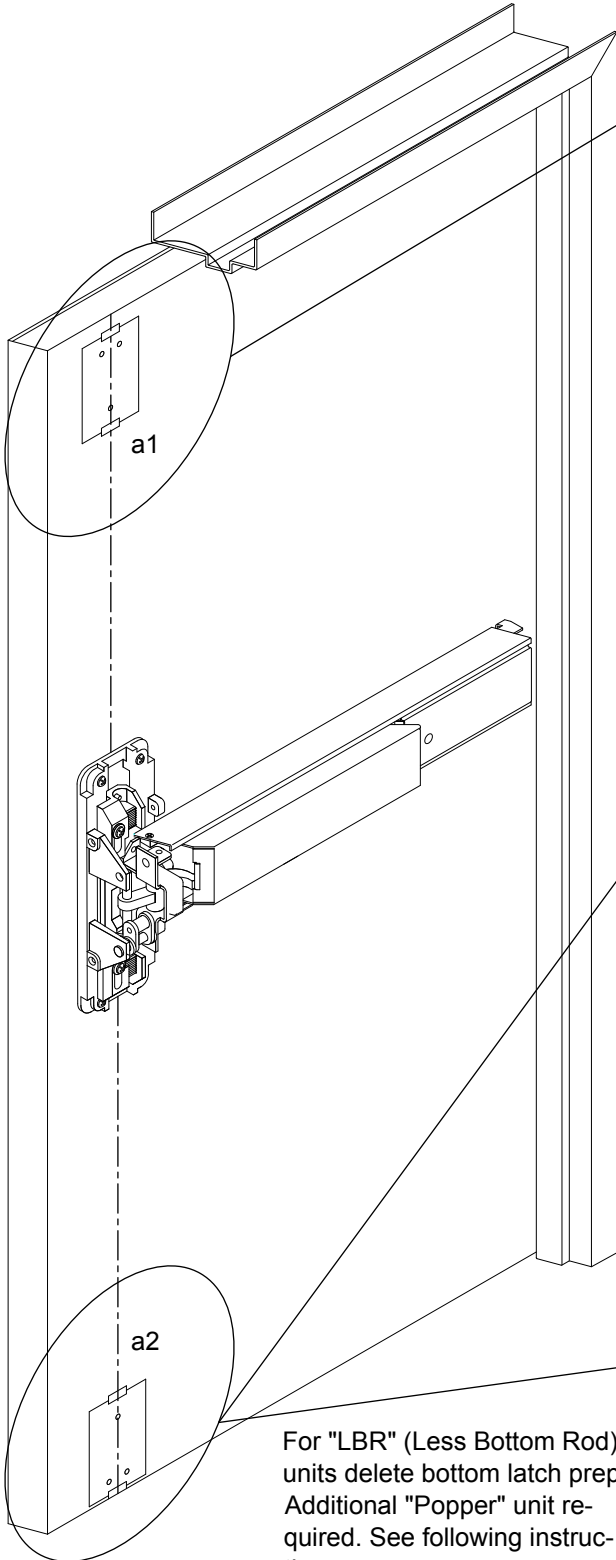
See "OPTIONS" pages for additional information.

10 Top and bottom latch installation. Bottom slidebolt standard, pullman type optional. Refer to latch templates, TSB1/TSB2 or TLB1/TLB2 enclosed with device.

Block open door.




Cut, tape to door, mark and drill holes per template.

-  — 1/8" (3 mm) Drill 1" (25 mm) Deep (Wood)
-  — No. 14 Drill - 12-24 Tap (Metal)
-  — 3/8" (10 mm) Dia. (Thru bolts)



For "LBR" (Less Bottom Rod) units delete bottom latch prep. Additional "Popper" unit required. See following instructions.

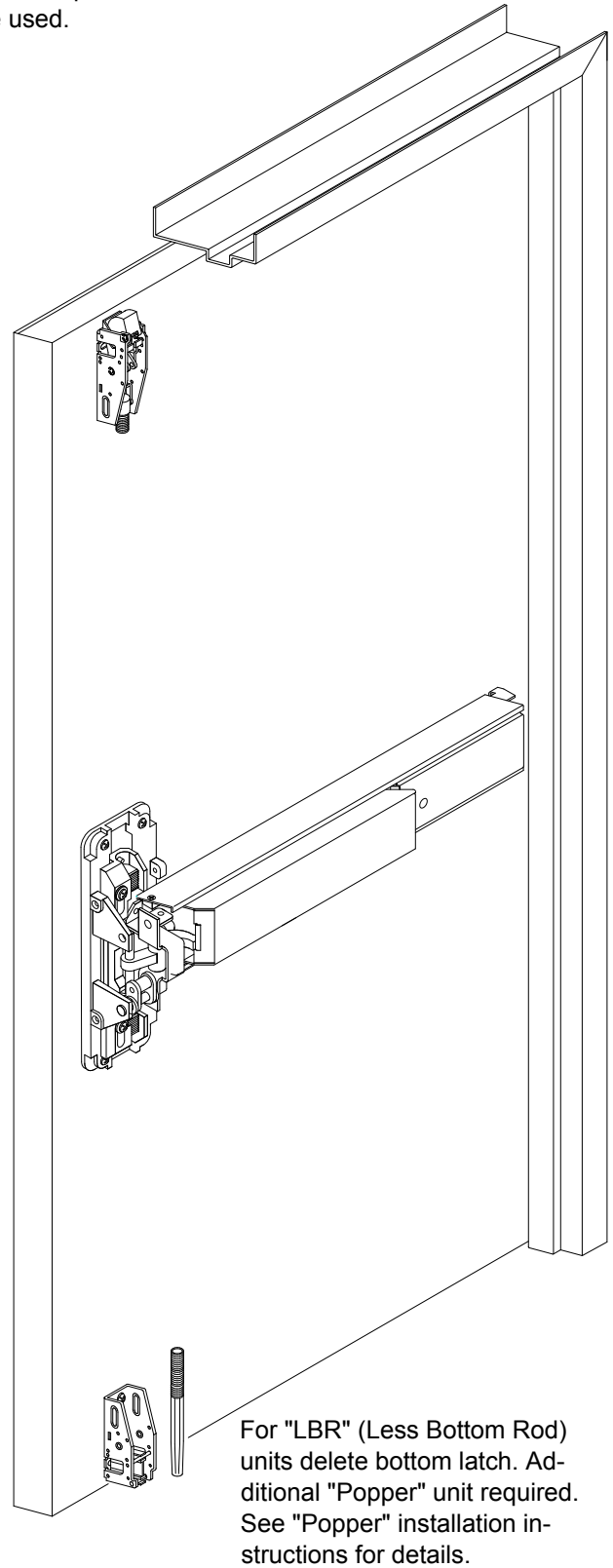
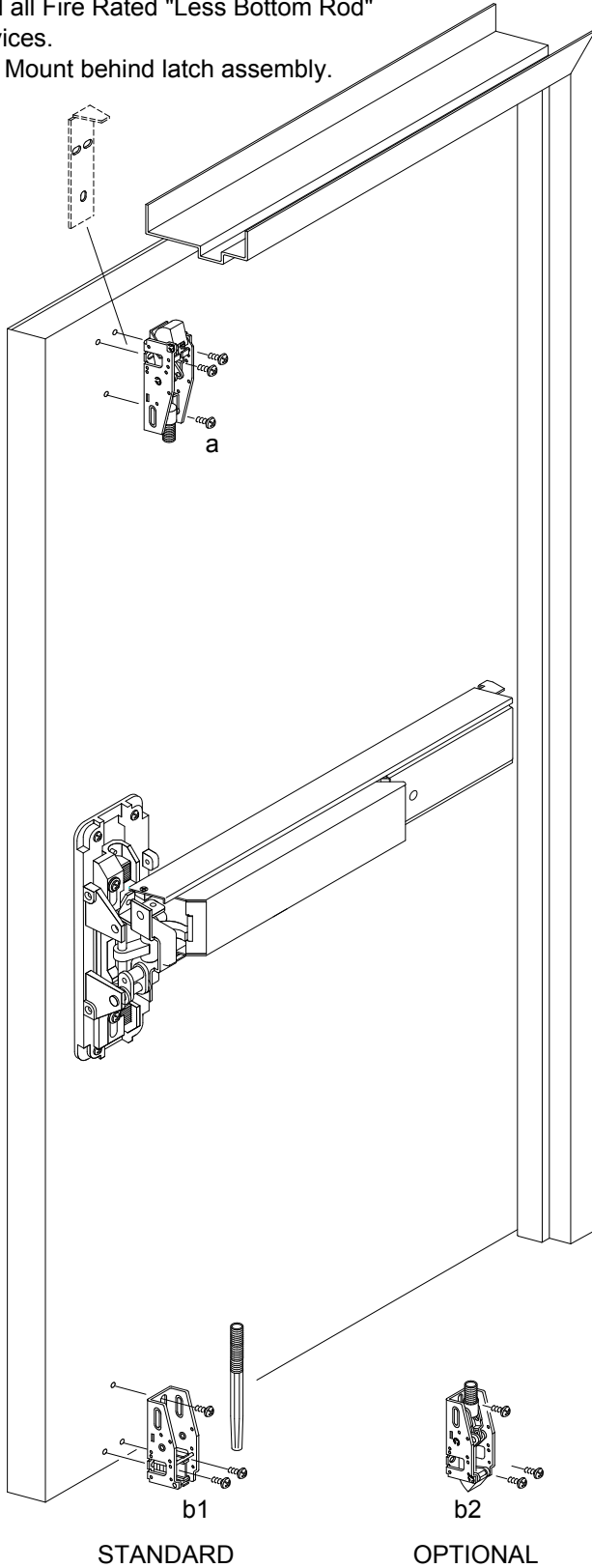
11 Install top and bottom latch assemblies with screws provided.

- —No. 12 x 1" (25 mm) R.H.P.T.S. (Wood)
- —12-24 x 1/2" (13 mm) R.H.P.M.S. (Metal)
- —12-24 x 1 1/4" (32 mm) R.H.P. M.S. (Thru bolts)

**INTER-LOCKING STRIKE ANGLE**  
 Fire Rated doors over 8' (2438 mm)  
 and all Fire Rated "Less Bottom Rod"  
 devices.



Mount behind latch assembly.

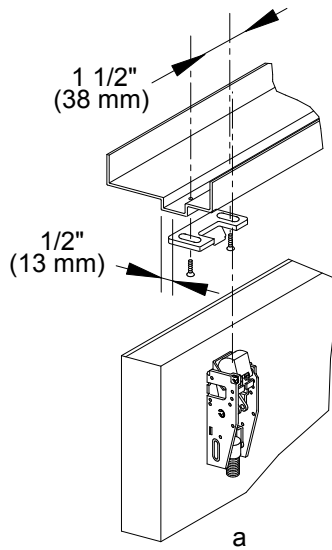
Note: If device is being installed  
 over glass lite panels, GK9000  
 must be used.






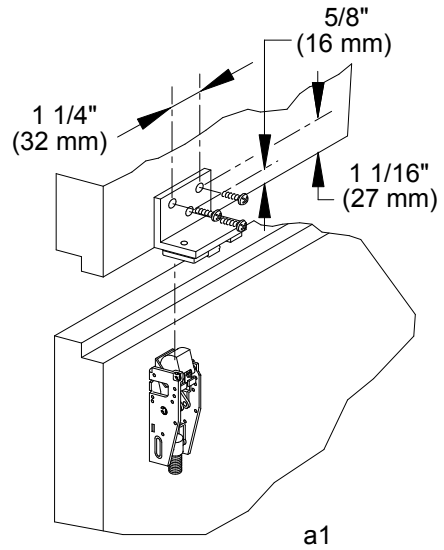


12 Install top strike per template, TSB1/TSB2 or TLB1/TLB2 with screws provided.

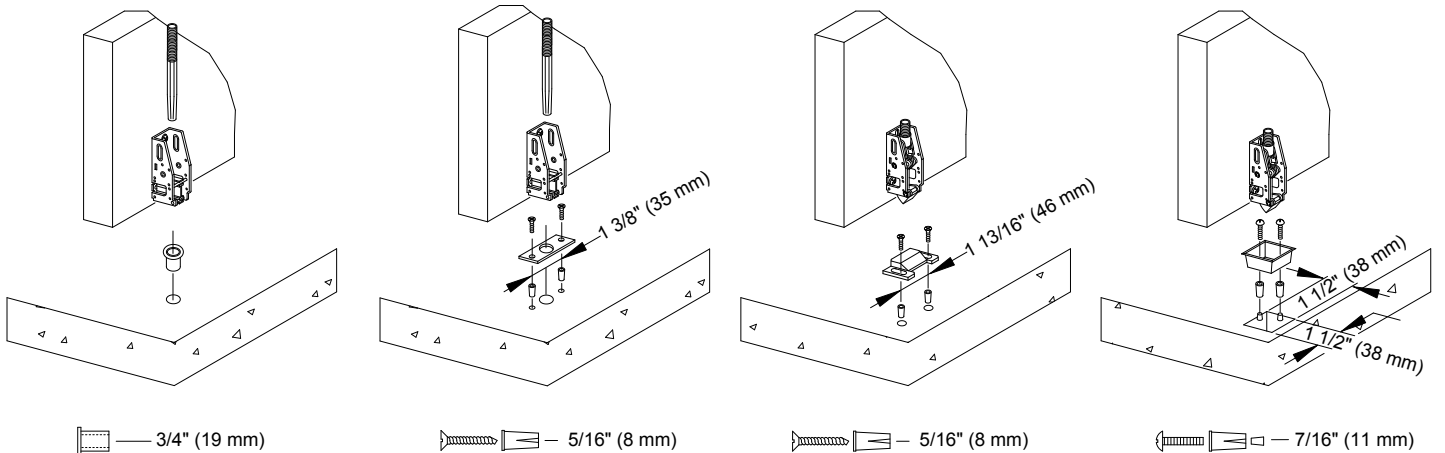
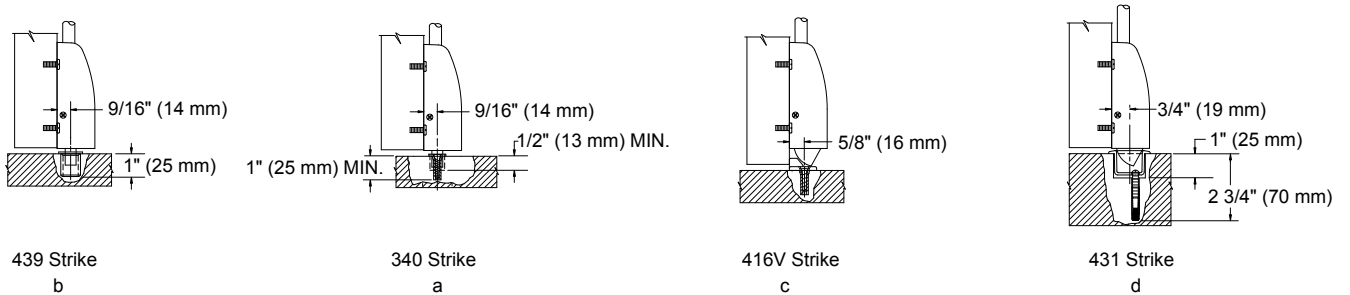
-  — #10 x 1" (25 mm) F.H.P.T.S. (Wood)
-  — 12-24 x 3/4" (19 mm) O.H.P.M.S. (Metal)



-  — #10 x 1" (25 mm) R.H.P.T.S. (Wood)
-  — 12-24 x 1" (25 mm) R.H.P.M.S. (Metal)
-  — 12-24 x 1" (25 mm) R.H.P.M.S. (Thrubolts)



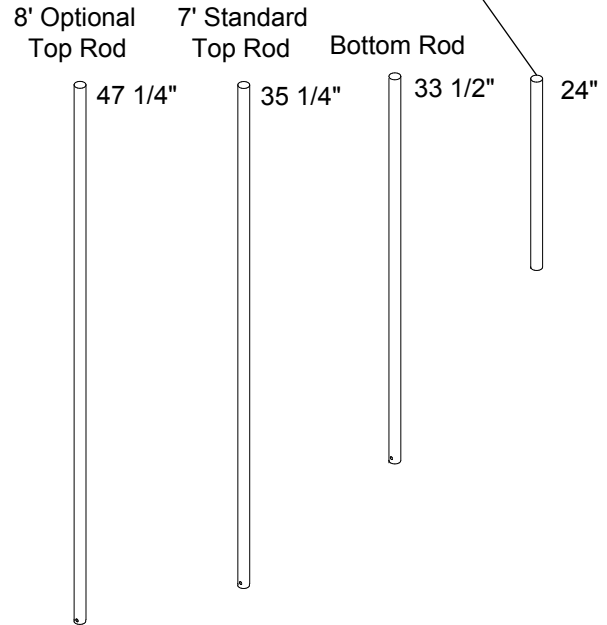
13 Install bottom strike per template, TSB1/TSB2 or TLB1/TLB2 with screws provided.



14 Rods shipped cut to length for 7' (2133 mm) door opening. Optional 8' (2438 mm) door opening available, (must be requested at time of ordering). For doors over 8' (2438 mm) and up to 10' (3048 mm) request "ETR" package at time of ordering. For top rod length other than "standard" see chart below. Order 8' option and cut to length.

For "ETR" (Extended Top Rod) devices.  
\*Do not cut extension piece!

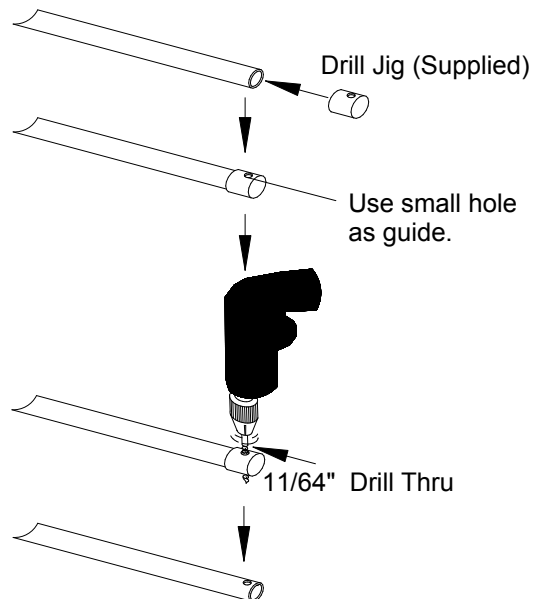
DOOR HEIGHT	TOP ROD LENGTH
6'8"	31 1/4"
6'10"	33 1/4"
7'0"	35 1/4"
7'2"	37 1/4"
7'4"	39 1/4"
7'6"	41 1/4"
7'8"	43 1/4"
7'10"	45 1/4"
8'0"	47 1/4"



**NOTE:**  
 If horizontal reference line is moved from the recommended 40 5/16" (1024mm) height, new rods will have to be ordered.

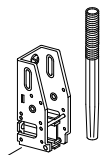
If cutting is required "Do Not Cut Threaded End".

Use 11/64" drill if new hole is required.

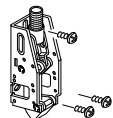


7' (2133 mm) STANDARD  
 8' (2438 mm) (Optional)

STANDARD



OPTIONAL



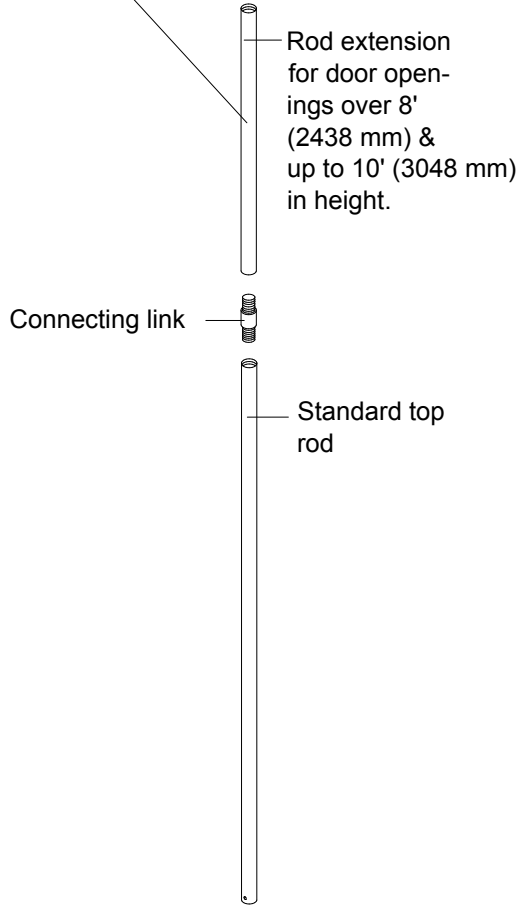
**"Optional Pullman Bottom Latch & #416V Surface Strike"**

NOTE: Bottom rod will require cutting. Cut 11/16" off of end of rod with hole & redrill with drill jig supplied, using 11/64" drill bit.

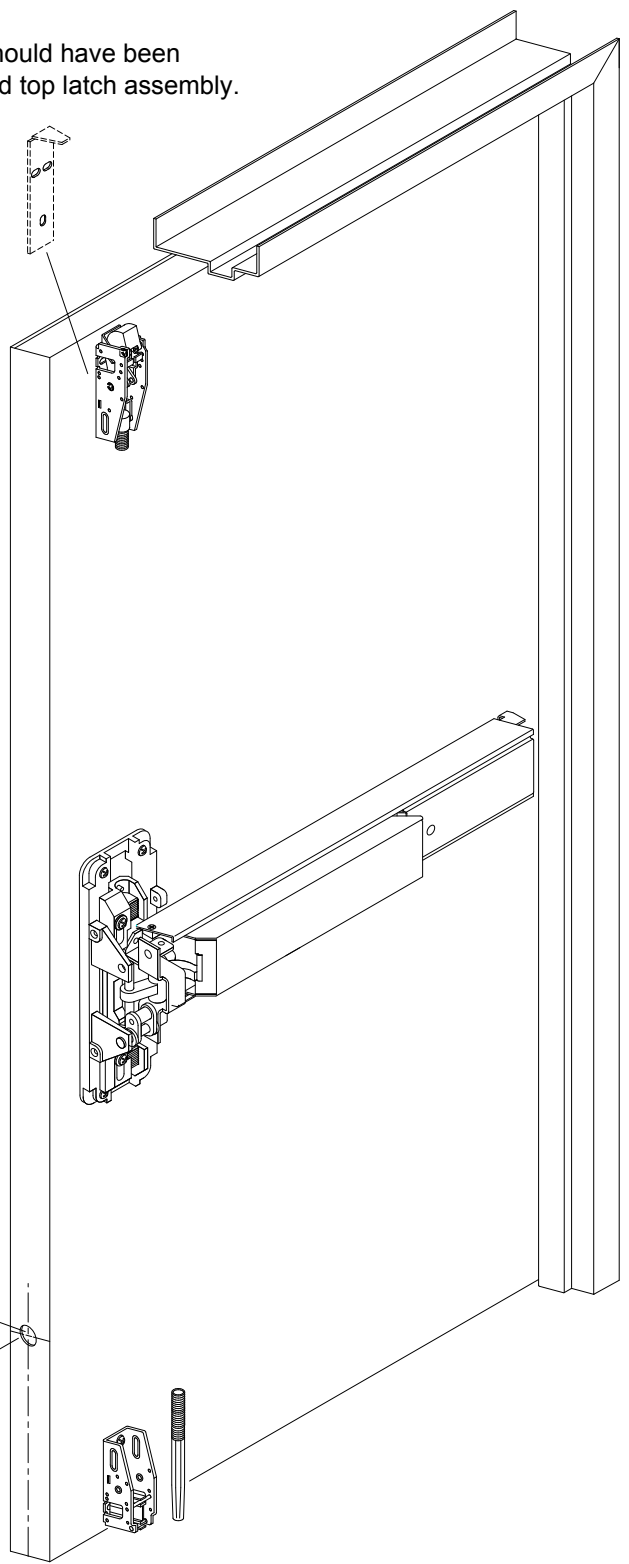
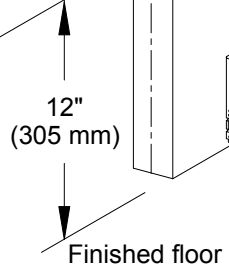
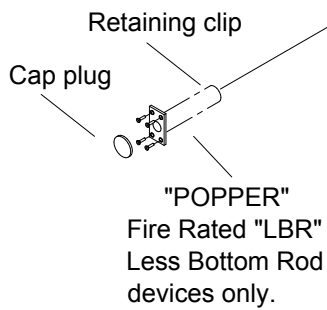
15 For Fire Rated doors over 8' (2438 mm) and all Fire Rated "LBR" (Less Bottom Rod) devices see additional instructions below.

\*NOTE:  
Strike angle should have been installed behind top latch assembly.

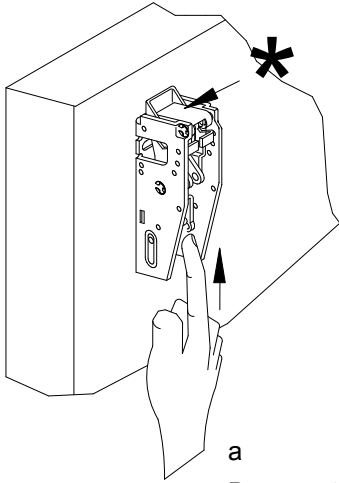
For "ETR" (Extended Top Rod) devices.  
**\*Do not cut extension piece!**



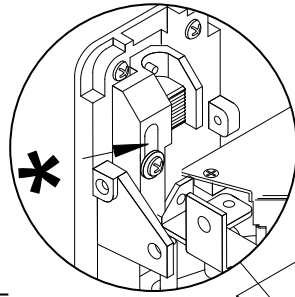
See instructions packaged with "POPPER" for details.



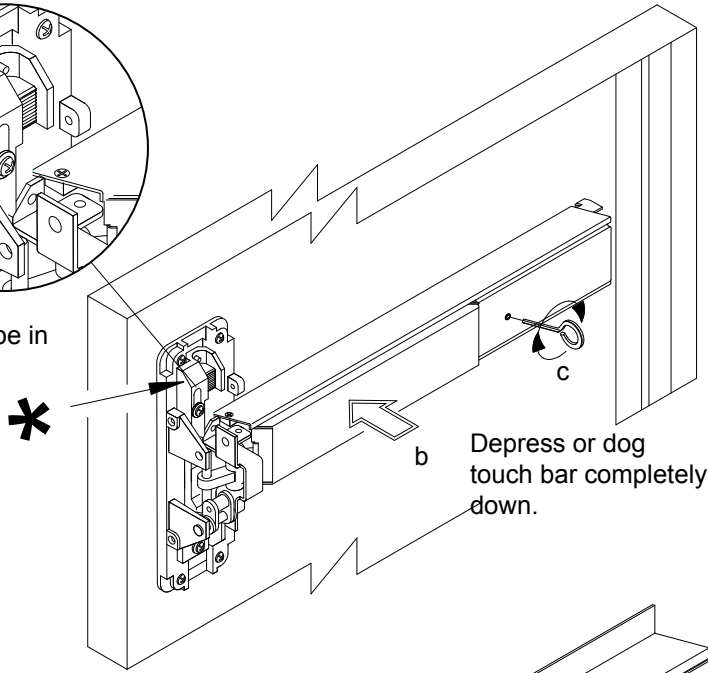
16 To install top rod follow steps below.



a  
Depress top latch

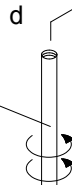
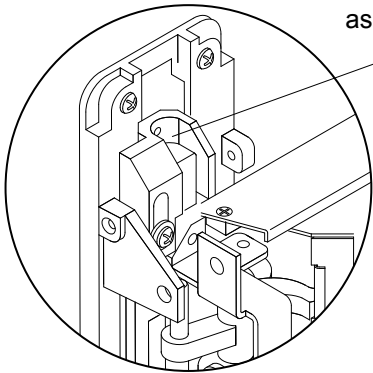


NOTE:  
Bell crank should be in  
full up position.

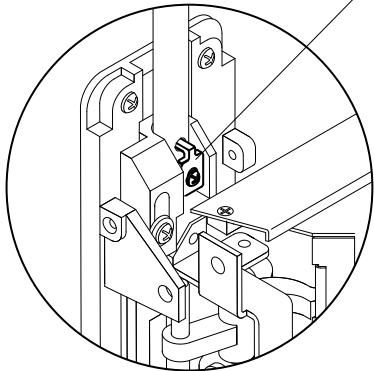


b  
Depress or dog  
touch bar completely  
down.

Thread rod approximately  
1/2 (half way) on to ad-  
justing bolt. Or until drilled  
hole in bottom of rod aligns  
with hole in top of bellcrank.  
Install rod & retaining plate  
as shown.

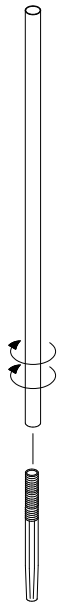


d

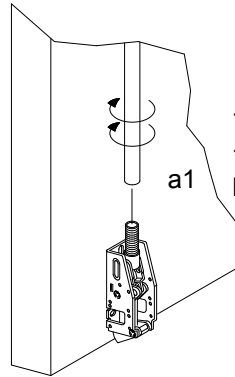


e  
Insert leg of retaining  
plate through hole in rod  
and hole in bellcrank. Install  
and tighten screw as shown.

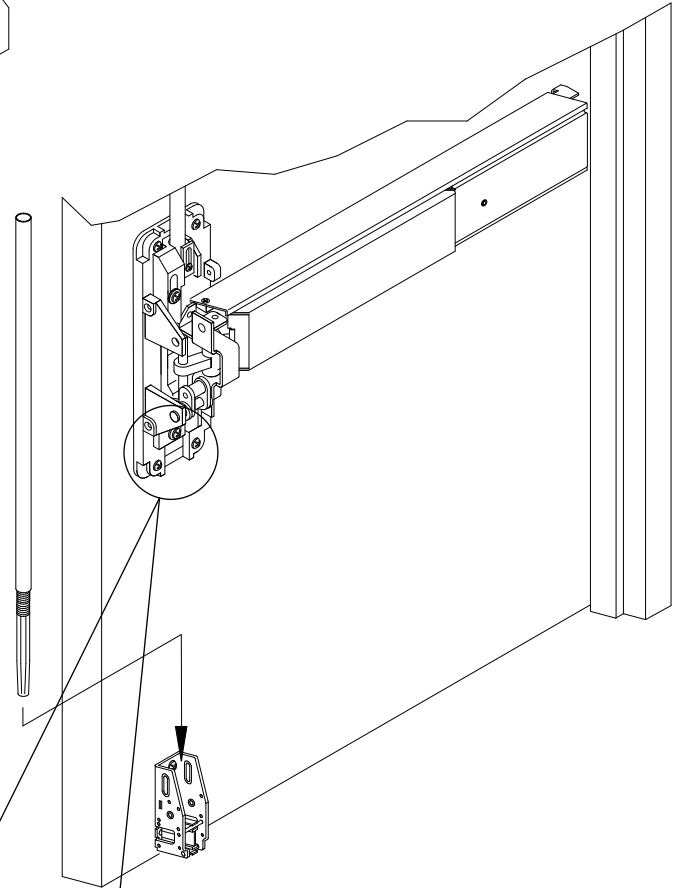
17 To install bottom rod follow steps below.



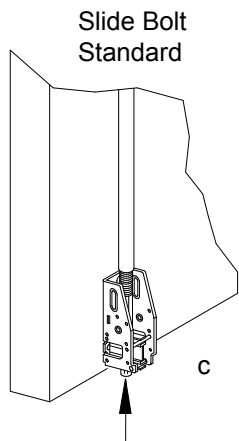
a Thread rod approximately 1/2 (half way) on to bottom slide bolt.



Pullman Type Latch (Optional)  
Thread rod approximately 1/2 (half way) on to adjusting bolt of bottom latch assembly.



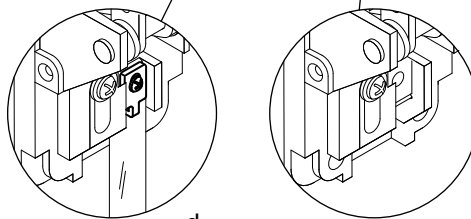
Insert slide bolt/ rod assembly into bottom slide bolt bracket on door.



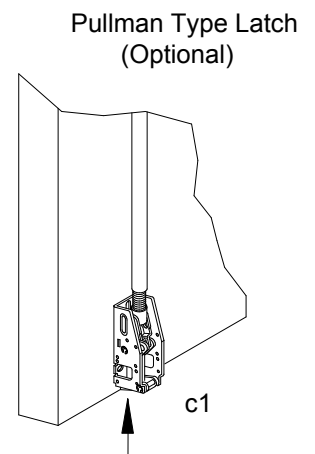
Slide Bolt Standard

c

Pull upward on rod until slide bolt is flush across bottom of bracket. Thread rod up or down as required until hole in rod aligns with hole in bottom of bellcrank. Install retaining plate as shown in step "d". Install screw in retaining plate as shown.



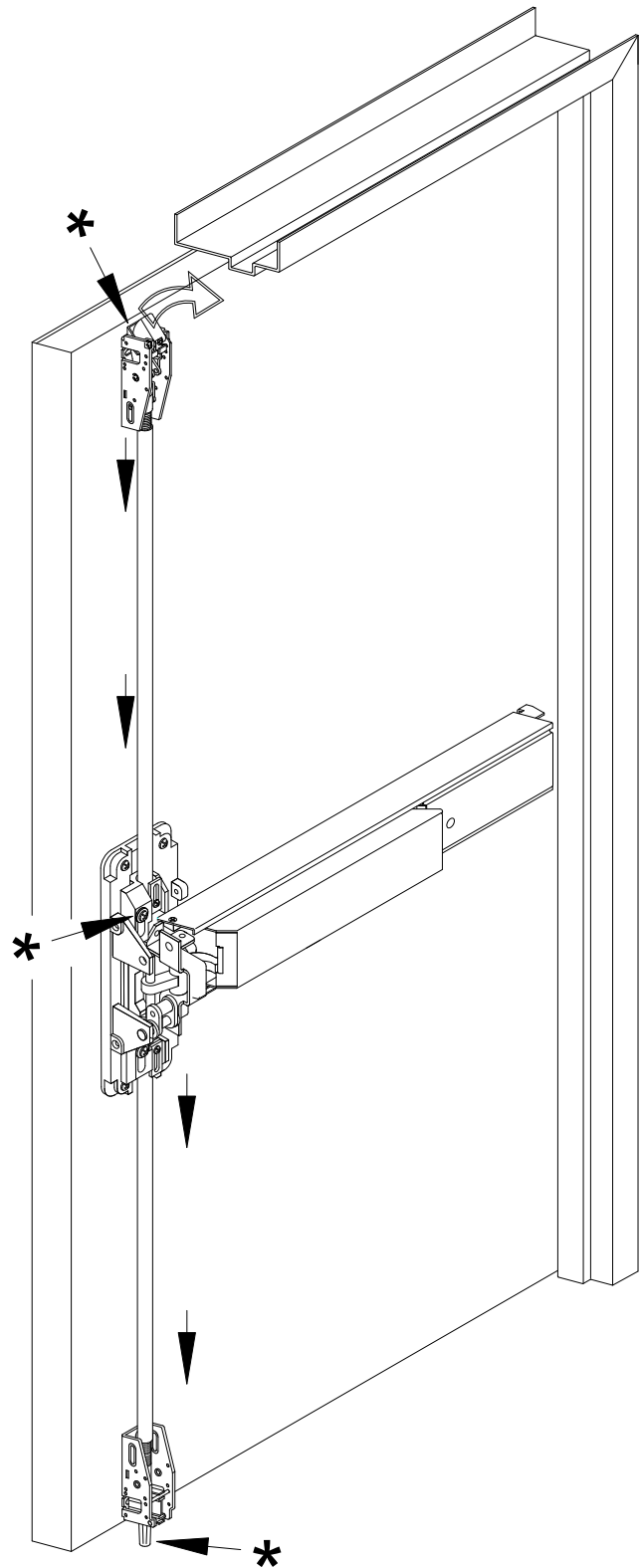
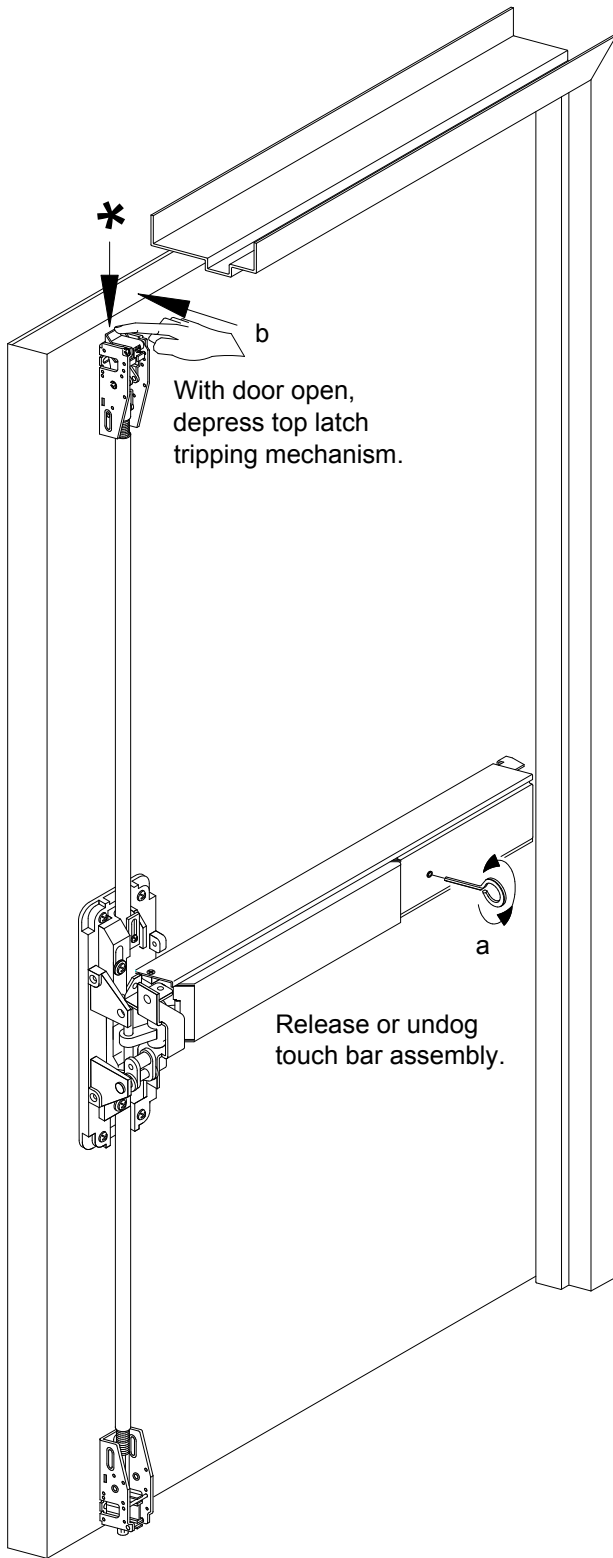
d Insert leg of retaining plate through hole in rod and hole in bellcrank. Tighten screw.



Pullman Type Latch (Optional)

c1

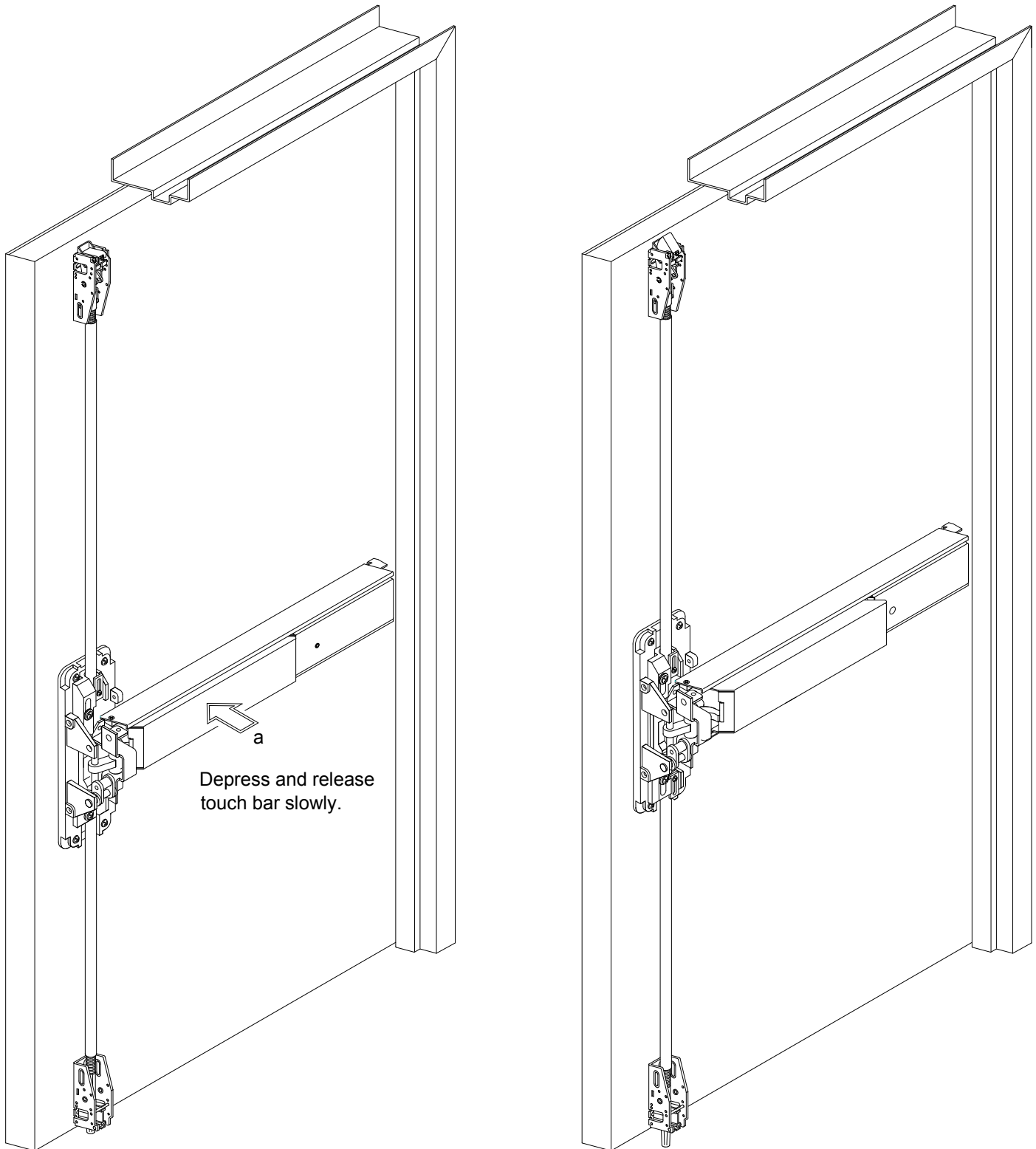
Pull up on rod until latchbolt is flush across bottom of bracket. Thread rod up or down as required until hole in rod aligns with hole in bottom of bellcrank. Install retaining plate as shown in step "d". Install screw as shown.



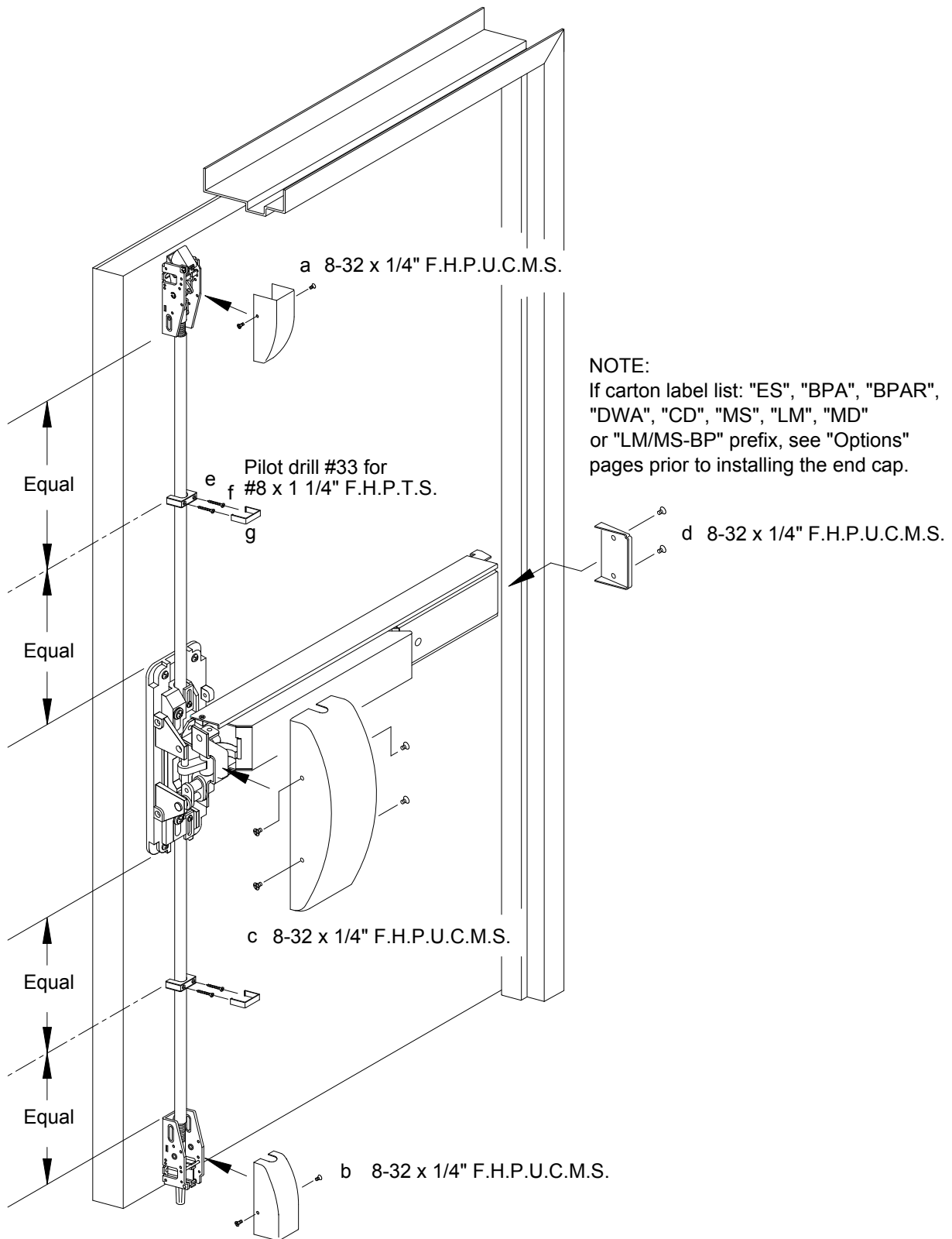
**c** Verify that top latch is extended fully, bellcrank is completely down and bottom slide bolt or latch has extended fully. Verify deadlatching of top latch by attempting to push in on top latch bolt. Bolt should not move. If latch bolt moves inward, top rod is too long you must re-adjust its length. Adjust top rod by removing the retaining plate. Rotate rod clockwise (right) to shorten and counter clockwise (left) to lengthen. Adjust half turn at a time.

After dead latch function has been verified, install retaining plate & screw. Re-check bottom slide bolt or latch for proper adjustment. Bottom slide bolt or latch should be flush across bottom of latch bracket when latches are held retracted by tripping mechanism in top latch. Re-adjust bottom rod if necessary.

Note: Door to be in blocked open position.



With rods properly adjusted, remove block and allow door to close. Check for proper engagement of latch bolts in strikes. Open and close door several times to insure proper alignment and function of device. If additional adjustments are made, be certain to tighten all screws when completed. Latch bolts should remain retracted (captured by tripping lever) when touch bar is released and door is in open position and should extend fully into strikes as door closes and tripping lever is activated. Check outside trim operation as well for proper function.



**General Maintenance Notes:**

The DORMA 9000 Series Exit Devices are designed to give years of trouble free service, however depending on installation, location, climate conditions etc. routine maintenance is recommended in all latch bolt locations. The device should be periodically cleaned and re-lubricated to ensure proper function and operation of all moving parts. (ie; Dura-Lube, etc.)

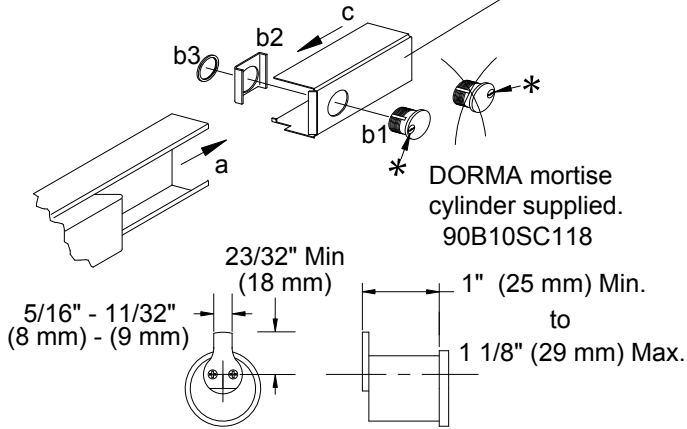


# OPTIONS

## "CD" CYLINDER DOGGING OPTION:

Cylinder dogging installation instructions & cylinder specifications.

NOTE: Touch bar must be in dogged down position, to remove the rear filler panel.



Useable Cams

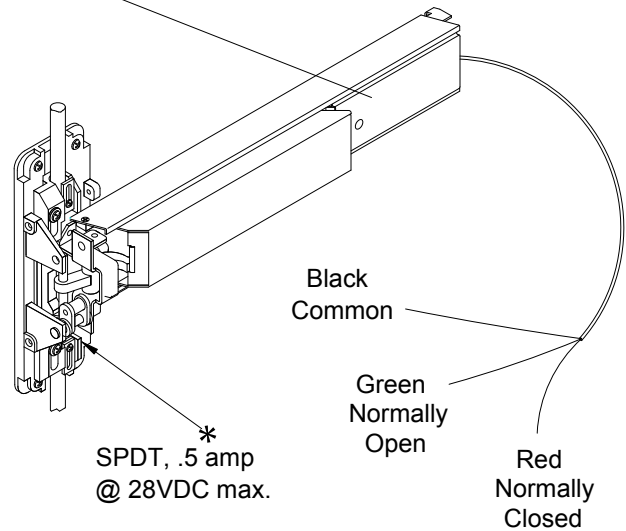
Arrow	001
Assa	Std. (Yale)
Best	C136
Corbin/Ruswin	A02
DORMA	10
Falcon	12667-3
Ilco/Unican	SC1
Lori	SC1 4200-82-2002 Std.
Sargent	13-0664 or 13-0660
Schlage	001
Yale	2160

## "LM" LATCH MONITOR OPTION:

Latch monitor: Monitors movement of latch bolt, with or without depressing of touch bar.  
Can be wired normally open or normally closed.

NOTE: Touch bar must be in dogged down position, to remove the rear filler panel.

\*NOTE: Use caution when cutting touch bar and rail to length.



## "BPA" & "BPAR" ALARM OPTION: (STANDARD INSTALLATION)

BPA: Battery powered alarm, sounds continuous or until disarmed.

BPAR: Battery powered alarm, sounds for 4 minutes, automatically resets.

"Alarm mode set at factory."

### SIZE A:

Will fit 48" (1219 mm) door opening without cutting.  
Can be cut to fit a 39" (991 mm) minimum door opening.

### SIZE B:

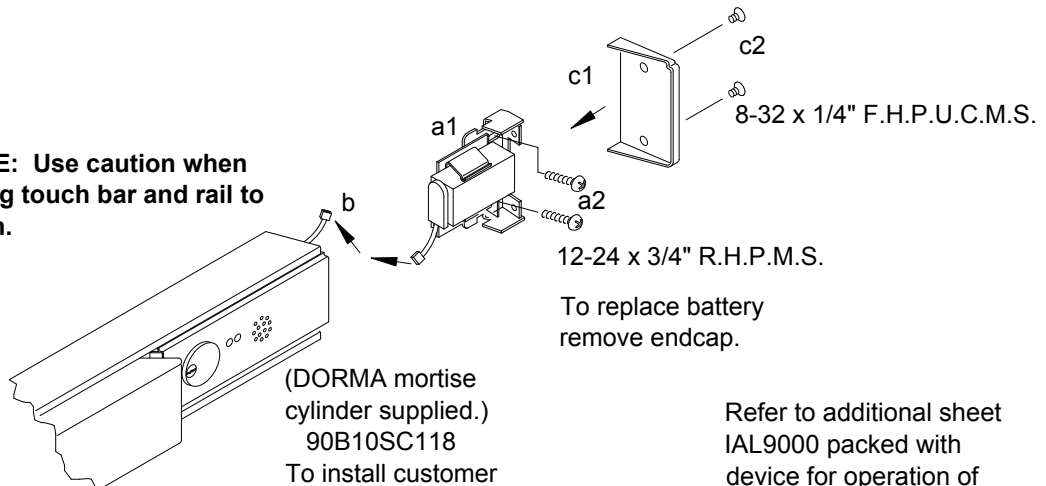
Will fit 36" (914 mm) door opening without cutting.  
Can be cut to fit a 33" (838 mm) minimum door opening.

### SIZE C:

Will fit 36" (914 mm) door opening without cutting.  
Can be cut to fit a 30" (762 mm) minimum door opening.

\*NOTE: Use caution when cutting touch bar and rail to length.

NOTE: Touch bar must be in dogged down position, to remove the rear filler panel.



(DORMA mortise cylinder supplied.)  
90B10SC118  
To install customer supplied cylinder, see cylinder dogging option at top of page.

To replace battery remove endcap.

Refer to additional sheet IAL9000 packed with device for operation of alarmed exit device.

# OPTIONS

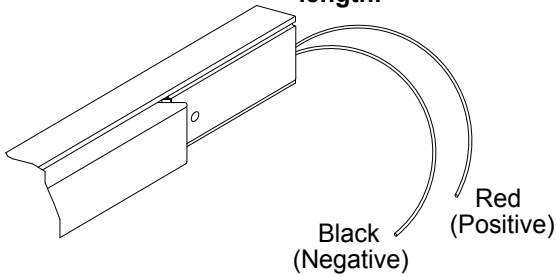
## "ES" ELECTRIC LATCH RETRACTION OPTION:

Electrically retracts latchbolt(s) when energized by power supply.

REQUIRES DORMA PS-501 POWER SUPPLY, WILL NOT OPERATE FROM OTHER MANUFACTURES POWER SUPPLIES.

PS-501 Will operate (2) "ES" 9400 exit devices. By adding a second "ES2" logic card, (2) additional "ES" 9400 exit devices may be used.

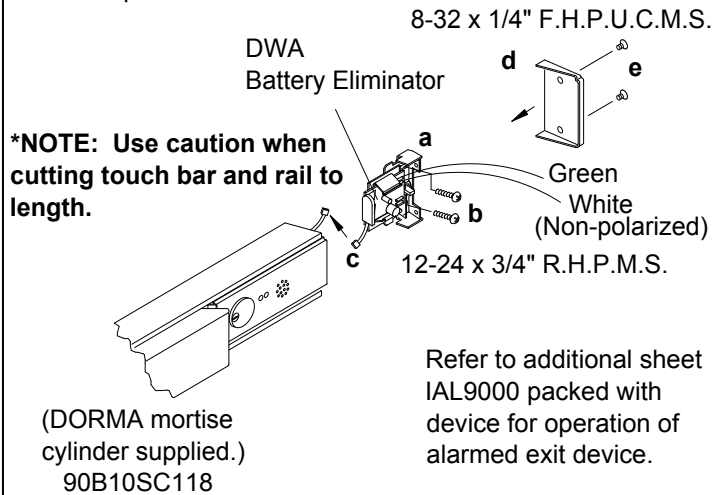
**\*NOTE: Use caution when cutting touch bar and rail to length.**



## "DWA" DIRECT WIRED ALARM OPTION:

Connected to outside power source. 12-24 Volt AC/DC Power Supply. i.e. DORMA ES-100. Contact DORMA for other power supplies available.

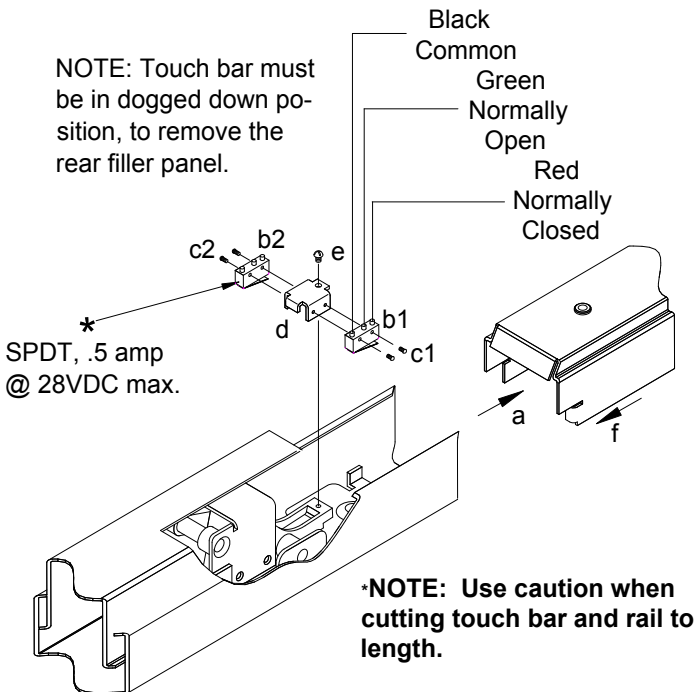
NOTE: Touch bar must be in dogged down position, to remove the rear filler panel.



## "MS" MICRO SWITCH OPTION:

"MS" option allows monitoring of touch bar during normal operation, or can be used as a signal switch for horn, light etc. Come standard with (2) two micro switches. Both can be wired either Normally Open or Normally Closed. Can be added to device after installation.

NOTE: Touch bar must be in dogged down position, to remove the rear filler panel.



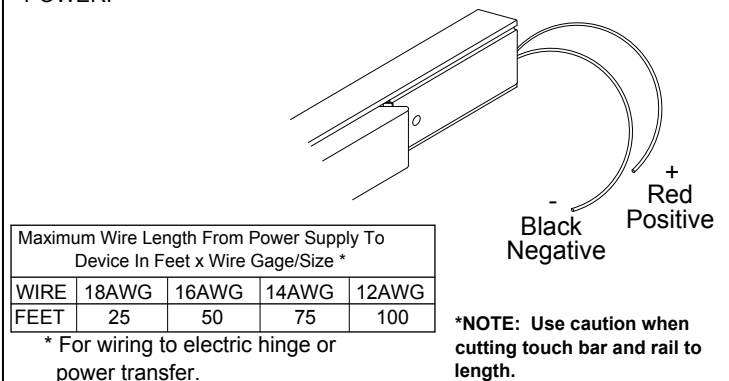
## "MD" MAGNETIC DOGGING OPTION:

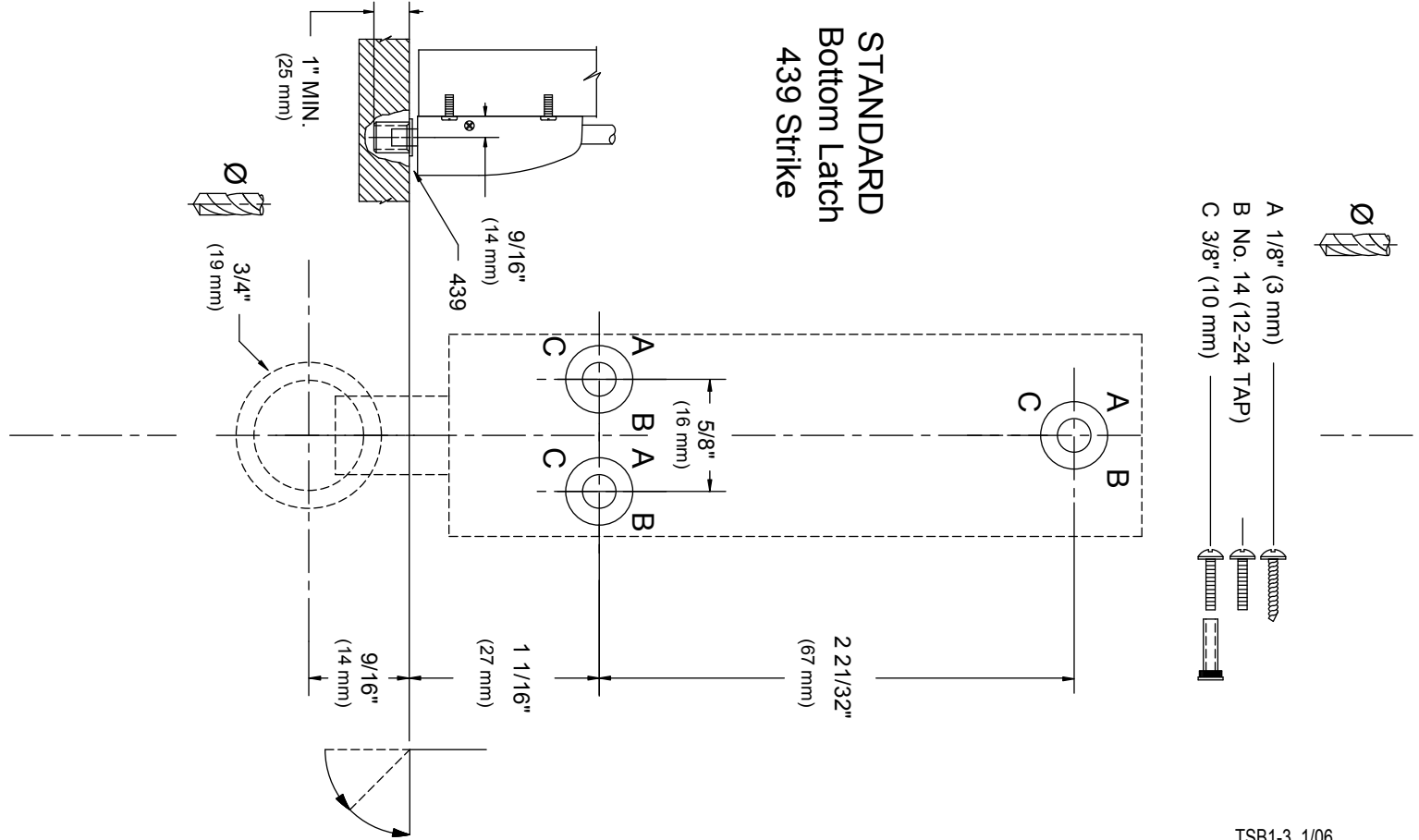
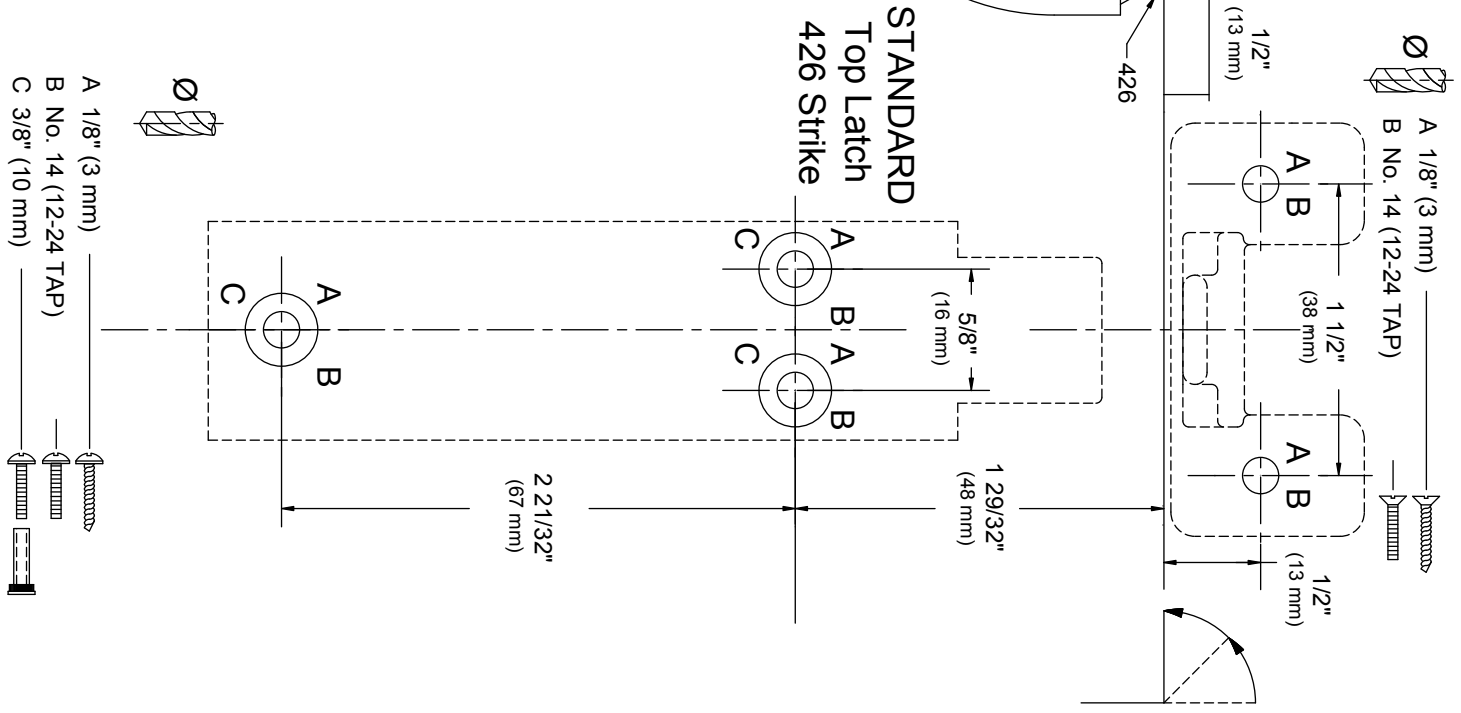
Electrically dogs touch bar when energized by power supply, then depressed. Releases upon interruption of power. .25 AMP CURRENT DRAW @ 24VDC

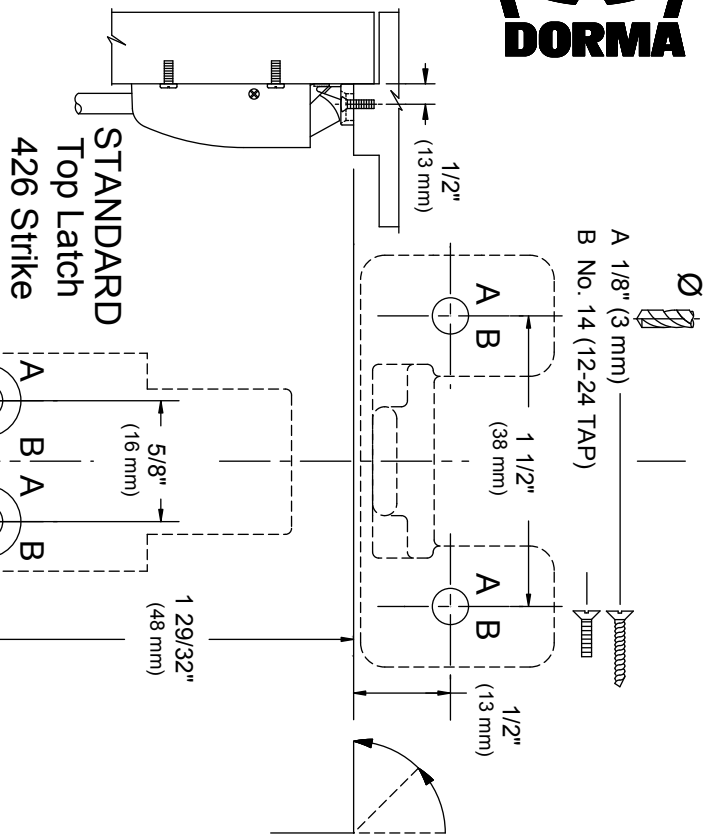
REQUIRES DORMA PS-545 POWER SUPPLY CAPABLE OF POWERING 1 - 4 "MD" DEVICES. THE USE OF A POWER TRANSFER, ES105 OR AN ELECTRIC HINGE PTH-2 IS RECOMMENDED.

FITS "STANDARD" TOUCH BAR AND RAIL ASSEMBLIES ON BOTH THE 5000 AND 9000 SERIES EXIT DEVICES. NOT AVAILABLE ON DEVICES SUCH AS "ES", "DE", "AL", BPA, BPAR, DWA, DWRA ETC.

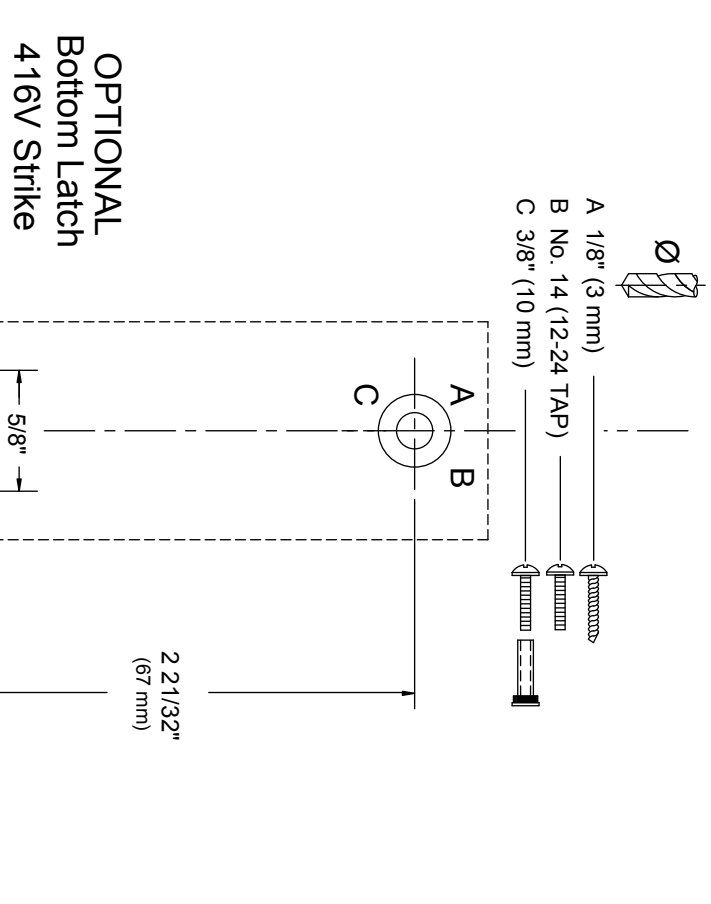
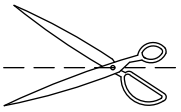
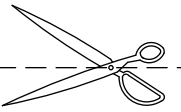
MAXIMUM HOLDING FORCE 40# - 60#. IMMEDIATE RELEASE UPON REMOVAL OF POWER.



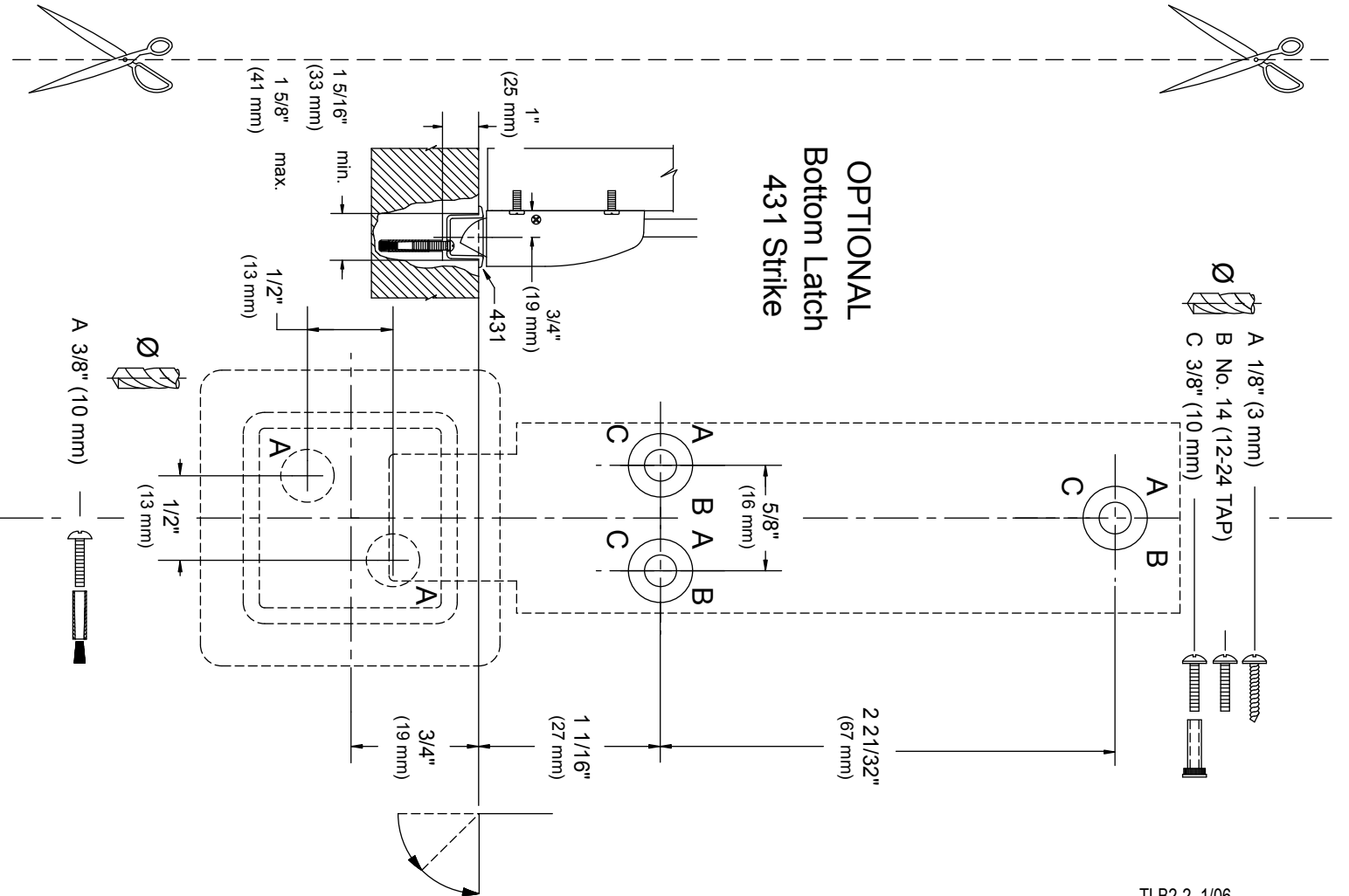
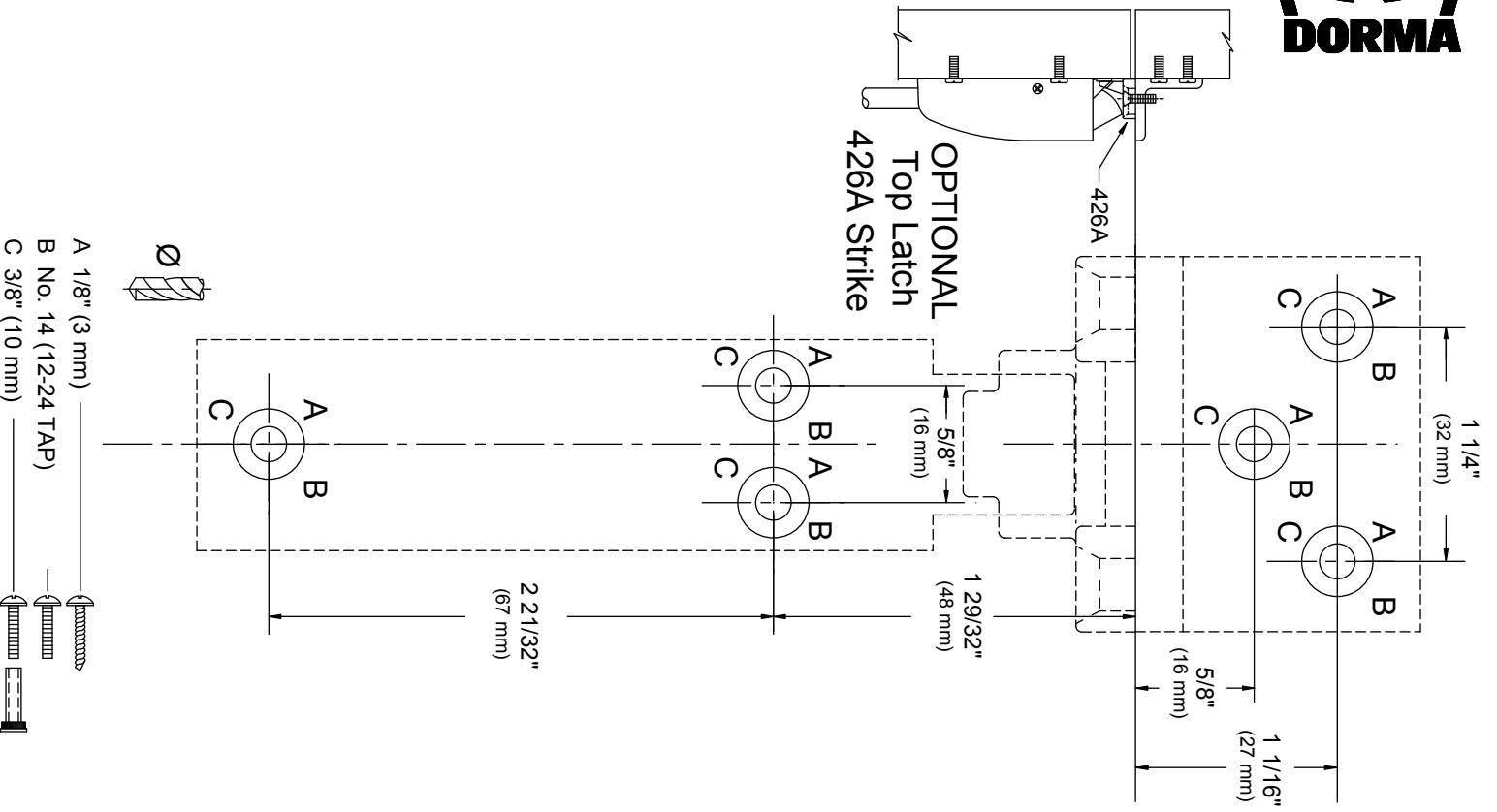




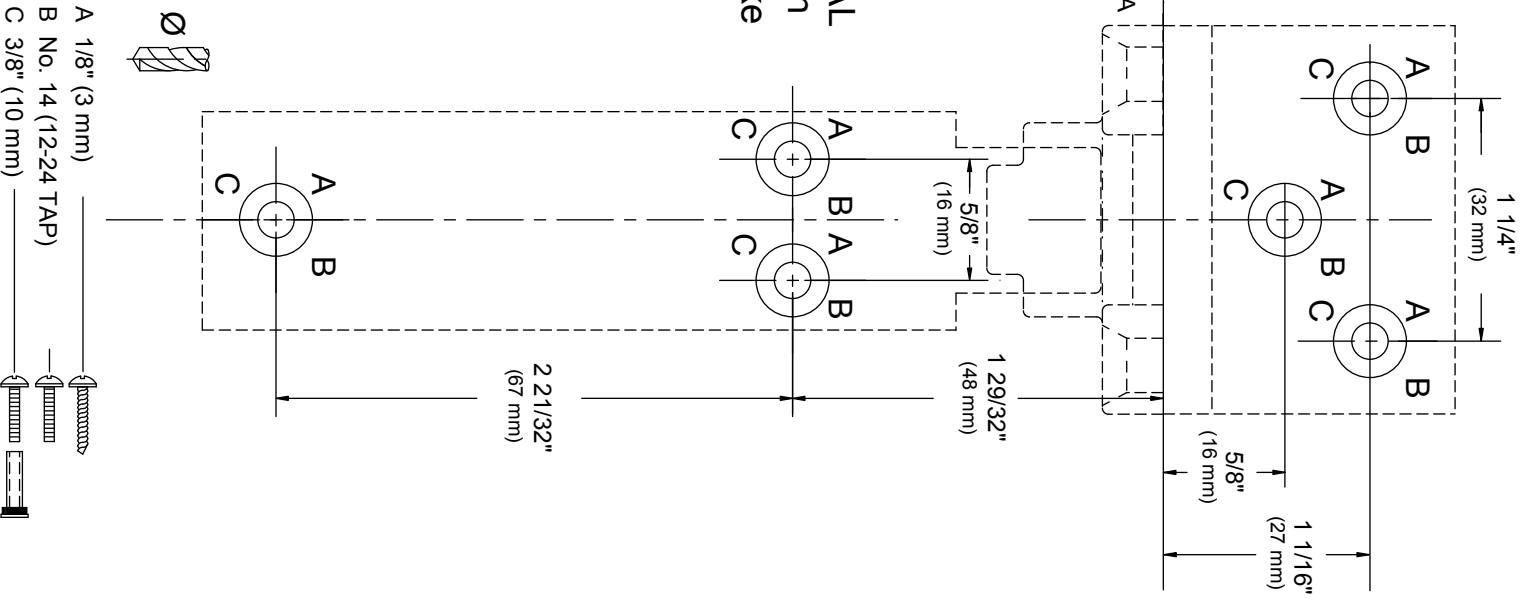
- A 1/8" (3 mm)
- B No. 14 (12-24 TAP)
- C 3/8" (10 mm)



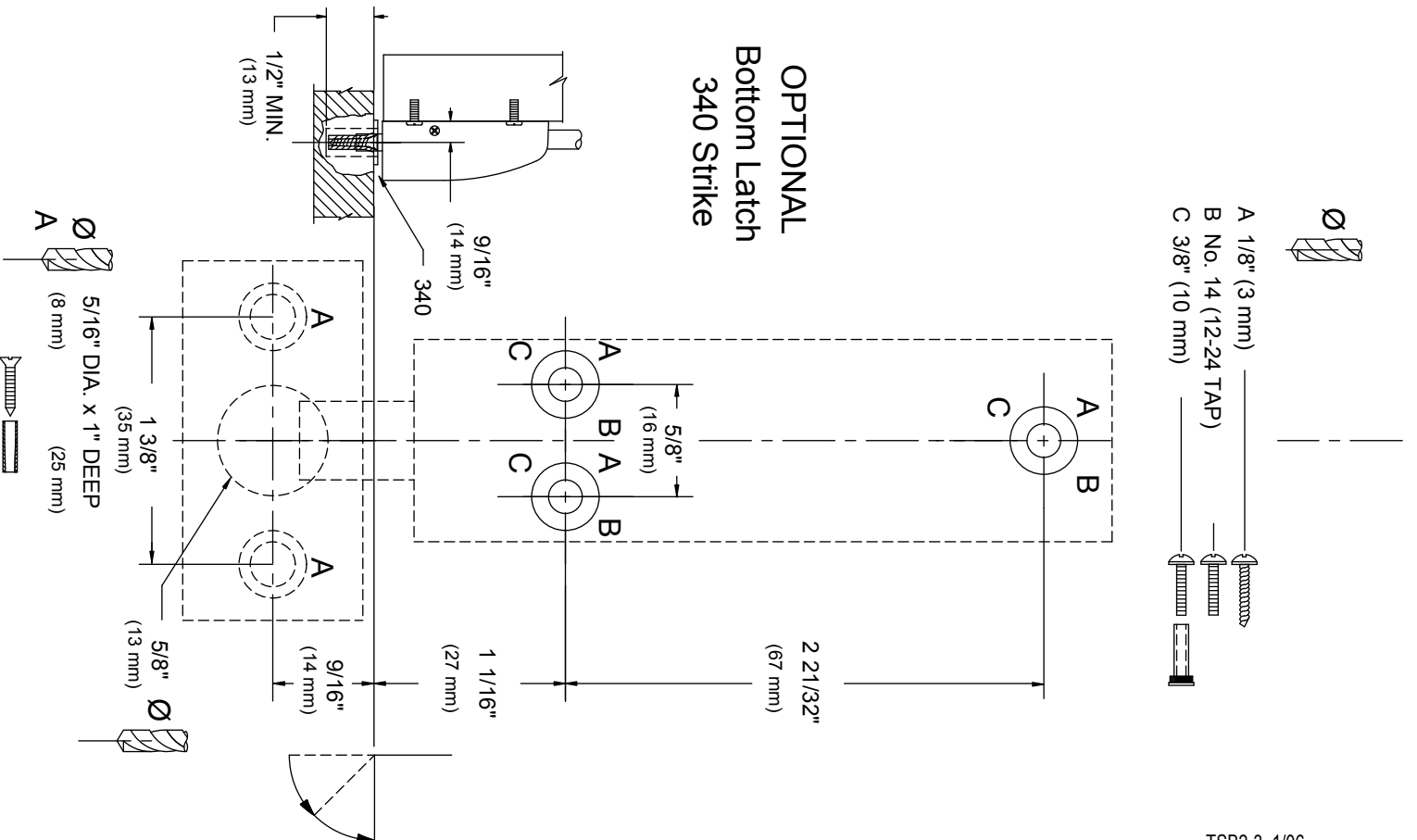
- A 1/8" (3 mm)
- B No. 14 (12-24 TAP)
- C 3/8" (10 mm)



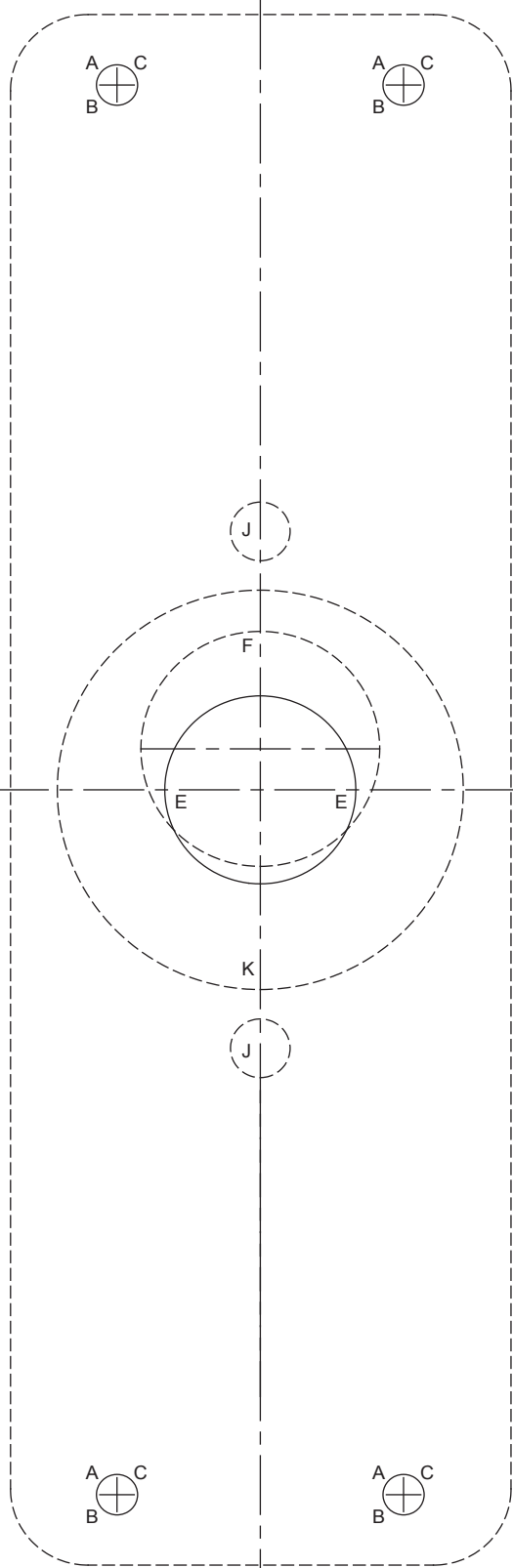
**OPTIONAL  
Top Latch  
426A Strike**



**OPTIONAL  
Bottom Latch  
340 Strike**



**INSIDE DOOR PREP  
(VERTICAL REFERENCE)**



DRILL CHART



- A 1/8" (3 mm) DIA. DRILL 1" (25 mm) DEEP
- B NO. 14 DRILL 12-24 TAP
- C 3/8" (10 mm) DIA. THRU

- C 3/8" (10 mm) DIA. THRU
- E 1" (25.4 mm) DIA. THRU FOR "08" FUNCTION
- F 1 1/4" (32 mm) DIA. THRU FOR "03" FUNCTION

- C 3/8" (10 mm) DIA. THRU
- E 1" (25.4 mm) DIA. THRU FOR "05" FUNCTION
- F 1 3/8" (35 mm) DIA. THRU FOR "03" FUNCTION

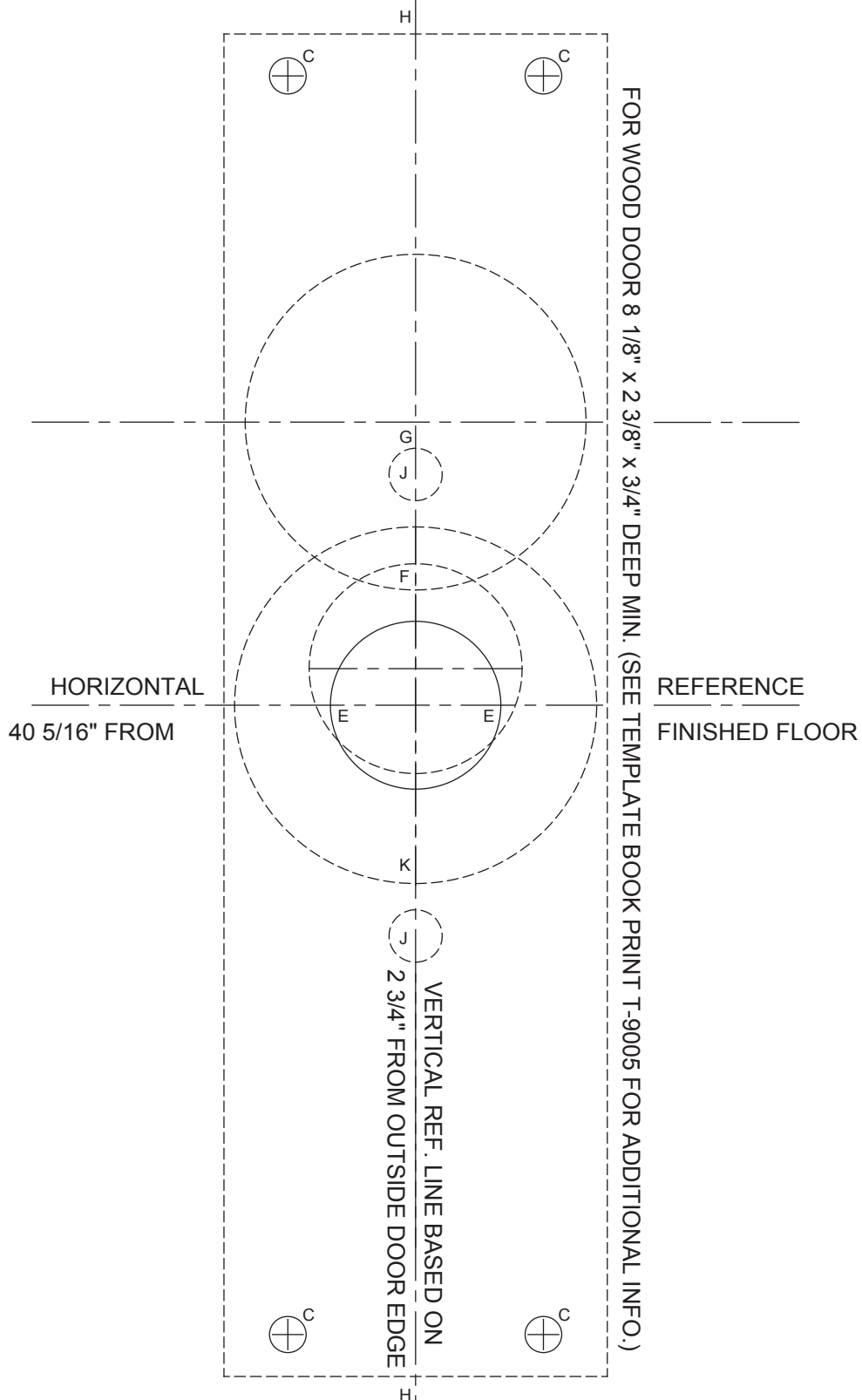
- D 1/2" (13 mm) DIA. THRU

- J 5/16" (8mm) DIA. THRU DOOR - C08, R08 & K08
- K 2 1/8" (54mm) DIA. THRU DOOR - C08, R08 & K08

- B NO. 14 DRILL 12-24 TAP



**OUTSIDE DOOR PREP  
(VERTICAL REFERENCE)**



HORIZONTAL  
40 5/16" FROM

REFERENCE  
FINISHED FLOOR

FOR WOOD DOOR 8 1/8" x 2 3/8" x 3/4" DEEP MIN. (SEE TEMPLATE BOOK PRINT T-9005 FOR ADDITIONAL INFO.)

VERTICAL REF. LINE BASED ON  
2 3/4" FROM OUTSIDE DOOR EDGE

DRILL CHART



- C 3/8" (10 mm) DIA. THRU

- C 3/8" (10 mm) DIA. THRU
- G 2" (51 mm) DIA. OUTSIDE FACE "08" FUNCTION
- E 1" (25.4 mm) DIA. THRU FOR "08" FUNCTION
- F 1 1/4" (32 mm) DIA. THRU FOR "03" FUNCTION

- C 3/8" (10 mm) DIA. THRU
- F 1 3/8" (35 mm) DIA. THRU FOR "03" FUNCTION
- H 2 1/4" (57 mm) x 8" (203 mm) CUTOUT OUTSIDE FACE ONLY FOR "05" & "22" FUNCTION

- D 1/2" (13 mm) DIA. THRU

- J 5/16" (8mm) DIA. THRU DOOR - C08, R08 & K08
- K 2 1/8" (54mm) DIA. THRU DOOR - C08, R08 & K08

