

HCA

Hinge Connectors

Hinge connectors are designed to transfer loads between two beams aligned end-to-end through a combination of bearing plates, side plates and bolts. In addition to supporting vertical loads, hinge connectors can also be specified with additional slotted bolt holes to resist horizontal loads as part of a continuous load path.

Material: Side plates — 7 gauge; top and bottom plates — see PT dimensions in table

Finish: Simpson Strong-Tie gray paint

Installation: • Use all specified fasteners; see General Notes

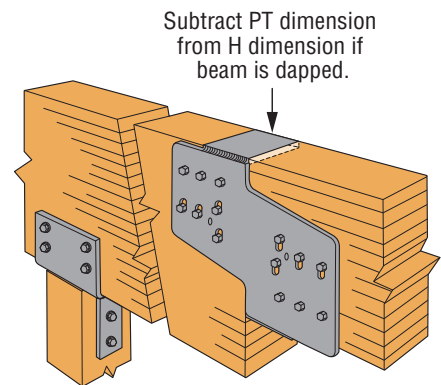
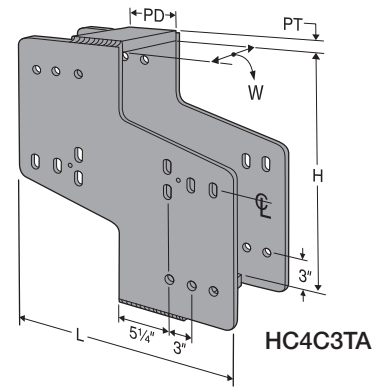
- Bolt holes shall be a minimum of 1/8" and a maximum of 1/16" larger than the bolt diameter (per 2015/2018 NDS 12.1.3.2)
- The model size (suffix) column in the Allowable Download table gives the basic HCA model with two rotation bolts
- Contact Simpson Strong-Tie for heights greater than 60"
- Position 3/4"-diameter bolts in slots away from bearing seat to allow for wood shrinkage
- For retrofit hinge connector strap applications, see strongtie.com.

Options: • The Horizontal Load table gives other bolt options

Ordering: • To order, specify model no., model size, and height H. Add the width (W) and bearing plate size (PD) designation after the model name. Specify the H dimension; example: HC4C3TA5-6 H = 18".

- For dapped beams, reduce the H dimension by the PT dimension for each dap. See strongtie.com/dap.

Codes: See p. 13 for Code Reference Key Chart



HC4C3TA
Top of carrying beam dapped the PT thickness for flush installation

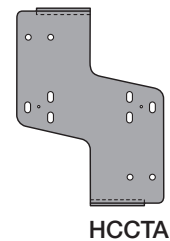
Model No. (Prefix)	Dimensions (in.)			Rotation Bolts per Beam	Slotted Tension Bolts	Allowable Horizontal Loads ^{1,2} (160)
	L	H ³ Min.	H Max.			
HCA	19 1/2	8	60	2	—	—
HCCTA	19 1/2	14	60	2	3	14,850
HC3A	25 1/2	8	60	3	—	—
HC4C3TA	25 1/2	14	60	3	4	19,720

1. Loads have been increased for wind or earthquake loading, with no further increase allowed. Reduce where other loads govern.
2. Horizontal loads are for Douglas fir-larch glulams with minimum W = 3 1/8". For other wood types, adjust the load according to the code.
3. H min. is the absolute minimum height. Reduce downloads according to footnote 1 in the Allowable Roof Download table.

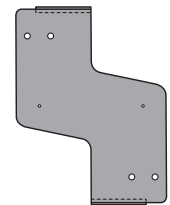
Allowable Roof Download Table

Model Size (Suffix)	Dimensions (in.)				Bolt Dia. (in.)	Two Rotation Bolts per Beam				Three Rotation Bolts per Beam				Code Ref.
	Beam Width	W	PT	PD		H ₁	H ₁ Allowable Roof Loads	Min. H	Min. H Allowable Roof Loads	H ₁	H ₁ Allowable Roof Loads	Min. H	Min. H Allowable Roof Loads	
3-5	3 1/8	3 1/4	3/4	5	3/4	12	8,750	8	3,070	10	8,750	8	4,465	—
3-7	3 1/8	3 1/4	3/4	7	3/4	18	12,250	15	9,240	14	12,250	12	9,235	—
5-5	5 1/8	5 1/4	3/4	5	3/4	16	14,350	8	3,100	13	14,350	8	4,560	—
5-7	5 1/8	5 1/4	3/4	7	3/4	25	20,090	20	14,835	19	20,090	16	15,505	—
5-9	5 1/8	5 1/4	3/4	9	3/4	36	25,830	25	16,365	27	25,830	19	16,030	—
5.62-5	5 1/2	5 5/8	3/4	5	3/4	18	17,190	8	3,100	14	17,190	8	4,640	—
5.62-7	5 1/2	5 5/8	3/4	7	3/4	28	24,065	19	14,495	21	24,065	15	15,020	—
7-5	6 3/4	6 7/8	1	5	3/4	19	18,900	8	3,100	15	18,900	8	4,605	IBC®, LA
7-7	6 3/4	6 7/8	1	7	3/4	30	26,460	24	19,850	22	26,460	18	19,845	IBC®, LA
7-9	6 3/4	6 7/8	1	9	3/4	40	29,615	30	20,905	33	34,020	22	20,190	IBC®, LA
9-5	8 3/4	8 7/8	1 1/4	5	3/4	22	24,500	8	3,100	17	24,500	8	4,605	—
9-7	8 3/4	8 7/8	1 1/4	7	3/4	37	34,300	29	25,455	27	34,300	22	26,145	—
9-9	8 3/4	8 7/8	1 1/4	9	3/4	40	29,615	37	27,000	40	43,975	27	27,160	—
11-5	10 3/4	10 7/8	1 1/2	5	3/4	26	30,100	8	3,100	20	30,100	8	4,605	—
11-7	10 3/4	10 7/8	1 1/2	7	3/4	40	37,925	34	31,230	32	42,140	25	30,815	—
11-9	10 3/4	10 7/8	1 1/2	9	3/4	40	29,615	40	29,615	40	43,975	32	33,630	—
3.62-5	3 1/2	3 5/8	3/4	5	3/4	15	13,125	8	3,100	12	13,125	8	4,625	—
3.62-9	3 1/2	3 5/8	3/4	9	3/4	34	23,625	16	8,710	25	23,625	13	9,125	—
5.37-5	5 1/4	5 5/8	1	5	3/4	19	19,690	8	3,100	15	19,690	8	4,640	—
5.37-9	5 1/4	5 5/8	1	9	3/4	40	29,605	20	12,190	34	35,440	16	13,040	—
7.12-5	7	7 1/8	1 1/4	5	3/4	23	26,250	8	3,100	18	26,250	8	4,635	—
7.12-9	7	7 1/8	1 1/4	9	3/4	40	29,600	24	15,670	40	44,330	19	16,950	—

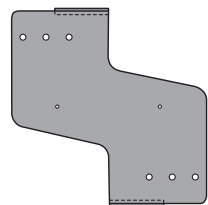
1. Loads are based on 560 psi perpendicular-to-grain bearing stress.
2. H₁ is the minimum dimension required to achieve full load for the hinge connector. For H dimensions between H₁ and Minimum H, loads may be linearly interpolated.
3. See Horizontal Load table for models available with three rotation bolts.
4. Beams must be the same width for both members in the connection.



HCCTA



HCA



HC3A