DE Series double egress

About the product

The DE Series double egress frames meet all the design parameters of conventional double egress frames and is specified when cross corridor openings have the additional requirements of maximized clear opening width. The unique design of the DE Series Frame **allows for the use of swing clear hinges.** This must be considered if your local building code has a minimum clear opening width requirement, typically 44".

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. The Authority Having Jurisdiction is the final authority in issues related to the installation and use of installed Fire Rated Doors.

Features and benefits

Steelcraft DE Series double egress frames offer the following unique features, which enhance long term functionality and durability:

1. **Die-mitered corner connection** insures tight fit and assembly. Frame must be welded by prior to installation.
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. **Factory prepared** for field installed silencers.
4. **Factory applied baked-on rust inhibiting primer** in accordance with ANSI A250.10-2011.
5. **Unique design to meet clear width corridor applications.**

Specification compliance

1. Overall frame construction for the Steelcraft DE16 and DE14 Series double egress frames meet and exceed the requirements of ANSI A250.8-2014 (SDI 100).
2. Hardware preparations and reinforcements are in accordance with ANSI A250.6. Locations are in accordance with ANSI/DHI A115 unless otherwise stated.

Fire ratings

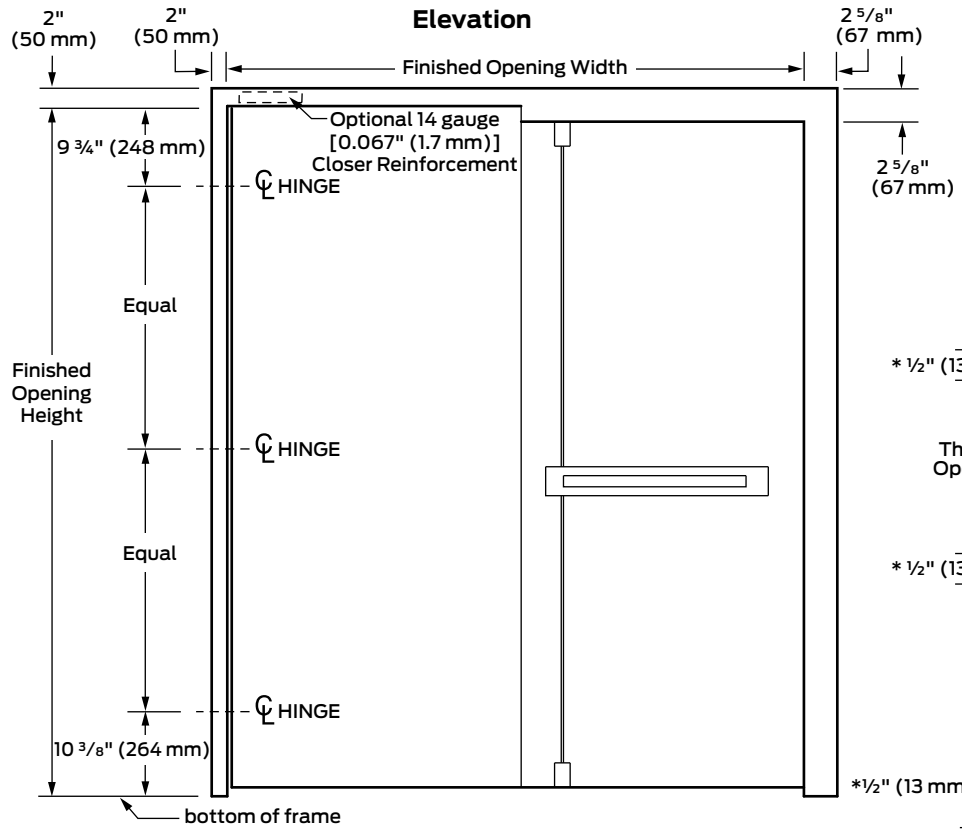
The DE Series double egress frames meet the broadest fire rating requirements. They are listed for installations requiring compliance to both neutral pressure testing (ASTM E152 and UL 10B) and positive pressure standards (UL 10C). Refer to the **Fire Rated Section** of this manual for particular listings.

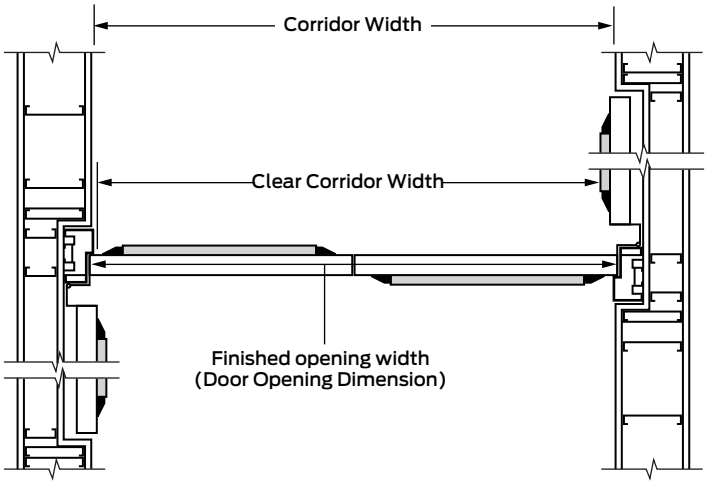
Applications

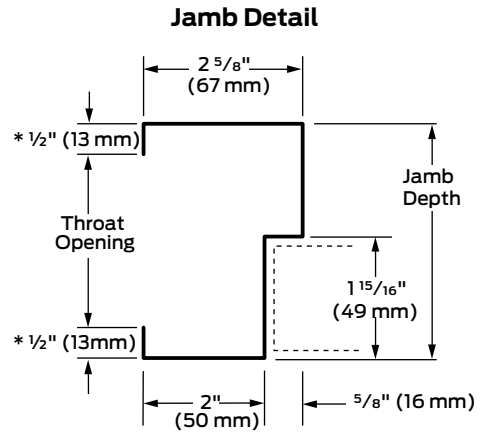
DE Series double egress frames are typically Installed in wall construction types as defined in the chart below:

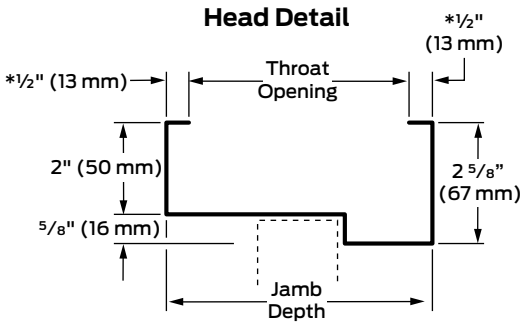
Frame applications

Profile	Steel thickness	Wall construction	Typical wall anchors
DE16	16 Gauge [0.053" (1.3 mm)]	Wood or steel stud	Weld-in stud anchor
DE16	16 Gauge [0.053" (1.3 mm)]	Masonry	Wire masonry
DE16	16 Gauge [0.053" (1.3 mm)]	Existing masonry	Bolted through door rabbet
DE14	14 Gauge [0.067" (1.7 mm)]	Wood or steel stud	Weld-in stud anchor
DE14	14 Gauge [0.067" (1.7 mm)]	Masonry	Wire masonry
DE14	14 Gauge [0.067" (1.7 mm)]	Existing masonry	Bolted through door rabbet









* 7/16" (11 mm) on 5 ¾" frame depth

Finished opening width (Door Opening Dimension) is the dimension from frame door rabbet to the opposite rabbet.

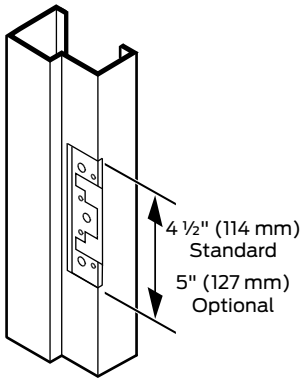
Note: For FE and DE Series double egress frames is ⅛" (3.2 mm) undersized from the standard nominal opening width. Example: 6'0" (1829 mm) head = 71 ⅞" net width in lieu of the standard 72".

Frame sizing options

Series	Maximum opening size	Jamb depth availability(profile)		Standard profile dimensions (variations available)			Corners
	Pair	2 step jambs x 2 step heads		Face	Stop	Returns	Standard
		Min.	Max.				
DE16	8'0" x 10'0" (2439 mm x 3048 mm)	5 ¾" (146 mm) Labeled or Non-label	14" (356 mm)	2" (50 mm) on narrow side. 2 5/8" (67 mm) on wide side.	5/8" (16 mm)	1/2"* (13 mm)	Must be welded prior to installation
DE14	8'0" x 10'0" (2439 mm x 3048 mm)	5 ¾" (146 mm) Labeled or Non-label	14" (356 mm)	2" (50 mm) on narrow side. 2 5/8" (67 mm) on wide side.	5/8" (16 mm)	1/2"* (13 mm)	Must be welded prior to installation

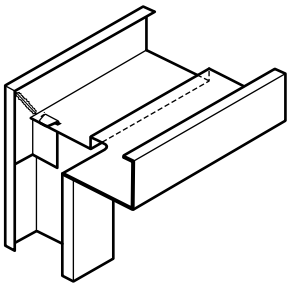
*Except 5 ¾" (146 mm) depth, which is 7/16" (11 mm)

Universal Mortise Hinge Prep



7 Gauge [0.167" (4.2mm)]
Hinge Reinforcement

Welded Corner



General notes

1. Variations in jamb depths available in ⅛" (3 mm) increments.
2. Due to the configuration of narrow hinge jambs mating to wider heads, DE Series frames are supplied set-up and welded only.
3. All DE Series frames are supplied standard with masonry wire and weld-in base anchors. Anchors are designed for maximum wall/frame engagement and installation flexibility. Optional weld-in jamb anchors are available as an add.
4. DE Series frames are to be installed as part of the wall framing sequence.
5. Depending on environmental and usage conditions,the steel can be either cold rolled or galvannealed.
6. Tabs in rabbeted area should be bent outward, not inward, during assembly (as shown).

Note:

Together with the use of Swing-Clear type hinges, the DE Series double egress 2 Step hinge jambs will provide additional cross-corridor width between jambs:

- removes the thickness of the door from the opening, even when at 90º
- changes the Pivot Point of the door
- can increase the clear opening width by 5 ¼" (133 mm)

Frame options

Series	Frame profile	Corner connections		4" (102 mm) Heads
		KD (Knock-down)	SUA (Set-up & weld)	
DE16	Typically for walls 3 ¾" (95 mm) thickness or greater	NOT AVAILABLE FORKD INSTALLATION Die-mitered corners, must be welded by distributor prior to installation	Available from Steelcraft when specified in accordance with ANSI A250.8-2014 (SDI 100)	Available when specified. Must be welded prior to installation
DE14	Typically for walls 3 ¾" (95 mm) thickness or greater	NOT AVAILABLE FORKD INSTALLATION Die-mitered corners, must be welded by distributor prior to installation	Available from Steelcraft when specified in accordance with ANSI A250.8-2014 (SDI 100)	Available when specified. Must be welded prior to installation

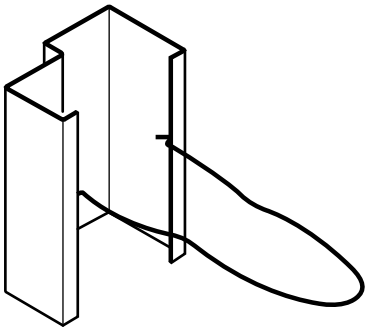
Note:

1. Hinge Jambs for DE Series double egress frames are single rabbet sections and are a smaller jamb depth than the head.
2. The jamb depth of the hinge jambs is shown in the chart below.
3. **ALWAYS ORDER DE Series frames BY THE FRAME DEPTH OF THE HEAD.** Steelcraft will manufacture the jambs as required.

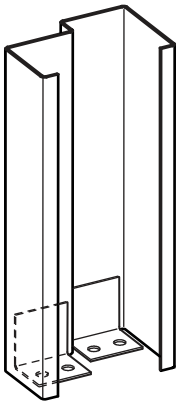
Head		Jamb	
Frame depth	Throat opening	Jamb depth	Throat opening
5 ¾" (146 mm)	4 ⅞" 1 (124 mm1)	3 27/32" (98 mm)	2 31/32" (75 mm)
6 ¾" (171 mm)	5 ¾" (146 mm)	4 11/32" (110 mm)	3 11/32" (85 mm)
7 ¾" (197 mm)	6 ¾" (171 mm)	4 27/32" (123 mm)	3 27/32" (98 mm)
8 ¾" (222 mm)	7 ¾" (197 mm)	5 11/32" (136 mm)	4 11/32" (110 mm)

15 ¾" (146 mm) jamb depth frame has 7/16" (11 mm) backbends. All others have ½" (13 mm) backbends.

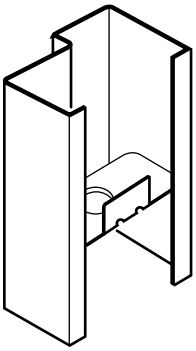
Wire Masonry Anchor



Fixed Base



Fixed Base



Anchoring and installation notes

1. **DE Series double egress frames** are supplied standard with masonry wire and fixed base anchors. Anchors are designed for maximum wall/frame engagement and installation flexibility. Optional weld-in jamb anchors are available as an add.
2. **For anchoring applications, refer to the Frames: Anchoring systems section 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. **Special frame anchorage:** Frame anchor details shown on this sheet are applicable To Formatuble Egress frames with 2" (50 mm) faces. Anchor details will vary with frame profile changes.
5. Installation shall conform to the published Steelcraft installation instructions, SDI 105 Recommended Installation Instructions for Steel Frames.
6. 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	Usage frequency [1]	KD Corner [4]	SUA Corner [4]	Applications
DE16	Non-Galvannealed [2]	Institutional and Commercial	Heavy to extra heavy duty	N/A	✓	Typical building conditions
	Galvannealed [3]					High humidity and/or weather exposure
DE14	Non-Galvannealed [2]	Institutional and Commercial	Extra heavy to maximum duty	N/A	✓	Typical building conditions
	Galvannealed [3]					High humidity and/or weather exposure

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

2 Commercial quality carbon steel

3 Reinforcements for galvannealed frames are also galvannealed

4 Knock-Down for field assembly prior to installation

N/A = Not available