

05.40.00 (Cold-Formed Metal Framing)





1200S350-97-P (50ksi, CP60, Punched)

12" structural stud with S350 (3-1/2") flange - 97mils (12ga)

Coating: CP60 per AISI S240 Color Code: Red

Geometric Properties

Web depth: 12.000 in Thickness: 97mils (12ga) Yield strength, Fy: 50 ksi Flange width: 3.500 in Design Thickness: 0.1017 in *Fy with Cold-Work, Fya: 50.0 ksi Stiffening lip: 1.000 in Min. steel thickness: 0.0966 in Ultimate, Fu: 65.0 ksi

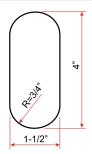
Gross Section Properties of Full Section, Strong Axis Cross sectional area (A) 2.059 in² 7.01 lb/ft Member weight per foot of length 43.280 in⁴ Moment of inertia (Ix) 7.213 in³ Section Modulus (Sx) Radius of gyration (Rx) 4.585 in Gross moment of inertia (ly) 3.159 in⁴ Gross radius of gyration (Ry) 1.239 in **Effective Section Properties, Strong Axis** 1.032 in² Effective Area (Ae) 43.270 in⁴ Moment of inertia for deflection (lx) 6 500 in 3 Section modulus (Sv)

Section modulus (Sx)	6.590 In ^o
Allowable bending moment (Ma)	197.32 in-k
Allowable moment based on distortion buckling (Mad)	167.38 in-k
Allowable shear force in web (solid section)	8147 lb
Allowable shear force in web (perforated section)	7411 lb
Unbraced length (Lu)	70.8 in
Torsional Propertie	es
St. Venant torsional constant (J x 1000)	7.098 in ⁴
Warping constant (Cw)	92.672 in ⁶
Distance from shear center to neutral axis (Xo)	-2.310 in
Distance between shear center and web centerline (m)	1.450 in
Radii of gyration (Ro)	5.281 in
Torsional flexural constant (Beta)	0.809

- Effective properties incorporate the strength increase from the cold work of forming.
- Gross properties are based on the cross section away from the punchouts.
- Effective properties are based on knockout/punched sections.

Code Approvals & Performance Standards

- AISI S100-16 (2020) w/S2-20 North American Specification for the Design of Cold-Formed Steel Structural Members
- AISI S240-20 North American Standard for Cold-Formed Steel Structural Framing
 - o (Compliant to ASTM C955, but IBC replaced with AISI S200 in IBC 2015, AISI S240 in IBC 2018)
 - Section A3 Material Chemical & mechanical requirements (Referencing ASTM A1003/A1003M)
 - Section A4 Corrosion Protection (Referencing ASTM A653/A653M)
 - o Section A5 Products Thickness, shapes, tolerances, identification
 - Section C Installation (Referencing ASTM C1007)
- AISI S202-20 Code of Standard Practice for Cold-Formed Steel Structural Framing
 - o Section F3 Delivery, Handling and Storage of Materials
- SDS For ASTM A1003 Steel Framing Products For Interior Framing, Exterior Framing and Clips/Accessories



Structural Punchout

East Coast / Central punch spacing:

Center of punchoutss are 12" from lead end, then 24" o.c.

West Coast punch spacing:

Center of punchouts are 24" from lead end, then 24" o.c.

Center of tail end punchout not less than 12" from end of stud.

If lateral bracing is required for head-of-wall deflection track and a punchout is not spaced 12" from the top of stud, use strapping and blocking in lieu of CRC or Spazzer Bar lateral bridging.

If custom punchout patterns are required. contact ClarkDietrich Sales or local plant for requests.

Sustainability Credits For more details and LEED letters contact Technical Services at 888-437-3244 or visit clarkdietrich.com/LEED.

- LEED v4.1 MR Credit: Environmental Product Declarations: EPD (1 point) - Sourcing of Raw Materials (up to 2 points) - Material Ingredients (1 point) - Construction and Demolition Waste Management (up to 2 points)
- LEED v4 MR Credit: Building Product Disclosure and Optimization: EPD (1 point) -Sourcing of Raw Materials (1 point) - Material Ingredients (1 point) - Construction and Demolition Waste Management (up to 2 points) -Innovation Credit (up to 2 points).