General Architectural 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:

1. Weight of Door
2. Frequency of use
3. Frame
4. 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 FREQUENCY OF DOOR USAGE:

Build Type	Daily Usage	Yearly Usage	Hinge Type
High Frequency/ Heavy Weight Door			**Heavy Weight**
Large Department Store Entrance	5,000	1,825,000	
Hospital Corridor and Surgical Doors	5,000	1,825,000	
Large Office Building Entrance	4,000	1,460,000	
School Entrance	1,250	456,250	
School Toilet Door	1,250	456,250	
Office Stairwell	500	182,500	
Office Building Toilet Door	400	146,000	
Medium Frequency/ Medium Weight Door			**Standard Weight**
School Corridor Door	100	36,500	
Hospital Consultation Rooms	100	36,500	
Office Building Corridor Door	80	29,200	
Store Toilet Door	60	21,900	
Storage Room	50	18,250	
Low Frequency /Light Door			**Plain Bearing**
Residential Entrance	30	10,950	
Interior Residential	20	7,300	

Minimum Architectural 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

1. Door Width
2. Door Thickness
3. Weight
4. Clearance

GUIDELINES FOR ARCHITECTURAL 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”, 2-1/4”, 2-1/2”	Up to 42”	5” heavy weight
2”, 2-1/4”,2-1/2”	Over 42”	6” heavy weight

GUIDELINES FOR ARCHITECTURAL HINGE WIDTH

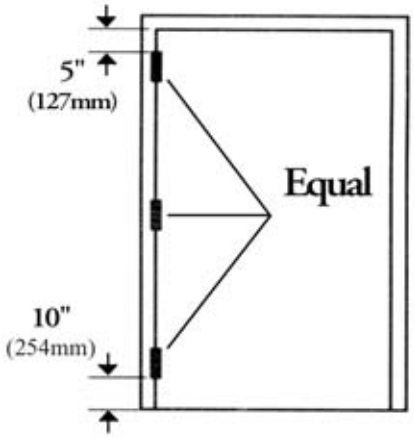
DOOR THICKNESS	CLEARANCE NEEDED	HINGE OPEN WIDTH
1-3/8	3/4	4
1-3/4	1	4
-	1-1/2	4-1/2
-	2	5
-	3	6
2	1	4-1/2
-	1-1/2	5
-	2-1/2	6
2-1/4	1	5
-	2	6
2-1/2	3/4	5
-	1-3/4	6
3	3/4	8
-	2-3/4	8
-	4-3/4	10

General Architectural Hinge Information

GUIDELINES FOR NUMBER OF ARCHITECTURAL HINGES

1. Doors up to 60”…… 2 hinges
2. Doors 60" to 90"…... 3 hinges
3. Doors 90" to 120" …. 4 hinges

LOCATION OF ARCHITECTURAL 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: Certain western states use a standard 7" from top and 11" From the bottom

IVES ARCHITECTURAL HINGE FINISHES

B.H.M.A SYMBOL
BASE MATERIAL

IVES	DESCRIPTION	STEEL	BRASS	STAINLESS STEEL	U.S. Equivalent
600	Primed for painting	600			USP
605	Bright Brass, clear coated		605		US3
630	Satin Stainless Steel			630	US32D
632	Bright Brass Plated, clear coated	632			US3
633	Satin Brass Plated, clear coated	633			US4
639	Satin Bronze Plated, clear coated	639			US10
641	Antique Bronze, Plated, Relieved, clear coated	641			US10A
643	Satin Bronze Plated, Blackened	643			US11
651	Bright Chromium Plated	651			US26
652	Satin Chromium Plated	652			US26D

GUIDELINES FOR ARCHITECTURAL HINGE METAL

1. Interior doors or non-corrosive areas use: Plated or painted Steel
2. Interior labeled door use: Plated or Painted Steel, Stainless Steel
3. Interior doors in corrosive areas use: Stainless Steel , Brass, Bronze
4. Exterior doors use: Stainless Steel, Brass, Bronze

MODEL NUMBER COMPARISON CHART

TYPE	ANSI	IVES	HAGER	MCKINNEY	STANLEY	BOMMER	PBB
STEEL PLAIN BEARING	A8133	3PB1	700	T714		8000	CP81
STAINLESS PLAIN BEARING	A5133	3PB1	800	NA		8002	CP51
STEEL CONCEALED BEARING	A8112	3CB1	AB700	TA714		LB8000	CB81
STAINLESS CONCEALED BEARING	A5112	3CB1	AB800	TA314		LB8002	CB51
STEEL CONCEALED BEARING HEAVY WEIGHT	A8111	3CB1HW	AB750	TA786		LB8004	4C81
STAINLESS CONCEALED BEARING HEAVY WEIGHT	A5111	3CB1HW	AB850	TA386		LB8006	4C51
BRASS CONCEALED BEARING HEAVY WEIGHT	A2111	3CB1HW	AB850	TA386		LB8005	4B21
STEEL BALL BEARING	A8112	5BB1	BB1279	TB2714	FBB179	BB5000	BB81
STAINLESS BALL BEARING	A5112	5BB1	BB1191	TB2314	FBB191	BB5002	BB51
STEEL BALL BEARING HEAVY WEIGHT	A8111	5BB1HW	BB1168	T4B3786	FBB168	BB5004	4B81
STAINLESS BALL BEARING HEAVY WEIGHT	A5111	5BB1HW	BB1199	T4B3386	FBB199	BB5006	4B51
STEEL SWING CLEAR	A8122	5BBSC1	BB1260	TB2895	FBB248	BB8020	SC81

General Architectural Hinge Information

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:

____ - ____ - ____ - ____ - ____ - ____ - ____ - ____ - ____

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

Size:
4.5 x 4
4.5 x 4.5
5 x 4.5

Finish (Some models are not available in all finishes):

600	USP
605	US3
630	US32D
632	US3
633	US4
639	US10
641	US10A
643	US11
651	US26
652	US26D

Special Pins:

NRP	Non-Removable Pin
HT	Hospital Tip

Radius Corners:

RC1/4"	1/4" Radius
RC5/8"	5/8" Radius

FULL MORTISE HINGES - 3 KNUCKLE

PLAIN BEARING • LOW FREQUENCY • STANDARD WEIGHT

For use on Medium Weight Doors with Low Frequency Usage,
not intended for use with door closing devices

3PB1 Steel with steel pin.
3PB1 Stainless Steel with stainless steel pin. (630 finish only)

- Hinges tested to ANSI - A156.1.
- Dimensions & tolerances conform to ANSI - A156.7.
- 3PB1 Steel Description conforms to ANSI - A8133.
- 3PB1 Stainless Description conforms to ANSI - A5133.
- Packed with wood and machine screws.

Size (Inches)	Size (MM)	Gauge
4.5 x 4	114 x 102	.134
4.5 x 4.5	114 x 114	.134

CONCEALED BEARING • MEDIUM FREQUENCY • STANDARD WEIGHT

For use on Medium Weight Doors with Medium Low Frequency Usage

3CB1 Steel with steel pin.
3CB1 Stainless Steel with Stainless Steel pin. (630 finish only)
Non- Removable Pin suffix "NRP".

- Hinges tested to ANSI - A156.1.
- Dimensions & tolerances conform to ANSI - A156.7.
- 3CB1 Steel description conforms to ANSI - A8112.
- 3CB1 Stainless description conforms to ANSI – A5112.
- Packed with wood and machine screws.

Size (Inches)	Size (MM)	Gauge
4.5 x 4	114 x 102	.134
4.5 x 4.5	114 x 114	.134

FULL MORTISE HINGES - 3 KNUCKLE

CONCEALED BEARING • HIGH FREQUENCY • HEAVY WEIGHT

For use on Heavy Weight Doors or High Frequency Usage

3CB1HW Steel with steel pin
3CB1HW Brass with stainless pin (605 finish only)
3CB1HW Stainless Steel with stainless steel pin (630 finish only)
Non- Removable Pin suffix "NRP"

- Hinges tested conforms to ANSI - A156.1
- Dimensions & tolerances conform to ANSI - A156.7
- 3CB1HW Steel description conforms to ANSI - A8111
- 3CB1HW Stainless description conforms to ANSI – A5111
- 3CB1HW Brass description conforms to ANSI – A2111
- Packed with wood and machine screws

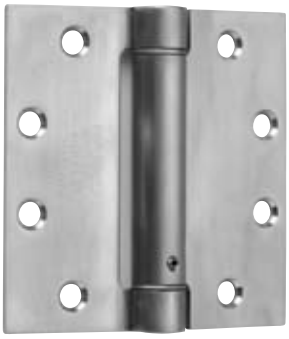
Size (Inches)	Size (MM)	Gauge
4.5 x 4	114 x 102	0.180
4.5 x 4.5	114 x 114	0.180
5 x 4.5	127 x 114	0.190

SPRING HINGE

For automatic closing of door.

3SP1 Steel with steel pin

- Hinges tested to ANSI - A156.1
- Packed with wood and machine screws.

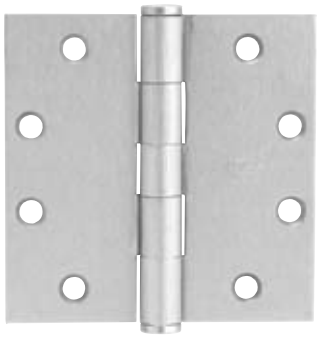


Size (Inches)	Size (MM)	Gauge
4.5 x 4.5	114 x 114	0.134

FULL MORTISE HINGES - 5 KNUCKLE

PLAIN BEARING • LOW FREQUENCY • STANDARD WEIGHT

For use on Medium Weight Doors with Low Frequency Usage, not intended for use with door closing devices.



5PB1 Steel with steel pin
5PB1 Stainless Steel with stainless steel pin (630 finish)
Non-Removable Pin Suffix "NRP"

- Hinges tested to ANSI - A156.1.
- Dimensions & tolerances conform to ANSI - A156.7.
- Packed with wood and machine screws.

Size (Inches)	Size (MM)	Gauge
4.5 x 4.5	114 x 114	.134
4.5 x 4	114 x 102	.134

2 BALL BEARING • MEDIUM FREQUENCY • STANDARD WEIGHT

For use on Standard Weight Doors with Medium Frequency Usage

5BB1 Steel with steel pin
5BB1 Stainless Steel with stainless steel pin (630 finish only)
Non-Removable Pin suffix "NRP"

- Hinges tested to ANSI - A156.1.
- Dimensions & tolerances conform to ANSI - A156.7.
- 5BB1 Steel description conforms to ANSI - A8112.
- 5BB1 Stainless description conforms to ANSI – A5112.
- Packed with wood and machine screws.

Size (Inches)	Size (MM)	Gauge
4.5 x 4.5	114 x 114	.134
4.5 x 4	114 x 102	.134

2 BALL BEARING • MEDIUM FREQUENCY • STANDARD WEIGHT • SECURITY STUDS

Two studs hold leaves secure when hinge is closed.

5BB1SH Steel with steel pin
5BB1SH Stainless Steel with stainless steel pin (630 finish only)

- Hinges tested to ANSI - A156.1.
- Dimensions & tolerances conform to ANSI - A156.7.
- 5BB1SH Steel description conforms to ANSI - A8112.
- 5BB1SH Stainless description conforms to ANSI – A5112.
- Packed with wood and machine screws.

Size (Inches)	Size (MM)	Gauge
4.5 x 4.5	114 x 114	.134

FULL MORTISE HINGES - 5 KNUCKLE

4 BALL BEARING • HIGH FREQUENCY • HEAVY WEIGHT

For use on Heavy Weight Doors or High Frequency Usage

5BB1HW Steel with steel pin
5BB1HW Stainless Steel with stainless steel pin (630 finish only)
Non-Removable Pin suffix "NRP" strike

- Hinges tested to ANSI - A156.1.
- Dimensions & tolerances conform to ANSI - A156.7.
- 5BB1HW Steel description conforms to ANSI - A8111.
- 5BB1HW Stainless description conforms to ANSI – A5111.
- Packed with wood and machine screws.

Size (Inches)	Size (MM)	Gauge
4.5 x 4.5	114 x 114	0.180
5 x 4.5	127 x 114	0.190

2 BALL BEARING • MEDIUM FREQUENCY • STANDARD WEIGHT • SWING CLEAR

Designed to completely clear the opening when door is opened 95 degrees. Pins and tips are reversible.

5BB1SC Steel with steel pin
5BB1SC Stainless Steel with stainless steel pin (630 finish only)

- Hinges tested to ANSI – A8122.
- Dimensions & tolerances conform to ANSI - A156.7.
- 5BB1SC Steel Description conforms to ANSI - A8133.
- 5BB1SC Stainless Description conforms to ANSI - A5121.
- Packed with flat head wood and machine screws.

Size (Inches)	Size (MM)	Gauge
4.5	114	0.134
5	127	0.134

RESIDENTIAL HINGES

1000 Series Residential Hinges

- Full mortise hinges in 3 sizes: 3", 3-1/2" and 4".
- Two corner options: Square corner and 5/8" radius corners.
- Made from solid brass or stainless steel.
- Finishes: B-505 (Ultima Lifetime Anti-Tarnish), B-613, B-619, B-620 and B-625

Model	Size	Corner
1000	3" x 3"	Square Corner
1001	3" x 3"	5/8" Radius Corner
1010	3-1/2" x 3-1/2"	Square Corner
1011	3-1/2" x 3-1/2"	5/8" Radius Corner
1020	4" x 4"	Square Corner
1021	4" x 4"	5/8" Radius Corner

1000

1011

1001

1020

1010

1021