05.40.00 (Cold-Formed Metal Framing)

925S162-97-P (50ksi, CP60, Punched)
9-1/4" structural stud with S162 (1-5/8") flange - 97mils (12ga)

Coating: CP60 per AISI S240　　　　　　**Color Code:** Red

Geometric Properties

Web depth: 9.250 in	**Thickness:** 97mils (12ga)	**Yield strength, Fy:** 50 ksi
Flange width: 1.625 in	**Design Thickness:** 0.1017 in	***Fy with Cold-Work, Fya:** 50.0 ksi
Stiffening lip: 0.500 in	**Min. steel thickness:** 0.0966 in	**Ultimate, Fu:** 65.0 ksi

| Gross Section Properties of Full Section, Strong Axis	
Cross sectional area (A)	$1.296\ in^2$
Member weight per foot of length	4.41 lb/ft
Moment of inertia (Ix)	$13.952\ in^4$
Section Modulus (Sx)	$3.017\ in^3$
Radius of gyration (Rx)	3.281 in
Gross moment of inertia (Iy)	$0.315\ in^4$
Gross radius of gyration (Ry)	0.493 in
Effective Section Properties, Strong Axis	
Effective Area (Ae)	$0.691\ in^2$
Moment of inertia for deflection (Ix)	$13.948\ in^4$
Section modulus (Sx)	$2.963\ in^3$
Allowable bending moment (Ma)	88.70 in-k
Allowable moment based on distortion buckling (Mad)	81.42 in-k
Allowable shear force in web (solid section)	10710 lb
Allowable shear force in web (perforated section)	7061 lb
Unbraced length (Lu)	30.8 in
Torsional Properties	
St. Venant torsional constant (J x 1000)	$4.468\ in^4$
Warping constant (Cw)	$5.719\ in^6$
Distance from shear center to neutral axis (Xo)	-0.802 in
Distance between shear center and web centerline (m)	0.530 in
Radii of gyration (Ro)	3.413 in
Torsional flexural constant (Beta)	0.945

- 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
  - (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)
  - 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
  - Section F3 Delivery, Handling and Storage of Materials
- SDS For ASTM A1003 Steel Framing Products For Interior Framing, Exterior Framing and Clips/Accessories
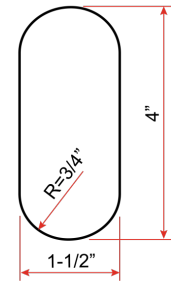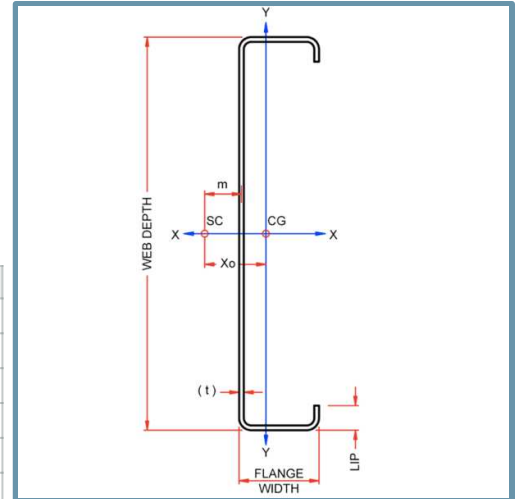
Structural Punchout

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).