

Model 73BH

Security Overhead Concealed Closer Non-Hold Open, Metal Frame

Installation Instructions

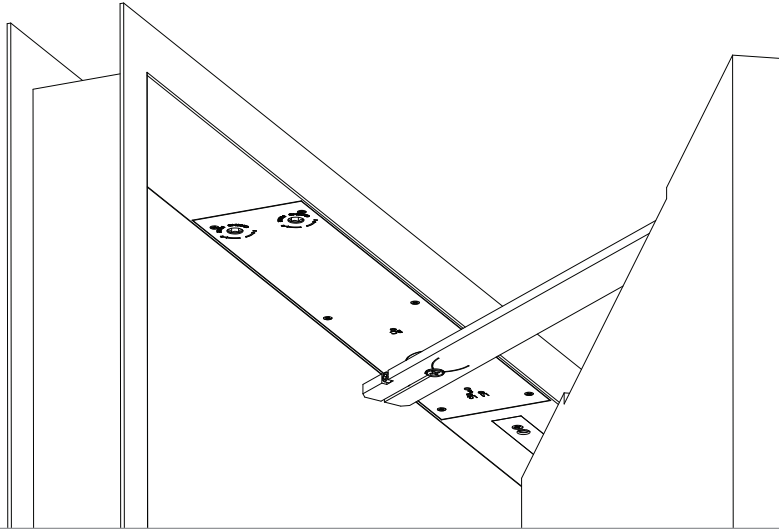


⚠️ WARNING

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.

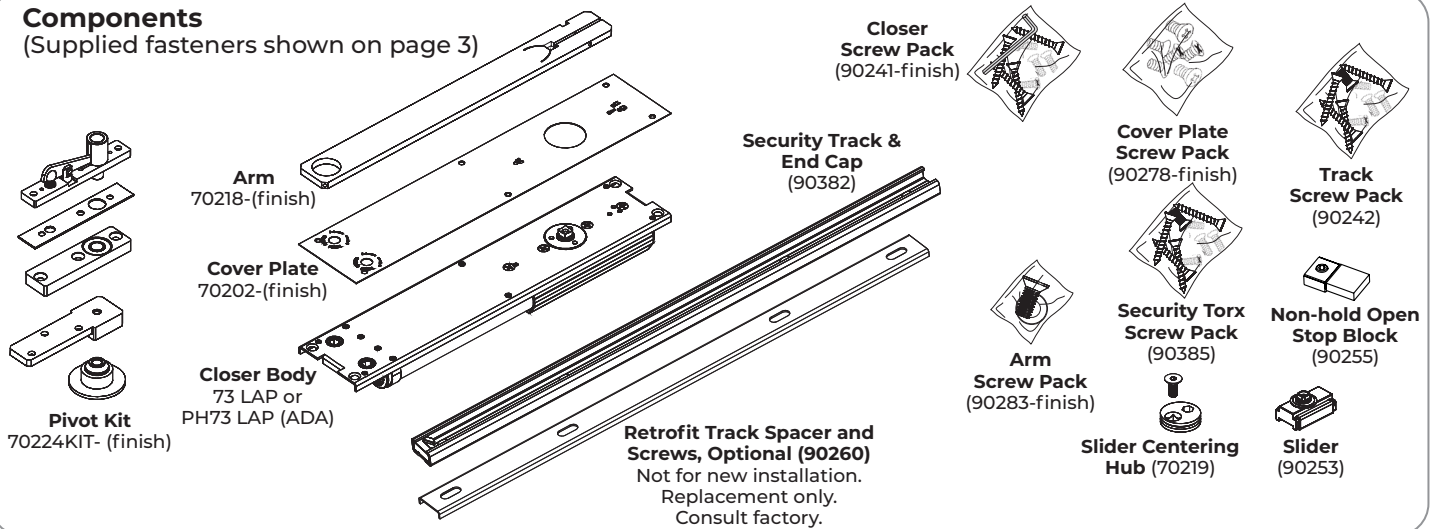
READ AND FOLLOW ALL INSTRUCTIONS.
SAVE THESE INSTRUCTIONS.

Model 73BH, Center Pivot Hung

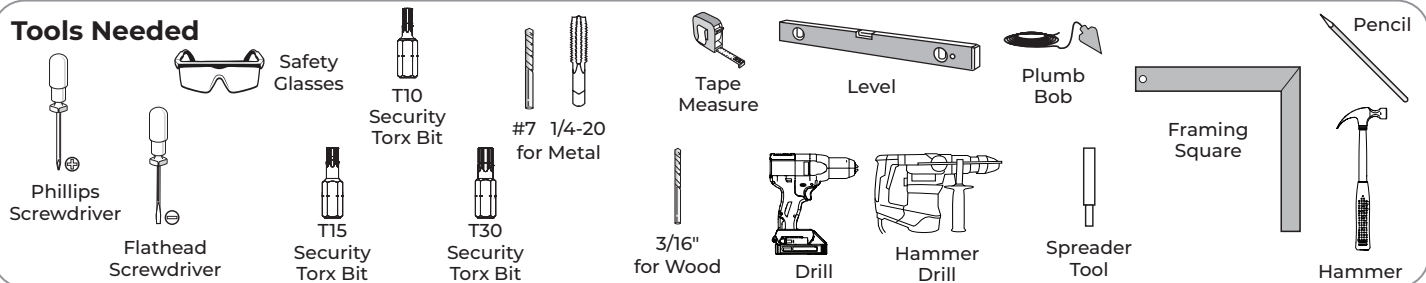


Components

(Supplied fasteners shown on page 3)



Tools Needed



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IMPORTANT:


- An improperly installed or incorrectly adjusted door closer may cause property damage or personal injury and will void product warranty.
- To avoid personal injury, **DO NOT DISASSEMBLE THIS DOOR CLOSER BODY.**
- Door closers must be securely fastened to a prepared door and frame with fasteners provided.

Before You Begin



- The Americans with Disabilities Act (ADA) requires that doors having door closers have an opening force not to exceed 5 lbf.
- Spring power size adjustment feature may require adjustment to its lowest setting to comply with ADA opening force guidelines.
- ADA compliant closers may not latch doors. Manufacturer does not guarantee latching on lower opening force settings.
- A separate auxiliary door stop, supplied by others, is strongly recommended to avoid damage to door closer in heavy abuse applications.
- Top pivot must be plumb with bottom pivot and door must swing freely before door closer is installed.
- Door and frame must be reinforced for attaching screws.
- All dimensions are given in inches (millimeters).

Mounting Hardware

Mounting Hardware		Door / Frame	Drill
	Bottom Pivot: 1/4-20 x 5/8"	Metal	Drill #7 (.201 dia. or 5.10mm) Tap 1/4-20
	Top Pivot, Track, Closer, Arm: 1/4-20 x 3/4-FHMS-TORX	Metal	Drill #7 (.201 dia. or 5.10mm) Tap 1/4-20

Model 73BH Security Overhead Concealed Closer

Supplied Fasteners

Hardware shown in gray is provided but not used for OMH/Security applications.

Top Pivot Screw Pack (70242-finish)

NOT USED **NOT USED** **NOT USED**

2x 8-32 x 1/4" PFHUCMS Finish Plate
5x 1/4-20 x 5/8" PFHMS Pivot
5x #14 x 1-1/2" PFHWS Pivot

Bottom Pivot Screw Pack (70243)

4x 1/4-20 x 5/8" PFHMS Pivot
NOT USED **4x** #14 x 1-1/2" PFHWS Pivot
1x 3/8-16 Female Threaded Drop-in Anchor
1x 3/8-16 x 2-1/4" SHCS Base Plate

Cover Plate Screw Pack (90278-finish)

NOT USED

6x 6-32 x 1/4" PFHMS Cover

Closer Screw Pack (90241)

NOT USED **NOT USED**

4x 1/4-20 x 5/8" PFHMS Closer Body
4x #14 x 1-1/2" PFHWS Closer Body
3/16" Hex Wrench
5/32" Hex Wrench
1/8" Hex Wrench

Closer Track Screw Kit (90242)

NOT USED **NOT USED**

4x 1/4-20 x 7/16" PFHUCMS Track
4x #14 x 1-1/4" PFHWS Track

Security Torx Screw Pack (90385)

2x 8-32 x 1/4" FHUCMS-TORX Top Pivot
6x 6-32 x 1/4" FHMS-TORX Track
15x 1/4-20 x 3/4" FHMS-TORX Top Pivot, Track, Closer, Arm

Arm Screw Pack (70251-finish)

NOT USED

2x 1/4-20 x 3/4" FH-Allen w/NP Arm Attach
1x Conical Washer Arm Attach
2x 10-24 x 3/8" SHSS Arm Attach
1x 10-24 x 1-1/2" SHCS Arm Clamp
3/32" Hex Wrench

Installation

A. Prepare frame and door.

1. Using supplied template, prepare and mortise door and head jamb for pivot set. (Figure 1)
2. Confirm all cutout dimensions for closer.

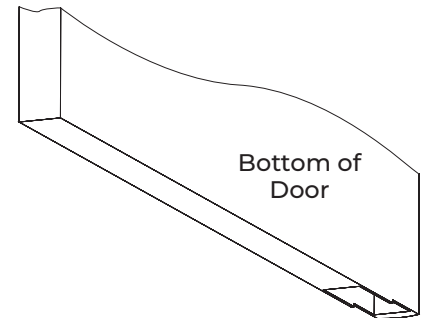
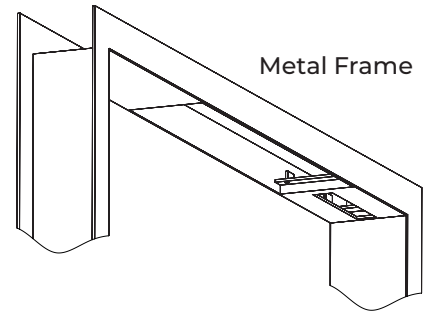
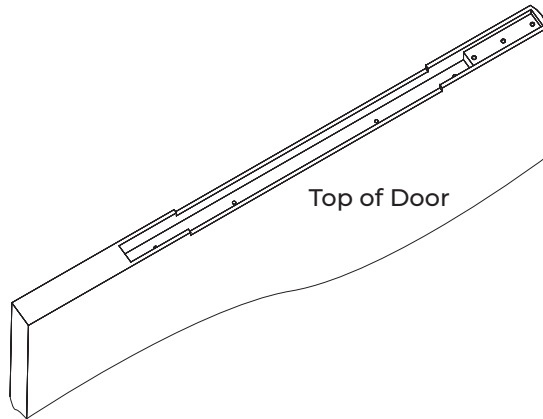


Figure 1

B. Install top pivot set.



1. Install jamb portion in prepared frame using a T30 Security Torx bit with two (2) 1/4-20 x 3/4-FHMS-TORX machine screws. (Figure 2)
2. Install door portion in prepared door using a T30 Security Torx bit with three (3) 1/4-20 x 3/4-FHMS-TORX machine screws. (Figure 2)
3. Attach finish plate to jamb portion using a T15 Security Torx bit with two (2) 8-32 x 1/4-FHUCMS-TORX machine screws. (Figure 2)

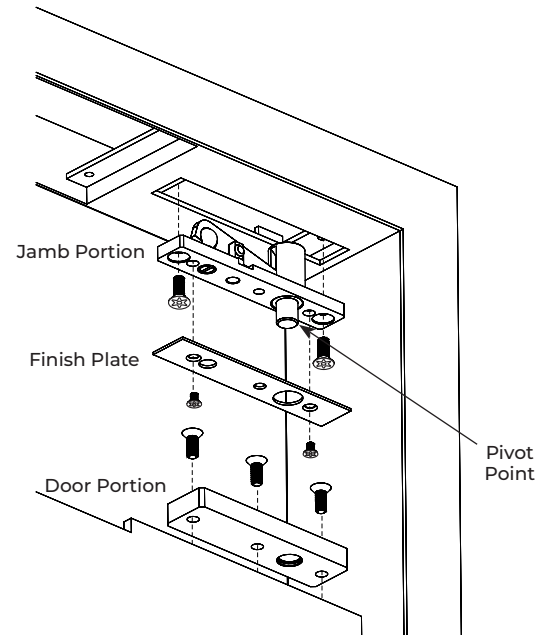


Figure 2 Top Pivot Set

Installation (cont.)

C. Install bottom pivot set.

! **IMPORTANT:** Pivot point of bottom pivot must be plumb with top pivot point. Be sure to properly locate and mark pivot center point of bottom base plate.



1. Install door portion into prepared door with four (4) 1/4-20 x 5/8" machine screws. (Figure 3)

NOTE: Depth of mortise in door bottom will determine clearance.

2. Using a plumb bob attached to top pivot, locate and mark position of base plate on floor.
3. Drill 3/4" dia. x 1-3/4" (19 x 44mm) deep hole in floor on center of pivot point for base plate mounting.

! **IMPORTANT:** It is critical to door alignment and proper frame clearance that this anchor hole is positioned within 1/32" of true plumb alignment with the top jamb portion pivot point.

4. With open side up, place drop-in anchor into floor hole. If necessary, tap lightly with hammer until anchor is at bottom of hole.

NOTE: Clean all concrete dust from hole before installing drop-in anchor.

5. Set anchor by striking spreader tool with hammer until the sleeve of the anchor is fully expanded.

6. Place base plate over anchor and securely fasten to floor with base plate screw.

7. If using a threshold, install it at this time.

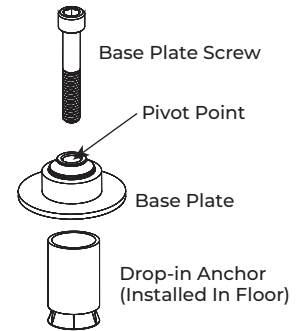
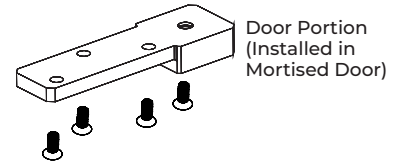
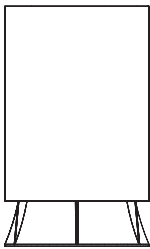
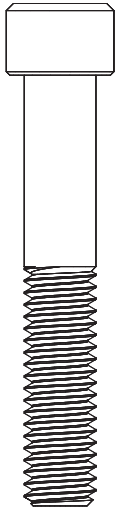


Figure 3 Bottom Pivot

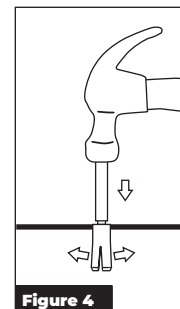


Figure 4

Installation (cont.)

D. Hang door.

1. Ensure pivot stud is fully retracted into pivot by turning pivot adjustment screw counter clockwise with a flathead screwdriver. (Figure 5)
2. With door in open position about 90° to jamb, carefully fit door onto bottom pivot at a slight angle. (Figure 6)
3. Tip door into vertical position aligning frame portion pivot stud to door portion hole. (Figure 7)
4. With top pivot stud aligned with door portion hole, use a flathead screwdriver to turn pivot adjustment screw clockwise to extend pivot stud into door pivot portion. (Figure 8)



IMPORTANT: Fully tighten adjustment screw to ensure pivot stud is fully extended into door portion. There is a door tipping hazard until door is held vertical by pivot stud.

5. Verify frame is square by using a framing square. Gaps between door and frame should be consistent. Gap should be 1/8" (3mm) at jamb and header. (Figure 9)

NOTES: Door should swing freely.

- If vertical height adjustment is necessary, use shims between door bottom and bottom pivot portion to increase clearance.
- To decrease clearance, increase mortise depth in bottom of door.
- To remove door, retract pivot stud and tip door out of vertical position, then lift door from bottom pivot.

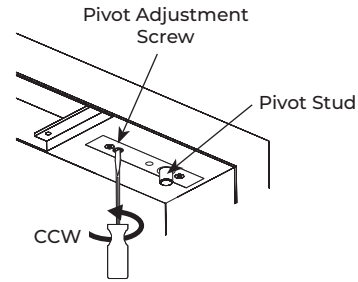


Figure 5

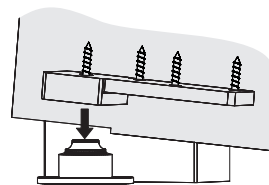


Figure 6

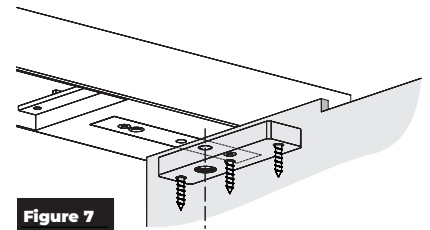


Figure 7

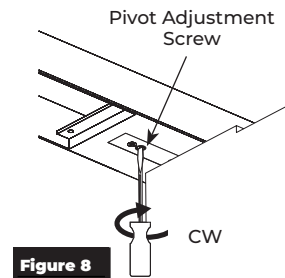


Figure 8

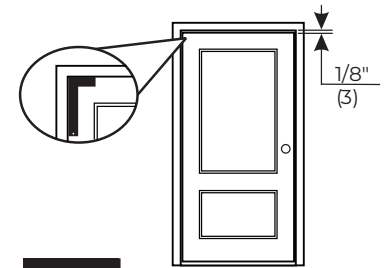


Figure 9

E. Assemble track.

1. Slide track components into track. (Figure 10)

NOTES:

- All track components must be placed in track before installing track into door.
- Insert slider into track first.
- The longer end of slider should be pointed towards hinge side of door.

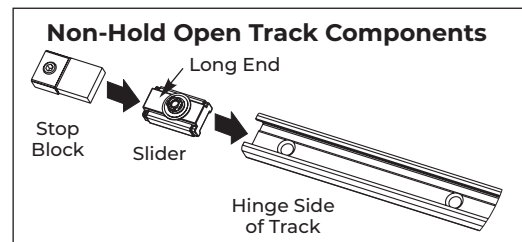
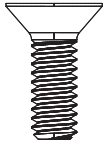


Figure 10

Installation (cont.)

F. Install track to door.



1. Make sure slider and track components are installed prior to installing track to door. See Step E.
2. Install track into top of door using a T30 Security Torx bit and four (4) 1/4-20 x 3/4-FHMS-TORX screws for metal doors. (Figure 11).

NOTES:

- If necessary, use optional retrofit spacer (replacement application only, consult factory).
- Track endcap is oriented away from hinge edge of door.

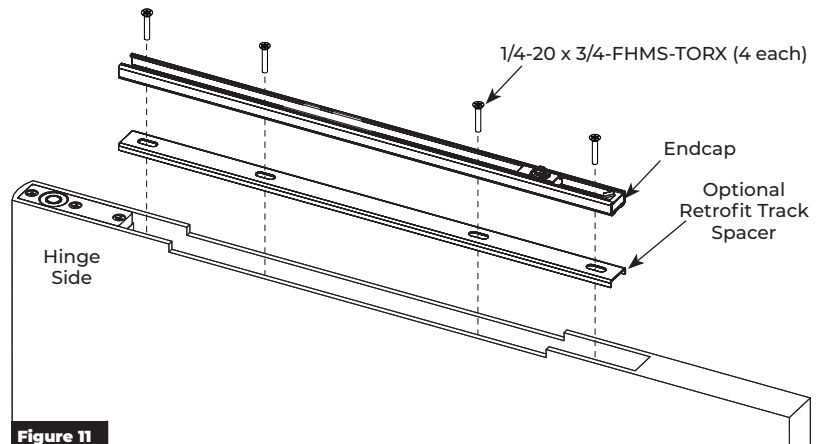
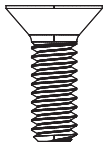


Figure 11

G. Install closer.



1. Install closer into frame with using a T30 Security Torx bit and four (4) 1/4-20 x 3/4-FHMS-TORX screws. (Figure 12)

NOTE: Mounting plate should be flush with frame rabbet.

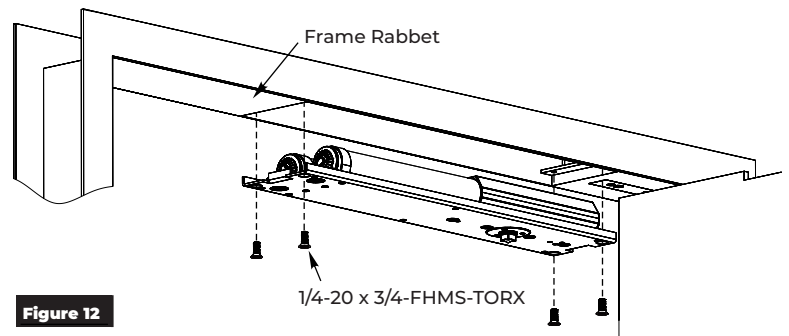


Figure 12

H. Install cover plate.



1. Install cover plate to closer body using a T10 Security Torx bit with six (6) 6-32-FHMS-TORX machine screws. (Figure 13)

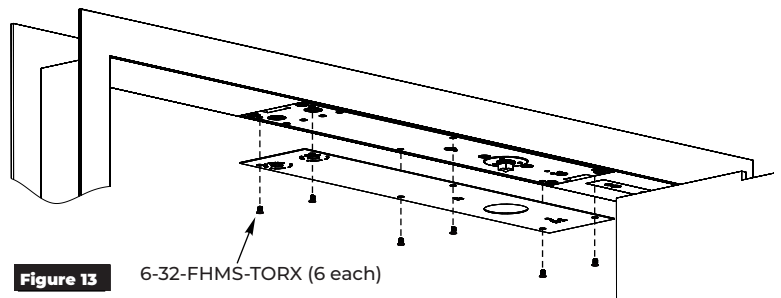
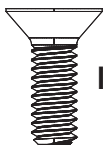


Figure 13

I. Attach arm to closer.



1. Attach arm to closer shaft using a T30 Security Torx bit and 1/4-20 x 3/4-FHMS-TORX w/Nylon Patch screw and washer. Tighten securely. (Figure 14)

NOTE: Ensure countersink recess side of arm faces down.

2. Insert 10-24 x 1-1/2" socket head cap screw into arm and clamp arm tightly to pinion square. (Figure 14)

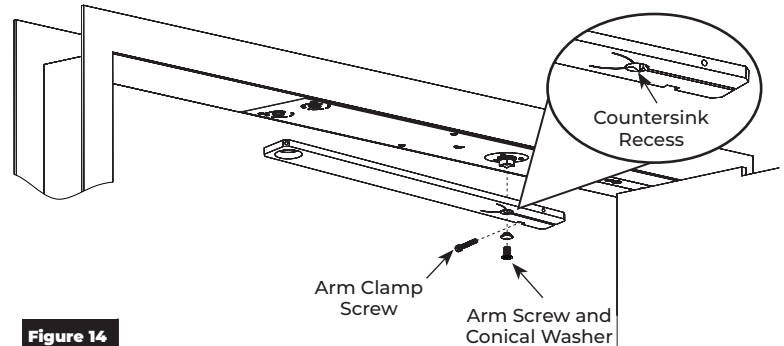
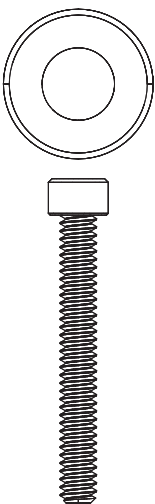


Figure 14



Installation (cont.)

J. Attach arm to track.

1. With provided 1/8" hex wrench, completely tighten latch and sweep valves by turning clockwise. This will allow for an easier closer-to-door connection. (Figure 15)

CAUTION: Arm will be under strong spring force to return if valves are not tightened completely closed.

2. Open door to about 45° then rotate arm over to door.

NOTES:

- With latch and sweep valves tightened, arm will maintain position.
- If door is opened beyond 45°, backcheck may need to be adjusted counter clockwise to easily rotate arm to door position.

3. Install slider centering hub through arm into slider. (Figure 16)

NOTE: Countersink recess should face up.

4. Align hub initially as shown and insert two (2) 10-24 x 3/8" adjustment set screws. Turn both set screws just enough to retain slider centering hub. Do not tighten firmly at this time. (Figure 17)

NOTE: Align square shank of slider with square in centering hub for proper fitment.

5. Insert arm attach screw, 1/4-20 x 3/4-FHMS-TORX w/Nylon Patch, and tighten using a T30 Security Torx bit. (Figure 16)

6. Open latch and sweep valves to allow door to close and observe door and frame alignment. If door is not centered in frame when closed, reopen door and use 5/16" hex wrench to rotate slider centering hub until door is centered. (Figure 18)

NOTES:

- DO NOT fully open valves. Valves will leak.
- Door should be centered in frame when in closed position. Adjust slider centering hub with hex wrench until door and frame are aligned properly then tighten adjustment set screws.

7. When door is completely aligned in frame tighten both adjustment set screws.

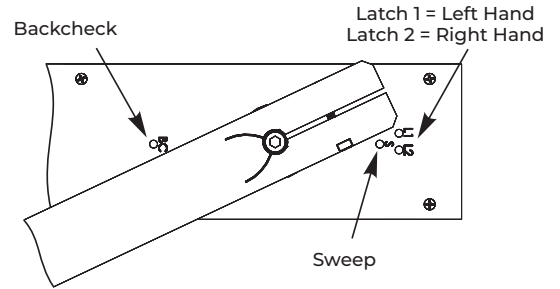


Figure 15

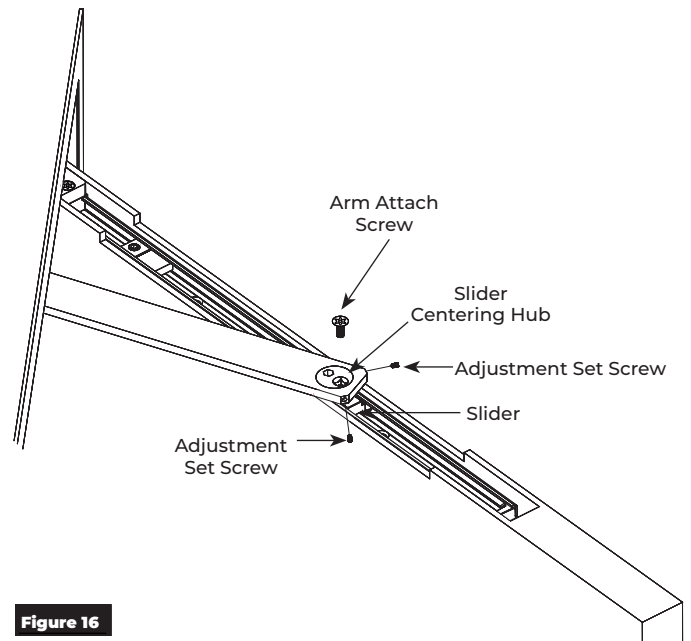


Figure 16

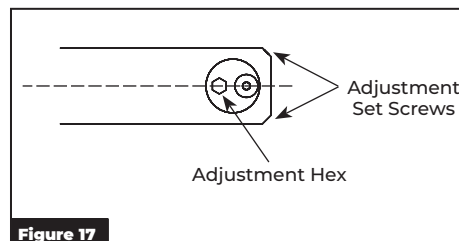


Figure 17

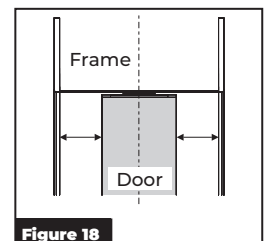
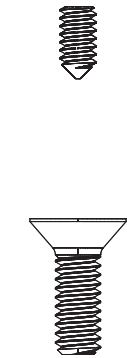


Figure 18



Adjustments

Speed Adjustment

Use provided 1/8" hex wrench to adjust sweep, latch and backcheck valves to control speed of door. (Figure 19)

- NEVER completely close backcheck valve.**
- NEVER use backcheck as a dead stop.**
- NEVER fully open valves. Valves will leak.**
- Do not use a power drill. Warranty will be void.**

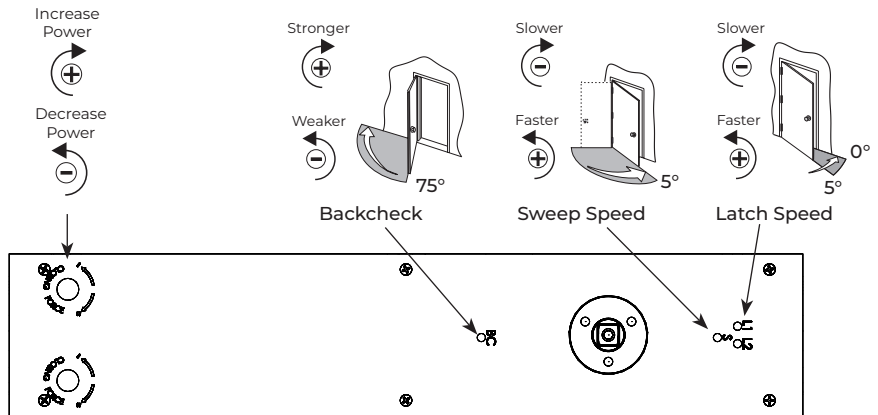


Figure 19

Closing Force Adjustment

If additional force is needed, use 3/8" hex wrench to adjust closing force. (Figure 20)

Use spring adjustment screw that corresponds with hand of swing. (Figure 19)

- Do not use a power drill. Warranty will be void.**
- All 73BH closers are factory set to minimum force. Adjust closer as necessary for more force taking into consideration door size, weight, positive room pressure, etc.

Spring Power Adjustment for Closing Force (Closer shipped at lowest setting)					
Model PH73BH			Model 73BH		
Closer Size	Description	Approx # of 360° Turns	Closer Size	Description	Approx # of 360° Turns
ADA	<5 lbs Opening Force	0	1	2 - 3 lbs Closing Force	0
1	2 - 3 lbs Closing Force	15	2	3 - 5 lbs Closing Force	15
2	3 - 5 lbs Closing Force	30	3	5 - 8 lbs Closing Force	35
3	5 - 8 lbs Closing Force	50	4	8+ lbs Closing Force	50

Figure 20

Installation of the **Model 73BH Overhead Concealed Closer** is now complete.

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Troubleshooting

Symptom	Cause	Remedy
Door won't latch	Spring tension not strong enough	Increase opening force. See Adjustments on page 9.
	Latch speed control not fast enough	Adjust latch speed valve. See Adjustments on page 9.
	Door hung on products other than center pivots	Send template for hanging means to factory. A new installation sheet is required. Closer will need to be relocated.
	Arm is not preloaded	See Step J. Attach arm to track. on page 8
Door is too difficult to open	Spring tension is set too strong	Decrease opening force. See Adjustments on page 9.

Technical Product Support:
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 NortonRixson.com

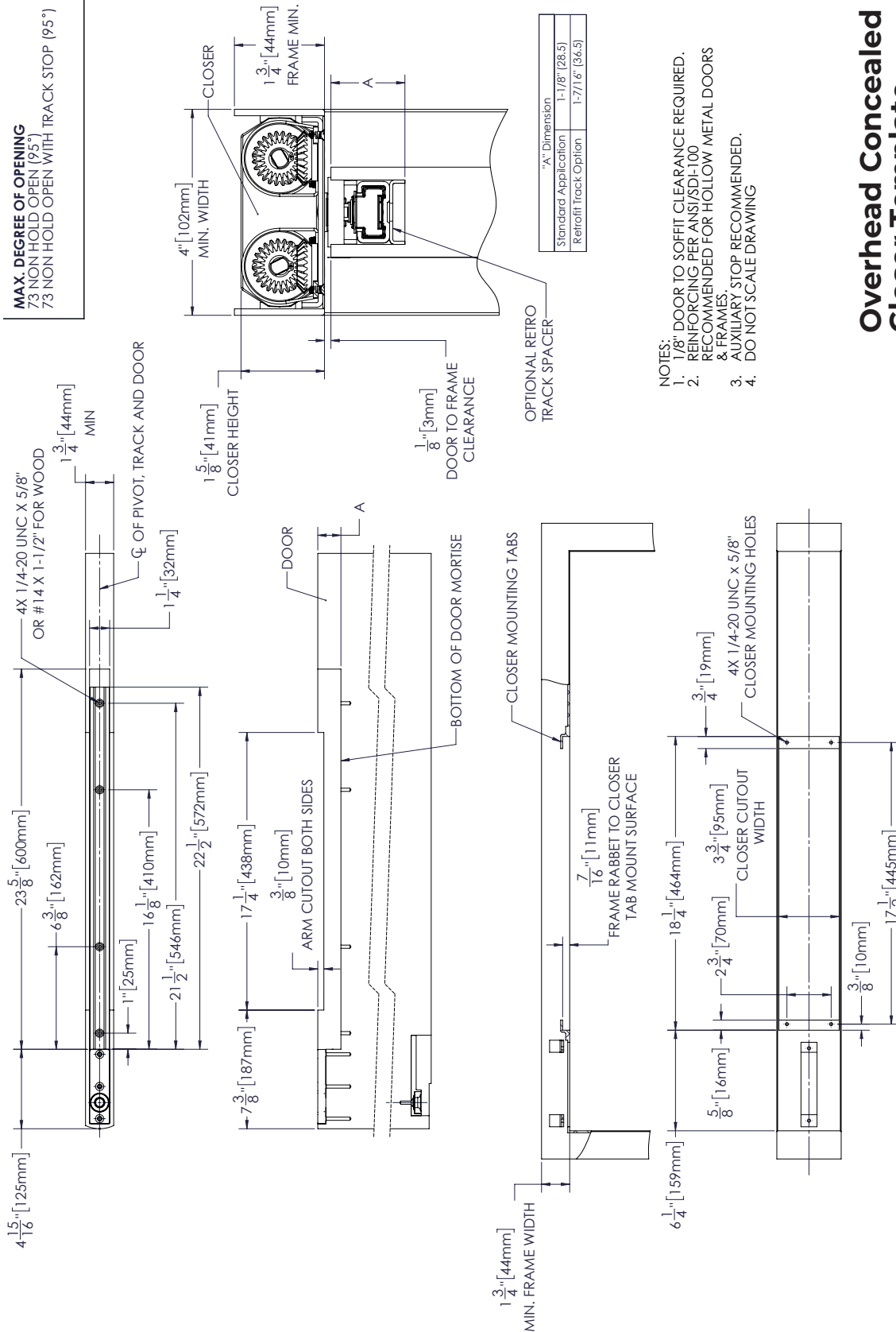
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Approved 2024-10-04

Model 73BH Overhead Concealed Closer Template

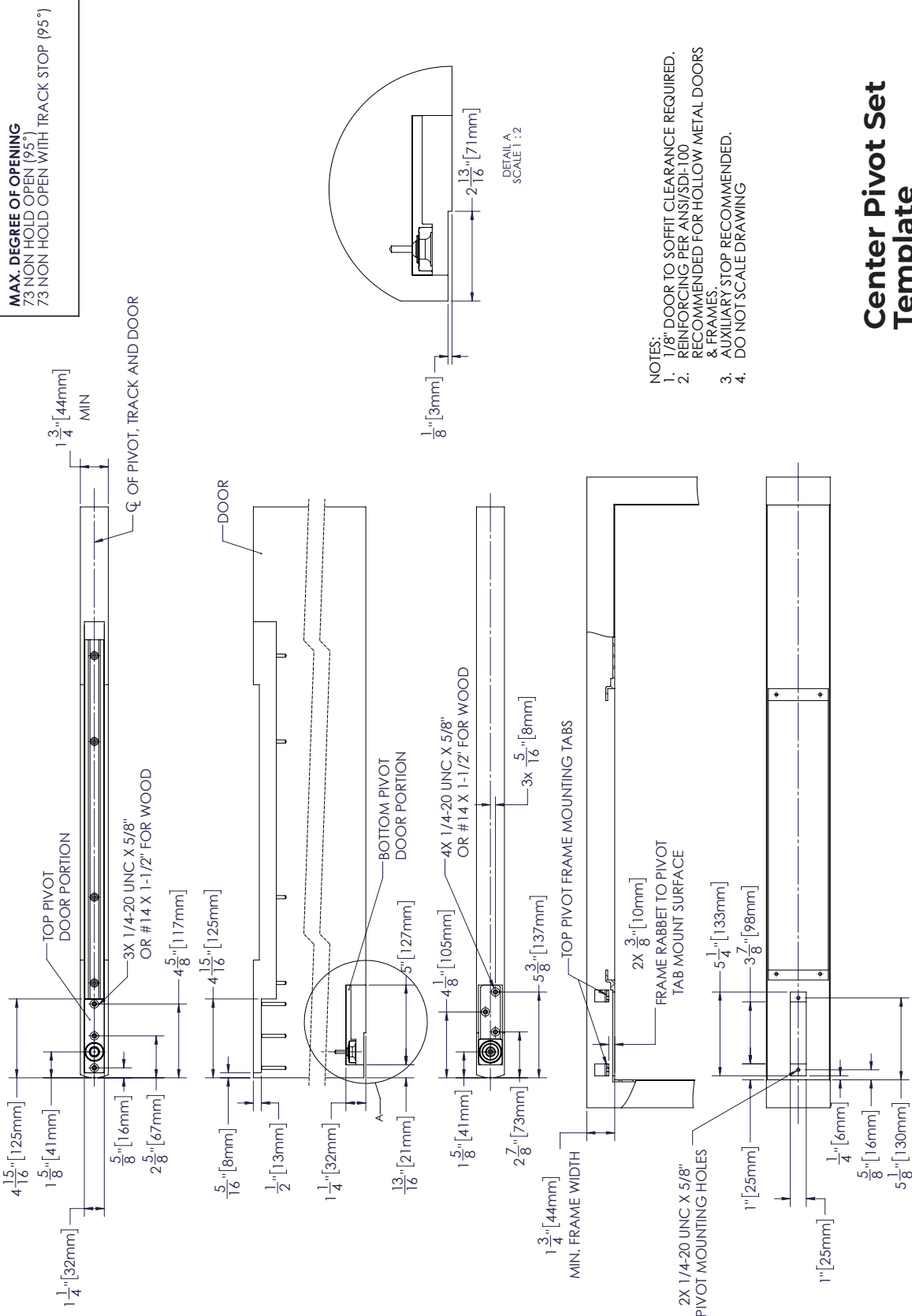
Center Pivot Set

Metal Frame



Overhead Concealed Closer Template

Model 73BH Overhead Concealed Closer Template Center Pivot Set Metal Frame

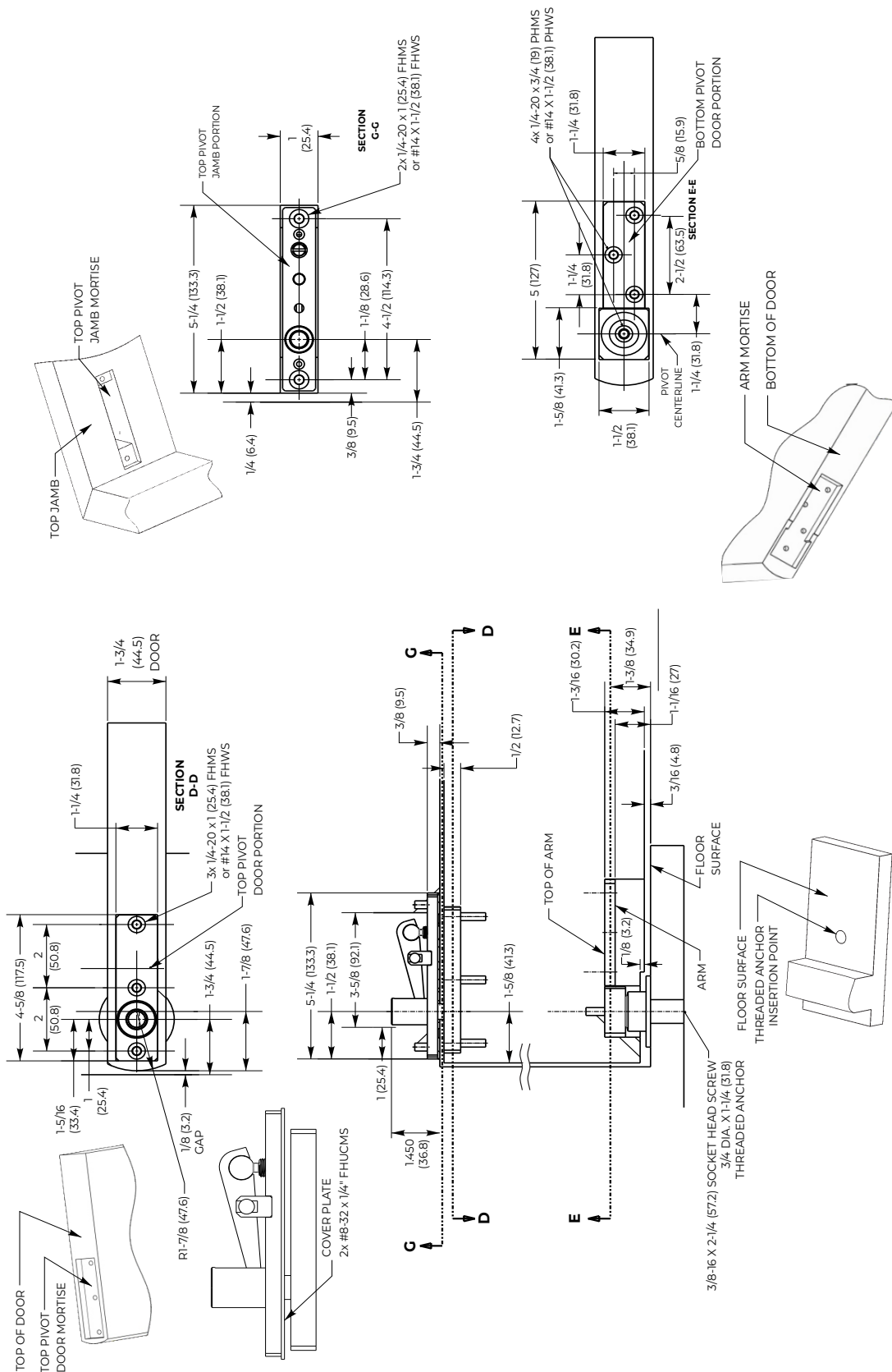


Center Pivot Set Template

Model 73BH Overhead Concealed Closer Template

Center Pivot Set

Metal Frame



270 Pivot Set Template