

# SPECIFICATIONS

## FIGURE 7881 STRUT CHANNEL



1-5/8" x 2-7/16" 12 GA-SOLID

### FEATURES

- 1-5/8" x 2-7/16"
- 12-gauge channel
- Solid
- Available in 20-ft. length only
- Material: Pre-galvanized steel (ASTM A653 SS Grade 33, G90)
- Available finish: Yellow "gold" zinc (Zinc Trivalent Chromium (ASTM B633))
- Standard length tolerance  $\pm 1/8"$
- Load data calculated based on ANSI/AISC 360-2016

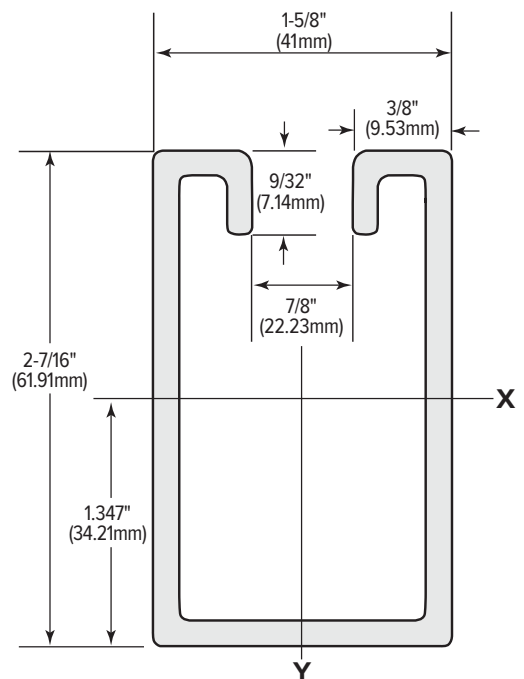


Item #	Finish	Size		Length		Gauge
		in.	mm	ft	m	
FNWST7881S12YSD2	Yellow	1-5/8 x 2-7/16	41 x 62	20	6.096	12

### SECTION PROPERTIES

Wt/Ft (lbs)	Area of Section Sq. In.	X-X Axis			Y-Y Axis		
		I in <sup>4</sup>	S in <sup>3</sup>	r in	I in <sup>4</sup>	S in <sup>3</sup>	r in
2.54	0.720	0.525	0.396	0.854	0.334	0.411	0.681

I = Moment of Inertia S = Section Modulus r = Radius of Gyration

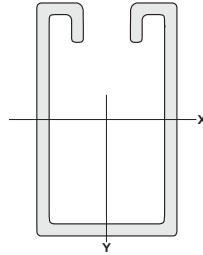


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**FIGURE 7881**  
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Span or Unbraced Height (in.)	Static Beam Load (X-X Axis)					Max Allowable Load at Slot Face (lbs)	Column Loading Data				Weight of Channel (lbs)
	Max Allowable Uniform Load (lbs)	Deflection at Uniform Load (in.)	Uniform Load at Deflection				Max Column Load				
			Span/180 Deflection (lbs)	Span/240 Deflection (lbs)	Span/360 Deflection (lbs)		k=.65 (lbs)	k=.80 (lbs)	k=1.0 (lbs)	k=1.2 (lbs)	
12	6640	0.01	6640	6640	6640	5050	15940	15530	14880	14140	2.5
18	4430	0.02	4430	4430	4430	4870	14970	14140	12920	11640	3.8
24	3320	0.04	3320	3320	3320	4630	13750	12500	10790	9160	5.1
30	2660	0.06	2660	2660	2660	4350	12390	10790	8770	7020	6.4
36	2210	0.09	2210	2210	2210	4030	11000	9160	7020	5360	7.6
42	1900	0.12	1900	1900	1870	3700	9650	7680	5590	4320	8.9
48	1660	0.15	1660	1660	1430	3350	8400	6390	4620	3630	10.2
60	1330	0.24	1330	1330	920	2770	6240	4620	3450	2770	12.7
72	1110	0.35	1110	960	640	2360	4790	3630	2770	2260	15.2
84	950	0.47	940	700	470	2070	3890	3010	2330	1910	17.8
96	830	0.62	720	540	360	1850	3290	2580	2020	1650	20.3
108	740	0.78	570	420	280	1670	2860	2260	1770	1440	22.9
120	660	0.97	460	340	230	1520	2530	2020	1580	**	25.4
144	550	1.39	320	240	160	1290	2070	1650	**	**	30.5
168	470	1.89	230	180	120	1110	1750	1380	**	**	35.6
180	440	2.17	200	150	100	**	1620	**	**	**	38.1
192	420	2.47	180	130	90	**	1510	**	**	**	40.6
216	370	3.13	140	110	70	**	**	**	**	**	45.7
240	330	3.86	110	90	60	**	**	**	**	**	50.8

NR = Not Recommended  
 \*\* Not recommended - KL/r exceeds 200

NOTE: 1. Allowable beam loads are based on a uniformly loaded, simply supported beam. For capacities of a beam loaded at midspan at a single point, multiply the beam capacity by 50% and deflection by 80%. 2. The section properties (excluding quality) are in the absence of holes.