

Model 91BH

Security Overhead Concealed Closer Non-Hold Open, Metal Frame

Installation Instructions

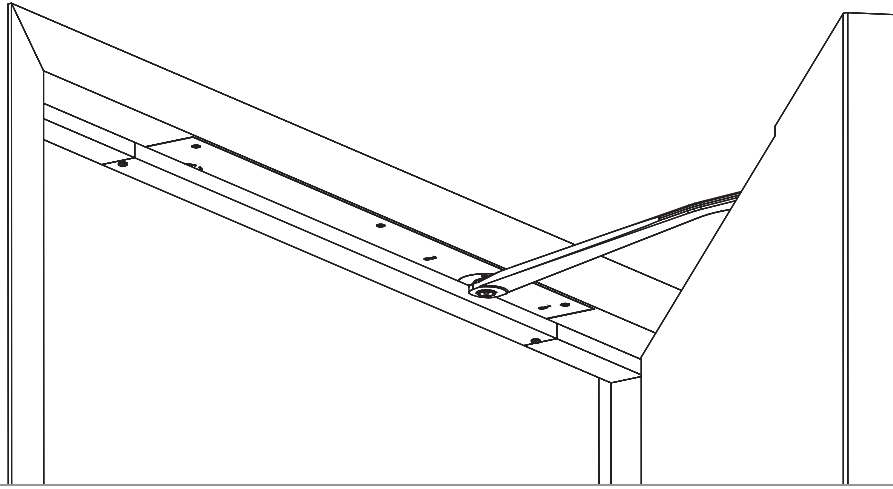
WARNING

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.

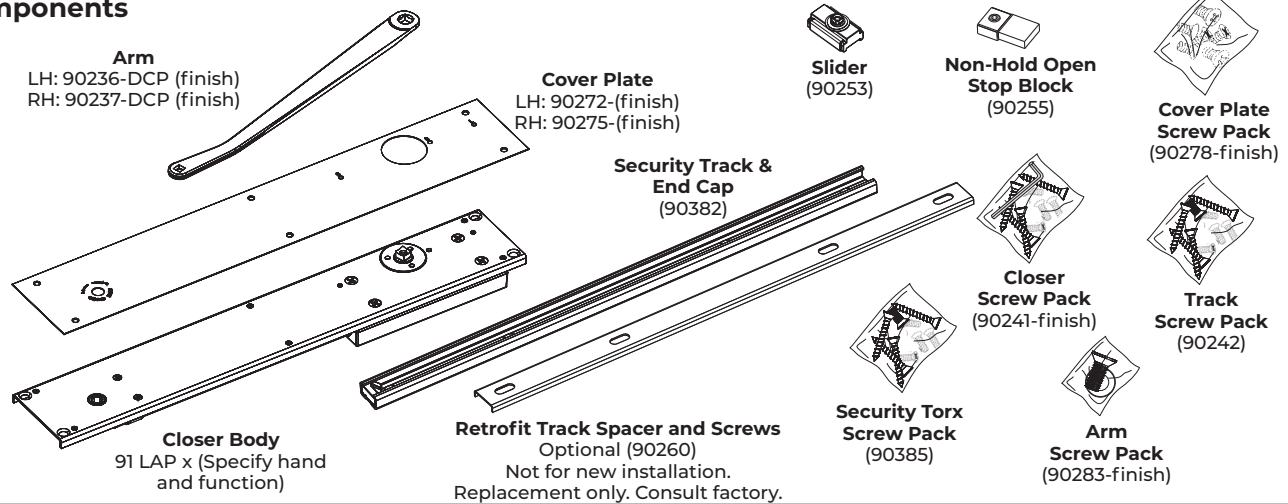
READ AND FOLLOW ALL INSTRUCTIONS.
SAVE THESE INSTRUCTIONS.

Model 91BH, (Left Hand Shown)

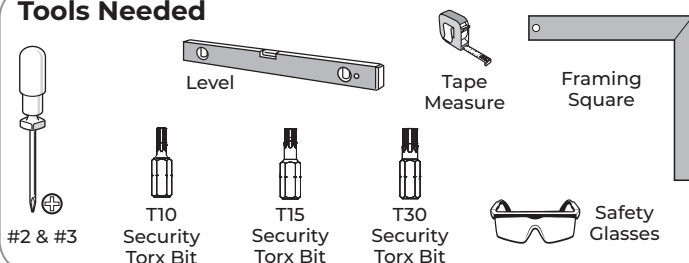
4-1/2" x 4-1/2" Butt or 3/4" Offset Pivot Hung; consult factory if other means



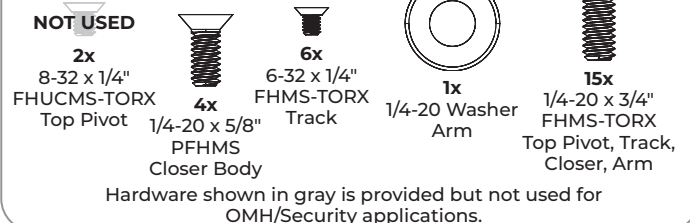
Components



Tools Needed



Supplied Fasteners



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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.**
- Protective equipment, including personal protective equipment for eyes, face, head, and extremities shall be worn as necessary in compliance with OSHA standards.
- 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.
- Door closer's 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 and adjacent property.
- Doors should be hung on ball bearing or anti-friction hinges/pivots. Door must swing freely. For other hanging means a special layout may be required, consult factory.
- Door and frame must be reinforced for attaching screws.
- All dimensions are given in inches (millimeters).

Installation

A. Verify frame and door installation.

1. Determine if right hand or left hand installation. (Figure 1)
2. Verify frame is square by using a carpenter's square. (Figure 2)
3. Note if gaps between door and frame are consistent. Gap should be 1/16" (1.6) at jamb and header.
4. Using supplied templates, confirm all dimensions of cut-outs.

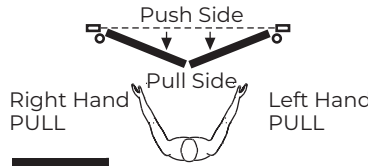


Figure 1

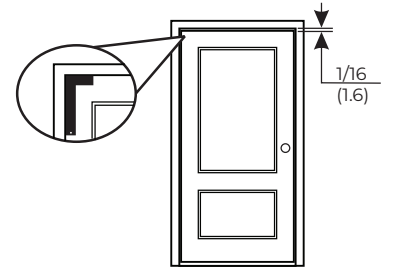


Figure 2

B. Install closer.

1. Install closer in prepped frame with four (4) 1/4-20 x 5/8" FHPMS mounting screws provided. (Figure 3)

NOTE: Mounting plate should be flush with frame rabbet.

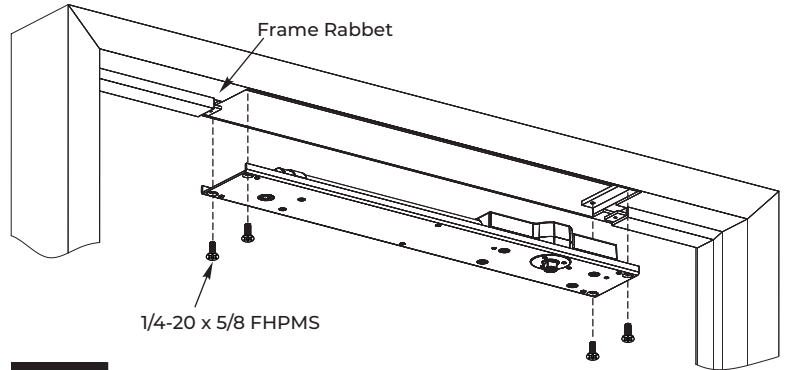


Figure 3 Left Hand Shown

C. Install cover plate.

1. Install cover plate to closer mounting plate using a T10 Security Torx bit with six (6) 6-32 x FHMS-TORX mounting screws provided. (Figure 4)

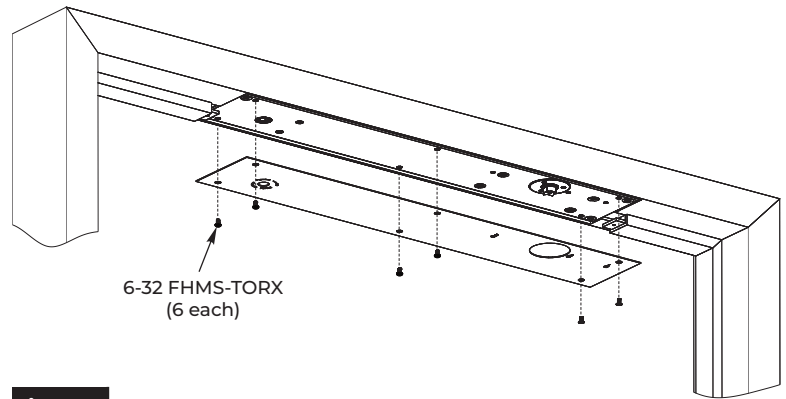


Figure 4

D. Attach arm.

1. Using a T30 Security Torx bit and 1/4-20 x 3/4" Torx screw with Patch screw and washer, attach arm to closer spindle. (Figure 5)

IMPORTANT: Arm should rest at 15° away from door side of closer mounting plate. Arm always rotates in direction of door.

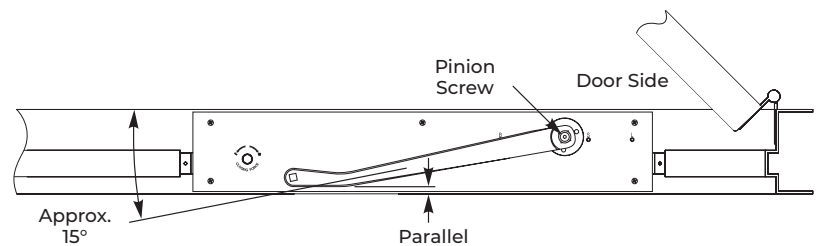
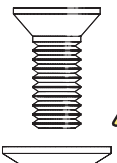


Figure 5

Installation (cont.)

E. Assemble track.

1. Slide track components into track.
(Figure 6)

NOTES:

- All track components must be placed in track before installing track into door.
- Stop block should be last component at hinge side of track.
- The longer end of slider should be pointed towards hinge end of track.

Non-Hold Open Track Components

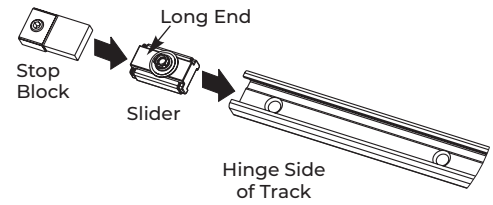
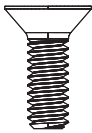


Figure 6

F. Install track to door.



1. Make sure slider and track components are installed prior to installing track to door.
2. Install track and, if necessary, optional retrofit spacer (replacement application only, consult factory) using a T30 Security Torx bit with four (4) provided 1/4-20 x 3/4-FHMS-TORX screws for metal door.
(Figure 7)

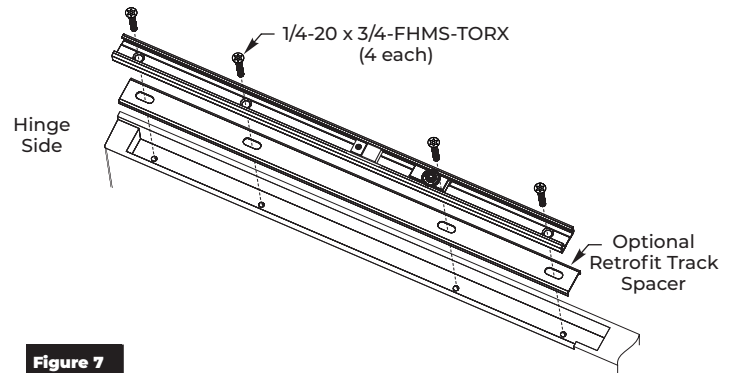


Figure 7

G. Attach arm to track.

1. With provided 1/8" hex wrench, completely tighten latch and sweep valves by turning screws clockwise. This will allow for an easier closer-to-door connection. (Figure 8)
2. Open door to about 45° then rotate arm over to door.

NOTE: Arm should maintain position because latch and sweep valves have been tightened.

3. Align slider square with arm square and connect using a T30 Security Torx bit with provided 1/4-20 x 3/4-FHMS-TORX with Patch screw. (Figure 9)

NOTE: If door is to be open beyond 45°, backcheck may need to be adjusted counter clockwise to easily rotate arm to door position.

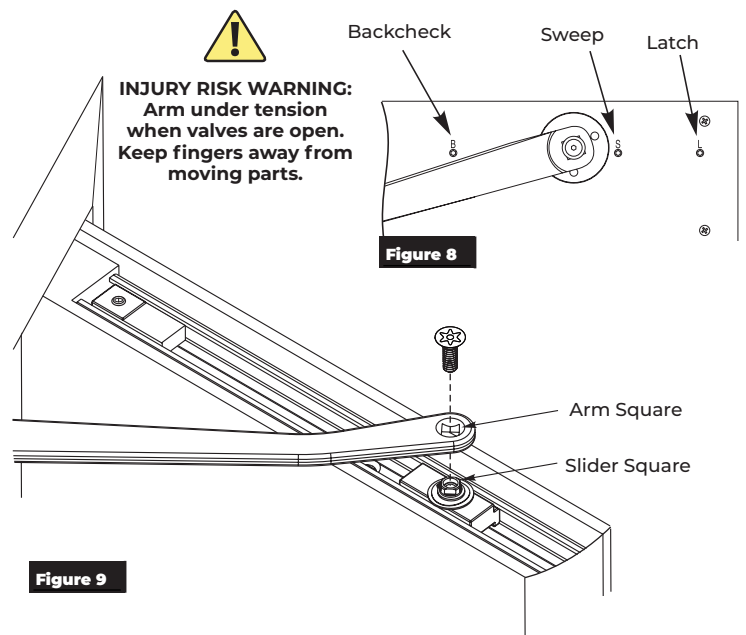


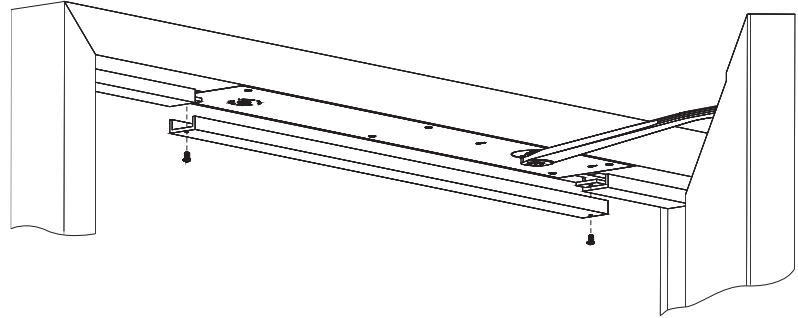
Figure 9

Installation (cont.)

H. Install removable stop.

After closer is installed and all adjustments are complete, install removable stop.

NOTE: DO NOT drill holes into closer cover plate.



The **Model 91BH Overhead Concealed Closer** has now been installed.

Adjustments

Speed Adjustment

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

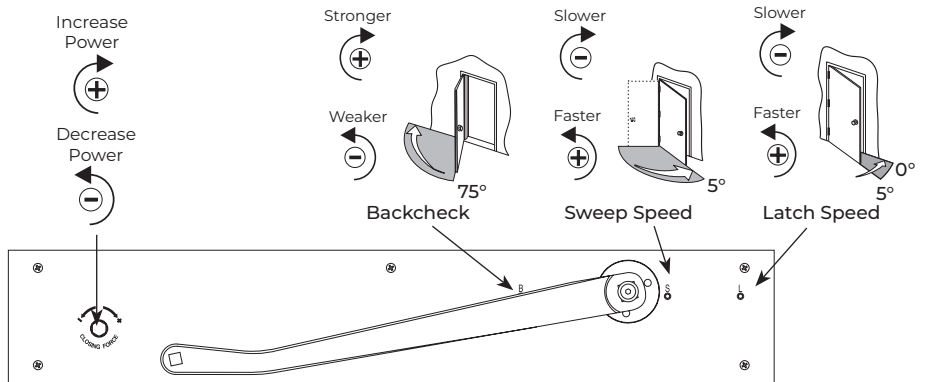
NEVER completely close backcheck valve.
NEVER use backcheck as a dead stop.
NEVER fully open valves. Valves will leak.
Do not use a power drill.
Warranty will be void.

Closing Force Adjustment

If additional force is needed, use 3/8" hex wrench to adjust closing force. Refer to chart.

Do not use a power drill.
Warranty will be void.

i All 91BH 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 PH91BH		Model 91BH	
Closer Size	Approx # of 360° Turns	Closer Size	Approx # of 360° Turns
ADA	0	3	0
1	15	4	17
2	30	5	25
3	55	6	32

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Troubleshooting

Symptom	Cause	Remedy
Door won't latch	Spring tension not strong enough	Increase opening force. See "Adjustments" on page 5.
	Latch speed control not fast enough	Adjust latch speed valve. See "Adjustments" on page 5.
	Door hung on products other than 4-1/2 x 4-1/2 butts or 3/4 offset 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 G. Attach Arm to Track
Door is too difficult to open	Spring tension is set too strong	Decrease opening force. See "Adjustments" on page 5

Technical Product Support:
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 NortonRixson.com

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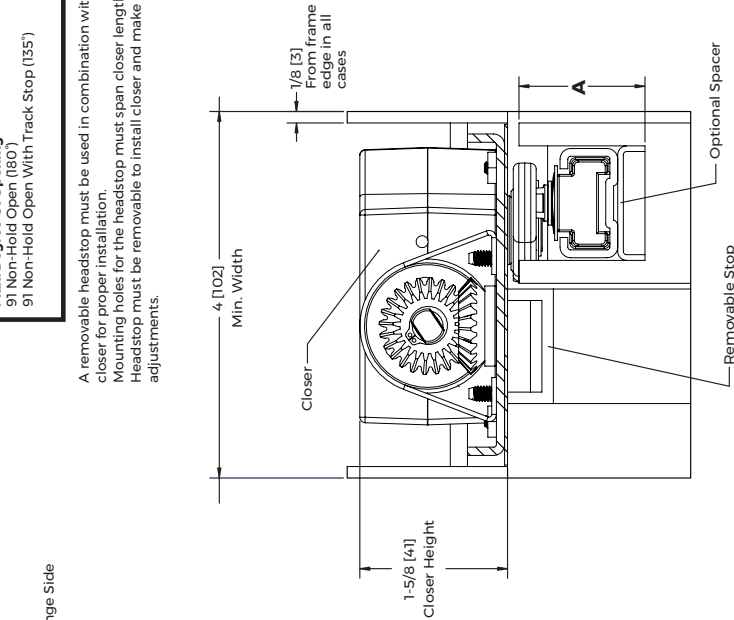
Approved 2024-10-04

Model 91BH Overhead Concealed Closer Template

Butt Hinge, Metal Frame

Max. Degree Of Opening
91 Non-Hold Open (180°)
91 Non-Hold Open With Track Stop (135°)

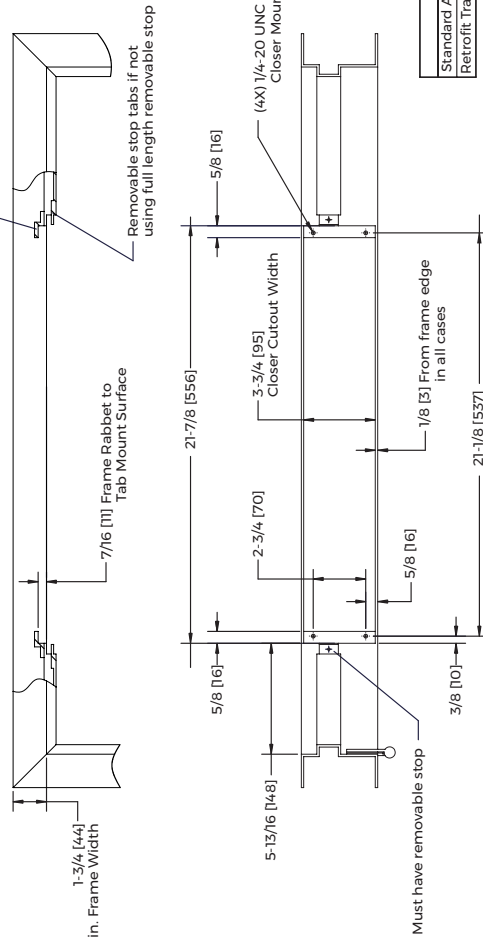
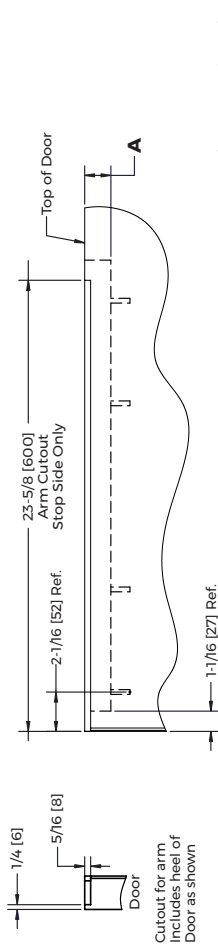
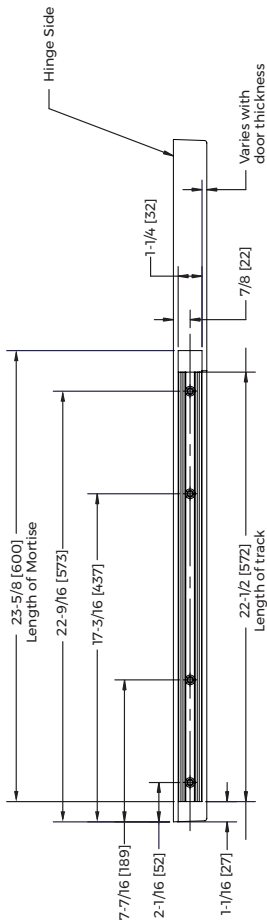
A removable headstop must be used in combination with the closer for proper installation.
Mounting holes for the headstop must span closer length.
Headstop must be removable to install closer and make proper adjustments.



- NOTES:**
1. For 180° opening, max. allowable butt hinge size is 5" x 5".
 2. Minimum stop thickness 1/2" [13mm].
 3. 1/8" [3mm] door to soffit clearance required.
 4. Reinforcing per ANSI/SDI-100 recommended for hollow metal doors and frames.
 5. Auxiliary stop recommended.
 6. Do not scale drawing.
 7. All Dimensions in inches [mm].

Left hand door and closer shown.
Right hand opposite.

"A" Dimension	
Standard Application	1-1/16 [27]
Retrofit Track Option	1-5/8 [55]

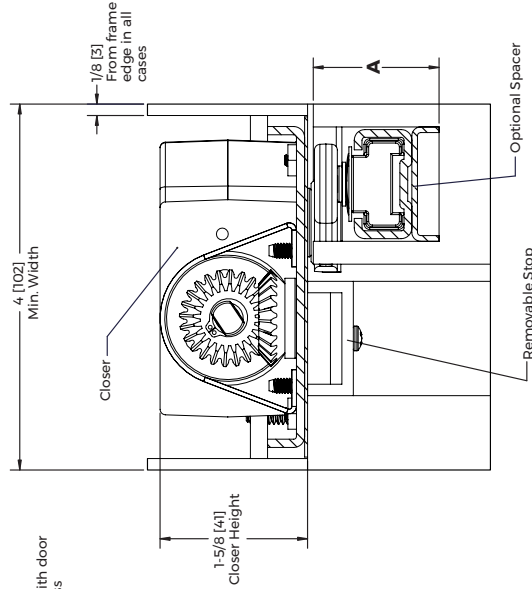


Model 91BH Overhead Concealed Closer Template

3/4" Offset Pivot, Metal Frame

Max. Degree of Opening
91 Non-Hold Open (115°)
91 Non-Hold Open With Track Stop (105°)

A removable headstop must be used in combination with the closer for proper installation. Mounting holes for the headstop must span closer length. Headstop must be removable to install closer and make proper adjustments.



- NOTES:**
- For pivot instructions or details, see Pivot template. For use with Norton Rixson 180 pivot.
 - Minimum stop thickness 1/2" [13mm].
 - 1/8" [3mm] door to soffit clearance required.
 - Reinforcing per ANSI/SDI-100 recommended for hollow metal doors and frames.
 - Auxiliary stop recommended.
 - Do not scale drawing.
 - All Dimensions in inches [mm].

*A' Dimension	Standard Application	Retrofit Track Option
	1-1/16 [27]	1-3/8 [55]

Left hand door and closer shown.
Right hand opposite.

