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General Hinge Information

SELECTION OF THE PROPER WEIGHT AND BEARING TYPE

Standard Weight Plain Bearing
Standard Weight Ball Bearing, Concealed Bearing
Heavy Weight Ball Bearing, Concealed Bearing

CONSIDERATIONS TO DETERMINE WEIGHT AND BEARING TYPE:

- Weight of Door
- Frequency of use
- Frame
- Door Hardware

Always use ball bearing or concealed bearing hinges for doors with door closers and in all fire rated openings. Heavy weight doors and high frequency doors should use heavy weight ball bearing or concealed bearing hinges.

GUIDELINES FOR HINGE METAL

- Interior door or non-corrosive area use: Plated or painted Steel
- Interior labeled door use: Plated or Painted Steel, Stainless Steel
- Interior door in corrosive area use: Stainless Steel, Brass, Bronze
- Exterior doors use: Stainless Steel, Brass, Bronze

Standard pin material are Brass Hinge – Steel Pin,
Stainless Steel Hinge – Stainless Steel Pin, Steel Hinge – Steel Pin

GUIDELINES FOR FREQUENCY OF DOOR USAGE:

Build Type	Daily Usage	Hinge Type
High Frequency/ Heavy Weight Door		
Large Department Store Entrance	5,000	Heavy Weight
Hospital Corridor and Surgical Doors	5,000	Heavy Weight
Large Office Building Entrance	4,000	Heavy Weight
School Entrance	1,250	Heavy Weight
School Toilet Door	1,250	Heavy Weight
Office Stairwell	500	Heavy Weight
Office Building Toilet Door	400	Heavy Weight
Medium Frequency/ Medium Weight Door		
School Corridor Door	100	Standard Weight
Hospital Consultation Rooms	100	Standard Weight
Office Building Corridor Door	80	Standard Weight
Store Toilet Door	60	Standard Weight
Storage Room	50	Standard Weight
Low Frequency /Light Door		
Residential Entrance	30	Plain Bearing
Interior Residential	20	Plain Bearing

ANSI/BHMA GRADE/MINIMUM CYCLE REQUIREMENTS

Grade 1: 2,500,000 Heavy Weight Ball & Concealed Bearing
Grade 2: 1,500,000 Standard Weight Ball & Concealed Bearing
Grade 3: 350,000 Light Weight Plain Bearing

CONSIDERATIONS TO DETERMINE HINGE SIZE

- Door Width
- Door Thickness
- Weight
- Clearance

GUIDELINES FOR HINGE HEIGHT

DOOR THICKNESS IN INCHES	DOOR WIDTH IN INCHES	HINGE HEIGHT IN INCHES
1-3/8"	Up to 32"	3-1/2"
1-3/8"	32" to 37"	4"
1-3/4"	Up to 36"	4-1/2"
1-3/4"	36" to 48"	5"
1-3/4"	Over 48"	6"
2" - 2-1/2"	Up to 42"	5" heavy weight
2" - 2-1/2"	Over 42"	6" heavy weight

CLEARANCE REQUIREMENT*

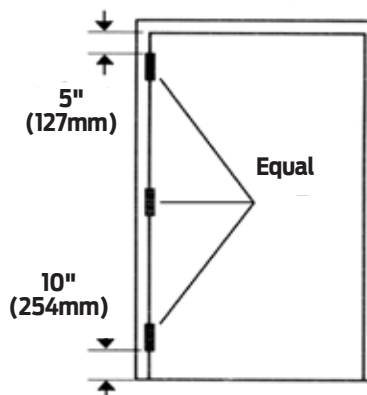
DOOR THICKNESS	CLEARANCE NEEDED	HINGE OPEN WIDTH
1-3/8"	3/4"	4"
1-3/4"	1"	4"
1-3/4"	1-1/2"	4-1/2"
1-3/4"	2"	5"
1-3/4"	3"	6"
2"	1"	4-1/2"
2"	1-1/2"	5"
2"	2-1/2"	6"
2-1/4"	1"	5"
2-1/4"	2"	6"
2-1/2"	3/4"	5"
2-1/2"	1-3/4"	6"
3"	3/4"	8"
3"	2-3/4"	8"

*Distance needed between wall and door at 180° to allow for any projections from wall; trim, decorative molding, etc.

GUIDELINES FOR NUMBER OF HINGES

- Doors under 7'6" 3 hinges
- Doors over 7'6" 4 hinges

LOCATION OF HINGES



Top hinge 5" from jamb rabbet to top of barrel

Bottom hinge 10" from bottom edge of barrel to finished floor

Third hinge centered between top and bottom hinges

Note: Some western states use a standard 7" from top and 11" from the bottom

Ives Hinge Number System

Please note: For availability of specific models, please refer to the item's catalog page or consult Customer Service.

How to Order:

<u>5</u>	-	<u>BB</u>	-	<u>1</u>	-	<u>HW</u>	-	<u>4.5x4.5</u>	-	<u>652</u>	-	<u>NRP</u>												
Number of Knuckles: 3 - 3 Knuckle 5 - 5 Knuckle Function: PB Plain Bearing BB Ball Bearing CB Concealed Bearing SP Spring Hinge Type: 1 Full Mortise 2 Half Mortise 3 Full Surface 4 Half Surface Weight/Options: Blank Standard Weight HW Heavy Weight SC Swing Clear SH Security Stud WT Wide Throw HT Hospital Tip RC Round Corners, 1/4" or 5/8" Radius Size Examples: <table> <tr> <td>3.5 x 3.5</td> <td>4.5 x 5</td> <td>5 x 6</td> </tr> <tr> <td>4 x 4</td> <td>4.5 x 6</td> <td>5 x 7</td> </tr> <tr> <td>4.5 x 4</td> <td>5 x 4.5</td> <td></td> </tr> <tr> <td>4.5 x 4.5</td> <td>5 x 5</td> <td></td> </tr> </table> <i>Larger sizes, up to 6 x 8 are available. Consult factory.</i>													3.5 x 3.5	4.5 x 5	5 x 6	4 x 4	4.5 x 6	5 x 7	4.5 x 4	5 x 4.5		4.5 x 4.5	5 x 5	
3.5 x 3.5	4.5 x 5	5 x 6																						
4 x 4	4.5 x 6	5 x 7																						
4.5 x 4	5 x 4.5																							
4.5 x 4.5	5 x 5																							
Finish (Some models require extended lead times): 600 USP - Steel 605 US3 - Brass 606 US4 - Brass 612 US10 - Brass 613 US10B - Brass 619 US15 - Brass 625 US26 - Brass 626 US26D - Brass 630 US32D - Stainless 632 US3 - Steel 633 US4 - Steel 639 US10 - Steel 640 US10B - Steel 641 US10A - Steel 643 US11 - Steel 646 US15 - Steel 651 US26 - Steel 652 US26D - Steel																								
Special Pins Applications: NRP Non-Removable Pin TW4 Four Wire TW8 Eight Wire MON Monitor TW4M Four Wire with Monitor TW8M Eight Wire with Monitor																								

A4 Hinges & Pivots						
	B Pulls & Plates					
		C Flush Bolts & Coordinators				
			D Latches, Catches & Bolts			
				E Stops		
					F Exterior Hardware	
						G Miscellaneous Hardware

ANSI Hinge Identification Reference

A = ANSI

First number indicates material

- 1 – Cast, forged or extruded brass or bronze
- 2 – Wrought brass or bronze
- 5 – Stainless steel
- 8 – Wrought or forged steel, or malleable iron

Second number indicates product type

- 1 – Full mortise
- 2 – Half mortise
- 3 – Full surface
- 4 – Half surface
- 5 – Anchor, pivot reinforced or thrust pivot unit or hinge sets
- 6 – Olive knuckle hinges
- 7 – Pivot hinge
- 8 – Rescue hardware

Third number indicates function

- 1 – Anti-friction bearing
- 2 – Anti-friction bearing, swing clear
- 3 – Plain bearing
- 4 – 4 to 0, special conditions

Fourth number indicates grade

- 1 – Grade 1, 4BB Extra Heavy Duty
- 2 – Grade 2, 2BB Standard Duty
- 3 – Grade 3, Plain Bearing

Example:

A8111 – Steel, Full Mortise, Anti-friction, Grade 1

A5112 – Stainless, Full Mortise, Anti Friction Bearing, Grade 2



Meets ANSI/BHMA A156.1
A8133 – Steel
A5133 – Stainless Steel
A2133 – Brass

3PB1 3 Knuckle, Plain Bearing Full Mortise Hinge

- For standard weight doors
- Low frequency usage
- Packed with wood and metal screws

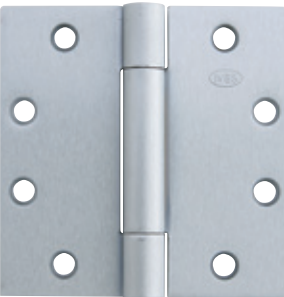
Not for use with a door closer.

Options

- NRP, Non-Removable Pin
- SH, Security Stud
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fasteners - Pin-in-Socket

Dimensions

Size (Inches)	Size (mm)	Gauge
3.5 x 3.5	90 x 90	0.134
4 x 4	102 x 102	0.134
4.5 x 4	114 x 102	0.134
4.5 x 4.5	114 x 114	0.134
5 x 4.5	127 x 114	0.134



Meets ANSI/BHMA A156.1
A8112 – Steel
A5112 – Stainless Steel
A2112 – Brass

3CB1 3 Knuckle, Concealed Bearing Full Mortise Hinge

- For standard weight doors
- Medium frequency usage
- Packed with wood and metal screws

Options

- NRP, Non-Removable Pin
- SH, Security stud
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fasteners - Pin-in-Socket

Dimensions

Size (Inches)	Size (mm)	Gauge
3.5 x 3.5	90 x 90	0.134
4 x 4	102 x 102	0.134
4.5 x 4	114 x 102	0.134
4.5 x 4.5	114 x 114	0.134
5 x 4.5	127 x 114	0.134

Finishes brass

Ives Finish	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	605	606	612	613	614	616	619	625	626

Finishes steel

Ives Finish	USP	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	600	632	633	639	640	641	643	646	651	652

Finishes stainless steel

Ives Finish	US32	US32D
BHMA	629	630



Meets ANSI/BHMA A156.1
A8112 – Steel
A5112 – Stainless Steel
A2112 – Brass

3CB1HW 3 Knuckle, Concealed Bearing Full Mortise Hinge

- For heavy weight doors
- High frequency usage
- Packed with wood and metal screws

Options

- NRP, Non-Removable Pin
- SH, Security stud
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fasteners - Pin-in-Socket

Dimensions

Size (Inches)	Size (mm)	Gauge
4.5 x 4	114 x 102	0.180
4.5 x 4.5	114 x 114	0.180
5 x 4.5	127 x 114	0.190
5 x 5	127 x 127	0.190



Meets ANSI/BHMA A156.7
K81071F – Steel
K51071F – Stainless Steel
UL listed for use with fire rated doors

3SP1 3 Knuckle Spring Full Mortise Hinge

- For automatic closing of doors
- Packed with wood and metal screws

Options

- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fasteners - Pin-in-Socket

Dimensions

Size (Inches)	Size (mm)	Gauge
4 x 4	102 x 102	0.134
4.5 x 4	114 x 102	0.134
4.5 x 4.5	114 x 114	0.134

Finishes *brass*

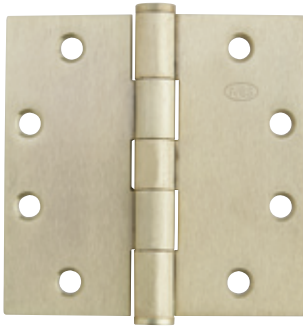
Ives Finish	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	605	606	612	613	614	616	619	625	626

Finishes *steel*

Ives Finish	USP	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	600	632	633	639	640	641	643	646	651	652

Finishes *stainless steel*

Ives Finish	US32	US32D
BHMA	629	630



Meets ANSI/BHMA A156.1
A8133 – Steel
A5133 – Stainless Steel
A2133 – Brass

5PB1 5 Knuckle, Plain Bearing Full Mortise Hinge

- For standard weight doors
- Low frequency usage
- Packed with wood and metal screws

Not for use with a door closer.

Options

- NRP, Non-Removable Pin
- SH, Security Stud
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fasteners - Pin-in-Socket

Dimensions

Size (Inches)	Size (mm)	Gauge
3.5 x 3.5	89 x 89	0.123
4 x 4	102 x 102	0.134
4.5 x 4	114 x 102	0.134
4.5 x 4.5	114 x 114	0.134
5 x 4.5	127 x 114	0.134



Meets ANSI/BHMA A156.1
A8112 – Steel
A5112 – Stainless Steel
A2112 – Brass

5BB1 5 Knuckle, Ball Bearing Full Mortise Hinge

- For standard weight doors
- Medium frequency usage
- 2 ball bearing
- Packed with wood and metal screws

Options

- NRP, Non-Removable Pin
- SH, Security Stud
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fasteners - Pin-in-Socket

Dimensions

Size (Inches)	Size (mm)	Gauge	Size (Inches)	Size (mm)	Gauge
3.5 x 3.5	80 x 102	0.130	5 x 4.5	127 x 114	0.146
4 x 4	102 x 102	0.130	5 x 5	127 x 127	0.146
4.5 x 4	114 x 102	0.134			
4.5 x 4.5	114 x 114	0.134			

Finishes brass

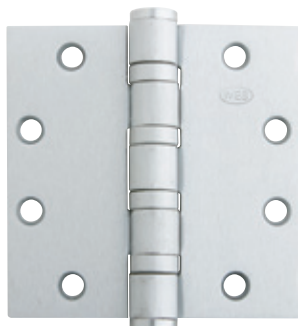
Ives Finish	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	605	606	612	613	614	616	619	625	626

Finishes steel

Ives Finish	USP	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	600	632	633	639	640	641	643	646	651	652

Finishes stainless steel

Ives Finish	US32	US32D
BHMA	629	630



Meets ANSI/BHMA A156.1
A8111 – Steel
A5111 – Stainless Steel
A2111 – Brass

5BB1HW

5 Knuckle, Ball Bearing, Heavy Weight Full Mortise Hinge

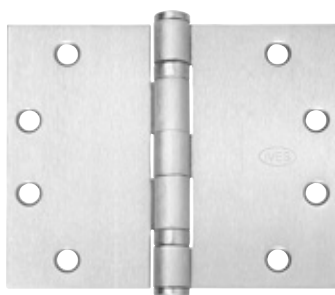
- For heavy weight doors
- High frequency usage
- 4 ball bearing
- Packed with wood and metal screws

Options

- NRP, Non-Removable Pin
- SH, Security Stud
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fasteners - Pin-in-Socket

Dimensions

Size (Inches)	Size (mm)	Gauge	Size (Inches)	Size (mm)	Gauge
4.5 x 4	114 x 102	0.180	5 x 4.5	127 x 114	0.190
4.5 x 4.5	114 x 114	0.180	5 x 5	127 x 127	0.190



Meets ANSI/BHMA A156.1
A8111 – Steel

5BB1WT

5 Knuckle, Ball Bearing, Wide Throw Full Mortise Hinge

- For medium weight doors
- Medium frequency usage
- 2 ball bearing
- Packed with wood and metal screws

Options

- NRP, Non-Removable Pin
- SH, Security Stud
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fasteners - Pin-in-Socket

Dimensions

Size (Inches)	Size (mm)	Gauge
4.5 x 5	114 x 127	0.134
4.5 x 6	114 x 152	0.134
5 x 6	127 x 152	0.146
5 x 7	127 x 178	0.146
5 x 8	127 x 203	0.146

Finishes *brass*

Ives Finish	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	605	606	612	613	614	616	619	625	626

Finishes *steel*

Ives Finish	USP	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	600	632	633	639	640	641	643	646	651	652

Finishes *stainless steel*

Ives Finish	US32	US32D
BHMA	629	630



Meets ANSI/BHMA A156.1
A8412 – Steel

5BB4 5 Knuckle, Ball Bearing, Half Surface Hinge

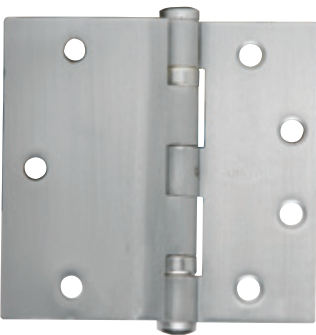
- For standard weight doors
- Medium frequency usage
- 2 ball bearing
- Packed with through bolts, grommets and sheet metal screws

Options

- NRP, Non-Removable Pin
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fastners - Pin-in-Socket

Dimensions

Size (Inches)	Size (mm)	Gauge
4.5	114	0.134



Meets ANSI/BHMA A156.1
A8411 – Steel

5BB4HW 5 Knuckle, Ball Bearing, Half Surface Heavy Weight Hinge

- For heavy weight doors
- High frequency usage
- 4 ball bearing
- Packed with through bolts, grommets and sheet metal screws

Options

- NRP, Non-Removable Pin
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fastners - Pin-in-Socket

Dimensions

Size (Inches)	Size (mm)	Gauge
4.5	114	0.180

Finishes *brass*

Ives Finish	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	605	606	612	613	614	616	619	625	626

Finishes *steel*

Ives Finish	USP	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	600	632	633	639	640	641	643	646	651	652

Finishes *stainless steel*

Ives Finish	US32	US32D
BHMA	629	630



Meets ANSI/BHMA A156.1
A8122 – Steel
A5122 – Stainless Steel
A2122 – Brass

5BB1SC

5 Knuckle, Ball Bearing, Swing Clear Full Mortise Hinge

- For standard weight doors
- Square edge standard
- Medium frequency usage
- 2 ball bearing
- Packed with flat head wood and metal screws

Designed to completely clear the opening when door is opened 92 degrees.

Options

- NRP, Non-Removable Pin
- B, beveled edge door
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fastners - Pin-in-Socket

Dimensions

Size (Inches)	Size (mm)	Gauge
4.5	114	0.134
5	127	0.145



Meets ANSI/BHMA A156.1
A8121 – Steel

5BB1SCHW

5 Knuckle, Ball Bearing, Swing Clear Heavy Weight Full Mortise Hinge

- For heavy weight doors
- High frequency usage
- 2 ball bearing
- Packed with flat head wood and metal screws

Designed to completely clear the opening when door is opened 92 degrees.

Options

- NRP, Non-Removable Pin
- B, beveled edge door
- HT, Hospital Tip
- RC, Round Corners - 1/4" or 5/8" Radius
- SEC, Security Fastners - Pin-in-Socket

Dimensions

Size (Inches)	Size (mm)	Gauge
4.5	114	0.180
5	127	0.190

Finishes *brass*

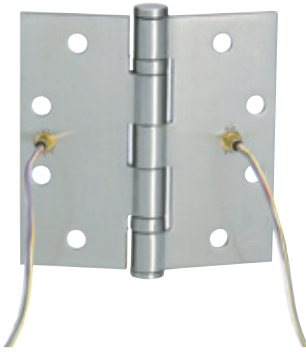
Ives Finish	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	605	606	612	613	614	616	619	625	626

Finishes *steel*

Ives Finish	USP	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	600	632	633	639	640	641	643	646	651	652

Finishes *stainless steel*

Ives Finish	US32	US32D
BHMA	629	630



UL Listed - UL634
Meets ANSI/BHMA A156.1
A8111 - Steel
A5111 - Stainless Steel
A2111 - Brass

Electrified Hinge

Available Options

- Through Wire - TW4 (4 wires) & TW8 (8 wires)
- Monitor - MON
- Through Wire with Monitor - TW4M & TW8M
- Available in 3 and 5 Knuckle
- One hinge per box, packed with wood and machine screws
- Hinge is NRP as a standard
- High quality brass ferrules and plastic tubing protect the wires
- Through-wire hinges cycle tested to ensure durability
- Ives warranty applies - 12 months from date of shipment

Through-Wire is rated for 50 volts AC/DC at 3.5 amp continuous and 16 amp pulse, maximum pulse 400 mili second.

Monitor rated 30VDC at .5 amp

Special wire configurations available, contact factory.

Finishes *brass*

Ives Finish	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	605	606	612	613	614	616	619	625	626

Finishes *steel*

Ives Finish	USP	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	600	632	633	639	640	641	643	646	651	652

Finishes *stainless steel*

Ives Finish	US32	US32D
BHMA	629	630



1010
Schlage Carded Only



1011



1012
Schlage Carded Only



1020
Schlage Carded Only



1021
Schlage Carded Only

1000 Series Residential Hinges

- Full mortise hinges in 2 sizes: 3-1/2" and 4".
- Two corner options: Square corners and 5/8" or 1/4" radius corners.
- Substrates include: Steel.

Model	Size	Corner
1010	3-1/2" x 3-1/2"	Square Corner
1011	3-1/2" x 3-1/2"	5/8" Radius Corner
1012	3-1/2" x 3-1/2"	1/4" Radius Corner
1020	4" x 4"	Square Corner
1021	4" x 4"	5/8" Radius Corner

Finishes *steel*

Ives Finish	F605E	F609E	F619E	F620E*	F625E**	F716E
BHMA	632		646		651	

- * *not available on 1012 hinge*
- * *only available on 1011*



Ives Continuous Hinges are designed to last the life of the building. The unique design distributes the weight of the door along the entire length of the frame, reducing the high amount of stress normally associated at top of door and frame on butt hinge applications. Not only does this reduce hinge failure, it also keeps your door in constant alignment, eliminating the chance of door sag. These characteristics make continuous hinges suitable for high use/high traffic doors.

The design of a continuous hinge eliminates the gap between the door and the frame. The absence of gap also helps prevent finger from being pinched, making it a safer device than traditional hinges. These benefits result in higher efficiency and less maintenance, maximizing the value of your opening investment.

Continuous hinges are available in two styles; aluminum geared and pin and barrel in steel or stainless steel.

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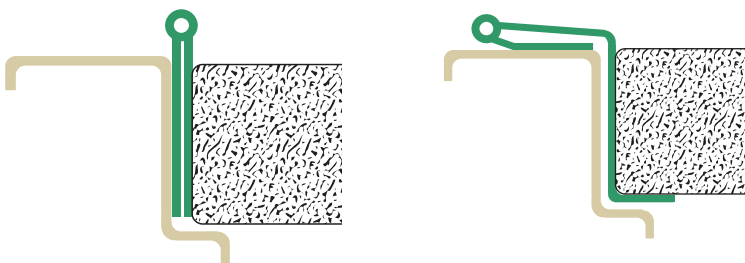
Aluminum Geared

Geared continuous hinges utilize a single gear section for the leaf and a separate gear section for the frame side of the door. The two are held in place together by a full length cover channel and rotate on a series of bearings.



Pin and Barrel

Pin and Barrel hinges share many of the same characteristics of a traditional hinge. Both have a center pin and rolled knuckles. However, a continuous Pin and Barrel hinge stretches along the entire length of the frame. Ives offers both stainless steel and primed steel to best match your specific application.



Lifetime Warranty Ives continuous hinges carry a limited lifetime warranty, ensuring your opening will function to your satisfaction every time.

Cross Reference Guide

Ives	Hager	Markar	McKinney	Pemko	Select	Stanley
Geared						
045HD	780-045HD					
046HD	780-046HD					
053HD	780-053HD					
054HD	780-054HD					
112HD	780-112HD		MCK-12HD	FMSLFHD	SL11HD	661HD
210HD	780-210HD		MCK-22HD	FSHD	SL21HD	665HD
224HD	780-224HD		MCK-25HD	FMHD	SL24HD	662HD
157XY*	780-157HD		MCK-58HD	FSCPHD	SL57HD	664HD
157HD	780-157HD		MCK-58HD	FSCPHD	SL57HD	664HD
Pin and Barrel						
600		FM200			SL200	
602		FS202				
611		N/A				
700	790-900	FM300			SL300	651
702		FS302			SL302	
705	790-905	HG305			SL305	652
711	790-911	HG311			SL311	656
715	790-915	HG315				653

*Application only. Features and benefits exceed current market standard.

Aluminum Geared Hinges

General Information

Material

6063-T6 Aluminum

Standard Lengths

83", 85", 95", 120"

Custom lengths are available up to 120", consult factory.

Finishes

CL - US28 (628) Clear Anodized

BR - 313AN (710) Dark Bronze

Hinge Duty

All Ives Aluminum Geared Hinges are Heavy Duty (HD).

Amount of bearings varies by size:

83" – 32 Bearings

85" – 32 Bearings

95" – 36 Bearings

120"- 47 Bearings

Door Weight

Each hinge can hold a door up to 450 lbs (Rivet nuts recommended) and a max door width of 4'0".

ANSI Certified

All Ives Aluminum Geared Hinges excluding the 157XY are certified to ANSI 156.26, Grade 1

UL Listed

All Ives Aluminum Geared Hinges excluding the 157XY are tested and approved UL 10C (90 minutes).

Field Modifications:

All Ives Aluminum Geared Continuous Hinges can be cut to length during installation. The unique mounting pattern allows to cut up to 6" from bottom while still having double row fasteners. If cut more than 13.5", other modifications may be necessary.

Electrification Options

Only available for the full mortise hinges

Electric Power Transfer (EPT)

Electric power transfer provides a means of transferring power from the door frame to the edge of a swinging door. Ives Continuous Hinges provide standard cut outs to fit Von Duprin EPT-2, EPT-10 and PNT-1 devices. Consult factory for other electrical cut out options.

Electrical Through-Wire (TW)

Provides electric power transfer from the frame to the door in order to supply power to an electrified mortise or cylindrical locks, exit devices with electric latch retraction, and/or electric strikes (pairs of doors). Through-wire is rated 50 volts AC/DC at 3.5 amp continuous and 16 amp pulse. Maximum pulse 400 milliseconds. Ives thru-wire hinges are fully compatible with 4 wire and 8 wire installations.

Aluminum Geared Hinges

How to Order:

	<u>112HD</u>	-	<u>CL</u>	-	<u>83</u>	-	<u>EPT</u>
Model	045HD Half Surface 046HD Half Surface 053HD Half Surface 054HD Half Surface 112HD Full Mortise 157XY Full Surface - Center Pivot 157HD Full Surface - Center Pivot 210HD Full Surface - Swing Clear 224HD Full Mortise - Edge Protector						
Finish	CL Clear BR Bronze <i>Custom finishes available, consult factory</i>						
Length	83" * 85" 95" 120" <i>Other lengths available up to 120", consult factory. Handing required.</i>						
Options	**EPT Electric Power Transfer Prep **TW8 Electric Through Wire *SEC Security Fasteners - Pin-in-Socket WD Wood Fasteners TF Thread forming screws (pilot hole required) HT Hospital Tip TWP Through Wire Panel						

* Not available with 157XY Continuous Hinge

** Full Mortise Models Only

A17
Hinges & Pivots

B
Pulls & Plates

C
Flush Bolts & Coordinators

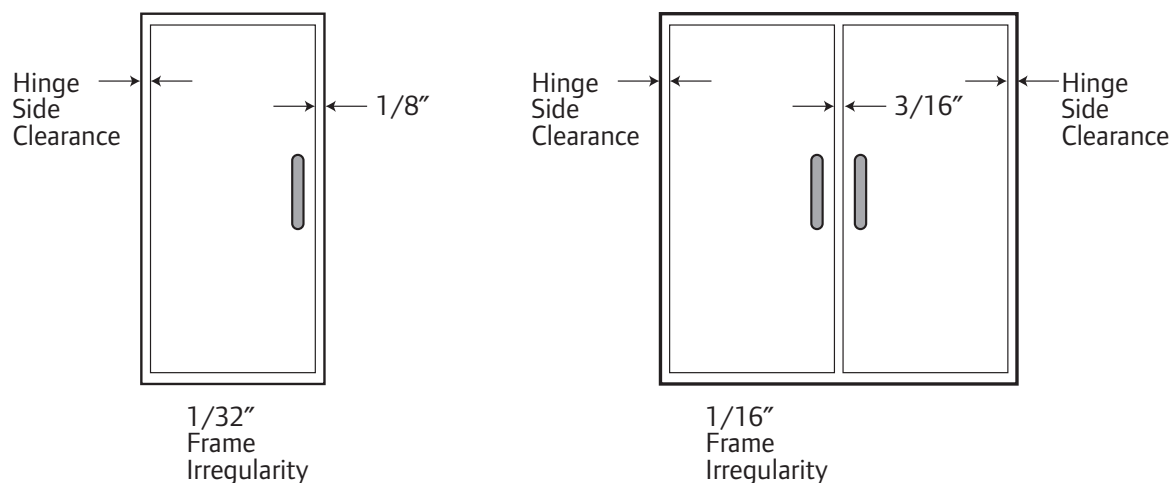
D
Latches, Catches & Bolts

E
Stops

F
Exterior Hardware

G
Miscellaneous Hardware

Aluminum Geared Hinges - Clearance Requirements



SINGLE DOOR

Model	Hinge-Side Clearance	Lock-Side Clearance	Frame Irregularity	Beveled Door Clearance	Door Under-Sizing Square Edged	Door Under-Sizing Beveled Edged
045HD	5/32"	1/8"	1/32"	1/32"	5/16"	11/32"
046HD	5/32"	1/8"	1/32"	1/32"	5/16"	11/32"
053HD	5/32"	1/8"	1/32"	1/32"	5/16"	11/32"
054HD	5/32"	1/8"	1/32"	1/32"	5/16"	11/32"
112HD	5/16"	1/8"	1/32"	1/32"	15/32"	1/2"
224HD	5/16"	1/8"	1/32"	1/32"	15/32"	1/2"
210HD	1/16"	1/8"	1/32"	1/32"	7/32"	1/4"
157XY	1/16"	1/8"	1/32"	1/32"	7/32"	1/4"

PAIR OF DOORS

Model	Hinge-Side Clearance	Lock-Side Clearance	Frame Irregularity	Beveled Door Clearance	Square Edged Total	Square Edged Each Door	Door Under-Sizing Beveled Edged Total	Door Under-Sizing Beveled Edged Each Door
045HD	5/32"	3/16"	1/16"	1/16"	9/16"	9/32"	5/8"	5/16"
046HD	5/32"	3/16"	1/16"	1/16"	9/16"	9/32"	5/8"	5/16"
053HD	5/32"	3/16"	1/16"	1/16"	9/16"	9/32"	5/8"	5/16"
054HD	5/32"	3/16"	1/16"	1/16"	9/16"	9/32"	5/8"	5/16"
112HD	5/16"	3/16"	1/16"	1/16"	7/8"	7/16"	15/16"	15/32"
224HD	5/16"	3/16"	1/16"	1/16"	7/8"	7/16"	15/16"	15/32"
210HD	1/16"	3/16"	1/16"	1/16"	3/8"	3/16"	7/16"	7/32"
157XY	1/16"	3/16"	1/16"	1/16"	3/8"	3/16"	7/16"	7/32"

Templates and installation instructions available on line at www.allegion.com/us

**045HD Half Surface Continuous Hinge**

- Half surface for retrofit or new construction
- Handing required when modified
- Frame leaf depth 1-9/16"
- 9/32" door inset

Standard lengths 83", 85", 95", 120"

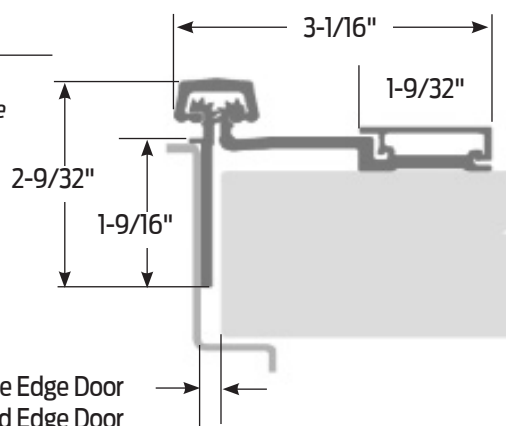
Standard Mounting Hardware

12-24 x 1/2" steel self tapping screw
 1/4-20 x 1-1/2" AL Sex Bolt
 1/4-20 x 1" Steel Shoulder Bolt
 12-24 x 3/4" Steel Self Drilling Shoulder Bolt
 Optional SEC-Security Fasteners available

Finishes

Clear (CL), Dark Bronze (DB)

Custom Anodizing and Painting are available, consult factory.



5/32" Clearance for Square Edge Door
 3/16" Clearance For Beveled Edge Door

**046HD Half Surface Continuous Hinge**

- Half surface for retrofit or new construction
- Handing required when modified
- Frame leaf depth 1-15/16"
- 9/32" door inset

Standard lengths 83", 85", 95", 120"

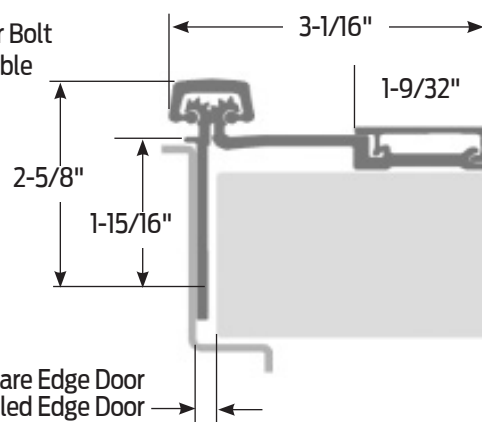
Standard Mounting Hardware

12-24 x 1/2" steel self tapping screw
 1/4-20 x 1-1/2" AL Sex Bolt
 1/4-20 x 1" Steel Shoulder Bolt
 12-24 x 3/4" Steel Self Drilling Shoulder Bolt
 Optional SEC-Security Fasteners available

Finishes

Clear (CL), Dark Bronze (DB)

Custom Anodizing and Painting are available, consult factory.



5/32" Clearance for Square Edge Door
 3/16" Clearance For Beveled Edge Door



053HD Half Surface Continuous Hinge

- Half surface for retrofit or new construction
- Handing required when modified
- Frame leaf depth 1-9/16"
- 1/8" door inset

Standard lengths 83", 85", 95", 120"

Standard Mounting Hardware

12-24 x 1/2" steel self tapping screw

1/4-20 x 1-1/2" AL Sex Bolt

1/4-20 x 1" Steel Shoulder Bolt

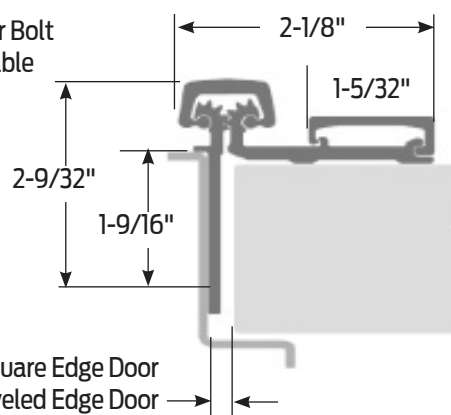
12-24 x 3/4" Steel Self Drilling Shoulder Bolt

Optional SEC-Security Fasteners available

Finishes

Clear (CL), Dark Bronze (DB)

Custom Anodizing and Painting are available, consult factory.



5/32" Clearance for Square Edge Door

3/16" Clearance For Beveled Edge Door



054HD Half Surface Continuous Hinge

- Half surface for retrofit or new construction
- Handing required when modified
- Frame leaf depth 1-15/16"
- 1/8" door inset

Standard lengths 83", 85", 95", 120"

Standard Mounting Hardware

12-24 x 1/2" steel self tapping screw

1/4-20 x 1-1/2" AL Sex Bolt

1/4-20 x 1" Steel Shoulder Bolt

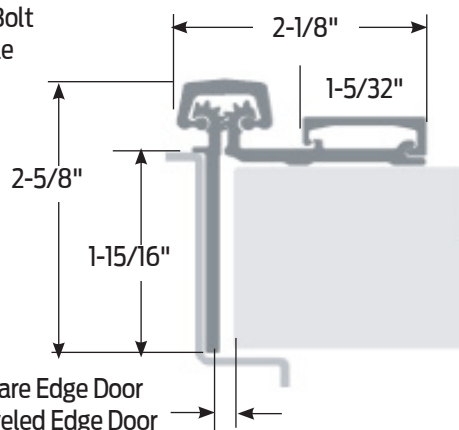
12-24 x 3/4" Steel Self Drilling Shoulder Bolt

Optional SEC-Security Fasteners available

Finishes

Clear (CL), Dark Bronze (DB)

Custom Anodizing and Painting are available, consult factory.



5/32" Clearance for Square Edge Door

3/16" Clearance For Beveled Edge Door



112HD Full Mortise Aluminum Geared Continuous Hinge

- Non Handed
- Flush Mounted, No Inset
- 48" Maximum Door Width
- Beveled or Square Edge Doors

For Doors Weighing up to 450 pounds without reinforcing,
600 pounds with reinforcing

Standard lengths 83", 85", 95", 120"

Standard Mounting Hardware

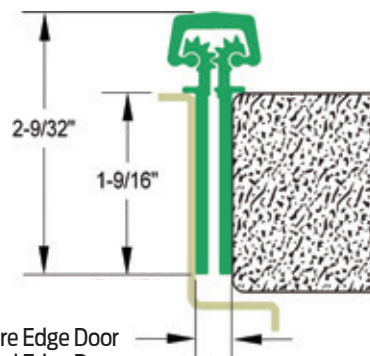
12-24 X 3/4" Steel Self Drilling, Self Tapping Screws

Optional WD - Wood Screws or SEC - Security Fasteners Available

Finishes

Clear (CL), Dark Bronze (DB)

Custom Anodizing and Painting are
available, consult factory.



5/16" Clearance for Square Edge Door
1/32" Clearance For Beveled Edge Door



157XY Full Surface, Center Pivot Aluminum Geared Continuous Hinge

- Non Handed
- Narrow Frame
- 1/16" Door Inset
- 48" Maximum Door Width
- Beveled or Square Edge Doors
- A patented easy-to-install, heavy duty, full surface continuous hinge
- Lateral and vertical adjustability while the door is still hanging

For Doors Weighing up to 550 pounds

Standard lengths 83", 95", 119"

Standard Mounting Hardware

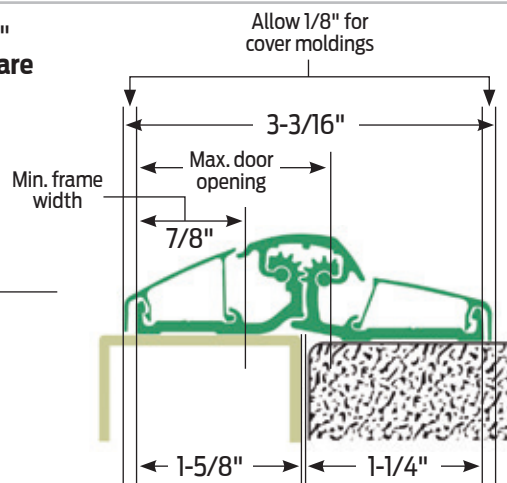
12-24 X 1/2" Steel Self Drilling
and Tapping Screws,

Optional Wood Screws and
Security Fasteners Available

Custom Paint Finish Available

Finishes

Clear (CL), Dark Bronze (DB)



A22 Hinges & Pivots						
B Pulls & Plates						
C Flush Bolts & Coordinators						
D Latches, Catches & Bolts						
E Stops						
F Exterior Hardware						
G Miscellaneous Hardware						



210HD Full Surface, Swing Clear Aluminum Geared Continuous Hinge

- Handing required when modified
- 1/32" Door Inset
- 48" Maximum Door Width
- Beveled or Square Edge Doors

For Doors Weighing up to 600 pounds

Standard lengths 83", 85", 95", 120"

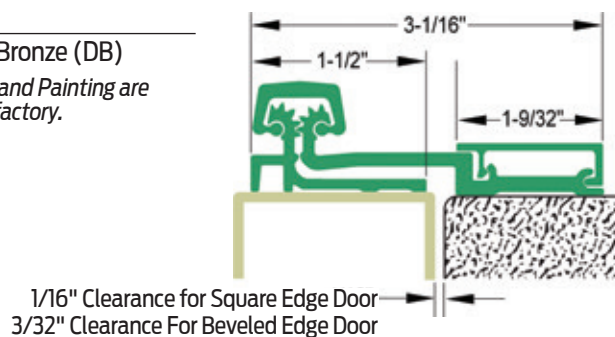
Standard Mounting Hardware

12-24 X 1/2" Steel Self Tapping Screws,
1/4-20 X 1-1/2" AL Sex Bolt
1/4-20 X 1" Steel
Shoulder Bolt, 12-24 X 3/4" Steel Self Drilling,
Optional SEC - Security Fasteners Available

Finishes

Clear (CL), Dark Bronze (DB)

Custom Anodizing and Painting are available, consult factory.





224HD Full Mortise Aluminum Geared Continuous Hinge

- Handing required when modified
- Door Edge Protector
- 48" Maximum Door Width
- 1/16" Door Inset
- Beveled or Square Edge Doors

For Doors Weighing up to 450 pounds without reinforcing,
600 pounds with reinforcing

Standard lengths 83", 85", 95", 120"

Standard Mounting Hardware

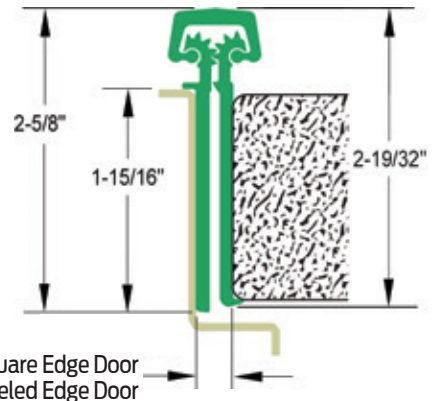
12-24 X 3/4" Steel Self Drilling, Self Tapping Screws

Optional WD - Wood Screws or SEC - Security Fasteners Available

Finishes

Clear (CL), Dark Bronze (DB)

Custom Anodizing and Painting are available, consult factory.



5/16" Clearance for Square Edge Door
1/32" Clearance For Beveled Edge Door

Electrical Cutouts

Ives Aluminum Geared Continuous Hinges are available with factory modified cutouts to accommodate most electrical frame to door requirements. Special templates are required.

When ordering indicate the following:

1. Opening size.
2. Handing. LH, RH, RHR or LHR.
3. Manufacturer and model number of the electrical product being used. Example; Von Duprin EPT2

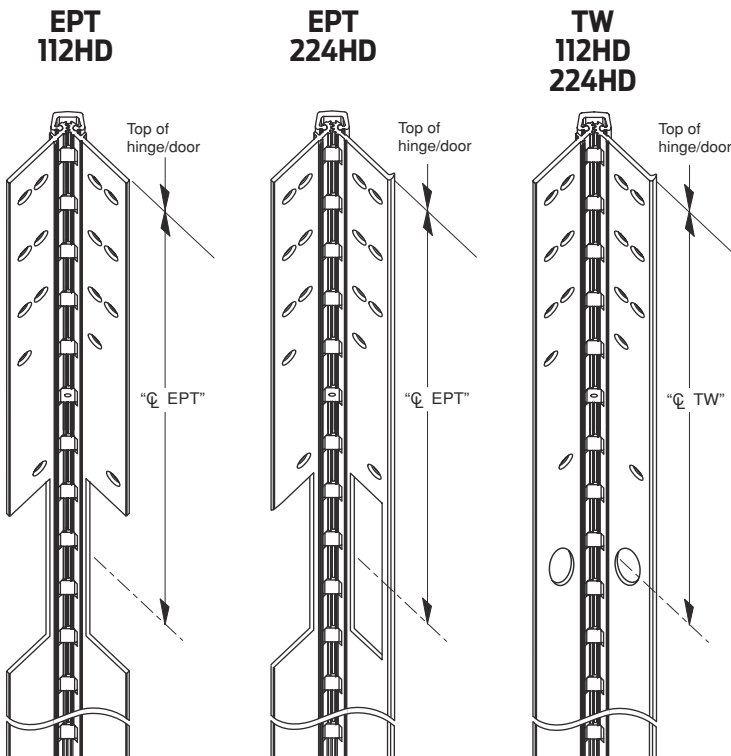
Because clearances may vary between door and frame manufacturer, and locations can be influenced by the door hardware it is always recommend contacting Ives Customer Technical for specific template information.

For your general information below are standard locations for Von Duprin EPT2 or EPT10, and monitor switch.

From Top Edge of Door to Center Line of Cut-Out

Standard Length	112HD EPT	224HD EPT	112HD/224HD TW
83"	30"	30"	41-1/2"
85"	32"	32"	42-1/2"
95"	42"	42"	57-3/4"
120"	67"	67"	81-25/32"

TWP option centered in hinge.



Note: See ordering guide in price book for proper placement.

Pin and Barrel Hinges

General Information

Standard Lengths

83", 85", 95", 120"

Custom lengths are available up to 120", consult factory.

Finishes

US32D (630) Satin Stainless Steel

USP (600) Steel, Primed for Paint

Barrel Type

Twin Self Lubricated Nylon Bearings with Stainless Steel Pin.

Door Weight

Each hinge can hold a door up to 600 lbs (Rivet nuts recommended) and a max door width of 4'0".

ANSI Certified

All Ives Pin and Barrel Hinges certified to ANSI 156.26, Grade 1.

UL Listed

All Ives Steel and Stainless Steel Pin and Barrel Hinges are tested and approved UL 10C (3 hr).

Field Modifications

All Ives Pin and Barrel Continuous Hinges can be cut to length during installation. If more than 6" from bottom of hinge, additional modifications may be necessary.

Electrification Options

Only available for the Full Mortise Hinges

Electric Power Transfer (EPT)

Electric power transfer provides a means of transferring power from the door frame to the edge of a swinging door. Ives Continuous Hinges provide cut outs to fit Von Duprin EPT-2, EPT-10 and PNT-1 devices. Consult factory for other EPT cut out options.

Electrical Through-Wire (TW)

Provides electric power transfer from the frame to the door in order to supply power to an electrified mortise or cylindrical locks, exit devices with electric latch retraction, and/or electric strikes (pairs of doors). Through-wire is rated for 3.5 amp continuous and 16 amp pulse. Ives thru-wire are fully compatible with 4 wire and 8 wire installations.

Pin and Barrel Hinges

How to Order:

700 - US32D - 83 - EPT

Model

Stainless Steel

700	Full Mortise
702	Full Surface - Center Pivot
705	Full Mortise - Full Wrap
711	Full Surface - Swing Clear
715	Full Mortise - Half Wrap

Steel

600	Full Mortise
602	Full Surface - Center Pivot
611	Full Surface - Swing Clear

Finish

Stainless Steel

US32D (630)

Steel

USP (600) Primed

Length

83"
85"
95"
120"

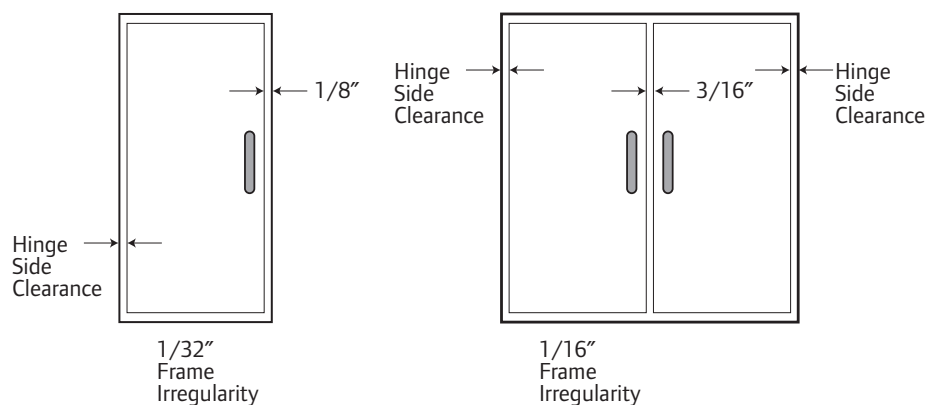
Other lengths available up to 120", consult factory. Handing is required.

Options

* EPT	Electric Power Transfer Prep
* TW8	Electric Through Wire
* TW8M	Electric Through Wire + Monitoring
SF	Security Fasteners - Torx
WD	Wood Fasteners

* Full Mortise Models Only

Pin and Barrel Hinges - Clearance Requirements



SINGLE DOOR

Model	Hinge-Side Clearance	Lock-Side Clearance	Frame Irregularity	Beveled Door Clearance	Door Under-Sizing Square Edged	Door Under-Sizing Beveled Edged
600	1/4"	1/8"	1/32"	1/32"	13/32"	7/16"
602	1/8"	1/8"	1/32"	1/32"	9/32"	5/16"
700	1/4"	1/8"	1/32"	1/32"	13/32"	7/16"
702	1/8"	1/8"	1/32"	1/32"	9/32"	5/16"
705	3/8"	1/8"	1/32"	1/32"	17/32"	9/16"
705*	1/2"	1/8"	1/32"	1/32"	21/32"	11/16"
711	7/32"	1/8"	1/32"	1/32"	3/8"	13/32"
715	1/4"	1/8"	1/32"	1/32"	13/32"	7/16"

* Use the Adjusta-Studs with 705

PAIR OF DOORS

Model	Hinge-Side Clearance	Lock-Side Clearance	Frame Irregularity	Beveled Door Clearance	Square Edged Total	Door Under-Sizing Square Edged Each Door	Door Under-Sizing Beveled Edged Total	Door Under-Sizing Beveled Edged Each Door
600	1/4"	3/16"	1/16"	1/16"	3/4"	3/8"	13/16"	13/32"
602	1/8"	3/16"	1/16"	1/16"	1/2"	1/4"	9/16"	9/32"
700	1/4"	3/16"	1/16"	1/16"	3/4"	3/8"	13/16"	13/32"
702	1/8"	3/16"	1/16"	1/16"	1/2"	1/4"	9/16"	9/32"
705	3/8"	3/16"	1/16"	1/16"	1"	1/2"	1-1/16"	17/32"
705*	1/2"	3/16"	1/16"	1/16"	1-1/4"	5/8"	1-5/16"	21/32"
711	7/32"	3/16"	1/16"	1/16"	11/16"	11/32"	3/4"	3/8"
715	1/4"	3/16"	1/16"	1/16"	3/4"	3/8"	13/16"	13/32"

* Use the Adjusta-Studs with 705



600
700

Full Mortise Pin and Barrel Continuous Hinge

For Doors Weighing up to 600 pounds

- Non Handed
- 1/8" Inset
- 48" Maximum Door Width
- Non Handed
- Bevel or Square Edge Door

Standard lengths 83", 85", 95", 120"

Standard Mounting Hardware

#10 X 1/2" Self Drilling Self Tapping Screws,

#10 X 1" Wood Screws

Optional SEC - Security Fasteners Available

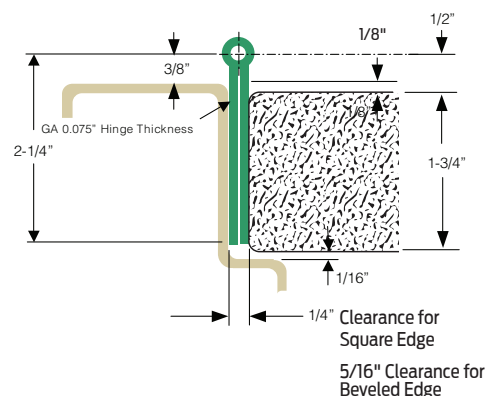
Material

600- 1012 Cold-Rolled Steel

700- 14 Gauge Type 304 Stainless Steel

1/4" Diameter 304 Stainless Pin with

Nylon Split Bearing



Finishes	600	700
BHMA	600	630
US Numbers	USP	US32D

Custom Paint Available, on 600
consult factory.



602
702

Full Surface Pin and Barrel Continuous Hinge

For Doors Weighing up to 600 pounds

- Non Handed
- Flush Mounted, No Inset
- 48" Maximum Door Width
- Bevel or Square Edge Door

Standard lengths 83", 85", 95", 120"

Standard Mounting Hardware

1/4"-20 x 3/4" Self Drilling Self Tapping Screws,

Cover Clips

Optional SEC - Security Fasteners Available

Material

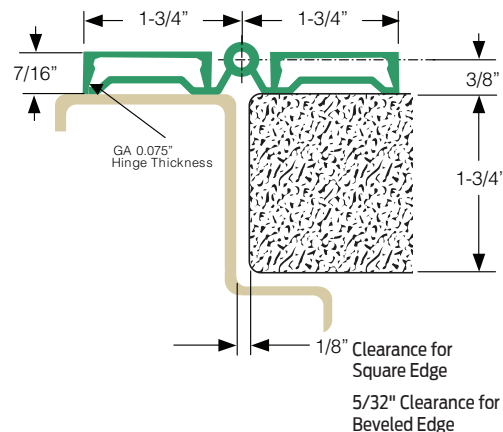
602- 1012 Cold-Rolled Steel

702 - 14 Gauge Type 304 Stainless Steel

1/4" Diameter 304 Stainless Pin with

Nylon Split Bearing

Brushed Aluminum Leaf Covers



Finishes	602	702
BHMA	600	630
US Numbers	USP	US32D

Custom Paint Available, on 602
consult factory



**611
711**

Swing Clear Pin and Barrel Continuous Hinge

For Doors Weighing up to 600 pounds

- Non Handed
- Edge Guard
- 48" Maximum Door Width
- Square Edge Door

Standard lengths 83", 85", 95", 120"

Standard Mounting Hardware

#10 X 1/2" Self Drilling Self Tapping Screws

#10 X 1" Wood Screws

Optional SEC - Security Fasteners

Available

Material

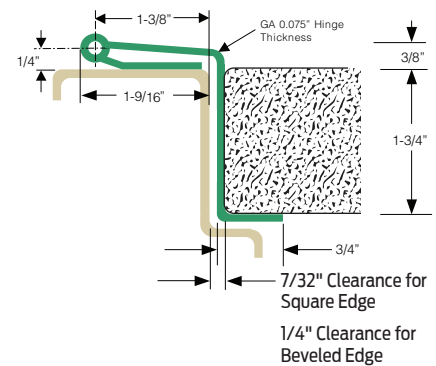
611- 1012 Cold-Rolled Steel

711- 14 Gauge Type 304 Stainless Steel

1/4" diameter 304 stainless pin with nylon split bearings

Finishes	611	711
BHMA	600	630
US Numbers	USP	US32D

Custom Paint Available, on 611 consult factory



705

Full Moritse, Full Wrap Pin and Barrel Continuous Hinge

For Doors Weighing up to 600 pounds

- Non Handed
- Flush Mounted, No Inset
- 48" Maximum Door Width
- Full Wrap Edge Guard
- Bevel or Square Edge Door



Standard lengths 83", 85", 95", 120"

Standard Mounting Hardware

#10 X 1/2" Self Drilling Self Tapping Screws, #10 X 1" Wood Screws

Adjusta-stud 1-3/8" with 10-32 internal thread

Optional SEC - Security Fasteners Available.

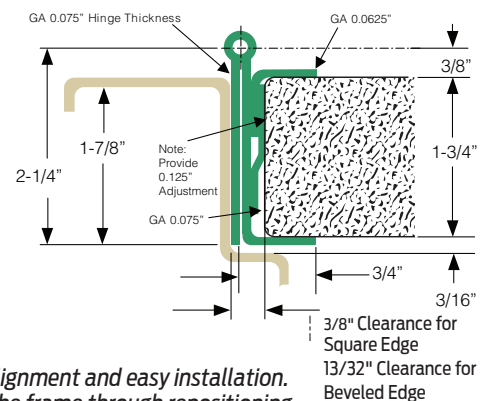
Material

14 Gauge Type 304 Stainless Steel

1/4" diameter 304 stainless pin with nylon split bearings

Finishes

BHMA	630
US Numbers	US32D



* **Adjusta-Stud** allows up to 3/8" width adjustment which ensures proper alignment and easy installation. Adjusta-Stud also makes it possible for future adjustments of the door on the frame through repositioning.

**715**

Full Mortise, Half Wrap Pin and Barrel Continuous Hinge

For Doors Weighing up to 600 pounds

- Non Handed
- Flush Mounted, No Inset
- Half Wrap Edge Guard
- 48" Maximum Door Width
- Square Edge Door

Standard lengths 83", 85", 95", 120"

Standard Mounting Hardware

#10 X 1/2" Self Drilling Tek Screws,

#10 X 1" Wood Screws

Optional SEC - Security Fasteners Available

Material

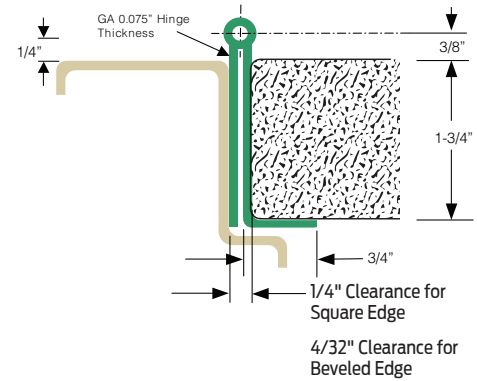
14 Gauge Type 304 Stainless Steel
1/4" diameter 304 stainless pin with
nylon split bearings

Finishes

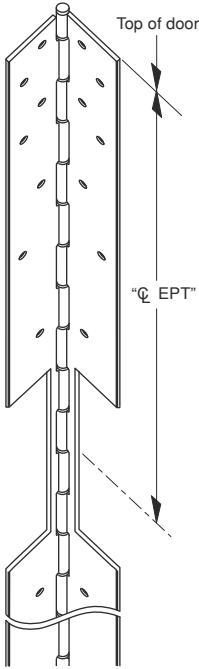
BHMA	630
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US Numbers	US32D
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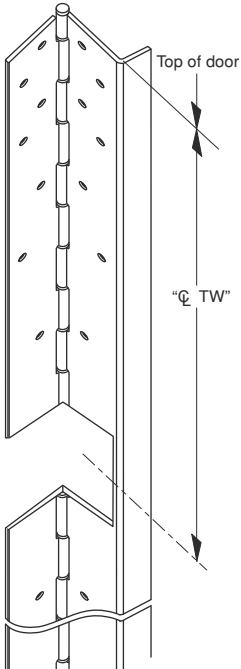
*Custom Paint Available,
consult factory*



EPT
600/700



TW
600/700



Electrical Cutouts

Ives Pin & Barrel Continuous Hinges are available with factory modified cutouts to accommodate most electrical frame to door requirements. Special templates are required.

When ordering indicate the following:

- 1. Opening size.
 - 2. Handing. LH, RH, RHR or LHR.
 - 3. Manufacturer and model number of the electrical product being used.
- Example; Von Duprin EPT2

Because clearances may vary between door and frame manufacturer, and locations can be influenced by the door hardware it is always recommend contacting Ives Customer Technical for specific template information.

For your general information following are standard locations for Von Duprin EPT2 or EPT10, and TW (through wire)

Standard centerline cutout locations

From Top Edge o top of Door to Center Line of Cut-Out

Standard Length	EPT	TW
83"	30"	43-19/32"
85"	32"	45-17/32"
95"	42"	55-17/32"
120"	67"	80-17/32"

Note: See ordering guide in price book for proper placement.

The door rests on the bottom pivot in this application. This reduces the stress on the frame by distributing the weight of the door throughout the floor and structure. By taking advantage of the strength of the structure, this makes a pivot the ideal solution for your heavy doors. Center and pocket pivots also provide an aesthetic option for your opening.

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Pocket Pivots

91105.....	A50
91105F	A50



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.

7200 series Pivot Selection Chart

Pivot Set	Pivot Type	Bottom Mounting Style	UL Listing	Max. Door Weight	Handing	When Ordering Separate Parts		
						Top	Bottom	Intermediate
7212	3/4" Offset	Jamb Mounted	none	200	LH or RH	7212-7215-7222-7226-7227 TOP	7212 BTM	7212-7212V-7222 INT
7212V	3/4" Offset	Jamb Mounted	none	200	LH or RH	7212V TOP	7212 BTM	7212-7212V-7222 INT
7215	3/4" Offset	Jamb Mounted	20 Minute	500	LH or RH	7212-7215-7222-7226-7227 TOP	7215 BTM	7215-7226-7227 INT
7215F	3/4" Offset	Jamb Mounted	3 Hour	500	LH or RH	7215F-7226F-7227F TOP	7215F BTM	7215F-7226F-7227F INT
7222	3/4" Offset	Floor Mounted	none	200	LH or RH	7212-7215-7222-7226-7227 TOP	7222 BTM	7212-7212V-7222 INT
7226	3/4" Offset	Floor Mounted	20 Minute	600	Non-Handed	7212-7215-7222-7226-7227 TOP	7226 BTM	7215-7226-7227 INT
7226F	3/4" Offset	Floor Mounted	3 Hour	600	Non-Handed	7215F-7226F-7227F TOP	7226F BTM	7215F-7226F-7227F INT
7227	3/4" Offset	Mortise Cement Case	20 Minute	700	Non-Handed	7212-7215-7222-7226-7227 TOP	7227 BTM	7215-7226-7227 INT
7227F	3/4" Offset	Mortise Cement Case	3 Hour	700	Non-Handed	7215F-7226F-7227F TOP	7227F BTM	7215-7226-7227 INT
7230F	3/4" Offset	Floor Mounted	3 Hour	1,000	Non-Handed	7230F-7237F TOP	7230F BTM	7215F-7226F-7227F INT
7237F	3/4" Offset	Mortise Cement Case	3 Hour	1,750	Non-Handed	7230F-7237F TOP	7237F BTM	7230F-7237F INT
7244F	1-1/2" Offset	Floor Mounted	3 Hour	400	Non-Handed	7244F-7245F TOP	7244F BTM	7230F-7237F INT
7245F	1-1/2" Offset	Mortise Cement Case	3 Hour	500	Non-Handed	7244F-7245F TOP	7245F BTM	7244F-7245F INT
7253	Center Hung	Floor Mounted	none	300	Non-Handed	7253-7255-7255J-7256 TOP	7253 BTM	7244F-7245F INT
7255	Center Hung	Floor Mounted	none	500	Non-Handed	7253-7255-7255J-7256 TOP	7255 BTM	none
7255J	Center Hung	Jamb Mounted	none	500	Non-Handed	7253-7255-7255J-7256 TOP	7255J BTM	none
7256	Center Hung	Mortise Cement Case	none	600	Non-Handed	7253-7255-7255J-7256 TOP	7256 BTM	none
7259	Center Hung	Mortise Cement Case	none	1,000	Non-Handed	7259 TOP	7259 BTM	none

How to Order:

	<u>7212</u>	-	<u> </u>	-	<u>LH</u>	-	<u>US3</u>
Pivot: 7212 7212V 7215 7215F 7222 7226 7226F 7227 7227F 7230F 7237F 7244F 7245F 7253 7255 7255J 7256 7259							
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							
Hand: LH Left hand door RH Right hand door							
Finish: US3 US4 US10 US10B US26 US26D SP4 SP10 SP28 SP313 SPBLK USP <i>optional finishes are available, consult factory</i>							

A33
Hinges & Pivots

B
Pulls & Plates

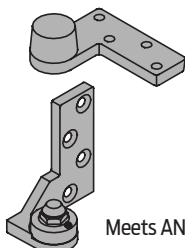
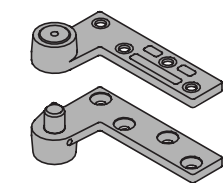
C
Flush Bolts & Coordinators

D
Latches, Catches & Bolts

E
Stops

F
Exterior Hardware

G
Miscellaneous Hardware

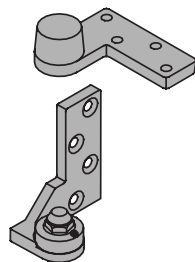
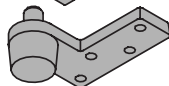
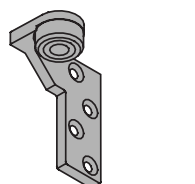
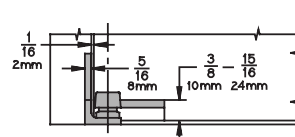
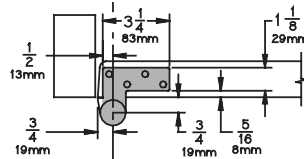
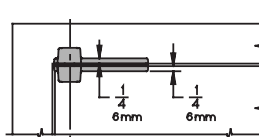
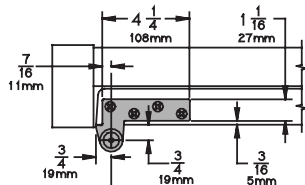
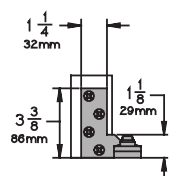


Meets ANSI/BHMA A156.4 C07131

7212 3/4" Offset Pivot

- Handed
- Top, header mount
- Bottom, jamb mount
- Use with 1-3/4" minimum door thickness, with 1/8" bevel in 2"
- Maximum door load 200 pounds
- Vertical adjustment range 3/16", with positive locking

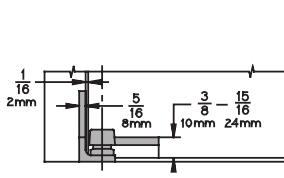
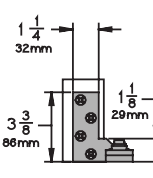
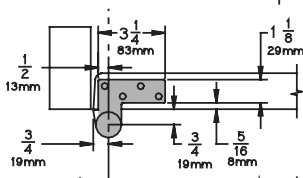
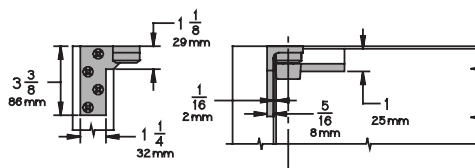
Optional 7212-7212V-7222 Intermediate Pivot (handed) for each additional 100 pounds or doors over 7'. See page A47.



7212V 3/4" Offset Pivot

- Handed
- Top, jamb mount
- Bottom, jamb mount
- Use with 1-3/4" minimum door thickness, with 1/8" bevel in 2"
- Maximum door load 200 pounds
- Vertical adjustment range 3/16", with positive locking

Optional 7212-7212V-7222 Intermediate Pivot (handed) for each additional 100 pounds or doors over 7'. See page A47.

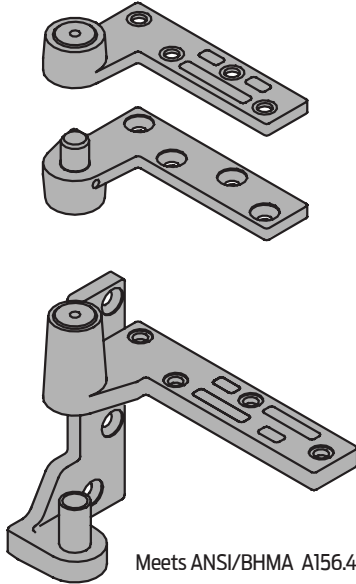


Plated Finishes *brass*

US Number	US3	US4	US10	US10B	US26	US26D
BHMA Number	605	606	612	613	625	626

Painted Finishes *brass*

US Number	SP4	SP10	SP28	SP313	SPBLK
BHMA Number	706	691	689	695	622



Meets ANSI/BHMA A156.4 C07131

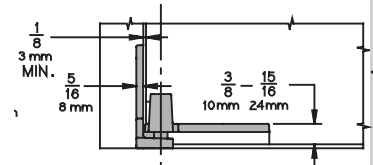
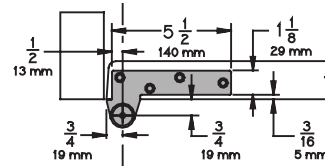
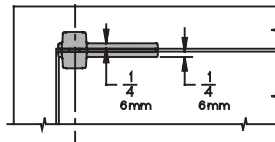
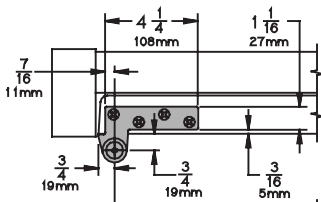
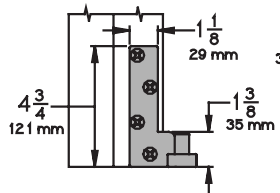
7215 - UL Listed 20 minute fire doors

7215F - UL Listed 3 hour fire doors

7215 7215F 3/4" Offset Pivot

- Handed
- Top, header mount
- Bottom, jamb mount
- Use with 1-3/4" minimum door thickness, with 1/8" bevel in 2"
- Maximum door load 500 pounds
- Vertical adjustment range 3/16", with positive locking
- WP - optional weather resistant bottom pivot is modified for improved corrosion resistance. Available in US26D (626) or US32D (630) only.

Optional 7215-7226-7227 or 7215F-7226F-7227F Intermediate Pivot (handed) for each additional 100 pounds or doors over 7'. See page A47.
Optional 7215PT Power Transfer, non-load bearing. See page A49



7215

Plated Finishes *brass*

US Number	US3	US4	US10	US10B	US26	US26D
BHMA Number	605	606	612	613	625	626

Painted Finishes *brass*

US Number	SP4	SP10	SP28	SP313	SPBLK
BHMA Number	706	691	689	695	622

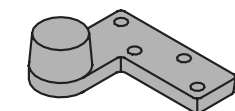
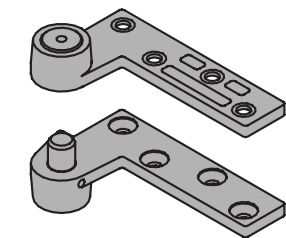
7215F

Plated Finishes *steel*

US Number	US3	US10	US32	US32D
BHMA Number	632	639	629	630

Painted Finishes *steel*

US Number	SP4	SP10	SP28	SP313	SPBLK
BHMA Number	706	691	689	695	622

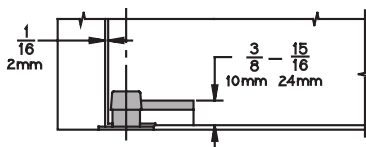
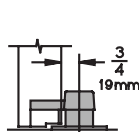
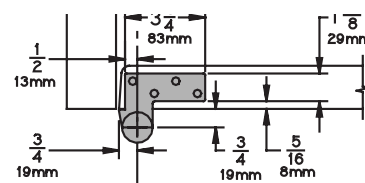
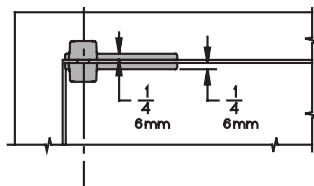
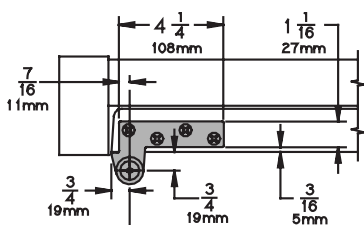


Meets ANSI/BHMA A156.4 C07162

7222 3/4" Offset Pivot

- Handed
- Top, header mount
- Bottom, base plate mount
- Use with 1-3/4" minimum door thickness, with 1/8" bevel in 2"
- Maximum door load 200 pounds
- Vertical adjustment range 3/16", with positive locking

Optional 7212-7212V-7222 Intermediate Pivot (handed) for each additional 100 pounds or doors over 7'. See page A47.

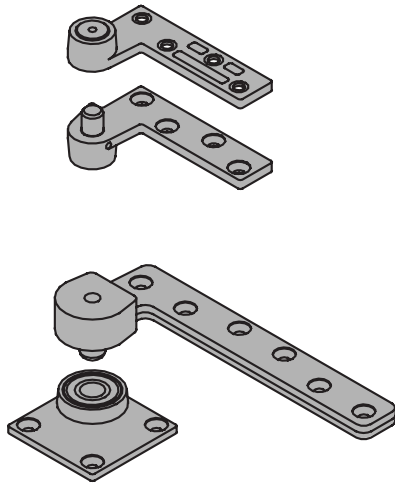


Plated Finishes *brass*

US Number	US3	US4	US10	US10B	US26	US26D
BHMA Number	605	606	612	613	625	626

Painted Finishes *brass*

US Number	SP4	SP10	SP28	SP313	SPBLK
BHMA Number	706	691	689	695	622



Meets ANSI/BHMA A156.4 C07162

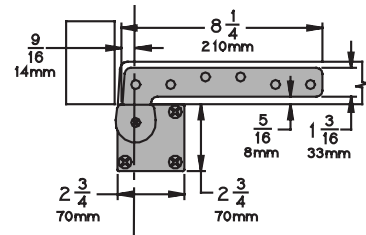
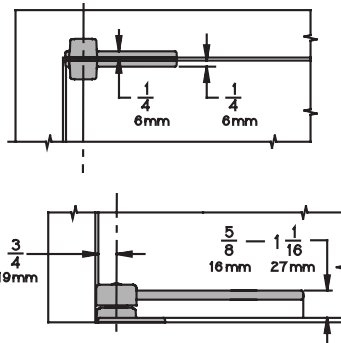
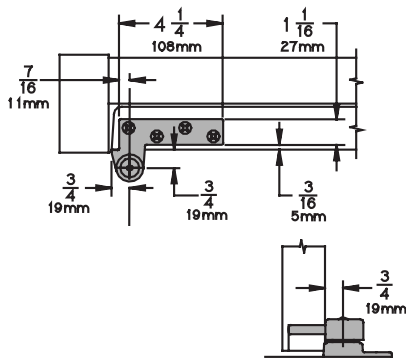
7226 - UL Listed 20 minute fire doors

7226F - UL Listed 3 hour fire doors

7226 7226F 3/4" Offset Pivot

- Non-handed
- Top, header mount
- Bottom, base plate mount
- Use with 1-3/4" minimum door thickness, with 1/8" bevel in 2"
- Maximum door load 600 pounds
- Vertical adjustment range 3/16", with positive locking

Optional 7215-7226-7227 or 7226F-722 Intermediate Pivot (handed) for each additional 100 pounds or doors over 7'. See page A47.
Optional 7226PT Power Transfer (four wires), non-load bearing. See page A49



7226

Plated Finishes *brass*

US Number	US3	US4	US10	US10B	US26	US26D
BHMA Number	605	606	612	613	625	626

Painted Finishes *brass*

US Number	SP4	SP10	SP28	SP313	SPBLK
BHMA Number	706	691	689	695	622

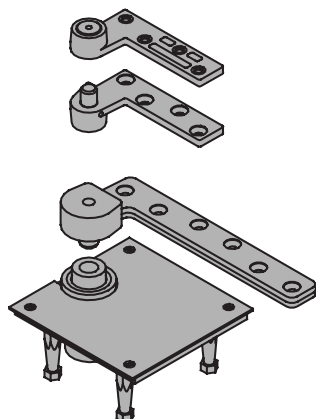
7226F

Plated Finishes *steel*

US Number	US3	US10	US32	US32D
BHMA Number	632	639	629	630

Painted Finishes *steel*

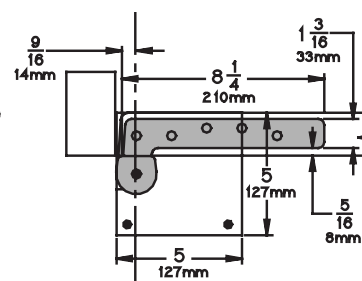
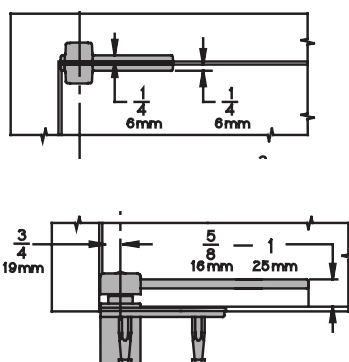
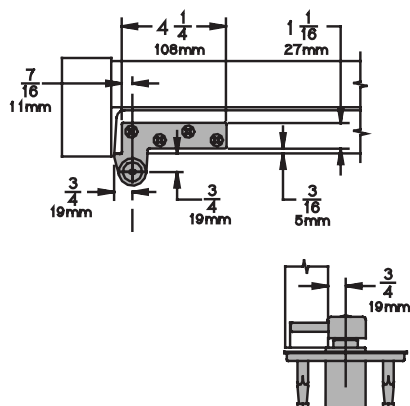
US Number	SP4	SP10	SP28	SP313	SPBLK
BHMA Number	706	691	689	695	622



Meets ANSI/BHMA A156.4 C07121

7227 - UL Listed 20 minute fire doors

7227F - UL Listed 3 hour fire doors



7227 7227F 3/4" Offset Pivot

- Non-handed
- Top, header mount
- Bottom, base plate mount
- Use with 1-3/4" minimum door thickness, with 1/8" bevel in 2"
- Maximum door load 700 pounds
- Vertical adjustment range 3/16", with positive locking

Optional 7215-7226-7227 or 7215F-7226F-7227F Intermediate Pivot (handed) for each additional 100 pounds or doors over 7'. See page A47.

Optional 7227PT Power Transfer (four wires), non-load bearing. See page A49.

7227

Plated Finishes *brass*

US Number	US3	US4	US10	US10B	US26	US26D
BHMA Number	605	606	612	613	625	626

Painted Finishes *brass*

US Number	SP4	SPT0	SP28	SP313	SPBLK
BHMA Number	706	691	689	695	622

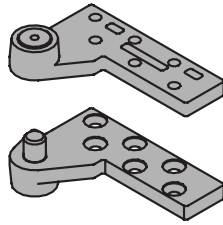
7227F

Plated Finishes *steel*

US Number	US3	US10	US32	US32D
BHMA Number	632	639	629	630

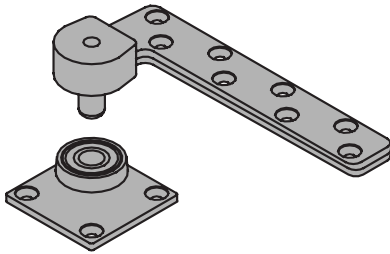
Painted Finishes *steel*

US Number	SP4	SPT0	SP28	SP313	SPBLK
BHMA Number	706	691	689	695	622



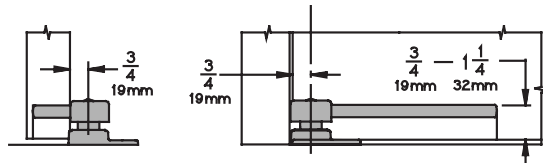
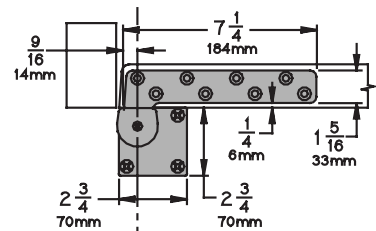
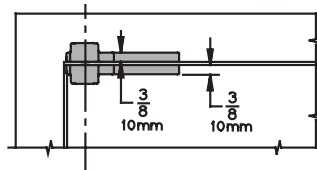
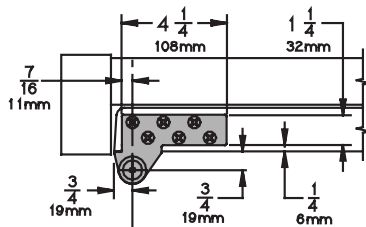
7230F 3/4" Offset Pivot - Heavy Duty

- Non-Handed
- Top, header mount
- Bottom, base plate mount
- Use with 1-3/4" minimum door thickness, with 1/8" bevel in 2"
- Maximum door load 1,000 pounds
- Vertical adjustment range 3/16", with positive locking



Optional 7230F-7237F Intermediate Pivot (handed) for each additional 100 pounds or doors over 7'. See page A48.

Meets ANSI/BHMA A156.4 C07162
UL Listed 3 Hour Fire Doors

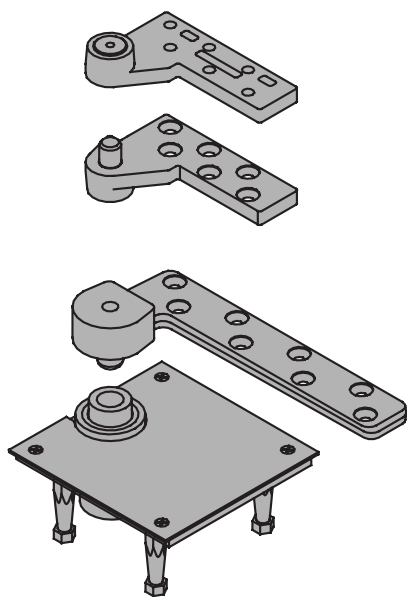


Plated Finishes *steel*

US Number	US3	US10	US32	US32D
BHMA Number	632	639	629	630

Painted Finishes *steel*

US Number	SP4	SP10	SP28	SP313	SPBLK
BHMA Number	706	691	689	695	622

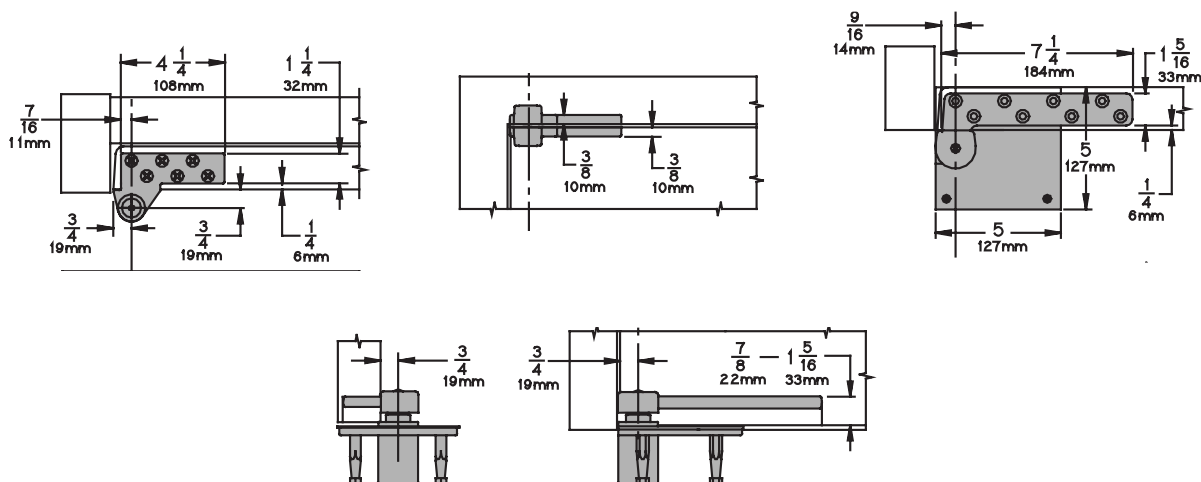


7237F 3/4" Offset Pivot - Heavy Duty

- Non-Handed
- Top, header mount
- Bottom, mortised cement case mount
- Use with 1-3/4" minimum door thickness, with 1/8" bevel in 2"
- Maximum door load 1,750 pounds
- Vertical adjustment range 3/16", with positive locking

Optional 7230F-7237F Intermediate Pivot (handed) for each additional 100 pounds or doors over 7'. See page A48.

Meets ANSI/BHMA A156.4 C07111
UL Listed 3 Hour Fire Doors

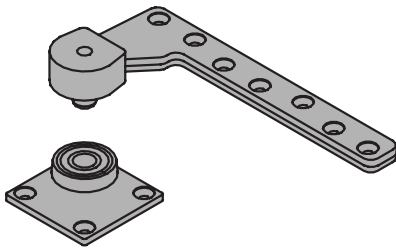
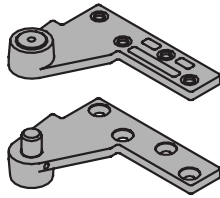


Plated Finishes *steel*

US Number	US3	US10	US32	US32D
BHMA Number	632	639	629	630

Painted Finishes *steel*

US Number	SP4	SP10	SP28	SP313	SPBLK
BHMA Number	706	691	689	695	622

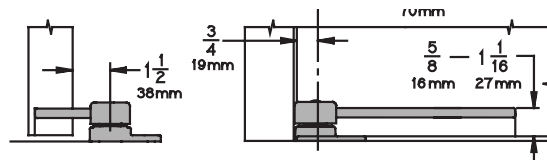
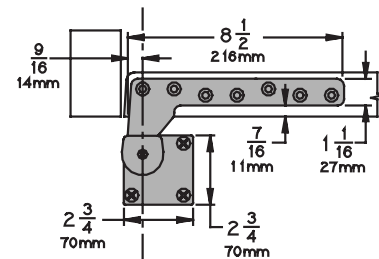
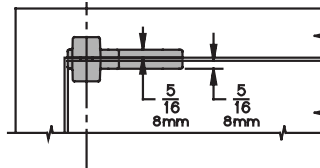
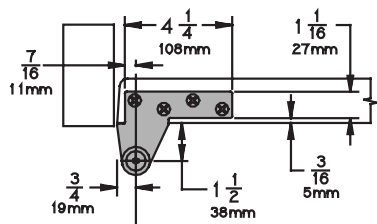


7244F 1-1/2" Offset Pivot - Heavy Duty

- Non-Handed
- Top, header mount
- Bottom, base mount
- Use with 1-3/4" minimum door thickness
- Maximum door load 400 pounds
- Vertical adjustment range 3/16", with positive locking

Optional 7244F-7245F Intermediate Pivot (handed) for each additional 100 pounds or doors over 7'. See page A48.

Meets ANSI/BHMA A156.4 C07162
UL Listed 3 Hour Fire Doors

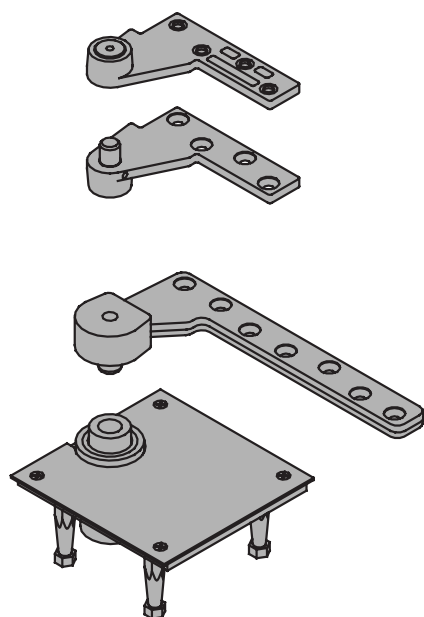


Plated Finishes *steel*

US Number	US3	US10	US32	US32D
BHMA Number	632	639	629	630

Painted Finishes *steel*

US Number	SP4	SP10	SP28	SP313	SPBLK
BHMA Number	706	691	689	695	622

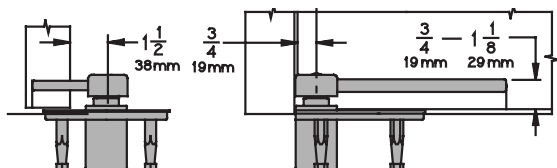
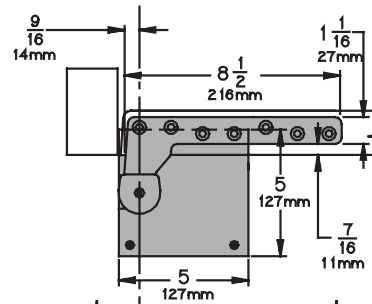
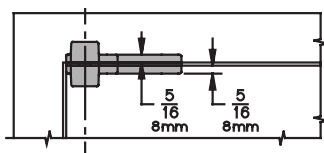
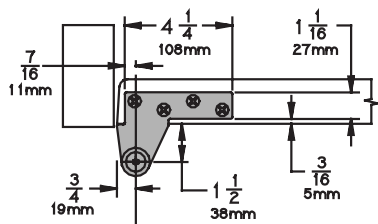


7245F 1-1/2" Offset Pivot - Heavy Duty

- Non-Handed
- Top, header mount
- Bottom, mortised cement case mount
- Use with 1-3/4" minimum door thickness, with 1/8" bevel in 2"
- Maximum door load 500 pounds
- Vertical adjustment range 3/16", with positive locking

Optional 7244F-7245F Intermediate Pivot (handed) for each additional 100 pounds or doors over 7'. See page A48.

Meets ANSI/BHMA A156.4 C07121
UL Listed 3 Hour Fire Doors



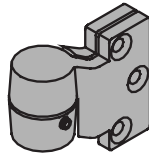
Plated Finishes *steel*

US Number	US3	US10	US32	US32D
BHMA Number	632	612	629	630

Painted Finishes *steel*

US Number	SP4	SP10	SP28	SP313	SPBLK
BHMA Number	706	691	689	695	622

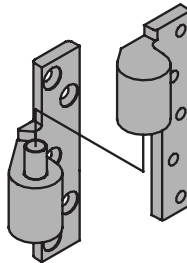
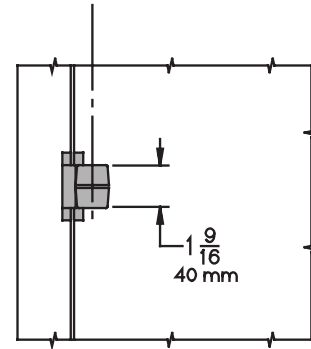
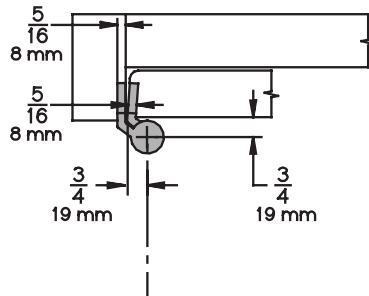
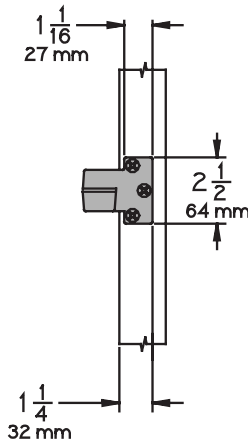
NFPA 80, Section 3-3.8 requires intermediate pivot on some fire door applications, consult factory. Use for door heights over 7'0" and one every 2'6" or . Use for door weight over the pivot set limit. One additional for every additional 100 pounds. Door thickness 1-3/4" minimum with 1/8" bevel in 2".



Meets ANSI/BHMA A156.4 C07382

7212-7212V-7222 INT

- Use with 7212, 7212V or 7222 3/4 Offset Pivot
- Handed
- Vertical adjustment 3/16", include positive locking.

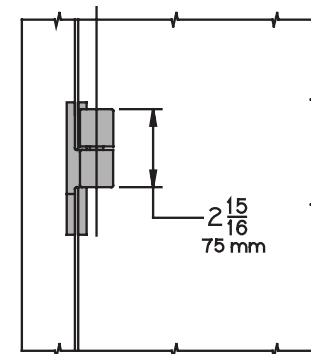
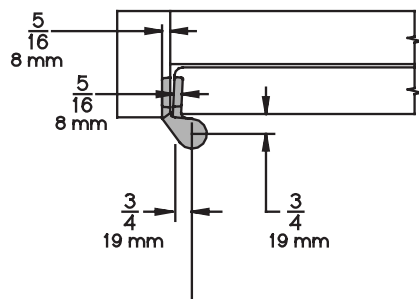
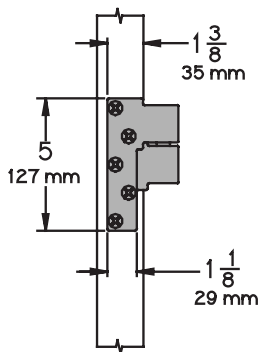


7215-7226-7227 INT:
UL listed 20 minute fire doors
Meets ANSI/BHMA A156.4 C07321

7215F-7226F-7227F INT:
UL listed 3 hour fire doors
Meets ANSI/BHMA A156.4 C07371

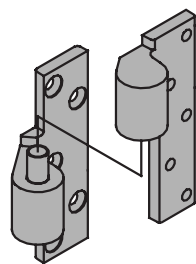
7215-7226-7227 INT

- Use with 7215, 7226 or 7227 3/4 Offset Pivot
- Handed
- Vertical adjustment 3/16", include positive locking.



7215F-7226F-7227F INT

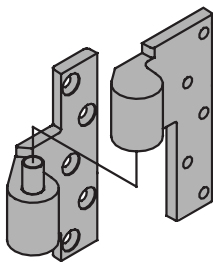
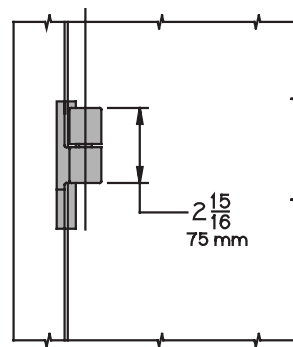
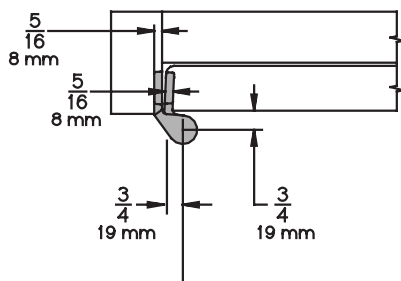
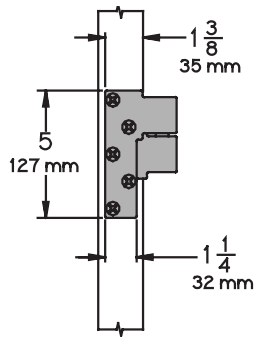
- Use with 7215F, 7226F or 7227F 3/4 Offset Pivot
- Handed
- Vertical adjustment 3/16", include positive locking.



7230F-7237F INT

- Use with 7230F or 7237F 3/4 Offset Pivot
- Handed
- Vertical adjustment 3/16", include positive locking.

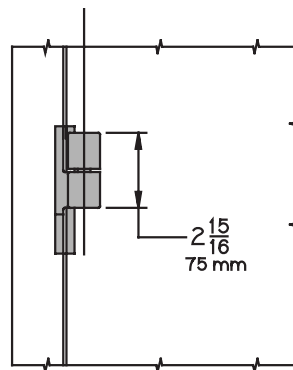
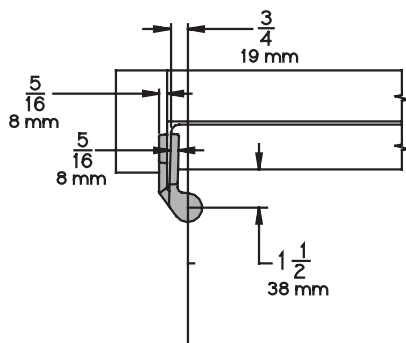
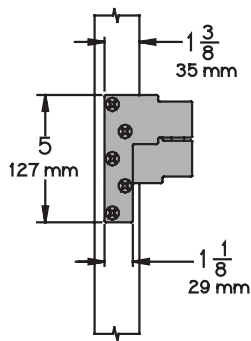
UL listed 3 hour fire doors
Meets ANSI/BHMA A156.4 C07311

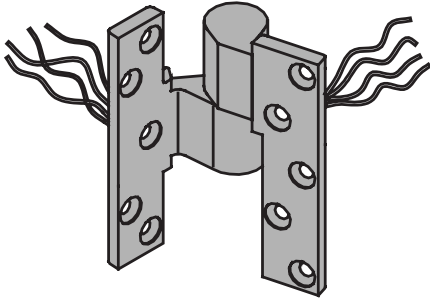


7244F-7245F

- Use with 7244F or 7245F 1-1/2" Offset Pivot
- Handed
- Vertical adjustment 3/16", include positive locking.

UL listed 3 hour fire doors
Meets ANSI/BHMA A156.4 C07371





7215PT-7226PT-7227PT Power Transfer Pivot

- Use with 7215, 7226 or 7227 3/4" Offset Pivots
- Four wires, 28 gauge
- Optional 8 wire available
- Rated 50 VDC or VAC @ 3.5 amps. Continuous or 16 amps pulse, maximum pulse 400 milliseconds.
- Non-load bearing
- Use with 1-3/4" thick door minimum, 1/8" bevel in 2".

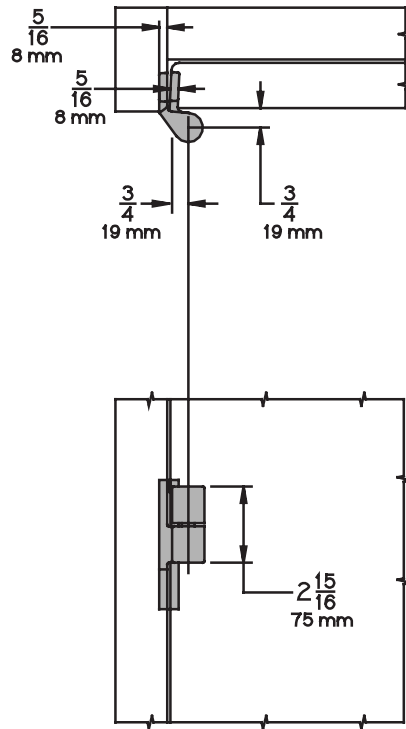
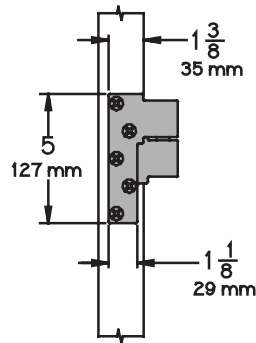
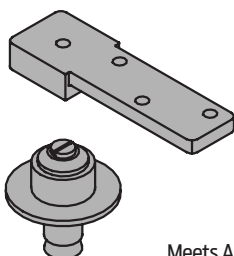
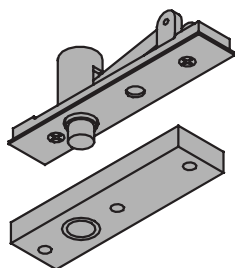


Plate Finishes *brass*

US Number	US3	US4	US10	US10B	US26	US26D
BHMA Number	605	606	612	613	625	626

Painted Finishes *brass*

US Number	SP4	SP10	SP28	SP313	SPBLK
BHMA Number	706	691	689	695	622



Meets ANSI/BHMA A156.4 C07032

7253 Center Hung Pivot

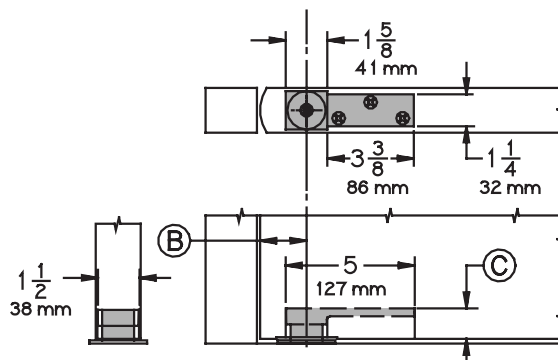
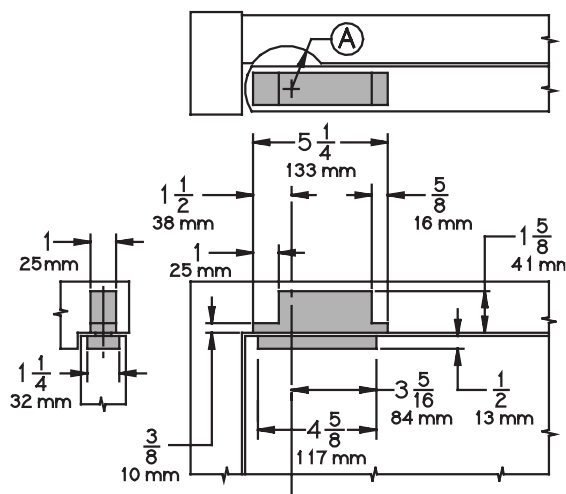
- Non-Handed
- Top, header mount
- Bottom, base plate mount
- Easy installation tilt on bearing and bearing pin.
- Use with 1-3/4" minimum door thickness.
- Adjustable floor to door clearance 3/16" to 3/4".
- Maximum door load 300 pounds
- Vertical adjustment range 3/16", with positive locking

Plated Finishes *brass*

US Number	US3	US4	US10	US10B	US26	US26D
BHMA Number	605	606	612	613	625	626

Painted Finishes *brass*

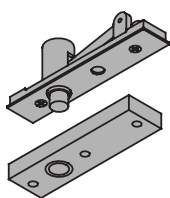
US Number	SP4	SP10	SP28	SP313	SPBLK
BHMA Number	706	691	689	695	622



- Radius Stop (A) to clear heel of door edge.
- 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 floor mounting surface is adjustable from 3/16" (5mm) to 3/4" (19mm) by varying the depth of the mortise (C) in the bottom of the door, refer to Chart D. Consult factory when clearance is over 3/4" (19mm).

Table D

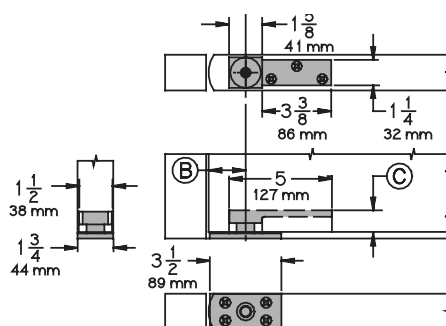
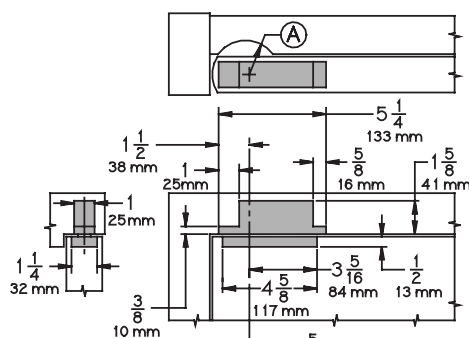
Clearance	Depth of Mortise
3/16" (5mm)	1-3/16" (30mm)
3/8" (10mm)	1" (25mm)
1/2" (13mm)	7/8" (22mm)
5/8" (16mm)	3/4" (19mm)
3/4" (19mm)	5/8" (16mm)



7255 Center Hung Pivot

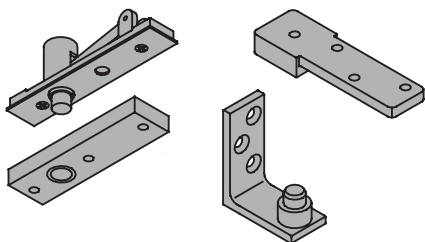
- Non-Handed
- Top, header mount
- Bottom, base plate mount
- Easy installation tilt on bearing and bearing pin.
- Use with 1-3/4" minimum door thickness.
- Adjustable floor to door clearance 3/16" to 3/4", consult factory if greater than 3/4"..
- Maximum door load 500 pounds
- Vertical adjustment range 3/16", with positive locking

Meets ANSI/BHMA A156.4 C07032



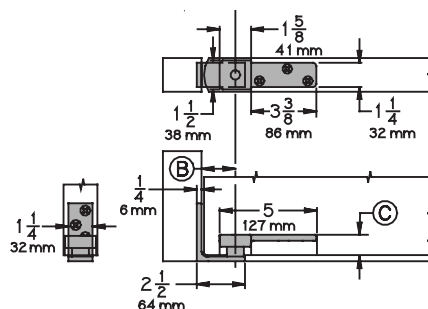
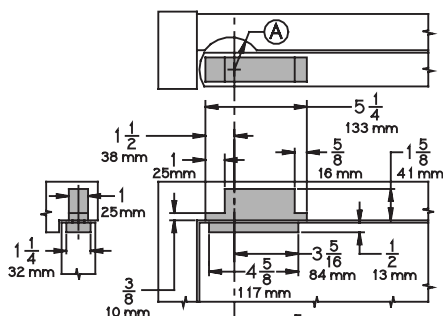
- Radius Stop (A) to clear heel of door edge.
- Pivot distance (B) 1-3/4" (44mm) minimum from jamb to centerline of pivot pin. Radius heel edge of door, 1-5/8" (41mm) minimum recommended.
- Clearance from bottom edge of door to floor mounting surface is adjustable from 3/16" (5mm) to 3/4" (19mm) by varying the depth of the mortise (C) in the bottom of the door, refer to Chart D. Consult factory when clearance is over 3/4" (19mm).

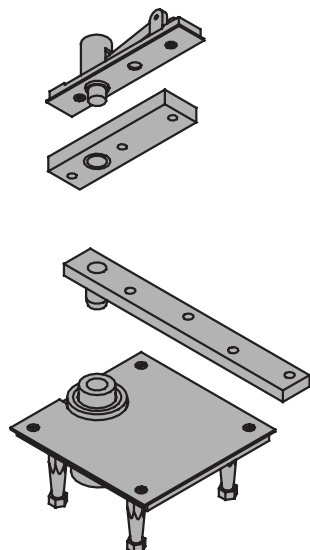
7255J Center Hung Pivot



Meets ANSI/BHMA A156.4 C07042

- Non-Handed
- Top, header mount
- Bottom, jamb mount
- Easy installation tilt on bearing and bearing pin.
- Use with 1-3/4" minimum door thickness.
- Adjustable floor to door clearance 3/16" to 3/4", consult factory if greater than 3/4".
- Maximum door load 500 pounds
- Vertical adjustment range 3/16", with positive locking

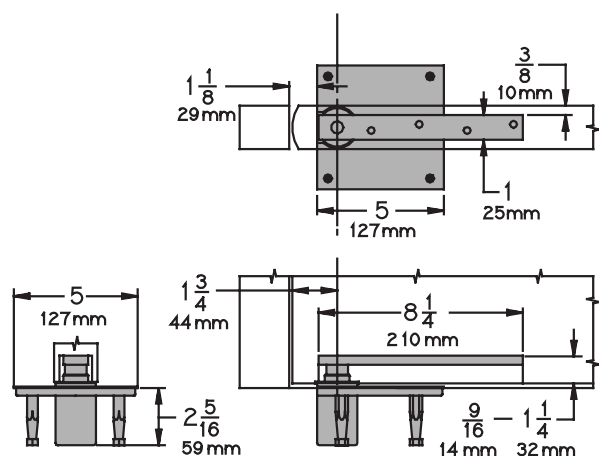
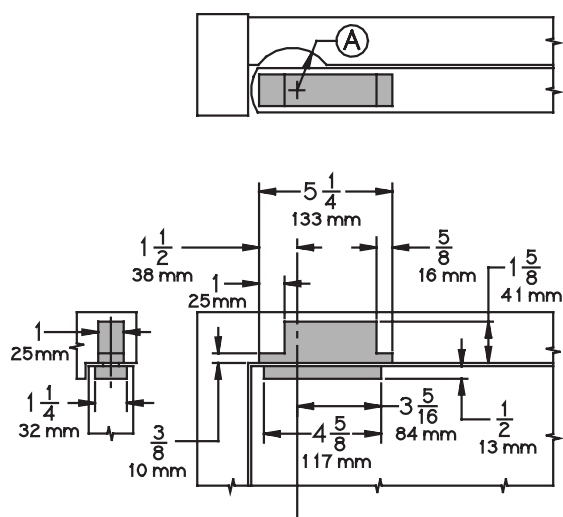




7256 Center Hung Pivot

- Non-Handed
- Top, header mount
- Bottom, base frame mount
- Easy installation tilt on bearing and bearing pin.
- Use with 1-3/4" minimum door thickness.
- Adjustable floor to door clearance 3/16" to 3/4", consult factory if greater than 3/4".
- Maximum door load 600 pounds
- Vertical adjustment range 3/16", with positive locking

Meets ANSI/BHMA A156.4 C07021



- Radius Stop (A) to clear heel of door edge.
- 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 floor mounting surface is adjustable from 3/16" (5mm) to 3/4" (19mm) by varying the depth of the mortise (C) in the bottom of the door, refer to Chart D. Consult factory when clearance is over 3/4" (19mm).

Table D

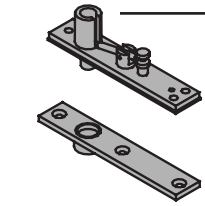
Clearance	Depth of Mortise
3/16" (5mm)	1-3/16" (30mm)
3/8" (10mm)	1" (25mm)
1/2" (13mm)	7/8" (22mm)
5/8" (16mm)	3/4" (19mm)
3/4" (19mm)	5/8" (16mm)

Plated Finishes *brass*

US Number	US3	US4	US10	US10B	US26	US26D
BHMA Number	605	606	612	613	625	626

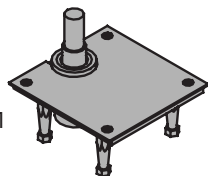
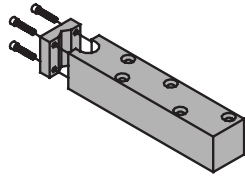
Painted Finishes *brass*

US Number	SP4	SPI0	SP28	SP313	SPBLK
BHMA Number	706	691	689	695	622

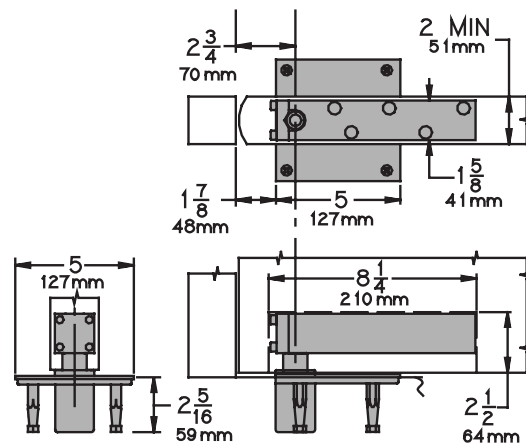
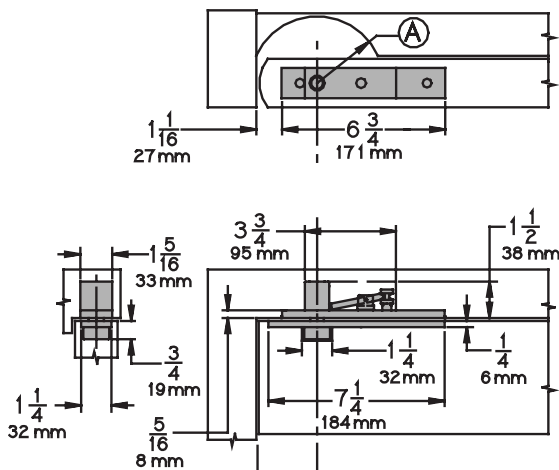


7259 Center Hung Pivot

- Non-Handed
- Top, header mount
- Bottom, base frame mount
- Easy installation tilt on bearing and bearing pin.
- Use with 2" minimum door thickness.
- Adjustable floor to door clearance 3/16" to 3/4", consult factory if greater than 3/4".
- Maximum door load 1,000 pounds
- Vertical adjustment range 3/16", with positive locking



Meets ANSI/BHMA A156.4 C07011



- Radius Stop (A) to clear heel of door edge.
- 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 floor mounting surface is adjustable from 3/16" (5mm) to 3/4" (19mm) by varying the depth of the mortise (C) in the bottom of the door, refer to Chart D. Consult factory when clearance is over 3/4" (19mm).

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)

Plated Finishes *brass*

US Number	US3	US4	US10	US10B	US26	US26D
BHMA Number	605	606	612	613	625	626

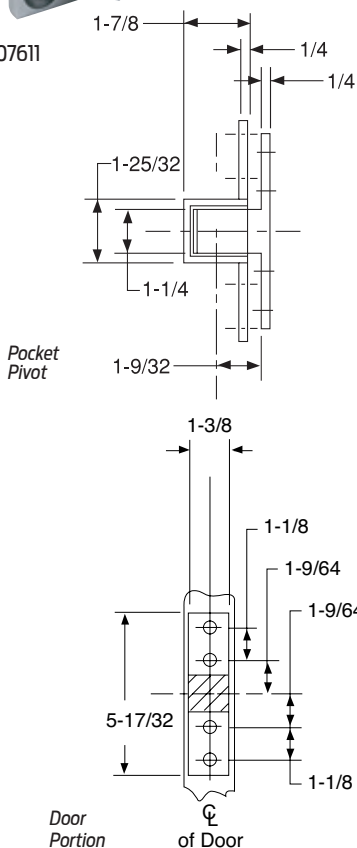
Painted Finishes *brass*

US Number	SP4	SP10	SP28	SP313	SPBLK
BHMA Number	706	691	689	695	622



UL Listed 3 hour fire doors
or 20 minute wood fire doors

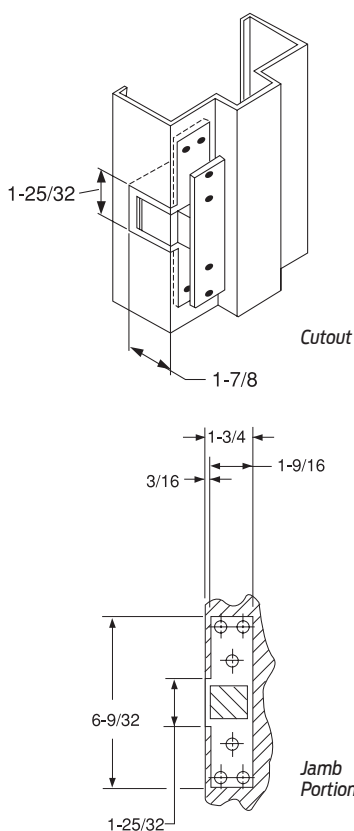
Meets ANSI/BHMA A156.4 C07611



91105F, 91105F-PT Pocket Pivot/Hinge

- Non-handed
- All stainless steel construction.
- Allows door to open a full 90 (* degree mark)
- Full mortise
- 90 pound load bearing
- Use two for doors up to 7'0" and over 7'0" use three.
- PT, Power Transfer version has four 28 gauge wires (contact factory for eight wire version). Rated 50 VOC or VAC @ 3.5 amps. Continuous or 16 amps pulse. Maximum pulse 400 milliseconds.

91105F Pocket Pivot



Plated Finishes *steel*

US Number	US3	US10	US10B
BHMA Number	632	639	640

Painted Finishes *steel*

US Number	USP	SP313
BHMA Number	600	695

Finishes *stainless steel*

US Number	US32	US32D
BHMA Number	629	630