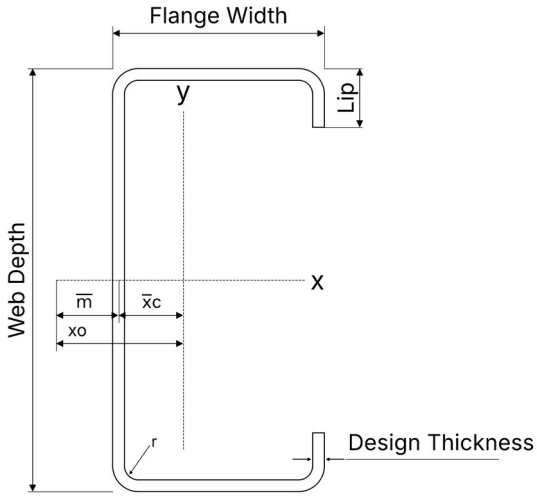
PRODUCT SUBMITTAL SHEET

Product Type: Structural Stud

Product Definition: 1200S250-43-U (50ksi, Unpunched)

CSI Code: 05 41 00



Profile Properties:

Web Depth	12.000 in	Yield Strength Fy:	50 ksi
Flange Width	2.500 in	Unit Weight	2.75 lb/ft
Stiffening Lip	0.6250 in	Punchout Width / Length	None (unpunched)
Design Thickness	0.0451 in	Coating	G60 or G90
Thickness	43 mils (18 Ga)	Min. Steel Thickness	0.0428 in
Inside Bend Radius	0.0712 in	Tensile Strength Fu	65 ksi

Gross Section Properties:

Cross Sectional Area	Agross	0.8077 in2
Member weight per foot of length		2.75 lb/ft
Moment of Inertia. x-axis	Ix	15.8299 in4
Section Modulus. x-axis	Sx	2.6383 in3
Radius of Gyration. x-axis	rx	4.4271 in
Moment of Inertia. y-axis	Iy	0.5557 in4
Radius of Gyration. y-axis	ry	0.8295 in

Torsional Properties:

St. Venant Torsion Constant	J x 1000	0.5476 in4
Warping Constant	Cw	15.8121 in6
Distance Between Shear Axis and Neutral Axis	x0	-1.3897 in
Shear Center to Web Centerline	m	0.8990 in
Polar Radius of Gyration	r0	4.7136 in
Torsional Flexural Constant	β	0.9131
Limit of Unbraced Length	Lu	38.21 in

Effective Section Properties:

Effective Area	Aeff	0.2846 in2
Effective Moment of Inertia for Deflection	Ixe	11.6467 in4
Effective Section Modulus	Sxe	1.5729 in3
Allowable Bending Moment	Ma	47.0922 in.k
Allowable Moment (Distortional Buckling)	Mad	41.9053 in.k
Allowable Shear Force (Solid Section)	Vag	694 lbs

Codes & Standards:

- Calculations are based on AISI S240-20 and AISI S100-16 (2020) w/S2-20.
- AISI S240-20 North American Standard for Cold-Formed Steel Structural Framing: Section A3 Material (ASTM A1003/A1003M); Section A4 Corrosion Protection (ASTM A653/A653M); Section A5 Products – thickness, shapes, tolerances, identification; Section C Installation (ASTM C1007).
- IBC 2024 International Building Code. ASTM C955. ASTM A1003. ASTM A653 SS Grade 50 Class 1. Coating G60 or G90 per AISI S240 Section A4.
- ICC-ES ESR-5905 UMS Joists, UMS Studs and UMS Tracks.
- LEED / Sustainability Credits: Environmental Product Declaration S-P Code: S-P-00869
- Note: Supplied without web punch-outs; holes or punch-outs in the web are outside the scope of ESR-5905 for members with h/t > 200. Web h/t exceeds 260: bearing (at supports and concentrated loads) and intermediate stiffeners are required per AISI S100-16 w/S2-20 Section B4 and Table B4.1-1.

Structural Studs. The technical content of this literature is effective 10/30/2026 and supersedes all previous information.