



**Advanced Door Control  
Solutions Inc.**

~~~~~  
***PIVOTS – HINGES  
THRESHOLDS  
WEATHERING***  
~~~~~

***Contact us:***

405 BACKBONE RD E  
PRINCETON IL 61356-9689  
815-875-4505 800-473-6781  
FAX 815-872-1445

advanced@advdoor-inc.com

Website: [www.advdoor-inc.com](http://www.advdoor-inc.com)

## **Table of Contents**

### **Hager**

Upon Request

### **Ives**

Pages 3 ~ 20

### **Jackson**

Pages 21 ~ 27

### **Kawneer**

Pages 28 ~ 31

### **National Guard Products**

Pages 32 ~ 49

### **PBB**

Pages 50 ~ 58

### **Precision Architectural Hardware**

Pages 59 - 61

### **Rixson**

Pages 62 ~ 95

### **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:

Description	Finish	BHMA
<b>Powder-Coated Finishes (Available on all models)</b>		
Aluminum	SP28	689
Black	SPBLK	622
Dark Bronze	SP313	695
Brass	SP4	706
Bronze	SP10	691
<b>Plated Finishes (Available on all models except "F—Fire-Rated" models)</b>		
Polished Brass	US3	605
Satin Brass	US4	606
Satin Bronze	US10	612
Oil-Rubbed Bronze	US10B	613
Polished Chromium Plated	US26	625
Satin Chromium Plated	US26D	626
<b>Plated Finishes (Available on "F—Fire-Rated" models)</b>		
Polished Brass on Stainless Steel	US3	632
Plated Satin Bronze on Stainless	US10	639
Polished Stainless Steel	US32	629
Satin Stainless Steel	US32D	630

## Optional Finishes:

Consult factory for availability.  
Special powder-coated finishes are available.

# 7200 Series Pivot Selection Chart

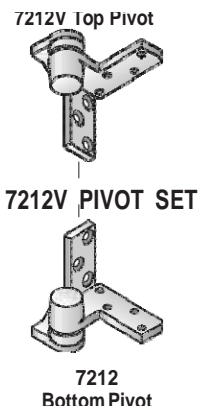
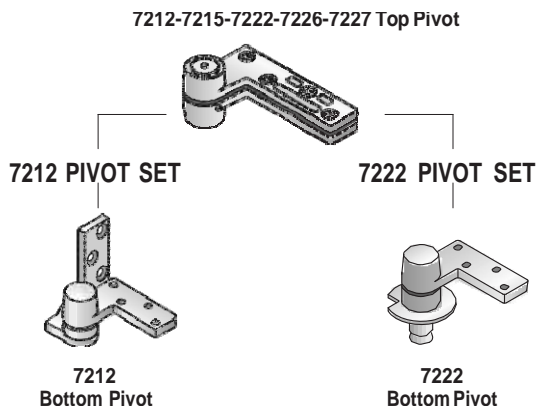


Pivot Set	UL Rating	Top Pivot	Bottom Pivot	Bottom Pivot Mounting	Recommended Intermediate Pivot	3/4" Offset	1-1/2" Offset	Center Hung	Max Door Weight	Handed
<b>7212</b>	None	7212-7215-7222-7226-7227 TOP	7212 BTM	Jamb Mounted	7212-7212V-7222 INT	Yes			200	Yes
<b>7212V</b>	None	7212V TOP	7212 BTM	Jamb Mounted	7212-7212V-7222 INT	Yes			200	Yes
<b>7215</b>	20 min	7212-7215-7222-7226-7227 TOP	7215 BTM	Jamb Mounted	7215-7226-7227 INT	Yes			500	Yes
<b>7215F</b>	3 hr	7215F-7226F-7227F TOP	7215F BTM	Jamb Mounted	7215F-7226F-7227F INT	Yes			500	Yes
<b>7222</b>	None	7212-7215-7222-7226-7227 TOP	7222 BTM	Floor Mounted	7212-7212V-7222 INT	Yes			200	Yes
<b>7226</b>	20 min	7212-7215-7222-7226-7227 TOP	7226 BTM	Floor Mounted	7215-7226-7227 INT	Yes			600	No
<b>7226F</b>	3 hr	7215F-7226F-7227F TOP	7226F BTM	Floor Mounted	7215F-7226F-7227F INT	Yes			600	No
<b>7227</b>	20 min	7212-7215-7222-7226-7227 TOP	7227 BTM	Mortised Cement Case	7215-7226-7227 INT	Yes			700	No
<b>7227F</b>	3 hr	7215F-7226F-7227F TOP	7227 BTM	Mortised Cement Case	7215F-7226F-7227F INT	Yes			700	No
<b>7230F</b>	3 hr	7230F-7237F TOP	7230F BTM	Floor Mounted	7230F-7237F INT	Yes			1000	No
<b>7237F</b>	3 hr	7230F-7237F TOP	7237F BTM	Mortised Cement Case	7230F-7237F INT	Yes			1750	No
<b>7244F</b>	3 hr	7244F-7245F TOP	7244F BTM	Floor Mounted	7244F-7245F INT		Yes		400	No
<b>7245F</b>	3 hr	7244F-7245F TOP	7245F BTM	Mortised Cement Case	7244F-7245F INT		Yes		500	No
<b>7253</b>	None	7253-7255-7255J-7256 TOP	7253 BTM	Floor Mounted	None			Yes	300	No
<b>7255</b>	None	7253-7255-7255J-7256 TOP	7255 BTM	Floor Mounted	None			Yes	500	No
<b>7255J</b>	None	7253-7255-7255J-7256 TOP	7255J BTM	Jamb Mounted	None			Yes	500	No
<b>7256</b>	None	7253-7255-7255J-7256 TOP	7256 BTM	Mortised Cement Case	None			Yes	600	No
<b>7259</b>	None	7259 TOP	7259 BTM	Mortised Cement Case	None			Yes	1000	No

# 7200 Series Pivots – Overview



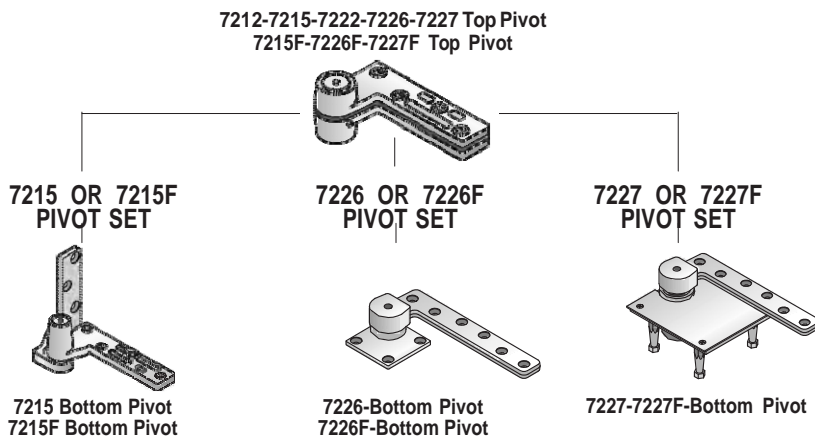
## 3/4" Offset Pivots - 200 Lb. Doors



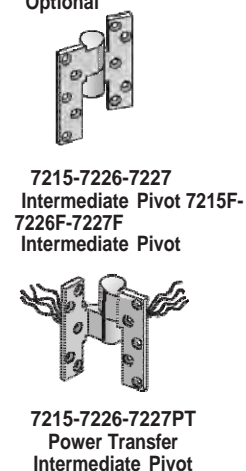
Optional



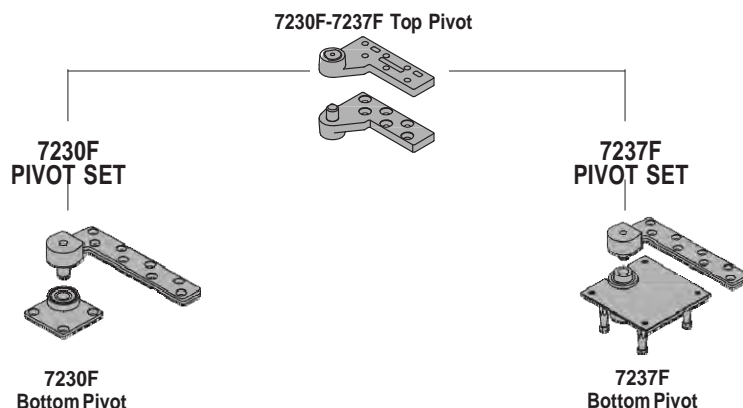
## 3/4" Offset Pivots - Standard and Fire-Rated - 500 to 700 Lb. Doors



Optional



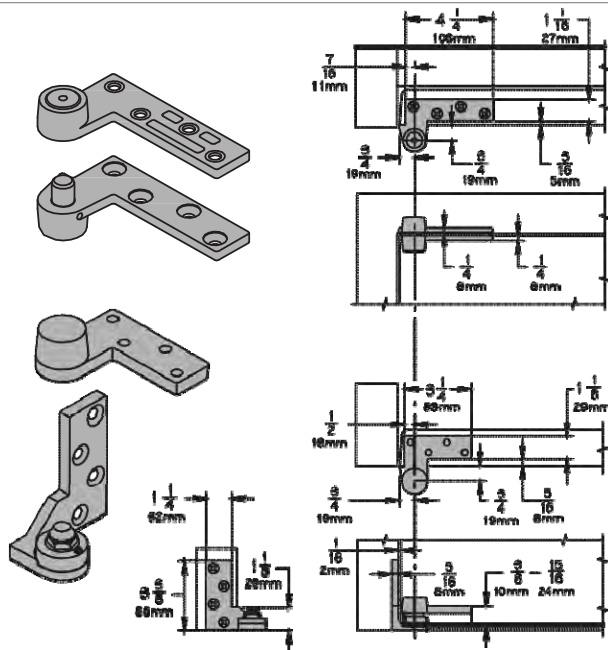
## 3/4" Offset Pivots - Fire-Rated - 1000 to 1750 Lb. Doors



Optional

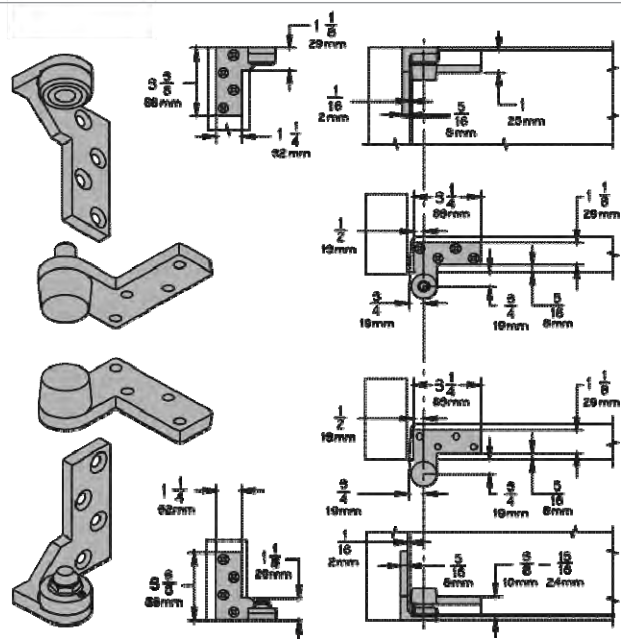


# 7212 & 7212V 3/4" Offset



## 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:

7212 - - - -

### Mounting Type:

- Blank** Head frame mounted to pivot  
**V** Jamb mounted top pivot

### Pivot Style:

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

### Handing:

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

### Finishes:

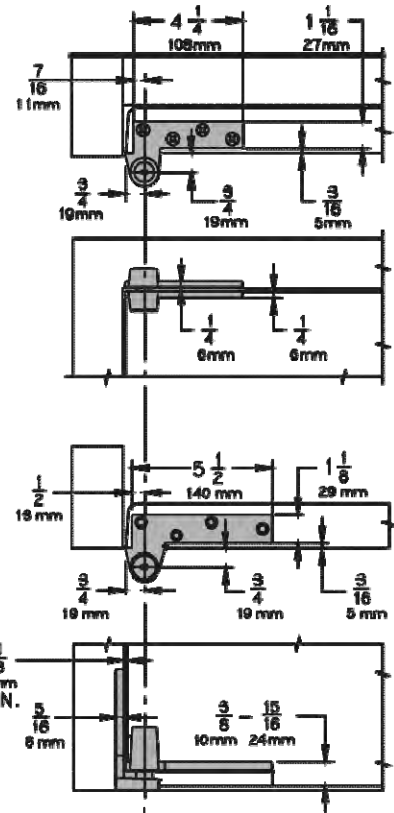
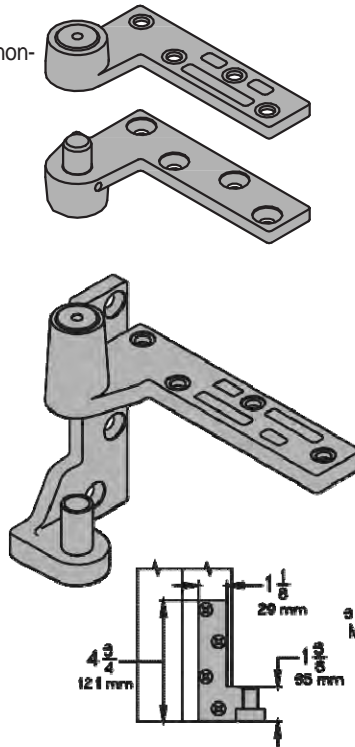
- US3, US4, US10, US10B, US26, US26D, SP4, SP10, SP28, SP313, SPBLK

# 7215 & 7215F 3/4" Offset



## 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:***

7215 - - -

**Rating:**

Blank	Non-fire-rated
F	Fire-rated

**Pivot Style:**

<b>Blank</b>	Top and bottom set
<b>TOP</b>	Top pivot only
<b>BTM</b>	Bottom pivot only
<b>INT</b>	Intermediate pivot only
<b>PT INT</b>	Power transfer intermediate pivot only

**Handing:**

LH Left-hand door  
RH Right-hand door

**Finishes:**

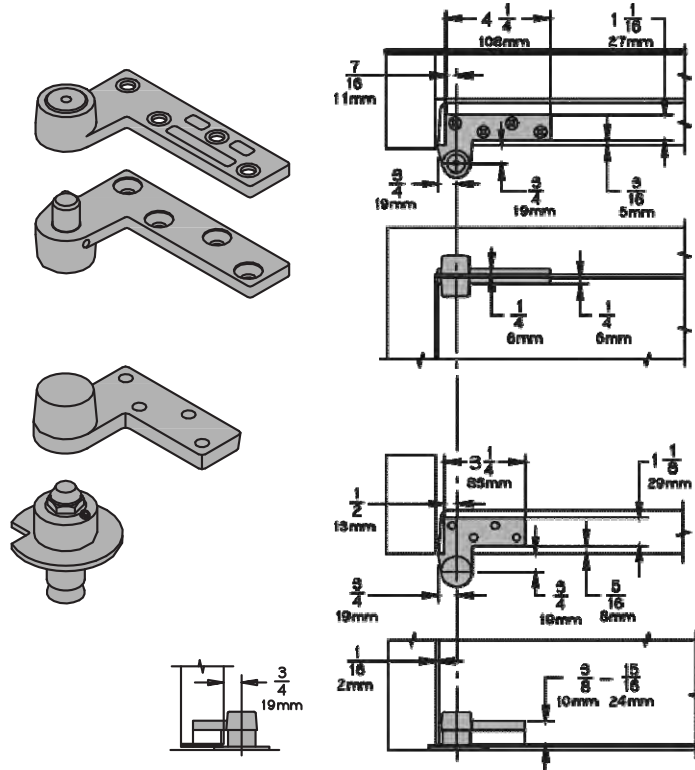
<b>Non-Fire-Rated</b>	US3, US4, US10, US10B, US26, US26D, SP4, SP10, SP28, SP313, SPBLK
<b>Fire-Rated</b>	US3, US10, US32, US32D, SP4, SP10, SP28, SP313, SPBLK

# 7222 3/4" Offset



## 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:

<b>Blank</b>	Top and bottom set
<b>TOP</b>	Top pivot only
<b>BTM</b>	Bottom pivot only
<b>INT</b>	Intermediate pivot only

### Handing:

<b>LH</b>	Left-hand door
<b>RH</b>	Right-hand door

### Finishes:

US3, US4, US10, US10B, US26, US26D, SP4, SP10, SP28, SP313, SPBLK

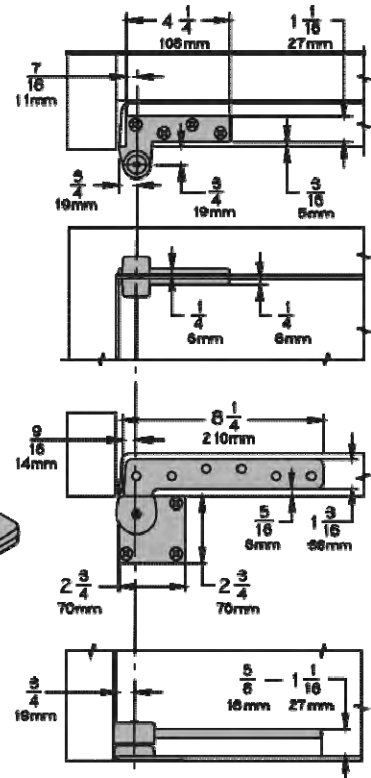
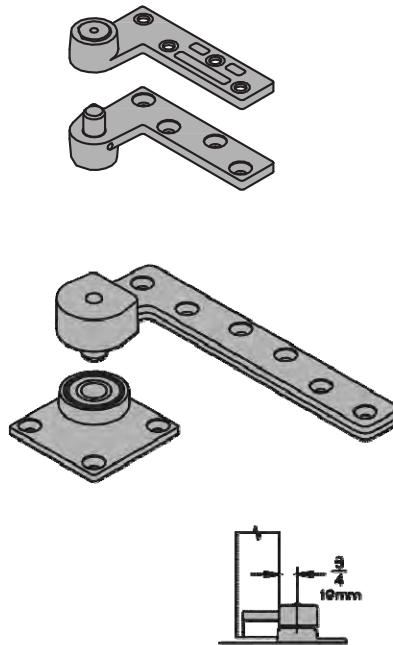


# 7226 & 7226F 3/4" Offset



## 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:

7226 - - - -

### Rating:

**Blank** Non-fire-rated  
**F** Fire-rated

### Pivot Style:

**Blank** Top and bottom set  
**TOP** Top pivot only  
**BTM** Bottom pivot only  
**INT** Intermediate pivot only  
**PT INT** Power transfer intermediate pivot only

### Handing:

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

### Finishes:

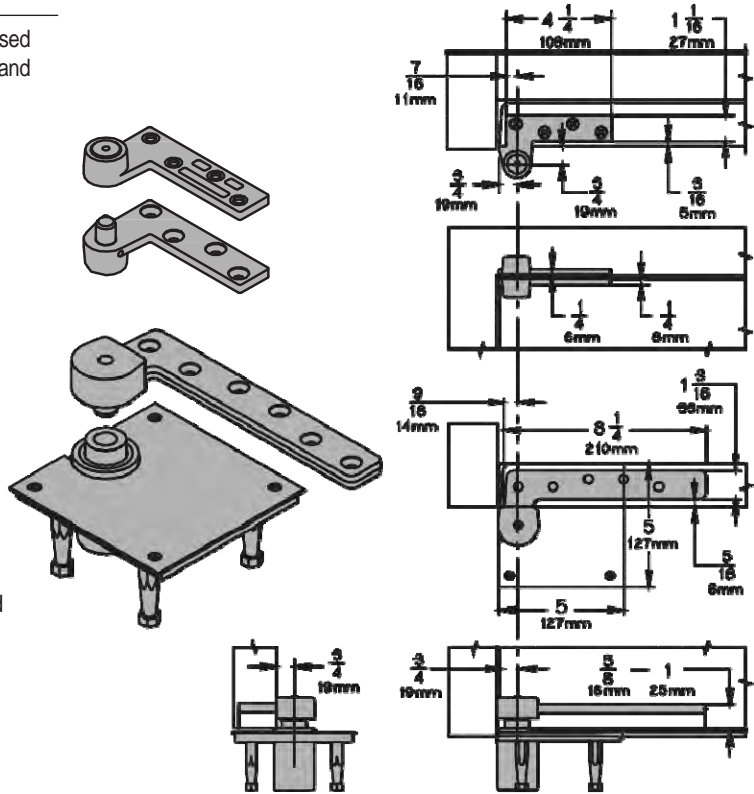
**Non-Fire-Rated** US3, US4, US10, US10B, US26, US26D, SP4, SP10, SP28, SP313, SPBLK  
**Fire-Rated** US3, US10, US32, US32D, SP4, SP10, SP28, SP313, SPBLK

# 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:

7227 - - - -

### Rating:

**Blank** Non-fire-rated  
**F** Fire-rated

### Pivot Style:

**Blank** Top and bottom set  
**TOP** Top pivot only  
**BTM** Bottom pivot only  
**INT** Intermediate pivot only  
**PT INT** Power transfer intermediate pivot only

### Handing:

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

### Finishes:

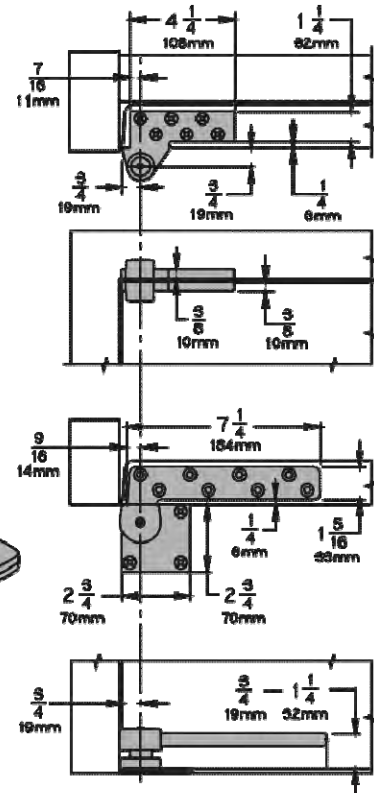
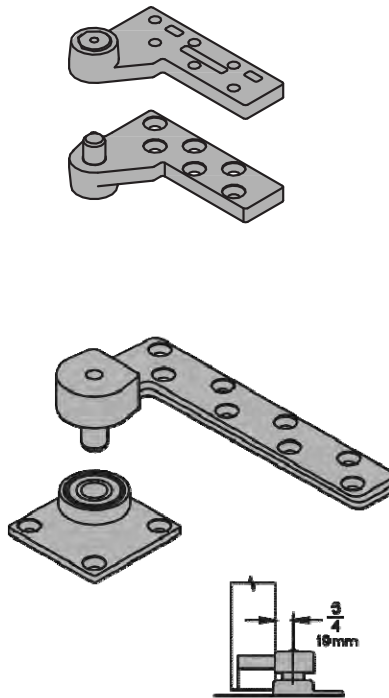
**Non-Fire-Rated** US3, US4, US10, US10B, US26, US26D, SP4, SP10, SP28, SP313, SPBLK  
**Fire-Rated** US3, US10, US32, US32D, SP4, SP10, SP28, SP313, SPBLK

# 7230F 3/4" Offset, Heavy Duty



## 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:

7230F - - -

### Pivot Style:

<b>Blank</b>	Top and bottom set
<b>TOP</b>	Top pivot only
<b>BTM</b>	Bottom pivot only
<b>INT</b>	Intermediate pivot only

### Handing:

<b>LH</b>	Left-hand door
<b>RH</b>	Right-hand door

### Finishes:

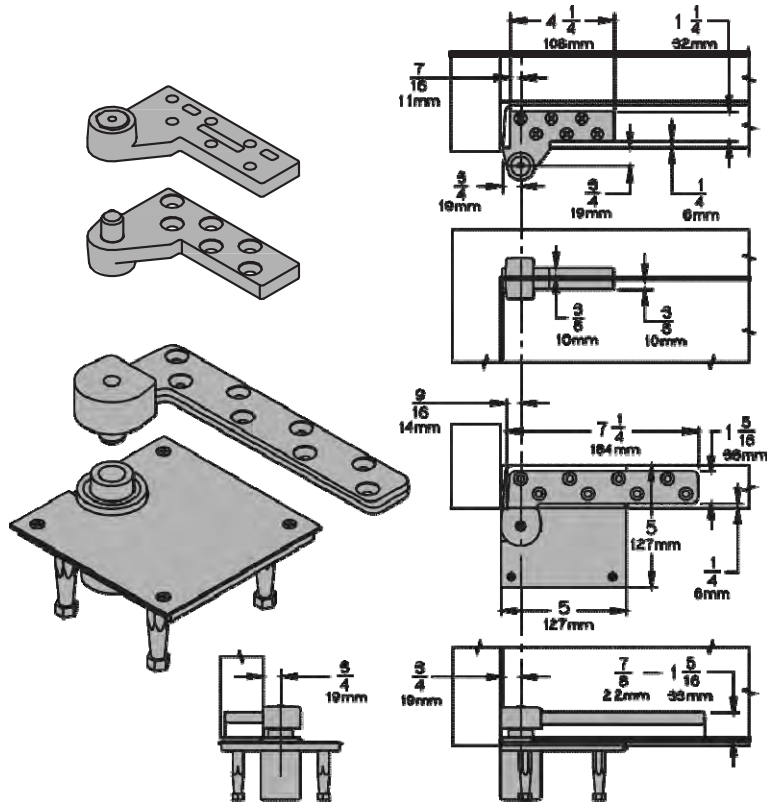
US3, US10, US32, US32D, SP4, SP10, SP28, SP313, SPBLK

# 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:

7237F - - -

### Pivot Style:

<b>Blank</b>	Top and bottom set
<b>TOP</b>	Top pivot only
<b>BTM</b>	Bottom pivot only
<b>INT</b>	Intermediate pivot only

### Handing:

<b>LH</b>	Left-hand door
<b>RH</b>	Right-hand door

### Finishes:

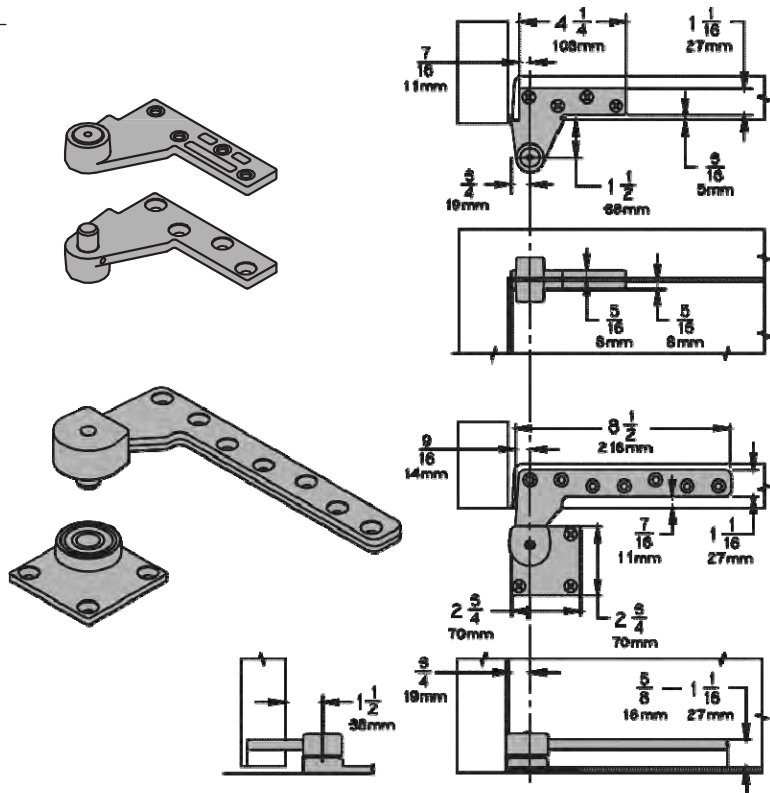
US3, US10, US32, US32D, SP4, SP10, SP28, SP313, SPBLK

# 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:

<b>Blank</b>	Top and bottom set
<b>TOP</b>	Top pivot only
<b>BTM</b>	Bottom pivot only
<b>INT</b>	Intermediate pivot only

### Handing:

<b>LH</b>	Left-hand door
<b>RH</b>	Right-hand door

### Finishes:

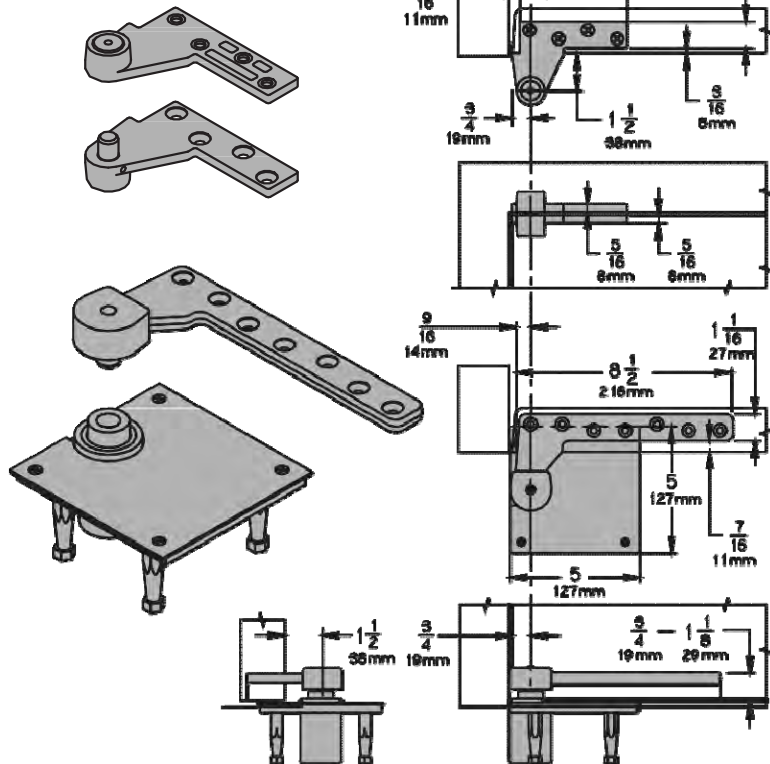
US3, US10, US32, US32D, SP4, SP10, SP28, SP313, SPBLK

# 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:

- |              |                         |
|--------------|-------------------------|
| <b>Blank</b> | Top and bottom set      |
| <b>TOP</b>   | Top pivot only          |
| <b>BTM</b>   | Bottom pivot only       |
| <b>INT</b>   | Intermediate pivot only |

### Handing:

- |           |                 |
|-----------|-----------------|
| <b>LH</b> | Left-hand door  |
| <b>RH</b> | Right-hand door |

### Finishes:

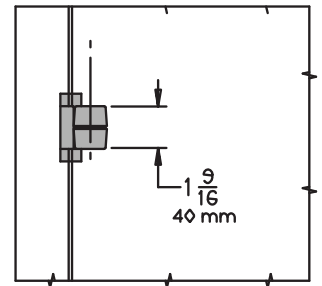
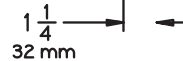
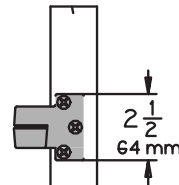
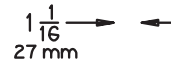
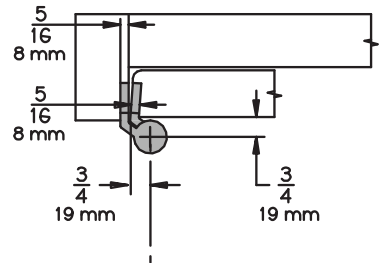
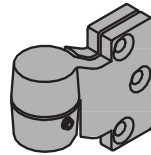
- US3, US10, US32, US32D, SP4, SP10, SP28, SP313, SPBLK

# 7200 Series Intermediate Pivots#



## 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).

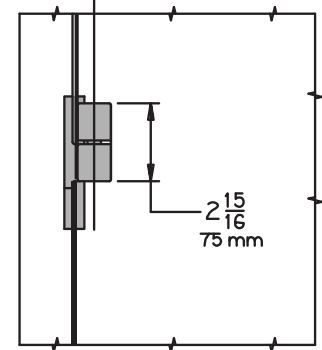
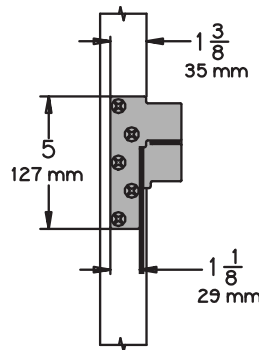
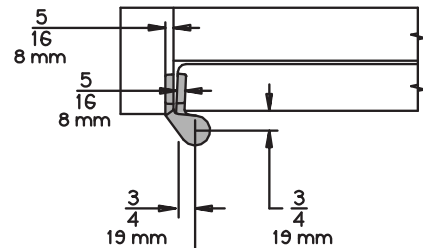
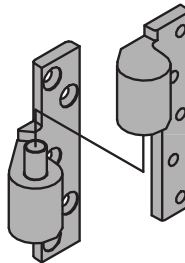


## 7212-7212V-7222 INT

- 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.
- Finishes: US3, US4, US10, US10B, US26, US26D, SP4, SP10, SP28, SP313 and SPBLK.

## 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.
- Finishes: US3, US4, US10, US10B, US26, US26D, SP4, SP10, SP28, SP313 and SPBLK.



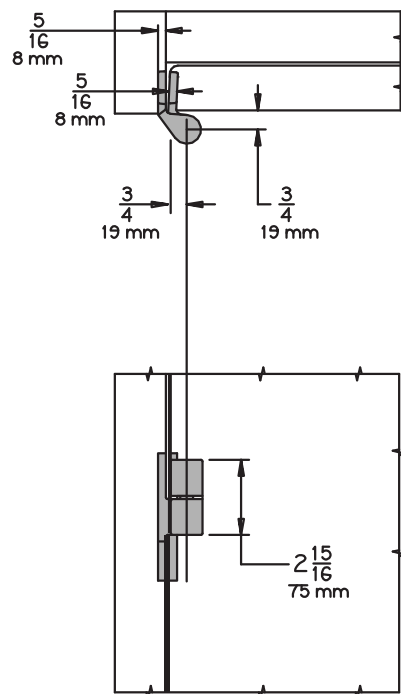
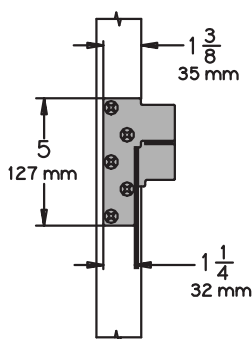
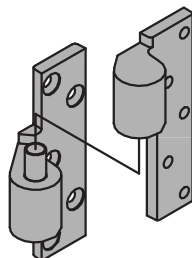
## 7215F-7226F-7227F INT

- 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.
- Finishes: US3, US10, US32, US32D, SP4, SP10, SP28, SP313 and SPBLK.

# 7200 Series Intermediate Pivots

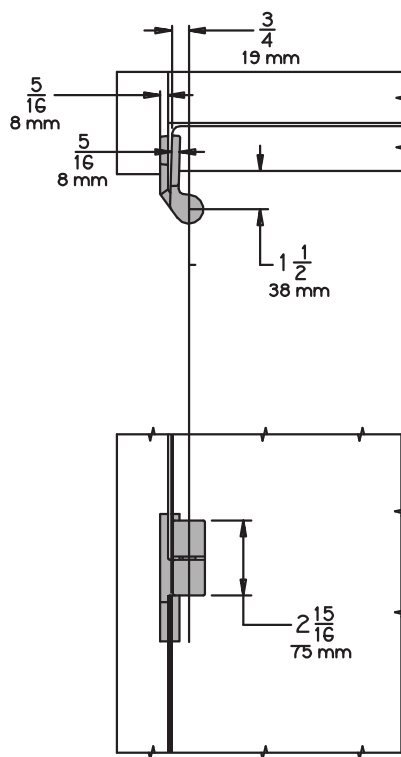
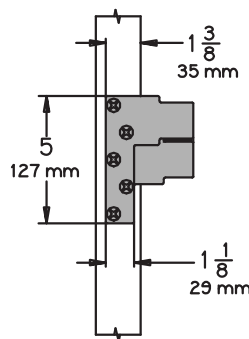
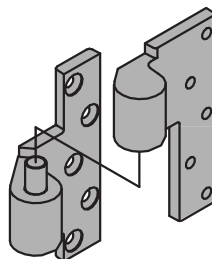
## 7230F - 7237F INT

- 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.
- Finishes: US3, US10, US32, US32D, SP4, SP10, SP28, SP313 and SPBLK.



## 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.
- Finishes: US3, US10, US32, US32D, SP4, SP10, SP28, SP313 and SPBLK.



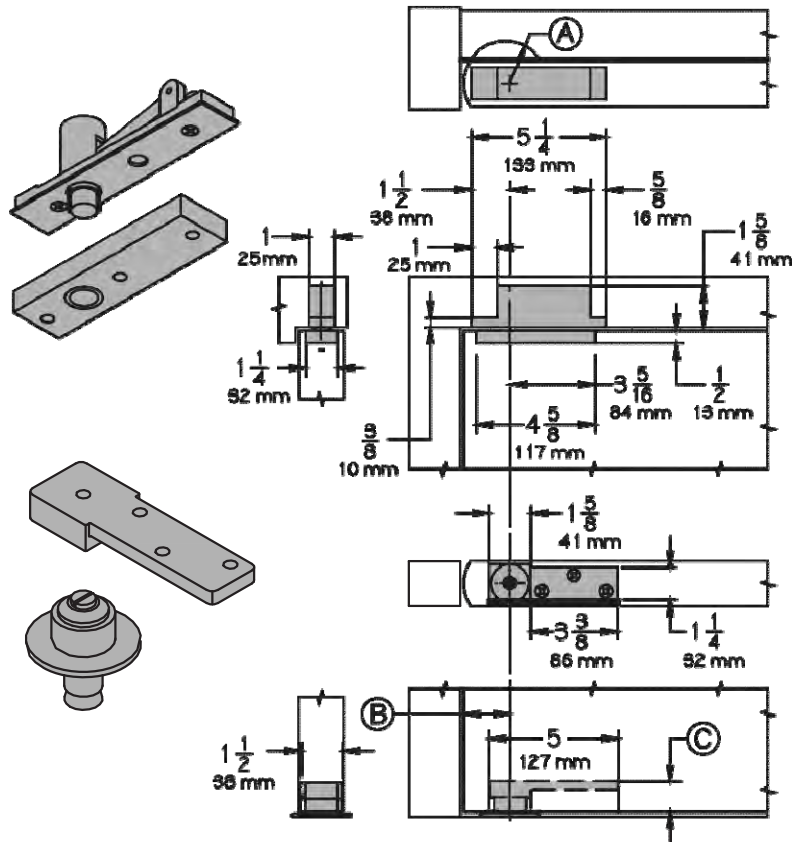


# 7253 Center Hung Pivot Set



## 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 D**

Clearance	Depth of Mortise
3/16" (5mm)	1-3/16" (30mm)
3/8" (10mm)	1" (25mm)
1/2" (13mm)	7/8" (22mm)
5/8" (16mm)	3/4" (19mm)
3/4" (19mm)	5/8" (16mm)

## How to Order:

7253 - - -

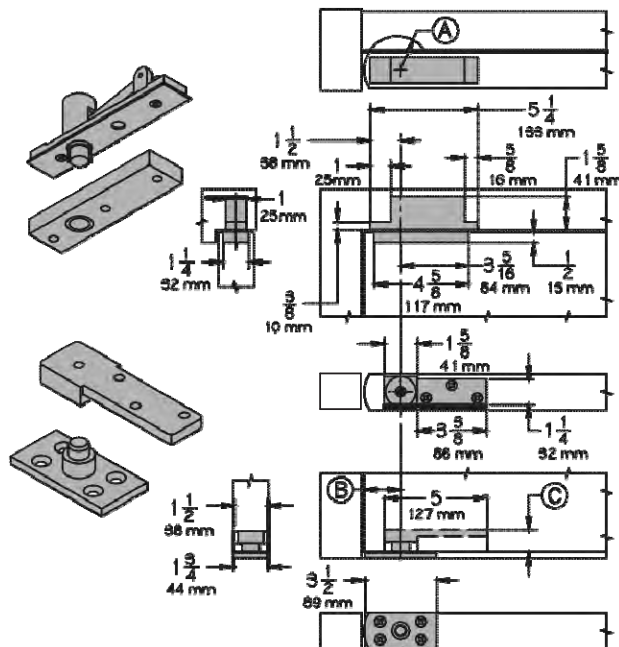
### Pivot Style:

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

### Finishes:

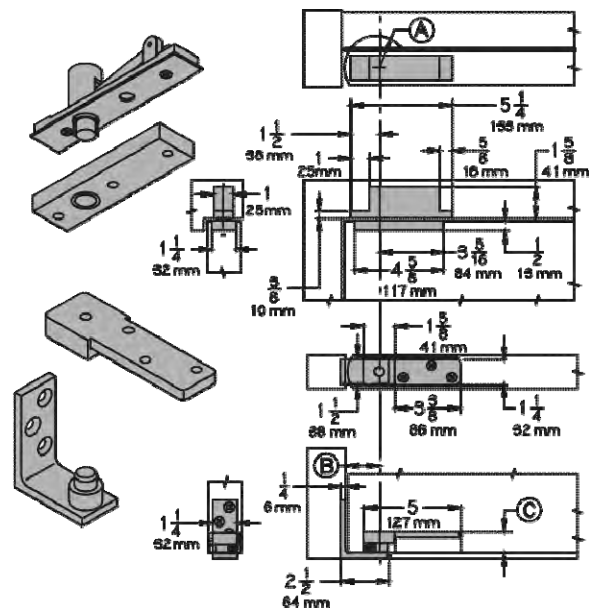
US3, US4, US10, US10B, US26, US26D, SP4, SP10, SP28, SP313, SPBLK

# 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:

7255 - -

### Mounting:

- Blank** Floor mounted bottom pivot  
**J** Jamb mounted bottom pivot

### Pivot Style:

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

### Finishes:

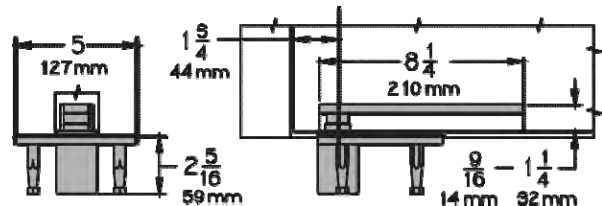
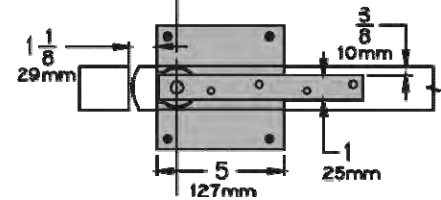
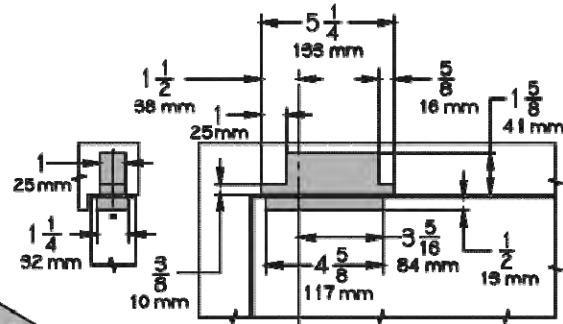
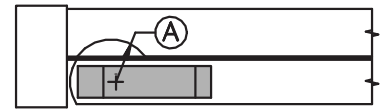
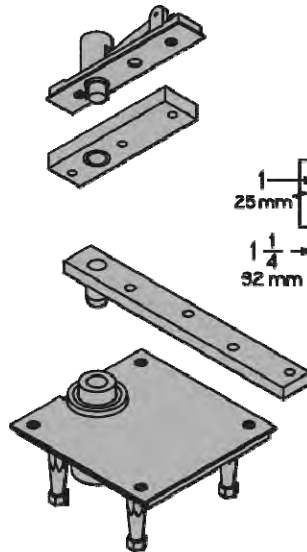
US3, US4, US10, US10B, US26, US26D, SP4, SP10, SP28, SP313, SPBLK

# 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**

Clearance	Depth of Mortise
3/16" (5mm)	1-3/16" (30mm)
3/8" (10mm)	1" (25mm)
1/2" (13mm)	7/8" (22mm)
5/8" (16mm)	3/4" (19mm)
3/4" (19mm)	5/8" (16mm)

## How to Order:

7256 - \_\_\_\_ - \_\_\_\_

### Pivot Style:

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

### Finishes:

US3, US4, US10, US10B, US26, US26D, SP4, SP10, SP28, SP313, SPBLK

# 7259 Center Hung Pivot Set

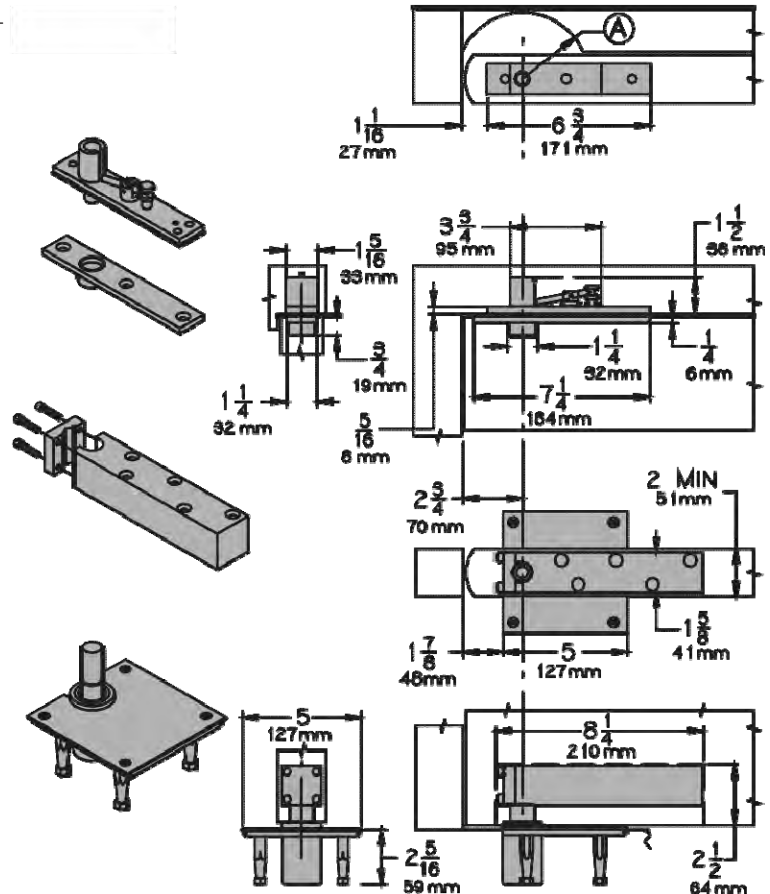


## 7259 Pivot Set

- 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**

Clearance	Depth of Mortise
3/16" (5mm)	1-3/16" (30mm)
3/8" (10mm)	1" (25mm)
1/2" (13mm)	7/8" (22mm)
5/8" (16mm)	3/4" (19mm)
3/4" (19mm)	5/8" (16mm)



## How to Order:

7259 -          -         

### Pivot Style:

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

### Finishes:

US3, US4, US10, US10B, US26, US26D, SP4, SP10, SP28, SP313, SPBLK



## **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)



#### **No. 20-902 (Type G)**

Height Adjustable

Application: For Floor Installation  
Application: For 1'-11 1/2" (38 mm) Deep Bottom Rail

Components: No. 20-741 Door Portion  
:No. 20-742 Floor Portion



#### **No. 20-944 (Type GE)**

Height Adjustable

Application: For Threshold Installation  
Application: For 1'-11 1/2" (38 mm) Deep Bottom Rail

Components: No. 20-741 Door Portion  
ts: No. 20-943 Threshold Portion



#### **No. 20-1155 (Type BE)**

Application: For Threshold Installation  
Application: For 1' (25.4 mm) Deep Bottom Rail

Components: No. 20-1154 Door Portion  
Components: No. 20-943 Threshold Portion

### **END-LOAD APPLICATIONS**

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



#### **No. 20-1570 (Type GW)**

Application: For Floor Installation  
Application: For 1' (25.4 mm) Deep Bottom Rail

Components: No. 20-647 Door Portion  
Components: No. 20-1062 Floor Portion



#### **No. 20-1060 (Type P)**

Application: For Floor Installation  
Application: For 1'-9 1/16" (39.7 mm) Deep Bottom Rail

Components: No. 20-1061 Door Portion  
Components: No. 20-1062 Floor Portion



#### **No. 20-728 (Type AE)**

Application: For Threshold Installation  
Application: For 1' (25.4 mm) Deep Bottom Rail

Components: No. 20-647 Door Portion  
Components: No. 20-607 Threshold Portion



#### **No. 20-1410 (Type EF)**

Application: For Threshold Installation  
Application: For 1'-9 1/8" (39.7 mm) Deep Bottom Rail

Components: No. 20-1061 Door Portion  
Components: No. 20-807 Threshold Portion



#### **No. 20-1680 (Type BV)**

Application: For Combination Floor & Threshold Installation  
Application: For 1' (25.4 mm) Deep Bottom Rail

Components: No. 20-847 Door Portion  
Components: No. 20-1062 Floor Portion  
Components: No. 20-650 Threshold Mounting Pkg.



#### **No. 20-1685 (Type UP)**

Application: For Combination Floor & Threshold Installation  
Application: For 1'-9 1/8" (39.7 mm) Deep Bottom Rail

Components: No. 20-1061 Door Portion  
Components: No. 20-1062 Threshold Portion  
Components: No. 20-650 Threshold Mounting Pkg.



## TOP CENTER-HUNG PIVOTS

- Walking beam type pivot assembly
- Completely concealed



### **No. 20-534**

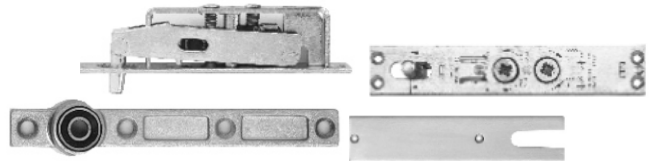
APPLICATION: Aluminum, Wood or Metal Doors and Frames

CAPACITY: Maximum Width = 48" (1219 mm)

Maximum Weight = 260 Lbs (118 Kg)

FINISH: Cover Plate: DBZ 313  
US28 / 628

- Adjustable to obtain top door clearances of 1/8"-3/4"
- Complete sets include pivot. Door arm & finished cover plate



### **No. 20-580**

APPLICATION: Aluminum, Wood or Metal Doors and Frames

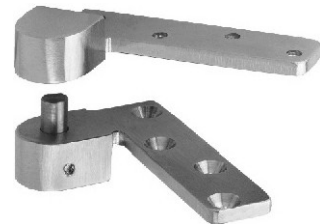
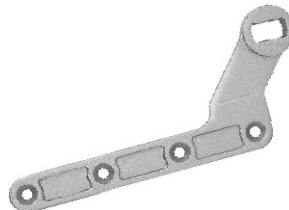
CAPACITY: Maximum Width = 54" (1372 mm)

Maximum Weight = 1000 Lbs (450 Kg)

FEATURES: Lateral door adjustment of 1/2" (12 mm)

FINISH: Cover Plate: DBZ 313  
US3 / 605  
US32 / 629  
US32D / 630

## 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"**

### **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

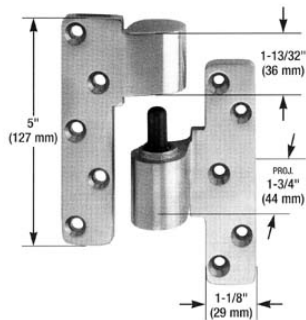
Available for Flush and 1/8" (3 mm) recessed doors.

FINISH: Cover Plate: US3 / 605  
US10B / 613  
US32 / 629  
US32D / 630



### 3/4" OFFSET – INTERMEDIATE PIVOTS

- Matching contemporary design
- Full race ball-bearing and oilite bronze bushing
- 5/8" (16 mm) vertical adjustment
- 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

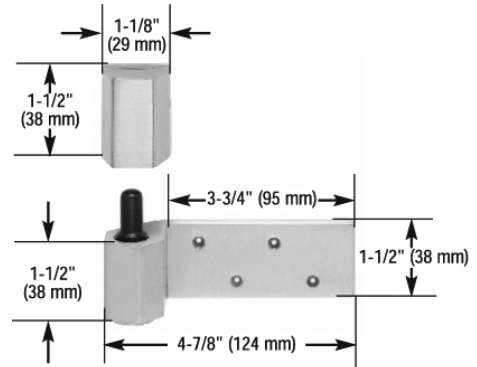
190HD Brass or Bronze or Stainless Steel

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**

### **3/4" OFFSET – PIVOT SETS**

#### **PIVOT COMPONENT LISTING**

<b>USER</b>	<b>SET NO.</b>
U.S. ALUMINUM	J-25 RH
U.S. ALUMINUM	J-25 LH
U.S. ALUMINUM	J-26 RH
U.S. ALUMINUM	J-26 LH
BESAM / KAWNEER	J-27 (OP27)
KAWNEER	J-28 (OP28)
ARCADIA / ARCH ALUMINUM / TUBELITE / VISTAWALL	J-30 RH (OP30)
ARCADIA / ARCH ALUMINUM / TUBELITE / VISTAWALL	J-30 LH (OP30)
ARCADIA / ARCH ALUMINUM / TUBELITE / VISTAWALL	J-31 RH (OP31)
ARCADIA / ARCH ALUMINUM / TUBELITE / VISTAWALL	J-31 LH (OP31)
U.S. ALUMINUM	J-34 RH (OP34)
U.S. ALUMINUM	J-34 LH (OP34)
AMARLITE / ARC ALUMINUM / REBCO	J-40 RH (OP40)
AMARLITE / ARC ALUMINUM / REBCO	J-40 LH (OP40)
EFCO CORP / PITTCO ENGINEERED / PPG	J-41 RH(OP41)
EFCO CORP / PITTCO ENGINEERED / PPG	J-41 LH (OP41)
ATLAS ARCH PRODUCT	J-43 RH
ATLAS ARCH PRODUCT	J-43 LH



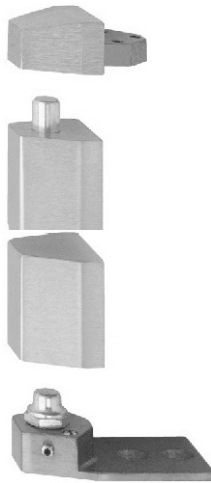


## **3/4" OFFSET – PIVOT SETS**

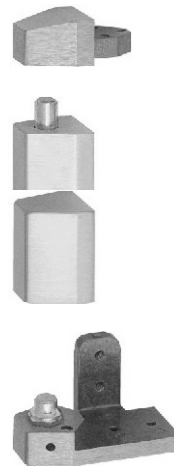
- Suitable for aluminum frames and doors weighing up to 125 lbs. (57 kg)
- Matching contemporary design
- Extruded or Cast Aluminum
- Full race ball-bearing and oilite bronze bushing
- Fully retractable, spring loaded top pin for easy door installation and adjustment
- 1/8" (3 mm) vertical adjustment



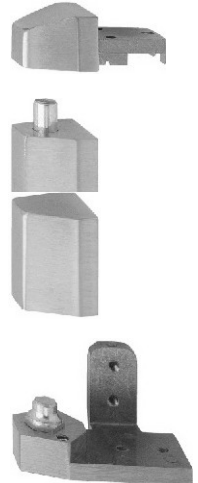
**Set No. J-25**



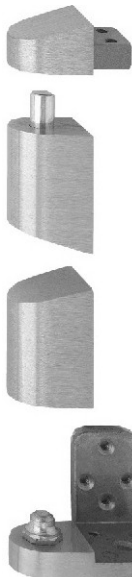
**Set No. J-27 (OP27)  
Set No. J-28 (OP28)**



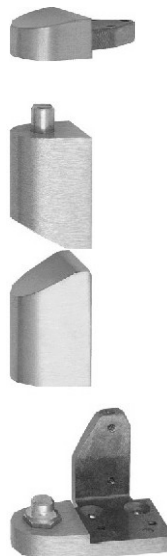
**Set No. J-30 (OP30)  
Set No. J-31 (OP31)**



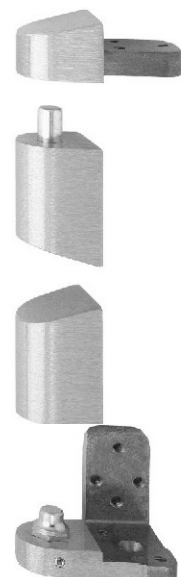
**Set No. J-43**



**Set No. J-34 (OP34)**



**Set No. J-40 (OP40)**

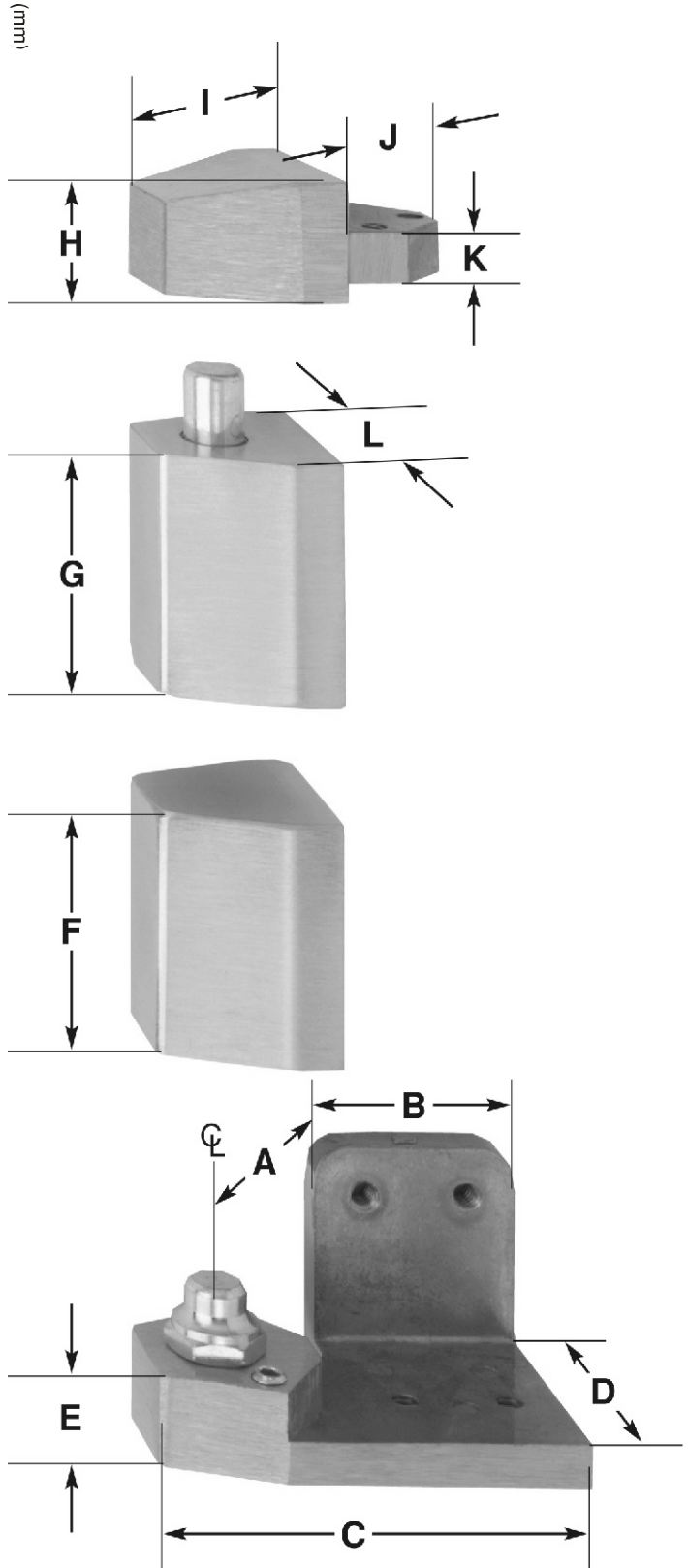


**Set No. 41 (OP41)**



## PIVOTS

### 3/4" OFFSET – PIVOT SETS



Set #	Hand	Application	A	B	C	D	E	F & G	H	I	J	K	L
J-25	R or L	Flush w/frame face	1" (25)	1 1/2" (38)	3" (76)	1 29/32" (48)	1 1/5" (41.7)	1 3/4" (44)	7/8" (22)	1 1/4" (32)	29/32" (23)	3/8" (10)	1 3/8" (35)
J-26	R or L	Recessed 1/8"	1" (25)	1 1/2" (38)	3" (76)	1 29/32" (48)	1 1/5" (41.7)	1 3/4" (44)	7/8" (22)	1 1/4" (32)	29/32" (23)	3/8" (10)	1 3/8" (35)
J-27	NH	Flush w/frame face	NA	NA	3" (76)	1 5/8" (41)	1 1/5" (41.7)	1 3/4" (44)	7/8" (22)	1 1/4" (32)	29/32" (23)	3/8" (10)	1 3/8" (35)
J-28	NH	Recessed 1/8"	NA	NA	3" (76)	1 5/8" (41)	1 1/5" (41.7)	1 3/4" (44)	7/8" (22)	1 1/4" (32)	29/32" (23)	3/8" (10)	1 3/8" (35)
J-30	R or L	Flush w/frame face	1" (25)	7/8" (22)	3" (76)	1 7/8" (48)	1 1/5" (41.7)	1 3/4" (44)	7/8" (22)	1 1/4" (32)	29/32" (23)	3/8" (10)	1 3/8" (35)
J-31	R or L	Recessed 1/8"	1" (25)	7/8" (22)	3" (76)	1 7/8" (48)	1 1/5" (41.7)	1 3/4" (44)	7/8" (22)	1 1/4" (32)	29/32" (23)	3/8" (10)	1 3/8" (35)
J-34	R or L	Flush w/frame face	7/8" (22)	1 3/5" (30)	2 3/4" (70)	1 15/16" (49)	1 1/2" (38)	2 1/2" (63)	15/16" (24)	1 3/8" (35)	3/4" (19)	7/16" (11)	1 3/8" (35)
J-40	R or L	Recessed 1/8"	29/32" (23)	1 3/5" (30)	3" (76)	1 15/16" (49)	1 1/2" (38)	2 1/4" (61)	3/4" (19)	1 1/4" (32)	15/16" (23)	3/8" (10)	1 3/8" (35)
J-41	R or L	Recessed 3/32"	7/8" (22)	1 3/5" (30)	2 3/4" (70)	1 15/16" (49)	1 1/2" (38)	2 1/2" (63)	1 1/8" (29)	1 1/4" (32)	15/16" (23)	7/16" (11)	1 3/8" (35)
J-43	R or L	Flush w/frame face	1" (25)	7/8" (22)	3" (76)	1 7/8" (48)	1 1/5" (41.7)	1 3/4" (44)	1" (25)	1 1/2" (38)	15/16" (23)	3/8" (10)	1 3/8" (35)



## 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

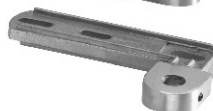


678 Floor Portion  
w/Steel Pin

#### **670M - Center-Hung**



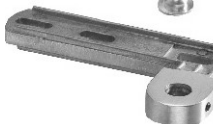
691 Top Header Portion  
w/nylon bushing



684 Offset Arm



685 Pivot Pin



684 Offset Arm



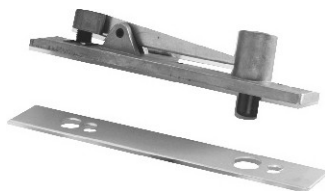
686 Bearing Holder  
w/Ball Bearing Race



678 Floor Portion  
w/Steel Pin

#### **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**



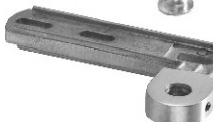
691 Top Header Portion  
w/nylon bushing



694 Offset Arm



685 Pivot Pin



694 Offset Arm



686 Bearing Holder  
w/Ball Bearing Race







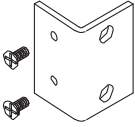
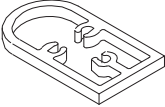
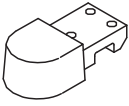
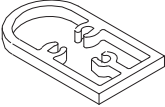

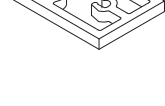

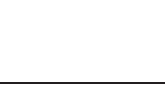

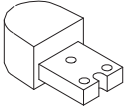

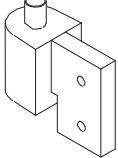
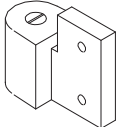
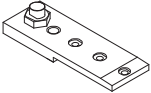


678 Floor Portion  
w/Steel Pin

#### **690 - Offset (Non-handed)**

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

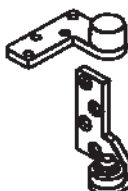
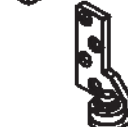
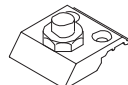
# OFFSET PIVOTS

	<b>TOP PIVOT Frame Portion</b> Price includes: Top pivot frame portion and screws	050321		<b>R.H. BOTTOM PIVOT Frame Portion for use with Threshold</b> Price includes: Bottom frame portion and screws	050324
	<b>TOP PIVOT Door Portion</b> Price includes: Top pivot door portion, reinforcing plate, and screws	050320		<b>L.H. BOTTOM PIVOT Frame Portion for use with Threshold</b> Price includes: Bottom frame portion and screws	050325
	<b>TOP OFFSET PIVOT PACKAGE</b> Price includes: Top pivot door and frame portion, reinforcing plate, and screws	050322		<b>TOP PIVOT Frame Portion for S/A Offset Arm</b> Price includes: Top pivot frame portion <i>*Use with pre 1998 doors</i>	041927
	<b>TOP DOOR PIVOT RETRO FIT PACKAGE</b> Price includes: Reinforcing plate, attachment screws, and installation instructions <i>*Use with 050320, or 050322 for pre 1989 doors</i>	050319		<b>0.188" THICK BOTTOM PIVOT SHIM</b> Price includes: Shim	047602
	<b>MODIFIED TOP PIVOT Frame Portion for Trifab® VG 451T Frame</b> Price includes: Top pivot frame portion and screws	452181		<b>0.250" THICK BOTTOM PIVOT SHIM</b> Price includes: Shim	047603
	<b>BOTTOM PIVOT Door Portion</b> Price includes: Bottom pivot door portion, reinforcing plate, and screws	050323		<b>0.312" THICK BOTTOM PIVOT SHIM</b> Price includes: Shim	047604
	<b>R.H. BOTTOM PIVOT Door and Frame Portion for use with threshold</b> Price includes: Bottom pivot door & frame portion, reinforcing plate, and screws	050326		<b>0.500" THICK BOTTOM PIVOT SHIM</b> Price includes: Shim	047605
	<b>L.H. BOTTOM PIVOT Door and frame portion for use with threshold</b> Price includes: Bottom pivot door & frame portion, reinforcing plate, and screws	050327		<b>TOP PIVOT Frame Portion for Tuffline® Door</b> Price includes: Top pivot frame portion	118400
	<b>BOTTOM PIVOT Frame Portion for use without threshold</b> Price includes: Bottom pivot frame portion, screws, and anchors	035506		<b>TOP PIVOT Door Portion for Tuffline® Door</b> Price includes: Top pivot door portion	118401
				<b>BOTTOM PIVOT Door Portion for Tuffline® Door</b> Price includes: Bottom pivot door portion	118409
				<b>BOTTOM PIVOT Frame Portion for Tuffline® Door</b> Price includes: Bottom pivot frame portion	118411

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.

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

## OFFSET PIVOTS

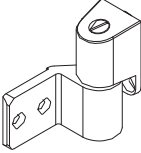
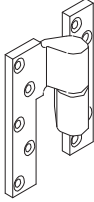


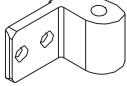



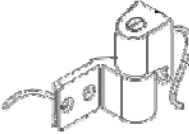
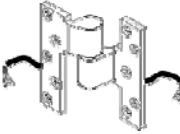



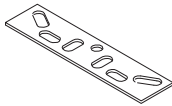



	<b>TOP &amp; BOTTOM PIVOT SET (L.H.) for Entara® Door</b> <i>Price includes: Top door and frame portion, bottom door and frame portion, and screws</i>	<b>105164</b>		
	<b>TOP &amp; BOTTOM PIVOT SET (R.H.) for Entara® Door</b> <i>Price includes: Top door and frame portion, bottom door and frame portion, and screws</i>	<b>105165</b>		
	<b>BOTTOM PIVOT</b> <i>Threshold fastened Price includes: Bottom pivot and screws (Use with T-Hold on page 42)</i>	<b>450526</b>		



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.

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


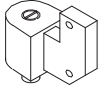
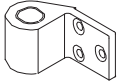


## INTERMEDIATE OFFSET PIVOTS

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

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.

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

## INTERMEDIATE OFFSET PIVOTS

	<b>FRAME REINFORCING (.125 WALL) for EL Optional Intermediate Pivot</b> <i>Price includes:</i> Frame reinforcement	047142EL		
	<b>INTERMEDIATE PIVOT Door Portion for Tuffline® Door</b> <i>Price includes:</i> Door portion pivot	118405		
	<b>INTERMEDIATE PIVOT Frame Portion for Tuffline® Door</b> <i>Price includes:</i> Frame portion intermediate pivot	118403		
	<b>FASTENER for Offset Pivots and Pivot Reinforcing</b> <i>Price includes:</i> #12-24 x 9/16" with Nylock patch	028848		
	<b>INTERMEDIATE OFFSET PIVOT SET (L.H.) for Entara® Door</b> <i>Price includes:</i> Intermediate pivot and screws	105162		
	<b>INTERMEDIATE OFFSET PIVOT SET (R.H.) for Entara® Door</b> <i>Price includes:</i> Intermediate pivot and screws	105163		



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

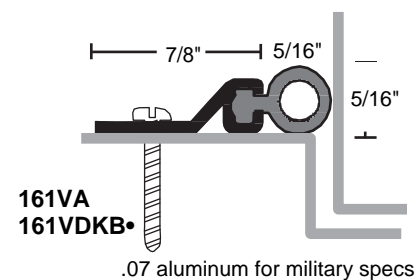
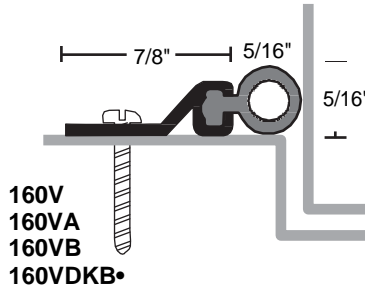
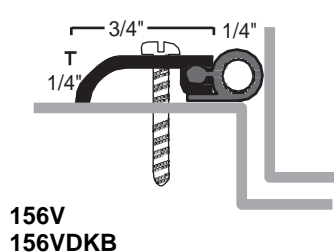
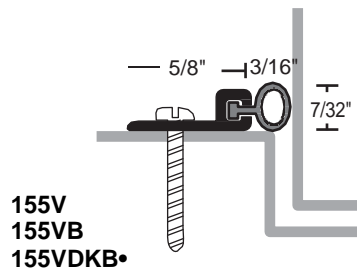
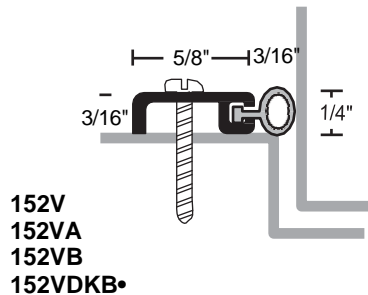
- Thermoplastic polymer: Polyvinyl Chloride (PVC) formulated with an environmentally friendly Bio-based plasticizer
- Economical
- Flame resistant
- Moisture resistant
- Temperature range 0°F to 140°F
- Oxidative degradation from age and exposure to Cold, Heat and UV causes hardening, loss of memory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

All vinyl seals this section

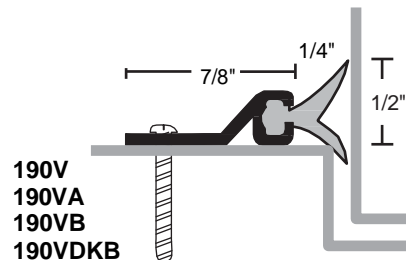
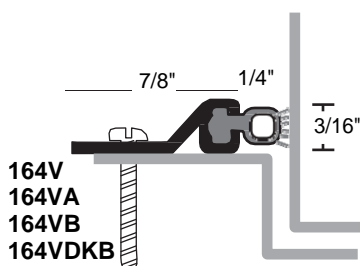


**A** - clear anodized  
**B** - gold  
**DKB** - dark bronze  
 no suffix - mill aluminum  
 vinyl is gray  
 exception: •vinyl is black

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

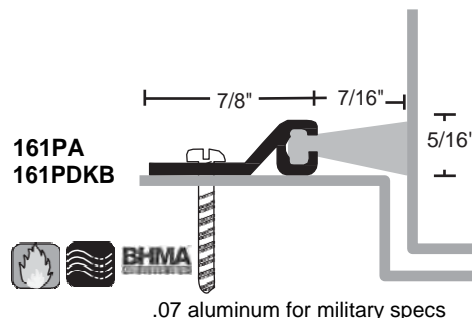
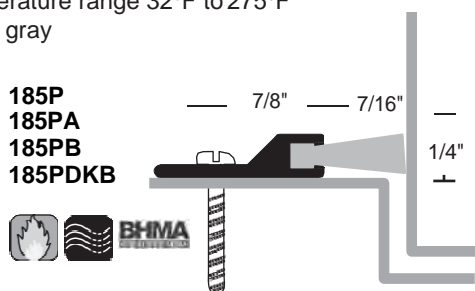


.07 aluminum for military specs



## Polypropylene Pile Seals

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



.07 aluminum for military specs



## 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/BHMAA156.22 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

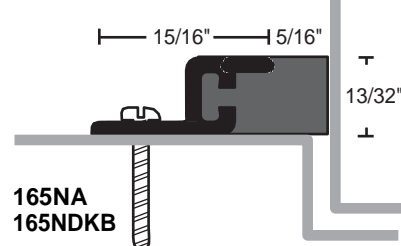
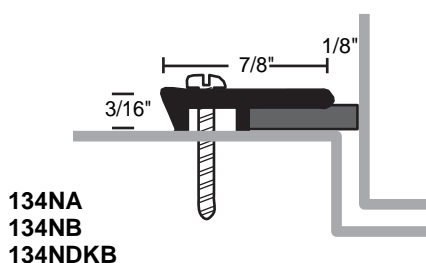
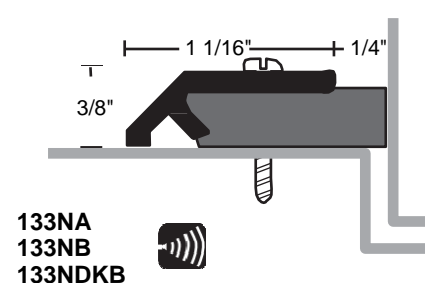
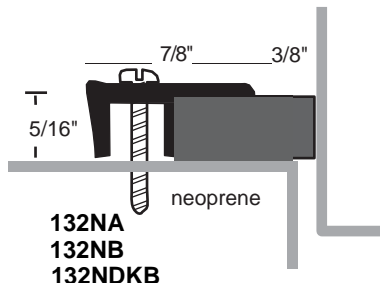
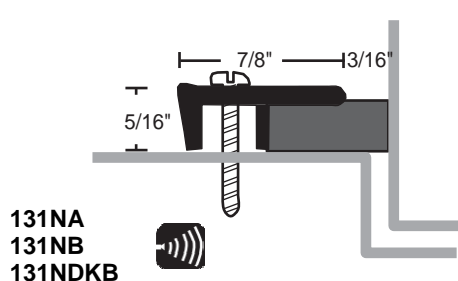
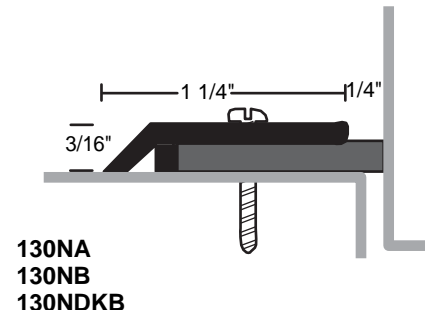
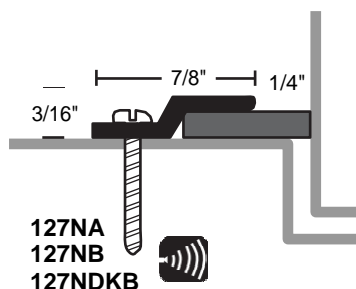
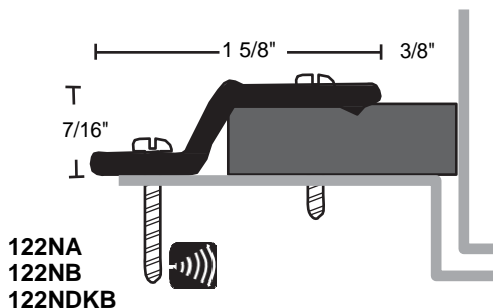
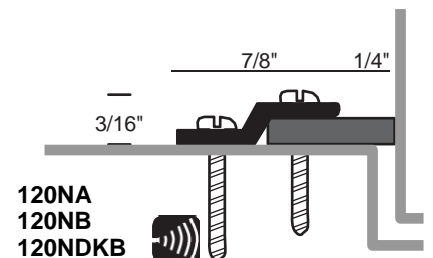
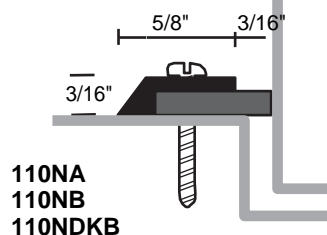
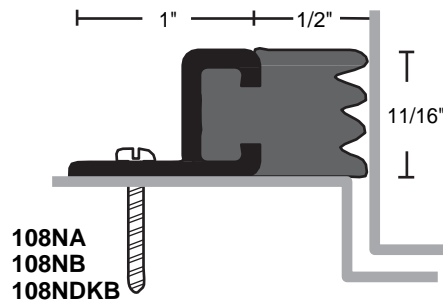
All products this page



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



### Closed Cell Sponge





## Silicone Seals

All products this page



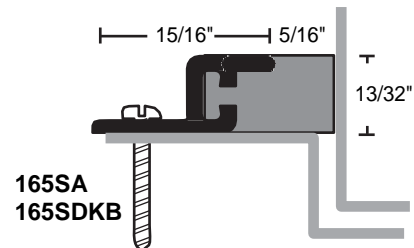
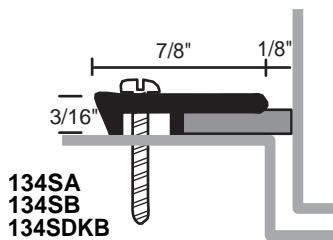
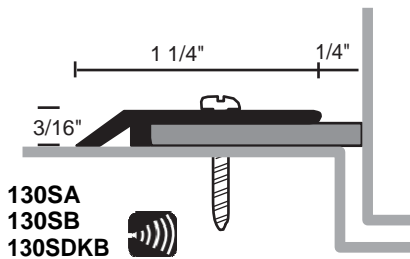
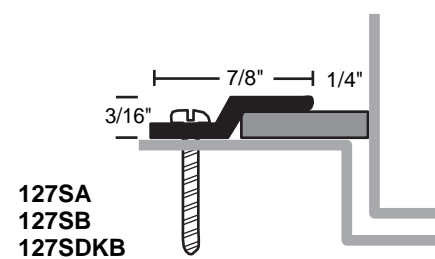
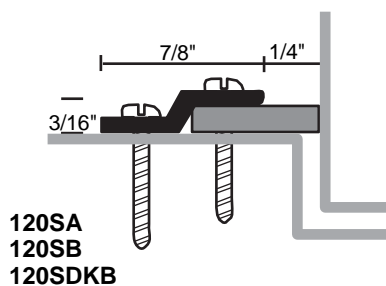
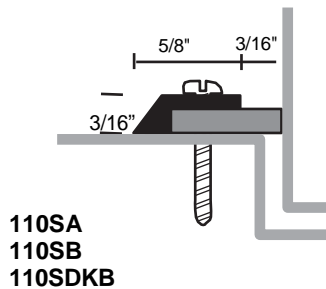
### Properties:

- 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

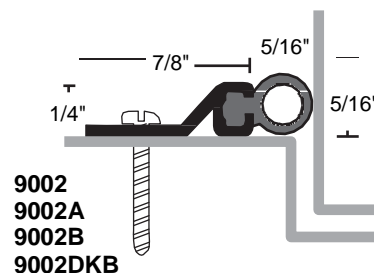
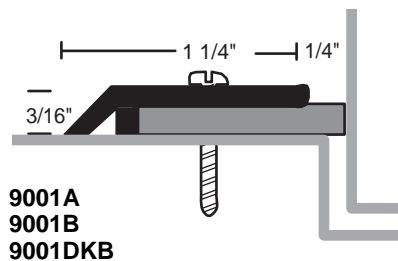


### Closed Cell Sponge



## Silicone Plus

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





## 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

All silicone seals this section



**A** - clear anodized

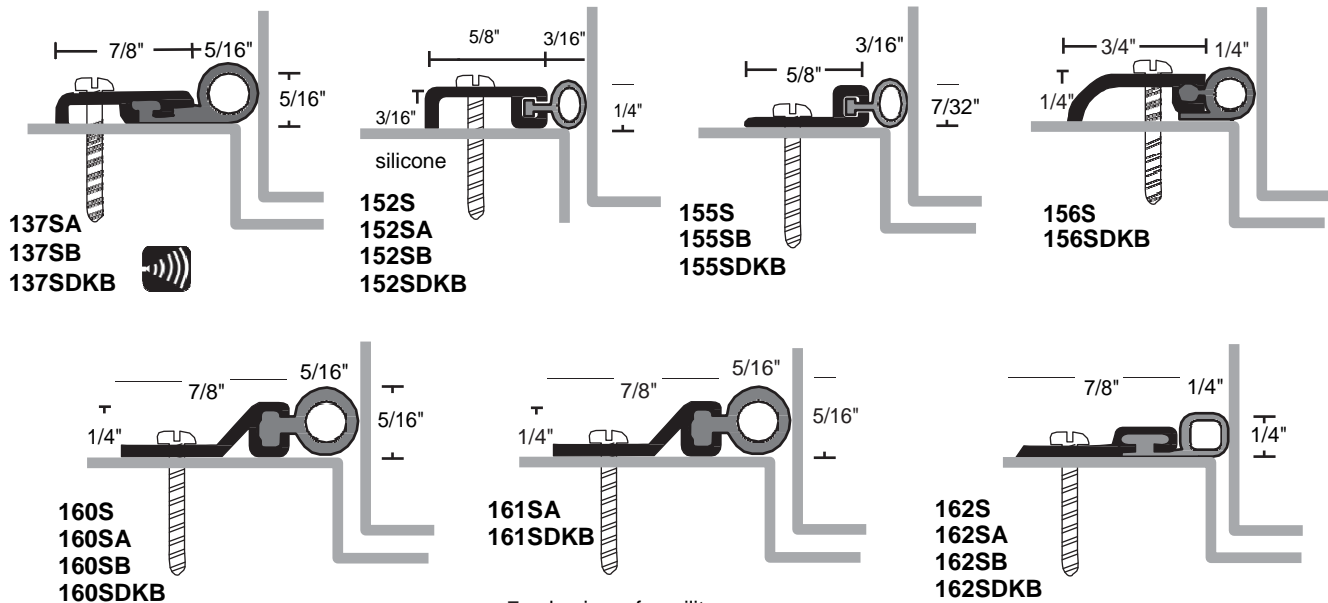
**B** - gold

**DKB** - dark bronze

**no suffix** - mill aluminum dense  
silicone is black exception: 137  
silicone is gray



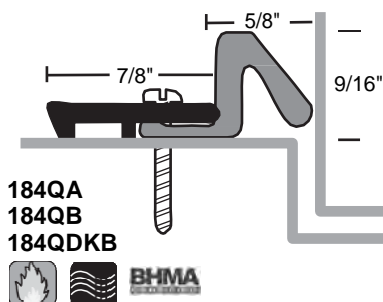
### Dense Bulbs



.7 aluminum for military specs

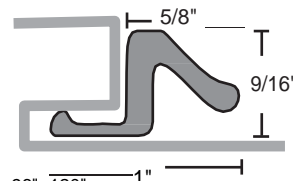
## Q-Lon® Foam Seals

Brown polyethylene liner with foam core



### Kerf Application

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



### 284Q

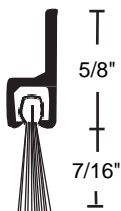
Stock lengths: 36", 48", 96", 120"



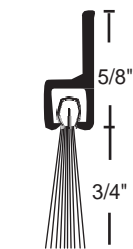
## Nylon Brush Seals



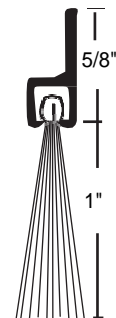
#6 x 3/4" Stainless Steel Sheet  
Metal Screws furnished. Screw  
holes slotted for adjustment.



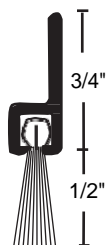
**A605A  
A605B  
A605DKB**  
 **BHMA**  
CERTIFIED



**OV634A  
OV634B  
OV634DKB**



**OV633A  
OV633B  
OV633DKB**



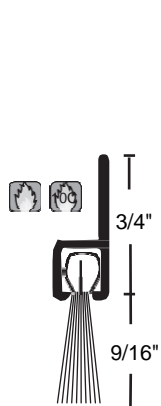
**B606A  
B606B  
B606DKB**



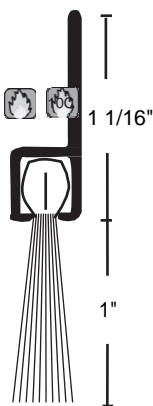
**600  
600A  
600B  
600DKB**



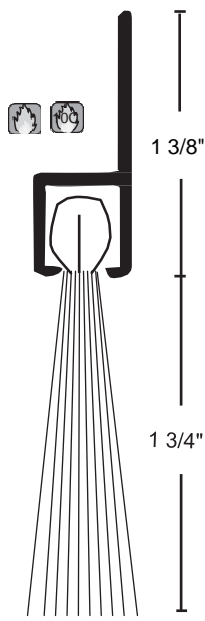
**601  
601A  
601B  
601DKB**



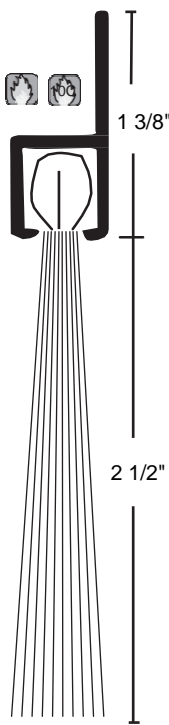
**C607A  
C607B  
C607DKB**



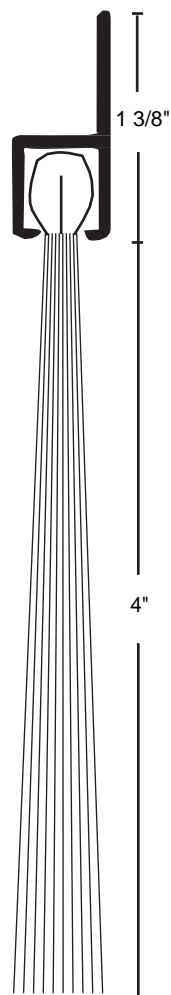
**D608A  
D608B  
D608DKB**



**G610A  
G610B  
G610DKB**



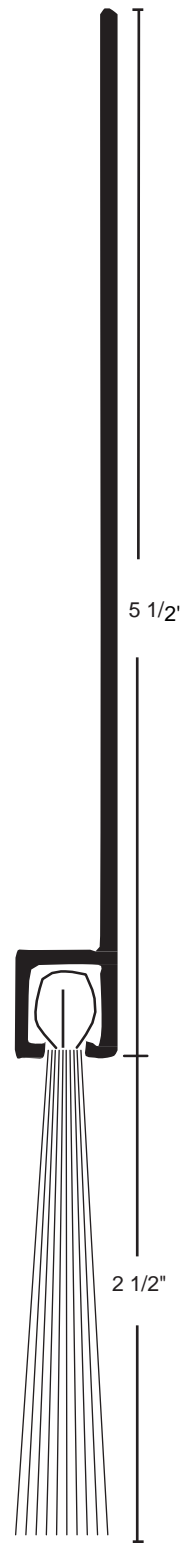
**H612A  
H612B  
H612DKB**



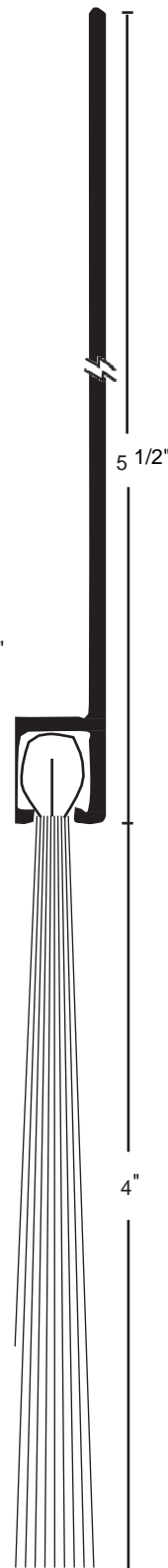
**I-615A  
I-615B  
I-615DKB**



**G611A  
G611DKB**

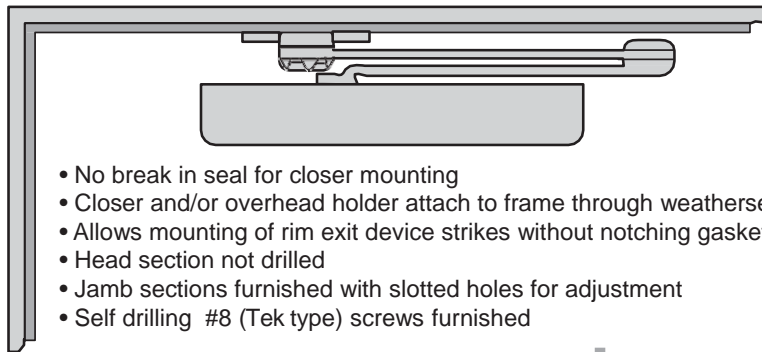


**H614A  
H614DKB**



**I-616A  
I-616DKB**

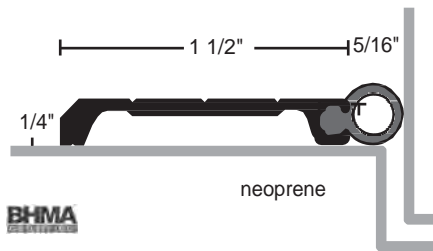
## Perimeter Seals Compatible with Parallel Arm Closers



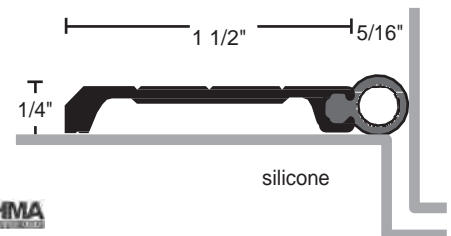
- No break in seal for closer mounting
- Closer and/or overhead holder attach to frame through weatherseal section. Install seal first
- Allows mounting of rim exit device strikes without notching gasketing
- Head section not drilled
- Jamb sections furnished with slotted holes for adjustment
- Self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

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

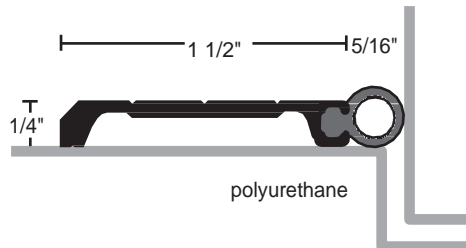
**700EN**  
**700ENDKB**



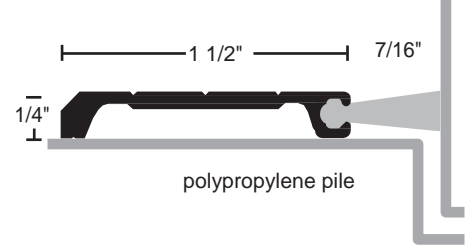
**700ES**  
**700ESDKB**



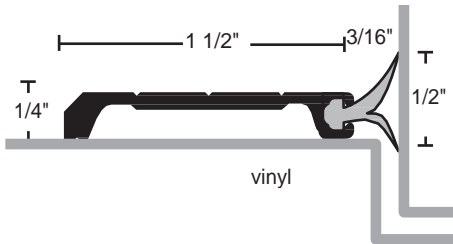
**700EU**  
**700EUDKB**



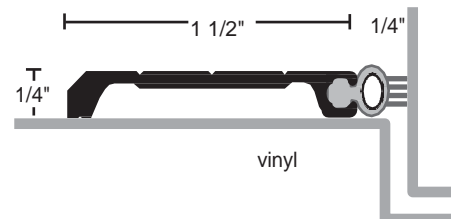
**701EP**  
**701EPDKB**



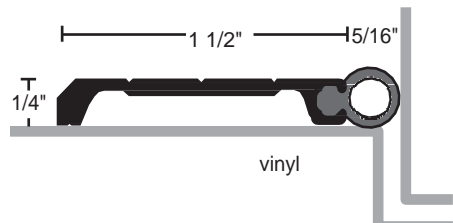
**703EV**  
**703EVDKB**



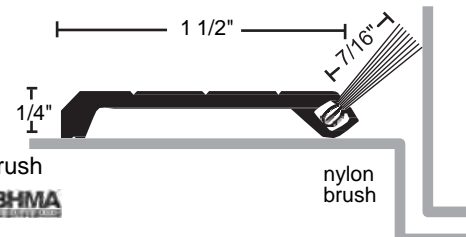
**704EV**  
**704EVDKB**



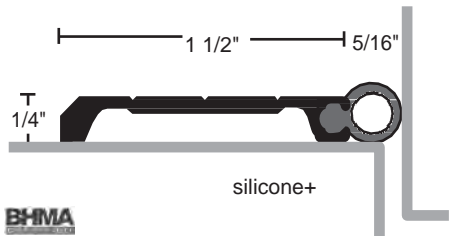
**705EV**  
**705EVDKB**



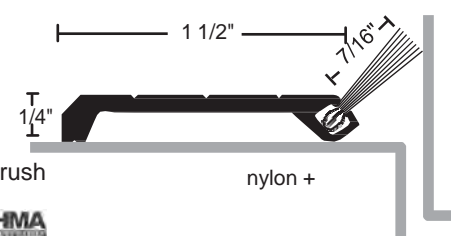
**706E** - gray brush  
**706EDKB** - black brush



**9700E**  
**9700EDKB**

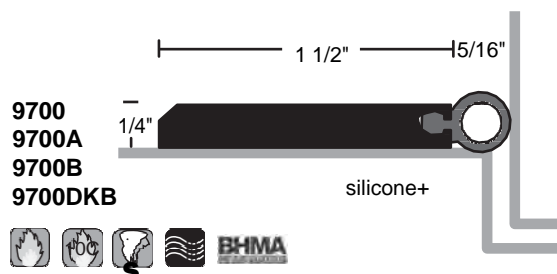
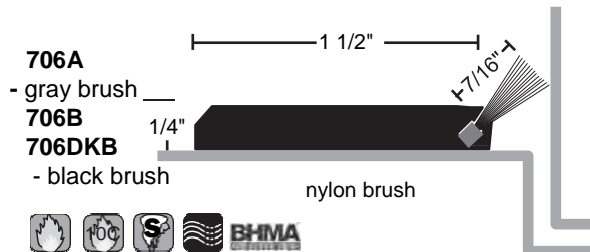
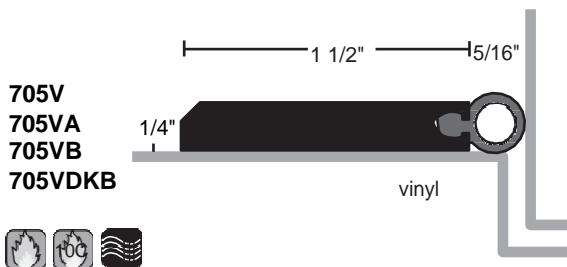
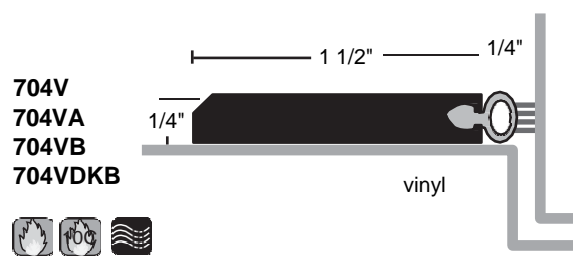
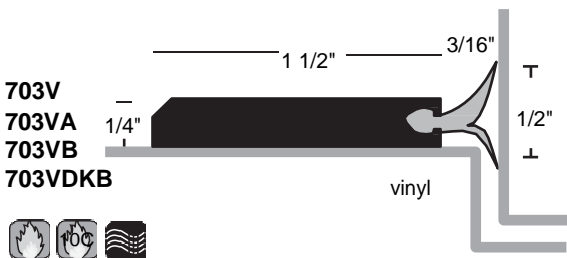
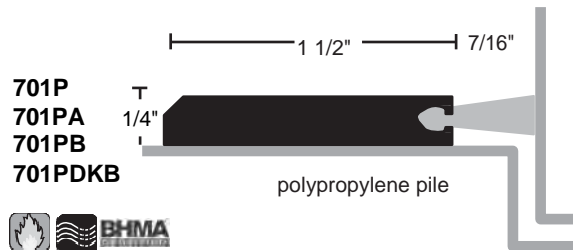
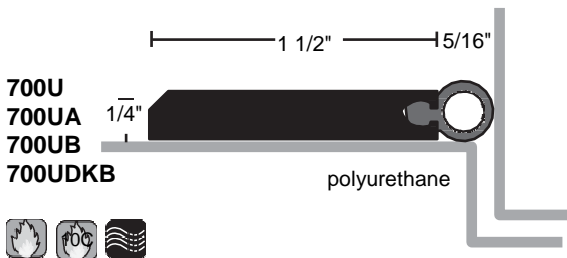
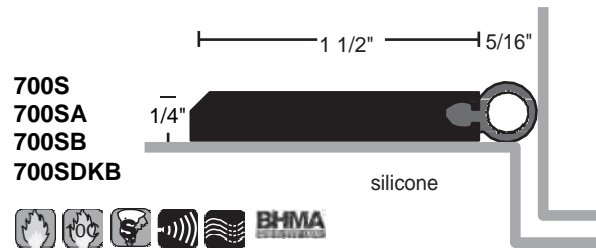
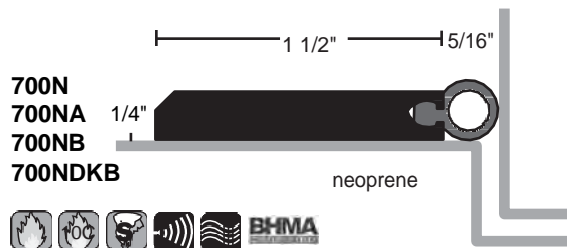


**9706E** - gray brush  
**9706EDKB** - black brush



## Perimeter Seals Compatible with Parallel Arm Closers

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

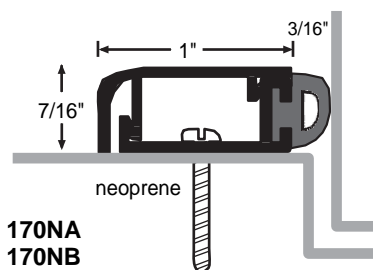
vinyl & pile are gray

\*vinyl is black

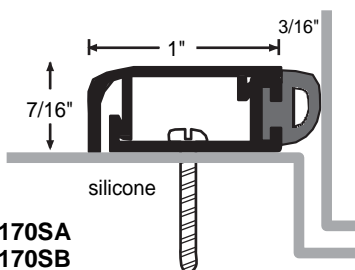
neoprene, NGP-TPV & silicone are black

nylon brush is gray with clear anodized

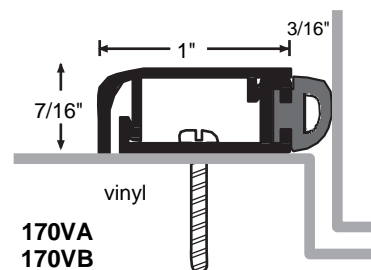
metal; black with gold and DKB metal



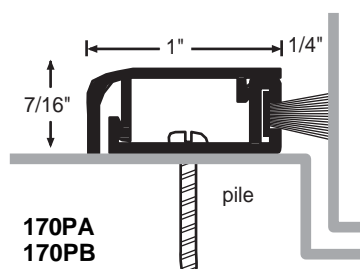
**170NA**  
**170NB**  
**170NDKB**



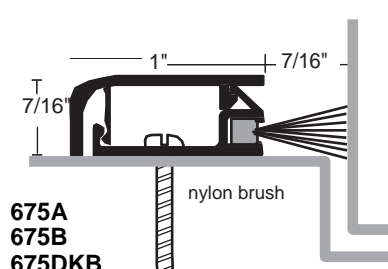
**170SA**  
**170SB**  
**170SDKB**



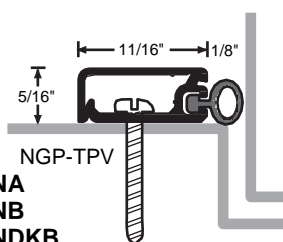
**170VA**  
**170VB**  
**170VDKB\***



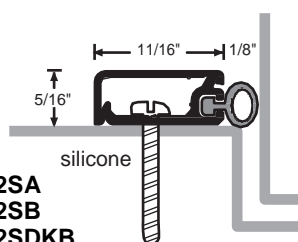
**170PA**  
**170PB**  
**170PDKB**



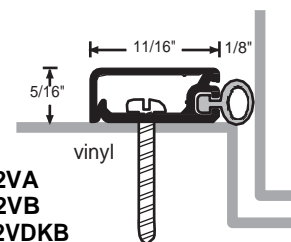
**675A**  
**675B**  
**675DKB**



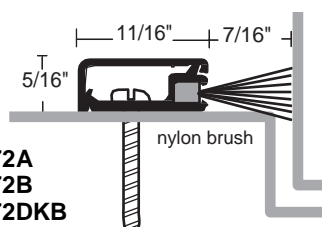
**172NA**  
**172NB**  
**172NDKB**



**172SA**  
**172SB**  
**172SDKB**



**172VA**  
**172VB**  
**172VDKB**



**672A**  
**672B**  
**672DKB**





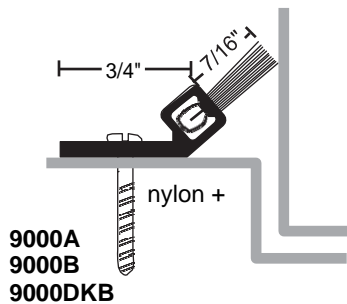
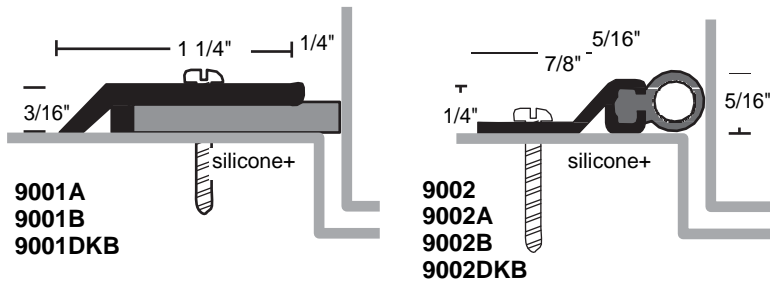
## Allseal® Gasketing

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



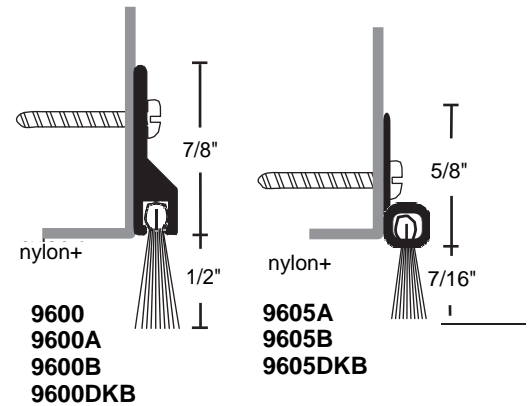
### Perimeter Seals



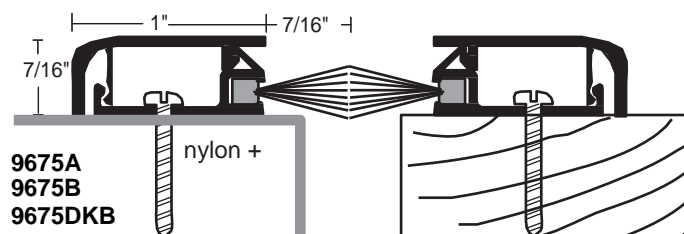
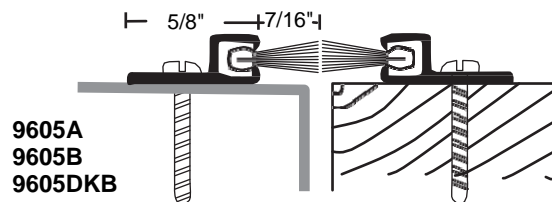
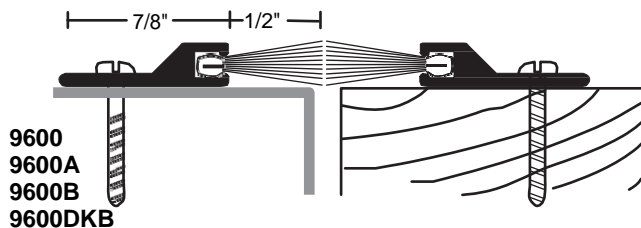
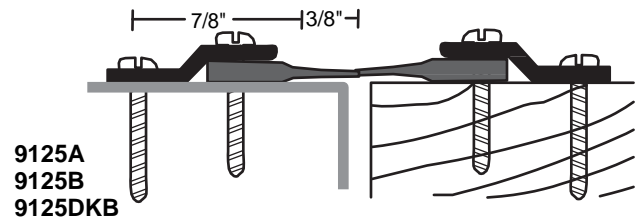
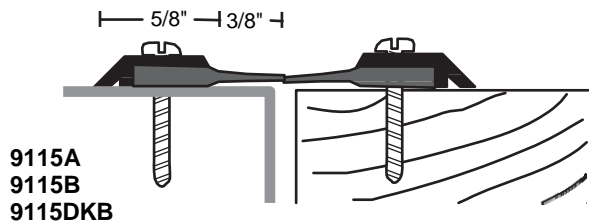
Metal	nylon+	silicone +
A - clear anodized	gray	tan
B - gold	black	tan
DKB - dark bronze	black	tan
no suffix - mill aluminum	gray	tan

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

### Perimeter Seals or Sweeps



### Astragal Seals





## 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

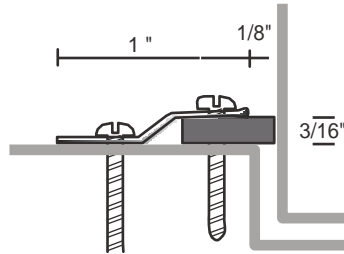
All perimeter seals this section



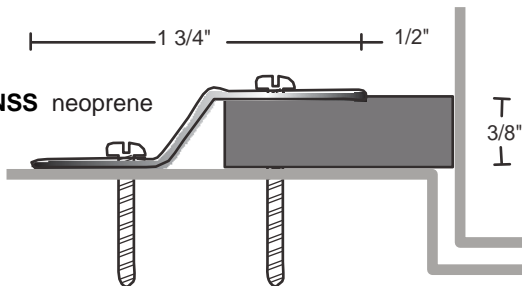
(Exception: 129USS not Smoke rated)

### Perimeter Seals

**120NSS** neoprene  
**120SSS** silicone

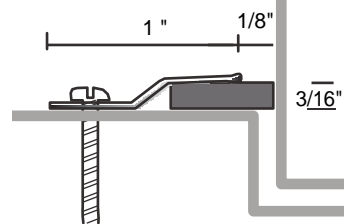


**122NSS** neoprene

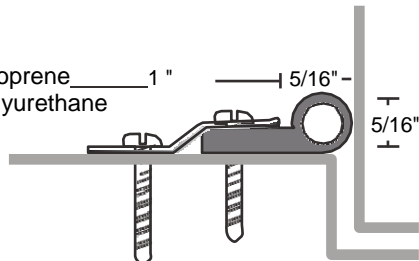


#6 X 3/4" and #6 x 1" stainless steel SMS furnished

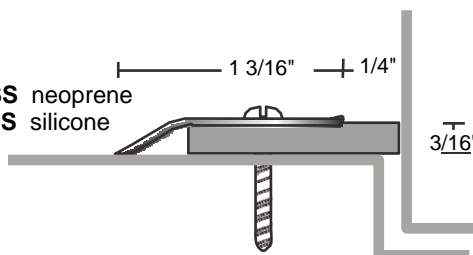
**127NSS** neoprene  
**127SSS** silicone



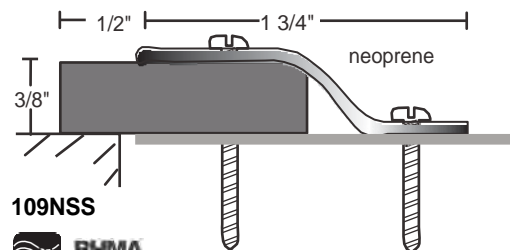
**129NSS** neoprene  
**129USS** polyurethane



**130NSS** neoprene  
**130SSS** silicone



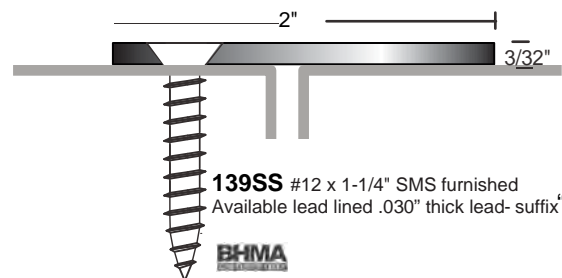
### Astragal Seals



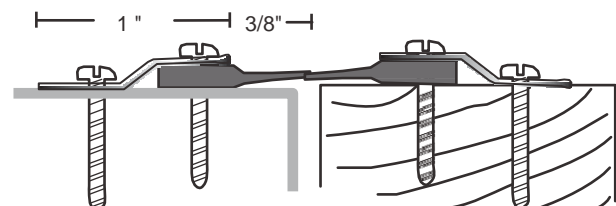
**109NSS**



#6 X 3/4" and #6 x 1" stainless steel SMS furnished



**139SS** #12 x 1-1/4" SMS furnished  
Available lead lined .030" thick lead-suffix "LD"



**125NSS** epdm  
**9125SS** silicone+



## Stainless Steel

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

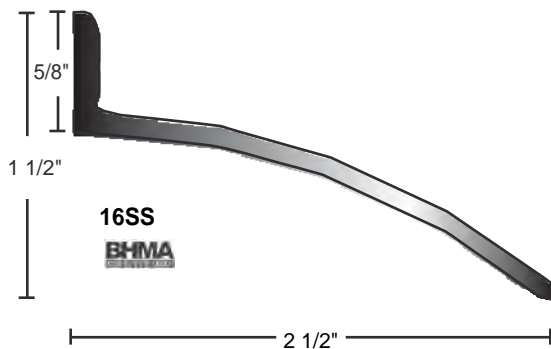
#6 X 3/4" stainless steel SMS furnished  
Screw holes slotted for adjustment

All automatic door bottoms this section

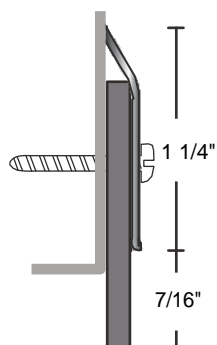


**BHMA**  
2015 A115.1

### Rain Drip Guard



### Door Sweep



**200NSS** neoprene

**BHMA**

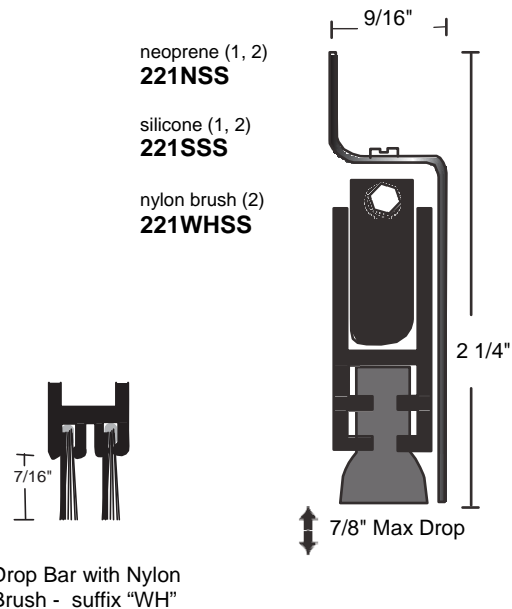
**200USS** polyurethane

**200SSS** silicone

**BHMA**



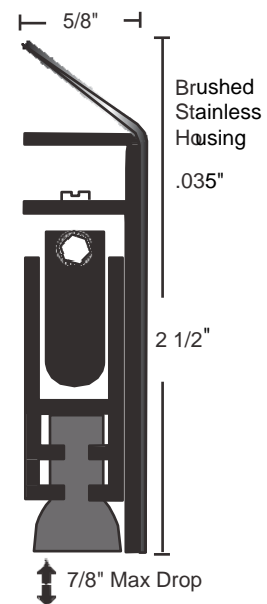
### Automatic Door Bottom



neoprene (1, 2)  
**229NSS**

silicone (1, 2)  
**229SSS**

nylon brush (2)  
**229WHSS**



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

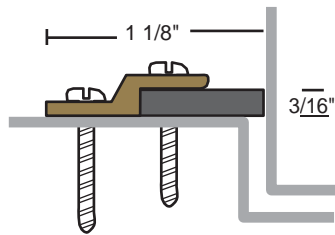
& EPDM are gray, silicone+ is tan

#6 x 3/4" brass plated SMS furnished

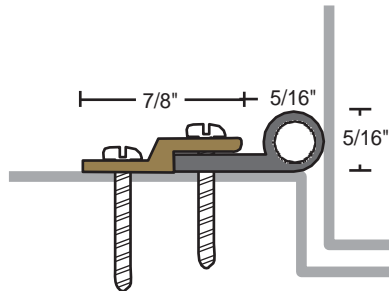
screw holes slotted for adjustment

### Perimeter Seals

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



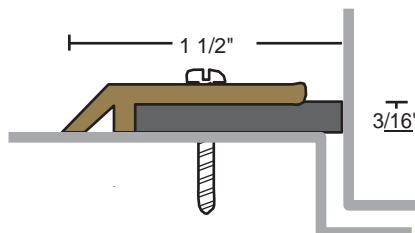
**129NBR** neoprene



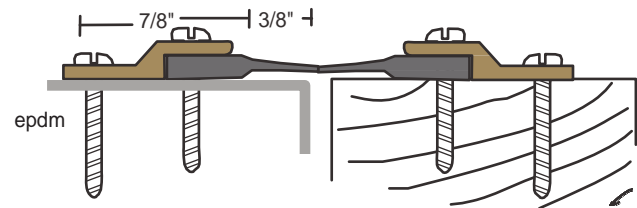
**129UBR** polyurethane



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



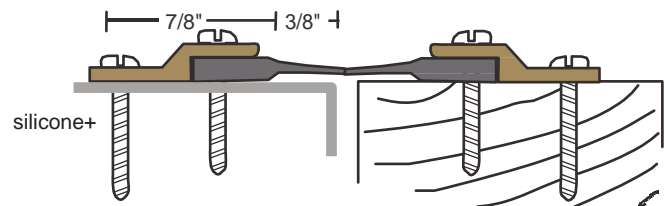
### Astragal Seals



**125NBR**



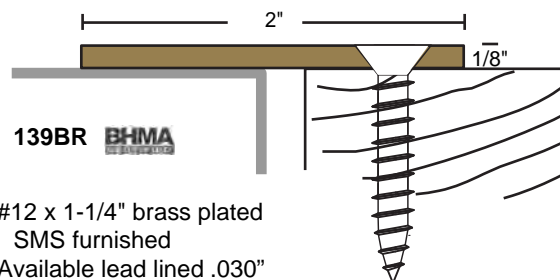
order as set to receive two pieces



**9125BR**



order as set to receive two pieces



**139BR**

#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

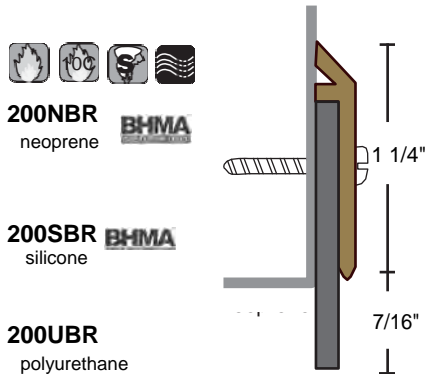
neoprene, polyurethane & nylon brush are black

silicone is gray

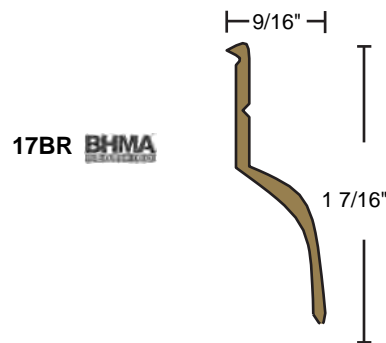
#6 x 3/4" brass plated SMS furnished

screw holes slotted for adjustment

### Door Sweep

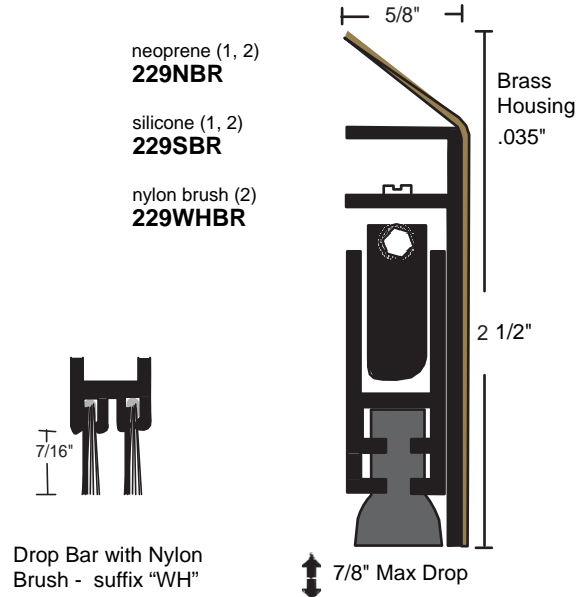
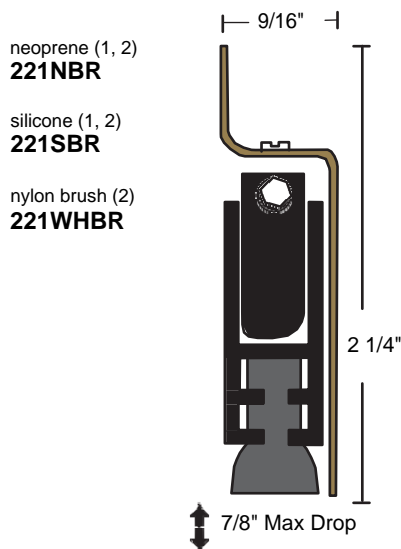


### Rain Drip Guard



## Automatic Door Bottoms

All automatic door bottoms this section



1. Lead insert available for radiation shield - specify "lead-lined"

2. Door Bottom is handed. Right hand supplied unless specified. Field reversible.



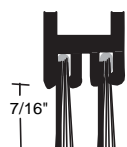
All products this page

## 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).
- End caps furnished standard. Models 220, 221, 229, 310 require door handing, RH supplied standard.



silicone is gray  
neoprene is black  
brush is gray with mill finish  
and stainless steel; black with  
gold, DKB and brass

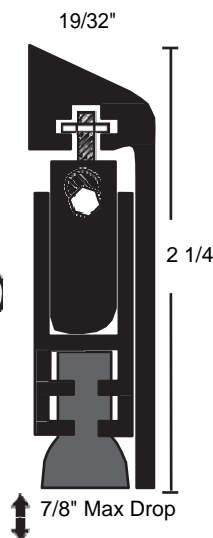


Drop Bar with Nylon  
Brush - suffix "WH"

neoprene  
(1, 2)  
**220NA**  
**220NB**  
**220NDKB**

silicone  
(1, 2)  
**220SA**  
**220SB**  
**220SDKB**

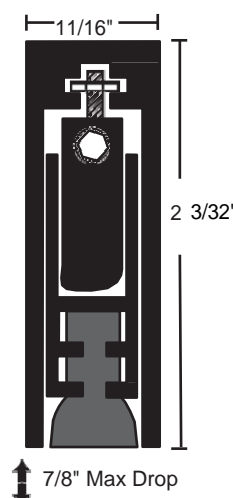
nylon brush (2)  
**220WHA**  
**220WHB**  
**220WHDKB**



neoprene  
(1)  
**222NA**  
**222NB**  
**222NDKB**

silicone  
(1)  
**222SA**  
**222SB**  
**222SDKB**

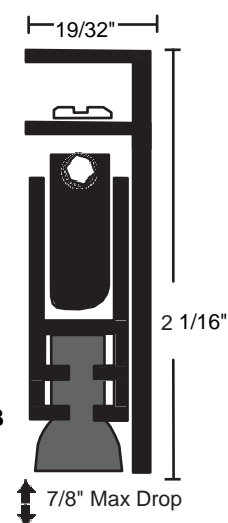
nylon brush  
**222WHA**  
**222WHB**  
**222WHDKB**



neoprene  
(1, 2)  
**310NA**  
**310NB**  
**310NDKB**

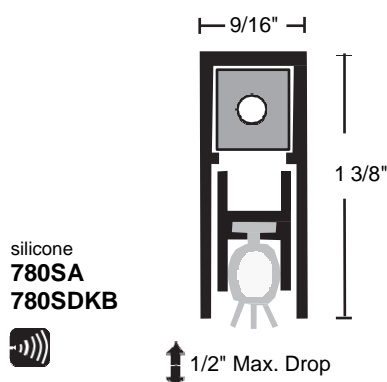
silicone  
(1, 2)  
**310SA**  
**310SB**  
**310SDKB**

nylon brush (2)  
**310WHA**  
**310WHB**  
**310WHDKB**



### Slimline

Endurance Tested to 5 Million Cycles



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.

### Brass and Stainless Steel

Brass  
neoprene (1, 2)  
**221NBR**

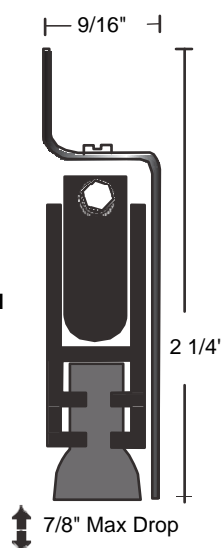
silicone (1, 2)  
**221SBR**

nylon brush (2)  
**221WHBR**

Stainless Steel  
neoprene (1, 2)  
**221NSS**

silicone (1, 2)  
**221SSS**

nylon brush (2)  
**221WHSS**



Brass  
neoprene (1, 2)  
**229NBR**

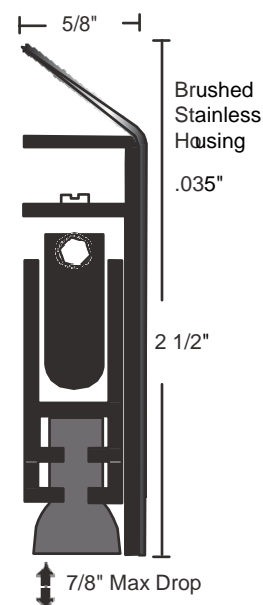
silicone (1, 2)  
**229SBR**

nylon brush (2)  
**229WHBR**

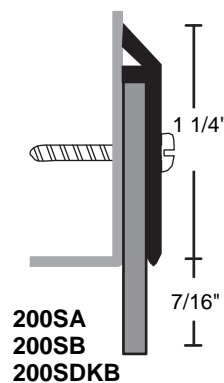
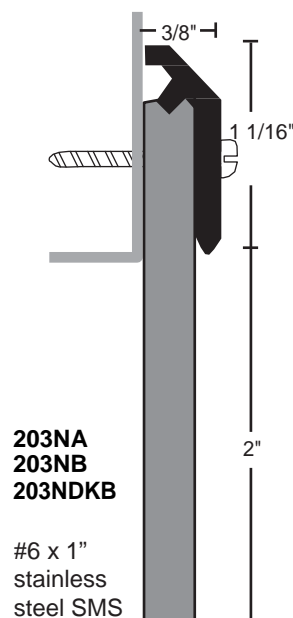
Stainless Steel  
neoprene (1, 2)  
**229NSS**

silicone (1, 2)  
**229SSS**

nylon brush (2)  
**229WHSS**



neoprene is black

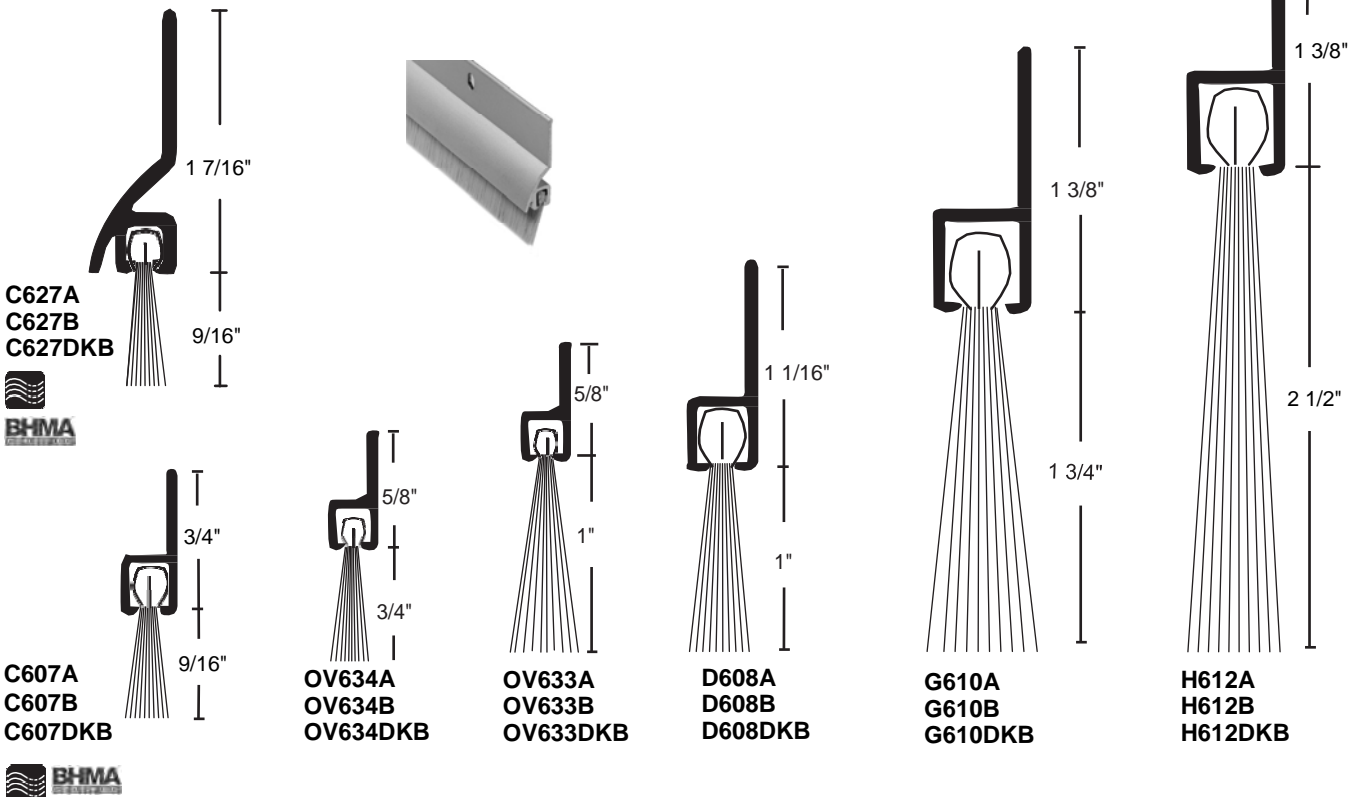
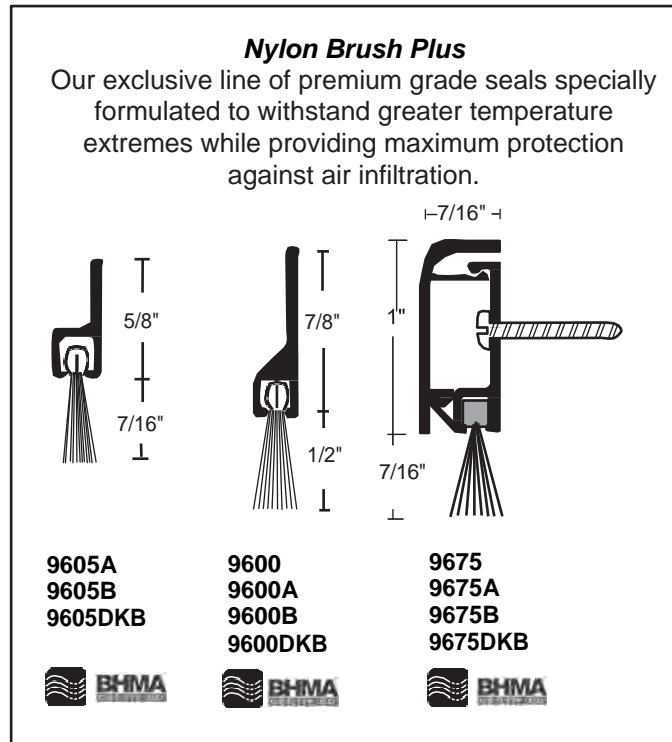
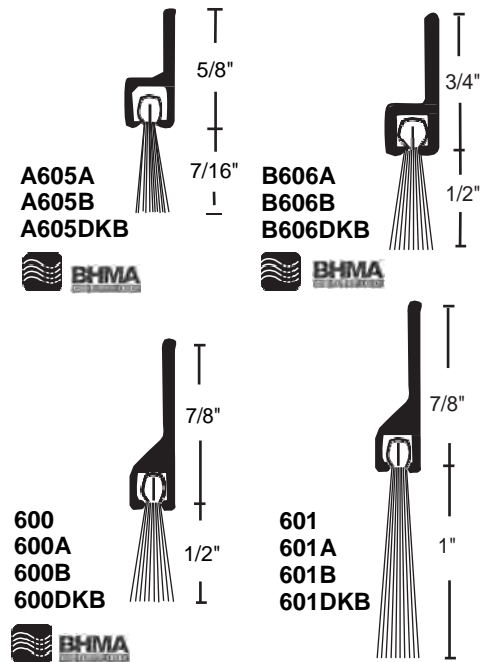


## Nylon Brush Sweeps

#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

All products this page

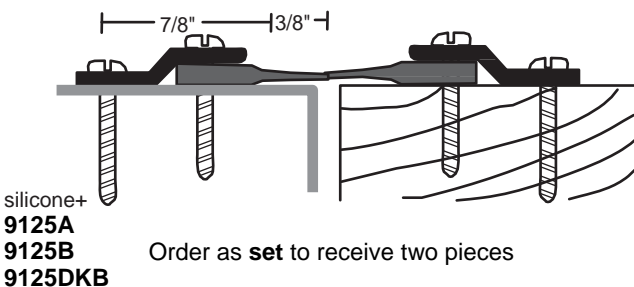
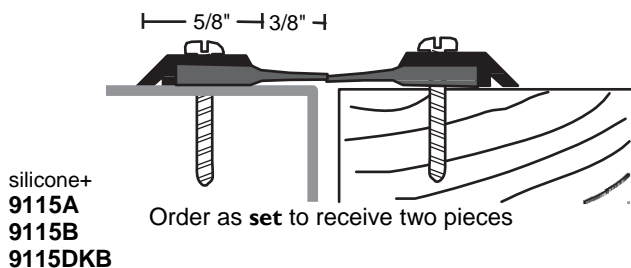
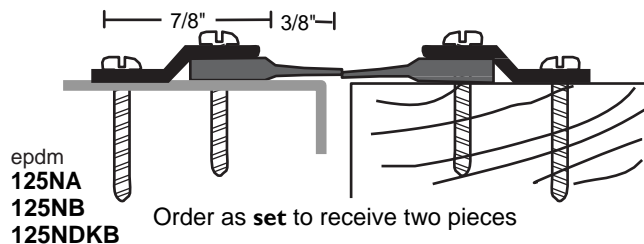
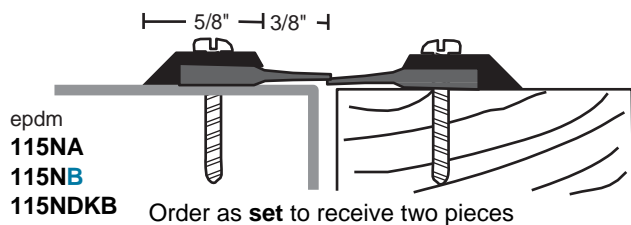


# Smoke-Rated Astragal Seals

Fire-rated Astragal Seals cannot replace any astragal required on the door by the door manufacturer to maintain its fire label. IBC, NFPA 80, NFPA105, 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.

Metal	epdm	silicone	nylon+
A - clear anodized	gray	tan	gray
B - gold	black	tan	black
DKB - dark bronze	black	tan	black
no suffix - mill aluminum	gray	tan	gray

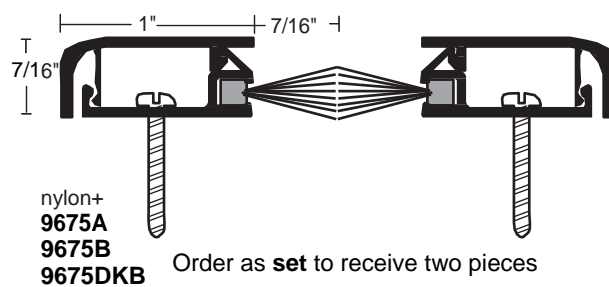
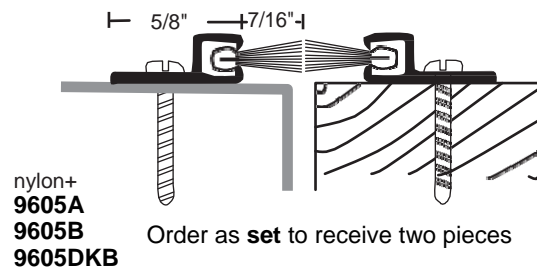
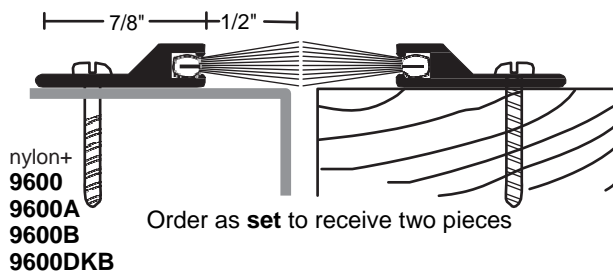
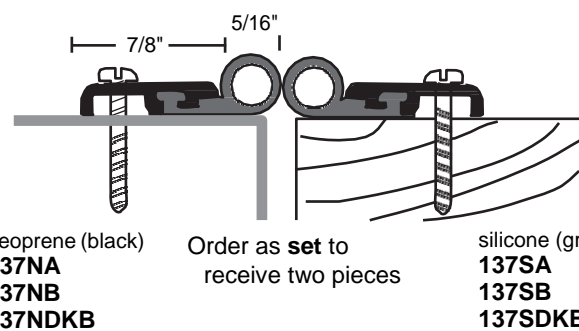
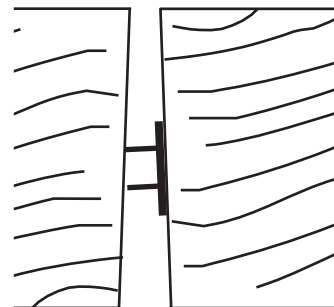


**5070B** Brown  
**5070CL** Clear  
self-adhesive TPE



\* antimicrobial not available in clear

All products this page

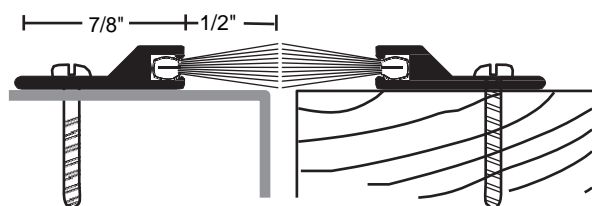




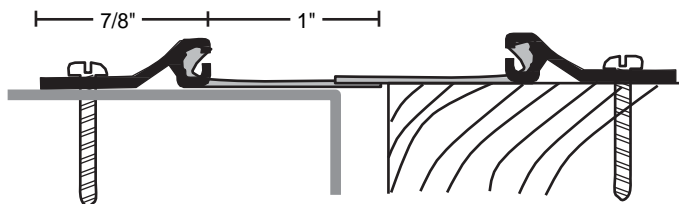
## Surface Mounted Astragal Sets

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

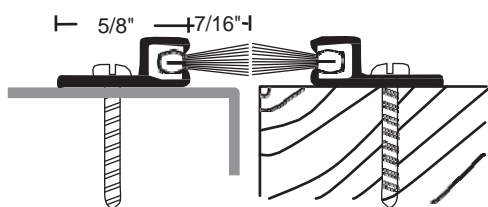
**A** - clear anodized  
**B** - gold  
**DKB** - dark bronze  
**no suffix** - mill aluminum  
Brush is gray with mill finish and clear anodized metal; black with gold and DKB  
vinyl is gray, except \* vinyl is black



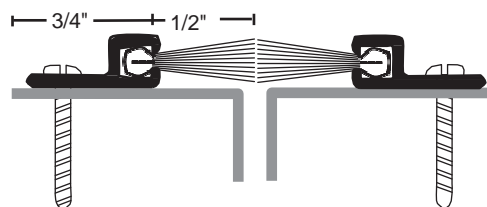
nylon brush Order as **set** to receive two pieces  
**600**  
**600A**  
**600B**  
**600DKB**



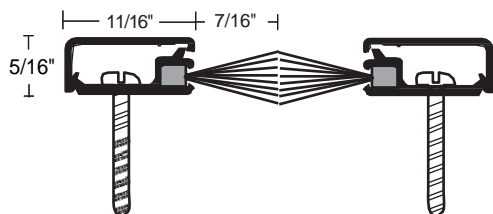
vinyl Order as **set** to receive two pieces  
**97V**  
**97VA**  
**97VB**  
**97VDKB**



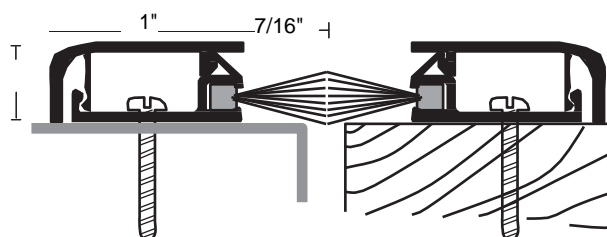
nylon brush Order as **set** to receive two pieces  
**A605A**  
**A605B**  
**A605DKB**



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**





## GENERAL INFORMATION

### APPLICATION DETERMINES KIND OF HINGE

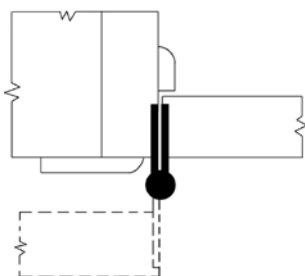
Use Three Hinges To A Door - Use Anti-Friction Bearing Hinges On Doors Equipped With Closers

#### 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.

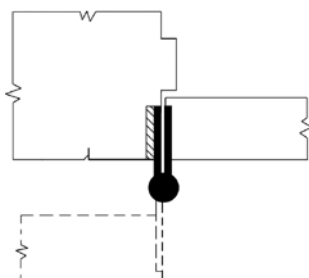
#### FULL MORTISE

Wood Doors, Wood Frame



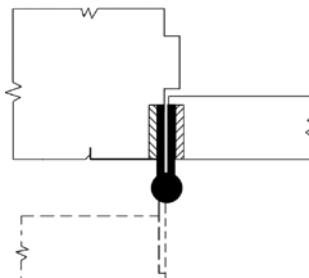
#### FULL MORTISE

Wood Doors, Hollow Metal Frame



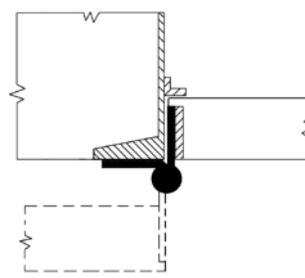
#### FULL MORTISE

Hollow Metal Doors, Hollow Metal Frame



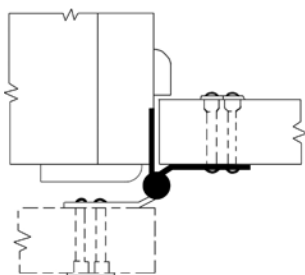
#### HALF MORTISE

Hollow Metal Doors, Channel Iron Frame



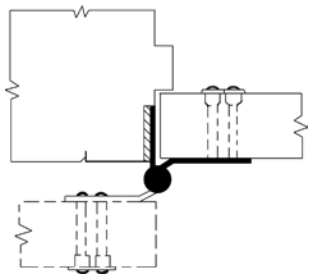
#### HALF SURFACE

Wood Doors, Wood Frame



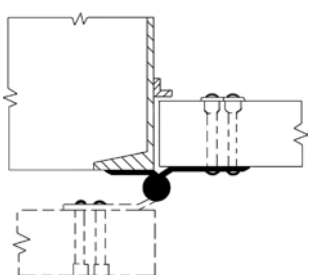
#### HALF SURFACE

Mineral Core Doors, Hollow Metal Frame



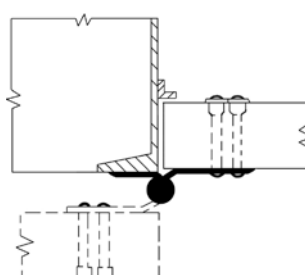
#### FULL SURFACE

Mineral Core Doors, Channel Iron Frame



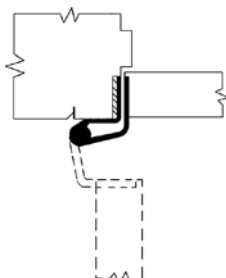
#### FULL SURFACE

Hollow Metal Doors, Channel Iron Frame



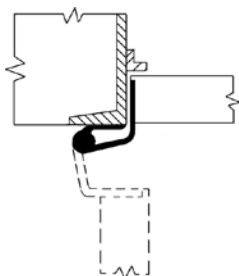
#### "SWING CLEAR" FULL MORTISE

Wood Doors, Hollow Metal Frame



#### "SWING CLEAR" HALF MORTISE

Wood Doors, Channel Iron Frame



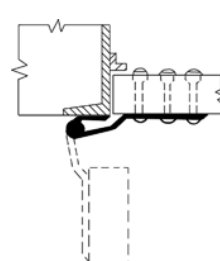
#### "SWING CLEAR" HALF SURFACE

Mineral Core Doors, Hollow Metal Frame



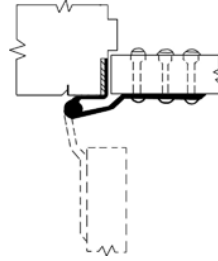
#### "SWING CLEAR" FULL SURFACE

Mineral Core Doors, Channel Iron Frame





## GENERAL INFORMATION





## GENERAL INFORMATION

### 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

TYPE OF BUILDING/USE	EXPECTED DAILY	FREQUENCY YEARLY
<b>HIGH FREQUENCY</b>		
Large Department Store Entrance	5,000	1,825,000
Large Office Building Entrance	4,000	1,460,000
Hospital Corridor and Surgical Doors	5,000	1,825,000
School Entrance	1,250	356,250
Office Stairwell	500	182,500
<b>MEDIUM FREQUENCY</b>		
Hospital Consultation Rooms	100	36,500
School Corridor	100	36,500
Office Building Corridor	80	29,200
Storage Room	50	18,250
<b>LOW FREQUENCY</b>		
Residential Entrance	30	10,950
Residential Interior	20	7,300

### HOW TO DETERMINE THE DOOR WEIGHT

Estimated Door Weights in Pounds Per Sq. Foot

COMMERCIAL FLUSH WOOD DOOR WEIGHTS					
Estimated Door Weights in Pounds Per Sq. Foot					
DOOR THICKNESS:	1-3/8"	1-3/4"	2"	2-1/4"	2-1/2"
DOOR MATERIAL:					
Ash	4.5	5.3	6.0	6.8	7.5
Birch	3.8	4.3	5.0	5.6	6.3
Fir	3.0	3.5	4.0	4.5	5.0
Mahogany	4.5	5.3	6.0	6.8	7.5
Oak	6.0	7.3	8.0	9.0	10.0
White Pine	3.0	3.5	4.0	4.0	5.0
Res. Hollow Core	1.7	2.5	-	-	-
Inst. Hollow Core	-	3.2	-	-	-
Staved Core	3.3	4.2	-	5.4	-
Particle Board Core	4.0	5.0	-	-	-
Mineral Core	-	4.0	-	-	-
Acoustic Core	-	8.3	-	10.6	-
Hollow Metal 18 gauge	4.3	4.6	-	-	-
Hollow Metal 16 gauge	5.4	5.8	-	-	-
Hollow Metal 15 gauge	6.2	6.5	-	-	-
Hollow Metal 14 gauge	7.0	7.3	-	-	-
Hollow Metal 13 gauge	8.3	8.7	-	-	-
Hollow Metal 12 gauge	9.9	10.2	-	-	-
Hollow Metal 11 gauge	11.2	11.6	-	-	-
Hollow Metal 10 gauge	12.8	13.0	-	-	-
1-3/4" Wood + 1/16" Lead	-	8.7	-	-	-
1-3/4" Wood + 1/8" Lead	-	12.4	-	-	-
1-3/4" Wood + 3/16" Lead	-	16.1	-	-	-
1-3/4" Wood + 1/4" Lead	-	19.8	-	-	-
1-3/4" Wood + 3/8" Lead	-	27.2	-	-	-
1-3/4" Wood + 1/2" Lead	-	34.6	-	-	-

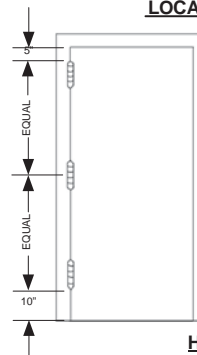
The above table represents relative weights of most common doors and is intended to be a guide or approximation.

### 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.

THICKNESS OF DOOR IN INCHES	WIDTH OF DOOR IN INCHES	HEIGHT OF HINGE IN INCHES
1-3/8" Door	To 32"	3-1/2"
1-3/8" Door	32" to 36"	4"
1-3/4" Door	To 36"	4-1/2"
1-3/4" Door	36" to 48"	5"
1-3/4" Door	Over 48"	6"
2", 2-1/4", 2-1/2" Door	To 42"	5" Heavy Weight
2", 2-1/4", 2-1/2" Door	Over 42"	6" Heavy Weight



### LOCATION OF HINGES ON DOORS

Top hinge 5" from jamb rabbet to top edge of barrel.

finished floor.

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.

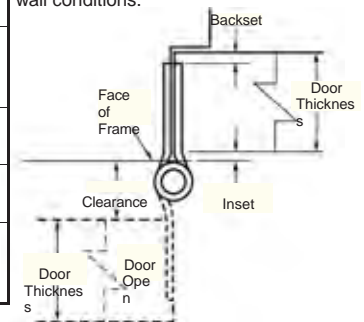
**Wood or Metal Door x Hollow Metal Frame:** The door inset would be 1/8".

**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:

Thickness of Door		Clearance		Open Width of	
inches	mm	inches	mm	inches	mm
1 3/8"	35	1 1/4"	33	3 1/2"	89
		1 3/4"	44	4"	102
1 3/4"	44	1"	25	4"	102
		1 1/2"	38	4 1/2"	114
		2"	51	5"	127
		3"	76	6"	152
2"	51	1"	25	4 1/2"	114
		1 1/2"	38	5"	127
		2 1/2"	64	6"	152
2 1/4"	57	1"	25	5"	127
		2"	51	6"	152
2 1/2"	64	3/4"	19	5"	127
		1 3/4"	44	6"	152
3"	76	3/4"	19	6"	152
		2 3/4"	70	8"	203
		4 3/4"	121	10"	254



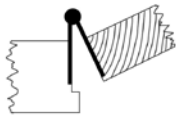


## GENERAL INFORMATION

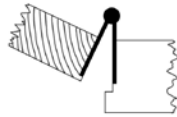
### HAND OF DOORS

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

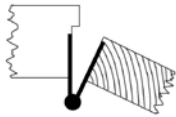


**OUTSIDE**  
Left hand door  
takes  
left hand hinges

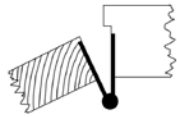


**OUTSIDE**  
Right hand door  
takes  
right hand hinges

#### REVERSED DOORS OPENING OUT Including Bookcase, Closet and Cupboard Doors



**OUTSIDE**  
Left hand reverse door  
takes  
right hand hinges



**OUTSIDE**  
Right hand reverse door  
takes  
left hand hinges

#### DOUBLE ACTING

Right Side of  
Hinge



**OUTSIDE**  
Left hand door  
takes  
left hand hinges

Left Side of  
Hinge



**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.

### 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.

### HINGE SWAGING

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



**HINGE OPENED**



**HINGE CLOSED**

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".



**HINGE OPENED**



**HINGE CLOSED**

Hinges for full surface application are not swaged. Blank hinges are for full surface welded application and are always furnished "flat back" unless other wise specified.



**HINGE WITH ONE LEAF SWAGED**

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.



**HINGE WITH ONE LEAF SWAGED FLAT**

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 hand specification.



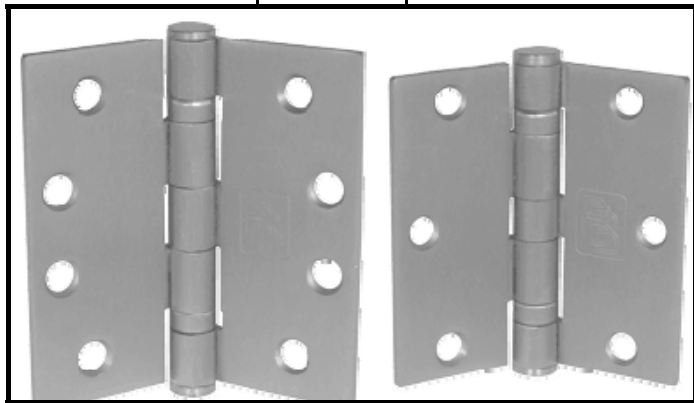
## FULL MORTISE TEMPLATE BALL BEARING

**STANDARD WEIGHT**  
**3 1/2" x 3 1/2", 4" x 4"**

### Templates:

**BB35**

**BB40**



#### **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/-0.015) for 3-1/2" x 3-1/2"

4.00 (+.000/-0.015) 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" FHWS - 10 x 1"	FHMS - 12-24 x 1/2" 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.

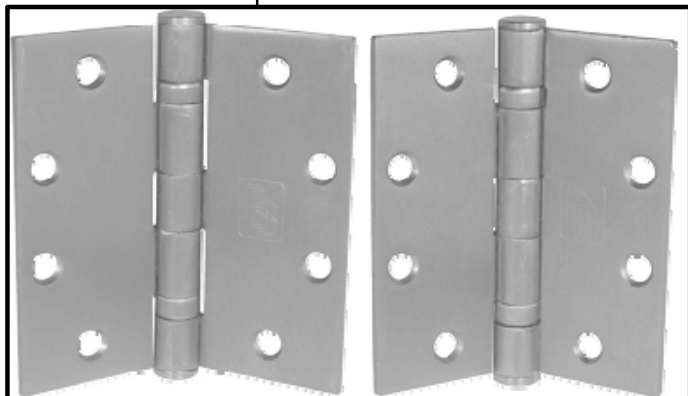
1 screw pack includes all machine screws (24), and 1/2 wood screws (12). ATMS & AWS also available. For 3-1/2 x 3-1/2, 1 screw pack includes (18) machine screws and (18) wood screws.



## FULL MORTISE TEMPLATE BALL BEARING

**STANDARD WEIGHT**  
**4 1/2" x 4", 4 1/2" x 4 1/2"**

**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"

### 4-1/2" STANDARD SCREW SIZE

FHMS - 12-24 x 1/2"

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.

### BB81 (ANSI A8112)

Steel-Polished and Plated or Bonderized and Prime Coated for Painting.

### B21 (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.
- All hinges are ANSI template.

### 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"

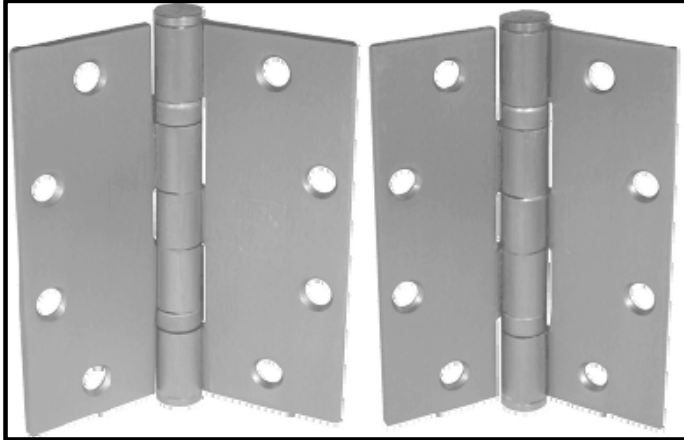


## FULL MORTISE TEMPLATE PLAIN BEARING

**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 (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 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"

### 5" STANDARD SCREW SIZE

FHMS - 12-24 x 1/2"  
 FHWS - 12 x 1-1/4"

### 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.



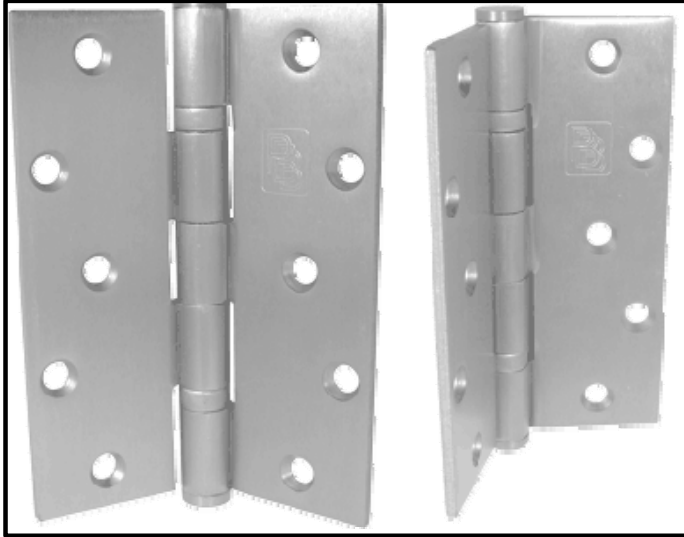


## FULL MORTISE TEMPLATE BALL BEARING

**STANDARD WEIGHT**  
**6" x 4 1/2", 6" x 5", 6" x 6"**

### 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. templatehinges 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 betweenleaves.

#### MATERIAL GAUGE:

.160 ± .005 for 6" x 4-1/2"  
 .160 ± .005 for 6" x 5"  
 .160 ± .005 for 6" x 6"

#### **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 hospital type, add HT to suffix of part number.

•All hinges are ANSI template.

#### OTHER SPECIFICATIONS:

Height of hinge:

6.00 (+.000/-.015) for 6" x 4-1/2"

6.00 (+.000/-.015) for 6" x 5"

6.00 (+.000/-.015) 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"

6" STANDARD SCREW SIZE
FHMS - 1/4-20 x 1/2"
FHWS - 14 x 1-1/2"

#### 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.



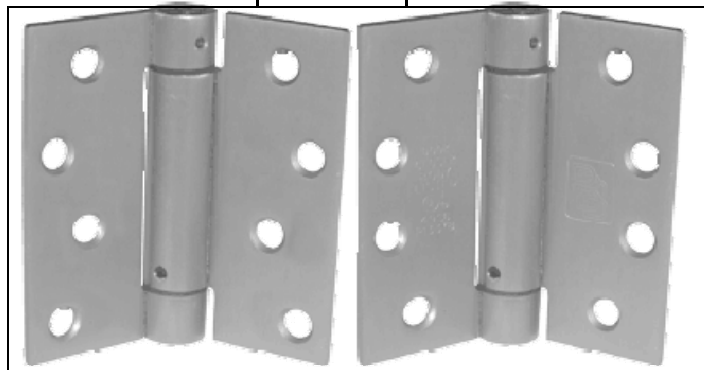
## FULL MORTISE U.L. LISTED SPRING HINGE

**STANDARD WEIGHT**  
4" x 4"

### 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



### 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.

SERIES	SIZE	RECOMMENDED MAX DOOR WEIGHT (LBS.)	SPRING HINGE	BUTT HINGE
FOR USE ON 1 3/4" DOOR, 1 3/8" DOOR				
SP81	4" x 4"	80	1	2
		85	2	1
		110	3	-

**MATERIAL GAUGE:** .130±.005

All hinges are ANSI template. 4" available in square and in 1/4" & 5/8" radius round corners.

### 4" STANDARD SCREW SIZE

FHMS – 12-24 x 1/2"

FHWS - 12 x 1-1/4"

4" x 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.



## FULL MORTISE U.L. LISTED SPRING HINGE

**STANDARD WEIGHT**  
4 1/2" x 4", 4 1/2" x 4 1/2"

### 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.

SERIES	SIZE	RECOMMENDED MAX DOOR WEIGHT (LBS.)	SPRING HINGE	BUTT HINGE
FOR USE ON 1 3/4" DOOR				
SP81	4 1/2" x 4" 4 1/2" x 4 1/2"	70	1	2
		100	2	1
		150	3	-

#### **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 (+.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"

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.

4 1/2" STANDARD SCREW SIZE
FHMS - 12-24 x 1/2"
FHWS - 12 x 1-1/4"

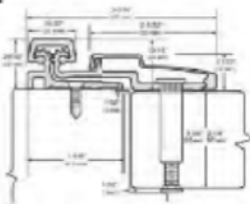


# PRECISION ARCHITECTURAL HARDWARE

## Hinges

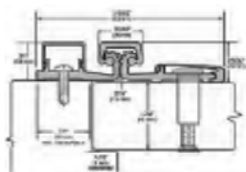
Precision Architectural Hinges meet or exceed ANSI Standard for Hinges. All of our manufactured hinges comes with an industry best warranty. Whether you are a door manufacturer or a door repair company, we have a hinge solution for all of your needs. We are confident that our hinges will be one of the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

### FULL SURFACE



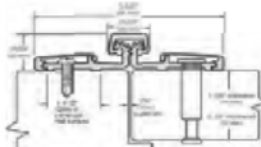
#### GHHD210

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



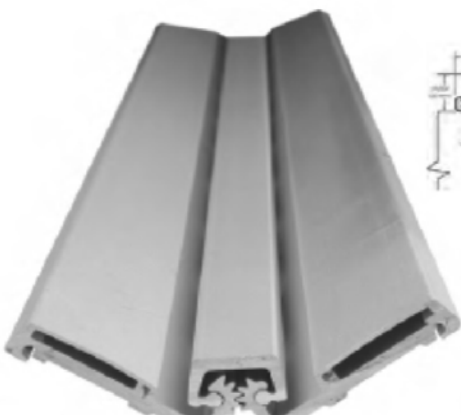
#### GHHD157

- 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



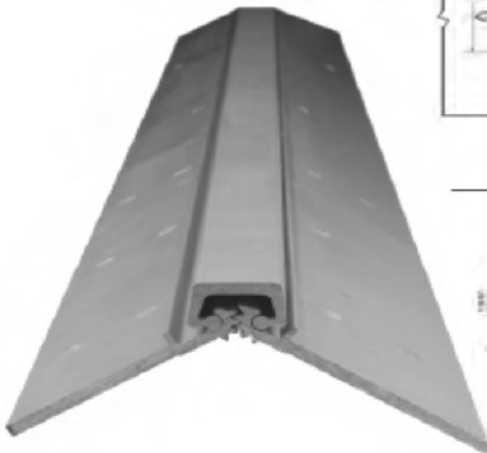
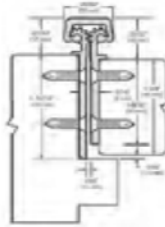


# PRECISION ARCHITECTURAL HARDWARE

## FULL MORTISE

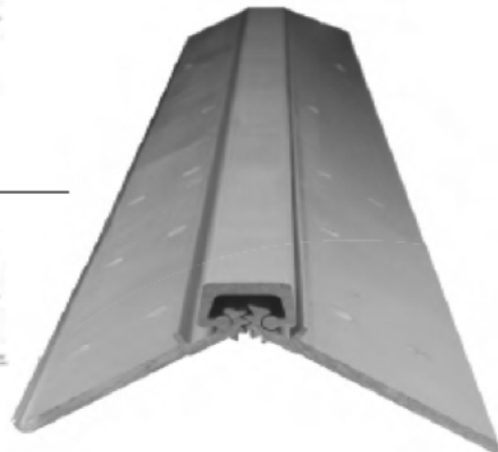
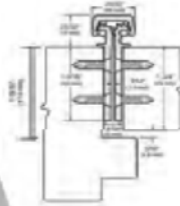
### GHHD111

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



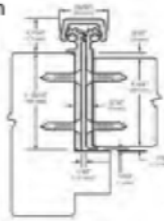
### GHHD112

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



### GHHD224

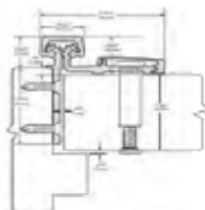
- Full Mortise Concealed Leaf Application
- High Frequency to Heavy Medium Frequency Doors
- Maximum Door Weight 450 lbs
- 3/32" Inset
- Door Edge w/ Protection Lip



## HALF SURFACE

### GHHD053

- Half Surface Application
- High Frequency to Heavy Medium Frequency Doors
- Maximum Door Weight 450 lbs
- 1/8" Inset
- Security Molding





# Precision Architectural Hardware

## Cross Reference

PAH	Hager	Select	Pemko	ABH	McKinney
GHHD05383AL	780-053HD-83AL	SL53-83-CL-HD	CHS83HD	A530HD-83AL	MCK-54HD83AL
GHHD05383DU	780-053HD-83DU	SL53-83-DU-HD	DHS83HD	A530HD-83DU	MCK-54HD83DU
GHHD05395AL	780-053HD-95AL	SL53-95-CL-HD	CHS95HD	A530HD-95AL	MCK-54HD95AL
GHHD05395DU	780-053HD-95DU	SL53-95-DU-HD	DHS95HD	A530HD-95DU	MCK-54HD95DU
GHHD05783AL	780-057HD-83AL	N/A	N/A	A571HD-83AL	N/A
GHHD05783DU	780-057HD-83DU	N/A	N/A	A571HD83DU	N/A
GHHD05795AL	780-057HD-95AL	N/A	N/A	A571HD95AL	N/A
GHHD05795DU	780-057HD-95DU	N/A	N/A	A571HD95DU	N/A
GHHD15783AL	780-157HD-83AL	SL57-83-CL-HD	CFS83HD	A570HD-83AL	MCK-58HD83AL
GHHD15783DU	780-157HD-83DU	SL57-83-DU-HD	DFS83HD	A570HD-83DU	MCK-58HD83DU
GHHD15795AL	780-157HD-95AL	SL57-95-CL-HD	CFS95HD	A570HD-95AL	MCK-58HD95AL
GHHD15795DU	780-157HD-95DU	SL57-95-DU-HD	DFS95HD	A570HD-95DU	MCK-58HD95DU
GHHD21083AL	780-210HD-83AL	SL21-83-CL-HD	CFS83HD	A210HD-83AL	MCK-22HD83AL
GHHD21083DU	780-210HD-83DU	SL21-83-DU-HD	DFS83HD	A210HD-83DU	MCK-22HD83DU
GHHD21095AL	780-210HD-95AL	SL21-95-CL-HD	CFS95HD	A210HD-95AL	MCK-22HD95AL
GHHD21095DU	780-210HD-95DU	SL21-95-DU-HD	DFS95HD	A210HD-95DU	MCK-22HD95DU
GHHD11183AL	780-111HD-83AL	SL18-83-CL-HD	CFM 83SLIHD	A111HD-83AL	MCK-14HD83AL
GHHD11183DU	780-111HD-83DU	SL18-83-DU-HD	DFM 83SLIHD	A111HD-83DU	MCK-14HD83DU
GHHD11195AL	780-111HD-95AL	SL18-95-CL-HD	CFM 95SLIHD	A111HD-95AL	MCK-14HD95AL
GHHD11195DU	780-111HD-95DU	SL18-95-DU-HD	DFM 95SLIHD	A111HD-95DU	MCK-14HD95DU
GHHD11283AL	780-112HD-83AL	SL11-83-CL-HD	CFMSLF83HD	A110HD-83AL	MCK-12HD83AL
GHHD11283DU	780-112HD-83DU	SL11-83-DU-HD	DFMSLF83HD	A110HD-83DU	MCK-12HD83DU
GHHD11295AL	780-112HD-95AL	SL11-95-CL-HD	CFMSLF95HD	A110HD-95AL	MCK-12HD95AL
GHHD11295DU	780-112HD-95DU	SL11-95-DU-HD	DFMSLF95HD	A110HD-95DU	MCK-12HD95DU
GHHD22483AL	780-224HD-83AL	SL24-83-CL-HD	CFM83HD	A240HD-83AL	MCK-25HD83AL
GHHD22483DU	780-224HD-83DU	SL24-83-DU-HD	DFM83HD	A240HD-83DU	MCK-25HD83DU
GHHD22495AL	780-224HD-95AL	SL24-95-CL-HD	CFM95HD	A240HD-95AL	MCK-25HD95AL
GHHD22495DU	780-224HD-95DU	SL24-95-DU-HD	DFM95HD	A240HD-95DU	MCK-25HD95DU
GHHD11183AL	780-111HD-83AL	SL18-83-CL-HD	CFM 83SLIHD	A111HD-83AL	MCK-14HD83AL
GHHD11183DU	780-111HD-83DU	SL18-83-DU-HD	DFM 83SLIHD	A111HD-83DU	MCK-14HD83DU
GHHD11195AL	780-111HD-95AL	SL18-95-CL-HD	CFM 95SLIHD	A111HD-95AL	MCK-14HD95AL
GHHD11195DU	780-111HD-95DU	SL18-95-DU-HD	DFM 95SLIHD	A111HD-95DU	MCK-14HD95DU

## 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



ANSI /C07172

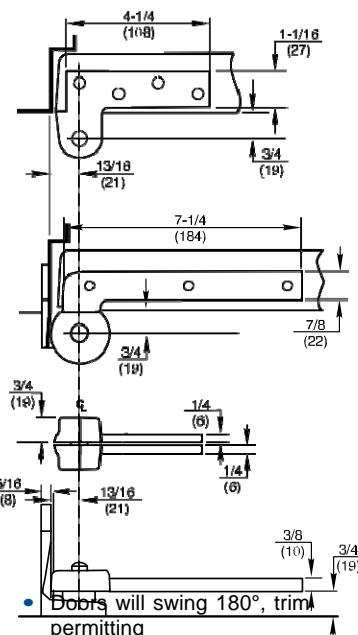
\* Door size & weight guidelines are determined using the appropriate number of intermediate pivots

#### 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



ANSI/C07162/C07202

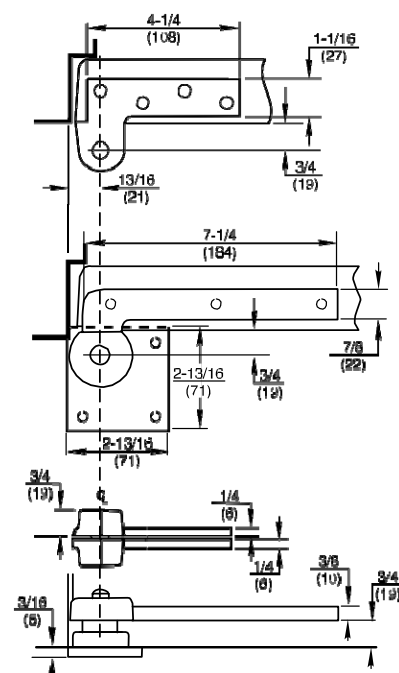
\* Door size & weight guidelines are determined using the appropriate number of intermediate pivots

#### Product Description & Features

- Standard top pivot 180 included
- 119 intermediate pivot recommended (order separately)
- Bottom pivot mortised into floor
- 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



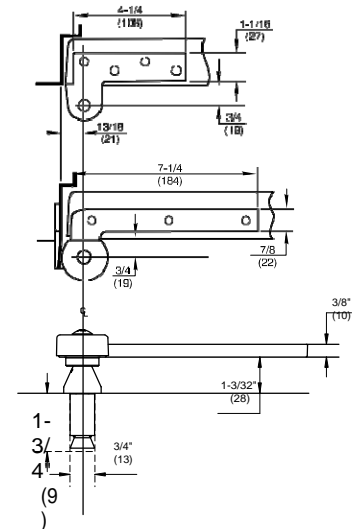
ANSI/C07162/C07202

## 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



ANSI/C07162/C07202

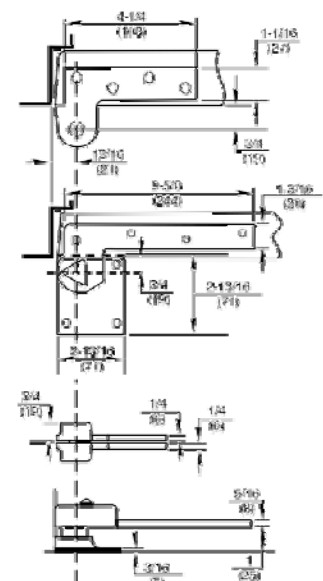
\* Door size & weight guidelines are determined using the appropriate number of intermediate pivots

## 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 30-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

## Technical Information

Frame stop required





## 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



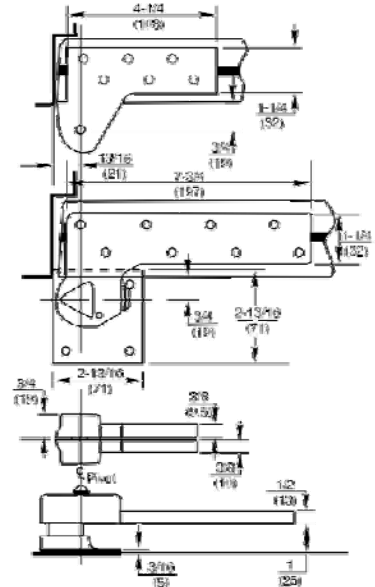
ANSI/C07162/C07202

#### 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



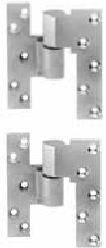
1-3/4" door shown

### 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



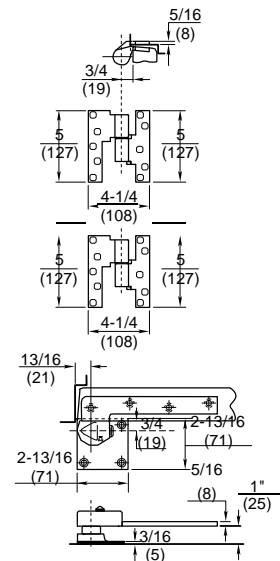
ANSI/C07162 (modified)  
/C07202

##### 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



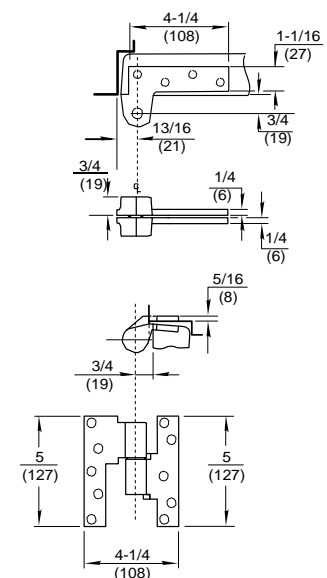
ANSI/C07162 (modified)

##### 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



## 3/4" OFFSET HUNG PIVOT SETS

### MODEL 195

#### Application

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



ANSI/C07131

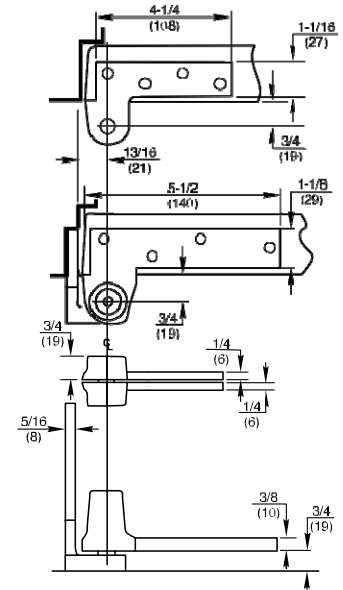
\* Door size & weight guidelines are determined using the appropriate number of intermediate pivots

#### 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



## Application

- 

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

- 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 drawing of a mechanical assembly, likely a pump or motor component, showing dimensions in inches (in) and millimeters (mm). The drawing includes a side view and a cross-sectional view.

**Dimensions (inches / millimeters):**

- Top horizontal dimension: 4-1/4 (110.8)
- Top right vertical dimension: 1-1/16 (27)
- Top left vertical dimension: 13/16 (21)
- Top middle horizontal dimension: 8-5/8 (215)
- Top right horizontal dimension: 1-3/16 (30)
- Top right vertical dimension: 3/4 (19)
- Bottom left vertical dimension: 3/4 (19)
- Bottom left horizontal dimension: 5-1/8 (130)
- Bottom middle horizontal dimension: 1/4 (6)
- Bottom right horizontal dimension: 1/4 (6.3)
- Bottom right vertical dimension: 5/8 (16)
- Bottom right horizontal dimension: 5/16 (8)
- Bottom middle horizontal dimension: 2-3/8 (62)
- Bottom left horizontal dimension: 5-1/8 (129)

## 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



ANSI/C07111

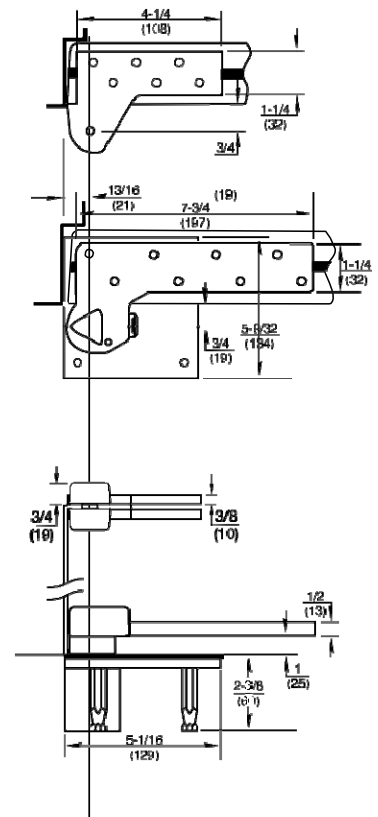
\* Door size & weight guidelines are determined using the appropriate number of intermediate pivots

#### 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

#### Technical Information

Frame stop required



Pivot for 1-3/4" door shown

## 3/4" OFFSET HUNG TOP PIVOTS

### MODEL 180

#### Application

- Full Mortise
- Non-handed

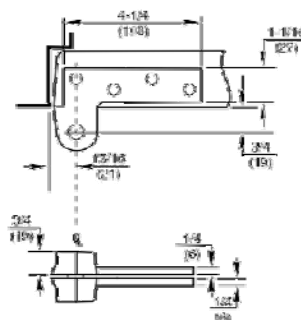


#### Product Description & Features

- 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

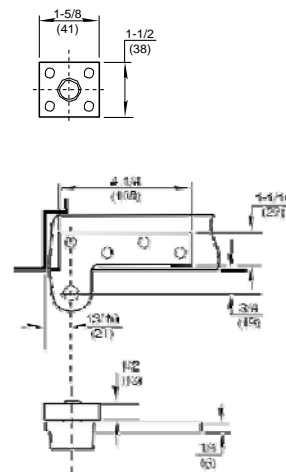


#### Product Description & Features

- 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

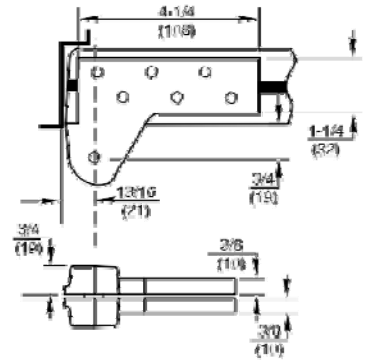


#### Product Description & Features

- 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



1-3/4" door shown

### MODEL FA180

#### Application

- Asylum Design
- Full Mortise
- Handed

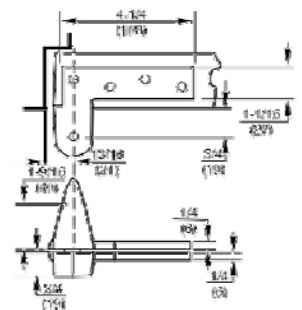


#### Product Description & Features

- 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<sup>®</sup> 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 280

#### Application

- Half Surface
- Handed

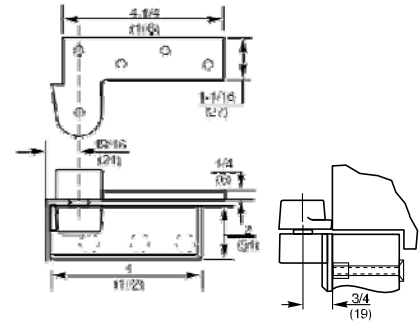


ANSI/C07501

#### 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

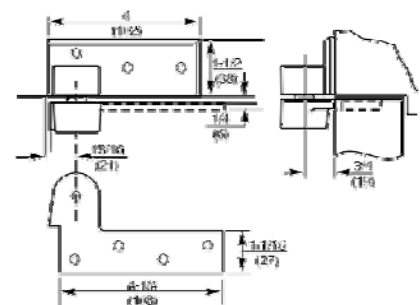


ANSI/C07511

#### 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





## 3/4" OFFSET HUNG TOP PIVOTS

### MODEL 480

#### Application

- Full Surface
- Handed

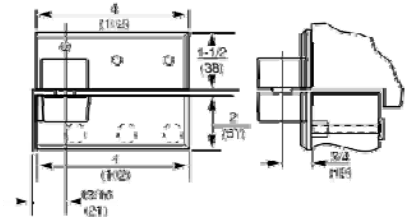


ANSI/C07521

#### 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

#### Technical Information



### MODEL 680

#### Application

- Side Jamb Mounted
- Frame Portion
- Handed

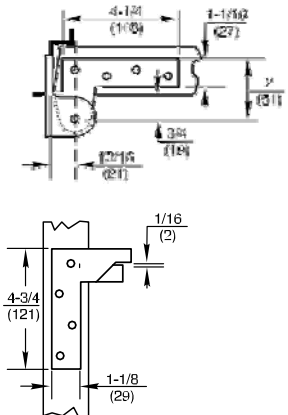


#### Product Description & Features

- 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

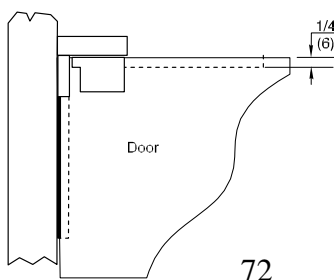
#### Technical Information

##### Frame stop required

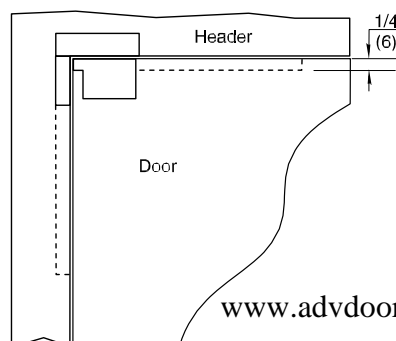


#### Technical Information

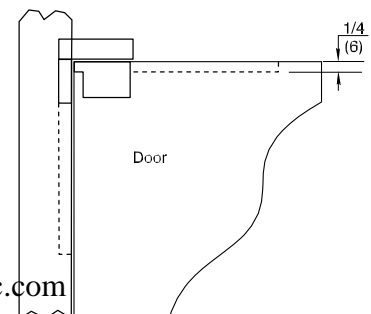
Surface Mount Jamb Double Mortise Door



Mortise Jamb, Header and Door



Mortise Jamb and Door



## INTERMEDIATE or SIDE JAMB PIVOTS

### MODEL 119

#### Application

- Full Mortise
- Handed

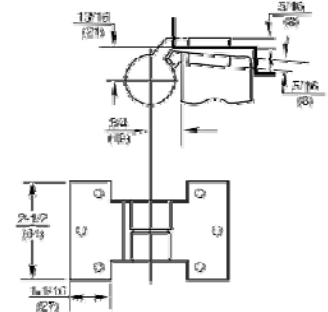


ANSI/C07382

#### 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

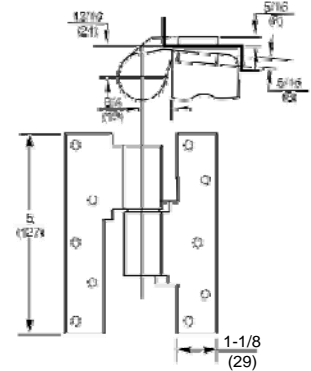


ANSI/C07321/C07371

#### 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



ANSI/C07321/C07371

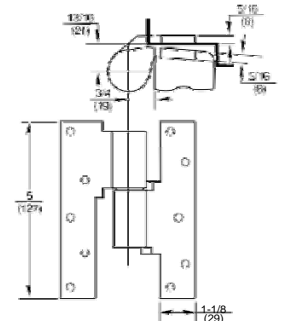
#### Product Description & Features

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

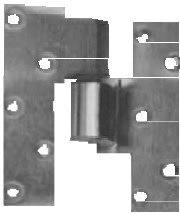


## INTERMEDIATE or SIDE JAMB PIVOTS

### MODEL ML19

#### Application

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



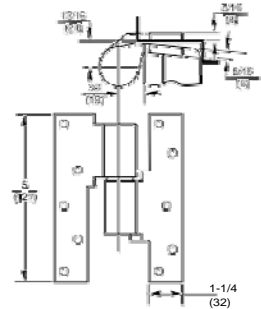
ANSI/C07311

#### 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



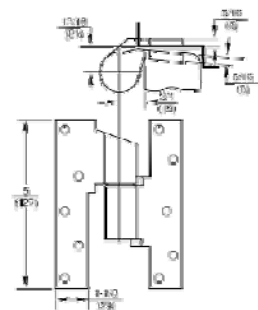
ANSI/C07361

#### 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<sup>®</sup> screws

#### Technical Information



## INTERMEDIATE or SIDE JAMB PIVOTS

### MODEL 219

#### Application

- Half Surface
- Handed

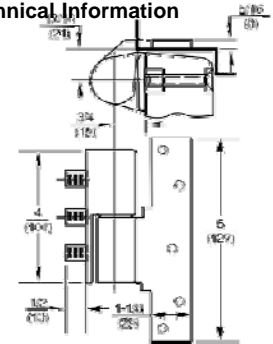


ANSI/C07331

#### 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"
- Furnished with wood and machine screws

#### Technical Information



### MODEL 319

#### Application

- Half Mortise
- Handed

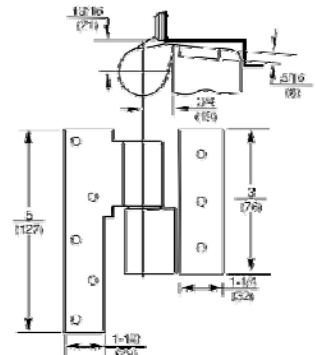


ANSI/C07341

#### 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

#### Technical Information



### MODEL 419

#### Application

- Full Surface
- Handed

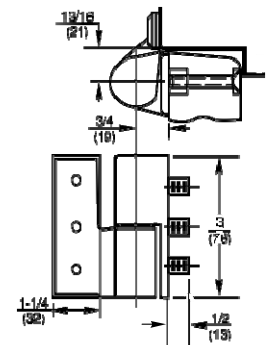


ANSI/C07351

#### 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
- ElectroLynx<sup>®</sup> option not available

#### 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



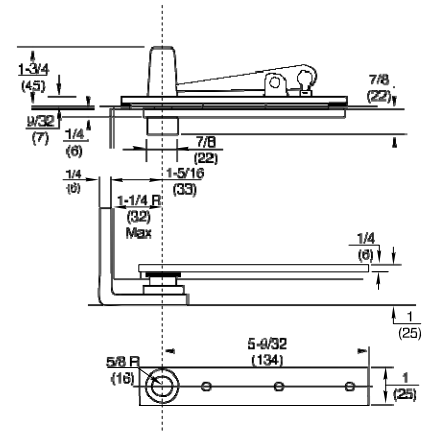
ANSI/C07042

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

#### 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

#### Technical Information



### MODEL 128-3/4

#### Application

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



ANSI/C07032

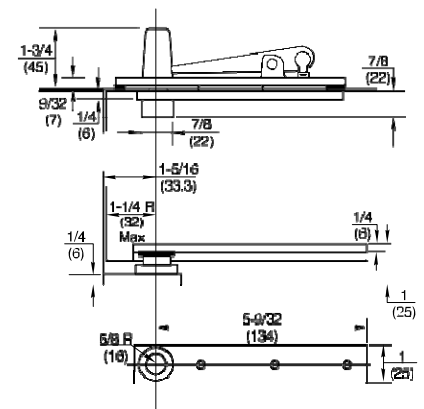
Center hung pivots are door hanging means only. To close doors, see floor closer sections of the catalogs.

#### Product Description & Features

Identical to the 127-3/4 except:

- Bottom pivot mounts directly to floor

#### Technical Information



## MODEL 370

- Exterior or Interior Doors
- Weight to 500 lbs.
- Door Sizes up to 3'8"x 8'6"\*  
(1118 x 2591mm)
- Non-handed



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 345 in lieu  
of 340

- 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

Fig. 1

# MODEL 117-3/4

- Exterior or Interior Doors
- Weight to 600 lbs.
- Door Sizes up to 4'0"x 8'6" (1219 x 2591mm)
- Non-handed



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  
345 in lieu of 340

- 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 drawing of a mechanical assembly, showing three views: a side elevation, a front elevation, and a top view. Dimensions are provided in inches (") and millimeters (mm).

- Side Elevation (Top View):**
  - Top flange thickness: 1-7/16" (38)
  - Flange width: 8-3/32" (7)
  - Flange height: 1/4" (6)
  - Distance from flange to centerline: 1-1/4" (32)
  - Distance from centerline to end: 9/4" (18)
- Front Elevation (Middle View):**
  - Flange thickness: 5/8" (16)
  - Distance from flange to centerline: 1-1/4" (32)
  - Distance from centerline to end: 9/4" (18)
  - End flange thickness: 1/2" (13)
- Top View (Bottom View):**
  - Overall width: 8-1/16" (128)
  - Distance from centerline to end: 11-1/4" (288)
  - Distance from centerline to end: 8-8/32" (134)
  - End flange thickness: 1/2" (13)
  - Distance from centerline to end: 1-3/16" (32)
  - Distance from centerline to end: 8-5/16" (130)

## 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"<sup>\*\*</sup>  
(1219 x 2591mm)
- Non-handed



ANSI/C07011

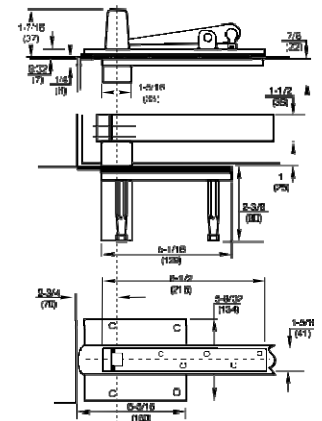
Center hung pivots are door hanging means only. To close doors, see floor closer sections of the catalogs.

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

## 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



## MODEL H117-3/4 x 587 ARM



ANSI/C07011

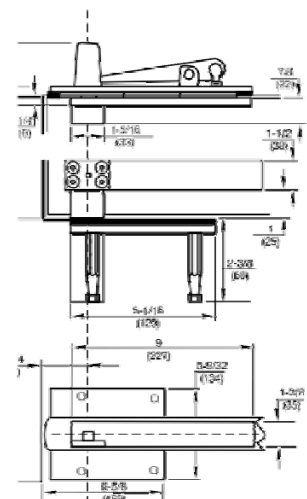
Center hung pivots are door hanging means only. To close doors, see floor closer sections of the catalogs.

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

## 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



## 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

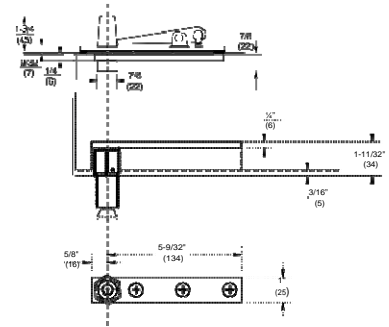


ANSI/CO7032

#### 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

#### Technical Information



### MODEL 178

#### Application

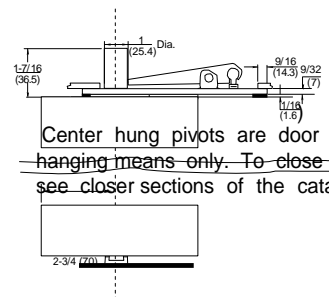
- Interior Doors
- Weight to 175 lbs.
- Door Sizes up to 3'0" x 8'0" (914 x 2591mm)
- Non Handed



#### 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 pivots are door hanging means only. To close doors see closer sections of the catalogs.\*



## CENTER HUNG TOP PIVOT SETS

### MODEL 320

#### Application

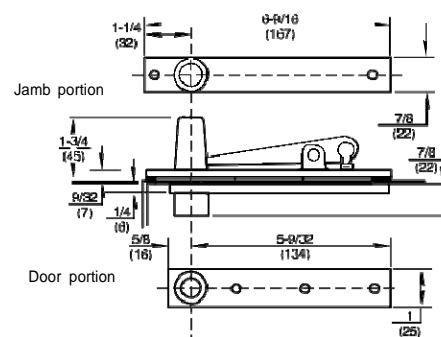
- Fully Concealed
- Non-handed



#### 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

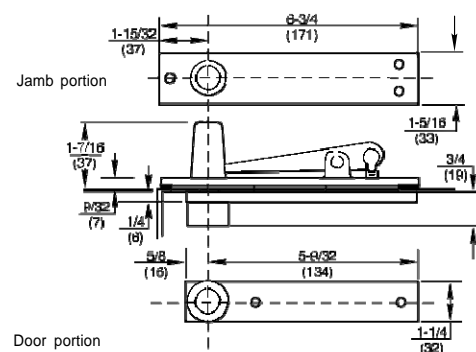
- Fully Concealed
- Non-handed



#### 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

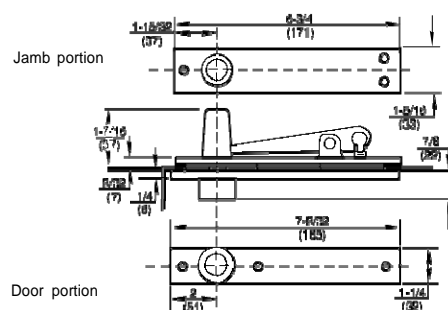
- Fully Concealed
- Heavy-Duty
- Non-handed



#### 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

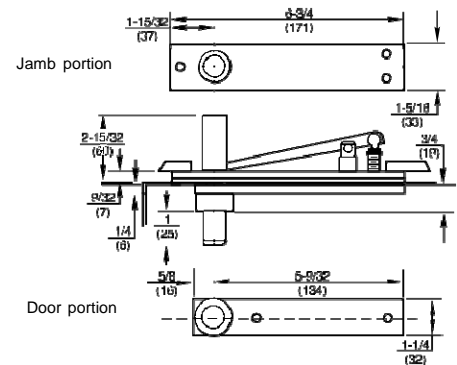
- Fully Concealed
- Center Hung
- Non-handed
- Earthquake Tolerant
- Taller Doors



#### 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

#### Technical Information



### MODEL H345

#### Application

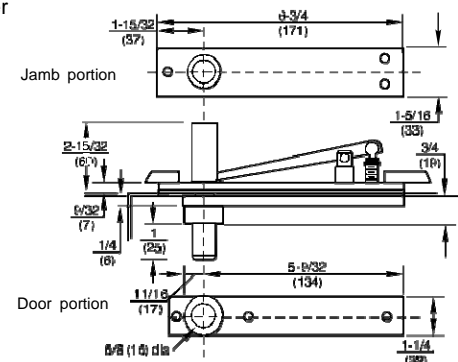
- Fully Concealed
- Center Hung
- Non-handed
- Earthquake Tolerant
- Taller Doors



#### 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

#### Technical Information



## CENTER HUNG TOP PIVOT SETS

### MODEL 340 X 102

#### Application

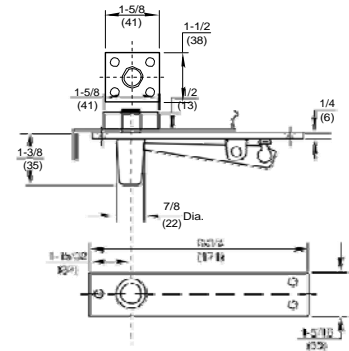
- Fully Concealed
- Non-handed



#### 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



340 x 102 shown

### MODEL 340 X AP3

#### Application

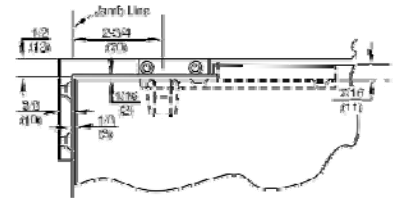
- Surface mounted
- Handed doors up to 3'6" wide



#### 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

Prefix	Model	Offset	Center Hung	Standard Top Pivot	Available 3-Hour Fire Rated Doors	Handed	Maximum Door Weight**
	117-1/4	Yes	No	180	No	Yes	250
F	117	Yes	No	180	Yes	Yes	300
	173	Yes	No	180	No	Yes	150
	173 x 1-1/2	Yes	No	180	No	Yes	100
F	117 x 1-1/2	Yes	No	180	Yes	Yes	150
F	147	Yes	No	180	Yes	Yes	600
F	147 x 1-1/2	Yes	No	180	Yes	Yes	350
F*	L147	Yes	No	L180	Yes*	Yes	800
F	547	Yes	No	NA	Yes	Yes	500
	165	Yes	No	H180	No	Yes	300
	195	Yes	No	180	No	Yes	450
F	117-1/2	Yes	No	180	Yes	Yes	650
F	117-1/2 x 1-1/2	Yes	No	180	Yes	Yes	450
F*	L117	Yes	No	L180	Yes*	Yes	1750
	127-3/4	No	Yes	320	No	No	200
	128-3/4	No	Yes	320	No	No	250
	370	No	Yes	340	No	No	500
	117-3/4	No	Yes	340	No	No	600
	H117-3/4	No	Yes	H340	No	No	1000
	H117-3/4 x 587	No	Yes	H340	No	No	1000
	176	No	Yes	320	No	No	150
	178	No	Yes	Special	No	No	175

\*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

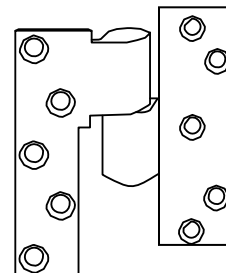
Prefix	L147 Model	3/4" Offset	X LTP x 2-1/4 dr Suffix	x RH Hand	x 626 Finish
F Fire-Rated Doors	117-1/4 117 173 147 L147 547 165 195 117-1-1/2 L117 127-3/4 128-3/4 370 117-3/4 117-3/4 176 178	3/4" 1-1/2" Blank - Center Hung	587 CH Arm for 1-3/4" Dr -Extended Spindles - Longer Top Pivot Pins LTP Less Top Pivot -20 20-Minute Label - Cover Pan (xDepth) SPLO Special Layout # - Door Thickness - L Product	RH Right Hand LH Left Hand Blank - Center Hung	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

## INTERMEDIATE PIVOTS PARTS DRAWINGS

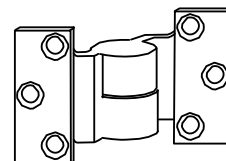
### M19, M190, ML19, FA19, 219, 319, FM19, FM190, ALL ELECTRIFIED M19 INTERMEDIATE PIVOTS

Model	Description
107015-*	Metal Screws for One Leaf
107115-*	Wood Screws for One Leaf
81778-*	Hex Cap
219, 319 and 419 Also Use:	
107059-*	Includes Screws and Backplate
	Torx <sup>®</sup> Available - Suffix "T"



### 119 INTERMEDIATE PIVOT

Model	Description
107014-*	Metal Screws for One Leaf
107114-*	Wood Screws for One Leaf
	Torx <sup>®</sup> Available - Suffix "T"



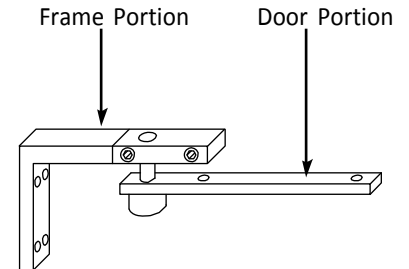
\* specify finish

## TOP PIVOT and POCKET PIVOTS PARTS DRAWINGS

### ANGLE PIVOT-3

Model	Description
107047*	Includes Screws and Stud
30243	Door Portion
30814**	Frame Portion (handed)

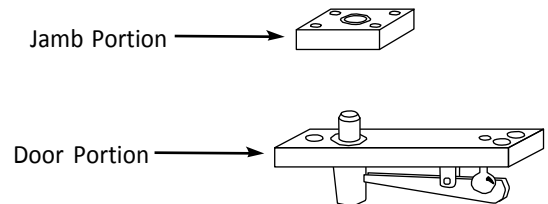
Torx<sup>®</sup> not available.



### TOP PIVOT 340 x 102 OR 320 x 102

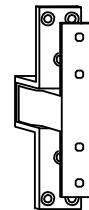
Model	Description
10210 AS	Jamb Portion
3065	Door Portion
640-ASY	Door Portion (320 x 102)
107012*	Jamb Portion Screw kit
107329	Door Portion Screw kit

Torx<sup>®</sup> not available.



### F519 POCKET PIVOT

Model	Description
619005-*	Screw kit
	Torx <sup>®</sup> Available



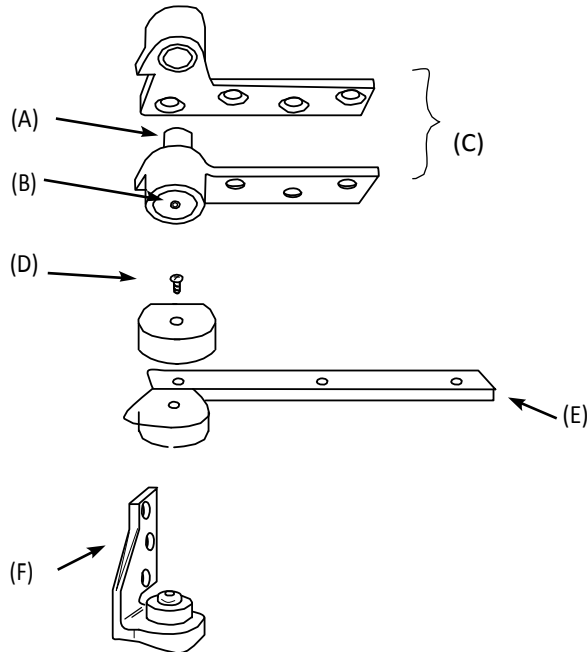
\*specify finish

## PIVOTS and PIVOT SETS PARTS DRAWINGS

### 117-1/4 PIVOT SET

Right Hand Shown  
 3/4" Offset Only

(A) Pivot Stud 181770-ASY
(B) Hex Cap 181778-*
(D) Arm Cap and Screw 12029-*AS
(E) Arm LH 11706LAS Y
(E) Arm RH 11705RAS Y
(F) Floor Portion Assy RH 17406R*AS
(F) Floor Portion Assy LH 17406L*AS



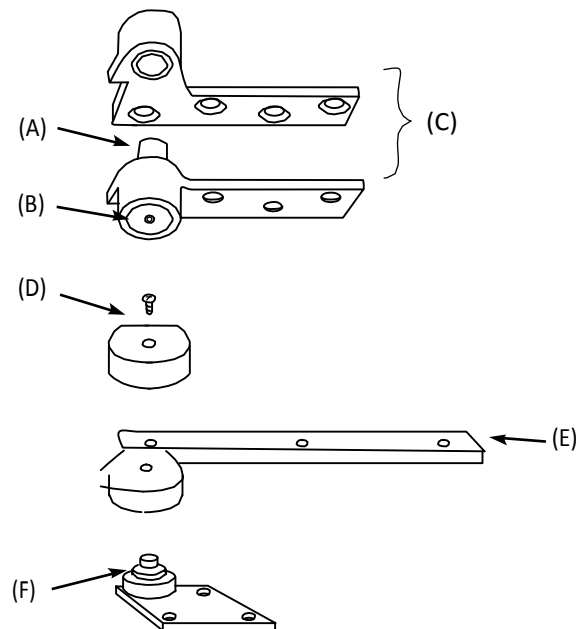
(C) 180 Top Pivot

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

(A) Pivot Stud 181770-ASY
(B) Hex Cap 181778-*
(D) Arm Cap and Screw 12029-*AS
(E) 3/4" Offset Arm LH 11706LAS Y
(E) 3/4" Offset Arm RH 11705RAS Y
(F) 117 Floor Portion Assy 17526-*AS (F117 Floor Portion Assy 17559-*AS)



(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 - *

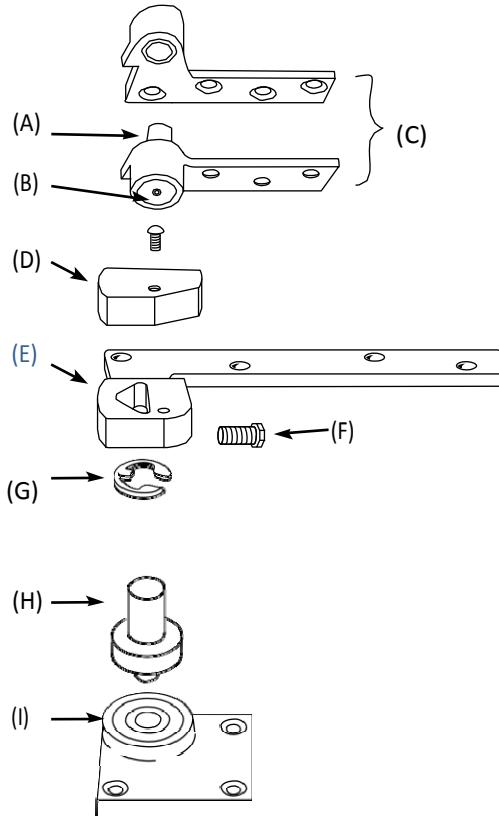
\*specify finish

# PIVOTS and PIVOT SETS PARTS DRAWINGS

## 147, F147 PIVOT SET

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

(A) Pivot Stud 181770-ASY
(B) Hex Cap 181778-*
(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 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



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

147 & F147 1-1/2 OS

(E) Arm x Locking Screw  
1-1/2" Offset 275167-\*

### Screw kits

180/F180 Screw kit 107014  
- \* Machine (2 req.)  
107114 - \* Wood (2 req.)

Arm Screw kit  
107044 Machine  
107144 Wood

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

\*specify finish

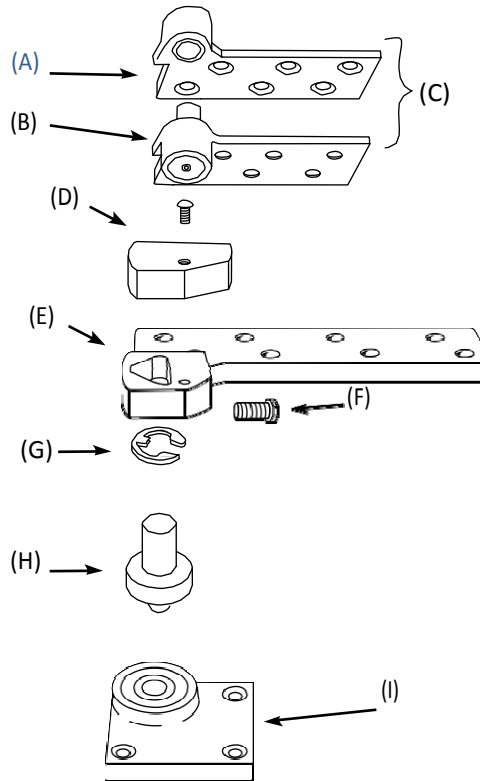


## PIVOTS and PIVOT SETS PARTS DRAWINGS

### L147, FL147 PIVOT SET

Right Hand  
Shown 3/4"  
Offset Only

(A) Pivot Stud 181770-ASY
(B) Hex Cap 181778-*
(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



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

(G) Arm Shims (2 per) 107071
(H) Spindle Stud 14714
(I) L147 Floor Portion x Bearing 14721-*AS

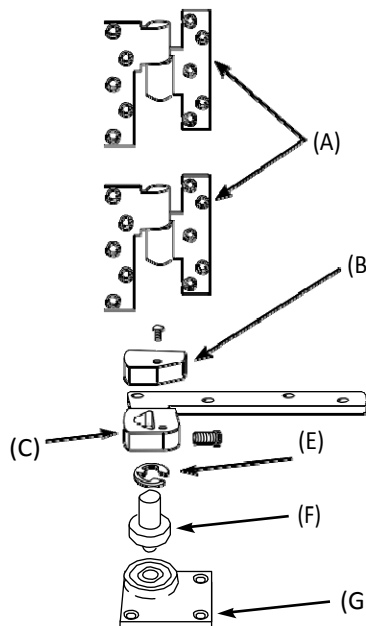
Screw kits
180/F180 Screw kit 107016 - * Machine ( 2 req.) 107116 - * Wood (2 req.)
Arm Screw kit 107048 Machine (2 req.) 107144 Wood (2 req.)
L147/F147 Bottom Pivot Screw kit (includes "E" ring shim) 107062-*

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



(A) M190 Intermediate Pivot  
(For Fire-Rated  
Doors order FM190)

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

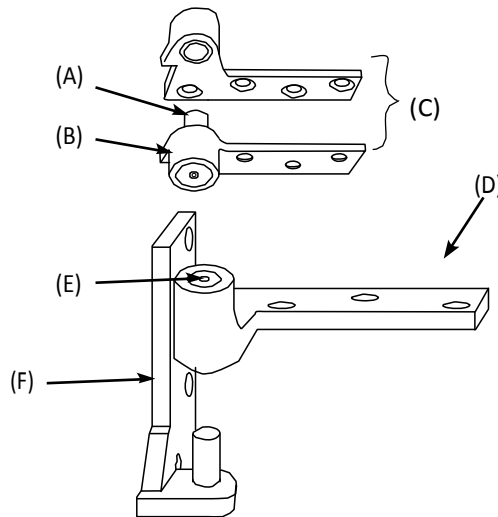
\*specify finish

## PIVOTS and PIVOT SETS PARTS DRAWINGS

### 195 PIVOT SET

Right Hand  
Shown 3/4"  
Offset Only

(A) Pivot Stud 181770-ASY
(B) Hex Cap 181778-*
(D) Door Portion Asy RH 19503-AS
(D) Door Portion Asy LH 19504-AS
(E) Cap 19511-*
(F) Jamb Portion Asy RH (Includes Stud) 19501-AS
(F) Jamb Portion Asy LH (Includes Stud) 19502-AS

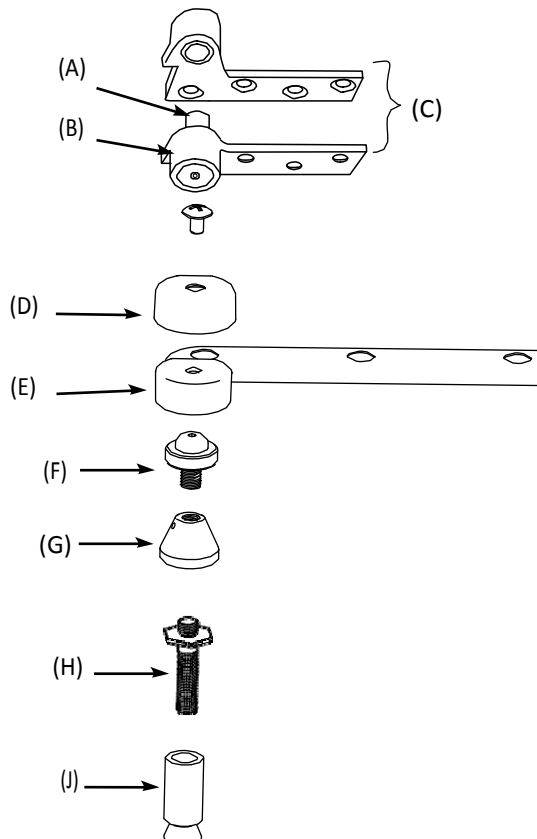


(C) 3/4" Offset Top Pivot Assembly  
180 (standard)  
F180 (Fire Rated)

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 PIVOT SET

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



(C) 180 Top Pivot

Screw kits
180 Screw kit 107014 - * Machine (2 req.) 107114 - * Wood (2 req.)
Bottom Arm Screw kit 173176 Wood and Machine

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

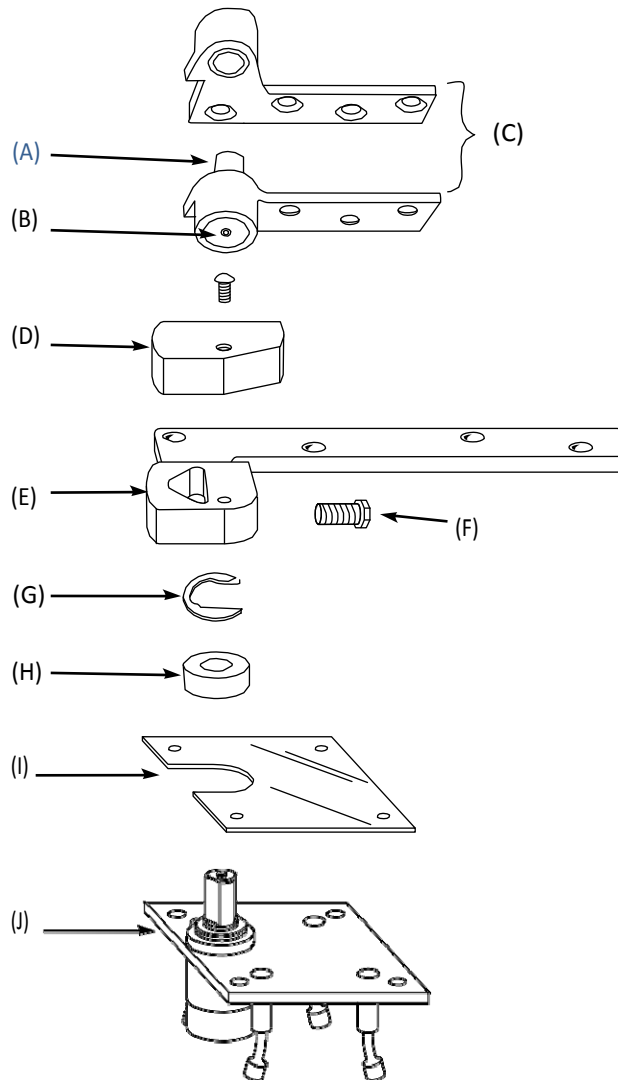
\*specify finish

## PIVOTS and PIVOT SETS PARTS DRAWINGS

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

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

(A) Pivot Stud 181770-ASY
(B) Hex Cap 181778-*
(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 3/4" Offset 275177 RH 3/4" Offset 275176 LH
(F) Arm Lock Screw Pkg (5 per) 88905-PKG
(G) Arm Shim kit (5 per) 275065-PKG
(H) Spindle Shoulder Collar 16301*
(I) Floor Plate x Screws 1174050-*
(J) 117-1/2 & F117-1/2 Floor Portion Assembly X01176350



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

1-1/2" Offset Arm  
 275167-\*

Screw kits
180/F180 Screw kit 107014 - * Machine (2 req.) 107114 - * Wood (2 req.)
Floor Plate Screw kit 107004-*
Arm Screw kit 107044 - * Machine 107144 - * Wood

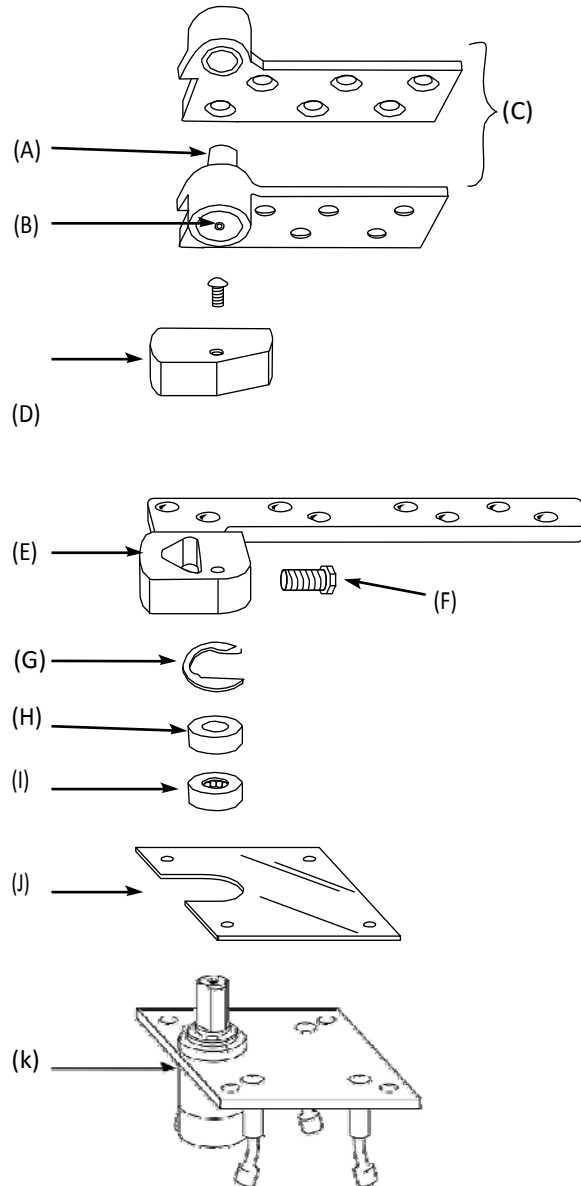
\*specify finish

# PIVOTS and PIVOT SETS PARTS DRAWINGS

## L117, FL117 PIVOT SET

Right Hand Shown  
3/4" Offset Only

(A) Pivot Stud 181770-ASY
(B) Hex Cap 181778-*
(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
(G) Arm Shim kit (5 per) 275060-PkG
(H) Spindle Shoulder Collar 259500-*
(I) Heavy-Duty Thrust-Bearing 41204-PkG
(J) Floor Plate x Screws 1174050-*
(k) Floor Portion Assembly X01176351 Includes 41204-PkG



(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

Screw kits
L180/FL180 Screw kit 107016 - * Machine ( 2 req.) 107116 - * Wood (2 req.)
Arm Screw kit 107048 - * Machine ( 2 req.) 107114 - * Wood (2 req.)
Floor Plate Screw kit 107004 - * Machine ( 2 req.)

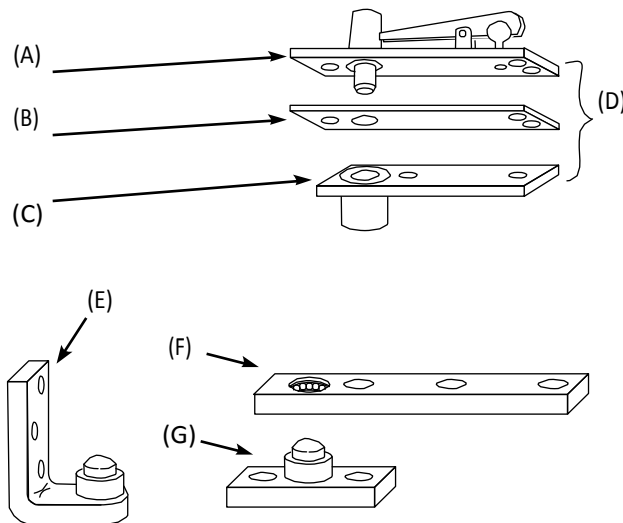
Special Note: FL117 is available for 1-3/4" doors only

\*specify finish

## 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



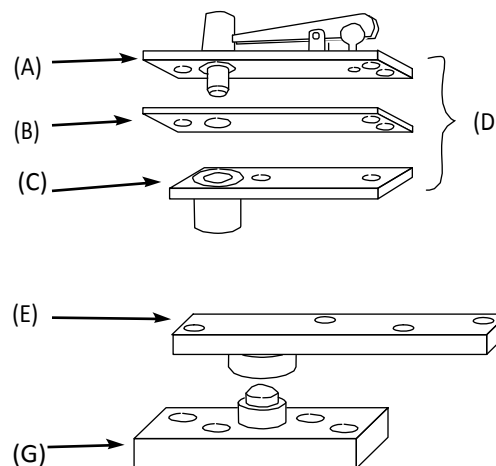
(D) 320 Top Pivot

Screw kits
320 Screw kit 107340 Machine & Wood
127-3/4 & 128-3/4 Screw kit 117127-*

\*specify finish

### 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-*



(D) 340 Top Pivot

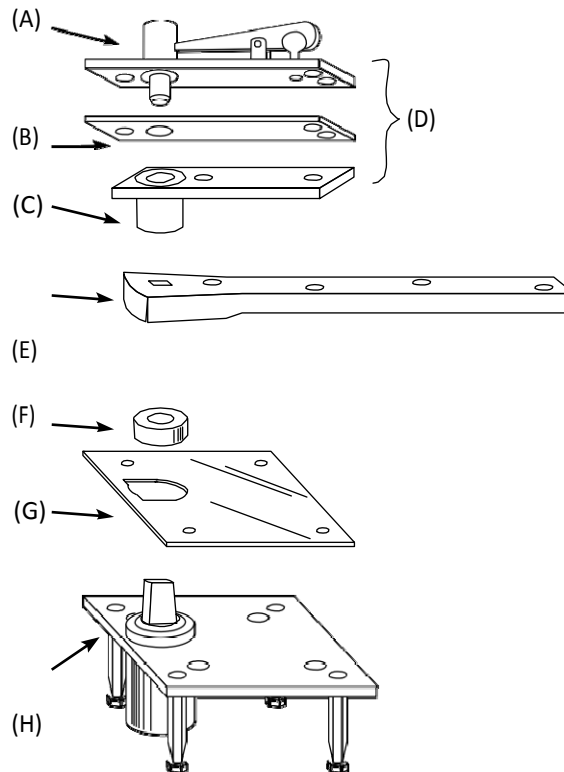
Screw kits
340 Top Pivot Screw kit 107329 Machine & Wood
370 Floor Portion 107370-*

\*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



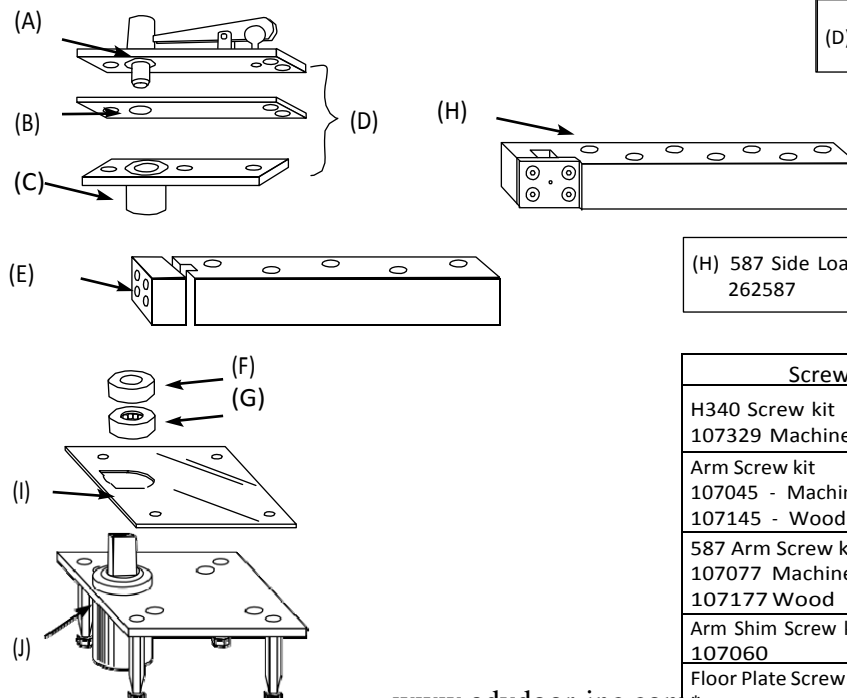
(D) 340 Top Pivot

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

(D) Top Pivot  
340

## H117-3/4 PIVOT SET

(A) Top Pivot Jamb Portion 308548
(B) Top Pivot Finish Plate 012202-*Pk(BRS) 012204-*Pk(SS)
(C) Top Pivot Door Portion 30141
(E) Standard End Load Arm Package 262022
(F) Spindle Shoulder Collar 259500-*
(G) Heavy-Duty Thrust Bearing 41204-PkG
(I) Floor Plate x Screws 1174020-*
(J) Floor Portion Assembly X01176322 Includes 41204-PkG



(D) 340 Top Pivot

(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-

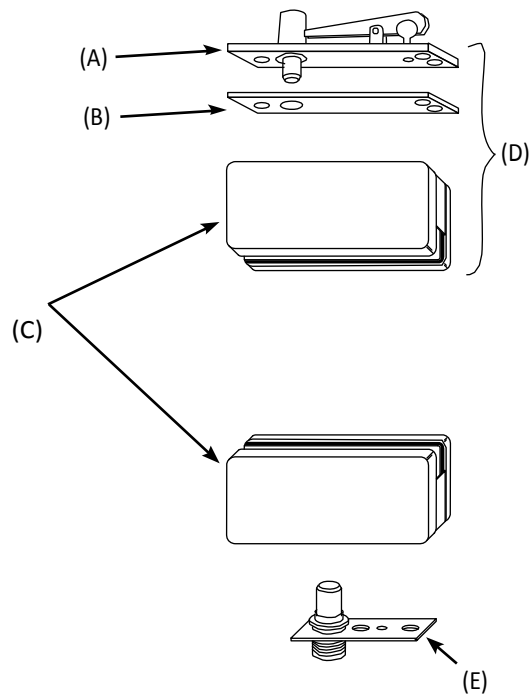
## PIVOTS and PIVOT SETS PARTS DRAWINGS

### 178 PIVOT SETS

(A) Top Jamb Portion 42801
(B) Finish Plate 012202-*Pk (BRS) 012204-*Pk (SS)
(C) Patch Fitting 7495-*

Top Pivot Screw kit 107329
-------------------------------

\*specify finish

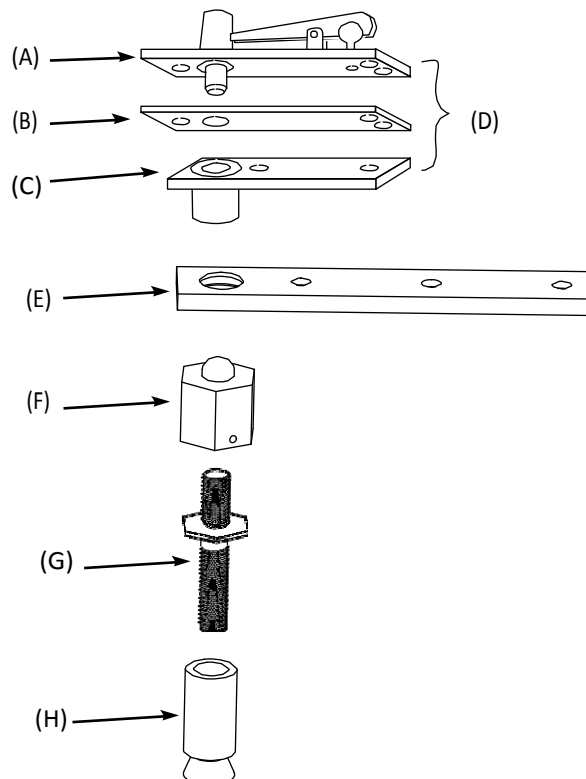


(D) Top Patch 7494-* Pk
(E) Bottom Pivot Floor Portion 74104

### 176 PIVOT SETS

(A) Top Pivot Jamb Portion 640-ASY
(B) Top Pivot Plate x Screws 12724-*Pk(SS) 12720- *Pk (BRG)
(C) Top Pivot Door Portion 12716
(E) Bottom Arm 12704
(F) Sleeve 176001
(G) Mounting Bolt 176002
(H) Floor Anchor 173010

\*specify finish



Screw kits
320 Screw kit 107340 Machine and Wood
Bottom Arm Screw kit 173176 Machine and Wood

