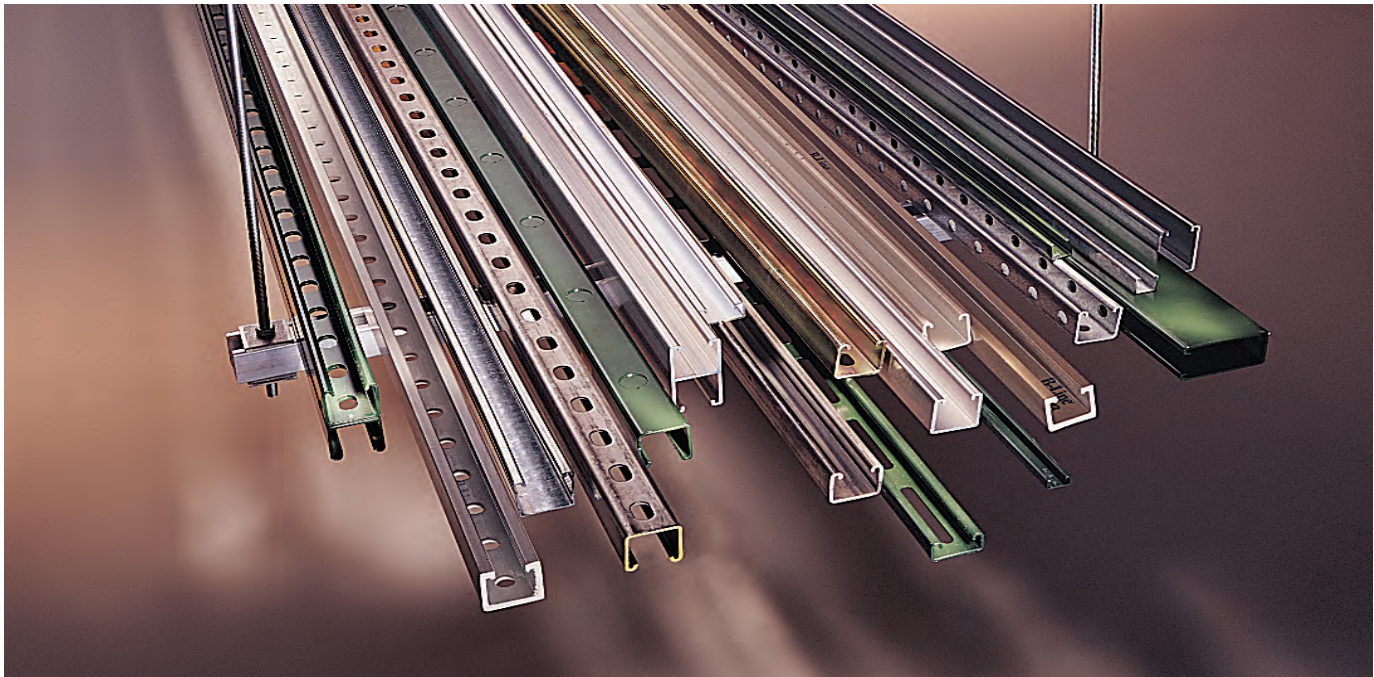


# Metal framing channels



## Channel

Metal framing channel is cold formed on our modern rolling mills from 12 Ga. (2.6mm) and 14 Ga. (1.9mm) low carbon steel strips. A continuous slot with inturned lips provides the ability to make attachments at any point.

## Lengths & Tolerances

All channels excluding 'SH' style  $\pm 1/8"$  (3.2mm) on 10' (3.05m) and  $\pm 3/16"$  (4.76mm) on 20' (6.09m)  
 All 'SH' channels only  $\pm 1/4"$  (6.35mm) on 10' (3.05m) and  $\pm 1/2"$  (12.70mm) on 20' (6.09m)  
 Custom lengths are available upon request.

## Slots

Slotted series of channels offer full flexibility. A variety of pre-punched slot patterns eliminate the need for precise field measuring for hole locations. Slots offer wide adjustments in the alignment and bolt sizing.

## Holes

A variety of pre-punched  $9/16"$  (14.3 mm) diameter hole patterns are available in our channels. These hole patterns provide an economical alternative to costly field drilling required for many applications.

## Knockouts

When used with series B217-20 Closure Strips, knockout channels can be used to provide an economical U.L. listed surface raceway. Channels are furnished with  $7/8"$  (22.2 mm) knockouts on 6" (152 mm) centers, allowing for perfect fixture alignment on spans up to 20' (6.09 m).

## Materials & Finishes (Unless otherwise noted)

### Steel: Plain & Pre-galvanized

12 Ga. (2.6) and 14 Ga. (1.9)

Note: A minimum order may apply on special material and finishes.

## Design Load (Steel & Stainless Steel)

The design loads given for strut beam loads are based on a simple beam condition using an allowable stress of 25,000 psi. This allowable stress results in a safety factor of 1.68. This is based upon virgin steel minimum yield strength of 33,000 psi cold worked during rolling to an average yield stress of 42,000 psi. For aluminum channel loading multiply steel loading by a factor of 0.38.

Finish Code	Finish	Specification
PLN	Plain	ASTM A1011, 33,000 PSI min. yield
GRN	DURA GREEN™	
GLV	Pre-Galvanized	ASTM A653 33,000 PSI min. yield
HDG	Hot-Dipped Galvanized	ASTM A123
YZN	Yellow Zinc Chromate	ASTM B633 SC3 Type II
SS4	Stainless Steel Type 304	ASTM A240
SS6	Stainless Steel Type 316	ASTM A240
AL	Aluminum	Aluminum 6063-T6



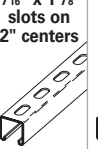
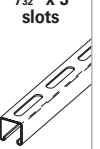
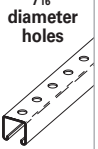


## Welding

Weld spacing is maintained between 2 1/2 inches (63.5 mm) and 4 inches (101.6 mm) on center. Through high quality control testing of welded channels and continuous monitoring of welding equipment, we provide the most consistent combination channels available today.

## Metric

Metric dimensions are shown in parentheses. Unless noted, all metric dimensions are in millimeters.

## Selection Chart for Channels, Materials and Hole Patterns

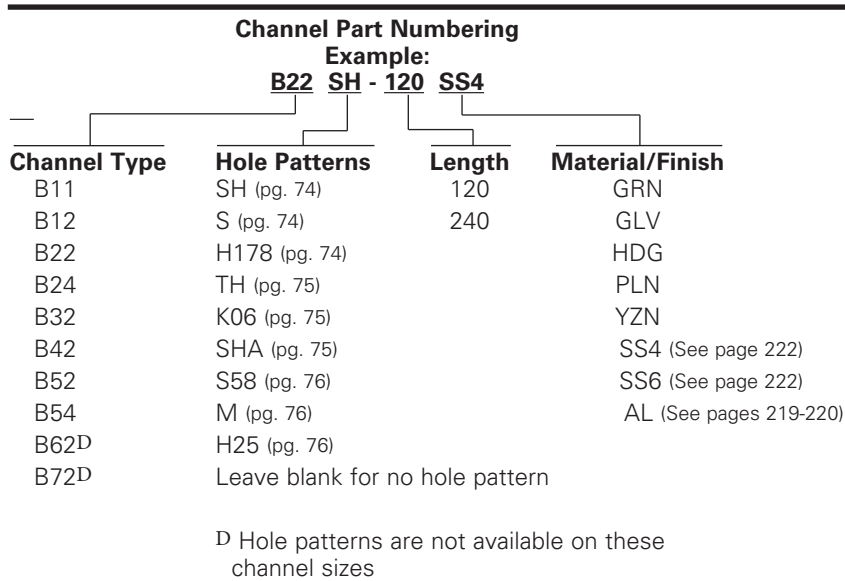
Channel Type	Channel Dimensions		Material & Thickness*				Channel Hole Pattern**				
	Height 	Width 	Stainless Steel				SH 	S 	H1 <sup>7</sup> / <sub>8</sub> 	TH 	KO6 
			Steel	Alum.	Type 304	Type 316					
			<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>					
<b>B11</b>	3 <sup>1</sup> / <sub>4</sub> " (82.5)	1 <sup>5</sup> / <sub>8</sub> " (41.3)	12 Ga.	.105	–	–	<u>1</u>	<u>1</u>	<u>1</u>	–	<u>1</u>
<b>B12</b>	2 <sup>7</sup> / <sub>16</sub> " (61.9)	1 <sup>5</sup> / <sub>8</sub> " (41.3)	12 Ga.	.105	–	–	<u>1</u> <u>2</u>	<u>1</u>	<u>1</u> <u>2</u>	–	<u>1</u> <u>2</u>
<b>B22</b>	1 <sup>5</sup> / <sub>8</sub> " (41.3)	1 <sup>5</sup> / <sub>8</sub> " (41.3)	12 Ga.	.105	12 Ga.	12 Ga.	<u>1</u> <u>2</u> <u>3</u> <u>4</u>	<u>1</u> <u>3</u>	<u>1</u> <u>2</u> <u>3</u> <u>4</u>	<u>1</u>	<u>1</u> <u>2</u>
<b>B24</b>	1 <sup>5</sup> / <sub>8</sub> " (41.3)	1 <sup>5</sup> / <sub>8</sub> " (41.3)	14 Ga.	–	14 Ga.	14 Ga.	<u>1</u> <u>2</u> <u>3</u> <u>4</u>	<u>1</u>	<u>1</u> <u>2</u> <u>3</u> <u>4</u>	–	<u>1</u> <u>2</u>
<b>B32</b>	1 <sup>3</sup> / <sub>8</sub> " (34.9)	1 <sup>5</sup> / <sub>8</sub> " (41.3)	12 Ga.	–	12 Ga.	–	<u>1</u> <u>3</u>	<u>1</u>	<u>1</u> <u>3</u>	–	<u>1</u>
<b>B42</b>	1" (25.4)	1 <sup>5</sup> / <sub>8</sub> " (41.3)	12 Ga.	–	12 Ga.	–	<u>1</u> <u>3</u>	<u>1</u>	<u>1</u> <u>3</u>	–	<u>1</u>
<b>B52</b>	1 <sup>3</sup> / <sub>16</sub> " (20.6)	1 <sup>5</sup> / <sub>8</sub> " (41.3)	12 Ga.	–	12 Ga.	12 Ga.	<u>1</u> <u>3</u> <u>4</u>	<u>1</u>	<u>1</u>	–	<u>1</u>
<b>B54</b>	1 <sup>3</sup> / <sub>16</sub> " (20.6)	1 <sup>5</sup> / <sub>8</sub> " (41.3)	14 Ga.	.080	14 Ga.	14 Ga.	<u>1</u> <u>2</u> <u>3</u> <u>4</u>	<u>1</u>	<u>1</u> <u>2</u> <u>3</u> <u>4</u>	–	<u>1</u> <u>2</u>
<b>B62</b>	1 <sup>3</sup> / <sub>16</sub> " (20.6)	1 <sup>3</sup> / <sub>16</sub> " (20.6)	18 Ga.	–	–	–	–	–	–	–	–
<b>B72</b>	1 <sup>3</sup> / <sub>32</sub> " (10.3)	1 <sup>3</sup> / <sub>16</sub> " (20.6)	18 Ga.	–	–	–	–	–	–	–	–

The selection has been prepared to provide a reference for available channel, materials and hole patterns. Material types available for various hole patterns are defined by numbers 1 thru 4.

Some stainless steel channels with hole patterns are available on special order only.

\* Metric equivalent for thicknesses shown in chart.      \*\* 1 - Steel  
 12 Ga. = 2.6 mm                      18 Ga. = 1.2 mm                      2 - Aluminum  
 14 Ga. = 1.9 mm                      .105 = 2.6 mm                      3 - Type 304 Stainless Steel  
 16 Ga. = 1.5 mm                      .080 = 2.0 mm                      4 - Type 316 Stainless Steel

Properties may vary due to commercial tolerances of the material.



Reference page 48 for general fitting and standard finish specifications.

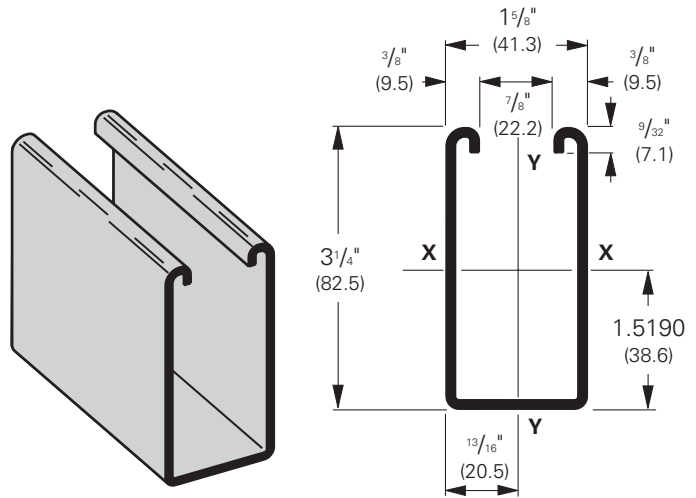
# B11 Channel, combinations & load data

## B11

- 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, Aluminum
- Weight: 3.05 Lbs./Ft. (4.54 kg/m)

### Note:

Aluminum loading, for B11, can be determined by multiplying load data times a factor of 0.38



Section Properties			X - X Axis			Y - Y Axis		
Channel	Weight lbs./ft. kg/m	Areas of Section sq. in. cm <sup>2</sup>	Moment of Inertia (I) in. <sup>4</sup> cm <sup>4</sup>	Section Modulus (S) in. <sup>3</sup> cm <sup>3</sup>	Radius of Gyration (r) in. cm	Moment of Inertia (I) in. <sup>4</sup> cm <sup>4</sup>	Section Modulus (S) in. <sup>3</sup> cm <sup>3</sup>	Radius of Gyration (r) in. cm
<b>B11</b>	3.059 (4.55)	.900 (5.81)	1.1203(46.63)	.6472 (10.61)	1.116 (2.83)	.4357(18.14)	.5362 (8.79)	.696 (1.77)
<b>B11A</b>	6.119 (9.11)	1.800(11.61)	6.3931(266.10)	1.9671(32.24)	1.885 (4.79)	.8714(36.27)	1.0725(17.58)	.696 (1.77)

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

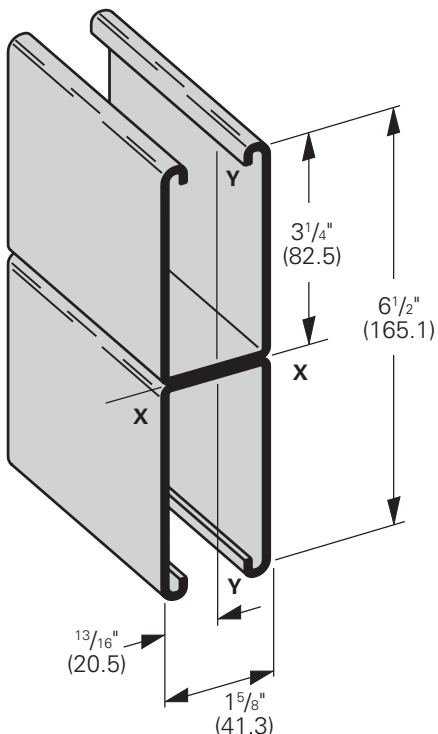
## Beam Loading

Beam Span In. mm	Channel Style	Uniform Load and Deflection				Uniform Load @ Deflection =			
		Lbs.	kN	In.	mm	1/240 Span		1/360 Span	
						Lbs.	kN	Lbs.	kN
24 (609)	<b>B11</b>	5130	(22.82)	.029	(.73)	5130	(22.82)	5130	(22.82)
	<b>B11A</b>	5130*	(22.82)	.005	(.13)	5130*	(22.82)	5130*	(22.82)
36 (914)	<b>B11</b>	3488	(15.51)	.065	(1.65)	3488	(15.51)	3488	(15.51)
	<b>B11A</b>	5130*	(22.82)	.017	(.43)	5130*	(22.82)	5130*	(22.82)
48 (1219)	<b>B11</b>	2616	(11.63)	.117	(2.97)	2616	(11.63)	2616	(11.63)
	<b>B11A</b>	5130*	(22.82)	.040	(1.01)	5130*	(22.82)	5130*	(22.82)
60 (1524)	<b>B11</b>	2093	(9.31)	.183	(4.65)	2093	(9.31)	1908	(8.49)
	<b>B11A</b>	5130*	(22.82)	.079	(2.00)	5130*	(22.82)	5130*	(22.82)
72 (1829)	<b>B11</b>	1744	(7.76)	.263	(6.68)	1744	(7.76)	1325	(5.89)
	<b>B11A</b>	5130*	(22.82)	.136	(3.45)	5130*	(22.82)	5130*	(22.82)
84 (2133)	<b>B11</b>	1495	(6.65)	.358	(9.09)	1460	(6.49)	974	(4.33)
	<b>B11A</b>	4552	(20.25)	.191	(4.85)	4552	(20.25)	4552	(20.25)
96 (2438)	<b>B11</b>	1308	(5.82)	.468	(11.89)	1118	(4.97)	745	(3.31)
	<b>B11A</b>	3983	(17.72)	.250	(6.35)	3983	(17.72)	3983	(17.72)
108 (2743)	<b>B11</b>	1163	(5.17)	.592	(15.03)	884	(3.93)	589	(2.62)
	<b>B11A</b>	3541	(15.75)	.317	(8.05)	3541	(15.75)	3353	(14.91)
120 (3048)	<b>B11</b>	1046	(4.65)	.731	(18.57)	716	(3.18)	477	(2.12)
	<b>B11A</b>	3187	(14.17)	.391	(9.93)	3187	(14.17)	2716	(12.08)
144 (3657)	<b>B11</b>	872	(3.88)	1.053	(26.74)	497	(2.21)	331	(1.47)
	<b>B11A</b>	2656	(11.81)	.563	(14.30)	2656	(11.81)	1886	(8.39)
168 (4267)	<b>B11</b>	747	(3.32)	1.433	(36.40)	365	(1.62)	243	(1.08)
	<b>B11A</b>	2276	(10.12)	.766	(19.45)	2078	(9.24)	1386	(6.16)
192 (4877)	<b>B11</b>	654	(2.91)	1.871	(47.52)	280	(1.24)	186	(0.83)
	<b>B11A</b>	1992	(8.86)	1.001	(25.42)	1591	(7.08)	1061	(4.72)
216 (5486)	<b>B11</b>	581	(2.58)	2.368	(60.15)	221	(0.98)	147	(0.65)
	<b>B11A</b>	1770	(7.87)	1.267	(32.18)	1257	(5.59)	838	(3.73)
240 (6096)	<b>B11</b>	523	(2.32)	2.924	(74.27)	179	(0.79)	119	(0.53)
	<b>B11A</b>	1593	(7.08)	1.564	(39.72)	1018	(4.53)	679	(3.02)

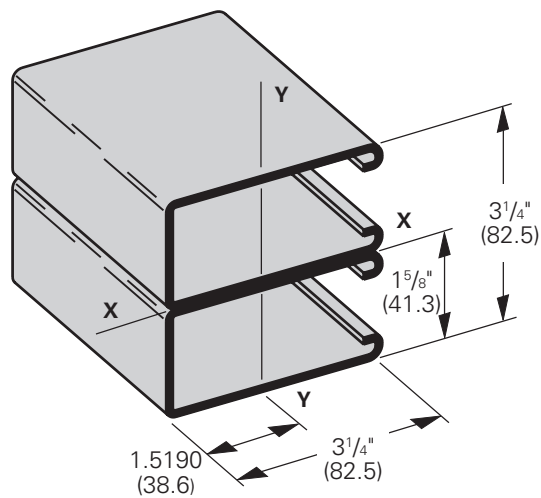
Based on simple beam condition using an allowable design stress of 25,000 psi (172 MPa) in accordance with MFMA, with adequate lateral bracing (see page 12 for further explanation). Actual yield point of cold rolled steel is 42,000 psi (289 MPa). To determine concentrated load capacity at mid span, multiply uniform load by 0.5 and corresponding deflection by 0.8. \*Failure determined by weld shear.

Reference page 48 for general fitting and standard finish specifications.

# B11 Beam & column loading data



**B11A**  
Wt. 6.10 Lbs./Ft. (9.08 kg/m)



**B11B**  
Wt. 6.10 Lbs./Ft. (9.08 kg/m)

## 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	
		Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN
24 (609)	<b>B11</b>	8190	(36.43)	4477	(19.91)	8446	(37.57)	7783	(34.62)	7311	(32.52)
	<b>B11A</b>	17701	(78.74)	8267	(36.77)	17778	(79.08)	17572	(78.16)	17416	(77.47)
36 (914)	<b>B11</b>	7311	(32.52)	4183	(18.61)	7838	(34.86)	6503	(28.93)	5612	(24.96)
	<b>B11A</b>	17416	(77.47)	8189	(36.42)	17590	(78.24)	17127	(76.18)	16774	(74.61)
48 (1219)	<b>B11</b>	6214	(27.64)	3783	(16.83)	7053	(31.37)	4988	(22.19)	3816	(16.97)
	<b>B11A</b>	17016	(75.69)	8079	(35.94)	17327	(77.07)	16503	(73.41)	15876	(70.62)
60 (1524)	<b>B11</b>	4988	(22.19)	3279	(14.58)	6140	(27.31)	3595	(15.99)	2790	(12.41)
	<b>B11A</b>	16503	(73.41)	7727	(34.37)	16988	(75.56)	15701	(69.84)	14721	(65.48)
72 (1829)	<b>B11</b>	3816	(16.97)	2444	(10.87)	5146	(22.89)	2790	(12.41)	2213	(9.84)
	<b>B11A</b>	15876	(70.62)	6160	(27.40)	16574	(73.72)	14721	(65.48)	13310	(59.20)
84 (2133)	<b>B11</b>	3063	(13.62)	1897	(8.44)	4133	(18.38)	2291	(10.19)	1846	(8.21)
	<b>B11A</b>	15135	(67.32)	4961	(22.07)	16084	(71.54)	13563	(60.33)	11642	(51.78)
96 (2438)	<b>B11</b>	2564	(11.40)	1532	(6.81)	3398	(15.11)	1953	(8.69)	1591	(7.08)
	<b>B11A</b>	14279	(63.51)	4045	(17.99)	15520	(69.03)	12226	(54.38)	9717	(43.22)
108 (2743)	<b>B11</b>	2213	(9.84)	1273	(5.66)	2886	(12.84)	1708	(7.60)	1401	(6.23)
	<b>B11A</b>	13310	(59.20)	3337	(14.84)	14880	(66.19)	10712	(47.65)	7725	(34.36)
120 (3048)	<b>B11</b>	1953	(8.69)	1081	(4.81)	2514	(11.18)	1522	(6.77)	1251**	(5.56)
	<b>B11A</b>	12226	(54.38)	2784	(12.38)	14164	(63.00)	9019	(40.12)	6257**	(27.83)
144 (3657)	<b>B11</b>	1591	(7.08)	816	(3.63)	2011	(8.94)	1251**	(5.56)	1026**	(4.56)
	<b>B11A</b>	9717	(43.22)	1990	(8.85)	12508	(55.64)	6257**	(27.83)	4345**	(19.33)
168 (4267)	<b>B11</b>	1347	(5.99)	642	(2.85)	1687	(7.50)	1058**	(4.70)	859**	(3.82)
	<b>B11A</b>	7183	(31.95)	1464	(6.51)	10550	(46.93)	4597**	(20.45)	3192**	(14.20)
192 (4877)	<b>B11</b>	1167**	(5.19)	519	(2.31)	1459	(6.49)	910**	(4.05)	-	-
	<b>B11A</b>	5499**	(24.46)	1121	(4.98)	8330	(37.05)	3520**	(15.66)	-	-
216 (5486)	<b>B11</b>	1026**	(4.56)	429	(1.91)	1285**	(5.71)	-	-	-	-
	<b>B11A</b>	4345**	(19.33)	885	(3.93)	6582**	(29.28)	-	-	-	-
40 (6096)	<b>B11</b>	910**	(4.05)	360	(1.60)	1148**	(5.10)	-	-	-	-
	<b>B11A</b>	3520**	(15.66)	717	(3.19)	5331**	(23.71)	-	-	-	-

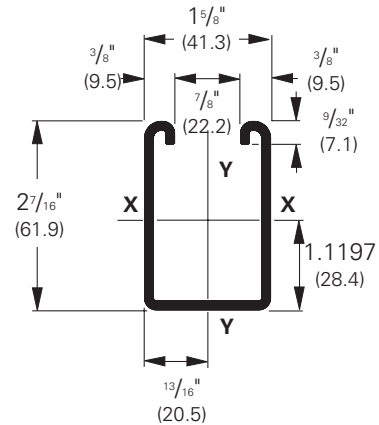
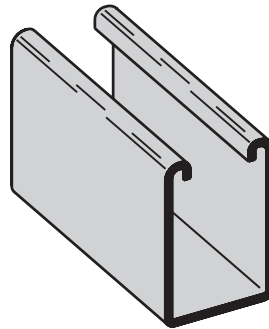
\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

Reference page 48 for general fitting and standard finish specifications.

# B12 Channel, combinations

## B12

- 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, Aluminum
- Weight: 2.47 Lbs./Ft. (3.67 kg/m)

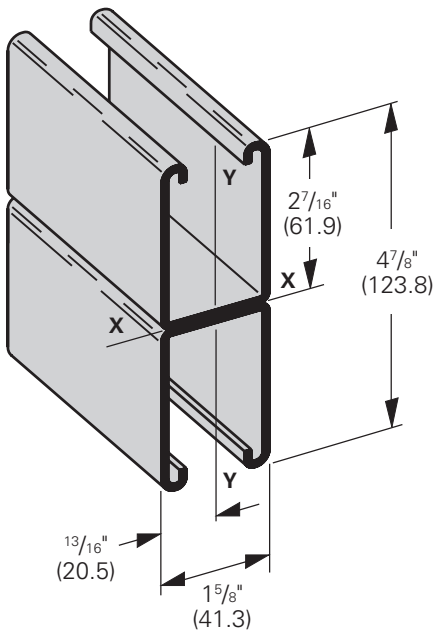


### Note:

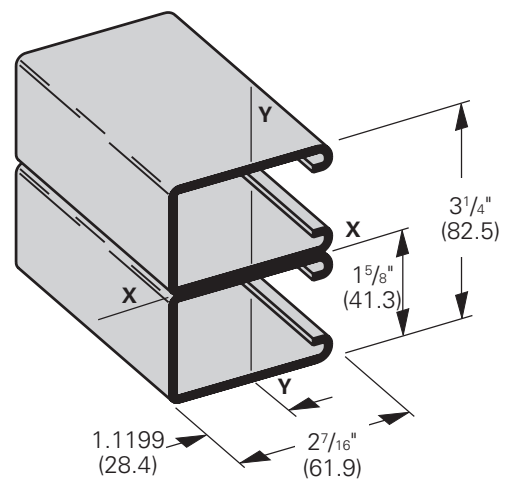
Aluminum loading, for B12, can be determined by multiplying load data times a factor of 0.38

Section Properties			X - X Axis				Y - Y Axis			
Channel	Weight lbs./ft. kg/m	Areas of Section sq. in. cm <sup>2</sup>	Moment of Inertia (I) in. <sup>4</sup> cm <sup>4</sup>	Section Modulus (S) in. <sup>3</sup> cm <sup>3</sup>	Radius of Gyration (r) in. cm	Moment of Inertia (I) in. <sup>4</sup> cm <sup>4</sup>	Section Modulus (S) in. <sup>3</sup> cm <sup>3</sup>	Radius of Gyration (r) in. cm		
<b>B12</b>	2.484 (3.70)	.731 (4.71)	.5349 (22.26)	.4061 (6.65)	.856 (2.17)	.3377 (14.06)	.4156 (6.81)	.680 (1.73)		
<b>B12A</b>	4.969 (7.40)	1.462 (9.43)	2.9036 (120.86)	1.1915 (19.52)	1.409 (3.58)	.6756 (28.12)	.8315 (13.63)	.680 (1.73)		

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



**B12A**  
Wt. 4.94 Lbs./Ft. (7.35 kg/m)



**B12B**  
Wt. 4.94 Lbs./Ft. (7.35 kg/m)

Reference page 48 for general fitting and standard finish specifications.

# B12 Beam & column 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	
		In.	mm	Lbs.	kN	Lbs.	kN	Lbs.	kN
12 (305)	<b>B12</b>	3880	(17.26)	.009	(.23)	3880	(17.26)	3880	(17.26)
	<b>B12A</b>	3880*	(17.26)	.001	(.02)	3880*	(17.26)	3880*	(17.26)
24 (609)	<b>B12</b>	3273	(14.56)	.038	(.96)	3273	(14.56)	3273	(14.56)
	<b>B12A</b>	3880*	(17.26)	.008	(.20)	3880*	(17.26)	3880*	(17.26)
36 (914)	<b>B12</b>	2182	(9.70)	.086	(2.18)	2182	(9.70)	2182	(9.70)
	<b>B12A</b>	3880*	(17.26)	.028	(.71)	3880*	(17.26)	3880*	(17.26)
48 (1219)	<b>B12</b>	1636	(7.28)	.153	(3.88)	1636	(7.28)	1421	(6.32)
	<b>B12A</b>	3880*	(17.26)	.067	(1.70)	3880*	(17.26)	3880*	(17.26)
60 (1524)	<b>B12</b>	1309	(5.82)	.240	(6.09)	1309	(5.82)	909	(4.04)
	<b>B12A</b>	3847*	(17.11)	.130	(3.30)	3847*	(17.11)	3847*	(17.11)
72 (1829)	<b>B12</b>	1091	(4.85)	.345	(8.76)	947	(4.21)	632	(2.81)
	<b>B12A</b>	3206	(14.26)	.188	(4.77)	3206	(14.26)	3206	(14.26)
84 (2133)	<b>B12</b>	935	(4.16)	.470	(11.94)	696	(3.09)	464	(2.06)
	<b>B12A</b>	2748	(12.22)	.255	(6.48)	2748	(12.22)	2509	(11.16)
96 (2438)	<b>B12</b>	818	(3.64)	.614	(15.59)	533	(2.37)	355	(1.58)
	<b>B12A</b>	2404	(10.69)	.334	(8.48)	2404	(10.69)	1921	(8.54)
108 (2743)	<b>B12</b>	727	(3.23)	.777	(19.73)	421	(1.87)	281	(1.25)
	<b>B12A</b>	2137	(9.50)	.422	(10.72)	2137	(9.50)	1518	(6.75)
120 (3048)	<b>B12</b>	655	(2.93)	.959	(24.36)	341	(1.52)	227	(1.01)
	<b>B12A</b>	1924	(8.56)	.521	(13.23)	1844	(8.20)	1229	(5.47)

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.

## Column Loading

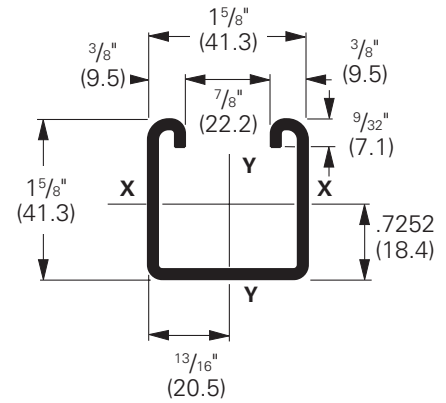
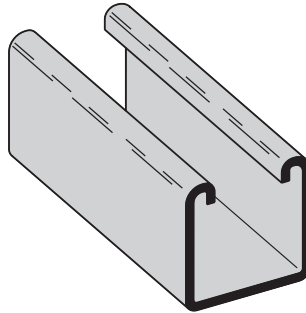
Unbraced Height In. mm	Channel Style	Max. Column Loading K = .80				Max. Column Loading (Loaded @ C.G.)					
		Loaded@ C.G.		Loaded@ Slot Face		K = .65		K = 1.0		K = 1.2	
		Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN
12 (305)	<b>B12</b>	10140	(45.10)	4752	(21.14)	10247	(45.58)	9965	(44.32)	9756	(43.40)
	<b>B12A</b>	20820	(92.61)	8023	(35.69)	20854	(92.76)	20763	(92.36)	20694	(92.05)
24 (609)	<b>B12</b>	9244	(41.12)	4514	(20.08)	9639	(42.87)	8629	(38.38)	7933	(35.29)
	<b>B12A</b>	20519	(91.27)	7956	(35.39)	20655	(91.88)	20293	(90.27)	20017	(89.04)
36 (914)	<b>B12</b>	7933	(35.29)	4137	(18.40)	8711	(35.75)	6786	(30.18)	5572	(24.78)
	<b>B12A</b>	20017	(89.04)	7844	(34.89)	20324	(90.40)	19509	(86.78)	18889	(84.02)
48 (1219)	<b>B12</b>	6386	(28.40)	3638	(16.18)	7562	(33.64)	4785	(21.28)	3717	(16.53)
	<b>B12A</b>	19315	(85.92)	7688	(34.20)	19861	(88.34)	18412	(81.90)	17309	(76.99)
60 (1524)	<b>B12</b>	4785	(21.28)	2963	(13.18)	6285	(27.96)	3523	(15.67)	2806	(12.48)
	<b>B12A</b>	18412	(81.90)	6941	(30.87)	19265	(85.69)	17002	(75.63)	15278	(67.96)
72 (1829)	<b>B12</b>	3717	(16.53)	2197	(9.77)	4964	(22.08)	2806	(12.48)	2271	(10.10)
	<b>B12A</b>	17309	(76.99)	5334	(23.73)	18536	(82.45)	15278	(67.96)	12795	(56.91)
84 (2133)	<b>B12</b>	3052	(13.57)	1717	(7.64)	3994	(17.76)	2345	(10.43)	1913	(8.51)
	<b>B12A</b>	16005	(71.19)	4176	(18.57)	17675	(78.62)	13240	(58.89)	9884	(43.96)
96 (2438)	<b>B12</b>	2600	(11.56)	1391	(6.19)	3350	(14.90)	2019	(8.98)	1650	(7.34)
	<b>B12A</b>	14500	(64.50)	3328	(14.80)	16682	(74.20)	10889	(48.43)	7567	(33.66)
108 (2743)	<b>B12</b>	2271	(10.10)	1155	(5.14)	2893	(12.87)	1773	(7.88)	1446	(6.43)
	<b>B12A</b>	12795	(56.91)	2692	(11.97)	15556	(69.19)	8610	(38.30)	5979	(26.59)
120 (3048)	<b>B12</b>	2019	(8.98)	977	(4.34)	2553	(11.35)	1577	(7.01)	1279**	(5.69)
	<b>B12A</b>	10889	(48.43)	2202	(9.79)	14298	(63.60)	6974	(31.02)	4843**	(21.54)

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

# 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)

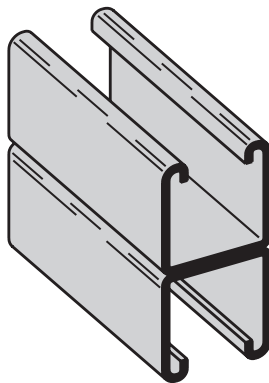


**Note:**

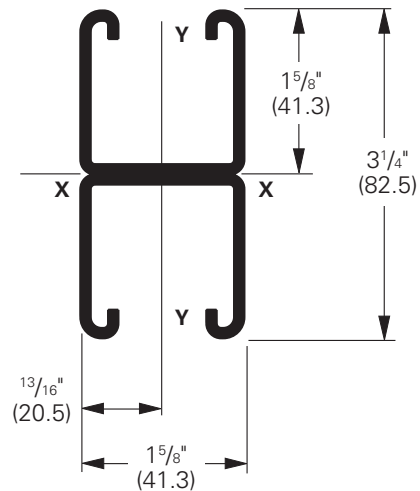
Aluminum loading, for B22 & B22A, can be determined by multiplying load data times a factor of 0.38

Section Properties			X - X Axis				Y - Y Axis			
Channel	Weight lbs./ft. kg/m	Areas of Section sq. in. cm <sup>2</sup>	Moment of Inertia (I) in. <sup>4</sup> cm <sup>4</sup>	Section Modulus (S) in. <sup>3</sup> cm <sup>3</sup>	Radius of Gyration (r) in. cm	Moment of Inertia (I) in. <sup>4</sup> cm <sup>4</sup>	Section Modulus (S) in. <sup>3</sup> cm <sup>3</sup>	Radius of Gyration (r) in. cm		
<b>B22</b>	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)		
<b>B22A</b>	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)		
<b>B22X</b>	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)		

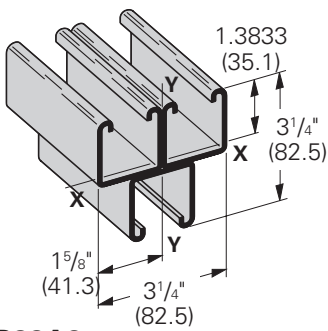
Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.



**B22A**  
Wt. 3.80 Lbs./Ft. (5.65 kg/m)

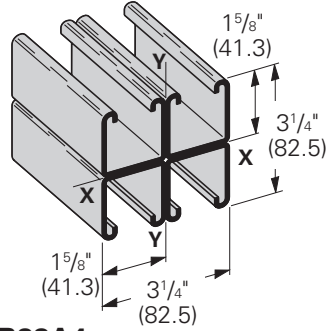


# B22 Combinations



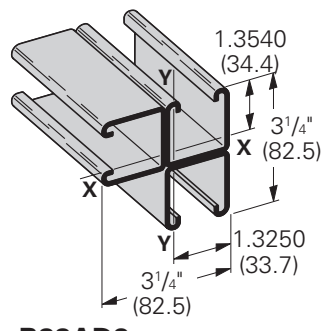
**B22A3**

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



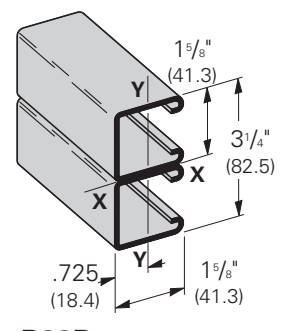
**B22A4**

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



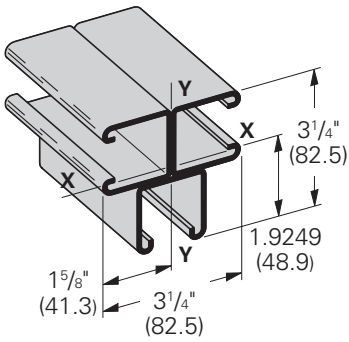
**B22AD3**

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



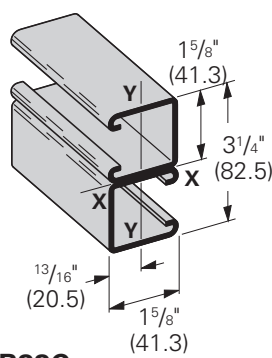
**B22B**

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



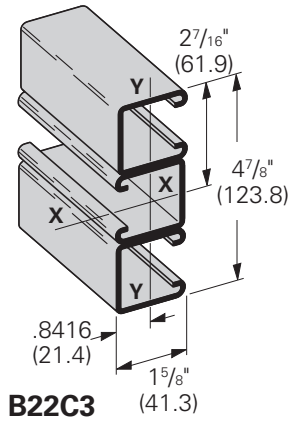
**B22B3**

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



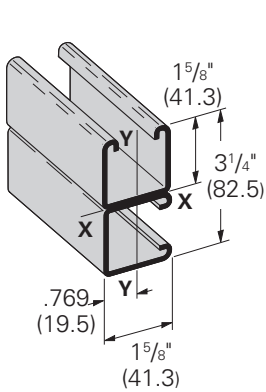
**B22C**

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



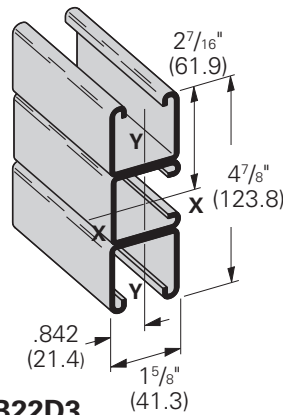
**B22C3**

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



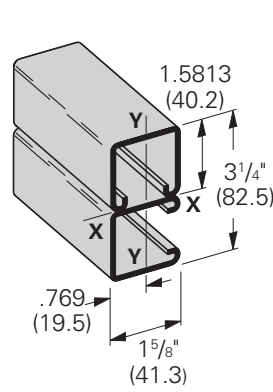
**B22D**

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



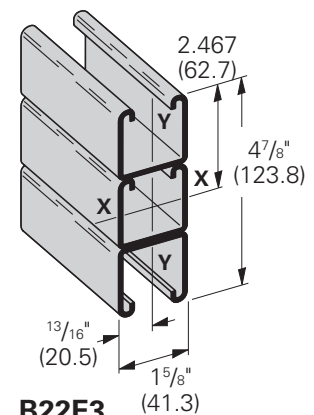
**B22D3**

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



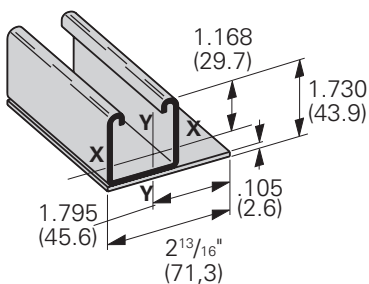
**B22E**

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



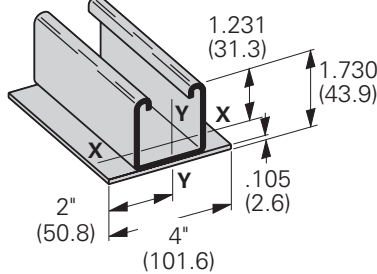
**B22E3**

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



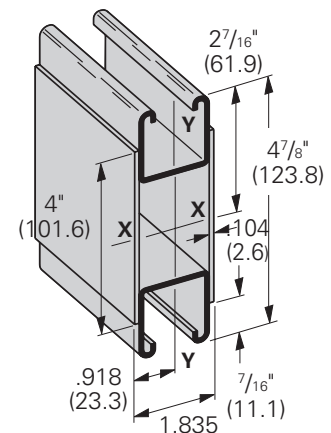
**B22LPL**

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)

Reference page 48 for general fitting and standard finish specifications.

Channel & Combinations



# B22 Beam loading data

## Beam Loading

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

Reference page 48 for general fitting and standard finish specifications.

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

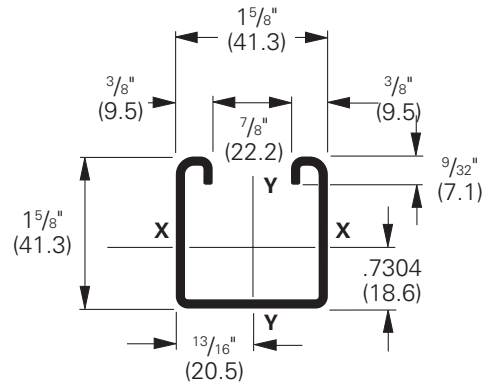
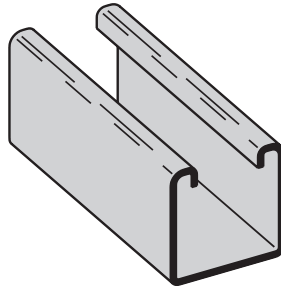
\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

Reference page 48 for general fitting and standard finish specifications.

# B24 Channel & combinations

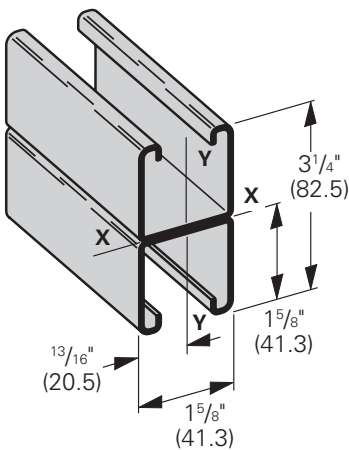
## B24

- Thickness: 14 Gauge (1.9 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
- Weight: 1.40 Lbs./Ft. (2.08 kg/m)

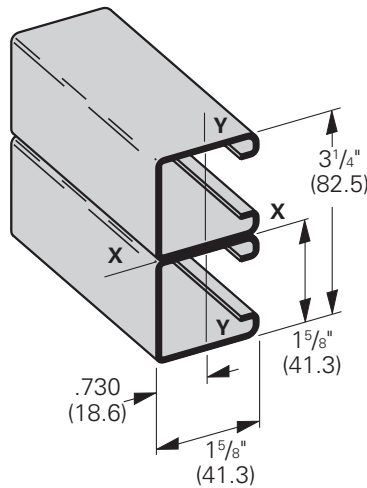


Section Properties			X - X Axis			Y - Y Axis		
Channel	Weight lbs./ft. kg/m	Areas of Section sq. in. cm <sup>2</sup>	Moment of Inertia (I) in. <sup>4</sup> cm <sup>4</sup>	Section Modulus (S) in. <sup>3</sup> cm <sup>3</sup>	Radius of Gyration (r) in. cm	Moment of Inertia (I) in. <sup>4</sup> cm <sup>4</sup>	Section Modulus (S) in. <sup>3</sup> cm <sup>3</sup>	Radius of Gyration (r) in. cm
<b>B24</b>	1.442 (2.15)	.424 (2.74)	.1494 (6.22)	.1670 (2.74)	.594 (1.51)	.1857 (7.73)	.2286 (3.75)	.662 (1.68)
<b>B24A</b>	2.884 (4.29)	.848 (5.47)	.7514 (31.28)	.4624 (7.58)	.941 (2.39)	.3713 (15.45)	.4570 (7.49)	.662 (1.68)

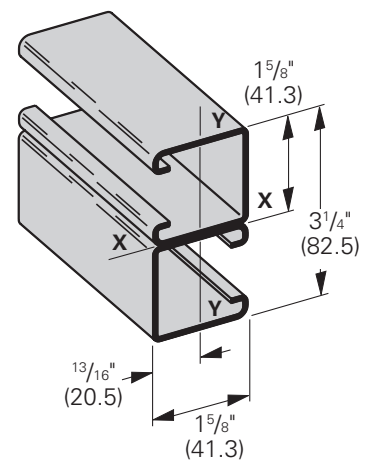
Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.



**B24A**  
Wt. 2.80 Lbs./Ft. (4.16 kg/m)



**B24B**  
Wt. 2.80 Lbs./Ft. (4.16 kg/m)



**B24C**  
Wt. 2.80 Lbs./Ft. (4.16 kg/m)

Reference page 48 for general fitting and standard finish specifications.

# B24 Beam & column loading data

## Beam Loading

Beam Span In. mm		Channel Style	Uniform Load and Deflection				Uniform Load @ Deflection =			
			Lbs. kN		In. mm		<sup>1</sup> / <sub>240</sub> Span Lbs. kN		<sup>1</sup> / <sub>360</sub> Span Lbs. kN	
12	(305)	<b>B24</b>	1750	(7.78)	.014	(.35)	1750	(7.78)	1750	(7.78)
		<b>B24A</b>	1750*	(7.78)	.002	(.05)	1750*	(7.78)	1750*	(7.78)
24	(609)	<b>B24</b>	1379	(6.13)	.057	(1.45)	1379	(6.13)	1379	(6.13)
		<b>B24A</b>	1750*	(7.78)	.014	(.35)	1750*	(7.78)	1750*	(7.78)
36	(914)	<b>B24</b>	919	(4.09)	.128	(3.25)	919	(4.09)	720	(3.20)
		<b>B24A</b>	1750*	(7.78)	.048	(1.22)	1750*	(7.78)	1750*	(7.78)
48	(1219)	<b>B24</b>	689	(3.06)	.227	(5.76)	607	(2.70)	405	(1.80)
		<b>B24A</b>	1750*	(7.78)	.115	(2.92)	1750*	(7.78)	1750*	(7.78)
60	(1524)	<b>B24</b>	551	(2.45)	.355	(9.02)	389	(1.73)	259	(1.15)
		<b>B24A</b>	1518	(6.75)	.195	(4.95)	1518	(6.75)	1294	(5.75)
72	(1829)	<b>B24</b>	460	(2.04)	.511	(12.98)	270	(1.20)	180	(0.80)
		<b>B24A</b>	1265	(5.63)	.281	(7.14)	1265	(5.63)	898	(3.99)
84	(2133)	<b>B24</b>	394	(1.75)	.695	(17.65)	198	(0.88)	132	(0.59)
		<b>B24A</b>	1084	(4.82)	.383	(9.73)	990	(4.40)	660	(2.93)
96	(2438)	<b>B24</b>	345	(1.53)	.908	(23.06)	152	(0.67)	101	(0.45)
		<b>B24A</b>	949	(4.22)	.500	(12.70)	758	(3.37)	505	(2.24)
108	(2743)	<b>B24</b>	306	(1.36)	1.149	(29.18)	120	(0.53)	80	(0.35)
		<b>B24A</b>	843	(3.75)	.633	(16.08)	599	(2.66)	399	(1.77)
120	(3048)	<b>B24</b>	276	(1.23)	1.419	(36.04)	97	(0.43)	65	(0.29)
		<b>B24A</b>	759	(3.37)	.782	(19.86)	485	(2.16)	323	(1.44)

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.

## 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	
			Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN
12	(305)	<b>B24</b>	6441	(28.65)	3077	(13.69)	6509	(28.95)	6330	(28.16)	6198	(27.57)
		<b>B24A</b>	13212	(58.77)	4988	(22.19)	13237	(58.88)	13171	(58.59)	13121	(58.36)
24	(609)	<b>B24</b>	5874	(26.13)	2896	(12.88)	6124	(27.24)	5483	(24.39)	5038	(22.41)
		<b>B24A</b>	12993	(57.79)	4924	(21.90)	13092	(58.23)	12828	(57.06)	12627	(56.17)
36	(914)	<b>B24</b>	5038	(22.41)	2619	(11.65)	5535	(24.62)	4302	(19.13)	3516	(15.64)
		<b>B24A</b>	12627	(56.17)	4819	(21.43)	12851	(57.16)	12256	(54.52)	11804	(52.51)
48	(1219)	<b>B24</b>	4043	(17.98)	2272	(10.10)	4800	(21.35)	3008	(13.38)	2324	(10.34)
		<b>B24A</b>	12115	(53.89)	4675	(20.79)	12512	(55.65)	11456	(50.96)	10651	(47.38)
60	(1524)	<b>B24</b>	3008	(13.38)	1873	(8.33)	3978	(17.69)	2200	(9.78)	1740	(7.74)
		<b>B24A</b>	11456	(50.96)	4020	(17.88)	12078	(53.72)	10427	(46.38)	9169	(40.78)
72	(1829)	<b>B24</b>	2324	(10.34)	1562	(6.95)	3123	(13.89)	1740	(7.74)	1397	(6.21)
		<b>B24A</b>	10651	(47.38)	3048	(13.56)	11546	(51.36)	9169	(40.78)	7358	(32.73)
84	(2133)	<b>B24</b>	1898	(8.44)	1340	(5.96)	2502	(11.13)	1444	(6.42)	1168	(5.19)
		<b>B24A</b>	9700	(43.15)	2362	(10.50)	10918	(48.56)	7683	(34.17)	5464	(24.30)
96	(2438)	<b>B24</b>	1608	(7.15)	1175	(5.22)	2089	(9.29)	1236	(5.50)	1000	(4.45)
		<b>B24A</b>	8602	(38.26)	1866	(8.30)	10194	(45.34)	6024	(26.79)	4184	(18.61)
108	(2743)	<b>B24</b>	1397	(6.21)	1046	(4.65)	1796	(7.99)	1078	(4.79)	870**	(3.87)
		<b>B24A</b>	7358	(32.73)	1498	(6.66)	9373	(41.69)	4760	(21.17)	3306	(14.70)
120	(3048)	<b>B24</b>	1236	(5.50)	942	(4.19)	1578	(7.02)	953**	(4.24)	764**	(3.40)
		<b>B24A</b>	6024	(26.79)	1216	(5.41)	8455	(37.61)	3856	(17.15)	2677**	(11.91)

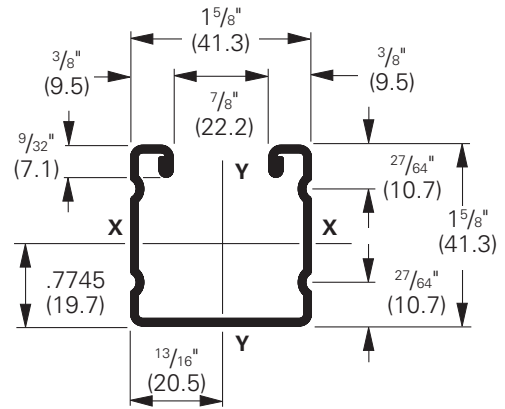
\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

Reference page 48 for general fitting and standard finish specifications.

# B26 Channel & combinations

## B26

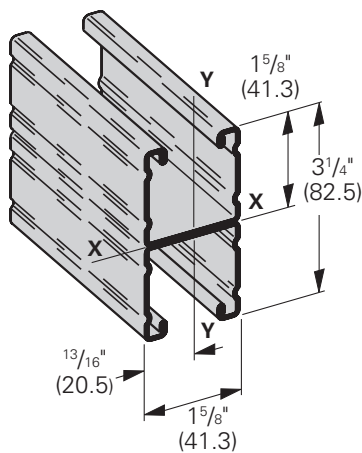
- Thickness: 16 Gauge (1.5 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, DURA GREEN™, Pre-Galvanized
- Weight: 1.12 Lbs./Ft. (1.66 kg/m)



## Section Properties

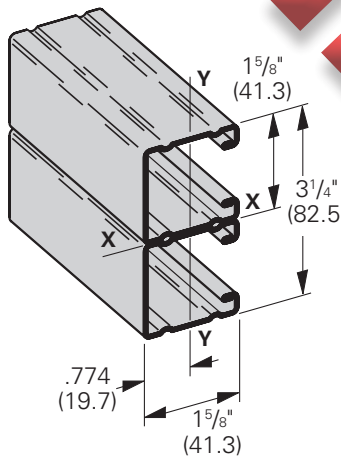
Channel	Weight lbs./ft. kg/m	Areas of Section sq. in. cm <sup>2</sup>	X - X Axis			Y - Y Axis		
			Moment of Inertia (I) in. <sup>4</sup> cm <sup>4</sup>	Section Modulus (S) in. <sup>3</sup> cm <sup>3</sup>	Radius of Gyration (r) in. cm	Moment of Inertia (I) in. <sup>4</sup> cm <sup>4</sup>	Section Modulus (S) in. <sup>3</sup> cm <sup>3</sup>	Radius of Gyration (r) in. cm
<b>B26</b>	1.234 (1.84)	.363 (2.34)	.1337 (5.57)	.1581 (2.59)	.607 (1.54)	.1564 (6.51)	.1925 (3.15)	.656 (1.67)
<b>B26A</b>	2.467 (3.67)	.726 (4.68)	.7086 (29.49)	.4361 (7.15)	.988 (2.51)	.3128 (13.02)	.3850 (6.31)	.656 (1.67)

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



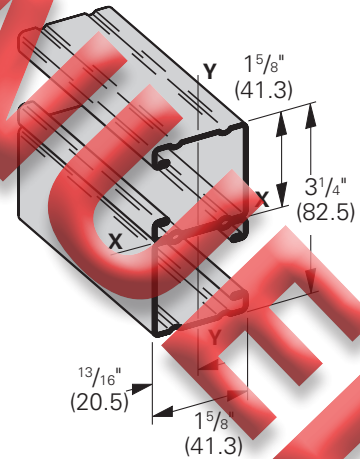
**B26A**

Wt. 2.24 Lbs./Ft. (3.33 kg/m)



**B26B**

Wt. 2.24 Lbs./Ft. (3.33 kg/m)



**B26C**

Wt. 2.24 Lbs./Ft. (3.33 kg/m)

Reference page 48 for general fitting and standard finish specifications.

# B26 Beam & column loading data

## Beam Loading

Beam Span In. mm	Channel Style	Uniform Load and Deflection				Uniform Load @ Deflection =			
		1/240 Span		1/360 Span		1/240 Span		1/360 Span	
		Lbs.	kN	In.	mm	Lbs.	kN	Lbs.	kN
12 (305)	B26	1220	(5.43)	.014	(.35)	1220	(5.43)	1220	(5.43)
	B26A	1220*	(5.43)	.001	(.02)	1220*	(5.43)	1220*	(5.43)
24 (609)	B26	1163	(5.17)	.057	(1.45)	1163	(5.17)	1163	(5.17)
	B26A	1220*	(5.43)	.012	(.30)	1220*	(5.43)	1220*	(5.43)
36 (914)	B26	775	(3.45)	.128	(3.25)	775	(3.45)	603	(2.68)
	B26A	1220*	(5.43)	.040	(1.01)	1220*	(5.43)	1220*	(5.43)
48 (1219)	B26	581	(2.58)	.228	(5.79)	509	(2,264)	339	(1.51)
	B26A	1220*	(5.43)	.096	(2.44)	1220*	(5.43)	1220*	(5.43)
60 (1524)	B26	465	(2.07)	.357	(9.07)	326	(1,45)	217	(0.96)
	B26A	1220*	(5.43)	.188	(4.77)	1220*	(5.43)	1076	(4.78)
72 (1829)	B26	388	(1.72)	.514	(13.05)	226	(1,45)	151	(0.96)
	B26A	1052	(4.68)	.281	(7.14)	1052	(4,68)	747	(3.32)
84 (2133)	B26	332	(1.48)	.699	(17.75)	166	(0.74)	111	(0.49)
	B26A	902	(4.01)	.383	(9.73)	824	(3.66)	549	(2.44)
96 (2438)	B26	291	(1.29)	.913	(23.19)	127	(0.56)	85	(0.38)
	B26A	789	(3.51)	.500	(12.70)	631	(2.81)	420	(1.87)
108 (2743)	B26	258	(1.15)	1.156	(29.36)	101	(0.45)	67	(0.30)
	B26A	702	(3.12)	.633	(16.08)	498	(2.21)	332	(1.48)
120 (3048)	B26	233	(1.03)	1.427	(36.24)	81	(0.36)	54	(0.24)
	B26A	631	(2.17)	.782	(19.86)	404	(1.80)	269	(1.19)

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.

## 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			
		Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN		
12 (305)	B26	4002	(17.80)	2216	(9.86)	4032	(17.93)	3952	(17.58)	3891	(17.31)		
	B26A	8151	(36.26)	3630	(16.15)	8163	(36.31)	8133	(36.18)	8109	(36.07)		
24 (609)	B26	3740	(16.63)	2109	(9.38)	3857	(17.16)	3554	(15.81)	3336	(14.84)		
	B26A	8051	(35.81)	3591	(15.97)	8096	(36.04)	7975	(35.47)	7883	(35.06)		
36 (914)	B26	3336	(14.49)	1941	(8.63)	3579	(15.82)	2952	(13.17)	2546	(11.32)		
	B26A	7883	(35.06)	3528	(15.69)	7986	(35.52)	7713	(34.31)	7505	(33.38)		
48 (1219)	B26	2828	(12.58)	1725	(7.61)	3217	(14.31)	2251	(10.01)	1705	(7.58)		
	B26A	7648	(34.02)	3441	(15.30)	7831	(34.83)	7346	(32.67)	6977	(31.03)		
60 (1524)	B26	2251	(10.01)	1469	(6.53)	2793	(12.42)	1603	(7.13)	1233	(5.48)		
	B26A	7346	(32.67)	3066	(13.64)	7631	(33.94)	6874	(30.58)	6298	(28.01)		
72 (1829)	B26	1705	(7.58)	1203	(5.35)	2326	(10.34)	1233	(5.48)	967	(4.30)		
	B26A	6977	(31.03)	2385	(10.61)	7388	(32.86)	6298	(28.01)	5467	(24.32)		
84 (2133)	B26	1358	(6.04)	1011	(4.50)	1851	(8.23)	1003	(4.46)	797	(3.54)		
	B26A	6541	(29.09)	1884	(8.38)	7100	(31.58)	5616	(24.98)	4486	(19.95)		
96 (2438)	B26	1129	(5.02)	871	(3.87)	1513	(6.73)	847	(3.77)	680	(3.02)		
	B26A	6038	(26.86)	1512	(6.72)	6767	(30.10)	4830	(21.48)	3463	(15.40)		
108 (2743)	B26	967	(4.30)	766	(3.41)	1277	(5.68)	734	(3.26)	592**	(2.63)		
	B26A	5467	(24.32)	1231	(5.47)	6391	(28.43)	3940	(17.52)	2736	(12.17)		
120 (3048)	B26	847	(3.77)	684	(3.04)	1105	(4.91)	648	(2.88)	523**	(2.32)		
	B26A	4830	(21.48)	1015	(4.51)	5970	(26.55)	3192	(14.20)	2216**	(9.86)		

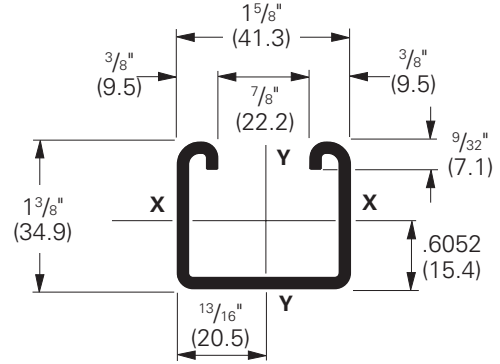
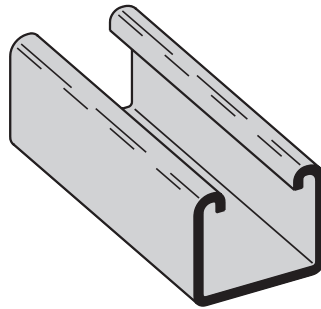
\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

Reference page 48 for general fitting and standard finish specifications.

# B32 Channel & combinations

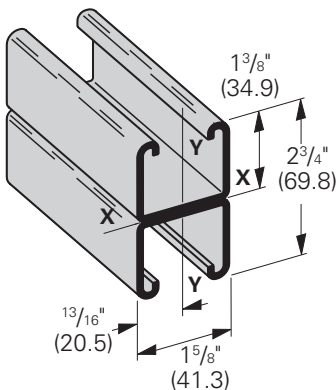
## B32

- 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
- Weight: 1.70 Lbs./Ft. (2.53 kg/m)



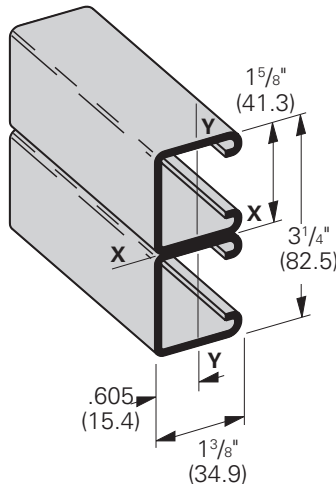
Section Properties			X - X Axis			Y - Y Axis		
Channel	Weight lbs./ft. kg/m	Areas of Section sq. in. cm <sup>2</sup>	Moment of Inertia (I) in. <sup>4</sup> cm <sup>4</sup>	Section Modulus (S) in. <sup>3</sup> cm <sup>3</sup>	Radius of Gyration (r) in. cm	Moment of Inertia (I) in. <sup>4</sup> cm <sup>4</sup>	Section Modulus (S) in. <sup>3</sup> cm <sup>3</sup>	Radius of Gyration (r) in. cm
<b>B32</b>	1.733 (2.58)	.510 (3.29)	.1252 (5.21)	.1626 (2.67)	.496 (1.26)	.2098 (8.73)	.2582 (4.23)	.642 (1.63)
<b>B32A</b>	3.467 (5.16)	1.020 (6.58)	.6238 (25.96)	.4537 (7.43)	.782 (1.99)	.4195 (17.46)	.5163 (8.46)	.642 (1.63)

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



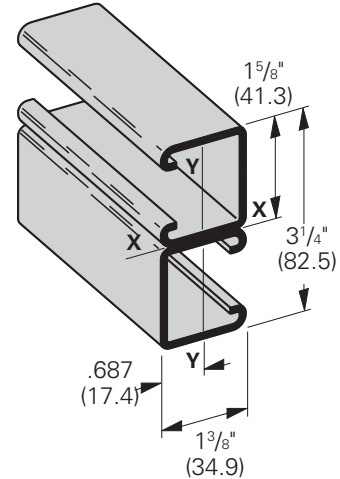
### B32A

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



### B32B

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



### B32C

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

Reference page 48 for general fitting and standard finish specifications.

# B32 Beam & column loading data

## Beam Loading

Beam Span In. mm		Channel Style	Uniform Load and Deflection				Uniform Load @ Deflection =			
			Lbs. kN		In. mm		1/240 Span		1/360 Span	
			Lbs.	kN	In.	mm	Lbs.	kN	Lbs.	kN
12	(305)	<b>B32</b>	2210	(9.83)	.016	(.40)	2210	(9.83)	2210	(9.83)
		<b>B32A</b>	2210*	(9.83)	.003	(.07)	2210*	(9.83)	2210*	(9.83)
24	(609)	<b>B32</b>	1299	(5.78)	.065	(1.65)	1299	(5.78)	1299	(5.78)
		<b>B32A</b>	2210*	(9.83)	.022	(.56)	2210*	(9.83)	2210*	(9.83)
36	(914)	<b>B32</b>	866	(3.85)	.147	(3.73)	866	(3.85)	587	(2.61)
		<b>B32A</b>	2210*	(9.83)	.076	(1.93)	2210*	(9.83)	2210*	(9.83)
48	(1219)	<b>B32</b>	649	(2.89)	.262	(6.65)	495	(2.20)	330	(1.47)
		<b>B32A</b>	1817	(8.08)	.148	(3.76)	1817	(8.08)	1638	(7.28)
60	(1524)	<b>B32</b>	520	(2.31)	.410	(10.41)	317	(1.41)	211	(0.94)
		<b>B32A</b>	1454	(6.47)	.231	(5.87)	1454	(6.47)	1048	(4.66)
72	(1829)	<b>B32</b>	433	(1.92)	.590	(14.98)	220	(0.98)	147	(0.65)
		<b>B32A</b>	1211	(5.39)	.333	(8.46)	1092	(4.86)	728	(3.24)
84	(2133)	<b>B32</b>	371	(1.65)	.803	(20.39)	162	(0.72)	108	(0.48)
		<b>B32A</b>	1038	(4.62)	.453	(11.50)	802	(3.57)	535	(2.38)
96	(2438)	<b>B32</b>	325	(1.44)	1.049	(26.64)	124	(0.55)	83	(0.37)
		<b>B32A</b>	909	(4.04)	.591	(15.01)	614	(2.73)	410	(1.82)
108	(2743)	<b>B32</b>	289	(1.28)	1.327	(33.70)	98	(0.43)	65	(0.29)
		<b>B32A</b>	808	(3.59)	.749	(19.02)	485	(2.16)	324	(1.44)
120	(3048)	<b>B32</b>	260	(1.15)	1.639	(41.63)	79	(0.35)	53	(0.23)
		<b>B32A</b>	727	(3.23)	.924	(23.47)	393	(1.75)	262	(1.16)

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.

## 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		
		Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN	
12	(305)	<b>B32</b>	10278	(4.572)	4036	(17.95)	10432	(46.40)	10035	(44.64)	9753	(43.38)
		<b>B32A</b>	21320	(94.83)	6557	(29.17)	21378	(95.09)	21224	(94.41)	21106	(93.88)
24	(609)	<b>B32</b>	9104	(40.49)	3732	(16.60)	9600	(42.70)	8387	(37.31)	7640	(33.98)
		<b>B32A</b>	20806	(92.55)	6431	(28.60)	21039	(93.58)	20421	(90.84)	19950	(88.74)
36	(914)	<b>B32</b>	7640	(33.98)	3323	(14.78)	8479	(37.71)	6520	(29.00)	5425	(24.13)
		<b>B32A</b>	19950	(88.74)	6228	(27.70)	20474	(91.07)	19083	(84.88)	18023	(80.17)
48	(1219)	<b>B32</b>	6151	(27.36)	2877	(12.80)	7265	(32.31)	4778	(21.25)	3870	(17.21)
		<b>B32A</b>	18751	(83.41)	5954	(26.48)	19682	(87.55)	17210	(76.55)	15326	(68.17)
60	(1524)	<b>B32</b>	4778	(21.25)	2435	(10.83)	6060	(26.95)	3693	(16.43)	2994	(13.32)
		<b>B32A</b>	17210	(76.55)	4692	(20.87)	18665	(83.02)	14801	(65.84)	11858	(52.75)
72	(1829)	<b>B32</b>	3870	(17.21)	2089	(9.29)	4923	(21.90)	2994	(13.32)	2403	(10.68)
		<b>B32A</b>	15326	(68.17)	3448	(15.34)	17421	(77.49)	11858	(52.75)	8316	(36.99)
84	(2133)	<b>B32</b>	3243	(14.42)	1817	(8.08)	4114	(18.30)	2489	(11.07)	1807**	(8.04)
		<b>B32A</b>	13100	(58.27)	2609	(11.60)	15951	(70.95)	8798	(39.13)	6110	(27.18)
96	(2438)	<b>B32</b>	2774	(12.34)	1594	(7.09)	3531	(15.70)	1993	(8.86)	1384**	(6.15)
		<b>B32A</b>	10525	(46.82)	2014	(8.96)	14256	(63.41)	6736	(29.96)	4678	(20.81)
108	(2743)	<b>B32</b>	2403	(10.69)	1407	(6.26)	3083	(13.71)	1574**	(7.00)	1093**	(4.86)
		<b>B32A</b>	8316	(36.99)	1592	(7.08)	12334	(54.86)	5322	(23.67)	3696**	(16.44)
120	(3048)	<b>B32</b>	1993	(8.86)	1221	(5.43)	2723	(12.11)	1275**	(5.67)	886**	(3.94)
		<b>B32A</b>	6736	(29.96)	1289	(5.73)	10203	(45.38)	4311	(19.17)	2994**	(13.32)

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

Reference page 48 for general fitting and standard finish specifications.

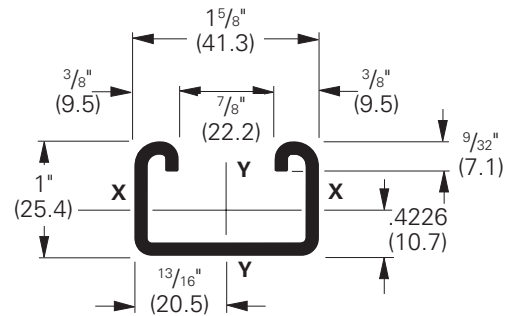
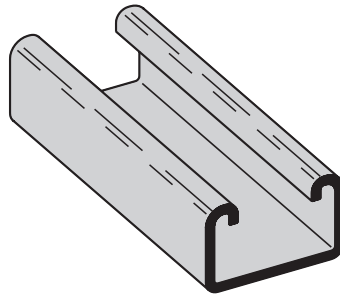


# B42 Channel & combinations

## B42

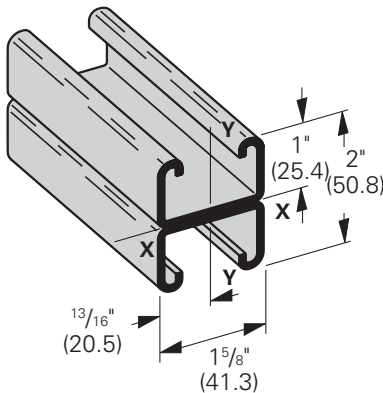
- Thickness: 12 Gauge (2.6 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, DURA GREEN™, Pre-Galvanized, Hot-Dipped Galvanized, Stainless Steel Type 304
- Weight: 1.44 Lbs./Ft. (2.14 kg/m)

Note: Also available in 14 gauge (1.9mm) material as B44

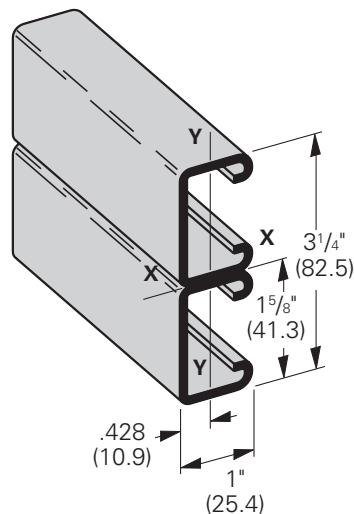


Section Properties			X - X Axis			Y - Y Axis		
Channel	Weight lbs./ft. kg/m	Areas of Section sq. in. cm <sup>2</sup>	Moment of Inertia (I) in. <sup>4</sup> cm <sup>4</sup>	Section Modulus (S) in. <sup>3</sup> cm <sup>3</sup>	Radius of Gyration (r) in. cm	Moment of Inertia (I) in. <sup>4</sup> cm <sup>4</sup>	Section Modulus (S) in. <sup>3</sup> cm <sup>3</sup>	Radius of Gyration (r) in. cm
<b>B42</b>	1.468 (2.18)	.432 (2.79)	.0554 (2.31)	.0968 (1.59)	.358 (.91)	.1645 (6.85)	.2025 (3.32)	.617 (1.57)
<b>B42A</b>	2.936 (4.37)	.864 (5.57)	.2689 (11.19)	.2689 (4.41)	.558 (1.42)	.3292 (13.70)	.4052 (6.64)	.617 (1.57)

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



**B42A**  
Wt. 2.88 Lbs./Ft. (4.28 kg/m)



**B42B**  
Wt. 2.88 Lbs./Ft. (4.28 kg/m)

Reference page 48 for general fitting and standard finish specifications.

# B42 Beam & column loading data

## Beam Loading

Beam Span In. mm	Channel Style	Uniform Load and Deflection				Uniform Load @ Deflection =			
		Lbs.	kN	In.	mm	<sup>1</sup> / <sub>240</sub> Span		<sup>1</sup> / <sub>360</sub> Span	
		Lbs.	kN	In.	mm	Lbs.	kN	Lbs.	kN
12 (305)	<b>B42</b>	1538	(6.84)	.022	(.56)	1538	(6.84)	1538	(6.84)
	<b>B42A</b>	1590*	(7.07)	.005	(.13)	1590*	(7.07)	1590*	(7.07)
24 (609)	<b>B42</b>	769	(3.42)	.088	(2.23)	769	(3.42)	582	(2.59)
	<b>B42A</b>	1590*	(7.07)	.038	(.96)	1590*	(7.07)	1590*	(7.07)
36 (914)	<b>B42</b>	513	(2.28)	.198	(5.03)	388	(1.72)	259	(1.15)
	<b>B42A</b>	1428	(6.35)	.114	(2.89)	1428	(6.35)	1248	(5.55)
48 (1219)	<b>B42</b>	384	(1.71)	.352	(8.94)	218	(0.97)	145	(0.64)
	<b>B42A</b>	1071	(4.76)	.203	(5.15)	1053	(4.68)	702	(3.12)
60 (1524)	<b>B42</b>	308	(1.37)	.550	(13.97)	140	(0.62)	93	(0.41)
	<b>B42A</b>	857	(3.81)	.318	(8.08)	674	(3.00)	449	(2.00)
72 (1829)	<b>B42</b>	256	(1.14)	.792	(20.11)	97	(0.43)	65	(0.29)
	<b>B42A</b>	714	(3.17)	.457	(11.61)	468	(2.08)	312	(1.39)
84 (2133)	<b>B42</b>	220	(0.98)	1.079	(27.40)	71	(0.31)	48	(0.21)
	<b>B42A</b>	612	(2.72)	.623	(15.82)	344	(1.53)	229	(1.02)
96 (2438)	<b>B42</b>	192	(0.85)	1.409	(35.79)	55	(0.24)	36	(0.16)
	<b>B42A</b>	535	(2.38)	.813	(20.65)	263	(1.17)	176	(0.78)
108 (2743)	<b>B42</b>	171	(0.76)	1.783	(45.29)	43	(0.19)	29	(0.13)
	<b>B42A</b>	476	(2.12)	1.029	(26.13)	208	(0.92)	139	(0.62)
120 (3048)	<b>B42</b>	154	(0.68)	2.202	(55.93)	35	(0.15)	23	(0.10)
	<b>B42A</b>	428	(1.90)	1.271	(32.28)	168	(0.75)	112	(0.50)

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.

## 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	
		Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN
12 (305)	<b>B42</b>	9138	(40.65)	3493	(15.54)	9283	(41.23)	8916	(39.66)	8670	(38.56)
	<b>B42A</b>	21094	(93.83)	5834	(25.95)	21304	(94.76)	20793	(92.49)	20469	(91.05)
24 (609)	<b>B42</b>	8137	(36.19)	3145	(13.99)	8540	(37.99)	7589	(33.76)	7050	(31.36)
	<b>B42A</b>	19757	(87.88)	5585	(24.84)	20299	(90.29)	18964	(84.35)	18094	(80.48)
36 (914)	<b>B42</b>	7050	(31.36)	2722	(12.11)	7657	(34.06)	5925	(26.35)	4335	(19.28)
	<b>B42A</b>	18094	(80.48)	5237	(23.29)	19067	(84.81)	16654	(74.08)	15057	(66.98)
48 (1219)	<b>B42</b>	5405	(24.04)	2227	(9.90)	6786	(30.18)	3512	(15.62)	2439	(10.85)
	<b>B42A</b>	16139	(71.79)	4818	(21.43)	17632	(78.43)	13906	(61.86)	11387	(50.65)
60 (1524)	<b>B42</b>	3512	(15.62)	1718	(7.64)	5272	(23.45)	2247	(9.99)	1561**	(6.94)
	<b>B42A</b>	13906	(61.86)	4352	(19.36)	16008	(71.21)	10710	(47.64)	7531	(33.50)
72 (1829)	<b>B42</b>	2439	(10.85)	1351	(6.01)	3694	(16.43)	1561**	(6.94)	1084**	(4.82)
	<b>B42A</b>	11387	(50.65)	3856	(17.15)	14200	(64.16)	7531	(33.50)	5230	(23.26)
84 (2133)	<b>B42</b>	1792	(7.97)	1087	(4.83)	2714	(12.07)	1147**	(5.10)	796**	(3.54)
	<b>B42A</b>	8645	(38.45)	3332	(14.82)	12206	(54.29)	5533	(24.61)	3842	(17.09)
96 (2438)	<b>B42</b>	1372**	(6.10)	891	(3.96)	2078	(9.24)	878**	(3.90)	-	-
	<b>B42A</b>	6619	(29.44)	2873	(12.78)	10012	(44.53)	4236	(18.84)	2942**	(13.08)
108 (2743)	<b>B42</b>	1084**	(4.82)	743	(3.30)	1642	(7.30)	-	-	-	-
	<b>B42A</b>	5230	(23.26)	2495	(11.10)	7922	(35.24)	3347	(14.89)	2324**	(10.34)
120 (3048)	<b>B42</b>	878**	(3.90)	628	(2.79)	1330**	(5.91)	-	-	-	-
	<b>B42A</b>	4236	(18.84)	2182	(9.70)	6417	(28.54)	2711**	(12.06)	1883**	(8.37)

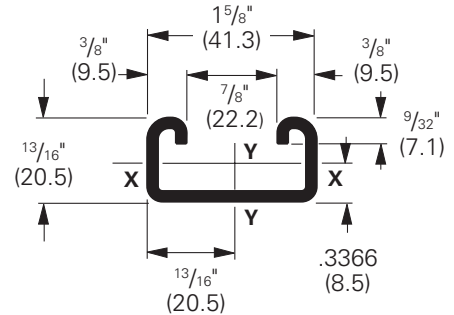
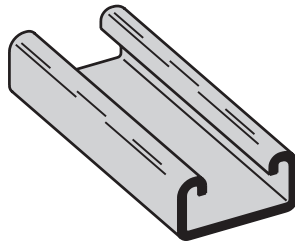
\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

Reference page 48 for general fitting and standard finish specifications.

# B52 Channel & combinations

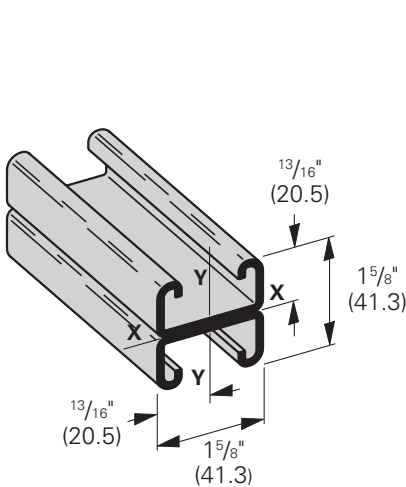
## B52

- Thickness: 12 Gauge (2.6 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, DURA GREEN™, Pre-Galvanized, Stainless Steel Type 304 or 316, Hot-Dipped Galvanized
- Weight: 1.27 Lbs./Ft. (1.89 kg/m)

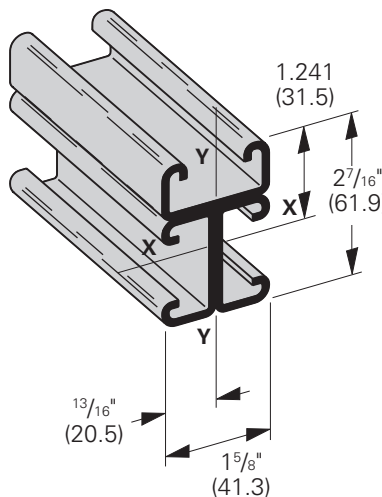


Section Properties			X - X Axis				Y - Y Axis									
Channel	Weight		Areas of Section	Moment of Inertia (I)	Section Modulus (S)	Radius of Gyration (r)	Moment of Inertia (I)		Section Modulus (S)		Radius of Gyration (r)					
	lbs./ft.	kg/m					sq. in.	cm <sup>2</sup>	in. <sup>4</sup>	cm <sup>4</sup>	in. <sup>3</sup>	cm <sup>3</sup>	in.	cm		
<b>B52</b>	1.313	(1.95)	.386	(2.49)	.0320	(1.33)	.0673	(1.10)	.288	(.73)	.1404	(5.84)	.1728	(2.83)	.603	(1.53)
<b>B52A</b>	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)

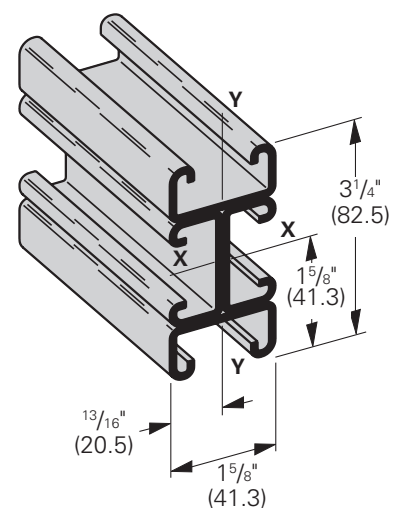
Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.



**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 48 for general fitting and standard finish specifications.

# B52 Beam & column loading data

## Beam Loading

Beam Span In. mm	Channel Style	Uniform Load and Deflection				Uniform Load @ Deflection =			
		Lbs.	kN	In.	mm	1/240 Span		1/360 Span	
		Lbs.	kN	In.	mm	Lbs.	kN	Lbs.	kN
12 (305)	<b>B52</b>	1079	(4.80)	.026	(.66)	1079	(4.80)	1079	(4.80)
	<b>B52A</b>	1270*	(5.65)	.006	(.15)	1270*	(5.65)	1270*	(5.65)
24 (609)	<b>B52</b>	539	(2.40)	.106	(2.69)	506	(2.25)	337	(1.50)
	<b>B52A</b>	1270*	(5.65)	.052	(1.32)	1270*	(5.65)	1270*	(5.65)
36 (914)	<b>B52</b>	360	(1.60)	.240	(6.09)	225	(1.00)	150	(0.67)
	<b>B52A</b>	1013	(4.50)	.141	(3.58)	1013	(4.50)	719	(3.20)
48 (1219)	<b>B52</b>	270	(1.20)	.427	(10.84)	126	(0.56)	84	(0.37)
	<b>B52A</b>	759	(3.37)	.250	(6.35)	607	(2.70)	404	(1.80)
60 (1524)	<b>B52</b>	216	(0.96)	.667	(16.94)	81	(0.36)	54	(0.24)
	<b>B52A</b>	608	(2.70)	.391	(9.93)	388	(1.72)	259	(1.15)
72 (1829)	<b>B52</b>	180	(0.80)	.960	(24.38)	56	(0.25)	37	(0.16)
	<b>B52A</b>	506	(.225)	.563	(14.30)	270	(1.20)	180	(0.80)
84 (2133)	<b>B52</b>	154	(0.68)	1.307	(33.20)	41	(0.18)	28	(0.12)
	<b>B52A</b>	434	(1.93)	.766	(19.45)	198	(0.88)	132	(0.59)
96 (2438)	<b>B52</b>	135	(0.60)	1.707	(43.36)	32	(0.14)	21	(0.09)
	<b>B52A</b>	380	(1.69)	1.001	(25.42)	152	(0.67)	101	(0.45)
108 (2743)	<b>B52</b>	120	(0.53)	2.160	(54.86)	25	(0.11)	17	(0.07)
	<b>B52A</b>	338	(1.50)	1.267	(32.18)	120	(0.53)	80	(0.35)
120 (3048)	<b>B52</b>	108	(0.48)	2.667	(67.74)	20	(0.09)	13	(0.06)
	<b>B52A</b>	304	(.135)	1.564	(39.72)	97	(0.43)	65	(0.29)

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.

## 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	
		Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN
12 (305)	<b>B52</b>	8407	(37.36)	3162	(14.06)	8543	(38.00)	8205	(36.50)	7989	(35.54)
	<b>B52A</b>	19160	(85.23)	5290	(23.53)	19425	(86.41)	18777	(83.52)	18363	(81.68)
24 (609)	<b>B52</b>	7519	(33.44)	2755	(12.25)	7879	(35.05)	6521	(29.01)	5397	(24.01)
	<b>B52A</b>	17444	(77.59)	4955	(22.04)	18144	(80.71)	16412	(73.00)	15275	(67.94)
36 (914)	<b>B52</b>	5397	(24.01)	2152	(9.57)	6653	(29.59)	3616	(16.08)	2511	(11.17)
	<b>B52A</b>	15275	(67.94)	4496	(20.00)	16547	(73.60)	13376	(59.50)	11243	(50.01)
48 (1219)	<b>B52</b>	3178	(14.13)	1560	(6.94)	4785	(21.28)	2034	(9.05)	1412**	(6.28)
	<b>B52A</b>	12692	(56.46)	3963	(17.63)	14667	(65.24)	9683	(43.07)	6780	(30.16)
60 (1524)	<b>B52</b>	2034	(9.05)	1159	(5.15)	3081	(13.70)	1302**	(5.79)	904**	(4.02)
	<b>B52A</b>	9683	(43.07)	3383	(15.05)	12516	(55.67)	6248	(27.79)	4339	(19.30)
72 (1829)	<b>B52</b>	1412**	(6.28)	891	(3.96)	2139	(9.51)	904**	(4.02)	-	-
	<b>B52A</b>	6780	(30.16)	2799	(12.45)	10084	(44.85)	4339	(19.30)	3013	(13.42)
84 (2133)	<b>B52</b>	1038**	(4.62)	704	(3.13)	1572	(6.99)	664**	(2.95)	-	-
	<b>B52A</b>	4981	(22.15)	2337	(10.39)	7545	(33.56)	3188	(14.18)	2214**	(9.85)
96 (2438)	<b>B52</b>	794**	(3.53)	570	(2.53)	1203**	(5.35)	-	-	-	-
	<b>B52A</b>	3814	(16.96)	1973	(8.77)	5777	(25.70)	2441**	(10.86)	1695**	(7.54)
108 (2743)	<b>B52</b>	-	-	470	(2.09)	951**	(4.23)	-	-	-	-
	<b>B52A</b>	3013	(13.40)	1684	(7.49)	4564	(20.30)	1928**	(8.57)	1339**	(5.95)
120 (3048)	<b>B52</b>	-	-	394	(1.75)	770**	(3.42)	-	-	-	-
	<b>B52A</b>	2441**	(10.86)	1452	(6.46)	3697	(16.44)	1562**	(6.95)	-	-

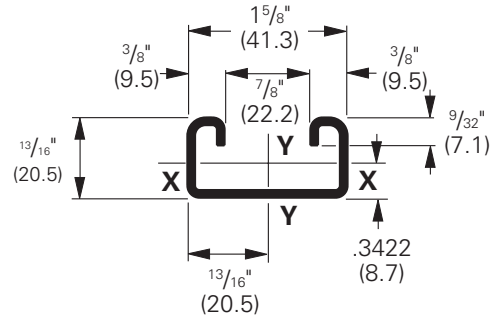
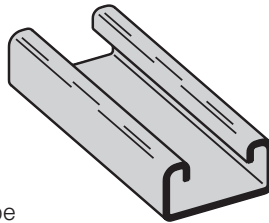
\*\*Where the slenderness ratio  $\frac{L}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

Reference page 48 for general fitting and standard finish specifications.

# B54 Channel & combinations

## B54

- Thickness: 14 Gauge (1.9 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: .97 Lbs./Ft. (1.44 kg/m)

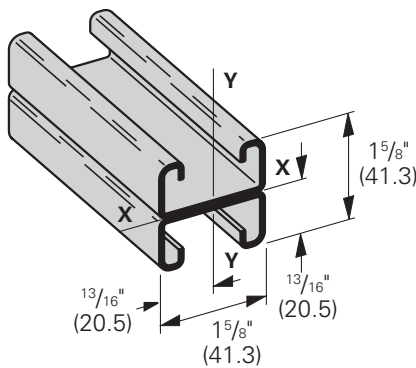


### Note:

Aluminum loading, for B54 & B54A, can be determined by multiplying load data times a factor of 0.38

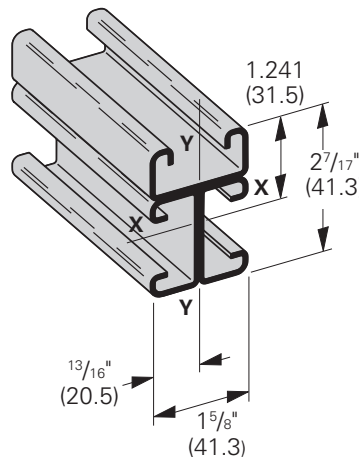
Section Properties			X - X Axis			Y - Y Axis		
Channel	Weight lbs./ft. kg/m	Areas of Section sq. in. cm <sup>2</sup>	Moment of Inertia (I) in. <sup>4</sup> cm <sup>4</sup>	Section Modulus (S) in. <sup>3</sup> cm <sup>3</sup>	Radius of Gyration (r) in. cm	Moment of Inertia (I) in. <sup>4</sup> cm <sup>4</sup>	Section Modulus (S) in. <sup>3</sup> cm <sup>3</sup>	Radius of Gyration (r) in. cm
<b>B54</b>	1.016 (1.51)	.299 (1.93)	.0263 (1.09)	.0560 (.92)	.297 (.75)	.1106 (4.60)	.1361 (2.23)	.608 (1.55)
<b>B54A</b>	2.032 (3.02)	.598 (3.86)	.1226 (5.10)	.1510 (2.47)	.453 (1.15)	.2212 (9.12)	.2722 (4.46)	.608 (1.55)

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



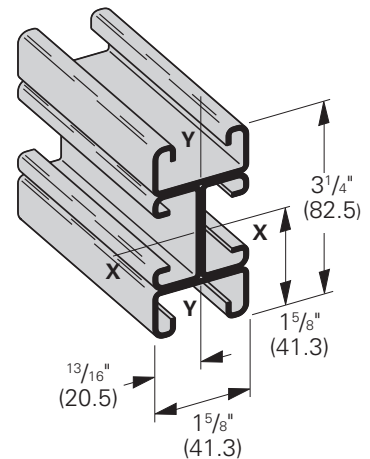
### B54A

Wt. 1.94 Lbs./Ft. (2.89 kg/m)



### B54B3

Wt. 2.91 Lbs./Ft. (4.33 kg/m)



### B54B4

Wt. 3.88 Lbs./Ft. (5.77 kg/m)

# B54 Beam & column loading data

## Beam Loading

Beam Span In. mm	Channel Style	Uniform Load and Deflection				Uniform Load @ Deflection =			
		Lbs.	kN	In.	mm	<sup>1</sup> / <sub>240</sub> Span		<sup>1</sup> / <sub>360</sub> Span	
		Lbs.	kN	In.	mm	Lbs.	kN	Lbs.	kN
12 (305)	<b>B54</b>	870	(3.87)	.027	(.68)	870	(3.87)	870	(3.87)
	<b>B54A</b>	870*	(3.87)	.005	(.13)	870*	(3.87)	870*	(3.87)
24 (609)	<b>B54</b>	465	(2.07)	.108	(2.74)	430	(1.91)	287	(1.27)
	<b>B54A</b>	870*	(3.87)	.043	(1.09)	870*	(3.87)	870*	(3.87)
36 (914)	<b>B54</b>	310	(1.38)	.243	(6.17)	191	(0.85)	127	(0.56)
	<b>B54A</b>	832	(3.70)	.141	(3.58)	832	(3.70)	591	(2.63)
48 (1219)	<b>B54</b>	233	(1.03)	.432	(10.97)	108	(0.48)	72	(0.32)
	<b>B54A</b>	624	(2.77)	.250	(6.35)	499	(2.22)	332	(1.48)
60 (1524)	<b>B54</b>	186	(0.83)	.676	(17.17)	69	(0.31)	46	(0.20)
	<b>B54A</b>	499	(2.22)	.391	(9.93)	319	(1.42)	213	(0.95)
72 (1829)	<b>B54</b>	155	(0.69)	.973	(24.71)	48	(0.21)	32	(0.14)
	<b>B54A</b>	416	(1.85)	.563	(14.30)	222	(0.99)	148	(0.66)
84 (2133)	<b>B54</b>	133	(0.59)	1.324	(33.63)	35	(0.15)	23	(0.10)
	<b>B54A</b>	357	(1.59)	.766	(19.45)	163	(0.72)	109	(0.48)
96 (2438)	<b>B54</b>	116	(0.51)	1.730	(43.94)	27	(0.12)	18	(0.08)
	<b>B54A</b>	312	(1.39)	1.001	(25.42)	125	(0.55)	83	(0.37)
108 (2743)	<b>B54</b>	103	(0.46)	2.189	(55.60)	21	(0.09)	14	(0.06)
	<b>B54A</b>	277	(1.23)	1.267	(32.18)	98	(0.43)	66	(0.29)
120 (3048)	<b>B54</b>	93	(0.41)	2.703	(68.65)	17	(0.07)	11	(0.05)
	<b>B54A</b>	250	(1.11)	1.564	(39.72)	80	(0.35)	53	(0.23)

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.

## 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	
		Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN
12 (305)	<b>B54</b>	6186	(27.51)	2586	(11.50)	6284	(27.95)	6032	(26.83)	5857	(26.05)
	<b>B54A</b>	12763	(56.77)	4060	(18.06)	12835	(57.09)	12645	(56.25)	12501	(55.61)
24 (609)	<b>B54</b>	5464	(24.30)	2254	(10.02)	5763	(25.63)	4968	(22.10)	4300	(19.13)
	<b>B54A</b>	12135	(53.98)	3857	(17.16)	12420	(55.25)	11663	(51.88)	11087	(49.32)
36 (914)	<b>B54</b>	4300	(19.13)	1816	(8.08)	5043	(22.43)	3076	(13.68)	2136	(9.50)
	<b>B54A</b>	11087	(49.32)	3549	(15.79)	11728	(52.17)	10026	(44.60)	8729	(38.83)
48 (1219)	<b>B54</b>	2703	(12.02)	1341	(5.96)	3920	(17.44)	1730	(7.69)	1201	(5.34)
	<b>B54A</b>	9620	(42.79)	3169	(14.09)	10759	(47.86)	7734	(34.40)	5571	(24.78)
60 (1524)	<b>B54</b>	1730	(7.69)	995	(4.42)	2621	(11.66)	1107**	(4.92)	769**	(3.42)
	<b>B54A</b>	7734	(34.40)	2745	(12.21)	9514	(42.32)	5134	(22.84)	3566	(15.86)
72 (1829)	<b>B54</b>	1201	(5.34)	763	(3.39)	1820	(8.09)	769**	(3.42)	534**	(2.37)
	<b>B54A</b>	5571	(24.78)	2291	(10.19)	7992	(35.50)	3566	(15.86)	2476	(11.01)
84 (2133)	<b>B54</b>	883**	(3.93)	603	(2.68)	1337	(5.95)	565**	(2.51)	—	—
	<b>B54A</b>	4093	(18.20)	1913	(8.51)	6200	(27.58)	2620	(11.65)	1819**	(8.09)
96 (2438)	<b>B54</b>	676**	(3.01)	487	(2.16)	1024**	(4.55)	—	—	—	—
	<b>B54A</b>	3134	(13.94)	1616	(7.19)	4747	(21.11)	2006**	(8.92)	1393**	(6.19)
108 (2743)	<b>B54</b>	534**	(2.37)	401	(1.78)	809**	(3.60)	—	—	—	—
	<b>B54A</b>	2476	(11.01)	1380	(6.14)	3751	(16.68)	1585**	(7.05)	1100**	(4.89)
120 (3048)	<b>B54</b>	—	—	336	(1.49)	655**	(2.91)	—	—	—	—
	<b>B54A</b>	2006**	(8.92)	1190	(5.29)	3038	(13.51)	1284**	(5.71)	—	—

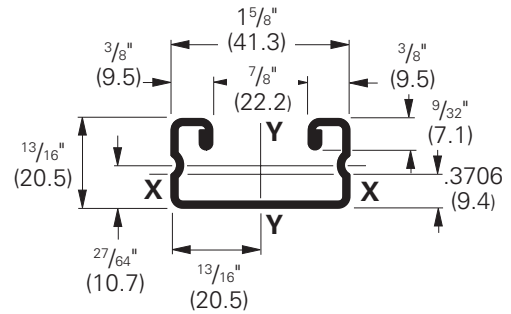
\*\*Where the slenderness ratio  $\frac{KL}{r}$  exceeds 200, and K = end fixity factor, L = actual length and r = radius of gyration.

Reference page 48 for general fitting and standard finish specifications.

# B56 Channel & combinations

## B56

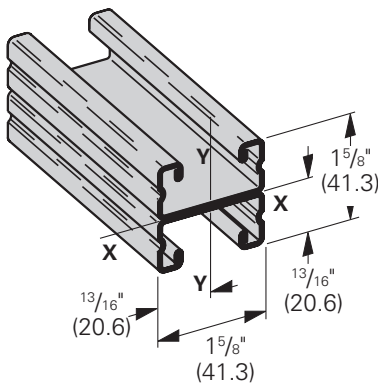
- Thickness: 16 Gauge (1.5 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, DURA GREEN™, Pre-Galvanized, Hot-Dipped Galvanized
- Weight: .85 Lbs./Ft. (1.26 kg/m)



## Section Properties

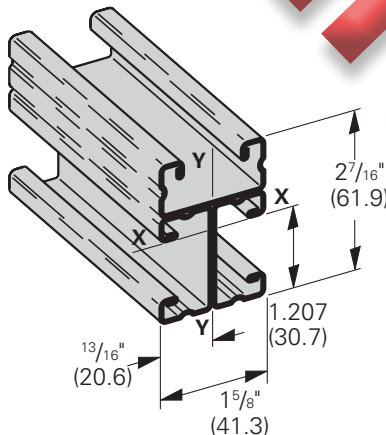
Channel	Weight lbs./ft. kg/m	Areas of Section sq. in. cm <sup>2</sup>	X - X Axis			Y - Y Axis		
			Moment of Inertia (I) in. <sup>4</sup> cm <sup>4</sup>	Section Modulus (S) in. <sup>3</sup> cm <sup>3</sup>	Radius of Gyration (r) in. cm	Moment of Inertia (I) in. <sup>4</sup> cm <sup>4</sup>	Section Modulus (S) in. <sup>3</sup> cm <sup>3</sup>	Radius of Gyration (r) 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.



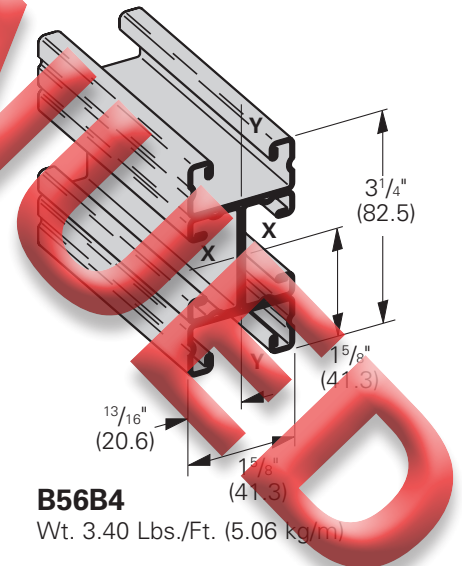
### B56A

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)

# B56 Beam & column loading data

## Beam Loading

Beam Span In. mm	Channel Style	Uniform Load and Deflection				Uniform Load @ Deflection =			
		Lbs.	kN	In.	mm	1/240 Span		1/360 Span	
		Lbs.	kN	In.	mm	Lbs.	kN	Lbs.	kN
12 (305)	B56	610	(2.73)	.027	(.68)	610	(2.71)	610	(2.71)
	B56A	610*	(2.71)	.004	(.10)	610*	(2.71)	610*	(2.71)
24 (609)	B56	405	(1.80)	.109	(2.77)	372	(1.65)	248	(1.10)
	B56A	610*	(2.71)	.035	(.89)	610*	(2.71)	610*	(2.71)
36 (914)	B56	270	(1.20)	.245	(6.22)	165	(0.73)	110	(0.49)
	B56A	610*	(2.71)	.121	(3.07)	610*	(2.71)	502	(2.23)
48 (1219)	B56	202	(0.90)	.435	(11.05)	93	(0.41)	62	(0.27)
	B56A	530	(2.36)	.250	(6.35)	423	(1.88)	282	(1.70)
60 (1524)	B56	162	(0.72)	.680	(17.27)	59	(0.26)	40	(0.18)
	B56A	424	(1.88)	.391	(9.93)	271	(1.20)	181	(0.80)
72 (1829)	B56	135	(0.60)	.980	(24.89)	41	(0.18)	28	(0.12)
	B56A	353	(1.57)	.563	(14.30)	188	(0.83)	125	(0.55)
84 (2133)	B56	116	(0.51)	1.334	(33.88)	30	(0.13)	20	(0.09)
	B56A	303	(1.35)	.766	(19.45)	138	(0.61)	92	(0.41)
96 (2438)	B56	101	(0.45)	1.742	(44.24)	23	(0.10)	15	(0.07)
	B56A	265	(1.18)	1.001	(25.42)	106	(0.47)	71	(0.31)
108 (2743)	B56	90	(0.40)	2.205	(56.01)	18	(0.08)	12	(0.05)
	B56A	236	(1.05)	1.267	(32.18)	84	(0.37)	56	(0.25)
120 (3048)	B56	81	(0.36)	2.722	(69.14)	15	(0.07)	10	(0.04)
	B56A	212	(0.94)	1.564	(39.72)	68	(0.30)	45	(0.20)

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.

## 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	
		Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN	Lbs.	kN
12 (305)	B56	4968	(22.10)	2182	(9.70)	5044	(22.44)	4845	(21.55)	4702	(20.91)
	B56A	10237	(45.53)	3365	(14.97)	10291	(45.77)	10148	(45.14)	10039	(44.65)
24 (609)	B56	4367	(19.42)	1903	(8.46)	4624	(20.57)	3985	(17.72)	3572	(15.89)
	B56A	9762	(43.42)	3202	(14.24)	9977	(44.38)	9405	(41.83)	8969	(39.89)
36 (914)	B56	3572	(15.89)	1557	(6.92)	4034	(17.94)	2658	(11.82)	1845	(8.21)
	B56A	8969	(39.89)	2955	(13.14)	9454	(42.05)	8167	(36.33)	7186	(31.96)
48 (1219)	B56	2335	(10.38)	1164	(5.18)	3290	(14.63)	1495	(6.65)	1038	(4.62)
	B56A	7860	(34.96)	2649	(11.78)	8722	(38.80)	6434	(28.62)	4731	(21.04)
60 (1524)	B56	1495	(6.65)	862	(3.83)	2264	(10.07)	957	(4.26)	664**	(2.95)
	B56A	6434	(28.62)	2307	(10.26)	7780	(34.61)	4360	(19.39)	3028	(13.47)
72 (1829)	B56	1038	(4.62)	661	(2.94)	1572	(6.99)	664**	(2.95)	461**	(2.05)
	B56A	4731	(21.04)	1937	(8.61)	6629	(29.49)	3028	(13.47)	2103	(9.35)
84 (2133)	B56	763**	(3.39)	522	(2.32)	1155	(5.14)	488**	(2.17)	-	-
	B56A	3476	(15.46)	1619	(7.20)	5269	(23.44)	2224	(9.89)	1545**	(6.87)
96 (2438)	B56	584**	(2.60)	422	(1.88)	884**	(3.93)	-	-	-	-
	B56A	2661	(11.84)	1368	(6.08)	4031	(17.93)	1703**	(7.57)	1183**	(5.26)
108 (2743)	B56	461**	(2.05)	348	(1.55)	699**	(3.11)	-	-	-	-
	B56A	2103	(9.35)	1169	(5.20)	3185	(14.17)	1346**	(5.99)	934**	(4.15)
120 (3048)	B56	-	-	291	(1.29)	566**	(2.42)	-	-	-	-
	B56A	1703**	(7.57)	1008	(4.48)	2580	(11.47)	1090**	(4.85)	-	-

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

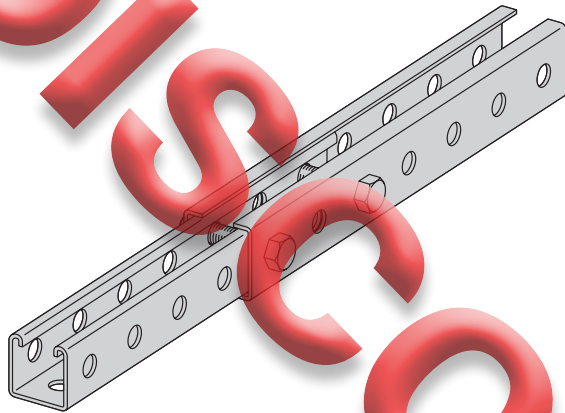
Reference page 48 for general fitting and standard finish specifications.



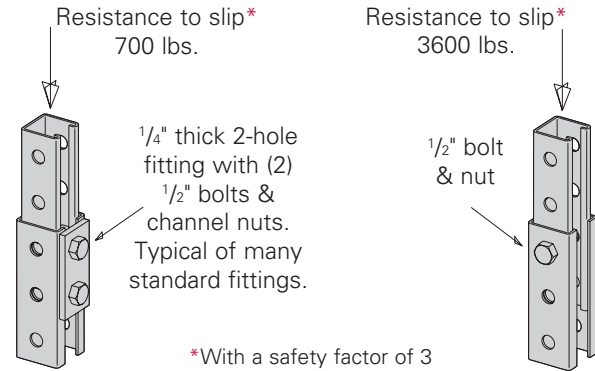
# Telescoping channel

## BTS22TH

- Can be secured at any point of system
- Order BTS22TH & B22TH separately
- Thickness: 12 Gauge (2.6 mm)
- Standard lengths: 10' (3.05 m)
- Standard finishes: DURA GREEN™, Yellow Zinc Dichromate, Hot-Dipped Galvanized



## Slip Load Data

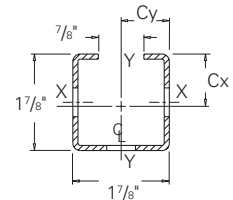


## BTS22TH Telescoping Strut

Fits over all 1 5/8" x 1 5/8" channels 9/16" holes on 1 7/8" centers 12 gauge material thickness

Channel	Section Properties		X-X Axis				Y-Y Axis			
	Weight lbs./ft.	Area In <sup>2</sup>	Cx In	Ix In <sup>4</sup>	Sx In <sup>3</sup>	rx In	Cy In	Iy In <sup>4</sup>	Sy In <sup>3</sup>	ry In
BTS22TH	1.934	0.4578	1.0009	0.2525	0.2523	0.7426	0.9375	0.2757	0.2941	0.7761

Section properties are based on nominal metal thickness, and overall dimensions.

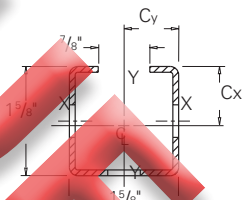


## B22TH Three Hole Strut

9/16" holes on 1 7/8" centers 12 gauge material thickness

Channel	Section Properties		X-X Axis				Y-Y Axis			
	Weight lbs./ft.	Area In <sup>2</sup>	Cx In	Ix In <sup>4</sup>	Sx In <sup>3</sup>	rx In	Cy In	Iy In <sup>4</sup>	Sy In <sup>3</sup>	ry In
B22TH	1.760	0.3863	0.8245	0.1596	0.1936	0.6400	0.8125	0.1719	0.2116	0.6642

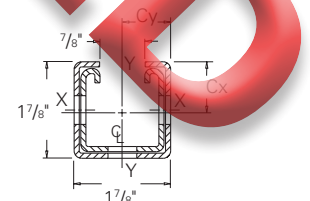
Section properties are based on nominal metal thickness, and overall dimensions.



## Combination of BTS22TH & B22TH

Combination	Section Properties		X-X Axis				Y-Y Axis			
	Weight lbs./ft.	Area In <sup>2</sup>	Cx In	Ix In <sup>4</sup>	Sx In <sup>3</sup>	rx In	Cy In	Iy In <sup>4</sup>	Sy In <sup>3</sup>	ry In
BTS22TH/B22TH	3.597	0.8474	0.9773	0.4126	0.4222	0.6978	0.9375	0.4476	0.4774	0.7268

Section properties are based on nominal metal thickness, and overall dimensions.

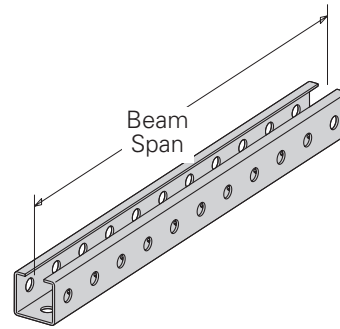


Reference page 48 for general fitting and standard finish specifications.

## Beam Loading Data

### B22TH

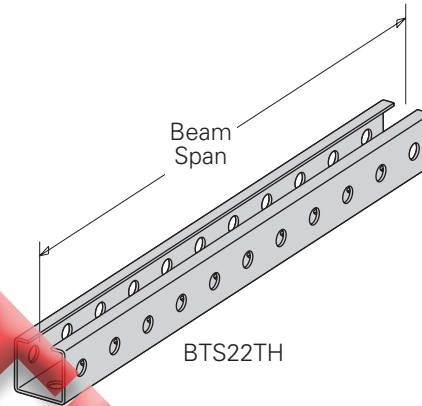
Beam Load Data x-x Axis				
Beam Span in	Allowable Load lbs*	Resulting Deflection in	Allowable Load @ Deflection= $\frac{1}{240}$ Span	
			Lbs.	kN
12	2225	0.015	3225	(14.34)
24	1610	0.061	1610	(7.16)
36	1071	0.136	1071	(4.76)
48	800	0.243	658	(2.92)
60	637	0.379	417	(1.85)
72	528	0.546	286	(1.27)
84	449	0.743	206	(0.91)
96	390	0.970	153	(0.68)
108	344	1.228	116	(0.51)
120	306	1.516	90	(0.40)



B22TH

### BTS22TH

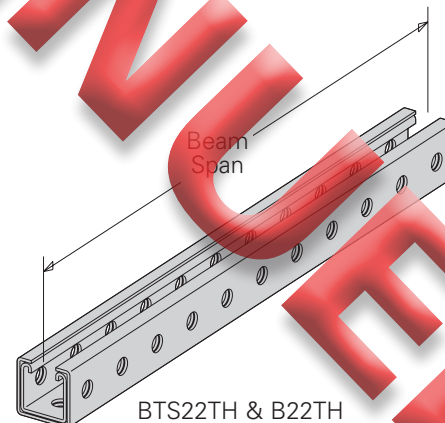
Beam Load Data x-x Axis				
Beam Span in	Allowable Load lbs*	Resulting Deflection in	Allowable Load @ Deflection= $\frac{1}{240}$ Span	
			Lbs.	kN
12	4203	0.012	4203	(18.69)
24	2099	0.050	2099	(9.33)
36	1396	0.112	1396	(6.21)
48	1044	0.200	1044	(4.64)
60	831	0.312	664	(2.95)
72	689	0.450	456	(2.03)
84	587	0.612	330	(1.48)
96	510	0.799	248	(1.10)
108	450	1.012	190	(0.84)
120	401	1.249	149	(0.66)



BTS22TH

### BTS22TH & B22TH Telescoping Members of Equal Length

Beam Load Data x-x Axis				
Beam Span in	Allowable Load lbs*	Resulting Deflection in	Allowable Load @ Deflection= $\frac{1}{240}$ Span	
			Lbs.	kN
12	7033	0.013	7033	(31.28)
24	3511	0.051	3511	(15.62)
36	2335	0.115	2335	(10.38)
48	1745	0.205	1705	(7.58)
60	1389	0.320	1082	(4.81)
72	1151	0.460	742	(3.30)
84	980	0.627	536	(2.38)
96	851	0.819	401	(1.78)
108	749	1.036	307	(1.36)
120	668	1.279	239	(1.06)



BTS22TH & B22TH

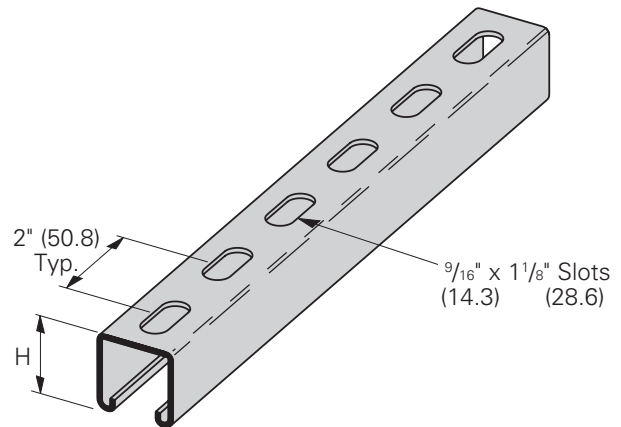
\*Based on simple beam condition using an allowable design stress of 25,000 psi (172 MPa) with adequate lateral bracing (see page 12 for further explanation). To determine concentrated load capacity at mid span, multiply uniform load by 0.5 and corresponding deflection by 0.8.

# Channel hole patterns

## B11SH thru B56SH SH Type Channel

- For beam loads use 90% of Channel Loading Chart

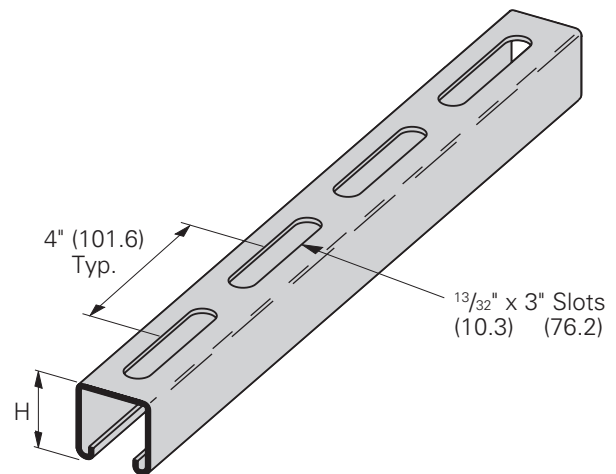
Part No.	Thickness	Height H		Weight	
		In.	mm	Lbs./Ft.	kg/m
<b>B11SH</b>	12 Ga. (2.6)	3 <sup>1</sup> / <sub>4</sub> "	(82.5)	2.97	(4.42)
<b>B12SH</b>	12 Ga. (2.6)	2 <sup>7</sup> / <sub>16</sub> "	(61.9)	2.39	(3.55)
<b>B22SH</b>	12 Ga. (2.6)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)	1.82	(2.71)
<b>B24SH</b>	14 Ga. (1.9)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)	1.34	(1.99)
<b>B32SH</b>	12 Ga. (2.6)	1 <sup>3</sup> / <sub>8</sub> "	(34.9)	1.62	(2.41)
<b>B42SH</b>	12 Ga. (2.6)	1"	(25.4)	1.36	(2.02)
<b>B52SH</b>	12 Ga. (2.6)	1 <sup>3</sup> / <sub>16</sub> "	(20.6)	1.19	(1.77)
<b>B54SH</b>	14 Ga. (1.9)	1 <sup>3</sup> / <sub>16</sub> "	(20.6)	.91	(1.35)



## B11S thru B56S S Type Channel

- For beam loads use 90% of Channel Loading Chart

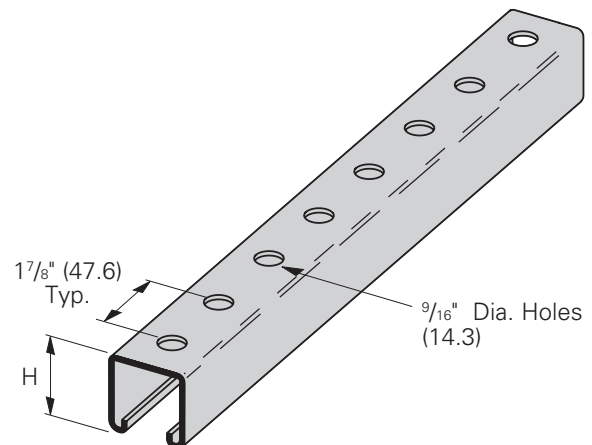
Part No.	Thickness	Height H		Weight	
		In.	mm	Lbs./Ft.	kg/m
<b>B11S</b>	12 Ga. (2.6)	3 <sup>1</sup> / <sub>4</sub> "	(82.5)	2.94	(4.37)
<b>B12S</b>	12 Ga. (2.6)	2 <sup>7</sup> / <sub>16</sub> "	(61.9)	2.36	(3.51)
<b>B22S</b>	12 Ga. (2.6)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)	1.79	(2.66)
<b>B24S</b>	14 Ga. (1.9)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)	1.32	(1.96)
<b>B32S</b>	12 Ga. (2.6)	1 <sup>3</sup> / <sub>8</sub> "	(34.9)	1.59	(2.36)
<b>B42S</b>	12 Ga. (2.6)	1"	(25.4)	1.33	(1.98)
<b>B52S</b>	12 Ga. (2.6)	1 <sup>3</sup> / <sub>16</sub> "	(20.6)	1.16	(1.72)
<b>B54S</b>	14 Ga. (1.9)	1 <sup>3</sup> / <sub>16</sub> "	(20.6)	.89	(1.32)



## B11H17/8 thru B56H17/8 H17/8 Type Channel

- For beam loads use 90% of Channel Loading Chart

Part No.	Thickness	Height H		Weight	
		In.	mm	Lbs./Ft.	kg/m
<b>B11H17/8</b>	12 Ga. (2.6)	3 <sup>1</sup> / <sub>4</sub> "	(82.5)	3.00	(4.46)
<b>B12H17/8</b>	12 Ga. (2.6)	2 <sup>7</sup> / <sub>16</sub> "	(61.9)	2.42	(3.60)
<b>B22H17/8</b>	12 Ga. (2.6)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)	1.85	(2.75)
<b>B24H17/8</b>	14 Ga. (1.9)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)	1.36	(2.02)
<b>B32H17/8</b>	12 Ga. (2.6)	1 <sup>3</sup> / <sub>8</sub> "	(34.9)	1.65	(2.45)
<b>B42H17/8</b>	12 Ga. (2.6)	1"	(25.4)	1.39	(2.07)
<b>B52H17/8</b>	12 Ga. (2.6)	1 <sup>3</sup> / <sub>16</sub> "	(20.6)	1.22	(1.81)
<b>B54H17/8</b>	14 Ga. (1.9)	1 <sup>3</sup> / <sub>16</sub> "	(20.6)	.93	(1.38)

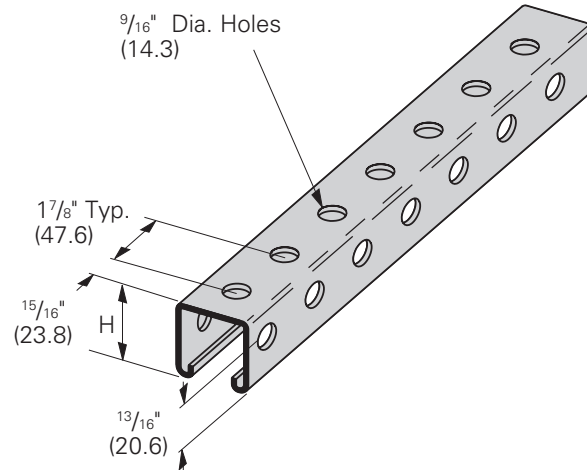


Reference page 48 for general fitting and standard finish specifications.

## B22TH TH Type Channel

- For beam loads use 90% of Channel Loading Chart

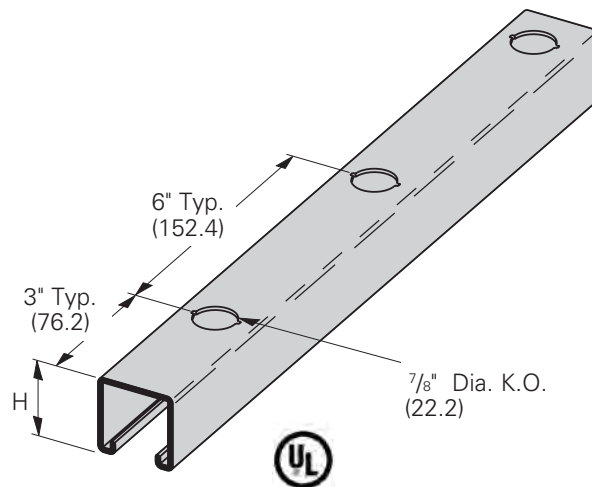
Part No.	Thickness	Height H		Weight	
		In.	mm	Lbs./Ft.	kg/m
B22TH	12 Ga.(2.6)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)	1.76	(2.62)



## B11KO6 thru B56KO6 KO6 Type Knockout Channel

- For beam loads use 90% of Channel Loading Chart

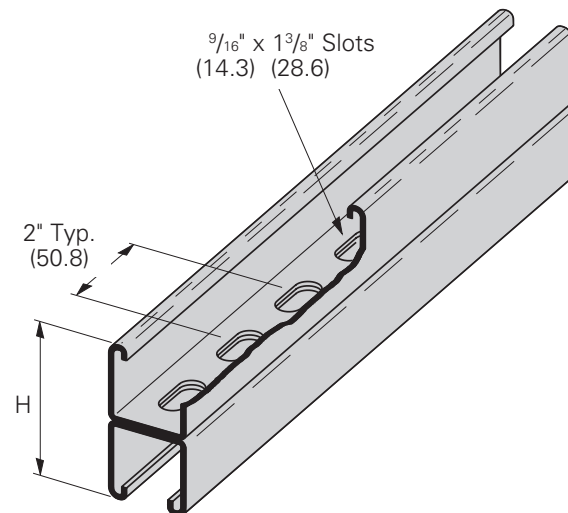
Part No.	Thickness	Height H		Weight	
		In.	mm	Lbs./Ft.	kg/m
B11KO6	12 Ga. (2.6)	3 <sup>1</sup> / <sub>4</sub> "	(82.5)	3.05	(4.54)
B12KO6	12 Ga.(2.6)	2 <sup>7</sup> / <sub>16</sub> "	(61.9)	2.47	(3.67)
B22KO6	12 Ga.(2.6)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)	1.90	(2.83)
B24KO6	14 Ga.(1.9)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)	1.40	(2.08)
B32KO6	12 Ga.(2.6)	1 <sup>3</sup> / <sub>8</sub> "	(34.9)	1.70	(2.53)
B42KO6	12 Ga.(2.6)	1"	(25.4)	1.44	(2.14)
B52KO6	12 Ga.(2.6)	1 <sup>3</sup> / <sub>16</sub> "	(20.6)	1.27	(1.89)
B54KO6	14 Ga.(1.9)	1 <sup>3</sup> / <sub>16</sub> "	(20.6)	.97	(1.44)



## B22SHA Back to Back SH Type Channel

- For beam loads use 90% of Channel Loading Chart

Part No.	Thickness	Height H		Weight	
		In.	mm	Lbs./Ft.	kg/m
B22SHA	12 Ga.(2.6)	3 <sup>1</sup> / <sub>4</sub> "	(82.5)	3.64	(5.42)
B52SHA	12 Ga.(2.6)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)	2.38	(1.77)
B54SHA	14 Ga.(1.9)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)	1.82	(1.35)



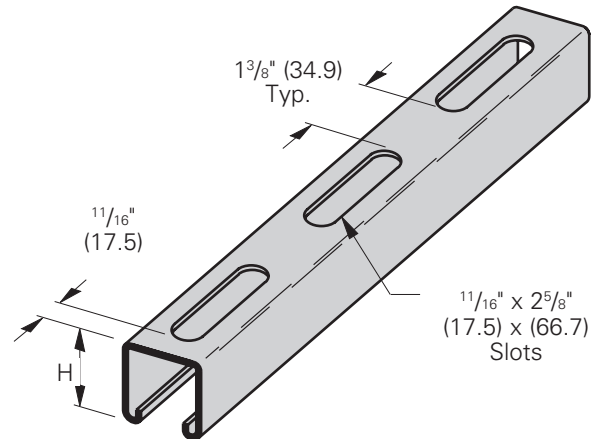
Reference page 48 for general fitting and standard finish specifications.

# Channel hole patterns

## B11S58 thru B56S58 S58 Type Channel

- For beam loads use 90% of Channel Loading Chart

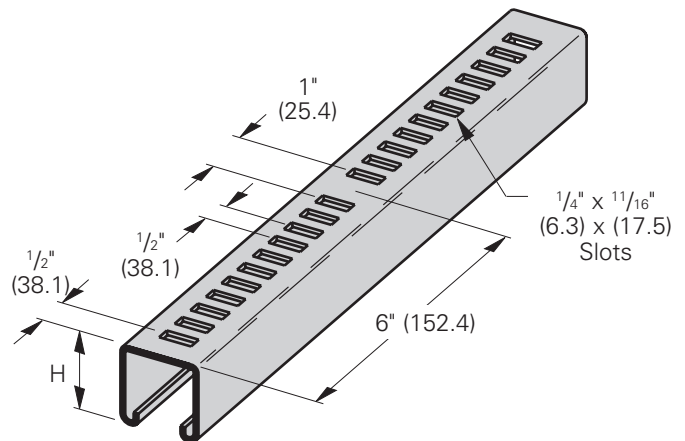
Part No.	Thickness	Height H		Weight	
		In.	mm	Lbs./Ft.	kg/m
<b>B11S58</b>	12 Ga. (2.6)	3 <sup>1</sup> / <sub>4</sub> "	(82.5)	2.94	(4.37)
<b>B12S58</b>	12 Ga. (2.6)	2 <sup>7</sup> / <sub>16</sub> "	(61.9)	2.36	(3.51)
<b>B22S58</b>	12 Ga. (2.6)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)	1.79	(2.66)
<b>B24S58</b>	14 Ga. (1.9)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)	1.32	(1.96)
<b>B32S58</b>	12 Ga. (2.6)	1 <sup>3</sup> / <sub>8</sub> "	(34.9)	1.59	(2.36)
<b>B42S58</b>	12 Ga. (2.6)	1"	(25.4)	1.33	(1.98)
<b>B52S58</b>	12 Ga. (2.6)	1 <sup>3</sup> / <sub>16</sub> "	(20.6)	1.16	(1.72)
<b>B54S58</b>	14 Ga. (1.9)	1 <sup>3</sup> / <sub>16</sub> "	(20.6)	.89	(1.32)



## B22M thru B54M M (Marine Rung) Type Channel

- For beam loads use 90% of Channel Loading Chart

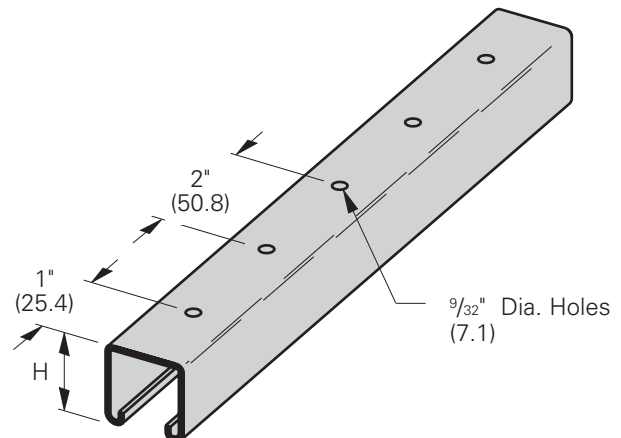
Part No.	Thickness	Height H		Weight	
		In.	mm	Lbs./Ft.	kg/m
<b>B22M</b>	12 Ga. (2.6)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)	1.79	(2.66)
<b>B24M</b>	14 Ga. (1.9)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)	1.32	(1.96)
<b>B32M</b>	12 Ga. (2.6)	1 <sup>3</sup> / <sub>8</sub> "	(34.9)	1.59	(2.36)
<b>B42M</b>	12 Ga. (2.6)	1"	(25.4)	1.33	(1.98)
<b>B44M</b>	14 Ga. (1.9)	1"	(25.4)	0.98	(1.46)
<b>B52M</b>	12 Ga. (2.6)	1 <sup>3</sup> / <sub>16</sub> "	(20.6)	1.16	(1.72)
<b>B54M</b>	14 Ga. (1.9)	1 <sup>3</sup> / <sub>16</sub> "	(20.6)	.89	(1.32)



## B22H25 thru B56H25 H25 Type Channel

- For beam loads use 90% of Channel Loading Chart

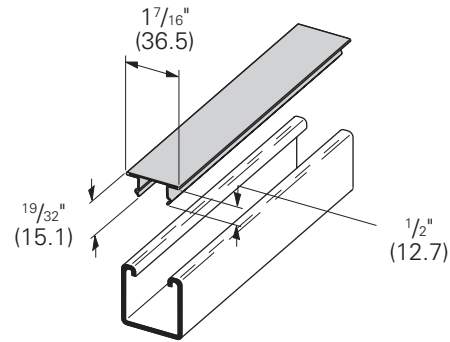
Part No.	Thickness	Height H		Weight	
		In.	mm	Lbs./Ft.	kg/m
<b>B22H25</b>	12 Ga. (2.6)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)	1.85	(2.75)
<b>B24H25</b>	14 Ga. (1.9)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)	1.36	(2.02)
<b>B32H25</b>	12 Ga. (2.6)	1 <sup>3</sup> / <sub>8</sub> "	(34.9)	1.65	(2.45)
<b>B42H25</b>	12 Ga. (2.6)	1"	(25.4)	1.39	(2.07)
<b>B52H25</b>	12 Ga. (2.6)	1 <sup>3</sup> / <sub>16</sub> "	(20.6)	1.22	(1.81)
<b>B54H25</b>	14 Ga. (1.9)	1 <sup>3</sup> / <sub>16</sub> "	(20.6)	.93	(1.38)



Reference page 48 for general fitting and standard finish specifications.

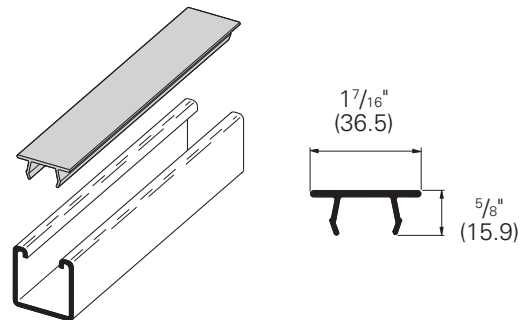
## B217-20 Snap Closure Strip for All 1<sup>5</sup>/<sub>8</sub>" (41.3) Wide Channels

- Refer to Raceway Fill Chart pages 278-279
- Material: 20 Gauge (.9)
- Standard finishes: GRN, GALV, YZN
- Standard length: 120" (3.05m)
- Wt./CFT 36 Lbs. (16.3 kg)



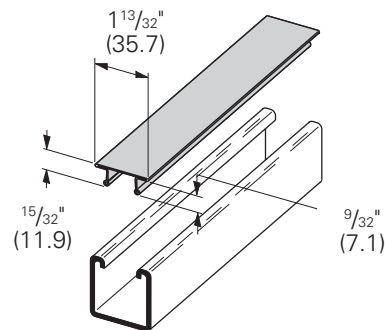
## B217P Plastic Snap Closure Strip for All 1<sup>5</sup>/<sub>8</sub>" (41.3) Wide Channels

- Refer to Raceway Fill Chart pages 278-279
- Standard finishes: Green (GRN) or Gray (GRY) Plastic
- Standard length: 120" (3.05m)
- Wt./CFT 9.2 Lbs. (4.2 kg)



## B217-24 Snap Closure Strip for All 1<sup>5</sup>/<sub>8</sub>" (41.3) Wide Channels

- Refer to Raceway Fill Chart pages 278-279
- For use with 7 or fewer conductors no larger than #12 AWG
- Material: 24 Gauge (.6)
- Standard finishes: GRN, GALV, YZN
- Standard length: 120" (3.05m)
- Wt./CFT 28 Lbs. (12.7 kg)



## Touch Up Paint

- Used to touch up cut ends of channel
- Standard colors: Green for DURA GREEN™ & B999 for Zinc/Galv
- Weight: 12.5 ounce cans

Part No.	Description	Box Qty.
<b>B999</b>	Zinc/Galv color	1
<b>960674A</b>	Dura-Green color	1



B999



960674A

Reference page 48 for general fitting and standard finish specifications.

## Hydraulic Strut Cutter

- Patented **esp**\* hydraulic strut cutter easily cuts a variety of B-Line series strut profiles to size in seconds
- Produces clean cuts without burrs or sharp edges - no post processing necessary
- Lightweight, black anodized 7075-T651 aluminum frame is portable to the jobsite - 65 lbs. (29.4kg)
- Collapsible handle creates a sturdy operations platform
- 10,000psi hydraulic power source and hose with universal coupling (sold separately) required for operation
- Adjustable material rest\* feeds strut sections straight into cutter
- Adjustable backstop\* provides for easy production cutting
- Die sets available for cutting B22, B24, B26, B52, B54, B56 strut profiles
- Die life: thousands of cuts from a single set of blades

\*requires two (2) sections of 1" OD tubing - sold separately



\* **esp** (edwards strut pro) is a product logo used by Edwards Manufacturing Company

Part No.	Description	Wt./C	
		Lbs.	kg
<b>BHSC100</b>	Complete esp set includes cutter, hydraulic pump & hose, material rest, backstop and the three (3) die sets listed below	173	(78.5)
<b>Die Sets for Channel</b>			
<b>BHSC100B22</b>	B22, B24, B26, B52, B54, B56	13	(5.9)

