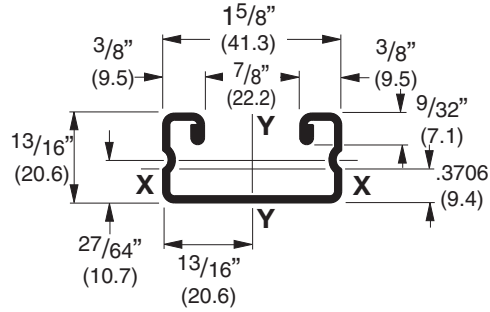
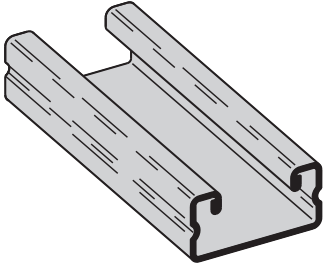


# B56 Channel & Combinations

## B56

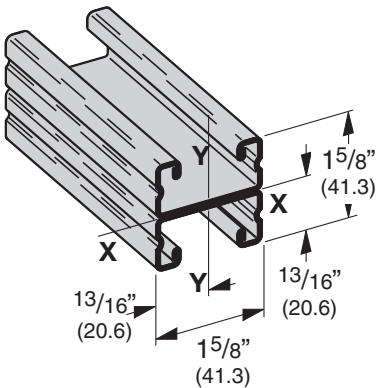
- Thickness: 16 Gauge (1.5 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, Dura-Green, Pre-Galvanized, Hot-Dipped Galvanized
- Weight: .85 Lbs./Ft. (1.26 kg/m)



## SECTION PROPERTIES

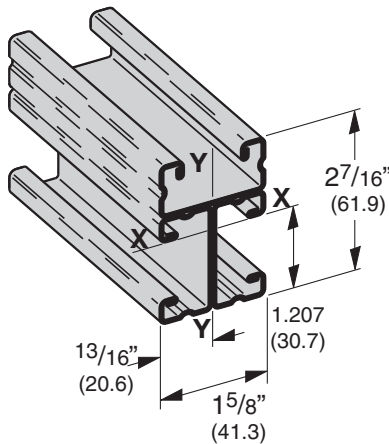
Channel	Weight lbs./ft. kg/m	Areas of Section		Moment of Inertia (I)		Section Modulus (S)		Radius of Gyration (r)		Moment of Inertia (I)		Section Modulus (S)		Radius of Gyration (r)	
		sq. in.	cm <sup>2</sup>	in. <sup>4</sup>	cm <sup>4</sup>	in. <sup>3</sup>	cm <sup>3</sup>	in.	cm	in. <sup>4</sup>	cm <sup>4</sup>	in. <sup>3</sup>	cm <sup>3</sup>	in.	cm
<b>B56</b>	.894 (1.33)	.263 (1.70)		.0241 (1.00)		.0546 (.89)		.303 (.77)		.0966 (4.02)		.1189 (1.95)		.606 (1.54)	
<b>B56A</b>	1.789 (2.66)	.526 (3.39)		.1205 (5.02)		.1484 (2.43)		.479 (1.22)		.1931 (8.04)		.2377 (3.89)		.606 (1.54)	

Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.



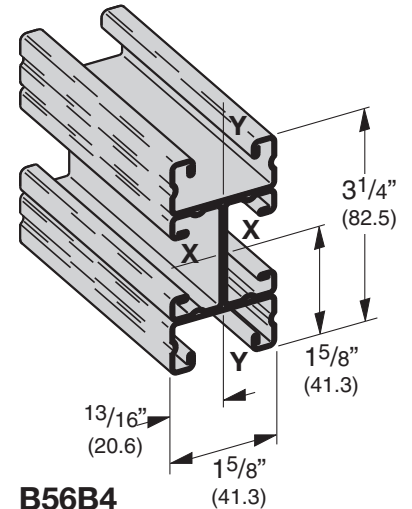
### B56A

Wt. 1.70 Lbs./Ft. (2.53 kg/m)



### B56B3

Wt. 2.55 Lbs./Ft. (3.79 kg/m)



### B56B4

Wt. 3.40 Lbs./Ft. (5.06 kg/m)

Reference page 14 for general fitting and standard finish specifications.

# B56 Beam & Column Loading Data

## BEAM LOADING

Beam Span In. mm		Channel Style	Uniform Load and Deflection				Uniform Load @ Deflection =			
			Lbs.		N		1/240 Span		1/360 Span	
In.	mm		Lbs.	N	In.	mm	Lbs.	N	Lbs.	N
12	(305)	B56	610	(2713)	.027	(.68)	610	(2713)	610	(2713)
		B56A	610*	(2713)	.004	(.10)	610*	(2713)	610*	(2713)
24	(609)	B56	405	(1801)	.109	(2.77)	372	(1655)	248	(1103)
		B56A	610*	(2713)	.035	(.89)	610*	(2713)	610*	(2713)
36	(914)	B56	270	(1201)	.245	(6.22)	165	(734)	110	(489)
		B56A	610*	(2713)	.121	(3.07)	610*	(2713)	502	(2233)
48	(1219)	B56	202	(898)	.435	(11.05)	93	(413)	62	(276)
		B56A	530	(2357)	.250	(6.35)	423	(1881)	282	(1699)
60	(1524)	B56	162	(720)	.680	(17.27)	59	(262)	40	(178)
		B56A	424	(1886)	.391	(9.93)	271	(1205)	181	(805)
72	(1829)	B56	135	(600)	.980	(24.89)	41	(182)	28	(124)
		B56A	353	(1570)	.563	(14.30)	188	(836)	125	(556)
84	(2133)	B56	116	(516)	1.334	(33.88)	30	(133)	20	(89)
		B56A	303	(1348)	.766	(19.45)	138	(614)	92	(409)
96	(2438)	B56	101	(449)	1.742	(44.24)	23	(102)	15	(67)
		B56A	265	(1179)	1.001	(25.42)	106	(471)	71	(316)
108	(2743)	B56	90	(400)	2.205	(56.01)	18	(80)	12	(53)
		B56A	236	(1050)	1.267	(32.18)	84	(373)	56	(249)
120	(3048)	B56	81	(360)	2.722	(69.14)	15	(67)	10	(44)
		B56A	212	(943)	1.564	(39.72)	68	(302)	45	(200)

Based on simple beam condition using an allowable design stress of 25,000 psi (172 MPa) in accordance with MFMA, with adequate lateral bracing (see page 11 for further explanation). Actual yield point of cold rolled steel is 42,000 psi. To determine concentrated load capacity at mid span, multiply uniform load by 0.5 and corresponding deflection by 0.8. \*Failure determined by weld shear.

## COLUMN LOADING

Unbraced Height In. mm		Channel Style	Max. Column Loading K = .80				Max. Column Loading (Loaded @ C.G.)					
			Loaded@ C.G.		Loaded@ Slot Face		K = .65		K = 1.0		K = 1.2	
In.	mm		Lbs.	N	Lbs.	N	Lbs.	N	Lbs.	N	Lbs.	N
12	(305)	B56	4968	(22099)	2182	(9706)	5044	(22437)	4845	(21551)	4702	(20915)
		B56A	10237	(45536)	3365	(14968)	10291	(45776)	10148	(45140)	10039	(44655)
24	(609)	B56	4367	(19425)	1903	(8465)	4624	(20568)	3985	(17726)	3572	(15889)
		B56A	9762	(43423)	3202	(14243)	9977	(44380)	9405	(41835)	8969	(39896)
36	(914)	B56	3572	(15889)	1557	(6926)	4034	(17944)	2658	(11823)	1845	(8207)
		B56A	8969	(39896)	2955	(13144)	9454	(42053)	8167	(36328)	7186	(31965)
48	(1219)	B56	2335	(10386)	1164	(5178)	3290	(14634)	1495	(6650)	1038	(4617)
		B56A	7860	(34963)	2649	(11783)	8722	(38797)	6434	(28620)	4731	(21044)
60	(1524)	B56	1495	(6650)	862	(3834)	2264	(10071)	957	(4257)	664**	(2953)
		B56A	6434	(28620)	2307	(10262)	7780	(34607)	4360	(19394)	3028	(13469)
72	(1829)	B56	1038	(4617)	661	(2940)	1572	(6992)	664**	(2953)	461**	(2050)
		B56A	4731	(21044)	1937	(8616)	6629	(29487)	3028	(13469)	2103	(9354)
84	(2133)	B56	763**	(3394)	522	(2322)	1155	(5137)	488**	(2171)	-	-
		B56A	3476	(15462)	1619	(7201)	5269	(23437)	2224	(9893)	1545**	(6872)
96	(2438)	B56	584**	(2598)	422	(1877)	884**	(3932)	-	-	-	-
		B56A	2661	(11837)	1368	(6085)	4031	(17931)	1703**	(7575)	1183**	(5262)
108	(2743)	B56	461**	(2050)	348	(1548)	699**	(3109)	-	-	-	-
		B56A	2103	(9354)	1169	(5200)	3185	(14167)	1346**	(5987)	934**	(4154)
120	(3048)	B56	-	-	291	(1294)	566**	(2417)	-	-	-	-
		B56A	1703**	(7575)	1008	(4484)	2580	(11476)	1090**	(4848)	-	-

\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

Reference page 14 for general fitting and standard finish specifications.