

TABLE A - COLA Chapter 16 CT or T2 PAIRED CONNECTION ASD CAPACITIES ^{1, 2, 3, 4, 5, 6, 7, 8}
DF-L No. 2 Grade typ., No. 1 @ 5x5 & larger

CT Model ² 2 r/d	A36 Anchor Rod Diam, 2 r/d (1/8" increments) ⁴	A307 Bolts Quantity & Diameter (in)	b min. width of attached member (depth) r/d (in)	CT Paired Connection ASD Design Capacities (pounds)								Δ_s @ max. strength capacity ⁷	Δ_{ASD} @ max. allow. capacity ⁷	
				min. t (in), length of bolt in wood members each side of CT (thickness)										
				1.5	2.5	3	3.5	5.125	5.5	7.25/7.50				
CT or T2-43	4	(4) 3/8	3.5	5,010	6,989	6,993	6,997	7,004	7,004	7,007	0.189	0.135		
CT or T2-24	4	(2) 1/2		3,360	5,600	6,235	6,235	6,235	6,235	6,235			0.229	0.164
CT or T2-44	5	(4) 1/2		6,637	11,118	12,395	12,405	12,420	12,430	12,457				
CT or T2-64	6	(6) 1/2	5.5	9,679	16,395	18,330	18,383	18,442	18,442	18,504	18,592	0.207	0.148	
CT or T2-84	7	(8) 1/2	3.5	[7,138]	[11,897]	[14,276]	[16,656]	[21,137]	[22,683]	24,590	0.217			0.155
			5.5	[10,662]	[17,769]	[21,323]	24,057	24,241	24,381	24,590				
			7.25/7.5	12,377	21,300	23,892	24,057	24,241	24,381	24,590				
CT or T2-46	8	(4) 3/4	5.5	9,749	[16,453]	17,192 ⁶	17,192 ⁶	17,192 ⁶	17,192 ⁶	17,192 ⁶	17,192 ⁶	0.222	0.159	
			7.25/7.5	9,749	16,464	17,192 ⁶	17,192 ⁶	17,192 ⁶	17,192 ⁶	17,192 ⁶				
CT or T2-48	9	(4) 1	5.5	[9,345]	[15,576]	[18,691]	[21,806]	[30,020]	[32,216]	43,420 ⁴	0.232	0.165		
			7.25/7.5	[12,029]	[20,048]	[24,057]	[28,067]	[41,858]	43,420 ⁴	43,420 ⁴				
			9.25/9.5	12,591	21,513	25,939	30,460	44,910 ⁴	43,420 ⁴	43,420 ⁴				
CT or T2-68	11	(6) 1	5.5	[9,345]	[15,576]	[18,691]	[21,806]	[30,020]	[32,216]	[43,931]	0.211	0.151		
			7.25/7.5	[12,029]	[20,048]	[24,057]	[28,067]	[41,858]	[46,736]	[63,731]				
			9.25/9.5	[14,590]	[24,317]	[29,180]	[34,044]	[49,850]	[50,119]	50,791 ⁶				
			11.25/11.5	[16,504]	[27,506]	[33,008]	[38,509]	50,791 ⁶	50,791 ⁶	50,791 ⁶				
			13.25/13.5	16,622	29,652	36,167	42,901	50,791 ⁶	50,791 ⁶	50,791 ⁶				

For SI: 1 inch (in) = 25.4 mm, 1 pound = 4.45 N

¹ Wood design capacities have been increased by a 1.60 load duration factor (C_D).

² CT ab-y

CT = paired continuity tie
 a = number of bolts

b = diameter of bolts (in 1/8 inch increments)
 y = diameter of All-thread/Anchor Rod specified by designer (in 1/8 inch increments)

³ Design capacity controlled by the net cross-section tension capacity of the wood member at bolts are shown by [##]

⁴ These capacities are limited by the All-thread/Anchor anchor rod tension design capacity.

⁵ The minimum end distance, from the end of the wood member to the centerline of the first CT bolt, is seven (7) CT bolt diameters. End distance may be increased with no decrease in design capacities.

⁶ Values are controlled by device capacity @ 1/8" deflection, as tested in a steel jig, divided by 3

⁷ Deflections at loads less than maximum P_S or P_{ASD} may be determined by multiplying by the ratio of the lesser load to the maximum load. Strength loads are the P_{ASD} shown times 1.4. Tabulated displacement consists of deformation and rotation of the hold-down (tie-down), and fastener slip of (bolt rotation) used to attach the hold-down (tie-down) to the wood member. Shrinkage of supporting wood members and anchor bolt/rod elongation shall be the responsibility of the Engineer of Record.

⁸ The user should note that hold-downs used in series shall account for the cumulative deformation of all hold-downs (tie-downs) within said series.

⁹ The capacity of the concrete anchor must be equal to or greater than the design capacity of the connector being specified.

¹⁰ The assembly must have an allowable strength equal to or greater than the required strength of the assembly under the action of the ASD load combinations referenced in the applicable code.

TABLE B - COLA Chapter 91 & 96 CT or T2 PAIRED CONNECTION ASD CAPACITIES ^{1, 2, 3, 4, 5, 6, 7, 8}
DF-L No. 2 Grade typ., No. 1 @ 5x5 & larger

CT Model ² 2 r/d	A36 Anchor Rod Diam, 2 r/d (1/8" increments) ⁴	A307 Bolts Quantity & Diameter (in)	b min. width of attached member (depth) r/d (in)	CT Paired Connection ASD Design Capacities (pounds)									Δ_s @ max. strength capacity ⁷	Δ_{ASD} @ max. allow. capacity ⁷
				min. t (in), length of bolt in wood members each side of CT (thickness)										
				1.5	2.5	3	3.5	5.125	5.5	7.25/7.50				
CT or T2-43	4	(4) 3/8	3.5	5,010	6,260 ⁶	6,260 ⁶	6,260 ⁶	6,260 ⁶	6,260 ⁶	6,260 ⁶	6,260 ⁶	0.169	0.120	
CT or T2-24	4	(2) 1/2		3,360	5,600	6,235	6,235	6,235	6,235	6,235	6,235	0.229	0.164	
CT or T2-44	5	(4) 1/2		6,637	11,118	11,606 ⁶	11,606 ⁶	11,606 ⁶	11,606 ⁶	11,606 ⁶	11,606 ⁶	0.194	0.139	
CT or T2-64	6	(6) 1/2		[7,138]	[11,897]	[14,276]	15,577 ⁶	15,577 ⁶	15,577 ⁶	15,577 ⁶	15,577 ⁶	0.173	0.124	
CT or T2-84	7	(8) 1/2	5.5	9,679	15,577 ⁶	15,577 ⁶	15,577 ⁶	15,577 ⁶	15,577 ⁶	15,577 ⁶	15,577 ⁶	0.153	0.110	
			3.5	[7,138]	[11,897]	[14,276]	[16,656]	17,358 ⁶	17,358 ⁶	17,358 ⁶				
			5.5	[10,662]	17,358 ⁶	17,358 ⁶	17,358 ⁶	17,358 ⁶	17,358 ⁶	17,358 ⁶				
CT or T2-46	8	(4) 3/4	5.5	9,749	10,315 ⁶	10,315 ⁶	10,315 ⁶	10,315 ⁶	10,315 ⁶	10,315 ⁶	10,315 ⁶	0.133	0.095	
CT or T2-48	9	(4) 1	5.5	[9,345]	[15,576]	[18,691]	[21,806]	[30,020]	30,249 ⁶	30,249 ⁶	30,249 ⁶	0.142	0.101	
			7.25/7.5	[12,029]	[20,048]	[24,057]	[28,067]	30,249 ⁶	30,249 ⁶	30,249 ⁶				
			9.25/9.5	12,591	21,513	25,939	30,249 ⁶	30,249 ⁶	30,249 ⁶	30,249 ⁶				
CT or T2-68	11	(6) 1	5.5	[9,345]	[15,576]	[18,691]	[21,806]	[30,020]	30,474 ⁶	30,474 ⁶	0.126	0.090		
			7.25/7.5	[12,029]	[20,048]	[24,057]	[28,067]	30,474 ⁶	30,474 ⁶	30,474 ⁶				
			9.25/9.5	[14,590]	[24,317]	[29,180]	30,474 ⁶	30,474 ⁶	30,474 ⁶	30,474 ⁶				
			11.25/11.5	[16,504]	[27,506]	30,474 ⁶	30,474 ⁶	30,474 ⁶	30,474 ⁶	30,474 ⁶				
			13.25/13.5	16,622	29,652	30,474 ⁶	30,474 ⁶	30,474 ⁶	30,474 ⁶	30,474 ⁶				

For **SI**: 1 inch (in) = 25.4 mm, 1 pound = 4.45 N

¹ Wood design capacities have been increased by a 1.60 load duration factor (C_D).

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CT = paired continuity tie
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b = diameter of bolts (in 1/8 inch increments)
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³ Design capacity controlled by the net cross-section tension capacity of the wood member at bolts are shown by [##]

⁴ The capacity of the concrete anchor must be equal to or greater than the design capacity of the connector being specified.

⁵ The minimum end distance, from the end of the wood member to the centerline of the first CT bolt, is seven (7) CT bolt diameters. End distance may be increased with no decrease in design capacities.

⁶ Values are controlled by device capacity @ 1/8" deflection, as tested in a steel jig, divided by 5

⁷ Deflections at loads less than maximum P_S or P_{ASD} may be determined by multiplying by the ratio of the lesser load to the maximum load. Strength loads are the P_{ASD} shown times 1.4. Tabulated displacement consists of deformation and rotation of the hold-down (tie-down), and fastener slip of (bolt rotation) used to attach the hold-down (tie-down) to the wood member. Shrinkage of supporting wood members and anchor bolt/rod elongation shall be the responsibility of the Engineer of Record.

⁸ The user should note that hold-downs used in series shall account for the cumulative deformation of all hold-downs (tie-downs) within said series.

⁹ The assembly must have an allowable strength equal to or greater than the required strength of the assembly under the action of the ASD load combinations referenced in the applicable code.