

## F Series flush



### About the product

F Series 3 sided flush frames are designed to meet requirements for light to maximum duty applications in both commercial and institutional buildings. They are installed in both interior and exterior locations, and in virtually all types of buildings and wall constructions. These frames are to be installed as part of the wall framing sequence. They can be specified and supplied as KD (knock-down) for field assembly prior to installation or welded for installation as a complete unit.

### Installation

1. Installation shall conform to the published Steelcraft installation instructions, ANSI A250.11-2012 (formerly SDI 105) Recommended Erection Instructions for Steel Frames and HMMA 840.
2. Fire Rated Assemblies must be in accordance with NFPA Pamphlet 80. The Authority Having Jurisdiction is the final authority in issues related to the installation and use of installed Fire Rated Doors.

### Frame applications

Profile	Steel thickness	Wall construction	Typical wall anchors
F16	16 Gauge [0.053" (1.3 mm)]	Wood or steel stud	Lock-in stud anchor
F16	16 Gauge [0.053" (1.3 mm)]	Masonry	Wire masonry
F16	16 Gauge [0.053" (1.3 mm)]	Existing masonry	Bolted through soffit
F14	14 Gauge [0.067" (1.7 mm)]	Wood or steel stud	Lock-in stud anchor
F14	14 Gauge [0.067" (1.7 mm)]	Masonry	Wire masonry
F14	14 Gauge [0.067" (1.7 mm)]	Existing masonry	Bolted through soffit
F12	12 Gauge [0.093" (2.3 mm)]	Wood or steel stud	Lock-in stud anchor
F12	12 Gauge [0.093" (2.3 mm)]	Masonry	Wire masonry
F12	12 Gauge [0.093" (2.3 mm)]	Existing masonry	Bolted through soffit

### Features and benefits

Steelcraft F Series flush frames offer the following unique features, which enhance long term functionality and durability:

1. **Die-mitered corner connections:** Die-mitered corner connection at the head and jamb insure an attractive, tight and closed mitered connection. The miter includes 4 corner tabs designed with concealed connection eliminating the need for continuous profile welding.
2. **Patented universal hinge preparations** allow for easy field conversion from standard weight .134" (3.3 mm) thick hinges to heavy weight .180" (4.7 mm) hinges.
3. **Adjustable base anchors** allow for installation adjustment when the floor is not level.
4. **Factory prepared** for field installed silencers.
5. **Factory applied baked on rust inhibiting primer** in accordance with ANSI A250.10-2011.

### Specification compliance

1. Overall frame construction for the Steelcraft F Series flush frames meets the requirements of ANSI A250.8-2014 (SDI 100).
2. Hardware preparations and reinforcements are in accordance with ANSI A250.8-2014 (SDI 100). Locations are in accordance with ANSI/DHI A115.

### Fire ratings

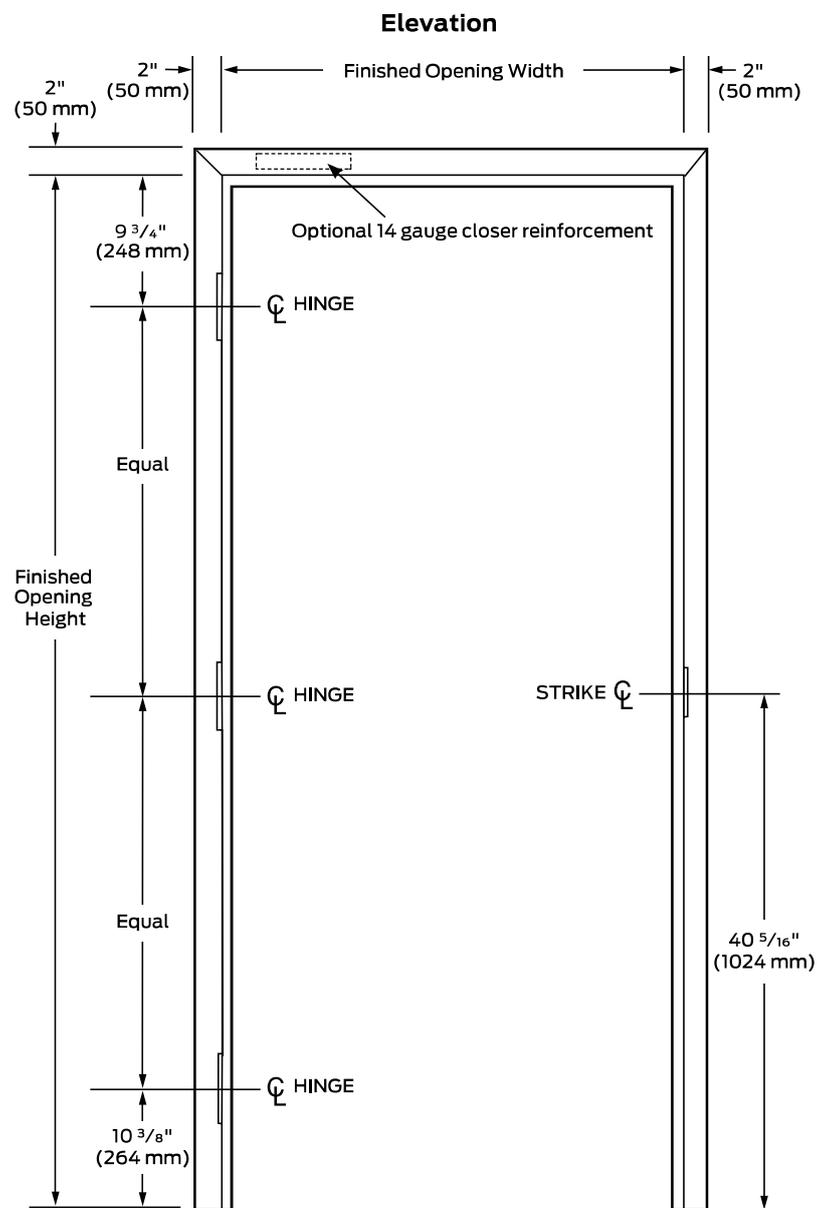
The F Series flush frames meet the broadest fire rating requirements. They are listed for installations requiring compliance to both neutral pressure testing (ASTM E152 and UL 10B) and positive pressure standards (UL 10C). Refer to the **Fire Rated Section** of this manual for particular listings.

### Applications

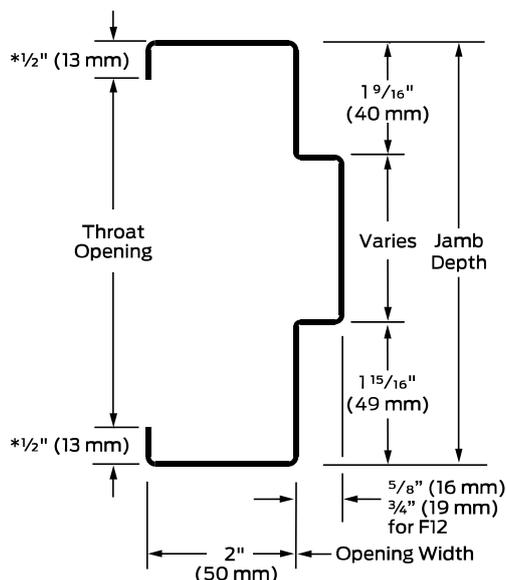
F Series frames are typically installed in wall construction types as defined in the chart below:

Frames - F Series flush

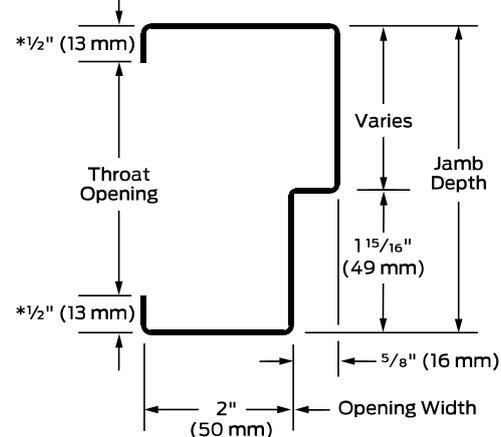
Standard construction



Standard Double Rabbet Frame



Single Rabbet Frame



\* 7/16" (11 mm) on 5 3/4" frame depth

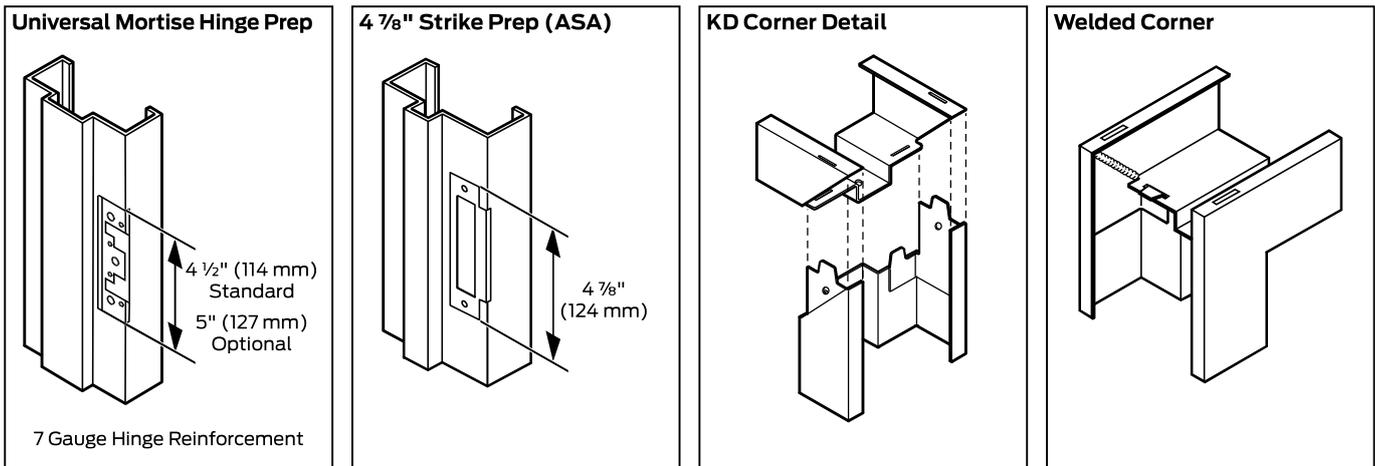
Frame sizing options										
Series	Maximum opening size		Jamb depth availability(profile)				Standard profile dimensions (variations available)			Corners
	Single	Pair	Single rabbet		Double rabbet		Face	Stop	Return	Standard
			Min.	Max.	Min.	Max.				
F16	5'0" x 11'0" (1524 mm x 3353 mm)	10'0" x 11'0" (2439 mm x 3353 mm)	3"	20"	4 1/2"	20"	2"	5/8"	1/2"*	DIE MITERED with four (4) concealed tabs interlocking head and jambs
F14			(76 mm)	(508 mm)	(114 mm)	(508 mm)	(50 mm)	(16 mm)	(13 mm)	
F12	4'0" x 8'0" (1 219 mm x 2438 mm)	8'0" x 8'0" (2438 mm x 2438 mm)	N/A	N/A	4 3/4"	14 3/4"	2"	3/4"	1/2"	Square cut for welded corners
					(121 mm)	(375 mm)	(50 mm)	(19 mm)	(13 mm)	

\* Except 5 3/4" (146 mm) depth, which is 7/16" (11 mm)

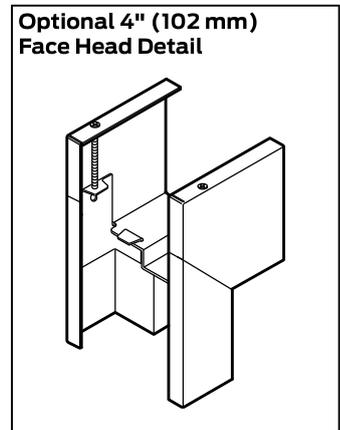
N/A - Not Available

12 gauge standard profile is equal rabbet

## Frames • F Series flush

**General notes**

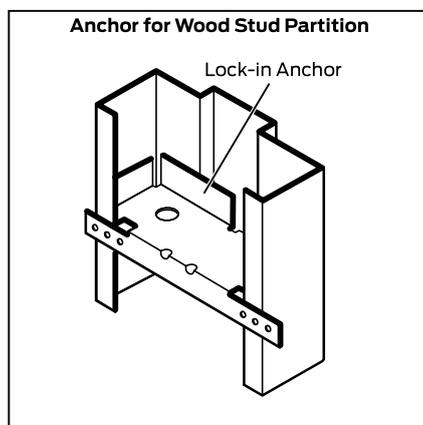
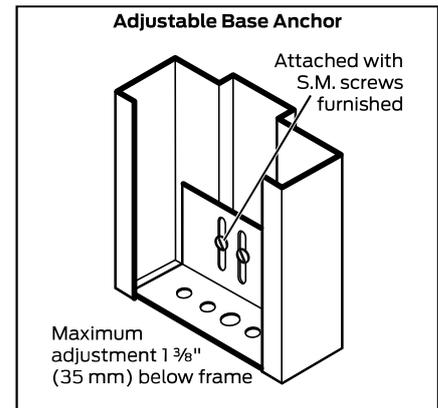
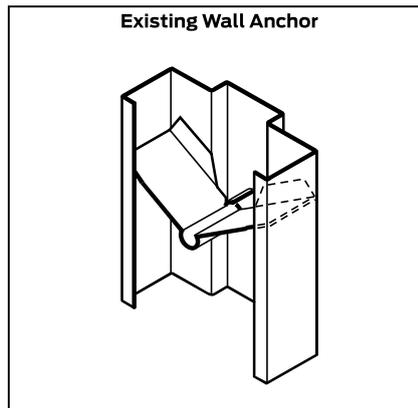
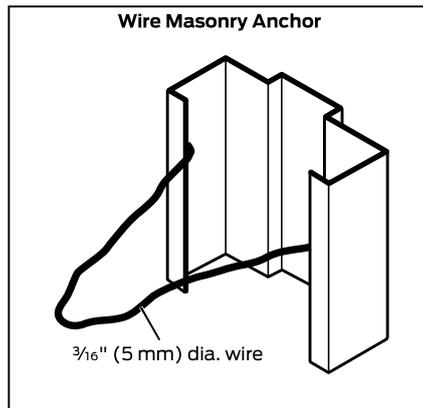
- Variations in jamb depths available in  $\frac{1}{8}$ " (3 mm) increments.
- All F Series frames are supplied standard with masonry wire or lock-in jamb anchors and adjustable base anchors. Anchors are designed for maximum wall/frame engagement and installation flexibility.
- F Series frames are to be installed as part of the wall framing sequence.
- Depending on environmental and usage conditions the steel can be either cold rolled or galvanized. Galvanized steel is recommended for all exterior applications.
- 12 gauge flush frames, F12, are standard equal rabbet profiles with  $\frac{3}{4}$ " stops.
- For KD Corner and optional 4" Head, tabs in rabbeted area should be bent outward, not inward, during assembly (as shown).
- F Series frames with 4" heads are mainly used in masonry applications when 2" face heads do not match course blocking.
- For reinforcement requirements for automatic operators, see "[High frequency hinge reinforcement F and FE Series](#)" on page 73.

**Frame options**

Series	Frame profile		Corner connections				4" (102 mm) heads
			KD (Knock-down)		SUA (Set-up & weld)		
	Single rabbet	Double rabbet	Single rabbet	Double rabbet	Single rabbet	Double rabbet	
F16	Typically for walls less than 3 $\frac{3}{4}$ " (95 mm) thick. Minimum walls thickness 2" (51 mm)	Typically for walls less than 3 $\frac{3}{4}$ " (95 mm) thickness or greater	3 interlocking corner tabs per factory die-miter. See the KD Corner Detail	4 interlocking corner tabs per factory die-miter. See the KD Corner Detail	Available when specified, and in accordance with ANSI A250.8-2014 (SDI 100).		Die-mitered for use with 2" (51 mm) face double rabbet jambs. Available when specified for KD or SUA applications.
F14					Standard Saw Cut and welded, and in accordance with ANSI A250.8-2014 (SDI 100)		
F12	N/A		N/A	N/A			For use with 2" (51 mm) face double rabbet jambs.

N/A - Not Available

## Frames - F Series flush

**Anchoring and installation notes**

- F16 and F14 Series commercial and Institutional frames** are supplied standard with masonry wire or lock-in jamb anchors and adjustable base anchors. Anchors are designed for maximum wall/frame engagement and installation flexibility.
- For anchoring applications, refer to the Frames: Anchoring systems section of this manual.**
- Installation Caution Notice: Grouted frames:**
  - When temperature conditions necessitate an additive to be used in the mortar to prevent freezing, the contractor installing the frames must coat the inside of frames in the field with a corrosion resistant coating per SDI 105.
  - When frames are to be grouted full, silencers must be field installed prior to grouting.
  - Steel frames, including fire rated frames, do not require grouting. Grouting is not recommended for frames in drywall.
- All fire rated frames must be installed in accordance with NFPA Pamphlet 80 and the Authority Having Jurisdiction.

Framing applications							
Series	Steel type	Building type	Opening	Usage frequency <sup>1</sup>	KD Corner <sup>4</sup>	SUA Corner <sup>5</sup>	Applications
F16	Non-Galvannealed <sup>2</sup>	Institutional and Commercial	Interior	Heavy to extra heavy duty	✓	✓	Typical building conditions
	Galvannealed <sup>3</sup>		Mainly Exterior				High humidity and/or weather exposure
F14	Non-Galvannealed <sup>2</sup>	Institutional and Commercial	Interior	Extra heavy to maximum duty	✓	✓	Typical building conditions
	Galvannealed <sup>3</sup>		Mainly Exterior				High humidity and/or weather exposure
F12	Galvannealed <sup>3</sup>	Institutional and Commercial	Interior and exterior	Maximum duty	N/A	✓	Maximum traffic building conditions
							High humidity and/or weather exposure

1 Usage frequency is based on ANSI A250.8-2014 (SDI 100)

2 Commercial quality cold rolled steel

3 Reinforcements for galvannealed frames are also galvannealed

4 Knock-Down for field assembly prior to installation

5 Set-up and Welded for installation as a pre-welded unit