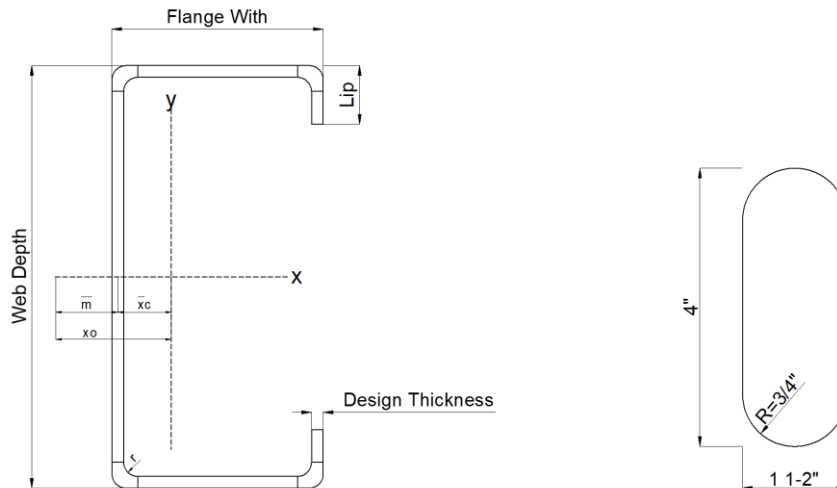


Product Type: Structural Stud

Product Definition: 400S162-43 (33ksi)

CSI Code: 05 41 00



Profile Properties:

Web Depth	4.000 in	Yield Strength F_y :	33 ksi
Flange Width	1.625 in	Unit Weight	1.21 lb/ft
Stiffening Lip	0.5000 in	Punchout Width / Length	1-1/2" – 4"
Design Thickness	0.0451 in	Coating	G60
Thickness	43mils (18Ga)		

Gross Section Properties:

Cross Sectional Area	A_{gross}	0.3567 in ²
Member weight per foot of length		1.21 lb/ft
Moment of Inertia. x-axis	I_x	0.8921 in ⁴
Radius of Gyration. x-axis	r_x	1.5815 in
Moment of Inertia. y-axis	I_y	0.1311 in ⁴
Radius of Gyration. y-axis	r_y	0.6062 in

Torsional Properties:

St. Venant Torsion Constant	$J \times 1000$	0.2418 in ⁴
Warping Constant	C_w	0.4598 in ⁶
Distance Between Shear Axis and Neutral Axis	x_0	-1.2517 in
Polar Radius of Gyration	r_0	2.1060 in
Torsional Flexural Constant	β	0.6468
Limit of Unbraced Length	L_u	43.50 in



Effective Section Properties:

Effective Area	Aeff	0.2851 in ²
Effective Moment of Inertia for Deflection	Ixe	0.8918 in ⁴
Effective Section Modulus	Sxe	0.4459 in ³
Allowable Bending Moment	Ma	8.8118 in.k
Allowable Moment (Distortional Buckling)	Mad	8.5456 in.k
Allowable Shear Force (Solid Section)	Vag	1740 lbs
Allowable Shear Force (Perforated Section)	VaPO	810 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