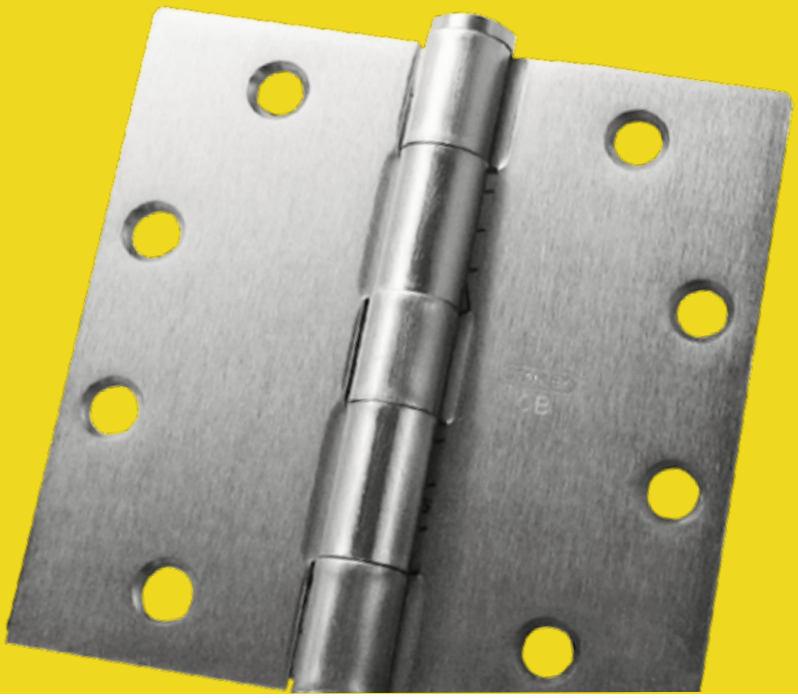
STANLEY®



General Hinge

Information

dormakaba

Trusted experts. Proven reliability. Simply STANLEY.

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General Hinge Information

Factors Determining Proper Hinge Selection

Application – Primary consideration is given to the type of door and frame for selection of a proper hinge configuration.

Hinge Size – Determined by door size, thickness, weight, frequency of use, and clearance required.

Hinge Type – The weight of the door and frequency of use determine whether a heavy weight, standard weight anti-friction* bearing or, a plain bearing hinge should be used.

Heavy weight hinges should always be used on heavy doors and doors where high frequency is expected.

Use anti-friction* bearing hinges on doors equipped with closers.

Metal and Finish – Determined by considerations such as atmospheric conditions, location of doors, or special conditions as in chemical laboratories, sewage disposal plants, etc. While ferrous metal can be given a good rust-resisting base, it cannot be given the same absolute guarantee against rust as nonferrous metals and should not be used for extreme exposure.
Finish on hinges can be furnished to Stanley or ANSI/BHMA Standards. When an exact match of another manufacturer's finish is desired, please submit sample.

Fasteners – Standard fasteners furnished with each hinge are specified in this catalog. Other fasteners are available and must be clearly specified.

Hand of Hinge – Loose joint hinges, pivot reinforced, electric, etc. are handed and should be specified right or left hand.

Hinge Edge of Door – Is the door edge on the hinge side square or beveled?

Tip Options – Institutions often require hospital type tips (barrel ends sloped) making it difficult to attach rope, wearing apparel, etc.

Flat button tip is universally used as standard.

Decorative tips and conversion kits are available for decorative effects.

Special Hinge Types – Raised barrel, electric hinges, pivot reinforced hinges, hinges with non-removable pins, security studs, etc.

Quality Level, Budget

Number of Hinges Required

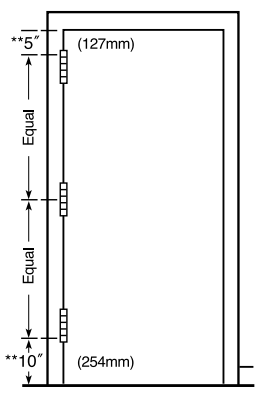
Use two hinges on doors up to 5′ (1.52m) and an additional hinge for each additional 2.5′ (.76m) or fraction thereof.

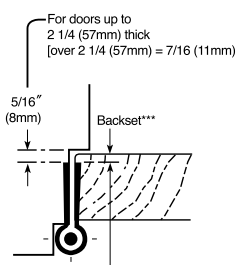
Location of Hinges on Doors (US Standards Procedure)

Top hinge 5″ (127mm) from frame rabbet to top of barrel.

Bottom hinge 10″ (254mm) from bottom edge of barrel to finished floor.

Third hinge centered between top and bottom hinges.





TYPICAL BACKSET

* Anti-friction bearings include Lifestan® CB bearings and ball bearings

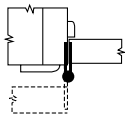
**Standard 7″ (178mm) from top and 11″ (279mm) from the bottom.

***The suggested location for olive knuckle and paumelle hinges is 1/4″ (6.4mm) from pull side of door to edge of hinge leaf

General Hinge Information

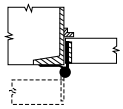
Application

Full Mortise



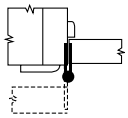
Doors	Frames
Solid Core Wood Hollow Metal Mineral Core Wood Doors with minimum 3/4" Edge Style	Wood Hollow Metal

Half Mortise



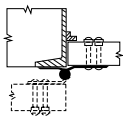
Doors	Frames
Solid Core Wood Hollow Metal	Channel Iron Tubular

Half Surface



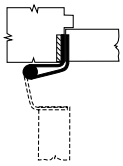
Doors	Frames
Hollow Core Wood Mineral Core Wood Doors with less than 3/4" Edge Style	Wood Hollow Metal

Full Surface



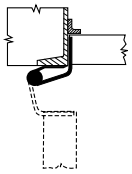
Doors	Frames
Hollow Core Wood Kalamein	Channel Iron Tubular

Swing Clear Full Mortise



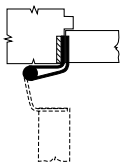
Doors	Frames
Wood	Hollow Metal

Swing Clear Half Mortise



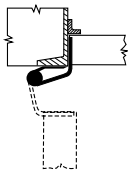
Doors	Frames
Wood	Channel Iron

Swing Clear Full Mortise



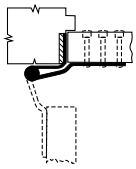
Doors	Frames
Wood	Hollow Metal

Swing Clear Half Mortise



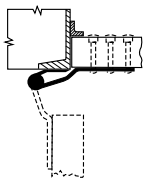
Doors	Frames
Wood	Channel Iron

Swing Clear Half Surface



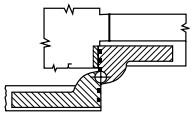
Doors	Frames
Mineral Core	Hollow Metal

Swing Clear Full Surface



Doors	Frames
Mineral Core	Channel Iron

Pivot Reinforced Full Mortise



Doors	Frames
Solid Core Wood Hollow Metal	Hollow Metal

General Hinge Information

Hinge Height – Standard Door size 3′ 0″ (.91m) x 7′ 0″ (2.13m)*

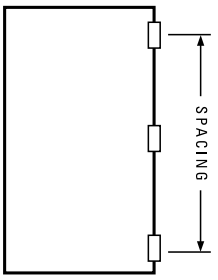
Weight	Frequency	1 3/8″		(35mm)	1 3/4″		(44mm)	2″		(51mm)
Up to 50 lbs. (23 Kg)	Low	741	3 1/2 x 3 1/2	(89 x 89)	741	4 x 4	(102 x 102)		—	
	Medium	741	3 1/2 x 3 1/2	(89 x 89)		—			—	
	High	F179	4 x 4	(102 x102)		—			—	
50 lbs. (23 Kg) to 75 lbs. (34 Kg)	Low	741	4 x 4	(102 x 102)	F179	4 x 4	(102 x 102)	F179	4 1/2 x 4 1/2	(114 x 114)
	Medium	CB179	3 1/2 x 3 1/2	(89 x 89)	CB179	4 x 4	(102 x 102)	CB179	4 1/2 x 4 1/2	(114 x 114)
	High	CB179	4 x 4	(102 x 102)	CB179	4 1/2 x 4 1/2	(114 x 114)	CB179	4 1/2 x 4 1/2	(114 x 114)
76 lbs. (34 Kg) to 125 lbs. (57 Kg)	Low	F179**	4 1/2 x 4	(114 x 102)	F179	4 1/2 x 4 1/2	(114 x 114)	F179	5 x 5	(127 x 127)
	Medium	CB179**	4 1/2 x 4	(114 x 102)	CB179	4 1/2 x 4 1/2	(114 x 114)	CB179	4 1/2 x 4 1/2	(114 x 114)
	High	CB179**	5 x 4 1/2	(127 x 114)	CB168	4 1/2 x 4 1/2	(114 x 114)	CB168	4 1/2 x 4 1/2	(114 x 114)
126 lbs. (57 Kg) to 175 lbs. (79Kg)	Low	F179**	4 1/2 x 4	(114 x 102)	F179	4 1/2 x 4 1/2	(114 x 114)	F179	5 x 5	(127 x 127)
	Medium	CB179**	4 1/2 x 4	(114 x 102)	CB179	4 1/2 x 4 1/2	(114 x 114)	CB179	5 x 5	(127 x 127)
	High	CB168**	4 1/2 x 4 1/2	(114 x 114)	CB168	4 1/2 x 4 1/2	(114 x 114)	CB168	5 x 5	(127 x 127)
176 lbs. (80 Kg) to 225 lbs. (102 Kg)	Low		—		CB179	5 x 4 1/2	(127 x 114)	CB179	5 x 5	(127 x 127)
	Medium		—		CB168	4 1/2 x 4 1/2	(114 x 114)	CB168	4 1/2 x 4 1/2	(114 x 114)
	High		—		CB168	5 x 5	(127 x 127)	CB168	5 x 5	(127 x 127)
226 lbs. (102 Kg) to 300 lbs. (136 Kg)	Low		—		CB168	4 1/2 x 4 1/2	(114 x 114)	CB168	4 1/2 x 4 1/2	(114 x 114)
	Medium		—		CB168	5 x 5	(127 x 127)	CB168	5 x 5	(127 x 127)
	High		—		CB168	6 x 5	(152 x 127)	CB168	6 x 6	(152 x 152)
301 lbs. (136 Kg) to 600 lbs. (272 Kg)	Low		—		CB168	5 x 5	(127 x 127)	CB168	5 x 5	(127 x 127)
	Medium		—		CB168	6 x 5	(152 x 127)	CB168	6 x 6	(152 x 152)
	High		—		CB168	8 x 6	(203 x 152)	CB168	8 x 8	(203 x 203)
601 lbs. (272 Kg) to 1000 lbs. (453 Kg)	Low		—		BB855	5 x 6	(127 x 152)	BB855	5 x 6	(127 x 152)
	Medium		—		BB855	5 x 6	(127 x 152)	BB855	5 x 6	(127 x 152)
	High		—		BB852	5 x 6	(127 x 152)	BB852	5 x 6	(127 x 152)
1001 lbs. (453 Kg) to 2000 lbs. (906 Kg)	All		—		BB852	5 x 6	(127 x 152)	BB852	5 x 6	(127 x 152)

Design Options: A comparable CB 3 Knuckle or "F" Line hinge may be substituted. A comparable non-ferrous hinge may also be substituted. A comparable different configuration of hinge may be subsituted.

Hinge Height – Other Door Sizes*

Door Width Factors Width		
Feet	Meters	Factor
2	.61	.66
2.5	.76	.83
3	.91	1.0
3.5	1.07	1.2
4	1.22	1.33
Over 4	1.22	Consult Factory

Hinge Spacing Factors Spacing		
Inches	mm	Factor
70	1778	1.0
64	1626	1.09
60	1524	1.17



No. Of Hinges Required Per Door Door Height		
Feet	Meters	Factor
Up to 5	1.52	2
7.5	2.29	3
10	3.05	4
12.5	3.81	5
15	4.57	6

Example 1

150 lbs. (68 Kg) door 13⁄4″ (44mm) x 3′ (.91m) wide x 7′ (2.13m) door–Medium frequency application. Select door weight column 126 lbs. (57Kg) to 175 lbs. (79Kg) and select door size column 13⁄4″ (44mm) x 3′ (.91m) wide x 7′ (2.13m). In box where both lines intersect use CB179 4 1⁄2″ x 4 1⁄2″ (114mm x 114mm) or 4 1⁄2″ x 4″ (114mm x 102mm) hinge for medium frequency use.

Example 2

100 lbs. (45 Kg) door 13⁄4″ (44mm) x 4′ (1.22m) wide x 60″ (1524mm) hinge spacing and high frequency application.

Solution: Door width factor 4′ (1.22m) = 1.33

Hinge spacing factor 60″ (1524mm) = 1.17

Multiply: Door weight x door width factor x hinge spacing factor. 100 lbs. (45 Kg) x 1.33 x 1.17 = 156 lbs. (70 Kg).

Check: Door weight column 126 lbs. (57 Kg) to 175 lbs. (79 Kg) and 1 3⁄4″ (44mm) door side column. Where they intersect use CB168 4 1⁄2″ x 4 1⁄2″ (114mm x 114mm) for high frequency use.

*This information is offered strictly as a guide to help select hinges for use in normal situations. The major factors affecting hinge selection are addressed but no attempt has been made to include extraordinary factors such as abuse, impacts, hostile atmospheres or other such conditions that can and often do affect hinge performance.

** A special hole pattern may be necessary for thin doors (such as 1 3/8″). Consult factory.

General Hinge Information

Hinge Width

Thickness of Door		Clearance Required		Open Width of Hinge	
Inches	mm	Inches	mm	Inches	mm
1 3/8"	35	1 1/4"	32	3 1/2"	89
		1 3/4"	44	4"	102
1 3/4"	44	1"	25	4"	102
		1 1/2"	38	4 1/2"	114
		2"	51	5"	127
		3"	76	6"	152
2"	51	1"	25	4 1/2"	114
		1 1/2"	38	5"	127
		2 1/2"	64	6"	152
2 1/4"	57	1"	25	5"	127
		2"	51	6"	152
2 1/2"	64	3/4"	19	5"	127
		1 3/4"	44	6"	152
3"	76	3/4"	19	6"	152
		2 3/4"	70	8"	203
		4 3/4"	121	10"	254

For Other Hinges

Full Surface, Half Surface, Half Mortise – clearance is dictated by the amount of offset rather than hinge width.

Frequency of Door Operation

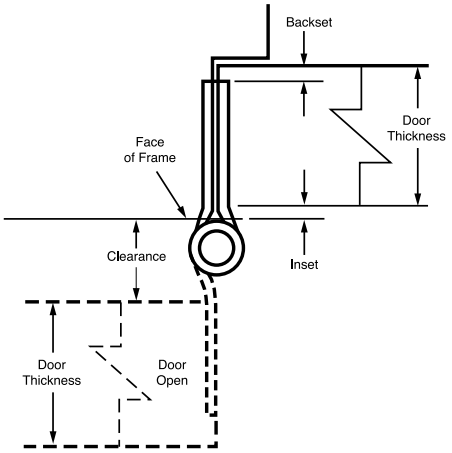
Type of Building and Door	Estimated Frequency			Hinge Type
	Daily	Yearly		
Large dept. store entrance	5,000	1,500,000	High frequency	Heavy Weight
Large office bldg. entrance	4,000	1,200,000		
School entrance	1,250	225,000		
School toilet door	1,250	225,000		
Store or bank entrance	500	150,000		
Office bldg. toilet door	400	118,000		
School corridor door	80	15,000	Av. frequency	Standard Weight Anti-Friction Bearing (except on heavy doors)
Office bldg. corridor door	75	22,000		
Store toilet door	60	18,000		
Dwelling entrance	40	15,000		
Dwelling toilet door	25	9,000	Low frequency	Plain Bearing Hinges may be used on light doors
Dwelling corridor door	10	3,600		
Dwelling closet door	6	2,200		

Hinge Cycle Testing

Type	Weight	Cycles
Grade 1	Heavy	5M
Grade 2	Standard	2.5M

Formula To Determine Hinge Width Where Additional Clearance Is Required

(door thickness minus backset) times 2 plus clearance required plus inset (if any) EQUALS hinge width (if not standard width – use next larger standard hinge width)



Average Door Weights of Architectural Grade Doors

	Inches	mm	Inches	mm	Inches	mm
Door Thickness	1 3/8"	35	1 3/4"	44	2"	51
	lbs/ft²	kg/m²	lbs/ft²	kg/m²	lbs/ft²	kg/m²
Hollow Metal	4	19.5	5	24.4	61/2	31.7
Kalamein	–	–	5	24.4	–	–
Hollow Core	2	9.8	21/2	12.2	–	–
Solid Core	3 1/2	17	4 1/2	22	5 1/4	25.6
Mineral Core	3 1/2	17	4	19.5	–	–
Pine (White)	3	14.6	3 1/2	17	4	19.5
Oak	5	24.4	7	34.2	8	39
Ash	4	19.5	5	24.4	6	29.3
Fir	3	14.6	3 1/2	17	4	19.5
Birch	4 1/4	20.8	5 1/2	26.9	6 1/4	30.5
Mahogany	3 1/2	17	4 1/2	22	5 1/4	25.6

Lead Lining Weights

Thickness			
Inches	mm	lbs/ft²	kg/m²
1/64	.4	1	4.9
1/16	1.6	3.75	18.3
1/8	3.2	7.5	36.6

Glass Door Weights

Thickness			
Inches	mm	lbs/ft²	kg/m²
1/4	6.4	3.5	17

PlexiGlass Door Weights

Thickness			
Inches	mm	lbs/ft²	kg/m²
1/4	6.4	1.6	7.8

General Hinge Information

Fasteners



1. Flat recessed head wood screw



2. Pan recessed head wood screw



3. Button head torx screw, tamper resistant



4. Flat recessed head machine screw



5. Flat spanner head wood screw



6. Flat head torx screw, tamper resistant



7. Flat recessed head machine screw with grommet nut



8. Sleeve nut and machine screw



9. Steel capnut and machine screw for labeled doors



10. Slotted head machine screw

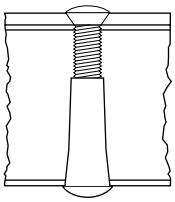


11. Tek screw

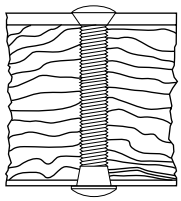
Half and Full Surface Hinge Fastenings

Application of machine screw and cap nut and machine screw and grommet nut.

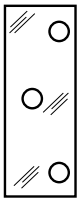
- Through-bolts and grommet nuts regularly furnished with half surface and full surface hinges
- Through-bolts and sleeve nuts available on special order
- Hinge back plates, BP-1, available for hinge sizes
- 4 1/2" (114mm) and 5" (127mm). Holes accommodate either sleeve nuts or grommet nuts
- Special back plates are also available for swing clear hinges



Machine screw and cap nut



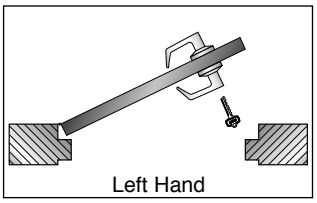
Machine screw and grommet nut



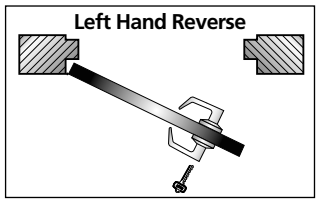
BP-1
Hinge Back Plate
[4 1/2" (114mm) size shown]

How to Determine Hand of Hinge

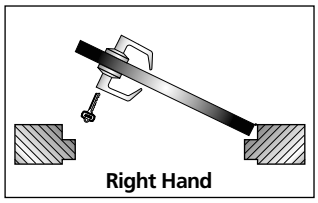
- The hand of a hinge is determined from the outside of the door to which it is applied
- The outside of a cupboard, bookcase or closet door is the room side. For other doors, the outside is usually the side from which security is necessary



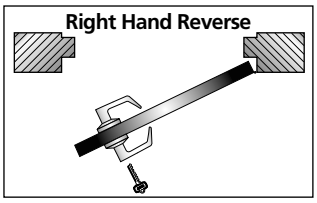
Left hand door takes left hand hinges



Left hand reverse door takes right hand hinges

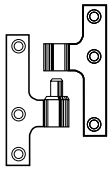


Right hand door takes right hand hinges

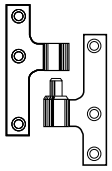


Right hand reverse door takes left hand hinges

- It will be observed that this method of determining the hand of loose joint cabinet hinges is exactly the opposite from the furniture manufacturers' standard rule
- To determine the hand of a loose joint hinge: open the hinge with its face toward you. If the knuckle of the right leaf is at the bottom, it is a right hand hinge. If the knuckle of the left leaf is at the bottom, it is a left hand hinge



Left Hand
Two-Knuckle Hinge



Right Hand
Two-Knuckle Hinge

General Hinge Information

Hinge Metals

Base Metals obtainable

Steel

Brass

Bronze

Stainless steel

- On interior doors or in non-corrosive environment use:
  1) Steel – painted or plated
- On interior labeled doors use:
  1) Steel – painted or plated
  2) Stainless steel
- On interior doors in a corrosive environment use:
  1) Stainless steel
  2) Brass or bronze
- On exterior doors use:
  1) Stainless steel
  2) Brass or bronze

Hinge Finishes

Steel Hinges

Prime coated for painting

- Phosphated then prime coated or painted
- Phosphating allows for a strong bond between the base metal and paint
- Ample paint clearance is provided between the barrel and the inner edges of the leaves

Polished or Plated

- The steel is first polished, then plated in desired finish

Steel hinges – Chromium plated

- Chromium plating is applied over a plating of nickel
- This method conforms strictly to requirements listed in ANSI/BHMA standard A156.18
- Chromium does not tarnish. The nickel underneath the chromium affords considerable rust protection but for absolute assurance against rusting, choose a non-ferrous base metal

Rust-Resisting "K" Base

- A "K" prefix to the class number of plated steel hinges (except chromium) indicates a coating of copper in addition to the final finish
- On prime coated and painted hinges, "K" prefix indicates a zinc undercoat that is applied prior to painting
- When ordering this extra rust-resisting base, insert the letter "K" as a prefix to the class number and suffix the final finish symbol i.e.,CBK1900R (USP) FBBK179 (US10)
- Rust – resisting base affords additional protection to a ferrous substrate. It should not be regarded as rust proof, but rust resistant. For absolute assurance against red rust, non-ferrous base metal should be selected.

Brass or Bronze Hinges

- Polished and finished
- Cannot rust
- Pins are made of stainless steel
- For brass or bronze hinges, finished other than natural we reserve the option to use either brass or bronze material Stainless Steel Hinges
- Furnished in bright or satin finishes
- Tips and pins are stainless steel

See next two pages for Stanley finish symbols and ANSI/BHMA numbers for materials and finishes.

General Hinge Information

Stanley Finish Symbols and ANSI/BHMA Finish Numbers

Specify finish by suffixing Stanley symbol or ANSI/BHMA number to class number

Stanley Finish Symbol	General Description	Base Material			
		Steel	Brass	Bronze	Stainless Steel
1D	Black coated	693	693	693	693
2C	Zinc plated	602	–	–	–
3	Bright brass	632	605	–	–
3A	Bright brass, no lacquer, on brass metal only	–	–	–	–
4	Satin brass	633	606	–	–
5	Satin brass, blackened, satin relieved, clear coated	638	609	–	–
9	Bright bronze	637	–	611	–
10	Satin bronze	639	–	612	–
10A*	Satin bronze light, oxidized, lacquered	641	–	614	–
10B*	Satin bronze dark, oxidized, oil rubbed	640	–	613	–
10BL*†	Satin bronze dark, oxidized, clear coated	–	–	–	–
14	Nickel plated, bright	645	618	618	–
15	Nickel plated, satin	646	619	619	–
15A	Antique nickel	647	–	–	–
17A	Nickel plated, imitation half-polished iron oxidized and relieved	648	621	621	–
20*	Statuary bronze	649	–	623	–
20A*	Statuary bronze, dark	650	–	624	–
26	Bright chromium plated,	651	625	625	–
26D	Satin chromium plated	652	626	626	–
32	Stainless steel metal, bright	–	–	–	629
32D	Stainless steel metal, satin	–	–	–	630
USP	Prime coat, gray	600	–	–	–
PCW	Prime coat, white	–	–	–	–
BC	Black chrome, bright	686	684	684	–
BCD	Black chrome, satin	687	685	685	–
DD	Dark bronze, painted	624E	624E	624E	–
DL	Light bronze, painted	691	691	691	691
DM	Medium bronze, painted	694	694	694	694
F4	Satin brass, blackened, satin relieved, clear coated	–	–	–	–
F8	Antique brass	–	–	–	–
PS	Plain steel – unfinished	–	–	–	–
ST4C	Zinc plated - satin brass tone	604	–	–	–

*Finishes 10A, 10B, 20, and 20A will be furnished to our standards

†Stanley does not recommend the finish on a steel substrate as it is cosmetic in nature and does not afford protection against corrosion. 10B over steel is not covered under warranty. On a steel product, we suggest specifying a lacquered 10BL finish.

General Hinge Information

Complete ANSI/BHMA Numbers for Materials and Finishes

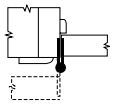
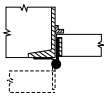
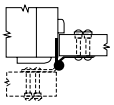
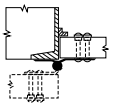
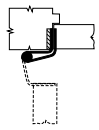
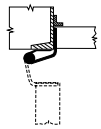
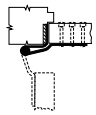
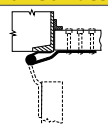
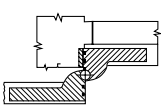
Finish Code Numbers

Code	Description	Base Material	Nearest/ Former U.S. Equivalent
600	Primed for pointing	Steel	P
601	Bright Japanned	Steel	1B
603	Zinc plated	Steel	2G
604	Zinc plated and dichromate sealed	Steel	
605	Bright brass, clear coated	Brass	3
606	Satin brass clear coated	Brass	4
607	Oxidized satin brass, oil rubbed	Brass	
608	Oxidized satin brass, relieved, clear coated	Brass	
609	Satin brass, blackened, satin relieved, clear coated	Brass	5
610	Satin brass, blackened, bright relieved, clear coated	Brass	7
611	Bright bronze, clear coated	Bronze	9
612	Satin bronze, clear coated	Bronze	10
613	Dark oxidized satin bronze, oil rubbed	Bronze	10B
614	Oxidized satin bronze, relieved, clear coated	Bronze	
615	Oxidized satin bronze, relieved, waxed	Bronze	
616	Satin bronze, blackened, satin relieved, clear coated	Bronze	11
617	Darkened oxidized satin bronze, bright relieved, clear coated	Bronze	13
618	Bright nickel plated, clear coated	Brass, Bronze	14
619	Satin nickel plated, clear coated	Brass, Bronze	15
620	Satin nickel plated, blackened, satin relieved, clear coated	Brass, Bronze	15A
621	Nickel plated, blackened, relieved, clear coated	Brass, Bronze	17A
622	Flat black coated	Brass, Bronze	19
623	Light oxidized statuary bronze, clear coated	Bronze	20
624	Dark oxidized statuary bronze, clear coated	Bronze	20A
625	Bright chromium plated	Brass, Bronze	26
626	Satin chromium plated	Brass, Bronze	26D
627	Satin aluminum, clear coated	Aluminum	27
628	Satin aluminum, clear anodized	Aluminum	28
629	Bright stainless steel	Stainless steel 300 series	32
630	Satin stainless steel	Stainless steel 300 series	32D
631	Flat black coated	Steel	19
632	Bright brass plated, clear coated	Steel	3
633	Satin brass plated, clear coated	Steel	4
634	Oxidized satin brass oil rubbed	Steel	
635	Oxidized satin brass plated, relieved, clear coated	Steel	
636	Satin brass plated, blackened, bright relieved, clear coated	Steel	7
637	Bright bronze plated, clear coated	Steel	9
638	Satin brass plated, blackened, satin relieved, clear coated	Steel	5
639	Satin bronze plated, clear coated	Steel	10
640	Oxidized satin bronze plated over copper plate, oil rubbed	Steel	10B
641	Oxidized satin bronze plated, relieved, clear coated	Steel	
642	Oxidized satin bronze plated, relieved, waxed	Steel	
643	Satin bronze plated, blackened, satin relieved, clear coated	Steel	11
644	Dark oxidized satin bronze plated, bright relieved, clear coated	Steel	13
645	Bright nickel plated, clear coated	Steel	14
646	Satin nickel plated, clear coated	Steel	15
647	Satin nickel plated, blackened satin relieved, clear coated	Steel	15A
648	Nickel plated, blackened relieved, clear coated	Steel	17A
649	Light oxidized bright bronze plated, clear coated	Steel	20

Finish Code Numbers

Code	Description	Base Material	Nearest/ Former U.S. Equivalent
650	Dark oxidized statuary bronze plated, clear coated	Steel	20A
651	Bright chromium plated	Steel	26
652	Satin chromium plated	Steel	26D
653	Bright Stainless steel	Stainless steel 400 series	
654	Satin stainless steel	Stainless steel 400 series	
655	Light oxidized satin bronze bright relieved, clear coated	Bronze	13
656	Light oxidized satin bronze plated, bright relieved, clear coated	Steel	13
657	Dark oxidized copper plated, satin relieved, clear coated	Steel	
658	Dark oxidized copper plated, bright relieved, clear coated	Steel	
659	Light oxidized copper plated, satin relieved, clear coated	Steel	
660	Light oxidized copper plated bright relieved, clear coated	Steel	
661	Oxidized satin copper, relieved, clear coated	Steel	
662	Satin brass plated, browned, satin relieved, clear coated	Steel	
663	Zinc plated with clear chromate seal	Steel	
664	Cadmium plated with clear chromate seal	Steel	
665	Cadmium plated with iridescent dichromate	Steel	
666	Bright brass plated, clear coated	Aluminum	3
667	Satin brass plated, clear coated	Aluminum	4
668	Satin bronze plated, clear coated	Aluminum	10
669	Bright nickel plated	Aluminum	14
670	Satin nickel plated	Aluminum	15
671	Flat black coated	Aluminum	19
672	Bright chromium plated	Aluminum	26
673	Aluminum clear coated	Aluminum	
674	Primed for painting	Zinc	P
675	Dichromate sealed	Zinc	
676	Flat black coated	Zinc	19
677	Bright brass plated, clear coated	Zinc	3
678	Satin brass plated, clear coated	Zinc	4
679	Bright bronze plated, clear coated	Zinc	9
680	Satin bronze plated, clear coated	Zinc	10
681	Bright chromium plated	Zinc	26
682	Satin chromium plated	Zinc	26D
683	Oxidized satin brass plated, oil rubbed	Zinc	
684	Black chrome, bright	Brass, Bronze	
685	Black chrome, satin	Brass, Bronze	
686	Black chrome, bright	Steel	
687	Black chrome, satin	Steel	
688	Satin aluminum, gold anodized	Aluminum	4
689	Aluminum painted	Any	28
690	Dark bronze painted	Any	20
691	Light bronze painted	Any	10
692	Tan painted	Any	
693	Black painted	Any (Black Aluminum Hard Coat)	
694	Medium bronze painted	Any (Medium Bronze Aluminum Hard Coat)	
695	Dark bronze painted	Any (Dark Bronze Aluminum Hard Coat)	
696	Satin brass painted	Any	4
697	Bright brass plated, clear coated	Plastic	3
698	Satin brass plated, clear coated	Plastic	4
699	Satin bronze plated, clear coated	Plastic	10
700	Bright chromium plated	Plastic	26
701	Satin chromium plated	Plastic	26D
702	Satin chromium plated	Aluminum	26D
703	Oxidized satin bronze plated, oil rubbed	Aluminum	10B
704	Oxidized satin bronze plated, oil rubbed	Zinc	10B

Hinge Type And Design Selection Chart

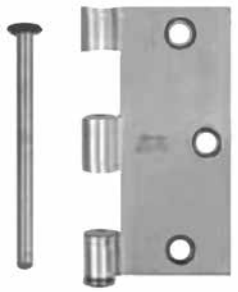
	Doors	Frames	3 Knuckle Concealed Bearing Shown	3 Knuckle CB			
				Std. Weight		Heavy Weight	
				Steel	Non-ferrous	Steel	Non-ferrous
Full Mortise 	Solid Core Wood Hollow Metal Mineral Core Wood Doors with minimum 3/4" Edge Style	Wood Hollow Metal		CB1900R	CB1960R	CB1901R	CB1961R
Half Mortise 	Solid Core Wood Hollow Metal	Channel Iron Tubular		CB1920R	CB1980R	CB1921R	CB1981R
Half Surface 	Hollow Core Wood Mineral Core Wood Doors with less than 3/4" Edge Style	Wood Hollow Metal		CB1910R	CB1970R	CB1911R	CB1971R
Full Surface 	Hollow Core Wood Kalamein	Channel Iron Tubular		CB1930R	CB1990R	CB1931R	CB1991R
Swing Clear Full Mortise 	Wood	Hollow Metal		CB1946R for beveled edge doors CB1947R for square edge doors	STS CB1946R for beveled edge doors STS CB1947R for square edge doors	CB1948R for square edge doors CB1949R for beveled edge doors	STS CB1948R for square edge doors STS CB1949R for beveled edge doors
Swing Clear Half Mortise 	Wood	Channel Iron		—	—	CB1941R for square edge doors CB1942R for beveled edge doors	STS CB1941R for square edge doors STS CB1942R for beveled edge doors
Swing Clear Half Surface 	Mineral Core	Hollow Metal		—	—	CB1959R	STS CB1959R
Swing Clear Full Surface 	Mineral Core	Channel Iron		—	—	CB1951R	STS CB1951R
Pivot Reinforced Full Mortise 	Solid Core Wood Hollow Metal	Hollow Metal		—	—	CB1907R frame plate only CB1908R frame & door plate for square edge doors CB1909R frame & door plate for beveled edge doors	CB1967R frame plate only CB1968R frame & door plate for square edge doors CB1969R frame & door plate for beveled edge doors

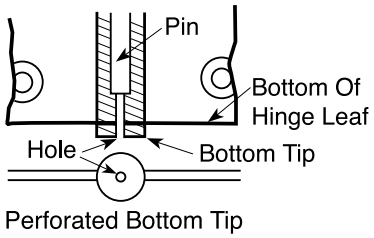
3 Knuckle Plain		5 Knuckle CB				5 Knuckle FBB				5 Knuckle Plain	
Bearing Std. Weight		Std. Weight		Heavy Weight		Std. Weight		Heavy Weight		Bearing Std. Weight	
Steel	Non-ferrous	Steel	Non-ferrous	Steel	Non-ferrous	Steel	Non-ferrous	Steel	Non-ferrous	Steel	Non-ferrous
1900R	1960R	CB179	CB191	CB168	CB199	FBB179	FBB191	FBB168	FBB199	F179	F191
1920R	—	CB167	CB108	CB138	CB98	FBB167	FBB108	FBB138	FBB98	F167	—
1910R	—	CB173	CB112	CB163	CB113	FBB173	FBB112	FBB163	FBB113	F173	—
—	—	CB171	CB110	CB169	CB109	FBB171	FBB110	FBB169	FBB109	—	—
1947R for square edge doors	—	CB248 for square edge doors CB258 for beveled edge doors	STSCB248 for square edge doors STSCB258 for beveled edge doors	CB268 for square edge doors CB278 for beveled edge doors	STSCB268 for square edge doors STSCB278 for beveled edge doors	FBB248 for square edge doors FBB258 for beveled edge doors	STSFBB248 for square edge doors STSFBB258 for beveled edge doors	FBB268 for square edge doors FBB278 for beveled edge doors	STSFBB268 for square edge doors STSFBB278 for beveled edge doors	F248 for square edge doors	—
—	—	—	—	CB264 for square edge doors CB274 for beveled edge doors	STSCB264 for square edge doors STSCB274 for beveled edge doors	—	—	FBB264 for square edge doors FBB274 for beveled edge doors	STSFBB264 for square edge doors STSFBB274 for beveled edge doors	—	—
—	—	—	—	CB269	STSCB269	—	—	FBB269	STSFBB269	—	—
—	—	—	—	CB266	STSCB266	—	—	FBB266	STSFBB266	—	—
—	—	—	—	CB211 frame plate only CB212 frame & door plate for square edge doors CB213 frame & door plate for beveled edge doors	CB221 frame plate only CB222 frame & door plate for square edge doors CB223 frame & door plate for beveled edge doors	—	—	FBB211 frame plate only FBB212 frame & door plate for square edge doors FBB213 frame & door plate for beveled edge doors	FBB221 frame plate only FBB222 frame & door plate for square edge doors FBB223 frame & door plate for beveled edge doors	—	—

General Hinge Information

Pin Design

- **Non-rising pin** construction features an easily seated pin that will not rise
- Hole in bottom tip provides for easy pin removal on button and flush tip hinges
- Pin is removed by inserting a punch or a thin rod through bottom hole of tip and tapping upward
- Helps prevent marring of the hinge or hinge finish
- Standard feature on size 3" x 3" (76mm x 76mm) and larger hinges

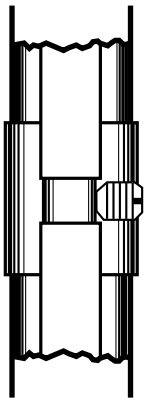




Non-Removable Pins

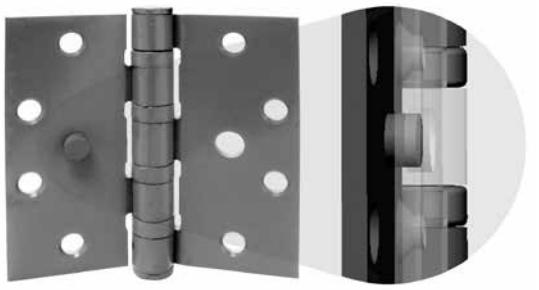
- NRP – Set screw in barrel intercepts groove in loose pin as shown. Set screw is not accessible when door is closed. Not available on size 3" (76mm) and smaller.
- Specify "**NRP**" (non-removable pin) when ordering





Security Stud

- Full mortise hinges are available with security studs for added safety
- With the door in its closed position, a stud attached to one leaf of the hinge projects into a hole in the matching leaf
- Hinged side of door cannot be moved, even with hinge pins removed, because the stud prevents the leaves from being slid apart
- Specify "**with security stud**" when ordering



Shear Resistant Stud

- Optional feature for prison hinges
- Withstands 200 foot pound (271.2-J) ram test
- Dimensionally consistent
- Keeps hinge in position even if all the screws break under attack
- Studs engage into door and frame
- Specify "**SRS**" when ordering



Special Situation Products

Raised Barrel Hinges

Specify hand of door when ordering

Specify whether hinges are for square edge or beveled edge doors on the hinge side

Specify equal or unequal leaves when ordering

- For application where doors are set deep on a wide frame
- Frame leaf may be either surface mounted or mortised as illustrated in sketches below
- Available special for doors that must open 180 degrees
- Supply detail of door and frame condition
- For other hinge types than listed below, consult factory

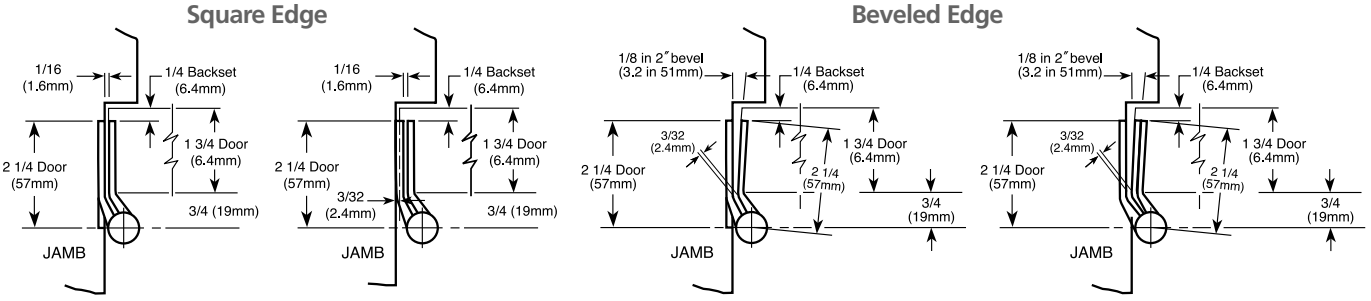


equal

Can be furnished on the following class numbers:

RBCB179	RBCB191	RBCB168	RBCB199
RBFBB179	RBFBB191	RBFBB168	RBFBB199
RBCB1900R	RBCB1960R	RBCB1901R	RBCB1961R

Square Edge | **Beveled Edge**

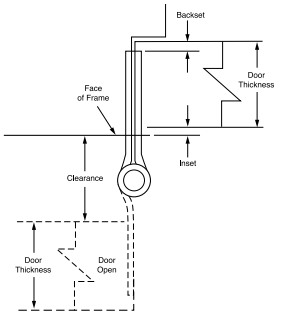


Mortise Application | **Surface Application** | **Mortise Application** | **Surface Application**

Note: Above applications are all equal leaves.

Wide Throw Hinge

- A full mortise hinge with wider than normal leaves, positions the door out further, when open, than with conventional hinges
- Normally used when doors are set in a reveal and are required to open 180°
- Specify whether hinges are for square or beveled edge doors on the hinge side when ordering





For hinge width formula refer to page 5.

Hinge Swaging

- Swaging is a slight offset of the hinge leaf at the barrel which permits the leaves to come closer together when parallel
- Hinges are slightly less in width when both leaves are not swaged
- Not swaged leaf is shorter when only one leaf is swaged. EXCEPTION: Specify "leaves must be equal" when ordering template hinges for metal door and metal frame (furnished all machine screws) when both leaves must be the same width
- When leaves are parallel, standard swaging for most architectural hinges provides a 1⁄16" (1.6mm) clearance.



Not swaged – Hinge closed



Both leaves swaged – Hinge closed (standard)



One leaf swaged (special)



Flat back – not swaged



Both leaves swaged

General Hinge Information

Special Situation Products

- "CE" Concealed electric hinges conduct current regardless of door position to electric locks, exit devices, or hold open devices where tamper-proof hinge is required. Also to transmit signals from code readers on doors to remote computers for access control
- No electrical parts are exposed when hinge is installed
- Permanent fast pin
- Hinges should be installed in the center hinge location
- Not available as swing clear or raised barrel
- Hinges may be equipped with both concealed wires and concealed switches. When both are desired on the same hinge use prefix "CECS"
- Packed one per box with all machine screws and installlation instructions
- When ordering specify class number, size, finish and number of wires
  Suffix -54 for 4 wires, 56 for 6 wires -66 for 6 wires (2@24AWG, 4@28AWG), 58 for 8 wires or 10 for 10 wires
- Should be used along with a junction box
- Can be furnished with hospital tips



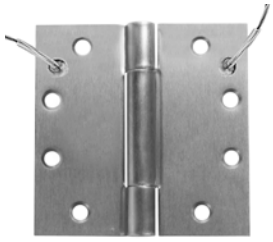
CECB179-12C**
Electrified Quick Connect Hinge



CECB179
CECB168
CECB191
CECB199
5-Knuckle Concealed Bearings



CEFBB179
CEFBB168
CEFBB191
CEFBB199
5-Knuckle Exposed Bearings



CECB1900R
CECB1901R
CECB1960R
CECB1961R
3-Knuckle Concealed Bearings
(Handed - Specify RH or LH)

c UL us LISTED

Electrical Ratings				
Suffix	# Wires	Wire Gage	Volts (AC or DC)	
			6, 12, 24	48
		Current		
-54	4	28AWG	1 amp/wire	5 milli-amp/wire
-56	6	28AWG	.7 amp/wire	5 milli-amp/wire
-58	8	28AWG	.5 amp/wire	5 milli-amp/wire
-10	10	28AWG	.4 amp/wire	5 milli-amp/wire
-66*	6	2@24AWG	2 amp/wire	5 milli-amp/wire
		4@28AWG	1 amp/wire	5 milli-amp/wire
18**	8	2@18AWG	10amp/wire	5 milli-amp/wire
		6@28AWG	.7amp/wire	5 milli-amp/wire

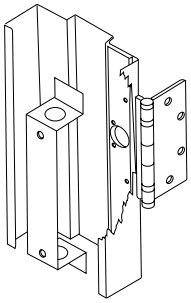
Inrush 15A for .05 second/wire
"CE" hinges are listed by UL at these ratings
* Not available in FBB168 and FBB199
** -18 and -12C are only available on models CB168, CB179, CB191 & CB-199.

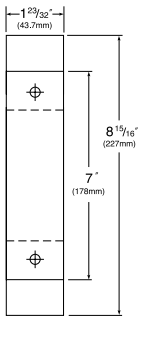
Class Number			Sizes Available	
CB179,	FBB179,	CB1900R		
CB168,	FBB168,	CB1901R	4 1/2" x 4"	(114mm x 102mm)
CB191,	FBB191,	CB1960R	4 1/2" x 4 1/2"	(114mm x 114mm)
CB199,	FBB199,	CB1961R	5" x 4"	(127mm x 102mm)
			5" x 4 1/2"	(127mm x 114mm)
			5" x 5"	(127mm x 127mm)
			6" x 4 1/2"	(152mm x 114mm)
			6" x 5" *	(152mm x 127mm)
			6" x 6" *	(152mm x 152mm)

* Not available in CB191, FBB191, CB1900R and CB1960R

JB2R – Junction Box

- Note: Install in middle hinge location
- Can be shop welded or field installed — before frames are set
- Fits either 41/2" (114mm) or 5" (127mm) size hinges





Junction Box Top View



Right Side View

General Hinge Information

Special Situation Products

- "CS" (Concealed Switch) Allows opening monitoring, switch operates when door is either open or closed. Used to activate alarms, monitoring devices, or other security equipment when a tamper-proof hinge is required
- Single pole double throw switch
- Packed one per box with screws and installation instructions
- No electrical parts are exposed when hinge is installed
- Hinges should be installed in the center hinge location
- When ordering specify class number, size, finish and hand of door
- Hinges are available as follows:
  - with Non-Removable Pins (NRP)
  - with hospital tips (HT)

CSCB179
CSCB168
CSCB191
CSCB199
5-Knuckle Concealed Bearings





CSFBB179
CSFBB168
CSFBB191
CSFBB199
5-Knuckle Exposed Bearings





CSCB1900R
CSCB1901R
CSCB1960R
CSCB1961R
3-Knuckle Concealed Bearings





c UL us LISTED

Electrical Ratings		
Volts	Current Rating	
AC or DC	**Resistive**	**Inductive**
6	.30amp	.30amp
12	.25amp	.25amp
24	.20amp	.15amp
48	.15amp	.12amp

Class Number			Sizes Available	
CB179,	FBB179,	CB1900R		
CB168,	FBB168,	CB1901R	4 1⁄2" x 4"	(114mm x 102mm)
CB191,	FBB191,	CB1960R	4 1⁄2" x 4 1⁄2"	(114mm x 114mm)
CB199,	FBB199,	CB1961R	5" x 4"	(127mm x 102mm)
			5" x 4 1⁄2"	(127mm x 114mm)
			5" x 5"	(127mm x 127mm)
			6" x 4 1⁄2"	(152mm x 114mm)
			6" x 5" *	(152mm x 127mm)
			6" x 6" *	(152mm x 152mm)

Hinges may be equipped with both concealed wires and concealed switch. When both are desired use prefix CECS. Specify hand.



5-Knuckle Concealed Bearings



5-Knuckle Ball Bearings



3-Knuckle Concealed Bearings

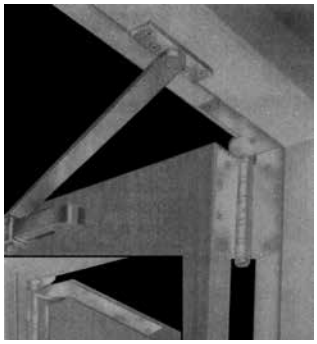
General Hinge Information

Special Situation Products

Designed to reduce door maintenance

They're Shockproof

- The Stanley pivot reinforced hinge is recommended for use on doors that get hard usage, especially those equipped with overhead door holders that bring doors to sudden, jarring stops
- Combines a pivot and a butt hinge in one compact, interlocked unit, in which they share the same pin to assure perfect alignment



See 3 Knuckle Hinge Section

See 5 Knuckle Hinge Section

Shock Arrestor

- Protects against loosened screws and bent hinge leaves.
- 225R – Solid steel



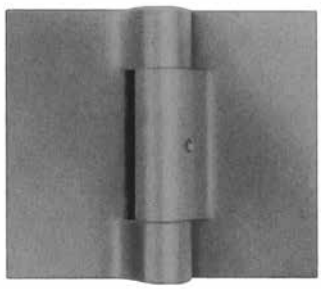
See Miscellaneous Door Hardware Section

Double Weight Hinge

Full Surface*, Ball Bearing

BB855 5x6

- Steel – with welded pin, – phosphated and prime coated for painting
- Made of double weight steel capable of carrying doors weighing up to 800 lbs. (362 Kg)



See Detention Hardware Section

Triple Weight Hinges

Full Surface*, Ball Bearing

BB852 5x6

- Steel – with welded pin, – phosphated and prime coated for painting
- Made of triple weight steel capable of carrying doors weighing up to 2000 lbs. (906 Kg)



See Detention Hardware Section

Slip-In Hinges for Aluminum Doors and Frames

Slip-in hinges – prefix "slip-in"

- CB179, FBB179, CB1900R, CB191, FBB191 and CB1960R are available for "Slip-In" applications for aluminum doors and frames



See 3 Knuckle Hinge Section

See 5 Knuckle Hinge Section

General Hinge Information

Special Situation Products

Swing Clear Hinges

- Wherever doors are required to meet barrier – free codes, or are required to swing completely out of the opening so that wide equipment can pass through without damaging doors and frames or the equipment



Full Mortise



Half Mortise



Full Surface



Half Surface

See 3 Knuckle Hinge Section

See 5 Knuckle Hinge Section

Decorative Hinges

Olive Knuckle



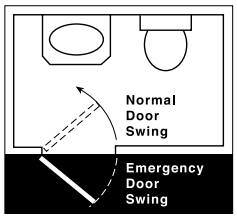
See Miscellaneous Door Hardware Section

BB95 – 6" x 3 7/8" (152 x 98mm)

Hospital Emergency Rescue Hardware

Swing Clear Hinges

- For application to doors from patient rooms to private baths. Permits door to normally swing into the bath, thus saving space, yet swing out into the bedroom in case of emergency when a patient is trapped inside



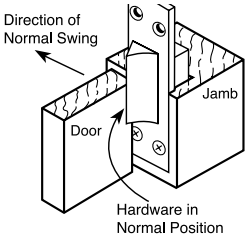


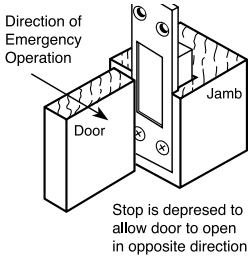
DAP-3
Double Acting Pivot



ES-1
Emergency Door Stop

See Emergency Hardware Section







DLS - 1
Double Lipped Strike
For 1/8" Inset Hung Doors



DLS - 2
Double Lipped Strike
For Center Hung Doors

General Hinge Information (Hinge Tips)

Button Tips

- Button tips are standard for all "F" line 5 knuckle hinges
- Button tip pins in standard weight steel hinges are made in one piece steel [except on 6" (152mm) sizes]



Hospital Tips

- Hospital type barrel ends are sloped, making cleaning easier, and making it difficult to attach rope, wearing apparel, etc. The pin is held in place by a cross pin for increased security. Prefix "HT" to class number.
  For "IHT" Institutional Hospital Tips see detention hardware section



Steeple Tips

- Solid brass steeple tips furnished on order at an extra cost by specifying "steeple tips" as a suffix to the class number. Available for "CB" and "F" lines
- See 3 knuckle and 5 knuckle hinge sections



Ball Tips

- Solid brass ball tips furnished on order at an extra cost by specifying "ball tips" as a suffix to the class number. Available for "CB" and "F" lines
- See 3 knuckle and 5 knuckle hinge sections



Crown Tips

- Solid brass ball tips furnished on order at an extra cost by specifying "ball tips" as a suffix to the class number. Available for "CB" and "F" lines
- See 3 knuckle and 5 knuckle hinge sections



General Hinge Information

Hinges For Fire Doors

- Table 2-4.3.1 Builders Hardware Mortise, Surface and Full Length Hinges, Pivots, or Spring Hinges for Swinging Doors
- Doors up to 60 in. (1.52 m) in height shall be provided with two hinges and an additional hinge for each additional 30 in. (0.76 m) of door height or fraction thereof. The distance between hinges shall be permitted to exceed 30 in. (0.76 m). When spring hinges are used, at least two shall be provided.

Door Rating (hr)	Maximum Door Size				Minimum Hinge Size				Type Hinge
	Width		Height		Height		Thickness		
	ft	(m)	ft	(m)	In.	(mm)	In.	(mm)	
For 1 3⁄4 in. (44.5-mm) or Thicker Doors									
3, 1 1⁄2, 1, 3⁄4, 1⁄2, 1⁄3	4	(1.22)	10	(3.05)	4 1⁄2	(114.3)	0.180	(4.57)	Steel, mortise or surface
3, 1 1⁄2, 1, 3⁄4, 1⁄2, 1⁄3	4	(1.22)	8	(2.44)	4 1⁄2	(114.3)	0.134	(3.40)	Steel, mortise or surface
1 1⁄2, 3⁄4, 1⁄2, 1⁄3	3 1⁄6	(0.96)	8	(2.44)	6	(152.4)	0.225	(5.72)	Steel, olive knuckle or paumelle
3, 1 1⁄2, 3⁄4, 1⁄2, 1⁄3	4	(1.22)	10	(3.05)	4	(101.6)	0.225	(5.72)	Steel pivots (including top, bottom, and intermediate)
1 1⁄2, 1, 3⁄4, 1⁄2, 1⁄3	3	(0.91)	5	(1.52)	4	(101.6)	0.130	(3.30)	Steel, mortise or surface
1 1⁄2, 1, 3⁄4, 1⁄2, 1⁄3	2	(0.61)	3	(0.91)	3	(76.2)	0.092	(2.34)	Steel, mortise or surface
3, 1 1⁄2, 1, 3⁄4, 1⁄2, 1⁄3	3	(0.91)	7	(2.13)	4 1⁄2	(114.3)	0.134	(3.40)	Steel mortise or surface (labeled, self closing, spring type)
3, 1 1⁄2, 1, 3⁄4, 1⁄2, 1⁄3	3	(0.91)	7	(2.13)	4	(101.6)	0.105	(2.67)	Steel,mortise or surface (labeled, self closing, spring type)
For 1 3⁄8 in. (34.93-mm) Doors									
3, 1 1⁄2, 3⁄4, 1⁄2, 1⁄3	3	(0.91)	7	(2.13)	3 1⁄2	(88.9)	0.123	(3.12)	Steel, mortise or surface
3, 1 1⁄2, 1, 3⁄4, 1⁄2, 1⁄3	2 2⁄3	(0.81)	7	(2.13)	3 1⁄2	(88.9)	0.105	(2.67)	Steel,mortise or surface (labeled, self closing, spring type)

NOTES:

1. All hinges or pivots, except spring hinges, shall be of the ball bearing type. Hinges or pivots employing other antifriction bearing surfaces shall be permitted if they meet the requirements of ANSI A156.1, Standard for Butts and Hinges. Spring hinges shall be labeled.
2. Hinges 4 1⁄2" (114-mm) high, 0.180" (4.57-mm) thick shall be permitted for use on wide and heavy doors or doors that are subjected to heavy use or unusual stress.
3. Some manufacturers can provide fire doors with hinges of lighter weight that are not of the ball bearing type where they are part of a listed assembly and meet the test requirements of ANSI A156.1, Standard for Butts and Hinges, and have been tested to a minimum of 350,000 cycles.
4. Pivot sets made up of components that are smaller or of a lighter gauge than shown in this table shall be permitted to be used, provided they meet the requirements of ANSI A156.4, Door Controls (Closers), and are in accordance with the manufacturers' label service procedures.

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Parts Of An Inch					
Fraction	Decimal	Millimeter	Fraction	Decimal	Millimeter
1⁄64	.016	0.4	17⁄32	.531	13.5
1⁄32	.031	0.8	9⁄16	.562	14.3
3⁄64	.047	1.2	19⁄32	.594	15.1
1⁄16	.062	1.6	5⁄8	.625	15.9
5⁄64	.078	2.0	21⁄32	.656	16.7
3⁄32	.094	2.4	11⁄16	.688	17.5
7⁄64	.109	2.8	23⁄32	.718	18.3
1⁄8	.125	3.2	3⁄4	.750	19.1
9⁄64	.140	3.6	25⁄32	.781	19.8
5⁄32	.156	4.0	13⁄16	.812	20.6
11⁄64	.172	4.4	27⁄32	.844	21.4
3⁄16	.187	4.8	7⁄8	.875	22.2
13⁄64	.203	5.2	29⁄32	.906	23.0
7⁄32	.219	5.6	15⁄16	.937	23.8
15⁄64	.234	6.0	31⁄32	.969	24.6
1⁄4	.250	6.4	1	1.000	25.4
9⁄32	.281	7.1	2	2.000	50.8
5⁄16	.312	7.9	3	3.000	76.2
11⁄32	.344	8.7	4	4.000	101.6
3⁄8	.375	9.5	5	5.000	127.0
13⁄32	.406	10.3	6	6 000	152.4
7⁄16	.437	11.1	7	7 000	177.8
15⁄32	.469	11.9	8	8.000	203.2
1⁄2	.500	12.7			
MM conversion to Inches – MM x .03937		Inches to MM – Inch x 25.4			

General Hinge Information

ANSI/BHMA Butts And Hinges Standard And Stanley Equivalent Numbers

ANSI/BHMA Number	Stanley Number	ANSI/BHMA Number	Stanley Number
A1612	BB95	A8111	FBB168 • CB168
A1711	BB93		CB1901R
A1882	ES-1	A8112	FBB179 • CB179
A2111	FBB199 • CB199 • CB1961R		CB1900R
A2112	FBB191 • CB191 • CB1960R	A8121	FBB268 • CB268
A2133	F191		CB1948R
	1960R	A8122	FBB248 • CB248
A2141	FBB199 • CB199 Slip in Application B - Both leaves tapped		CB1947R
	CB1961R Slip in Application B - Both leaves tapped	A8123	F248
A2142	FBB191 • CB191 Slip in Application B - Both leaves tapped		1947R
	CB1960R Slip in Application B - Both leaves tapped	A8133	F179 • 1900R
A2143	F191 Slip in Application B - Both leaves tapped	A8141	FBB168 • CB168 Slip in Application B - Both leaves tapped
	1960R Slip in Application B - Both leaves tapped		CB1901R Slip in Application B - Both leaves tapped
A2151	FBB199 • CB199 Slip in Application A - One leaf tapped	A8142	FBB179 • CB179 Slip in Application B - Both leaves tapped
	CB1961R Slip in Application A - One leaf tapped		CB1900R Slip in Application B - Both leaves tapped
A2152	FBB191 • CB191 Slip in Application A - One leaf tapped	A8143	F179 • 1900R Slip in Application B - Both leaves tapped
	CB1960R Slip in Application A - One leaf tapped	A8151	FBB168 • CB168 Slip in Application A - One leaf tapped
A2153	F191 Slip in Application A - One leaf tapped		CB1901R Slip in Application A - One leaf tapped
	1960R Slip in Application A - One leaf tapped	A8152	FBB179 • CB179 Slip in Application A - One leaf tapped
A2211	FBB98 • CB98		CB1900R Slip in Application A - One leaf tapped
	CB1981R	A8153	F179 Slip in Application A - One leaf tapped
A2212	FBB108 • CB108		1900R Slip in Application A - One leaf tapped
	CB1980R	A8211	FBB138 • CB138
A2311	FBB109 • CB109		CB1921R
	CB1991R	A8212	FBB167 • CB167
A2312	FBB110 • CB191		CB1920R
	CB1990R	A8221	FBB264 • CB264
A2361	FBB1091/2 • CB1091/2		CB1941R
A2411	FBB113 • CB113	A8233	F167
	CB1971R		1920R
A2412	FBB112 • CB112	A8311	FBB169 • CB169
	CB1970R		CB1931R
A2541	FBB221 • CB221	A8312	FBB171 • CB171
	CB1967R		CB1930R
	FBB222 • CB222	A8321	FBB266 • CB266
	CB1968R		CB1951R
	FBB223 • CB223	A8361	FBB169 1/2 • CB169 1/2
	CB1969R	A8381	BB855
A2742	DAP-3	A8391	BB852
A5111	FBB199 • CB199 (32, 32D)	A8411	FBB163 • CB163
	CB1961R (32, 32D)		CB1911R
A5112	FBB191 • CB191 (32,32D)	A8412	FBB173 • CB173
	CB1960R (32,32D)		CB1910R
A5133	F191 (32, 32D)	A8421	FBB269 • CB269
	1960R (32,32D)		CB1959R
A5211	FBB98 • CB98 (32, 32D)	A8433	F173
	CB1981R (32, 32D)		1910R
A5212	FBB108 • CB108 (32 32D)	A8541	FBB211 • CB211
	CB1980R (32,32D)		CB1907R
A5311	FBB109 • CB109 (32 32D)		FBB212 & CB212
	CB199R (32,32D)		CB1908R
A5312	FBB110 • CB110 (32, 32D)		FBB213 • CB213
	CB1990R (32, 32D)		CB1909R
A5361	FBB1091/2 • CB1091/2 (32, 32D)	A8711	BB143
A5411	FBB113 • CB113 (32, 32D)	A8712	BB140
	CB1971R (32, 32D)	A8753	340
A5412	FBB112 • CB112 (32, 32D)	A8773	341
	CB1970R (32, 32D)	A8782	327
A5541	FBB222 • CB222 (32D)	A8783	342
	CB1968R (32D)		
	FBB223 • CB223 (32D)		
	CB1969R (32D)		

General Hinge Information

Cross Reference of Stanley's Hinge Designs

Old CB3K (1900/CB1900)	New CB3K (1900R/CB1900R)	CB5K	F/FBB
1900	1900R	F179*	F179
CB1900	CB1900R	CB179	FBB179
CB1900 (APP. A)	CB1900R (APP. A)	CB179 (APP. A)	FBB179 (APP. A)
CB1900 (APP. B)	CB1900R (APP. B)	CB179 (APP. B)	FBB179 (APP. B)
CB1901	CB1901R	CB168	FBB168
CB1907	CB1907R	CB211	FBB211
CB1908	CB1908R	CB212	FBB212
CB1909	CB1909R	CB213	FBB213
1910	1910R	F173*	F173
CB1910	CB1910R	CB173	FBB173
CB1911	CB1911R	CB163	FBB163
1920	1920R	F167*	F167
CB1920	CB1920R	CB167	FBB167
CB1921	CB1921R	CB138	FBB138
CB1930	CB1930R	CB171	FBB171
CB1931	CB1931R	CB169	FBB169
CB1941	CB1941R	CB264	FBB264
CB1942	CB1942R	CB274	FBB274
CB1946	CB1946R	CB258	FBB258
1947	1947R	F248*	F248
CB1947	CB1947R	CB248	FBB248
CB1948	CB1948R	CB268	FBB268
CB1949	CB1949R	CB278	FBB278
CB1951	CB1951R	CB266	FBB266
CB1959	CB1959R	CB269	FBB269
1960	1960R	F191*	F191
CB1960	CB1960R	CB191	FBB191
CB1960 (APP. A)	CB1960R (APP. A)	CB191 (APP. A)	FBB191 (APP. A)
CB1960 (APP. B)	CB1960R (APP. B)	CB191 (APP. B)	FBB191 (APP. B)
CB1961	CB1961R	CB199	FBB199
CB1967	CB1967R	CB221	FBB221
CB1968	CB1968R	CB222	FBB222
CB1969	CB1969R	CB223	FBB223
CB1970	CB1970R	CB112	FBB112
CB1971	CB1971R	CB113	FBB113
CB1980	CB1980R	CB108	FBB108
CB1981	CB1981R	CB98	FBB98
CB1990	CB1990R	CB110	FBB110
CB1991	CB1991R	CB109	FBB109

*Plain bearing companion hinge for all 5 knuckle designs.

General Hinge Information

Things to look for when looking for problems with door and frame alignment and mortise preparation:

- Check for visible damage on the door or frame.
- Square or plumb condition of the frame.
- Irregular surface or lamination of the frame construction.
- Hinge pins properly seated.
- All fasteners are secure and flush or below the surface of the hinge.
- Uniformity of all mortised surfaces, length, width, and depth on the frame as well as on the door.
- Hinge set too deep in the mortise and hinge barrel rubbing the door or frame.
- Mortise does not match the material thickness of the hinge. Too deep or too shallow will upset the swage design of the hinge.
- No interference from closers, latches, or door travel limiting devices.
- Door squareness, look for a bow or other irregularity.
- Closed door interference on top, bottom, or against the stop.

Notes:

STANLEY

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