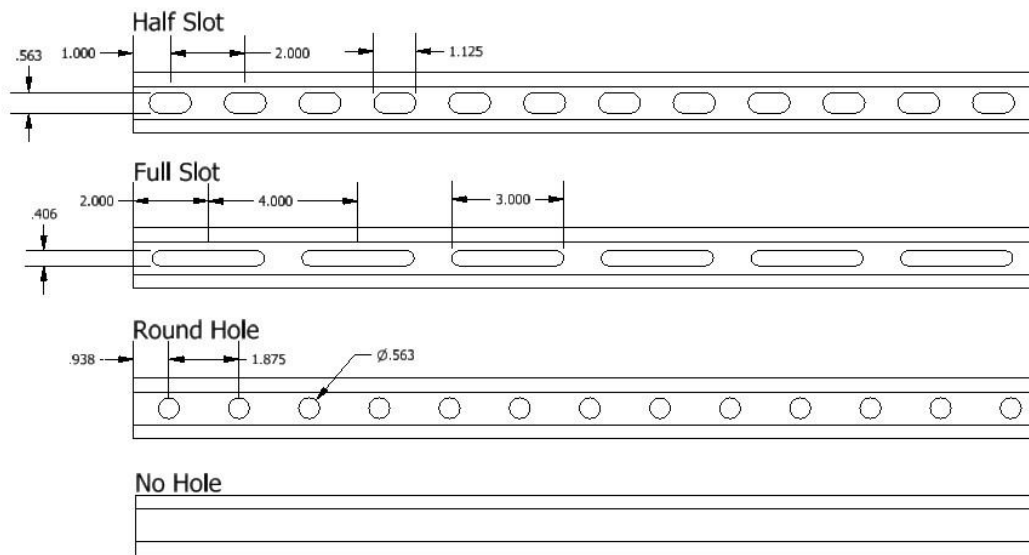
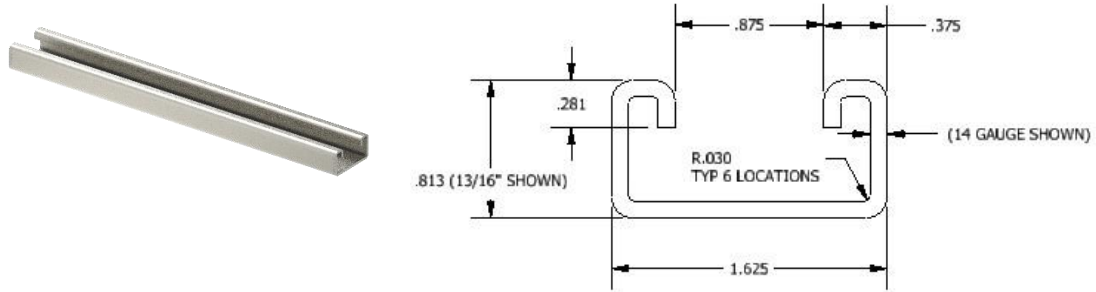


CS1316XX14- 13/16 x 1-5/8" 14 GAUGE CHANNEL STRUT-HALF SLOT



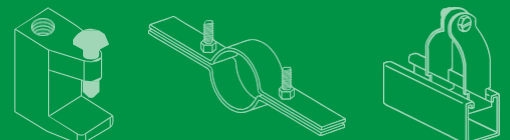
Materials, Coatings, and Notes:

- Carbon Steel: ASTM A 1011 SS GR 33
- PG: Pre-Galv: ASTM A653 G60 MIN
- BS: Bare Steel/Plain No coating
- GR: Green powder coat: ASTM B117
- HDG: Hot Dip Galv.: ASTM A123
- YZ: Yellow Zinc plated: ASTM B633

Project:	Date:	Phone/Email:
Submitted By:	Address:	Notes:



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Section Properties

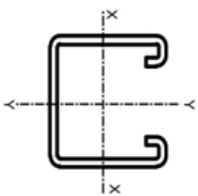
0.8125x1.625x14 Ga Half Slot

t (in)	Fy (ksi)	Gross Area (in ²)	Wt. (lb/ft)	Ixx (in ⁴)	Rx (in)	Iyy (in ⁴)	Ry (in)	Ycg (in)	M _{n,xx} (+) (in-k)	M _{n,xx} (-) (in-k)	Ixx-defl (in ³)	V _{xy} (lb)
0.0713	33	0.2774	0.94	0.0252	0.3013	0.1040	0.6124	0.3391	0.99	0.99	0.0227	1076

Section:
0.8125x1.625x14 Ga Half Slot

Notes:

- The listed thickness, t, is the design thickness. Minimum deliverable thickness is at least 95% of design thickness per AISI S100-16, B7.1.
- Allowable moment and Ixx-defl calculated in accordance with AISI S100-16. Ixx-defl taken as minimum calculated per S100-16, Eq. L2-1 and Ixx(average) calculated per S100-16 Table 2.3.2-1.
- Allowable moment M_n(+) is for bending with the open side of the strut in compression, M_n(-) is for bending with the open side of the strut in tension.
- Listed allowable moments are the minimum values based on local or distortional buckling as applicable.
- For deflection calculations, use Ixx-defl.
- Ycg is measured from the bottom of the channel.



Simple Span Beam Allowable Loads

0.8125x1.625x14 Ga Half Slot

pan (in)	Fully Braced			
	M ₁ ^a (in-k)	Max Allowable Uniform Load ^{b,c} (lb)	Defl at Max Uniform Load (in)	Total Uniform Load at Deflection ^d L/180 (lb)
24	0.99	329	0.088	329
36	0.99	219	0.198	219
48	0.99	164	0.353	124
60	0.99	131	0.551	80
72	0.99	110	0.793	55
96	0.99	82	1.411	31
108	0.99	73	1.785	25
120	0.99	66	2.204	20
144	0.99	55	3.174	14
168	0.99	47	4.320	10
192	0.99	41	5.643	8
216	0.99	37	7.141	6
240	0.99	33	8.816	5

Unbraced Length (in)	Lateral Bracing Reductions	
	M ₁ ^a (in-k)	Reduction Factor ^e
24	0.99	1.00
36	0.99	1.00
48	0.95	0.97
60	0.92	0.94
72	0.90	0.92
96	0.87	0.88
108	0.85	0.86
120	0.83	0.84
144	0.80	0.81
168	0.77	0.78
192	0.74	0.75
216	0.71	0.72
240	0.67	0.68

Allowable Column Loading (Compression)

0.8125x1.625x14 Ga Half Slot

Unbraced Length (kl)	Allowable Column Load
24	3271
36	2290
48	1400
60	896
72	Note 3
96	Note 3
108	Note 3

Simple Span Beam Notes:

- M₁ Fully Braced is the minimum value of allowable moment with lateral-torsional buckling restrained (i.e. no global buckling) either M_n(+) or M_n(-).
- Max Allowable Uniform Load is the total uniform load, including self-weight, resulting in simple span bending moment equal to allowable moment, M_a.
- Max Allowable Uniform Load is listed as total load (lb) and distributed load (lb/in). The distributed load is the total load divided by the span.
- Total Uniform Load at Deflection is the total load, applied uniformly, on the span resulting in the listed deflection ratio - not to exceed the Max Allowable Uniform Load.
- M_a for the listed unbraced length are based on simple span conditions with no lateral-torsional bracing over the listed unbraced length.
- The Reduction Factor is the ratio of Ma(Fully-Braced)/Ma(Unbraced) at the listed length. To determine the Max Allowable Uniform load at a given unbraced length, multiply the listed Fully-Braced Max Allowable Uniform Load by the Reduction Factor.

Column Loading Notes

- Listed allowable axial loads are based on loads applied through the center of gravity of the section.
- See AISI S100-16 for combined bending and axial load conditions.
- Where no load is provided, KL/r exceeds 200.

