Advanced Door Control Solutions Inc.

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PIVOTS – HINGES
THRESHOLDS
WEATHERING
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Sealeze
Upon Request
7200 Series Pivots

General Information:
• Complete line of 3/4" offset, 1-1/2" offset, center hung, intermediate and power transfer pivots with all exposed parts made of brass or stainless steel for maximum corrosion resistance.
• High strength brass and stainless steel forgings, and castings for rated and non-rated doors combined with precision bearings for smooth operation.
• Stainless steel machine screws and wood screws standard.
• Positive locking vertical adjustment mechanism allows the installer to precisely position the door and balance the load.
• Last digit in pivot set number reflects the maximum door weight in hundreds of pound, e.g., 7215 = 500 pounds. For sets designated as “heavy duty”, add 1,000 pounds, e.g., 7237F HD set = 1700 pounds.
• Pivots for lead lined doors are available, consult factory.
• See following page for Pivot Selection Chart.

Finishes:

<table>
<thead>
<tr>
<th>Description</th>
<th>Finish</th>
<th>BHMA</th>
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<tr>
<td><strong>Powder-Coated Finishes (Available on all models)</strong></td>
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<tr>
<td>Dark Bronze</td>
<td>SP313</td>
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<td>SP4</td>
<td>706</td>
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<tr>
<td>Bronze</td>
<td>SP10</td>
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<td><strong>Plated Finishes (Available on all models except “F—Fire-Rated” models)</strong></td>
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<td></td>
</tr>
<tr>
<td>Polished Brass</td>
<td>US3</td>
<td>605</td>
</tr>
<tr>
<td>Satin Brass</td>
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<tr>
<td>Satin Bronze</td>
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<td>612</td>
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<tr>
<td>Oil-Rubbed Bronze</td>
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<td>613</td>
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<td>Polished Chromium Plated</td>
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<td>625</td>
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<tr>
<td>Satin Chromium Plated</td>
<td>US26D</td>
<td>626</td>
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<td><strong>Plated Finishes (Available on “F—Fire-Rated” models)</strong></td>
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Optional Finishes:
Consult factory for availability.
Special powder-coated finishes are available.
## 7200 Series Pivot Selection Chart

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<thead>
<tr>
<th>Pivot Set</th>
<th>UL Rating</th>
<th>Top Pivot</th>
<th>Bottom Pivot</th>
<th>Bottom Pivot Mounting</th>
<th>Recommended Intermediate Pivot</th>
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<th>1-1⁄2&quot; Offset</th>
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<th>Max Door Weight</th>
<th>Handed</th>
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7200 Series Pivots – Overview

3/4" Offset Pivots - 200 Lb. Doors

- 7212 Top Pivot
- 7222 Top Pivot
- 7212V Top Pivot
- 7212-7212V-7222 Intermediate Pivot

3/4" Offset Pivots - 500 to 700 Lb. Doors

- 7215 Bottom Pivot
- 7215F Bottom Pivot
- 7226 Bottom Pivot
- 7226F Bottom Pivot
- 7227 Bottom Pivot
- 7227F Bottom Pivot
- 7215-7215F-7226-7226F-7227F Intermediate Pivot
- 7215-7226-7227 Power Transfer Intermediate Pivot

3/4" Offset Pivots - Fire-Rated - 1000 to 1750 Lb. Doors

- 7230F-7237F Top Pivot
- 7230F Bottom Pivot
- 7237F Bottom Pivot
- 7230F-7237F Intermediate Pivot
7212 & 7212V 3/4" Offset

7212 Pivot Set

- Handed 3/4" offset pivot set consisting of a jamb mounted 7212 Bottom Pivot (handed), and a head frame mounted 7212 Top Pivot (non-handed).
- Door Thickness minimum 1-3/4" (44mm), bevel 1/8" (3mm) in 2" (51mm).
- Center Line Offset 3/4" (19mm) from face of door and 3/4" from edge of door.
- Maximum Load 200 pounds (91 kg).
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
- Optional 7212 Intermediate Pivot (handed) carries up to an additional 100 pounds (45.5 kg) load or needed for doors over 7'.

7212V Pivot Set

- Handed 3/4" offset pivot set consisting of a jamb mounted 7212 Bottom Pivot (handed), and a jamb mounted 7212V Top Pivot (handed).
- Door Thickness minimum 1-3/4" (44mm), bevel 1/8" (3mm) in 2" (51mm).
- Center Line Offset 3/4" (19mm) from face of door and 3/4" from edge of door.
- Maximum Load 200 pounds (91 kg).
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
- Optional 7212 Intermediate Pivot (handed) carries up to an additional 100 pounds (45.5 kg) load or needed for doors over 7'.

How to Order:

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<tr>
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7215 or 7215F Pivot Sets

- Handed 3/4" offset pivot set consisting of a jamb mounted 7215 or 7215F Bottom Pivot (handed) and a head frame mounted 7215 or 7215F Top Pivot, (non-handed).
- Door Thickness minimum 1-3/4" (44mm), bevel 1/8" (3mm) in 2" (51mm).
- Center Line Offset 3/4" (19mm) from face of door and 3/4" from edge of door.
- Maximum Load 500 pounds (227 kg).
- UL Listed
  7215 for 20 minute rated door.
  7215F for 3 hour rated door.
- 7215F meets ANSI/BHMA Grade 1.
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
- Optional Intermediate Pivot
  For 7215 set use 7215 Intermediate Pivot (handed).
  For 7215F set use 7215 Intermediate Pivot (handed).
  Each Intermediate Pivot carries up to an additional 100 pounds (45.5 kg) load or needed for doors over 7’. See page B14.
- Optional 7215 PT Power Transfer Intermediate Pivot (handed). Provides 4 wire transfer with no weight bearing capabilities.

How to Order:

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<td>Intermediate pivot only</td>
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<td>Right-hand door</td>
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</table>
7222 Pivot Set

- Handed 3/4” offset pivot set consisting of a base plate mounted 7222 Bottom Pivot (handed), and a head frame mounted 7222 Top Pivot (non-handed).
- Door Thickness minimum 1-3/4” (44mm), bevel 1/8” (3mm) in 2” (51mm).
- Center Line Offset 3/4” (19mm) from face of door and 3/4” from edge of door.
- Maximum Load 200 pounds (91 kg).
- Vertical Adjustment Range of 3/16” (5mm), which includes a positive locking feature.
- Optional 7222 Intermediate Pivot (handed) carries up to an additional 100 pounds (45.5 kg) load or needed for doors over 7’.

How to Order:

7222 - __________ - __________ - __________

**Pivot Style:**
- **Blank** - Top and bottom set
- **TOP** - Top pivot only
- **BTM** - Bottom pivot only
- **INT** - Intermediate pivot only

**Handing:**
- **LH** - Left-hand door
- **RH** - Right-hand door

**Finishes:**
7226 & 7226F 3/4" Offset

**7226 or 7226F Pivot Sets**

- Non-handed 3/4" offset pivot set consisting of a base plate mounted 7226 or 7226F Bottom Pivot, and a head frame mounted 7226 or 7226F Top Pivot.
- Door Thickness minimum 1-3/4" (44mm), bevel 1/8" (3mm) in 2" (51mm).
- Center Line Offset 3/4" (19mm) from face of door and 3/4" from edge of door.
- Maximum Load 600 pounds (272 kg).
- UL Listed
  - 7226 for 20 minute rated door.
  - 7226F for 3 hour rated door.
- 7226F meets ANSI/BHMA Grade 1.
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
- Optional Intermediate Pivot
  - For 7226 set, use 7226 Intermediate Pivot (handed). For 7226F set, use 7226F Intermediate Pivot (handed). Each Intermediate Pivot carries up to an additional 100 pounds (45.5 kg) load or needed for doors over 7'. See page B14.
- Optional 7226 PT Power Transfer Intermediate Pivot (handed). Provides 4 wire transfer with no weight bearing capabilities.

**How to Order:**

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</table>
**7227 & 7227F 3/4" Offset**

**7227 or 7227F Pivot Sets**
- Non-handed 3/4" offset pivot set consisting of mortised cement case mounted 7227 or 7227F Bottom Pivot and a head frame mounted 7227 or 7227F Top Pivot.
- Door Thickness minimum 1-3/4" (44mm), bevel 1/8" (3mm) in 2" (51mm).
- Center Line Offset 3/4" (19mm) from face of door and 3/4" from edge of door.
- Maximum Load 700 pounds (318 kg).
- UL Listed
  - 7227 for 20 minute rated door.
  - 7227F for 3 hour rated door.
- 7227F meets ANSI/BHMA Grade 1.
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
- Optional Intermediate Pivot
  - For 7227 set use 7227 Intermediate Pivot (handed).
  - For 7227F set use 7227F Intermediate Pivot (handed).
  - Each Intermediate Pivot carries up to an additional 100 pounds (45.5 kg) load or needed for doors over 7'. See page B14.
- Optional 7227 PT Power Transfer Intermediate Pivot (handed). Provides 4 wire transfer with no weight bearing capabilities.

**How to Order:**

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<tr>
<td>RH</td>
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<th>Finishes:</th>
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</table>
7230F Heavy Duty Pivot Set

- Non-handed 3/4" offset pivot set consisting of a base plate mounted 7230F Bottom Pivot and a head frame mounted 7230F Top Pivot.
- Door Thickness minimum 1-3/4" (44mm), bevel 1/8" (3mm) in 2" (51mm).
- Center Line Offset 3/4" (19mm) from face of door and 3/4" from edge of door.
- Maximum Load 1000 pounds (455 kg).
- Can be used on lead-lined doors.
- UL Listed for 3 hour rated door.
- Meets ANSI/BHMA Grade 1.
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
- Optional 7230F Intermediate Pivot (handed) carries up to an additional 100 pounds (45.5 kg) load or needed for doors over 7'.

How to Order:

<table>
<thead>
<tr>
<th>Pivot Style</th>
<th>Blank</th>
<th>TOP</th>
<th>BTM</th>
<th>INT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Top and bottom set</td>
<td>Top pivot only</td>
<td>Bottom pivot only</td>
<td>Intermediate pivot only</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Handing</th>
<th>LH</th>
<th>RH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Left-hand door</td>
<td>Right-hand door</td>
</tr>
</tbody>
</table>


7230F
7237F 3/4" Offset, Heavy Duty

**7237F Heavy Duty Pivot Set**
- Non-handed 3/4" offset pivot set consisting of a mortised cement case mounted 7237F Bottom Pivot and a head frame mounted 7237F Top Pivot.
- Door Thickness minimum 1-3/4" (44mm), bevel 1/8" (3mm) in 2" (51mm).
- Center Line Offset 3/4" (19mm) from face of door and 3/4" from edge of door.
- Maximum Load 1750 pounds (795 kg).
- Can be used on lead-lined doors.
- UL Listed for 3 hour rated door.
- Meets ANSI/BHMA Grade 1.
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
- Optional 7237F Intermediate Pivot (handed) carries up to an additional 100 pounds (45.5 kg) load or needed for doors over 7'.

---

**How to Order:**

<table>
<thead>
<tr>
<th>Pivot Style</th>
<th>Finishes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOP</td>
<td></td>
</tr>
<tr>
<td>BTM</td>
<td></td>
</tr>
<tr>
<td>INT</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Handing</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LH</td>
<td>Left-hand door</td>
</tr>
<tr>
<td>RH</td>
<td>Right-hand door</td>
</tr>
</tbody>
</table>
7244F 1-1/2" Offset

7244F Heavy Duty Pivot Set

- Non-handed 1-1/2" offset pivot set consisting of a base plate mounted 7244F Bottom Pivot and a head frame mounted 7244F Top Pivot.
- Door Thickness minimum 1-3/4" (44mm), bevel 1/8" (3mm) in 2" (51mm).
- Center Line Offset 1-1/2" (19mm) from face of door and 3/4" from edge of door.
- Maximum Load 400 pounds (182 kg).
- UL Listed for 3 hour rated door.
- Meets ANSI/BHMA Grade 1.
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
- Optional 7244F Intermediate Pivot (handed) carries up to an additional 100 pounds (45.5 kg) load or needed for doors over 7'.

How to Order:

7244F - - -

Pivot Style:
- Blank  Top and bottom set
- TOP    Top pivot only
- BTM    Bottom pivot only
- INT    Intermediate pivot only

Handing:
- LH     Left-hand door
- RH     Right-hand door

Finishes:
7245F 1-1/2" Offset

7245F Heavy Duty Pivot Set
• Non-handed 1-1/2" offset pivot set consisting of a mortised cement case mounted 7245F Bottom Pivot and a head frame mounted 7245F Top Pivot.
• Door Thickness minimum 1-3/4" (44mm), bevel 1/8" (3mm) in 2" (51mm).
• Center Line Offset 1-1/2" (19mm) from face of door and 3/4" from edge of door.
• Maximum Load 500 pounds (227 kg).
• UL Listed for 3 hour rated door.
• Meets ANSI/BHMA Grade 1.
• Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
• Optional 7245F Intermediate Pivot (handed) carries up to an additional 100 pounds (45.5 kg) load or needed for doors over 7'.

How to Order:
7245F - _____ - _____ - _____

Pivot Style:
Blank Top and bottom set
TOP Top pivot only
BTM Bottom pivot only
INT Intermediate pivot only

Handing:
LH Left-hand door
RH Right-hand door

Finishes:
General Information:
- Door Height NFPA 80, Section 3-8.3, requires additional intermediate pivot for some fire-rated doors. We recommend one for every 2'6" (762mm), or fraction thereof, door height over 5'0" (1524mm).
- Door Weight exceeding pivot set limit, add one intermediate pivot for each 100 lbs. (45.5 kg) additional.
- Door Thickness minimum 1-3/4" (44mm), bevel 1/8" (3mm) in 2" (51mm).

7212-7212V-7222 INT
- Handed 3/4" offset pivots compatible with the following pivot sets: 7212, 7212V and 7222.
- Maximum Load 100 pounds (45.5 kg).
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.

7215-7226-7227 INT
- Handed 3/4" offset pivots compatible with the following pivot sets: 7215, 7226 and 7227.
- Maximum Load 100 pounds (45.5 kg).
- UL Listed for 20 minute rated door.
- Meets ANSI/BHMA Grade 1.
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.

7215F-7226F-7227F INT
- Handed 3/4" offset pivots compatible with the following pivot sets: 7215F, 7226F and 7227F.
- Maximum Load 100 pounds (45.5 kg).
- UL Listed for 3 hour rated door.
- Meets ANSI/BHMA Grade 1.
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
7200 Series Intermediate Pivots

7230F - 7237F INT
- Handed 3/4" offset pivots compatible with the following pivot sets: 7230F and 7237F.
- Maximum Load 100 pounds (45.5 kg).
- Can be used on lead-lined doors.
- UL Listed for 3 hour rated door.
- Meets ANSI/BHMA Grade 1.
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.

7244F - 7245F INT
- Handed 1-1/2" offset pivots compatible with the following pivot sets: 7244F and 7245F.
- Maximum Load 100 pounds (45.5 kg).
- UL Listed for 3 hour rated door.
- Meets ANSI/BHMA Grade 1.
- Vertical Adjustment Range of 3/16" (5mm), which includes a positive locking feature.
7253 Center Hung Pivot Set

7253 Pivot Set

- Center hung pivot set consisting of base plate mounted 7253 Bottom Pivot and a head frame mounted 7253 Top Pivot.
- Maximum Load 300 pounds (136 kg).
- Easy Installation Tilt on bearing and bearing pin.
- Door Thickness minimum 1-3/4" (44mm).
- Radius Stop (A) to clear heel edge of door.
- Pivot Distance (B) 1-3/4" (44mm) minimum from jamb to centerline of pivot pin. Radius heel edge of door, 1-5/8" (41mm) minimum recommended.
- Clearance from bottom edge of door to the floor mounting surface is adjustable from 3/16" (5mm) to 3/4" (19mm) by varying the depth of the mortise (C) in the bottom rail of the door, refer to Table D. Over 3/4" (19mm) from the door to floor mounting surface, consult factory.
- Vertical Adjustment based on mortise preparation in bottom rail of the door. Refer to Table D.

<table>
<thead>
<tr>
<th>Clearance</th>
<th>Depth of Mortise</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/16&quot; (5mm)</td>
<td>1-3/16&quot; (30mm)</td>
</tr>
<tr>
<td>3/8&quot; (10mm)</td>
<td>1&quot; (25mm)</td>
</tr>
<tr>
<td>1/2&quot; (13mm)</td>
<td>7/8&quot; (22mm)</td>
</tr>
<tr>
<td>5/8&quot; (16mm)</td>
<td>3/4&quot; (19mm)</td>
</tr>
<tr>
<td>3/4&quot; (19mm)</td>
<td>5/8&quot; (16mm)</td>
</tr>
</tbody>
</table>

How to Order:

7253 - -

Pivot Style:
- Blank: Top and bottom set
- TOP: Top pivot only
- BTM: Bottom pivot only

Finishes:
# 7255 & 7255J Center Hung Pivot Sets

**7255 Pivot Set**
- Center hung pivot set consisting of base plate mounted 7255 Bottom Pivot and a head frame mounted 7255 Top Pivot.
- Maximum Load 500 pounds (227 kg).
- Door Thickness minimum 1-3/4" (44mm).
- Radius Stop (A) to clear heel edge of door.
- Pivot Distance (B) 1-3/4" (44mm) minimum from jamb to centerline of pivot pin. Radius heel edge of door, 1-5/8" (41mm) minimum recommended.
- Clearance from bottom edge of door to the floor mounting surface is adjustable from 3/16" (5mm) to 3/4" (19mm) by varying the depth of the mortise (C) in the bottom rail of the door, refer to Table D. Over 3/4" (19mm) from the door to floor mounting surface, consult factory.
- Meets ANSI/BHMA Grade 1.
- Vertical Adjustment based on mortise preparation in bottom rail of the door.

**7255J Pivot Set**
- Center hung pivot set consisting of jamb mounted 7255J Bottom Pivot and a head frame mounted 7255 Top Pivot.
- Maximum Load 500 pounds (227 kg).
- Door Thickness minimum 1-3/4" (44mm).
- Radius Stop (A) to clear heel edge of door.
- Pivot Distance (B) 1-3/4" (44mm) minimum from jamb to centerline of pivot pin. Radius heel edge of door, 1-5/8" (41mm) minimum recommended.
- Clearance from bottom edge of door to the floor mounting surface is adjustable from 3/16" (5mm) to 3/4" (19mm) by varying the depth of the mortise (C) in the bottom rail of the door, refer to Table D. Over 3/4" (19mm) from the door to floor mounting surface, consult factory.
- Meets ANSI/BHMA Grade 1.
- Vertical Adjustment based on mortise preparation in bottom rail of the door.

## How to Order:

<table>
<thead>
<tr>
<th>Mounting:</th>
<th>Blank</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Floor mounted bottom pivot</td>
<td>Jamb mounted bottom pivot</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pivot Style:</th>
<th>Blank</th>
<th>TOP</th>
<th>BTM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Top and bottom set</td>
<td>Top pivot only</td>
<td>Bottom pivot only</td>
</tr>
</tbody>
</table>

**7256 Center Hung Pivot Set**

**7256 Pivot Set**

- Center hung pivot set consisting of mortised cement case mounted 7256 Bottom Pivot and a head frame mounted 7256 Top Pivot.
- Door Thickness minimum 1-3/4" (44mm).
- Radius Stop (A) to clear heel edge of door.
- Pivot Distance (B) 1-3/4" (44mm) minimum from jamb to centerline of pivot pin. Radius heel edge of door, 1-5/8" (41mm) minimum recommended.
- Clearance from bottom edge of door to the floor mounting surface is adjustable from 3/16" (5mm) to 3/4" (19mm) by varying the depth of the mortise (C) in the bottom rail of the door, refer to Table D. Over 3/4" (19mm) from the door to floor mounting surface, consult factory.
- Maximum Load 600 pounds (272 kg).
- Meets ANSI/BHMA Grade 1.
- Vertical Adjustment based on mortise preparation in bottom rail of the door. Refer to Table D.

**Table D**

<table>
<thead>
<tr>
<th>Clearance</th>
<th>Depth of Mortise</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/16&quot; (5mm)</td>
<td>1-3/16&quot; (30mm)</td>
</tr>
<tr>
<td>3/8&quot; (10mm)</td>
<td>1&quot; (25mm)</td>
</tr>
<tr>
<td>1/2&quot; (13mm)</td>
<td>7/8&quot; (22mm)</td>
</tr>
<tr>
<td>5/8&quot; (16mm)</td>
<td>3/4&quot; (19mm)</td>
</tr>
<tr>
<td>3/4&quot; (19mm)</td>
<td>5/8&quot; (16mm)</td>
</tr>
</tbody>
</table>

**How to Order:**

7256 -

**Pivot Style:**

- **Blank** Top and bottom set
- **TOP** Top pivot only
- **BTM** Bottom pivot only

**Finishes:**

7259 Center Hung Pivot Set

7259 Pivot Set

- Center hung consisting of mortised cement case mounted 7259 Bottom Pivot and a head frame mounted 7259 Top Pivot.
- Door Thickness minimum 2" (51mm).
- Radius Stop (A) to clear heel edge of door.
- Pivot Distance (B) 1-3/4" (44mm) minimum from jamb to centerline of pivot pin. Radius heel edge of door, 1-5/8" (41mm) minimum recommended.
- Clearance from bottom edge of door to the floor mounting surface is adjustable from 3/16" (5mm) to 3/4" (19mm) by varying the depth of the mortise (C) in the bottom rail of the door, refer to Table D. Over 3/4" (19mm) from the door to floor mounting surface, consult factory.
- Maximum Load 1000 pounds (455 kg).
- Meets ANSI/BHMA Grade 1.
- Vertical Adjustment based on mortise preparation in bottom rail of the door. Refer to Table D.

Table D

<table>
<thead>
<tr>
<th>Clearance</th>
<th>Depth of Mortise</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/16&quot; (5mm)</td>
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</tr>
<tr>
<td>3/8&quot; (10mm)</td>
<td>1&quot; (25mm)</td>
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<tr>
<td>1/2&quot; (13mm)</td>
<td>7/8&quot; (22mm)</td>
</tr>
<tr>
<td>5/8&quot; (16mm)</td>
<td>3/4&quot; (19mm)</td>
</tr>
<tr>
<td>3/4&quot; (19mm)</td>
<td>5/8&quot; (16mm)</td>
</tr>
</tbody>
</table>

How to Order:

7259 -

Pivot Style:
- Blank: Top and bottom set
- TOP: Top pivot only
- BTM: Bottom pivot only

Finishes:
# CENTER-HUNG FLOOR PIVOTS

- Designed for use with Aluminum or properly prepared Wood and Hollow Metal Doors.
- Full Ball Bearing Design

## SIDE-LOAD APPLICATIONS

For Doors weighing up to 125 lbs. (56 kg)

<table>
<thead>
<tr>
<th>No. 20-902 (Type G)</th>
<th>No. 20-944 (Type GE)</th>
<th>No. 20-1155 (Type BE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height Adjustable</td>
<td>Height Adjustable</td>
<td></td>
</tr>
<tr>
<td>Application: For Floor Installation</td>
<td>Application: For 1-1/16&quot; (38 mm) Deep Bottom Rail</td>
<td>Application: For Threshold Installation</td>
</tr>
<tr>
<td>Components: No. 20-741 Door Portion</td>
<td>Components: No. 20-741 Door Portion</td>
<td>Components: No. 20-943 Threshold Portion</td>
</tr>
<tr>
<td>Components: No. 20-742 Floor Portion</td>
<td>Components: No. 20-741 Door Portion</td>
<td>Components: No. 20-943 Threshold Portion</td>
</tr>
</tbody>
</table>

## END-LOAD APPLICATIONS

For Doors weighing up to 175 lbs. (79 kg)

<table>
<thead>
<tr>
<th>No. 20-1570 (Type GW)</th>
<th>No. 20-1060 (Type P)</th>
<th>No. 20-728 (Type AE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application: For Floor Installation</td>
<td>Application: For 1/2&quot; (25.4 mm) Deep Bottom Rail</td>
<td>Application: For Floor Installation</td>
</tr>
<tr>
<td>Components: No. 20-647 Door Portion</td>
<td>Components: No. 20-1061 Door Portion</td>
<td>Components: No. 20-647 Door Portion</td>
</tr>
<tr>
<td>Components: No. 20-1062 Floor Portion</td>
<td>Components: No. 20-1062 Floor Portion</td>
<td>Components: No. 20-607 Threshold Portion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. 20-1410 (Type EF)</th>
<th>No. 20-1680 (Type BV)</th>
<th>No. 20-1685 (Type UP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application: For Threshold Installation</td>
<td>Application: For Combination Floor &amp; Threshold Installation</td>
<td>Application: For Combination Floor &amp; Threshold Installation</td>
</tr>
<tr>
<td>Application: For 1-9/16&quot; (39.7 mm) Deep Bottom Rail</td>
<td>Application: For 1-7/16&quot; (39.7 mm) Deep Bottom Rail</td>
<td>Application: For 1-91/8&quot; (39.7 mm) Deep Bottom Rail</td>
</tr>
<tr>
<td>Components: No. 20-1061 Door Portion</td>
<td>Components: No. 20-847 Door Portion</td>
<td>Components: No. 20-1061 Door Portion</td>
</tr>
<tr>
<td>Components: No. 20-807 Threshold Portion</td>
<td>Components: No. 20-1062 Floor Portion</td>
<td>Components: No. 20-1062 Threshold Portion</td>
</tr>
<tr>
<td>Components: No. 20-1062 Floor Portion</td>
<td>Components: No. 20-650 Threshold Mounting Pkg.</td>
<td>Components: No. 20-650 Threshold Mounting Pkg.</td>
</tr>
</tbody>
</table>
TOP CENTER-HUNG PIVOTS

- Walking beam type pivot assembly
- Completely concealed

No. 20-534
APPLICATION: Aluminum, Wood or Metal Doors and Frames
CAPACITY: Maximum Width = 48" (1219 mm)
Maximum Weight = 260 Lbs (118 Kg)
FINISH: Cover Plate: DBZ 313
US28 / 628

No. 20-580
APPLICATION: Aluminum, Wood or Metal Doors and Frames
CAPACITY: Maximum Width = 54" (1372 mm)
Maximum Weight = 1000 Lbs (450 Kg)
FEATURES: Lateral door adjustment of ½" (12 mm)
FINISH: Cover Plate: DBZ 313
US3 / 605
US32 / 629
US32D / 630

ADJUSTABLE TO OBTAIN TOP DOOR CLEARANCES OF 1/8"-3/4"
COMPLETE SETS INCLUDE PIVOT, DOOR ARM & FINISHED COVER PLATE

TOP OFFSET PIVOTS

No. 20-7065 - 3/4"
APPLICATION: Aluminum, Wood Doors and Frames
CAPACITY: Maximum Width = 48" (1219 mm)
Maximum Weight = 260 Lbs (118 Kg)
MATERIAL: Cast Steel
FINISH: DBZ 313
US3 / 605
US15 / 646

No. 20-7075 - 1-1/2"
APPLICATION: Aluminum, Wood or Metal Doors and Frames
CAPACITY: Maximum Width = 54" (1372 mm)
Maximum Weight = 1000 Lbs (450 Kg)
FEATURES: Full Mortise - Handed
Available for Flush and 1/8" (3 mm) recessed doors.
FINISH: Cover Plate: US3 / 605
US10B / 613
US32 / 629
US32D / 630

No. J-110 - 3/4"
APPLICATION: Aluminum, Wood or Metal Doors and Frames
CAPACITY: Maximum Width = 54" (1372 mm)
Maximum Weight = 1000 Lbs (450 Kg)
FEATURES: Full Mortise - Handed
Available for Flush and 1/8" (3 mm) recessed doors.
FINISH: Cover Plate: US3 / 605
US10B / 613
US32 / 629
US32D / 630
3/4” OFFSET – INTERMEDIATE PIVOTS

- Matching contemporary design
- 5/8" (16 mm) vertical adjustment
- Full race ball-bearing and oilite bronze bushing
- Fully retractable pin for easy installation

No. J-190

APPLICATION: Aluminum or Metal Doors and Frames
CAPACITY:
190 Aluminum  .  Max. Wt. = 0,150 Lbs (468 Kg)
190HD Brass/Bronze - Max. Wt. = 1,000 Lbs (454 Kg)
FEATURES: Full Mortise – Handed
MATERIAL: 190HD = Aluminum
190HD  Brass or Bronze or Stainless Steel
FINISH:  190 = DBZ 313  190HD = US3 / 605
        US28 / 628  US10B / 613
        US32 / 629
        US32D / 630

No. J-14

APPLICATION: Aluminum Doors and Frames
CAPACITY: Maximum Weight = 125 Lbs (57 Kg)
FEATURES: Reversible - Non-Handed
Jamb Slot-in
MATERIAL: Extruded Aluminum
FINISH:  DBZ 313
US2B / 628
Short leg available
# PIVOTS

### ¾” OFFSET – PIVOT SETS

## PIVOT COMPONENT LISTING

<table>
<thead>
<tr>
<th>USER</th>
<th>SET NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. ALUMINUM</td>
<td>J-25 RH</td>
</tr>
<tr>
<td>U.S. ALUMINUM</td>
<td>J-25 LH</td>
</tr>
<tr>
<td>U.S. ALUMINUM</td>
<td>J-26 RH</td>
</tr>
<tr>
<td>U.S. ALUMINUM</td>
<td>J-26 LH</td>
</tr>
<tr>
<td>BESAM / KAWNEER</td>
<td>J-27 (OP27)</td>
</tr>
<tr>
<td>KAWNEER</td>
<td>J-28 (OP28)</td>
</tr>
<tr>
<td>ARCADIA / ARCH ALUMINUM / TUBELITE / VISTAWALL</td>
<td>J-30 RH (OP30)</td>
</tr>
<tr>
<td>ARCADIA / ARCH ALUMINUM / TUBELITE / VISTAWALL</td>
<td>J-30 LH (OP30)</td>
</tr>
<tr>
<td>ARCADIA / ARCH ALUMINUM / TUBELITE / VISTAWALL</td>
<td>J-31 RH (OP31)</td>
</tr>
<tr>
<td>ARCADIA / ARCH ALUMINUM / TUBELITE / VISTAWALL</td>
<td>J-31 LH (OP31)</td>
</tr>
<tr>
<td>U.S. ALUMINUM</td>
<td>J-34 RH (OP34)</td>
</tr>
<tr>
<td>U.S. ALUMINUM</td>
<td>J-34 LH (OP34)</td>
</tr>
<tr>
<td>AMARLITE / ARC ALUMINUM / REBCO</td>
<td>J-40 RH (OP40)</td>
</tr>
<tr>
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<td>J-40 LH (OP40)</td>
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<tr>
<td>EFCO CORP / PITTCO ENGINEERED / PPG</td>
<td>J-41 RH (OP41)</td>
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<tr>
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<td>J-41 LH (OP41)</td>
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<tr>
<td>ATLAS ARCH PRODUCT</td>
<td>J-43 RH</td>
</tr>
<tr>
<td>ATLAS ARCH PRODUCT</td>
<td>J-43 LH</td>
</tr>
</tbody>
</table>
¾” OFFSET – PIVOT SETS

- Suitable for aluminum frames and doors weighing up to 125 lbs. (57 kg)
- Matching contemporary design
- Extruded or Cast Aluminum

- Full race ball-bearing and oilite bronze bushing
- Fully retractable, spring loaded top pin for easy door installation and adjustment
- 1/8" (3 mm) vertical adjustment

Set No. J-25
Set No. J-27 (OP27)
Set No. J-28 (OP28)

Set No. J-30 (OP30)
Set No. J-31 (OP31)
Set No. J-43

Set No. J-34 (OP34)
Set No. J-40 (OP40)
Set No. 41 (OP41)
PIVOT SETS

For 1-3/4” Aluminum Doors weighing not more than 125 lbs. (57 kg)

- 213 Walking beam Top Pivot
- 673A Top Door Arm w/nylon bushing
- 676 Bottom Door Arm w/Ball Bearing Race
- 678 Floor Portion w/Steel Pin

670M - Center-Hung

689 - Offset (Non-handed)

For 1-3/4” Wood or Hollow Metal Doors weighing not more than 125 lbs. (57 kg)

- 213K Walking Beam Top Pivot w/cover plate
- 653A Top Door Arm w/nylon bushing
- 676 Bottom Door Arm w/Ball Bearing Race
- 678 Floor Portion w/Steel Pin

650M - Center-Hung

690 - Offset (Non-handed)
### EFFECTIVE OCTOBER 1, 2012 SERVICE PARTS

**OFFSET PIVOTS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
<th>Price includes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOP PIVOT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frame Portion</td>
<td>050321</td>
<td>Top pivot frame portion and screws</td>
</tr>
<tr>
<td><strong>TOP DOOR PIVOT RETRO FIT PACKAGE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price includes: Top pivot door and frame portion, reinforcing plate, and screws</td>
<td>050319</td>
<td></td>
</tr>
<tr>
<td><strong>MODIFIED TOP PIVOT</strong></td>
<td>452181</td>
<td>Top pivot frame portion and screws</td>
</tr>
<tr>
<td><strong>L.H. BOTTOM PIVOT</strong></td>
<td>050325</td>
<td>Bottom pivot door portion, reinforcing plate, and screws</td>
</tr>
<tr>
<td><strong>TOP PIVOT</strong></td>
<td>050320</td>
<td>Top pivot door portion, reinforcing plate, and screws</td>
</tr>
<tr>
<td><strong>TOP OFFSET PIVOT PACKAGE</strong></td>
<td>050322</td>
<td>Top pivot door and frame portion, reinforcing plate, and screws</td>
</tr>
<tr>
<td><strong>TOP PIVOT</strong></td>
<td>118400</td>
<td>Top pivot frame portion</td>
</tr>
<tr>
<td><strong>TOP PIVOT</strong></td>
<td>118401</td>
<td>Top pivot frame portion</td>
</tr>
<tr>
<td><strong>TOP PIVOT</strong></td>
<td>118409</td>
<td>Top pivot frame portion</td>
</tr>
<tr>
<td><strong>L.H. BOTTOM PIVOT</strong></td>
<td>050327</td>
<td>Bottom pivot door &amp; frame portion, reinforcing plate, and screws</td>
</tr>
<tr>
<td><strong>R.H. Bottom Pivot</strong></td>
<td>118411</td>
<td>Bottom pivot frame portion</td>
</tr>
<tr>
<td><strong>R.H. BOTTOM PIVOT</strong></td>
<td>050324</td>
<td>Bottom pivot frame portion and screws</td>
</tr>
<tr>
<td><strong>L.H. Bottom Pivot</strong></td>
<td>050326</td>
<td>Bottom pivot door &amp; frame portion, reinforcing plate, and screws</td>
</tr>
<tr>
<td><strong>0.188&quot; THICK BOTTOM PIVOT SHIM</strong></td>
<td>047602</td>
<td>Shim</td>
</tr>
<tr>
<td><strong>0.250&quot; THICK BOTTOM PIVOT SHIM</strong></td>
<td>047603</td>
<td>Shim</td>
</tr>
<tr>
<td><strong>0.312&quot; THICK BOTTOM PIVOT SHIM</strong></td>
<td>047604</td>
<td>Shim</td>
</tr>
<tr>
<td><strong>0.500&quot; THICK BOTTOM PIVOT SHIM</strong></td>
<td>047605</td>
<td>Shim</td>
</tr>
<tr>
<td><strong>R.H. BOTTOM PIVOT</strong></td>
<td>050326</td>
<td>Bottom pivot door &amp; frame portion, reinforcing plate, and screws</td>
</tr>
<tr>
<td><strong>R.H. Bottom Pivot</strong></td>
<td>050324</td>
<td>Bottom pivot frame portion and screws</td>
</tr>
<tr>
<td><strong>L.H. Bottom Pivot</strong></td>
<td>050327</td>
<td>Bottom pivot door &amp; frame portion, reinforcing plate, and screws</td>
</tr>
<tr>
<td><strong>Bottom Pivot</strong></td>
<td>035506</td>
<td>Bottom pivot frame portion, screws, and anchors</td>
</tr>
<tr>
<td><strong>Bottom Pivot</strong></td>
<td>118411</td>
<td>Bottom pivot frame portion</td>
</tr>
</tbody>
</table>

---

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.
<table>
<thead>
<tr>
<th>TOP &amp; BOTTOM PIVOT SET (L.H.) for Entara® Door</th>
<th>105164</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price includes:</td>
<td></td>
</tr>
<tr>
<td>Top door and frame portion, bottom door and frame portion, and screws</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TOP &amp; BOTTOM PIVOT SET (R.H.) for Entara® Door</th>
<th>105165</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price includes:</td>
<td></td>
</tr>
<tr>
<td>Top door and frame portion, bottom door and frame portion, and screws</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BOTTOM PIVOT Threshold fastened</th>
<th>450526</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price includes:</td>
<td></td>
</tr>
<tr>
<td>Bottom pivot and screws</td>
<td></td>
</tr>
<tr>
<td>(Use with T-Hold on page 42)</td>
<td></td>
</tr>
</tbody>
</table>

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.
**INTERMEDIATE OFFSET PIVOTS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Code</th>
<th>Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KAWNEER STANDARD INTERMEDIATE OFFSET PIVOT PACKAGE</strong></td>
<td>050331</td>
<td><strong>OPTIONAL INTERMEDIATE OFFSET PIVOT (R.H.)</strong></td>
<td>037233</td>
</tr>
<tr>
<td>Price includes: Door portion pivot, frame portion pivot, reinforcement plate, plug cap, and screws</td>
<td></td>
<td>Price includes: Intermediate pivot and screws</td>
<td></td>
</tr>
<tr>
<td><strong>STANDARD INTERMEDIATE PIVOT</strong></td>
<td>050305</td>
<td><strong>OPTIONAL INTERMEDIATE OFFSET PIVOT (L.H.)</strong></td>
<td>037234</td>
</tr>
<tr>
<td>Door Portion</td>
<td></td>
<td>Price includes: Intermediate pivot and screws</td>
<td></td>
</tr>
<tr>
<td>Price includes: Intermediate pivot door portion</td>
<td></td>
<td><strong>DOOR REINFORCING</strong></td>
<td>047141</td>
</tr>
<tr>
<td><strong>STANDARD INTERMEDIATE PIVOT</strong></td>
<td>050309</td>
<td>for Optional Intermediate Pivot</td>
<td></td>
</tr>
<tr>
<td>Frame Portion</td>
<td></td>
<td>Price includes: Reinforcing plate</td>
<td></td>
</tr>
<tr>
<td>Price includes: Intermediate pivot frame portion</td>
<td></td>
<td><strong>FRAME REINFORCING</strong></td>
<td>047814</td>
</tr>
<tr>
<td><strong>FRAME REINFORCEMENT for Kawneer Standard Intermediate Pivot</strong></td>
<td>200483</td>
<td>for Optional Intermediate Pivot</td>
<td></td>
</tr>
<tr>
<td>Price includes: Frame reinforcement</td>
<td></td>
<td><strong>FRAME REINFORCEMENT</strong></td>
<td></td>
</tr>
<tr>
<td><strong>R.H. STANDARD ELECTRIC TRANSFER OFFSET PIVOT</strong></td>
<td>050392</td>
<td><strong>R.H. OPTIONAL ELECTRIC TRANSFER EL INTERMEDIATE OFFSET PIVOT</strong></td>
<td>050397</td>
</tr>
<tr>
<td>Price includes: Door and frame portion pivots with wiring harness</td>
<td></td>
<td>Price includes: Door portion pivot, frame portion pivot, and screws</td>
<td></td>
</tr>
<tr>
<td><strong>L.H. STANDARD ELECTRIC TRANSFER OFFSET PIVOT</strong></td>
<td>050393</td>
<td><strong>L.H. OPTIONAL ELECTRIC TRANSFER EL INTERMEDIATE OFFSET PIVOT</strong></td>
<td>050398</td>
</tr>
<tr>
<td>Price includes: Door and frame portion pivots with wiring harness</td>
<td></td>
<td>Price includes: Door portion pivot, frame portion pivot, and screws</td>
<td></td>
</tr>
<tr>
<td><strong>FRAME REINFORCEMENT for Standard Electric Transfer Offset Pivot</strong></td>
<td>200483EL</td>
<td><strong>SHIM</strong></td>
<td>049876</td>
</tr>
<tr>
<td>Price includes: Frame reinforcement</td>
<td></td>
<td>for Optional Intermediate Pivot and Optional EL Intermediate Pivot with 350 Heavy Wall Door</td>
<td></td>
</tr>
<tr>
<td><strong>PLUG CAP</strong></td>
<td>118404</td>
<td><strong>DOOR REINFORCEING</strong></td>
<td>047141EL</td>
</tr>
<tr>
<td>for Standard Intermediate Offset Pivot</td>
<td></td>
<td>for Optional EL Intermediate Pivot</td>
<td></td>
</tr>
<tr>
<td>Price includes: Plug cap</td>
<td></td>
<td>Price includes: Reinforcing plate</td>
<td></td>
</tr>
<tr>
<td>(Package quantity is 10 each)</td>
<td></td>
<td><strong>FRAME REINFORCEMENT (.094 WALL)</strong></td>
<td>047814EL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>for Optional EL Intermediate Pivot</td>
<td></td>
</tr>
</tbody>
</table>

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.
<table>
<thead>
<tr>
<th>PART</th>
<th>Code</th>
<th>Description</th>
<th>Price Includes</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRAME REINFORCING (.125 WALL) for EL Optional Intermediate Pivot</td>
<td>047142EL</td>
<td>Frame reinforcement</td>
<td></td>
</tr>
<tr>
<td>INTERMEDIATE PIVOT Door Portion for Tuffline® Door</td>
<td>118405</td>
<td>Door portion pivot</td>
<td></td>
</tr>
<tr>
<td>INTERMEDIATE PIVOT Frame Portion for Tuffline® Door</td>
<td>118403</td>
<td>Frame portion intermediate pivot</td>
<td></td>
</tr>
<tr>
<td>FASTENER for Offset Pivots and Pivot Reinforcing</td>
<td>028848</td>
<td>#12-24 x 9/16&quot; with Nylock patch</td>
<td></td>
</tr>
<tr>
<td>INTERMEDIATE OFFSET PIVOT SET (L.H.) for Entara® Door</td>
<td>105162</td>
<td>Intermediate pivot and screws</td>
<td></td>
</tr>
<tr>
<td>INTERMEDIATE OFFSET PIVOT SET (R.H.) for Entara® Door</td>
<td>105163</td>
<td>Intermediate pivot and screws</td>
<td></td>
</tr>
</tbody>
</table>

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.
Vinyl Seals

Properties
- Thermoplastic polymer: Polyvinyl Chloride (PVC) formulated with an environmentally friendly Bio-based plasticizer
- Economical
- Flame resistant
- Moisture resistant
- Temperature range 0°F to 140°F
- Oxidative degradation from age and exposure to Cold, Heat and UV causes hardening, loss of memory and resilience, cracking, crazing and discoloration

#6 x 3/4" Stainless Steel Sheet Metal Screws furnished
Screw holes slotted for adjustment

A - clear anodized
B - gold
DKB - dark bronze
no suffix - mill aluminum
vinyl is gray
exception: vinyl is black

Polypropylene Pile Seals
Temperature range 32°F to 275°F
Pile is gray

#10C
Neoprene Sponge Seals

Properties:
- Synthetic rubber polymer blend: PVC, Nitrile rubber (NBR), and Chloroprene closed cell advanced elastomeric foam
- Very good abrasion resistance, tensile strength and memory
- Flame resistant
- Moisture resistant
- Temperature range -20°F to 200°F
- Good resistance to ozone, sunlight and aging
- BHMA Certified to ANSI/BHMA A156.22 performance tests for Heat, Cold, Air Infiltration and Smoke Infiltration

#6 x 3/4" Stainless Steel Sheet Metal Screws furnished. Screw holes slotted for adjustment

Closed Cell Sponge

A - clear anodized
B - gold
DKB - dark bronze
neoprene is black
**Silicone Seals**

Properties:
- Synthetic rubber polymer: Siloxane closed cell sponge
- Excellent flexibility and memory
- Flame resistant
- Moisture resistant
- Temperature range -100°F to 500°F, remains flexible at extreme temperatures
- Excellent resistance to ozone, UV and aging
- Recommended for areas using FM200 or Halon Fire Suppression Systems
- BHMA Certified to ANSI/BHMA A156.22 performance tests for Heat, Cold, Air Infiltration and Smoke Infiltration

#6 x 3/4” Stainless Steel Sheet Metal Screws furnished
Screw holes slotted for adjustment

**Closed Cell Sponge**

![Closed Cell Sponge Diagram](image)

110SA
110SB
110SDKB

120SA
120SB
120SDKB

127SA
127SB
127SDKB

130SA
130SB
130SDKB

134SA
134SB
134SDKB

165SA
165SB
165SDKB

**Silicone Plus**

Specially formulated to withstand greater temperature extremes while providing maximum protection against air infiltration. Silicone Plus gasket material is tan.

![Silicone Plus Diagram](image)

9001A
9001B
9001DKB

9002
9002A
9002B
9002DKB
Silicone Seals

Properties:
• Synthetic rubber polymer: Siloxane
• Excellent flexibility and memory
• Flame resistant
• Moisture resistant
• Temperature range -100°F to 500°F, remains flexible at extreme temperatures
• Excellent resistance to ozone, UV and aging
• Recommended for areas using FM200 or Halon Fire Suppression Systems
• BHMA Certified to ANSI/BHMA A156.22 performance tests for Heat, Cold, Air Infiltration and Smoke Infiltration

#6 x 3/4" Stainless Steel Sheet Metal Screws furnished
Screw holes slotted for adjustment

Dense Bulbs

A - clear anodized
B - gold
DKB - dark bronze
no suffix - mill aluminum dense
silicone is black exception: 137 silicone is gray

Q-Lon® Foam Seals

Brown polyethylene liner with foam core

Kerf Application
Fits 1/8" wide x 7/16" deep kerf

Stock lengths: 36", 48", 96", 120"
Nylon Brush Seals

#6 x 3/4" Stainless Steel Sheet Metal Screws furnished. Screw holes slotted for adjustment.
Perimeter Seals Compatible with Parallel Arm Closers

- No break in seal for closer mounting
- Closer and/or overhead holder attach to frame through weatherseal section. Install seal first
- Allows mounting of rim exit device strikes without notching gasketing
- Head section not drilled
- Jamb sections furnished with slotted holes for adjustment
- Self drilling #8 (Tek type) screws furnished

700EN 700ENDKB
- neoprene

700ES 700ESDKB
- silicone

700EU 700EUDKB
- polyurethane

703EV 703EVDKB
- vinyl

705EV 705EVDKB
- vinyl

9700E 9700EDKB
- silicone+

A - clear anodized
B - gold
DKB - dark bronze
no suffix - mill aluminum
vinyl & pile are gray
neoprene, silicone, &
polyurethane are black, sili-
cone+ is tan
Profiles on this page may be cut to fit narrow frame stops at additional charge. Specify “cut to width” on order.
Concealed Fastener Seals

Snap-on cover conceals screw heads for clean appearance

#6 x 3/4" Stainless Steel Sheet Metal Screws furnished
Screw holes slotted for adjustment

A - clear anodized
B - gold
DKB - dark bronze
vinyl & pile are gray
*vinyl is black
neoprene, NGP-TPV & silicone are black
nylon brush is gray with clear anodized metal; black with gold and DKB metal
Allseal® Gasketing

Our exclusive line of premium grade seals specially formulated to withstand greater temperature extremes while providing maximum protection against air infiltration.

Perimeter Seals

<table>
<thead>
<tr>
<th>Metal</th>
<th>nylon+</th>
<th>silicone+</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>gray</td>
<td>tan</td>
</tr>
<tr>
<td>B</td>
<td>black</td>
<td>tan</td>
</tr>
<tr>
<td>DKB</td>
<td>black</td>
<td>tan</td>
</tr>
<tr>
<td>no suffix</td>
<td>mill aluminum</td>
<td>gray</td>
</tr>
</tbody>
</table>

#6 x 3/4" Stainless Steel Sheet Metal Screws furnished
Screw holes slotted for adjustment

Perimeter Seals or Sweeps

Astragal Seals

www.advdoor-inc.com
Stainless Steel

Stainless steel type 304 brushed #4 finish (US32D, 630) neoprene & polyurethane are black, epdm & silicone are gray, silicone+ is tan

#6 X 3/4 stainless steel SMS furnished
Screw holes slotted for adjustment

Perimeter Seals

Astragal Seals

120NSS neoprene
120SSS silicone

122NSS neoprene

127NSS neoprene
127SSS silicone

129NSS neoprene
129USS polyurethane

130NSS neoprene
130SSS silicone

125NSS epdm
9125SS silicone+

All perimeter seals this section
( Exception: 129USS not Smoke rated)
**Stainless Steel**

Stainless steel type 304 brushed #4 finish (US32D, 630)
neoprene & polyurethane are black, silicone and nylon brush are gray

#6 X 3/4" stainless steel SMS furnished
Screw holes slotted for adjustment

**Automatic Door Bottom**

Rain Drip Guard

- neoprene (1, 2) 221NSS
- silicone (1, 2) 221SSS
- nylon brush (2) 221WHSS

Door Sweep

- Drop Bar with Nylon Brush - suffix “WH”

1. Lead insert available for radiation shield - specify “lead-lined”
2. Door Bottom is handed. Right hand supplied unless specified. Field reversible.
Architectural Bronze

Architectural bronze satin finish (728), similar to US4
Optional finishes: Polished (721), suffix “POL”
Dark Oxidized oil rubbed (722) similar to US10B, suffix DKB
neoprene & polyurethane are black silicone
& EPDM are gray, silicone+ is tan
#6 x 3/4" brass plated SMS furnished
screw holes slotted for adjustment

Perimeter Seals

- **120NBR** neoprene
- **120SBR** silicone

Astragal Seals

- **125NBR** order as set to receive two pieces

- **129NBR** neoprene
- **129UBR** polyurethane

- **9125BR** order as set to receive two pieces

- **130NBR** neoprene
- **130SBR** silicone

#12 x 1-1/4" brass plated
SMS furnished
Available lead lined .030”
thick lead - suffix “LD”
**Architectural Bronze**

Architectural bronze satin finish (728), similar to US4
Optional finishes: Polished (721), suffix “POL”
Dark Oxidized oil rubbed (722) similar to US10B, suffix DKB

neoprene, polyurethane & nylon brush are black
silicone is gray

#6 x 3/4” brass plated SMS furnished
screw holes slotted for adjustment

**Door Sweep**

<table>
<thead>
<tr>
<th>Material</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neoprene</td>
<td>200NBR</td>
<td>1 1/4”</td>
</tr>
<tr>
<td>Silicone</td>
<td>200SBR</td>
<td>7/16”</td>
</tr>
<tr>
<td>Polyurethane</td>
<td>200UBR</td>
<td></td>
</tr>
</tbody>
</table>

**Rain Drip Guard**

<table>
<thead>
<tr>
<th>Material</th>
<th>Code</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neoprene</td>
<td>17BR</td>
<td>9/16”</td>
</tr>
<tr>
<td>Silicone</td>
<td>17BR</td>
<td>1 7/16”</td>
</tr>
</tbody>
</table>

**Automatic Door Bottoms**

All automatic door bottoms this section

<table>
<thead>
<tr>
<th>Material</th>
<th>Code</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neoprene (1, 2)</td>
<td>221NBR</td>
<td>9/16”</td>
</tr>
<tr>
<td>Silicone (1, 2)</td>
<td>221SBR</td>
<td>2 1/4”</td>
</tr>
<tr>
<td>Nylon Brush (2)</td>
<td>221WHBR</td>
<td>7/8” Max Drop</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material</th>
<th>Code</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neoprene (1, 2)</td>
<td>229NBR</td>
<td>5/8”</td>
</tr>
<tr>
<td>Silicone (1, 2)</td>
<td>229SBR</td>
<td>2 1/2”</td>
</tr>
<tr>
<td>Nylon Brush (2)</td>
<td>229WHBR</td>
<td>7/8” Max Drop</td>
</tr>
</tbody>
</table>

1. Lead insert available for radiation shield - specify “lead-lined”
2. Door Bottom is handed. Right hand supplied unless specified. Field reversible.
**Automatic Door Bottoms - Surface**

- Mounts on push side of door.
- Use with a threshold for maximum sealing capability.
- Nylon brush recommended for carpet applications where no threshold is provided.
- Specify exact net length required to avoid field sizing.
- 36" and longer may be cut up to 4" in the field, under 36" should not be cut in the field, order net length.
- Minimum length 11", maximum length 60" (except 780).

- **Slimline**

  - **Endurance Tested to 5 Million Cycles**

- **Brass and Stainless Steel**

  - **Stainless Steel**

    - neoprene (1, 2) 221NSS
    - silicone (1, 2) 221SSS
    - nylon brush (2) 221WHSS

  - **Brass**

    - neoprene (1, 2) 221NBR
    - silicone (1, 2) 221SBR
    - nylon brush (2) 221WHBR

  - **Silicone** 780SA 780SDKB

  - Available 23" to 96" in length
  - End caps furnished standard.
  - Will work half mortised on swing or sliding doors!

  1. Lead insert available for radiation shield - specify "lead-lined"
  2. Door Bottom is handed. Right hand supplied unless specified. Field reversible.
Neoprene Sweeps

#6 x 3/4" Stainless Steel Sheet Metal Screws furnished. Screw holes slotted for adjustment. Neoprene is black.

Material Finishes:
A - clear anodized aluminum
DKB - dark bronze
no suffix = mill aluminum
neoprene is black

All products this page

Reinforced Neoprene Sweep
Polyurethane Sweeps
Silicone Sweep

polyurethane is black
silicone is gray
Nylon Brush Sweeps

#6 x 3/4” Stainless Steel Sheet Metal Screws furnished.
Screw holes are slotted for adjustment.

A - clear anodized with gray brush
B - gold with black brush
DKB - dark bronze with black brush
no suffix - mill aluminum with gray brush

Nylon Brush Plus
Our exclusive line of premium grade seals specially formulated to withstand greater temperature extremes while providing maximum protection against air infiltration.

All products this page

Nylon Brush Sweeps

A605A
A605B
A605DKB

B606A
B606B
B606DKB

600
600A
600B
600DKB

601
601A
601B
601DKB

9600
9600A
9600B
9600DKB

9605A
9605B
9605DKB

9675
9675A
9675B
9675DKB

C627A
C627B
C627DKB

C607A
C607B
C607DKB

OV634A
OV634B
OV634DKB

OV633A
OV633B
OV633DKB

D608A
D608B
D608DKB

G610A
G610B
G610DKB

H612A
H612B
H612DKB

600
601
9600
9605
9675
C627
C607
OV634
OV633
D608
G610
H612

#6 x 3/4” Stainless Steel Sheet Metal Screws furnished.
Screw holes are slotted for adjustment.

A - clear anodized with gray brush
B - gold with black brush
DKB - dark bronze with black brush
no suffix - mill aluminum with gray brush

Nylon Brush Plus
Our exclusive line of premium grade seals specially formulated to withstand greater temperature extremes while providing maximum protection against air infiltration.

All products this page

Nylon Brush Sweeps

A605A
A605B
A605DKB

B606A
B606B
B606DKB

600
600A
600B
600DKB

601
601A
601B
601DKB

9600
9600A
9600B
9600DKB

9605A
9605B
9605DKB

9675
9675A
9675B
9675DKB

C627A
C627B
C627DKB

C607A
C607B
C607DKB

OV634A
OV634B
OV634DKB

OV633A
OV633B
OV633DKB

D608A
D608B
D608DKB

G610A
G610B
G610DKB

H612A
H612B
H612DKB

600
601
9600
9605
9675
C627
C607
OV634
OV633
D608
G610
H612
Smoke-Rated Astragal Seals

Fire-rated Astragal Seals cannot replace any astragal required on the door by the door manufacturer to maintain its fire label. IBC, NFPA 80, NFPA 105, and NFPA 252 require the gap at the meeting edge between fire labeled doors must not exceed 1/8”.

#6 x 3/4” Stainless Steel Sheet Metal Screws furnished. Screw holes are slotted for adjustment.

<table>
<thead>
<tr>
<th>Metal</th>
<th>epdm</th>
<th>silicone</th>
<th>nylon+</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - clear anodized</td>
<td>gray</td>
<td>tan</td>
<td>gray</td>
</tr>
<tr>
<td>B - gold</td>
<td>black</td>
<td>tan</td>
<td>black</td>
</tr>
<tr>
<td>DKB - dark bronze</td>
<td>gray</td>
<td>tan</td>
<td>black</td>
</tr>
<tr>
<td>no suffix</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5/8” 3/8”

5070B Brown
5070CL Clear self-adhesive TPE

* Antimicrobial not available in clear

All products this page

5/16”

6”

7/16”

1/2”

10C

S

Metal

epdm

115NA
115NB
115NDKB

Order as set to receive two pieces

7/8”

3/8”

epdm

125NA
125NB
125NDKB

Order as set to receive two pieces

7/8”

1/2”

nylon+

9600
9600A
9600B
9600DKB

Order as set to receive two pieces

5/8”

3/8”

silicone+

9115A
9115B
9115DKB

Order as set to receive two pieces

7/8”

3/8”

silicone+

9125A
9125B
9125DKB

Order as set to receive two pieces

1”

7/16”

nylon+

9675A
9675B
9675DKB

Order as set to receive two pieces
**Surface Mounted Astragal Sets**

#6 x 3/4” Stainless Steel SMS furnished. Screw holes are slotted for adjustment.

A - clear anodized  
B - gold  
DKB - dark bronze  
no suffix - mill aluminum

Brush is gray with mill finish and clear anodized metal; black with gold and DKB vinyl is gray, except * vinyl is black

- nylon brush
  - Order as **set** to receive two pieces
  - 600  
  - 600A  
  - 600B  
  - 600DKB

- vinyl
  - Order as **set** to receive two pieces
  - 97V  
  - 97VA  
  - 97VB  
  - 97VDKB

- nylon brush
  - Order as **set** to receive two pieces
  - A605A  
  - A605B  
  - A605DKB

- nylon brush
  - Order as **set** to receive two pieces
  - B606A  
  - B606B  
  - B606DKB

- nylon brush
  - Order as **set** to receive two pieces
  - 672A  
  - 672B  
  - 672DKB

- nylon brush
  - Order as **set** to receive two pieces
  - 675A  
  - 675B  
  - 675DKB
APPLICATION DETERMINES KIND OF HINGE
Use Three Hinges To A Door - Use Anti-Friction Bearing Hinges On Doors Equipped With Closers

TO SELECT THE PROPER HINGE
THE FOLLOWING FACTORS SHOULD BE CONSIDERED

• The material of the door and frame determine method of application, i.e. mortised, surface mounted, half surface mounted, or half mortised.

• The size, thickness and weight of the door - Wider doors, put more strain on hinges, so taller hinges should be used. Thicker doors require wider hinges. Heavy doors require taller, heavier gauge, narrower hinges.

• Clearance of the trim when a door swings 180° effects the width of the hinge.

• The frequency of use and the abuse the door will be subjected to effect hinge choice ... heavy duty ball bearing, average ball bearing or non-ball bearing hinges. It also effects the need for additional hardware such as closers, panic devices, etc.

FULL MORTISE
Wood Doors, Wood Frame

FULL MORTISE
Wood Doors, Hollow Metal Frame

FULL MORTISE
Hollow Metal Doors, Hollow Metal Frame

FULL MORTISE
Hollow Metal Doors, Channel Iron Frame

HALF MORTISE
Wood Doors, Wood Frame

HALF MORTISE
Wood Doors, Hollow Metal Frame

HALF MORTISE
Hollow Metal Doors, Hollow Metal Frame

HALF MORTISE
Hollow Metal Doors, Channel Iron Frame

HALF SURFACE
Wood Doors, Wood Frame

HALF SURFACE
Mineral Core Doors, Hollow Metal Frame

HALF SURFACE
Mineral Core Doors, Channel Iron Frame

FULL SURFACE
Hollow Metal Doors, Channel Iron Frame

“SWING CLEAR” FULL MORTISE
Wood Doors, Hollow Metal Frame

“SWING CLEAR” HALF MORTISE
Wood Doors, Channel Iron Frame

“SWING CLEAR” HALF SURFACE
Mineral Core Doors, Hollow Metal Frame

“SWING CLEAR” FULL SURFACE
Mineral Core Doors, Channel Iron Frame
HOW TO SELECT THE PROPER WEIGHT AND BEARING STRUCTURE
There are three groups of hinges:
Standard Weight - Plain Bearing
Standard Weight - Ball Bearing
Heavy Weight - Ball Bearing
To determine the weight and structure of the hinge you must consider:
1. Frequency of use
2. Weight of door
3. Weight of door hardware
Ball bearing hinges should always be used on doors where door closers are applied and in all fire rated openings. Heavy weight ball bearing hinges should be used on heavy doors and high frequency use doors.

HOW TO DETERMINE THE FREQUENCY OF USE

HOW TO SELECT THE PROPER HINGE SIZE
1. Door Height
2. Door Weight
3. Door Width
4. Door Thickness
5. Trim Dimension Required
First find the height of hinge. The following chart is only an example. Job situation will vary.

<table>
<thead>
<tr>
<th>THICKNESS OF DOOR IN INCHES</th>
<th>WIDTH OF DOOR IN INCHES</th>
<th>HEIGHT OF HINGE IN INCHES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3/8&quot; Door</td>
<td>To 32&quot;</td>
<td>3-1/2&quot;</td>
</tr>
<tr>
<td>1-3/4&quot; Door</td>
<td>32&quot; to 36&quot;</td>
<td>4&quot;</td>
</tr>
<tr>
<td>1-3/4&quot; Door</td>
<td>To 36&quot;</td>
<td>4-1/2&quot;</td>
</tr>
<tr>
<td>1-3/4&quot; Door</td>
<td>36&quot; to 48&quot;</td>
<td>5&quot;</td>
</tr>
<tr>
<td>2&quot;, 2-1/4&quot;, 2-1/2&quot; Door</td>
<td>Over 48&quot;</td>
<td>6&quot;</td>
</tr>
<tr>
<td>2&quot;, 2-1/4&quot;, 2-1/2&quot; Door</td>
<td>To Over 42&quot;</td>
<td>5&quot; Heavy Weight</td>
</tr>
</tbody>
</table>

LOCATION OF HINGES ON DOORS
Top hinge 5" from jamb rabbet to top edge of barrel.
Third hinge centered between top and bottom hinges.
The above is U.S. Standards procedure.
* Certain western states use as standard 7" from top and 11" from the bottom.

HOW TO DETERMINE THE NUMBER OF HINGES PER DOOR
-As a general rule you will want to use 1 hinge per every 30" of door or fraction thereof.
-Referring to door height:
Doors up to 60" - 2 hinges, doors over 60" but not over 90" - 3 hinges, doors over 90" but not over 120" - 4 hinges.

HOW TO DETERMINE THE HINGE WIDTH
You need:
Wood Door x Wood Frame: The door would be flush with the casing or face of the frame.
Wood or Metal Door x Hollow Metal Frame: The door inset would be 1/8".
Doors up to 2-1/4" Thick: The hinge is set back 1/4" from the back face of the door.
Doors over 2-1/4" Thick: The hinge is set back 3/8" from the back face of the door.

Once these dimensions are known you can apply the following formula:

<table>
<thead>
<tr>
<th>Thickness of Door</th>
<th>Clearance (mm)</th>
<th>Open Width of Hinge (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 3/8&quot;</td>
<td>1 1/4&quot; to 1 3/4&quot;</td>
<td>3 1/2&quot; to 4 1/2&quot;</td>
</tr>
<tr>
<td>1 3/4&quot;</td>
<td>1 1/2&quot; to 2</td>
<td>4&quot; to 5&quot;</td>
</tr>
<tr>
<td>2&quot;</td>
<td>1 1/2&quot;</td>
<td>5&quot; to 6&quot;</td>
</tr>
<tr>
<td>2 1/4&quot;</td>
<td>1 1/2&quot;</td>
<td>6&quot; to 7&quot;</td>
</tr>
<tr>
<td>2 1/2&quot;</td>
<td>3/4&quot; to 1 3/4&quot;</td>
<td>7&quot; to 8&quot;</td>
</tr>
<tr>
<td>3&quot;</td>
<td>3/4&quot; to 1 3/4&quot;</td>
<td>8&quot; to 9&quot;</td>
</tr>
</tbody>
</table>

Take the door thickness, minus the backset, times two, plus the clearance required plus inset (if any). If the size is not standard move up to the next larger hinge width. The first dimension of a full Mortise hinge is the hinge height. The second dimension is the hinge width when both leaves are in the open position. It may be necessary to extend the width of the hinge to clear trim or wall conditions.
HAND OF DOORS
All doors are handed - right or left. The following illustration indicated clearly this “handling” as it is understood within the hardware industry.

REGULAR DOORS OPENING IN

HINGE OPENED
HINGE CLOSED

OUTSIDE
Left hand door takes left hand hinges
Right hand door takes right hand hinges

REVERSED DOORS OPENING OUT
Including Bookcase, Closet and Cupboard Doors

HINGE OPENED
HINGE CLOSED

OUTSIDE
Left hand reverse door takes right hand hinges
Right hand reverse door takes left hand hinges

DOUBLE ACTING

HINGE OPENED
HINGE CLOSED

OUTSIDE
Left hand door takes left hand hinges

(Hand of door is determined from outside)

When standing on outside of door and hinges are on the right, it is right hand. When hinges are on the left, it is left hand.

A double acting door opens from you and toward you, therefore is not called reverse like a single acting door. When specifying two finishes on the same hinge, stand in the doorway facing the jamb to determine the right or left side.

HINGE SWAGING
Swaging is the slight offset in the hinge leaves which permits them to close to parallel position as the door closes.

All hinges for full mortise application are swaged. Normal swaging on standard and heavy gauge hinges provides a clearance of 1/16" when leaves are parallel. Full mortise wide throw hinges have a clearance of 3/32".

Hinges for full surface application are not swaged. Blank hinges are for full surface welded application and are always furnished “flat back” unless otherwise specified.

When only one leaf is swaged, the non-swaged leaf is approximately 1/16” shorter. Exception-on template hinges for metal door and metal frame application both leaves must be the same width, so specify: “Leaves must be equal.” These hinges also require right or left hand specification.

When only one leaf is swaged, the non-swaged leaf is approximately 3/32” shorter. Exception-on template hinges for metal door and metal frame application both leaves must be the same width, so specify: “Leaves must be equal.” These hinges are handed requiring right or left specification.

TEMPLATE HINGES
All PBB template hinges are made to close tolerances and conform to the America National Standard Institutes (ANSI) specifications wherever applicable.

Template hinges will exactly fit the cutout and screw hole location in hollow metal doors and hollow metal frames made to similar template.

Each hinge is carefully inspected and held within close commercial tolerances.

We recommend the use of blueprint templates, which are available on all sizes, when physical sample of a template hinge is not required. These are drawings which show actual measurements, gauge of metal, location, and size. (Note: Some template drawings are not to scale).

Use of physical samples to make cutouts on metal doors or frames is not recommended.
Templates:  

<table>
<thead>
<tr>
<th>BB35</th>
<th>BB40</th>
</tr>
</thead>
</table>

BB81 (ANSI A8112)  
Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

BB21 (ANSI A2112)  
Brass-Polished and Plated

BB51 (ANSI A5112)  
Stainless Steel-Polished and Satin Finish

- For use on medium weight doors or doors requiring average frequency service.
- Ball bearing hinges must be used on doors in conjunction with door closers and on all fire rated openings
- For hospital type, add HT to suffix of part number.
- 3-1/2, 4” available in square, 5/8”, 1/4” Radius Round Corners.
- All hinges are ANSI template.

GENERAL PRODUCT INFORMATION:

PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING:

A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:

- .123 ± .005 for 3-1/2” x 3-1/2”
- .130 ± .005 for 4” x 4”

OTHER SPECIFICATIONS:

Height of hinge:
3.50 (+.000/-0.15) for 3-1/2” x 3-1/2”
4.00 (+.000/-0.15) for 4” x 4”

Width:
3.50 ± .015 for 3-1/2” x 3-1/2”
4.00 ± .015 for 4” x 4”

Template screw hole locations for all 3-1/2 x 3-1/2 Full Mortise Template butts are punched to Commercial Standard CS9-65.

3-1/2” STANDARD SCREW SIZE | 4” STANDARD SCREW SIZE
--- | ---
FHMS - 10-24 x 1/2” | FHMS - 12-24 x 1/2”
FHWS - 10 x 1” | FHWS - 12 x 1-1/4”

PACKAGING INFORMATION:

One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton. 16 unit carton or 48 hinges per master shipping carton.

1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available. For 3-1/2 x 3-1/2, 1 screw pack includes (18) machine screws and (18) wood screws.
**Templates:**

- **BB45**

---

**GENERAL PRODUCT INFORMATION:**

PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

**HINGE SWAGING:**

A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

**MATERIAL GAUGE:**

- .134 ± .005 for 4-1/2” x 4”
- .134 ± .005 for 4-1/2” x 4-1/2”

---

**OTHER SPECIFICATIONS:**

- **Height of hinge:**
  - 4.50 (+.000/- .015) for 4-1/2” x 4”
  - 4.50 (+.000/- .015) for 4 1/2” x 4-1/2”

- **Width:**
  - 4.00 ± .015 for 4-1/2” x 4”
  - 4.50 ± .015 for 4-1/2” x 4-1/2”

---

**PACKAGING INFORMATION:**

One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.

16 unit carton or 48 hinges per master shipping carton.

1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
FULL MORTISE TEMPLATE PLAIN BEARING

STANDARD WEIGHT
5" x 4", 5" X 4 1/2", 5" x 5"

Templates:  BB50

- For use on medium weight doors or doors requiring low frequency service.
- Not for use with door closer.

BB81 (ANSIA8112)
Steel - Polished and Plated or Bonderized and Prime Coated for Painting.

BB21 (ANSIA2112)
Brass - Polished and Plated

BB51 (ANSIA5112)
Stainless Steel - Polished and Satin Finish

• For hospital type, add HT to suffix of part number.
• All hinges are ANSI template.

GENERAL PRODUCT INFORMATION:
PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

HINGE SWAGING: A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

MATERIAL GAUGE:
.146 ± .005 for 5" x 4"
.146 ± .005 for 5" x 4-1/2"
.146 ± .005 for 5" x 5"

OTHER SPECIFICATIONS:
Height of hinge:
5.00 (+.000/- .015) for 5" x 4"
5.00 (+.000/- .015) for 5" x 4-1/2"
5.00 (+.000/- .015) for 5" x 5"

Width:
4.00 ± .015 for 5" x 4"
4.50 ± .015 for 5" x 4-1/2"
5.00 ± .015 for 5" x 5"

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
12 unit carton or 36 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.

5" STANDARD SCREW SIZE

<table>
<thead>
<tr>
<th>FHMS</th>
<th>FHWS</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-24 x 1/2&quot;</td>
<td>12 x 1-1/4&quot;</td>
</tr>
</tbody>
</table>
Templates:  

**BB60**

- For use on medium weight doors or doors requiring average frequency service.

- Ball bearing hinges must be used on doors in conjunction with door closers and on all fire rated openings.

**GENERAL PRODUCT INFORMATION:**

PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

**HINGE SWAGING:**

A standard swaging of our standard weight fullmortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

**MATERIAL GAUGE:**

\[ .160 \pm .005 \text{ for } 6” \times 4\frac{1}{2}” \]
\[ .160 \pm .005 \text{ for } 6” \times 5” \]
\[ .160 \pm .005 \text{ for } 6” \times 6” \]

**6” STANDARD SCREW SIZE**

<table>
<thead>
<tr>
<th>FHMS</th>
<th>1/4-20 x 1/2”</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHWS</td>
<td>14 x 1-1/2”</td>
</tr>
</tbody>
</table>

**OTHER SPECIFICATIONS:**

- Height of hinge:
  - 6.00 (+.000/-0.15) for 6” x 4-1/2”
  - 6.00 (+.000/-0.15) for 6” x 5”
  - 6.00 (+.000/-0.15) for 6” x 6”

- Width:
  - 4.50 ± .015 for 6” x 4-1/2”
  - 5.00 ± .015 for 6” x 5”
  - 6.00 ± .015 for 6” x 6”

**PACKAGING INFORMATION:**

One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.

8 unit carton or 24 hinges per master shipping carton.

1 screw pack with all machine screws (30), and 1 screw pack with 1/2 wood screws (15). ATMS & AWS also available.
Templates: | SP40 | SPY40

SP81 (ANSI K8107)
Steel - Polished and Plated or Bonderized and Prime Coated for Painting.

SP51 (ANSI K5107)
Stainless Steel - Polished and Satin Finish

Spring hinge door closer Model K8107 passed a 250,000 cycle UL test in accordance with Underwriters Laboratories for door closers, with or without integral smoke detectors.

UL LISTED FOR FIRE DOORS

OTHER SPECIFICATIONS:
Height of hinge:
4.00
(+.000/-.015)

Width:
4.00
±.015

Maximum Door Size
For labeled doors 3’ x 7’ the maximum door size is based on the limits set forth by NFPA Standard #80. Labeled doors require Ball Bearing hinges.

For non-labeled doors 4’0” wide 4” x 4” Spring hinges are not recommended.
For non labeled doors over 7’6” in height, use an additional hinge for each additional 30” of height or fraction thereof.

Notes:

1. For complete warranty protection use all spring hinges or a combination of spring hinges and ball bearing hinges. Do not use plain bearing hinges as this voids all factory warranties.

2. Use of gasket for smoke or sound protection, wind condition or unbalanced air pressure may prevent door from latching. Additional closing power would be required. See installation instruction sheet.

PACKAGING INFORMATION:
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available.
**Templates:**

| SP45 |

**SP81 (ANSI K8107)**
Steel: Polished and Plated or Bonderized and Prime Coated for Painting.

**SP51 (ANSI K5107)**
Stainless Steel: Polished and Satin Finish

• Spring hinge door closer Model K8107/K5107 passed a 1,000,000 cycle UL test in accordance with Underwriters Laboratories for door closers, with or without integral smoke detectors.

• UL listed for doors up to 4’ x 8’, weighing up to 180lbs.

**GENERAL PRODUCT INFORMATION:**

PBB, Inc. template hinges are manufactured to close tolerances and meet all specifications and requirements set by the American National Standards Institute (ANSI).

**HINGE SWAGING:** A standard swaging of our standard weight full mortise hinge when closed to parallel position provides a 1/16” clearance between leaves.

<table>
<thead>
<tr>
<th>SERIES</th>
<th>SIZE</th>
<th>RECOMMENDED MAX DOOR WEIGHT (LBS.)</th>
<th>SPRING HINGE</th>
<th>BUTT HINGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOR USE ON 1 3/4” DOOR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SP81</td>
<td>4 1/2” x 4”</td>
<td>70</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>4 1/2” x 4 1/2</td>
<td>100</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>4 1/2” x 4 1/2</td>
<td>150</td>
<td>3</td>
<td>-</td>
</tr>
</tbody>
</table>

**MATERIAL GAUGE:**
.134 ± .005 for 4-1/2” x 4”
.134 ± .005 for 4-1/2” x 4 1/2”

Both models comply and meet ANSI/BHMA specifications for ANSI/BHMA A156.17 Grade 1 and bear U.L.’s listing mark.

All hinges are ANSI template.

**PACKAGING INFORMATION:**
One hinge per plastic bag, 3 hinges and 1 screw pack per unit carton.
16 unit carton or 48 hinges per master shipping carton.
1 screw pack includes all machine screws (24), and 1/2 wood screws (12).
ATMS & AWS also available.

**OTHER SPECIFICATIONS:**

Height of hinge:
4.50 (+0.000/-0.015) for 4-1/2” x 4”
4.50 (+0.000/-0.015) for 4-1/2” x 4 1/2”

Width:
4.00 ± .015 for 4-1/2” x 4”
4.50 ± .015 for 4-1/2” x 4 1/2”

Maximum Door Size
For labeled doors 3’ x 7’ the maximum door size is based on the limits set forth by NFPA Standard #80. Labeled doors require Ball Bearing hinges.

For non-labeled doors over 76” in height, use an additional hinge for each additional 30” of height or fraction thereof.

**NOTES:**

1. For complete warranty protection use all spring hinges or a combination of spring hinges and ball bearing hinges. Do not use plain bearing hinges as this voids all factory warranties.

2. Use of gasket for smoke or sound protection, wind condition or unbalanced air pressure may prevent door from latching. Additional closing power would be required. See installation instruction sheet.

<table>
<thead>
<tr>
<th>4 1/2” STANDARD SCREW SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHMS – 12-24 x 1/2”</td>
</tr>
<tr>
<td>FHWS - 12 x 1-1/4”</td>
</tr>
</tbody>
</table>

www.advdoor –inc.com
Hinges

Precision Architectural Hinges meet or exceed ANSI Standard for Hinges. All of our manufactured hinges come with an industry best warranty. Whether you are a door manufacturer or a door repair company, we have a hinge solution for all of your needs. We are confident that our hinges will be one of the best and most reliable products in your inventory.

FULL SURFACE

GHHD210

- Full Surface Application
- High Frequency to Heavy Medium Frequency Doors
- Maximum Weight 450 lbs
- Minimum 1 5/8" Frame Face Needed
- Security Molding

GHHD157

- Limited Frame Full Surface Application
- High Frequency to Heavy Medium Frequency Doors
- Maximum Door Weight 450 lbs
- Minimum 7/8" Frame Face Needed
- Security Molding

GHHD057

- Bi-Fold Full Surface Application
- High Frequency to Heavy Medium Frequency Doors
- Maximum Door Weight 450 lbs
- Minimum 7/8" Frame Face Needed
- Security Molding
Full Mortise

GHHD111
- Full Mortise Concealed Leaf Application
- High Frequency to Heavy Medium Frequency Doors
- Maximum Door Weight 450 lbs
- 1/8” Inset

GHHD112
- Full Mortise Concealed Leaf Application
- High Frequency to Heavy Medium Frequency Doors
- Maximum Door Weight 450 lbs
- Flush Mount with No Inset

GHHD224
- Full Mortise Concealed Leaf Application
- High Frequency to Heavy Medium Frequency Doors
- Maximum Door Weight 450 lbs
- 3/32” Inset
- Door Edge w/ Protection Lip

Half Surface

GHHD053
- Half Surface Application
- High Frequency to Heavy Medium Frequency Doors
- Maximum Door Weight 450 lbs
- 1/8” Inset
- Security Molding
## Cross Reference

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3/4” OFFSET HUNG PIVOT SETS

MODEL 117-1/4

Application
• Interior Doors
• Weight to 250 lbs.*
• Door Width up to 3’6” (1067mm)
• Handed

Product Description & Features
• Standard top pivot 180 included
• 119 intermediate pivot recommended (order separately)
• Bottom pivot mortised into side jamb
• Not available for fire-rated doors
• Non-ferrous base material
• Doors 60” (1524mm) to 90” (2286mm) in height should use one intermediate pivot. Each additional 30” (762mm) of door height warrants another intermediate pivot
• 3/4” (19mm) offset (measured from centerline of pivot to face of door)
• Door edges must be beveled 1/8” in 2”
• Weight of door borne by floor
• Furnished with wood and machine screws
• Extended spindles available in 1/2” (13mm) increments up to 2” (51mm) longer than standard

Technical Information
Frame stop required

MODEL 117

Application
• Interior Doors
• Weight to 300 lbs.*
• Door Width up to 3’6” (1067mm)
• Handed

Product Description & Features
• Standard top pivot 180 included
• 119 intermediate pivot recommended (order separately)
• Bottom pivot mortised into side jamb
• Available for fire door assemblies up to three hours – specify F117. Intermediate pivot required by UL. Specify FM19, (order separately)
• For 20-minute label suffix “–20” to the part number
• Non-ferrous base material
• Doors up to 90” (2286mm) in height should use one intermediate pivot. Each additional 30” (762mm) of door height warrants another intermediate pivot
• 3/4” (19mm) offset (measured from centerline of pivot to face of door)
• Available for 1-1/2” (38mm) offset (door weight 150 lbs) for doors with cladding or frame molding.
• Door edges must be beveled 1/8” in 2”
• Furnished with wood and machine screws
• Extended spindles available in 1/2” (13mm) increments up to 2” (51mm) longer than standard

Technical Information
Frame stop required
3/4” OFFSET HUNG PIVOT SETS

MODEL 173

Application
• Interior Doors
• Weight 150 lbs
• Door Sizes up to 3’0” x 8’0” x 1-3/4”
• Handed

Product Description & Features
• Standard top pivot 180 included
• 119 intermediate pivot recommended for all doors over 6’8” (order separately)
• Bottom pivot mounts directly to concrete floor
• Uses same arm and cap as 117 pivot set
• Non-ferrous base metal
• 3/4” offset only (measured from centerline of pivot to face of door)
• Available for 1-1/2” (38mm) offset (door weight 100 lbs) for doors with cladding or frame molding
• Door edges must be beveled 1/8” in 2”
• Furnished with wood and metal screws
• 3/8” vertical adjustment
• No spindle extensions available
• Door will swing 180°, trim permitting

Technical Information
Frame stop required

MODEL 147

Application
• Exterior or Interior Doors
• Weight to 600 lbs.*
• Door Width up to 4’0” (1219mm)
• Handed

Product Description & Features
• Standard top pivot 180 included
• M19 intermediate pivot required (order separately)
• Bottom pivot mounts directly to floor
• Uses same arm and cap as 27 floor closer
• Available for fire door assemblies up to three hours (ferrous material) – specify F147. Intermediate pivot required by UL. Specify FM19 (order separately)
• For 20-minute label suffix “–20” to the part number
• Non-ferrous base material
• Doors 60” (1524mm) to 90” (2286mm) in height should use one intermediate pivot. Each additional 30” (762mm) of door height warrants another intermediate pivot
• 3/4” (19mm) offset (measured from centerline of pivot to face of door)
• Available for 1-1/2” (38mm) offset (door weight 350 lbs.) for doors with cladding or frame molding
• Door edges must be beveled 1/8” in 2”
• Furnished with wood and machine screws
• Extended spindles available in 1/2” (13mm) increments up to 2” (51mm) longer than standard
• Doors will swing 180°, trim permitting

Technical Information
Frame stop required

ANSI/C07162/C07202

* Door size & weight guidelines are determined using the appropriate number of intermediate pivots
3/4” OFFSET HUNG PIVOT SETS

MODEL L147

Application
- Exterior or Interior Doors
- Lead-Lined/Heavy/High Traffic Doors
- Weight to 800 lbs.
- Door Width up to 4’0” (1219mm)

Handed

Product Description & Features
- Standard top pivot L180 included
- ML19 intermediate pivot required (order separately)
- Bottom pivot mounts directly to floor
- Doors with lead lining under the skin should also use this product.
- Screw holes in top pivot and bottom arm spaced to straddle lead lining in the middle of the door
- Available for fire door assemblies up to three hours for 1-3/4” (44mm) doors only (ferrous material) – specify FL147. Intermediate pivot required by UL. Specify FML19 (order separately)
- For 20-minute label suffix “-20” to the part number
- Non-ferrous base material
- Doors 60” (1524mm) to 90” (2286mm) in height should use one intermediate pivot. Each additional 30” (762mm) of door height warrants another intermediate pivot
- Available to accommodate lead in door thicknesses 1-3/4” (44mm), 2” (51mm), 2-1/4” (57mm), 2-1/2” (64mm), or 3” (76mm) – specify when ordering
- 3/4” (19mm) offset (measured from centerline of pivot to face of door)
- Door edges must be beveled 1/8” in 2”
- Furnished with wood and machine screws
- Extended spindles available in 1/2” (13mm) increments up to 2” (51mm) longer than standard
- Doors will swing 180°, trim permitting

Technical Information
Frame stop required

ANSI/C07162/C07202
3/4” OFFSET HUNG PIVOT SETS

MODEL 547

Application
- Exterior or Interior Doors
- For Arch Top Doors or Overhead
- Concealed Closers
- Weight to 500 lbs.
- Door Width up to 3'6" (1067mm)
- Handed

Product Description & Features
- Set consists of two each M190 intermediate pivots and bottom pivot
- Bottom pivot mounts directly to floor
- Available for fire door assemblies up to three hours. Specify F547. Intermediate pivots FM190 included
- For 20-minute label suffix “–20” to the part number
- Non-ferrous base material
- Doors 60" (1524) to 90" (2286mm) in height have two intermediate pivots. Each additional 30" (762mm) of door height warrants another intermediate pivot
- 3/4” (19mm) offset (measured from centerline of pivot to face of door)
- Door edges must be beveled 1/8" in 2”
- Furnished with wood and machine screws
- Extended spindles available in 1/2” (13mm) increments up to 2” (51mm) longer than standard
- Doors will swing 180°, trim permitting

Technical Information
Frame stop required

MODEL 165

Application
- Exterior or Interior Doors
- For Doors Without Bottom Pivots
- Weight to 300 lbs.
- Door Width up to 3'6" (1067mm)
- Handed

Product Description & Features
- Set consists of one H180 top pivot and two each M190 intermediate pivots
- Not available for fire door assemblies
- Non-ferrous base material
- Doors 60" (1524mm) to 90" (2286mm) in height have two intermediate pivots. Each additional 30" (762mm) of door height warrants another intermediate pivot
- 3/4” (19mm) offset (measured from centerline of pivot to face of door)
- Door edges must be beveled 1/8" in 2”
- Furnished with wood and machine screws
- Doors will swing 180°, trim permitting

Technical Information
Frame stop required
MODEL 195

**Application**
- Exterior or Interior Doors
- Weight to 450 lbs.*
- Door Width up to 4'0" (1219mm)

Handed

ANSI/C07131

* Door size & weight guidelines are determined using the appropriate number of intermediate pivots

**Product Description & Features**
- Standard top pivot 180 included
- 119 or M19 intermediate pivots are recommended (order separately)
- Bottom pivot mortised into side jamb
- Not available for fire-rated door
- Pivot set can be vertically adjusted up to 3/16" (5mm) after installation without the use of shims
- Doors 60" (1524mm) to 90" (2286mm) in height should use one intermediate pivot. Each additional 30" (762mm) of door height warrants another intermediate pivot
- Non-ferrous base material
- Available for fire door assemblies up to three hours. Specify F195. Intermediate pivot required by UL. Specify FM19 (order separately)
- 3/4" (19mm) offset (measured from centerline of pivot to face of door)
- Door edges must be beveled 1/8" in 2"
- Weight of door is borne by floor portion
- Furnished with wood and machine screws
- Extended spindles available in 1/2" (13mm) increments up to 2" (51mm) longer than standard
- Doors will swing 180°, trim permitting

**Technical Information**

Frame stop required

* Door size & weight guidelines are determined using the appropriate number of intermediate pivots
3/4” OFFSET HUNG PIVOT SETS

MODEL 117-1/2

Application
• Exterior or Interior Doors
• Weight to 650 lbs.*
• Door Width up to 4'0" (1219mm)
• Handed

Product Description & Features
• Standard top pivot 180 included
• M19 intermediate pivot required (order separately)
• Bottom pivot mortised into floor
• Available for fire door assemblies up to three hours (ferrous material) – specify F117-1/2. Intermediate pivot required by UL. Specify FM19 (order separately)
• For 20-minute label suffix “–20” to the part number
• Non-ferrous base material
• Doors 60" (1524mm) to 90" (2286mm) in height should use one intermediate pivot. Each additional 30" (762mm) of door height warrants another intermediate pivot
• 3/4" (19mm) offset (measured from centerline of pivot to face of door)
• Available for 1-1/2" (38mm) offset (door weight 350 lbs.) for doors with cladding or frame molding
• Door edges must be beveled 1/8" in 2"
• Furnished with wood and machine screws
• Extended spindles available in 1/2" (13mm) increments up to 2" (51mm) longer than standard
• Doors will swing 180°, trim permitting

Technical Information
Frame stop required

ANSI/C07121/C07202

* Door size & weight guidelines are determined using the appropriate number of intermediate pivots
3/4” OFFSET HUNG PIVOT SETS

MODEL L117

Application
- Exterior or Interior Doors
- Lead-Lined/Heavy/High Traffic Doors
- Weight to 1,750 lbs. *
- Door Width up to 4’0” (1219mm)
- Handed

Product Description & Features
- Standard top pivot L180 included
- ML19 intermediate pivot required (order separately)
- Bottom pivot mortised into floor
- Available for fire door assemblies up to three hours (ferrous material). Specify FL117. Intermediate pivot required by UL. Specify FML19 (order separately), see page 19. Note: UL listing for 1-3/4” thick doors only
- Available to accommodate lead in door thicknesses 1-3/4” (44mm), 2” (51mm), 2-1/4” (57mm), 2-1/2” (64mm), or 3” (76mm) – specify when ordering
- Additional thrust bearing for greater load capacity
- Doors 60” (1524mm) to 90” (2286mm) in height should use one intermediate pivot. Each additional 30” (762mm) of door height warrants another intermediate pivot
- For 20-minute label suffix “–20” to the part number
- Non-ferrous base material for top pivot
- 3/4” (19mm) offset (measured from centerline of pivot to face of door)
- Door edges must be beveled in 1/8” in 2”
- Furnished with wood and machine screws
- Extended spindles available in 1/2” (13mm) increments up to 2” (51mm) longer than standard
- Doors will swing 180°, trim permitting

ANSI/C07111

* Door size & weight guidelines are determined using the appropriate number of intermediate pivots

Technical Information
Frame stop required

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MODEL 180

Application
- Full Mortise
- Non-handed

Product Description & Features
- Standard top pivot for most offset pivot sets and floor closers
- Oil-impregnated sintered bronze bushing
- Non-ferrous base material
- Available for fire door assemblies (ferrous material) – specify F180 or FH180
- For 20-minute label suffix “–20” to the part number
- 3/4” (19mm) offset (measured from centerline of pivot to face of door)
- Available for 1-1/2” (38mm) offset
- Furnished with wood and machine screws
- Available with longer than standard pivot pins. Increments are 1/4” (6mm), 1/2” (13mm), 3/4” (19mm) only
- For extra wide or high traffic prefix "H" – H pivots have heavy-duty needle bearings; available in 1-1/2” (38mm) offset

Technical Information
Frame stop required

MODEL 180 X 102

Application
- Full Mortise
- Non-handed

Product Description & Features
- Special top pivot for doors in deep reveals or unusual door details where one leaf is too long for the normal door or frame portion
- Oil-impregnated sintered bronze bushings
- Non-ferrous base metal
- Available for 1-1/2” (38mm) offset
- May be inverted
- Furnished with wood and machine screws
- Available with longer than standard pivot pins. Increments are 1/4” (6mm), 1/2” (13mm), 3/4” (19mm) only

Technical Information
Frame stop required
3/4” OFFSET HUNG TOP PIVOTS

MODEL L180

Application
- Lead-Lined/Heavy/High
- Traffic Doors
- Full Mortise
- Non-handed

Product Description & Features
- Standard top pivot for L147, L117 pivots and L27 floor closers
- Doors with lead lining under the skin should also use this product
- Screw holes spaced to straddle lead in the middle of the door
- Available to accommodate lead lined door thicknesses: 1-3/4” (44mm), 2” (51mm), 2-1/4” (57mm), 2-1/2” (64mm), or 3” (76mm) – specify when ordering
- Available for fire door assemblies for 1-3/4” (19mm) doors only (ferrous material). Specify FL180
- For 20-minute label suffix “–20” to the part number
- Non-ferrous base material
- 3/4” (19mm) offset (measured from centerline of pivot to face of door)
- Furnished with wood and machine screws
- Available with longer than standard pivot pins. Increments are 1/4” (6mm), 1/2” (13mm), 3/4” (19mm) only

Technical Information
Frame stop required

MODEL FA180

Application
- Asylum Design
- Full Mortise
- Handed

Product Description & Features
- Standard top pivot for SEC27-180 floor closer packages
- Optional top pivot for institutional use or installations where flat surfaces are objectionable
- For fire door assemblies
- Ferrous base material
- 3/4” (19mm) offset (measured from centerline of pivot to face of door)
- Furnished with wood and machine Torx® screws
- Available with longer than standard pivot pins. Increments are 1/4” (6mm), 1/2” (13mm), 3/4” (19mm) only

Technical Information
Frame stop required
MODEL 280

Application
- Half Surface
- Handed

Product Description & Features
- Flush door and frame application only
- Optional top pivot where door portion cannot be mortised
- Available for fire door assemblies (ferrous material) – specify F280
- Non-ferrous base material
- 3/4" (19mm) offset (measured from centerline of pivot to face of door)
- 1-3/4" door only
- Contact factory if door is not flush
- Furnished with wood and machine screws
- Available with longer than standard pivot pins. Increments are 1/4" (6mm), 1/2" (13mm), 3/4" (19mm) only

Technical Information

MODEL 380

Application
- Half Mortise
- Handed

Product Description & Features
- Flush door and frame application only
- Optional top pivot where jamb portion cannot be mortised
- Designed for channel iron door frames with aluminum, hollow metal or wood doors
- Available for fire door assemblies (ferrous material) – specify F380
- Door portion from L180 pivot is available if lead-lined doors are used – specify L380 and door thickness
- Non-ferrous base material
- 3/4" (19mm) offset (measured from centerline of pivot to face of door)
- Furnished with wood and machine screws
- Available with longer than standard pivot pins. Increments are 1/4" (6mm), 1/2" (13mm), 3/4" (19mm) only

Technical Information
MODEL 480

Application
• Full Surface
• Handed

Product Description & Features
• Flush door and frame application only
• Optional top pivot where door and jamb portion cannot be mortised
• Designed for channel iron door frames and any door where thru-bolting is advantageous
• Available for fire door assemblies (ferrous material) – specify F480
• Non-ferrous base material
• 3/4” (19mm) offset (measured from centerline of pivot to face of door)
• 1-3/4” door only
• Furnished with wood and machine screws
• Available with longer than standard pivot pins. Increments are 1/4” (6mm), 1/2” (13mm), 3/4” (19mm) only

ANSI/C07521

MODEL 680

Application
• Side Jamb Mounted
• Frame Portion
• Handed

Product Description & Features
• Used where no frame exists above door, or where it is not possible to anchor pivot into header of frame
• Side jamb portion can be surface mounted or mortised
• Non-ferrous base material
• 3/4” (19mm) offset (measured from centerline of pivot to face of door)
• Door edges must be beveled in 1/8” in 2”
• Furnished with wood and machine screws

Technical Information
Frame stop required
INTERMEDIATE or SIDE JAMB PIVOTS

MODEL 119

Application
- Full Mortise
- Handed

Product Description & Features
- Not load-bearing
- Maintains door alignment
- Available 3/4” (19mm) offset only
- Non-ferrous base material
- Doors 60” (1524mm) to 90” (2286mm) in height should use one intermediate pivot. Each additional 30” (762mm) of door height warrants another intermediate pivot
- Door edges must be beveled in 1/8” in 2”
- Used with 117, 117-1/4, 195 pivot sets and 127 and 427 floor closers
- Furnished with wood and machine screws

Technical Information

MODEL M19

Application
- Full Mortise
- Handed

Product Description & Features
- Not load-bearing
- Maintains door alignment
- Aids in installing floor closers and bottom pivots
- For 20-minute label suffix “–20” to the part number
- Non-ferrous base metal
- 3/4” (19mm) offset
- Available for 1-1/2” (38mm) offset
- Available for fire door assemblies (ferrous material) – specify FM19
- Doors 60” (1524mm) to 90” (2286mm) in height should use one intermediate pivot. Each additional 30” (762mm) warrants another intermediate pivot
- Door edges must be beveled in 1/8” in 2”
- Furnished with wood and machine screws

Technical Information

MODEL M190

Application
- Heavy-Duty Full Mortise
- Handed

Product Description & Features
- Used when frame condition does not allow standard top pivot
- Lateral load-bearing
- Maintains door alignment
- Aids in installing floor closers and bottom pivots
- Heavy-duty needle bearing
- Non-ferrous base metal
- 3/4” (19mm) offset standard
- Available for 1-1/2” (38mm) offset
- Available for fire door assemblies (ferrous material) – specify FM190
- For 20-minute label suffix “–20” to part number
- Doors 60” (1524mm) to 90” (2286mm) in height should use one intermediate pivot. Each additional 30” (762mm) warrants another intermediate pivot
- Door edges must be beveled in 1/8” in 2”
- Furnished with wood and machine screws

Technical Information
INTERMEDIATE or SIDE JAMB PIVOTS

MODEL ML19

Application
• Full Mortise
• Lead-Lined, Heavy or High Traffic Doors
• Handed

Product Description & Features
Screw holes spaced to straddle lead lining in center of door. Also use on extra heavy or high traffic door
• Load-bearing
• Maintains door alignment
• Aids in installing closers and pivots
• For 20-minute label suffix “–20” to the part number
• Available to accommodate door thicknesses 1-3/4” (44mm), 2” (51mm), 2-1/4” (57mm), 2-1/2” (64mm), or 3” (76mm) – specify thickness when ordering
• Non-ferrous base material
• Available for fire door assemblies –  1-3/4” (44mm) door only – specify FML19
• Doors 60” (1524mm) to 90” (2286mm) in height should use one intermediate pivot. Each additional 30” (762mm) warrants another intermediate pivot
• Door edges must be beveled in 1/8” in 2”
• Furnished with wood and machine screws

Technical Information

MODEL FA19

Application
• Full Mortise
• Asylum or High Security Applications
• Handed

Product Description & Features
Optional intermediate pivot for institutional use or installations where flat surfaces are objectionable
• Maintains door alignment
• Aids in installing bottom pivots
• 3/4” (19mm) offset
• May be used with fire door assemblies
• Ferrous base material
• Doors 60” (1524mm) to 90” (2286mm) in height should use one intermediate pivot. Each additional 30” (762mm) warrants another intermediate pivot
• Door edges must be beveled in 1/8” in 2”
• Furnished with wood and machine Torx® screws

Technical Information
INTERMEDIATE or SIDE JAMB PIVOTS

MODEL 219

Application
- Half Surface
- Handed

Product Description & Features
- Flush door and frame applications only
- Optional intermediate pivot where door portion cannot be mortised
- Maintains door alignment
- Non-ferrous base material
- 3/4" (19mm) offset only
- 1-3/4" door only
- Doors up to 90" (2286mm) in height should use one intermediate pivot. Each additional 30" (762mm) warrants another intermediate pivot
- Door edges must be beveled in 1/8" in 2" to avoid binding
- Furnished with wood and machine screws

ANSI/C07331

MODEL 319

Application
- Half Mortise
- Handed

Product Description & Features
- Flush door and frame applications only
- Optional intermediate pivot where jamb portion cannot be mortised
- Door portion from ML19 pivot is available if lead-lined door is used – specify L319 and door thickness
- Maintains door alignment
- Non-ferrous base material
- 3/4" (19mm) offset only
- Doors up to 90" (2286mm) in height should use one intermediate pivot. Each additional 30" (762mm) warrants another intermediate pivot
- Door edges must be beveled in 1/8" in 2"
- Furnished with wood and machine screws

ANSI/C07341

MODEL 419

Application
- Full Surface
- Handed

Product Description & Features
- Flush door and frame applications only
- Optional intermediate pivot where door and jamb portion cannot be mortised
- Maintains door alignment
- Non-ferrous base material
- 3/4" (19mm) offset only
- 1-3/4" door only
- Doors up to 90" (2286mm) in height should use one intermediate pivot. Each additional 30" (762mm) warrants another intermediate pivot
- Furnished with wood and machine screws maximum, three each 22 gauge wires
- Switch rated at 0.3 amps and 28 volts
- ElectroLynx® option not available

ANSI/C07351

Technical Information
- 3/4" (19mm) offset
- 1-3/4" door only
CENTER HUNG PIVOT SETS

MODEL 127-3/4

Application
- Interior Doors
- Weight to 200 lbs.
- Door Sizes up to 3'6"x8'6" (1067 x 2591mm)
- Non-handed

Product Description & Features
- Standard top pivot 320 included
- Bottom pivot mortised into side jamb
- Weight of door borne by floor
- Pivot point centered in thickness of door
- Door must have radius on pivot edge
- Not allowed for use on labeled doors and frames
- Pivot point remains constant at 1-1/4 from the edge of the door
- Furnished with wood and machine screws
- Available with extended spindles in 1/2" (13mm) increments up to 2" (51mm) longer than standard

ANSI/C07042

Center hung pivots are door hanging means only. To close doors, see floor closer sections of the catalogs.

MODEL 128-3/4

Application
- Interior Doors
- Weight to 250 lbs.
- Door Sizes up to 3'6"x8'6" (1067 x 2591mm)
- Non-handed

Product Description & Features
Identical to the 127-3/4 except:
- Bottom pivot mounts directly to floor

ANSI/C07032

Center hung pivots are door hanging means only. To close doors, see floor closer sections of the catalogs.
CENTER HUNG PIVOT SETS

MODEL 370

Application
- Exterior or Interior Doors
- Weight to 500 lbs.
- Door Sizes up to 38" x 86"*
  (1118 x 2591mm)
- Non-handed

Product Description & Features
- Standard top pivot 340 included
- Bottom pivot mounts directly to floor
- Pivot point centered in thickness of door
- Door must have radius on pivot edge
- Pivot set features sealed bearings for protection against weather and debris
- Not allowed for use on labeled doors and frames
- Furnished with wood and machine screws
- Available with extended spindles in 1/2" (13mm) increments up to 2" (51mm) longer than standard

Technical Information

ANSI NO/C07032

Center hung pivots are door hanging means only. To close doors, see floor closer sections of the catalogs.

* For doors taller than 86" use top pivot 345 in lieu of 340

MODEL 117-3/4

Application
- Exterior or Interior Doors
- Weight to 600 lbs.
- Door Sizes up to 40" x 86"*
  (1219 x 2591mm)
- Non-handed

Product Description & Features
- Standard top pivot 340 included
- Bottom pivot is mortised into floor
- Pivot point centered in thickness of door
- Door must have radius on pivot edge
- Heavy-duty bearings
- Pivot set features sealed bearings for protection against weather and debris
- Not allowed for use on labeled doors and frames
- Furnished with wood and machine screws
- Available with extended spindles in 1/2" (13mm) increments up to 2" (51mm) longer than standard

Technical Information

Center hung pivots are door hanging means only. To close doors, see floor closer sections of the catalogs.

* For doors taller than 86" use top pivot 345 in lieu of 340
CENTER HUNG PIVOT SETS

MODEL H117-3/4

Application

- Exterior or Interior Doors
- Weight to 1,000 lbs.
- Door Sizes up to 4'0" x 8'6"*
  (1219 x 2591mm)
- Non-handed

Product Description & Features

- Standard top pivot H340 included
- Bottom pivot is mortised into floor
- End load arm for minimum 2" (51mm)
  thick doors
- Pivot point centered in thickness of door
- Additional surface applied thrust bearing
- Door must have radius on pivot edge
- Pivot point remains constant at 2-3/4 from
  the edge of the door
- Pivot set features sealed bearings for
  protection against weather and debris
- Not allowed for use on labeled doors
  and frames
- Furnished with wood and machine screws
- Available with extended spindles in 1/2"
  (13mm) increments up to 2" (51mm) longer
  than standard

Technical Information

ANSI/C07011

Center hung pivots are door hanging means only. To close doors, see floor closer sections of the catalogs.

* For doors taller than 8'6" use top pivot
H345 in lieu of H340

MODEL H117-3/4 x 587 ARM

Product Description & Features

- Standard top pivot H340 included
- Bottom pivot is mortised into floor
- Special side load arm for 1-3/4" thick doors or
  for moving pivot point toward lock edge of door
- Pivot point centered in thickness of door
- Additional surface applied thrust bearing
- Door must have radius on pivot edge
- Pivot set features sealed bearings for
  protection against weather and debris
- Not allowed for use on labeled doors
  and frames
- Furnished with wood and machine screws
- Available with extended spindles in 1/2"
  (13mm) increments up to 2" (51mm) longer
  than standard

Technical Information

ANSI/C07011

Center hung pivots are door hanging means only. To close doors, see floor closer sections of the catalogs.

* For doors taller than 8'6" use top pivot
H345 in lieu of H340
CENTER HUNG PIVOT SETS

MODEL 176
Application
- Interior Doors
- Weight up to 150 lbs.
- Door Sizes up to 3’0” x 8’0”
- Door Thickness 1-3/8 to 1-3/4
- Non Handed

Product Description & Features
- Standard top pivot 320 included
- Bottom pivot mounts directly into concrete floor
- Pivot point centered in thickness of the door
- Door must have radius on pivot edge
- Not allowed for use on labeled doors and frames
- Furnished with wood and machine screws
- 3/8” vertical adjustment
- No spindle extensions available

ANSI/CO7032

MODEL 178
Application
- Interior Doors
- Weight to 175 lbs.
- Door Sizes up to 3’0” x 8’0” (914 x 2591mm)
- Non Handed

Product Description & Features
- Used on full glass doors
- Doors do not return to center
- Accommodates glass thicknesses 3/8”-1/2”
- Includes special floor portion, top and bottom patch fittings and walking beam top pivot

Technical Information
CENTER HUNG TOP PIVOT SETS

MODEL 320
Application
- Fully Concealed
- Non-handed

Product Description & Features
- Standard top pivot for Models 127-3/4, 128-3/4, and 176 pivot sets
- Walking beam-type pivot – 1/2" (13mm) diameter pivot pin with 3/4" (19mm) engagement
- Oil-impregnated sintered bronze bushing
- Completely concealed when door is closed
- Furnished with wood and machine screws
- Available with longer than standard pivot pins. Increments are 1/4" (6mm), 1/2" (13mm), 3/4" (19mm) only

Technical Information

MODEL 340
Application
- Fully Concealed
- Non-handed

Product Description & Features
- Standard top pivot for Models 370 and 117-3/4 pivot sets. Also used for 28, 30, 40 and 50 Series floor closers
- Walking beam-type pivot – 1/2" (13mm) diameter pivot pin with 3/4" (19mm) engagement
- Oil-impregnated sintered bronze bushing
- Completely concealed when door is closed
- Furnished with wood and machine screws
- Available with longer than standard pivot pins. Increments are 1/4" (6mm), 1/2" (13mm), 3/4" (19mm) only

Technical Information

MODEL H340
Application
- Fully Concealed
- Heavy-Duty
- Non-handed

Product Description & Features
- Standard top pivot for Model H117-3/4 pivot set. Also used for H28 and H40 Series floor closers
- Can be used with any floor closer or pivot set with pivot point 2-3/4, or greater, from edge of the door
- Walking beam-type pivot – 11/16" (17mm) diameter pivot pin with 3/4" (19mm) engagement
- Heavy-duty needle bearing
- Completely concealed when door is closed
- Furnished with wood and machine screws
- Available with longer than standard pivot pins. Increments are 1/4" (6mm), 1/2" (13mm), 3/4" (19mm) only

Technical Information
CENTER HUNG TOP PIVOT SETS

MODEL 345

Application
- Fully Concealed
- Center Hung
- Non-handed
- Earthquake Tolerant
- Taller Doors

Product Description & Features
- Optional top pivot
- Ideal for locations where there is a fear of dramatic building settling or for doors over 8’6” in height
- Long pivot pin engages in top of door 1-3/4” (44mm)
- Can be used with any center hung bottom pivot or floor closer. Order pivot set or floor closer LTP (less top pivot) with 345 on separate line item
- Walking beam-type pivot –1/2” (13mm) diameter pivot pin
- Oil-impregnated sintered bronze bushing
- Completely concealed when door is closed
- Furnished with wood and machine screws

MODEL H345

Application
- Fully Concealed
- Center Hung
- Non-handed
- Earthquake Tolerant
- Taller Doors

Product Description & Features
- Ideal for locations where there is a fear of dramatic building settling or for doors over 8’6” in height
- Long pivot pin engages in top of door 1-3/4” (44mm)
- Can be used with any center hung bottom pivot or floor closer whose pivot point is 2-3/4, or greater, from the edge of the door. Order pivot set or floor closer LTP (less top pivot) with H345 on separate line item
- Walking beam-type pivot – 11/16” (17mm) diameter pivot pin
- Heavy-duty needle bearing
- Completely concealed when door is closed
- Furnished with wood and machine screws
CENTER HUNG TOP PIVOT SETS

MODEL 340 X 102

Application
- Fully Concealed
- Non-handed

Product Description & Features
- Optional top pivot for doors or frames that have conflicts with other hardware
- Can be inverted. The walking beam portion would be installed the header of the frame
- No finish plate supplied
- If inverted, finish plate should be ordered and priced separately (see page 43 for 340 or 320 plate part numbers)
- Oil-impregnated sintered bronze bushing
- Completely concealed when door is closed
- Available with longer than standard pivot pins. Increments are 1/4" (6mm) up to 3/4" (19mm)
- Furnished with wood and machine screws
- For lighter weight doors use 320 x 102

Technical Information

MODEL 340 X AP3

Application
- Surface mounted
- Handed doors up to 3'6" wide

Product Description & Features
- Used where no frame exists above door, or where it is not possible to anchor pivot into header of frame
- Center hung applications only
- Furnished with 340 door portion
- Part is handed to keep installation plate to inside of room or building
- Furnished with wood and machine screws

Technical Information
## PIVOT SETS

### QUICK REFERENCE of OPTIONS

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Model</th>
<th>Offset</th>
<th>Center Hung</th>
<th>Standard Top Pivot</th>
<th>Available 3-Hour Fire Rated Doors</th>
<th>Handed</th>
<th>Maximum Door Weight**</th>
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*For 1-3/4" doors only

**Weight for offset product is based on 3/4" offset and the use of an intermediate pivot.

### HOW TO ORDER

<table>
<thead>
<tr>
<th>Prefix</th>
<th>L147 Model</th>
<th>3/4&quot; Offset</th>
<th>X LTP x 2-1/4 dr Suffix</th>
<th>x RH Hand</th>
<th>x 626 Finish</th>
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<tbody>
<tr>
<td>F Fire-Rated Doors</td>
<td>117-1/4</td>
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</table>

587 CH Arm for 1-3/4" Dr - Extended Spindles
- Longer Top Pivot Pins
LTP Less Top Pivot
20 20-Minute Label
- Cover Pan (xDepth)
SPLO Special Layout #
- Door Thickness - L Product

| 605 | Bright Brass |
| 606 | Satin Brass |
| 611 | Bright Bronze |
| 612 | Satin Bronze |
| 613 | Dark Bronze |
| 613E | Dark Oxidized Satin Bronze - equivalent |
| 618 | Bright Nickel |
| 619 | Satin Nickel |
| 622 | Flat Black |
| 625 | Bright Chrome |
| 626 | Satin Chrome |

*specify finish
### M19, M190, ML19, FA19, 219, 319, FM19, FM190, ALL ELECTRIFIED M19 INTERMEDIATE PIVOTS

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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<tbody>
<tr>
<td>107015-*</td>
<td>Metal Screws for One Leaf</td>
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<tr>
<td>107115-*</td>
<td>Wood Screws for One Leaf</td>
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<tr>
<td>81778-*</td>
<td>Hex Cap</td>
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*specify finish

219, 319 and 419 Also Use:

<table>
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<th>Model</th>
<th>Description</th>
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<tbody>
<tr>
<td>107059-*</td>
<td>Includes Screws and Backplate</td>
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*Torx Available - Suffix “T”*

### 119 INTERMEDIATE PIVOT

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<tr>
<td>107114-*</td>
<td>Wood Screws for One Leaf</td>
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*Torx Available - Suffix “T”*
## ANGLE PIVOT-3

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<tr>
<td>107047*</td>
<td>Includes Screws and Stud</td>
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<tr>
<td>30243</td>
<td>Door Portion</td>
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<tr>
<td>30814**</td>
<td>Frame Portion (handed)</td>
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</tbody>
</table>

Torx® not available.

## TOP PIVOT 340 x 102 OR 320 x 102

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10210 AS</td>
<td>Jamb Portion</td>
</tr>
<tr>
<td>3065</td>
<td>Door Portion</td>
</tr>
<tr>
<td>640-ASY</td>
<td>Door Portion (320 x 102)</td>
</tr>
<tr>
<td>107012*</td>
<td>Jamb Portion Screw kit</td>
</tr>
<tr>
<td>107329</td>
<td>Door Portion Screw kit</td>
</tr>
</tbody>
</table>

Torx® not available.

## F519 POCKET PIVOT

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>619005-*</td>
<td>Screw kit</td>
</tr>
<tr>
<td></td>
<td>Torx® Available</td>
</tr>
</tbody>
</table>

*specify finish
PIVOTS and PIVOT SETS PARTS DRAWINGS

117-1/4 PIVOT SET
Right Hand Shown
3/4" Offset Only

<table>
<thead>
<tr>
<th>(A) Pivot Stud 181770-ASY</th>
</tr>
</thead>
<tbody>
<tr>
<td>(B) Hex Cap 181778-*</td>
</tr>
<tr>
<td>(D) Arm Cap and Screw 12029-*AS</td>
</tr>
<tr>
<td>(E) Arm LH 11706LASY</td>
</tr>
<tr>
<td>(E) Arm RH 11705RASY</td>
</tr>
<tr>
<td>(F) Floor Portion Assy RH 17406R*AS</td>
</tr>
<tr>
<td>(F) Floor Portion Assy LH 17406L*AS</td>
</tr>
</tbody>
</table>

(C) 180 Top Pivot

Screw kits
- 180 Screw kit
  - 107014 - * Machine (2 req.)
  - 107114 - * Wood (2 req.)
- 117-1/4 Screw kit
  - 117127 - *

117, F117 PIVOT SET
Right Hand Shown
3/4" and 1-1/2" Offset

<table>
<thead>
<tr>
<th>(A) Pivot Stud 181770-ASY</th>
</tr>
</thead>
<tbody>
<tr>
<td>(B) Hex Cap 181778-*</td>
</tr>
<tr>
<td>(D) Arm Cap and Screw 12029-*AS</td>
</tr>
<tr>
<td>(E) 3/4&quot; Offset Arm LH 11706LASY</td>
</tr>
<tr>
<td>(E) 3/4&quot; Offset Arm RH 11705RASY</td>
</tr>
<tr>
<td>(F) 117 Floor Portion Assy 17526-*AS</td>
</tr>
<tr>
<td>(F) 117 Floor Portion Assy 17559-*AS</td>
</tr>
</tbody>
</table>

(C) 3/4" Offset Top Pivot Assembly
- 180 (standard)
- F180 (Fire Rated)
  - 180-20 (20 minutes)

117 x 1-1/2 OS

| (E) 1-1/2" Offset Arm LH 11706L15* |
| (E) 1-1/2" Offset Arm RH 11705R15* |

Screw kits
- 180 Screw kit
  - 107014 - * Machine (2 req.)
  - 107114 - * Wood (2 req.)
- Bottom Pivot Screw kit
  - 117127 - *

*specify finish
147, F147 PIVOT SET

Right Hand Shown
3/4" and 1-1/2" Offset

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>Pivot Stud 181770-ASY</td>
</tr>
<tr>
<td>(B)</td>
<td>Hex Cap 181778-*</td>
</tr>
<tr>
<td>(D)</td>
<td>Arm Cap &amp; Screw 012142<em>AS (RH, BRS) 012142L</em>AS (LH, BRS) 012144<em>RAS (RH, SS) 012144L</em>AS (LH, SS)</td>
</tr>
<tr>
<td>(E)</td>
<td>Arm x Locking Screw 3/4&quot; Offset 275177 RH 3/4&quot; Offset 275176 LH</td>
</tr>
<tr>
<td>(F)</td>
<td>Arm Lock Screw Pkg (5 per) 88905-Pkg</td>
</tr>
<tr>
<td>(G)</td>
<td>Arm Shims (2 per) 107071</td>
</tr>
<tr>
<td>(H)</td>
<td>Spindle Stud 14714</td>
</tr>
<tr>
<td>(I)</td>
<td>147/F147 Floor Portion x Bearing 14721-*AS</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(C) 3/4" Offset Top Pivot Assembly 180 (standard) F180 (Fire Rated) 180-20 (20 minutes)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>(C)</td>
<td></td>
</tr>
</tbody>
</table>

147 & F147 1-1/2 OS

(A) Pivot Stud 181770-ASY
(B) Hex Cap 181778-*
(D) Arm Cap & Screw 012142*AS (RH, BRS) 012142L*AS (LH, BRS) 012144*RAS (RH, SS) 012144L*AS (LH, SS)
(E) Arm x Locking Screw 3/4" Offset 275177 RH 3/4" Offset 275176 LH
(F) Arm Lock Screw Pkg (5 per) 88905-Pkg
(G) Arm Shims (2 per) 107071
(H) Spindle Stud 14714
(I) 147/F147 Floor Portion x Bearing 14721-*AS

Screw kits

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>180/F180 Screw kit 107014 - * Machine (2 req.) 107114 - * Wood (2 req.)</td>
<td></td>
</tr>
</tbody>
</table>

Arm Screw kit 107044 Machine 107144 Wood

147/F147 Bottom Pivot Screw kit (includes "E" ring shims) 107062-*

*specify finish
PIVOTS and PIVOT SETS PARTS DRAWINGS

L147, FL147 PIVOT SET

Right Hand
Shown 3/4"
Offset Only

(A) Pivot Stud 181770-ASY
(B) Hex Cap 181778-
(C) 3/4" Offset Top Pivot Assembly
L180 (standard)
FL180 (Fire Rated)
L180-20 (20 minutes)

(D) Arm Cap & Screw
012142R*AS (RH, BRS)
012142L*AS (LH, BRS)
012144R*AS (RH, SS)
012144L*AS (LH, SS)

(E) Arm x Locking Screw
1-3/4" Door 18550-Asy RH
18650-Asy LH

(E) Arm x Locking Screw
2" Door 18551-Asy RH
18651-Asy LH

(E) Arm x Locking Screw
2-1/4" Door 18552-Asy RH
18652-Asy LH

(E) Arm x Locking Screw
2-1/2" Door 18553-Asy RH
18653-Asy LH

(E) Arm x Locking Screw
3" Door 18554-Asy RH
18654-Asy LH

(F) Arm Lock Screw Pkg (5 per) 88905-PKG

Special Note: FL147 is available for 1-3/4" doors only

547/F547 PIVOT SET

Right Hand
Shown 3/4"
Offset Only

(B) Arm Cap & Screw
012142R*AS
(RH, BRS)
012142L*AS
(LH, BRS)
012144R*AS
(RH, SS)
012144L*AS
(LH, SS)

(C) Arm x Locking Screw
275177RH
275176RH

(D) Arm x Locking Screw Pkg (5 per) 88905-Pkg

(E) Arm Shim kit (2 per) 107071

(F) Spindle Stud 14714

(G) 147 Floor Portion x Bearing 14721-*AS

*specify finish

147/F147 Bottom Pivot Screw kit (includes "E" ring shim) 107062-*

(A) M190 Intermediate Pivot
(For Fire-Rated Doors order FM190)
## 195 PIVOT SET

**Right Hand**
**Shown 3/4" Offset Only**

<table>
<thead>
<tr>
<th>(A) Pivot Stud 181770-ASY</th>
<th>(B) Hex Cap 181778-*</th>
</tr>
</thead>
<tbody>
<tr>
<td>(D) Door Portion Asy RH 19503-*AS</td>
<td>(D) Door Portion Asy LH 19504-*AS</td>
</tr>
<tr>
<td>(E) Cap 19511-*</td>
<td>(F) Jamb Portion Asy RH (includes Stud) 19501-*AS</td>
</tr>
<tr>
<td>(F) Jamb Portion Asy LH (includes Stud) 19502-*AS</td>
<td></td>
</tr>
</tbody>
</table>

### Screw kits

- 180 Screw kit
  - 107014 - * Machine (2 req.)
  - 107114 - * Wood (2 req.)
- 195 Screw kit
  - 107014 - * Machine (2 req.)
  - 107114 - * Wood (2 req.)

### 3/4" Offset Top Pivot Assembly
- 180 (standard)
- F180 (Fire Rated)

## 173 PIVOT SET

<table>
<thead>
<tr>
<th>(A) Pivot Stud 181770-ASY</th>
<th>(B) Hex Cap 181778-*</th>
</tr>
</thead>
<tbody>
<tr>
<td>(D) Arm Cap and Screw 12029-*AS</td>
<td>(E) Arm LH 11706L*AS</td>
</tr>
<tr>
<td>(E) Arm RH 11705R*AS</td>
<td>(F) Spindle Stud 173003</td>
</tr>
<tr>
<td>(G) Spindle Collar 173001</td>
<td>(H) Mounting Bolt 173002</td>
</tr>
<tr>
<td>(J) Floor Anchor 173010</td>
<td></td>
</tr>
</tbody>
</table>

### Screw kits

- 180 Screw kit
  - 107014 - * Machine (2 req.)
  - 107114 - * Wood (2 req.)
- 195 Screw kit
  - 107014 - * Machine (2 req.)
  - 107114 - * Wood (2 req.)

### 173 x 1-1/2OS

- (E) 1-1/2" offset arm LH 11706L15*
- (E) 1-1/2" offset arm RH 11705R15*

*specify finish
PIVOTS and PIVOT SETS PARTS DRAWINGS

117-1/2, F117-1/2 PIVOT SET

Right Hand Shown
3/4” and 1-1/2” Offset

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>Pivot Stud 181770-ASY</td>
</tr>
<tr>
<td>(B)</td>
<td>Hex Cap 181778-*</td>
</tr>
<tr>
<td>(D)</td>
<td>Arm Cap &amp; Screw 012142R<em>AS (RH, BRS) 012142L</em>AS (LH, BRS) 012144R<em>AS (RH, SS) 012144L</em>AS (LH, SS)</td>
</tr>
<tr>
<td>(E)</td>
<td>Arm x Locking Screw 3/4” Offset 275177 RH 3/4” Offset 275176 LH</td>
</tr>
<tr>
<td>(F)</td>
<td>Arm Lock Screw Pkg (5 per) 88905-PkG</td>
</tr>
<tr>
<td>(G)</td>
<td>Arm Shim kit (5 per) 275065-PkG</td>
</tr>
<tr>
<td>(H)</td>
<td>Spindle Shoulder Collar 16301*</td>
</tr>
<tr>
<td>(I)</td>
<td>Floor Plate x Screws 1174050-*</td>
</tr>
<tr>
<td>(J)</td>
<td>117-1/2 &amp; F117-1/2 Floor Portion Assembly X01176350</td>
</tr>
</tbody>
</table>

(C) 3/4” Offset Top Pivot Assembly 180 (standard) F180 (Fire Rated) 180-20 (20 minutes)

1-1/2” Offset Arm 275167-*

*Screw kits

<table>
<thead>
<tr>
<th>Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>180/F180 Screw kit 107014 * Machine (2 req.) 107114 * Wood (2 req.)</td>
<td></td>
</tr>
<tr>
<td>Floor Plate Screw kit 107004-*</td>
<td></td>
</tr>
<tr>
<td>Arm Screw kit 107044 * Machine 107144 * Wood</td>
<td></td>
</tr>
</tbody>
</table>

*specify finish
PIVOTS and PIVOT SETS PARTS DRAWINGS

L117, FL117 PIVOT SET

Right Hand Shown
3/4” Offset Only

<table>
<thead>
<tr>
<th>A</th>
<th>Pivot Stud 181770-ASY</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Hex Cap 181778-*</td>
</tr>
<tr>
<td>D</td>
<td>Arm Cap &amp; Screw 012142R<em>AS (RH, BRS) 012142L</em>AS (LH, BRS) 012144R<em>AS (RH, SS) 012144L</em>AS (LH, SS)</td>
</tr>
<tr>
<td>E</td>
<td>Arm x Locking Screw 1-3/4” Door 18550-ASY RH 18650-ASY LH</td>
</tr>
<tr>
<td>E</td>
<td>Arm x Locking Screw 2” Door 18551-ASY RH 18651-ASY LH</td>
</tr>
<tr>
<td>E</td>
<td>Arm x Locking Screw 2-1/4” Door 18552-ASY RH 18652-ASY LH</td>
</tr>
<tr>
<td>E</td>
<td>Arm x Locking Screw 2-1/2” Door 18553-ASY RH 18653-ASY LH</td>
</tr>
<tr>
<td>E</td>
<td>Arm x Locking Screw 3” Door 18554-ASY RH 18654-ASY LH</td>
</tr>
<tr>
<td>F</td>
<td>Arm Lock Screw Pkg (5 per) 88905-PkG</td>
</tr>
<tr>
<td>G</td>
<td>Arm Shim kit (5 per) 275060-PkG</td>
</tr>
<tr>
<td>H</td>
<td>Spindle Shoulder Collar 259500-*</td>
</tr>
<tr>
<td>I</td>
<td>Heavy-Duty Thrust-Bearing 41204-PkG</td>
</tr>
<tr>
<td>J</td>
<td>Floor Plate x Screws 1174050-*</td>
</tr>
<tr>
<td>K</td>
<td>Floor Portion Assembly X01176351 Includes 41204-PkG</td>
</tr>
</tbody>
</table>

(C) 3/4” Offset Top Pivot Assembly L180 (standard) FL180 (Fire Rated) L180-20 (20 minutes)

Note: FL is available for 1-3/4” doors only

*specify finish

Special Note: FL117 is available for 1-3/4” doors only
PIVOTS and PIVOT SETS PARTS DRAWINGS

127-3/4 & 128-3/4 PIVOT SETS

(A) Top Pivot Jamb Portion
640-ASY

(B) Top Pivot Plate x Screws
12724-*Pk(SS) 12720-*Pk (BRS)

(C) Top Pivot Door Portion
12716

(E) Jamb Portion & Stud Assembly 127-3/4 Only 12711-*

(F) Arm & Bearing Assembly
12714 Door Portion

(G) Floor Pivot & Stud Assembly 128-3/4 Only 71521-*AS

370 PIVOT SET

(A) Top Pivot Jamb Portion
3065

(B) Finish Plate x Screws
012202-*Pk (BRS)
012204-*Pk (SS)

(C) Top Pivot Door Portion
30243

(E) Arm
22131

(G) Floor Portion and Stud
22121-*

*specify finish

Screw kits

320 Screw kit
107340 Machine & Wood

127-3/4 & 128-3/4 Screw kit
117127-*

340 Top Pivot Screw kit
107329 Machine & Wood

370 Floor Portion
107370-*

*specify finish
PIVOTS and PIVOT SETS PARTS DRAWINGS

117-3/4 PIVOT SET

(A) Top Pivot Jamb Portion
3065
(B) Top Pivot Finish Plate
012202-*Pk(BRS) 012204-*Pk(SS)
(C) Top Pivot Door Portion
30243
(E) Arm
185.75
(F) Spindle Shoulder Collar
16301*
(G) Floor Plate x Screws
1174020-*
(H) Floor Portion Assembly
X01176320

(D) 340 Top Pivot

Screw kits
340 Top Pivot Screw kit
107329 Machine & Wood
Floor Plate Screws
107004-* Machine and wood
Arm Screw kit
107064

(H) 587 Side Load Arm Package
262587

Screw kits
H340 Screw kit
107329 Machine & Wood
Arm Screw kit
107045 - Machine
107145 - Wood
587 Arm Screw kit
107077 Machine
107177 Wood
Arm Shim Screw kit
107060
Floor Plate Screw kit 107004-
### 178 PIVOT SETS

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>Top Jamb Portion 42801</td>
</tr>
<tr>
<td>(B)</td>
<td>Finish Plate 012202-*Pk (BRS) 012204-*Pk (SS)</td>
</tr>
<tr>
<td>(C)</td>
<td>Patch Fitting 7495-*</td>
</tr>
</tbody>
</table>

**Top Pivot Screw kit**

107329

*specify finish

### 176 PIVOT SETS

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>Top Pivot Jamb Portion 640-ASY</td>
</tr>
<tr>
<td>(B)</td>
<td>Top Pivot Plate x Screws 12724-*P(K(S)) 12720-*Pk (BRG)</td>
</tr>
<tr>
<td>(C)</td>
<td>Top Pivot Door Portion 12716</td>
</tr>
<tr>
<td>(E)</td>
<td>Bottom Arm 12704</td>
</tr>
<tr>
<td>(F)</td>
<td>Sleeve 176001</td>
</tr>
<tr>
<td>(G)</td>
<td>Mounting Bolt 176002</td>
</tr>
<tr>
<td>(H)</td>
<td>Floor Anchor 173010</td>
</tr>
</tbody>
</table>

*specify finish

**Screw kits**

<table>
<thead>
<tr>
<th>Screw kit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>320 Screw kit 107340 Machine and Wood</td>
<td></td>
</tr>
<tr>
<td>Bottom Arm Screw kit 173176 Machine and Wood</td>
<td></td>
</tr>
</tbody>
</table>