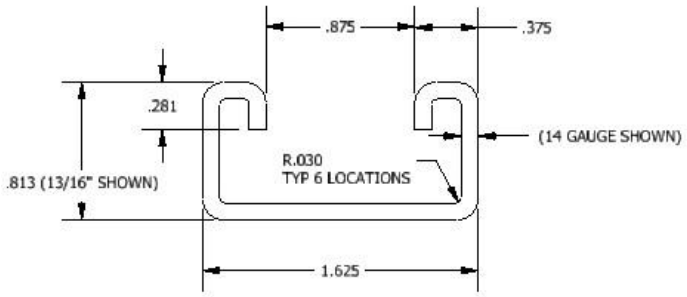
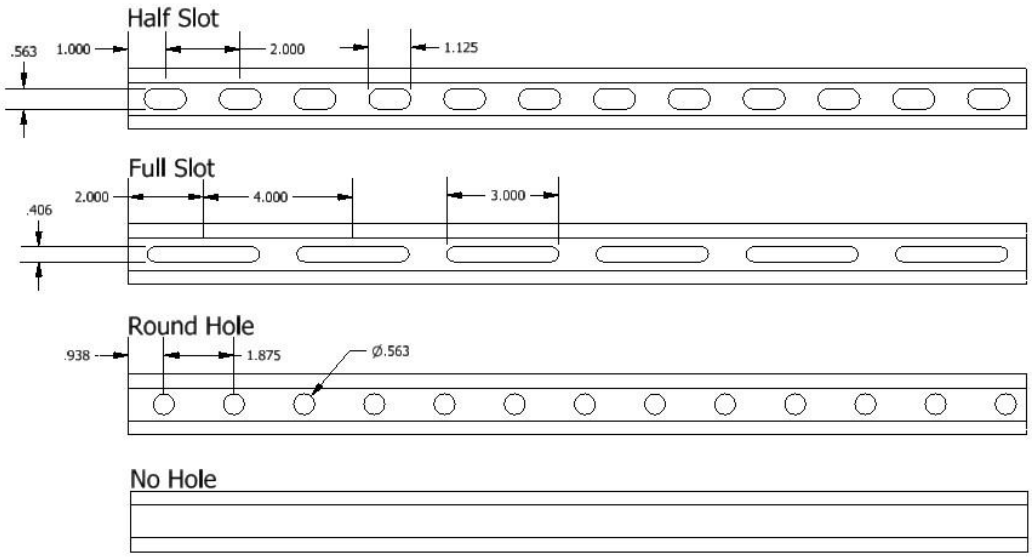
CS1316XX14- 13/16 x 1-5/8” 14 GUAGE CHANNEL STRUT-HALF SLOT



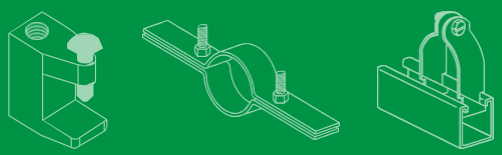


Materials, Coatings, and Notes:

- Carbon Steel: ASTM A 1011 SS GR 33, Melted and manufactured in the USA
- 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:

⚠ **CALIFORNIA WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.



Section Properties

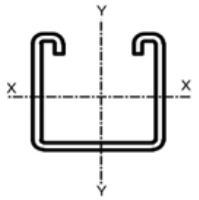
0.8125x1.625x14 Ga Half Slot

t (in)	Fy (ksi)	Gross Area (in²)	Wt. (lb/ft)	Ixx (in⁴)	Rx (in)	Iyy (in⁴)	Ry (in)	Ycg (in)	$M_{a\text{-}xx}$ (+) (in-k)	$M_{a\text{-}xx}$ (-) (in-k)	Ixx-defl (in⁴)	V_{ay} (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:

1. The listed thickness, t, is the design thickness. Minimum deliverable thickness is at least 95% of design thickness per AISI S100-16, B7.1.
2. 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.
3. Allowable moment M_a (+) is for bending with the open side of the strut in compression, M_a (-) is for bending with the open side of the strut in tension.
4. Listed allowable moments are the minimum values based on local or distortional buckling as applicable.
5. For deflection calculations, use Ixx-defl.
6. Ycg is measured from the bottom of the channel.



Simple Span Beam Allowable Loads

0.8125x1.625x14 Ga Half Slot

Span (in)	Fully Braced M_a (in-k)	Max Allowable Uniform Load (lb)	Max Allowable Uniform Load (lb/in)	Defl at Max Uniform Load (in)	Total Uniform Load at Deflection L/180 (lb)	L/240 (lb)	L/360 (lb)
24	0.99	329	13.69	0.088	329	329	249
36	0.99	219	6.09	0.198	219	166	110
48	0.99	164	3.42	0.353	124	93	62
60	0.99	131	2.19	0.551	80	60	40
72	0.99	110	1.52	0.793	55	41	28
96	0.99	82	0.86	1.411	31	23	16
108	0.99	73	0.68	1.785	25	18	12
120	0.99	66	0.55	2.204	20	15	10
144	0.99	55	0.38	3.174	14	10	7
168	0.99	47	0.28	4.320	10	8	5
192	0.99	41	0.21	5.643	8	6	4
216	0.99	37	0.17	7.141	6	5	3
240	0.99	33	0.14	8.816	5	4	2

Lateral Bracing Reductions

Unbraced Length (in)	M_a (in-k)	Reduction Factor
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

Simple Span Beam Notes:

1. M_a Fully Braced is the minimum value of allowable moment with lateral-torsional buckling restrained (i.e. no global buckling) either M_a(+) or M_a(-).
2. Max Allowable Uniform Load is the total uniform load, including self-weight, resulting in simple span bending moment equal to allowable moment, Ma.
3. 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.
4. 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.
5. Ma for the listed unbraced length are based on simple span conditions with no lateral-torsional bracing over the listed unbraced length.
6. 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.

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

Column Loading Notes

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