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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*

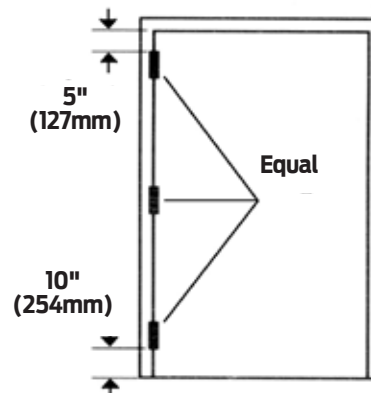
DOOR THICKNESS	CLEARANCE NEEDED	HINGE OPEN WIDTH
1-3/8"	3/4"	4"
1-3/4"	1"	4"
1-3/4"	1-1/2"	4-1/2"
1-3/4"	2"	5"
1-3/4"	3"	6"
2"	1"	4-1/2"
2"	1-1/2"	5"
2"	2-1/2"	6"
2-1/4"	1"	5"
2-1/4"	2"	6"
2-1/2"	3/4"	5"
2-1/2"	1-3/4"	6"
3"	3/4"	8"
3"	2-3/4"	8"

*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:

5 - BB - 1 - HW - 4.5x4.5 - 652 - NRP

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:

- | | | | |
|------------------|----------------|--------------|------------------------------------------------------------------|
| 3.5 x 3.5 | 4.5 x 5 | 5 x 6 | <i>Larger sizes, up to 6 x 8 are available. Consult factory.</i> |
| 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

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

A6
Hinges & Pilots

B
Pulls & Plates

C
Flush Bolts & Coordinators

D
Latches, Catches & Bolts

E
Stops

F
Exterior Hardware

G
Miscellaneous Hardware



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 Fastners - 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 A156.1
A8112 – Steel
A5112 – Stainless Steel
A2112 – Brass



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 Fastners - 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

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

Finishes *brass*

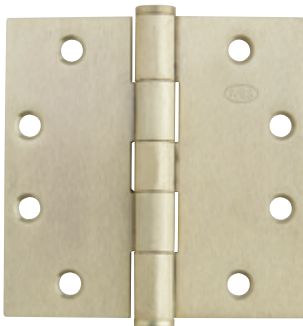
Ives Finish	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	605	606	612	613	614	616	619	625	626

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 Fastners - 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 Fastners - 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

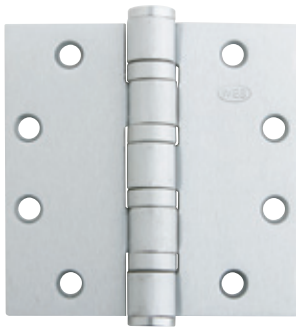
Ives Finish	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	605	606	612	613	614	616	619	625	626

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

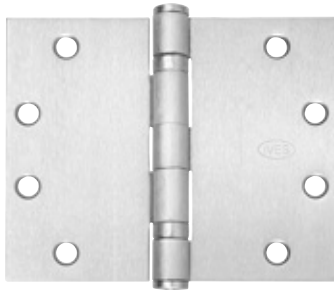
- For heavy weight doors
- High frequency usage
- 4 ball bearing
- Packed with wood and metal screws

Options

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

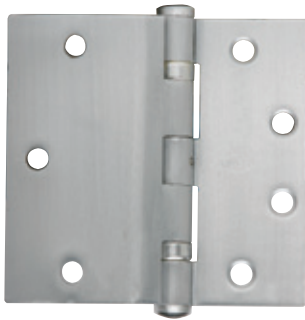
Ives Finish	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	605	606	612	613	614	616	619	625	626

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*

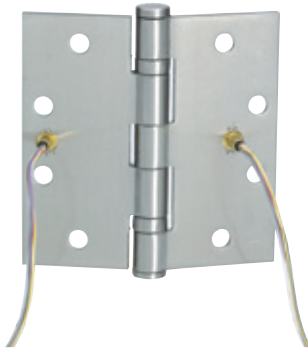
Ives Finish	US3	US4	US10	US10B	US10A	US11	US15	US26	US26D
BHMA	605	606	612	613	614	616	619	625	626

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

Hinges & Pivots **A11**

Pulls & Plates **B**

Flush Bolts & Coordinators **C**

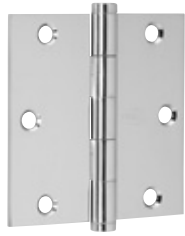
Latches, Catches & Bolts **D**

Stops **E**

Exterior Hardware **F**

Miscellaneous Hardware **G**

A12	Hinges & Pilots
B	Pulls & Plates
C	Flush Bolts & Coordinators
D	Latches, Catches & Bolts
E	Stops
F	Exterior Hardware
G	Miscellaneous Hardware



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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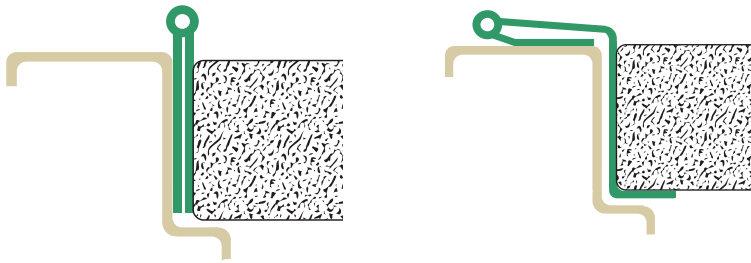
Aluminum Geared

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:

112HD - CL - 83 - EPT

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

Aluminum Geared Hinges - Clearance Requirements

A18
Hinges & Pilots

B
Pulls & Plates

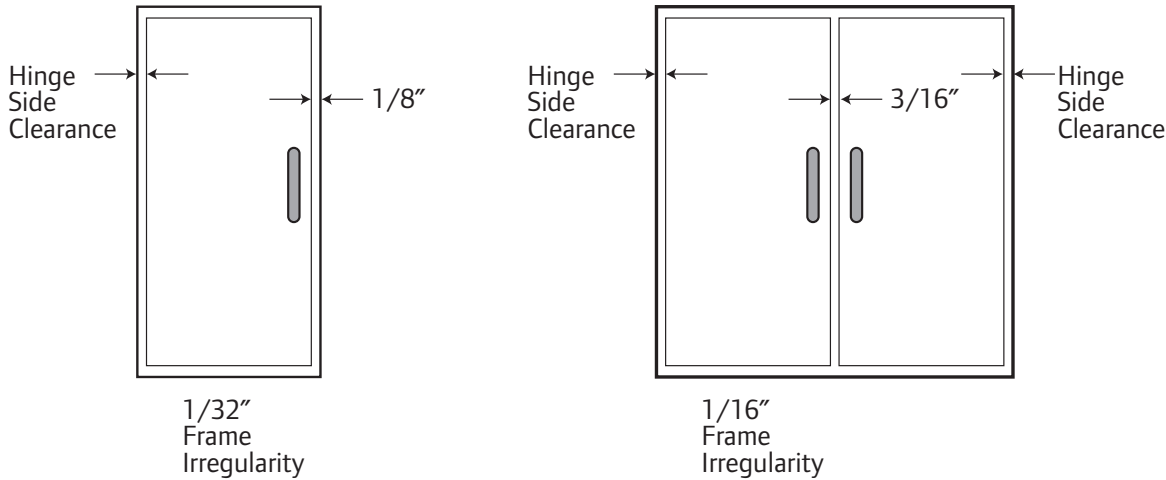
C
Flush Bolts & Coordinators

D
Latches, Catches & Bolts

E
Stops

F
Exterior Hardware

G
Miscellaneous Hardware



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

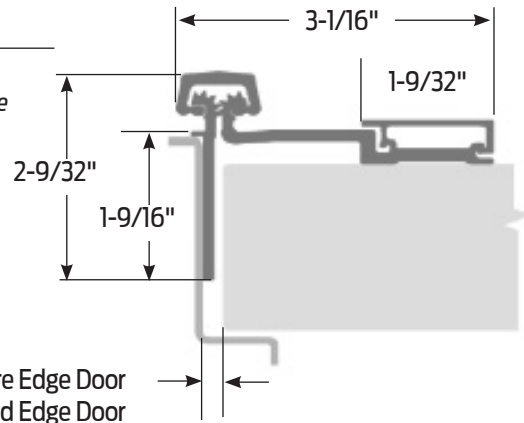
Standard lengths 83", 85", 95", 120"

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

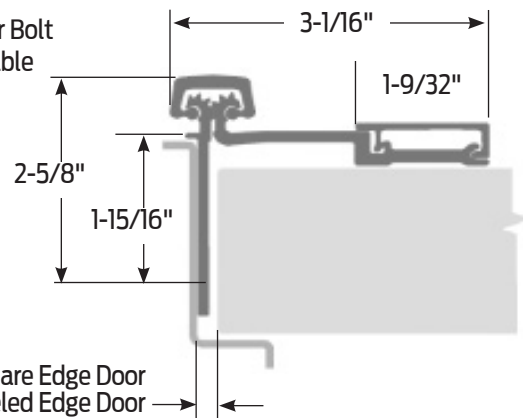
Standard lengths 83", 85", 95", 120"

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



A20 Hinges & Pivots
B Pulls & Plates
C Flush Bolts & Coordinators
D Latches, Catches & Bolts
E Stops
F Exterior Hardware
G Miscellaneous Hardware



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

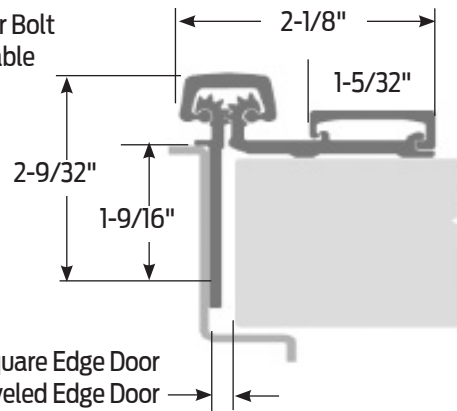
Standard lengths 83", 85", 95", 120"

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

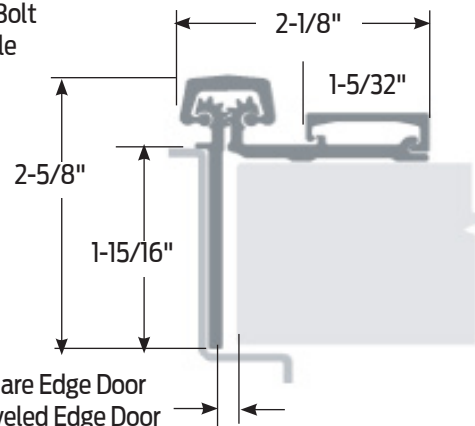
Standard lengths 83", 85", 95", 120"

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

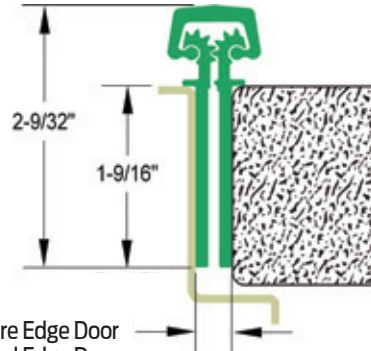
12-24 X 3/4" Steel Self Drilling, Self Tapping Screws

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

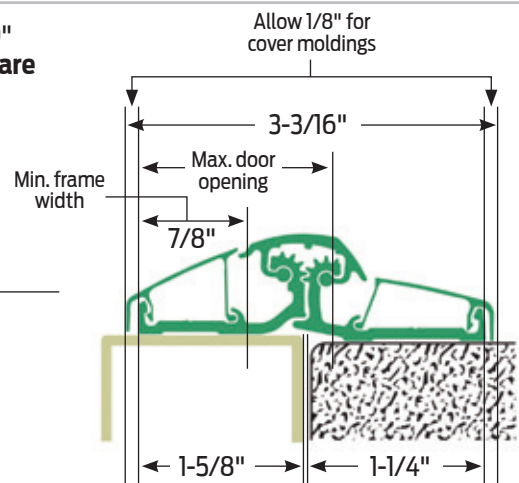
12-24 X 1/2" Steel Self Drilling and Tapping Screws,

Optional Wood Screws and Security Fasteners Available

Custom Paint Finish Available

Finishes

Clear (CL), Dark Bronze (DB)



Hinges & Pivots
A21

Pulls & Plates
B

Flush Bolts & Coordinators
C

Latches, Catches & Bolts
D

Stops
E

Exterior Hardware
F

Miscellaneous Hardware
G

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

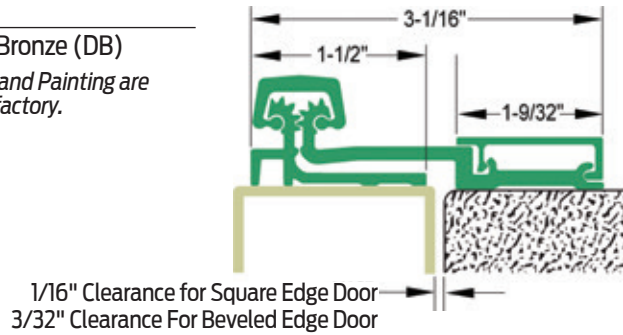
Standard lengths 83", 85", 95", 120"

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

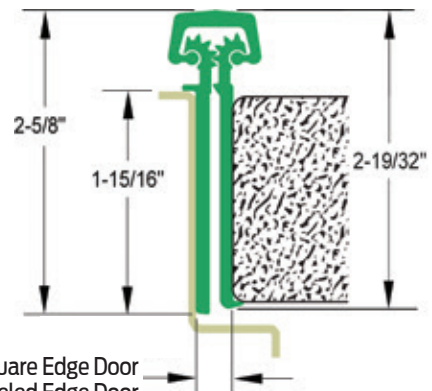
12-24 X 3/4" Steel Self Drilling, Self Tapping Screws

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

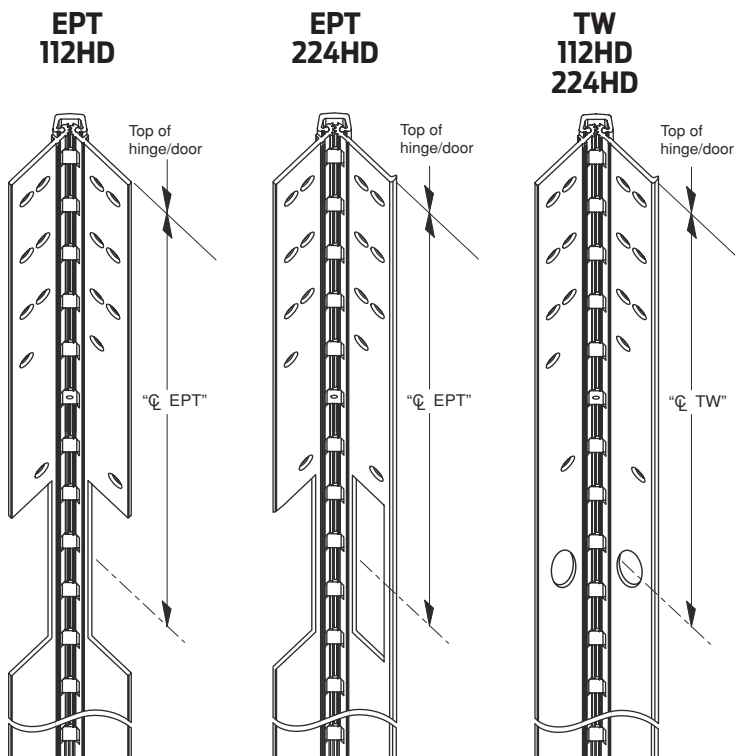
Because clearances may vary between door and frame manufacturer, and locations can be influenced by the door hardware it is always recommend contacting Ives Customer Technical for specific template information.

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

A25
Hinges & Pivots

B
Pulls & Plates

C
Flush Bolts & Coordinators

D
Latches, Catches & Bolts

E
Stops

F
Exterior Hardware

G
Miscellaneous Hardware

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"

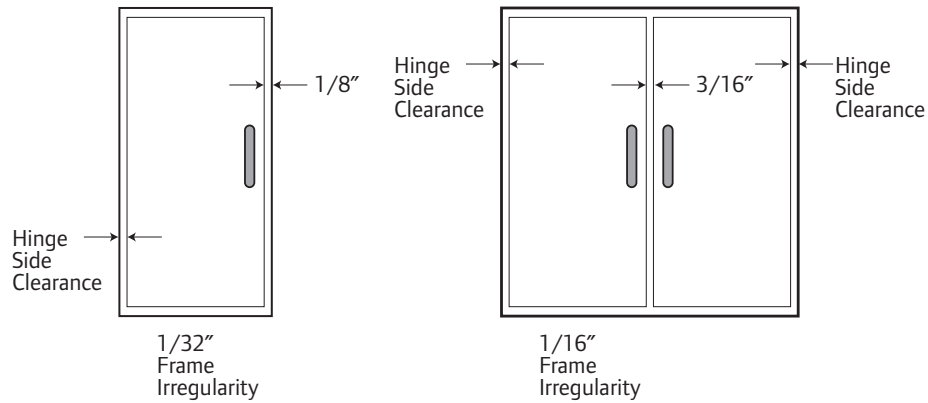
Other lengths available up to 120", consult factory. Handing is required.

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	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	Beveled Edged Total	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

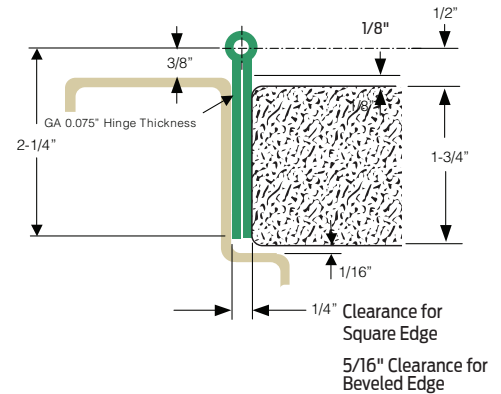
Optional SEC - Security Fasteners Available

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

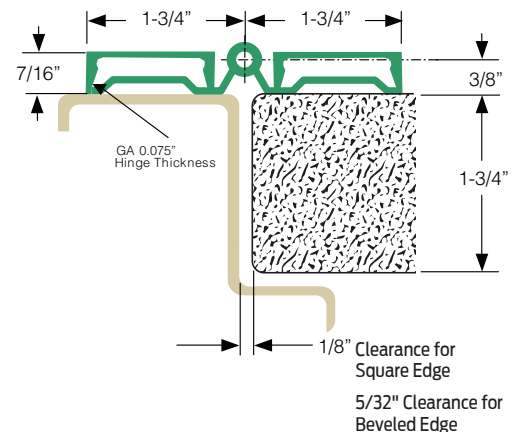
Material

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

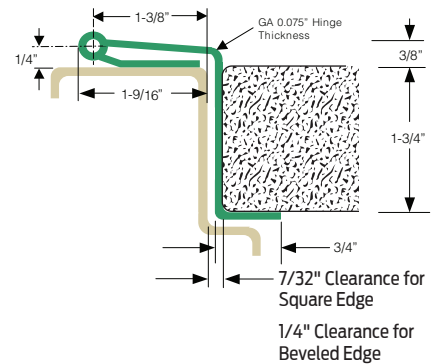
Standard lengths 83", 85", 95", 120"

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

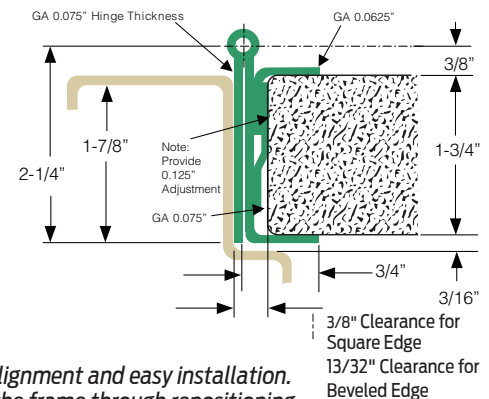
- Non Handed
- Flush Mounted, No Inset
- 48" Maximum Door Width
- Full Wrap Edge Guard
- Bevel or Square Edge Door

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

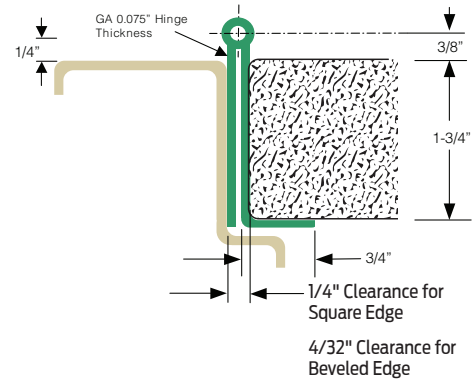
14 Gauge Type 304 Stainless Steel
1/4" diameter 304 stainless pin with
nylon split bearings

Finishes

BHMA 630

US Numbers US32D

*Custom Paint Available,
consult factory*



A29
Hinges & Pivots

B
Pulls & Plates

C
Flush Bolts & Coordinators

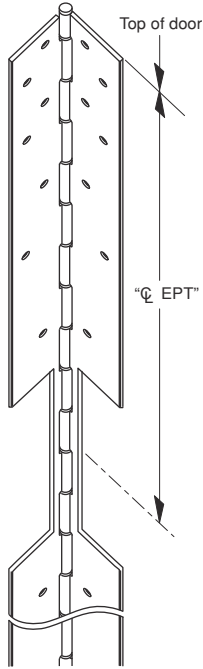
D
Latches, Catches & Bolts

E
Stops

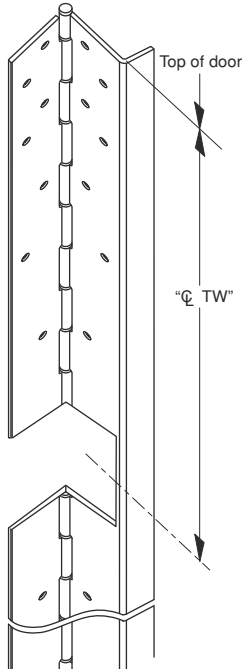
F
Exterior Hardware

G
Miscellaneous Hardware

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.

About Allegion

Allegion (NYSE: ALLE) creates peace of mind by pioneering safety and security. As a \$2 billion provider of security solutions for homes and businesses, Allegion employs more than 7,800 people and sells products in more than 120 countries across the world. Allegion comprises 23 global brands, including strategic brands CISA®, Interflex®, LCN®, Schlage® and Von Duprin®.

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