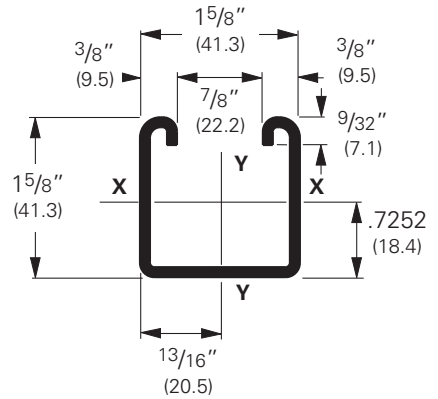
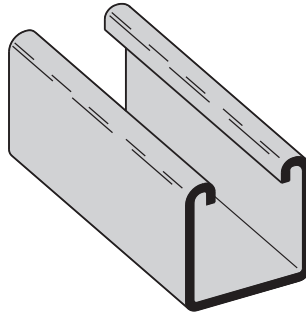


B22 Channel

B22

- 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, Stainless Steel Type 304 or 316, Aluminum
- Weight: 1.90 Lbs./Ft. (2.83 kg/m)



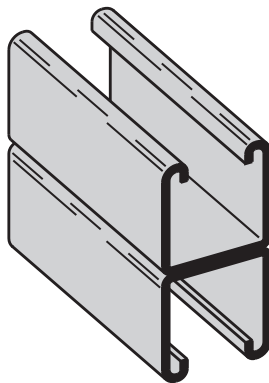
Note:

Aluminum loading, for B22 & B22A, can be determined by multiplying load data times a factor of 0.38

Section Properties

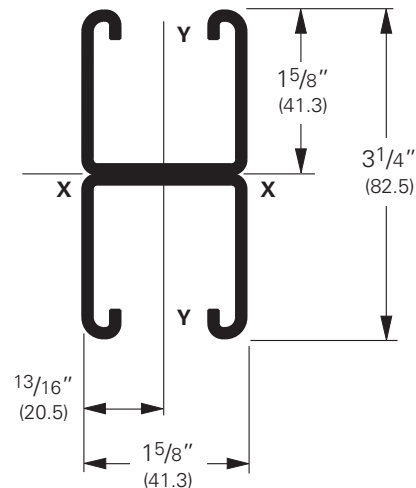
Channel	Weight lbs./ft. kg/m	Areas of Section sq. in. cm ²	X - X Axis			Y - Y Axis		
			Moment of Inertia (I) in. ⁴ cm ⁴	Section Modulus (S) in. ³ cm ³	Radius of Gyration (r) in. cm	Moment of Inertia (I) in. ⁴ cm ⁴	Section Modulus (S) in. ³ cm ³	Radius of Gyration (r) in. cm
B22	1.910 (2.84)	.562 (3.62)	.1912 (7.96)	.2125 (3.48)	.583 (1.48)	.2399 (9.99)	.2953 (4.84)	.653 (1.66)
B22A	3.820 (5.69)	1.124 (7.25)	.9732 (40.51)	.5989 (9.81)	.931 (2.36)	.4798 (19.97)	.5905 (9.68)	.653 (1.66)
B22X	6.649 (9.89)	1.956 (12.62)	4.1484(172.67)	1.7019 (27.89)	1.456 (3.70)	1.1023 (45.88)	1.2027 (19.71)	.751 (1.91)

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

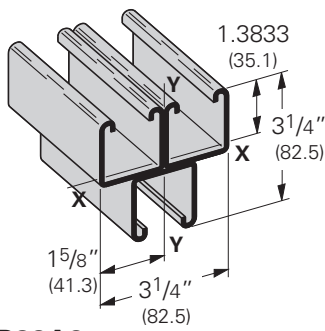


B22A

Wt. 3.80 Lbs./Ft. (5.65 kg/m)

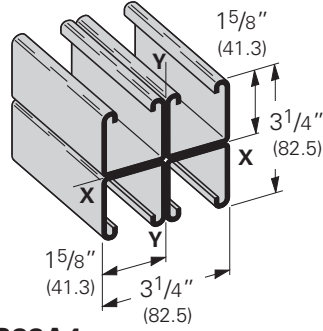


B22 Combinations



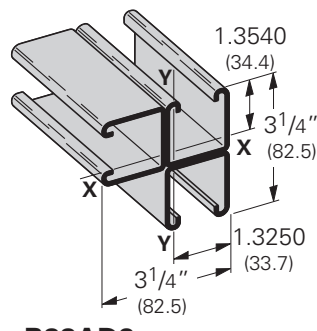
B22A3

Wt. 5.70 Lbs./Ft. (8.48 kg/m)



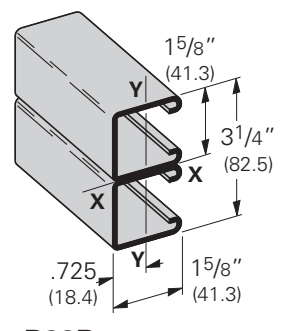
B22A4

Wt. 7.60 Lbs./Ft. (11.31 kg/m)



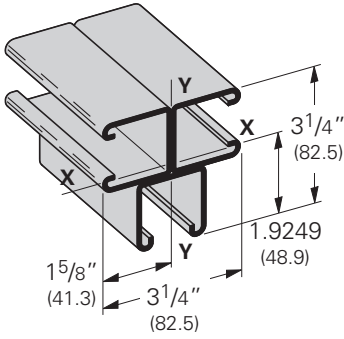
B22AD3

Wt. 5.70 Lbs./Ft. (8.48 kg/m)



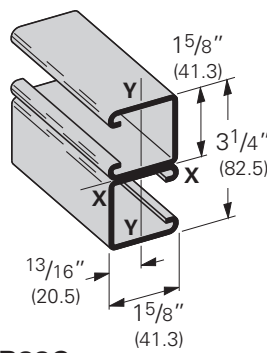
B22B

Wt. 3.80 Lbs./Ft. (5.65 kg/m)



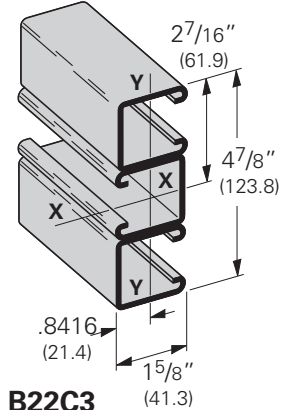
B22B3

Wt. 5.70 Lbs./Ft. (8.48 kg/m)



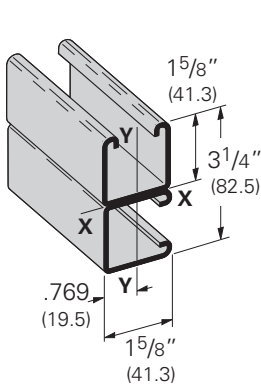
B22C

Wt. 3.80 Lbs./Ft. (5.65 kg/m)



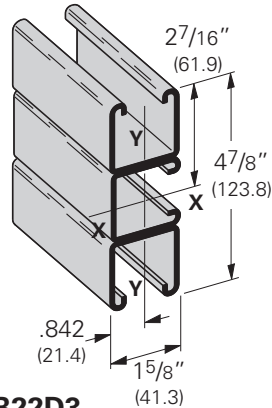
B22C3

Wt. 5.70 Lbs./Ft. (8.48 kg/m)



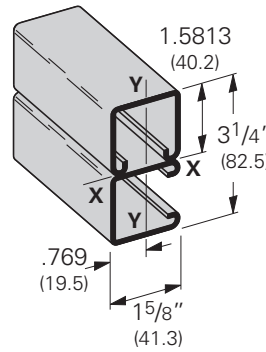
B22D

Wt. 3.80 Lbs./Ft. (5.65 kg/m)



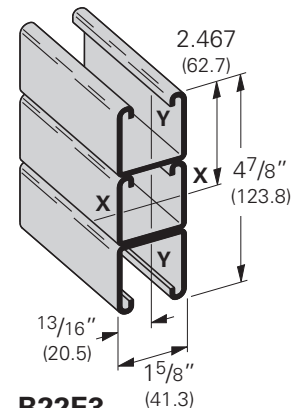
B22D3

Wt. 5.70 Lbs./Ft. (8.48 kg/m)



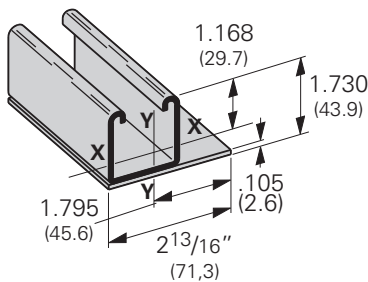
B22E

Wt. 3.80 Lbs./Ft. (5.65 kg/m)



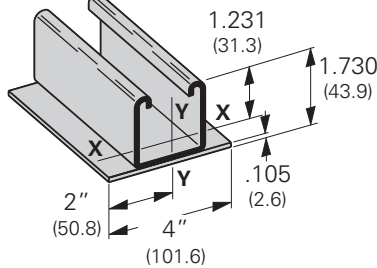
B22E3

Wt. 5.70 Lbs./Ft. (8.48 kg/m)



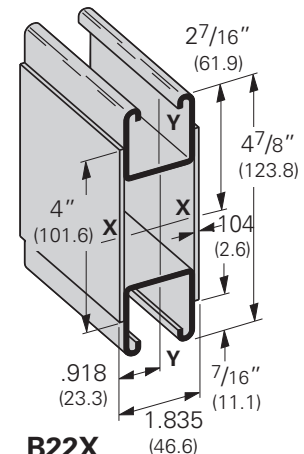
B22LPL

Wt. 2.90 Lbs./Ft. (4.31 kg/m)



B22PL

Wt. 3.35 Lbs./Ft. (4.98 kg/m)



B22X

Wt. 6.70 Lbs./Ft. (9.97 kg/m)

B22 Beam Loading Data

Beam Loading

Beam Span In. mm		Channel Style	Uniform Load and Deflection				Uniform Load @ Deflection =			
			Lbs.		kN		1/240 Span		1/360 Span	
			Lbs.	kN	In.	mm	Lbs.	kN	Lbs.	kN
12	(305)	B22	2610	(11.61)	.014	(.35)	2610	(11.61)	2610	(11.61)
		B22A	2610*	(11.61)	.002	(.05)	2610*	(11.61)	2610*	(11.61)
		B22X	5790*	(25.75)	.001	(.02)	5790*	(25.75)	5790*	(25.75)
18	(457)	B22	2269	(10.09)	.031	(.79)	2269	(10.09)	2269	(10.09)
		B22A	2610*	(11.61)	.007	(.18)	2610*	(11.61)	2610*	(11.61)
		B22X	5790*	(25.75)	.003	(.07)	5790*	(25.75)	5790*	(25.75)
24	(609)	B22	1702	(7.57)	.056	(1.42)	1702	(7.57)	1702	(7.57)
		B22A	2610*	(11.61)	.017	(.43)	2610*	(11.61)	2610*	(11.61)
		B22X	5790*	(25.75)	.008	(.20)	5790*	(25.75)	5790*	(25.75)
30	(762)	B22	1361	(6.05)	.087	(2.21)	1361	(6.05)	1294	(5.75)
		B22A	2610*	(11.61)	.033	(.84)	2610*	(11.61)	2610*	(11.61)
		B22X	5790*	(25.75)	.017	(.73)	5790*	(25.75)	5790*	(25.75)
36	(914)	B22	1135	(5.05)	.126	(3.20)	1135	(5.05)	899	(4.00)
		B22A	2610*	(11.61)	.057	(1.45)	2610*	(11.61)	2610*	(11.61)
		B22X	5790*	(25.75)	.029	(.73)	5790*	(25.75)	5790*	(25.75)
42	(1067)	B22	972	(4.32)	.172	(4.37)	972	(4.32)	660	(2.93)
		B22A	2610*	(11.61)	.091	(2.31)	2610*	(11.61)	2610*	(11.61)
		B22X	5790*	(25.75)	.046	(1.17)	5790*	(25.75)	5790*	(25.75)
48	(1219)	B22	851	(3.78)	.224	(5.69)	758	(3.37)	505	(2.24)
		B22A	2405	(10.70)	.125	(3.17)	2405	(10.70)	2405	(10.70)
		B22X	5790*	(25.75)	.068	(1.73)	5790*	(25.75)	5790*	(25.75)
54	(1371)	B22	756	(3.36)	.284	(7.21)	599	(2.66)	399	(1.77)
		B22A	2138	(9.51)	.158	(4.01)	2138	(9.51)	2024	(9.00)
		B22X	5790*	(25.75)	.097	(2.46)	5790*	(25.75)	5790*	(25.75)
60	(1524)	B22	681	(3.03)	.351	(8.91)	485	(2.16)	323	(1.44)
		B22A	1924	(8.56)	.195	(4.95)	1924	(8.56)	1640	(7.29)
		B22X	5645	(25.11)	.130	(3.30)	5645	(25.11)	5645	(25.11)
66	(1676)	B22	619	(2.75)	.424	(10.77)	401	(1.78)	267	(1.19)
		B22A	1749	(7.78)	.236	(5.99)	1749	(7.78)	1355	(6.03)
		B22X	5132	(22.83)	.158	(4.01)	5132	(22.83)	5132	(22.83)
72	(1829)	B22	567	(2.52)	.505	(12.83)	337	(1.50)	225	(1.00)
		B22A	1603	(7.13)	.281	(7.14)	1603	(7.13)	1139	(5.06)
		B22X	4704	(20.92)	.188	(4.77)	4704	(20.92)	4704	(20.92)
78	(1981)	B22	524	(2.33)	.593	(15.06)	287	(1.27)	191	(0.85)
		B22A	1480	(6.58)	.330	(8.38)	1455	(6.47)	970	(4.31)
		B22X	4342	(19.31)	.220	(5.59)	4342	(19.31)	4270	(18.99)
84	(2133)	B22	486	(2.16)	.687	(17.45)	248	(1.10)	165	(0.73)
		B22A	1374	(6.11)	.383	(9.73)	1255	(5.58)	837	(3.72)
		B22X	4032	(17.93)	.255	(6.48)	4032	(17.93)	3682	(16.38)
90	(2286)	B22	454	(2.02)	.789	(20.04)	216	(0.96)	144	(0.64)
		B22A	1283	(5.71)	.440	(11.17)	1093	(4.86)	729	(3.24)
		B22X	3763	(16.74)	.293	(7.44)	3763	(16.74)	3207	(14.26)
96	(2438)	B22	425	(1.89)	.898	(22.81)	190	(0.84)	126	(0.56)
		B22A	1202	(5.35)	.500	(12.70)	961	(4.27)	640	(2.85)
		B22X	3528	(15.69)	.334	(8.48)	3528	(15.69)	2819	(12.54)
102	(2591)	B22	400	(1.78)	1.013	(25.73)	168	(0.75)	112	(0.50)
		B22A	1132	(5.03)	.565	(14.35)	851	(3.78)	567	(2.52)
		B22X	3320	(14.77)	.377	(9.57)	3320	(14.77)	2497	(11.11)
108	(2743)	B22	378	(1.68)	1.136	(28.85)	150	(0.67)	100	(0.44)
		B22A	1069	(4.75)	.633	(16.08)	759	(3.37)	506	(2.25)
		B22X	3136	(13.95)	.422	(10.72)	3136	(13.95)	2227	(9.90)
114	(2895)	B22	358	(1.59)	1.266	(32.15)	134	(0.59)	90	(0.40)
		B22A	1013	(4.50)	.706	(17.93)	681	(3.03)	454	(2.02)
		B22X	2971	(13.21)	.471	(11.96)	2971	(13.21)	1999	(8.89)
120	(3048)	B22	340	(1.51)	1.403	(35.63)	121	(0.54)	81	(0.36)
		B22A	962	(4.28)	.782	(19.86)	615	(2.73)	410	(1.82)
		B22X	2822	(12.55)	.521	(13.23)	2706	(12.04)	1804	(8.02)

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 12 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.

B22 Column Loading Data

Column Loading

Unbraced Height		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.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN
12	(305)	B22	10454	(46.50)	4276	(19.12)	10598	(47.14)	10222	(45.47)	9950	(44.26)
		B22A	21625	(96.19)	7002	(31.14)	21677	(96.42)	21539	(95.81)	21433	(95.34)
		B22X	46948	(208.83)	18975	(84.40)	47061	(209.34)	46761	(208.00)	46531	(206.98)
18	(457)	B22	9950	(44.26)	4153	(18.47)	10253	(45.62)	9481	(42.17)	8955	(39.83)
		B22A	21433	(95.34)	6959	(30.95)	21551	(95.86)	21239	(94.47)	21001	(93.42)
		B22X	46531	(206.98)	18859	(83.90)	46787	(208.12)	46110	(205.11)	45593	(202.81)
24	(609)	B22	9311	(41.42)	3993	(17.76)	9801	(43.60)	8582	(38.17)	7801	(34.70)
		B22A	21164	(94.14)	6898	(30.68)	21373	(95.07)	20819	(92.61)	20397	(90.73)
		B22X	45947	(204.38)	18693	(84.44)	46401	(206.40)	45198	(201.05)	44282	(196.97)
30	(762)	B22	8582	(38.17)	3802	(16.91)	9268	(41.22)	7601	(33.81)	6595	(29.33)
		B22A	20819	(92.61)	6821	(30.34)	21145	(94.06)	20279	(90.20)	19619	(87.27)
		B22X	45198	(201.05)	18485	(82.22)	45906	(204.20)	44026	(195.84)	42593	(189.46)
36	(914)	B22	7801	(34.70)	3589	(15.96)	8676	(38.59)	6595	(28.33)	5392	(23.98)
		B22A	20397	(90.73)	6728	(29.93)	20866	(92.81)	19619	(87.27)	18669	(83.04)
		B22X	44282	(196.97)	18233	(81.10)	45300	(201.50)	42593	(189.46)	40530	(180.28)
42	(1067)	B22	6998	(31.13)	3360	(14.94)	8048	(35.80)	5595	(24.89)	4444	(19.77)
		B22A	19898	(88.51)	6620	(29.45)	20537	(91.33)	18840	(83.80)	17546	(78.05)
		B22X	43198	(192.15)	17940	(79.80)	44586	(198.33)	40901	(181.94)	38092	(169.44)
48	(1219)	B22	6193	(27.55)	3118	(13.87)	7401	(32.92)	4718	(20.99)	3791	(16.86)
		B22A	19322	(85.95)	6496	(28.89)	20157	(89.66)	17940	(79.80)	16251	(72.29)
		B22X	41948	(186.59)	17604	(78.30)	43761	(194.57)	38948	(173.25)	35281	(156.94)
54	(1371)	B22	5392	(23.98)	2864	(12.74)	6746	(30.01)	4090	(18.19)	3310	(14.72)
		B22A	18669	(83.04)	6263	(27.86)	19276	(87.74)	16920	(75.26)	14782	(65.75)
		B22X	40530	(180.28)	16973	(75.50)	42825	(190.49)	36733	(163.39)	32092	(142.75)
60	(1524)	B22	4718	(20.99)	2631	(11.70)	6093	(27.10)	3616	(16.08)	2936	(13.06)
		B22A	17940	(79.80)	5340	(23.75)	19244	(85.60)	15781	(70.20)	13141	(58.45)
		B22X	38948	(173.25)	14471	(64.37)	41779	(185.84)	34260	(152.39)	28529	(126.90)
66	(1676)	B22	4202	(18.69)	2434	(10.83)	5441	(24.20)	3242	(14.42)	2634	(11.71)
		B22A	17134	(76.21)	4587	(20.40)	18712	(83.23)	14521	(64.59)	11328	(50.39)
		B22X	37198	(165.46)	12431	(55.29)	40624	(180.70)	31525	(140.23)	24593	(109.39)
72	(1829)	B22	3791	(16.86)	2264	(10.07)	4869	(21.66)	2936	(13.06)	2381	(10.59)
		B22A	16251	(72.29)	3968	(17.65)	18129	(80.64)	13141	(58.45)	9524	(42.36)
		B22X	35281	(156.94)	10753	(47.83)	39358	(175.07)	28529	(126.90)	20676	(91.97)
78	(1981)	B22	3456	(15.37)	2116	(9.41)	4412	(19.62)	2680	(11.92)	2166	(9.63)
		B22A	15291	(68.02)	3456	(15.37)	17496	(77.82)	11642	(51.78)	8115	(36.10)
		B22X	33197	(147.67)	9366	(41.66)	37984	(168.96)	25275	(112.43)	17617	(78.36)
84	(2133)	B22	3176	(14.13)	1984	(8.82)	4037	(17.96)	2461	(10.95)	1980	(8.81)
		B22A	14255	(63.41)	3028	(13.47)	16812	(74.78)	10076	(44.82)	6998	(31.13)
		B22X	30947	(137.66)	8206	(36.50)	36499	(162.35)	21875	(97.30)	15192	(67.58)
90	(2286)	B22	2936	(13.06)	1867	(8.30)	3724	(16.56)	2270	(10.10)	1816	(8.08)
		B22A	13141	(58.45)	2667	(11.86)	16077	(71.51)	8778	(39.04)	6096	(27.11)
		B22X	28529	(126.90)	7227	(32.15)	34903	(155.25)	19057	(84.77)	13234	(58.87)
96	(2438)	B22	2728	(16.58)	1761	(7.83)	3456	(15.37)	2101	(9.34)	1671	(7.43)
		B22A	11951	(53.16)	2359	(10.49)	15291	(68.02)	7715	(34.32)	5357	(23.83)
		B22X	25945	(115.41)	6393	(28.44)	33197	(147.67)	16749	(74.50)	11630	(51.73)
102	(2591)	B22	2545	(11.32)	1664	(7.40)	3225	(14.34)	1951	(8.68)	1542**	(6.34)
		B22A	10678	(47.50)	2093	(9.31)	14455	(64.30)	6834	(30.40)	4746	(21.11)
		B22X	23182	(103.12)	5672	(25.23)	31382	(139.59)	14836	(65.99)	10303	(45.83)
108	(2743)	B22	2381	(10.59)	1575	(7.00)	3022	(13.44)	1816	(8.08)	1426**	(68.60)
		B22A	9524	(42.36)	1867	(8.30)	13568	(60.35)	6096	(27.11)	4233	(18.83)
		B22X	20676	(91.97)	5059	(22.50)	29456	(131.03)	13234	(58.87)	9190	(40.88)
114	(2895)	B22	2234	(9.94)	1494	(6.64)	2842	(12.64)	1694	(7.53)	1322**	(5.88)
		B22A	8548	(38.02)	1675	(7.45)	12630	(56.18)	5471	(24.33)	3799**	(16.90)
		B22X	18558	(82.55)	4539	(20.19)	27420	(121.97)	11877	(52.83)	8247	(36.68)
120	(3048)	B22	2101	(9.34)	1418	(6.31)	2680	(11.92)	1583**	(7.04)	1228**	(5.46)
		B22A	7715	(34.32)	1512	(6.72)	11642	(51.78)	4937	(21.96)	3429**	(15.25)
		B22X	16749	(74.50)	4097	(18.22)	25275	(112.43)	10718	(47.67)	7444	(33.11)

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

Channel & Combinations