

Fast Strut™

Curtain Wall/Bypass

Commonly used for large standoff conditions.

The ClarkDietrich Fast Strut™ curtain wall connector employs the FastClip™ technology for curtain wall stud attachment and is commonly used when large standoff conditions exist. Fast Strut products are available in standard lengths of 12-1/4" and 15-1/4" and custom lengths of 18", 20", 22" and 24" long to allow framing attachment well beyond the perimeter of the structural steel—or when the spandrel beams are set back from the edge of the structure. Fast Struts are attached to the underside of structural members with screws, welds or powder-actuated fasteners. Studs are plumbed and secured with propriety screws for friction-free deflection. FS12 and FS15 are embossed with fastening patterns to ensure accurate placement of fasteners.

INSTALLATION

Connections to the building can be made with screws, powder-actuated fasteners, drill-in concrete anchors or welding. Mechanical fasteners shall be equally spaced along the scored line of the 1-1/2" flange. The Fast Strut must engage the building structure a minimum of 4". When using the tabulated allowable loads indicated in the table on the opposite page, connections to the building structure must be made according to the notes. Three Proprietary Deflection Screws are used to attach the Fast Strut to the cold-formed steel framing. Screws shall be driven through the slotted holes and positioned to allow for the appropriate building deflection.

MATERIAL SPECIFICATIONS

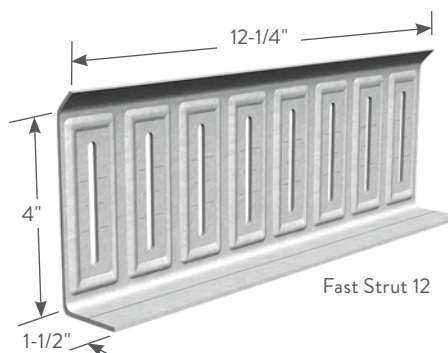
- Gauge:** 14 gauge (68mils)
- Design Thickness:** 0.0713 inches
- Coating:** G90
- Yield Strength:** 50ksi
- ASTM:** A653/A653M

PRODUCT DIMENSIONS

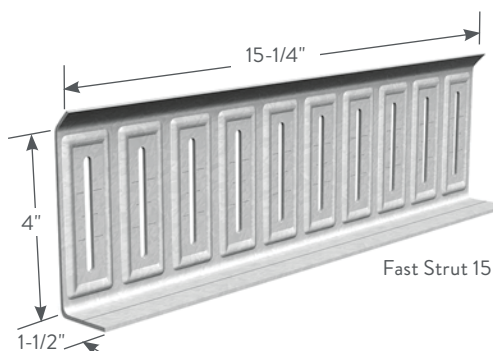
- FS12:** 4" x 1-1/2" x 12-1/4"
- FS15:** 4" x 1-1/2" x 15-1/4"
- Extended Lengths:** 4" x 1-1/2" x 18", 20", 22" and 24"

ALTERNATIVE PRODUCTS

FastClip™ Slide Clip



Fast Strut 12



Fast Strut 15

Fast Strut™ (FS12, FS15, FS18, FS20, FS22, FS24)

Product code	Thickness		Size (in)	Packaging Pcs./Carton
	Mils (Gauge)	Design thickness (in)		
FS12	68mils (14ga)	0.0713	4 x 1-1/2 x 12-1/4	10
FS15	68mils (14ga)	0.0713	4 x 1-1/2 x 15-1/4	10
FS18	68mils (14ga)	0.0713	4 x 1-1/2 x 18	10
FS20	68mils (14ga)	0.0713	4 x 1-1/2 x 20	10
FS22	68mils (14ga)	0.0713	4 x 1-1/2 x 22	10
FS24	68mils (14ga)	0.0713	4 x 1-1/2 x 24	10
Custom lengths	68mils (14ga)	0.0713	per customer specs	10



Proprietary Deflection Screw

Includes 55 deflection screws per carton.

U.S. Patent No. 6,688,069

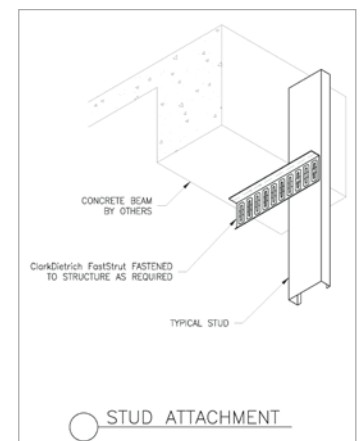
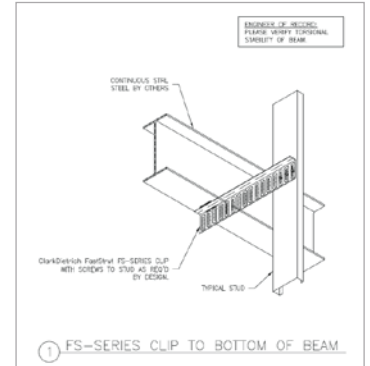
Fast Strut™ FS12, FS15 and FS24 Allowable Loads (lbs)

Stud thickness	Yield strength	Slip allowance (in)	Welded direct to structural steel	Mechanically Anchored				
				Number of anchors	PAF in steel (FS=5)	PAF in steel (FS=10)	Buildex #12-24 screws in steel	Hilti 1/4"x 1-3/4" Kwik-Cons in concrete
33mils (20ga)	33ksi	0.75	546	2	546	290	546	269
			546	3	546	343	546	—
		1.25	546	2	513	257	546	232
			546	3	546	294	546	—
43mils (18ga)	33ksi	0.75	1522	2	579	290	789	269
			1522	3	686	343	963	—
		1.25	1522	2	513	257	720	232
			1522	3	587	294	760	—
54mils (16ga)	33ksi	0.75	1612	2	579	290	789	269
			1612	3	686	343	963	—
		1.25	1612	2	513	257	720	232
			1612	3	587	294	760	—
54mils (16ga)	50ksi	0.75	1705	2	579	290	789	269
			1705	3	686	343	963	—
		1.25	1705	2	513	257	720	232
			1705	3	587	294	760	—
68mils (14ga)	33ksi	0.75	1792	2	579	290	789	269
			1792	3	686	343	963	—
		1.25	1792	2	513	257	720	232
			1792	3	587	294	760	—
68mils (14ga)	50ksi	0.75	1978	2	579	290	789	269
			1978	3	686	343	963	—
		1.25	1978	2	513	257	720	232
			1978	3	587	294	760	—
97mils (12ga)	33ksi	0.75	2481	2	579	290	789	269
			2481	3	686	343	963	—
		1.25	2481	2	513	257	720	232
			2481	3	587	294	760	—
97mils (12ga)	50ksi	0.75	2997	2	579	290	789	269
			2997	3	686	343	963	—
		1.25	2997	2	513	257	720	232
			2997	3	587	294	760	—

Notes:

- 1 Except when welding, tabulated values require a minimum of 4" of structure engagement. For other conditions or technical assistance, contact ClarkDietrich at 888-437-3244.
- 2 The tabulated values for welds are based on the following weld lengths: use 4-1/2" of weld along each edge of the 1-1/2" FastStrut leg for 20, and 18 gauge, use 5-1/2" along each edge for 16 and 14 gauge, use 6-1/2" along each edge for 12 gauge. Use E70XX (min.) electrodes. (Note that the welded values may require more than 4" of structure engagement.)
- 3 Tabulated values for PAFs and Buildex screws are based on the following: fasteners are spaced at 3" o.c. (min.) when using two anchors, and 1-1/2" o.c. (min.) when using three anchors; anchors are placed 1/2" (min.) away from the edge of the building structure, and 1/2" (min.) away from edge of the Fast Strut.
- 4 Tabulated values for Hilti Kwik-Cons are based on the following: anchors are spaced at 2-3/4" o.c. (min.), anchors are placed 3/4" (min.) away from edge of building structure and 1/2" (min.) away from edge of Fast Strut. The tabulated values are based on 3000psi normal weight concrete.
- 5 For 3/4" deflection, center the propriety screws along the topmost hash mark. For 1-1/4" deflection, center the screws along the center hash mark.
- 6 Capacities listed for PAFs are based on minimum PAF requirements listed in General Note #6 on page 9.
- 7 It is the responsibility of the design professional to detail the project drawings for proper clip attachment.
- 8 Buildex is a registered trademark of Illinois Tool Works, Inc.
- 9 Hilti is a registered trademark of Hilti Aktiengesellschaft Corporation.

TYPICAL CONSTRUCTION DETAILS



Visit our CAD Library at clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.