Installation Instructions

Traditional Style
Door Closers

Series 78-B/F-PRA
Series 78-B/F-PRHA
Non-Hold Open or Hold Open
With 2019S, 2019L, 6890, or 6891 Soffit Plate Accessories
No. 88 Drop Plate Optional

- Read these instructions before proceeding with the installation.
- Make sure that the door opens the full angle desired and latches without any binding action or interference.
- For special applications, a separate preparation template is packed with these instructions. Use this instruction sheet for installation sequence and closer adjustment only.
- Select the type of installation from the following illustrations:

<table>
<thead>
<tr>
<th>Standard Frame Mount - See Page 3</th>
<th>With 2019S Block or 2019S and 6891 Blocks</th>
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</thead>
<tbody>
<tr>
<td><img src="image1" alt="Standard Frame Mount Illustration" /></td>
<td><img src="image2" alt="Standard Frame Mount Illustration" /></td>
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<tr>
<th>Narrow Frame Mount - See Page 4</th>
<th>With 6890 Bracket or 6890 Bracket and 6891 Block</th>
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<td><img src="image3" alt="Narrow Frame Mount Illustration" /></td>
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<th>Flush Frame Mount - See Page 5</th>
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<tr>
<td><img src="image5" alt="Flush Frame Mount Illustration" /></td>
<td><img src="image6" alt="Flush Frame Mount Illustration" /></td>
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Hold Open Arm

Hold Open Adjustment Nut

Arm Dog
Check hand of door. Hand of door closer must be the same as hand of door. Door closer is handed but can be easily reversed. SEE BELOW FOR INSTRUCTIONS FOR REVERSING HAND OF CLOSER.

Hold open arms are handed and cannot be reversed.

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**Hand of Door**

![Diagram of Hand of Door](image)

**To Reverse Closer Hand**

1. Remove main arm screw, arm assembly, ratchet, and top cover.
2. Lift out spring using screwdriver wedged between coils.
3. Reverse spring and re-assemble to required hand. (See figure 2)
4. Rotate shaft to required hand. (See figure 2)
5. Replace cover and insert ratchet, lining up slot with inner hook on spring.

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**Indexing of Main Arm**

![Diagram of Indexing of Main Arm](image)
Installation Sequence

1. From the template above, select the angle of opening desired. Locate and mark for 4 holes on the door for the closer body or No. 88 drop plate, if used. Locate and mark for 5 holes on frame header for mounting soffit plate.

2. Prepare the door and frame for fasteners (see chart above).

3. Install closer body to door. If drop plate is used, mount it first, then fasten the closer body to the drop plate.

4. Following the main arm indexing illustrations in figure 3 on page 2, place main arm onto the closer pinion shaft. Install and tighten main arm screw with a 1/2" wrench. NOTE: Do not engage arm dog into closer ratchet at this time.

5. Open door and attach soffit plate to frame header. NOTE: Depending on type of application, use shim blocks as required.

See last page for instructions for loading closer spring and closer adjustments.
Installation Sequence

1. From the template above, select the angle of opening desired. Locate and mark for 4 holes on the door for the closer body or No. 88 drop plate, if used. Locate and mark for 6 holes on frame face and header for arm mounting. Measurements on header taken from the frame face.

2. Prepare the door and frame for fasteners (see chart above).

3. Install closer body to door. If drop plate is used, mount it first, then fasten the closer body to the drop plate.

4. Following the main arm indexing illustrations in figure 3 on page 2, place main arm onto the closer pinion shaft. Install and tighten main arm screw with a 1/2" wrench. NOTE: Do not engage arm dog into closer ratchet at this time.

5. Open door and attach soffit plate and bracket to frame header. NOTE: Depending on type of application, use shim blocks as required.

See last page for instructions for loading closer spring and closer adjustments.
Installation Sequence

1. From the template above, select the angle of opening desired. Locate and mark for 4 holes on the door for the closer body or No. 88 drop plate, if used. Locate and mark for 4 holes on frame face for "L" bracket.

2. Prepare the door and frame for fasteners (see chart above).

3. Install closer body to door. If drop plate is used, mount it first, then fasten the closer body to the drop plate.

4. Following the main arm indexing illustrations in figure 3 on page 2, place main arm onto the closer pinion shaft. Install and tighten main arm screw with a 1/2" wrench. NOTE: Do not engage arm dog into closer ratchet at this time.

5. Open door and attach "L" bracket to frame header. Fasten soffit plate to "L" bracket.

See last page for instructions for loading closer spring and closer adjustments.
6. Closing Tension - Place wrench (packed with door closer) on ratchet as shown. Swing wrench toward hinge to wind spring between 3 to 10 notches, engage arm dog in ratchet, increase or decrease spring power to suit conditions.

Caution - Underwound spring (less than 3 notches) or overwound spring (more than 10 notches) will cause spring breakage.

Left Hand Door

Right Hand Door

7. Hold Open Adjustment -
Open door to angle of hold open desired and tighten holder adjustment nut with wrench supplied.

Closer Adjustment -

Closing Speed ... Controlled by the regulating valve on the end of the closer farthest from the hinge.

Sweep Speed ... Controls the door's speed in the sweep speed range, see illustration. Full 360° clockwise turns decrease the sweep speed. Full 360° counter-clockwise turns increase the sweep speed.

Latch Speed ... Controls the door's speed in the latch speed range, see illustration. A partial turn, up to a maximum of 1/2 turn (180°) in either direction determines the latch speed.

Backcheck ... Controlled by the regulating valve on the end of the closer closest from the hinge. Backcheck cushions or slows the door opening speed near the end of the opening cycle. Full 360° clockwise turns increases resistance to opening. Full 360° counter-clockwise turns decreases resistance to opening.

Note: If backcheck is encountered extremely early in the opening cycle, rotate the valve 1/2 turn (180°) to eliminate early opening resistance.

Caution ... To avoid damage to closer, never fully close the backcheck regulating valve.

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