



Re: Simpson Strong-Tie® MFCB Bypass Framing Fixed-Clip Connector

The New MFCB Bypass Framing Fixed-Clip Connector is part of the FCB Bypass Framing Fixed-Clip Connector product line. The MFCB connector is made of 68 mil (14 ga.) steel thickness that provides a higher capacity for the use of cold-formed steel (CFS) curtain wall framings and other variety applications. The connectors are tested and rated for tension, compression, shear and in-plane loads. Refer to the following tables for allowable connector loads, allowable anchorage loads, connector dimensions and anchorage options.

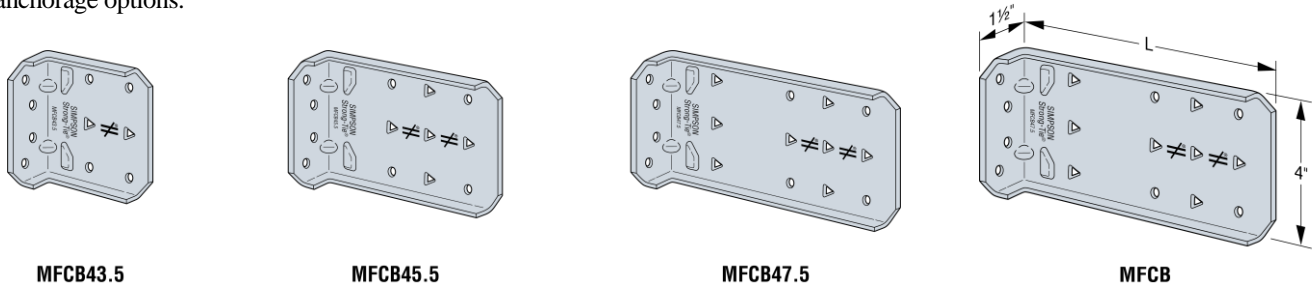
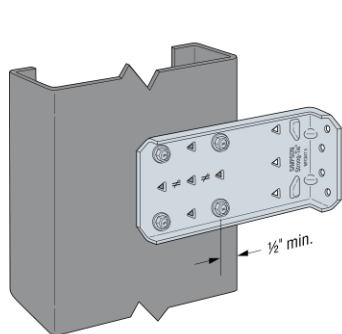


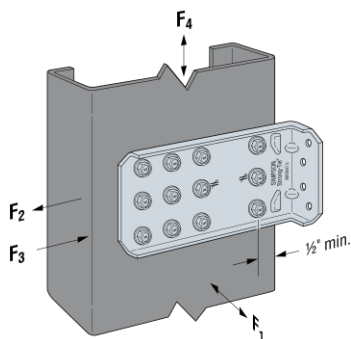
Table 1 – MFCB Allowable Connector Loads (lb.)

Model No.	Connector Material Thickness mil (ga.)	L (in.)	Min./Max.	No. of #12-14 Self-Drilling Screws	Stud Thickness											
					33 mil (20 ga.)				43 mil (18 ga.)				54 mil (16 ga.)			
					F1	F2	F3	F4	F1	F2	F3	F4	F1	F2	F3	F4
MFCB43.5	68 (14)	3½	Min.	4	170	755	755	755	220	1,105	1,120	1,120	410	1,530	2,630	1,595
			Max.	6	205	1,130	1,130	1,130	265	1,265	1,385	1,545	410	1,605	2,630	1,770
MFCB45.5	68 (14)	5½	Min.	4	170	755	755	755	220	1,105	1,120	1,030	410	1,530	2,630	1,595
			Max.	9	205	1,265	1,260	1,780	265	1,265	1,385	2,315	410	1,605	3,205	2,025
MFCB47.5	68 (14)	7½	Min.	4	170	755	755	755	220	1,105	1,120	870	410	1,580	2,630	1,015
			Max.	12	205	1,265	1,350	1,780	265	1,265	1,760	2,315	410	1,605	3,350	2,700

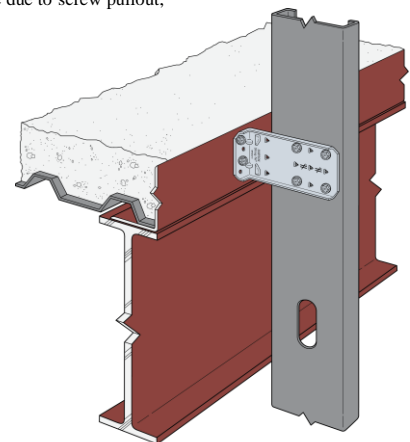
1. Min. fastener quantity and load values — fill all round holes; Max. fastener quantity and load values — fill all round and triangular holes.
2. Allowable loads are based on clip capacity only and do not consider anchorage. The capacity of the connection system will be the minimum of the tabulated value in Table 1 and MFCB Allowable Anchorage Loads in Table 2.
3. Tabulated values for 54 mil (16 ga.) CFS framing may be used for 68 mil (14 ga.) and greater steel thickness.
4. Anchorage to the supporting structure may be determined using tabulated capacities per Table 2, specified welds or a minimum of (2) fasteners are required.
5. Tabulated F1 loads are based on assembly tests with the load through the centerline of stud. Tested failure modes were due to screw pullout; therefore compare F1 against Fp calculated per ASCE 7-10 Chapter 13 with ap = 1.25 and Rp = 1.0.
6. For additional important information, see General Information and Notes on C-CF-2020 catalog on p. 22.



MFCB Installation with Min. Fasteners



MFCB Installation with Max. Fasteners

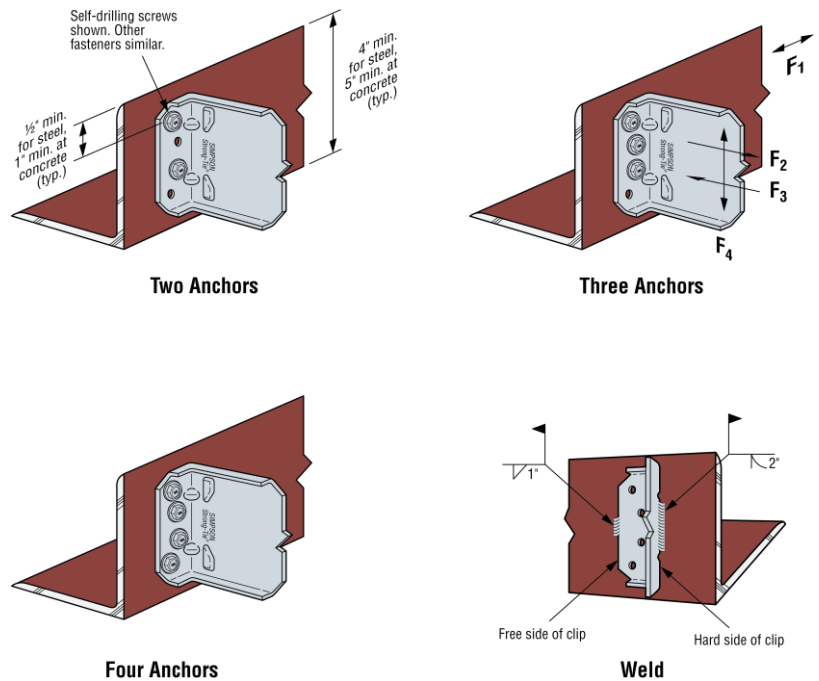


Typical MFCB Installation at Bypass Framing

Table 2 – MFCB Allowable Anchorage Loads (lb.)

Anchorage Type	Minimum Base Material	No. of Anchors	Allowable Loads					
			F1	F2 and F3	F4			
					MFCB43.5	MFCB45.5	MFCB47.5	
					Min./Max.	Min./Max.	Min.	Max.
#12–24 self-drilling screws Simpson Strong-Tie® X and XL Metal screws	A36 steel 3/16" thick	2	205	1,150	1,220	1,015	510	1,350
		3	310	1,725	1,830	1,520	760	2,025
		4	410	2,300	2,440	2,025	1,015	2,700
Simpson Strong-Tie 0.157" x 5/8" power-actuated fasteners PDPAT-62KP	A36 steel 3/16" thick	2	—	390	410	265	165	290
		3	—	715	465	305	190	330
		4	—	970	840	550	340	595
Simpson Strong-Tie 0.157" x 5/8" power-actuated fasteners PDPAT-62KP	A572 or A992 steel 3/16" thick	2	—	585	410	265	165	290
		3	—	800	465	305	190	330
		4	—	1,170	840	550	340	595
Simpson Strong-Tie ¼" x 1¼" Titen Turbo TNT25134H	Concrete f'c = 2,500 psi	2	—	380	415	315	195	315
		3	—	525	470	470	290	470
		4	—	675	645	630	390	630
Weld E70XX electrodes	A36 steel 3/16" thick	Hard side: 2"	795	2,275	2,315	2,315	1,015	2,315
		Free side: 1"						

1. Min. fastener quantity and load values — fill all round holes; Max. fastener quantity and load values — fill all round and triangular holes.
2. For additional important information, see General Information and Notes on C-CF-2020 catalog on p. 22.
3. Allowable loads are for clip anchorage only. The capacity of the connection system will be the minimum of the tabulated values and the MFCB Allowable Connector Loads in Table 1.
4. Allowable loads for #12–24 self-drilling screws and PDPAT powder-actuated fasteners are based on installation in minimum 3/16"-thick structural steel with $F_y = 36$ ksi. PDPAT values are also provided for A572 steel. Values listed above maybe used where other thicknesses of steel are encountered or other manufacturers are used, provided that the fastener has equal or better tested values (see p. 22 of C-CF-2020 catalog). It is the responsibility of the designer to select the proper length fasteners based on the steel thickness installation.
5. For screw fastener installation into steel backed by concrete, predrilling of both the steel and the concrete is suggested. For predrilling use a maximum 3/16" diameter drill bit.



MFCB Anchor Layout

The information in this letter is valid until **12/31/2022** when it will be reevaluated by Simpson Strong-Tie. Please reference the Cold-Formed Steel catalog at strongtie.com for additional pertinent information. If you have questions or need further assistance regarding this matter, please contact the Simpson Strong-Tie Engineering Department at 800-999-5099.

Sincerely,

SIMPSON STRONG-TIE COMPANY INC.