

**STANLEY**<sup>®</sup>  
Security Solutions



**5 KNUCKLE**  
BALL BEARING HINGES

**STANLEY**<sup>®</sup>

TABLE OF CONTENTS		Page	Page
Table of contents.....	2	Full surface hinges.....	10-11
Company history.....	2	Slip-in hinges .....	12
5 knuckle hinge design .....	3	Pivot reinforced hinges .....	13
Full mortise hinges .....	4-5	Swing clear hinges .....	14-15
Half surface hinges .....	6-7	Plain bearing hinges .....	16
Half mortise hinges .....	8-9		

**COMPANY HISTORY**



**The Stanley Works  
New Britain, CT in 1843**

As a young man in 1843, Frederick T. Stanley founded The Stanley Works – a small company located in New Britain, Connecticut that manufactured hinges, bolts and other door hardware in a one-story wooden building.

Mr. Stanley’s vision was to create a hardware company with unsurpassed customer service, product innovation and integrity – and to offer products that would become the first choice among professionals around the world.

With the early success of this mission and an increasing demand for his high-quality goods, Mr. Stanley began exporting his products in the 1870s.

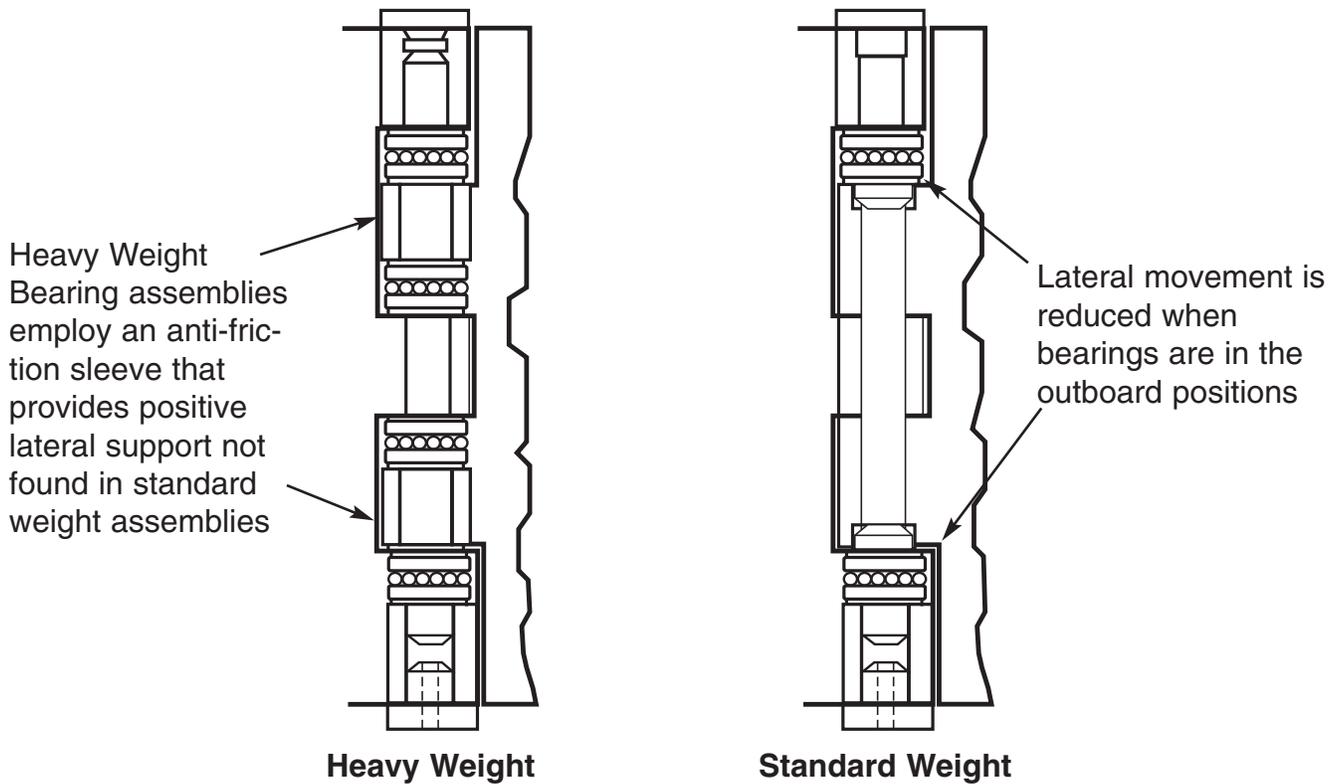
Today, Stanley is a global organization supplying hardware and tools for the architectural, consumer, industrial and residential markets worldwide. Utilizing state-of-the-art research, manufacturing and quality-control capabilities, Stanley continues to deliver the innovative, high quality products that have made the Stanley name synonymous with the highest craftsmanship and dependability for more than 160 years.

To our valued customers, we appreciate your loyalty over the years and proudly present our Architectural Hardware offering.

Commercial Customer Service: 1-800-337-4393  
www.stanleyhardware.com



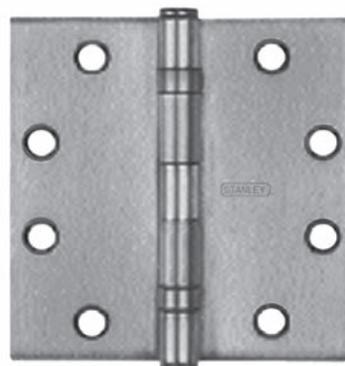
## 5 KNUCKLE BALL BEARING HINGES



- The vertical load of the door is supported by through-hardened chrome alloy, vertical thrust ball bearing assemblies.
- The lateral load of the door is supported by the pin bearing on the inside of the hinge knuckles.
- Large cold headed, drawn stock of the pins and long bearing area within the knuckles distributes lateral wear over a greater area, resulting in increased life of the hinge.
- Approved for use on all types of fire doors up to 4' x 10' (1219mm x 3048mm), 8' x 10' (2438mm x 3048mm) pairs, to maintain the integrity of fire rated openings and walls. **Refer to NFPA80.**



**Heavy Weight**



**Standard Weight**

## 5 KNUCKLE FULL MORTISE HINGES

### Standard Weight Ball Bearing

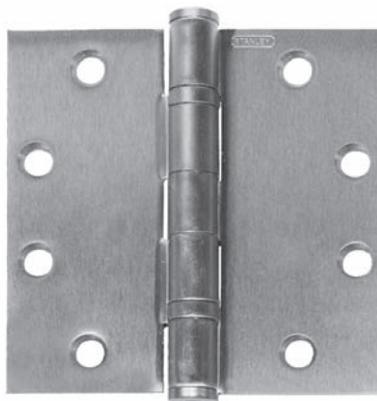
**FBB179** – (ANSI A8112) Steel – polished and plated or phosphated and prime coated for painting

**FBB191** – (ANSI A2112) Brass or bronze – polished and plated or painted

**FBB191 (32)** – (ANSI A5112) Stainless steel – highly polished

**FBB191 (32D)** – (ANSI A5112) Stainless steel – satin finish

- For medium weight doors of average frequency
- All hinges have template screw hole location for use on either wood or hollow metal doors and frames
- Equipped with two Stanley permanently lubricated non-detachable ball bearings
- Pins in non-ferrous hinges are stainless steel
- Hole in bottom tip for easy pin removal
- Reversible flush tips and pins
- Hinges can be furnished as follows:
  - with raised barrel (RB)
  - with electric wires and/or switches (CE and/or CS)
  - with hospital tips (HT)
  - with decorative tips
  - with security studs
  - with non-removable pins (NRP)



Size Open		Gauge of Metal		Flat Head Screws Per Piece		Quantity Per Box	Quantity Per Case	Case Weight			
Inches	(mm)	Inches	(mm)	Machine	Wood			Bronze	Steel		
							Lbs.	(Kg)	Lbs.	(Kg)	
3 1/2 x 3	(89 x 76)	.123	(3.1)	6 - 10-24 x 1/2	6 - 10 x 1	3 EA.	90 EA.	58	(26)	54	(24)
3 1/2 x 3 1/2	(89 x 89)	.123	(3.1)	6 - 10-24 x 1/2	6 - 10 x 1	3 EA.	90 EA.	65	(29)	59	(27)
4 x 3 1/2	(102 x 89)	.130	(3.3)	8 - 12-24 x 1/2	8 - 12 x 1 1/4	3 EA.	48 EA.	43	(19)	39	(18)
4 x 4	(102 x 102)	.130	(3.3)	8 - 12-24 x 1/2	8 - 12 x 1 1/4	3 EA.	48 EA.	45	(20)	42	(19)
4 1/2 x 4	(114 x 102)	.134	(3.4)	8 - 12-24 x 1/2	8 - 12 x 1 1/4	3 EA.	48 EA.	55	(25)	52	(24)
4 1/2 x 4 1/2	(114 x 114)	.134	(3.4)	8 - 12-24 x 1/2	8 - 12 x 1 1/4	3 EA.	48 EA.	59	(27)	55	(25)
5 x 4	(127 x 102)	.146	(3.7)	8 - 12-24 x 1/2	4 - 12 x 1 1/4	3 EA.	30 EA.	41	(19)	39	(18)
5 x 4 1/2	(127 x 114)	.146	(3.7)	8 - 12-24 x 1/2	4 - 12 x 1 1/4	3 EA.	30 EA.	45	(20)	43	(19)
5 x 5	(127 x 127)	.146	(3.7)	8 - 12-24 x 1/2	4 - 12 x 1 1/4	3 EA.	30 EA.	50	(23)	46	(21)
*6 x 4 1/2	(152 x 114)	.160	(4.1)	10 - 1/4-20 x 1/2	5 - 14 x 1 1/2	3 EA.	24 EA.	43	(19)	36	(16)
*6 x 5	(152 x 127)	.160	(4.1)	10 - 1/4-20 x 1/2	5 - 14 x 1 1/2	3 EA.	24 EA.	47	(21)	40	(18)
*6 x 6	(152 x 152)	.160	(4.1)	10 - 1/4-20 x 1/2	5 - 14 x 1 1/2	3 EA.	24 EA.	67	(30)	61	(28)

\* Available in Steel only

Consult factory for other sizes not listed

**Heavy Weight Ball Bearing**

**FBB168** – (ANSI A8111) Steel – polished and plated or phosphated and prime coated for painting

**FBB199** – (ANSI A2111) Brass or bronze – polished and plated or painted

**FBB199 (32)** – (ANSI A5111) Stainless steel – highly polished

**FBB199 (32D)** – (ANSI A5111) Stainless steel – satin finish

- For use on heavy doors or doors where high frequency is expected such as entrance doors to office buildings, stores, public buildings and corridor entrance doors to offices
- All hinges have template screw hole location for use on either wood or hollow metal doors and frames
- Equipped with four Stanley permanently lubricated non-detachable ball bearings
- Pins in non-ferrous hinges are stainless steel
- Hole in bottom tip for easy pin removal
- Reversible flush tips and pins
- Hinges can be furnished as follows:
  - with raised barrel (RB)
  - with electric wires and/or switches (CE and/or CS)
  - with hospital tips (HT)
  - with decorative tips
  - with security studs
  - with non-removable pins (NRP)



Size Open		Gauge of Metal		Flat Head Screws Per Piece		Quantity Per Box	Quantity Per Case	Case Weight			
Inches	(mm)	Inches	(mm)	Machine	Wood			Bronze Lbs.	(Kg)	Steel Lbs.	(Kg)
4 1/2 x 4 1/2	(114 x 114)	.180	(4.6)	8 - 12-24 x 1/2	8 -12 x 1 1/4	3 EA.	30 EA.	45	(21)	42	(19)
5 x 4 1/2	(127 x 114)	.190	(4.8)	8 - 12-24 x 1/2	8 -12 x 1 1/2	3 EA.	24 EA.	46	(21)	40	(18)
5 x 5	(127 x 127)	.190	(4.8)	8 - 12-24 x 1/2	8 -12 x 1 1/2	3 EA.	24 EA.	50	(23)	46	(21)
6 x 4 1/2	(152 x 114)	.203	(5.2)	10 - 1/4-20 x 1/2	10 -14 x 1 1/2	3 EA.	24 EA.	63	(29)	53	(24)
6 x 5	(152 x 127)	.203	(5.2)	10 - 1/4-20 x 1/2	10 -14 x 1 1/2	3 EA.	24 EA.	65	(30)	55	(25)
6 x 6	(152 x 152)	.203	(5.2)	10 - 1/4-20 x 1/2	10 -14 x 1 1/2	3 EA.	24 EA.	76	(35)	61	(28)
8 x 6*	(203 x 152)	.203	(5.2)	16 - 1/4-20 x 1/2	16 -14 x 1 1/2	3 EA.	12 EA.	57	(26)	51	(23)
8 x 8*	(203 x 203)	.203	(5.2)	16 - 1/4-20 x 1/2	16 -14 x 1 1/2	3 EA.	12 EA.	68	(31)	61	(28)

\*Available in Steel only

Consult factory for other sizes not listed

**5 KNUCKLE HALF SURFACE HINGES**

**Standard Weight Ball Bearing**

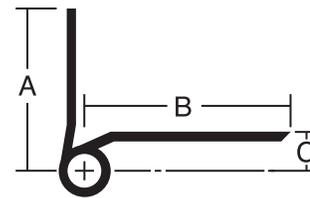
**FBB173** (ANSI A8412) – Steel – polished and plated or phosphated and prime coated for painting

**FBB112** (ANSI A2412) – Brass or bronze – highly polished and painted or plated

**FBB112 (32)** (ANSI A5412) – Stainless steel – highly polished

**FBB112 (32D)** (ANSI A5412) – Stainless steel – satin finish

- For medium weight wood, kalamein, or mineral core doors with edge rails that won't hold screws, hung on hollow metal frames, of average frequency
- Equipped with two Stanley permanently lubricated non-detachable ball bearings
- Pins in non-ferrous hinges are stainless steel
- Reversible flush tips and pins
- Hinges can be furnished with hospital tips (HT)
- Consider using a back plate with these hinges
- Packed with machine screws and grommet nuts for 1 3/4" doors



Measurements below

Size Length of Joint	Width		Offset (C)	Gauge of Metal	Flat Head Machine Screws/Per Piece		Quantity Per Box	Quantity Per Case	Case Weight	
	Frame Leaf (A)	Door Leaf (B)			Frame Leaf	Door Leaf			Bronze Lbs. (Kg)	Steel Lbs. (Kg)
4 (102)	1 13/16 (46)	2 1/4 (57.2)	1/2 (12.7)	.130 (3.3)	4-12-24 X 1/2	3-1/4-20 X 2	3 EA.	48 EA.	56 (26)	47 (22)
4 1/2 (114)	2 1/16 (52.4)	2 9/16 (65.1)	9/16 (14.3)	.134 (3.4)	4-12-24 X 1/2	3-1/4-20 X 2	3 EA.	30 EA.	44 (20)	37 (17)
5 (127)	2 1/16 (52.4)	2 7/8 (73)	9/16 (14.3)	.146 (3.7)	4-12-24 X 1/2	4-1/4-20 X 2	3 EA.	24 EA.	48 (22)	39 (18)

**Heavy Weight Ball Bearing**

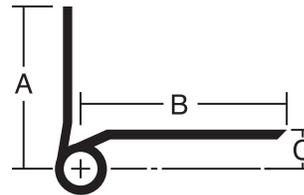
**FBB163** (ANSI A8411) – Steel – polished and plated or phosphated and prime coated for painting

**FBB113** (ANSI A2411) – Brass or bronze – polished and plated or painted

**FBB113 (32)** (ANSI A5411) – Stainless steel – highly polished

**FBB113 (32D)** (ANSI A5411) – Stainless steel – satin finish

- For heavy or high frequency wood, or mineral core doors with edge rails that won't hold screws hung on hollow metal frames
- Equipped with four Stanley permanently lubricated non-detachable ball bearings
- Heavy weight gauges increase available bearing surface area for maximum friction reduction
- Pins in non-ferrous hinges are stainless steel
- Reversible flush tips and pins
- Hinges can be furnished with hospital tips (HT)
- Consider using a back plate with these hinges
- Packed with machine screws and grommet nuts for 1 3/4" doors



Measurements below

Size Length of Joint	Width		Offset (C)		Gauge of Metal	Flat Head Machine Screws/Per Piece		Quantity Per Box	Quantity Per Case	Case Weight	
	Frame Leaf (A)	Door Leaf (B)				Frame Leaf	Door Leaf			Bronze Lbs. (Kg)	Steel Lbs. (Kg)
4 1/2 (114)	2 1/8 (54)	2 9/16 (65)	5/8 (15.9)	.180 (4.6)	4-12-24 X 1/2	3 -1/4-20 X 2	3 EA.	30 EA.	59 (27)	47 (21)	
5 (127)	2 1/8 (54)	2 7/8 (73)	5/8 (15.9)	.190 (4.8)	4-12-24 X 1/2	4 -1/4-20 X 2	3 EA.	24 EA.	58 (26)	48 (22)	
6 (152)	2 1/8 (54)	3 1/4 (82.6)	5/8 (15.9)	.203 (5.2)	5-1/4-20 X 1/2	4 -1/4-20 X 2	3 EA.	24 EA.	90 (41)	82 (37)	

**5 KNUCKLE HALF MORTISE HINGES**

**Standard Weight Ball Bearing**

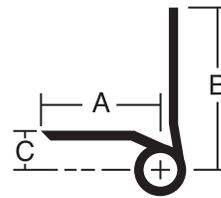
**FBB167** (ANSI A8212) – Steel – polished and plated or phosphated and prime coated for painting

**FBB108** (ANSI A2212) – Brass or bronze – polished and plated or painted

**FBB108 (32)** (ANSI A5212) – Stainless steel – highly polished

**FBB108 (32D)** (ANSI A5212) – Stainless steel – satin finish

- For medium weight hollow metal or wood doors of average frequency, hung on channel iron frames
- Equipped with two Stanley permanently lubricated non-detachable ball bearings
- Pins in non-ferrous hinges are stainless steel
- Reversible flush tips and pins
- Hinges can be furnished with hospital tips (HT)



Measurements below

Size Length of Joint	Width				Offset (C)	Gauge of Metal	Flat Head Machine Screws/Per Piece		Quantity Per Box	Quantity Per Case	Case Weight	
	Frame Leaf (A)		Door Leaf (B)				Frame Leaf	Door Leaf			Bronze Lbs. (Kg)	Steel Lbs. (Kg)
Inches (mm)	Inches (mm)	Inches (mm)	Inches (mm)	Inches (mm)	Inches (mm)							
4 1/2 (114)	1 1/2 (38.1)	2 1/16 (52.4)	7/16 (11.1)	.134 (3.4)	3-12-24 X 1/2	3-12-24 X 1/2	3 EA.	30 EA.	30 (14)	29 (13)		
5 (127)	1 1/2 (38.1)	2 1/16 (52.4)	7/16 (11.1)	.146 (3.7)	4-12-24 X 1/2	4-12-24 X 1/2	3 EA.	24 EA.	37 (17)	33 (15)		

**Heavy Weight Ball Bearing**

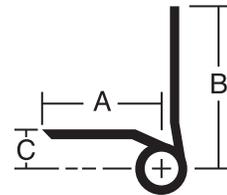
**FBB138** (ANSI A8211) – Steel – polished and plated or phosphated and prime coated for painting

**FBB98** (ANSI A2211) – Brass or bronze – polished and plated or painted

**FBB98 (32)** (ANSI A5211) – Stainless steel – highly polished

**FBB98 (32D)** (ANSI A5211) – Stainless steel – satin finish

- For heavy or high frequency hollow metal or wood doors hung on channel iron frames
- Equipped with four Stanley permanently lubricated non-detachable ball bearings
- Pins in non-ferrous hinges are stainless steel
- Reversible flush tips and pins
- Hinges can be furnished with hospital tips (HT)



Measurements below

Size Length of Joint	Width		Offset		Gauge of Metal	Flat Head Machine Screws/Per Piece		Quantity Per Box	Quantity Per Case	Case Weight	
	Frame Leaf (A)	Door Leaf (B)	(C)			Frame Leaf	Door Leaf			Bronze Lbs. (Kg)	Steel Lbs. (Kg)
4 1/2 (114)	1 1/2 (38.1)	2 1/8 (54)	1/2 (12.7)	.180 (4.6)	3-12-24 X 1/2	4-12-24 X 1/2	3 EA.	30 EA.	36 (17)	36 (17)	
5 (127)	1 1/2 (38.1)	2 1/8 (54)	1/2 (12.7)	.190 (4.8)	4-12-24 X 1/2	4-12-24 X 1/2	3 EA.	24 EA.	36 (17)	36 (17)	
6 (152)	1 1/2 (38.1)	2 1/8 (54)	1/2 (12.7)	.203 (5.2)	4-1/4-20 X 1/2	5-1/4-20 X 1/2	3 EA.	24 EA.	48 (22)	48 (22)	

**5 KNUCKLE FULL SURFACE HINGES**

**Standard Weight Ball Bearing**

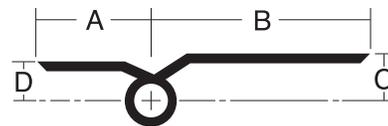
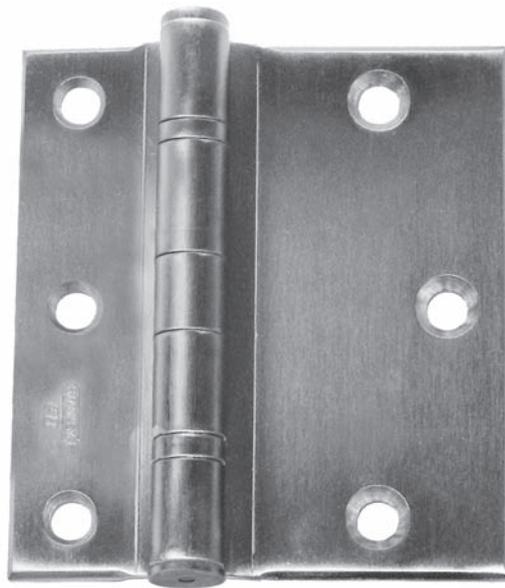
**FBB171** (ANSI A8312) – Steel – polished and plated or phosphated and prime coated for painting

**FBB110** (ANSI A2312) – Brass or bronze – polished and plated or painted

**FBB110 (32)** (ANSI A5312) – Stainless steel – highly polished

**FBB110 (32D)** (ANSI A5312) – Stainless steel – satin finish

- For medium weight kalamein mineral core or wood doors of average frequency hung on channel iron frames
- Equipped with two Stanley permanently lubricated non-detachable ball bearings
- Pins in non-ferrous hinges are stainless steel
- Reversible flush tips and pins
- Hinges can be furnished with hospital tips (HT)
- Consider using a back plate with these hinges
- Packed with machine screws and grommet nuts for 1 3/4" doors



Measurements below

Size Length of Joint	Width		Offset		Gauge of Metal	Flat Head Machine Screws/Per Piece		Quantity Per Box	Quantity Per Case	Case Weight	
	Frame Leaf (A)	Door Leaf (B)	Door Leaf (C)	Frame Leaf (D)		Frame Leaf	Door Leaf			Bronze Lbs. (Kg)	Steel Lbs. (Kg)
4 1/2 (114)	1 1/2 (38.1)	2 9/16 (65)	9/16 (14.3)	7/16 (11.1)	.134 (3.4)	3-12-24 X 1/2	3-1/4-20 X 2	3 EA.	30 EA.	40 (18)	38 (17)
5 (127)	1 1/2 (38.1)	2 7/16 (73)	9/16 (14.3)	7/16 (11.1)	.146 (3.7)	4-12-24 X 1/2	4-1/4-20 X 2	3 EA.	24 EA.	43 (20)	39 (18)

**Heavy Weight Ball Bearing**

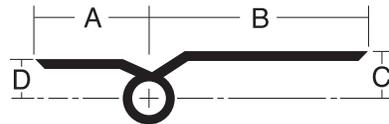
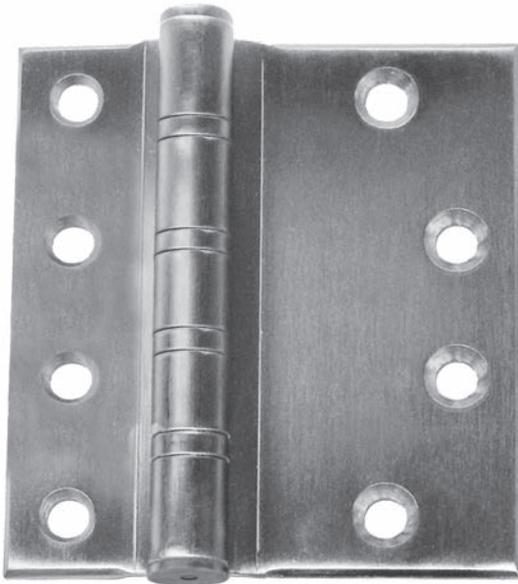
**FBB169** (ANSI A8311) – Steel – polished and plated or phosphated and prime coated for painting

**FBB109** (ANSI A2311) – Brass or bronze – polished and plated or painted

**FBB109 (32)** (ANSI A5311) – Stainless steel – highly polished

**FBB109 (32D)** (ANSI A5311) – Stainless steel – satin finish

- For heavy or high frequency mineral core or wood doors with edge rails that won't hold screws, hung on channel iron frames
- Heavy weight gauges increase available bearing surface area for maximum friction reduction
- Equipped with four Stanley permanently lubricated non-detachable ball bearings
- Pins in non-ferrous hinges are stainless steel
- Reversible flush tips and pins
- Hinges can be furnished with hospital tips (HT)
- Consider using a back plate with these hinges
- Available with an inline hole pattern for tubular doors
- Packed with machine screws and grommet nuts for 1 3/4" doors



Measurements below

Size Length of Joint	Width		Offset		Gauge of Metal	Flat Head Machine Screws/Per Piece		Quantity Per Box	Quantity Per Case	Case Weight	
	Frame Leaf (A)	Door Leaf (B)	Door Leaf (C)	Frame Leaf (D)		Frame Leaf	Door Leaf			Bronze Lbs. (Kg)	Steel Lbs. (Kg)
4 1/2 (114)	1 1/2 (38.1)	2 9/16 (65)	5/8 (15.9)	1/2 (12.7)	.180 (4.6)	3-12-24 X 1/2	3-1/4-20 X 2	3 EA.	30 EA.	56 (26)	44 (20)
5 (127)	1 1/2 (38.1)	2 7/8 (73)	5/8 (15.9)	1/2 (12.7)	.190 (4.8)	4-12-24 X 1/2	4-1/4-20 X 2	3 EA.	24 EA.	57 (26)	51 (23)
6 (152)	1 1/2 (38.1)	3 1/4 (82.6)	5/8 (15.9)	1/2 (12.7)	.203 (5.2)	4-1/4-20 X 1/2	5-1/4-20 X 2	3 EA.	24 EA.	80 (36)	74 (34)

## 5 KNUCKLE SLIP-IN HINGES

### Standard Weight Ball Bearing – Application “A”

**FBB179** – (ANSI A8152) Slip-in application “A”, steel – polished and plated or painted

**FBB191** – (ANSI A2152) Slip-in application “A”, brass or bronze – polished and plated or painted

**FBB191 (32)** – (ANSI A5152) Slip-in application “A”, stainless steel – highly polished

**FBB191 (32D)** – (ANSI A5152) Slip-in application “A”, stainless steel – satin finish



- For aluminum doors with aluminum frames
- “Slip-in” application where one leaf of hinge is inserted through a slot in door or frame, and the other leaf mortised
- Application A – specify “swaged to provide  $\frac{3}{16}$ ” (4.8mm) clearance between leaves when parallel and one leaf with standard punching and countersinking and other leaf drilled and tapped.” Specify hand desired.
- Round corners – use prefix “RD” and specify radius desired.  
 $\frac{1}{4}$ ” (6.4mm) radius available on all sizes
- Other types and sizes available on request
- Pins in nonferrous hinges are stainless steel

Size Open		Gauge of Metal		Flat Head Machine Screws/Per Piece*	Quantity Per Box	Quantity Per Case	Case Weight			
Inches	(mm)	Inches	(mm)				Steel Lbs.	(Kg)	Bronze Lbs.	(Kg)
4 x 4	(102 x 102)	.130	(3.3)	8 - 12-24 x $\frac{1}{2}$	3 EA.	48 EA.	44	(20)	45	(21)
4 $\frac{1}{2}$ x 4	(114 x 102)	.134	(3.4)	8 - 12-24 x $\frac{1}{2}$	3 EA.	48 EA.	52	(24)	55	(25)
4 $\frac{1}{2}$ x 4 $\frac{1}{2}$	(114 x 114)	.134	(3.4)	8 - 12-24 x $\frac{1}{2}$	3 EA.	48 EA.	55	(25)	59	(27)

\* For application A when used on wood doors, specify wood screws for door leaf

### Standard Weight Ball Bearing – Application “B”

**FBB179** – (ANSI A8142) Slip-in application “B”, Steel – polished and plated or painted

**FBB191** – (ANSI A2142) Slip-in application “B”, Brass or bronze – polished and plated or painted

**FBB191 (32)** – (ANSI A5142) Slip-in application “B”, Stainless steel – highly polished

**FBB191 (32D)** – (ANSI A5142) Slip-in application “B”, Stainless steel – satin finish



- For aluminum doors with aluminum frames
- “Slip-in” application where both leaves of hinge are inserted through slots in door and frame
- Application B – specify “both leaves swaged to provide  $\frac{5}{16}$ ” (7.9mm) clearance between leaves when parallel and both leaves drilled and tapped”
- Round corners – use prefix “RD” and specify radius desired.  
 $\frac{1}{4}$ ” (6.4mm) radius available on all sizes
- Other types and sizes available on request
- Pins in nonferrous hinges are stainless steel
- Not handed

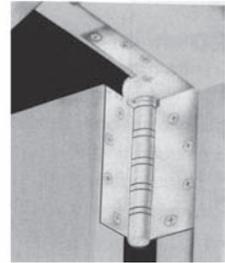
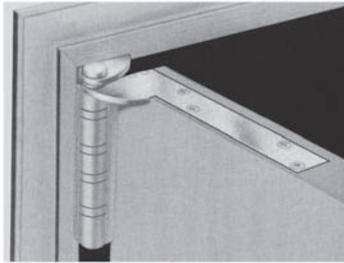
Size Open		Gauge of Metal		Flat Head Machine Screws/Per Piece	Quantity Per Box	Quantity Per Case	Case Weight			
Inches	(mm)	Inches	(mm)				Steel Lbs.	(Kg)	Bronze Lbs.	(Kg)
4 x 4	(102 x 102)	.130	(3.3)	8 - 12-24 x $\frac{1}{2}$	3 EA.	48 EA.	44	(20)	45	(21)
4 $\frac{1}{2}$ x 4	(114 x 102)	.134	(3.4)	8 - 12-24 x $\frac{1}{2}$	3 EA.	48 EA.	52	(24)	55	(25)
4 $\frac{1}{2}$ x 4 $\frac{1}{2}$	(114 x 114)	.134	(3.4)	8 - 12-24 x $\frac{1}{2}$	3 EA.	48 EA.	55	(25)	59	(27)

**Heavy Weight Ball Bearing**

**Shock Proof!**

- FBB211 – (ANSI A8541)
  - FBB212 – (ANSI A8541)
  - FBB213 – (ANSI A8541)
- } Steel – polished and plated or phosphated and prime coated for painting
- FBB221 – (ANSI A2541)
  - FBB222 – (ANSI A2541)
  - FBB223 – (ANSI A2541)
- } Bronze – polished and finished
- FBB221 (32D) – (ANSI A5541)
  - FBB222 (32D) – (ANSI A5541)
  - FBB223 (32D) – (ANSI A5541)
- } Stainless steel – satin finish

- Ideal for any door that is subject to jarring or abusive handling
- The purpose of this two-in-one combination is to anchor and reinforce doors and frames exposed to damage from abuse. In such installations, stresses are transferred to the top hinge
- A pivot and butt hinge are combined in one compact interlocked unit and share the same pin to assure perfect alignment. Interlocked corners prevent sidewise motion of pivot or butt leaves
- Heavy weight gauges increase available bearing surface area for maximum friction reduction
- Beveled edge doors require a different door plate than square edge doors
- Short door plate [4" (102mm) min.] available for use with most concealed holders and closers – specify on order
- Handed left or right



Right Hand Shown

Class Number	Door Edge	Metal	Contents of Set			
			Top Hinge*	Intermediate and Bottom Hinge*		
				Number	Inches	Size (mm)
FBB211	Square or beveled 1/8" in 2" (3.2 in 51mm)	Steel	1–Type of FBB168 NRP X Frame plate ONLY	2-FBB168-NRP	5 X 4 1/2	(127 X 114)
FBB212	Square	Steel	1–Type of FBB168 NRP X Frame and door plate	2-FBB168-NRP	5 X 4 1/2	(127 X 114)
FBB213	Beveled 1/8" IN 2" (3.2 in 51 mm)	Steel	1–Type of FBB168 NRP X Frame and door plate	2-FBB168-NRP	5 X 4 1/2	(127 X 114)
FBB221	square or beveled 1/8" in 2" (3.2 in 51mm)	Bronze or Stainless Steel	1–Type of FBB199 NRP X Frame plate ONLY	2-FBB199-NRP	5 X 4 1/2	(127 X 114)
FBB222	Square	Bronze or Stainless Steel	1–Type of FBB199 NRP X Frame and door plate	2-FBB199-NRP	5 X 4 1/2	(127 X 114)
FBB223	Beveled 1/8" in 2" (3.2 in 51mm)	Bronze or Stainless Steel	1–Type of FBB199 NRP X Frame and door plate	2-FBB199-NRP	5 X 4 1/2	(127 X 114)

Class Number	Gauge of Metal	Frame Plate			Door Plate			Flat Head Screws/Set		Sets Per Case	Case Weight Lbs. (Kg)
		Length		Width	Length		Width	Wood	Machine		
		Inches	(mm)	Inches	(mm)	Inches	(mm)				
FBB211	.190 (4.8)	5 (127)	1.25 (31.8)	...	...	...	...	28-12- X 1 1/2	28-12-24 X 1 1/2	1	6 (3)
FBB212	.190 (4.8)	5 (127)	1.25 (31.8)	7.78 (198)	1.25 (31.8)	7.78 (198)	1.25 (31.8)	32-12- X 1 1/2	32-12-24 X 1 1/2	1	7 (3)
FBB213	.190 (4.8)	5 (127)	1.25 (31.8)	7.64 (194)	1.25 (31.8)	7.64 (194)	1.25 (31.8)	32-12- X 1 1/2	32-12-24 X 1 1/2	1	7 (3)
FBB221	.190 (4.8)	5 (127)	1.25 (31.8)	...	...	...	...	12-12- X 1 1/2	28-12-24 X 1 1/2	1	6 (3)
FBB222	.190 (4.8)	5 (127)	1.25 (31.8)	7.78 (198)	1.25 (31.8)	7.78 (198)	1.25 (31.8)	16-12- X 1 1/2	32-12-24 X 1 1/2	1	7 (3)
FBB222 (32D)	.190 (4.8)	5 (127)	1.25 (31.8)	7.78 (198)	1.25 (31.8)	7.78 (198)	1.25 (31.8)	16-12- X 1 1/2	32-12-24 X 1 1/2	1	7 (3)
FBB223	.190 (4.8)	5 (127)	1.25 (31.8)	7.64 (194)	1.25 (31.8)	7.64 (194)	1.25 (31.8)	16-12- X 1 1/2	32-12-24 X 1 1/2	1	7 (3)
FBB223 (32D)	.190 (4.8)	5 (127)	1.25 (31.8)	7.64 (194)	1.25 (31.8)	7.64 (194)	1.25 (31.8)	16-12- X 1 1/2	32-12-24 X 1 1/2	1	7 (3)

Hinges supplied with set screw in barrel, non-removable pin  
For doors over 7' 6" in height, specify additional hinges to order: specify catalog number, finish and hand

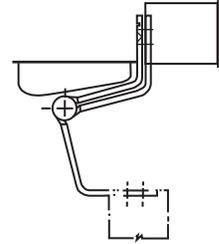
## 5 KNUCKLE SWING CLEAR HINGES

### Standard Weight Plain Bearing “Swing Clear” Full Mortise



**F248** – (ANSI A8123) Steel – polished and plated or phosphated and prime coated for painting

- Equipped with easily seated non-rising pins
- Reversible flush tips and pins
- Ideal for remodeling or new construction
- Available for full mortise application on square edge doors only
- Designed to replace existing 3 1/2" (89mm) or 4" (102mm) hinges for Swing Clear openings (some modification of preparation may be required for residential use)
- Designed to swing doors completely clear of the opening when door is opened 95°



Class Number	Size Length of Joint		Gauge of Metal		Flat Head Wood Screws/ Per Piece	Quantity Per Box	Quantity Per Case	Case Weight	
	Inches	(mm)	Inches	(mm)				Lbs.	(Kg)
<b>F248</b>	3 1/2	(89)	.123	(3.1)	6-10 X 1	2 EA.	20 EA.	16	(7)
	4	(102)	.130	(3.3)	8-12 X 1 1/4	2 EA.	20 EA.	24	(11)

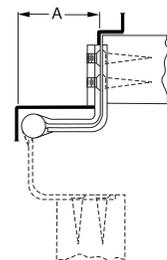
### Standard Weight Ball Bearing “Swing Clear” Full Mortise



**FBB248** – (ANSI A8122) } Steel –  
**FBB258** – (ANSI A8122) } polished and plated or phosphated and prime coated for painting

**STSFBB248** – (ANSI A5122) } Stainless Steel –  
**STSFBB258** – (ANSI A5122) } highly polished or satin finish

- Reversible flush tips and pins
- Ideal for remodeling or new construction
- Specify FBB248 and STSFBB248 for full mortise application on square edge doors
- Specify FBB258 and STSFBB258 for full mortise application on bevel edge doors
- Designed to swing doors completely clear of the opening when door is opened 90°
- Equipped with two Stanley permanently lubricated non-detachable ball bearings
- Hinges can be furnished with hospital tips (HT)



**FBB248 (Shown) and STSFBB248**  
 {For square edge doors}

**FBB258 and STSFBB258**  
 {For doors beveled 1/8" in 2" (3.2 in 51mm)}

Class Number	Size Length of Joint		Minimum Clearance Required Dimensions "A"		Gauge of Metal		Flat Head Screws/ Per Piece		Quantity Per Box	Quantity Per Case	Case Weight	
	inches	(mm)	inches	(mm)	inches	(mm)	Frame Leaf-Machine	Door Leaf-Wood			Lbs.	(Kg)
<b>FBB248, STSFBB248</b>	4 1/2	(114)	2 1/8	(54)	.134	(3.4)	4-12-24 X 1/2	4-12 X 1 1/4	3 EA.	24 EA.	36	(17)
<b>FBB258, STSFBB258</b>	4 1/2	(114)	2 1/8	(54)	.134	(3.4)	4-12-24 X 1/2	4-12 X 1 1/4	3 EA.	24 EA.	36	(17)

**5 KNUCKLE SWING CLEAR HINGES**

**Heavy Weight Ball Bearing "Swing Clear"**



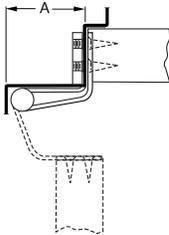
**FBB268** – (ANSI A8121)  
**FBB278†** – (ANSI A8121)  
**FBB269** – (ANSI A8421)  
**FBB264** – (ANSI A8221)  
**FBB274†** – (ANSI A8221)  
**FBB266** – (ANSI A8321)

Steel –  
 polished and plated or  
 phosphated and prime  
 coated for painting

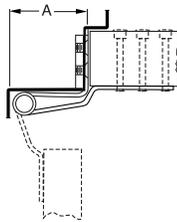
**STSFBB268** – (ANSI A5121)  
**STSFBB278†** – (ANSI A5121)  
**STSFBB269** – (ANSI A5421)  
**STSFBB264** – (ANSI A5221)  
**STSFBB274†** – (ANSI A5221)  
**STSFBB266** – (ANSI A5321)

Stainless Steel –  
 highly polished  
 or satin finish

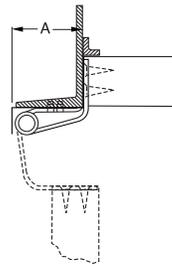
- For corridor doors to patients' rooms, operating rooms, emergency rooms, or wherever conditions require a completely clear opening in hospitals, institutions or public buildings
- Designed to swing door completely clear of the opening when door is opened 95°
- Consult factory for hinges available to clear 90°
- Equipped with four Stanley permanently lubricated non-detachable ball bearings
- Pins in nonferrous hinges are stainless steel
- Heavy weight gauges increase available bearing surface area for maximum friction reduction
- Hinges can be furnished with hospital tips
- Full surface and half surface hinges packed with flat head machine screws and grommet nuts for door leaf, specify door thickness if other than 1 3/4"
- Consider using a back plate on full surface and half surface hinges
- For half mortise and full surface hinges to fit narrow metal frames, consult factory
- Reversible flush tips and pins



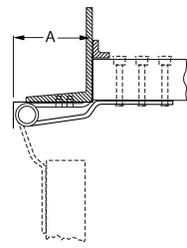
**Full Mortise - FBB268 and STSFBB268**  
 {For square edge doors} (shown)  
**FBB278† and STSFBB278†**  
 {For doors beveled 1/8" in 2" (3.2 in 51mm)}



**Half Surface FBB269 and STSFBB269**



**Half Mortise For Channel Iron Frames FBB264 and STSFBB264**  
 {For square edge doors} (shown)  
**FBB274† and STSFBB274†**  
 {For doors beveled 1/8" in 2" (3.2 in 51mm)}



**Full Surface For Channel Iron Frames FBB266 and STSFBB266**

Class Number	Size Length of Joint		Minimum Clearance Required Dimensions "A"		Gauge of Metal		Flat Head Screws/ Per Piece		Quantity Per Box	Quantity Per Case	Case Weight	
	inches	(mm)	inches	(mm)	inches	(mm)	Frame Leaf-Machine	Door Leaf-Wood			Lbs.	(Kg)
<b>FBB268, STSFBB268</b>	4 1/2	(114)	2 1/8	(54)	.180	(4.6)	4-12-24 X 1/2	4-12 X 1 1/4 W.S	3 EA.	15 EA.	31	(14)
<b>FBB268, STSFBB268</b>	5	(127)	2 1/8	(54)	.190	(4.8)	4-12-24 X 1/2	4-12 X 1 1/4 W.S	3 EA.	15 EA.	35	(16)
<b>FBB278†, STSFBB278†</b>	4 1/2	(114)	2 1/8	(54)	.190	(4.8)	4-12-24 X 1/2	4-12 X 1 1/4 W.S	3 EA.	15 EA.	31	(14)
<b>FBB278†, STSFBB278†</b>	5	(127)	2 1/8	(54)	.190	(4.8)	4-12-24 X 1/2	4-12 X 1 1/4 W.S	3 EA.	15 EA.	35	(16)
<b>FBB269, STSFBB269</b>	5	(127)	2 1/8	(54)	.190	(4.8)	4-12-24 X 1/2	5-1/4-20 X 1 1/4 M.S.*	....	3 EA.	9	(4)
<b>FBB264, STSFBB264</b>	5	(127)	2 1/8	(54)	.190	(4.8)	4-12-24 X 1/2	4-12 X 1 1/4 W.S	3 EA.	15 EA.	35	(16)
<b>FBB274† STSFBB274</b>	5	(127)	2 1/8	(54)	.190	(4.8)	4-12-24 X 1/2	4-12 X 1 1/4 W.S	3 EA.	15 EA.	35	(16)
<b>FBB266, STSFBB266</b>	5	(127)	2 1/8	(54)	.190	(4.8)	4-12-24 X 1/2	5-1/4-20 X 1 1/4 M.S.*	3 EA.	15 EA.	35	(16)

\* Furnished with through-bolts and grommet nuts.

† For doors beveled 1/8" IN 2" (3.2MM IN 51 MM) on hinge side.

For frame and door leaf dimensions refer to template furnished on request. If door closers, friction or overhead door holders are to be used in conjunction with these hinges, consult manufacturer of the device to be used for application details

## 5 KNUCKLE HINGES

### Full Mortise Standard Weight Plain Bearing

**F179** – (ANSI A8133 except for 3" x 3") Steel – polished and plated or phosphated and prime coated for painting

**F191** – (ANSI A2133) Brass or bronze – polished and plated or painted

**F191 (32)** – (ANSI A5133) Stainless steel – highly polished

**F191 (32D)** – (ANSI A5133) Stainless steel – satin finish

- For use on internal or external doors without door closers in hospitals, churches, schools, airports, hotels, malls, apartment houses, office buildings, etc.
- All hinges have template screw hole location for use on either wood or hollow metal doors and frames
- Use anti-friction bearing hinges on high and average frequency doors and all doors equipped with door closers
- Hinges can be furnished with hospital tips (HT)



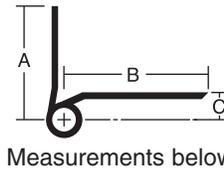
Size Open		Gauge of Metal		Flat Head Screws/Per Piece		Quantity		Case Weight	
Inches	(mm)	Inches	(mm)	Machine	Wood	Per Box	Per Case	Steel	Brass
								Lbs. (Kg)	Lbs. (Kg)
3 x 3*	(76 x 76)	.080	(2)		6 - 9 x 3/4	2 EA.	100 EA.	32 (15)	
3 1/2 x 3	(89 x 76)	.123	(3.1)	6 - 10-24 x 1/2	6 - 10 x 1	2 EA.	100 EA.	60 (27)	64 (29)
3 1/2 x 3 1/2	(89 x 89)	.123	(3.1)	6 - 10-24 x 1/2	6 - 10 x 1	2 EA.	100 EA.	66 (30)	72 (33)
4 x 3 1/2	(102 x 89)	.130	(3.3)	8 - 12-24 x 1/2	8 - 12 x 1 1/4	3 EA.	48 EA.	38 (17)	44 (20)
4 x 4	(102 x 102)	.130	(3.3)	8 - 12-24 x 1/2	8 - 12 x 1 1/4	3 EA.	48 EA.	43 (20)	46 (21)
4 1/2 x 4	(114 x 102)	.134	(3.4)	8 - 12-24 x 1/2	8 - 12 x 1 1/4	3 EA.	48 EA.	51 (23)	54 (25)
4 1/2 x 4 1/2	(114 x 114)	.134	(3.4)	8 - 12-24 x 1/2	8 - 12 x 1 1/4	3 EA.	48 EA.	55 (25)	60 (27)
5 x 4	(127 x 102)	.146	(3.7)	8 - 12-24 x 1/2	8 - 12 x 1 1/4	3 EA.	30 EA.	40 (18)	43 (20)
5 x 4 1/2	(127 x 114)	.146	(3.7)	8 - 12-24 x 1/2	8 - 12 x 1 1/4	3 EA.	30 EA.	43 (20)	46 (21)
5 x 5*	(127 x 127)	.146	(3.7)	8 - 12-24 x 1/2	8 - 12 x 1 1/4	3 EA.	30 EA.	46 (21)	51 (23)

\*Steel only – for other substrates consult factory

### Half Surface Standard Weight Plain Bearing

**F173** – (ANSI A8433) Steel – polished and plated or phosphated and prime coated for painting

- For low frequency kalamein or wood doors with hollow metal frames (use ball bearing hinges on all doors equipped with door closers)
- Easily applied as only jamb leaf is mortised
- Packed with machine screws and grommet nuts

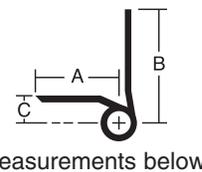


Size Length of Joint	Width		Offset (C)	Gauge of Metal	Flat head Machine Screws/Per Piece		Quantity Per Box	Quantity Per Case	Case Weight
	Frame Leaf (A)	Door Leaf (B)			Frame Leaf	Door Leaf			
Inches (mm)	Inches (mm)	Inches (mm)	Inches (mm)	Inches (mm)					Lbs. (Kg)
4 1/2 (114)	2 1/16 (52.4)	2 9/16 (65.1)	9/16 (14.3)	.134 (3.4)	4-12-24 X 1/2	3-1/4-20 X 2	3 EA.	30 EA.	37 (17)

### Half Mortise Standard Weight Plain Bearing

**F167** – (ANSI A8233) Steel – polished and plated or phosphated and prime coated for painting

- For low frequency hollow metal or wood doors with channel iron frames (use ball bearing hinges on all doors equipped with door closers)
- Easily applied as only door leaf is mortised



Size Length of Joint	Width		Offset (C)	Gauge of Metal	Quantity & Size of Screws/Per Piece		Quantity Per Box	Quantity Per Case	Case Weight
	Frame Leaf (A)	Door Leaf (B)			Frame Leaf	Door Leaf			
Inches (mm)	Inches (mm)	Inches (mm)	Inches (mm)	Inches (mm)					Lbs. (Kg)
4 1/2 (114)	1 1/2 (38.1)	2 1/16 (52.4)	7/16 (11.1)	.134 (3.4)	4-12-24 X 1/2	3-12-24 X 1/2	3 EA.	30 EA.	28 (13)

### Conversion Tips and Pins

- Converts standard flush tip hinges
- Available in three styles, Ball, Crown and Steeple
- Same tips fit "CB", "1900R" and "F" line hinges
- Conversion pins are stainless
- Conversion pins accept NRP screw
- Knurl eliminates pin rotation
- For heavy weight consult factory

### Standard weight Tips and Pins

