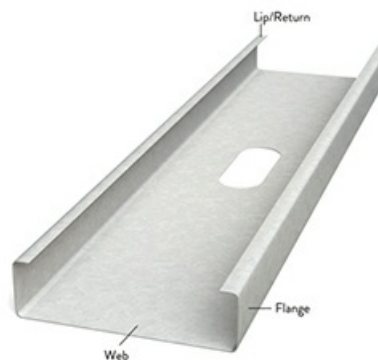


PRODUCT CATEGORY: STRUCTURAL STUD  
PRODUCT NUMBER: 250S137-33  
COATING: G60/G90 Available

#### PHYSICAL PROPERTIES

WEB DEPTH: 2.500 IN  
FLANGE HEIGHT: 1.380 IN  
DESIGN THICKNESS: 0.0346 IN  
YIELD: 33 KSI  
WEIGHT: 0.67 LB/LFT



#### GROSS SECTION PROPERTIES

CROSS SECTIONAL AREA (A): 0.197 IN<sup>2</sup>  
MOMENT OF INERTIA (I<sub>x</sub>): 0.203 IN<sup>4</sup>  
SECTION MODULUS ABOUT X-X AXIS (STRONG AXIS) (S<sub>x</sub>): 0.163 IN<sup>3</sup>  
RADIUS OF GYRATION (R<sub>x</sub>): 1.015 IN  
GROSS MOMENT OF INERTIA (I<sub>y</sub>): 0.052 IN<sup>4</sup>  
GROSS RADIUS OF GYRATION (R<sub>y</sub>): 0.515 IN

#### EFFECTIVE SECTION PROPERTIES

MOMENT OF INERTIA (I<sub>x</sub>): 0.203 IN<sup>4</sup>  
SECTION MODULUS (S<sub>x</sub>): 0.158 IN<sup>3</sup>  
ALLOWABLE BENDING MOMENT (M<sub>a</sub>): 3.11 IN-KIPS

#### TORSIONAL PROPERTIES

ST VENANT TORSION CONSTANT (J x 1000): 0.079 IN<sup>4</sup>  
WARPING CONSTANT (C<sub>w</sub>): 0.076 IN<sup>6</sup>  
DISTANCE FROM SHEAR CENTER TO NEUTRAL AXIS (X<sub>o</sub>): -1.141 IN  
RADIUS OF GYRATION (R<sub>o</sub>): 1.612 IN  
TORSIONAL FLEXURAL CONSTANT (B): 0.499

#### SECTION PROPERTIES TABLE NOTES:

- CALCULATED PROPERTIES ARE BASED ON AISI S100-16, NORTH AMERICAN SPECIFICATION FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.
- THE CENTER LINE 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 A3.3.2.
- 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.  
Example.362S162-54 (50KSI)
- WEB DEPTH FOR TRACK SECTIONS IS EQUAL TO THE NOMINAL HEIGHT PLUS 2 TIMES THE DESIGN THICKNESS PLUS THE BEND RADIUS. HEMS ON NONSTRUCTURAL RACK SECTIONS ARE IGNORED.

#### LEED:

- COMPLIES WITH ASTM C955
- LEED CREDITS MR 2: CONSTRUCTION WASTE MATERIAL-RAM STEEL FRAMING IS 100% RECYCLEABLE
- LEED CREDITS MR 4: RAM STEEL FRAMING IS FORMED WITH A MINIMUM 25.5% POST CONSUMER AND 14.4% PRE-CONSUMER CONTENT
- LEED CREDITS MR 5: REGIONAL MATERIALS MAY APPLY

PRODUCT CATEGORY:

STRUCTURAL STUD

PRODUCT NUMBER

250S137-33

LIMITING HEIGHTS												
SPACING INCHES	5 PSF			15 PSF			20 PSF			25 PSF		
	L/120	L/240	L/360	L/240	L/360	L/600	L/240	L/360	L/600	L/240	L/360	L/600
12	17' 6"	13' 10"	12' 1"	10' 10"	9' 5"	8' 0"	9' 10"	8' 7"	7' 3"	9' 1"	8' 0"	6' 9"
16	15' 10"	12' 7"	11' 0"	9' 10"	8' 7"	7' 3"	8' 10"	7' 10"	6' 7"	7' 10"	7' 3"	6' 1"
24	13' 10"	11' 0"	9' 7"	8' 4"	7' 6"	6' 4"	7' 2"	6' 10"	5' 9"	6' 5"	6' 4"	5' 4"

SPACING INCHES	30 PSF			35 PSF			40 PSF			50 PSF		
	L/240	L/360	L/600	L/240	L/360	L/600	L/240	L/360	L/600	L/240	L/360	L/600
12	8' 4"	7' 6"	6' 4"	7' 8"	7' 2"	6' 0"	7' 2"	6' 10"	5' 9"			
16	7' 2"	6' 10"	5' 9"	6' 8"	6' 6"	5' 6"	6' 3"	6' 2"	5' 3"			
24	5' 10" e	5' 10" e	5' 0"	5' 5" e	5' 5" e	4' 9"	5' 1" e	5' 1" e	4' 7" e			

WALL HEIGHT TABLE NOTES:

1. LATERAL LOADS HAVE NOT BEEN MODIFIED FOR STRENGTH CHECKS: FULL LOADS ARE APPLIED.
2. CALCULATED PROPERTIES ARE BASED ON AISI S100-16, NORTH AMERICAN SPECIFICATION FOR COLD-FORMED STEEL STRUCTURAL MEMBERS.
3. THE 5 PSF LIVE LOAD HAS NOT BEEN REDUCED FOR DEFLECTION CHECKS. FOR 15 PSF OR HIGHER WIND PRESSURE, READ THE NOTE BELOW.  
IBC 2012/ASCE 7-10: DUE TO THE CHANGE IN THE MODEL BUILDING CODES, DESIGN WIND PRESSURES DETERMINED USING IBC 2012/ASCE 7-10 ARE STRENGTH LEVEL LOADS (LRFD) IN COMPARISON TO THOSE DETERMINED IN EARLIER IBC CODES WHICH WERE SERVICE LEVEL LOADS (ASD). THE LOAD/SPAN TABLES THAT FOLLOW ARE BASED ON SERVICE LEVEL (ASD) WIND LOADS. THEREFORE, TO PROPERLY USE THE LOAD/SPAN TABLES IN THIS CATALOG, MULTIPLY THE IBC 2012/ASCE 7-10 DESIGN WIND PRESSURES BY 0.6 (REFERENCE SECTION 2.4 ASCE 7-10) PRIOR TO ENTERING THE LOAD/SPAN TABLES.  
- EXAMPLE:  
\* ASCE 7-10 CALCULATED DESIGN WIND PRESSURE = 25 PSF (STRENGTH LEVEL LOADS, LRFD)  
\* CONVERT TO SERVICE LEVEL LOADS (ASD) = 25 PSF X 0.6 = 15 PSF  
\* USE 10 PFS AS THE PRESSURE VALUE USED IN THIS TABLE TO DETERMINE THE MEMBER SPAN  
ANY OTHER BUILDING CODE: THE LOAD/SPAN TABLES THAT FOLLOW ARE BASED ON SERVICE LEVEL (ASD) WIND LOADS. IF THE WIND LOAD BEING USED MEETS THIS CRITERION, IT DOES NOT NEED TO BE MODIFIED PRIOR TO USING THE TABLES.
4. 15 PSF AND HIGHER WIND PRESSURES HAVE BEEN MULTIPLIED BY 0.7 FOR DEFLECTION DETERMINATION, IN ACCORDANCE WITH FOOTNOTE F OF IBC TABLE 1604.3.  
THE 5 PSF LIVE LOAD HAS NOT BEEN REDUCED FOR DEFLECTION CHECKS.
5. LIMITING HEIGHTS ARE BASED ON CONTINUOUS SUPPORT OF EACH FLANGE OVER THE FULL LENGTH OF THE STUD.
6. LIMITING HEIGHTS ARE BASED ON STEEL PROPERTIES ALONE (NON-COMPOSITE).
7. WEB CRIPPLING CHECKS ARE BASED ON END-ONE FLANGE LOADING CONDITION USING 1-INCH END BEARING.
8. END SHEAR AND WEB CRIPPLING CAPACITY HAVE NOT BEEN REDUCED FOR PUNCHOUTS. PUNCHOUTS ARE ASSUMED TO BE ATLEAST 10-INCHS FROM THE END OF MEMBERS, IN ACCORDANCE WITH ASTM C955, SECTION 4.6.
9. WHERE LIMITING HEIGHTS ARE FOLLOWED BY "E", WEB STIFFENERS ARE REQUIRED.