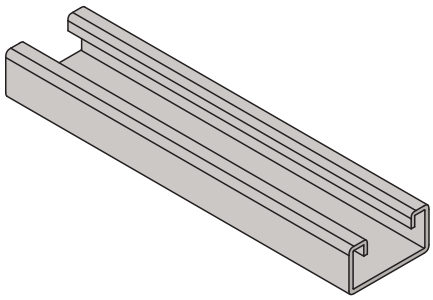
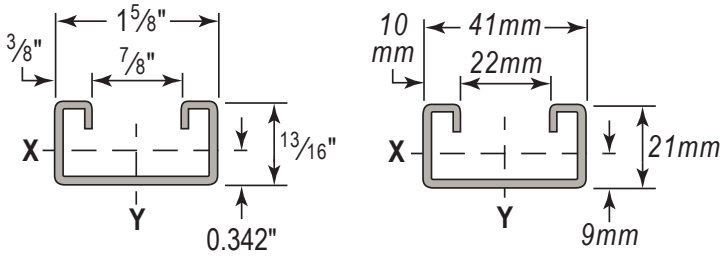
SUBMITTAL SHEETS

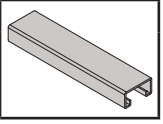
Channel

1-5/8" x 13/16" *(41mm x 21mm)* Channel

12 Gauge





SPECIFYING Brand & Part No. WESANCO	Gauge	DISCONTINUED Brands & Part No. VERSABAR	DISCONTINUED Brands & Part No. FLORIDA STRUT	1-5/8" x 13/16"
Solid Channel				
W510	12 Ga.	VA13	FS121316NS	

Standard Finish: Pre-Galvanized (PG) • Available in 10' & 20' standard lengths & pre-cut lengths • Custom cut lengths, combinations, and pierced channel available

Finish or Material Order Codes			
Material/Finish	**ASTM Designation**	**Material/Finish Codes**	**Description**
Hot Rolled: Channel	A 1011SS GR33		Hot rolled carbon steel sheet and strip, structural quality.
Cold Rolled: Channel	A 1008SS GR33, A 1008		Cold rolled carbon sheet steel.
Electroplated	ASTM B 633	EG	Fittings and hardware supplied as "Electro-Galvanized"
Mill-Galvanized (Pre-Galvanized)	A 653 SS GR33 G90.	PG	Galvanized steel used in the manufacture of channel sections. Uncoated edges resulted from slitting, punching and channel cut off are present.
Hot Dip Galvanized After Fabrication	ASTM A 123, ASTM A153, or ASTM A386.	HG	Channel and fittings which are hot dip galvanized after fabrication.
Paint-Green Powder Coating	--	GR	A dark green low gloss powder coating is applied and thoroughly baked after steel has been cleaned and phosphatized.
Plain	--	PL	Other commercially available finishes can be supplied per specification when required to protect applications.
Special Coatings Yellow Passivate (Trivalent Chromium)	ASTM B63	YC	Fittings and hardware supplied as "Electro-Galvanized", with a "Yellow" Dichromate conversion coat versus the clear conversion coat of the EG finish.
Stainless Steel:	A 240 TYPE 304	S4	Heat resisting chromium and chromium-nickel stainless steel plate, sheet, strip for pressure vessel.
	A 240 TYPE 316	S6	
Aluminum	B 221 TYPE 6063 T6	AL	Aluminum alloy extruded bar, rod, wire, shape and tube.

PROJECT INFORMATION:		APPROVAL STAMP:
Project:		
Date:	**Phone:**	
Architect / Engineer:		
Contractor:		
Address:		
Notes 1:		

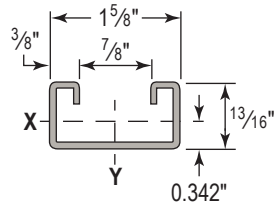
WARNING: Cancer and Reproductive Harm Warning. For more information go to www.P65Warnings.ca.gov.

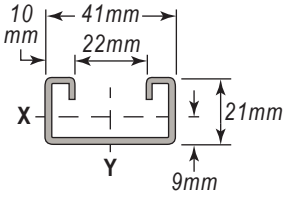
Channel

1-5/8" x 13/16" *(41mm x 21mm)* Channel

12 Gauge

Channel Load Data





Section Properties

12 Gauge SPECIFYING Brand & Part No. WESANCO	Wt./Ft. Lbs. (Kg/M)	Area of Section Sq. in. (Sq. cm)	X-X Axis			Y-Y Axis			DISCONTINUED Brands & Part No.	
			Ix in.^{4} (Ix cm^4)	Sx in.^{3} (Sx cm^3)	rx. in. (rx. cm)	Iy in.^{4} (Iy cm^4)	Sy in.^{3} (Sy cm^3)	ry in. (ry cm)	VERSABAR	FLORIDA STRUT
1 5/8" x 13/16" *(41mm x 21mm)* 12 Gauge Channel										
W510	1.27 *(1.89)*	0.374 *(2.41)*	0.0308 *(1.28)*	0.0647 *(1.06)*	0.284 *(0.72)*	0.1375 *(5.72)*	0.1692 *(2.77)*	0.599 *(1.52)*	VA13	FS121316NS

1 5/8" x 13/16" *(41mm x 21mm)* 12 Gauge Channel

Allowable Beam Loads

Span	Max. Uniform Load (W)	Deflection at Load (W)	Uniform Load at Deflection Span /240	Lateral Bracing Load Reduction Rate
In *(mm)*	Lbs *(kN)*	In *(mm)*	Lbs *(kN)*	
24 *(610)*	532 *(2.4)*	0.11 *(2.8)*	502 *(2.2)*	--
36 *(914)*	358 *(1.6)*	0.24 *(6.1)*	223 *(1.0)*	--
48 *(1,219)*	265 *(1.2)*	0.43 *(10.9)*	122 *(0.5)*	--
60 *(1,524)*	212 *(0.9)*	0.67 *(17.0)*	78 *(0.3)*	--
72 *(1,829)*	175 *(0.8)*	0.96 *(24.4)*	54 *(0.2)*	--
84 *(2,134)*	152 *(0.7)*	1.31 *(33.3)*	39 *(0.2)*	--
96 *(2,438)*	132 *(0.6)*	1.71 *(43.4)*	30 *(0.1)*	--
108 *(2,743)*	118 *(0.5)*	2.16 *(54.9)*	22 *(0.1)*	--
120 *(3,048)*	102 *(0.5)*	2.67 *(67.8)*	18 *(0.1)*	--

Allowable Column Loads

Unbraced Height	Max. Slot Face Load	Max. Column Load Applied at C.G. K = 1.0
In *(mm)*	Lbs *(kN)*	Lbs *(kN)*
24 *(610)*	2,750 *(12.2)*	6,515 *(29.0)*
36 *(914)*	2,150 (9.6)	3600 *(16.0)*
48 *(1,219)*	1,558 *(6.9)*	2,030 *(9.0)*
60 *(1,524)*	1,158 *(5.2)*	**
72 *(1,829)*	888 *(4.0)*	**
84 *(2,134)*	700 *(3.1)*	**
96 *(2,438)*	565 *(2.5)*	**
108 *(2,743)*	460 *(2.0)*	**
120 *(3,048)*	390 *(1.7)*	**

* Load limited by spot weld shear

** KL/r > 200

NR = Not Recommended

Beam loads shown are total uniform load, including the channel weight, for a simple span supported at each end that is adequately laterally braced.

Refer to pages 34 - 36 for other beam support conditions.

Beam Loading of Punched Channels

Load for punched channel is obtained by multiplying the loads shown by the following reduction factors:

Channel with Short Slots 0.90
Channel with Long Slots 0.90
Channel with Holes 0.95
Knock-Out Channel 0.95

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