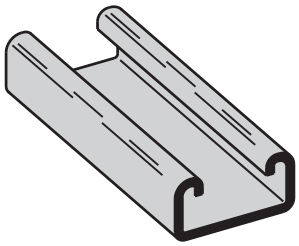
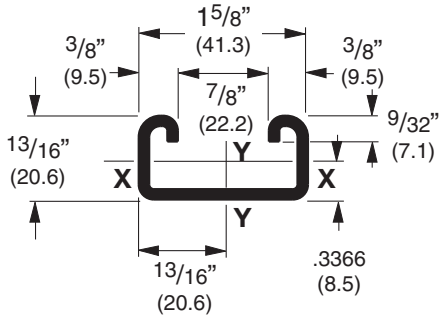
B52

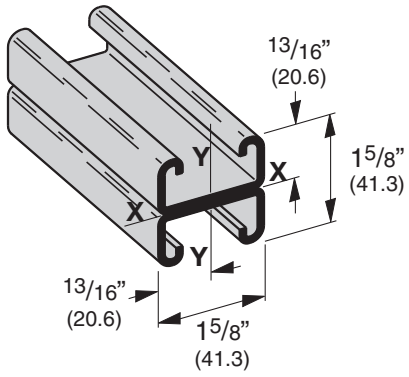
- Thickness: 12 Gauge (2.6 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, Dura-Green, Pre-Galvanized, Hot-Dipped Galvanized
- Weight: 1.27 Lbs./Ft. (1.89 kg/m)



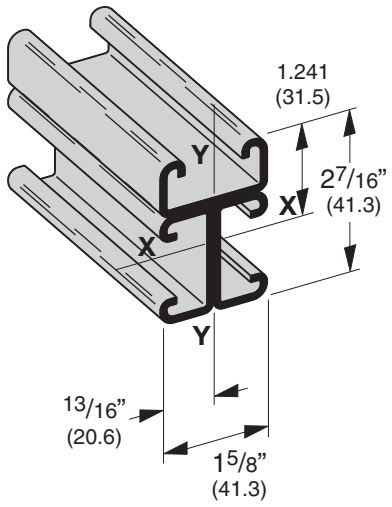


SECTION PROPERTIES					X - X Axis						Y - Y Axis					
Channel	Weight		Areas of Section		Moment of Inertia (I)		Section Modulus (S)		Radius of Gyration (r)		Moment of Inertia (I)		Section Modulus (S)		Radius of Gyration (r)	
	lbs./ft.	kg/m	sq. in.	cm^2	$in.^4$	cm^4	$in.^3$	cm^3	in.	cm	$in.^4$	cm^4	$in.^3$	cm^3	in.	cm
B52	1.313	(1.95)	.386	(2.49)	.0320	(1.33)	.0673	(1.10)	.288	(.73)	.1404	(5.84)	.1728	(2.83)	.603	(1.53)
B52A	2.627	(3.91)	.773	(4.99)	.1517	(6.31)	.1868	(3.06)	.443	(1.13)	.2809	(11.69)	.3457	(5.67)	.603	(1.53)

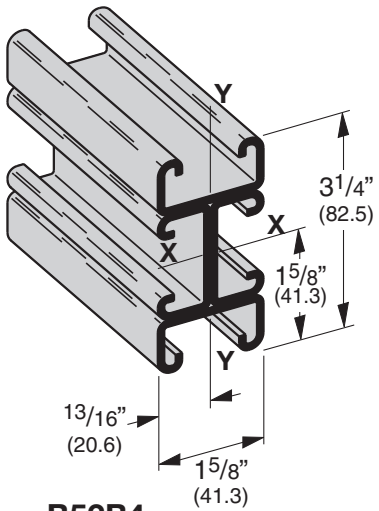
Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.



B52A
Wt. 2.54 Lbs./Ft. (3.78 kg/m)



B52B3
Wt. 3.81 Lbs./Ft. (5.67 kg/m)



B52B4
Wt. 5.08 Lbs./Ft. (7.56 kg/m)

Reference page 14 for general fitting and standard finish specifications.

BEAM LOADING

Beam Span In.	mm	Channel Style	Uniform Load and Deflection Lbs.	N	In.	mm	Uniform Load @ Deflection = 1/240 Span Lbs.	N	1/360 Span Lbs.	N
12	(305)	B52 B52A	1079 1270*	(4799) (5649)	.026 .006	(.66) (.15)	1079 1270*	(4799) (5649)	1079 1270*	(4799) (5649)
24	(609)	B52 B52A	539 1270*	(2397) (5649)	.106 .052	(2.69) (1.32)	506 1270*	(2251) (5649)	337 1270*	(1499) (5649)
36	(914)	B52 B52A	360 1013	(1601) (4506)	.240 .141	(6.09) (3.58)	225 1013	(1001) (4506)	150 719	(667) (3198)
48	(1219)	B52 B52A	270 759	(1201) (3376)	.427 .250	(10.84) (6.35)	126 607	(560) (2700)	84 404	(373) (1797)
60	(1524)	B52 B52A	216 608	(961) (2704)	.667 .391	(16.94) (9.93)	81 388	(360) (1726)	54 259	(240) (1152)
72	(1829)	B52 B52A	180 506	(800) (2251)	.960 .563	(24.38) (14.30)	56 270	(249) (1201)	37 180	(164) (800)
84	(2133)	B52 B52A	154 434	(685) (1930)	1.307 .766	(33.20) (19.45)	41 198	(182) (881)	28 132	(124) (587)
96	(2438)	B52 B52A	135 380	(600) (1690)	1.707 1.001	(43.36) (25.42)	32 152	(142) (676)	21 101	(93) (449)
108	(2743)	B52 B52A	120 338	(534) (1503)	2.160 1.267	(54.86) (32.18)	25 120	(111) (534)	17 80	(75) (356)
120	(3048)	B52 B52A	108 304	(480) (1352)	2.667 1.564	(67.74) (39.72)	20 97	(89) (431)	13 65	(58) (289)

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 Loaded@ C.G. Lbs.	N	Loaded@ Slot Face Lbs.	N	Max. Column Loading (Loaded @ C.G.) K = .65 Lbs.	N	K = 1.0 Lbs.	N	K = 1.2 Lbs.	N
12	(305)	B52 B52A	8407 19160	(37396) (85228)	3162 5290	(14065) (23531)	8543 19425	(38001) (86407)	8205 18777	(36497) (83524)	7989 18363	(35537) (81682)
24	(609)	B52 B52A	7519 17444	(33446) (77595)	2755 4955	(12255) (22041)	7879 18144	(35047) (80708)	6521 16412	(29007) (73004)	5397 15275	(24007) (67946)
36	(914)	B52 B52A	5397 15275	(24007) (67946)	2152 4496	(9572) (19999)	6653 16547	(29594) (73605)	3616 13376	(16085) (59499)	2511 11243	(11169) (50011)
48	(1219)	B52 B52A	3178 12692	(14136) (56457)	1560 3963	(6939) (17628)	4785 14667	(21285) (65242)	2034 9683	(9047) (43072)	1412** 6780	(6281) (30159)
60	(1524)	B52 B52A	2034 9683	(9047) (43072)	1159 3383	(5155) (15048)	3081 12516	(13705) (55674)	1302** 6248	(5791) (27792)	904** 4339	(4021) (19301)
72	(1829)	B52 B52A	1412** 6780	(6281) (30159)	891 2799	(3963) (12450)	2139 10084	(9515) (44856)	904** 4339	(4021) (19301)	– 3013	– (13402)
84	(2133)	B52 B52A	1038** 4981	(4617) (22156)	704 2337	(3131) (10395)	1572 7545	(6992) (33562)	664** 3188	(2953) (14181)	– 2214**	– (9848)
96	(2438)	B52 B52A	794** 3814	(3532) (16965)	570 1973	(2535) (8776)	1203** 5777	(5351) (25697)	– 2441**	– (10858)	– 1695**	– (7540)
108	(2743)	B52 B52A	- 3013	- (13402)	470 1684	(2090) (7491)	951** 4564	(4230) (20301)	– 1928**	– (8576)	– 1339**	– (5956)
120	(3048)	B52 B52A	- 2441**	- (10858)	394 1452	(1752) (6459)	770** 3697	(3425) (16445)	– 1562**	– (6948)	– –	– –

**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.