

SECTION PROPERTIES

SYMBOLS AND DEFINITIONS:

Gross Properties:

Ixx:	Moment of inertia of the gross section about the X-X axis (strong axis).
Sxx:	Section Modulus of the gross section about the X-X axis.
Rxx:	Radius of gyration of the gross section about the X-X axis.
Iyy:	Moment of inertia of the gross section about the Y-Y axis (weak axis).
Ry:	Radius of gyration of the gross section about the Y-Yaxis.

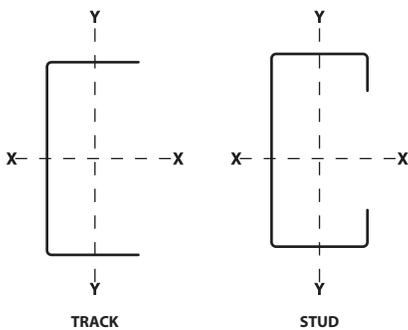
Effective 33 ksi Properties:

Ixx:	Moment of inertia for deflection calculations based on "Procedure 1 for Deflection Determination" of the 1999 AISI Specification.
Sxx:	Effective section modulus about the X-X axis (strong axis).
Ma:	Allowable Bending Moment - Based on the effective section modulus and the allowable stress including the strength increase from the cold-work of forming (AISI 7.2) where applicable.
Va:	Allowable Shear Load.
Ycg:	Maximum distance from the outside of the compression flange to the center of gravity of the effective section.

Torsional Properties:

J:	St. Venant Constant.
Cw:	Torsional Warping Constant.
Xo:	Distance from the shear center to the centroid along the principal X-axis.
Ro:	Polar radius of gyration about the centroidal principal axis.
B:	$1 - (Xo/Ro)^2$

Steel Thickness:



GUAGE	DESIGN THICKNESS (IN)	CORNER RADIUS (IN)
25	0.0188	0.0843
20 – Drywall	0.0312	0.0781
20 - Structural	0.0346	0.0764
18	0.0451	0.0712
16	0.0566	0.0849
14	0.0713	0.1069
12	0.1017	0.1525
10	0.1242	0.1863

Notes

1. The Section Properties are prepared based on the North America Specification for the Design of Cold Formed Steel Structural members, 2001 Edition
2. Effective properties incorporate the strength increase from the cold work of forming as applicable per AISI A7.2
3. Gross properties are based on full reinforced cross section of studs and joists, away from the punchouts.
4. For components where the web depth is followed by *, web height to thickness ratio (h/t) exceeds 200. Components require web stiffeners at support and concentrated loads.
5. For deflection calculations, use the effective moment of inertia.

In conformance with the AISI Specification, the actual delivered base steel thickness, individual measurement, must not be less than 95 percent of the values listed above.

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