

**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 A250.11-2001 (formerly SDI 105) *Recommended Erection Instructions for Steel Frames and HMMMA 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 Gage [0.053" (1.3mm)] | Wood or Steel Stud | Lock-in Stud Anchor   |
|         |                          | Masonry            | Wire Masonry          |
|         |                          | Existing Masonry   | Bolted Through Soffit |
| F14     | 14 Gage [0.067" (1.7mm)] | Wood or Steel Stud | Lock-in Stud Anchor   |
|         |                          | Masonry            | Wire Masonry          |
|         |                          | Existing Masonry   | Bolted Through Soffit |
| F12     | 12 Gage [0.093" (2.3mm)] | Wood or Steel Stud | Welded Stud Anchors   |
|         |                          | Masonry            | Wire Masonry          |
|         |                          | 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" (3.3mm) thick hinges to heavy weight .180" (4.7mm) 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 A250.10-1998 (R2004).

**SPECIFICATION COMPLIANCE:**

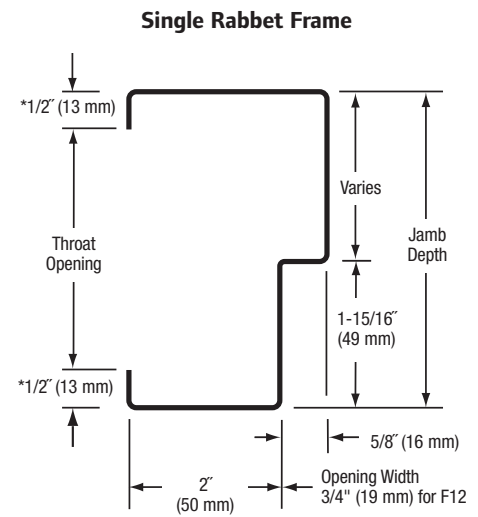
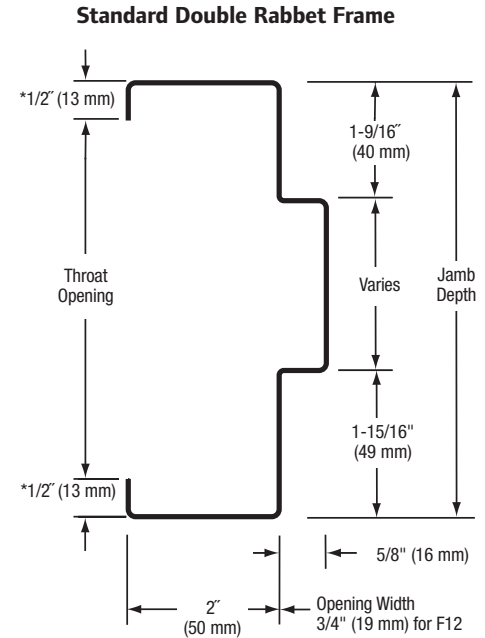
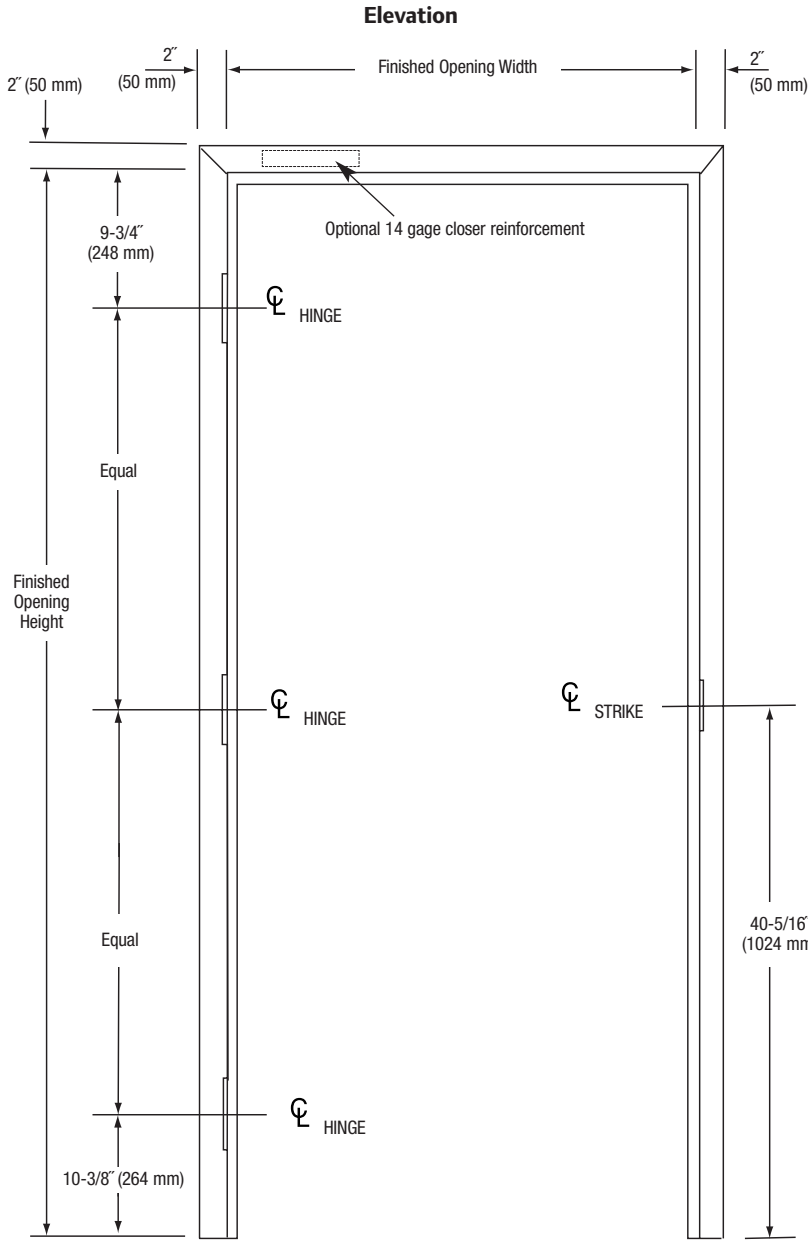
1. Overall frame construction for the Steelcraft F-Series Flush Frames meets the requirements of ANSI A250.8-2003 (commonly referred to as SDI-100).
2. Hardware preparations and reinforcements are in accordance with ANSI A250.6-2003. Locations are in accordance with ANSI/DHI A115 .

**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 (UBC 7-2 and 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:

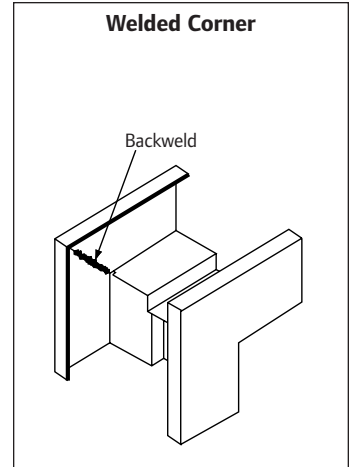
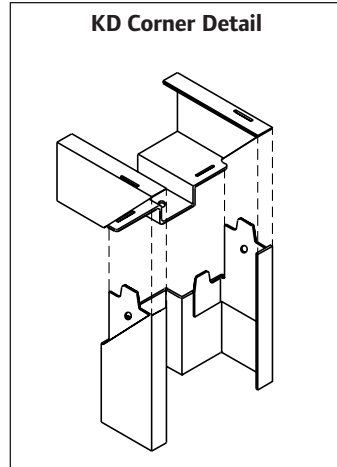
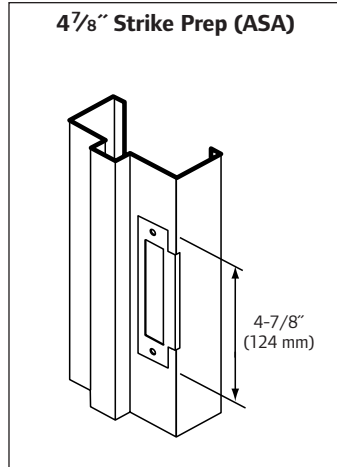
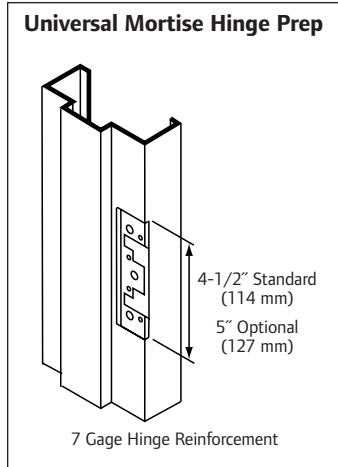


\* 7/16" (11mm) on 5-3/4" frame depth

### FRAME SIZING OPTIONS

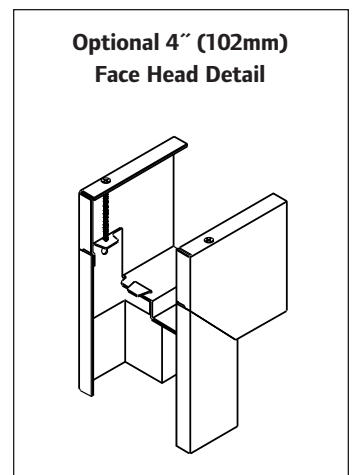
| SERIES | MAXIMUM OPENING SIZE                |                                      | JAMB DEPTH AVAILABILITY<br>(profile) |                |                   |                    | STANDARD PROFILE DIMENSIONS<br>(Variations Available) |                |                 | CORNERS  |
|--------|-------------------------------------|--------------------------------------|--------------------------------------|----------------|-------------------|--------------------|---|----------------|-----------------|--|
|        | Single                              | Pair                                 | SINGLE RABBET                        |                | DOUBLE RABBET     |                    | FACE  | STOP           | RETURNS         | STANDARD   |
|        |                                     |                                      | Minimum                              | Maximum        | Minimum           | Maximum            |   |                |                 |  |
| F16    | 5'-0" x 11'-0"<br>(1524mm x 3353mm) | 10'-0" x 11'-0"<br>(2439mm x 3353mm) | 3"<br>(76mm)                         | 20"<br>(508mm) | 4-3/4"<br>(121mm) | 20"<br>(508mm)     | 2"<br>(50mm)  | 5/8"<br>(16mm) | 1/2"*<br>(13mm) | DIE MITERED<br>with four (4)<br>concealed tabs<br>interlocking head<br>and jamba |
| F14    |                                     |                                      |                                      |                |                   |                    |   |                |                 |  |
| F12    | 4'-0" x 8'-0"<br>(1524mm x 3353mm)  | 8'-0" x 8'-0"<br>(2439mm x 3353mm)   | N/A<br>(76mm)                        | N/A<br>(508mm) | 4-3/4"<br>(121mm) | 14-3/4"<br>(375mm) | 2"<br>(50mm)  | 3/4"<br>(19mm) | 1/2"<br>(13mm)  | Square cut for<br>welded corners   |

\*except 5-3/4" (146mm) depth, which is 7/16" (11mm) N/A - Not Available



**GENERAL NOTES:**

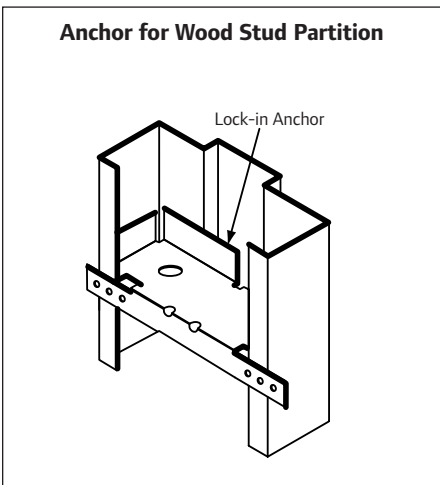
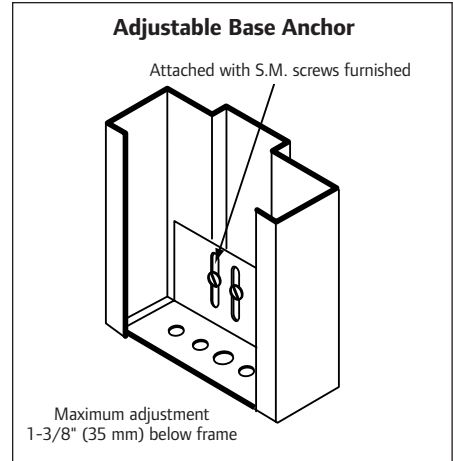
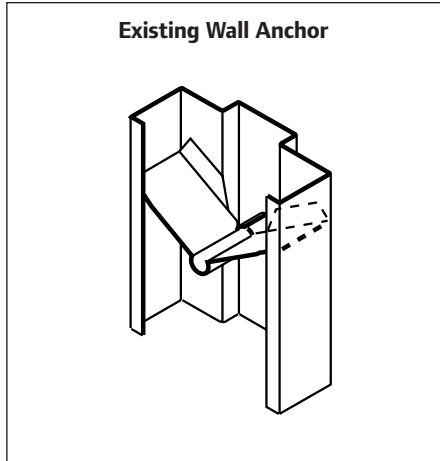
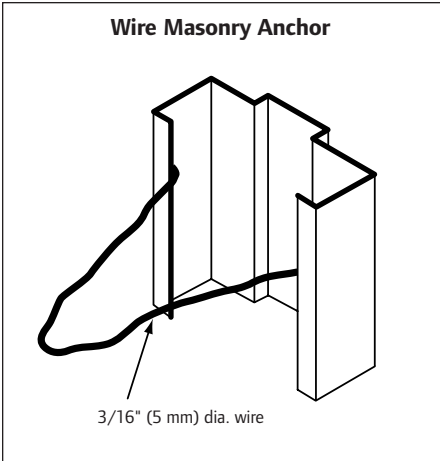
1. Variations in jamb depths available in 1/8" (3mm) increments.
2. All F Series frames are supplied standard with masonry wire or lock-in jamb anchors and adjustable base anchors. Anchors are designed for maximum wall/frame engagement and installation flexibility.
3. F Series Frames are to be installed as part of the wall framing sequence.
4. Depending on environmental and usage conditions the steel can be either cold rolled or galvanized. Galvanized steel is recommended for all exterior applications.



**FRAME OPTIONS**

| SERIES | FRAME PROFILE  |  | CORNER CONNECTIONS   |  |  |  | 4" (102mm) 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 3-3/4" (95mm) thick. Minimum walls thickness 2" (51mm) | Typically for walls 3-3/4" (95mm) 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 A250.8-2003 (SDI 100).   |  | Die-mitered for use with 2" (51mm) face double rabbet jambs. Available when specified for KD or SUA applications. |
| F14    |  |  |  |  | Standard Saw Cut and welded, and in accordance with ANSI A250.8-2003 (SDI 100) |  |   |
| F12    | N/A  |  | N/A  | N/A  | N/A  | For use with 2" (51mm) face double rabbet jambs. |   |

N/A = Not Available



### Anchoring and Installation Notes:

1. **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.
2. **For anchoring applications, refer to section 2.4 of this manual.**
3. **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.
4. 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 <sup>4</sup> Corner | SUA <sup>5</sup> Corner | Applications                          |
|------------|-------------------------------|------------------------------|-----------------------|------------------------------|------------------------|-------------------------|---------------------------------------|
| <b>F16</b> | 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 |
| <b>F14</b> | 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 |
| <b>F12</b> | Galvannealed                  | Institutional and Commercial | Interior and Exterior | Maximum Duty                 | N/A                    | ✓                       | Maximum Traffic Building Conditions   |
|            |                               |                              |                       |                              |                        |                         | High Humidity and/or Weather Exposure |

<sup>1</sup> Usage frequency is based on ANSI A250.8-2003

<sup>2</sup> Commercial quality cold rolled steel

<sup>3</sup> Reinforcements for galvannealed frames are also galvannealed

<sup>4</sup> Knock-Down for field assembly prior to installation

<sup>5</sup> Set-up and Welded for installation as a pre-welded unit