



Corporate Headquarters
1528 Island Home Avenue, Knoxville, TN 37920
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Description

OCS Steel Framing members C-shaped and U-shaped studs and track manufactured based on the AISI S100-07 North American Specification for the design of Cold-Formed Steel Structural Members Standard coating G60.

Structural Stud Submittal

Project:

Architect:

Contractor:

Submitted By:

Date Submitted:

References and Standards

ASTM

Material - A 1003 Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold Formed Framing Members

Coating - A 653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron (Galvannealed) by the Hot Dip Process

Product - C 955 Standard Specification for Load-Bearing Steel Studs, Runners, and Bracing

Installation & Storage - C 754 Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products

AISI

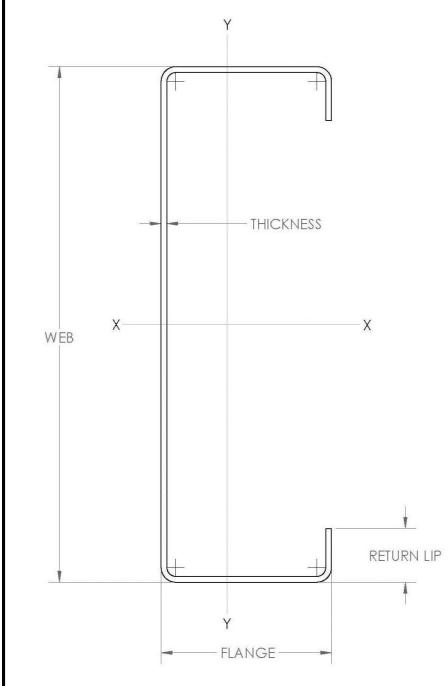
Design - S 100-2007 North American Specification for the Design of Cold Formed Steel Structural Members

Framing Standards - Code of Standard Practice for Cold-Formed Steel Structural members

ICC

ICC AC 46 - Acceptance Criteria for Cold-Formed Steel Framing Members

MSDS available upon request



Industry Associations

ASTM
AWCI-Association of Wall and Ceiling Industries
Cold-Formed Steel Engineers Institute
Construction Specifications Institute
Steel Framing Alliance
USGBC

Identification

All OCS Steel Framing members are identified with the member depth, flange size, minimum steel thickness (in mils), minimum yield strength, minimum protective coating weight.

Please Note Approval Below

LEED Credit and Recycled Information

MR Credit 2.1 and 2.1 Construction Waste Management (2 Points) - Steel is the construction industry's most recycled material. Scrap can be salvaged and redirected to the manufacturer to be used for new product.

MR Credit 4.1 and 4.2 Recycled Content (2 Points) - OCS Steel Framing is manufactured from steel coil that contains an high percentage of pre-consumer (6.8%) and post-consumer (25.5%) recycled content.

MR Credit 5.1 and 5.2 Regional Materials (2 Points) - Available when OCS Steel Framing manufacturing and material sources are located within 500 miles of the project. Please contact OCS Steel Framing for additional information.

This information is provided with the intention that it is accurate and current to the best of our knowledge. The information in this submittal is to be used as a guide for selecting and using OCS Steel Framing products. This information is provided only for guidance and is not intended to replace the design, drawings, specifications and decisions of a professional architect or engineer. OCS Steel Framing shall not be responsible for incidental or consequential damages, directly or indirectly sustained, nor for loss caused by application of our products for other than their intended uses. Our liability is limited to replacement of defective products. Claims shall be made to us in writing within thirty (30) dates of the date the problem/defect was, or reasonably should have been, discovered.



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General Notes for All Tables

1. Where 'NASPEC' is referenced, it is the "North American Specification for the Design of Cold-Formed Steel Structural Members", 2007 edition (AISI S100-2007).
2. The strength increase from cold work of forming has been incorporated for flexural strength per NASPEC A7.2.
3. Various sections may be manufactured with yield points of 33 or 50 ksi. The yield point used for calculations is indicated in the tables.
4. For sections available in both 33 and 50 ksi, the specifier must clearly indicate which yield point is required. For example: 362S162-54 (50).
5. When provided, factory punch-outs will be located along the centerline of the webs of the members and will have a minimum center-to-center spacing of 24 inches. Punch-outs for members > 2.5 inches deep are a maximum of 1.5 inches wide x 4 inches long. Members with depths 2.5" and smaller are maximum 3/4" wide x 4 inches long.

Section Property Table Notes

1. Web depth for track sections equals nominal depth plus 2 x design thickness plus bend radius
2. Hems on non-structural track sections are ignored
3. Effective properties include the strength increase from cold-work of forming per NASPEC section A7.2 where applicable
4. For deflection determination, use the effective moment of inertia. Effective moment of inertia is based on Procedure 1 of the NASPEC.'
5. The effective moment of inertia for deflection is calculated at a stress which results in a section modulus such that the stress times the section modulus at that stress is equal to the allowable local buckling moment.
6. Tabulated gross properties are based on the full, unreduced section away from punch-outs
7. Effective properties of all 'S' sections based on punched sections. Track sections are considered un-punched
8. Where effective properties are not listed for a section at 33 or 50 ksi yield, web depth-to-thickness or flange width-to-thickness limits from the NASPEC are exceeded. Only gross properties are available.
9. Where section designations include a superscript '1', web height-to-thickness exceeds 200. Web stiffeners are required at all supports and concentrated loads.

Definitions of Structural Property Symbols

Gross Properties

I_{xx}: Moment of inertia of the gross section about the X-X axis (strong axis).

S_{xx}: Section modulus of the gross section about the X-X axis (strong axis).

R_x: Radius of gyration of the gross section about the X-X axis (strong axis).

I_{yy}: Moment of inertia of the gross section about the Y-Y (weak axis).

R_y: Radius of gyration of the gross section about the Y-Y axis (weak axis).

Effective Properties

I_{xx}: Effective Moment of inertia about the X-X axis (strong axis). See Notes 4 and 5 above.

S_{xx}: EffectiveSection modulus about the X-X axis (strong axis).

M_{aFy}: Allowable moment at yield, based on local buckling.

M_{n-Dist}: Nominal moment based on distortional buckling (NASPEC C3.1.4(b)). Divide by 1.67 for allowable moment

K_{fC}: Critical value of rotational stiffness, K_f, where allowable distortional buckling momnet equals allowable local buckling moment M_{n-dist}/1.67 = M_{aFy}

V_{aG}: Allowable strong axis shear away from punchouts, per NASPEC C3.2.1

V_{aNet}: Allowable strong axis shear at a punchout, per NASPEC C3.2.2

Torsional Properties:

J: St. Venmant torsional constant

C_w: Torsional warping constant

X_o: Distance from shear center to the centroid along the principal X-axis

m: Distance from shear center to the mid-plane of the web

R_o: Polar radius of gyration about the centroidal principal axis.

b: 1-(X_o/R_o)

L_u: The longest weak axis (L_y) and torsional (L_t) unbraced length at which lateral-torsional buckling is restrained in accordance with NASPEC C3.1.2.1

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