



# Engineering Channel Load Information

## Beam and Column Load Information

- Beam Load Support Formulas
- Beam Load - Design Fundamentals
- Column Load - Design Fundamentals
- Channel Selection Chart
- Individual Channel Beam and Column Load Information
- Lateral Bracing Load Reduction Charts



Call ZSi-Foster at 800.323.7053 or order now at [zsi-foster.com](http://zsi-foster.com)

**ZSi-Foster**

Springfield, MO | Canton, MI | La Mirada, CA



# Table of Contents

Beam Load Support Formulas . . . . . 3 - 4  
 Beam - Design Fundamentals . . . . . 5  
 Column - Design Fundamentals . . . . . 6  
 Channel Selection Chart . . . . . 7

## W200

W200 - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" Channel . . . . . 8  
 W200H - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" Channel with Holes . . . . . 9  
 W200KO - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" Channel with Knock Outs . . . . . 10  
 W200SL - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" Channel with Long Slots . . . . . 11  
 W200SS - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" Channel with Short Slots . . . . . 12  
 W201 - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 3<sup>1</sup>/<sub>4</sub>" Back-to-Back Channel . . . . . 13  
 W201SS - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 3<sup>1</sup>/<sub>4</sub>" Channel with Short Slots . . . . . 14

## W210

W210 - 14 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" Channel . . . . . 15  
 W210H - 14 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" Channel with Holes . . . . . 16  
 W210SL - 14 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" Channel with Long Slots . . . . . 17  
 W210SS - 14 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" Channel with Short Slots . . . . . 18  
 W210KO - 14 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" Channel with Knock Outs . . . . . 19  
 W211 - 14 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 3<sup>1</sup>/<sub>4</sub>" Back-to-Back Channel . . . . . 20  
 W211SS - 14 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 3<sup>1</sup>/<sub>4</sub>" Back-to-Back Channel with Short Slots . 21

## W300

W300 - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>8</sub>" Channel . . . . . 22  
 W300H - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>8</sub>" Channel with Holes . . . . . 23  
 W300SL - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>8</sub>" Channel with Long Slots . . . . . 24  
 W300SS - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>8</sub>" Channel with Short Slots . . . . . 25  
 W301 - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 2<sup>3</sup>/<sub>4</sub>" Back-to-Back Channel . . . . . 26  
 W301SS - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 2<sup>3</sup>/<sub>4</sub>" Back-to-Back Channel with Short Slots. 27

## W800

W800 - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1" Channel . . . . . 28  
 W800H - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1" Channel with Holes . . . . . 29  
 W800SL - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1" Channel with Long Slots . . . . . 30  
 W800SS - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1" Channel with Short Slots . . . . . 31  
 W801 - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 2" Back-to-Back Channel . . . . . 32  
 W801SS - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 2" Back-to-Back Channel with Short Slots . . 33

## W900

W900 - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 7<sup>8</sup>/<sub>8</sub>" Channel . . . . . 34  
 W900H - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 7<sup>8</sup>/<sub>8</sub>" Channel with Holes . . . . . 35  
 W900SL - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 7<sup>8</sup>/<sub>8</sub>" Channel with Long Slots . . . . . 36  
 W900SS - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 7<sup>8</sup>/<sub>8</sub>" Channel with Short Slots . . . . . 37  
 W901 - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>4</sub>" Back-to-Back Channel . . . . . 38  
 W901SS - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>4</sub>" Back-to-Back Channel with Short Slots. 39

## W500

W500 - 14 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>16</sub>" Channel . . . . . 40  
 W500H - 14 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>16</sub>" Channel with Holes . . . . . 41  
 W500SL - 14 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>16</sub>" Channel with Long Slots . . . . . 42  
 W500SS - 14 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>16</sub>" Channel with Short Slots . . . . . 43  
 W501 - 14 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" Back-to-Back Channel . . . . . 44  
 W501SS - 14 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" Back-to-Back Channel with Short Slots. 45

## W400

W400 - 16 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>16</sub>" Channel . . . . . 46  
 W400H - 16 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>16</sub>" Channel with Holes . . . . . 47  
 W400SL - 16 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>16</sub>" Channel with Long Slots . . . . . 48  
 W400SS - 16 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>16</sub>" Channel with Short Slots . . . . . 49  
 W401 - 16 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" Back-to-Back Channel . . . . . 50

## W100

W100 - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 2<sup>7</sup>/<sub>16</sub>" Channel . . . . . 51  
 W100H - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 2<sup>7</sup>/<sub>16</sub>" Channel with Holes . . . . . 52  
 W100SS - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 2<sup>7</sup>/<sub>16</sub>" Channel with Short Slots . . . . . 53  
 W101 - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 4<sup>7</sup>/<sub>8</sub>" Back-to-Back Channel . . . . . 54  
 W101SS - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 4<sup>7</sup>/<sub>8</sub>" Back-to-Back Channel with Short Slots. 55

## W150

W150 - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 3<sup>1</sup>/<sub>4</sub>" Channel . . . . . 56  
 W150H - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 3<sup>1</sup>/<sub>4</sub>" Channel with Holes . . . . . 57  
 W150SS - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 3<sup>1</sup>/<sub>4</sub>" Channel with Short Slots . . . . . 58  
 W151 - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 6<sup>1</sup>/<sub>2</sub>" Back-to-Back Channel . . . . . 59  
 W151SS - 12 Gauge - 1<sup>5</sup>/<sub>8</sub>" x 6<sup>1</sup>/<sub>2</sub>" Back-to-Back Channel with Short Slots. 60

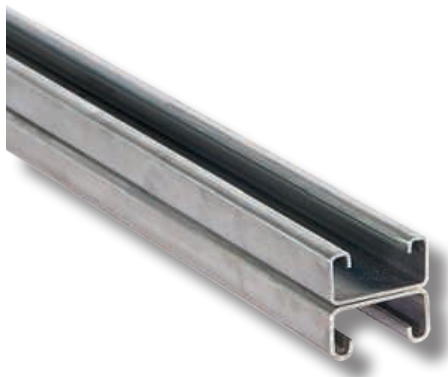
## W600

W600 - 19 Gauge - 1<sup>3</sup>/<sub>16</sub>" x 1<sup>3</sup>/<sub>16</sub>" Channel . . . . . 61  
 W601 - 19 Gauge - 1<sup>3</sup>/<sub>16</sub>" x 1<sup>5</sup>/<sub>8</sub>" Back-to-Back Channel . . . . . 62

## W700

W700 - 19 Gauge - 1<sup>3</sup>/<sub>16</sub>" x 1<sup>3</sup>/<sub>32</sub>" Channel . . . . . 63  
 W701 - 19 Gauge - 1<sup>3</sup>/<sub>16</sub>" x 1<sup>3</sup>/<sub>16</sub>" Back-to-Back Channel . . . . . 64

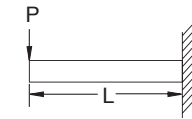
Lateral Bracing Load Reduction Charts . . . . . 65



# Beam Load Support Formulas



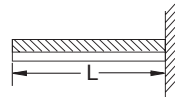
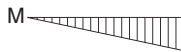
## Cantilever Beams



$$V \text{ max.} = P$$

$$M \text{ max.} = PL$$

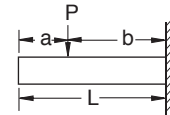
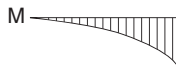
$$\Delta \text{ max.} = \frac{PL^3}{3EI}$$



$$V \text{ max.} = W$$

$$M \text{ max.} = \frac{WL}{2}$$

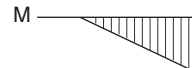
$$\Delta \text{ max.} = \frac{WL^3}{8EI}$$



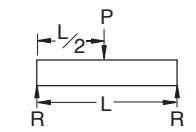
$$V \text{ max.} = P$$

$$M \text{ max.} = Pb$$

$$\Delta \text{ max.} = \frac{Pb^2(3L-b)}{6EI}$$



## Simple Beams

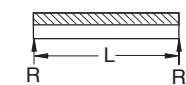


$$R = \frac{P}{2}$$

$$V \text{ max.} = \frac{P}{2}$$

$$M \text{ max.} = \frac{PL}{4}$$

$$\Delta \text{ max.} = \frac{PL^3}{48EI}$$

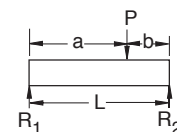


$$R = \frac{W}{2}$$

$$V \text{ max.} = \frac{W}{2}$$

$$M \text{ max.} = \frac{WL}{8}$$

$$\Delta \text{ max.} = \frac{5WL^3}{384EI}$$



$$R_1 = \frac{Pb}{L}$$

$$R_2 = \frac{Pa}{L}$$

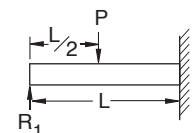
$$V \text{ max.} = \frac{Pa}{L}$$

$$M \text{ max.} = \frac{Pab}{L}$$

$$\Delta \text{ max.} = \frac{Pab(a+2b) \sqrt{3a(a+2b)}}{27EIL}$$



## Beams Fixed At One End & Supported At The Other



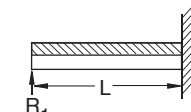
$$R_1 = \frac{5P}{16}$$

$$V \text{ max.} = \frac{11P}{16}$$

$$M \text{ max.} = \frac{3PL}{16}$$

$$\Delta \text{ max. at } x = 0.447L$$

$$\Delta \text{ max.} = 0.009317 \frac{PL^3}{EI}$$



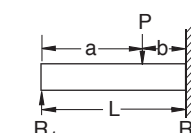
$$R_1 = \frac{3W}{8}$$

$$V \text{ max.} = \frac{5W}{8}$$

$$M \text{ max.} = \frac{WL}{8}$$

$$\Delta \text{ max. at } x = 0.4215L$$

$$\Delta \text{ max.} = \frac{WL^3}{185EI}$$



$$R_1 = \frac{Pb^2}{2L^3}(a+2L)$$

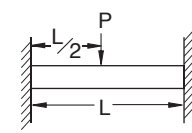
$$R_2 = \frac{Pa}{2L^3}(3L^2-a^2)$$

$$M \text{ at point of load} = R_1a$$

$$M \text{ at fixed end} = \frac{Pab}{2L^3}(a+L)$$



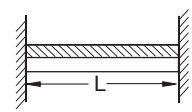
## Beams Fixed At Both Ends



$$V \text{ max.} = \frac{P}{2}$$

$$M \text{ max.} = \frac{PL}{8}$$

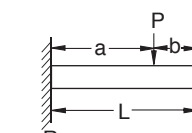
$$\Delta \text{ max.} = \frac{PL^3}{192EI}$$



$$V \text{ max.} = \frac{W}{2}$$

$$M \text{ max.} = \frac{WL}{12}$$

$$\Delta \text{ max.} = \frac{WL^3}{384EI}$$



$$R_1 = \frac{Pb^2}{L^3}(3a+b)$$

$$R_2 = \frac{Pa^2}{L^3}(a+3b)$$

$$M_1 = \frac{Pab^2}{L^2}$$

$$M_2 = \frac{Pa^2b}{L^2}$$



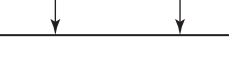

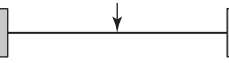


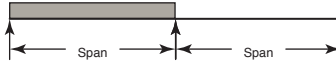





R – Reaction  
M – Moment  
P – Concentrated Load

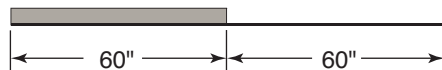
W – Total Uniform Load  
V – Shear  
L – Length

$\Delta$  – Deflection  
E – Modulus of Elasticity  
I – Moment of Inertia

All Beam Load tables are for simple beams supported at the ends. These can be used in the majority of the cases. There are times when it is necessary to know what happens with other loading and support conditions. Some common arrangements are shown below. Simply multiply the values from the Beam Load tables by factors given below.

Load and Support Condition		Load Factor	Deflection Factor
<b>Simple Beam</b> Uniform Load		1.00	1.00
<b>Simple Beam</b> Concentrated Load at Center		0.50	0.80
<b>Simple Beam</b> Two Equal Concentrated Loads at 1/4 Points		1.00	1.10
<b>Beam Fixed at Both Ends</b> Uniform Load		1.50	0.30
<b>Beam Fixed at Both Ends</b> Concentrated Load at Center		1.00	0.40
<b>Cantilever Beam</b> Uniform Load		0.25	2.40
<b>Cantilever Beam</b> Concentrated Load at End		0.12	3.20
<b>Continuous Beam</b> Two Equal Spans - Uniform Load on One Span		1.30	0.92
<b>Continuous Beam</b> Two Equal Spans - Uniform Load on Both Spans		1.00	0.42
<b>Continuous Beam</b> Two Equal Spans - Concentrated Load at Center of One Span		0.62	0.71
<b>Continuous Beam</b> Two Equal Spans - Concentrated Load at Center of Both Spans		0.67	0.48

### EXAMPLE I



#### PROBLEM:

Calculate the load and deflection of an W200 beam continuous over one support and loaded uniformly on one span.

#### SOLUTION:

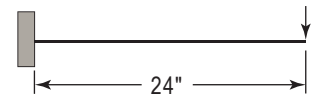
A. From load table for W200 the load for a 60" span is 700 lbs. and deflection is 0.35".

B. Multiply by factors from Table above

Load = 700 lb. x 1.30 = 910 lbs.

Deflection = 0.35 x 0.92 = 0.322".

### EXAMPLE II



#### PROBLEM:

Determine load and deflection of an W150 cantilever beam with a concentrated load on the end.

#### SOLUTION:

A. From load table for W150 the load for a 24" span is 5,360 lbs. and deflection is 0.09".

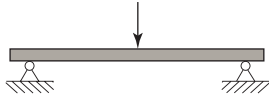
B. Multiply by factors from Table above.

Load = 5,360 lbs. x 0.12 = 643.2 lbs.

Deflection = 0.09 x 3.20 = 0.288"

Beams are structural members loaded at right angles (perpendicular) to their length. Most beams are horizontal and subjected to gravity or vertical loads, e.g. a shelf support. However, a vertical member can act as a beam under certain conditions, such as a curtain wall mullion subjected to wind loading. The bending moment developed in a beam is dependent on:

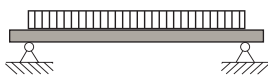
- (a) The amount of load applied,
- (b) The type of loading applied,
- (c) The support conditions



## Beam Loading - Point Load

A load concentrated onto a very small length of the beam is a point load.

## Beam Loading - Uniform Load



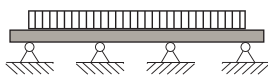
A load spread evenly over a relatively long length of the beam is a uniform load.

Point and uniform loads can be placed on a beam in any combination. A series of point loads can approximate a uniform loading. The load charts and tables are based on a uniform load unless identified otherwise.

## Support Conditions - Simple Beam

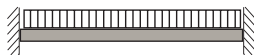
A simple beam has supports that prevent movement left and right, or up and down, but do not restrain the beam from rotating at the supports. In a natural deflected curve, most connections produce simple beams. The load charts and tables are based on simple beams unless identified otherwise.

## Support Conditions - Continuous Beam



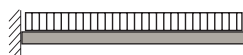
Any simple beam that is supported at one or more intermediate points is a continuous beam. A mezzanine joist that passes over three or more columns is an example of a continuous beam.

## Support Conditions - Fixed-End Beam



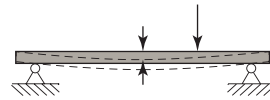
Supports that prevent the beam from rotating into a natural deflected curve produce a fixed-end beam. A welded end connection to a very rigid support produces a fixed-end beam.

## Support Conditions - Cantilever Beam



A cantilever beam is a fixed-end beam that is supported at one end only, while the other end is unsupported. Brackets are examples of cantilever beams.

## Deflection



All beams deflect under load. The amount of deflection is dependent on:

- (a) the amount of load,
- (b) the support conditions,
- (c) the stiffness of the beam's cross-sectional shape,
- (d) the stiffness of the beam material.

The stiffness of the beam's cross-sectional shape is measured by its "Moment Of Inertia" or "I". The larger a beam's "I", the stiffer it is and the less it will deflect. A beam's "I" can change for each major axis. The "I" of both major axes (I 1-1 and I 2-2) are provided.

The stiffness of a beam's material is measured by its "Modulus of Elasticity" or "E". The larger a material's "E", the stiffer it is and the less it deflects. For example, steel is about three times stiffer than aluminum and as a result, deflects only one-third as much. Do not confuse stiffness with strength. Two materials may have identical strengths yet still have different "E's". A high-strength aluminum may be as strong as steel and still deflect three times as much.

The load charts and tables give calculated deflections for the loads shown. In many cases, a final design will be determined by the maximum deflection, not the maximum load.

## Bending Moment

A beam must not only hold up the anticipated loads, but must also have sufficient additional capacity to safely hold unforeseen variations in applied loads and material strengths. This additional capacity is called a safety factor and is usually regulated by the various design codes and standards. A beam's strength is usually measured by an allowable bending moment or an allowable stress. The traditional approach is the allowable stress method, where a beam is determined to have a maximum allowable stress (in pounds per square inch) which is not to be exceeded.

The approach of the current AISI "Specification For The Design Of Cold-Formed Steel Structural Members" is to use a maximum allowable bending moment (in inch-pounds) which is not to be exceeded. Bending moment divided by a beam's section modulus or "S" equals stress.





Columns are structural members that are loaded parallel to their length. Most columns are vertical and are used to carry loads from a higher level to a lower level. However any member subjected to compression loads, such as a diagonal or prop brace, is a column.

A column fails by "buckling", which is a sudden loss of straightness and subsequent collapse. Allowable column load is dependent on:

- (a) the length of column,
- (b) the type of loading,
- (c) the support conditions, and
- (d) the column's cross-sectional shape and material

## Column Length

The column length is measured from braced point to braced point. A braced point is where the column is restrained from lateral movement (translation) in all directions.

## Column Loading – Concentric Loading

Loads applied to the center of gravity of the column cross-section are considered concentric. A beam that passes over and rests on the top of a column is an example of concentric loading.

## Column Loading – Eccentric Loading

Any load which is not concentric is eccentric. The amount of eccentricity (in inches) has a major effect on the load-carrying capacity of any particular column. A load that is transmitted to a Unistrut Metal Framing column using a standard fitting bolted to the slot face is considered eccentric.

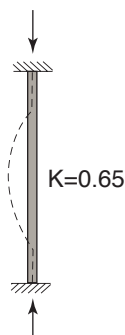
The load tables give allowable loads for both concentric (loaded at C.G.) and certain eccentric (loaded at slot face) loading. Allowable loads for other eccentric loading must be determined by a qualified design professional.

## Support Conditions

Based on the support conditions, an appropriate "K" value is selected. This "K" value, which mathematically describes the column end conditions, is used in the column design equations. The most common support condition combinations are as follows:

### Support Conditions - Fixed Top – Fixed Bottom

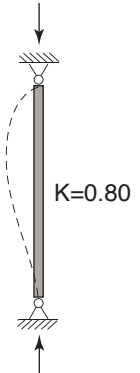
Both ends are restrained against rotation and lateral movement (translation).



### Support Conditions - Pinned Top – Fixed Bottom

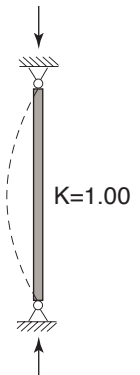
The top is restrained against lateral movement (translation) but is allowed to rotate. The bottom is restrained against rotation and lateral movement.

This is a common support condition and is used to construct the allowable column load applied at the Slot Face tables.



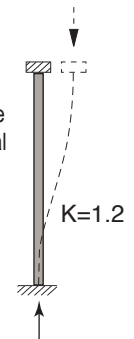
### Support Conditions - Pinned Top – Pinned Bottom

Both ends are restrained against lateral movement (translation) but are allowed to rotate.



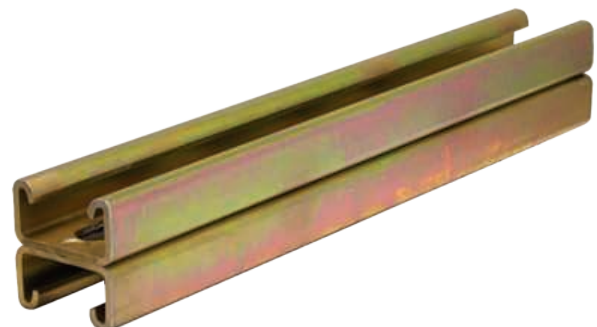
### Support Conditions - Fixed / Free Top – Fixed Bottom

The top is restrained against rotation but is allowed to move laterally. The bottom is restrained against rotation and lateral movement (translation).

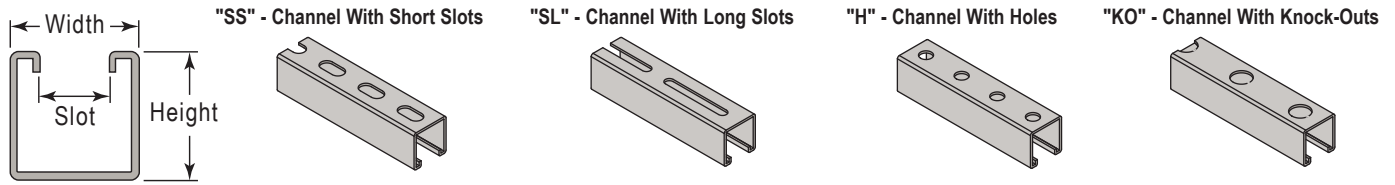


## Cross-Sectional Shape

The cross-sectional shape of a column member determines the value of its "Radius of Gyration" or "r". In general, a member with a large "r" makes a better column than a member with a small "r". Each axis of a column has a different "r". Typically the axis with the smallest "r" determines the final design.



# Wesanco® Channel Selection Chart



Channel	Channel Dimensions			Steel Gauge	Hole Patterns				Finish					Special Metals					
	Style	Width	Height		Slot Width	SS	SL	H	KO	PG	EG	HG	GR	PL	Gold	ST304	ST316	EA	
W100		1 5/8" (41mm)	2 7/16" (62mm)	7/8" (22mm)	12	◆	◆	◆	◆	■	-	■	■	■	■	■	■	-	
W101			4 7/8" (124mm)			◆	◆	◆	◆	■	-	■	■	■	■	■	■	■	-
W150			3 1/4" (83mm)			◆	◆	◆	◆	■	-	■	■	■	■	■	■	■	-
W151			6 1/2" (165mm)			◆	◆	◆	◆	■	-	■	■	■	■	■	■	■	-
W200			1 5/8" (41mm)			◆	◆	◆	◆	■	-	■	■	■	■	■	■	■	■
W201			3 1/4" (83mm)			◆	◆	◆	◆	■	-	■	■	■	■	■	■	■	■
W210			1 5/8" (41mm)			◆	◆	◆	◆	■	-	■	■	■	■	■	■	■	-
W211			3 1/4" (83mm)			◆	◆	◆	◆	■	-	■	■	■	■	■	■	■	-
W300			1 3/8" (35mm)			◆	◆	◆	◆	■	-	■	■	■	■	■	■	■	-
W301			2 3/4" (70mm)			◆	◆	◆	◆	■	-	■	■	■	■	■	■	■	-
W400			1 3/16" (21mm)			◆	◆	◆	◆	■	-	■	■	■	■	■	■	■	-
W401			1 5/8" (41mm)			◆	◆	◆	◆	■	-	■	■	■	■	■	■	■	-
W500			1 3/16" (21mm)			◆	◆	◆	◆	■	-	■	■	■	■	■	■	■	■
W501			1 5/8" (41mm)			◆	◆	◆	◆	■	-	■	■	■	■	■	■	■	■
W600		1 3/16" (21mm)	1 3/16" (21mm)	7/16" (11mm)	19	-	-	-	-	-	■	■	■	■	■	-	-		
W601			1 5/8" (41mm)			-	-	-	-	-	-	■	■	■	■	■	-	-	
W700			1 3/32" (10mm)			-	-	-	-	-	-	■	■	■	■	■	-	-	
W701			1 3/16" (21mm)			-	-	-	-	-	-	■	■	■	■	■	-	-	
W800		1 5/8" (41mm)	1" (25mm)	7/8" (22mm)	12	◆	◆	◆	◆	■	-	■	■	■	■	■	■	-	
W801			2" (51mm)			◆	◆	◆	◆	■	-	■	■	■	■	■	■	■	-
W900			7/8" (23mm)			◆	◆	◆	◆	■	-	■	■	■	■	■	■	■	-
W901			1 3/4" (44mm)			◆	◆	◆	◆	■	-	■	■	■	■	■	■	■	-

◆ Pierced Available

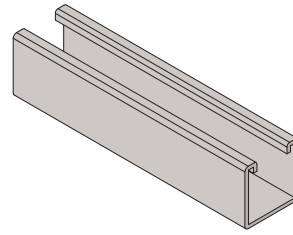
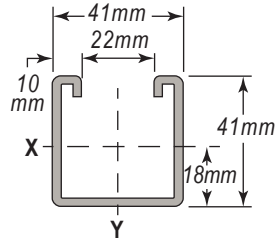
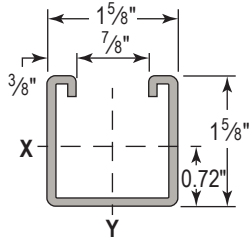
For finish and material specifications see pages 24 - 25

PG - Pre-Galvanized • EG - Electro-Galvanized • HG - Hot Dip Galvanized • GR - Paint-Green Powder Coating • PL - Uncoated Steel • GOLD - Yellow Zinc Dichromate  
 ST304 - Stainless Steel Type 304 • ST316 - Stainless Steel Type 316 • EA - Extruded Aluminum



# W200 - 12 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" (41mm x 41mm)



## W200 Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.91 (2.84)	0.561 (3.62)	0.188 (7.83)	0.207 (3.39)	0.579 (1.47)	0.238 (9.91)	0.293 (4.80)	0.652 (1.66)

## W200 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	3,480	0.01	3,480	3,480	3,480	1.00
24	1,740	0.06	1,740	1,740	1,740	1.00
36	1,160	0.13	1,160	1,160	910	0.93
48	870	0.23	870	770	510	0.87
60	700	0.35	660	490	330	0.82
72	580	0.51	460	340	230	0.77
84	500	0.70	340	250	170	0.74
96	430	0.89	260	190	130	0.70
108	390	1.15	200	150	100	0.67
120	350	1.42	160	120	80	0.65

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	15.7	0.35	15.7	15.7	15.7	1.00
600	7.9	1.39	7.9	7.9	7.9	1.00
900	5.2	3.13	5.2	5.2	4.2	0.94
1,200	3.9	5.53	3.9	3.6	2.4	0.87
1,500	3.2	8.72	3.0	2.3	1.5	0.82
1,800	2.6	12.52	2.1	1.6	1.1	0.78
2,100	2.2	16.85	1.6	1.2	0.8	0.74
2,400	2.0	22.13	1.2	0.9	0.6	0.71
2,700	1.7	27.93	0.9	0.7	0.4	0.68
3,000	1.6	34.39	0.8	0.6	0.4	0.65

## W200 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	3,870	12,430	12,120	11,640	11,110
24	3,620	10,830	9,970	8,830	7,780
36	3,250	8,970	7,780	6,420	5,330
48	2,800	7,300	6,030	4,710	3,820
60	2,410	5,940	4,710	3,650	2,970
72	2,110	4,850	3,820	2,970	2,410
84	1,870	4,060	3,210	2,490	1,990
96	1,680	3,490	2,760	2,120	1,670
108	1,530	3,060	2,410	1,830	KL/r >200
120	1,390	2,710	2,120	KL/r >200	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	17.3	55.4	54.0	52.0	49.6
600	16.1	48.4	44.7	39.7	35.1
900	14.5	40.3	35.1	29.0	24.1
1,200	12.6	32.9	27.3	21.4	17.3
1,500	10.9	26.8	21.4	16.5	13.5
1,800	9.5	22.0	17.3	13.5	10.9
2,100	8.5	18.4	14.5	11.3	9.1
2,400	7.6	15.8	12.5	9.6	7.6
2,700	6.9	13.8	10.9	8.3	KL/r >200
3,000	6.3	12.3	9.6	KL/r >200	KL/r >200

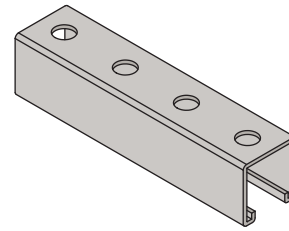
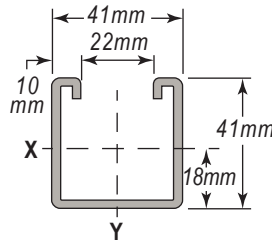
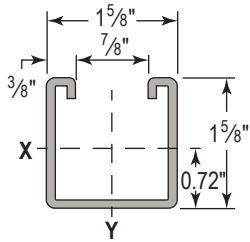
Beam loads shown are total uniform load, including the channel weight, for a simple span supported at each end that is adequately laterally braced. Refer to pages 3 - 6 for other beam support conditions.



# W200H - 12 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" (41mm x 41mm) with <sup>9</sup>/<sub>16</sub>" holes on 1<sup>7</sup>/<sub>8</sub>" centers.



## W200H Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.91 (2.84)	0.561 (3.62)	0.188 (7.83)	0.207 (3.39)	0.579 (1.47)	0.238 (9.91)	0.293 (4.80)	0.652 (1.66)

## W200H - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	3,306	0.01	3,306	3,306	3,306	1.00
24	1,653	0.06	1,653	1,653	1,653	1.00
36	1,102	0.13	1,102	1,102	865	0.93
48	827	0.23	827	732	485	0.87
60	665	0.35	627	466	314	0.82
72	551	0.51	437	323	219	0.77
84	475	0.70	323	238	162	0.74
96	409	0.89	247	181	124	0.70
108	371	1.15	190	143	95	0.67
120	333	1.42	152	114	76	0.65

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	14.9	0.35	14.9	14.9	14.9	1.00
600	7.5	1.39	7.5	7.5	7.5	1.00
900	5.0	3.13	5.0	5.0	4.0	0.94
1,200	3.7	5.53	3.7	3.4	2.2	0.87
1,500	3.0	8.72	2.9	2.2	1.4	0.82
1,800	2.5	12.52	2.0	1.5	1.0	0.78
2,100	2.1	16.85	1.5	1.1	0.7	0.74
2,400	1.9	22.13	1.1	0.8	0.5	0.71
2,700	1.6	27.93	0.9	0.7	0.4	0.68
3,000	1.5	34.39	0.7	0.5	0.3	0.65

## W200H - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	3,870	12,430	12,120	11,640	11,110
24	3,620	10,830	9,970	8,830	7,780
36	3,250	8,970	7,780	6,420	5,330
48	2,800	7,300	6,030	4,710	3,820
60	2,410	5,940	4,710	3,650	2,970
72	2,110	4,850	3,820	2,970	2,410
84	1,870	4,060	3,210	2,490	1,990
96	1,680	3,490	2,760	2,120	1,670
108	1,530	3,060	2,410	1,830	KL/r >200
120	1,390	2,710	2,120	KL/r >200	KL/r >200

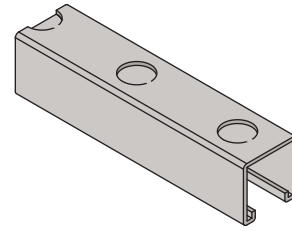
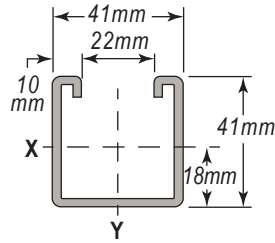
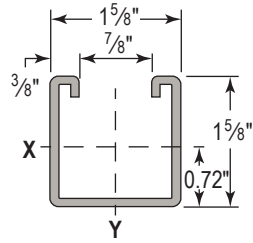
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	17.3	55.4	54.0	52.0	49.6
600	16.1	48.4	44.7	39.7	35.1
900	14.5	40.3	35.1	29.0	24.1
1,200	12.6	32.9	27.3	21.4	17.3
1,500	10.9	26.8	21.4	16.5	13.5
1,800	9.5	22.0	17.3	13.5	10.9
2,100	8.5	18.4	14.5	11.3	9.1
2,400	7.6	15.8	12.5	9.6	7.6
2,700	6.9	13.8	10.9	8.3	KL/r >200
3,000	6.3	12.3	9.6	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.



# W200KO - 12 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" (41mm x 41mm) with 7/<sub>8</sub>" Knock Outs on 6" centers



## W200KO Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.91 (2.84)	0.561 (3.62)	0.188 (7.83)	0.207 (3.39)	0.579 (1.47)	0.238 (9.91)	0.293 (4.80)	0.652 (1.66)

## W200KO - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	3,306	0.01	3,306	3,306	3,306	1.00
24	1,653	0.06	1,653	1,653	1,653	1.00
36	1,102	0.13	1,102	1,102	865	0.93
48	827	0.23	827	732	485	0.87
60	665	0.35	627	466	314	0.82
72	551	0.51	437	323	219	0.77
84	475	0.70	323	238	162	0.74
96	409	0.89	247	181	124	0.70
108	371	1.15	190	143	95	0.67
120	333	1.42	152	114	76	0.65

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	14.9	0.35	14.9	14.9	14.9	1.00
600	7.5	1.39	7.5	7.5	7.5	1.00
900	5.0	3.13	5.0	5.0	4.0	0.94
1,200	3.7	5.53	3.7	3.4	2.2	0.87
1,500	3.0	8.72	2.9	2.2	1.4	0.82
1,800	2.5	12.52	2.0	1.5	1.0	0.78
2,100	2.1	16.85	1.5	1.1	0.7	0.74
2,400	1.9	22.13	1.1	0.8	0.5	0.71
2,700	1.6	27.93	0.9	0.7	0.4	0.68
3,000	1.5	34.39	0.7	0.5	0.3	0.65

## W200KO - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	3,870	12,430	12,120	11,640	11,110
24	3,620	10,830	9,970	8,830	7,780
36	3,250	8,970	7,780	6,420	5,330
48	2,800	7,300	6,030	4,710	3,820
60	2,410	5,940	4,710	3,650	2,970
72	2,110	4,850	3,820	2,970	2,410
84	1,870	4,060	3,210	2,490	1,990
96	1,680	3,490	2,760	2,120	1,670
108	1,530	3,060	2,410	1,830	KL/r >200
120	1,390	2,710	2,120	KL/r >200	KL/r >200

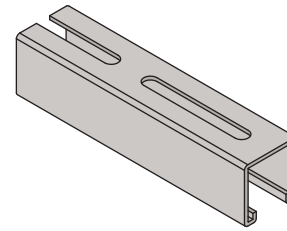
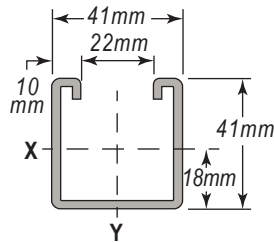
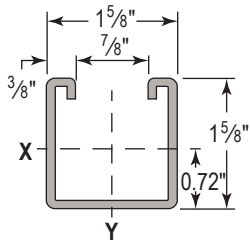
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	17.3	55.4	54.0	52.0	49.6
600	16.1	48.4	44.7	39.7	35.1
900	14.5	40.3	35.1	29.0	24.1
1,200	12.6	32.9	27.3	21.4	17.3
1,500	10.9	26.8	21.4	16.5	13.5
1,800	9.5	22.0	17.3	13.5	10.9
2,100	8.5	18.4	14.5	11.3	9.1
2,400	7.6	15.8	12.5	9.6	7.6
2,700	6.9	13.8	10.9	8.3	KL/r >200
3,000	6.3	12.3	9.6	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.

# W200SL - 12 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" (41mm x 41mm) with 1<sup>3</sup>/<sub>32</sub>" x 3" Long Slots on 4" centers.



## W200SL Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.91 (2.84)	0.561 (3.62)	0.188 (7.83)	0.207 (3.39)	0.579 (1.47)	0.238 (9.91)	0.293 (4.80)	0.652 (1.66)

## W200SL - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	3,132	0.01	3,132	3,132	3,132	1.00
24	1,566	0.06	1,566	1,566	1,566	1.00
36	1,044	0.13	1,044	1,044	819	0.93
48	783	0.23	783	693	459	0.87
60	630	0.35	594	441	297	0.82
72	522	0.51	414	306	207	0.77
84	450	0.70	306	225	153	0.74
96	387	0.89	234	171	117	0.70
108	351	1.15	180	135	90	0.67
120	315	1.42	144	108	72	0.65

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	14.1	0.35	14.1	14.1	14.1	1.00
600	7.1	1.39	7.1	7.1	7.1	1.00
900	4.7	3.13	4.7	4.7	3.8	0.94
1,200	3.5	5.53	3.5	3.2	2.1	0.87
1,500	2.8	8.72	2.7	2.0	1.4	0.82
1,800	2.4	12.52	1.9	1.4	1.0	0.78
2,100	2.0	16.85	1.4	1.0	0.7	0.74
2,400	1.8	22.13	1.1	0.8	0.5	0.71
2,700	1.6	27.93	0.8	0.6	0.4	0.68
3,000	1.4	34.39	0.7	0.5	0.3	0.65

## W200SL - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	3,870	12,430	12,120	11,640	11,110
24	3,620	10,830	9,970	8,830	7,780
36	3,250	8,970	7,780	6,420	5,330
48	2,800	7,300	6,030	4,710	3,820
60	2,410	5,940	4,710	3,650	2,970
72	2,110	4,850	3,820	2,970	2,410
84	1,870	4,060	3,210	2,490	1,990
96	1,680	3,490	2,760	2,120	1,670
108	1,530	3,060	2,410	1,830	KL/r >200
120	1,390	2,710	2,120	KL/r >200	KL/r >200

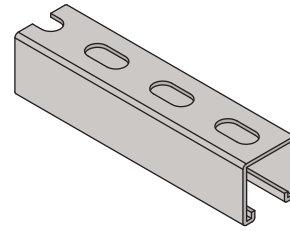
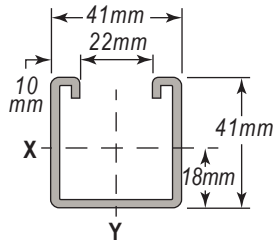
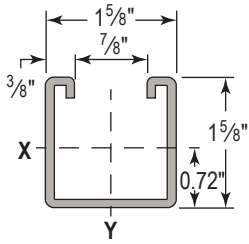
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	17.3	55.4	54.0	52.0	49.6
600	16.1	48.4	44.7	39.7	35.1
900	14.5	40.3	35.1	29.0	24.1
1,200	12.6	32.9	27.3	21.4	17.3
1,500	10.9	26.8	21.4	16.5	13.5
1,800	9.5	22.0	17.3	13.5	10.9
2,100	8.5	18.4	14.5	11.3	9.1
2,400	7.6	15.8	12.5	9.6	7.6
2,700	6.9	13.8	10.9	8.3	KL/r >200
3,000	6.3	12.3	9.6	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.



# W200SS - 12 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" (41mm x 41mm) with <sup>9</sup>/<sub>16</sub>" x 1<sup>1</sup>/<sub>8</sub>" Short Slots on 6" centers



## W200SS Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.91 (2.84)	0.561 (3.62)	0.188 (7.83)	0.207 (3.39)	0.579 (1.47)	0.238 (9.91)	0.293 (4.80)	0.652 (1.66)

## W200SS - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	3,132	0.01	3,132	3,132	3,132	1.00
24	1,566	0.06	1,566	1,566	1,566	1.00
36	1,044	0.13	1,044	1,044	819	0.93
48	783	0.23	783	693	459	0.87
60	630	0.35	594	441	297	0.82
72	522	0.51	414	306	207	0.77
84	450	0.70	306	225	153	0.74
96	387	0.89	234	171	117	0.70
108	351	1.15	180	135	90	0.67
120	315	1.42	144	108	72	0.65

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	14.1	0.35	14.1	14.1	14.1	1.00
600	7.1	1.39	7.1	7.1	7.1	1.00
900	4.7	3.13	4.7	4.7	3.8	0.94
1,200	3.5	5.53	3.5	3.2	2.1	0.87
1,500	2.8	8.72	2.7	2.0	1.4	0.82
1,800	2.4	12.52	1.9	1.4	1.0	0.78
2,100	2.0	16.85	1.4	1.0	0.7	0.74
2,400	1.8	22.13	1.1	0.8	0.5	0.71
2,700	1.6	27.93	0.8	0.6	0.4	0.68
3,000	1.4	34.39	0.7	0.5	0.3	0.65

## W200SS - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	3,870	12,430	12,120	11,640	11,110
24	3,620	10,830	9,970	8,830	7,780
36	3,250	8,970	7,780	6,420	5,330
48	2,800	7,300	6,030	4,710	3,820
60	2,410	5,940	4,710	3,650	2,970
72	2,110	4,850	3,820	2,970	2,410
84	1,870	4,060	3,210	2,490	1,990
96	1,680	3,490	2,760	2,120	1,670
108	1,530	3,060	2,410	1,830	KL/r >200
120	1,390	2,710	2,120	KL/r >200	KL/r >200

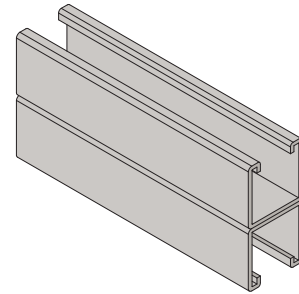
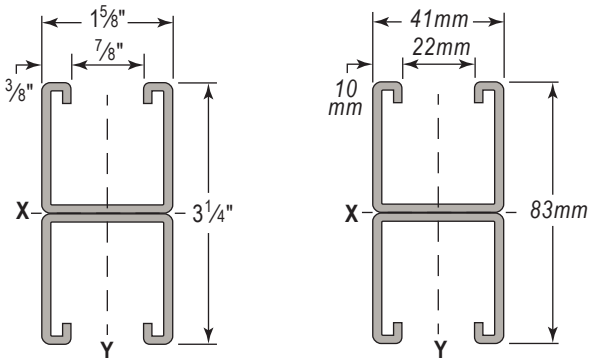
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	17.3	55.4	54.0	52.0	49.6
600	16.1	48.4	44.7	39.7	35.1
900	14.5	40.3	35.1	29.0	24.1
1,200	12.6	32.9	27.3	21.4	17.3
1,500	10.9	26.8	21.4	16.5	13.5
1,800	9.5	22.0	17.3	13.5	10.9
2,100	8.5	18.4	14.5	11.3	9.1
2,400	7.6	15.8	12.5	9.6	7.6
2,700	6.9	13.8	10.9	8.3	KL/r >200
3,000	6.3	12.3	9.6	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.

# W201 - 12 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 3<sup>1</sup>/<sub>4</sub>" (41mm x 83mm)



## W201 Section Properties

Wt.. Lbs./ Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
3.82 (5.68)	1.122 (7.24)	0.954 (39.71)	0.587 (9.62)	0.922 (2.34)	0.477 (19.85)	0.587 (9.62)	0.652 (1.66)

## W201 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	2,500 *	0.00	2,500 *	2,500 *	2,500 *	1.00
24	2,500 *	0.02	2,500 *	2,500 *	2,500 *	1.00
36	2,500 *	0.05	2,500 *	2,500 *	2,500 *	1.00
48	2,460	0.13	2,460	2,460	2,460	1.00
60	1,970	0.20	1,970	1,970	1,670	0.96
72	1,640	0.28	1,640	1,640	1,160	0.92
84	1,410	0.39	1,410	1,280	850	0.88
96	1,230	0.50	1,230	980	650	0.85
108	1,090	0.64	1,030	770	510	0.81
120	980	0.78	830	630	420	0.77

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	11.1 *	0.05	11.1 *	11.1 *	11.1 *	1.00
600	11.1 *	0.39	11.1 *	11.1 *	11.1 *	1.00
900	11.1 *	1.31	11.1 *	11.1 *	11.1 *	1.00
1,200	11.1 *	3.10	11.1 *	11.1 *	11.1 *	1.00
1,500	8.9	4.84	8.9	8.9	7.7	0.97
1,800	7.4	6.98	7.4	7.4	5.3	0.93
2,100	6.4	9.50	6.4	5.9	3.9	0.89
2,400	5.6	12.39	5.6	4.5	3.0	0.85
2,700	4.9	15.66	4.7	3.6	2.4	0.81
3,000	4.4	19.36	3.8	2.9	1.9	0.78

## W201 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	6700	25700	25480	25120	24720
24	6580	24510	23830	22900	22010
36	6430	23020	22010	20810	19820
48	6290	21580	20450	18860	16320
60	6130	20370	18860	15680	12520
72	5730	19160	16320	12520	9040
84	5270	17120	13760	9570	6640
96	4770	15040	11310	7320	5090
108	4240	12980	9040	5790	4020
120	3750	11010	7320	4690	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	29.8	114.4	113.4	111.9	110.1
600	29.3	109.2	106.3	102.2	98.3
900	28.6	102.7	98.3	92.9	88.5
1,200	28.0	96.4	91.4	84.7	73.7
1,500	27.4	91.0	84.7	70.9	57.0
1,800	25.7	86.1	73.7	57.0	41.5
2,100	23.7	77.2	62.5	43.9	30.5
2,400	21.5	68.1	51.6	33.6	23.4
2,700	19.2	59.0	41.5	26.6	18.5
3,000	17.0	50.3	33.6	21.5	KL/r >200

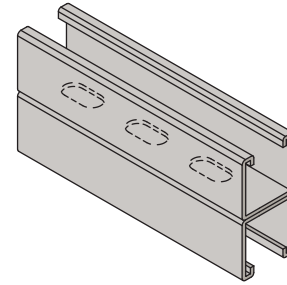
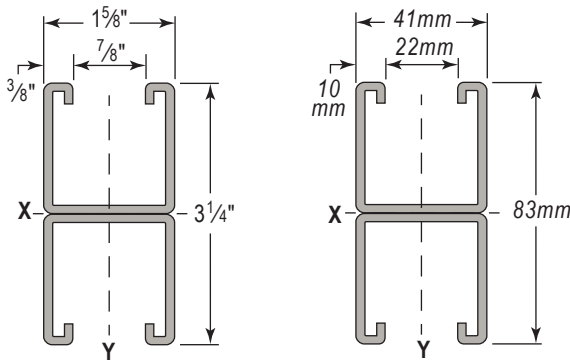
\* Load limited by spot weld shear

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 3 - 6 for other beam support conditions.



# W201SS - 12 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 3<sup>1</sup>/<sub>4</sub>" (41mm x 83mm) with <sup>9</sup>/<sub>16</sub>" x 1<sup>1</sup>/<sub>8</sub>" Short Slots on 2" centers



## W201SS Section Properties

Wt. Lbs./ Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
3.82 (5.68)	1.122 (7.24)	0.954 (39.71)	0.587 (9.62)	0.922 (2.34)	0.477 (19.85)	0.587 (9.62)	0.652 (1.66)

## W201SS - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	2,250 *	0.00	2,250 *	2,250 *	2,250 *	1.00
24	2,250 *	0.02	2,250 *	2,250 *	2,250 *	1.00
36	2,250 *	0.05	2,250 *	2,250 *	2,250 *	1.00
48	2,214	0.13	2,214	2,214	2,214	1.00
60	1,773	0.20	1,773	1,773	1,503	0.96
72	1,476	0.28	1,476	1,476	1,044	0.92
84	1,269	0.39	1,269	1,152	765	0.88
96	1,107	0.50	1,107	882	585	0.85
108	981	0.64	927	693	459	0.81
120	882	0.78	747	567	378	0.77

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	10.0 *	0.05	10.0 *	10.0 *	10.0 *	1.00
600	10.0 *	0.39	10.0 *	10.0 *	10.0 *	1.00
900	10.0 *	1.31	10.0 *	10.0 *	10.0 *	1.00
1,200	10.0 *	3.10	10.0 *	10.0 *	10.0 *	1.00
1,500	8.0	4.84	8.0	8.0	6.9	0.97
1,800	6.7	6.98	6.7	6.7	4.8	0.93
2,100	5.7	9.50	5.7	5.3	3.5	0.89
2,400	5.0	12.39	5.0	4.0	2.7	0.85
2,700	4.4	15.66	4.2	3.2	2.1	0.81
3,000	4.0	19.36	3.4	2.6	1.7	0.78

## W201SS - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	6700	25700	25480	25120	24720
24	6580	24510	23830	22900	22010
36	6430	23020	22010	20810	19820
48	6290	21580	20450	18860	16320
60	6130	20370	18860	15680	12520
72	5730	19160	16320	12520	9040
84	5270	17120	13760	9570	6640
96	4770	15040	11310	7320	5090
108	4240	12980	9040	5790	4020
120	3750	11010	7320	4690	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	29.8	114.4	113.4	111.9	110.1
600	29.3	109.2	106.3	102.2	98.3
900	28.6	102.7	98.3	92.9	88.5
1,200	28.0	96.4	91.4	84.7	73.7
1,500	27.4	91.0	84.7	70.9	57.0
1,800	25.7	86.1	73.7	57.0	41.5
2,100	23.7	77.2	62.5	43.9	30.5
2,400	21.5	68.1	51.6	33.6	23.4
2,700	19.2	59.0	41.5	26.6	18.5
3,000	17.0	50.3	33.6	21.5	KL/r >200

\* Load limited by spot weld shear

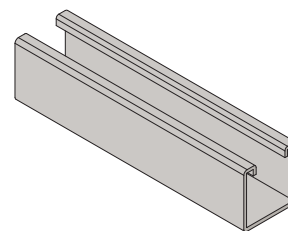
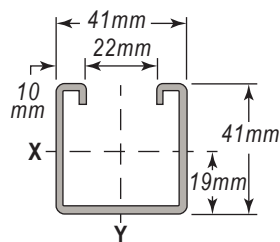
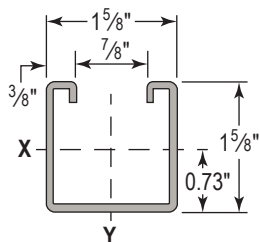
Beam loads shown are total uniform load, including the channel weight, for a simple span supported at each end that is adequately laterally braced. Refer to pages 3 - 6 for other beam support conditions.



# W210 - 14 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" (41mm x 41mm)



## W210 Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.42 (2.11)	0.417 (2.69)	0.148 (6.16)	0.169 (2.77)	0.596 (1.51)	0.183 (7.62)	0.225 (3.69)	0.662 (1.68)

## W210 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	2,840	0.01	2,840	2,840	2,840	1.00
24	1,420	0.06	1,420	1,420	1,420	0.99
36	950	0.13	950	950	720	0.88
48	710	0.23	710	610	400	0.77
60	570	0.37	520	390	260	0.66
72	470	0.52	360	270	180	0.57
84	410	0.72	260	200	130	0.50
96	350	0.92	200	150	100	0.45
108	320	1.20	160	120	80	0.41
120	280	1.44	130	100	60	0.38

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	12.8	0.36	12.8	12.8	12.8	1.00
600	6.4	1.44	6.4	6.4	6.4	1.00
900	4.3	3.24	4.3	4.3	3.3	0.89
1,200	3.2	5.75	3.2	2.8	1.9	0.77
1,500	2.6	9.05	2.4	1.8	1.2	0.67
1,800	2.1	12.94	1.6	1.2	0.8	0.58
2,100	1.8	17.55	1.2	0.9	0.6	0.50
2,400	1.6	23.01	0.9	0.7	0.4	0.45
2,700	1.4	29.12	0.7	0.5	0.4	0.41
3,000	1.3	36.20	0.6	0.4	0.3	0.39

## W210 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	3110	9250	9020	8660	8250
24	2880	8030	7330	6360	5420
36	2460	6480	5420	4190	3210
48	1980	4990	3830	2760	2160
60	1570	3740	2760	2050	1640
72	1300	2860	2160	1640	1320
84	1100	2310	1780	1370	1110
96	950	1950	1520	1170	950
108	840	1690	1320	1030	KL/r >200
120	750	1490	1170	KL/r >200	KL/r >200

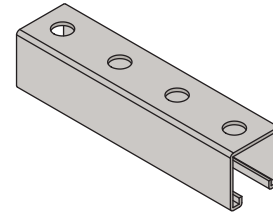
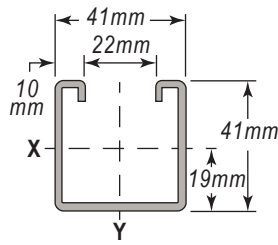
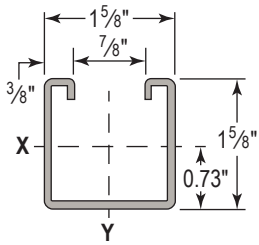
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	13.8	41.2	40.3	38.7	36.9
600	12.9	35.9	32.9	28.6	24.5
900	11.1	29.1	24.5	19.0	14.6
1,200	8.9	22.6	17.4	12.5	9.8
1,500	7.1	17.0	12.5	9.3	7.4
1,800	5.9	13.0	9.8	7.4	6.0
2,100	5.0	10.5	8.1	6.2	5.0
2,400	4.3	8.9	6.9	5.3	4.3
2,700	3.8	7.7	6.0	4.7	KL/r >200
3,000	3.4	6.8	5.3	4.1	KL/r >200

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 3 - 6 for other beam support conditions.



# W210H - 14 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" (41mm x 41mm) with 9<sup>16</sup>/<sub>16</sub>" holes on 1<sup>7</sup>/<sub>8</sub>" centers.



## W210H Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.42 (2.11)	0.417 (2.69)	0.148 (6.16)	0.169 (2.77)	0.596 (1.51)	0.183 (7.62)	0.225 (3.69)	0.662 (1.68)

## W210H - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	2,698	0.01	2,698	2,698	2,698	1.00
24	1,349	0.06	1,349	1,349	1,349	0.99
36	903	0.13	903	903	684	0.88
48	675	0.23	675	580	380	0.77
60	542	0.37	494	371	247	0.66
72	447	0.52	342	257	171	0.57
84	390	0.72	247	190	124	0.50
96	333	0.92	190	143	95	0.45
108	304	1.20	152	114	76	0.41
120	266	1.44	124	95	57	0.38

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	12.2	0.36	12.2	12.2	12.2	1.00
600	6.1	1.44	6.1	6.1	6.1	1.00
900	4.1	3.24	4.1	4.1	3.1	0.89
1,200	3.0	5.75	3.0	2.7	1.8	0.77
1,500	2.5	9.05	2.2	1.7	1.1	0.67
1,800	2.0	12.94	1.6	1.2	0.8	0.58
2,100	1.7	17.55	1.1	0.8	0.6	0.50
2,400	1.5	23.01	0.9	0.7	0.4	0.45
2,700	1.4	29.12	0.7	0.5	0.3	0.41
3,000	1.2	36.20	0.5	0.4	0.3	0.39

## W210H - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	3110	9250	9020	8660	8250
24	2880	8030	7330	6360	5420
36	2460	6480	5420	4190	3210
48	1980	4990	3830	2760	2160
60	1570	3740	2760	2050	1640
72	1300	2860	2160	1640	1320
84	1100	2310	1780	1370	1110
96	950	1950	1520	1170	950
108	840	1690	1320	1030	KL/r >200
120	750	1490	1170	KL/r >200	KL/r >200

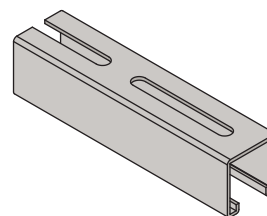
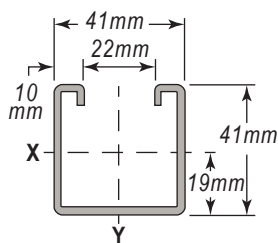
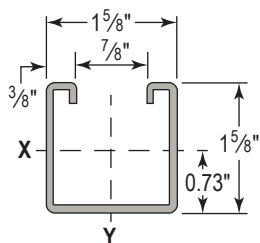
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	13.8	41.2	40.3	38.7	36.9
600	12.9	35.9	32.9	28.6	24.5
900	11.1	29.1	24.5	19.0	14.6
1,200	8.9	22.6	17.4	12.5	9.8
1,500	7.1	17.0	12.5	9.3	7.4
1,800	5.9	13.0	9.8	7.4	6.0
2,100	5.0	10.5	8.1	6.2	5.0
2,400	4.3	8.9	6.9	5.3	4.3
2,700	3.8	7.7	6.0	4.7	KL/r >200
3,000	3.4	6.8	5.3	4.1	KL/r >200

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 3 - 6 for other beam support conditions.

# W210SL - 14 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" (41mm x 41mm) with 1<sup>3</sup>/<sub>32</sub>" x 3" Long Slots on 4" centers.



## W210SL Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.42 (2.11)	0.417 (2.69)	0.148 (6.16)	0.169 (2.77)	0.596 (1.51)	0.183 (7.62)	0.225 (3.69)	0.662 (1.68)

## W210SL - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	2,556	0.01	2,556	2,556	2,556	1.00
24	1,278	0.06	1,278	1,278	1,278	0.99
36	855	0.13	855	855	648	0.88
48	639	0.23	639	549	360	0.77
60	513	0.37	468	351	234	0.66
72	423	0.52	324	243	162	0.57
84	369	0.72	234	180	117	0.50
96	315	0.92	180	135	90	0.45
108	288	1.20	144	108	72	0.41
120	252	1.44	117	90	54	0.38

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	11.5	0.36	11.5	11.5	11.5	1.00
600	5.8	1.44	5.8	5.8	5.8	1.00
900	3.8	3.24	3.8	3.8	3.0	0.89
1,200	2.9	5.75	2.9	2.5	1.7	0.77
1,500	2.3	9.05	2.1	1.6	1.1	0.67
1,800	1.9	12.94	1.5	1.1	0.8	0.58
2,100	1.6	17.55	1.1	0.8	0.6	0.50
2,400	1.4	23.01	0.8	0.6	0.4	0.45
2,700	1.3	29.12	0.6	0.5	0.3	0.41
3,000	1.2	36.20	0.5	0.4	0.3	0.39

## W210SL - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	3110	9250	9020	8660	8250
24	2880	8030	7330	6360	5420
36	2460	6480	5420	4190	3210
48	1980	4990	3830	2760	2160
60	1570	3740	2760	2050	1640
72	1300	2860	2160	1640	1320
84	1100	2310	1780	1370	1110
96	950	1950	1520	1170	950
108	840	1690	1320	1030	KL/r >200
120	750	1490	1170	KL/r >200	KL/r >200

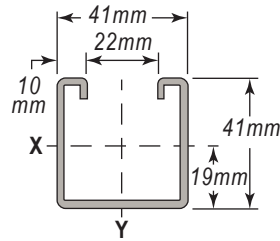
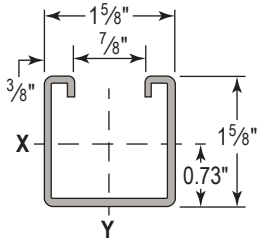
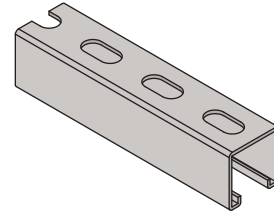
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	13.8	41.2	40.3	38.7	36.9
600	12.9	35.9	32.9	28.6	24.5
900	11.1	29.1	24.5	19.0	14.6
1,200	8.9	22.6	17.4	12.5	9.8
1,500	7.1	17.0	12.5	9.3	7.4
1,800	5.9	13.0	9.8	7.4	6.0
2,100	5.0	10.5	8.1	6.2	5.0
2,400	4.3	8.9	6.9	5.3	4.3
2,700	3.8	7.7	6.0	4.7	KL/r >200
3,000	3.4	6.8	5.3	4.1	KL/r >200

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 3 - 6 for other beam support conditions.



# W210SS - 14 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" (41mm x 41mm) with <sup>9</sup>/<sub>16</sub>" x 1<sup>1</sup>/<sub>8</sub>" Short Slots on 2" centers



## W210SS Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.42 (2.11)	0.417 (2.69)	0.148 (6.16)	0.169 (2.77)	0.596 (1.51)	0.183 (7.62)	0.225 (3.69)	0.662 (1.68)

## W210SS - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	2,556	0.01	2,556	2,556	2,556	1.00
24	1,278	0.06	1,278	1,278	1,278	0.99
36	855	0.13	855	855	648	0.88
48	639	0.23	639	549	360	0.77
60	513	0.37	468	351	234	0.66
72	423	0.52	324	243	162	0.57
84	369	0.72	234	180	117	0.50
96	315	0.92	180	135	90	0.45
108	288	1.20	144	108	72	0.41
120	252	1.44	117	90	54	0.38

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	11.5	0.36	11.5	11.5	11.5	1.00
600	5.8	1.44	5.8	5.8	5.8	1.00
900	3.8	3.24	3.8	3.8	3.0	0.89
1,200	2.9	5.75	2.9	2.5	1.7	0.77
1,500	2.3	9.05	2.1	1.6	1.1	0.67
1,800	1.9	12.94	1.5	1.1	0.8	0.58
2,100	1.6	17.55	1.1	0.8	0.6	0.50
2,400	1.4	23.01	0.8	0.6	0.4	0.45
2,700	1.3	29.12	0.6	0.5	0.3	0.41
3,000	1.2	36.20	0.5	0.4	0.3	0.39

## W210SS - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	3110	9250	9020	8660	8250
24	2880	8030	7330	6360	5420
36	2460	6480	5420	4190	3210
48	1980	4990	3830	2760	2160
60	1570	3740	2760	2050	1640
72	1300	2860	2160	1640	1320
84	1100	2310	1780	1370	1110
96	950	1950	1520	1170	950
108	840	1690	1320	1030	KL/r >200
120	750	1490	1170	KL/r >200	KL/r >200

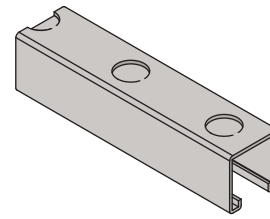
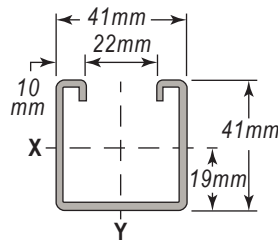
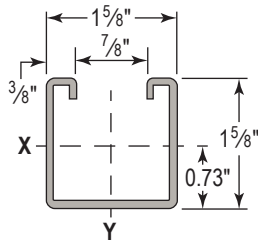
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	13.8	41.2	40.3	38.7	36.9
600	12.9	35.9	32.9	28.6	24.5
900	11.1	29.1	24.5	19.0	14.6
1,200	8.9	22.6	17.4	12.5	9.8
1,500	7.1	17.0	12.5	9.3	7.4
1,800	5.9	13.0	9.8	7.4	6.0
2,100	5.0	10.5	8.1	6.2	5.0
2,400	4.3	8.9	6.9	5.3	4.3
2,700	3.8	7.7	6.0	4.7	KL/r >200
3,000	3.4	6.8	5.3	4.1	KL/r >200

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 3 - 6 for other beam support conditions.

# W210KO - 14 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" (41mm x 41mm) with 7/8" Knock Outs on 6" centers



## W210KO Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.42 (2.11)	0.417 (2.69)	0.148 (6.16)	0.169 (2.77)	0.596 (1.51)	0.183 (7.62)	0.225 (3.69)	0.662 (1.68)

## W210KO - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	2,698	0.01	2,698	2,698	2,698	1.00
24	1,349	0.06	1,349	1,349	1,349	0.99
36	903	0.13	903	903	684	0.88
48	675	0.23	675	580	380	0.77
60	542	0.37	494	371	247	0.66
72	447	0.52	342	257	171	0.57
84	390	0.72	247	190	124	0.50
96	333	0.92	190	143	95	0.45
108	304	1.20	152	114	76	0.41
120	266	1.44	124	95	57	0.38

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	12.2	0.36	12.2	12.2	12.2	1.00
600	6.1	1.44	6.1	6.1	6.1	1.00
900	4.1	3.24	4.1	4.1	3.1	0.89
1,200	3.0	5.75	3.0	2.7	1.8	0.77
1,500	2.5	9.05	2.2	1.7	1.1	0.67
1,800	2.0	12.94	1.6	1.2	0.8	0.58
2,100	1.7	17.55	1.1	0.8	0.6	0.50
2,400	1.5	23.01	0.9	0.7	0.4	0.45
2,700	1.4	29.12	0.7	0.5	0.3	0.41
3,000	1.2	36.20	0.5	0.4	0.3	0.39

## W210KO - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	3110	9250	9020	8660	8250
24	2880	8030	7330	6360	5420
36	2460	6480	5420	4190	3210
48	1980	4990	3830	2760	2160
60	1570	3740	2760	2050	1640
72	1300	2860	2160	1640	1320
84	1100	2310	1780	1370	1110
96	950	1950	1520	1170	950
108	840	1690	1320	1030	KL/r >200
120	750	1490	1170	KL/r >200	KL/r >200

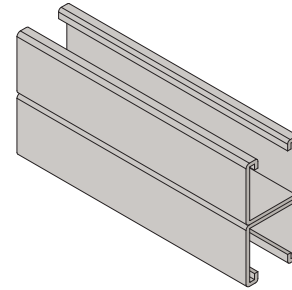
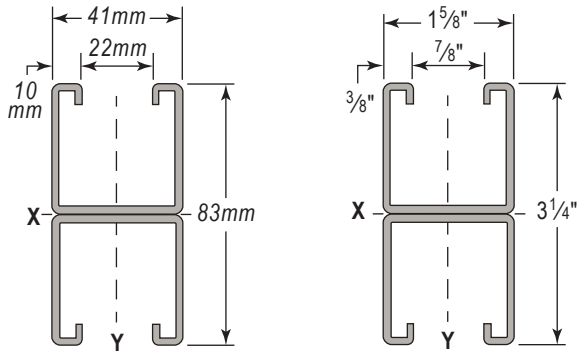
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	13.8	41.2	40.3	38.7	36.9
600	12.9	35.9	32.9	28.6	24.5
900	11.1	29.1	24.5	19.0	14.6
1,200	8.9	22.6	17.4	12.5	9.8
1,500	7.1	17.0	12.5	9.3	7.4
1,800	5.9	13.0	9.8	7.4	6.0
2,100	5.0	10.5	8.1	6.2	5.0
2,400	4.3	8.9	6.9	5.3	4.3
2,700	3.8	7.7	6.0	4.7	KL/r >200
3,000	3.4	6.8	5.3	4.1	KL/r >200

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 3 - 6 for other beam support conditions.



# W211 - 14 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 3<sup>1</sup>/<sub>4</sub>" (41mm x 83mm)



## W211 Section Properties

Wt.. Lbs./ Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
2.84 (4.23)	0.834 (5.38)	0.739 (30.76)	0.455 (7.46)	0.942 (2.39)	0.365 (15.19)	0.450 (7.37)	0.662 (1.68)

## W211 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	1,600 *	0.00	1,600 *	1,600 *	1,600 *	1.00
24	1,600 *	0.01	1,600 *	1,600 *	1,600 *	1.00
36	1,600 *	0.04	1,600 *	1,600 *	1,600 *	1.00
48	1,600 *	0.11	1,600 *	1,600 *	1,600 *	0.98
60	1,530	0.20	1,530	1,530	1,290	0.93
72	1,270	0.28	1,270	1,270	900	0.87
84	1,090	0.39	1,090	990	660	0.81
96	950	0.50	950	760	500	0.76
108	850	0.64	800	600	400	0.70
120	760	0.78	650	480	320	0.64

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	7.1 *	0.04	7.1 *	7.1 *	7.1 *	1.00
600	7.1 *	0.32	7.1 *	7.1 *	7.1 *	1.00
900	7.1 *	1.08	7.1 *	7.1 *	7.1 *	1.00
1,200	7.1 *	2.56	7.1 *	7.1 *	7.1 *	0.98
1,500	6.9	4.84	6.9	6.9	5.9	0.93
1,800	5.7	6.96	5.7	5.7	4.1	0.88
2,100	4.9	9.51	4.9	4.5	3.0	0.82
2,400	4.3	12.41	4.3	3.5	2.3	0.76
2,700	3.8	15.66	3.6	2.8	1.8	0.71
3,000	3.5	19.49	3.0	2.2	1.5	0.65

## W211 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	5140	19130	18970	18700	18390
24	5040	18230	17670	16860	16010
36	4890	16970	16010	14760	13610
48	4720	15590	14360	12920	11740
60	4500	14260	12920	11480	9280
72	4230	13080	11740	9280	6690
84	3890	12080	10210	7080	4920
96	3490	11150	8380	5420	3770
108	3060	9620	6690	4280	2980
120	2690	8160	5420	3470	KL/r > 200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	22.9	85.1	84.4	83.3	82.0
600	22.4	81.2	78.8	75.3	71.6
900	21.8	75.8	71.6	66.1	61.0
1,200	21.1	69.7	64.3	57.9	52.7
1,500	20.1	63.9	57.9	51.5	42.2
1,800	18.9	58.7	52.7	42.2	30.7
2,100	17.5	54.2	46.3	32.5	22.6
2,400	15.7	50.4	38.3	24.9	17.3
2,700	13.9	43.8	30.7	19.7	13.7
3,000	12.2	37.3	24.9	15.9	KL/r > 200

\* Load limited by spot weld shear

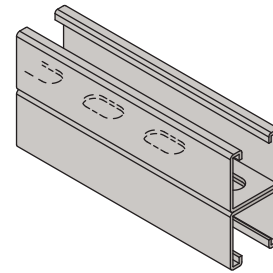
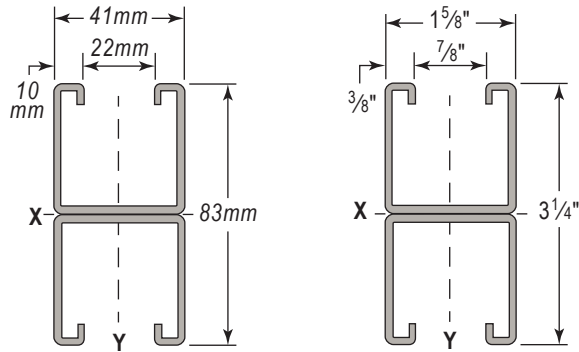
Beam loads shown are total uniform load, including the channel weight, for a simple span supported at each end that is adequately laterally braced. Refer to pages 3 - 6 for other beam support conditions.



# W211SS - 14 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 3<sup>1</sup>/<sub>4</sub>" (41mm x 83mm) with 9/<sub>16</sub>" x 1<sup>1</sup>/<sub>8</sub>" Short Slots on 2" centers



## W211SS Section Properties

Wt. Lbs./ Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
2.84 (4.23)	0.834 (5.38)	0.739 (30.76)	0.455 (7.46)	0.942 (2.39)	0.365 (15.19)	0.450 (7.37)	0.662 (1.68)

## W211SS - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	1,440 *	0.00	1,440 *	1,440 *	1,440 *	1.00
24	1,440 *	0.01	1,440 *	1,440 *	1,440 *	1.00
36	1,440 *	0.04	1,440 *	1,440 *	1,440 *	1.00
48	1,440 *	0.11	1,440 *	1,440 *	1,440 *	0.98
60	1,377	0.20	1,377	1,377	1,161	0.93
72	1,143	0.28	1,143	1,143	810	0.87
84	981	0.39	981	891	594	0.81
96	855	0.50	855	684	450	0.76
108	765	0.64	720	540	360	0.70
120	684	0.78	585	432	288	0.64

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	6.4 *	0.04	6.4 *	6.4 *	6.4 *	1.00
600	6.4 *	0.32	6.4 *	6.4 *	6.4 *	1.00
900	6.4 *	1.08	6.4 *	6.4 *	6.4 *	1.00
1,200	6.4 *	2.56	6.4 *	6.4 *	6.4 *	0.98
1,500	6.2	4.84	6.2	6.2	5.3	0.93
1,800	5.2	6.96	5.2	5.2	3.7	0.88
2,100	4.4	9.51	4.4	4.1	2.7	0.82
2,400	3.9	12.41	3.9	3.1	2.1	0.76
2,700	3.4	15.66	3.3	2.5	1.6	0.71
3,000	3.1	19.49	2.7	2.0	1.3	0.65

## W211SS - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	5140	19130	18970	18700	18390
24	5040	18230	17670	16860	16010
36	4890	16970	16010	14760	13610
48	4720	15590	14360	12920	11740
60	4500	14260	12920	11480	9280
72	4230	13080	11740	9280	6690
84	3890	12080	10210	7080	4920
96	3490	11150	8380	5420	3770
108	3060	9620	6690	4280	2980
120	2690	8160	5420	3470	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	22.9	85.1	84.4	83.3	82.0
600	22.4	81.2	78.8	75.3	71.6
900	21.8	75.8	71.6	66.1	61.0
1,200	21.1	69.7	64.3	57.9	52.7
1,500	20.1	63.9	57.9	51.5	42.2
1,800	18.9	58.7	52.7	42.2	30.7
2,100	17.5	54.2	46.3	32.5	22.6
2,400	15.7	50.4	38.3	24.9	17.3
2,700	13.9	43.8	30.7	19.7	13.7
3,000	12.2	37.3	24.9	15.9	KL/r >200

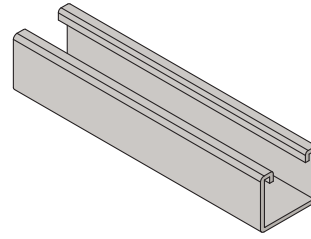
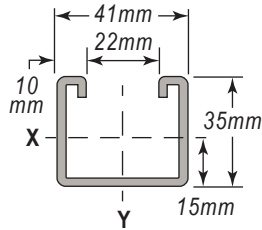
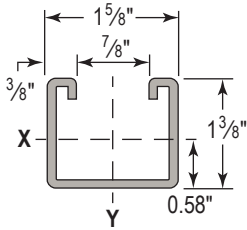
\* Load limited by spot weld shear

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 3 - 6 for other beam support conditions.



# W300 - 12 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>8</sub>" (41mm x 35mm)



## W300 Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.73 (2.57)	0.508 (3.28)	0.123 (5.12)	0.158 (2.59)	0.491 (1.25)	0.208 (8.66)	0.256 (4.20)	0.64 (1.63)

## W300 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	2,650	0.02	2,650	2,650	2,650	1.00
24	1,320	0.07	1,320	1,320	1,320	1.00
36	880	0.15	880	880	600	0.96
48	660	0.26	660	500	340	0.91
60	530	0.41	430	320	210	0.87
72	440	0.59	300	220	150	0.84
84	380	0.81	220	160	110	0.81
96	330	1.05	170	130	80	0.78
108	290	1.31	130	100	70	0.76
120	260	1.62	110	80	50	0.74

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	12.0	0.40	12.0	12.0	12.0	1.00
600	6.0	1.63	6.0	6.0	6.0	1.00
900	4.0	3.66	4.0	4.0	2.8	0.96
1,200	3.0	6.46	3.0	2.3	1.6	0.91
1,500	2.4	10.16	2.0	1.5	1.0	0.87
1,800	2.0	14.63	1.4	1.0	0.7	0.84
2,100	1.7	19.62	1.0	0.8	0.5	0.81
2,400	1.5	26.21	0.8	0.6	0.4	0.79
2,700	1.3	32.92	0.6	0.4	0.3	0.76
3,000	1.2	40.65	0.5	0.4	0.3	0.74

## W300 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	3480	11260	10980	10550	10080
24	3260	9830	9100	8150	7280
36	2980	8260	7280	6180	5280
48	2640	6890	5860	4760	3890
60	2340	5780	4760	3720	3010
72	2080	4880	3890	3010	2330
84	1860	4130	3270	2470	KL/r >200
96	1680	3550	2790	1890	KL/r >200
108	1480	3110	2330	KL/r >200	KL/r >200
120	1280	2740	1890	KL/r >200	KL/r >200

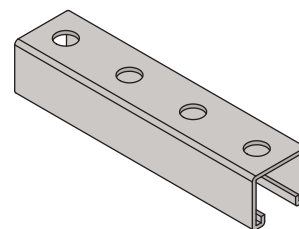
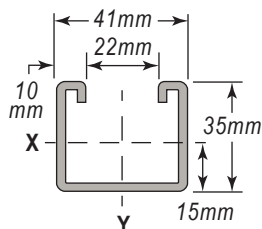
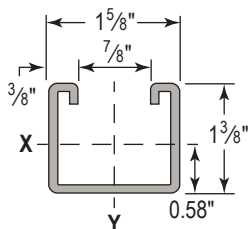
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	15.5	50.1	48.9	47.1	45.0
600	14.5	43.9	40.7	36.6	32.7
900	13.3	37.1	32.7	27.8	23.8
1,200	11.8	31.0	26.4	21.5	17.6
1,500	10.5	26.1	21.5	16.8	13.7
1,800	9.3	22.1	17.6	13.7	10.7
2,100	8.4	18.7	14.8	11.3	KL/r >200
2,400	7.6	16.1	12.6	8.7	KL/r >200
2,700	6.8	14.1	10.7	KL/r >200	KL/r >200
3,000	5.8	12.4	8.7	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.

# W300H - 12 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>8</sub>" (41mm x 35mm) with 9/<sub>16</sub>" holes on 1<sup>7</sup>/<sub>8</sub>" centers.



## W300H Section Properties

Wt., Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		I <sub>x</sub> in. <sup>4</sup> (cm <sup>4</sup> )	S <sub>x</sub> in. <sup>3</sup> (cm <sup>3</sup> )	r <sub>x</sub> in. (cm)	I <sub>y</sub> in. <sup>4</sup> (m <sup>4</sup> )	S <sub>y</sub> in. <sup>3</sup> (cm <sup>3</sup> )	r <sub>y</sub> in. (cm)
1.73 (2.57)	0.508 (3.28)	0.123 (5.12)	0.158 (2.59)	0.491 (1.25)	0.208 (8.66)	0.256 (4.20)	0.64 (1.63)

## W300H - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	2,518	0.02	2,518	2,518	2,518	1.00
24	1,254	0.07	1,254	1,254	1,254	1.00
36	836	0.15	836	836	570	0.96
48	627	0.26	627	475	323	0.91
60	504	0.41	409	304	200	0.87
72	418	0.59	285	209	143	0.84
84	361	0.81	209	152	105	0.81
96	314	1.05	162	124	76	0.78
108	276	1.31	124	95	67	0.76
120	247	1.62	105	76	48	0.74

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	11.4	0.40	11.4	11.4	11.4	1.00
600	5.7	1.63	5.7	5.7	5.7	1.00
900	3.8	3.66	3.8	3.8	2.6	0.96
1,200	2.8	6.46	2.8	2.2	1.5	0.91
1,500	2.3	10.16	1.9	1.4	0.9	0.87
1,800	1.9	14.63	1.3	1.0	0.6	0.84
2,100	1.6	19.62	1.0	0.7	0.5	0.81
2,400	1.4	26.21	0.7	0.5	0.4	0.79
2,700	1.3	32.92	0.6	0.4	0.3	0.76
3,000	1.1	40.65	0.5	0.3	0.3	0.74

## W300H - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	3480	11260	10980	10550	10080
24	3260	9830	9100	8150	7280
36	2980	8260	7280	6180	5280
48	2640	6890	5860	4760	3890
60	2340	5780	4760	3720	3010
72	2080	4880	3890	3010	2330
84	1860	4130	3270	2470	KL/r >200
96	1680	3550	2790	1890	KL/r >200
108	1480	3110	2330	KL/r >200	KL/r >200
120	1280	2740	1890	KL/r >200	KL/r >200

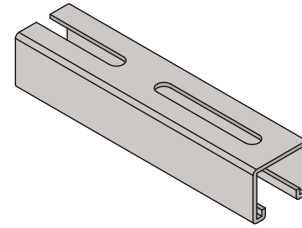
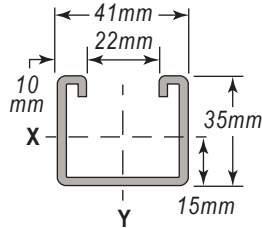
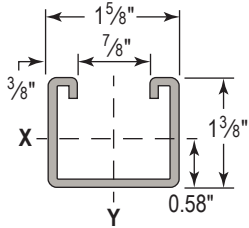
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	15.5	50.1	48.9	47.1	45.0
600	14.5	43.9	40.7	36.6	32.7
900	13.3	37.1	32.7	27.8	23.8
1,200	11.8	31.0	26.4	21.5	17.6
1,500	10.5	26.1	21.5	16.8	13.7
1,800	9.3	22.1	17.6	13.7	10.7
2,100	8.4	18.7	14.8	11.3	KL/r >200
2,400	7.6	16.1	12.6	8.7	KL/r >200
2,700	6.8	14.1	10.7	KL/r >200	KL/r >200
3,000	5.8	12.4	8.7	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.



# W300SL - 12 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>8</sub>" (41mm x 35mm) with 1<sup>3</sup>/<sub>32</sub>" x 3" Long Slots on 4" centers.



## W300SL Section Properties

Wt.. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.73 (2.57)	0.508 (3.28)	0.123 (5.12)	0.158 (2.59)	0.491 (1.25)	0.208 (8.66)	0.256 (4.20)	0.64 (1.63)

## W300SL - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	2,385	0.02	2,385	2,385	2,385	1.00
24	1,188	0.07	1,188	1,188	1,188	1.00
36	792	0.15	792	792	540	0.96
48	594	0.26	594	450	306	0.91
60	477	0.41	387	288	189	0.87
72	396	0.59	270	198	135	0.84
84	342	0.81	198	144	99	0.81
96	297	1.05	153	117	72	0.78
108	261	1.31	117	90	63	0.76
120	234	1.62	99	72	45	0.74

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	10.8	0.40	10.8	10.8	10.8	1.00
600	5.4	1.63	5.4	5.4	5.4	1.00
900	3.6	3.66	3.6	3.6	2.5	0.96
1,200	2.7	6.46	2.7	2.1	1.4	0.91
1,500	2.2	10.16	1.8	1.3	0.9	0.87
1,800	1.8	14.63	1.2	0.9	0.6	0.84
2,100	1.5	19.62	0.9	0.7	0.4	0.81
2,400	1.4	26.21	0.7	0.5	0.4	0.79
2,700	1.2	32.92	0.6	0.4	0.3	0.76
3,000	1.1	40.65	0.4	0.3	0.2	0.74

## W300SL - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	3480	11260	10980	10550	10080
24	3260	9830	9100	8150	7280
36	2980	8260	7280	6180	5280
48	2640	6890	5860	4760	3890
60	2340	5780	4760	3720	3010
72	2080	4880	3890	3010	2330
84	1860	4130	3270	2470	KL/r >200
96	1680	3550	2790	1890	KL/r >200
108	1480	3110	2330	KL/r >200	KL/r >200
120	1280	2740	1890	KL/r >200	KL/r >200

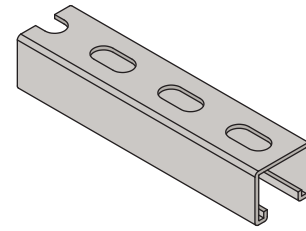
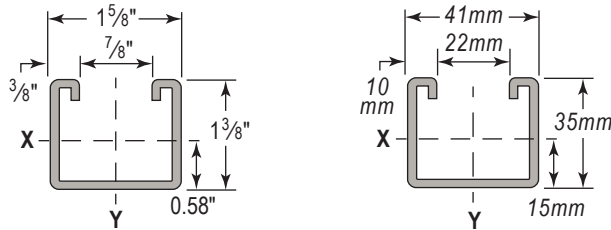
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	15.5	50.1	48.9	47.1	45.0
600	14.5	43.9	40.7	36.6	32.7
900	13.3	37.1	32.7	27.8	23.8
1,200	11.8	31.0	26.4	21.5	17.6
1,500	10.5	26.1	21.5	16.8	13.7
1,800	9.3	22.1	17.6	13.7	10.7
2,100	8.4	18.7	14.8	11.3	KL/r >200
2,400	7.6	16.1	12.6	8.7	KL/r >200
2,700	6.8	14.1	10.7	KL/r >200	KL/r >200
3,000	5.8	12.4	8.7	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.

# W300SS - 12 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>8</sub>" (41mm x 35mm) with 9/16" x 1/8" Short Slots on 2" centers



## W300SS Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.73 (2.57)	0.508 (3.28)	0.123 (5.12)	0.158 (2.59)	0.491 (1.25)	0.208 (8.66)	0.256 (4.20)	0.64 (1.63)

## W300SS - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	2,385	0.02	2,385	2,385	2,385	1.00
24	1,188	0.07	1,188	1,188	1,188	1.00
36	792	0.15	792	792	540	0.96
48	594	0.26	594	450	306	0.91
60	477	0.41	387	288	189	0.87
72	396	0.59	270	198	135	0.84
84	342	0.81	198	144	99	0.81
96	297	1.05	153	117	72	0.78
108	261	1.31	117	90	63	0.76
120	234	1.62	99	72	45	0.74

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	10.8	0.40	10.8	10.8	10.8	1.00
600	5.4	1.63	5.4	5.4	5.4	1.00
900	3.6	3.66	3.6	3.6	2.5	0.96
1,200	2.7	6.46	2.7	2.1	1.4	0.91
1,500	2.2	10.16	1.8	1.3	0.9	0.87
1,800	1.8	14.63	1.2	0.9	0.6	0.84
2,100	1.5	19.62	0.9	0.7	0.4	0.81
2,400	1.4	26.21	0.7	0.5	0.4	0.79
2,700	1.2	32.92	0.6	0.4	0.3	0.76
3,000	1.1	40.65	0.4	0.3	0.2	0.74

## W300SS - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	3480	11260	10980	10550	10080
24	3260	9830	9100	8150	7280
36	2980	8260	7280	6180	5280
48	2640	6890	5860	4760	3890
60	2340	5780	4760	3720	3010
72	2080	4880	3890	3010	2330
84	1860	4130	3270	2470	KL/r >200
96	1680	3550	2790	1890	KL/r >200
108	1480	3110	2330	KL/r >200	KL/r >200
120	1280	2740	1890	KL/r >200	KL/r >200

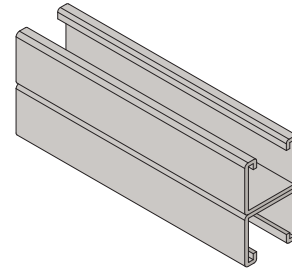
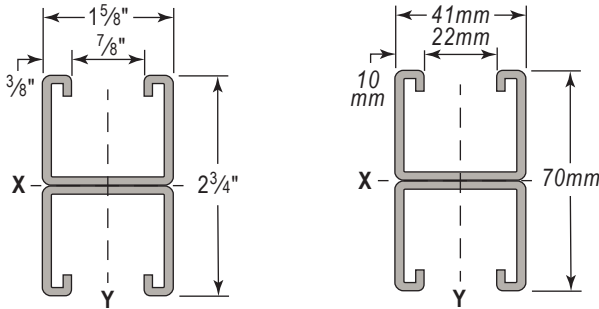
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	15.5	50.1	48.9	47.1	45.0
600	14.5	43.9	40.7	36.6	32.7
900	13.3	37.1	32.7	27.8	23.8
1,200	11.8	31.0	26.4	21.5	17.6
1,500	10.5	26.1	21.5	16.8	13.7
1,800	9.3	22.1	17.6	13.7	10.7
2,100	8.4	18.7	14.8	11.3	KL/r >200
2,400	7.6	16.1	12.6	8.7	KL/r >200
2,700	6.8	14.1	10.7	KL/r >200	KL/r >200
3,000	5.8	12.4	8.7	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.



# W301 - 12 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 2<sup>3</sup>/<sub>4</sub>" (41mm x 70mm)



## W301 Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
3.46 (5.15)	1.017 (6.56)	0.608 (25.31)	0.443 (7.26)	0.774 (1.97)	0.416 (17.32)	0.512 (8.39)	0.64 (1.63)

## W301 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	2,110 *	0.00	2,110 *	2,110 *	2,110 *	1.00
24	2,110 *	0.02	2,110 *	2,110 *	2,110 *	1.00
36	2,110 *	0.07	2,110 *	2,110 *	2,110 *	1.00
48	1,860	0.15	1,860	1,860	1,660	1.00
60	1,490	0.23	1,490	1,490	1,060	0.98
72	1,240	0.34	1,240	1,110	740	0.95
84	1,060	0.46	1,060	810	540	0.91
96	930	0.60	830	620	410	0.88
108	830	0.76	660	490	330	0.85
120	740	0.93	530	400	270	0.82

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	9.4 *	0.06	9.4 *	9.4 *	9.4 *	1.00
600	9.4 *	0.51	9.4 *	9.4 *	9.4 *	1.00
900	9.4 *	1.73	9.4 *	9.4 *	9.4 *	1.00
1,200	8.4	3.68	8.4	8.4	7.6	1.00
1,500	6.7	5.74	6.7	6.7	4.9	0.98
1,800	5.6	8.27	5.6	5.1	3.4	0.95
2,100	4.8	11.26	4.8	3.7	2.5	0.92
2,400	4.2	14.63	3.8	2.8	1.9	0.88
2,700	3.7	18.62	3.0	2.3	1.5	0.85
3,000	3.4	23.11	2.4	1.8	1.2	0.82

## W301 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	6000	23260	23040	22700	22330
24	5890	22130	21520	20730	20000
36	5770	20830	20000	19080	17990
48	5670	19670	18820	16850	14500
60	5470	18750	16850	13900	10990
72	5150	17140	14500	10990	7860
84	4740	15240	12140	8320	5770
96	4280	13310	9890	6370	4420
108	3800	11420	7860	5030	KL/r >200
120	3370	9620	6370	4070	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	26.7	103.5	102.6	101.1	99.5
450	26.5	101.3	99.5	96.8	94.2
600	26.2	98.6	95.9	92.5	89.3
750	25.9	95.7	92.5	88.5	85.1
900	25.7	92.9	89.3	85.1	80.7
1050	25.4	90.2	86.4	81.9	73.3
1200	25.2	87.8	84.0	75.8	65.5
1500	24.4	83.7	75.8	62.9	50.1
1800	23.1	77.0	65.5	50.1	36.1
2100	21.3	68.7	55.1	38.2	26.5

\* Load limited by spot weld shear

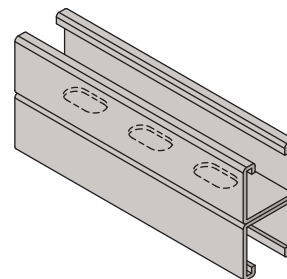
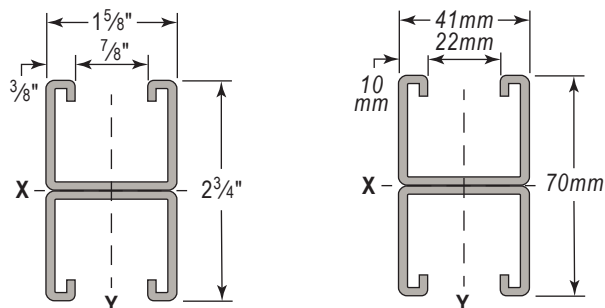
Beam loads shown are total uniform load, including the channel weight, for a simple span supported at each end that is adequately laterally braced. Refer to pages 3 - 6 for other beam support conditions.



# W301SS - 12 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 2<sup>3</sup>/<sub>4</sub>" (41mm x 70mm) with 9/<sub>16</sub>" x 1<sup>1</sup>/<sub>8</sub>" Short Slots on 2" centers.



## W301SS Section Properties

Wt. . Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
3.46 (5.15)	1.017 (6.56)	0.608 (25.31)	0.443 (7.26)	0.774 (1.97)	0.416 (17.32)	0.512 (8.39)	0.64 (1.63)

## W301SS - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	1,899 *	0.00	1,899 *	1,899 *	1,899 *	1.00
24	1,899 *	0.02	1,899 *	1,899 *	1,899 *	1.00
36	1,899 *	0.07	1,899 *	1,899 *	1,899 *	1.00
48	1,674	0.15	1,674	1,674	1,494	1.00
60	1,341	0.23	1,341	1,341	954	0.98
72	1,116	0.34	1,116	999	666	0.95
84	954	0.46	954	729	486	0.91
96	837	0.60	747	558	369	0.88
108	747	0.76	594	441	297	0.85
120	666	0.93	477	360	243	0.82

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	8.4 *	0.06	8.4 *	8.4 *	8.4 *	1.00
600	8.4 *	0.51	8.4 *	8.4 *	8.4 *	1.00
900	8.4 *	1.73	8.4 *	8.4 *	8.4 *	1.00
1,200	7.6	3.68	7.6	7.6	6.8	1.00
1,500	6.0	5.74	6.0	6.0	4.4	0.98
1,800	5.0	8.27	5.0	4.6	3.0	0.95
2,100	4.3	11.26	4.3	3.4	2.2	0.92
2,400	3.8	14.63	3.4	2.6	1.7	0.88
2,700	3.4	18.62	2.7	2.0	1.4	0.85
3,000	3.0	23.11	2.2	1.6	1.1	0.82

## W301SS - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	6000	23260	23040	22700	22330
24	5890	22130	21520	20730	20000
36	5770	20830	20000	19080	17990
48	5670	19670	18820	16850	14500
60	5470	18750	16850	13900	10990
72	5150	17140	14500	10990	7860
84	4740	15240	12140	8320	5770
96	4280	13310	9890	6370	4420
108	3800	11420	7860	5030	KL/r >200
120	3370	9620	6370	4070	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	26.7	103.5	102.6	101.1	99.5
450	26.5	101.3	99.5	96.8	94.2
600	26.2	98.6	95.9	92.5	89.3
750	25.9	95.7	92.5	88.5	85.1
900	25.7	92.9	89.3	85.1	80.7
1050	25.4	90.2	86.4	81.9	73.3
1200	25.2	87.8	84.0	75.8	65.5
1500	24.4	83.7	75.8	62.9	50.1
1800	23.1	77.0	65.5	50.1	36.1
2100	21.3	68.7	55.1	38.2	26.5

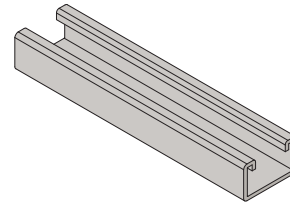
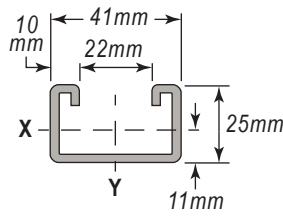
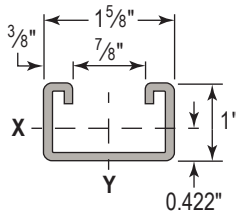
\* Load limited by spot weld shear

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 3 - 6 for other beam support conditions.



# W800 - 12 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 1" (41mm x 25mm)



## W800 Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.46 (2.17)	0.43 (2.77)	0.054 (2.25)	0.093 (1.52)	0.354 (0.90)	0.163 (6.78)	0.200 (3.28)	0.615 (1.56)

## W800 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	1,560	0.02	1,560	1,560	1,560	1.00
18	1,040	0.05	1,040	1,040	1,040	1.00
24	780	0.09	780	780	590	1.00
30	630	0.14	630	570	380	1.00
36	520	0.20	520	390	260	1.00
42	450	0.27	380	290	190	1.00
48	390	0.35	290	220	150	1.00
60	310	0.55	190	140	90	1.00
72	260	0.79	130	100	70	0.97
84	220	1.07	100	70	50	0.94

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	7.1	0.54	7.1	7.1	7.1	1.00
450	4.7	1.23	4.7	4.7	4.7	1.00
600	3.5	2.17	3.5	3.5	2.7	1.00
750	2.8	3.43	2.8	2.6	1.7	1.00
900	2.4	4.90	2.4	1.8	1.2	1.00
1050	2.0	6.61	1.8	1.3	0.9	1.00
1200	1.8	8.77	1.3	1.0	0.7	1.00
1500	1.4	13.71	0.8	0.7	0.4	1.00
1800	1.2	19.25	0.6	0.4	0.3	0.97
2100	1.0	27.04	0.4	0.3	0.2	0.94

## W800 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	2220	9730	9590	9350	9070
18	2190	9390	9070	8580	8010
24	2150	8920	8400	7600	6730
30	2090	8350	7600	6500	5370
36	2020	7700	6730	5370	4090
42	1930	7000	5820	4290	3010
48	1820	6280	4930	3320	2310
60	1540	4820	3320	2120	KL/r >200
72	1280	3490	2310	KL/r >200	KL/r >200
84	1060	2570	1690	KL/r >200	KL/r >200

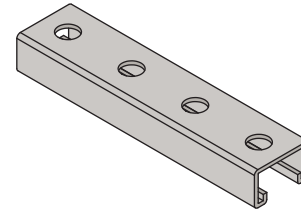
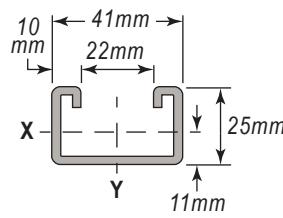
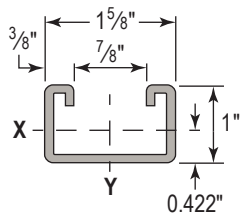
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	9.9	43.3	42.7	41.7	40.5
450	9.7	41.8	40.5	38.3	35.9
600	9.6	39.8	37.5	34.1	30.3
750	9.3	37.4	34.1	29.3	24.4
900	9.0	34.6	30.3	24.4	18.7
1050	8.6	31.5	26.3	19.6	13.8
1200	8.2	28.3	22.4	15.3	10.6
1500	7.0	21.9	15.3	9.7	KL/r >200
1800	5.8	16.1	10.6	KL/r >200	KL/r >200
2100	4.8	11.8	7.8	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.

# W800H - 12 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 1" (41mm x 25mm) with 9/16" holes on 1<sup>7</sup>/<sub>8</sub>" centers.



## W800H Section Properties

Wt.. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.46 (2.17)	0.43 (2.77)	0.054 (2.25)	0.093 (1.52)	0.354 (0.90)	0.163 (6.78)	0.200 (3.28)	0.615 (1.56)

## W800H - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	1,482	0.02	1,482	1,482	1,482	1.00
18	988	0.05	988	988	988	1.00
24	741	0.09	741	741	561	1.00
30	599	0.14	599	542	361	1.00
36	494	0.20	494	371	247	1.00
42	428	0.27	361	276	181	1.00
48	371	0.35	276	209	143	1.00
60	295	0.55	181	133	86	1.00
72	247	0.79	124	95	67	0.97
84	209	1.07	95	67	48	0.94

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	6.7	0.54	6.7	6.7	6.7	1.00
450	4.5	1.23	4.5	4.5	4.5	1.00
600	3.3	2.17	3.3	3.3	2.6	1.00
750	2.7	3.43	2.7	2.5	1.6	1.00
900	2.2	4.90	2.2	1.7	1.1	1.00
1050	1.9	6.61	1.7	1.3	0.8	1.00
1200	1.7	8.77	1.3	1.0	0.6	1.00
1500	1.4	13.71	0.8	0.6	0.4	1.00
1800	1.1	19.25	0.6	0.4	0.3	0.97
2100	1.0	27.04	0.4	0.3	0.2	0.94

## W800H - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	2220	9730	9590	9350	9070
18	2190	9390	9070	8580	8010
24	2150	8920	8400	7600	6730
30	2090	8350	7600	6500	5370
36	2020	7700	6730	5370	4090
42	1930	7000	5820	4290	3010
48	1820	6280	4930	3320	2310
60	1540	4820	3320	2120	KL/r >200
72	1280	3490	2310	KL/r >200	KL/r >200
84	1060	2570	1690	KL/r >200	KL/r >200

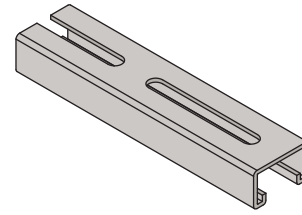
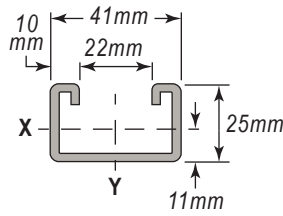
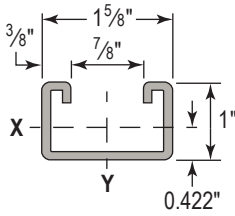
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	9.9	43.3	42.7	41.7	40.5
450	9.7	41.8	40.5	38.3	35.9
600	9.6	39.8	37.5	34.1	30.3
750	9.3	37.4	34.1	29.3	24.4
900	9.0	34.6	30.3	24.4	18.7
1050	8.6	31.5	26.3	19.6	13.8
1200	8.2	28.3	22.4	15.3	10.6
1500	7.0	21.9	15.3	9.7	KL/r >200
1800	5.8	16.1	10.6	KL/r >200	KL/r >200
2100	4.8	11.8	7.8	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.



# W800SL - 12 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 1" (41mm x 25mm) with 1<sup>3</sup>/<sub>32</sub>" x 3" Long Slots on 4" centers.



## W800SL Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.46 (2.17)	0.43 (2.77)	0.054 (2.25)	0.093 (1.52)	0.354 (0.90)	0.163 (6.78)	0.200 (3.28)	0.615 (1.56)

## W800SL - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	1,404	0.02	1,404	1,404	1,404	1.00
18	936	0.05	936	936	936	1.00
24	702	0.09	702	702	531	1.00
30	567	0.14	567	513	342	1.00
36	468	0.20	468	351	234	1.00
42	405	0.27	342	261	171	1.00
48	351	0.35	261	198	135	1.00
60	279	0.55	171	126	81	1.00
72	234	0.79	117	90	63	0.97
84	198	1.07	90	63	45	0.94

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	6.4	0.54	6.4	6.4	6.4	1.00
450	4.2	1.23	4.2	4.2	4.2	1.00
600	3.2	2.17	3.2	3.2	2.4	1.00
750	2.6	3.43	2.6	2.3	1.6	1.00
900	2.1	4.90	2.1	1.6	1.1	1.00
1050	1.8	6.61	1.6	1.2	0.8	1.00
1200	1.6	8.77	1.2	0.9	0.6	1.00
1500	1.3	13.71	0.8	0.6	0.4	1.00
1800	1.0	19.25	0.6	0.4	0.3	0.97
2100	0.9	27.04	0.4	0.3	0.2	0.94

## W800SL - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	2220	9730	9590	9350	9070
18	2190	9390	9070	8580	8010
24	2150	8920	8400	7600	6730
30	2090	8350	7600	6500	5370
36	2020	7700	6730	5370	4090
42	1930	7000	5820	4290	3010
48	1820	6280	4930	3320	2310
60	1540	4820	3320	2120	KL/r >200
72	1280	3490	2310	KL/r >200	KL/r >200
84	1060	2570	1690	KL/r >200	KL/r >200

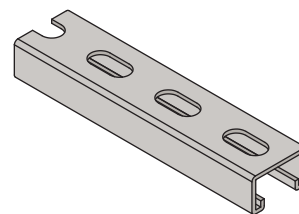
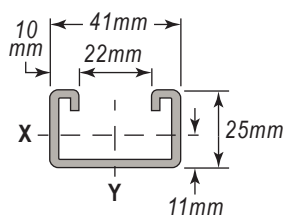
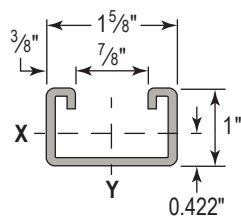
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	9.9	43.3	42.7	41.7	40.5
450	9.7	41.8	40.5	38.3	35.9
600	9.6	39.8	37.5	34.1	30.3
750	9.3	37.4	34.1	29.3	24.4
900	9.0	34.6	30.3	24.4	18.7
1050	8.6	31.5	26.3	19.6	13.8
1200	8.2	28.3	22.4	15.3	10.6
1500	7.0	21.9	15.3	9.7	KL/r >200
1800	5.8	16.1	10.6	KL/r >200	KL/r >200
2100	4.8	11.8	7.8	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.

# W800SS - 12 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 1" (41mm x 25mm) with 9<sup>1</sup>/<sub>16</sub>" x 1<sup>1</sup>/<sub>8</sub>" Short Slots on 2" centers.



## W800SS Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.46 (2.17)	0.43 (2.77)	0.054 (2.25)	0.093 (1.52)	0.354 (0.90)	0.163 (6.78)	0.200 (3.28)	0.615 (1.56)

## W800SS - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	1,404	0.02	1,404	1,404	1,404	1.00
18	936	0.05	936	936	936	1.00
24	702	0.09	702	702	531	1.00
30	567	0.14	567	513	342	1.00
36	468	0.20	468	351	234	1.00
42	405	0.27	342	261	171	1.00
48	351	0.35	261	198	135	1.00
60	279	0.55	171	126	81	1.00
72	234	0.79	117	90	63	0.97
84	198	1.07	90	63	45	0.94

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	6.4	0.54	6.4	6.4	6.4	1.00
450	4.2	1.23	4.2	4.2	4.2	1.00
600	3.2	2.17	3.2	3.2	2.4	1.00
750	2.6	3.43	2.6	2.3	1.6	1.00
900	2.1	4.90	2.1	1.6	1.1	1.00
1050	1.8	6.61	1.6	1.2	0.8	1.00
1200	1.6	8.77	1.2	0.9	0.6	1.00
1500	1.3	13.71	0.8	0.6	0.4	1.00
1800	1.0	19.25	0.6	0.4	0.3	0.97
2100	0.9	27.04	0.4	0.3	0.2	0.94

## W800SS - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	2220	9730	9590	9350	9070
18	2190	9390	9070	8580	8010
24	2150	8920	8400	7600	6730
30	2090	8350	7600	6500	5370
36	2020	7700	6730	5370	4090
42	1930	7000	5820	4290	3010
48	1820	6280	4930	3320	2310
60	1540	4820	3320	2120	KL/r >200
72	1280	3490	2310	KL/r >200	KL/r >200
84	1060	2570	1690	KL/r >200	KL/r >200

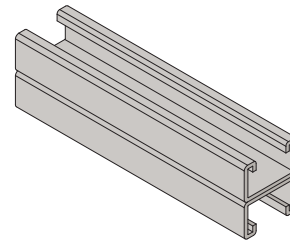
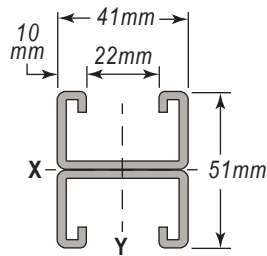
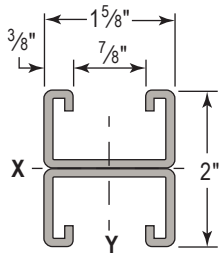
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	9.9	43.3	42.7	41.7	40.5
450	9.7	41.8	40.5	38.3	35.9
600	9.6	39.8	37.5	34.1	30.3
750	9.3	37.4	34.1	29.3	24.4
900	9.0	34.6	30.3	24.4	18.7
1050	8.6	31.5	26.3	19.6	13.8
1200	8.2	28.3	22.4	15.3	10.6
1500	7.0	21.9	15.3	9.7	KL/r >200
1800	5.8	16.1	10.6	KL/r >200	KL/r >200
2100	4.8	11.8	7.8	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.



# W801 - 12 Gauge Channel

1 5/8" x 2" (41mm x 51mm)



## W801 Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
2.92 (4.35)	0.859 (5.54)	0.261 (10.86)	0.261 (4.28)	0.551 (1.40)	0.325 (13.53)	0.400 (6.55)	0.615 (1.56)

## W801 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	1,520 *	0.00	1,520 *	1,520 *	1,520 *	1.00
18	1,520 *	0.02	1,520 *	1,520 *	1,520 *	1.00
24	1,520 *	0.04	1,520 *	1,520 *	1,520 *	1.00
30	1,520 *	0.07	1,520 *	1,520 *	1,520 *	1.00
36	1,460	0.12	1,460	1,460	1,270	1.00
42	1,250	0.16	1,250	1,250	930	0.98
48	1,090	0.20	1,090	1,070	710	0.94
60	870	0.32	870	680	460	0.88
72	730	0.46	630	470	320	0.83
84	620	0.62	470	350	230	0.77

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	6.8 *	0.11	6.8 *	6.8 *	6.8 *	1.00
450	6.8 *	0.36	6.8 *	6.8 *	6.8 *	1.00
600	6.8 *	0.86	6.8 *	6.8 *	6.8 *	1.00
750	6.8 *	1.68	6.8 *	6.8 *	6.8 *	1.00
900	6.6	2.83	6.6	6.6	5.8	1.00
1050	5.6	3.86	5.6	5.6	4.3	0.97
1200	4.9	5.03	4.9	4.9	3.3	0.94
1500	4.0	7.88	4.0	3.2	2.1	0.89
1800	3.3	11.32	2.9	2.2	1.5	0.83
2100	2.8	15.31	2.1	1.6	1.1	0.78

## W801 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	5660	19300	18950	18430	17870
18	5560	18500	17870	17000	16160
24	5440	17580	16720	15640	14720
30	5320	16650	15640	14510	13590
36	5210	15770	14720	13590	11460
42	5110	14990	13940	11810	9360
48	4920	14310	12880	10050	7400
60	4320	12710	10050	6820	4730
72	3660	10400	7400	4730	3290
84	3030	8200	5430	3480	2420

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	25.2	85.9	84.4	82.2	79.7
450	24.8	82.5	79.7	75.9	72.2
600	24.2	78.5	74.7	69.9	65.8
750	23.7	74.4	69.9	64.9	60.9
900	23.2	70.5	65.8	60.9	51.9
1050	22.8	67.0	62.4	53.4	42.6
1200	22.0	64.0	58.1	45.7	33.9
1500	19.4	57.3	45.7	31.3	21.8
1800	16.5	47.2	33.9	21.8	15.1
2100	13.8	37.5	25.0	16.0	11.1

\* Load limited by spot weld shear

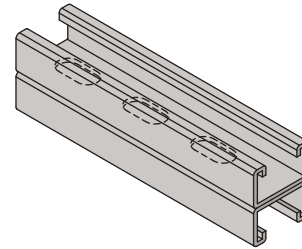
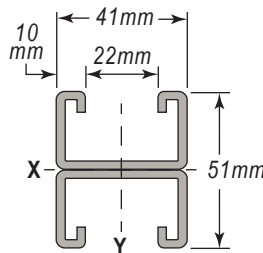
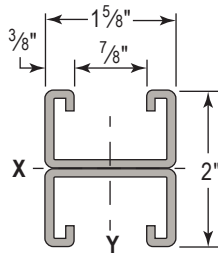
Beam loads shown are total uniform load, including the channel weight, for a simple span supported at each end that is adequately laterally braced. Refer to pages 3 - 6 for other beam support conditions.



# W801SS - 12 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 2" (41mm x 51mm) with 9/<sub>16</sub>" x 1<sup>1</sup>/<sub>8</sub>" Short Slots on 2" centers.



## W801SS Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
2.92 (4.35)	0.859 (5.54)	0.261 (10.86)	0.261 (4.28)	0.551 (1.40)	0.325 (13.53)	0.400 (6.55)	0.615 (1.56)

## W801SS - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	1,368 *	0.00	1,368 *	1,368 *	1,368 *	1.00
18	1,368 *	0.02	1,368 *	1,368 *	1,368 *	1.00
24	1,368 *	0.04	1,368 *	1,368 *	1,368 *	1.00
30	1,368 *	0.07	1,368 *	1,368 *	1,368 *	1.00
36	1,314	0.12	1,314	1,314	1,143	1.00
42	1,125	0.16	1,125	1,125	837	0.98
48	981	0.20	981	963	639	0.94
60	783	0.32	783	612	414	0.88
72	657	0.46	567	423	288	0.83
84	558	0.62	423	315	207	0.77

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	6.1 *	0.11	6.1 *	6.1 *	6.1 *	1.00
450	6.1 *	0.36	6.1 *	6.1 *	6.1 *	1.00
600	6.1 *	0.86	6.1 *	6.1 *	6.1 *	1.00
750	6.1 *	1.68	6.1 *	6.1 *	6.1 *	1.00
900	5.9	2.83	5.9	5.9	5.2	1.00
1050	5.1	3.86	5.1	5.1	3.8	0.97
1200	4.4	5.03	4.4	4.4	3.0	0.94
1500	3.6	7.88	3.6	2.8	1.9	0.89
1800	3.0	11.32	2.6	2.0	1.3	0.83
2100	2.5	15.31	1.9	1.4	1.0	0.78

## W801SS - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	5660	19300	18950	18430	17870
18	5560	18500	17870	17000	16160
24	5440	17580	16720	15640	14720
30	5320	16650	15640	14510	13590
36	5210	15770	14720	13590	11460
42	5110	14990	13940	11810	9360
48	4920	14310	12880	10050	7400
60	4320	12710	10050	6820	4730
72	3660	10400	7400	4730	3290
84	3030	8200	5430	3480	2420

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	25.2	85.9	84.4	82.2	79.7
450	24.8	82.5	79.7	75.9	72.2
600	24.2	78.5	74.7	69.9	65.8
750	23.7	74.4	69.9	64.9	60.9
900	23.2	70.5	65.8	60.9	51.9
1050	22.8	67.0	62.4	53.4	42.6
1200	22.0	64.0	58.1	45.7	33.9
1500	19.4	57.3	45.7	31.3	21.8
1800	16.5	47.2	33.9	21.8	15.1
2100	13.8	37.5	25.0	16.0	11.1

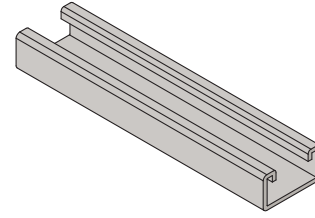
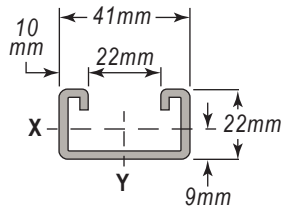
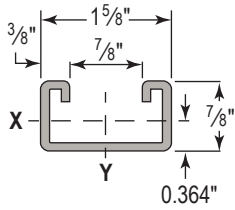
\* Load limited by spot weld shear

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 3 - 6 for other beam support conditions.



# W900 - 12 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 7<sup>7</sup>/<sub>8</sub>" (41mm x 23mm)



## W900 Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.37 (2.04)	0.403 (2.60)	0.038 (1.58)	0.074 (1.21)	0.307 (0.78)	0.147 (6.12)	0.181 (2.97)	0.604 (1.53)

## W900 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	1,250	0.03	1,250	1,250	1,250	1.00
18	830	0.06	830	830	740	1.00
24	620	0.10	620	620	420	1.00
30	500	0.16	500	400	270	1.00
36	420	0.23	370	280	180	1.00
42	360	0.31	270	200	140	1.00
48	310	0.40	210	160	100	1.00
60	250	0.63	130	100	70	0.98
72	210	0.91	90	70	50	0.97
84	180	1.24	70	50	30	0.95

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	5.6	0.62	5.6	5.6	5.6	1.00
450	3.7	1.38	3.7	3.7	3.4	1.00
600	2.8	2.45	2.8	2.8	1.9	1.00
750	2.3	3.87	2.3	1.8	1.2	1.00
900	1.9	5.51	1.7	1.3	0.8	1.00
1050	1.6	7.50	1.2	0.9	0.6	1.00
1200	1.4	9.96	0.9	0.7	0.5	1.00
1500	1.1	15.19	0.6	0.4	0.3	0.98
1800	0.9	22.05	0.4	0.3	0.2	0.97
2100	0.8	30.01	0.3	0.2	0.1	0.95

## W900 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	2560	8900	8670	8360	8040
18	2500	8400	8040	7580	6980
24	2440	7880	7430	6510	5530
30	2330	7380	6510	5280	4100
36	2190	6620	5530	4100	2890
42	2020	5840	4560	3050	2120
48	1820	5040	3650	2340	1620
60	1420	3540	2340	1500	KL/r >200
72	1110	2460	1620	KL/r >200	KL/r >200
84	KL/r >200	1810	KL/r >200	KL/r >200	KL/r >200

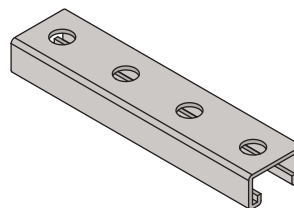
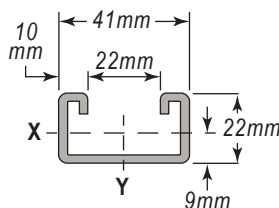
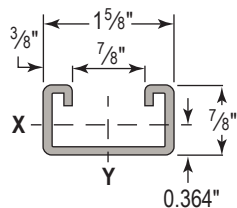
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	11.4	39.6	38.7	37.3	35.9
450	11.1	37.5	35.9	33.9	31.3
600	10.9	35.2	33.2	29.3	25.0
750	10.4	33.1	29.3	23.9	18.7
900	9.8	29.8	25.0	18.7	13.3
1050	9.1	26.3	20.8	14.0	9.7
1200	8.2	22.9	16.8	10.7	7.5
1500	6.4	16.3	10.7	6.9	KL/r >200
1800	5.1	11.3	7.5	KL/r >200	KL/r >200
2100	KL/r >200	8.3	KL/r >200	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.

# W900H - 12 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 7<sup>7</sup>/<sub>8</sub>" (41mm x 23mm) with 9<sup>9</sup>/<sub>16</sub>" holes on 1<sup>7</sup>/<sub>8</sub>" centers.



## W900H Section Properties

Wt. . Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.37 (2.04)	0.403 (2.60)	0.038 (1.58)	0.074 (1.21)	0.307 (0.78)	0.147 (6.12)	0.181 (2.97)	0.604 (1.53)

## W900H - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	1,188	0.03	1,188	1,188	1,188	1.00
18	789	0.06	789	789	703	1.00
24	589	0.10	589	589	399	1.00
30	475	0.16	475	380	257	1.00
36	399	0.23	352	266	171	1.00
42	342	0.31	257	190	133	1.00
48	295	0.40	200	152	95	1.00
60	238	0.63	124	95	67	0.98
72	200	0.91	86	67	48	0.97
84	171	1.24	67	48	29	0.95

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	5.4	0.62	5.4	5.4	5.4	1.00
450	3.5	1.38	3.5	3.5	3.2	1.00
600	2.7	2.45	2.7	2.7	1.8	1.00
750	2.2	3.87	2.2	1.7	1.1	1.00
900	1.8	5.51	1.6	1.2	0.8	1.00
1050	1.5	7.50	1.2	0.9	0.6	1.00
1200	1.4	9.96	0.9	0.7	0.5	1.00
1500	1.1	15.19	0.6	0.4	0.3	0.98
1800	0.9	22.05	0.4	0.3	0.2	0.97
2100	0.8	30.01	0.3	0.2	0.1	0.95

## W900H - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	2560	8900	8670	8360	8040
18	2500	8400	8040	7580	6980
24	2440	7880	7430	6510	5530
30	2330	7380	6510	5280	4100
36	2190	6620	5530	4100	2890
42	2020	5840	4560	3050	2120
48	1820	5040	3650	2340	1620
60	1420	3540	2340	1500	KL/r >200
72	1110	2460	1620	KL/r >200	KL/r >200
84	KL/r >200	1810	KL/r >200	KL/r >200	KL/r >200

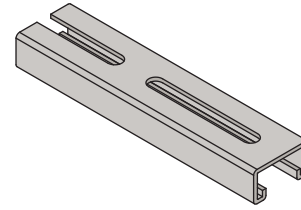
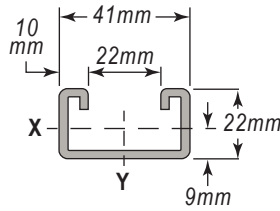
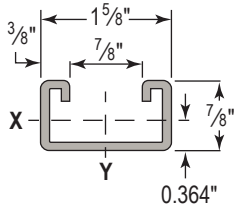
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	11.4	39.6	38.7	37.3	35.9
450	11.1	37.5	35.9	33.9	31.3
600	10.9	35.2	33.2	29.3	25.0
750	10.4	33.1	29.3	23.9	18.7
900	9.8	29.8	25.0	18.7	13.3
1050	9.1	26.3	20.8	14.0	9.7
1200	8.2	22.9	16.8	10.7	7.5
1500	6.4	16.3	10.7	6.9	KL/r >200
1800	5.1	11.3	7.5	KL/r >200	KL/r >200
2100	KL/r >200	8.3	KL/r >200	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.



# W900SL - 12 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 7<sup>7</sup>/<sub>8</sub>" (41mm x 23mm) with 1<sup>3</sup>/<sub>32</sub>" x 3" Long Slots on 4" centers.



## W900SL Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.37 (2.04)	0.403 (2.60)	0.038 (1.58)	0.074 (1.21)	0.307 (0.78)	0.147 (6.12)	0.181 (2.97)	0.604 (1.53)

## W900SL - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	1,125	0.03	1,125	1,125	1,125	1.00
18	747	0.06	747	747	666	1.00
24	558	0.10	558	558	378	1.00
30	450	0.16	450	360	243	1.00
36	378	0.23	333	252	162	1.00
42	324	0.31	243	180	126	1.00
48	279	0.40	189	144	90	1.00
60	225	0.63	117	90	63	0.98
72	189	0.91	81	63	45	0.97
84	162	1.24	63	45	27	0.95

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	5.1	0.62	5.1	5.1	5.1	1.00
450	3.4	1.38	3.4	3.4	3.0	1.00
600	2.5	2.45	2.5	2.5	1.7	1.00
750	2.0	3.87	2.0	1.6	1.1	1.00
900	1.7	5.51	1.5	1.2	0.8	1.00
1050	1.4	7.50	1.1	0.8	0.6	1.00
1200	1.3	9.96	0.8	0.6	0.4	1.00
1500	1.0	15.19	0.6	0.4	0.3	0.98
1800	0.8	22.05	0.4	0.3	0.2	0.97
2100	0.7	30.01	0.3	0.2	0.1	0.95

## W900SL - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	2560	8900	8670	8360	8040
18	2500	8400	8040	7580	6980
24	2440	7880	7430	6510	5530
30	2330	7380	6510	5280	4100
36	2190	6620	5530	4100	2890
42	2020	5840	4560	3050	2120
48	1820	5040	3650	2340	1620
60	1420	3540	2340	1500	KL/r >200
72	1110	2460	1620	KL/r >200	KL/r >200
84	KL/r >200	1810	KL/r >200	KL/r >200	KL/r >200

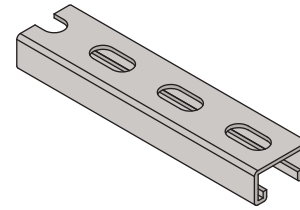
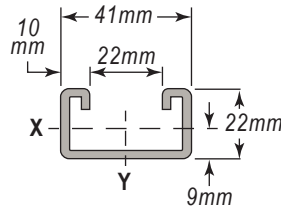
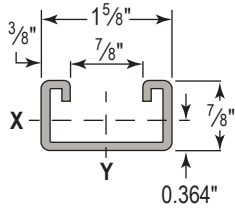
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	11.4	39.6	38.7	37.3	35.9
450	11.1	37.5	35.9	33.9	31.3
600	10.9	35.2	33.2	29.3	25.0
750	10.4	33.1	29.3	23.9	18.7
900	9.8	29.8	25.0	18.7	13.3
1050	9.1	26.3	20.8	14.0	9.7
1200	8.2	22.9	16.8	10.7	7.5
1500	6.4	16.3	10.7	6.9	KL/r >200
1800	5.1	11.3	7.5	KL/r >200	KL/r >200
2100	KL/r >200	8.3	KL/r >200	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.

# W900SS - 12 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 7<sup>7</sup>/<sub>8</sub>" (41mm x 23mm) with 9<sup>9</sup>/<sub>16</sub>" x 1<sup>1</sup>/<sub>8</sub>" Short Slots on 2" centers.



## W900SS Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.37 (2.04)	0.403 (2.60)	0.038 (1.58)	0.074 (1.21)	0.307 (0.78)	0.147 (6.12)	0.181 (2.97)	0.604 (1.53)

## W900SS - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	1,125	0.03	1,125	1,125	1,125	1.00
18	747	0.06	747	747	666	1.00
24	558	0.10	558	558	378	1.00
30	450	0.16	450	360	243	1.00
36	378	0.23	333	252	162	1.00
42	324	0.31	243	180	126	1.00
48	279	0.40	189	144	90	1.00
60	225	0.63	117	90	63	0.98
72	189	0.91	81	63	45	0.97
84	162	1.24	63	45	27	0.95

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	5.1	0.62	5.1	5.1	5.1	1.00
450	3.4	1.38	3.4	3.4	3.0	1.00
600	2.5	2.45	2.5	2.5	1.7	1.00
750	2.0	3.87	2.0	1.6	1.1	1.00
900	1.7	5.51	1.5	1.2	0.8	1.00
1050	1.4	7.50	1.1	0.8	0.6	1.00
1200	1.3	9.96	0.8	0.6	0.4	1.00
1500	1.0	15.19	0.6	0.4	0.3	0.98
1800	0.8	22.05	0.4	0.3	0.2	0.97
2100	0.7	30.01	0.3	0.2	0.1	0.95

## W900SS - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	2560	8900	8670	8360	8040
18	2500	8400	8040	7580	6980
24	2440	7880	7430	6510	5530
30	2330	7380	6510	5280	4100
36	2190	6620	5530	4100	2890
42	2020	5840	4560	3050	2120
48	1820	5040	3650	2340	1620
60	1420	3540	2340	1500	KL/r >200
72	1110	2460	1620	KL/r >200	KL/r >200
84	KL/r >200	1810	KL/r >200	KL/r >200	KL/r >200

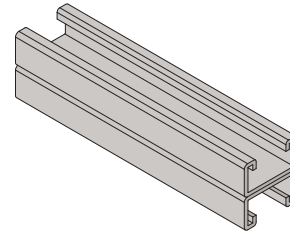
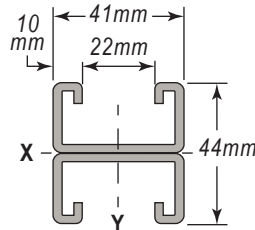
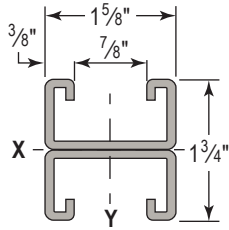
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	11.4	39.6	38.7	37.3	35.9
450	11.1	37.5	35.9	33.9	31.3
600	10.9	35.2	33.2	29.3	25.0
750	10.4	33.1	29.3	23.9	18.7
900	9.8	29.8	25.0	18.7	13.3
1050	9.1	26.3	20.8	14.0	9.7
1200	8.2	22.9	16.8	10.7	7.5
1500	6.4	16.3	10.7	6.9	KL/r >200
1800	5.1	11.3	7.5	KL/r >200	KL/r >200
2100	KL/r >200	8.3	KL/r >200	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.



# W901 - 12 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>4</sub>" (41mm x 44mm)



## W901 Section Properties

Wt. . Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
2.75 (4.09)	0.807 (5.21)	0.183 (7.62)	0.209 (3.42)	0.476 (1.21)	0.295 (12.28)	0.363 (5.95)	0.604 (1.53)

## W901 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	1,310 *	0.01	1,310 *	1,310 *	1,310 *	1.00
18	1,310 *	0.02	1,310 *	1,310 *	1,310 *	1.00
24	1,310 *	0.04	1,310 *	1,310 *	1,310 *	1.00
30	1,310 *	0.09	1,310 *	1,310 *	1,280	1.00
36	1,170	0.13	1,170	1,170	890	1.00
42	1,000	0.18	1,000	980	650	1.00
48	880	0.23	880	750	500	1.00
60	700	0.37	640	480	320	0.99
72	580	0.52	440	330	220	0.97
84	500	0.72	330	240	160	0.94

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	5.8 *	0.13	5.8 *	5.8 *	5.8 *	1.00
450	5.8 *	0.45	5.8 *	5.8 *	5.8 *	1.00
600	5.8 *	1.06	5.8 *	5.8 *	5.8 *	1.00
750	5.8 *	2.07	5.8 *	5.8 *	5.8 *	1.00
900	5.3	3.25	5.3	5.3	4.1	1.00
1050	4.5	4.42	4.5	4.5	3.0	1.00
1200	4.0	5.76	4.0	3.4	2.3	1.00
1500	3.2	8.97	2.9	2.2	1.5	1.00
1800	2.6	12.88	2.0	1.5	1.0	0.97
2100	2.3	17.68	1.5	1.1	0.8	0.95

## W901 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	4510	18310	18090	17780	17470
18	4470	17820	17470	17040	16590
24	4430	17320	16900	16110	15040
30	4380	16870	16110	14760	13260
36	4290	16230	15040	13260	11360
42	4190	15390	13870	11680	9470
48	4070	14460	12630	10090	7670
60	3770	12470	10090	7090	4920
72	3370	10410	7670	4920	3420
84	2880	8400	5650	3620	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	20.1	81.5	80.6	79.2	77.8
450	19.9	79.4	77.8	75.9	74.1
600	19.7	77.2	75.4	72.0	67.4
750	19.5	75.2	72.0	66.1	59.6
900	19.1	72.6	67.4	59.6	51.3
1050	18.7	68.9	62.3	52.7	43.0
1200	18.2	64.9	56.9	45.8	35.1
1500	16.9	56.2	45.8	32.6	22.6
1800	15.2	47.2	35.1	22.6	15.7
2100	13.0	38.3	26.0	16.6	KL/r >200

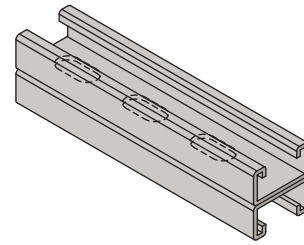
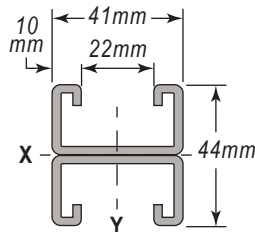
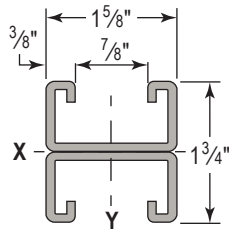
\* Load limited by spot weld shear

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 3 - 6 for other beam support conditions.

# W901SS - 12 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>4</sub>" (41mm x 44mm) with <sup>9</sup>/<sub>16</sub>" x 1<sup>1</sup>/<sub>8</sub>" Short Slots on 2" centers.



## W901SS Section Properties

Wt. . Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
2.75 (4.09)	0.807 (5.21)	0.183 (7.62)	0.209 (3.42)	0.476 (1.21)	0.295 (12.28)	0.363 (5.95)	0.604 (1.53)

## W901SS - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	1,179 *	0.01	1,179 *	1,179 *	1,179 *	1.00
18	1,179 *	0.02	1,179 *	1,179 *	1,179 *	1.00
24	1,179 *	0.04	1,179 *	1,179 *	1,179 *	1.00
30	1,179 *	0.09	1,179 *	1,179 *	1,152	1.00
36	1,053	0.13	1,053	1,053	801	1.00
42	900	0.18	900	882	585	1.00
48	792	0.23	792	675	450	1.00
60	630	0.37	576	432	288	0.99
72	522	0.52	396	297	198	0.97
84	450	0.72	297	216	144	0.94

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	5.2 *	0.13	5.2 *	5.2 *	5.2 *	1.00
450	5.2 *	0.45	5.2 *	5.2 *	5.2 *	1.00
600	5.2 *	1.06	5.2 *	5.2 *	5.2 *	1.00
750	5.2 *	2.07	5.2 *	5.2 *	5.2 *	1.00
900	4.8	3.25	4.8	4.8	3.7	1.00
1050	4.1	4.42	4.1	4.0	2.7	1.00
1200	3.6	5.76	3.6	3.1	2.1	1.00
1500	2.8	8.97	2.6	2.0	1.3	1.00
1800	2.4	12.88	1.8	1.4	0.9	0.97
2100	2.0	17.68	1.4	1.0	0.7	0.95

## W901SS - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	4510	18310	18090	17780	17470
18	4470	17820	17470	17040	16590
24	4430	17320	16900	16110	15040
30	4380	16870	16110	14760	13260
36	4290	16230	15040	13260	11360
42	4190	15390	13870	11680	9470
48	4070	14460	12630	10090	7670
60	3770	12470	10090	7090	4920
72	3370	10410	7670	4920	3420
84	2880	8400	5650	3620	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	20.1	81.5	80.6	79.2	77.8
450	19.9	79.4	77.8	75.9	74.1
600	19.7	77.2	75.4	72.0	67.4
750	19.5	75.2	72.0	66.1	59.6
900	19.1	72.6	67.4	59.6	51.3
1050	18.7	68.9	62.3	52.7	43.0
1200	18.2	64.9	56.9	45.8	35.1
1500	16.9	56.2	45.8	32.6	22.6
1800	15.2	47.2	35.1	22.6	15.7
2100	13.0	38.3	26.0	16.6	KL/r >200

\* Load limited by spot weld shear

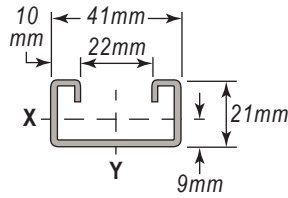
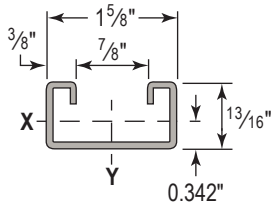
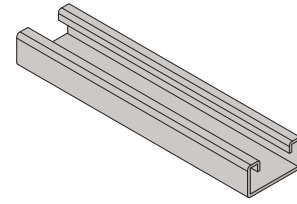
Beam loads shown are total uniform load, including the channel weight, for a simple span supported at each end that is adequately laterally braced. Refer to pages 3 - 6 for other beam support conditions.





# W500 - 14 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>16</sub>" (41mm x 21mm)



## W500 Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.00 (1.49)	0.295 (1.90)	0.026 (1.08)	0.056 (0.92)	0.297 (0.75)	0.109 (4.54)	0.135 (2.21)	0.609 (1.55)

## W500 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	930	0.03	930	930	930	1.00
18	620	0.06	620	620	510	1.00
24	470	0.11	470	430	290	1.00
30	370	0.17	370	270	180	0.99
36	310	0.24	250	190	130	0.98
42	270	0.34	190	140	90	0.96
48	230	0.43	140	110	70	0.94
60	190	0.69	90	70	50	0.91
72	160	1.01	60	50	30	0.88
84	130	1.30	50	40	20	0.86

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	4.2	0.67	4.2	4.2	4.2	1.00
450	2.8	1.50	2.8	2.8	2.4	1.00
600	2.1	2.65	2.1	2.0	1.3	1.00
750	1.7	4.19	1.7	1.2	0.8	1.00
900	1.4	6.09	1.2	0.9	0.6	0.98
1050	1.2	8.16	0.8	0.6	0.4	0.96
1200	1.1	10.83	0.7	0.5	0.3	0.94
1500	0.8	16.74	0.4	0.3	0.2	0.91
1800	0.7	24.37	0.3	0.2	0.1	0.88
2100	0.6	33.86	0.2	0.2	0.1	0.86

## W500 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	2010	6530	6360	6110	5840
18	1950	6140	5840	5420	5010
24	1890	5700	5280	4650	3910
30	1800	5250	4650	3720	2840
36	1680	4740	3910	2840	1980
42	1510	4140	3180	2100	1460
48	1330	3540	2510	1610	1110
60	1020	2430	1610	KL/r >200	KL/r >200
72	780	1690	1110	KL/r >200	KL/r >200
84	KL/r >200	1240	KL/r >200	KL/r >200	KL/r >200

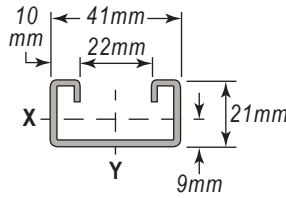
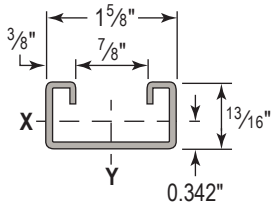
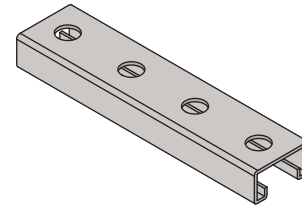
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	8.9	29.1	28.3	27.3	26.1
450	8.7	27.4	26.1	24.3	22.5
600	8.4	25.5	23.7	20.9	17.7
750	8.1	23.5	20.9	16.9	13.0
900	7.5	21.3	17.7	13.0	9.1
1050	6.8	18.7	14.5	9.6	6.7
1200	6.0	16.1	11.5	7.4	5.1
1500	4.6	11.2	7.4	4.7	KL/r >200
1800	3.6	7.7	5.1	KL/r >200	KL/r >200
2100	KL/r >200	5.7	KL/r >200	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.

# W500H - 14 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>16</sub>" (41mm x 21mm) with <sup>9</sup>/<sub>16</sub>" holes on 1<sup>7</sup>/<sub>8</sub>" centers.



## W500H Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		I <sub>x</sub> in. <sup>4</sup> (cm <sup>4</sup> )	S <sub>x</sub> in. <sup>3</sup> (cm <sup>3</sup> )	r <sub>x</sub> in. (cm)	I <sub>y</sub> in. <sup>4</sup> (cm <sup>4</sup> )	S <sub>y</sub> in. <sup>3</sup> (cm <sup>3</sup> )	r <sub>y</sub> in. (cm)
1.00 (1.49)	0.295 (1.90)	0.026 (1.08)	0.056 (0.92)	0.297 (0.75)	0.109 (4.54)	0.135 (2.21)	0.609 (1.55)

## W500H - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	884	0.03	884	884	884	1.00
18	589	0.06	589	589	485	1.00
24	447	0.11	447	409	276	1.00
30	352	0.17	352	257	171	0.99
36	295	0.24	238	181	124	0.98
42	257	0.34	181	133	86	0.96
48	219	0.43	133	105	67	0.94
60	181	0.69	86	67	48	0.91
72	152	1.01	57	48	29	0.88
84	124	1.30	48	38	19	0.86

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	4.0	0.67	4.0	4.0	4.0	1.00
450	2.7	1.50	2.7	2.7	2.2	1.00
600	2.0	2.65	2.0	1.9	1.3	1.00
750	1.6	4.19	1.6	1.2	0.8	1.00
900	1.4	6.09	1.1	0.8	0.5	0.98
1050	1.1	8.16	0.8	0.6	0.4	0.96
1200	1.0	10.83	0.6	0.5	0.3	0.94
1500	0.8	16.74	0.4	0.3	0.2	0.91
1800	0.7	24.37	0.3	0.2	0.1	0.88
2100	0.6	33.86	0.2	0.2	0.1	0.86

## W500H - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	2010	6530	6360	6110	5840
18	1950	6140	5840	5420	5010
24	1890	5700	5280	4650	3910
30	1800	5250	4650	3720	2840
36	1680	4740	3910	2840	1980
42	1510	4140	3180	2100	1460
48	1330	3540	2510	1610	1110
60	1020	2430	1610	KL/r >200	KL/r >200
72	780	1690	1110	KL/r >200	KL/r >200
84	KL/r >200	1240	KL/r >200	KL/r >200	KL/r >200

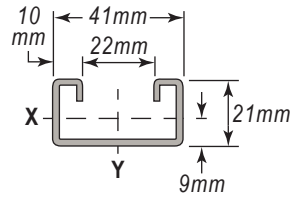
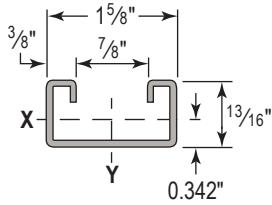
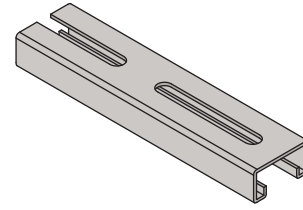
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	8.9	29.1	28.3	27.3	26.1
450	8.7	27.4	26.1	24.3	22.5
600	8.4	25.5	23.7	20.9	17.7
750	8.1	23.5	20.9	16.9	13.0
900	7.5	21.3	17.7	13.0	9.1
1050	6.8	18.7	14.5	9.6	6.7
1200	6.0	16.1	11.5	7.4	5.1
1500	4.6	11.2	7.4	4.7	KL/r >200
1800	3.6	7.7	5.1	KL/r >200	KL/r >200
2100	KL/r >200	5.7	KL/r >200	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.



# W500SL - 14 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>16</sub>" (41mm x 21mm) with 1<sup>3</sup>/<sub>32</sub>" x 3" Long Slots on 4" centers.



## W500SL Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.00 (1.49)	0.295 (1.90)	0.026 (1.08)	0.056 (0.92)	0.297 (0.75)	0.109 (4.54)	0.135 (2.21)	0.609 (1.55)

## W500SL - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	837	0.03	837	837	837	1.00
18	558	0.06	558	558	459	1.00
24	423	0.11	423	387	261	1.00
30	333	0.17	333	243	162	0.99
36	279	0.24	225	171	117	0.98
42	243	0.34	171	126	81	0.96
48	207	0.43	126	99	63	0.94
60	171	0.69	81	63	45	0.91
72	144	1.01	54	45	27	0.88
84	117	1.30	45	36	18	0.86

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	3.8	0.67	3.8	3.8	3.8	1.00
450	2.5	1.50	2.5	2.5	2.1	1.00
600	1.9	2.65	1.9	1.8	1.2	1.00
750	1.5	4.19	1.5	1.1	0.8	1.00
900	1.3	6.09	1.0	0.8	0.5	0.98
1050	1.1	8.16	0.8	0.6	0.4	0.96
1200	1.0	10.83	0.6	0.4	0.3	0.94
1500	0.8	16.74	0.4	0.3	0.2	0.91
1800	0.6	24.37	0.3	0.2	0.1	0.88
2100	0.6	33.86	0.2	0.2	0.1	0.86

## W500SL - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	2010	6530	6360	6110	5840
18	1950	6140	5840	5420	5010
24	1890	5700	5280	4650	3910
30	1800	5250	4650	3720	2840
36	1680	4740	3910	2840	1980
42	1510	4140	3180	2100	1460
48	1330	3540	2510	1610	1110
60	1020	2430	1610	KL/r >200	KL/r >200
72	780	1690	1110	KL/r >200	KL/r >200
84	KL/r >200	1240	KL/r >200	KL/r >200	KL/r >200

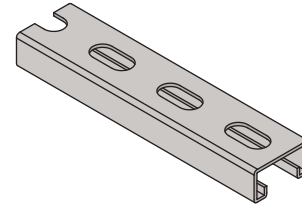
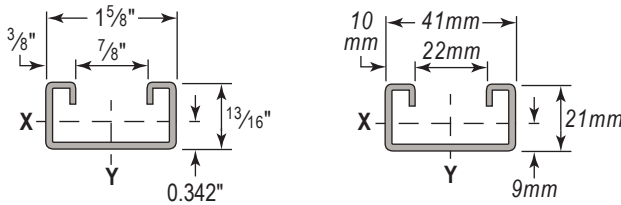
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	8.9	29.1	28.3	27.3	26.1
450	8.7	27.4	26.1	24.3	22.5
600	8.4	25.5	23.7	20.9	17.7
750	8.1	23.5	20.9	16.9	13.0
900	7.5	21.3	17.7	13.0	9.1
1050	6.8	18.7	14.5	9.6	6.7
1200	6.0	16.1	11.5	7.4	5.1
1500	4.6	11.2	7.4	4.7	KL/r >200
1800	3.6	7.7	5.1	KL/r >200	KL/r >200
2100	KL/r >200	5.7	KL/r >200	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.

# W500SS - 14 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>16</sub>" (41mm x 21mm) with 9/<sub>16</sub>" x 1<sup>1</sup>/<sub>8</sub>" Short Slots on 2" centers.



## W500SS Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.00 (1.49)	0.295 (1.90)	0.026 (1.08)	0.056 (0.92)	0.297 (0.75)	0.109 (4.54)	0.135 (2.21)	0.609 (1.55)

## W500SS - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	837	0.03	837	837	837	1.00
18	558	0.06	558	558	459	1.00
24	423	0.11	423	387	261	1.00
30	333	0.17	333	243	162	0.99
36	279	0.24	225	171	117	0.98
42	243	0.34	171	126	81	0.96
48	207	0.43	126	99	63	0.94
60	171	0.69	81	63	45	0.91
72	144	1.01	54	45	27	0.88
84	117	1.30	45	36	18	0.86

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	3.8	0.67	3.8	3.8	3.8	1.00
450	2.5	1.50	2.5	2.5	2.1	1.00
600	1.9	2.65	1.9	1.8	1.2	1.00
750	1.5	4.19	1.5	1.1	0.8	1.00
900	1.3	6.09	1.0	0.8	0.5	0.98
1050	1.1	8.16	0.8	0.6	0.4	0.96
1200	1.0	10.83	0.6	0.4	0.3	0.94
1500	0.8	16.74	0.4	0.3	0.2	0.91
1800	0.6	24.37	0.3	0.2	0.1	0.88
2100	0.6	33.86	0.2	0.2	0.1	0.86

## W500SS - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	2010	6530	6360	6110	5840
18	1950	6140	5840	5420	5010
24	1890	5700	5280	4650	3910
30	1800	5250	4650	3720	2840
36	1680	4740	3910	2840	1980
42	1510	4140	3180	2100	1460
48	1330	3540	2510	1610	1110
60	1020	2430	1610	KL/r >200	KL/r >200
72	780	1690	1110	KL/r >200	KL/r >200
84	KL/r >200	1240	KL/r >200	KL/r >200	KL/r >200

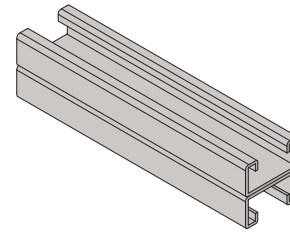
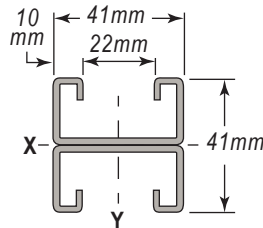
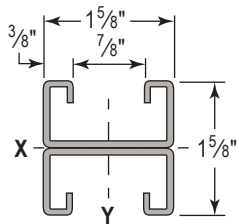
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	8.9	29.1	28.3	27.3	26.1
450	8.7	27.4	26.1	24.3	22.5
600	8.4	25.5	23.7	20.9	17.7
750	8.1	23.5	20.9	16.9	13.0
900	7.5	21.3	17.7	13.0	9.1
1050	6.8	18.7	14.5	9.6	6.7
1200	6.0	16.1	11.5	7.4	5.1
1500	4.6	11.2	7.4	4.7	KL/r >200
1800	3.6	7.7	5.1	KL/r >200	KL/r >200
2100	KL/r >200	5.7	KL/r >200	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.



# W501 - 14 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" (41mm x 41mm)



## W501 Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
2.01 (2.99)	0.59 (3.81)	0.122 (5.08)	0.15 (2.46)	0.454 (1.15)	0.219 (9.12)	0.269 (4.41)	0.609 (1.55)

## W501 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	790 *	0.00	790 *	790 *	790 *	1.00
18	790 *	0.02	790 *	790 *	790 *	1.00
24	790 *	0.04	790 *	790 *	790 *	1.00
30	790 *	0.08	790 *	790 *	790 *	1.00
36	790 *	0.13	790 *	790 *	590	1.00
42	720	0.19	720	650	430	1.00
48	630	0.25	630	500	330	0.99
60	500	0.39	420	320	210	0.95
72	420	0.57	300	220	150	0.92
84	360	0.78	220	160	110	0.88

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	3.5 *	0.12	3.5 *	3.5 *	3.5 *	1.00
450	3.5 *	0.41	3.5 *	3.5 *	3.5 *	1.00
600	3.5 *	0.96	3.5 *	3.5 *	3.5 *	1.00
750	3.5 *	1.88	3.5 *	3.5 *	3.5 *	1.00
900	3.5 *	3.24	3.5 *	3.5 *	2.7	1.00
1050	3.2	4.76	3.2	3.0	2.0	1.00
1200	2.8	6.23	2.8	2.3	1.5	1.00
1500	2.3	9.69	2.0	1.5	1.0	0.96
1800	1.9	13.79	1.3	1.0	0.7	0.92
2100	1.6	18.77	1.0	0.8	0.5	0.88

## W501 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	3430	13420	13250	13000	12720
18	3390	13030	12720	12300	11880
24	3350	12580	12160	11590	10740
30	3310	12120	11590	10520	9340
36	3230	11680	10740	9340	7870
42	3150	11010	9820	8110	6430
48	3040	10290	8850	6900	5080
60	2760	8730	6900	4680	3250
72	2370	7140	5080	3250	2260
84	2000	5630	3730	2390	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	15.3	59.7	59.0	57.9	56.7
450	15.1	58.0	56.7	54.8	53.0
600	14.9	56.1	54.2	51.8	48.1
750	14.7	54.1	51.8	47.2	42.0
900	14.4	52.1	48.1	42.0	35.6
1050	14.1	49.3	44.1	36.7	29.3
1200	13.6	46.2	39.9	31.4	23.3
1500	12.4	39.4	31.4	21.5	14.9
1800	10.7	32.4	23.3	14.9	10.4
2100	9.1	25.8	17.1	11.0	KL/r >200

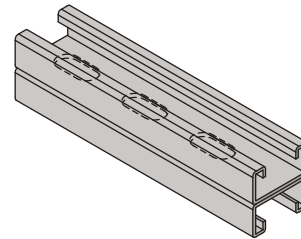
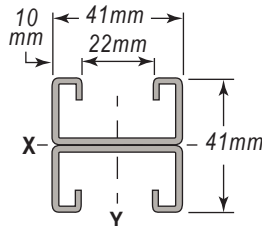
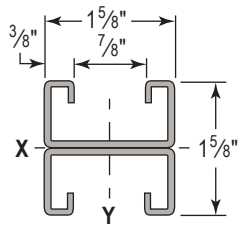
\* Load limited by spot weld shear

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 3 - 6 for other beam support conditions.

# W501SS - 14 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" (41mm x 41mm) with 9/<sub>16</sub>" x 1<sup>1</sup>/<sub>8</sub>" Short Slots on 2" centers.



## W501SS Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
2.01 (2.99)	0.59 (3.81)	0.122 (5.08)	0.15 (2.46)	0.454 (1.15)	0.219 (9.12)	0.269 (4.41)	0.609 (1.55)

## W501SS - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	711 *	0.00	711 *	711 *	711 *	1.00
18	711 *	0.02	711 *	711 *	711 *	1.00
24	711 *	0.04	711 *	711 *	711 *	1.00
30	711 *	0.08	711 *	711 *	711 *	1.00
36	711 *	0.13	711 *	711 *	531	1.00
42	648	0.19	648	585	387	1.00
48	567	0.25	567	450	297	0.99
60	450	0.39	378	288	189	0.95
72	378	0.57	270	198	135	0.92
84	324	0.78	198	144	99	0.88

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	3.2 *	0.12	3.2 *	3.2 *	3.2 *	1.00
450	3.2 *	0.41	3.2 *	3.2 *	3.2 *	1.00
600	3.2 *	0.96	3.2 *	3.2 *	3.2 *	1.00
750	3.2 *	1.88	3.2 *	3.2 *	3.2 *	1.00
900	3.2 *	3.24	3.2 *	3.2 *	2.4	1.00
1050	2.9	4.76	2.9	2.7	1.8	1.00
1200	2.6	6.23	2.6	2.0	1.4	1.00
1500	2.0	9.69	1.8	1.3	0.9	0.96
1800	1.7	13.79	1.2	0.9	0.6	0.92
2100	1.4	18.77	0.9	0.7	0.4	0.88

## W501SS - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	3430	13420	13250	13000	12720
18	3390	13030	12720	12300	11880
24	3350	12580	12160	11590	10740
30	3310	12120	11590	10520	9340
36	3230	11680	10740	9340	7870
42	3150	11010	9820	8110	6430
48	3040	10290	8850	6900	5080
60	2760	8730	6900	4680	3250
72	2370	7140	5080	3250	2260
84	2000	5630	3730	2390	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	15.3	59.7	59.0	57.9	56.7
450	15.1	58.0	56.7	54.8	53.0
600	14.9	56.1	54.2	51.8	48.1
750	14.7	54.1	51.8	47.2	42.0
900	14.4	52.1	48.1	42.0	35.6
1050	14.1	49.3	44.1	36.7	29.3
1200	13.6	46.2	39.9	31.4	23.3
1500	12.4	39.4	31.4	21.5	14.9
1800	10.7	32.4	23.3	14.9	10.4
2100	9.1	25.8	17.1	11.0	KL/r >200

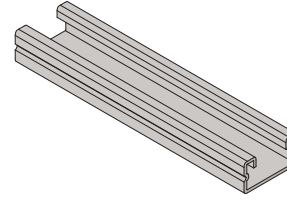
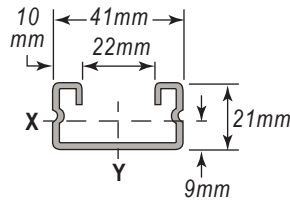
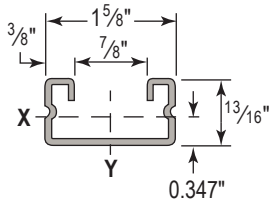
\* Load limited by spot weld shear

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 3 - 6 for other beam support conditions.



# W400 - 16 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>16</sub>" (41mm x 21mm)



## W400 Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
0.83 (1.24)	0.244 (1.57)	0.023 (0.96)	0.05 (0.82)	0.31 (0.79)	0.092 (3.83)	0.113 (1.85)	0.614 (1.56)

## W400 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	840	0.03	840	840	840	1.00
18	560	0.06	560	560	450	1.00
24	420	0.11	420	380	260	1.00
30	330	0.17	330	250	160	0.97
36	280	0.25	230	170	110	0.94
42	240	0.34	170	130	80	0.92
48	210	0.44	130	100	60	0.88
60	170	0.69	80	60	40	0.82
72	140	0.99	60	40	30	0.78
84	120	1.34	40	30	20	0.74

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	3.8	0.67	3.8	3.8	3.8	1.00
450	2.5	1.52	2.5	2.5	2.1	1.00
600	1.9	2.72	1.9	1.8	1.2	1.00
750	1.5	4.19	1.5	1.1	0.8	0.97
900	1.2	5.97	1.0	0.8	0.5	0.94
1050	1.1	8.12	0.8	0.6	0.4	0.91
1200	0.9	10.61	0.6	0.4	0.3	0.88
1500	0.8	16.77	0.4	0.3	0.2	0.83
1800	0.6	23.87	0.3	0.2	0.1	0.78
2100	0.5	32.49	0.2	0.1	0.1	0.74

## W400 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	1780	5390	5250	5040	4800
18	1720	5070	4800	4420	4030
24	1650	4680	4290	3780	3310
30	1570	4260	3780	3210	2520
36	1470	3840	3310	2520	1780
42	1340	3460	2800	1880	1310
48	1180	3080	2250	1440	1000
60	890	2180	1440	920	KL/r >200
72	690	1520	1000	KL/r >200	KL/r >200
84	KL/r >200	1110	KL/r >200	KL/r >200	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	7.9	24.0	23.4	22.5	21.4
450	7.7	22.6	21.4	19.8	18.1
600	7.4	20.9	19.2	17.0	14.9
750	7.0	19.1	17.0	14.5	11.5
900	6.6	17.3	14.9	11.5	8.2
1050	6.0	15.6	12.7	8.6	6.0
1200	5.3	14.0	10.3	6.6	4.6
1500	4.0	10.0	6.6	4.2	KL/r >200
1800	3.2	6.9	4.6	KL/r >200	KL/r >200
2100	KL/r >200	5.1	KL/r >200	KL/r >200	KL/r >200

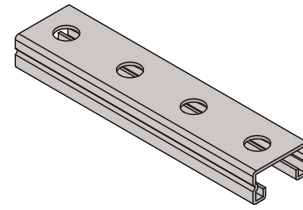
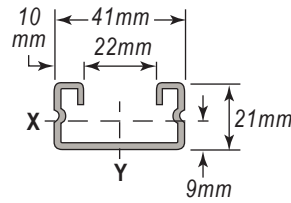
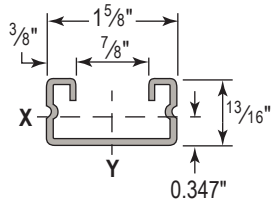
Beam loads shown are total uniform load, including the channel weight, for a simple span supported at each end that is adequately laterally braced. Refer to pages 3 - 6 for other beam support conditions.



# W400H - 16 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>16</sub>" (41mm x 21mm) with <sup>9</sup>/<sub>16</sub>" holes on 1<sup>7</sup>/<sub>8</sub>" centers.



## W400 Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
0.83 (1.24)	0.244 (1.57)	0.023 (0.96)	0.05 (0.82)	0.31 (0.79)	0.092 (3.83)	0.113 (1.85)	0.614 (1.56)

## W400H - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	798	0.03	798	798	798	1.00
18	532	0.06	532	532	428	1.00
24	399	0.11	399	361	247	1.00
30	314	0.17	314	238	152	0.97
36	266	0.25	219	162	105	0.94
42	228	0.34	162	124	76	0.92
48	200	0.44	124	95	57	0.88
60	162	0.69	76	57	38	0.82
72	133	0.99	57	38	29	0.78
84	114	1.34	38	29	19	0.74

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	3.6	0.67	3.6	3.6	3.6	1.00
450	2.4	1.52	2.4	2.4	2.0	1.00
600	1.8	2.72	1.8	1.7	1.1	1.00
750	1.4	4.19	1.4	1.1	0.7	0.97
900	1.2	5.97	1.0	0.8	0.5	0.94
1050	1.0	8.12	0.7	0.5	0.4	0.91
1200	0.9	10.61	0.5	0.4	0.3	0.88
1500	0.7	16.77	0.3	0.3	0.2	0.83
1800	0.6	23.87	0.3	0.2	0.1	0.78
2100	0.5	32.49	0.2	0.1	0.1	0.74

## W400H - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	1780	5390	5250	5040	4800
18	1720	5070	4800	4420	4030
24	1650	4680	4290	3780	3310
30	1570	4260	3780	3210	2520
36	1470	3840	3310	2520	1780
42	1340	3460	2800	1880	1310
48	1180	3080	2250	1440	1000
60	890	2180	1440	920	KL/r >200
72	690	1520	1000	KL/r >200	KL/r >200
84	KL/r >200	1110	KL/r >200	KL/r >200	KL/r >200

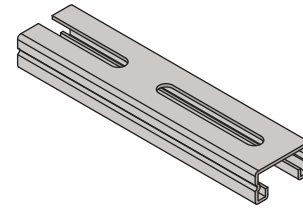
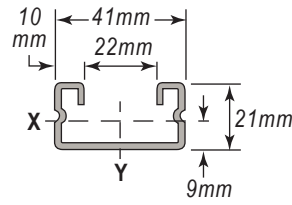
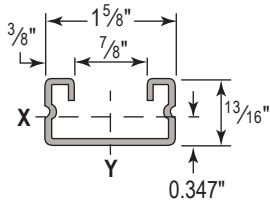
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	7.9	24.0	23.4	22.5	21.4
450	7.7	22.6	21.4	19.8	18.1
600	7.4	20.9	19.2	17.0	14.9
750	7.0	19.1	17.0	14.5	11.5
900	6.6	17.3	14.9	11.5	8.2
1050	6.0	15.6	12.7	8.6	6.0
1200	5.3	14.0	10.3	6.6	4.6
1500	4.0	10.0	6.6	4.2	KL/r >200
1800	3.2	6.9	4.6	KL/r >200	KL/r >200
2100	KL/r >200	5.1	KL/r >200	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.



# W400SL - 16 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 1<sup>3</sup>/<sub>16</sub>" (41mm x 21mm) with 1<sup>3</sup>/<sub>32</sub>" x 3" Long Slots on 4" centers.



## W400SL Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
0.83 (1.24)	0.244 (1.57)	0.023 (0.96)	0.05 (0.82)	0.31 (0.79)	0.092 (3.83)	0.113 (1.85)	0.614 (1.56)

## W400SL - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	756	0.03	756	756	756	1.00
18	504	0.06	504	504	405	1.00
24	378	0.11	378	342	234	1.00
30	297	0.17	297	225	144	0.97
36	252	0.25	207	153	99	0.94
42	216	0.34	153	117	72	0.92
48	189	0.44	117	90	54	0.88
60	153	0.69	72	54	36	0.82
72	126	0.99	54	36	27	0.78
84	108	1.34	36	27	18	0.74

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	3.4	0.67	3.4	3.4	3.4	1.00
450	2.3	1.52	2.3	2.3	1.9	1.00
600	1.7	2.72	1.7	1.6	1.0	1.00
750	1.4	4.19	1.4	1.0	0.7	0.97
900	1.1	5.97	0.9	0.7	0.5	0.94
1050	1.0	8.12	0.7	0.5	0.4	0.91
1200	0.8	10.61	0.5	0.4	0.3	0.88
1500	0.7	16.77	0.3	0.2	0.2	0.83
1800	0.6	23.87	0.2	0.2	0.1	0.78
2100	0.5	32.49	0.2	0.1	0.1	0.74

## W400SL - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	1780	5390	5250	5040	4800
18	1720	5070	4800	4420	4030
24	1650	4680	4290	3780	3310
30	1570	4260	3780	3210	2520
36	1470	3840	3310	2520	1780
42	1340	3460	2800	1880	1310
48	1180	3080	2250	1440	1000
60	890	2180	1440	920	KL/r >200
72	690	1520	1000	KL/r >200	KL/r >200
84	KL/r >200	1110	KL/r >200	KL/r >200	KL/r >200

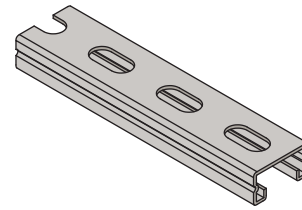
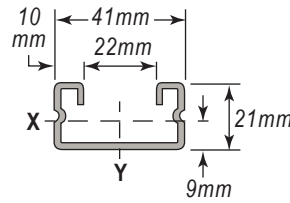
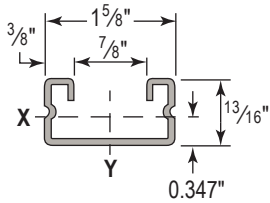
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	7.9	24.0	23.4	22.5	21.4
450	7.7	22.6	21.4	19.8	18.1
600	7.4	20.9	19.2	17.0	14.9
750	7.0	19.1	17.0	14.5	11.5
900	6.6	17.3	14.9	11.5	8.2
1050	6.0	15.6	12.7	8.6	6.0
1200	5.3	14.0	10.3	6.6	4.6
1500	4.0	10.0	6.6	4.2	KL/r >200
1800	3.2	6.9	4.6	KL/r >200	KL/r >200
2100	KL/r >200	5.1	KL/r >200	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.

# W400SS - 16 Gauge Channel



1 5/8" x 13/16" (41mm x 21mm) with 9/16" x 1 1/8" Short Slots on 2" centers.



## W400SS Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
0.83 (1.24)	0.244 (1.57)	0.023 (0.96)	0.05 (0.82)	0.31 (0.79)	0.092 (3.83)	0.113 (1.85)	0.614 (1.56)

## W400SS - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	756	0.03	756	756	756	1.00
18	504	0.06	504	504	405	1.00
24	378	0.11	378	342	234	1.00
30	297	0.17	297	225	144	0.97
36	252	0.25	207	153	99	0.94
42	216	0.34	153	117	72	0.92
48	189	0.44	117	90	54	0.88
60	153	0.69	72	54	36	0.82
72	126	0.99	54	36	27	0.78
84	108	1.34	36	27	18	0.74

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	3.4	0.67	3.4	3.4	3.4	1.00
450	2.3	1.52	2.3	2.3	1.9	1.00
600	1.7	2.72	1.7	1.6	1.0	1.00
750	1.4	4.19	1.4	1.0	0.7	0.97
900	1.1	5.97	0.9	0.7	0.5	0.94
1050	1.0	8.12	0.7	0.5	0.4	0.91
1200	0.8	10.61	0.5	0.4	0.3	0.88
1500	0.7	16.77	0.3	0.2	0.2	0.83
1800	0.6	23.87	0.2	0.2	0.1	0.78
2100	0.5	32.49	0.2	0.1	0.1	0.74

## W400SS - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	1780	5390	5250	5040	4800
18	1720	5070	4800	4420	4030
24	1650	4680	4290	3780	3310
30	1570	4260	3780	3210	2520
36	1470	3840	3310	2520	1780
42	1340	3460	2800	1880	1310
48	1180	3080	2250	1440	1000
60	890	2180	1440	920	KL/r >200
72	690	1520	1000	KL/r >200	KL/r >200
84	KL/r >200	1110	KL/r >200	KL/r >200	KL/r >200

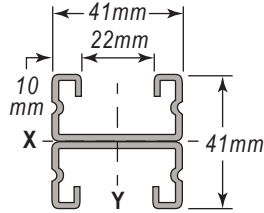
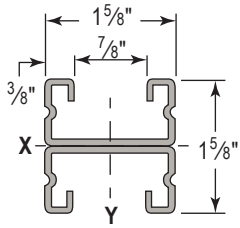
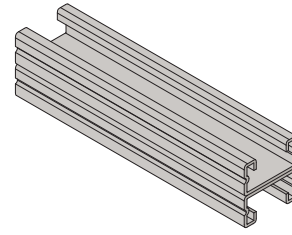
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	7.9	24.0	23.4	22.5	21.4
450	7.7	22.6	21.4	19.8	18.1
600	7.4	20.9	19.2	17.0	14.9
750	7.0	19.1	17.0	14.5	11.5
900	6.6	17.3	14.9	11.5	8.2
1050	6.0	15.6	12.7	8.6	6.0
1200	5.3	14.0	10.3	6.6	4.6
1500	4.0	10.0	6.6	4.2	KL/r >200
1800	3.2	6.9	4.6	KL/r >200	KL/r >200
2100	KL/r >200	5.1	KL/r >200	KL/r >200	KL/r >200

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 3 - 6 for other beam support conditions.



# W401 - 16 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>8</sub>" (41mm x 41mm)



## W401 Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
1.66 (2.47)	0.487 (3.14)	0.105 (4.37)	0.129 (2.11)	0.463 (1.18)	0.184 (7.66)	0.226 (3.70)	0.614 (1.56)

## W401 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	500 *	0.00	500 *	500 *	500 *	1.00
18	500 *	0.01	500 *	500 *	500 *	1.00
24	500 *	0.03	500 *	500 *	500 *	1.00
30	500 *	0.06	500 *	500 *	500 *	1.00
36	500 *	0.10	500 *	500 *	500 *	1.00
42	500 *	0.16	500 *	500 *	370	1.00
48	500 *	0.23	500 *	430	290	0.98
60	430	0.39	370	270	180	0.93
72	360	0.57	250	190	130	0.88
84	310	0.78	190	140	90	0.83

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	2.2 *	0.09	2.2 *	2.2 *	2.2 *	1.00
450	2.2 *	0.30	2.2 *	2.2 *	2.2 *	1.00
600	2.2 *	0.71	2.2 *	2.2 *	2.2 *	1.00
750	2.2 *	1.38	2.2 *	2.2 *	2.2 *	1.00
900	2.2 *	2.38	2.2 *	2.2 *	2.2 *	1.00
1050	2.2 *	3.79	2.2 *	2.2 *	1.7	1.00
1200	2.2 *	5.65	2.2 *	2.0	1.3	0.98
1500	2.0	9.71	1.7	1.2	0.8	0.93
1800	1.6	14.11	1.2	0.9	0.6	0.88
2100	1.4	18.78	0.8	0.6	0.4	0.84

## W401 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	2920	11090	10960	10750	10520
18	2890	10780	10520	10140	9740
24	2850	10390	10000	9470	8960
30	2800	9970	9470	8810	7870
36	2760	9540	8960	7870	6700
42	2690	9120	8260	6900	5530
48	2600	8630	7490	5920	4440
60	2350	7390	5920	4090	2840
72	2030	6110	4440	2840	1970
84	1710	4880	3260	2090	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	13.0	49.4	48.8	47.9	46.9
450	12.9	48.0	46.9	45.2	43.5
600	12.7	46.4	44.7	42.3	40.1
750	12.5	44.5	42.3	39.5	35.4
900	12.3	42.6	40.1	35.4	30.3
1050	12.0	40.7	37.1	31.1	25.2
1200	11.6	38.7	33.7	26.9	20.3
1500	10.5	33.3	26.9	18.8	13.0
1800	9.2	27.7	20.3	13.0	9.1
2100	7.7	22.3	15.0	9.6	KL/r >200

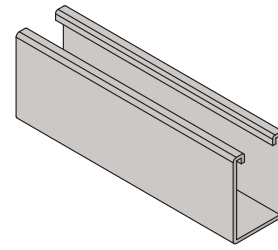
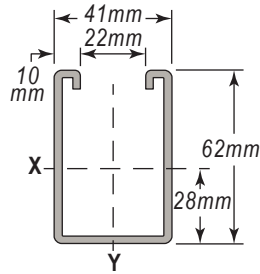
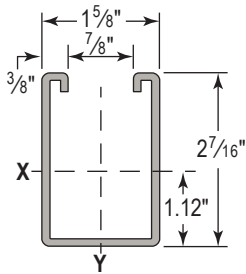
\* Load limited by spot weld shear

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 3 - 6 for other beam support conditions.

# W100 - 12 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 2<sup>7</sup>/<sub>16</sub>" (41mm x 62mm)



## W100 Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
2.49 (3.71)	0.732 (4.72)	0.530 (22.06)	0.400 (6.55)	0.851 (2.16)	0.337 (14.03)	0.415 (6.80)	0.679 (1.72)

## W100 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	6,700	0.01	6,700	6,700	6,700	1.00
24	3,350	0.04	3,350	3,350	3,350	0.99
36	2,230	0.09	2,230	2,230	2,230	0.88
48	1,670	0.15	1,670	1,670	1,450	0.77
60	1,340	0.24	1,340	1,340	930	0.66
72	1,120	0.35	1,120	960	640	0.57
84	960	0.47	940	710	470	0.50
96	840	0.62	720	540	360	0.45
108	740	0.78	570	430	290	0.42
120	670	0.96	460	350	230	0.39

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	30.3	0.24	30.3	30.3	30.3	1.00
600	15.1	0.95	15.1	15.1	15.1	1.00
900	10.1	2.14	10.1	10.1	10.1	0.89
1200	7.6	3.79	7.6	7.6	6.6	0.77
1500	6.0	5.93	6.0	6.0	4.3	0.67
1800	5.0	8.51	5.0	4.4	2.9	0.58
2100	4.3	11.60	4.3	3.2	2.2	0.51
2400	3.8	15.18	3.3	2.5	1.6	0.46
2700	3.4	19.32	2.6	2.0	1.3	0.42
3000	3.0	23.71	2.1	1.6	1.1	0.39

## W100 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	5090	16190	15760	15090	14330
24	4720	13920	12640	10890	9220
36	4020	11110	9220	7040	5370
48	3210	8440	6400	4630	3640
60	2570	6250	4630	3460	2780
72	2130	4790	3640	2780	2270
84	1810	3900	3010	2340	1920
96	1580	3290	2590	2020	1660
108	1400	2860	2270	1780	1450
120	1270	2540	2020	1580	KL/r >200

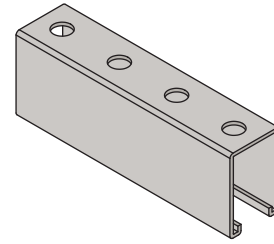
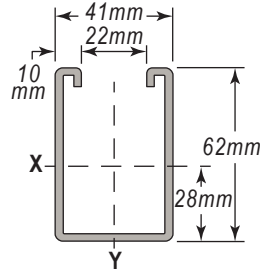
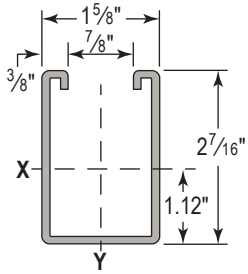
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	22.7	72.1	70.3	67.4	64.1
600	21.0	62.3	56.7	49.1	41.7
900	18.1	50.0	41.7	32.0	24.5
1200	14.5	38.3	29.2	21.0	16.5
1500	11.6	28.5	21.0	15.7	12.6
1800	9.6	21.8	16.5	12.6	10.3
2100	8.2	17.7	13.7	10.6	8.7
2400	7.1	14.9	11.7	9.2	7.5
2700	6.4	13.0	10.3	8.1	6.6
3000	5.7	11.5	9.2	7.2	KL/r >200

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 3 - 6 for other beam support conditions.



# W100H - 12 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 2<sup>7</sup>/<sub>16</sub>" (41mm x 62mm) with <sup>9</sup>/<sub>16</sub>" holes on 1<sup>7</sup>/<sub>8</sub>" centers.



## W100H Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
2.49 (3.71)	0.732 (4.72)	0.530 (22.06)	0.400 (6.55)	0.851 (2.16)	0.337 (14.03)	0.415 (6.80)	0.679 (1.72)

## W100H - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	6,365	0.01	6,365	6,365	6,365	1.00
24	3,183	0.04	3,183	3,183	3,183	0.99
36	2,119	0.09	2,119	2,119	2,119	0.88
48	1,587	0.15	1,587	1,587	1,378	0.77
60	1,273	0.24	1,273	1,273	884	0.66
72	1,064	0.35	1,064	912	608	0.57
84	912	0.47	893	675	447	0.50
96	798	0.62	684	513	342	0.45
108	703	0.78	542	409	276	0.42
120	637	0.96	437	333	219	0.39

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	28.8	0.24	28.8	28.8	28.8	1.00
600	14.4	0.95	14.4	14.4	14.4	1.00
900	9.6	2.14	9.6	9.6	9.6	0.89
1200	7.2	3.79	7.2	7.2	6.3	0.77
1500	5.7	5.93	5.7	5.7	4.1	0.67
1800	4.8	8.51	4.8	4.2	2.8	0.58
2100	4.1	11.60	4.1	3.1	2.1	0.51
2400	3.6	15.18	3.2	2.4	1.6	0.46
2700	3.2	19.32	2.5	1.9	1.3	0.42
3000	2.9	23.71	2.0	1.5	1.0	0.39

## W100H - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	5090	16190	15760	15090	14330
24	4720	13920	12640	10890	9220
36	4020	11110	9220	7040	5370
48	3210	8440	6400	4630	3640
60	2570	6250	4630	3460	2780
72	2130	4790	3640	2780	2270
84	1810	3900	3010	2340	1920
96	1580	3290	2590	2020	1660
108	1400	2860	2270	1780	1450
120	1270	2540	2020	1580	KL/r >200

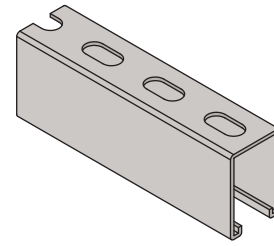
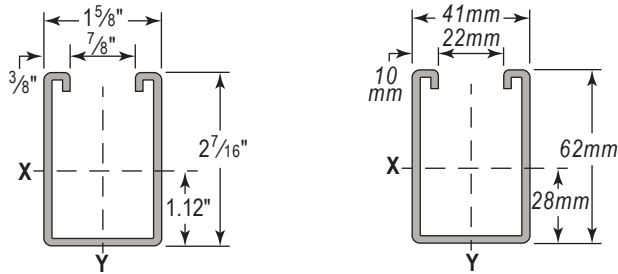
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	22.7	72.1	70.3	67.4	64.1
600	21.0	62.3	56.7	49.1	41.7
900	18.1	50.0	41.7	32.0	24.5
1200	14.5	38.3	29.2	21.0	16.5
1500	11.6	28.5	21.0	15.7	12.6
1800	9.6	21.8	16.5	12.6	10.3
2100	8.2	17.7	13.7	10.6	8.7
2400	7.1	14.9	11.7	9.2	7.5
2700	6.4	13.0	10.3	8.1	6.6
3000	5.7	11.5	9.2	7.2	KL/r >200

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 3 - 6 for other beam support conditions.

# W100SS - 12 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 2<sup>7</sup>/<sub>16</sub>" (41mm x 62mm) with <sup>9</sup>/<sub>16</sub>" x 1<sup>1</sup>/<sub>8</sub>" Short Slots on 2" centers.



## W100SS Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
2.49 (3.71)	0.732 (4.72)	0.530 (22.06)	0.400 (6.55)	0.851 (2.16)	0.337 (14.03)	0.415 (6.80)	0.679 (1.72)

## W100SS - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	6,030	0.01	6,030	6,030	6,030	1.00
24	3,015	0.04	3,015	3,015	3,015	0.99
36	2,007	0.09	2,007	2,007	2,007	0.88
48	1,503	0.15	1,503	1,503	1,305	0.77
60	1,206	0.24	1,206	1,206	837	0.66
72	1,008	0.35	1,008	864	576	0.57
84	864	0.47	846	639	423	0.50
96	756	0.62	648	486	324	0.45
108	666	0.78	513	387	261	0.42
120	603	0.96	414	315	207	0.39

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	27.3	0.24	27.3	27.3	27.3	1.00
600	13.6	0.95	13.6	13.6	13.6	1.00
900	9.1	2.14	9.1	9.1	9.1	0.89
1200	6.8	3.79	6.8	6.8	6.0	0.77
1500	5.4	5.93	5.4	5.4	3.8	0.67
1800	4.5	8.51	4.5	4.0	2.6	0.58
2100	3.9	11.60	3.9	2.9	2.0	0.51
2400	3.4	15.18	3.0	2.2	1.5	0.46
2700	3.0	19.32	2.4	1.8	1.2	0.42
3000	2.7	23.71	1.9	1.4	1.0	0.39

## W100SS - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	5090	16190	15760	15090	14330
24	4720	13920	12640	10890	9220
36	4020	11110	9220	7040	5370
48	3210	8440	6400	4630	3640
60	2570	6250	4630	3460	2780
72	2130	4790	3640	2780	2270
84	1810	3900	3010	2340	1920
96	1580	3290	2590	2020	1660
108	1400	2860	2270	1780	1450
120	1270	2540	2020	1580	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	22.7	72.1	70.3	67.4	64.1
600	21.0	62.3	56.7	49.1	41.7
900	18.1	50.0	41.7	32.0	24.5
1200	14.5	38.3	29.2	21.0	16.5
1500	11.6	28.5	21.0	15.7	12.6
1800	9.6	21.8	16.5	12.6	10.3
2100	8.2	17.7	13.7	10.6	8.7
2400	7.1	14.9	11.7	9.2	7.5
2700	6.4	13.0	10.3	8.1	6.6
3000	5.7	11.5	9.2	7.2	KL/r >200

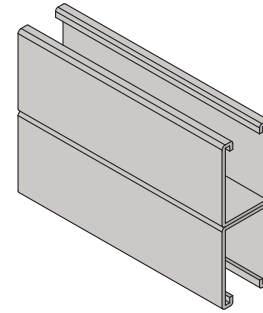
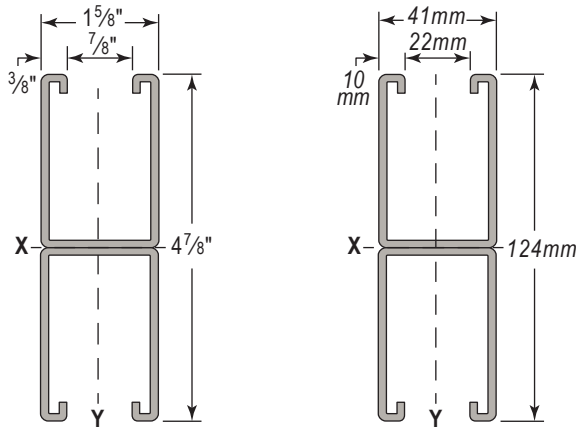
Beam loads shown are total uniform load, including the channel weight, for a simple span supported at each end that is adequately laterally braced. Refer to pages 3 - 6 for other beam support conditions.





# W101 - 12 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 4<sup>7</sup>/<sub>8</sub>" (41mm x 124mm)



## W101: Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
4.98 (7.41)	1.463 (9.44)	2.867 (119.33)	1.176 (19.27)	1.400 (3.56)	0.674 (28.05)	0.829 (13.58)	0.679 (1.72)

## W101 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	3,710 *	0.00	3,710 *	3,710 *	3,710 *	1.00
24	3,710 *	0.01	3,710 *	3,710 *	3,710 *	1.00
36	3,710 *	0.03	3,710 *	3,710 *	3,710 *	1.00
48	3,710 *	0.06	3,710 *	3,710 *	3,710 *	0.98
60	3,710 *	0.12	3,710 *	3,710 *	3,710 *	0.92
72	3,290	0.19	3,290	3,290	3,290	0.87
84	2,820	0.26	2,820	2,820	2,560	0.81
96	2,470	0.34	2,470	2,470	1,960	0.75
108	2,190	0.42	2,190	2,190	1,550	0.69
120	1,970	0.52	1,970	1,880	1,250	0.64

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	16.5 *	0.02	16.5 *	16.5 *	16.5 *	1.00
600	16.5 *	0.19	16.5 *	16.5 *	16.5 *	1.00
900	16.5 *	0.65	16.5 *	16.5 *	16.5 *	1.00
1200	16.5 *	1.53	16.5 *	16.5 *	16.5 *	0.98
1500	16.5 *	2.99	16.5 *	16.5 *	16.5 *	0.93
1800	14.9	4.65	14.9	14.9	14.9	0.87
2100	12.7	6.32	12.7	12.7	11.7	0.82
2400	11.1	8.25	11.1	11.1	9.0	0.76
2700	9.9	10.47	9.9	9.9	7.1	0.70
3000	8.9	12.89	8.9	8.6	5.7	0.65

## W101 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	8890	33570	33290	32840	32320
24	8730	32030	31100	29720	28280
36	8490	29900	28280	26150	24190
48	8220	27560	25470	23020	21020
60	7840	25310	23020	20590	17300
72	7370	23300	21020	17300	12800
84	6870	21600	18880	13530	9410
96	6210	20180	15750	10370	7200
108	5510	17890	12800	8190	5690
120	4850	15370	10370	6640	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	39.6	149.4	148.2	146.3	144.0
600	38.9	142.7	138.7	132.7	126.4
900	37.8	133.4	126.4	117.0	108.4
1200	36.7	123.2	114.1	103.2	94.3
1500	35.0	113.3	103.2	92.3	78.6
1800	33.0	104.4	94.3	78.6	58.8
2100	30.9	96.8	85.6	62.0	43.2
2400	28.0	90.5	71.8	47.6	33.1
2700	25.0	81.2	58.8	37.6	26.1
3000	22.0	70.1	47.6	30.5	KL/r >200

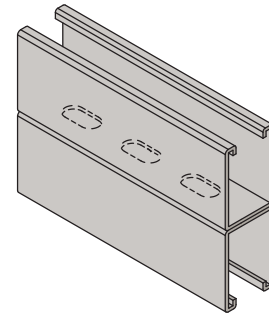
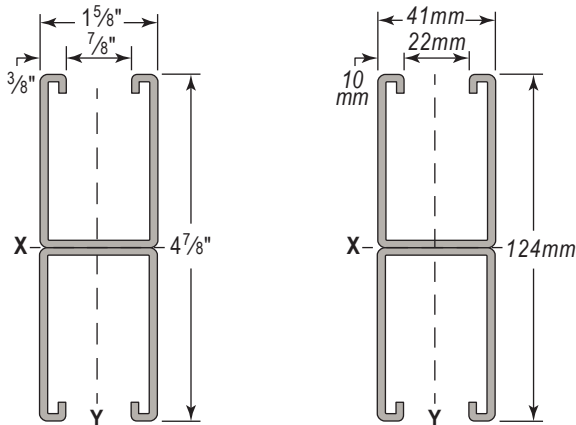
\* Load limited by spot weld shear

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 3 - 6 for other beam support conditions.

# W101SS - 12 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 4<sup>7</sup>/<sub>8</sub>" (41mm x 124mm) with <sup>9</sup>/<sub>16</sub>" x 1<sup>1</sup>/<sub>8</sub>" Short Slots on 2" centers.



## W101SS: Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
4.98 (7.41)	1.463 (9.44)	2.867 (119.33)	1.176 (19.27)	1.400 (3.56)	0.674 (28.05)	0.829 (13.58)	0.679 (1.72)

## W101SS - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	3,339 *	0.00	3,339 *	3,339 *	3,339 *	1.00
24	3,339 *	0.01	3,339 *	3,339 *	3,339 *	1.00
36	3,339 *	0.03	3,339 *	3,339 *	3,339 *	1.00
48	3,339 *	0.06	3,339 *	3,339 *	3,339 *	0.98
60	3,339 *	0.12	3,339 *	3,339 *	3,339 *	0.92
72	2,961	0.19	2,961	2,961	2,961	0.87
84	2,538	0.26	2,538	2,538	2,304	0.81
96	2,223	0.34	2,223	2,223	1,764	0.75
108	1,971	0.42	1,971	1,971	1,395	0.69
120	1,773	0.52	1,773	1,692	1,125	0.64

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	14.9 *	0.02	14.9 *	14.9 *	14.9 *	1.00
600	14.9 *	0.19	14.9 *	14.9 *	14.9 *	1.00
900	14.9 *	0.65	14.9 *	14.9 *	14.9 *	1.00
1200	14.9 *	1.53	14.9 *	14.9 *	14.9 *	0.98
1500	14.9 *	2.99	14.9 *	14.9 *	14.9 *	0.93
1800	13.4	4.65	13.4	13.4	13.4	0.87
2100	11.4	6.32	11.4	11.4	10.6	0.82
2400	10.0	8.25	10.0	10.0	8.1	0.76
2700	8.9	10.47	8.9	8.9	6.4	0.70
3000	8.0	12.89	8.0	7.8	5.2	0.65

## W101SS - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	8890	33570	33290	32840	32320
24	8730	32030	31100	29720	28280
36	8490	29900	28280	26150	24190
48	8220	27560	25470	23020	21020
60	7840	25310	23020	20590	17300
72	7370	23300	21020	17300	12800
84	6870	21600	18880	13530	9410
96	6210	20180	15750	10370	7200
108	5510	17890	12800	8190	5690
120	4850	15370	10370	6640	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	39.6	149.4	148.2	146.3	144.0
600	38.9	142.7	138.7	132.7	126.4
900	37.8	133.4	126.4	117.0	108.4
1200	36.7	123.2	114.1	103.2	94.3
1500	35.0	113.3	103.2	92.3	78.6
1800	33.0	104.4	94.3	78.6	58.8
2100	30.9	96.8	85.6	62.0	43.2
2400	28.0	90.5	71.8	47.6	33.1
2700	25.0	81.2	58.8	37.6	26.1
3000	22.0	70.1	47.6	30.5	KL/r >200

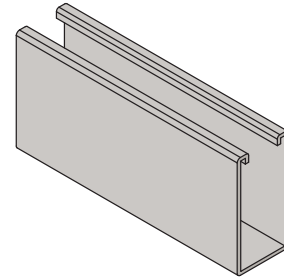
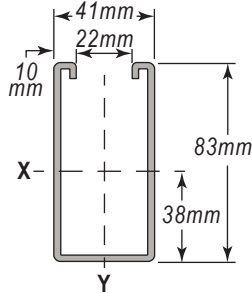
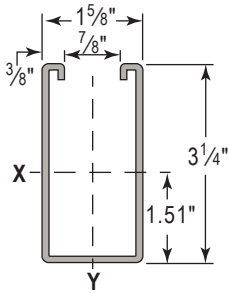
\* Load limited by spot weld shear

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 3 - 6 for other beam support conditions.



# W150 - 12 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 3<sup>1</sup>/<sub>4</sub>" (41mm x 83mm)



## W150: Section Properties

Wt. . Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
3.07 (4.57)	0.902 (5.82)	1.113 (46.33)	0.639 (10.47)	1.111 (2.82)	0.435 (18.11)	0.536 (8.78)	0.695 (1.77)

## W150 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	10,720	0.01	10,720	10,720	10,720	1.00
24	5,360	0.03	5,360	5,360	5,360	0.98
36	3,570	0.07	3,570	3,570	3,570	0.85
48	2,680	0.12	2,680	2,680	2,680	0.70
60	2,140	0.18	2,140	2,140	1,940	0.54
72	1,790	0.27	1,790	1,790	1,350	0.44
84	1,530	0.36	1,530	1,490	990	0.37
96	1,340	0.47	1,340	1,140	760	0.33
108	1,190	0.59	1,190	900	600	0.29
120	1,070	0.73	970	730	490	0.27

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	48.4	0.18	48.4	48.4	48.4	1.00
600	24.2	0.72	24.2	24.2	24.2	0.99
900	16.1	1.63	16.1	16.1	16.1	0.85
1200	12.1	2.89	12.1	12.1	12.1	0.71
1500	9.7	4.52	9.7	9.7	8.9	0.56
1800	8.1	6.53	8.1	8.1	6.2	0.44
2100	6.9	8.88	6.9	6.9	4.5	0.38
2400	6.0	11.56	6.0	5.2	3.5	0.33
2700	5.4	14.64	5.4	4.1	2.8	0.30
3000	4.8	18.10	4.4	3.3	2.2	0.27

## W150 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	6230	19910	19360	18480	17490
24	5730	16950	15250	12890	10630
36	4740	13190	10630	7650	5660
48	3590	9570	6870	4800	3660
60	2740	6690	4800	3460	2710
72	2160	4990	3660	2710	2170
84	1760	3960	2970	2250	1830
96	1500	3280	2500	1930	1580
108	1310	2800	2170	1700	1400
120	1170	2460	1930	1520	KL/r >200

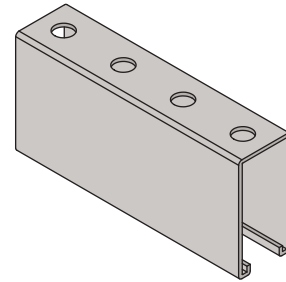
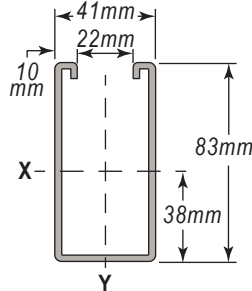
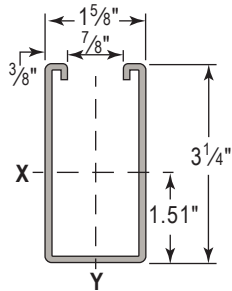
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	27.8	88.7	86.3	82.6	78.2
600	25.6	75.9	68.5	58.2	48.2
900	21.3	59.5	48.2	35.0	25.8
1200	16.2	43.5	31.4	21.9	16.7
1500	12.5	30.6	21.9	15.7	12.3
1800	9.8	22.7	16.7	12.3	9.8
2100	8.0	18.0	13.5	10.2	8.3
2400	6.8	14.9	11.3	8.7	7.2
2700	5.9	12.7	9.8	7.7	6.3
3000	5.3	11.1	8.7	6.9	KL/r >200

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 3 - 6 for other beam support conditions.

# W150H - 12 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 3<sup>1</sup>/<sub>4</sub>" (41mm x 83mm) with 9/<sub>16</sub>" holes on 1<sup>7</sup>/<sub>8</sub>" centers.



## W150H: Section Properties

Wt. . Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
3.07 (4.57)	0.902 (5.82)	1.113 (46.33)	0.639 (10.47)	1.111 (2.82)	0.435 (18.11)	0.536 (8.78)	0.695 (1.77)

## W150H - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	10,184	0.01	10,184	10,184	10,184	1.00
24	5,092	0.03	5,092	5,092	5,092	0.98
36	3,392	0.07	3,392	3,392	3,392	0.85
48	2,546	0.12	2,546	2,546	2,546	0.70
60	2,033	0.18	2,033	2,033	1,843	0.54
72	1,701	0.27	1,701	1,701	1,283	0.44
84	1,454	0.36	1,454	1,416	941	0.37
96	1,273	0.47	1,273	1,083	722	0.33
108	1,131	0.59	1,131	855	570	0.29
120	1,017	0.73	922	694	466	0.27

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	46.0	0.18	46.0	46.0	46.0	1.00
600	23.0	0.72	23.0	23.0	23.0	0.99
900	15.3	1.63	15.3	15.3	15.3	0.85
1200	11.5	2.89	11.5	11.5	11.5	0.71
1500	9.2	4.52	9.2	9.2	8.5	0.56
1800	7.7	6.53	7.7	7.7	5.9	0.44
2100	6.6	8.88	6.6	6.5	4.3	0.38
2400	5.7	11.56	5.7	5.0	3.3	0.33
2700	5.1	14.64	5.1	3.9	2.6	0.30
3000	4.6	18.10	4.2	3.2	2.1	0.27

## W150H - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	6230	19910	19360	18480	17490
24	5730	16950	15250	12890	10630
36	4740	13190	10630	7650	5660
48	3590	9570	6870	4800	3660
60	2740	6690	4800	3460	2710
72	2160	4990	3660	2710	2170
84	1760	3960	2970	2250	1830
96	1500	3280	2500	1930	1580
108	1310	2800	2170	1700	1400
120	1170	2460	1930	1520	KL/r >200

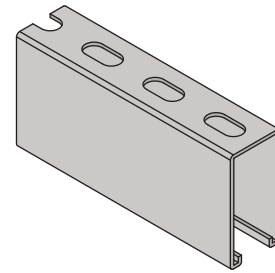
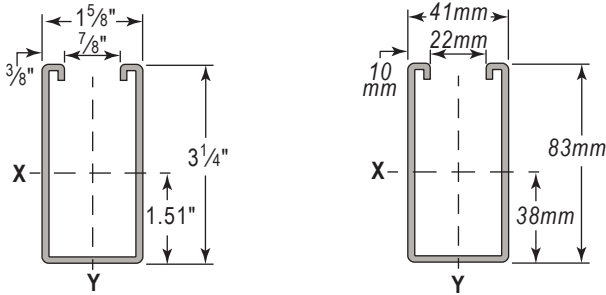
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	27.8	88.7	86.3	82.6	78.2
600	25.6	75.9	68.5	58.2	48.2
900	21.3	59.5	48.2	35.0	25.8
1200	16.2	43.5	31.4	21.9	16.7
1500	12.5	30.6	21.9	15.7	12.3
1800	9.8	22.7	16.7	12.3	9.8
2100	8.0	18.0	13.5	10.2	8.3
2400	6.8	14.9	11.3	8.7	7.2
2700	5.9	12.7	9.8	7.7	6.3
3000	5.3	11.1	8.7	6.9	KL/r >200

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 3 - 6 for other beam support conditions.



# W150SS - 12 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 3<sup>1</sup>/<sub>4</sub>" (41mm x 83mm) with <sup>9</sup>/<sub>16</sub>" x 1<sup>1</sup>/<sub>8</sub>" Short Slots on 2" centers.



## W150SS: Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
3.07 (4.57)	0.902 (5.82)	1.113 (46.33)	0.639 (10.47)	1.111 (2.82)	0.435 (18.11)	0.536 (8.78)	0.695 (1.77)

## W150SS - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	9,648	0.01	9,648	9,648	9,648	1.00
24	4,824	0.03	4,824	4,824	4,824	0.98
36	3,213	0.07	3,213	3,213	3,213	0.85
48	2,412	0.12	2,412	2,412	2,412	0.70
60	1,926	0.18	1,926	1,926	1,746	0.54
72	1,611	0.27	1,611	1,611	1,215	0.44
84	1,377	0.36	1,377	1,341	891	0.37
96	1,206	0.47	1,206	1,026	684	0.33
108	1,071	0.59	1,071	810	540	0.29
120	963	0.73	873	657	441	0.27

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	43.6	0.18	43.6	43.6	43.6	1.00
600	21.8	0.72	21.8	21.8	21.8	0.99
900	14.5	1.63	14.5	14.5	14.5	0.85
1200	10.9	2.89	10.9	10.9	10.9	0.71
1500	8.7	4.52	8.7	8.7	8.0	0.56
1800	7.3	6.53	7.3	7.3	5.6	0.44
2100	6.2	8.88	6.2	6.2	4.1	0.38
2400	5.4	11.56	5.4	4.7	3.1	0.33
2700	4.8	14.64	4.8	3.7	2.5	0.30
3000	4.4	18.10	4.0	3.0	2.0	0.27

## W150SS - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	6230	19910	19360	18480	17490
24	5730	16950	15250	12890	10630
36	4740	13190	10630	7650	5660
48	3590	9570	6870	4800	3660
60	2740	6690	4800	3460	2710
72	2160	4990	3660	2710	2170
84	1760	3960	2970	2250	1830
96	1500	3280	2500	1930	1580
108	1310	2800	2170	1700	1400
120	1170	2460	1930	1520	KL/r >200

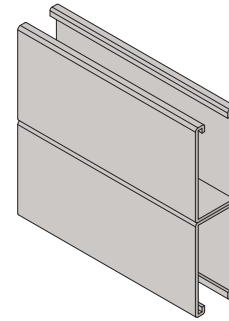
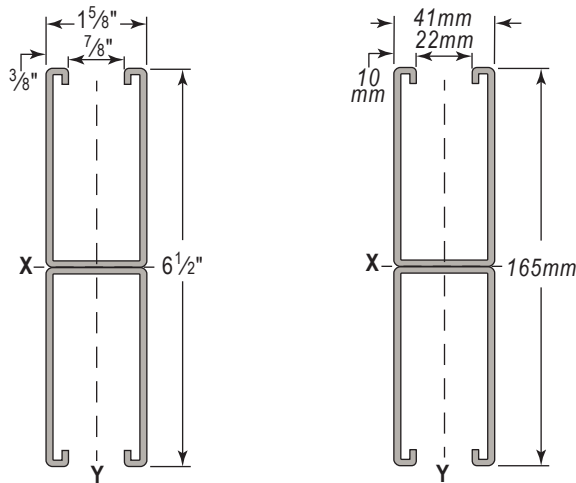
Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	27.8	88.7	86.3	82.6	78.2
600	25.6	75.9	68.5	58.2	48.2
900	21.3	59.5	48.2	35.0	25.8
1200	16.2	43.5	31.4	21.9	16.7
1500	12.5	30.6	21.9	15.7	12.3
1800	9.8	22.7	16.7	12.3	9.8
2100	8.0	18.0	13.5	10.2	8.3
2400	6.8	14.9	11.3	8.7	7.2
2700	5.9	12.7	9.8	7.7	6.3
3000	5.3	11.1	8.7	6.9	KL/r >200

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 3 - 6 for other beam support conditions.

# W151 - 12 Gauge Channel



1<sup>5</sup>/<sub>8</sub>" x 6<sup>1</sup>/<sub>2</sub>" (41mm x 165mm)



## W151 Section Properties

Wt.. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
6.14 (9.14)	1.804 (11.64)	6.339 (263.85)	1.951 (31.97)	1.874 (4.76)	0.871 (36.25)	1.072 (17.57)	0.695 (1.77)

## W151 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	4,890 *	0.00	4,890 *	4,890 *	4,890 *	1.00
24	4,890 *	0.00	4,890 *	4,890 *	4,890 *	1.00
36	4,890 *	0.02	4,890 *	4,890 *	4,890 *	1.00
48	4,890 *	0.04	4,890 *	4,890 *	4,890 *	0.96
60	4,890 *	0.07	4,890 *	4,890 *	4,890 *	0.90
72	4,890 *	0.13	4,890 *	4,890 *	4,890 *	0.83
84	4,670	0.19	4,670	4,670	4,670	0.75
96	4,090	0.25	4,090	4,090	4,090	0.68
108	3,630	0.32	3,630	3,630	3,420	0.60
120	3,270	0.39	3,270	3,270	2,770	0.53

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	21.8 *	0.01	21.8 *	21.8 *	21.8 *	1.00
600	21.8 *	0.11	21.8 *	21.8 *	21.8 *	1.00
900	21.8 *	0.38	21.8 *	21.8 *	21.8 *	1.00
1200	21.8 *	0.91	21.8 *	21.8 *	21.8 *	0.97
1500	21.8 *	1.78	21.8 *	21.8 *	21.8 *	0.90
1800	21.8 *	3.08	21.8 *	21.8 *	21.8 *	0.83
2100	21.1	4.75	21.1	21.1	21.1	0.76
2400	18.5	6.19	18.5	18.5	18.5	0.69
2700	16.4	7.84	16.4	16.4	15.7	0.61
3000	14.8	9.67	14.8	14.8	12.7	0.54

## W151 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	11040	41400	41060	40490	39830
24	10820	39460	38240	36400	34410
36	10490	36640	34410	31330	28370
48	10080	33380	30320	26520	23250
60	9400	30070	26520	22520	19410
72	8650	26970	23250	19410	16540
84	7930	24210	20560	17050	12160
96	7280	21830	18390	13400	9310
108	6660	19820	16540	10590	7350
120	5800	18150	13400	8580	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	49.1	184.2	182.8	180.3	177.5
600	48.2	175.9	170.6	162.6	153.9
900	46.8	163.7	153.9	140.4	127.4
1200	45.0	149.4	136.0	119.2	104.7
1500	42.1	134.9	119.2	101.4	87.5
1800	38.8	121.2	104.7	87.5	75.1
2100	35.6	109.0	92.7	76.9	55.8
2400	32.7	98.4	82.9	61.5	42.7
2700	30.1	89.4	75.1	48.6	33.8
3000	26.4	81.8	61.5	39.4	KL/r >200

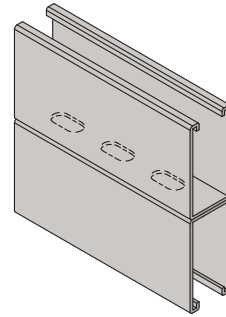
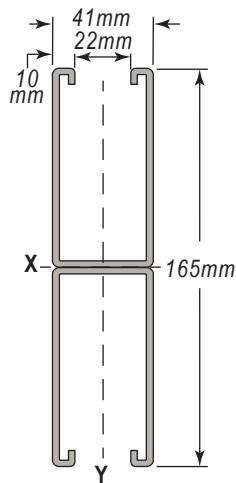
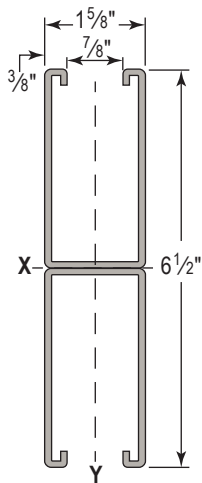
\* Load limited by spot weld shear

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 3 - 6 for other beam support conditions.



# W151SS - 12 Gauge Channel

1<sup>5</sup>/<sub>8</sub>" x 6<sup>1</sup>/<sub>2</sub>" (41mm x 165mm) with <sup>9</sup>/<sub>16</sub>" x 1<sup>1</sup>/<sub>8</sub>" Short Slots on 2" centers.



## W151SS Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
6.14 (9.14)	1.804 (11.64)	6.339 (263.85)	1.951 (31.97)	1.874 (4.76)	0.871 (36.25)	1.072 (17.57)	0.695 (1.77)

## W151SS - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	4,401 *	0.00	4,401 *	4,401 *	4,401 *	1.00
24	4,401 *	0.00	4,401 *	4,401 *	4,401 *	1.00
36	4,401 *	0.02	4,401 *	4,401 *	4,401 *	1.00
48	4,401 *	0.04	4,401 *	4,401 *	4,401 *	0.96
60	4,401 *	0.07	4,401 *	4,401 *	4,401 *	0.90
72	4,401 *	0.13	4,401 *	4,401 *	4,401 *	0.83
84	4,203	0.19	4,203	4,203	4,203	0.75
96	3,681	0.25	3,681	3,681	3,681	0.68
108	3,267	0.32	3,267	3,267	3,078	0.60
120	2,943	0.39	2,943	2,943	2,493	0.53

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	19.6 *	0.01	19.6 *	19.6 *	19.6 *	1.00
600	19.6 *	0.11	19.6 *	19.6 *	19.6 *	1.00
900	19.6 *	0.38	19.6 *	19.6 *	19.6 *	1.00
1200	19.6 *	0.91	19.6 *	19.6 *	19.6 *	0.97
1500	19.6 *	1.78	19.6 *	19.6 *	19.6 *	0.90
1800	19.6 *	3.08	19.6 *	19.6 *	19.6 *	0.83
2100	19.0	4.75	19.0	19.0	19.0	0.76
2400	16.6	6.19	16.6	16.6	16.6	0.69
2700	14.8	7.84	14.8	14.8	14.1	0.61
3000	13.3	9.67	13.3	13.3	11.4	0.54

## W151SS - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	11040	41400	41060	40490	39830
24	10820	39460	38240	36400	34410
36	10490	36640	34410	31330	28370
48	10080	33380	30320	26520	23250
60	9400	30070	26520	22520	19410
72	8650	26970	23250	19410	16540
84	7930	24210	20560	17050	12160
96	7280	21830	18390	13400	9310
108	6660	19820	16540	10590	7350
120	5800	18150	13400	8580	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	49.1	184.2	182.8	180.3	177.5
600	48.2	175.9	170.6	162.6	153.9
900	46.8	163.7	153.9	140.4	127.4
1200	45.0	149.4	136.0	119.2	104.7
1500	42.1	134.9	119.2	101.4	87.5
1800	38.8	121.2	104.7	87.5	75.1
2100	35.6	109.0	92.7	76.9	55.8
2400	32.7	98.4	82.9	61.5	42.7
2700	30.1	89.4	75.1	48.6	33.8
3000	26.4	81.8	61.5	39.4	KL/r >200

\* Load limited by spot weld shear

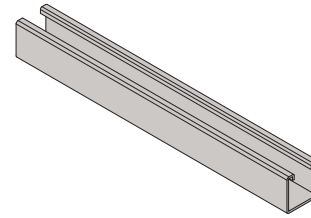
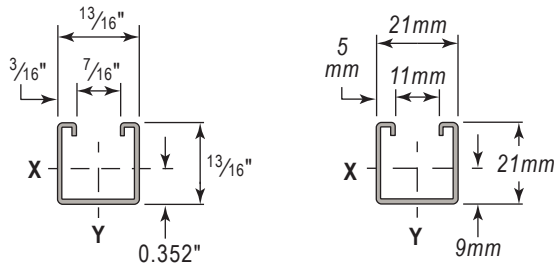
Beam loads shown are total uniform load, including the channel weight, for a simple span supported at each end that is adequately laterally braced. Refer to pages 3 - 6 for other beam support conditions.



# W600 - 19 Gauge Channel



$1\frac{3}{16}'' \times 1\frac{3}{16}''$  (21mm x 21mm)



## W600 Section Properties

Wt. . Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
0.36 (0.54)	0.107 (0.69)	0.009 (0.37)	0.020 (0.33)	0.295 (0.75)	0.012 (0.50)	0.029 (0.48)	0.333 (0.85)

## W600 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	340	0.03	340	340	340	1.00
18	230	0.06	230	230	180	0.91
24	170	0.11	170	150	100	0.80
30	140	0.18	130	100	70	0.72
36	110	0.24	90	70	50	0.63
42	100	0.35	70	50	30	0.58
48	80	0.42	50	40	30	0.52
60	70	0.72	NR	NR	NR	0.45
72	60	1.06	NR	NR	NR	0.40
84	50	1.41	NR	NR	NR	0.37

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	1.5	0.68	1.5	1.5	1.5	1.00
450	1.0	1.54	1.0	1.0	0.8	0.91
600	0.8	2.70	0.8	0.7	0.4	0.80
750	0.6	4.34	0.6	0.4	0.3	0.73
900	0.5	5.90	0.4	0.3	0.2	0.64
1050	0.4	8.52	0.3	0.2	0.1	0.59
1200	0.4	11.44	0.2	0.2	0.1	0.52
1500	0.3	17.38	NR	NR	NR	0.45
1800	0.3	25.74	NR	NR	NR	0.40
2100	0.2	34.06	NR	NR	NR	0.37

## W600 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	700	2050	1880	1630	1400
18	600	1660	1400	1100	860
24	490	1300	1010	740	590
30	400	990	740	560	450
36	340	770	590	450	370
42	290	630	490	380	310
48	260	540	420	330	270
60	210	410	330	KL/r >200	KL/r >200
72	180	340	270	KL/r >200	KL/r >200
84	KL/r >200	280	KL/r >200	KL/r >200	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	3.1	9.2	8.4	7.3	6.3
450	2.7	7.5	6.3	5.0	3.9
600	2.2	5.9	4.6	3.4	2.7
750	1.8	4.5	3.4	2.5	2.0
900	1.5	3.5	2.7	2.0	1.7
1050	1.3	2.8	2.2	1.7	1.4
1200	1.2	2.4	1.9	1.5	1.2
1500	0.9	1.9	1.5	KL/r >200	KL/r >200
1800	0.8	1.5	1.2	KL/r >200	KL/r >200
2100	KL/r >200	1.3	KL/r >200	KL/r >200	KL/r >200

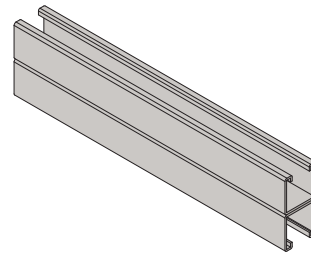
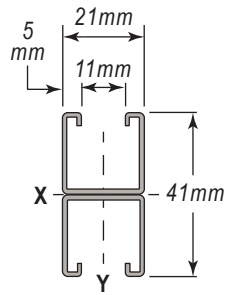
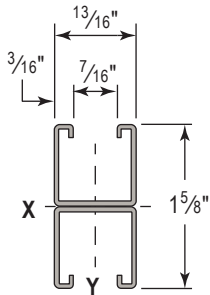
NR = Not Recommended

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 3 - 6 for other beam support conditions.



# W601 - 19 Gauge Channel

$1\frac{3}{16}'' \times 1\frac{5}{8}''$  (21mm x 41mm)



## W601 Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (m <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
0.73 (1.09)	0.214 (1.38)	0.045 (1.87)	0.056 (0.92)	0.459 (1.17)	0.024 (1.00)	0.058 (0.95)	0.333 (0.85)

## W601 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	280 *	0.00	280 *	280 *	280 *	1.00
18	280 *	0.02	280 *	280 *	280 *	1.00
24	280 *	0.04	280 *	280 *	280 *	0.99
30	280 *	0.07	280 *	280 *	280 *	0.94
36	280 *	0.13	280 *	280 *	220	0.89
42	270	0.20	270	240	160	0.84
48	230	0.25	230	180	120	0.79
60	190	0.40	160	120	80	0.70
72	160	0.58	110	80	50	0.60
84	130	0.75	80	60	40	0.51

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	1.2 *	0.11	1.2 *	1.2 *	1.2 *	1.00
450	1.2 *	0.39	1.2 *	1.2 *	1.2 *	1.00
600	1.2 *	0.92	1.2 *	1.2 *	1.2 *	0.99
750	1.2 *	1.79	1.2 *	1.2 *	1.2 *	0.95
900	1.2 *	3.10	1.2 *	1.2 *	1.0	0.90
1050	1.2	4.74	1.2	1.1	0.8	0.86
1200	1.1	6.29	1.1	0.8	0.6	0.80
1500	0.8	9.73	0.7	0.5	0.4	0.70
1800	0.7	14.16	0.5	0.4	0.3	0.61
2100	0.6	19.67	0.4	0.3	0.2	0.52

## W601 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	1240	4650	4510	4300	4090
18	1210	4330	4090	3780	3500
24	1170	3980	3680	3340	3060
30	1130	3660	3340	3010	2460
36	1070	3380	3060	2460	1800
42	990	3140	2690	1900	1320
48	900	2930	2230	1460	1010
60	710	2180	1460	930	KL/r >200
72	550	1530	1010	KL/r >200	KL/r >200
84	KL/r >200	1130	KL/r >200	KL/r >200	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	5.5	20.7	20.1	19.2	18.3
450	5.4	19.3	18.3	16.9	15.7
600	5.2	17.8	16.5	14.9	13.7
750	5.0	16.4	14.9	13.5	11.2
900	4.8	15.1	13.7	11.2	8.3
1050	4.4	14.1	12.2	8.7	6.0
1200	4.0	13.2	10.2	6.7	4.6
1500	3.2	9.9	6.7	4.3	KL/r >200
1800	2.5	7.0	4.6	KL/r >200	KL/r >200
2100	2.0	5.2	3.4	KL/r >200	KL/r >200

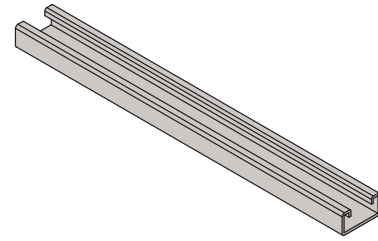
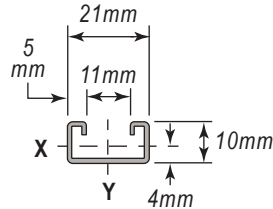
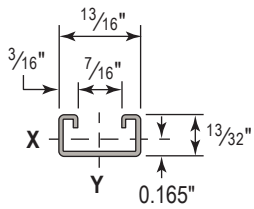
\* Load limited by spot weld shear

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 3 - 6 for other beam support conditions.

# W700 - 19 Gauge Channel



$1\frac{3}{16}'' \times 1\frac{3}{32}''$  (21mm x 10mm)



## W700 Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
0.25 (0.37)	0.074 (0.48)	0.002 (0.08)	0.007 (0.11)	0.149 (0.38)	0.007 (0.29)	0.017 (0.28)	0.307 (0.78)

## W700 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	110	0.05	110	110	70	1.00
18	80	0.12	70	50	30	0.97
24	60	0.22	40	30	20	0.95
30	50	0.35	20	20	NR	0.93
36	40	0.48	20	NR	NR	0.91
42	30	0.58	NR	NR	NR	0.89
48	30	0.86	NR	NR	NR	0.87
60	20	1.12	NR	NR	NR	0.83
72	20	1.94	NR	NR	NR	0.80
84	20	3.08	NR	NR	NR	0.76

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	0.5	1.30	0.5	0.5	0.4	1.00
450	0.4	2.93	0.3	0.2	0.1	0.97
600	0.3	5.22	0.2	0.1	0.1	0.95
750	0.2	8.49	0.1	0.1	NR	0.93
900	0.2	11.74	0.1	NR	NR	0.91
1050	0.1	13.98	NR	NR	NR	0.89
1200	0.1	20.86	NR	NR	NR	0.87
1500	0.1	27.16	NR	NR	NR	0.84
1800	0.1	46.94	NR	NR	NR	0.80
2100	0.1	74.54	NR	NR	NR	0.77

## W700 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	460	1430	1330	1170	990
18	410	1190	990	720	500
24	330	890	630	410	280
30	260	620	410	KL/r >200	KL/r >200
36	200	430	280	KL/r >200	KL/r >200
42	KL/r >200	310	KL/r >200	KL/r >200	KL/r >200
48	KL/r >200	KL/r >200	KL/r >200	KL/r >200	KL/r >200
60	KL/r >200	KL/r >200	KL/r >200	KL/r >200	KL/r >200
72	KL/r >200	KL/r >200	KL/r >200	KL/r >200	KL/r >200
84	KL/r >200	KL/r >200	KL/r >200	KL/r >200	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	2.0	6.4	6.0	5.3	4.4
450	1.8	5.4	4.4	3.3	2.3
600	1.5	4.0	2.9	1.9	1.3
750	1.2	2.8	1.9	1.2	KL/r >200
900	0.9	2.0	1.3	KL/r >200	KL/r >200
1050	KL/r >200	1.4	KL/r >200	KL/r >200	KL/r >200
1200	KL/r >200	KL/r >200	KL/r >200	KL/r >200	KL/r >200
1500	KL/r >200	KL/r >200	KL/r >200	KL/r >200	KL/r >200
1800	KL/r >200	KL/r >200	KL/r >200	KL/r >200	KL/r >200
2100	KL/r >200	KL/r >200	KL/r >200	KL/r >200	KL/r >200

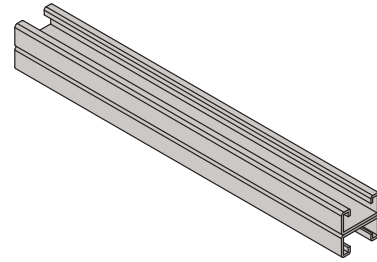
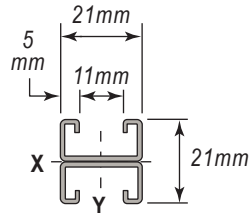
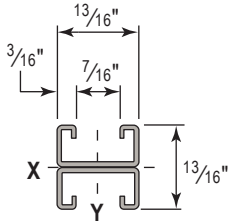
NR = Not Recommended

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 3 - 6 for other beam support conditions.



# W701 - 19 Gauge Channel

$1\frac{3}{16}'' \times 1\frac{3}{16}''$  (21mm x 21mm)



## W701 Section Properties

Wt. Lbs./Ft. (Kg/M)	Area of Section in. <sup>2</sup> (cm <sup>2</sup> )	X-X Axis			Y-Y Axis		
		Ix in. <sup>4</sup> (cm <sup>4</sup> )	Sx in. <sup>3</sup> (cm <sup>3</sup> )	rx. in. (cm)	Iy in. <sup>4</sup> (cm <sup>4</sup> )	Sy in. <sup>3</sup> (cm <sup>3</sup> )	ry in. (cm)
0.51 (0.76)	0.149 (0.96)	0.007 (0.29)	0.018 (0.29)	0.222 (0.56)	0.014 (0.58)	0.034 (0.56)	0.307 (0.78)

## W701 - Allowable Beam Loads

Span In	Max. Uniform Load Lbs	Defl. at Load In	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 Lbs	Span /240 Lbs	Span /360 Lbs	
12	140 *	0.01	140 *	140 *	140 *	1.00
18	140 *	0.05	140 *	140 *	140 *	1.00
24	140 *	0.12	140 *	120	80	1.00
30	120	0.20	100	80	50	0.97
36	100	0.28	70	50	40	0.93
42	90	0.40	50	40	30	0.89
48	80	0.53	40	30	NR	0.87
60	60	0.78	30	NR	NR	0.80
72	50	1.13	NR	NR	NR	0.73
84	40	1.43	NR	NR	NR	0.67

Span mm	Max. Uniform Load kN	Defl. at Load mm	Uniform Load at Deflection			Lateral Bracing Reduction
			Span /180 kN	Span /240 kN	Span /360 kN	
300	0.6 *	0.35	0.6 *	0.6 *	0.6 *	1.00
450	0.6 *	1.20	0.6 *	0.6 *	0.6 *	1.00
600	0.6 *	2.83	0.6 *	0.5	0.4	1.00
750	0.5	4.74	0.5	0.4	0.2	0.97
900	0.4	6.83	0.3	0.2	0.2	0.94
1050	0.4	9.76	0.2	0.2	0.1	0.91
1200	0.4	12.96	0.2	0.1	NR	0.87
1500	0.3	18.98	0.1	NR	NR	0.81
1800	0.2	27.33	NR	NR	NR	0.74
2100	0.2	34.72	NR	NR	NR	0.68

## W701 - Allowable Column Loads

Unbraced Height In	Max. Slot Face Load Lbs	Max. Column Load Applied at C.G.			
		K = 0.65 Lbs	K = 0.80 Lbs	K = 1.0 Lbs	K = 1.2 Lbs
12	820	3150	3040	2910	2690
18	790	2930	2690	2330	1960
24	740	2570	2210	1710	1250
30	670	2180	1710	1150	800
36	580	1770	1250	800	560
42	490	1390	920	590	KL/r >200
48	420	1070	700	KL/r >200	KL/r >200
60	KL/r >200	680	KL/r >200	KL/r >200	KL/r >200
72	KL/r >200	KL/r >200	KL/r >200	KL/r >200	KL/r >200
84	KL/r >200	KL/r >200	KL/r >200	KL/r >200	KL/r >200

Unbraced Height mm	Max. Slot Face Load kN	Max. Column Load Applied at C.G.			
		K = 0.65 kN	K = 0.80 kN	K = 1.0 kN	K = 1.2 kN
300	3.6	14.1	13.6	13.0	12.1
450	3.5	13.1	12.1	10.5	8.9
600	3.3	11.6	10.0	7.8	5.7
750	3.0	9.8	7.8	5.3	3.7
900	2.6	8.1	5.7	3.7	2.5
1050	2.2	6.4	4.2	2.7	KL/r >200
1200	1.9	4.9	3.2	KL/r >200	KL/r >200
1500	KL/r >200	3.2	KL/r >200	KL/r >200	KL/r >200
1800	KL/r >200	KL/r >200	KL/r >200	KL/r >200	KL/r >200
2100	KL/r >200	KL/r >200	KL/r >200	KL/r >200	KL/r >200

NR = Not Recommended

\* Load limited by spot weld shear

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 3 - 6 for other beam support conditions.

# Lateral Bracing Load Reduction Charts



## Lateral Bracing Load Reduction Charts

SPAN (in)	W100	W101	W150	W151	W200	W201	W210	W211	W300	W301	W400
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
24	0.99	1.00	0.98	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00
36	0.88	1.00	0.85	1.00	0.93	1.00	0.88	1.00	0.96	1.00	0.94
48	0.77	0.98	0.70	0.96	0.87	1.00	0.77	0.98	0.91	1.00	0.88
60	0.66	0.92	0.54	0.90	0.82	0.96	0.66	0.93	0.87	0.98	0.82
72	0.57	0.87	0.44	0.83	0.77	0.92	0.57	0.87	0.84	0.95	0.78
84	0.50	0.81	0.37	0.75	0.74	0.88	0.50	0.81	0.81	0.91	0.74
96	0.45	0.75	0.33	0.68	0.70	0.85	0.45	0.76	0.78	0.88	0.71
108	0.42	0.69	0.29	0.60	0.67	0.81	0.41	0.70	0.76	0.85	0.68
120	0.39	0.64	0.27	0.53	0.65	0.77	0.38	0.64	0.74	0.82	0.65

SPAN (in)	W401	W500	W501	W600	W601	W700	W701	W800	W801	W900	W901
12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
24	1.00	1.00	1.00	0.80	0.99	0.95	1.00	1.00	1.00	1.00	1.00
36	1.00	0.98	1.00	0.63	0.89	0.91	0.93	1.00	1.00	1.00	1.00
48	0.98	0.94	0.99	0.52	0.79	0.87	0.87	1.00	0.94	1.00	1.00
60	0.93	0.91	0.95	0.45	0.70	0.83	0.80	1.00	0.88	0.98	0.99
72	0.88	0.88	0.92	0.40	0.60	0.80	0.73	0.97	0.83	0.97	0.97
84	0.83	0.86	0.88	0.37	0.51	0.76	0.67	0.94	0.77	0.95	0.94
96	0.78	0.83	0.84	0.34	0.44	0.73	0.60	0.91	0.72	0.94	0.92
108	0.74	0.81	0.80	0.31	0.39	0.70	0.54	0.89	0.67	0.92	0.89
120	0.69	0.79	0.77	0.30	0.35	0.66	0.49	0.86	0.61	0.91	0.87

SPAN (mm)	W100	W101	W150	W151	W200	W201	W210	W211	W300	W301	W400
300	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
600	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
900	0.89	1.00	0.85	1.00	0.94	1.00	0.89	1.00	0.96	1.00	0.94
1,200	0.77	0.98	0.71	0.97	0.87	1.00	0.77	0.98	0.91	1.00	0.88
1,500	0.67	0.93	0.56	0.90	0.82	0.97	0.67	0.93	0.87	0.98	0.83
1,800	0.58	0.87	0.44	0.83	0.78	0.93	0.58	0.88	0.84	0.95	0.78
2,100	0.51	0.82	0.38	0.76	0.74	0.89	0.50	0.82	0.81	0.92	0.74
2,400	0.46	0.76	0.33	0.69	0.71	0.85	0.45	0.76	0.79	0.88	0.71
2,700	0.42	0.70	0.30	0.61	0.68	0.81	0.41	0.71	0.76	0.85	0.68
3,000	0.39	0.65	0.27	0.54	0.65	0.78	0.39	0.65	0.74	0.82	0.65

SPAN (mm)	W401	W500	W501	W600	W601	W700	W701	W800	W801	W900	W901
300	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
600	1.00	1.00	1.00	0.80	0.99	0.95	1.00	1.00	1.00	1.00	1.00
900	1.00	0.98	1.00	0.64	0.90	0.91	0.94	1.00	1.00	1.00	1.00
1,200	0.98	0.94	1.00	0.52	0.80	0.87	0.87	1.00	0.94	1.00	1.00
1,500	0.93	0.91	0.96	0.45	0.70	0.84	0.81	1.00	0.89	0.98	1.00
1,800	0.88	0.88	0.92	0.40	0.61	0.80	0.74	0.97	0.83	0.97	0.97
2,100	0.84	0.86	0.88	0.37	0.52	0.77	0.68	0.94	0.78	0.95	0.95
2,400	0.79	0.84	0.85	0.34	0.45	0.73	0.61	0.92	0.73	0.94	0.92
2,700	0.74	0.82	0.81	0.32	0.39	0.70	0.55	0.89	0.67	0.93	0.90
3,000	0.70	0.80	0.77	0.30	0.35	0.67	0.49	0.86	0.62	0.91	0.87



# Engineering Channel Load Information

***ZSi-Foster's products have earned a reputation for unparalleled quality and effectiveness. ZSi-Foster will continue to meet the ever-changing needs of our customers by producing quality products to solve problems while saving money.***



45065 Michigan Ave. Canton, MI 48188  
Ph: 734.844.0055 • Ph: 800.323.7053  
Fax: 734.844.0066



2324 W. Battlefield Rd. Springfield, MO 65807  
Ph: 866.918.3003  
Ph: 417.881.6600 • Fax: 417.881.3645



2324 W. Battlefield Rd. Springfield, MO 65807  
Ph: 866.918.3003  
Ph: 417.881.6600 • Fax: 417.881.3645



14870 Desman Rd.  
La Mirada, CA 90638  
Ph: 714.739.4989 • Fax: 714.739.7562

**ZSi-Foster** Springfield, MO | Canton, MI | La Mirada, CA