

# Pivot and Pivot Sets

Architectural Solutions for  
Durable and Efficient  
Hanging of Doors



**RIXSON**  
**ASSA ABLOY**

ASSA ABLOY, the global leader  
in door opening solutions

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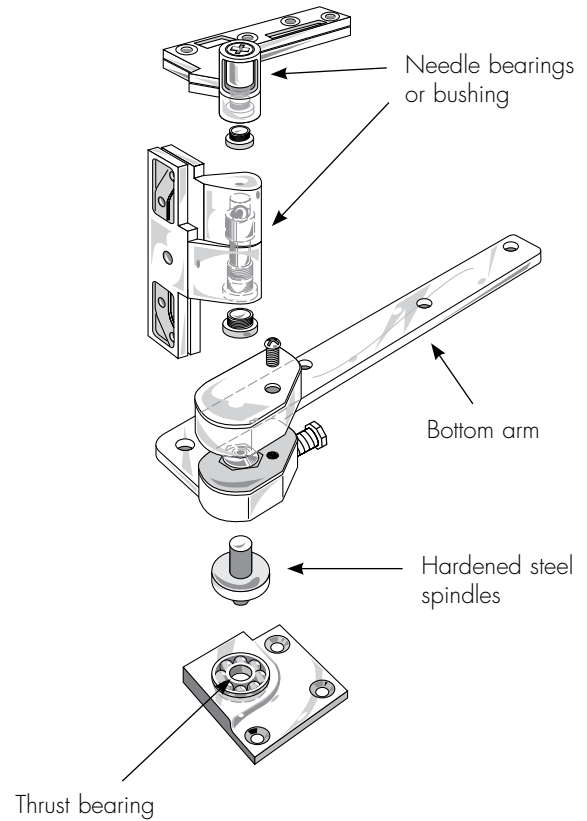
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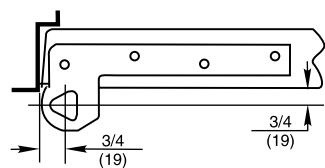
Pivot sets provide the best possible means of hanging a door. They are designed to work with the laws of physics to provide long-lasting performance and reliability.

- The weight of the door is supported at the bottom by the floor
  - Uses principles of gravity to its advantage
  - Door swings with less resistance
  - Heavier doors can be accommodated
- Reduced stress on frame
  - Fasteners are in shear, not tension
  - Eliminates door sag
  - Vertically adjustable
- Heavy-duty hardened steel spindles
  - Thrust bearing supports vertical load
  - Needle bearings and bushings for lateral force
  - Extra heavy-duty models also have an additional surface applied thrust bearing to handle heavier or high-traffic doors
- Offset pivots provide better weight distribution and can accommodate taller doors
- Intermediate pivots are used for alignment and to ensure proper installation of bottom pivot or floor closer
- Center hung pivots are used for aesthetics or if the pivot point is going to be moved nearer the lock edge of the door
- **PIVOTS DO NOT RETURN DOORS TO CENTER.** Pivots in this section are for door hanging means only. For door control see door closer catalog sections.



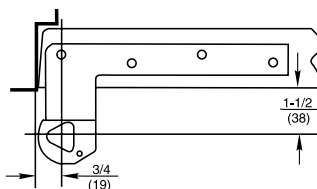
147 Pivot set and M19  
Intermediate pivot shown  
(recommended)

### 1. OFFSET VS. CENTER HUNG APPLICATION



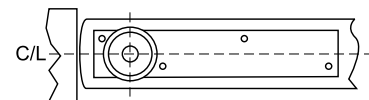
#### 3/4" Offset

Pivot point located 3/4" from the heel edge of the door and 3/4" from face of door



#### 1-1/2" Offset

Pivot point located 3/4" from the heel edge of the door and 1-1/2" from face of door. Extended offsets should be used when there is cladding on the face of door or trim on the frame



#### Center Hung

Pivot point centered in thickness of door.

### 2. SIZE OF DOOR (WIDTH, HEIGHT, THICKNESS)

Estimated door weights pounds per square foot (PSF)

DOOR MATERIAL	DOOR THICKNESS		
	1-3/4"	2-1/4"	3"
Hollow Metal	6.5	7	—
Solid Core Wood	7	9	11.5
Aluminum/Glass Storefront	3.5	4	—
Bullet Resistent	20	21	—
MDF	7	9	11.5
TEMPERED GLASS	GLASS THICKNESS		
	3/8"	1/2"	3/4"
	5	7	9.75
LEAD LINING (add to door weight)	LEAD THICKNESS		
	1/16"	1/8"	1/4"
	5	8	9.75
3/4" CLADDING (add to door weight)	CLADDING MATERIAL		
	Wood	Stone	Bronze
	3	10.5	28

Example: 3/6 X 8/0 X 1/2" Tempered Glass Door

Door: 28sq ft x 7lb./sq ft = 196lbs

For doors of other sizes, consult factory

Example: 3/0 X 7/0 X 1-3/4" WD X 1/4" Lead lining


Door: 21sq ft x 7lb./sq ft = 147lbs

Lead Lining: 9.75 = 204.75lbs


Total Door weight: 351.75lbs

### 2. SIZE OF DOOR (WIDTH, HEIGHT, THICKNESS)

Application	Daily Cycles	Yearly Cycles	
Large department store entrance	5,000	1,500,000	
Large office building entrance	4,000	1,200,000	
Theater entrance	1,000	365,000	
School entrance	1,250	225,000	High
School restroom door	1,250	225,000	
Store or bank entrance	500	150,000	
Office building restroom door	400	118,000	
School corridor door	80	15,000	
Office building corridor door	75	22,000	Average
Store restroom door	60	18,000	
Residential entrance door	40	15,000	
Residential restroom door	25	9,000	
Residential hallway door	10	3,600	Low
Residential closet door	6	2,200	

**Fire Rated – Prefix F** 

Pivots for fire rated doors (up to 3 hours) include a steel top pivot and must have additional steel intermediate pivots. For F519 pocket pivot, door assemblies must have been tested with pocket pivots.

**Twenty-minute label – Suffix - 20** 

This UL rating is for 20-minute assemblies. Product with this rating has an authorized label.

**Handing**

All offset pivots and pivot sets are handed. Suffix RH or LH.

**Extended Spindle – Suffix extra length needed**

Any special coverings or severe door undercuts will affect the spindle height. In these applications, an extended spindle may be required. Most standard spindle heights accommodate door undercuts up to 1/2". Extended spindles available in 1/2" increments up to 2" longer than standard. See template.

**1-1/2" Offset – Suffix 1-1/2**

Offset is the distance from the face of the door to the pivot point. Extended offsets should not be used unless there is cladding on the face of the door or there is trim to clear on the frame. 1-1/2" offset arms and pivots are for doors with cladding or trim that project 3/4" from the face of the door. The greater the offset the less weight can be carried by the pivot.

**Less Top Pivot – Suffix LTP**

For conditions requiring special top pivots or for arch top doors, the pivot set should be ordered less top pivot – LTP. For offset installations, an additional load bearing intermediate (side jamb) M190 pivot is required. All intermediate pivots for that opening should be M190's, not M19's.

**Special Layouts – Suffix SPLO#**

Unique installations or specially engineered products are called special layouts. These numbers must be assigned by the technical support department and they must be called out specifically by their number when ordering.

**Door Thickness – Suffix 1-3/4", 2", 2-1/4", 2-1/2" or 3"**

When ordering L series pivot for lead-lined doors, the thickness of the door must be given. The purpose of the L product is to have screws spaced so they straddle the lead in the center of the door. Also used when lead lining is under the skins of the door. Recommended for use on extra heavy or high traffic doors.

**Electrolynx® Connectors – Suffix QC – Number of Wires**

The plug-in connectors, with easy color coded wire system, eliminate matching wires. Must be used with ASSA ABLOY doors, frames and hardware. Available 4, 6, 8 or 12 wires for most products.

*Hardwiring Made Easy®*

**CERTIFICATIONS**

All Rixson® pivots and pivot sets are in compliance with ANSI/BHMA A156.4 Standards. See individual products for sub sections.

**LIMITED WARRANTY**

Rixson pivot sets are warranted for 2 years for defect. See Rixson Price Book for specific details of the limited warranty.

**SPECIFICATIONS**

All pivots and pivot sets shall be of one manufacturer. All heavy-duty pivots shall have a minimum of 2 bearings internal to the bottom pivot. One shall be a thrust bearing and the other a needle bearing. Separate bearing surfaces shall be in the top pivot. Lead-lined door units and high traffic pivots shall have additional thrust bearing. Fire rated pivot sets shall have steel top pivots. Fire rated doors require steel intermediate pivots.

## MODEL 117-1/4

### Application

- Interior Doors
- Weight to 250 lbs.\*
- Door Width up to 3'6" (1067mm)
- Handed



ANSI /C07172

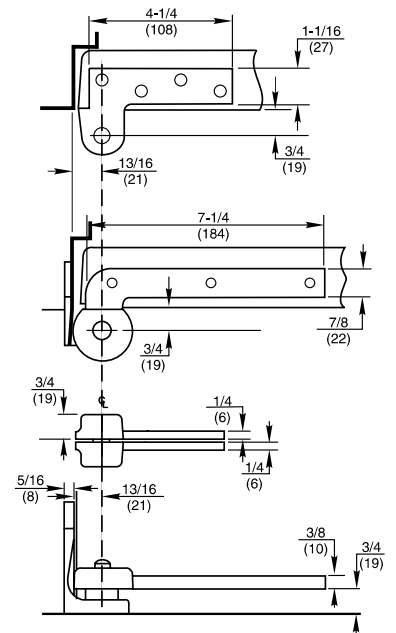
\* Door size & weight guidelines are determined using the appropriate number of intermediate pivots

### Product Description & Features

- Standard top pivot 180 included
- 119 intermediate pivot recommended (order separately); see page 18
- 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

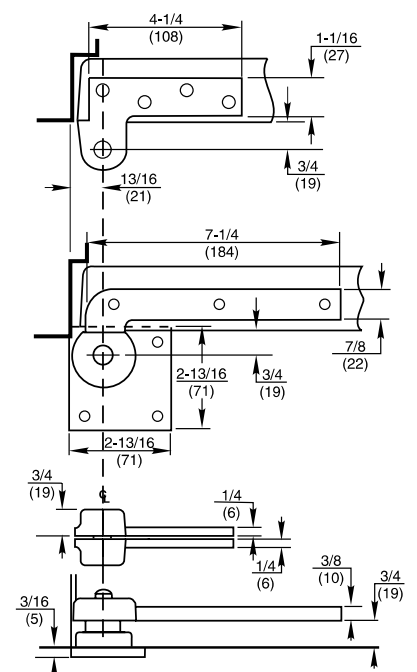
\* Door size & weight guidelines are determined using the appropriate number of intermediate pivots

### Product Description & Features

- Standard top pivot 180 included
- 119 intermediate pivot recommended (order separately); see page 18
- 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), see page 18
- 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
- Doors will swing 180°, trim permitting

### Technical Information

Frame stop required



MODEL 173

**Application**

- Interior Doors
- Weight 150 lbs
- Door Sizes up to 3'0" x 8'0" x 1-3/4"
- Handed



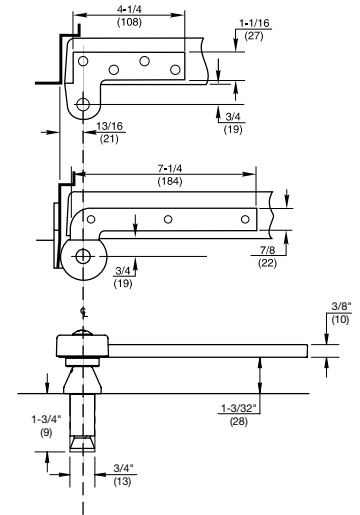
ANSI/C07162/C07202

**Product Description & Features**

- Standard top pivot 180 included
- 119 intermediate pivot recommended for all doors over 6'8" (order separately) see page 18
- 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



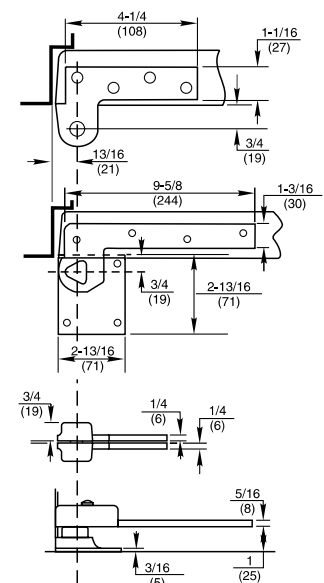
ANSI/C07162/C07202

**Product Description & Features**

- Standard top pivot 180 included
- M19 intermediate pivot required (order separately); see page 18
- 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), see page 18
- For 20-minute label suffix “-20” to the part number
- Non-ferrous base material
- Doors 60" (1524mm) to 90" (2286mm) in height should use one intermediate pivot. Each additional 30" (762mm) of door height warrants another intermediate pivot
- 3/4" (19mm) offset (measured from centerline of pivot to face of door)
- Available for 1-1/2" (38mm) offset (**door weight 350 lbs.**) for doors with cladding or frame molding
- Door edges must be beveled 1/8" in 2"
- Furnished with wood and machine screws
- Extended spindles available in 1/2" (13mm) increments up to 2" (51mm) longer than standard
- Doors will swing 180°, trim permitting

**Technical Information**

Frame stop required



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



## 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



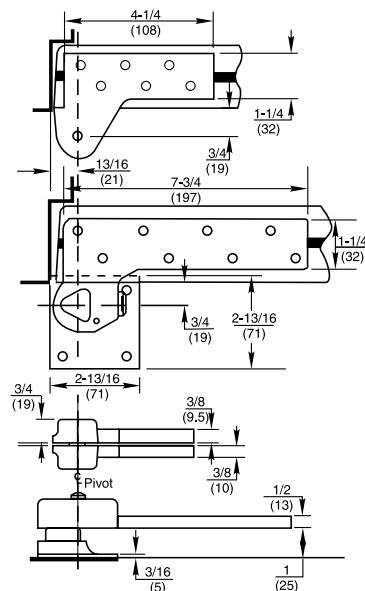
ANSI/C07162/C07202

### Product Description & Features

- Standard top pivot L180 included
- ML19 intermediate pivot required (order separately), see page 19
- 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), see page 19
- 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

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



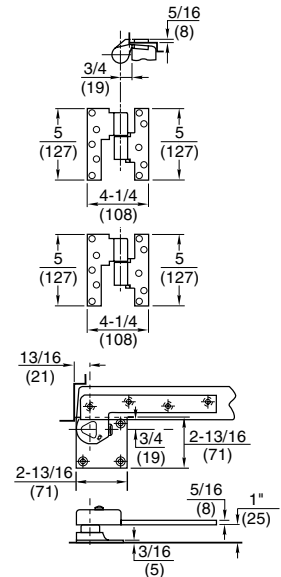
ANSI/C07162 (modified)/C07202

**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



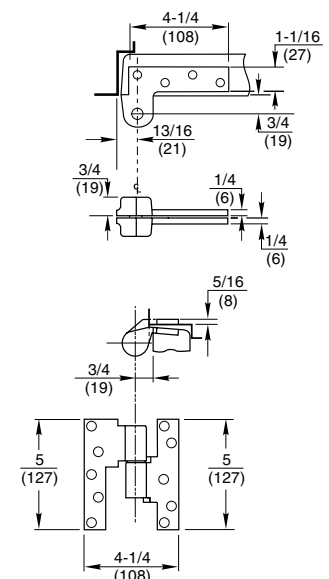
ANSI/C07162 (modified)

**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



### MODEL 195

#### Application

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



ANSI/C07172

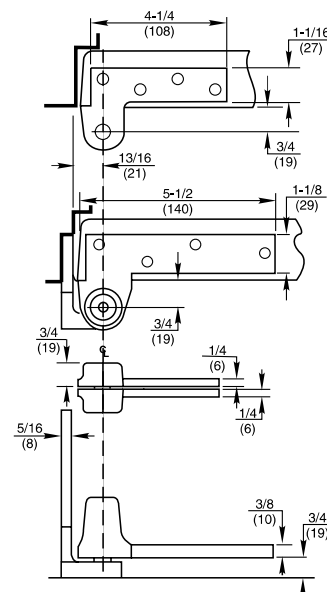
\* Door size & weight guidelines are determined using the appropriate number of intermediate pivots

#### Product Description & Features

- Standard top pivot 180 included
- 119 or M19 intermediate pivots are recommended (order separately), see page 18
- Bottom pivot mortised into side jamb
- 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), see page 18
- 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



MODEL 117-1/2

**Application**

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



ANSI/C07121/C07202

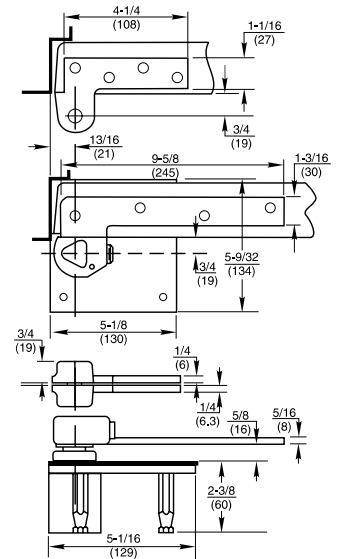
\* Door size & weight guidelines are determined using the appropriate number of intermediate pivots

**Product Description & Features**

- Standard top pivot 180 included
- M19 intermediate pivot required (order separately), see page 18
- 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), see page 18
- For 20-minute label suffix “-20” to the part number
- Non-ferrous base material
- Doors 60" (1524mm) to 90" (2286mm) in height should use one intermediate pivot. Each additional 30" (762mm) of door height warrants another intermediate pivot
- 3/4" (19mm) offset (measured from centerline of pivot to face of door)
- Available for 1-1/2" (38mm) offset (**door weight 350 lbs.**) for doors with cladding or frame molding
- Door edges must be beveled 1/8" in 2"
- Furnished with wood and machine screws
- Extended spindles available in 1/2" (13mm) increments up to 2" (51mm) longer than standard
- Doors will swing 180°, trim permitting

**Technical Information**

Frame stop required



## 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

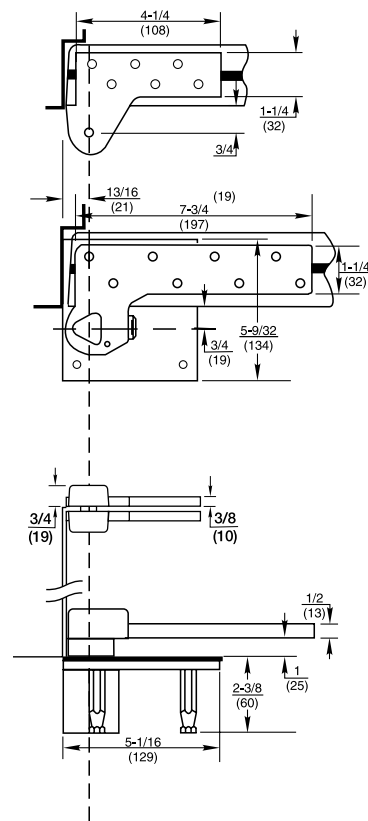
\* Door size & weight guidelines are determined using the appropriate number of intermediate pivots

### Product Description & Features

- Standard top pivot L180 included
- ML19 intermediate pivot required (order separately), see page 19
- 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

MODEL 180

**Application**

- Full Mortise
- Non-handed

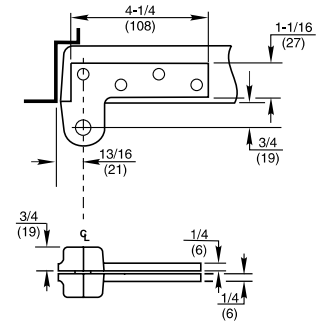


**Product Description & Features**

- 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
- Handed

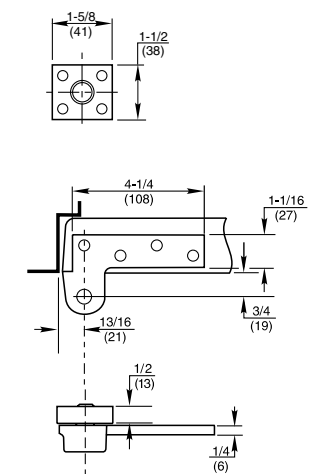


**Product Description & Features**

- 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



### MODEL L180

#### Application

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

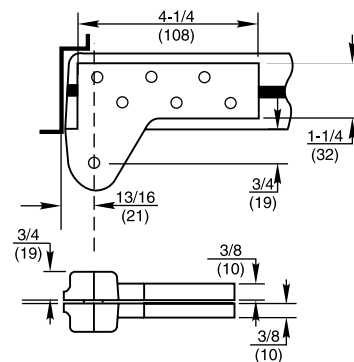


#### Product Description & Features

- 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

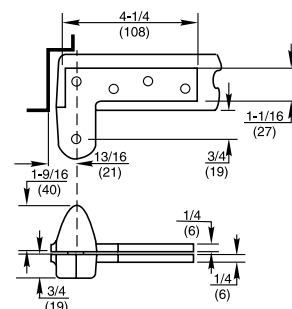


#### Product Description & Features

- 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® screws
- Available with longer than standard pivot pins. Increments are 1/4" (6mm), 1/2" (13mm), 3/4" (19mm) only

#### Technical Information

Frame stop required



MODEL 280

**Application**

- Half Surface
- Handed

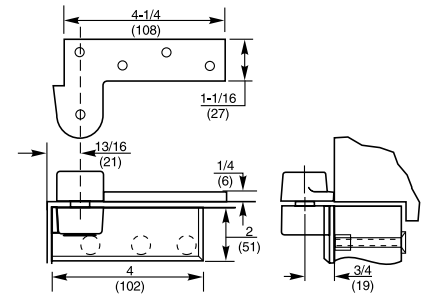


ANSI/C07501

**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

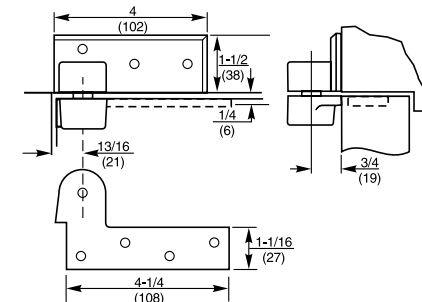


ANSI/C07511

**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**





### MODEL 480

#### Application

- Full Surface
- Handed

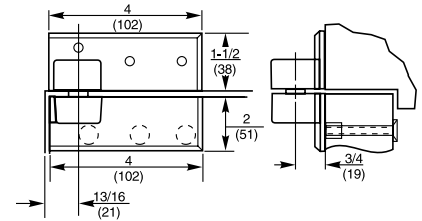


ANSI/C07521

#### 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

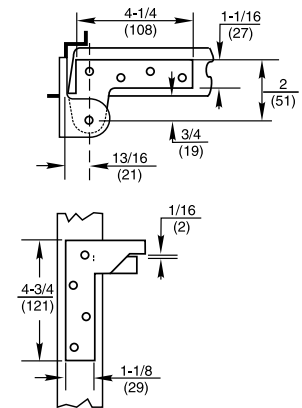


#### Product Description & Features

- 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

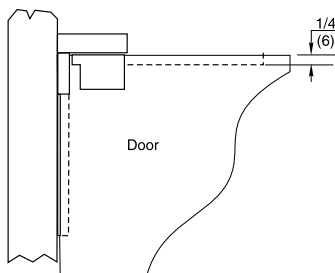
#### Technical Information

##### Frame stop required

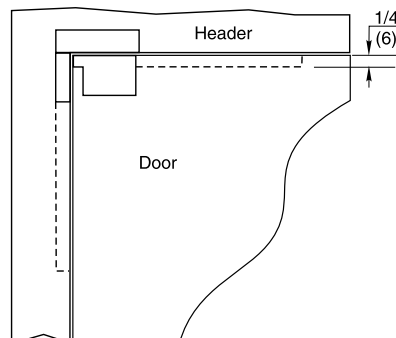


#### Technical Information

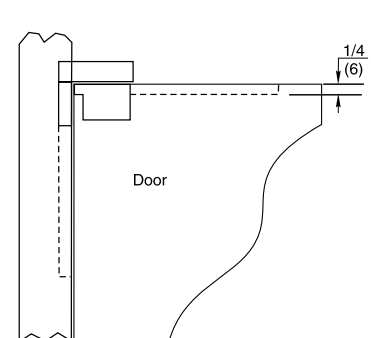
Surface Mount Jamb Double Mortise Door



Mortise Jamb, Header and Door



Mortise Jamb and Door



MODEL 119

**Application**

- Full Mortise
- Handed

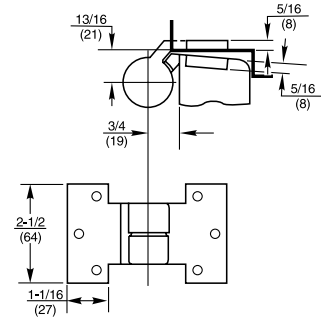


ANSI/C07382

**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

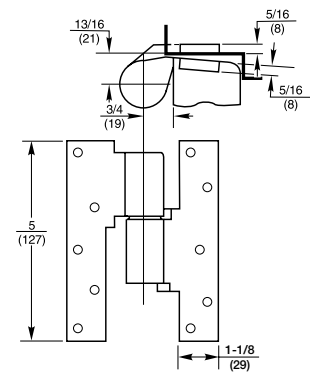


ANSI/C07321/C07371

**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



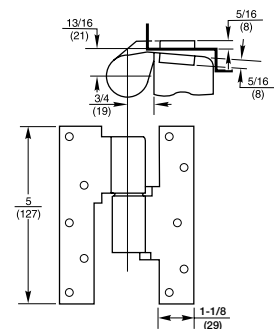
ANSI/C07321/C07371

**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**



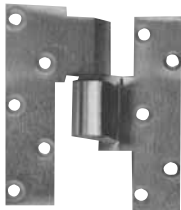
# PIVOTS AND PIVOT SETS

## INTERMEDIATE OR SIDE JAMB PIVOTS

### MODEL ML19

#### Application

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



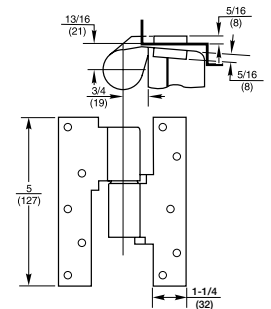
ANSI/C07311

#### 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



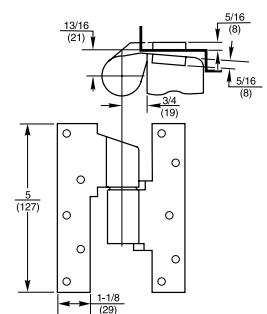
ANSI/C07361

#### 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® screws

#### Technical Information



MODEL 219

**Application**

- Half Surface
- Handed

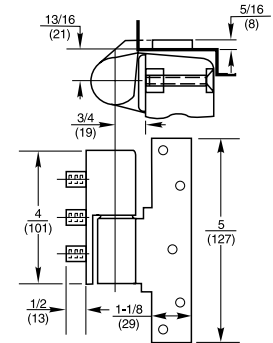


ANSI/C07331

**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

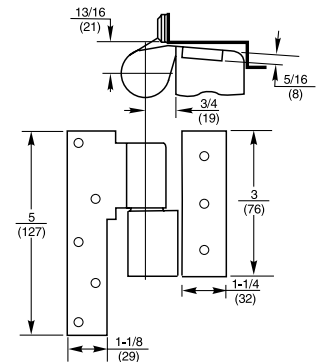


ANSI/C07341

**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

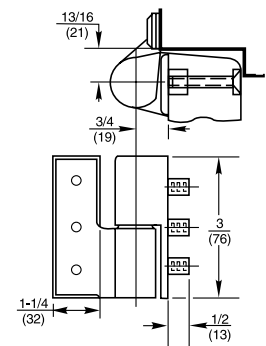


ANSI/C07351

**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

**Technical Information**



# PIVOTS AND PIVOT SETS

## ELECTRIFIED INTERMEDIATE OR SIDE JAMB PIVOTS

### MODEL E-M19

#### Application

- Offset Hung
- Electric Pivot for Power Transfer
- Handed

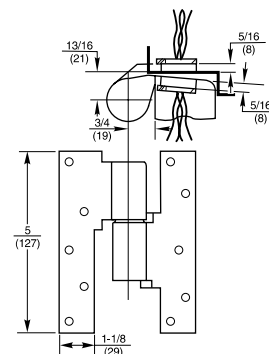


Whenever power transfer pivots are used, the leaves must not be separated

#### Product Description & Features

- Not load-bearing
- Door and jamb portion are factory assembled and cannot be separated
- Always use M19 intermediate pivot to install door
- Specify four, six, eight or twelve wires
- Electrolynx® option available, suffix "QC#" (number of wires)
- 24-gauge wire is rated at 2 amps for low voltage, class II wiring applications
- Available for fire door assemblies (ferrous material) – specify E-FM19
- For 20-minute label, suffix "-20" to the part number
- 3/4" (19mm) offset
- Available 1-1/2" offset
- Door edges must be beveled in 1/8" in 2"
- Furnished with wood and machine screws

#### Technical Information



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### MODEL E-M19U

#### Application

- Offset Hung
- Electric Pivot for Power Transfer
- Handed
- For Electrified Panic Devices with Large Inrush Current

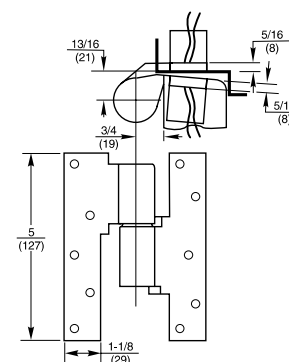


Whenever power transfer pivots are used, the leaves must not be separated

#### Product Description & Features

- Not load-bearing
- Always use M19 intermediate pivot to install door
- Door and jamb portion are factory assembled and cannot be separated
- Junction boxes are supplied with pivots
- Two each 18 gauge wires. Each wire is rated at 2 amps continuously. UL listed for 24-volt, Class I wiring
- Electrolynx® option not available
- Not available in ferrous material
- 3/4" (19mm) offset
- Door edges must be beveled in 1/8" in 2"
- Furnished with wood and machine screws

#### Technical Information



MODEL E-ML19

**Application**

- Offset Hung
- Lead Lined or Extra Heavy Doors
- Electric Pivot for Power Transfer
- Handed

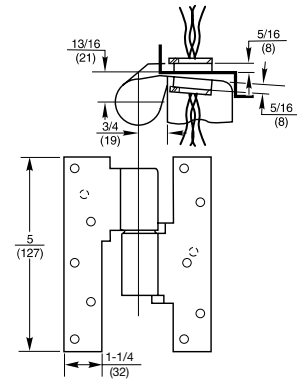


Whenever power transfer pivots are used, the leaves must not be separated

**Product Description & Features**

- Not load-bearing
- Always use ML19 intermediate pivot to install door
- Door and jamb portion are factory assembled and cannot be separated
- Specify four, six, eight or twelve wires
- ElectroLynx® option available, suffix "QC#" (number of wires)
- 24-gauge wire is rated at 2 amps for low voltage, class II wiring applications
- Available for fire door assemblies (ferrous base material) specify E-FML19
- For 20-minute label, suffix "-20" to the part number
- 3/4" (19mm) offset
- Available 1-3/4" doors only
- Door edges must be beveled in 1/8" in 2"
- Furnished with wood and machine screws

**Technical Information**



MODEL CS-M19

**Application**

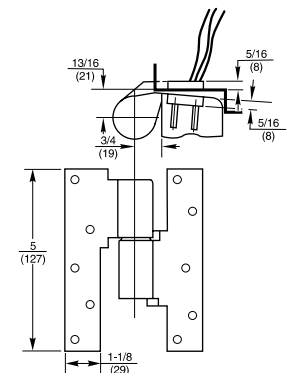
- Offset Hung
- Electric Pivot for Door Position Monitoring
- Handed



**Product Description & Features**

- Magnetically activated reed switch in frame leaf of pivot monitors door position
- Always use M19 intermediate pivot to install door
- Not load-bearing
- Adjusting screw is easy to set on-site after installation. Screw is disguised as an installation screw
- Switch rated at 0.3 amps and 28 volts maximum, three each 22-gauge wires
- ElectroLynx® option not available
- 3/4" (19mm) offset
- Available 1-1/2" offset
- Door edges must be beveled in 1/8" in 2"
- Furnished with wood and machine screws

**Technical Information**



### CS-E-M19

#### Application

- Offset Hung
- Electric Pivot for Door Position Monitoring + Power Transfer
- Handed

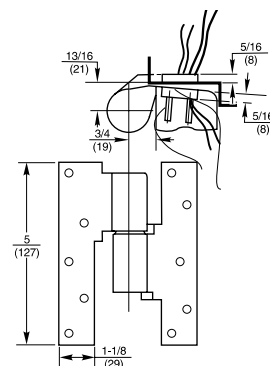


Whenever power transfer pivots are used, the leaves must not be separated

#### Product Description & Features

- Always use M19 intermediate pivot to install door
- Not load-bearing
- Magnetically activated reed switch in frame leaf of pivot monitors door position
- Adjusting screw is easy to set on-site after installation. Screw is disguised as an installation screw
- Door and jamb portion are factory assembled and cannot be separated
- For power transfer specify four, six, eight or twelve wires. 24-gauge wire is rated @ 2 amps for low voltage, class II wiring application
- Switch rated at 0.3 amps and 28 volts maximum. Three each 22 gauge wires only
- Electrolynx® option available for power transfer only, suffix "QC#" (number of wires) – Specify four, six, eight or twelve wires
- Not available in ferrous material
- 3/4" (19mm) offset
- For 20-minute label, suffix -20
- Available 1-1/2" offset
- Door edges must be beveled in 1/8" in 2"
- Furnished with wood and machine screws

#### Technical Information



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### CS-ML19

#### Application

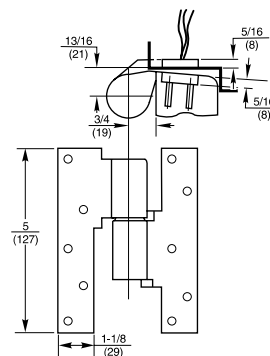
- Offset Hung
- Lead Lined or Extra Heavy Doors
- Electric Pivot For Door Position Monitoring
- Handed



#### Product Description & Features

- Always use ML19 intermediate pivot to install door
- Not load-bearing
- Door and jamb portion are factory assembled and cannot be separated
- Magnetically activated reed switch in frame leaf of pivot monitors door position
- Adjusting screw is easy to set on-site after installation. Screw is disguised as an installation screw
- Switch rated at 0.3 amps and 28 volts maximum, three each 22 gauge wires
- Electrolynx® option not available
- 3/4" (19mm) offset
- 1-3/4" door only
- Door edges must be beveled in 1/8" in 2"
- Furnished with wood and machine screws

#### Technical Information



MODEL F519

Application

- Pocket Door Pivot
- Non-handed

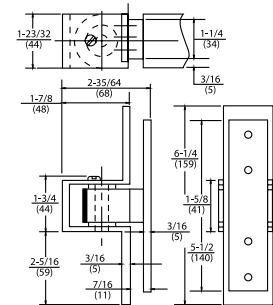


ANSI/C07611

Product Description & Features

- Full mortise, non-handed pivot for pocket door applications
- Heavy-duty steel pivot with ball bearings
- Allows doors to swing 90°
- Minimum three pocket pivots per door
- Doors 60" (1524mm) to 90" (2286mm) in height require four pocket pivots. Every additional 30" (762mm) of door height warrants another pocket pivot
- UL listed for all labeled pocket fire-door assemblies up to and including 3 hours
- Fire-rated door assemblies must have been tested with pocket pivots
- Furnished with wood and machine screws

Technical Information



MODEL E-F519

Application

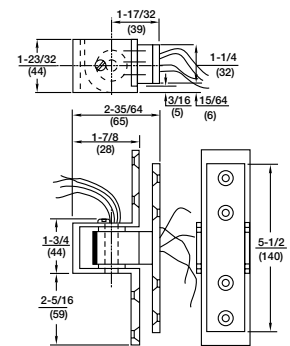
- Pocket Door Pivot
- Electric Pivot for Power Transfer
- Non-handed



Product Description & Features

- Full mortise, non-handed pivot for pocket door applications
- Always use as middle pivot
- Available with four wires only
- ElectroLynx® option available, suffix "QC4"
- 24-gauge wire is rated at 2 amps for low voltage, class II wiring applications
- Heavy-duty steel pivot with ball bearings
- Allows doors to swing 90°
- Door and jamb portions are factory assembled and cannot be separated
- Minimum three pocket pivots per door
- Doors over 90" (2286mm) in height require four pocket pivots. Every additional 30" (762mm) of door height warrants another pocket pivot
- Fire-rated door assemblies must have been tested with pocket pivots
- Furnished with wood and machine screws

Technical Information



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# PIVOTS AND PIVOT SETS CENTER HUNG

## MODEL 127-3/4

### Application

- Interior Doors
- Weight to 200 lbs.
- Door Sizes up to 3'6" x 8'6" (1067 x 2591mm)
- Non-handed



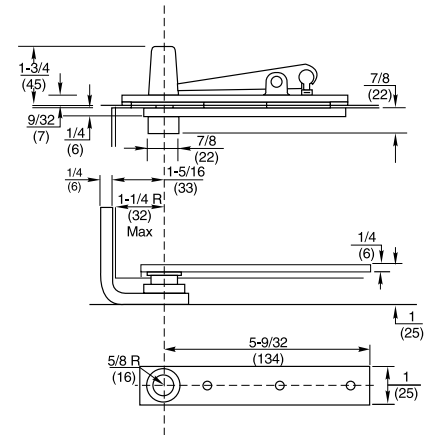
ANSI/C07042

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" x 8'6" (1067 x 2591mm)
- Non-handed



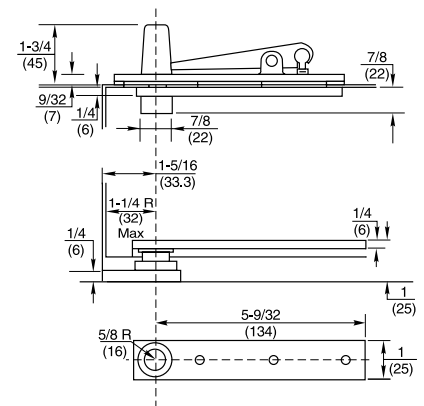
ANSI/C07032

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

**Application**

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



ANSI NO/C07032

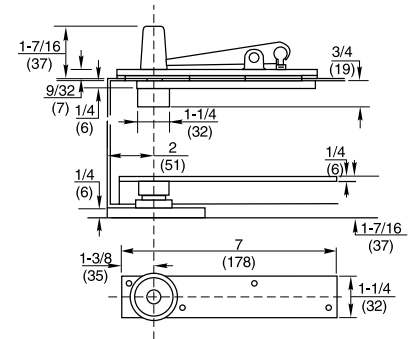
Center hung pivots are door hanging means only. To close doors, see floor closer sections of the catalogs.

\* For doors taller than 8'6" use top pivot 345 in lieu of 340

**Product Description & Features**

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

**Technical Information**



MODEL 117-3/4

**Application**

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



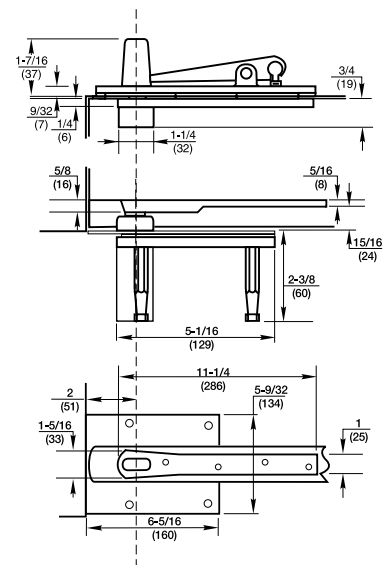
Center hung pivots are door hanging means only. To close doors, see floor closer sections of the catalogs.

\* For doors taller than 8'6" use top pivot 345 in lieu of 340

**Product Description & Features**

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

**Technical Information**



## MODEL H117-3/4

### Application

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



ANSI/C07011

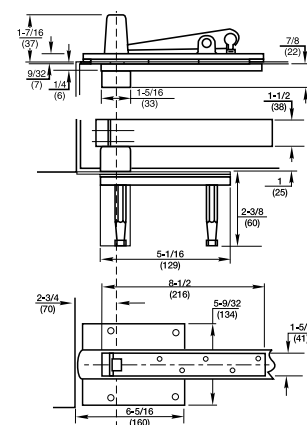
Center hung pivots are door hanging means only. To close doors, see floor closer sections of the catalogs.

\* 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

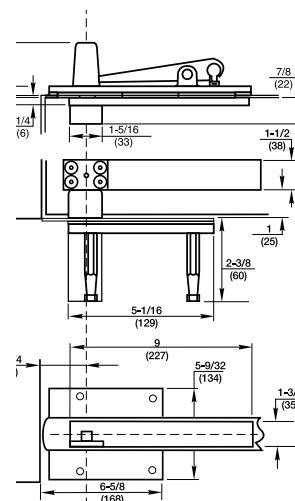
Center hung pivots are door hanging means only. To close doors, see floor closer sections of the catalogs.

\* 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



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

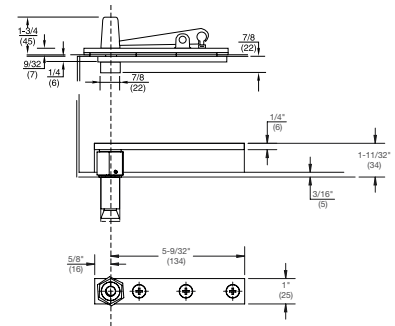


ANSI/CO7032

**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**

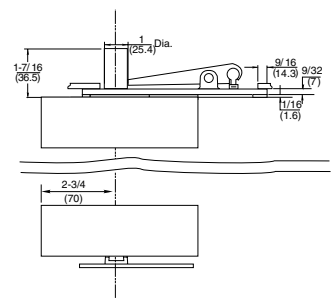
- Interior Doors
- Weight to 175 lbs.
- Door Sizes up to 3'0" x 8'0" (914 x 2591 mm)
- Non Handed



**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.\*

### MODEL 320

#### Application

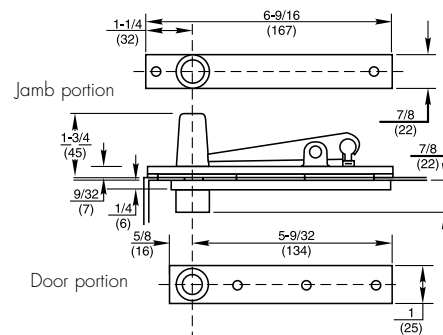
- Fully Concealed
- Non-handed



#### 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

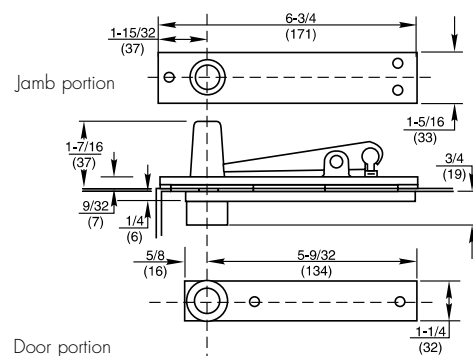
- Fully Concealed
- Non-handed



#### 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

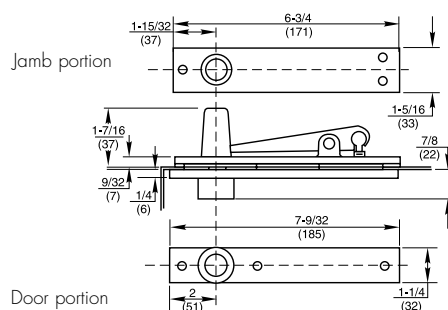
- Fully Concealed
- Heavy-Duty
- Non-handed



#### 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



MODEL 345

**Application**

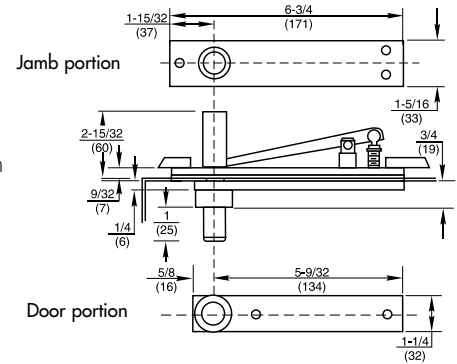
- Fully Concealed
- Center Hung
- Non-handed
- Earthquake Tolerant
- Taller Doors



**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**

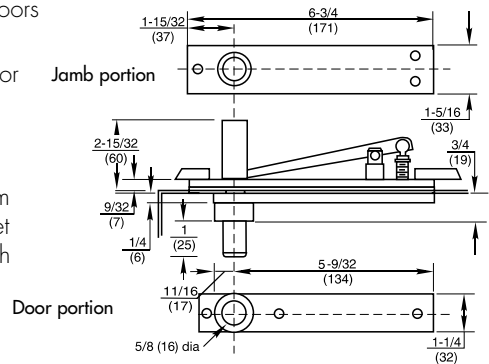
- Fully Concealed
- Center Hung
- Non-handed
- Earthquake Tolerant
- Taller Doors



**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 – 1 1/16" (17mm) diameter pivot pin
- Heavy-duty needle bearing
- Completely concealed when door is closed
- Furnished with wood and machine screws

**Technical Information**



# PIVOTS AND PIVOT SETS

## CENTER HUNG TOP PIVOTS

### MODEL 340 X 102

#### Application

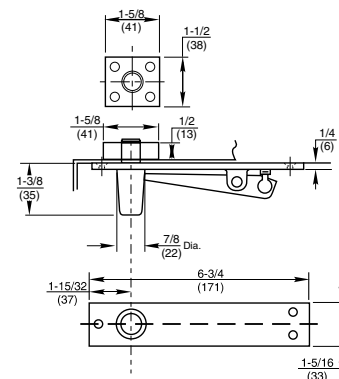
- Fully Concealed
- Non-handed



#### 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

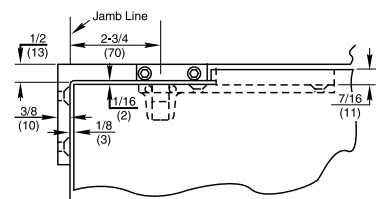
- Surface mounted
- Handed doors up to 3'6" wide



#### 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



MODEL E-H340

**Application**

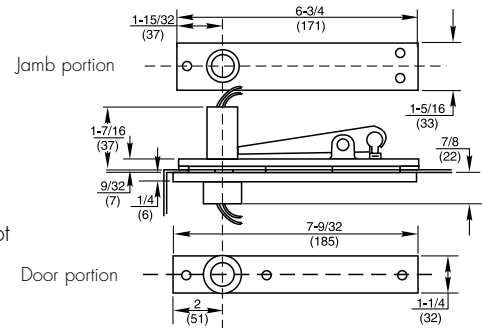
- Center Hung
- Top Pivot for Power Transfer
- Non-handed



**Product Description & Features**

- Walking beam type pivot – 11/16" (17mm) diameter pivot pin with 3/4" (19mm) engagement
- Can be used with any center hung bottom pivot or floor closer. Order the pivot set LTP (less top pivot) with E-H340 as a separate line
- Heavy-duty needle bearing
- Specify two, four, six, eight or twelve wires
- Two-wire is available in 18 gauge and is not available Electrolynx®
- Four, six, eight and twelve wires are 24 gauge and available in Electrolynx®. Suffix QC# (number of wires)
- Completely concealed when door is closed
- Furnished with wood and machine screws

**Technical Information**



Hardwiring Made Easy®



MODEL E-H345

**Application**

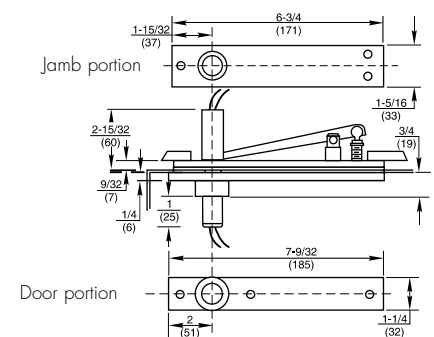
- Fully Concealed
- Center Hung
- Top Pivot for Power Transfer
- Non-handed
- Earthquake Tolerant
- Taller Doors



**Product Description & Features**

- Walking beam-type pivot – 11/16" (17mm) diameter pivot pin
- Longer pivot pin throw engages in top of door 1-3/4" (44mm). Ideal for locations where there is a fear of dramatic building settling
- 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 the pivot set LTP (less top pivot) with E-H345 as a separate line
- Used with heavy-duty pivots & floor closers
- Heavy-duty needle bearing
- For doors over 8'6" in height
- Specify two, four, six, eight or twelve wires
- Two-wire is available in 18 gauge and is not available with Electrolynx®
- Four, six, eight and twelve wires are 24 gauge and available in Electrolynx®. Suffix QC# (number of wires)
- Furnished with wood and machine screws

**Technical Information**



Hardwiring Made Easy®





# PIVOTS AND PIVOT SETS

## ELECTRIFIED CENTER HUNG TOP PIVOTS

### MODEL CS-340

#### Application

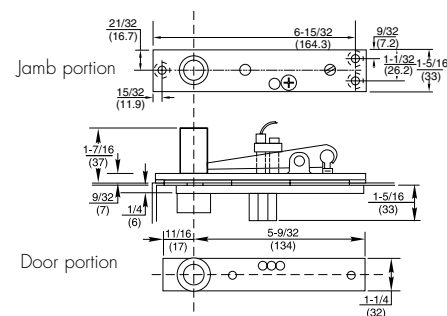
- Center Hung
- Door Position Monitoring
- Non-handed



#### Product Description & Features

- Walking beam type pivot
- Magnetically activated reed switch in frame of pivot monitors door position
- Adjusting screw is easy to set on-site after installation screw is concealed by cover plate
- Oil-impregnated sintered bronze bearing
- Completely concealed when door is closed
- Switch rated at 0.3 amps and 28 volts maximum, three wires, 22 gauge
- Electrolynx® option not available
- Furnished with wood and machine screws

#### Technical Information



### MODEL CS-345

#### Application

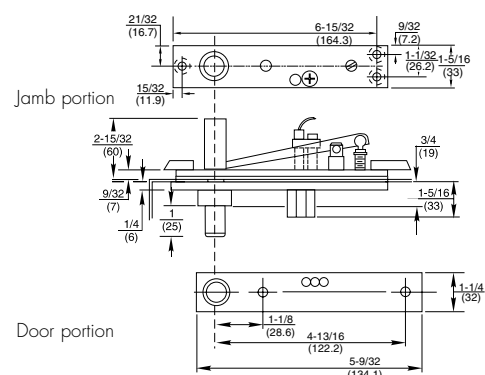
- Fully Concealed
- Center Hung
- Door Position Monitoring
- Non-handed
- Taller Doors



#### Product Description & Features

- Longer pivot throw pin engages in top of door 1-3/4" (44mm). Ideal for locations where there is a fear of dramatic building settling or taller doors
- Can be used with any center hung bottom pivot or floor closer
- Magnetically activated reed switch monitors door position
- Adjusting screw is easy to set on-site after installation screw is concealed by cover plate
- Switch rated at 0.3 amps and 28 volts maximum, three wires, 22 gauge
- Electrolynx® option not available
- Heavy-duty needle bearing
- Completely concealed when door is closed
- Furnished with wood and machine screws

#### Technical Information



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.

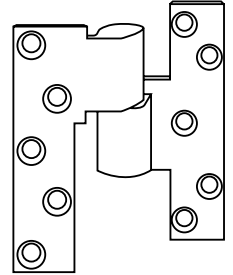
HOW TO ORDER

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 H117-3/4 176 178	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) SPL0 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

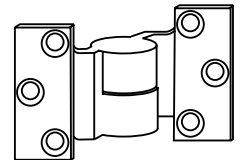
M19, M190, ML19, FA19, 219, 319, FM19, FM190, ALL ELECTRIFIED M19 INTERMEDIATE PIVOTS

Model	Description
107015-*	Metal Screws for One Leaf
107115-*	Wood Screws for One Leaf
181778-*	Hex Cap
<b>219, 319 and 419 Also Use:</b>	
107059-*	Includes Screws and Backplate
	Torx® Available - Suffix "T"



119 INTERMEDIATE PIVOT

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

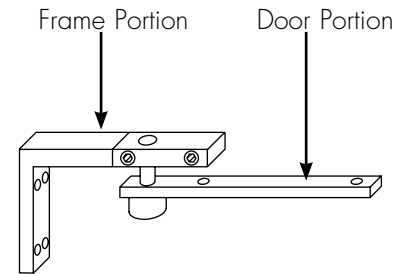


\*specify finish

ANGLE PIVOT-3

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

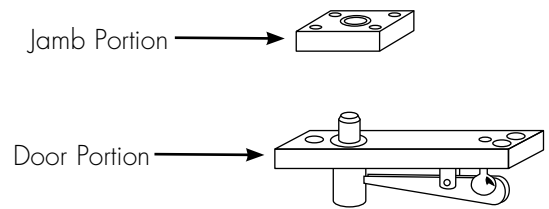
Torx® not available.



TOP PIVOT 340 X 102 OR 320 X 102

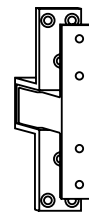
Model	Description
10210 AS	Jamb Portion
3065	Door Portion
640-ASY	Door Portion (320 x 102)
107012*	Jamb Portion Screw Kit
107329	Door Portion Screw Kit

Torx® not available.



F519 POCKET PIVOT

Model	Description
619005-*	Screw Kit
	Torx® Available



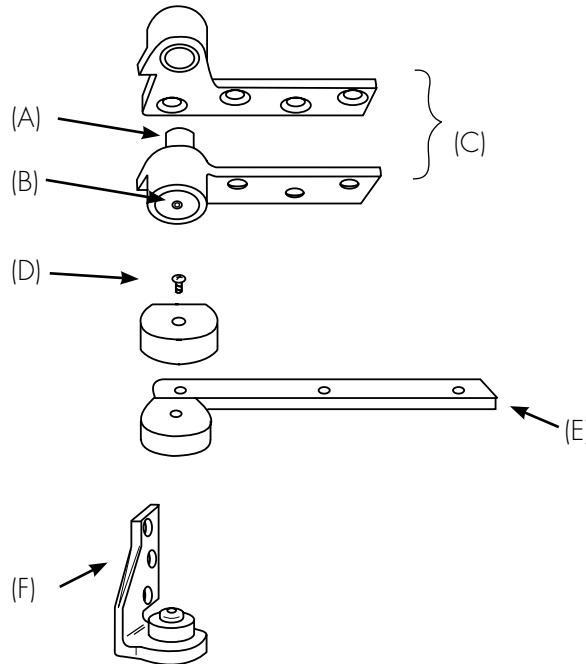
\*specify finish

# 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
(E) Arm RH 11705RAS
(F) Floor Portion Assy RH 17406R-AS
(F) Floor Portion Assy LH 17406L-AS



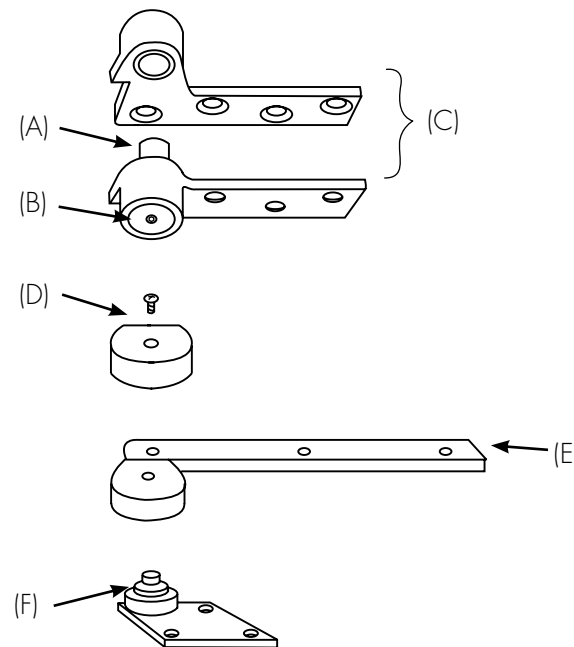
(C) 180 Top Pivot

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
(E) 3/4" Offset Arm RH 11705RAS
(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*

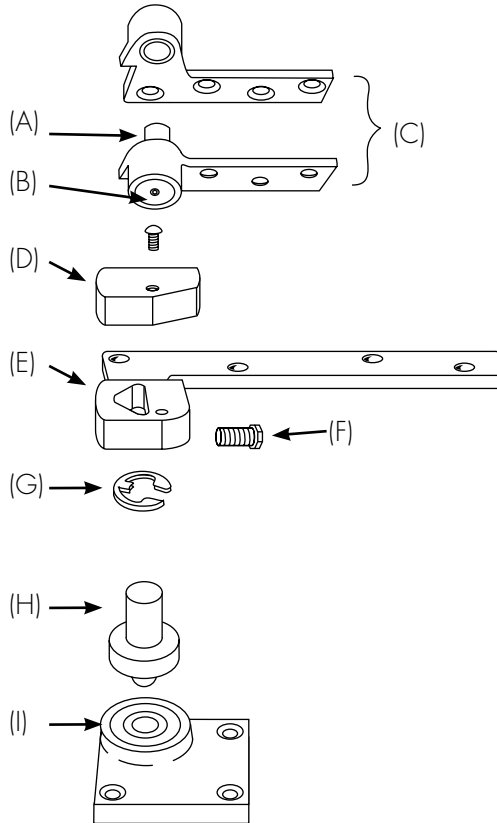
Screw Kits
180 Screw Kit 107014 - * Machine (2 req.) 107114 - * Wood (2 req.)
Bottom Pivot Screw Kit 117127 - *

\*specify finish

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

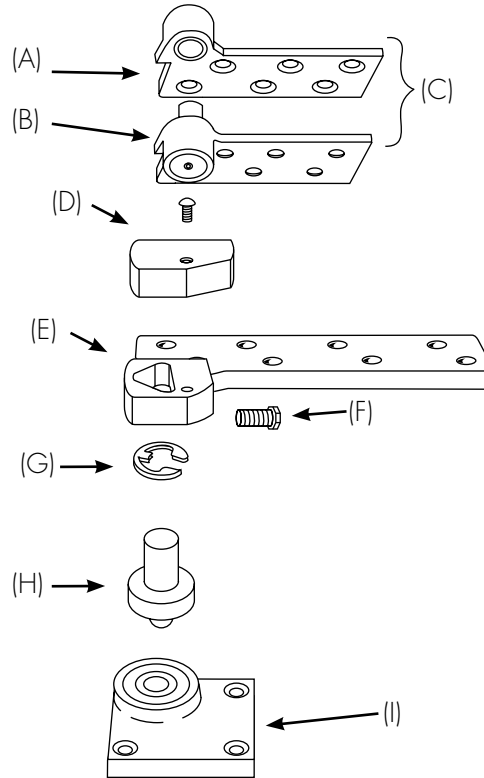
# PIVOTS AND PIVOT SETS

## 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

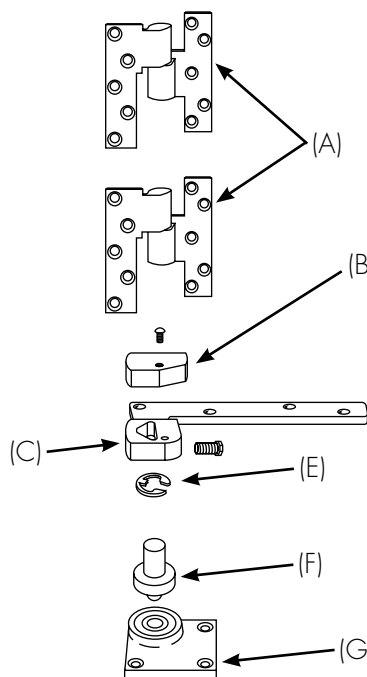
Screw Kits
180/F180 Screw Kit 107016 - * Machine ( 2 req.) 107116 - * Wood (2 req.)
Arm Screw Kit 107048 Machine (2 req.) 107144 Wood (2 req.)
L147/F147 Bottom Pivot Screw Kit (includes "E" ring shim) 107062-*

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 275176LH
(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)

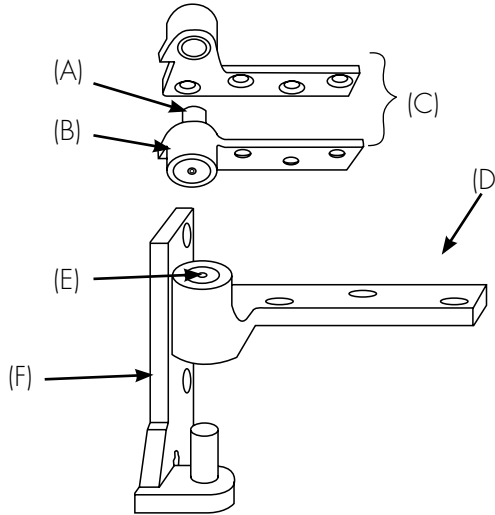
L147/F147 Bottom Pivot Screw Kit  
(includes "E" ring shim)  
107062-\*

\*specify finish

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

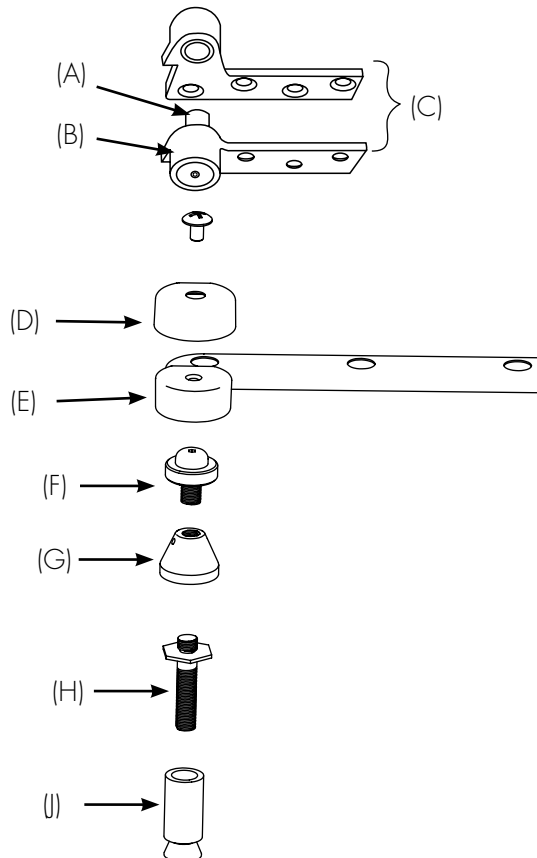


(C) 3/4" Offset Top Pivot Assembly 180 (standard) F180 (Fire Rated)
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Screw Kits
180 Screw Kit 107014 - * Machine (2 req.) 107114 - * Wood (2 req.)
195 Screw Kit 107014 - * Machine (2 req.) 107114 - * Wood (2 req.)

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

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

\*specify finish



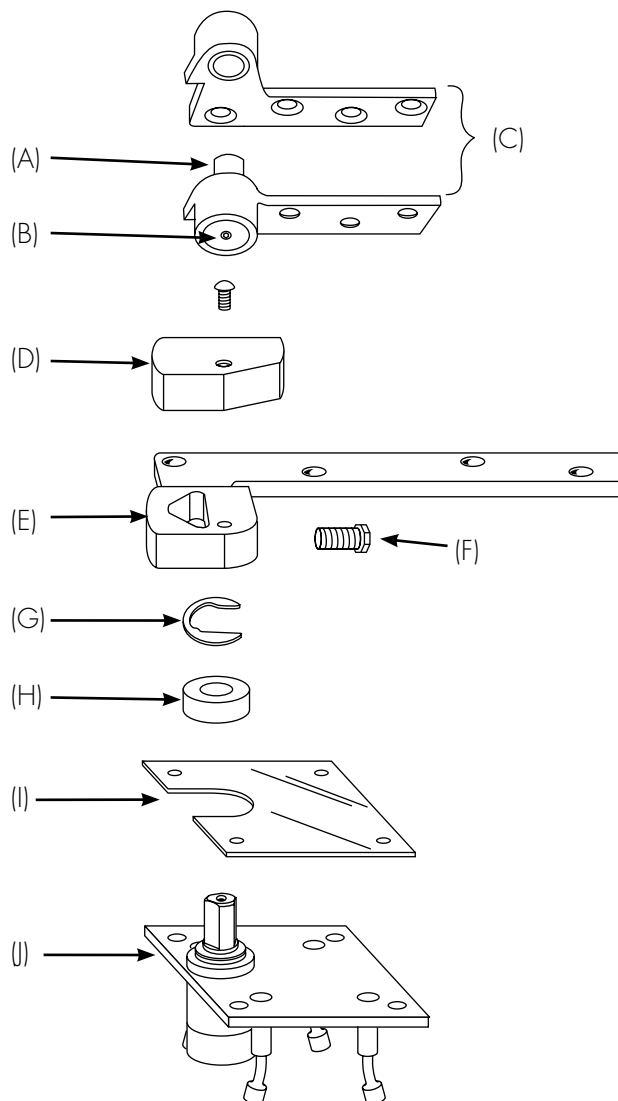
# PIVOTS AND PIVOT SETS

## 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 XO1176350



(C) 3/4" Offset Top Pivot Assembly 180 (standard) F180 (Fire Rated) 180-20 (20 minutes)
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1-1/2" Offset Arm 275167-*
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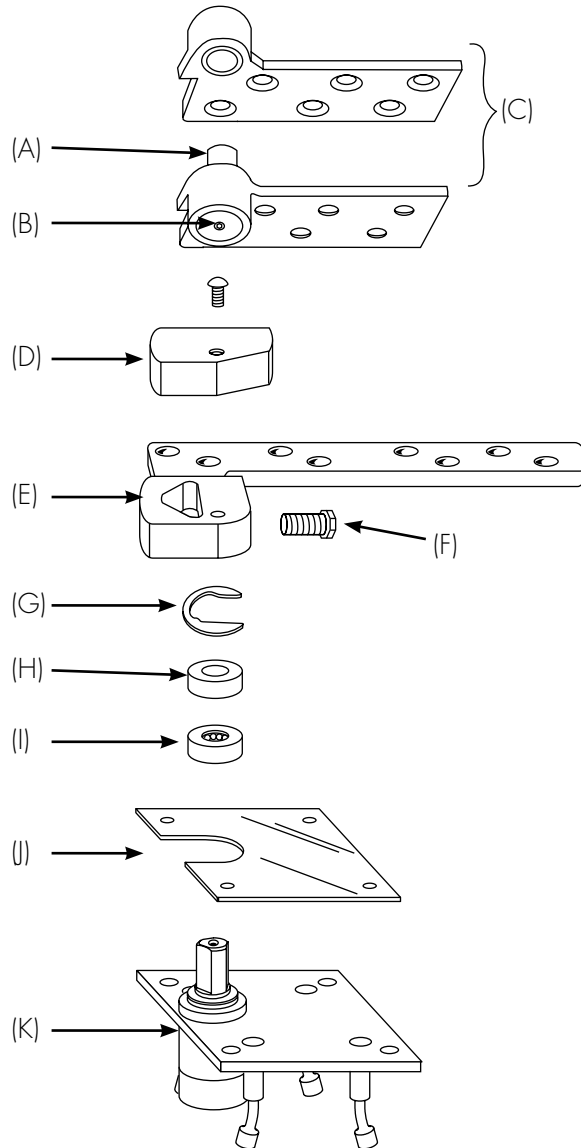
Screw Kits
180/F180 Screw Kit 107014 - * Machine (2 req.) 107114 - * Wood (2 req.)
Floor Plate Screw Kit 107004-*
Arm Screw Kit 107044 - * Machine 107144 - * Wood

\*specify finish

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) 275065-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

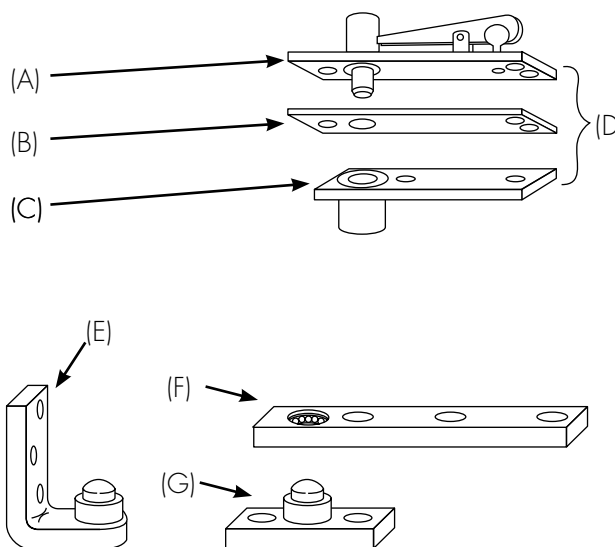
Screw Kits
L180/FL180 Screw Kit 107016 - * Machine ( 2 req.) 107116 - * Wood (2 req.)
Arm Screw Kit 107048 - * Machine ( 2 req.) 107114 - * Wood (2 req.)
Floor Plate Screw Kit 107004 - * Machine ( 2 req.)

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

\*specify finish

### 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



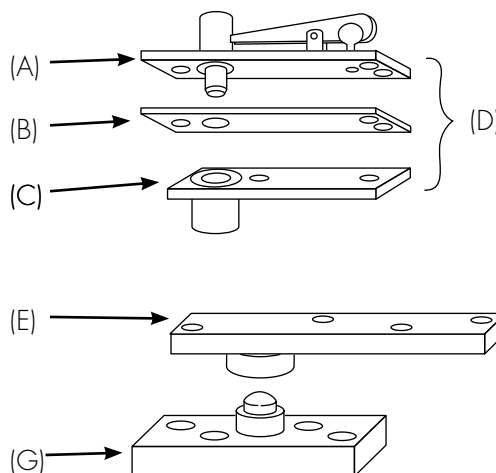
(D) 320 Top Pivot

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-*



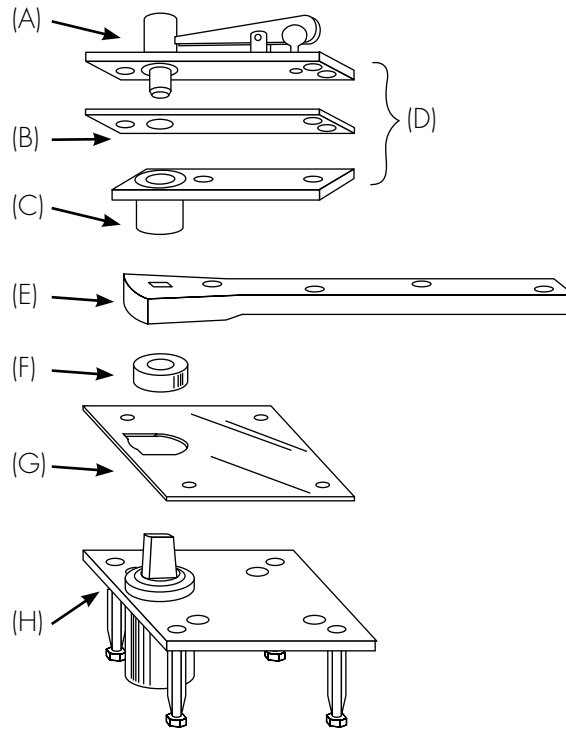
(D) 340 Top Pivot

Screw Kits
340 Top Pivot Screw Kit 107329 Machine & Wood
370 Floor Portion 107370-*

\*specify finish

117-3/4 PIVOT SET

(A) Top Pivot Jamb Portion 3065
(B) Top Pivot Finish Plate 01 2202-*PK(BRS) 01 2204-*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 XO1176320



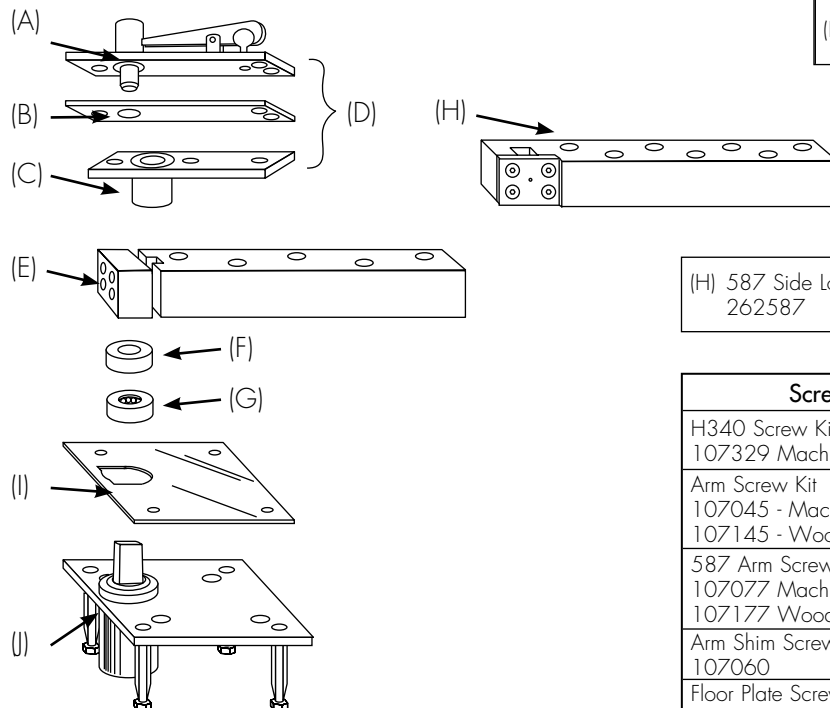
(D) 340 Top Pivot

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 01 2202-*PK(BRS) 01 2204-*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 XO1176322 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-*

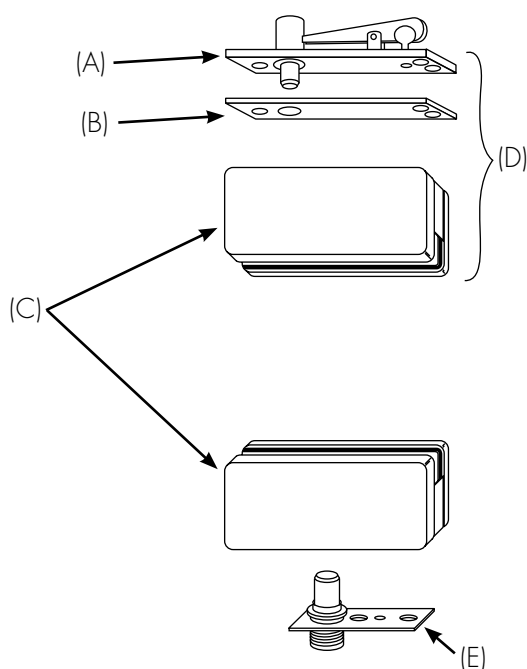
\*specify finish

## 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
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\*specify finish

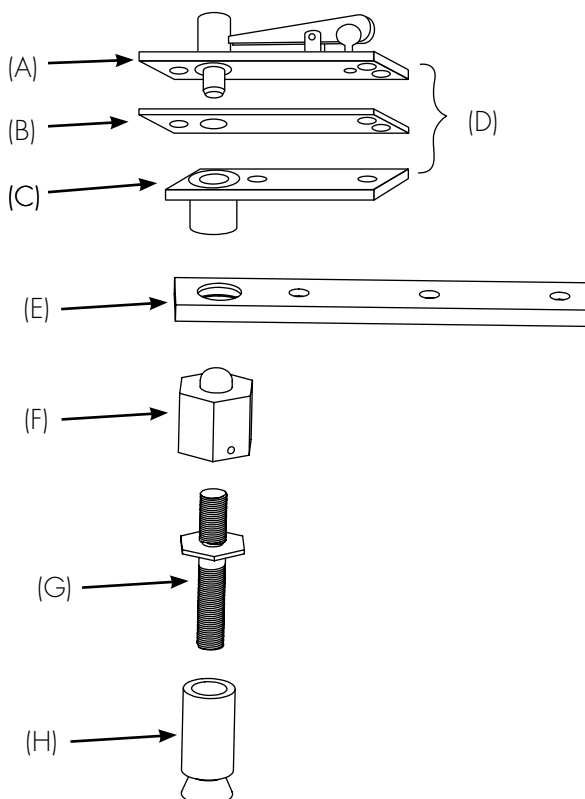


(D) Top Patch 7494-* PK
(E) Bottom Pivot Floor Portion 74104

## 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

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