

PRODUCT IDENTIFICATION

SECTION PROPERTIES

PRODUCT IDENTIFICATION

All Telling Industries products contain a four part identification code. This identifies the size (both depth and flange/leg height), style, and material thickness of each member.

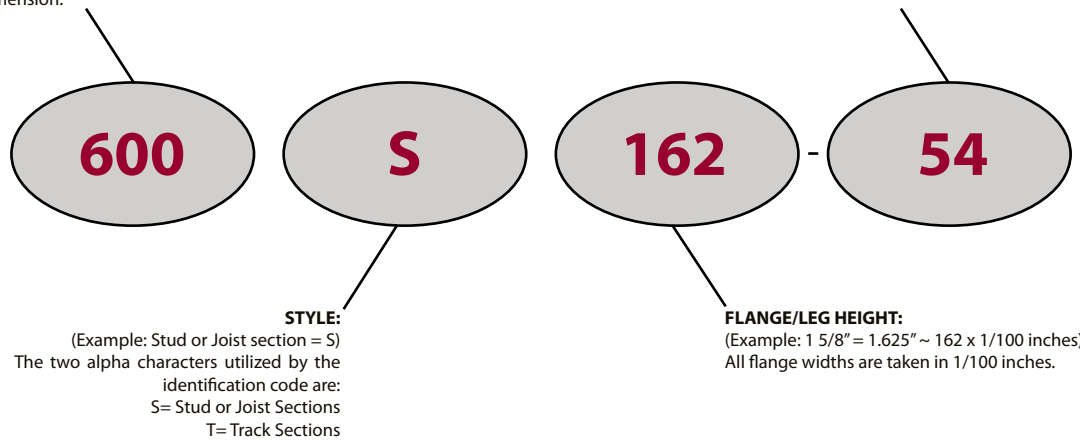
EXAMPLE:

WEB DEPTH:

(Example: 6" = 600 x 1/100 inches) All member depths are taken in 1/100 inches. For all "T" sections member depths is the inside to inside dimension.

MATERIAL THICKNESS:

(Example: 0.054 in. = 54 mils = 16 gauge; 1 mil = 1/1000 in.) Material thickness is the minimum base metal thickness in mils. Minimum base metal thickness represents 95% of the design thickness.



Note: For those sections where two different yield strengths (33 ksi and 50 ksi) are shown, the yield strength used in the design, if greater than 33 ksi, should be identified on the design and ordering of steel. (i.e., 600S162-54(50 ksi))

THICKNESS - STEEL COMPONENTS

Minimum Thickness ¹ (mils)	Design Thickness (in)	Inside Corner Radii (in)	Reference Only Gauge No.	Color Coding
18	0.0188	0.0843	25	Mill
27	0.0283	0.0796	22	Black
30	0.0312	0.0781	20 - Drywall	White
33	0.0346	0.0764	20 - Structural	White
43	0.0451	0.0712	18	Yellow
54	0.0566	0.0849	16	Green
68	0.0713	0.1069	14	Orange
97	0.1017	0.1525	12	Red

DESIGN STIFFENING LIP LENGTH

Section	Flange Width	Design Stiffening Lip Length (in)
S125	1 1/4"	0.188
S137	1 3/8"	0.375
S162	1 5/8"	0.5
S200	2"	0.625
S250	2 1/2"	0.625
S300	3"	0.75

¹Minimum Thickness represents 95% of the design thickness and is the minimum acceptable thickness delivered to the job site based on Section A2.4 of the 2004 NASPEC.

GENERAL PRODUCT INFORMATION

RAW MATERIAL INFORMATION

All Telling Industries products are formed from steel with a minimum yield strength of 33 or 50 KSI (1000 lbs per square inch). All products contained in this brochure are engineered to meet the 2001 Edition of the AISI (American Iron and Steel Institute) North American Specification for the Design of Cold- Formed Steel Structural Members. The same document was used to calculate the physical and structural properties of all products listed herein via allowable stress design criteria.

TECHNICAL ASSISTANCE

Technical assistance is available to Telling Industries customers when requested. A Telling Industries representative or design professional can review project specific load conditions and determine deflection criteria and lateral bracing conditions not discussed herein. Further, our representatives can assist purchasers and designers in economical applications for maximum efficiency.

All information contained in this brochure is intended as a general guide for using Telling Industries' products. This information should not be used in design or assembly without an independent assessment by a qualified design

professional. Such an assessment is necessary to verify the suitability of a particular product for use in any load bearing application. Telling Industries assume no liability for failure resulting from the use or misapplications of any information contained herein. Detail drawings contained herein are for information only. Telling Industries reserve the right to make modifications, changes, additions or deletions to the information on any of our products without prior notice or obligation. For the latest product information or to verify availability, contact a Telling Industries representative. This brochure contains the latest information available at the time of printing.

GENERAL NOTES FOR ALL TABLES

1. The strength increase due to cold work forming was incorporated for flexural strength as applicable per AISI A7.2.
2. The moment of inertia for deflection is calculated at a stress which results in an effective section modulus such that the stress times that section modulus is equal to the allowable moment. This follows Procedure 1 of the AISI specification.
3. The yield stresses (33 ksi or 50 ksi) used to calculate the tabulated values are indicated in the tables.
4. 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". Punch-outs will have a maximum width = half the member web height (d/2) or 1 1/2", whichever is less, and a maximum length = 4". The minimum distance between the end of the member and the near edge of the web punch-out = 10 unless otherwise specified.
5. For those steels that have both 33 and 50 ksi listings, if the design is based upon 50 ksi, the 50 ksi steel needs to be specified by the designer/purchasers. (i.e., 362S137- 54 (50 ksi)

DEFINITIONS OF STRUCTURAL PROPERTY SYMBOLS

GROSS PROPERTIES

- I_{xx}**: Moment of inertia 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.
- I_{yy}**: Moment of inertia of the gross section about the Y-Y axis (weak axis).
- R_y**: Radius of gyration of the gross section about the Y-Y axis.

EFFECTIVE PROPERTIES

- I_{xx}**: Moment of inertia for deflection calculations based on the "Procedure 1 or Deflection Determination" of the 2001 AISI Specification.
- S_{xx}**: Effective section modulus about the X-X axis (strong axis) $\text{Stress} = F_y$
- M_a**: Allowable Bending Moment- Based on the effective section modulus and the allowable stress including the strength increase from cold-work of forming (AISI A 7.2) where applicable.
- V_a**: Allowable Shear Load.
- Y_{cg}**: Maximum distance from the outside of the compression flange to the center of gravity of the effective section.

TORSIONAL PROPERTIES

- J**: St. Venant Torsional Constant.
- C_w**: Torsional warping constant.
- X_o**: Distance from the shear center to the centroid along the principal X-axis.
- R_o**: Polar radius of gyration about the centroid principal axis.
- β**: $1 - (X_o/R_o)^2$

SECTION PROPERTIES TABLE NOTES

1. The centerline bend radius is the greater of 2 times the design thickness or 3/32".
2. Web depth for track sections is equal to the nominal height plus 2 times the design thickness plus the bend radius.
3. Hems on non-structural track sections are ignored.
4. Effective properties incorporate the strength increase from the cold work of forming as applicable per AISI A7.2.
5. Tabulated gross properties are based on the full-unreduced cross section of the studs, away from punch-outs.
6. For deflection calculations, use the effective moment of inertia.
7. For those steels that have both 33 and 50 ksi, the 50 ksi steel needs to be specified. (i.e., 362S137-54 (50 ksi))