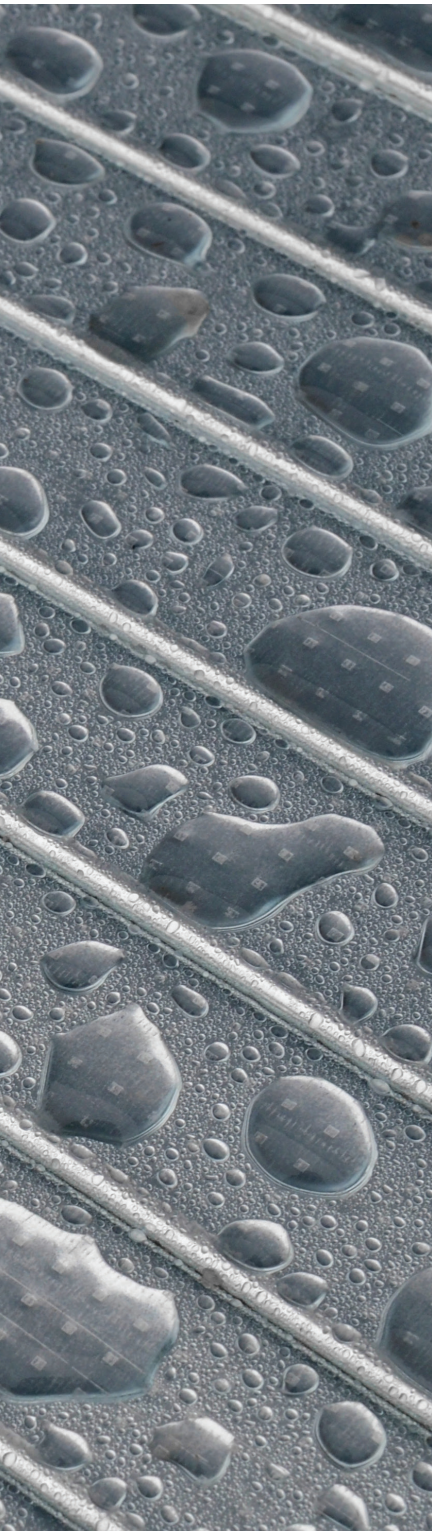
METAL U.S.

GENERAL PRODUCT INFORMATION

www.ebmetal.us

Introduction



EB Metal is a full line lightweight steel framing manufacturer, and fabricator located in Montreal, Quebec, and Londonderry, NH, serving the Quebec, Ontario, and the North-Eastern USA market.

All of our product structural property standards are computed in accordance with AISI (North American Specification for the Design of Cold Formed Steel Structural Members, 2001 with 2004 supplement), and CSA Standards CAN/CSA-S136-01

We offer a wide selection of steel components, and we are ever striving to expand our existing markets

The ever-changing demands of the building and construction industry leads EB Metal efforts in committing to….Order Accuracy, High Fill Rates, and On Time Delivery, whether it's to your yard or directly to the job site

Our value proposition is to go the full distance to serve you best!!

We look forward to doing business with you.

Material Specifications

Products manufactured by by EB Metal US are formed from steel with a minimum yield stress of 33 or 50 kips per square inch (ksi). Unless noted otherwise, all products are engineered to meet the 2012 Edition of the American Iron and Steel Institute (AISI) S100-12 -2012 Edition of the North American Specification for the Design of Cold-Formed Steel Structural Members (NASPEC) and other AISI standards referenced in section 2210 of the 2015 International Building Code (IBC 2015). The structural properties have been computed based upon allowable stress design (ASD) which includes distortional buckling considerations for all stud sections. For fastener tables, the screw sizes and head diameters do not refer to specific fasteners which may or may not be available from EB Metal US. Shear and tension data for screws was developed using published manufacturer data and evaluation reports available at the time of publications.

WARRANTY

EB METAL INC. WARRANTS THAT ALL PRODUCTS ARE FREE FROM DEFECT AT TIME OF SHIPMENT, AND ARE MANUFACTURED IN ACCORDANCE WITH COMPANY AND/OR INDUSTRY STANDARDS AS APPLICABLE.

NOTICE: WE SHALL NOT BE LIABLE FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES, DIRECTLY OR INDIRECTLY SUSTAINED, NOR FOR ANY LOSS CAUSED BY APPLICATION OF THESE GOODS NOT IN ACCORDANCE WITH CURRENT PRINTED INSTRUCTIONS OR FOR OTHER THAN THE INTENDED USE. OUR LIABILITY IS EXPRESSLY LIMITED TO REPLACEMENT OF DEFECTIVE GOODS. ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN THIRTY (30) DAYS FROM DATE IT WAS OR REASONABLY SHOULD HAVE BEEN.

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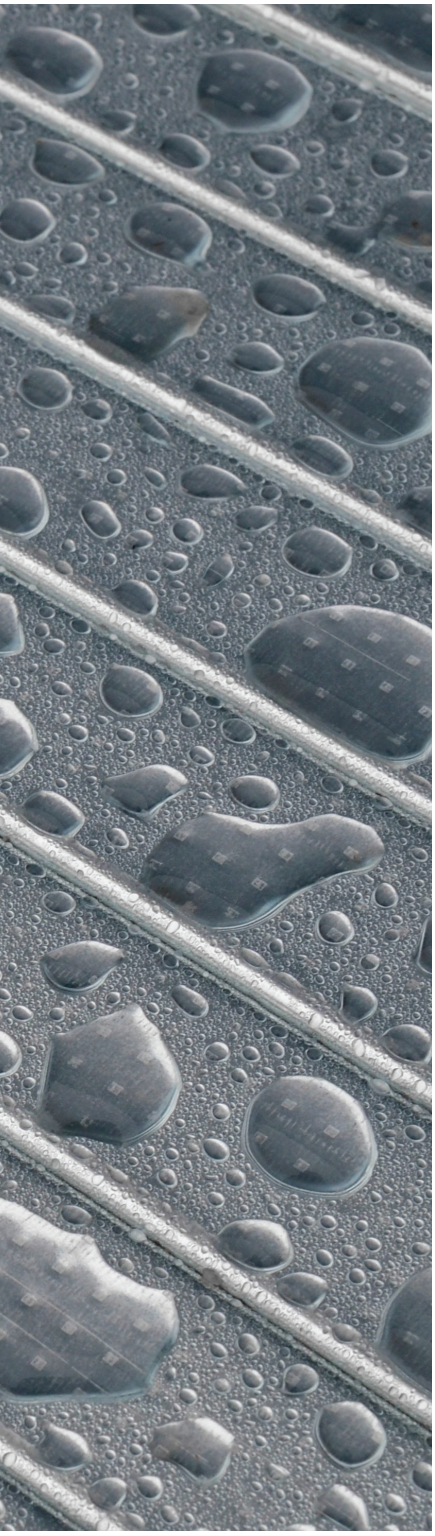

Technical Assistance

EB Metal US supports the industry standard nomenclature published in the American Iron and Steel Institute's (AISI) General Provisions, S200. The AISI S200 states in Section A5.2 that "structural members and non-structural members shall use a four-part product designator that identifies the size (both web depth and flange width), style and thickness." An example of this designator is shown below:

Member Depth:

(Example: 3-5/8"= 3.625" - 362 x 1/100 inches) All member depths are taken in 1/100 inches. For all "T" Sections, member depth is the inside- to- inside dimension.

Flange Width:

(Example: 2-1 /2" = x 1/100 inches) All flange widths are taken in 1/100 inches.

362 S 250- 54

Style:

(Example: Stud or Joist section= S) The four alpha characters utilized by the designator system are: S = Stud or Joist Sections

T = Track Sections

U = Channel Sections

F = Furring Channel Sections

Material Thickness:

(Example: 0.054 in= 54 mils; 1 mil= 1/1000 in.) Material thickness is the minimum base steel thickness in mils.

NOTE: For Structural members that are 54 mil (16 gauge) and thicker and that have both 33 and 50 ksi yield strength options shown, the designer shall identify which yield strength he has specified and the manufacturer shall label the product with the yield strength.

Complies with the 2015 International Building Code (IBC 2015) and 2012 Edition of the American Iron and Steel Institute (AISI) S100-12 -2012 Edition of the "North American Specification for the Design of Cold-Formed Steel Structural Members" (NASPEC).

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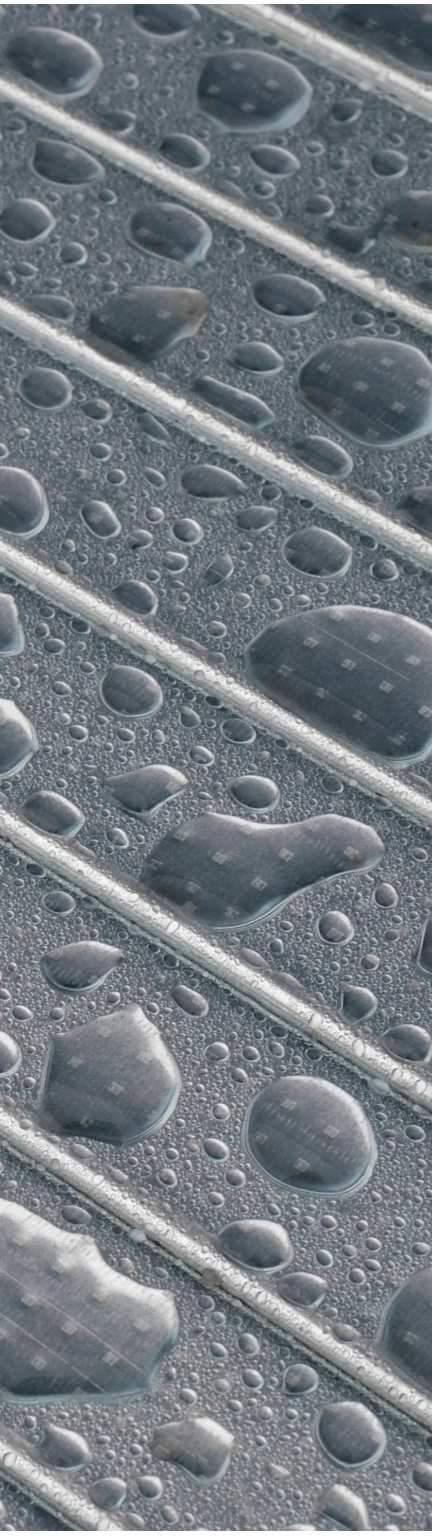

Thickness Table

Designation Thickness (Mils)	Minimum Thickness[1] (in)	Design Thickness (in)	Design Inside Corner Radii[2] (in)	Reference Gauge No.
18	0.0179	0.0188	0.0844	25
30	0.0296	0.0312	0.0782	20-Dw
33	0.0329	0.0346	0.0765	20-Str
43	0.0428	0.0451	0.0712	18
54	0.0538	0.0566	0.0849	16
68	0.0677	0.0713	0.1070	14
97	0.0966	0.1017	0.1526	12

[1] Minimum Thickness represents 95% of the design thickness and is the minimum acceptable thickness delivered to the jobsite based upon Section A2A of the AISI S 100-07 Specification.

[2] The tables in this guide are calculated based on inside corner radii listed in this table.

Stiffening Lip Length

Member	Flange Width	Design Stiffening Lip Length (in)
S125	1-1/4"	0.188
S137	1-3/8"	0.375
S162	1-5/8"	0.0.500
S200	2"	0.625
S250	2-1/2"	0.625
S300	3"	0.625

General Notes for all Tables

1. Where AISI S 100-07 Specification is referenced, it is the “North American Specification for the Design of Cold-Formed Steel Structural Members.”

2. The strength increase from cold work of forming has been incorporated for flexural strength per section A7.2 of AISI 5100-07 Specification.

3. 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 moment. AISI Sl00-07 specification procedure 1 for serviceability determination has been used. Increases in the effective moment of Inertia (1_{xe}) may be possible at lower stress levels. Any modified values would be required to be calculated by a qualified engineer.

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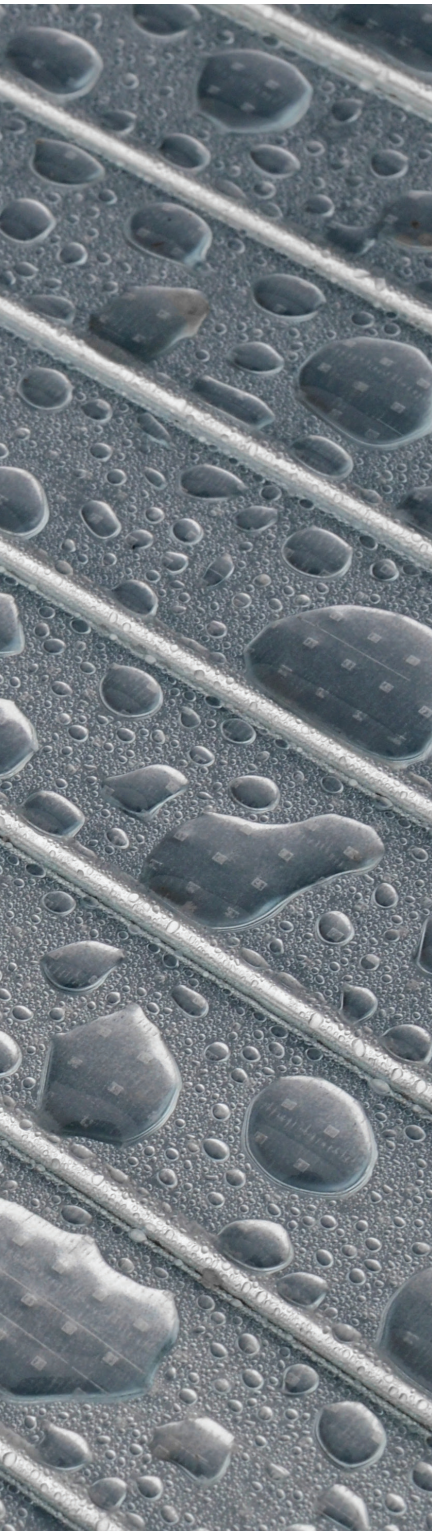


4. Various members may be manufactured with yield strengths of 33 or 50 kips per square inch (ksi). The yield strength used for calculations is indicated in the tables.

5. For members available in both 33 and 50 ksi, the specifier must clearly indicate which yield strength is required. For example: 3625162-54 (50ksi).

6. When provided, factory punchouts shall be located along the centerline of the webs of the members and will have a minimum center-to-center spacing of 24 inches. Punchouts for members greater than 2.5 inches deep are a maximum of 1.5 inches wide x 4 inches long. Members with depths of 1.625 and 2.5 inches and smaller are maximum of 3/4 inches wide x 4 inches long.

7. Allowable flexural strength values in the tables are based upon the minimum of local, distortional and lateral-torsional buckling. Distortional buckling strength is based on a k-phi = 0. Higher values may be obtained when sheathing is applied to the walls resulting in a higher k-phi value.

Definitions of Structural Property Symbols

Gross Properties

Ix: Moment of inertia of gross section about the X-X axis (strong axis).

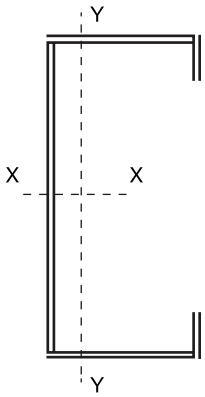
Sx: Section modulus about the X-X axis (strong axis).

Rx: Radius of gyration of the gross section about the X-X axis.

Iy: Moment of inertia of gross section about the Y-Y axis (weak axis).

Ry: Radius of gyration of the gross section about the Y-Y axis.

Effective Properties



Ixe: Moment of inertia for deflection calculations based upon "Procedure 1 for deflection determination of the AISI S 100-07 Specification:'

Sxe: Effective section modulus about the X-X axis (strong axis) stress= Fy.

Ma: Allowable Bending Moment - Based upon the effective section modulus and the allowable stress including the strength increase from the cold-work of forming (section A7.2) where applicable.

Mnc: Nominal Bending Moment - Based upon Distortional Bucking Strength calculated in accordance with AISI section C3.1.4.

Vag: Allowable strong axis shear away from punchout, calculated in accordance with AISI section C3.2.1.

Vanet: Allowable strong axis shear at punchout, calculated in accordance with AISI section C3.2.2.

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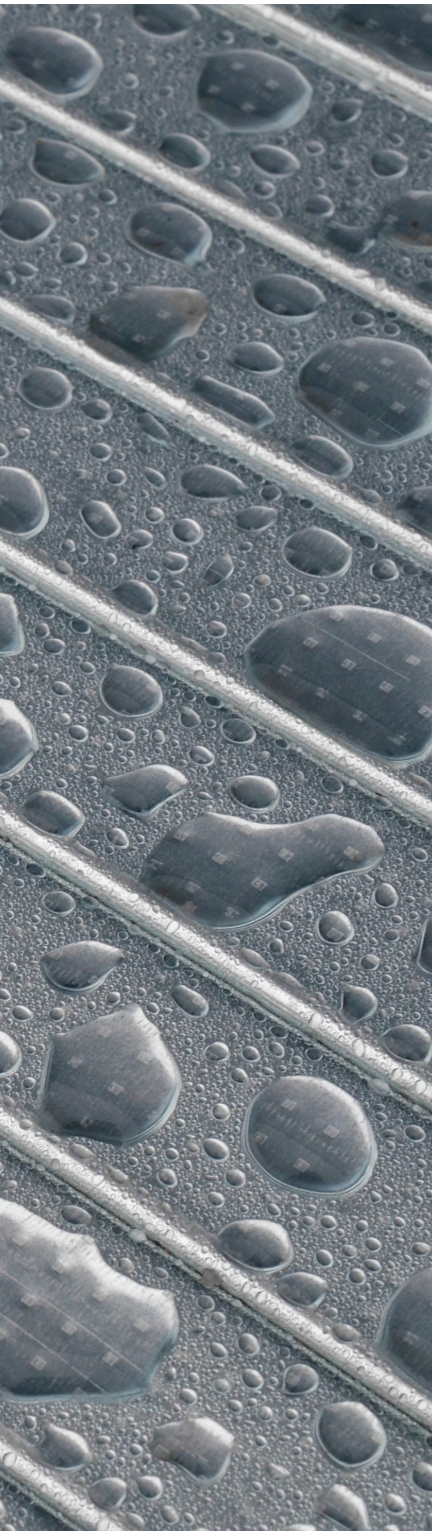

Torsional and Other Properties

J: St. VenantTorsional Constant.

Cw: Torsional warping constant.

M: Distance from shear center to mid-plane of web.

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 -$(X_0 / R_0)^2$ or 1 -$(X_0 / R_0)^{\wedge 2}$

Lu: The longest weak axis (Ly) and torsional (Lt) unbraced length at which lateral torsional buckling is restrained in accordance with AISI C3.1.2.1.

Section Properties Table Notes

1. Calculated properties are based on AISI S 100-07, North American Specification for the Design of Cold-Formed Steel Structural Members.

2. The centerlfne bend radius is based upon inside corner radii shown in thickness chart.

3. Effective properties incorporate the strength increase from the cold work of forming as applicable per AISI A7.2.

4. Tabulated gross properties, including torsional properties, are based upon full-unreduced cross section of the studs, away from punchouts.

5. For deflection calculations, use the effective moment of inertia.

6. Allowable moment includes cold-work of forming.

7. For the steels that have both 33 and 50 ksi listing, if the design is based upon so ksi, the SO ksi steel needs to be specified. (example: 3625 S 137 16-50 (SO ksi)).

8. Web depth for track sections is equal to the nominal height plus 2 times the design thickness plus the bend radius. Hems on non-structural track sections are ignored.

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