### Installation Instructions for REGULAR ARM (PULL SIDE) Mounting

- Right hand door shown
- Left hand door opposite
- Dimensions are in inches
- Drawing not to scale
- Closer projection and location may restrict door swing if door must open against wall or other barrier.

<table>
<thead>
<tr>
<th>OPENING</th>
<th>DIM.A</th>
</tr>
</thead>
<tbody>
<tr>
<td>TO 100°</td>
<td>120mmX4 9/32</td>
</tr>
<tr>
<td>100°-120°</td>
<td>130mmX4 9/32</td>
</tr>
<tr>
<td>OVER 180°</td>
<td>80mmX8 5/32</td>
</tr>
</tbody>
</table>

### INSTALLATION INSTRUCTIONS
1. Select degree of opening from table and use template dimensions shown in above, mark 4 holes on door for door closer and two (2) holes on frame for arm shoe.
2. Drill pilot holes in door and frame for #14 all-purpose screws or drill and tap for 1/4-20 machine screws.
3. Install adjustable forearm/arm shoe assembly to frame using screws provided.
4. Install main arm to top pinion shaft using screw provided.
5. Mount closer on door using screws provided, SPRING POWER ADJUSTING NUT MUST BE POSITIONED AWAY FROM HINGE EDGE.
6. Adjust length of adjustable forearm so that adjustable forearm is perpendicular to frame when assembled to preload main arm (illustration below). Secure forearm to main arm with screw provided.
7. Snap pinion cap over shaft at bottom of closer (When using full cover pinion cap is not necessary).
8. Adjust closing speed, back check control and spring power of door, following instructions as shown page 4.

### Top View Typical Installation

- Right hand door
- Left hand door
- Preload
- Adjustable Forearm
- SPRING POWER ADJUSTING NUT

---

### Installation Instructions for TOP JAMB (PUSH SIDE) Mounting

- Left hand door shown
- Right hand door opposite
- Dimensions are in inches
- Drawing not to scale
- Closer projection and location may restrict door swing if door must open against wall or other barrier.

<table>
<thead>
<tr>
<th>OPENING</th>
<th>DIM.A</th>
</tr>
</thead>
<tbody>
<tr>
<td>TO 100°</td>
<td>140mmX5 1/2</td>
</tr>
<tr>
<td>100°-120°</td>
<td>130mmX5 1/2</td>
</tr>
<tr>
<td>OVER 180°</td>
<td>30mmX8 5/16</td>
</tr>
</tbody>
</table>

### INSTALLATION INSTRUCTIONS
1. Select degree of opening from table and use template dimensions shown in above, mark 4 HOLES ON FRAME for closer and TWO (2) HOLES ON DOOR for arm shoe.
2. Drill pilot holes in door and frame for #14 all-purpose screws or drill and tap for 1/4-20 machine screws.
3. Install adjustable forearm/arm shoe assembly to door using screws provided.
4. Install main arm to top pinion shaft using screw provided.
5. Mount closer on frame using screws provided, SPRING POWER ADJUSTING NUT MUST BE POSITIONED AWAY FROM HINGE EDGE.
6. Adjust length of adjustable forearm so that adjustable forearm is perpendicular to door when assembled to preload main arm (Illustration below). Secure forearm to main arm with screw provided.
7. Snap pinion cap over shaft at top of closer (When using full cover pinion cap is not necessary).
8. Adjust closing speed, back check control and spring power of door, following instructions as shown page 4.

### Top View Typical Installation

- Left hand door
- Right hand door
- Preload
- Adjustable Forearm
500 SERIES
Surface Mounted Power
Adjustable & Preset "Back-Check"
Optional BF/DA

**Installation Instructions for PARALLEL ARM (PUSH SIDE) Mounting**

1. Select degree of opening from table and use template dimensions shown in above mark 4 holes on door for door closed end and four (4) underlast of frame for bracket.
2. Drill pilot holes in door and frame for #14 all-purpose screws or drill and tap for 1/4-20 machine screws.
3. Mount closer on door using screws provided. SPRING POWER ADJUSTING NUT MUST BE POSITIONED TOWARDS HINGE EDGE.
4. Install Parallel Arm Bracket to Frame. Using screw provided.
5. Also, adjust spring to square shaft at bottom of closer, note shaft approximately 45° toward hinge edge of door. Hold and place main arm of shaft on top of closer at proper index mark as illustrated FOR LEFT HAND DOOR. "A", FOR RIGHT HAND DOOR "B", Tighten arm screw with lockwasher securely.
6. Remove arm shoe from the forearm and discard arm shoe is not used for parallel installation and tighten screw securely.
7. Adjust length of adjustable forearm so that adjustable forearm is parallel to frame.
8. Snap pin cap over shaft at bottom of closer. (When using full cover, pin cap is not necessary).
9. Adjust closing speed to back check control and spring power of door following instructions as shown page 4.

**Top View Typical Installation**

- Left hand door shown
- Right hand door opposite
- Dimensions are in inches
- Drawing not to scale

**CLOSING CYCLE**

- **CLOSING**
  - Spring power adjusting valve clockwise for a SLOWER closing speed.
  - Turn the speed adjusting valve COUNTER COUNTERWISE for a FASTER closing speed.

- **COUNTER-CLOSING**
  - Left hand door shown
  - Right hand door opposite
  - Dimensions are in inches
  - Drawing not to scale

**INSTALLATION INSTRUCTIONS**

<table>
<thead>
<tr>
<th>OPENING</th>
<th>DIM.A</th>
<th>DIM.B</th>
</tr>
</thead>
</table>
| TO 100° | 200mm(7-7/8) | 150mm(5-3/4)
| 120°-180° | 110mm(4-3/8) | 120mm(4-3/32)

**BACK CHECK CONTROL**

- To decrease back check control valve anticlockwise.
- To increase back check control valve clockwise.

**SPRING POWER CONTROL**

- To decrease open force and closing force, turn the spring adjusting screw clockwise.
- To increase open force and closing force, turn the spring adjusting screw anticlockwise.

**FULLY ADJUSTABLE SPRING**

- Control closer is shipped as size 2 on BF/BR BAR RIER FREEMODELS, and size 3 on non BF/BR MODELLS. ROTATE SPRING ADJUSTMENT SCREW COUNTER-CLOCKWISE TO REDUCE THE SIZE, ROTATE SPRING ADJUSTMENT SCREW CLOCKWISE TO INCREASE SPRING POWER.

**ADJUSTABLE SPRING MODELS**

<table>
<thead>
<tr>
<th>CLOSER SIZE</th>
<th>STANDARD DIS</th>
<th>POWER TURNS OF ADJUSTING SCREW</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>18</td>
</tr>
</tbody>
</table>

**NOTE**

- Maximum adjustment is approximately 18 turns from minimum setting.
- Do not forcibly extend adjustment beyond limits.

Page: 3