Column Caps

Column-to-beam connections often have multiple beams framing on top of a column. L, T, and cross-column caps provide design solutions for this application.

Material: 7 gauge or 3 gauge depending on size

Finish: Simpson Strong-Tie gray paint, also available in HDG

Installation:

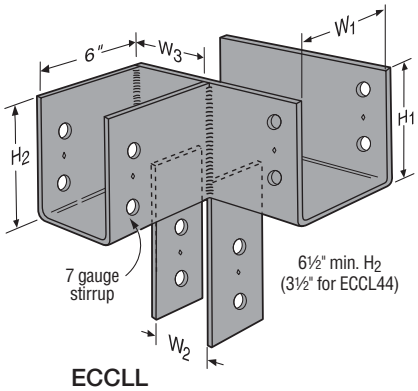
- Use all specified fasteners; see General Notes
- Bolt holes shall be a minimum of 1/32" to a maximum of 1/16" larger than bolt diameter (per 2015 and 2018 NDS 12.1.3.2)

Options:

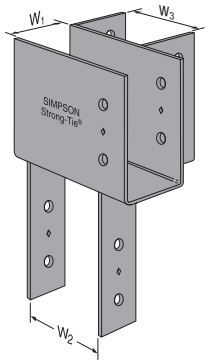
- Many combinations of beam and post sizes can be manufactured. Refer to worksheet T-C-CCLTC-WS at **strongtie.com**.
- The download shall be determined from the allowable loads for the unmodified product (see p. 91). The side beam can take a maximum of 40% of the download and shall not exceed 10,665 lb. The sum of the loads for the side beam(s) and main beam can not exceed the table load.
- Uplift loads do not apply for ECCL caps. For CCC and CCT, uplift loads from table apply for main beam only.
- The column width in the direction of the main beam width must be the same as the main beam width (W_1).
- Specify the stirrup height from the top of the cap. The minimum side stirrup heights (H_2 or H_3) is 6½" (3½" for 44s).
- The L dimension may vary depending on the width of the side stirrup (W_3 or W_4).
- See p. 91 for other dimensions.
- Column caps may be ordered without the column straps for field welding to a steel column. Specify "No Straps" when ordering. Weld by designer. Full loads apply for the beam and the post cap.

Ordering Examples:

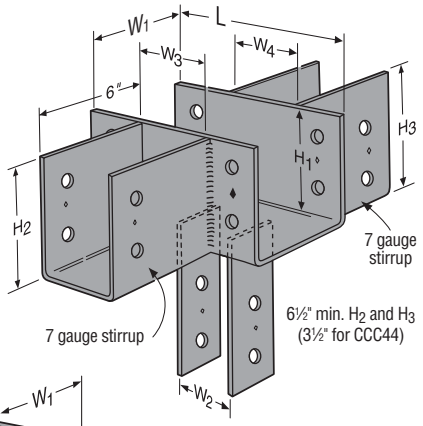
- A CCC66 with W_3 = 5½", H_2 and H_3 = 6½" is a CC66 column cap with 5½" beams on each side with all beam seats flush.
- An ECCLR66 with W_3 = 3⅝", H_2 = 7½" is an ECC66 end column cap with a 4x beam on the right side (specify direction left or right for stirrup) and stirrup seat 1" below the cap seat.



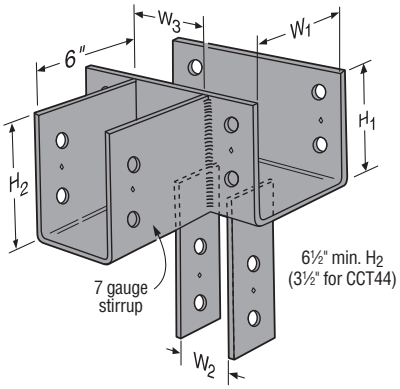
ECCLL
(left direction shown)
Order ECCLR for right direction.



ECCLR
(right direction shown)



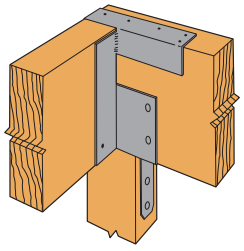
CCC



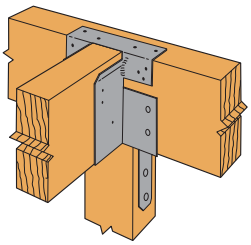
CCT

Specify post-to-beam connections

There are cost-effective alternatives for replacing column caps by using a combination of connectors. Designer must specify the options required. For column cap clearance, allow 3" for the hanger flange depth.



ECC and HWP
(top flange offset right)



CC and HWP

Ordering Multiple-Beam Column Caps

Ordering column caps incorporates several key steps that are important to ensure the highest allowable-load solution for your project.
For more information, refer to worksheet T-C-CCLTC-WS for bolted connections and worksheet T-C-CCQLTC-WS for Quick Install connections.
See p. 2 of these worksheets for model numbers for common post and beam width combinations.
These worksheets are available at **strongtie.com**.

CC/ECC/ECCU

Column Caps (cont.)

These products are available with additional corrosion protection. For more information, see p. 14.

SS For stainless-steel fasteners, see p. 21.

Model No.	Beam Width (in.)	Dimensions (in.)						Bolts					Allowable Loads (DF/SP)					Code Ref.	CCO/ECCO Model No. (No Legs)
		W_1	W_2	L			H_1	Size	Beam			Post	CC		ECC	ECCU			
				CC	ECC	ECCU			CC	ECC	ECCU		Uplift (160)	Down (100)	Down (100)	Uplift (160)	Down (100)		
SS	CC3 1/4-4	3⅛	3¼	3⅝	11	7½	9½	6½	⅝	4	2	4	2	3,150	16,980	6,835	3,150	6,835	IBC, FL, LA	CCO3 1/4 ECCO3 1/4
	CC3 1/4-6	3⅛	3¼	5½	11	7½	9½	6½	⅝	4	2	4	2	3,150	21,485	10,740	3,150	10,740		
SS	CC44	3½	3⅝	3⅝	7	5½	6½	4	⅝	2	1	2	2	1,850	19,020	7,655	1,850	7,655		CCO4 ECCO4
	CC46	3½	3⅝	5½	11	8½	9½	6½	⅝	4	2	4	2	3,530	24,065	12,030	3,530	12,030		CCO4/6 ECCO4/6
	CC48	3½	3⅝	7½	11	8½	9½	6½	⅝	4	2	4	2	3,530	24,065	16,405	3,530	16,405		
	CC4.62-3.62	4½	4⅝	3⅝	11	8½	9½	6½	⅝	4	2	4	2	4,535	23,390	9,845	4,535	9,845		CCO4.62 ECCO4.62
	CC4.62-4.62	4½	4⅝	4⅝	11	8½	9½	6½	⅝	4	2	4	2	4,535	30,070	12,655	4,535	12,655		
	CC4.62-5.50	4½	4⅝	5½	11	8½	9½	6½	⅝	4	2	4	2	4,535	30,940	15,470	4,535	15,470		
	CC5 1/4-4	5⅛	5¼	3⅝	13	9½	10½	8	¾	4	2	4	2	6,300	26,635	11,210	6,300	11,210		CCO5 1/4 ECCO5 1/4
	CC5 1/4-6	5⅛	5¼	5½	13	9½	10½	8	¾	4	2	4	2	6,500	28,190	17,615	6,500	17,615		
	CC5 1/4-8	5⅛	5¼	7½	13	9½	10½	8	¾	4	2	4	2	6,645	35,235	24,025	6,645	24,025		
	CC64	5¼, 5½	5½	3⅝	11	7½	9½	6½	⅝	4	2	4	2	5,545	28,585	12,030	5,545	12,030		CCO6 ECCO6
SS	CC66	5¼, 5½	5½	5½	11	7½	9½	6½	⅝	4	2	4	2	5,545	30,250	18,905	5,545	18,905		
	CC68	5¼, 5½	5½	7½	11	9½	9½	6½	⅝	4	2	4	2	5,545	37,815	25,780	5,545	25,780		ECCO68
	CC6-7 1/8	5¼, 5½	5½	7⅛	11	9½	9½	6½	⅝	4	2	4	2	5,545	37,815	24,490	5,545	24,490		
	CC74	6¾	6⅞	3⅝	13	10½	10½	8	¾	4	2	4	2	6,330	33,490	15,355	6,330	15,355		CCO7 ECCO7
	CC76	6¾	6⅞	5½	13	10½	10½	8	¾	4	2	4	2	6,790	37,125	24,130	6,790	24,130		
	CC77	6¾	6⅞	6⅞	13	10½	10½	8	¾	4	2	4	2	7,020	48,265	29,615	7,020	29,615		
	CC78	6¾	6⅞	7½	13	10½	10½	8	¾	4	2	4	2	7,145	48,265	32,090	7,145	32,905		
	CC7 1/8-4	7	7⅛	3⅝	13	10½	10½	8	¾	4	2	4	2	6,360	34,730	18,375	6,360	18,375		CCO7 1/8 ECCO7 1/8
	CC7 1/8-6	7	7⅛	5½	13	10½	10½	8	¾	4	2	4	2	6,825	38,500	28,875	6,825	28,875		
	CC7 1/8-7 1/8	7	7⅛	7⅛	13	10½	10½	8	¾	4	2	4	2	7,105	57,750	36,750	7,105	36,750		
	CC7 1/8-8	7	7⅛	7½	13	10½	10½	8	¾	4	2	4	2	7,190	52,500	39,375	7,190	39,375		
	CC84	7½	7½	3⅝	13	10½	10½	8	¾	4	2	4	2	6,410	37,210	16,405	6,410	16,405		CCO8 ECCO8
	CC86	7½	7½	5½	13	10½	10½	8	¾	4	2	4	2	6,885	41,250	25,780	6,885	25,780		
	CC88	7½	7½	7½	13	10½	10½	8	¾	4	2	4	2	7,250	51,565	35,155	7,250	35,155		
	CC94	8¾	8⅞	3⅝	13	10½	10½	8	¾	4	4	4	2	6,580	47,545	19,905	6,580	19,905		CCO9 ECCO9
	CC96	8¾	8⅞	5½	13	10½	10½	8	¾	4	4	4	2	7,080	48,125	31,280	7,080	31,280		
	CC98	8¾	8⅞	7½	13	10½	10½	8	¾	4	4	4	2	7,455	62,565	42,655	7,455	42,655		
	CC106	9¼	9½	5½	13	10½	10½	8	¾	4	4	4	2	7,160	52,250	32,655	7,160	32,655		CCO10 ECCO10

1. Uplift loads have been increased for earthquake or wind loading with no further increase allowed. Reduce where other loads govern.
2. Downloads shall be reduced where limited by allowable loads of the post.
3. CC uplift loads do not apply to splice conditions.
4. Splice conditions with CCs must be detailed by the designer to transfer tension loads between spliced members by means other than the column cap.
5. Column sides are assumed to be aligned in the same vertical plane as the beam sides. CC4.62 models assume a minimum 3½"-wide post.
6. Structural composite lumber columns have sides that show either the wide face or the edges of the lumber strands/veneers known as the narrow face. Values in the tables reflect installation into the wide face. See technical bulletin T-C-SCLCLM at **strongtie.com** for load reductions resulting from narrow-face installations.
7. Beam depth must be at least as tall as H_1.
8. CCO and ECCO welded to a steel column will achieve maximum load listed for the beam and the post cap as CC and ECC. The steel column width shall match the beam width. Weld by designer.
9. All references to bolts are for structural quality through bolts (not lag screws or carriage bolts) equal to or better than ASTM A307, Grade A.