

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

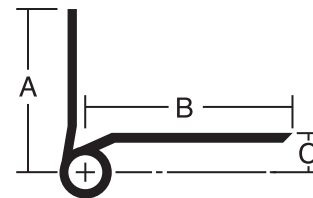
FBB173 (ANSI A8412) – Steel – polished and plated or phosphated and prime coated for painting

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

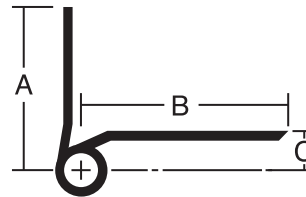
FBB163 (ANSI A8411) – Steel – polished and plated or phosphated and prime coated for painting

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

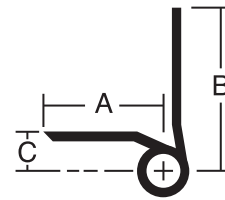
FBB167 (ANSI A8212) – Steel – polished and plated or phosphated and prime coated for painting

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)
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

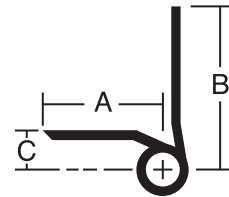
FBB138 (ANSI A8211) – Steel – polished and plated or phosphated and prime coated for painting

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

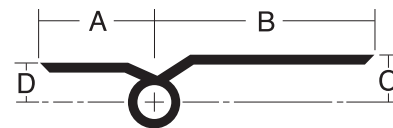
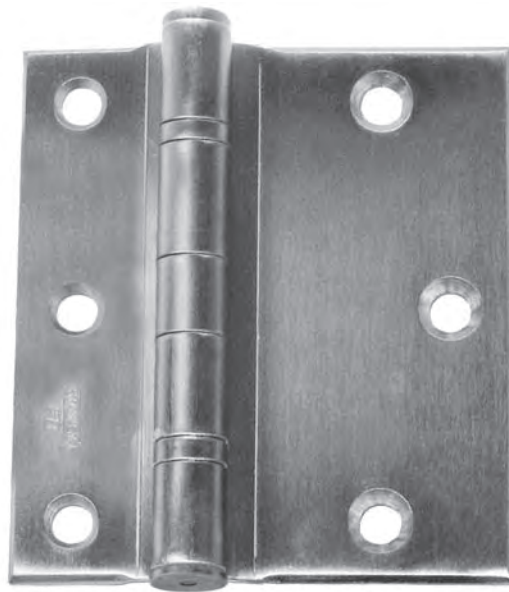
FBB171 (ANSI A8312) – Steel – polished and plated or phosphated and prime coated for painting

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

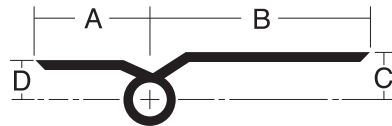
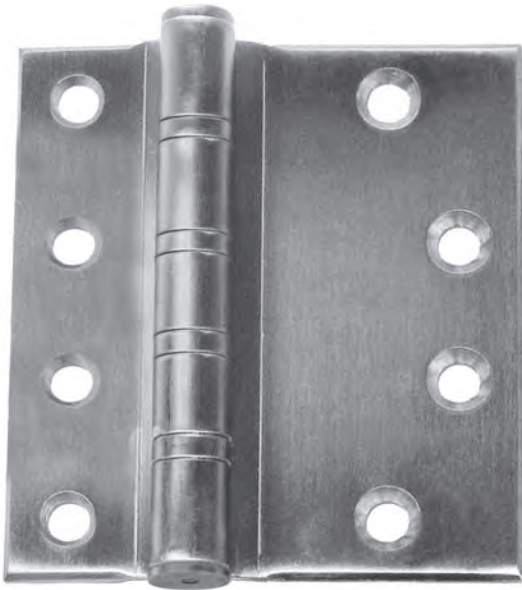
FBB169 (ANSI A8311) – Steel – polished and plated or phosphated and prime coated for painting

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

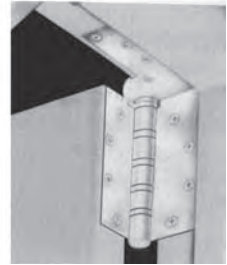
Size Open		Gauge of Metal		Flat Head Machine Screws/Per Piece	Quantity Per Box	Quantity Per Case	Case Weight			
Inches	(mm)	Inches	(mm)				Steel Lbs.	(Kg)	Bronze Lbs.	(Kg)
4 x 4	(102 x 102)	.130	(3.3)	8 - 12-24 x $\frac{1}{2}$	3 EA.	48 EA.	44	(20)	45	(21)
4 $\frac{1}{2}$ x 4	(114 x 102)	.134	(3.4)	8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