

05.40.00 (Cold-Formed Metal Framing)

Technical Services: 888-437-3244, Engineering Services: 877-832-3206, Sales 800-543-7140



## 1400T150-54 (50ksi, CP60)

1400 (14") structural track with T150 (1-1/2") leg - 54mils (16ga)

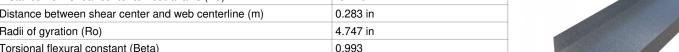
Coating: CP60 per AISI S240 Color Code: Green

## **Geometric Properties**

Web depth: 14.198 in Thickness: 54mils (16ga) Leg width: 1.50 in Design Thickness: 0.0566 in Min. steel thickness: 0.0538 in Yield strength, Fy: 50 ksi \*Fy with Cold-Work, Fya: 50.0 ksi

Ultimate, Fu: 65.0 ksi

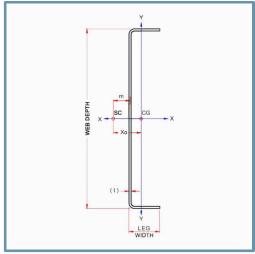
Gross Section Properties of Full Section, Strong Axis	
Cross sectional area (A)	0.962 in <sup>2</sup>
Member weight per foot of length	3.27 lb/ft
Moment of inertia (Ix)	21.402 in <sup>4</sup>
Section Modulus (Sx)	3.015in <sup>3</sup>
Radius of gyration (Rx)	4.718 in
Gross moment of inerita (ly)	0.105 in <sup>4</sup>
Gross radius of gyration (Ry)	0.330 in
Effective Section Properties, S	Strong Axis
Effective Area (Ae)	0.246 in <sup>2</sup>
Moment of inertia for deflection (Ix)	17.156 in <sup>4</sup>
Section modulus (Sx)	1.547 in <sup>3</sup>
Allowable bending moment (Ma)	46.33 in-k
Allowable shear force in web	1160 lb
Torsional Properties	s
St. Venant torsional constant (J x 1000)	1.027 in <sup>4</sup>
Warping constant (Cw)	4.280 in <sup>6</sup>
Distance from shear center to neutral axis (Xo)	-0.410 in
Distance between shear center and web centerline (m)	0.283 in
Radii of gyration (Ro)	4.747 in
Torsional flexural constant (Beta)	0.993



- · Effective properties incorporate the strength increase from the cold work of forming.
- Web-height to thickness ratio exceeds 200. Web Stiffeners are required at all support points and concentrated loads.

## **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
- IBC 2021 International Building Code
- ICC-ES ESR-1166P Structural Studs and Track
  - ESR-1166P LABC and LARC Supplement
  - ESR-1166P Catalog ClarkDietrich Structural Technical Design Guide (6/22/20)
- Intertek CCRR-0206 Structural Studs and Track
- SFIA Stud Code Compliance Certification Program
- SDS For ASTM A1003 Steel Framing Products For Interior Framing, Exterior Framing and Clips/Accessories



- · Load-bearing walls
- Curtain walls
- Tall interior walls
- Floor & ceiling joists
- Trusses



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).