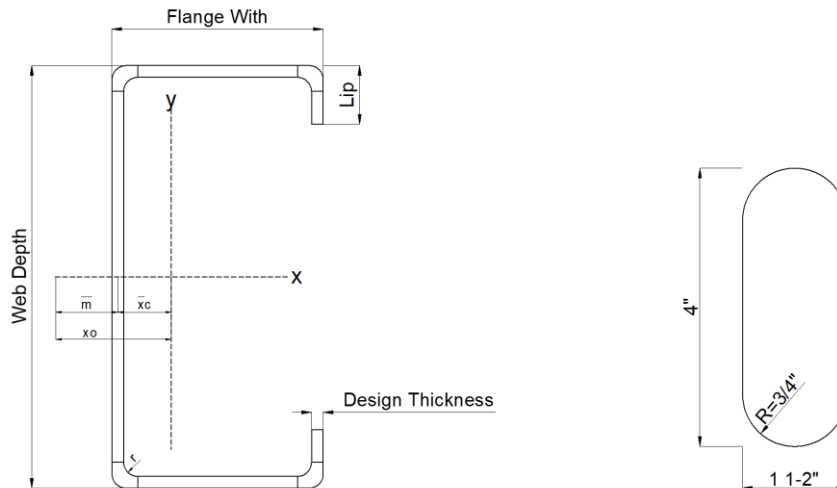


Product Type: Structural Stud

Product Definition: 1200S162-54 (50ksi)

CSI Code: 05 41 00



Profile Properties:

Web Depth	12.000 in	Yield Strength F_y :	50 ksi
Flange Width	1.625 in	Unit Weight	3.05 lb/ft
Stiffening Lip	0.5000 in	Punchout Width / Length	1-1/2" – 4"
Design Thickness	0.0566 in	Coating	G60
Thickness	54mils (16Ga)		

Gross Section Properties:

Cross Sectional Area	A_{gross}	0.8959 in ²
Member weight per foot of length		3.05 lb/ft
Moment of Inertia. x-axis	I_x	15.7361 in ⁴
Radius of Gyration. x-axis	r_x	4.1909 in
Moment of Inertia. y-axis	I_y	0.2118 in ⁴
Radius of Gyration. y-axis	r_y	0.4862 in

Torsional Properties:

St. Venant Torsion Constant	$J \times 1000$	0.9567 in ⁴
Warping Constant	C_w	6.3402 in ⁶
Distance Between Shear Axis and Neutral Axis	x_0	-0.7320 in
Polar Radius of Gyration	r_0	4.2821 in
Torsional Flexural Constant	β	0.9708
Limit of Unbraced Length	L_u	28.05 in



Effective Section Properties:

Effective Area	Aeff	0.3591 in ²
Effective Moment of Inertia for Deflection	Ixe	13.2208 in ⁴
Effective Section Modulus	Sxe	1.9143 in ³
Allowable Bending Moment	Ma	57.3154 in.k
Allowable Moment (Distortional Buckling)	Mad	46.7749 in.k
Allowable Shear Force (Solid Section)	Vag	1377 lbs
Allowable Shear Force (Perforated Section)	VaPO	1377 lbs

Codes & Standards:

- Calculations are based on AISI S240-20 and AISI S100-16 (2020) w/S2-20.
- Complies with IBC 2024. ASTM C955. ASTM C754. ASTM A653. ASTM A1003. ASTM E72
- LEED / Sustainability Credits: Environmental Product Declaration S-P Code: S-P-00869