MRI STEEL FRAMING LLC

Corporate Headquarters: 15 Salt Creek Lane, Suite 412 Hinsdale, IL 60521 **P:** 630-616-1850 **F:** 630-568-5979
Production Facility: 201 Mississippi St, Dock #Q40, Gary, IN 46402 **P:** 630-616-1850 **F:** 219-886-3341

Product Category: 05.40.00 - Cold-Formed Metal Framing **Product Name:** 1600S300-118

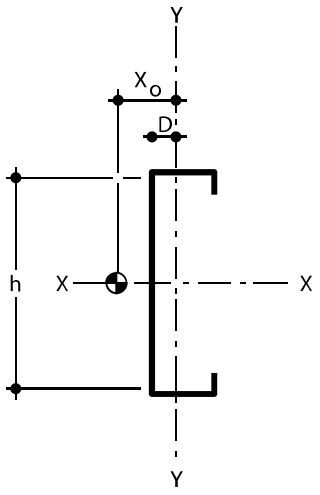
Available Finish: G60, G90
*Other standard coatings referenced in ASTM A1003

Web Depth: 16 in
Flange Width: 3 in
Design Thickness: 0.1242 in
Gauge: 118 mils or 10G
Yield stress, Fy: 50 ksi
Weight: 9.43 lb/ft

- Calculated properties are based on AISI S100-16/S240-20, North American Specification for Design of Cold-Formed Steel Structural Members and meets the requirements of the IBC 2021 Building Code.
- The centerline bend radius is based on inside corner radii shown in thickness chart.
- Effective properties incorporate the strength increase from the cold work of forming as applicable per AISI A7.2.
- Tabulated gross properties are based on full-unreduced cross section of the studs, away from punchouts.
- For deflection calculations, use the effective moment of inertia.
- Allowable moment includes cold-work of forming.
- For the steels that have both 33 and 50 ksi listing, if the design is based on 50 ksi, the 50 ksi steel needs to be specified. (ex. 3.625S137 16-50 (50 ksi))

Gross Section Properties

Cross sectional area (A)	2.773 in^2
Moment of inertia (Ix)	91.284 in^4
Section Modulus (Sx)	11.411 in^3
Radius of gyration (Rx)	5.738 in
Gross moment of inertia (Iy)	2.240 in^4
Gross Radius of gyration (Ry)	0.899 in



Effective Section Properties

Moment of inertia for deflection (Ix)	89.916 in^4
Section modulus (Sx)	9.836 in^3
Allowable bending moment (Ma)	294.490 In-k
Allowable bending moment from distortional buckling (Mad)	244.86 In-k
Allowable strong axis shear away from punch-out (Vag)	11088 lb
Allowable strong axis shear at punch out (Vanet)	11088 lb

Torsional Properties

St. Venant torsion constant (J x 1000)	14.258 in^4
Warping constant (Cw)	116.606 in^6
Distance from shear center to neutral axis (Xo)	-1.439 in
Distance from shear center to mid-plane of web (m)	0.951 in
Radii of gyration (Ro)	5.983 in
Torsional flexural constant (β)	0.942
Unbraced Length (Lu)	54.7 in

Additional Information

MRI Steel Framing, LLC is an SFIA member. MRI acts in accordance with the product and quality standards required by the SFIA program.

MRI meets or exceeds ASTM C955, A653, and A1003.

Current LEED credits available upon request