

ProTRAK® 400PDT125-18G90

Product Description 4" ProTrak®20 (18mil) 1-1/4" leg G90

Coating G90

Physical Properties

Design Thickness (in) 0.019

Minimum Thickness (in) 0.01805

Web Width (in) 4

Flange Width (in) 1.25

Yield Strength (ksi) 50



Gross Section Properties

Cross Sectional Area (A)	0.123
Moment of Inertia (Ix)	0.297
Radius of Gyration (Rx)	1.55
Gross Moment of Inertia (Iy)	0.017
Gross Radium of Gyration (Ry)	0.374

Effective Section Properties

Effective Area (Ae)	0.029
Moment of Inertia for deflection (Ixe)	0.211
Section Modulus (Sxe)	0.055
Allowable Bending moment (Ma)	1653
Allowable shear force in web (U)(Vag)	154

Torsional Properties

St. Venant torsion constant (J x 1000)	0.01486
Warping constant (Cw)	0.051
Distance from shear center to neutral axis (Xo)	-0.638
Radii of gyration (Ro)	1.718
Torsional flexural constant (Beta)	0.862

ASTM & Code Standards

- AISI S100-07 & S220-11
- Meets or exceeds ASTM C645 & C754
- ASTM E119, E72, & E90
- ATI CCRR-0207
- LA RR 26019

Section Properties Table Notes

1. Calculated properties are based on AISI S100-12, North American Specification for Design of Cold-Formed Steel Structural Members and AISI S220-15, North American Standard for Cold-Formed Steel Framing - NonStructural Members.
2. Effective Properties incorporate the strength increase from the cold work of forming as applicable per AISI A7.2.
3. Tabulated gross properties including torsional properties are based on full-unreduced cross section of the studs, away from punchouts.
4. For deflection calculations, use the effective moment of inertia.
5. Allowable moment includes cold-work of forming.
6. Allowable moment is taken as the lowest value based on local or distortional buckling. Distortional buckling strength is based on a $k\text{-}\phi = 0$.

Mill Steel Framing LEED Green Credits

- MR Credit 2** • ConstructionWaste Management – Mill Steel Framing steel framing is 100% recyclable
- MR Credit 4** • Recycled Content – Mill Steel Framing products contain no less than 25.5% post-consumer and 6.8% pre-consumer recycled content
- MR Credit 5** • Regional Materials – Mill Steel Framing has manufacturing facilities in Indiana, Alabama & Texas
- V4 MR Credits** • Building Product Disclosure and Optimization EPD (1 point)
- Materials Ingredients (1 point) – Construction and Demolition Waste Management (1 point)

