NEW AISIWIN v7.0 Software
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CLARKWESTERN™
BUILDING SYSTEMS

Information Conforms to 2001 AISI "Specification"

MEMBER: STEEL STUD MANUFACTURERS ASSOCIATION

CLARKWESTERN™ BUILDING SYSTEMS

This Technical Submittal provides information for the most commonly used light steel framing products we manufacture, but it does not cover all of our products. You will find more complete information on each member selection by going to our web site, www.clarkwestern.com. Please note the introductory information for each set of tables so that you know about the additional information that is readily available from our website.

How to Identify Our Products

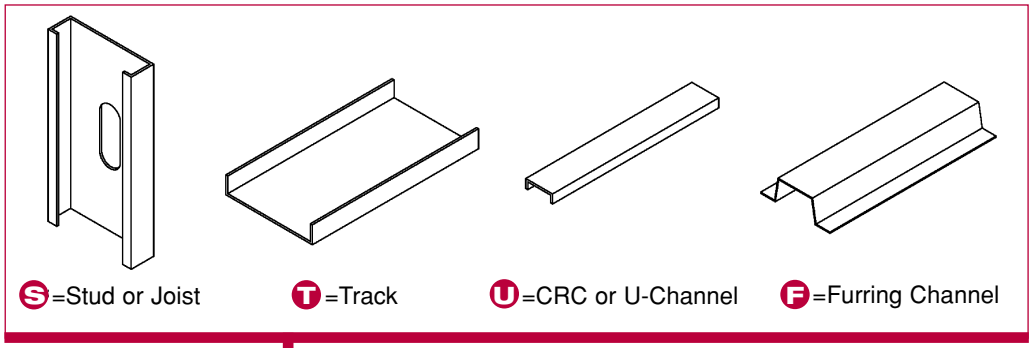
CLARKWESTERN has adopted standard nomenclature established by the Steel Stud Manufacturers Association (SSMA) for identifying each of its products. Coding of each member has four parts:

- First is a number which identifies the web depth of the member to two decimal places. 600 = 6.00", 1000 = 10.00", 550 = 5.50", 362 = 3.625" etc.
- Second is a letter that tells you the type of member, such as S = Stud/Joist, T = Track, U = U-Channel, and F = Furring Channel.
- Third is a number that defines the flange dimension in inches to two decimal places. 162 = 1.625", 200 = 2.00", 125 = 1.25" etc.
- Fourth, following a hyphen, is the minimum design thickness of the metal in thousandths of an inch. 18 = .018", 27 = .027", etc.

Product Availability

Most products manufactured by CLARKWESTERN are readily available in all markets, but there can be exceptions. Please contact your CLARKWESTERN Sales Representative to make sure the product you need is available in your market area.

Example: 362S162-43 (33ksi) Punched



362 S 162 - 43 (33ski) Punched

Punched studs or joists will be supplied unless the customer indicates unpunched material is required at time of order.

All track and channels are unpunched

33ksi steel will be specified unless the customer indicates 50ksi at time of order

CLARKWESTERN Members Depths, Flanges & Available Thickness

Member Depths	Flange Widths	Mils Range	Gauge Range
(162) 1-5/8"	1-1/4"	18 - 30	25 - 20 GA
(250) 2-1/2"	1-1/4" & 1-5/8"	18 - 68	25 - 14 GA
(350) 3-1/2"	1-5/8"	33 - 68	20 - 14 GA
(362) 3-5/8"	1-1/4", 1-3/8", 1-5/8", 2", 2-1/2" & 3"	18 - 118	25 - 10 GA
(400) 4"	1-1/4", 1-3/8", 1-5/8", 2", 2-1/2" & 3"	18 - 97	25 - 12 GA
(550) 5-1/2"	1-5/8", 2" & 2-1/2"	33 - 97	20 - 12 GA
(600) 6"	1-1/4", 1-3/8", 1-5/8", 2", 2-1/2",3" & 3-1/2"	18 - 118	25 - 10 GA
(725) 7-1/4"	1-5/8", 2" & 2-1/2"	33 - 97	20 - 12 GA
(800) 8"	1-3/8", 1-5/8", 2", 2-1/2", 3" & 3-1/2"	33 - 118	20 - 10 GA
(925) 9-1/4"	1-5/8", 2" & 2-1/2"	43 - 97	18 - 12 GA
(1000) 10"	1-5/8", 2", 2-1/2", 3" & 3-1/2"	43 - 118	18 - 10 GA
(1150) 11-1/2"	1-5/8", 2" & 2-1/2"	43 - 97	18 - 12 GA
(1200) 12"	1-5/8", 2", 2-1/2", 3" & 3-1/2"	54 - 118	16 - 10 GA
(1350) 13-1/2"	1-5/8", 2", 2-1/2", 3" & 3-1/2"	54 - 118	16 - 10 GA
(1400) 14"	1-5/8", 2", 2-1/2", 3" & 3-1/2"	54 - 118	16 - 10 GA
(1600) 16"	1-5/8", 2", 2-1/2", 3" & 3-1/2"	54 - 118	16 - 10 GA

CLARKWESTERN Return Lip Dimensions

Flange Width	Return Lip	Member Depths
125 (1-1/4")	3/16"	1-5/8" - 6"
137 (1-3/8")	3/8"	3-5/8" 8"
162 (1-5/8")	1/2"	2-1/2" - 16"
200 (2")	5/8"	3-5/8" - 16"
250 (2-1/2")	5/8"	3-5/8" - 16"
300 (3")	1"	6" - 16"
350 (3-1/2")	1"	6" - 16"

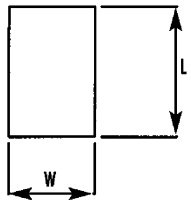
Description Conversion (inches)

Code # (Inches)	Code # (Inches)
125 (1-1/4")	725 (7-1/4")
137 (1-3/8")	800 (8")
162 (1-5/8")	925 (9-1/4")
200 (2")	1000 (10")
250 (2-1/2")	1150 (11-1/2")
300 (3")	1200 (12")
350 (3-1/2")	1350 (13-1/2")
400 (4")	1400 (14")
550 (5-1/2")	1600 (16")
600 (6")	

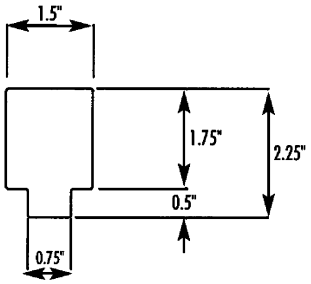
CLARKWESTERN Thickness Identification by Color Coding

Member Thickness Mils	Gauge	Design Thickness	Min Thickness	Color
18	25	0.0188"	0.0179"	None
27	22	0.0283"	0.0269"	Black
30	DW20	0.0312"	0.0296"	Pink
33	20	0.0346"	0.0329"	White
43	18	0.0451"	0.0428"	Yellow
54	16	0.0566"	0.0538"	Green
68	14	0.0713"	0.0677"	Orange
97	12	0.1017"	0.0966"	Red
118	10	0.1242"	0.1180"	Blue

Stud Sizes	162-250
W	0.75"
L	1.5"

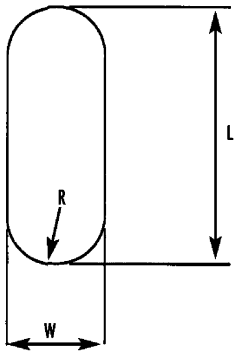


Rectangle Punch

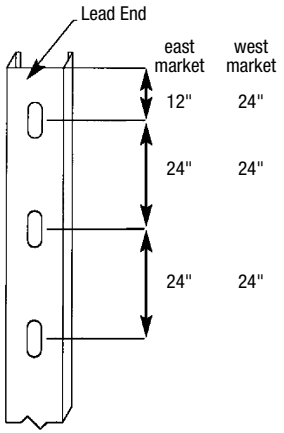


Keyhole Punch

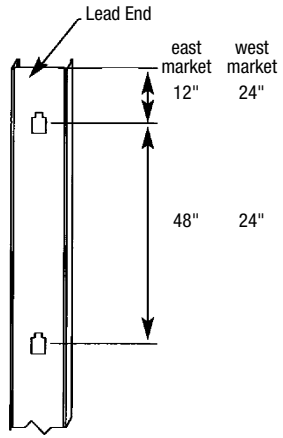
Stud Sizes	250	350-1600
W	0.75"	1.5"
L	2"	4"
R	0.375"	0.75"



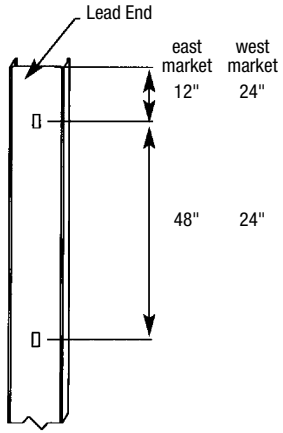
Oval Punch



Structural Stud Punchout



Non Structural Keyhole Punchout



Non Structural Rectangle Punchout

Structural Studs

Member Depth	Punchout Size
250 (2-1/2")	3/4" wide x 2" long oval
350 (3-1/2") -1600 (16")	1-1/2" wide x 4" long oval

CLARKWESTERN Technical Support

Technical support is the most important way we serve our present and prospective customers. After all, your experience with our products will only be a good one if you are satisfied that the material is right for the job, and that it is being installed correctly. That's why we have provided four ways to make sure you can get the technical support you need.

Web Support – We maintain a site at www.clarkwestern.com. This web location contains information on the company, its products, and a wealth of other information related to the steel framing industry. This web site also provides you with more detailed information about all of the company's products, including load and limiting heights tables for member sizes and configurations not contained in this printed manual. Please visit this site to familiarize yourself with what we have to offer.

Engineering Software – To make sure you can design structures successfully, we provide engineering software FREE to customers, engineers, architects and students. This state-of-the-art and user-friendly AISIWIN software helps configure exterior curtain wall framing for wind loads, load-bearing framing for combined loads, joists for required spans and anticipated load configurations, etc. A download is available from our web site.

CLARKWESTERN Design [CWD] – Is a full service light gauge structural engineering firm that provides certified engineering shop drawing packages. CWD is licensed throughout the United States. CWD can be reached by calling 877-832-3206.

CLARKWESTERN Technical Support – For general technical support on products, member sizing, industry standards, framing details, or information on AISIWIN Software, please call technical support at 888-437-3244.

Physical properties table notes

1. Physical properties and load tables have been calculated in conformance with the 2001 North American Specification [NASPEC] for the Design of Cold-Formed Steel Structural Members 2001 and the International Building Code [IBC] 2003.
2. All materials delivered from CLARKWESTERN shall be kept dry, preferably by being stored inside a building under a roof. Where necessary to store material outside, it shall be stacked off the ground, properly supported on a level platform, and fully protected from the weather. Reference ASTM C 754 section 8 and ASTM C 1007 section 4.
3. Effective properties incorporate the strength increase from the cold work of forming as applicable per NASPEC A7.2.
4. Effective properties are based on punched sections.
5. For those steels with both 33 and 50 ksi listings, if the design is based upon 50 ksi, the 50 ksi steel needs to be specified by the end user at the time of quote and order.
6. The inside corner bend radii are based upon the standards set by SSMA for a given gauge or design thickness.
7. Where noted with a superscript "5", web height to thickness ratio exceeds 200. Web stiffeners are required at all support points and concentrated loads.
8. Where no effective properties are listed, width-to-thickness ratio limits per NASPEC B1 are exceeded. Only gross properties are available.
9. Tabulated gross properties are based on the full-unreduced cross sections of the studs, away from the web punchouts.
10. For deflection calculations, use the effective moment of inertia. Reference the NAS Commentary section C1.
11. Overall depth for track sections are equal to the nominal depth plus 2 times the design thickness plus the inside bend radius.
12. Hems on nonstructural track sections [25 ga. or –18 mils] ignored for purposes of section properties.
13. The standard protective coating for structural framing members is a G-60 coating or equivalent. The standard protective coating for nonstructural framing members is a G-40 coating or equivalent. Reference ASTM A1003 table 1.
14. Nonstructural framing is not permitted in load bearing [i.e. axial load greater than 100 lb/ft 200 lb/stud.] or exterior applications [i.e. lateral (or wind loads) more than 10 PSF. Reference ASTM C 645 section 3.2.2.

** Some building codes (eg Florida Building Code) do not allow such an increase in strength, in this case please call our technical services for section properties w/o this increase.

Member	Thickness	Area	Weight	Gross Properties					33 ksi Effective Properties				Torsional Properties				
				Ix	Sx	Rx	Iy	Ry	Ix	Sx	Ma	Va	Jx1000	Cw	Xo	Ro	Beta
	in	in^2	lb/ft	in^4	in^3	in	in^4	in	in^4	in^3	in-k	lb	in^4	in^6	in-k	lb	in^4
162S125-18	0.0188	0.080	0.27	0.038	0.046	0.686	0.016	0.447	0.034	0.033	0.65	302	0.009	0.009	-1.061	1.340	0.373
162S125-27	0.0283	0.120	0.41	0.056	0.068	0.682	0.023	0.443	0.055	0.053	1.05	494	0.032	0.013	-1.049	1.327	0.375
162S125-30	0.0312	0.131	0.45	0.061	0.075	0.681	0.026	0.441	0.060	0.061	1.21	543	0.043	0.014	-1.046	1.323	0.376
162S125-33	0.0346	0.145	0.50	0.067	0.083	0.679	0.028	0.440	0.066	0.071	1.41	601	0.058	0.015	-1.042	1.319	0.376
162T100-18	0.0188	0.068	0.23	0.035	0.040	0.713	0.007	0.324	0.027	0.024	0.48	302	0.008	0.004	-0.667	1.029	0.580
162T100-27	0.0283	0.103	0.35	0.052	0.059	0.715	0.011	0.323	0.046	0.042	0.83	541	0.027	0.006	-0.663	1.027	0.583
162T100-30	0.0312	0.113	0.38	0.058	0.065	0.715	0.012	0.322	0.052	0.048	0.95	597	0.037	0.006	-0.661	1.026	0.585
162T125-18	0.0188	0.078	0.26	0.042	0.048	0.733	0.013	0.411	-	-	-	-	0.009	0.007	-0.891	1.225	0.471
162T125-27	0.0283	0.117	0.40	0.063	0.072	0.735	0.020	0.410	0.050	0.044	0.87	541	0.031	0.010	-0.886	1.221	0.474
162T125-30	0.0312	0.129	0.44	0.070	0.079	0.735	0.022	0.409	0.057	0.050	1.00	597	0.042	0.012	-0.884	1.220	0.475
162T125-33	0.0346	0.143	0.49	0.077	0.087	0.736	0.024	0.408	0.066	0.058	1.15	663	0.057	0.013	-0.882	1.219	0.476
250S125-18	0.0188	0.097	0.33	0.099	0.079	1.014	0.019	0.439	0.089	0.062	1.23	258	0.011	0.023	-0.93	1.444	0.585
250S125-27	0.0283	0.144	0.49	0.147	0.118	1.009	0.027	0.434	0.145	0.098	1.93	685	0.039	0.033	-0.919	1.432	0.589
250S125-30	0.0312	0.159	0.54	0.161	0.129	1.008	0.030	0.433	0.159	0.112	2.20	832	0.052	0.036	-0.915	1.429	0.592
250S125-33	0.0346	0.176	0.60	0.178	0.142	1.006	0.033	0.431	0.175	0.128	2.54	975	0.070	0.040	-0.912	1.425	0.591
250T100-18	0.0188	0.085	0.29	0.088	0.067	1.020	0.008	0.310	0.071	0.045	0.88	245	0.010	0.010	-0.573	1.210	0.776
250T100-27	0.0283	0.127	0.43	0.133	0.101	1.021	0.012	0.308	0.117	0.075	1.49	685	0.034	0.015	-0.569	1.209	0.779
250T100-30	0.0312	0.140	0.48	0.146	0.111	1.021	0.013	0.308	0.132	0.085	1.69	832	0.046	0.016	-0.567	1.208	0.780
250T125-18	0.0188	0.094	0.32	0.104	0.079	1.052	0.015	0.399	-	-	-	-	0.011	0.018	-0.779	1.368	0.676
250T125-27	0.0283	0.141	0.48	0.157	0.119	1.053	0.022	0.398	0.129	0.079	1.56	685	0.038	0.027	-0.774	1.366	0.679
250T125-30	0.0312	0.156	0.53	0.173	0.131	1.053	0.025	0.397	0.145	0.090	1.77	832	0.051	0.030	-0.773	1.365	0.679
250T125-33	0.0346	0.173	0.59	0.192	0.145	1.054	0.027	0.397	0.166	0.103	2.03	1024	0.069	0.033	-0.772	1.365	0.680
250T200-18	0.0188	0.122	0.42	0.152	0.116	1.114	0.053	0.661	-	-	-	-	0.014	0.064	-1.441	1.938	0.447
250T200-27	0.0283	0.184	0.63	0.229	0.174	1.116	0.080	0.659	-	-	-	-	0.049	0.096	-1.436	1.934	0.449
250T200-30	0.0312	0.203	0.69	0.253	0.191	1.116	0.088	0.659	-	-	-	-	0.066	0.106	-1.434	1.933	0.450
362S125-18	0.0188	0.118	0.40	0.234	0.129	1.409	0.021	0.421	0.220	0.079	1.57	173	0.014	0.053	-0.807	1.677	0.768
362S125-27	0.0283	0.176	0.60	0.347	0.192	1.404	0.031	0.416	0.342	0.136	2.68	592	0.047	0.077	-0.797	1.667	0.771
362S125-30	0.0312	0.194	0.66	0.381	0.210	1.402	0.033	0.415	0.376	0.159	3.13	794	0.063	0.084	-0.794	1.664	0.772
362S125-33	0.0346	0.215	0.73	0.421	0.232	1.400	0.037	0.413	0.415	0.187	3.69	1024	0.086	0.092	-0.790	1.660	0.773
362T100-18	0.0188	0.106	0.36	0.205	0.110	1.393	0.009	0.291	0.174	0.064	1.26	167	0.012	0.023	-0.487	1.504	0.895
362T100-27	0.0283	0.159	0.54	0.309	0.164	1.393	0.013	0.289	0.277	0.129	2.55	569	0.042	0.034	-0.483	1.503	0.897
362T100-30	0.0312	0.175	0.60	0.341	0.181	1.393	0.015	0.289	0.311	0.146	2.88	762	0.057	0.037	-0.482	1.502	0.897
362T125-18	0.0188	0.115	0.39	0.238	0.127	1.437	0.017	0.380	-	-	-	-	0.014	0.041	-0.674	1.632	0.829
362T125-27	0.0283	0.173	0.59	0.358	0.191	1.438	0.025	0.378	0.301	0.135	2.66	569	0.046	0.062	-0.670	1.631	0.831
362T125-30	0.0312	0.191	0.65	0.395	0.210	1.438	0.027	0.378	0.339	0.152	3.01	762	0.062	0.068	-0.669	1.630	0.832
362T125-33	0.0346	0.212	0.72	0.438	0.232	1.438	0.030	0.377	0.385	0.180	3.44	1024	0.085	0.075	-0.667	1.630	0.832
362T200-18	0.0188	0.143	0.49	0.336	0.179	1.530	0.060	0.648	-	-	-	-	0.017	0.147	-1.290	2.104	0.624
362T200-27	0.0283	0.216	0.73	0.506	0.269	1.532	0.090	0.646	-	-	-	-	0.058	0.220	-1.286	2.101	0.626
362T200-30	0.0312	0.238	0.81	0.558	0.296	1.532	0.099	0.645	-	-	-	-	0.077	0.242	-1.284	2.101	0.626
400S125-18[5]	0.0188	0.125	0.42	0.294	0.147	1.536	0.021	0.414	0.279	0.088	1.74	156	0.015	0.066	-0.774	1.769	0.809
400S125-27	0.0283	0.187	0.64	0.438	0.219	1.531	0.031	0.410	0.431	0.151	2.99	533	0.050	0.096	-0.764	1.759	0.811
400S125-30	0.0312	0.206	0.70	0.481	0.240	1.529	0.034	0.408	0.474	0.177	3.49	715	0.067	0.105	-0.761	1.756	0.812
400S125-33	0.0346	0.228	0.77	0.531	0.265	1.527	0.038	0.407	0.524	0.208	4.11	976	0.091	0.116	-0.758	1.753	0.813
400T100-18[5]	0.0188	0.113	0.38	0.259	0.125	1.513	0.009	0.285	0.204	0.066	1.31	151	0.013	0.028	-0.464	1.608	0.917
400T100-27	0.0283	0.170	0.58	0.389	0.188	1.514	0.014	0.283	0.352	0.131	2.59	515	0.045	0.042	-0.460	1.608	0.918
400T100-30	0.0312	0.187	0.64	0.429	0.207	1.514	0.015	0.283	0.397	0.154	3.04	689	0.061	0.047	-0.459	1.607	0.918
400T125-18[5]	0.0188	0.122	0.42	0.298	0.145	1.561	0.017	0.374	-	-	-	-	0.014	0.052	-0.645	1.730	0.861
400T125-27	0.0283	0.184	0.63	0.449	0.217	1.562	0.025	0.372	0.380	0.156	3.08	515	0.049	0.077	-0.641	1.729	0.862
400T125-30	0.0312	0.203	0.69	0.495	0.239	1.562	0.028	0.371	0.427	0.176	3.49	689	0.066	0.085	-0.640	1.729	0.863
400T125-33	0.0346	0.225	0.77	0.549	0.265	1.563	0.031	0.371	0.484	0.201	3.97	940	0.090	0.094	-0.639	1.728	0.863
400T200-18[5]	0.0188	0.150	0.51	0.417	0.202	1.664	0.062	0.642	-	-	-	-	0.018	0.183	-1.248	2.177	0.672
400T200-27	0.0283	0.226	0.77	0.628	0.304	1.665	0.093	0.640	-	-	-	-	0.060	0.275	-1.243	2.174	0.673
400T200-30	0.0312	0.250	0.85	0.692	0.334	1.666	0.102	0.639	-	-	-	-	0.081	0.303	-1.242	2.174	0.674
600S125-18[5]	0.0188	0.162	0.55	0.778	0.259	2.189	0.024	0.382	-	-	-	-	0.019	0.169	-0.637	2.312	0.924
600S125-27[5]	0.0283	0.243	0.83	1.160	0.387	2.183	0.035	0.377	1.096	0.272	5.37	349	0.065	0.247	-0.628	2.303	0.926
600S125-30	0.0312	0.268	0.91	1.275	0.425	2.181	0.038	0.376	1.217	0.319	6.30	468	0.087	0.270	-0.625	2.300	0.926
600S125-33	0.0346	0.297	1.02	1.410	0.470	2.180	0.042	0.375	1.360	0.378	7.45	638	0.119	0.296	-0.622	2.297	0.927
600T100-18[5]	0.0188	0.150	0.51	0.689	0.225	2.139	0.010	0.257	-	-	-	-	0.018	0.071	-0.372	2.187	0.971
600T100-27[5]	0.0283	0.226	0.77	1.036	0.338	2.140	0.015	0.255	0.897	0.206	4.07	341	0.060	0.106	-0.369	2.186	0.971
600T100-30	0.0312	0.250	0.85	1.142	0.372	2.140	0.016	0.255	1.022	0.243	4.80	456	0.081	0.117	-0.368	2.186	0.972
600T125-18[5]	0.0188	0.160	0.54	0.776	0.254	2.204	0.019	0.342	-	-	-	-	0.019	0.131	-0.528	2.292	0.947
600T125-27[5]	0.0283	0.241	0.82	1.168	0.381	2.204	0.028	0.340	0.958	0.210	4.16	341	0.064	0.195	-0.525	2.291	0.948
600T125-30	0.0312	0.265	0.90	1.288	0.419	2.204	0.031	0.340	1.095	0.249	4.92	456	0.086	0.214	-0.524	2.291	0.948
600T125-33	0.0346	0.294	1.00	1.428	0.465	2.204	0.034	0.339	1.258	0.297	5.87	622	0.117	0.237	-0.523	2.291	0.948
600T200-18[5]	0.0188	0.188	0.64	1.039	0.339	2.350	0.069	0.607	-	-	-	-	0.022	0.462	-1.064	2.650	0.839
600T200-27[5]	0.0283	0.283	0.96	1.564	0.510	2.351	0.104	0.605	-	-	-	-	0.076	0.693	-1.060	2.649	0.840
600T200-30	0.0312	0.312	1.06	1.725	0.562	2.351	0.114	0.605	-	-	-	-	0.101	0.763	-1.059	2.649	0.840

For Section Properties Table Notes see page 3

CLARKWESTERN is converting all Non-Structural Framing to UltraSTEEL® Framing. Once your local facility converts to UltraSTEEL® they will no longer provide traditional non-structural stud and track.

Member	Thickness	Area	Weight	Gross Ix	Gross Sx	Gross Rx	Gross Iy	Gross Ry	33 ksi Effective Properties Ix	33 ksi Sx	33 ksi Ma	33 ksi Va	50 ksi Effective Properties Ix	50 ksi Sx	50 ksi Ma	50 ksi Va	Torsional Properties Jx1000	Cw	Xo	Ro	Beta
	in	in^2	lb/ft	in^4	in^3	in	in^4	in	in^4	in^3	in-k	lb	in^4	in^3	in-k	lb	in^4	in^6	in	in	
250S137-33	0.0346	0.197	0.67	0.203	0.163	1.015	0.052	0.515	0.203	0.158	3.11	975	0.203	0.141	4.21	1260	0.079	0.075	-1.170	1.633	0.486
250S137-43	0.0451	0.255	0.87	0.261	0.208	1.010	0.067	0.511	0.261	0.205	4.53	1265	0.261	0.198	5.92	1917	0.173	0.094	-1.158	1.620	0.489
250S137-54	0.0566	0.316	1.07	0.318	0.255	1.004	0.080	0.504	0.318	0.255	5.76	1553	0.318	0.244	8.22	2353	0.337	0.113	-1.150	1.608	0.488
250S137-68	0.0713	0.390	1.33	0.386	0.309	0.994	0.095	0.495	0.386	0.309	7.19	1891	0.386	0.308	10.65	2866	0.661	0.134	-1.142	1.593	0.486
250S137-97	0.1017	0.533	1.81	0.506	0.405	0.975	0.120	0.475	0.506	0.405	10.01	2506	0.506	0.405	14.75	3798	1.839	0.168	-1.125	1.562	0.481
250S162-33	0.0346	0.223	0.76	0.235	0.188	1.027	0.087	0.624	0.235	0.180	3.55	975	0.235	0.164	4.91	1260	0.089	0.144	-1.501	1.923	0.390
250S162-43	0.0451	0.289	0.98	0.302	0.242	1.022	0.111	0.620	0.302	0.240	5.22	1265	0.302	0.217	6.50	1917	0.196	0.182	-1.489	1.909	0.392
250S162-54	0.0566	0.358	1.22	0.370	0.296	1.016	0.135	0.613	0.370	0.296	6.57	1553	0.370	0.284	9.42	2353	0.383	0.219	-1.482	1.898	0.391
250S162-68	0.0713	0.443	1.51	0.450	0.360	1.007	0.162	0.605	0.450	0.360	8.21	1891	0.450	0.357	12.11	2866	0.752	0.262	-1.474	1.885	0.389
250S200-33	0.0346	0.258	0.88	0.279	0.223	1.040	0.154	0.773	0.276	0.196	3.87	975	0.265	0.179	5.37	1260	0.103	0.299	-1.960	2.350	0.304
250S200-43	0.0451	0.334	1.14	0.358	0.287	1.036	0.198	0.769	0.358	0.278	5.49	1265	0.358	0.252	7.54	1917	0.227	0.379	-1.948	2.336	0.305
250S200-54	0.0566	0.415	1.41	0.440	0.352	1.030	0.241	0.763	0.440	0.352	7.65	1553	0.440	0.321	9.61	2353	0.443	0.459	-1.942	2.326	0.303
250S200-68	0.0713	0.515	1.75	0.537	0.430	1.022	0.293	0.754	0.537	0.430	9.57	1891	0.537	0.417	13.84	2866	0.872	0.554	-1.935	2.315	0.301
250S200-97	0.1017	0.711	2.42	0.718	0.575	1.005	0.386	0.736	0.718	0.575	13.36	2506	0.718	0.575	19.82	3798	2.452	0.720	-1.923	2.292	0.296
250S250-43	0.0451	0.379	1.29	0.426	0.341	1.060	0.336	0.941	0.426	0.298	5.90	1265	0.410	0.268	8.03	1917	0.257	0.634	-2.439	2.821	0.253
250S250-54	0.0566	0.471	1.60	0.524	0.419	1.055	0.412	0.935	0.524	0.380	7.50	1553	0.521	0.346	10.35	2353	0.503	0.771	-2.433	2.812	0.251
250S250-68	0.0713	0.586	1.99	0.643	0.514	1.047	0.503	0.926	0.643	0.495	10.79	1891	0.643	0.447	13.38	2866	0.993	0.934	-2.427	2.800	0.249
250S250-97	0.1017	0.813	2.77	0.864	0.692	1.031	0.670	0.908	0.864	0.690	15.60	2506	0.864	0.663	22.31	3798	2.803	1.227	-2.415	2.778	0.244
250T100-33	0.0346	0.156	0.53	0.162	0.123	1.022	0.015	0.307	0.150	0.098	1.93	1024	0.143	0.092	2.75	1260	0.062	0.018	-0.566	1.208	0.780
250T100-43	0.0451	0.203	0.69	0.212	0.159	1.023	0.019	0.305	0.207	0.139	2.74	1356	0.198	0.130	3.88	2054	0.137	0.023	-0.561	1.206	0.783
250T100-54	0.0566	0.254	0.86	0.269	0.199	1.029	0.023	0.303	0.269	0.189	3.73	1692	0.265	0.177	5.31	2563	0.271	0.029	-0.557	1.209	0.787
250T100-68	0.0713	0.320	1.09	0.344	0.251	1.038	0.029	0.300	0.344	0.251	5.58	2111	0.344	0.243	7.26	3199	0.542	0.037	-0.553	1.214	0.792
250T100-97	0.1017	0.455	1.55	0.508	0.356	1.056	0.039	0.293	0.508	0.356	8.27	2954	0.508	0.356	12.27	4476	1.570	0.054	-0.545	1.224	0.802
250T125-33	0.0346	0.173	0.59	0.192	0.145	1.054	0.027	0.397	0.166	0.103	2.03	1024	0.157	0.096	2.87	1260	0.069	0.033	-0.771	1.365	0.680
250T125-43	0.0451	0.225	0.77	0.250	0.188	1.055	0.035	0.395	0.231	0.147	2.91	1356	0.220	0.137	4.09	2054	0.153	0.042	-0.766	1.362	0.683
250T125-54	0.0566	0.282	0.96	0.318	0.236	1.062	0.043	0.392	0.310	0.203	4.01	1692	0.297	0.188	5.64	2563	0.301	0.054	-0.763	1.365	0.688
250T125-68	0.0713	0.355	1.21	0.408	0.297	1.072	0.054	0.389	0.408	0.281	5.56	2111	0.402	0.262	7.85	3199	0.602	0.068	-0.758	1.369	0.694
250T125-97	0.1017	0.506	1.72	0.604	0.423	1.092	0.074	0.383	0.604	0.423	9.56	2954	0.604	0.423	12.67	4476	1.745	0.100	-0.749	1.379	0.705
250T150-33	0.0346	0.190	0.65	0.221	0.167	1.079	0.045	0.485	0.179	0.107	2.11	1024	0.170	0.099	2.98	1260	0.076	0.054	-0.986	1.540	0.590
250T150-43	0.0451	0.248	0.84	0.289	0.217	1.080	0.058	0.483	0.252	0.154	3.03	1356	0.238	0.142	4.25	2054	0.168	0.070	-0.981	1.537	0.593
250T150-54	0.0566	0.311	1.06	0.368	0.273	1.088	0.072	0.481	0.342	0.213	4.22	1692	0.325	0.197	5.89	2563	0.332	0.088	-0.977	1.539	0.597
250T150-68	0.0713	0.391	1.33	0.472	0.344	1.099	0.089	0.478	0.465	0.299	5.92	2111	0.445	0.276	8.27	3199	0.663	0.113	-0.972	1.543	0.603
250T150-97	0.1017	0.557	1.90	0.701	0.491	1.121	0.124	0.471	0.701	0.491	9.69	2954	0.701	0.463	13.86	4476	1.921	0.167	-0.963	1.551	0.615
250T200-33	0.0346	0.225	0.76	0.280	0.212	1.117	0.097	0.658	0.203	0.112	2.22	1024	0.191	0.104	3.12	1260	0.090	0.118	-1.432	1.932	0.450
250T200-43	0.0451	0.293	1.00	0.366	0.275	1.118	0.126	0.657	0.288	0.163	3.21	1356	0.270	0.150	4.48	2054	0.198	0.153	-1.427	1.928	0.452
250T200-54	0.0566	0.367	1.25	0.466	0.346	1.127	0.157	0.654	0.396	0.228	4.51	1692	0.371	0.209	6.25	2563	0.392	0.195	-1.422	1.929	0.456
250T200-68	0.0713	0.462	1.57	0.600	0.437	1.139	0.196	0.652	0.548	0.324	6.41	2111	0.517	0.296	8.86	3199	0.783	0.251	-1.417	1.932	0.462
250T200-97	0.1017	0.659	2.24	0.893	0.626	1.165	0.275	0.646	0.893	0.556	10.99	2954	0.856	0.510	15.27	4476	2.271	0.373	-1.408	1.938	0.472
250T250-43	0.0451	0.338	1.15	0.443	0.333	1.146	0.230	0.826	0.318	0.169	3.34	1356	0.296	0.155	4.64	2054	0.229	0.283	-1.888	2.358	0.359
250T250-54	0.0566	0.424	1.44	0.565	0.419	1.155	0.287	0.824	0.440	0.238	4.70	1692	0.410	0.217	6.50	2563	0.453	0.361	-1.884	2.358	0.362
250T250-68	0.0713	0.534	1.82	0.728	0.530	1.168	0.360	0.821	0.616	0.341	6.74	2111	0.576	0.310	9.27	3199	0.904	0.465	-1.878	2.359	0.366
250T250-97	0.1017	0.761	2.59	1.086	0.761	1.195	0.506	0.815	1.028	0.596	11.79	2954	0.972	0.541	16.20	4476	2.622	0.695	-1.868	2.363	0.375
250T300-54	0.0566	0.480	1.63	0.664	0.492	1.176	0.470	0.989	0.477	0.245	4.85	1692	0.443	0.223	6.69	2563	0.513	0.599	-2.354	2.811	0.299
250T300-68	0.0713	0.605	2.06	0.856	0.623	1.189	0.589	0.987	0.674	0.353	6.98	2111	0.626	0.319	9.56	3199	1.025	0.774	-2.349	2.811	0.302
250T300-97	0.1017	0.862	2.93	1.279	0.896	1.218	0.830	0.981	1.144	0.625	12.35	2954	1.072	0.563	16.86	4476	2.973	1.159	-2.338	2.813	0.309

For Section Properties Table Notes see page 3

A = Cross Sectional Area
Ix = Moment of inertia (x-axis)
Sx = Section modulus (x-axis)
Rx = Radius of gyration (x-axis)
Iy = Moment of inertia (y-axis)
Ry = Radius of gyration (y-axis)
Ma = Allowable bending moment
Va = Allowable shear force
J = St. Vennant torsion constant
Cw = Torsional warping constant
Xo = Distance from center of gravity to shear center along x-axis
Ro = Polar radius of gyration about the centroidal principal axis
ß = Beta coefficient

Member	Thickness	Area	Weight	Gross					33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties				
				Ix	Sx	Rx	Iy	Ry	Ix	Sx	Ma	Va	Ix	Sx	Ma	Va	Jx1000	Cw	Xo	Ro	Beta
	in	in^2	lb/ft	in^4	in^3	in	in^4	in	in^4	in^3	in-k	lb	in^4	in^3	in-k	lb	in^4	in^6	in	in	
350S137-33	0.0346	0.232	0.79	0.441	0.252	1.380	0.059	0.503	0.441	0.223	4.41	1024	0.441	0.191	5.72	1125	0.093	0.150	-1.040	1.800	0.666
350S137-43	0.0451	0.300	1.02	0.568	0.324	1.375	0.075	0.498	0.568	0.307	6.07	1739	0.568	0.282	8.44	2141	0.204	0.189	-1.029	1.788	0.669
350S137-54	0.0566	0.372	1.27	0.696	0.398	1.367	0.090	0.492	0.696	0.385	7.61	2253	0.696	0.366	10.95	3372	0.398	0.228	-1.020	1.775	0.670
350S137-68	0.0713	0.461	1.57	0.849	0.485	1.357	0.107	0.482	0.849	0.474	9.36	2774	0.849	0.472	14.12	4202	0.782	0.272	-1.010	1.759	0.670
350S137-97	0.1017	0.635	2.16	1.130	0.646	1.334	0.136	0.462	1.130	0.629	12.43	3765	1.130	0.629	18.84	5704	2.189	0.347	-0.990	1.724	0.670
350S162-33	0.0346	0.258	0.88	0.508	0.290	1.404	0.098	0.617	0.508	0.257	5.09	1024	0.508	0.226	6.77	1125	0.103	0.273	-1.351	2.044	0.563
350S162-43	0.0451	0.334	1.14	0.654	0.374	1.400	0.125	0.612	0.654	0.357	7.05	1739	0.654	0.309	9.25	2141	0.227	0.345	-1.339	2.031	0.565
350S162-54	0.0566	0.415	1.41	0.804	0.460	1.392	0.152	0.606	0.804	0.447	8.83	2253	0.804	0.426	12.74	3372	0.443	0.418	-1.331	2.019	0.566
350S162-68	0.0713	0.515	1.75	0.985	0.563	1.383	0.184	0.597	0.985	0.551	10.89	2774	0.985	0.549	16.44	4202	0.872	0.503	-1.321	2.004	0.565
350S162-97	0.1017	0.711	2.42	1.320	0.754	1.362	0.238	0.578	1.320	0.738	14.59	3765	1.320	0.738	22.10	5704	2.452	0.650	-1.303	1.972	0.564
350S200-33	0.0346	0.292	0.99	0.598	0.342	1.431	0.175	0.773	0.598	0.280	5.53	1024	0.580	0.248	7.43	1125	0.117	0.535	-1.789	2.418	0.452
350S200-43	0.0451	0.379	1.29	0.771	0.441	1.426	0.224	0.768	0.771	0.410	8.09	1739	0.771	0.361	10.82	2141	0.257	0.679	-1.777	2.405	0.454
350S200-54	0.0566	0.471	1.60	0.950	0.543	1.420	0.274	0.762	0.950	0.530	10.47	2253	0.950	0.470	14.07	3372	0.503	0.827	-1.769	2.393	0.453
350S200-68	0.0713	0.586	1.99	1.167	0.667	1.411	0.333	0.754	1.167	0.655	12.95	2774	1.167	0.638	19.10	4202	0.993	1.001	-1.761	2.379	0.452
350S200-97	0.1017	0.813	2.77	1.576	0.901	1.393	0.440	0.736	1.576	0.884	17.48	3765	1.576	0.884	26.48	5704	2.803	1.313	-1.744	2.350	0.449
350S250-43	0.0451	0.424	1.44	0.906	0.518	1.461	0.380	0.946	0.906	0.433	8.56	1739	0.883	0.379	11.35	2141	0.288	1.141	-2.251	2.846	0.374
350S250-54	0.0566	0.528	1.80	1.118	0.639	1.455	0.467	0.940	1.118	0.559	11.05	2253	1.111	0.500	14.98	3372	0.564	1.394	-2.243	2.834	0.374
350S250-68	0.0713	0.657	2.24	1.376	0.787	1.447	0.570	0.931	1.376	0.747	14.77	2774	1.376	0.662	19.82	4202	1.114	1.695	-2.235	2.820	0.372
350S250-97	0.1017	0.915	3.11	1.870	1.069	1.430	0.762	0.913	1.870	1.052	20.79	3765	1.870	1.007	30.16	5704	3.154	2.245	-2.218	2.793	0.369
350T100-33	0.0346	0.190	0.65	0.348	0.191	1.353	0.016	0.290	0.324	0.158	3.11	1024	0.311	0.149	4.47	1077	0.076	0.038	-0.489	1.468	0.889
350T100-43	0.0451	0.248	0.84	0.454	0.248	1.354	0.021	0.288	0.443	0.221	4.36	1739	0.427	0.208	6.24	2141	0.168	0.049	-0.485	1.467	0.891
350T100-54	0.0566	0.311	1.06	0.574	0.310	1.359	0.025	0.286	0.574	0.296	5.86	2392	0.565	0.280	8.40	3372	0.332	0.061	-0.481	1.470	0.893
350T100-68	0.0713	0.391	1.33	0.730	0.390	1.367	0.031	0.283	0.730	0.390	8.67	2994	0.730	0.379	11.34	4536	0.663	0.077	-0.477	1.475	0.895
350T100-97	0.1017	0.557	1.90	1.064	0.552	1.382	0.042	0.276	1.064	0.552	12.83	4213	1.064	0.552	19.03	6383	1.921	0.111	-0.469	1.485	0.900
350T125-33	0.0346	0.207	0.71	0.405	0.222	1.397	0.030	0.379	0.354	0.165	3.27	1024	0.339	0.156	4.67	1077	0.083	0.070	-0.677	1.598	0.820
350T125-43	0.0451	0.270	0.92	0.528	0.288	1.397	0.038	0.377	0.490	0.233	4.61	1739	0.469	0.219	6.55	2141	0.183	0.090	-0.673	1.596	0.822
350T125-54	0.0566	0.339	1.15	0.668	0.361	1.404	0.048	0.375	0.651	0.317	6.26	2392	0.626	0.297	8.89	3372	0.362	0.113	-0.669	1.599	0.825
350T125-68	0.0713	0.427	1.45	0.851	0.454	1.412	0.059	0.372	0.851	0.433	8.55	2994	0.839	0.407	12.18	4536	0.723	0.143	-0.665	1.605	0.828
350T125-97	0.1017	0.608	2.07	1.243	0.645	1.430	0.081	0.366	1.243	0.645	14.56	4213	1.243	0.645	19.30	6383	2.096	0.207	-0.656	1.615	0.835
350T150-33	0.0346	0.225	0.76	0.461	0.253	1.432	0.049	0.469	0.382	0.171	3.39	1024	0.364	0.162	4.84	1077	0.090	0.114	-0.876	1.743	0.747
350T150-43	0.0451	0.293	1.00	0.601	0.328	1.433	0.064	0.467	0.531	0.243	4.80	1739	0.505	0.227	6.80	2141	0.198	0.148	-0.872	1.741	0.749
350T150-54	0.0566	0.367	1.25	0.761	0.412	1.440	0.079	0.465	0.712	0.332	6.57	2392	0.679	0.310	9.28	3372	0.392	0.186	-0.868	1.744	0.752
350T150-68	0.0713	0.462	1.57	0.972	0.518	1.450	0.099	0.462	0.957	0.459	9.07	2994	0.919	0.428	12.81	4536	0.783	0.236	-0.863	1.749	0.756
350T150-97	0.1017	0.659	2.24	1.422	0.738	1.469	0.136	0.455	1.422	0.738	14.58	4213	1.422	0.701	20.98	6383	2.271	0.343	-0.854	1.759	0.764
350T200-33	0.0346	0.259	0.88	0.574	0.315	1.487	0.108	0.647	0.428	0.181	3.57	1024	0.410	0.161	4.82	1077	0.103	0.248	-1.297	2.077	0.610
350T200-43	0.0451	0.338	1.15	0.749	0.409	1.489	0.140	0.645	0.600	0.257	5.09	1739	0.568	0.240	7.18	2141	0.229	0.322	-1.292	2.074	0.612
350T200-54	0.0566	0.424	1.44	0.949	0.513	1.496	0.175	0.642	0.814	0.355	7.01	2392	0.770	0.329	9.85	3372	0.453	0.408	-1.288	2.076	0.615
350T200-68	0.0713	0.534	1.82	1.213	0.647	1.508	0.218	0.639	1.112	0.496	9.80	2994	1.054	0.458	13.71	4536	0.904	0.520	-1.283	2.080	0.620
350T200-97	0.1017	0.761	2.59	1.780	0.923	1.530	0.305	0.633	1.779	0.831	16.41	4213	1.708	0.769	23.01	6383	2.622	0.760	-1.274	2.089	0.628
350T250-43	0.0451	0.383	1.30	0.896	0.490	1.530	0.257	0.819	0.659	0.268	5.29	1739	0.621	0.249	7.46	2141	0.260	0.592	-1.733	2.452	0.501
350T250-54	0.0566	0.480	1.63	1.137	0.615	1.538	0.321	0.817	0.900	0.371	7.33	2392	0.846	0.343	10.26	3372	0.513	0.750	-1.728	2.454	0.504
350T250-68	0.0713	0.605	2.06	1.454	0.776	1.550	0.401	0.814	1.241	0.522	10.31	2994	1.168	0.479	14.35	4536	1.025	0.958	-1.723	2.457	0.508
350T250-97	0.1017	0.862	2.93	2.139	1.109	1.575	0.563	0.808	2.027	0.889	17.56	4213	1.924	0.815	24.39	6383	2.973	1.407	-1.713	2.464	0.516
350T300-54	0.0566	0.537	1.83	1.324	0.716	1.570	0.525	0.989	0.974	0.383	7.57	2392	0.912	0.353	10.57	3372	0.573	1.237	-2.182	2.864	0.420
350T300-68	0.0713	0.676	2.30	1.695	0.904	1.583	0.657	0.986	1.352	0.541	10.69	2994	1.265	0.495	14.83	4536	1.146	1.583	-2.177	2.867	0.423
350T300-97	0.1017	0.964	3.28	2.497	1.295	1.610	0.926	0.980	2.242	0.931	18.40	4213	2.110	0.848	25.40	6383	3.323	2.331	-2.166	2.871	0.431

For Section Properties Table Notes see page 3

A = Cross Sectional Area
Ix = Moment of inertia (x-axis)
Sx = Section modulus (x-axis)
Rx = Radius of gyration (x-axis)
Iy = Moment of inertia (y-axis)
Ry = Radius of gyration (y-axis)
Ma = Allowable bending moment
Va = Allowable shear force
J = St. Vennant torsion constant
Cw = Torsional warping constant
Xo = Distance from center of gravity to shear center along x-axis
Ro = Polar radius of gyration about the centroidal principal axis
ß = Beta coefficient

Member	Thickness	Gross Area	Gross Weight	Gross Ix	Gross Sx	Gross Rx	Gross Iy	Gross Ry	33 ksi Effective Properties Ix	33 ksi Sx	33 ksi Ma	33 ksi Va	50 ksi Effective Properties Ix	50 ksi Sx	50 ksi Ma	50 ksi Va	Torsional Properties Jx1000	Cw	Xo	Ro	Beta
	in	in^2	lb/ft	in^4	in^3	in	in^4	in	in^4	in^3	in-k	lb	in^4	in^3	in-k	lb	in^4	in^6	in	in	
362S137-33	0.0346	0.236	0.80	0.479	0.264	1.424	0.059	0.501	0.479	0.232	4.59	1024	0.479	0.198	5.94	1083	0.094	0.162	-1.026	1.826	0.684
362S137-43	0.0451	0.306	1.04	0.616	0.340	1.419	0.075	0.497	0.616	0.320	6.32	1739	0.616	0.293	8.78	2141	0.207	0.204	-1.015	1.814	0.687
362S137-54	0.0566	0.379	1.29	0.756	0.417	1.411	0.091	0.490	0.756	0.402	7.94	2341	0.756	0.381	11.42	3372	0.405	0.246	-1.006	1.801	0.688
362S137-68	0.0713	0.470	1.60	0.922	0.509	1.401	0.109	0.480	0.922	0.498	9.84	2884	0.922	0.493	14.77	4370	0.797	0.294	-0.996	1.784	0.689
362S137-97	0.1017	0.648	2.20	1.229	0.678	1.377	0.137	0.460	1.229	0.662	13.09	3922	1.229	0.662	19.83	5943	2.233	0.375	-0.975	1.749	0.689
362S162-33	0.0346	0.262	0.89	0.551	0.304	1.450	0.099	0.616	0.551	0.268	5.29	1024	0.551	0.235	7.04	1083	0.105	0.293	-1.335	2.065	0.582
362S162-43	0.0451	0.340	1.16	0.710	0.392	1.445	0.127	0.611	0.710	0.372	7.34	1739	0.710	0.321	9.62	2141	0.230	0.371	-1.323	2.052	0.585
362S162-54	0.0566	0.422	1.44	0.873	0.481	1.438	0.154	0.604	0.873	0.466	9.22	2341	0.873	0.444	13.28	3372	0.451	0.449	-1.314	2.040	0.585
362S162-68	0.0713	0.524	1.78	1.069	0.590	1.429	0.186	0.596	1.069	0.579	11.43	2884	1.069	0.574	17.18	4370	0.887	0.540	-1.305	2.024	0.585
362S162-97	0.1017	0.724	2.46	1.435	0.792	1.408	0.241	0.577	1.435	0.776	15.33	3922	1.435	0.776	23.23	5943	2.496	0.699	-1.286	1.992	0.583
362S200-33	0.0346	0.297	1.01	0.648	0.358	1.478	0.177	0.772	0.648	0.291	5.76	1024	0.629	0.258	7.73	1083	0.118	0.571	-1.770	2.432	0.470
362S200-43	0.0451	0.385	1.31	0.836	0.461	1.474	0.227	0.767	0.836	0.427	8.43	1739	0.836	0.376	11.26	2141	0.261	0.726	-1.758	2.419	0.472
362S200-54	0.0566	0.479	1.63	1.030	0.568	1.467	0.277	0.761	1.030	0.553	10.93	2341	1.030	0.490	14.66	3372	0.511	0.884	-1.750	2.407	0.471
362S200-68	0.0713	0.595	2.02	1.265	0.698	1.458	0.337	0.753	1.265	0.687	13.58	2884	1.265	0.666	19.95	4370	1.008	1.070	-1.741	2.393	0.470
362S200-97	0.1017	0.826	2.81	1.711	0.944	1.44	0.446	0.735	1.711	0.928	18.34	3922	1.711	0.928	27.80	5943	2.847	1.404	-1.724	2.363	0.468
362S250-43	0.0451	0.430	1.46	0.980	0.541	1.510	0.385	0.946	0.980	0.451	8.91	1739	0.957	0.394	11.81	2141	0.292	1.219	-2.230	2.854	0.390
362S250-54	0.0566	0.535	1.82	1.210	0.668	1.504	0.473	0.940	1.210	0.583	11.52	2341	1.203	0.521	15.60	3372	0.571	1.489	-2.222	2.843	0.389
362S250-68	0.0713	0.666	2.27	1.490	0.822	1.496	0.578	0.931	1.490	0.782	15.46	2884	1.490	0.690	20.67	4370	1.129	1.812	-2.213	2.829	0.388
362S250-97	0.1017	0.927	3.16	2.027	1.118	1.478	0.772	0.912	2.027	1.103	21.79	3922	2.027	1.055	31.59	5943	3.197	2.402	-2.196	2.800	0.385
362S300-54	0.0566	0.634	2.16	1.433	0.791	1.503	0.863	1.166	1.433	0.687	13.58	2341	1.390	0.614	18.39	3372	0.677	3.805	-2.995	3.549	0.288
362S300-68	0.0713	0.791	2.69	1.770	0.976	1.496	1.062	1.158	1.770	0.948	18.73	2884	1.770	0.858	25.69	4370	1.341	4.657	-2.989	3.537	0.286
362S300-97	0.1017	1.105	3.76	2.420	1.335	1.480	1.440	1.141	2.420	1.319	26.07	3922	2.420	1.307	39.12	5943	3.811	6.255	-2.976	3.514	0.283
362T100-33	0.0346	0.194	0.66	0.378	0.200	1.394	0.016	0.288	0.352	0.166	3.28	1024	0.338	0.157	4.71	1039	0.078	0.041	-0.481	1.502	0.898
362T100-43	0.0451	0.253	0.86	0.492	0.260	1.394	0.021	0.286	0.481	0.232	4.58	1739	0.464	0.219	6.56	2141	0.172	0.053	-0.477	1.501	0.899
362T100-54	0.0566	0.318	1.08	0.622	0.326	1.400	0.026	0.284	0.622	0.311	6.15	2480	0.613	0.295	8.82	3372	0.339	0.066	-0.473	1.504	0.901
362T100-68	0.0713	0.400	1.36	0.792	0.409	1.407	0.032	0.281	0.792	0.409	9.09	3104	0.792	0.398	11.90	4703	0.678	0.084	-0.469	1.509	0.903
362T100-97	0.1017	0.570	1.94	1.152	0.579	1.422	0.043	0.274	1.152	0.579	13.45	4370	1.152	0.579	19.96	6622	1.965	0.120	-0.461	1.520	0.908
362T125-33	0.0346	0.212	0.72	0.438	0.232	1.438	0.030	0.377	0.384	0.174	3.44	1024	0.368	0.164	4.92	1039	0.085	0.075	-0.667	1.630	0.832
362T125-43	0.0451	0.276	0.94	0.571	0.302	1.439	0.039	0.375	0.531	0.245	4.84	1739	0.508	0.230	6.89	2141	0.187	0.097	-0.663	1.628	0.834
362T125-54	0.0566	0.346	1.18	0.723	0.378	1.445	0.048	0.373	0.705	0.332	6.57	2480	0.678	0.312	9.34	3372	0.369	0.122	-0.659	1.632	0.837
362T125-68	0.0713	0.436	1.48	0.921	0.475	1.454	0.060	0.370	0.921	0.453	8.95	3104	0.907	0.427	12.78	4703	0.738	0.155	-0.655	1.637	0.840
362T125-97	0.1017	0.621	2.11	1.343	0.675	1.471	0.082	0.363	1.343	0.675	15.24	4370	1.343	0.675	20.20	6622	2.140	0.223	-0.646	1.647	0.846
362T150-33	0.0346	0.229	0.78	0.499	0.264	1.475	0.050	0.467	0.414	0.180	3.56	1024	0.395	0.170	5.09	1039	0.091	0.123	-0.865	1.772	0.762
362T150-43	0.0451	0.298	1.02	0.650	0.343	1.476	0.064	0.465	0.574	0.255	5.04	1739	0.547	0.239	7.15	2141	0.202	0.160	-0.860	1.771	0.764
362T150-54	0.0566	0.374	1.27	0.823	0.431	1.483	0.080	0.462	0.769	0.349	6.89	2480	0.735	0.325	9.74	3372	0.400	0.201	-0.856	1.774	0.767
362T150-68	0.0713	0.471	1.60	1.050	0.542	1.492	0.099	0.459	1.034	0.480	9.49	3104	0.993	0.449	13.43	4703	0.799	0.256	-0.852	1.779	0.771
362T150-97	0.1017	0.672	2.29	1.534	0.771	1.512	0.138	0.453	1.534	0.771	15.23	4370	1.534	0.733	21.94	6622	2.315	0.37	-0.843	1.789	0.778
362T200-33	0.0346	0.264	0.90	0.619	0.328	1.532	0.110	0.645	0.464	0.190	3.76	1024	0.445	0.167	5.00	1039	0.105	0.269	-1.282	2.100	0.627
362T200-43	0.0451	0.343	1.17	0.808	0.427	1.534	0.142	0.643	0.649	0.270	5.34	1739	0.615	0.252	7.55	2141	0.233	0.349	-1.277	2.097	0.629
362T200-54	0.0566	0.431	1.47	1.024	0.536	1.541	0.177	0.640	0.879	0.372	7.35	2480	0.832	0.345	10.34	3372	0.460	0.441	-1.273	2.099	0.632
362T200-68	0.0713	0.543	1.85	1.307	0.675	1.552	0.221	0.638	1.199	0.519	10.26	3104	1.138	0.480	14.37	4703	0.919	0.562	-1.268	2.104	0.636
362T200-97	0.1017	0.773	2.63	1.917	0.963	1.575	0.308	0.631	1.915	0.867	17.14	4370	1.839	0.803	24.06	6622	2.666	0.820	-1.259	2.112	0.645
362T250-43	0.0451	0.389	1.32	0.966	0.510	1.577	0.260	0.818	0.713	0.281	5.56	1739	0.672	0.262	7.85	2141	0.263	0.640	-1.715	2.469	0.517
362T250-54	0.0566	0.487	1.66	1.224	0.641	1.585	0.324	0.816	0.971	0.389	7.69	2480	0.914	0.360	10.77	3372	0.521	0.810	-1.711	2.471	0.520
362T250-68	0.0713	0.614	2.09	1.565	0.808	1.597	0.406	0.813	1.337	0.546	10.79	3104	1.259	0.502	15.04	4703	1.040	1.035	-1.706	2.474	0.524
362T250-97	0.1017	0.875	2.98	2.300	1.155	1.621	0.570	0.807	2.180	0.928	18.34	4370	2.069	0.851	25.49	6622	3.016	1.517	-1.696	2.481	0.533
362T300-54	0.0566	0.544	1.85	1.425	0.746	1.618	0.531	0.988	1.051	0.402	7.94	2480	0.985	0.371	11.11	3372	0.581	1.336	-2.163	2.876	0.435
362T300-68	0.0713	0.685	2.33	1.823	0.941	1.631	0.665	0.985	1.456	0.566	11.19	3104	1.364	0.519	15.55	4703	1.161	1.708	-2.158	2.879	0.438
362T300-97	0.1017	0.977	3.32	2.682	1.348	1.657	0.937	0.979	2.409	0.972	19.21	4370	2.268	0.887	26.54	6622	3.367	2.512	-2.147	2.884	0.446

For Section Properties Table Notes see page 3

A = Cross Sectional Area
Ix = Moment of inertia (x-axis)
Sx = Section modulus (x-axis)
Rx = Radius of gyration (x-axis)
Iy = Moment of inertia (y-axis)
Ry = Radius of gyration (y-axis)
Ma = Allowable bending moment
Va = Allowable shear force
J = St. Vennant torsion constant
Cw = Torsional warping constant
Xo = Distance from center of gravity to shear center along x-axis
Ro = Polar radius of gyration about the centroidal principal axis
ß = Beta coefficient

Member	Thickness	Area	Weight	Gross					33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties				
				Ix	Sx	Rx	Iy	Ry	Ix	Sx	Ma	Va	Ix	Sx	Ma	Va	Jx1000	Cw	Xo	Ro	Beta
	in	in^2	lb/ft	in^4	in^3	in	in^4	in	in^4	in^3	in-k	lb	in^4	in^3	in-k	lb	in^4	in^6	in	in	
400S137-33	0.0346	0.249	0.85	0.603	0.301	1.556	0.061	0.496	0.603	0.259	5.12	976	0.603	0.221	6.61	976	0.099	0.200	-0.987	1.908	0.732
400S137-43	0.0451	0.323	1.10	0.776	0.388	1.551	0.078	0.491	0.776	0.359	7.09	1739	0.776	0.328	9.81	2141	0.219	0.253	-0.976	1.897	0.735
400S137-54	0.0566	0.401	1.36	0.953	0.477	1.542	0.094	0.484	0.953	0.453	8.96	2603	0.953	0.428	12.82	3372	0.428	0.305	-0.967	1.884	0.737
400S137-68	0.0713	0.497	1.69	1.165	0.582	1.531	0.112	0.475	1.165	0.567	11.21	3215	1.165	0.558	16.70	4871	0.842	0.365	-0.956	1.866	0.738
400S137-97	0.1017	0.686	2.33	1.557	0.779	1.507	0.142	0.454	1.557	0.764	15.10	4394	1.557	0.764	22.88	6658	2.365	0.467	-0.935	1.831	0.739
400S162-33	0.0346	0.275	0.94	0.692	0.346	1.586	0.103	0.611	0.692	0.299	5.91	976	0.692	0.262	7.84	976	0.110	0.358	-1.288	2.133	0.635
400S162-43	0.0451	0.357	1.21	0.892	0.446	1.581	0.131	0.606	0.892	0.417	8.23	1739	0.892	0.359	10.75	2141	0.242	0.453	-1.276	2.121	0.638
400S162-54	0.0566	0.443	1.51	1.098	0.549	1.574	0.159	0.600	1.098	0.526	10.39	2603	1.098	0.498	14.90	3372	0.473	0.550	-1.268	2.108	0.638
400S162-68	0.0713	0.550	1.87	1.346	0.673	1.564	0.192	0.591	1.346	0.658	13.00	3215	1.346	0.648	19.41	4871	0.933	0.663	-1.258	2.092	0.639
400S162-97	0.1017	0.762	2.59	1.812	0.906	1.542	0.249	0.572	1.812	0.892	17.63	4394	1.812	0.892	26.70	6658	2.628	0.860	-1.238	2.059	0.638
400S200-33	0.0346	0.310	1.05	0.812	0.406	1.619	0.183	0.769	0.812	0.326	6.44	976	0.790	0.288	8.63	976	0.124	0.689	-1.715	2.481	0.522
400S200-43	0.0451	0.402	1.37	1.047	0.524	1.615	0.235	0.764	1.047	0.478	9.45	1739	1.047	0.420	12.59	2141	0.272	0.876	-1.703	2.468	0.524
400S200-54	0.0566	0.500	1.70	1.292	0.646	1.608	0.287	0.758	1.292	0.623	12.30	2603	1.292	0.549	16.43	3372	0.534	1.068	-1.695	2.456	0.524
400S200-68	0.0713	0.622	2.12	1.589	0.795	1.599	0.349	0.750	1.589	0.78	15.40	3215	1.589	0.751	22.48	4871	1.054	1.295	-1.686	2.441	0.523
400S200-97	0.1017	0.864	2.94	2.155	1.077	1.579	0.462	0.731	2.155	1.063	21.01	4394	2.155	1.063	31.83	6658	2.978	1.704	-1.668	2.410	0.521
400S250-43	0.0451	0.447	1.52	1.224	0.612	1.655	0.399	0.945	1.224	0.505	9.97	1739	1.197	0.440	13.18	2141	0.303	1.473	-2.168	2.887	0.436
400S250-54	0.0566	0.556	1.89	1.512	0.756	1.649	0.490	0.938	1.512	0.654	12.92	2603	1.504	0.583	17.46	3372	0.594	1.801	-2.160	2.875	0.435
400S250-68	0.0713	0.693	2.36	1.864	0.932	1.640	0.599	0.929	1.864	0.883	17.45	3215	1.864	0.776	23.24	4871	1.174	2.193	-2.151	2.860	0.434
400S250-97	0.1017	0.966	3.29	2.541	1.271	1.622	0.801	0.911	2.541	1.256	24.83	4394	2.541	1.202	35.98	6658	3.329	2.915	-2.133	2.830	0.432
400S300-54	0.0566	0.655	2.23	1.792	0.896	1.654	0.895	1.169	1.792	0.774	15.29	2603	1.741	0.690	20.66	3372	0.700	4.430	-2.926	3.559	0.324
400S300-68	0.0713	0.818	2.78	2.215	1.108	1.646	1.102	1.161	2.215	1.073	21.21	3215	2.215	0.968	28.97	4871	1.386	5.426	-2.919	3.547	0.322
400S300-97	0.1017	1.144	3.89	3.036	1.518	1.629	1.496	1.144	3.036	1.504	29.71	4394	3.036	1.488	44.54	6658	3.942	7.298	-2.905	3.522	0.320
400T100-33	0.0346	0.207	0.71	0.476	0.229	1.514	0.016	0.282	0.447	0.181	3.58	940	0.430	0.160	4.78	940	0.083	0.051	-0.458	1.607	0.919
400T100-43	0.0451	0.27	0.92	0.620	0.298	1.515	0.021	0.280	0.606	0.267	5.28	1739	0.588	0.243	7.29	2078	0.183	0.066	-0.454	1.606	0.920
400T100-54	0.0566	0.339	1.15	0.783	0.373	1.520	0.026	0.278	0.783	0.357	7.06	2739	0.771	0.339	10.16	3372	0.362	0.083	-0.451	1.609	0.922
400T100-68	0.0713	0.427	1.45	0.995	0.468	1.527	0.032	0.275	0.995	0.468	10.42	3435	0.995	0.456	13.65	5205	0.723	0.104	-0.447	1.614	0.923
400T100-97	0.1017	0.608	2.07	1.443	0.663	1.541	0.044	0.268	1.443	0.663	15.40	4842	1.443	0.663	22.86	7337	2.096	0.148	-0.439	1.624	0.927
400T125-33	0.0346	0.225	0.76	0.549	0.265	1.563	0.031	0.371	0.484	0.201	3.97	940	0.465	0.189	5.66	940	0.09	0.094	-0.639	1.728	0.863
400T125-43	0.0451	0.293	1.00	0.716	0.344	1.563	0.040	0.369	0.666	0.282	5.57	1739	0.639	0.266	7.96	2078	0.198	0.122	-0.635	1.727	0.865
400T125-54	0.0566	0.367	1.25	0.904	0.431	1.569	0.049	0.366	0.882	0.381	7.53	2739	0.849	0.359	10.74	3372	0.392	0.153	-0.631	1.730	0.867
400T125-68	0.0713	0.462	1.57	1.150	0.541	1.577	0.061	0.363	1.150	0.517	10.22	3435	1.134	0.488	14.62	5205	0.783	0.193	-0.627	1.736	0.870
400T125-97	0.1017	0.659	2.24	1.673	0.768	1.594	0.084	0.357	1.673	0.768	17.35	4842	1.673	0.768	23.00	7337	2.271	0.277	-0.618	1.746	0.875
400T150-33	0.0346	0.242	0.82	0.622	0.300	1.603	0.051	0.460	0.519	0.208	4.12	940	0.500	0.187	5.60	940	0.097	0.154	-0.831	1.863	0.801
400T150-43	0.0451	0.315	1.07	0.811	0.390	1.604	0.066	0.458	0.719	0.293	5.80	1739	0.687	0.276	8.26	2078	0.214	0.200	-0.827	1.862	0.803
400T150-54	0.0566	0.396	1.35	1.025	0.489	1.610	0.082	0.456	0.960	0.399	7.89	2739	0.918	0.374	11.19	3372	0.422	0.251	-0.823	1.865	0.805
400T150-68	0.0713	0.498	1.69	1.306	0.615	1.619	0.102	0.453	1.286	0.548	10.82	3435	1.237	0.513	15.35	5205	0.844	0.318	-0.818	1.870	0.808
400T150-97	0.1017	0.710	2.41	1.903	0.874	1.638	0.141	0.447	1.903	0.874	17.27	4842	1.903	0.832	24.92	7337	2.447	0.459	-0.810	1.881	0.815
400T200-33	0.0346	0.277	0.94	0.768	0.371	1.666	0.113	0.639	0.581	0.220	4.34	940	0.562	0.184	5.51	940	0.110	0.335	-1.240	2.173	0.674
400T200-43	0.0451	0.360	1.23	1.002	0.482	1.668	0.146	0.637	0.811	0.311	6.14	1739	0.769	0.291	8.72	2078	0.244	0.435	-1.235	2.171	0.676
400T200-54	0.0566	0.452	1.54	1.268	0.604	1.675	0.182	0.635	1.093	0.426	8.42	2739	1.037	0.397	11.88	3372	0.483	0.549	-1.231	2.173	0.679
400T200-68	0.0713	0.569	1.94	1.617	0.761	1.685	0.227	0.632	1.485	0.591	11.68	3435	1.412	0.549	16.42	5205	0.965	0.699	-1.226	2.178	0.683
400T200-97	0.1017	0.811	2.76	2.363	1.085	1.707	0.317	0.625	2.360	0.981	19.38	4842	2.268	0.911	27.28	7337	2.797	1.016	-1.217	2.187	0.691
400T250-43	0.0451	0.405	1.38	1.193	0.573	1.715	0.268	0.813	0.888	0.324	6.40	1739	0.840	0.303	9.06	2078	0.275	0.798	-1.666	2.525	0.565
400T250-54	0.0566	0.509	1.73	1.511	0.720	1.723	0.335	0.811	1.205	0.445	8.80	2739	1.137	0.413	12.38	3372	0.543	1.008	-1.661	2.527	0.568
400T250-68	0.0713	0.641	2.18	1.928	0.907	1.735	0.418	0.808	1.652	0.622	12.28	3435	1.559	0.574	17.19	5205	1.086	1.285	-1.656	2.531	0.572
400T250-97	0.1017	0.913	3.11	2.823	1.296	1.758	0.587	0.802	2.679	1.048	20.72	4842	2.546	0.965	28.89	7337	3.148	1.877	-1.646	2.539	0.580
400T300-54	0.0566	0.565	1.92	1.753	0.835	1.761	0.548	0.985	1.302	0.460	9.09	2739	1.224	0.426	12.77	3372	0.604	1.659	-2.107	2.917	0.478
400T300-68	0.0713	0.712	2.42	2.239	1.054	1.774	0.686	0.982	1.797	0.645	12.74	3435	1.687	0.594	17.78	5205	1.206	2.118	-2.102	2.920	0.482
400T300-97	0.1017	1.015	3.45	3.284	1.508	1.799	0.967	0.976	2.953	1.098	21.70	4842	2.786	1.005	30.09	7337	3.499	3.102	-2.091	2.926	0.489

For Section Properties Table Notes see page 3

A = Cross Sectional Area
Ix = Moment of inertia (x-axis)
Sx = Section modulus (x-axis)
Rx = Radius of gyration (x-axis)
Iy = Moment of inertia (y-axis)
Ry = Radius of gyration (y-axis)
Ma = Allowable bending moment
Va = Allowable shear force
J = St. Vennant torsion constant
Cw = Torsional warping constant
Xo = Distance from center of gravity to shear center along x-axis
Ro = Polar radius of gyration about the centroidal principal axis
ß = Beta coefficient

Member	Thickness	Area	Weight	Gross					33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties				
	in	in^2	lb/ft	Ix in^4	Sx in^3	Rx in	Iy in^4	Ry in	Ix in^4	Sx in^3	Ma in-k	Va lb	Ix in^4	Sx in^3	Ma in-k	Va lb	Jx1000 in^4	Cw in^6	Xo in	Ro in	Beta
550S137-33	0.0346	0.301	1.02	1.283	0.467	2.064	0.067	0.472	1.283	0.453	8.95	699	1.283	0.383	11.46	699	0.120	0.406	-0.858	2.285	0.859
550S137-43	0.0451	0.391	1.33	1.655	0.602	2.059	0.085	0.467	1.655	0.592	13.08	1550	1.655	0.574	17.19	1550	0.265	0.513	-0.848	2.275	0.861
550S137-54	0.0566	0.486	1.65	2.039	0.741	2.049	0.103	0.460	2.039	0.741	16.77	2739	2.039	0.714	24.03	3093	0.519	0.622	-0.839	2.261	0.862
550S137-68	0.0713	0.604	2.05	2.503	0.910	2.036	0.123	0.451	2.503	0.910	21.22	4347	2.503	0.909	31.42	5350	1.023	0.747	-0.828	2.243	0.864
550S137-97	0.1017	0.838	2.85	3.380	1.229	2.008	0.155	0.430	3.380	1.229	30.35	6282	3.380	1.229	44.72	9518	2.891	0.965	-0.805	2.206	0.867
550S162-33	0.0346	0.327	1.11	1.458	0.530	2.112	0.113	0.589	1.458	0.512	10.11	699	1.458	0.443	13.25	699	0.130	0.704	-1.134	2.468	0.789
550S162-43	0.0451	0.424	1.44	1.883	0.685	2.107	0.145	0.584	1.883	0.681	14.79	1550	1.883	0.624	18.69	1550	0.288	0.894	-1.123	2.458	0.791
550S162-54	0.0566	0.528	1.80	2.324	0.845	2.098	0.176	0.577	2.324	0.845	18.76	2739	2.324	0.811	26.86	3093	0.564	1.088	-1.114	2.445	0.792
550S162-68	0.0713	0.657	2.24	2.861	1.040	2.086	0.212	0.568	2.861	1.040	23.72	4347	2.861	1.031	34.94	5350	1.114	1.316	-1.103	2.427	0.793
550S162-97	0.1017	0.915	3.11	3.886	1.413	2.061	0.276	0.549	3.886	1.413	33.91	6282	3.886	1.413	50.13	9518	3.154	1.723	-1.081	2.392	0.795
550S200-33	0.0346	0.362	1.23	1.694	0.616	2.164	0.204	0.751	1.678	0.556	10.99	699	1.638	0.477	14.28	699	0.144	1.312	-1.531	2.755	0.691
550S200-43	0.0451	0.469	1.60	2.189	0.796	2.159	0.261	0.746	2.189	0.776	15.34	1550	2.189	0.715	21.40	1550	0.318	1.673	-1.519	2.744	0.693
550S200-54	0.0566	0.585	1.99	2.706	0.984	2.152	0.320	0.739	2.706	0.984	21.41	2739	2.706	0.902	27.00	3093	0.624	2.045	-1.511	2.731	0.694
550S200-68	0.0713	0.729	2.48	3.341	1.215	2.141	0.389	0.731	3.341	1.215	27.03	4347	3.341	1.170	38.83	5350	1.235	2.488	-1.500	2.715	0.695
550S200-97	0.1017	1.016	3.46	4.563	1.659	2.119	0.515	0.712	4.563	1.659	38.58	6282	4.563	1.659	57.25	9518	3.504	3.299	-1.479	2.680	0.695
550S250-43	0.0451	0.515	1.75	2.524	0.918	2.215	0.445	0.930	2.524	0.820	16.20	1550	2.426	0.751	22.50	1550	0.349	2.811	-1.958	3.099	0.601
550S250-54	0.0566	0.641	2.18	3.126	1.137	2.208	0.547	0.923	3.126	1.033	20.42	2739	3.081	0.959	28.72	3093	0.685	3.446	-1.949	3.086	0.601
550S250-68	0.0713	0.800	2.72	3.866	1.406	2.198	0.669	0.914	3.866	1.345	29.28	4347	3.863	1.235	36.96	5350	1.356	4.211	-1.939	3.070	0.601
550S250-97	0.1017	1.118	3.80	5.304	1.929	2.178	0.897	0.895	5.304	1.925	43.47	6282	5.304	1.837	61.77	9518	3.855	5.636	-1.918	3.037	0.601
550T100-33	0.0346	0.259	0.88	1.022	0.362	1.985	0.018	0.260	0.955	0.262	5.17	680	0.896	0.228	6.81	680	0.103	0.106	-0.386	2.039	0.964
550T100-43	0.0451	0.338	1.15	1.332	0.471	1.986	0.023	0.258	1.312	0.400	7.91	1504	1.264	0.354	10.59	1504	0.229	0.136	-0.383	2.039	0.965
550T100-54	0.0566	0.424	1.44	1.678	0.589	1.990	0.028	0.256	1.678	0.567	11.20	2739	1.661	0.513	15.36	2980	0.453	0.170	-0.380	2.042	0.965
550T100-68	0.0713	0.534	1.82	2.125	0.739	1.995	0.034	0.253	2.125	0.739	16.45	4347	2.125	0.723	21.65	5350	0.904	0.213	-0.376	2.046	0.966
550T100-97	0.1017	0.761	2.59	3.062	1.046	2.007	0.047	0.247	3.062	1.046	24.32	6730	3.062	1.046	36.08	10197	2.622	0.299	-0.369	2.055	0.968
550T125-33	0.0346	0.277	0.94	1.159	0.410	2.046	0.033	0.346	1.029	0.270	5.33	680	0.959	0.233	6.98	680	0.110	0.194	-0.547	2.146	0.935
550T125-43	0.0451	0.360	1.23	1.510	0.533	2.047	0.043	0.344	1.428	0.416	8.23	1504	1.365	0.365	10.93	1504	0.244	0.251	-0.544	2.146	0.936
550T125-54	0.0566	0.452	1.54	1.903	0.668	2.052	0.053	0.342	1.862	0.597	11.80	2739	1.811	0.535	16.01	2980	0.483	0.314	-0.540	2.149	0.937
550T125-68	0.0713	0.569	1.94	2.412	0.839	2.058	0.066	0.339	2.412	0.807	15.95	4347	2.379	0.769	23.02	5350	0.965	0.395	-0.536	2.154	0.938
550T125-97	0.1017	0.811	2.76	3.483	1.190	2.072	0.090	0.333	3.483	1.190	26.87	6730	3.483	1.19	35.62	10197	2.797	0.561	-0.529	2.164	0.940
550T150-33	0.0346	0.294	1.00	1.295	0.459	2.099	0.055	0.434	1.115	0.310	6.12	680	1.091	0.252	7.55	680	0.117	0.319	-0.721	2.261	0.898
550T150-43	0.0451	0.383	1.30	1.688	0.596	2.099	0.072	0.432	1.516	0.468	9.25	1504	1.463	0.430	12.86	1504	0.260	0.412	-0.717	2.260	0.899
550T150-54	0.0566	0.480	1.63	2.128	0.747	2.105	0.089	0.430	2.005	0.628	12.41	2739	1.928	0.595	17.81	2980	0.513	0.517	-0.714	2.264	0.901
550T150-68	0.0713	0.605	2.06	2.699	0.939	2.112	0.110	0.427	2.66	0.850	16.80	4347	2.569	0.804	24.07	5350	1.025	0.652	-0.710	2.269	0.902
550T150-97	0.1017	0.862	2.93	3.904	1.333	2.128	0.153	0.421	3.904	1.333	26.35	6730	3.904	1.278	38.27	10197	2.973	0.931	-0.701	2.280	0.905
550T200-33	0.0346	0.329	1.12	1.567	0.555	2.184	0.123	0.613	1.246	0.307	6.06	680	1.214	0.252	7.55	680	0.131	0.692	-1.097	2.520	0.810
550T200-43	0.0451	0.428	1.46	2.043	0.722	2.185	0.160	0.611	1.690	0.495	9.79	1504	1.637	0.423	12.68	1504	0.290	0.898	-1.093	2.518	0.812
550T200-54	0.0566	0.537	1.83	2.578	0.905	2.191	0.199	0.609	2.253	0.669	13.21	2739	2.153	0.630	18.86	2980	0.573	1.129	-1.089	2.521	0.813
550T200-68	0.0713	0.676	2.30	3.274	1.139	2.200	0.248	0.606	3.027	0.914	18.06	4347	2.894	0.857	25.67	5350	1.146	1.428	-1.084	2.527	0.816
550T200-97	0.1017	0.964	3.28	4.746	1.621	2.219	0.347	0.600	4.735	1.483	29.30	6730	4.566	1.391	41.64	10197	3.323	2.054	-1.075	2.538	0.820
550T250-43	0.0451	0.473	1.61	2.399	0.848	2.252	0.295	0.790	1.841	0.516	10.20	1504	1.790	0.419	12.55	1504	0.321	1.639	-1.495	2.816	0.718
550T250-54	0.0566	0.594	2.02	3.029	1.063	2.259	0.368	0.788	2.466	0.699	13.81	2739	2.346	0.657	19.66	2980	0.634	2.064	-1.491	2.819	0.720
550T250-68	0.0713	0.748	2.54	3.849	1.339	2.269	0.460	0.785	3.338	0.960	18.97	4347	3.172	0.897	26.86	5350	1.267	2.617	-1.486	2.824	0.723
550T250-97	0.1017	1.066	3.63	5.588	1.908	2.290	0.646	0.779	5.314	1.580	31.23	6730	5.073	1.470	44.01	10197	3.674	3.781	-1.477	2.834	0.728
550T300-54	0.0566	0.650	2.21	3.479	1.221	2.313	0.606	0.965	2.654	0.723	14.28	2739	2.526	0.663	19.84	2980	0.694	3.382	-1.912	3.153	0.632
550T300-68	0.0713	0.819	2.79	4.424	1.539	2.324	0.758	0.962	3.610	0.996	19.68	4347	3.417	0.929	27.80	5350	1.388	4.294	-1.907	3.157	0.635
550T300-97	0.1017	1.167	3.97	6.430	2.196	2.347	1.068	0.956	5.816	1.654	32.68	6730	5.516	1.531	45.83	10197	4.024	6.222	-1.897	3.166	0.641

For Section Properties Table Notes see page 3

A = Cross Sectional Area
Ix = Moment of inertia (x-axis)
Sx = Section modulus (x-axis)
Rx = Radius of gyration (x-axis)
Iy = Moment of inertia (y-axis)
Ry = Radius of gyration (y-axis)
Ma = Allowable bending moment
Va = Allowable shear force
J = St. Vennant torsion constant
Cw = Torsional warping constant
Xo = Distance from center of gravity to shear center along x-axis
Ro = Polar radius of gyration about the centroidal principal axis
ß = Beta coefficient

Member	Thickness	Gross							33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties				
	in	Area in^2	Weight lb/ft	Ix in^4	Sx in^3	Rx in	Iy in^4	Ry in	Ix in^4	Sx in^3	Ma in-k	Va lb	Ix in^4	Sx in^3	Ma in-k	Va lb	Jx1000 in^4	Cw in^6	Xo in	Ro in	Beta
600S137-33	0.0346	0.318	1.08	1.582	0.527	2.229	0.069	0.464	1.548	0.455	8.98	638	1.526	0.387	11.59	638	0.127	0.493	-0.823	2.421	0.884
600S137-43	0.0451	0.413	1.41	2.042	0.681	2.223	0.087	0.459	2.041	0.645	12.74	1416	2.011	0.582	17.42	1416	0.280	0.625	-0.813	2.411	0.886
600S137-54	0.0566	0.514	1.75	2.518	0.839	2.213	0.105	0.452	2.518	0.832	16.44	2739	2.518	0.777	23.26	2823	0.549	0.757	-0.804	2.398	0.888
600S137-68	0.0713	0.640	2.18	3.094	1.031	2.200	0.125	0.443	3.094	1.031	24.05	4347	3.094	1.03	30.84	5350	1.084	0.911	-0.793	2.380	0.889
600S137-97	0.1017	0.889	3.03	4.188	1.396	2.170	0.159	0.422	4.188	1.396	34.48	6911	4.188	1.396	50.80	10472	3.066	1.179	-0.770	2.341	0.892
600S162-33	0.0346	0.344	1.17	1.793	0.598	2.282	0.116	0.581	1.793	0.577	11.41	638	1.793	0.481	14.40	638	0.137	0.851	-1.091	2.595	0.823
600S162-43	0.0451	0.447	1.52	2.316	0.772	2.276	0.148	0.576	2.316	0.767	16.68	1416	2.316	0.706	21.12	1416	0.303	1.082	-1.081	2.585	0.825
600S162-54	0.0566	0.556	1.89	2.860	0.953	2.267	0.180	0.570	2.860	0.953	21.17	2739	2.860	0.916	30.33	2823	0.594	1.318	-1.072	2.572	0.826
600S162-68	0.0713	0.693	2.36	3.525	1.175	2.255	0.218	0.560	3.525	1.175	26.79	4347	3.525	1.164	39.47	5350	1.174	1.596	-1.061	2.554	0.828
600S162-97	0.1017	0.966	3.29	4.797	1.599	2.229	0.283	0.541	4.797	1.599	38.37	6911	4.797	1.599	56.73	10472	3.329	2.093	-1.039	2.518	0.830
600S200-33	0.0346	0.379	1.29	2.075	0.692	2.340	0.209	0.743	2.059	0.617	12.20	638	2.016	0.520	15.57	638	0.151	1.577	-1.479	2.866	0.734
600S200-43	0.0451	0.492	1.67	2.683	0.894	2.335	0.268	0.739	2.683	0.873	17.24	1416	2.683	0.806	24.12	1416	0.334	2.012	-1.468	2.855	0.736
600S200-54	0.0566	0.613	2.09	3.319	1.106	2.327	0.328	0.732	3.319	1.106	24.07	2739	3.319	1.016	30.41	2823	0.655	2.461	-1.459	2.842	0.737
600S200-68	0.0713	0.764	2.60	4.101	1.367	2.316	0.400	0.723	4.101	1.367	30.42	4347	4.101	1.317	43.71	5350	1.295	2.997	-1.448	2.826	0.737
600S200-97	0.1017	1.067	3.63	5.612	1.871	2.293	0.530	0.705	5.612	1.871	43.49	6911	5.612	1.871	64.53	10472	3.679	3.981	-1.427	2.791	0.739
600S250-43	0.0451	0.537	1.83	3.082	1.027	2.396	0.458	0.923	3.082	0.921	18.19	1416	2.973	0.826	24.73	1416	0.364	3.379	-1.898	3.193	0.647
600S250-54	0.0566	0.670	2.28	3.819	1.273	2.388	0.562	0.917	3.819	1.160	22.91	2739	3.763	1.079	32.31	2823	0.715	4.146	-1.889	3.180	0.647
600S250-68	0.0713	0.836	2.84	4.727	1.576	2.378	0.688	0.908	4.727	1.508	32.82	4347	4.722	1.388	41.55	5350	1.416	5.071	-1.878	3.164	0.647
600S250-97	0.1017	1.169	3.98	6.496	2.165	2.357	0.923	0.889	6.496	2.161	48.81	6911	6.496	2.063	69.38	10472	4.030	6.798	-1.857	3.130	0.648
600S300-54	0.0566	0.769	2.62	4.523	1.508	2.426	1.038	1.162	4.522	1.366	26.99	2739	4.363	1.262	37.77	2823	0.821	9.016	-2.605	3.745	0.516
600S300-68	0.0713	0.960	3.27	5.610	1.870	2.417	1.279	1.154	5.610	1.843	36.42	4347	5.610	1.702	50.97	5350	1.627	11.077	-2.596	3.730	0.516
600S300-97	0.1017	1.347	4.58	7.747	2.582	2.398	1.741	1.137	7.747	2.582	57.16	6911	7.747	2.508	82.86	10472	4.644	14.998	-2.577	3.699	0.515
600S350-54	0.0566	0.825	2.81	5.022	1.674	2.467	1.491	1.344	4.916	1.441	28.48	2739	4.715	1.323	39.62	2823	0.881	12.844	-3.072	4.163	0.456
600S350-68	0.0713	1.032	3.51	6.237	2.079	2.459	1.841	1.336	6.237	1.949	38.50	4347	6.170	1.761	52.73	5350	1.748	15.814	-3.062	4.148	0.455
600S350-97	0.1017	1.449	4.93	8.631	2.877	2.441	2.518	1.318	8.631	2.822	61.55	6911	8.631	2.593	77.64	10472	4.994	21.504	-3.044	4.118	0.454
600T100-33	0.0346	0.277	0.94	1.267	0.412	2.140	0.018	0.254	1.170	0.289	5.71	622	1.094	0.250	7.49	622	0.110	0.129	-0.367	2.186	0.972
600T100-43	0.0451	0.36	1.23	1.650	0.536	2.140	0.023	0.252	1.629	0.444	8.78	1377	1.551	0.391	11.69	1377	0.244	0.166	-0.364	2.185	0.972
600T100-54	0.0566	0.452	1.54	2.077	0.670	2.144	0.028	0.250	2.077	0.633	12.51	2728	2.061	0.569	17.05	2728	0.483	0.207	-0.361	2.188	0.973
600T100-68	0.0713	0.569	1.94	2.629	0.841	2.149	0.035	0.247	2.629	0.841	16.62	4347	2.629	0.813	24.35	5350	0.965	0.259	-0.358	2.192	0.973
600T100-97	0.1017	0.811	2.76	3.784	1.191	2.159	0.047	0.241	3.784	1.191	27.68	7359	3.784	1.191	41.07	10885	2.797	0.363	-0.350	2.201	0.975
600T125-33	0.0346	0.294	1.00	1.428	0.465	2.204	0.034	0.339	1.258	0.297	5.87	622	1.169	0.256	7.66	622	0.117	0.237	-0.523	2.291	0.948
600T125-43	0.0451	0.383	1.30	1.861	0.604	2.205	0.044	0.337	1.768	0.461	9.11	1377	1.670	0.402	12.05	1377	0.260	0.306	-0.519	2.290	0.949
600T125-54	0.0566	0.480	1.63	2.344	0.756	2.209	0.054	0.335	2.299	0.666	13.15	2728	2.241	0.592	17.73	2728	0.513	0.383	-0.516	2.293	0.949
600T125-68	0.0713	0.605	2.06	2.969	0.950	2.215	0.067	0.332	2.969	0.916	18.09	4347	2.934	0.858	25.69	5350	1.025	0.481	-0.512	2.298	0.950
600T125-97	0.1017	0.862	2.93	4.281	1.347	2.228	0.092	0.326	4.281	1.347	30.43	7359	4.281	1.347	40.33	10885	2.973	0.681	-0.504	2.308	0.952
600T150-33	0.0346	0.311	1.06	1.590	0.517	2.260	0.057	0.426	1.334	0.303	5.99	622	1.234	0.260	7.79	622	0.124	0.389	-0.691	2.401	0.917
600T150-43	0.0451	0.405	1.38	2.072	0.673	2.261	0.073	0.424	1.890	0.474	9.36	1377	1.775	0.411	12.31	1377	0.275	0.503	-0.687	2.400	0.918
600T150-54	0.0566	0.509	1.73	2.611	0.843	2.266	0.091	0.422	2.473	0.689	13.62	2728	2.400	0.609	18.24	2728	0.543	0.630	-0.684	2.404	0.919
600T150-68	0.0713	0.641	2.18	3.309	1.059	2.273	0.113	0.419	3.262	0.963	19.03	4347	3.162	0.891	26.68	5350	1.086	0.794	-0.680	2.409	0.920
600T150-97	0.1017	0.913	3.11	4.778	1.504	2.288	0.156	0.413	4.778	1.504	29.71	7359	4.778	1.444	43.23	10885	3.148	1.131	-0.672	2.420	0.923
600T200-33	0.0346	0.346	1.18	1.913	0.622	2.352	0.126	0.604	1.542	0.333	6.59	622	1.504	0.275	8.23	622	0.138	0.845	-1.057	2.648	0.841
600T200-43	0.0451	0.451	1.53	2.494	0.809	2.353	0.163	0.602	2.076	0.565	11.16	1377	2.025	0.460	13.76	1377	0.305	1.095	-1.053	2.647	0.842
600T200-54	0.0566	0.565	1.92	3.145	1.015	2.359	0.203	0.600	2.759	0.759	15.00	2728	2.641	0.717	21.48	2728	0.604	1.376	-1.049	2.650	0.843
600T200-68	0.0713	0.712	2.42	3.990	1.277	2.367	0.254	0.597	3.696	1.034	20.42	4347	3.540	0.973	29.12	5350	1.206	1.739	-1.045	2.656	0.845
600T200-97	0.1017	1.015	3.45	5.773	1.816	2.385	0.354	0.591	5.758	1.667	32.95	7359	5.558	1.568	46.94	10885	3.499	2.496	-1.036	2.667	0.849
600T250-43	0.0451	0.496	1.69	2.916	0.946	2.425	0.303	0.781	2.269	0.563	11.13	1377	2.210	0.457	13.67	1377	0.336	1.999	-1.447	2.930	0.756
600T250-54	0.0566	0.622	2.12	3.678	1.187	2.432	0.377	0.779	3.014	0.793	15.68	2728	2.881	0.732	21.92	2728	0.664	2.516	-1.443	2.933	0.758
600T250-68	0.0713	0.783	2.67	4.670	1.495	2.442	0.472	0.776	4.065	1.085	21.45	4347	3.871	1.017	30.46	5350	1.327	3.186	-1.438	2.938	0.760
600T250-97	0.1017	1.116	3.80	6.767	2.129	2.462	0.662	0.770	6.441	1.775	35.08	7359	6.157	1.656	49.58	10885	3.849	4.592	-1.428	2.949	0.765
600T300-54	0.0566	0.679	2.31	4.212	1.359	2.492	0.622	0.957	3.239	0.821	16.22	2728	3.108	0.722	21.61	2728	0.725	4.119	-1.856	3.251	0.674
600T300-68	0.0713	0.854	2.91	5.350	1.712	2.502	0.778	0.954	4.389	1.126	22.25	4347	4.164	1.053	31.53	5350	1.448	5.223	-1.851	3.256	0.677
600T300-97	0.1017	1.218	4.15	7.762	2.442	2.524	1.096	0.948	7.034	1.857	36.69	7359	6.681	1.724	51.62	10885	4.200	7.549	-1.841	3.265	0.682

Member	Thickness	Area	Weight	Gross					33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties				
	in	in^2	lb/ft	Ix in^4	Sx in^3	Rx in	Iy in^4	Ry in	Ix in^4	Sx in^3	Ma in-k	Va lb	Ix in^4	Sx in^3	Ma in-k	Va lb	Jx1000 in^4	Cw in^6	Xo in	Ro in	Beta
800S137-33[5]	0.0346	0.388	1.32	3.198	0.799	2.873	0.073	0.435	2.998	0.622	12.30	474	2.939	0.526	15.75	474	0.155	0.948	-0.709	2.991	0.944
800S137-43	0.0451	0.503	1.71	4.134	1.033	2.866	0.093	0.430	4.001	0.896	17.70	1051	3.912	0.799	23.92	1051	0.341	1.202	-0.700	2.981	0.945
800S137-54	0.0566	0.627	2.13	5.110	1.277	2.855	0.112	0.423	5.077	1.179	23.29	2091	4.974	1.083	32.42	2091	0.670	1.460	-0.691	2.967	0.946
800S137-68	0.0713	0.782	2.66	6.303	1.576	2.839	0.134	0.414	6.303	1.541	30.45	4221	6.285	1.468	43.96	4221	1.325	1.762	-0.680	2.948	0.947
800S137-97	0.1017	1.093	3.72	8.597	2.149	2.805	0.169	0.394	8.597	2.149	53.09	8843	8.597	2.149	64.35	10885	3.767	2.295	-0.658	2.908	0.949
800S162-33[5]	0.0346	0.413	1.41	3.582	0.896	2.943	0.125	0.550	3.384	0.710	14.03	474	3.322	0.614	18.39	474	0.165	1.615	-0.951	3.142	0.908
800S162-43	0.0451	0.537	1.83	4.633	1.158	2.937	0.160	0.546	4.500	1.019	20.14	1051	4.428	0.866	25.93	1051	0.364	2.056	-0.941	3.132	0.910
800S162-54	0.0566	0.670	2.28	5.736	1.434	2.927	0.194	0.539	5.702	1.334	26.36	2091	5.600	1.229	36.79	2091	0.715	2.509	-0.932	3.119	0.911
800S162-68	0.0713	0.836	2.84	7.089	1.772	2.913	0.235	0.530	7.089	1.737	34.32	4221	7.070	1.663	49.80	4221	1.416	3.047	-0.921	3.101	0.912
800S162-97	0.1017	1.169	3.98	9.713	2.428	2.883	0.305	0.510	9.713	2.428	58.27	8843	9.713	2.428	72.70	10885	4.030	4.023	-0.899	3.062	0.914
800S200-33[5]	0.0346	0.448	1.52	4.096	1.024	3.023	0.227	0.712	4.096	0.812	16.04	474	3.943	0.692	20.72	474	0.179	2.945	-1.306	3.369	0.850
800S200-43	0.0451	0.582	1.98	5.302	1.325	3.018	0.292	0.708	5.302	1.293	25.54	1051	5.302	1.064	31.85	1051	0.395	3.763	-1.295	3.359	0.851
800S200-54	0.0566	0.726	2.47	6.573	1.643	3.009	0.357	0.701	6.573	1.643	35.75	2091	6.573	1.499	44.89	2091	0.775	4.612	-1.286	3.346	0.852
800S200-68	0.0713	0.907	3.09	8.140	2.035	2.996	0.435	0.692	8.140	2.035	45.29	4221	8.140	1.964	65.21	4221	1.537	5.631	-1.275	3.329	0.853
800S200-97	0.1017	1.271	4.32	11.203	2.801	2.969	0.576	0.673	11.203	2.801	65.12	8843	11.203	2.801	96.63	10885	4.381	7.524	-1.253	3.292	0.855
800S250-43	0.0451	0.627	2.13	6.015	1.504	3.097	0.500	0.893	6.015	1.318	26.04	1051	5.902	1.090	32.64	1051	0.425	6.320	-1.695	3.641	0.783
800S250-54	0.0566	0.783	2.66	7.465	1.866	3.088	0.614	0.886	7.465	1.713	33.85	2091	7.370	1.543	46.20	2091	0.836	7.769	-1.686	3.628	0.784
800S250-68	0.0713	0.978	3.33	9.261	2.315	3.077	0.752	0.877	9.261	2.220	48.33	4221	9.239	2.062	61.73	4221	1.658	9.526	-1.674	3.611	0.785
800S250-97	0.1017	1.372	4.67	12.789	3.197	3.053	1.009	0.857	12.789	3.191	72.07	8843	12.789	3.054	102.70	10885	4.731	12.838	-1.652	3.575	0.787
800S300-54	0.0566	0.882	3.00	8.790	2.198	3.157	1.145	1.139	8.783	2.009	39.69	2091	8.530	1.797	53.80	2091	0.942	15.946	-2.354	4.100	0.670
800S300-68	0.0713	1.103	3.75	10.926	2.731	3.147	1.411	1.131	10.926	2.696	53.28	4221	10.926	2.505	75.01	4221	1.869	19.634	-2.344	4.084	0.671
800S300-97	0.1017	1.550	5.28	15.151	3.788	3.126	1.922	1.113	15.151	3.788	83.85	8843	15.151	3.675	121.43	10885	5.345	26.701	-2.323	4.051	0.671
800S350-54	0.0566	0.938	3.19	9.683	2.421	3.212	1.646	1.325	9.483	2.112	41.74	2091	9.184	1.853	55.47	2091	1.002	22.719	-2.797	4.460	0.607
800S350-68	0.0713	1.174	4.00	12.046	3.012	3.203	2.034	1.316	12.046	2.837	56.07	4221	11.914	2.584	77.37	4221	1.990	28.029	-2.786	4.445	0.607
800S350-97	0.1017	1.652	5.62	16.737	4.184	3.183	2.784	1.298	16.737	4.101	89.43	8843	16.737	3.785	113.34	10885	5.696	38.275	-2.765	4.412	0.607
800T100-33[5]	0.0346	0.346	1.18	2.611	0.641	2.748	0.019	0.232	2.295	0.397	7.84	465	2.119	0.341	10.20	465	0.138	0.246	-0.307	2.774	0.988
800T100-43	0.0451	0.451	1.53	3.401	0.833	2.747	0.024	0.230	3.247	0.620	12.24	1030	3.051	0.538	16.11	1030	0.305	0.317	-0.304	2.774	0.988
800T100-54	0.0566	0.565	1.92	4.276	1.043	2.750	0.030	0.229	4.244	0.900	17.79	2039	4.118	0.796	23.83	2039	0.604	0.394	-0.302	2.776	0.988
800T100-68	0.0713	0.712	2.42	5.402	1.310	2.755	0.036	0.226	5.402	1.263	24.95	4087	5.376	1.160	34.74	4087	1.206	0.491	-0.299	2.780	0.988
800T100-97	0.1017	1.015	3.45	7.747	1.854	2.763	0.049	0.221	7.747	1.854	43.11	8843	7.747	1.854	55.52	10885	3.499	0.685	-0.292	2.787	0.989
800T125-33[5]	0.0346	0.363	1.24	2.895	0.711	2.824	0.036	0.313	2.441	0.407	8.03	465	2.243	0.348	10.41	465	0.145	0.456	-0.444	2.875	0.976
800T125-43	0.0451	0.473	1.61	3.773	0.924	2.824	0.046	0.311	3.484	0.640	12.65	1030	3.252	0.552	16.54	1030	0.321	0.588	-0.440	2.875	0.977
800T125-54	0.0566	0.594	2.02	4.745	1.158	2.827	0.057	0.309	4.668	0.940	18.58	2039	4.426	0.824	24.66	2039	0.634	0.734	-0.438	2.878	0.977
800T125-68	0.0713	0.748	2.54	5.998	1.454	2.833	0.070	0.306	5.998	1.356	26.80	4087	5.956	1.216	36.39	4087	1.267	0.919	-0.434	2.882	0.977
800T125-97	0.1017	1.066	3.63	8.613	2.062	2.843	0.096	0.301	8.613	2.062	40.74	8843	8.613	2.062	61.72	10885	3.674	1.293	-0.427	2.891	0.978
800T150-33[5]	0.0346	0.380	1.29	3.180	0.781	2.891	0.060	0.397	2.569	0.414	8.18	465	2.350	0.353	10.57	465	0.152	0.750	-0.593	2.978	0.960
800T150-43	0.0451	0.496	1.69	4.144	1.015	2.891	0.077	0.395	3.689	0.655	12.95	1030	3.427	0.563	16.85	1030	0.336	0.970	-0.590	2.977	0.961
800T150-54	0.0566	0.622	2.12	5.214	1.272	2.896	0.096	0.393	4.976	0.969	19.15	2039	4.692	0.844	25.27	2039	0.664	1.213	-0.587	2.980	0.961
800T150-68	0.0713	0.783	2.67	6.594	1.599	2.902	0.119	0.390	6.527	1.412	27.91	4087	6.361	1.255	37.58	4087	1.327	1.522	-0.583	2.985	0.962
800T150-97	0.1017	1.116	3.80	9.479	2.269	2.914	0.165	0.384	9.479	2.269	44.83	8843	9.479	2.192	65.62	10885	3.849	2.155	-0.576	2.995	0.963
800T200-33[5]	0.0346	0.415	1.41	3.749	0.921	3.005	0.135	0.571	2.788	0.424	8.37	465	2.532	0.360	10.77	465	0.166	1.635	-0.925	3.196	0.916
800T200-43	0.0451	0.541	1.84	4.887	1.197	3.006	0.175	0.569	4.043	0.676	13.35	1030	3.728	0.577	17.28	1030	0.367	2.119	-0.921	3.195	0.917
800T200-54	0.0566	0.679	2.31	6.152	1.501	3.011	0.218	0.567	5.505	1.009	19.93	2039	5.149	0.871	26.09	2039	0.725	2.657	-0.917	3.198	0.918
800T200-68	0.0713	0.854	2.91	7.786	1.888	3.019	0.272	0.564	7.306	1.490	29.45	4087	7.051	1.310	39.22	4087	1.448	3.346	-0.913	3.204	0.919
800T200-97	0.1017	1.218	4.15	11.212	2.683	3.034	0.379	0.558	11.176	2.491	49.22	8843	10.833	2.347	70.27	10885	4.200	4.770	-0.905	3.215	0.921
800T250-43	0.0451	0.586	1.99	5.629	1.380	3.100	0.326	0.746	4.593	0.739	14.60	1030	4.485	0.607	18.18	1030	0.397	3.869	-1.282	3.437	0.861
800T250-54	0.0566	0.735	2.50	7.090	1.730	3.106	0.407	0.744	5.948	1.193	23.57	2039	5.816	0.959	28.71	2039	0.785	4.858	-1.279	3.440	0.862
800T250-68	0.0713	0.926	3.15	8.978	2.177	3.114	0.509	0.741	7.917	1.648	32.57	4087	7.588	1.560	46.72	4087	1.569	6.131	-1.274	3.445	0.863
800T250-97	0.1017	1.320	4.49	12.944	3.098	3.132	0.713	0.735	12.361	2.641	52.19	8843	11.872	2.487	74.47	10885	4.550	8.778	-1.265	3.457	0.866
800T300-54	0.0566	0.792	2.69	8.028	1.958	3.184	0.675	0.923	6.396	1.178	23.28	2039	6.237	0.956	28.62	2039	0.845	7.942	-1.663	3.709	0.799
800T300-68	0.0713	0.997	3.39	10.171	2.466	3.194	0.844	0.920	8.497	1.709	33.76	4087	8.160	1.548	46.36	4087	1.690	10.037	-1.659	3.715	0.801
800T300-97	0.1017	1.422	4.84	14.676	3.513	3.213	1.188	0.914	13.395	2.757	54.49	8843	12.794	2.586	77.43	10885	4.901	14.412	-1.649	3.726	0.804

For Section Properties Table Notes see page 3

A = Cross Sectional Area
Ix = Moment of inertia (x-axis)
Sx = Section modulus (x-axis)
Rx = Radius of gyration (x-axis)
Iy = Moment of inertia (y-axis)
Ry = Radius of gyration (y-axis)
Ma = Allowable bending moment
Va = Allowable shear force
J = St. Vennant torsion constant
Cw = Torsional warping constant
Xo = Distance from center of gravity to shear center along x-axis
Ro = Polar radius of gyration about the centroidal principal axis
ß = Beta coefficient

Member	Thickness	Area	Weight	Gross					33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties				
				Ix	Sx	Rx	Iy	Ry	Ix	Sx	Ma	Va	Ix	Sx	Ma	Va	Jx1000	Cw	Xo	Ro	Beta
	in	in^2	lb/ft	in^4	in^3	in	in^4	in	in^4	in^3	in-k	lb	in^4	in^3	in-k	lb	in^4	in^6	in	in	
1000S137-33[5]	0.0346	0.457	1.55	5.589	1.118	3.498	0.077	0.409	-	-	-	-	-	-	-	-	0.182	1.576	-0.624	3.577	0.970
1000S137-43[5]	0.0451	0.593	2.02	7.232	1.446	3.491	0.097	0.405	6.727	1.147	22.66	836	6.536	1.015	30.39	836	0.402	1.999	-0.615	3.568	0.970
1000S137-54	0.0566	0.740	2.52	8.956	1.791	3.478	0.117	0.398	8.636	1.526	30.15	1661	8.393	1.389	41.58	1661	0.791	2.431	-0.607	3.553	0.971
1000S137-68	0.0713	0.925	3.15	11.076	2.215	3.461	0.140	0.389	11.010	2.029	40.09	3345	10.732	1.908	57.13	3345	1.567	2.940	-0.597	3.533	0.971
1000S137-97	0.1017	1.296	4.41	15.192	3.038	3.424	0.177	0.369	15.192	3.038	60.04	8843	15.192	2.917	87.32	9864	4.468	3.845	-0.576	3.491	0.973
1000S162-43[5]	0.0451	0.627	2.13	8.025	1.605	3.577	0.168	0.518	7.523	1.302	25.74	836	7.370	1.099	32.91	836	0.425	3.404	-0.836	3.709	0.949
1000S162-54	0.0566	0.783	2.66	9.950	1.990	3.565	0.204	0.511	9.627	1.722	34.02	1661	9.391	1.572	47.07	1661	0.836	4.160	-0.827	3.696	0.950
1000S162-68	0.0713	0.978	3.33	12.325	2.465	3.550	0.246	0.502	12.256	2.276	44.98	3345	11.978	2.154	64.51	3345	1.658	5.060	-0.817	3.677	0.951
1000S162-97	0.1017	1.372	4.67	16.967	3.393	3.516	0.320	0.483	16.967	3.393	67.06	8843	16.967	3.269	97.89	9864	4.731	6.708	-0.795	3.637	0.952
1000S200-43[5]	0.0451	0.672	2.29	9.085	1.817	3.676	0.309	0.677	8.602	1.470	29.05	836	8.443	1.269	38.00	836	0.456	6.189	-1.162	3.914	0.912
1000S200-54	0.0566	0.839	2.86	11.278	2.256	3.666	0.378	0.671	10.953	1.984	39.20	1661	10.769	1.706	51.07	1661	0.896	7.595	-1.153	3.901	0.913
1000S200-68	0.0713	1.050	3.57	13.994	2.799	3.652	0.460	0.662	13.920	2.607	51.51	3345	13.665	2.420	72.46	3345	1.779	9.291	-1.142	3.883	0.913
1000S200-97	0.1017	1.474	5.02	19.336	3.867	3.622	0.609	0.643	19.336	3.867	76.42	8843	19.336	3.741	112.00	9864	5.082	12.460	-1.120	3.845	0.915
1000S250-43[5]	0.0451	0.717	2.44	10.203	2.041	3.771	0.531	0.860	10.203	1.622	32.05	836	10.128	1.356	40.60	836	0.486	10.404	-1.535	4.161	0.864
1000S250-54	0.0566	0.896	3.05	12.677	2.535	3.762	0.653	0.854	12.677	2.279	45.03	1661	12.644	1.900	56.90	1661	0.957	12.806	-1.525	4.148	0.865
1000S250-68	0.0713	1.121	3.81	15.751	3.150	3.749	0.799	0.844	15.751	3.028	65.93	3345	15.737	2.773	83.02	3345	1.899	15.726	-1.514	4.130	0.866
1000S250-97	0.1017	1.576	5.36	21.827	4.365	3.722	1.072	0.825	21.827	4.357	98.41	8843	21.827	4.181	140.63	9864	5.433	21.268	-1.491	4.093	0.867
1000S300-97	0.102	1.754	5.97	25.660	5.130	3.820	2.060	1.084	25.656	5.131	113.59	8843	25.660	4.980	164.74	9864	6.046	42.868	-2.120	4.506	0.779
1000S300-118	0.1240	2.121	7.22	30.740	6.150	3.810	2.430	1.070	30.743	6.148	139.18	13189	30.740	6.148	207.18	16235	10.905	50.631	-2.104	4.479	0.779
1000S350-97	0.1020	1.855	6.31	28.150	5.630	3.890	2.990	1.270	28.147	5.517	120.33	8843	28.158	5.126	153.46	9864	6.396	61.429	-2.540	4.820	0.722
1000S350-118	0.1240	2.245	7.64	33.770	6.750	3.880	3.540	1.256	33.772	6.754	150.23	13189	33.772	6.427	213.25	16235	11.544	72.774	-2.524	4.795	0.723
1000T100-43[5]	0.0451	0.541	1.84	6.053	1.191	3.346	0.025	0.213	5.525	0.795	15.71	822	5.140	0.685	20.51	822	0.367	0.521	-0.262	3.363	0.994
1000T100-54	0.0566	0.679	2.31	7.606	1.492	3.348	0.030	0.212	7.277	1.169	23.10	1628	7.008	1.022	30.61	1628	0.725	0.647	-0.260	3.365	0.994
1000T100-68	0.0713	0.854	2.91	9.598	1.873	3.352	0.037	0.209	9.507	1.667	32.95	3261	9.219	1.509	45.19	3261	1.448	0.804	-0.257	3.368	0.994
1000T100-97	0.1017	1.218	4.15	13.740	2.654	3.358	0.051	0.204	13.740	2.649	52.34	8843	13.740	2.497	74.77	9507	4.200	1.117	-0.251	3.374	0.994
1000T125-43[5]	0.0451	0.563	1.92	6.630	1.305	3.431	0.047	0.290	5.886	0.819	16.19	822	5.442	0.702	21.02	822	0.382	0.973	-0.383	3.464	0.988
1000T125-54	0.0566	0.707	2.41	8.333	1.634	3.434	0.059	0.288	7.960	1.216	24.03	1628	7.479	1.055	31.59	1628	0.755	1.212	-0.380	3.467	0.988
1000T125-68	0.0713	0.890	3.03	10.522	2.053	3.438	0.073	0.286	10.452	1.781	35.19	3261	10.155	1.575	47.15	3261	1.508	1.514	-0.377	3.470	0.988
1000T125-97	0.1017	1.269	4.32	15.077	2.912	3.447	0.100	0.280	15.077	2.907	57.44	8843	15.077	2.753	82.42	9507	4.375	2.121	-0.371	3.478	0.989
1000T125-118	0.1240	1.549	5.27	18.470	3.54	3.453	0.118	0.276	18.471	3.540	82.05	13189	18.471	3.535	105.85	16235	7.966	2.556	-0.366	3.483	0.989
1000T150-43[5]	0.0451	0.58	1.99	7.207	1.419	3.507	0.080	0.370	6.195	0.837	16.54	822	5.703	0.714	21.39	822	0.397	1.610	-0.518	3.565	0.979
1000T150-54	0.0566	0.735	2.50	9.061	1.777	3.511	0.100	0.368	8.430	1.249	24.69	1628	7.880	1.079	32.29	1628	0.785	2.011	-0.515	3.567	0.979
1000T150-68	0.0713	0.926	3.15	11.445	2.233	3.516	0.124	0.366	11.342	1.846	36.48	3261	10.774	1.621	48.53	3261	1.569	2.519	-0.511	3.572	0.980
1000T150-97	0.1017	1.320	4.49	16.413	3.170	3.526	0.171	0.360	16.413	3.165	62.54	8843	16.413	2.902	86.90	9507	4.550	3.551	-0.504	3.580	0.980
1000T200-43[5]	0.0451	0.631	2.15	8.361	1.646	3.640	0.183	0.539	6.722	0.861	17.01	822	6.145	0.731	21.89	822	0.428	3.535	-0.819	3.770	0.953
1000T200-54	0.0566	0.792	2.69	10.516	2.062	3.645	0.228	0.537	9.231	1.295	25.60	1628	8.560	1.111	33.26	1628	0.845	4.426	-0.816	3.773	0.953
1000T200-68	0.0713	0.997	3.39	13.292	2.594	3.651	0.284	0.534	12.551	1.936	38.26	3261	11.820	1.684	50.42	3261	1.690	5.564	-0.812	3.778	0.954
1000T200-97	0.1017	1.422	4.84	19.087	3.686	3.664	0.397	0.528	19.031	3.427	67.72	8843	18.583	3.081	92.25	9507	4.901	7.899	-0.804	3.788	0.955
1000T200-118	0.1240	1.736	5.91	23.422	4.489	3.674	0.476	0.523	23.422	4.420	87.35	13189	23.422	4.208	125.99	16235	8.924	9.612	-0.799	3.796	0.956
1000T250-43[5]	0.0451	0.676	2.30	9.515	1.873	3.751	0.344	0.713	7.172	0.876	17.32	822	6.519	0.742	22.22	822	0.458	6.466	-1.154	3.989	0.916
1000T250-54	0.0566	0.848	2.89	11.972	2.348	3.757	0.429	0.711	9.913	1.326	26.20	1628	9.141	1.132	33.89	1628	0.906	8.109	-1.150	3.993	0.917
1000T250-68	0.0713	1.068	3.64	15.138	2.954	3.764	0.536	0.708	13.578	1.997	39.46	3261	12.708	1.726	51.68	3261	1.81	10.214	-1.146	3.998	0.918
1000T250-97	0.1017	1.523	5.18	21.760	4.202	3.780	0.751	0.702	20.871	3.596	71.05	8843	20.254	3.201	95.84	9507	5.252	14.565	-1.138	4.009	0.919
1000T300-54	0.0566	0.905	3.08	13.427	2.633	3.852	0.714	0.888	11.083	1.452	28.69	1628	10.826	1.191	35.65	1628	0.966	13.262	-1.510	4.232	0.873
1000T300-68	0.0713	1.140	3.88	16.985	3.314	3.860	0.893	0.885	14.416	2.377	46.96	3261	14.106	1.904	57.01	3261	1.931	16.728	-1.505	4.237	0.874
1000T300-97	0.1017	1.625	5.53	24.434	4.719	3.878	1.257	0.879	22.441	3.798	75.04	8843	21.530	3.589	107.45	9507	5.602	23.921	-1.496	4.248	0.876

For Section Properties Table Notes see page 3

A = Cross Sectional Area
Ix = Moment of inertia (x-axis)
Sx = Section modulus (x-axis)
Rx = Radius of gyration (x-axis)
Iy = Moment of inertia (y-axis)
Ry = Radius of gyration (y-axis)
Ma = Allowable bending moment
Va = Allowable shear force
J = St. Vennant torsion constant
Cw = Torsional warping constant
Xo = Distance from center of gravity to shear center along x-axis
Ro = Polar radius of gyration about the centroidal principal axis
ß = Beta coefficient

Member	Thickness in	Area in²	Weight lb/ft	Gross Ix in⁴	Gross Sx in³	Gross Rx in	Gross Iy in⁴	Gross Ry in	33 ksi Effective Properties Ix in⁴	33 ksi Effective Properties Sx in³	33 ksi Effective Properties Ma in-k	33 ksi Effective Properties Va lb	50 ksi Effective Properties Ix in⁴	50 ksi Effective Properties Sx in³	50 ksi Effective Properties Ma in-k	50 ksi Effective Properties Va lb	Torsional Properties Jx1000 in⁴	Torsional Properties Cw in⁶	Torsional Properties Xo in	Torsional Properties Ro in	Beta
1200S137-33[5]	0.0346	0.526	1.79	8.893	1.482	4.112	0.079	0.387	-	-	-	-	-	-	-	-	0.210	2.384	-0.558	4.168	0.982
1200S137-43[5]	0.0451	0.684	2.33	11.517	1.920	4.104	0.100	0.383	-	-	-	-	-	-	-	-	0.464	3.026	-0.550	4.159	0.983
1200S137-54[5]	0.0566	0.853	2.90	14.283	2.380	4.091	0.121	0.376	13.296	1.873	37.01	1377	12.836	1.694	50.71	1377	0.911	3.683	-0.542	4.144	0.983
1200S137-68	0.0713	1.067	3.63	17.698	2.950	4.072	0.144	0.367	17.142	2.518	49.76	2771	16.572	2.348	70.3	2771	1.809	4.458	-0.532	4.123	0.983
1200S137-97	0.1017	1.499	5.10	24.379	4.063	4.032	0.182	0.348	24.379	3.899	77.04	8147	24.161	3.666	109.75	8147	5.170	5.847	-0.512	4.079	0.984
1200S162-54[5]	0.0566	0.896	3.05	15.730	2.622	4.190	0.212	0.486	14.743	2.109	41.68	1377	14.298	1.914	57.31	1377	0.957	6.293	-0.744	4.283	0.970
1200S162-68	0.0713	1.121	3.81	19.518	3.253	4.173	0.255	0.477	18.955	2.817	55.66	2771	18.390	2.645	79.19	2771	1.899	7.666	-0.734	4.264	0.970
1200S162-97	0.1017	1.576	5.36	26.966	4.494	4.137	0.331	0.459	26.966	4.327	85.51	8147	26.735	4.091	122.49	8147	5.433	10.187	-0.713	4.223	0.971
1200S200-54[5]	0.0566	0.953	3.24	17.662	2.944	4.306	0.393	0.643	16.678	2.425	47.93	1377	16.333	2.074	62.09	1377	1.017	11.462	-1.047	4.478	0.945
1200S200-68	0.0713	1.192	4.06	21.947	3.658	4.291	0.479	0.634	21.376	3.215	63.54	2771	20.864	2.963	88.71	2771	2.020	14.038	-1.036	4.459	0.946
1200S200-97	0.1017	1.677	5.71	30.417	5.069	4.258	0.635	0.615	30.417	4.899	96.81	8147	30.175	4.660	139.51	8147	5.783	18.876	-1.014	4.420	0.947
1200S250-54[5]	0.0566	1.009	3.43	19.681	3.280	4.416	0.683	0.823	18.831	2.484	49.09	1377	18.380	2.172	65.02	1377	1.078	19.354	-1.395	4.704	0.912
1200S250-68	0.0713	1.263	4.30	24.484	4.081	4.402	0.836	0.813	23.963	3.496	69.08	2771	23.572	3.012	90.17	2771	2.141	23.796	-1.384	4.686	0.913
1200S250-97	0.1017	1.779	6.05	34.016	5.669	4.373	1.121	0.794	34.016	5.496	108.6	8147	33.835	5.037	150.82	8147	6.134	32.260	-1.361	4.648	0.914
1200S300-97	0.1017	1.957	6.66	39.669	6.612	4.502	2.171	1.053	39.669	6.612	146.35	8147	39.669	6.424	212.25	8147	6.747	63.858	-1.953	5.019	0.848
1200S300-118	0.1242	2.369	8.06	47.613	7.936	4.483	2.561	1.039	47.613	7.936	179.62	13189	47.613	7.936	267.39	14986	12.183	75.552	-1.937	4.993	0.849
1200S350-97	0.1017	2.059	7.01	43.269	7.211	4.584	3.159	1.239	43.268	7.071	154.22	8147	43.269	6.599	197.57	8147	7.098	91.505	-2.353	5.299	0.803
1200S350-118	0.1242	2.494	8.49	51.993	8.665	4.566	3.741	1.225	51.993	8.665	192.74	13189	51.993	8.260	274.07	14986	12.821	108.579	-2.336	5.273	0.804
1200T100-54[5]	0.0566	0.792	2.69	12.292	2.015	3.940	0.031	0.198	11.281	1.438	28.41	1354	10.792	1.248	37.38	1354	0.845	0.966	-0.228	3.952	0.997
1200T100-68	0.0713	0.997	3.39	15.504	2.531	3.943	0.038	0.196	14.876	2.074	40.97	2713	14.295	1.859	55.64	2713	1.690	1.200	-0.225	3.955	0.997
1200T100-97	0.1017	1.422	4.84	22.169	3.588	3.949	0.052	0.191	22.169	3.384	66.87	7902	21.856	3.139	93.99	7902	4.901	1.662	-0.220	3.960	0.997
1200T125-54[5]	0.0566	0.820	2.79	13.335	2.186	4.033	0.060	0.271	12.296	1.491	29.47	1354	11.460	1.286	38.51	1354	0.876	1.820	-0.337	4.056	0.993
1200T125-68	0.0713	1.033	3.51	16.826	2.747	4.036	0.074	0.268	16.246	2.206	43.60	2713	15.686	1.934	57.90	2713	1.750	2.271	-0.334	4.059	0.993
1200T125-97	0.1017	1.472	5.01	24.078	3.897	4.044	0.102	0.263	24.078	3.690	72.92	7902	23.751	3.442	103.06	7902	5.076	3.173	-0.328	4.066	0.994
1200T125-118	0.1242	1.797	6.12	29.472	4.740	4.049	0.121	0.259	29.472	4.740	93.67	13189	29.472	4.490	134.44	14434	9.243	3.815	-0.323	4.070	0.994
1200T150-54[5]	0.0566	0.848	2.89	14.378	2.357	4.117	0.103	0.348	12.962	1.530	30.23	1354	12.020	1.313	39.31	1354	0.906	3.032	-0.459	4.157	0.988
1200T150-68	0.0713	1.068	3.64	18.148	2.963	4.121	0.127	0.345	17.568	2.281	45.08	2713	16.566	1.987	59.48	2713	1.810	3.793	-0.456	4.161	0.988
1200T150-97	0.1017	1.523	5.18	25.987	4.206	4.130	0.176	0.340	25.987	3.996	78.97	7902	25.719	3.616	108.27	7902	5.252	5.332	-0.449	4.169	0.988
1200T200-118	0.1242	1.984	6.75	36.530	5.875	4.291	0.492	0.498	36.530	5.794	114.50	13189	36.530	5.278	158.02	14434	10.201	14.478	-0.719	4.379	0.973
1200T200-54[5]	0.0566	0.905	3.08	16.464	2.699	4.265	0.236	0.510	14.078	1.582	31.26	1354	12.962	1.350	40.41	1354	0.966	6.706	-0.736	4.358	0.971
1200T200-68	0.0713	1.140	3.88	20.791	3.395	4.271	0.294	0.508	19.277	2.383	47.09	2713	18.026	2.058	61.62	2713	1.931	8.419	-0.732	4.363	0.972
1200T200-97	0.1017	1.625	5.53	29.805	4.824	4.283	0.410	0.502	29.805	4.298	84.93	7902	28.959	3.819	114.35	7902	5.602	11.921	-0.725	4.373	0.973
1200T250-54[5]	0.0566	0.962	3.27	18.550	3.041	4.392	0.445	0.681	15.021	1.617	31.95	1354	13.756	1.374	41.14	1354	1.027	12.321	-1.047	4.566	0.947
1200T250-68	0.0713	1.211	4.12	23.435	3.826	4.399	0.556	0.678	20.720	2.451	48.44	2713	19.255	2.106	63.04	2713	2.052	15.499	-1.043	4.572	0.948
1200T250-97	0.1017	1.727	5.88	33.623	5.442	4.413	0.780	0.672	32.479	4.489	88.70	7902	31.310	3.954	118.37	7902	5.953	22.041	-1.035	4.582	0.949
1200T300-54[5]	0.0566	1.018	3.46	20.636	3.383	4.502	0.745	0.855	15.856	1.641	32.44	1354	14.451	1.391	41.65	1354	1.087	20.178	-1.384	4.787	0.916
1200T300-68	0.0713	1.282	4.36	26.079	4.258	4.510	0.932	0.852	21.991	2.501	49.41	2713	20.338	2.140	64.06	2713	2.173	25.418	-1.380	4.792	0.917
1200T300-97	0.1017	1.828	6.22	37.441	6.060	4.525	1.310	0.847	34.841	4.629	91.46	7902	33.377	4.051	121.30	7902	6.304	36.249	-1.371	4.804	0.919

For Section Properties Table Notes see page 3

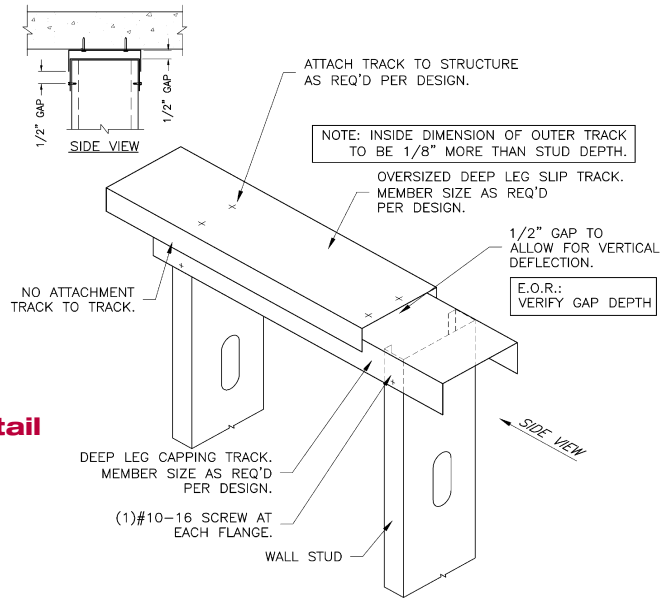
A = Cross Sectional Area
Ix = Moment of inertia (x-axis)
Sx = Section modulus (x-axis)
Rx = Radius of gyration (x-axis)
Iy = Moment of inertia (y-axis)
Ry = Radius of gyration (y-axis)
Ma = Allowable bending moment
Va = Allowable shear force
J = St. Vennant torsion constant
Cw = Torsional warping constant
Xo = Distance from center of gravity to shear center along x-axis
Ro = Polar radius of gyration about the centroidal principal axis
ß = Beta coefficient

Member	Thickness	Area	Weight	Gross					33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties				
				Ix	Sx	Rx	Iy	Ry	Ix	Sx	Ma	Va	Ix	Sx	Ma	Va	Jx1000	Cw	Xo	Ro	Beta
	in	in^2	lb/ft	in^4	in^3	in	in^4	in	in^4	in^3	in-k	lb	in^4	in^3	in-k	lb	in^4	in^6	in	in	
1400S137-33[5]	0.0346	0.595	2.03	13.249	1.893	4.718	0.081	0.368	-	-	-	-	-	-	-	-	0.237	3.377	-0.505	4.760	0.989
1400S137-43[5]	0.0451	0.774	2.63	17.170	2.453	4.710	0.103	0.364	-	-	-	-	-	-	-	-	0.525	4.288	-0.497	4.750	0.989
1400S137-54[5]	0.0566	0.967	3.29	21.317	3.045	4.696	0.124	0.358	19.109	2.219	43.85	1177	18.345	1.998	59.82	1177	1.032	5.222	-0.490	4.735	0.989
1400S137-68	0.0713	1.210	4.12	26.455	3.779	4.676	0.147	0.349	24.868	3.008	59.43	2365	23.871	2.787	83.44	2365	2.050	6.327	-0.481	4.714	0.990
1400S137-97	0.1017	1.703	5.79	36.565	5.224	4.634	0.186	0.331	36.434	4.748	93.82	6939	35.366	4.417	132.24	6939	5.871	8.311	-0.461	4.668	0.990
1400S162-54[5]	0.0566	1.009	3.43	23.302	3.329	4.805	0.218	0.464	21.103	2.496	49.32	1177	20.365	2.256	67.54	1177	1.078	8.927	-0.677	4.875	0.981
1400S162-68	0.0713	1.263	4.30	28.952	4.136	4.787	0.262	0.456	27.357	3.357	66.33	2365	26.375	3.135	93.85	2365	2.141	10.882	-0.667	4.855	0.981
1400S162-97	0.1017	1.779	6.05	40.115	5.731	4.748	0.340	0.437	39.965	5.248	103.71	6939	38.897	4.915	147.14	6939	6.134	14.489	-0.647	4.812	0.982
1400S200-54[5]	0.0566	1.066	3.63	25.951	3.707	4.935	0.406	0.617	23.767	2.866	56.63	1177	23.198	2.441	73.08	1177	1.138	16.250	-0.959	5.065	0.964
1400S200-68	0.0713	1.335	4.54	32.284	4.612	4.918	0.494	0.608	30.684	3.824	75.56	2365	29.797	3.505	104.93	2365	2.262	19.920	-0.949	5.046	0.965
1400S200-97	0.1017	1.881	6.40	44.853	6.408	4.883	0.655	0.590	44.683	5.917	116.93	6939	43.616	5.580	167.07	6939	6.484	26.834	-0.928	5.006	0.966
1400S250-54[5]	0.0566	1.122	3.82	28.702	4.100	5.057	0.707	0.794	26.756	2.929	57.88	1177	26.057	2.553	76.45	1177	1.198	27.489	-1.287	5.278	0.941
1400S250-68	0.0713	1.406	4.78	35.743	5.106	5.042	0.865	0.784	34.239	4.145	81.90	2365	33.561	3.555	106.44	2365	2.383	33.827	-1.276	5.260	0.941
1400S250-97	0.1017	1.983	6.75	49.764	7.109	5.010	1.160	0.765	49.579	6.611	130.64	6939	48.650	6.010	179.95	6939	6.835	45.941	-1.254	5.221	0.942
1400S300-97	0.1017	2.1605	7.35	57.596	8.228	5.163	2.260	1.023	57.393	7.722	152.59	6939	56.383	7.263	217.45	6939	7.449	89.955	-1.813	5.567	0.894
1400S300-118	0.1242	2.6177	8.91	69.222	9.889	5.142	2.666	1.009	69.222	9.690	191.48	12745	69.004	9.295	278.29	12745	13.460	106.565	-1.797	5.540	0.895
1400S350-97	0.1017	2.2622	7.69	62.507	8.930	5.256	3.296	1.207	62.507	8.762	191.08	6939	62.507	8.203	245.60	6939	7.799	128.939	-2.194	5.822	0.858
1400S350-118	0.1242	2.7419	9.33	75.200	10.743	5.237	3.903	1.193	75.200	10.743	238.95	12745	75.200	10.260	340.44	12745	14.090	153.185	-2.177	5.796	0.859
1400T100-54[5]	0.0566	0.905	3.08	18.562	2.615	4.529	0.031	0.186	16.300	1.706	33.71	1160	15.506	1.474	44.14	1160	0.966	1.354	-0.203	4.537	0.998
1400T100-68	0.0713	1.140	3.88	23.404	3.285	4.532	0.039	0.184	21.674	2.480	49.01	2322	20.662	2.207	66.09	2322	1.931	1.680	-0.201	4.540	0.998
1400T100-97	0.1017	1.625	5.53	33.441	4.659	4.537	0.053	0.180	33.212	4.127	81.54	6761	32.031	3.783	113.27	6761	5.602	2.321	-0.196	4.544	0.998
1400T125-54[5]	0.0566	0.933	3.18	19.977	2.814	4.627	0.061	0.256	17.725	1.767	34.91	1160	16.407	1.517	45.42	1160	0.997	2.561	-0.302	4.644	0.996
1400T125-68	0.0713	1.175	4.00	25.196	3.536	4.630	0.076	0.254	23.552	2.632	52.01	2322	22.620	2.293	68.64	2322	1.992	3.191	-0.290	4.647	0.996
1400T125-97	0.1017	1.676	5.70	36.024	5.019	4.636	0.104	0.249	35.775	4.480	88.53	6761	34.588	4.134	123.76	6761	5.778	4.450	-0.294	4.652	0.996
1400T125-118	0.1242	2.046	6.96	44.068	6.106	4.641	0.123	0.245	44.068	5.853	115.67	12344	43.752	5.453	163.27	12344	10.520	5.343	-0.290	4.657	0.996
1400T150-54[5]	0.0566	0.962	3.27	21.392	3.013	4.717	0.105	0.330	18.620	1.810	35.76	1160	17.153	1.547	46.33	1160	1.027	4.280	-0.414	4.746	0.992
1400T150-68	0.0713	1.211	4.12	26.987	3.788	4.721	0.130	0.327	25.409	2.717	53.68	2322	23.803	2.352	70.42	2322	2.052	5.349	-0.411	4.750	0.993
1400T150-97	0.1017	1.727	5.88	38.607	5.379	4.729	0.180	0.322	38.340	4.834	95.52	6761	37.285	4.332	129.69	6761	5.953	7.504	-0.405	4.757	0.993
1400T200-54[5]	0.0566	1.018	3.46	24.221	3.412	4.878	0.242	0.487	20.098	1.868	36.92	1160	18.387	1.589	47.56	1160	1.087	9.514	-0.670	4.947	0.982
1400T200-68	0.0713	1.282	4.36	30.571	4.291	4.883	0.301	0.485	27.707	2.830	55.93	2322	25.738	2.432	72.81	2322	2.173	11.932	-0.667	4.952	0.982
1400T200-97	0.1017	1.828	6.22	43.773	6.098	4.893	0.420	0.479	43.679	5.174	102.24	6761	41.749	4.559	136.48	6761	6.304	16.863	-0.660	4.961	0.982
1400T200-118	0.1242	2.232	7.60	53.606	7.427	4.900	0.504	0.475	53.606	7.062	139.54	12344	53.453	6.354	190.23	12344	11.478	20.450	-0.655	4.967	0.983
1400T250-54[5]	0.0566	1.075	3.66	27.051	3.811	5.017	0.458	0.653	21.342	1.907	37.68	1160	19.421	1.616	48.38	1160	1.148	17.531	-0.961	5.150	0.965
1400T250-68	0.0713	1.354	4.61	34.154	4.794	5.023	0.573	0.650	29.615	2.906	57.42	2322	27.352	2.485	74.40	2322	2.294	22.032	-0.957	5.155	0.966
1400T250-97	0.1017	1.930	6.57	48.939	6.818	5.036	0.803	0.645	47.449	5.386	106.42	6761	44.883	4.708	140.94	6761	6.654	31.271	-0.950	5.165	0.966
1400T300-54[5]	0.0566	1.131	3.85	29.881	4.209	5.139	0.769	0.825	22.429	1.935	38.24	1160	20.324	1.635	48.96	1160	1.208	28.762	-1.278	5.360	0.943
1400T300-68	0.0713	1.425	4.85	37.737	5.297	5.146	0.962	0.822	31.291	2.961	58.50	2322	28.775	2.523	75.54	2322	2.415	36.197	-1.274	5.365	0.944
1400T300-97	0.1017	2.032	6.91	54.105	7.538	5.160	1.353	0.816	50.615	5.540	109.48	6761	47.633	4.815	144.17	6761	7.005	51.521	-1.266	5.376	0.945
1600S300-97	0.1017	2.364	8.04	79.844	9.981	5.812	2.334	0.994	78.497	9.011	178.05	6043	76.799	8.427	252.35	6043	8.150	121.384	-1.693	6.134	0.924
1600S300-118	0.1242	2.866	9.75	96.066	12.008	5.790	2.753	0.980	96.066	11.396	225.20	11088	94.483	10.857	325.05	11088	14.737	143.940	-1.677	6.107	0.925
1600S350-97	0.1017	2.466	8.39	86.270	10.784	5.915	3.409	1.176	84.926	9.771	193.09	6043	83.684	8.395	251.34	6043	8.500	174.080	-2.057	6.372	0.896
1600S350-118	0.1242	2.990	10.18	103.892	12.987	5.894	4.038	1.162	103.892	12.367	244.38	11088	102.530	11.305	338.47	11088	15.376	207.013	-2.040	6.345	0.897
1600T125-118	0.1242	2.294	7.81	62.755	7.637	5.230	0.125	0.233	62.755	6.965	137.62	10783	60.930	6.420	192.21	10783	11.797	7.142	-0.263	5.242	0.998
1600T200-118	0.1242	2.481	8.44	75.146	9.145	5.504	0.514	0.455	75.146	8.331	164.65	10783	73.613	7.433	222.53	10783	12.755	27.551	-0.601	5.555	0.988

For Section Properties Table Notes see page 3

A = Cross Sectional Area
Ix = Moment of inertia (x-axis)
Sx = Section modulus (x-axis)
Rx = Radius of gyration (x-axis)
Iy = Moment of inertia (y-axis)
Ry = Radius of gyration (y-axis)
Ma = Allowable bending moment
Va = Allowable shear force
J = St. Vennant torsion constant
Cw = Torsional warping constant
Xo = Distance from center of gravity to shear center along x-axis
Ro = Polar radius of gyration about the centroidal principal axis
ß = Beta coefficient

Member	Thickness	Area	Weight	Gross					33 ksi Effective Properties				50 ksi Effective Properties				Torsional Properties				
	in	in^2	lb/ft	Ix in^4	Sx in^3	Rx in	Iy in^4	Ry in	Ix in^4	Sx in^3	Ma in-k	Va lb	Ix in^4	Sx in^3	Ma in-k	Va lb	Jx1000 in^4	Cw in^6	Xo in	Ro in	Beta
387T200-33	0.0346	0.272	0.93	0.716	0.356	1.622	0.112	0.641	0.540	0.210	4.14	971	0.521	0.178	5.34	971	0.109	0.312	-1.254	2.148	0.659
387T200-43	0.0451	0.355	1.21	0.935	0.463	1.623	0.145	0.639	0.754	0.297	5.87	1739	0.715	0.278	8.32	2141	0.241	0.405	-1.249	2.145	0.661
387T200-54	0.0566	0.445	1.51	1.183	0.581	1.631	0.180	0.637	1.019	0.408	8.06	2655	0.965	0.379	11.36	3372	0.475	0.512	-1.245	2.148	0.664
387T200-68	0.0713	0.560	1.91	1.509	0.732	1.641	0.225	0.634	1.386	0.567	11.20	3325	1.317	0.525	15.73	5037	0.950	0.651	-1.240	2.152	0.668
387T200-97	0.1017	0.799	2.72	2.208	1.044	1.663	0.314	0.627	2.206	0.942	18.62	4685	2.119	0.875	26.19	7098	2.753	0.948	-1.230	2.162	0.676
387T250-33	0.0346	0.307	1.04	0.854	0.425	1.668	0.205	0.817	-	-	-	-	-	-	-	-	0.122	0.571	-1.687	2.509	0.548
387T250-43	0.0451	0.400	1.36	1.114	0.552	1.669	0.265	0.815	0.827	0.309	6.11	1739	0.781	0.289	8.65	2141	0.271	0.743	-1.682	2.506	0.550
387T250-54	0.0566	0.502	1.71	1.411	0.693	1.677	0.331	0.813	1.124	0.426	8.42	2655	1.059	0.395	11.83	3372	0.536	0.939	-1.678	2.508	0.552
387T250-68	0.0713	0.632	2.15	1.802	0.874	1.689	0.414	0.810	1.543	0.596	11.78	3325	1.455	0.550	16.46	5037	1.070	1.198	-1.673	2.511	0.556
387T250-97	0.1017	0.900	3.06	2.642	1.249	1.713	0.582	0.804	2.506	1.008	19.91	4685	2.380	0.927	27.74	7098	3.104	1.752	-1.663	2.519	0.564
387T300-33	0.0346	0.342	1.16	0.991	0.493	1.704	0.335	0.990	-	-	-	-	-	-	-	-	0.136	0.939	-2.135	2.905	0.460
387T300-43	0.0451	0.445	1.51	1.294	0.641	1.705	0.434	0.988	-	-	-	-	-	-	-	-	0.302	1.222	-2.129	2.901	0.461
387T300-54	0.0566	0.558	1.90	1.640	0.805	1.714	0.542	0.986	1.215	0.440	8.70	2655	1.141	0.408	12.20	3372	0.596	1.547	-2.125	2.903	0.464
387T300-68	0.0713	0.703	2.39	2.095	1.016	1.726	0.679	0.983	1.679	0.618	12.21	3325	1.575	0.569	17.02	5037	1.191	1.975	-2.120	2.905	0.468
387T300-97	0.1017	1.002	3.41	3.075	1.454	1.752	0.957	0.977	2.765	1.055	20.86	4685	2.606	0.965	28.89	7098	3.455	2.897	-2.109	2.911	0.475
625T200-33	0.0346	0.355	1.21	2.102	0.657	2.435	0.128	0.600	1.705	0.347	6.85	597	1.664	0.286	8.58	597	0.141	0.927	-1.038	2.714	0.854
625T200-43	0.0451	0.462	1.57	2.740	0.855	2.436	0.165	0.598	2.291	0.595	11.75	1321	2.239	0.478	14.30	1321	0.313	1.203	-1.034	2.713	0.855
625T200-54	0.0566	0.579	1.97	3.454	1.071	2.442	0.206	0.596	3.037	0.806	15.94	2618	2.909	0.763	22.84	2618	0.619	1.511	-1.030	2.716	0.856
625T200-68	0.0713	0.730	2.48	4.381	1.348	2.450	0.256	0.593	4.062	1.096	21.65	4347	3.893	1.033	30.91	5252	1.237	1.908	-1.026	2.722	0.858
625T200-97	0.1017	1.040	3.54	6.333	1.917	2.468	0.358	0.587	6.317	1.763	34.83	7674	6.100	1.660	49.69	10885	3.586	2.735	-1.017	2.733	0.861
625T250-33	0.0346	0.389	1.32	2.452	0.767	2.510	0.236	0.779	-	-	-	-	-	-	-	-	0.155	1.690	-1.428	2.991	0.772
625T250-43	0.0451	0.507	1.73	3.197	0.997	2.511	0.306	0.777	2.506	0.585	11.56	1321	2.442	0.475	14.23	1321	0.344	2.195	-1.423	2.989	0.773
625T250-54	0.0566	0.636	2.16	4.032	1.251	2.518	0.382	0.775	3.313	0.843	16.65	2618	3.180	0.761	22.77	2618	0.679	2.761	-1.420	2.992	0.775
625T250-68	0.0713	0.801	2.73	5.117	1.575	2.527	0.477	0.772	4.462	1.150	22.73	4347	4.253	1.080	32.33	5252	1.357	3.495	-1.415	2.998	0.777
625T250-97	0.1017	1.142	3.89	7.409	2.243	2.547	0.669	0.766	7.055	1.876	37.07	7674	6.748	1.752	52.47	10885	3.937	5.031	-1.406	3.008	0.782
625T300-33	0.0346	0.424	1.44	2.802	0.876	2.571	0.388	0.957	-	-	-	-	-	-	-	-	0.169	2.760	-1.838	3.303	0.690
625T300-43	0.0451	0.552	1.88	3.654	1.140	2.573	0.504	0.955	-	-	-	-	-	-	-	-	0.374	3.588	-1.833	3.300	0.691
625T300-54	0.0566	0.693	2.36	4.610	1.430	2.580	0.629	0.953	3.558	0.872	17.22	2618	3.427	0.751	22.49	2618	0.740	4.519	-1.829	3.303	0.693
625T300-68	0.0713	0.872	2.97	5.854	1.801	2.590	0.788	0.950	4.814	1.193	23.58	4347	4.571	1.118	33.47	5252	1.478	5.727	-1.824	3.308	0.696
625T300-97	0.1017	1.244	4.23	8.484	2.569	2.612	1.109	0.944	7.696	1.962	38.77	7674	7.316	1.824	54.61	10885	4.287	8.270	-1.814	3.318	0.701



Double Slip Track Detail

Telescoping Slip Track Connection

For Section Properties Table Notes see page 3

A = Cross Sectional Area
Ix = Moment of inertia (x-axis)
Sx = Section modulus (x-axis)
Rx = Radius of gyration (x-axis)
Iy = Moment of inertia (y-axis)
Ry = Radius of gyration (y-axis)
Ma = Allowable bending moment
Va = Allowable shear force
J = St. Vennant torsion constant
Cw = Torsional warping constant
Xo = Distance from center of gravity to shear center along x-axis
Ro = Polar radius of gyration about the centroidal principal axis
ß = Beta coefficient

Non-Structural Non-Composite 5 PSF Allowable Wall Heights

Member	Spacing in oc	5 psf L/120	5 psf L/240	5 psf L/360
162S125-18	12	9' 3"	7' 7"	6' 8"
162S125-18	16	8' 0"	6' 11"	6' 0"
162S125-18	24	6' 6"	6' 0"	5' 3"
162S125-27	12	11' 3"	8' 11"	7' 9"
162S125-27	16	10' 3"	8' 1"	7' 1"
162S125-27	24	8' 4"	7' 1"	6' 2"
162S125-30	12	11' 7"	9' 2"	8' 0"
162S125-30	16	10' 6"	8' 4"	7' 3"
162S125-30	24	8' 11"	7' 3"	6' 4"
162S125-33	12	12' 0"	9' 6"	8' 3"
162S125-33	16	10' 10"	8' 7"	7' 6"
162S125-33	24	9' 6"	7' 6"	6' 7"
250S125-18	12	12' 9"	10' 6"	9' 2"
250S125-18	16	11' 1"	9' 6"	8' 4"
250S125-18	24	9' 0"	8' 4"	7' 3"
250S125-27	12	15' 7"	12' 4"	10' 9"
250S125-27	16	13' 10"	11' 2"	9' 9"
250S125-27	24	11' 4"	9' 9"	8' 6"
250S125-30	12	16' 1"	12' 9"	11' 1"
250S125-30	16	14' 7"	11' 7"	10' 1"
250S125-30	24	12' 1"	10' 1"	8' 10"
250S125-33	12	16' 7"	13' 2"	11' 6"
250S125-33	16	15' 1"	11' 11"	10' 5"
250S125-33	24	13' 0"	10' 5"	9' 1"
362S125-18	12	14' 5"	14' 2"	12' 5"
362S125-18	16	12' 6"	12' 6"	11' 3"
362S125-18	24	10' 2"	10' 2"	9' 10"
362S125-27	12	18' 11"	16' 5"	14' 4"
362S125-27	16	16' 4"	14' 11"	13' 1"
362S125-27	24	13' 4"	13' 1"	11' 5"
362S125-30	12	20' 5"	17' 0"	14' 10"
362S125-30	16	17' 8"	15' 5"	13' 6"
362S125-30	24	14' 5"	13' 6"	11' 9"
362S125-33	12	22' 1"	17' 7"	15' 4"
362S125-33	16	19' 2"	15' 11"	13' 11"
362S125-33	24	15' 8"	13' 11"	12' 2"
400S125-18	12	15' 2"	15' 2"	13' 5"
400S125-18	16	13' 2"	13' 2"	12' 2"
400S125-18	24	10' 9"	10' 9"	10' 8"
400S125-27	12	19' 11"	17' 9"	15' 6"
400S125-27	16	17' 3"	16' 2"	14' 1"
400S125-27	24	14' 1"	14' 1"	12' 4"
400S125-30	12	21' 6"	18' 4"	16' 0"
400S125-30	16	18' 8"	16' 8"	14' 7"
400S125-30	24	15' 3"	14' 7"	12' 8"
400S125-33	12	23' 5"	19' 0"	16' 7"
400S125-33	16	20' 3"	17' 3"	15' 1"
400S125-33	24	16' 6"	15' 1"	13' 2"
600S125-27	12	26' 9"	24' 3"	21' 2"
600S125-27	16	23' 2"	22' 1"	19' 3"
600S125-27	24	18' 11"	18' 11"	16' 10"
600S125-30	12	28' 11"	25' 2"	21' 11"
600S125-30	16	25' 1"	22' 10"	19' 11"
600S125-30	24	20' 5"	19' 11"	17' 5"
600S125-33	12	31' 6"	26' 1"	22' 9"
600S125-33	16	27' 3"	23' 8"	20' 8"
600S125-33	24	22' 3"	20' 8"	18' 1"

These tables provide height limitations for wall framing alone and composite walls & sheathing with gypsum wallboard. Note: Values on this page apply to standard 1-1⁄4" flange studs.

<< Non-Composite Table Notes:

1. Limiting heights based upon a fully braced section, if section is not fully braced on both flanges, please use the AISIWIN software available at www.clarkwestern.com, or contact our Technical Support line at 888-437-3244 for the limiting height and maximum spacing of lateral bracing for the specific condition.
2. Values based on Fy=33 ksi.
3. Lateral loads have not been modified for strength or deflection checks.
4. Reference ASTM C754 section 5.3 for the requirements of stud to track connections. Reference ASTM C754 section 5.2 for requirements of runners (track) connections to the building structure.
5. Nonstructural framing [18-mil, 27-mil and 30-mil] is not permitted in load bearing (i.e. axial load greater than 100 lb/ft or 200 lbs/stud) or exterior applications (i.e. transverse load greater than 10 PSF). Reference ASTM C645 section 3.2.2.
6. Adding additional horizontal bridging will not reduce the actual deflection in the wall. To reduce the deflection of a wall stud either a heavier member is required or an intermediate structural support must be provided.
7. A sufficient diaphragm, such as screw-attached gypsum board, may serve as an adequate means of bracing the stud pending the determination of the gypsum supplier or a design professional. Horizontal mechanical bridging would be required if the sheathing diaphragm is not structurally sufficient. In addition, horizontal bridging may be required during the construction phase of a tall wall in order to keep it plumb and true.
8. The standard protective coating for nonstructural framing members is a G-40 coating or equivalent. Thicker protective coatings are available. For coatings thicker than a G-40 consult your sales contact to verify lead times.
9. Provide 150U50-54 (1-1/2"x16-ga.) cold-rolled channel lateral bracing @ 10'-0" o.c. in walls over 30 ft. tall.

Composite Table Notes: >>

1. Composite wall sheathed both sides and full height with 1/2" gypsum wallboard for 18, 30 & 33 mils wall studs.
2. Sheathing attached with #6 screws, spaced at 12"o.c. max.
3. Subscripts indicate wall height controlled by "v" = shear, "f" = flexural stress and no mark indicates deflection.
4. 600S125-18 tested wall assemblies did not include web stiffeners.

CLARKWESTERN is converting all Non-Structural Framing to UltraSTEEL® Framing. Once your local facility converts to UltraSTEEL® they will no longer provide traditional non-structural stud and track. For more information, contact your local sales representative.

Non-Structural Composite SSMA 2001 Allowable Wall Heights

Member	Spacing in oc	5 psf L/120	5 psf L/240	5 psf L/360	10 psf L/120	10 psf L/240	10 psf L/360
162S125-18	12	11'-2"	8'-10"	NA	8'-10"	NA	NA
162S125-18	16	10'-7"	8'-4"	NA	8'-4"	NA	NA
162S125-18	24	9'-9"f	7'-11"	NA	NA	NA	NA
162S125-30	12	12'-5"	9'-11"	NA	9'-11"	NA	NA
162S125-30	16	11'-6"	9'-2"	NA	9'-2"	NA	NA
162S125-30	24	10'-5"	8'-3"	NA	8'-3"	NA	NA
162S125-33	12	13'-0"	10'-4"	9'-0"	10'-4"	NA	NA
162S125-33	16	12'-1"	9'-8"	8'-5"	9'-8"	NA	NA
162S125-33	24	11'-0"	8'-9"	7'-8"	8'-9"	NA	NA
250S125-18	12	15'-1"	11'-11"	10'-5"	10'-9"f	9'-6"	NA
250S125-18	16	13'-3"f	11'-3"	9'-10"	9'-5"f	8'-11"	NA
250S125-18	24	11'-10"	10'-7"	9'-3"	8'-5"f	8'-5"	NA
250S125-30	12	16'-8"	13'-2"	11'-6"	13'-2"	10'-5"	9'-1"
250S125-30	16	15'-4"	12'-1"	10'-6"	12'-1"	9'-6"	8'-4"
250S125-30	24	13'-9"	10'-9"	9'-4"	10'-9"	8'-6"	7'-4"
250S125-33	12	17'-9"	13'-11"	12'-1"	13'-11"	10'-11"	9'-5"
250S125-33	16	16'-5"	12'-10"	11'-2"	12'-10"	10'-0"	8'-8"
250S125-33	24	14'-10"	11'-7"	10'-0"	11'-7"	8'-11"	7'-8"
362S125-18	12	17'-8"f	15'-4"	13'-3"	12'-5"f	12'-0"	10'-5"
362S125-18	16	15'-4"f	14'-4"	12'-4"	10'-9"f	10'-9"f	9'-9"
362S125-18	24	13'-9"f	13'-5"	11'-7"	9'-5"f	9'-5"f	9'-1"
362S125-30	12	21'-8"	17'-1"	14'-10"	17'-1"	13'-5"	11'-8"
362S125-30	16	19'-11"	15'-8"	13'-7"	15'-8"	12'-3"	10'-7"
362S125-30	24	17'-9"	14'-0"	12'-0"	14'-0"	10'-10"	9'-4"
362S125-33	12	22'-6"	17'-10"	15'-6"	17'-10"	14'-1"	12'-4"
362S125-33	16	20'-8"	16'-5"	14'-3"	16'-5"	12'-11"	11'-4"
362S125-33	24	18'-6"	14'-9"	12'-9"	14'-9"	11'-7"	10'-1"
400S125-18	12	19'-6"f	16'-5"	14'-4"	13'-8"f	13'-0"	11'-4"
400S125-18	16	17'-2"f	15'-4"	13'-4"	11'-11"f	11'-11"f	10'-6"
400S125-18	24	15'-1"f	14'-2"	12'-4"	10'-5"f	10'-5"f	9'-9"
400S125-30	12	24'-0"	19'-0"	16'-6"	19'-0"	14'-11"	12'-11"
400S125-30	16	22'-0"	17'-6"	15'-2"	17'-6"	13'-8"	11'-10"
400S125-30	24	19'-8"	15'-7"	13'-5"	14'-9"f	12'-1"	10'-5"
400S125-33	12	25'-1"	19'-11"	17'-4"	19'-11"	15'-8"	13'-7"
400S125-33	16	23'-1"	18'-4"	15'-11"	18'-4"	14'-5"	12'-6"
400S125-33	24	20'-9"	16'-5"	14'-3"	16'-5"	12'-10"	11'-2"
600S125-18	12	22'-10"	22'-1"	19'-4"	16'-2"f	16'-2"f	15'-0"
600S125-18	16	19'-9"f	19'-9"f	17'-11"	14'-0"f	14'-0"f	13'-10"
600S125-18	24	16'-9"f	16'-9"f	16'-9"f	11'-5"f	11'-5"f	11'-5"f
600S125-30	12	32'-1"	25'-6"	22'-3"	24'-7"f	20'-3"	17'-6"
600S125-30	16	29'-2"	23'-2"	20'-3"	21'-5"f	18'-4"	15'-10"
600S125-30	24	25'-1"f	20'-3"	17'-8"	17'-9"f	16'-0"	13'-8"
600S125-33	12	33'-9"	26'-9"	23'-5"	26'-9"	21'-3"	18'-7"
600S125-33	16	30'-10"	24'-6"	21'-4"	24'-6"	19'-5"	17'-0"
600S125-33	24	27'-2"	21'-7"	18'-10"	19'-1"v	17'-2"	15'-0"

Structural Stud Non-Composite – Allowable Wall Heights - 5 PSF (Interior)

Member	Spacing in oc	5 psf L/120	L/240	L/360
362S162-33	12	24' 4"	19' 3"	16' 10"
362S162-33	16	22' 1"	17' 6"	15' 4"
362S162-33	24	18' 9"	15' 4"	13' 4"
362S200-33	12	25' 8"	20' 4"	17' 9"
362S200-33	16	23' 4"	18' 6"	16' 2"
362S200-33	24	19' 7"	16' 2"	14' 1"
362S162-43	12	26' 6"	21' 0"	18' 4"
362S162-43	16	24' 0"	19' 1"	16' 8"
362S162-43	24	21' 0"	16' 8"	14' 7"
362S200-43	12	27' 11"	22' 2"	19' 4"
362S200-43	16	25' 5"	20' 2"	17' 7"
362S200-43	24	22' 2"	17' 7"	15' 4"
362S250-43	12	29' 6"	23' 5"	20' 5"
362S250-43	16	26' 9"	21' 3"	18' 7"
362S250-43	24	23' 5"	18' 7"	16' 2"
362S162-54	12	28' 4"	22' 6"	19' 8"
362S162-54	16	25' 9"	20' 5"	17' 10"
362S162-54	24	22' 6"	17' 10"	15' 7"
362S200-54	12	30' 0"	23' 9"	20' 9"
362S200-54	16	27' 3"	21' 7"	18' 10"
362S200-54	24	23' 9"	18' 10"	16' 6"
362S250-54	12	31' 7"	25' 1"	21' 11"
362S250-54	16	28' 9"	22' 9"	19' 11"
362S250-54	24	25' 1"	19' 11"	17' 5"
362S162-68	12	30' 4"	24' 1"	21' 0"
362S162-68	16	27' 7"	21' 10"	19' 1"
362S162-68	24	24' 1"	19' 1"	16' 8"
362S200-68	12	32' 1"	25' 6"	22' 3"
362S200-68	16	29' 2"	23' 2"	20' 2"
362S200-68	24	25' 6"	20' 2"	17' 8"
362S250-68	12	33' 11"	26' 11"	23' 6"
362S250-68	16	30' 9"	24' 5"	21' 4"
362S250-68	24	26' 11"	21' 4"	18' 8"
362S162-97	12	33' 6"	26' 7"	23' 2"
362S162-97	16	30' 5"	24' 1"	21' 1"
362S162-97	24	26' 7"	21' 1"	18' 5"
362S200-97	12	35' 6"	28' 2"	24' 7"
362S200-97	16	32' 3"	25' 7"	22' 4"
362S200-97	24	28' 2"	22' 4"	19' 6"
362S250-97	12	37' 7"	29' 10"	26' 0"
362S250-97	16	34' 1"	27' 1"	23' 8"
362S250-97	24	29' 10"	23' 8"	20' 8"

These tables provide height limitations for wall framing, alone. Values on this page apply to wide flange studs (1⅝", 2", 2½") and greater metal thicknesses (33, 43, 54, 68 and 97 mil)

Non-Composite Table Notes:

1. Limiting heights based upon a fully braced section, if section is not fully braced on both flanges, please use the AISIWIN software available at www.clarkwestern.com, or contact our Technical Support line at 888-437-3244 for the limiting height and maximum spacing of lateral bracing for the specific condition.
2. Values based on Fy=33 ksi.
3. Lateral loads have not been modified for strength or deflection checks.
4. Reference ASTM C754 section 5.3 for the requirements of stud to track connections. Reference ASTM C754 section 5.2 for requirements of runners (track) connections to the building structure.
5. Adding additional horizontal bridging will not reduce the actual deflection in the wall. To reduce the deflection of a wall stud either a heavier member is required or an intermediate structural support must be provided.
6. A sufficient diaphragm, such as screw-attached gypsum board, may serve as an adequate means of bracing the stud pending the determination of the gypsum supplier or a design professional. Horizontal mechanical bridging would be required if the sheathing diaphragm is not structurally sufficient. In addition, horizontal bridging may be required during the construction phase of a tall wall in order to keep it plumb and true.

Structural Stud Non-Composite – Allowable Wall Heights - 5 PSF (Interior)

Member	Spacing in oc	5 psf L/120	L/240	L/360
600S162-33	12	36' 1"	28' 7"	25' 0"
600S162-33	16	32' 9"	26' 0"	22' 8"
600S162-33	24	27' 6"	22' 8"	19' 10"
600S200-33	12	37' 9"	29' 11"	26' 2"
600S200-33	16	34' 4"	27' 3"	23' 9"
600S200-33	24	28' 6"	23' 9"	20' 9"
600S162-43	12	39' 3"	31' 2"	27' 3"
600S162-43	16	35' 8"	28' 4"	24' 9"
600S162-43	24	31' 2"	24' 9"	21' 7"
600S200-43	12	41' 3"	32' 9"	28' 7"
600S200-43	16	37' 6"	29' 9"	26' 0"
600S200-43	24	32' 9"	26' 0"	22' 8"
600S250-43	12	43' 2"	34' 3"	29' 11"
600S250-43	16	39' 3"	31' 2"	27' 2"
600S250-43	24	34' 3"	27' 2"	23' 9"
600S162-54	12	42' 2"	33' 5"	29' 2"
600S162-54	16	38' 3"	30' 4"	26' 6"
600S162-54	24	33' 5"	26' 6"	23' 2"
600S200-54	12	44' 3"	35' 2"	30' 8"
600S200-54	16	40' 3"	31' 11"	27' 11"
600S200-54	24	35' 2"	27' 11"	24' 4"
600S250-54	12	46' 5"	36' 10"	32' 2"
600S250-54	16	42' 2"	33' 5"	29' 3"
600S250-54	24	36' 10"	29' 3"	25' 6"
600S162-68	12	45' 2"	35' 10"	31' 4"
600S162-68	16	41' 0"	32' 7"	28' 5"
600S162-68	24	35' 10"	28' 5"	24' 10"
600S200-68	12	47' 6"	37' 8"	32' 11"
600S200-68	16	43' 2"	34' 3"	29' 11"
600S200-68	24	37' 8"	29' 11"	26' 2"
600S250-68	12	49' 10"	39' 6"	34' 6"
600S250-68	16	45' 3"	35' 11"	31' 4"
600S250-68	24	39' 6"	31' 4"	27' 5"
600S162-97	12	50' 1"	39' 9"	34' 8"
600S162-97	16	45' 6"	36' 1"	31' 6"
600S162-97	24	39' 9"	31' 6"	27' 6"
600S200-97	12	52' 9"	41' 10"	36' 7"
600S200-97	16	47' 11"	38' 0"	33' 3"
600S200-97	24	41' 10"	33' 3"	29' 0"
600S250-97	12	55' 5"	43' 11"	38' 5"
600S250-97	16	50' 4"	39' 11"	34' 11"
600S250-97	24	43' 11"	34' 11"	30' 6"

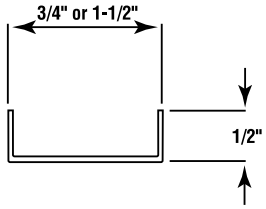
CLARKWESTERN™ BUILDING SYSTEMS

PHYSICAL/STRUCTURAL PROPERTIES FOR HAT FURRING CHANNELS

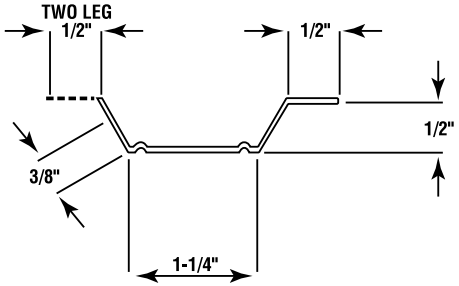
SECTION	Fy ksi	Design Thickness (in)	GROSS PROPERTIES Area (in^2)	Weight (lb/ft)	Ix (in^4)	Rx (in)	Iy (in^4)	Ry (in)	EFFECTIVE PROPERTIES Ix (in^4)	Sx (in^3)	Ma (ft-lb)	Va (lb)
087F125-18	33	0.0188	0.0702	0.2389	0.0089	0.3570	0.0422	0.774	0.0086	0.0159	26.23	323.7
087F125-27	33	0.0283	0.1046	0.3559	0.0131	0.3530	0.0628	0.774	0.0131	0.0270	44.53	480.6
087F125-30	33	0.0312	0.1150	0.3920	0.0147	0.3520	0.0691	0.774	0.0142	0.0305	50.21	527.6
087F125-33	33	0.0346	0.1270	0.4322	0.0157	0.3510	0.0763	0.774	0.0157	0.0336	55.25	582.2
087F125-43	33	0.0451	0.1636	0.5567	0.0198	0.3480	0.0984	0.774	0.0198	0.0424	69.84	747.1
087F125-54	33	0.0566	0.2010	0.6820	0.0240	0.3440	0.1203	0.774	0.0237	0.0508	83.62	867.0
150F125-18	33	0.0188	0.0939	0.3195	0.0310	0.5740	0.0539	0.758	0.0299	0.0342	56.37	604.4
150F125-27	33	0.0283	0.1403	0.4774	0.0458	0.5710	0.0806	0.758	0.0458	0.0567	93.41	910.6
150F125-30	33	0.0312	0.1543	0.5250	0.0502	0.5700	0.0886	0.758	0.0502	0.0637	104.92	1001.7
150F125-33	33	0.0346	0.1707	0.5809	0.0553	0.5690	0.0980	0.758	0.0553	0.0702	115.58	1107.9
150F125-43	33	0.0451	0.2206	0.7507	0.0705	0.5650	0.1267	0.758	0.0705	0.0896	147.50	1432.4
150F125-54	33	0.0566	0.2720	0.9250	0.0845	0.5610	0.1561	0.758	0.0855	0.1085	178.65	1727.1

Notes:

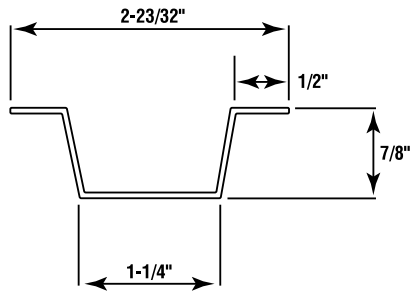
1. Properties based on the 2001 NASPEC.
2. Design thickness used for determination of properties. Minimum delivered thickness must be no less than 95% of design thickness.
3. For deflection calculations, use effective Ixx. Effective Ixx is based on Procedure 1 of the NASPEC.
4. Effective properties based on 33 ksi steel.



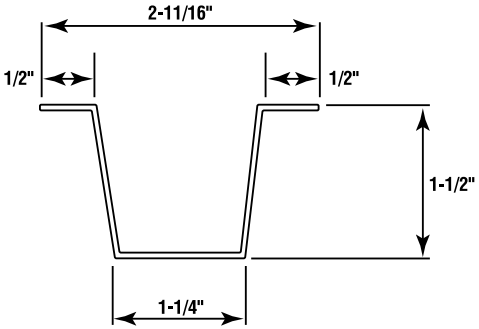
COLD-ROLLED CHANNEL 75U50 & 150U50



ONE LEG RESILIENT FURRING CHANNEL (SHOWN)
TWO LEG ALSO AVAILABLE



7/8" DRYWALL FURRING CHANNEL 087F125

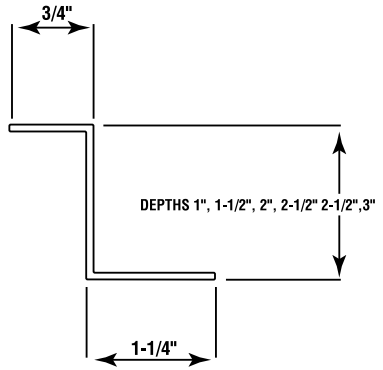


1-1/2" DRYWALL FURRING CHANNEL 150F125

PHYSICAL PROPERTIES FOR COLD-ROLLED CHANNEL, ONE LEG RESILIENT FURRING & Z FURRING

SECTION	Fy ksi	Design Thickness (in)	GROSS PROPERTIES Area (in^2)	Weight (lb/ft)	Ix (in^4)	Rx (in)	Iy (in^4)	Ry (in)	EFFECTIVE PROPERTIES Ix (in^4)	Sx (in^3)	Ma (ft-lb)
075U50-54	33	0.0566	0.0867	0.2950	0.0072	0.2876	0.0021	0.1545	0.0072	0.0191	38
150U50-54	33	0.0566	0.1292	0.4396	0.0387	0.5475	0.0027	0.1430	0.0387	0.0516	102
One Leg RFC-18	33	0.0188	0.0504	0.1715	0.0019	0.1964	0.0215	0.6534	–	–	–
Two Leg RFC-18	33	0.0188	0.0643	0.2188	0.0029	0.2137	0.0427	0.8153	–	–	–
100ZFurring-18	33	0.0188	0.0550	0.1872	0.0100	0.4260	0.0130	0.4970	–	–	–
100ZFurring-30	33	0.0312	0.0887	0.3018	0.0154	0.4167	0.0210	0.4868	–	–	–
150ZFurring-18	33	0.0188	0.0640	0.2178	0.0250	0.6210	0.0140	0.4700	–	–	–
150ZFurring-30	33	0.0312	0.1043	0.3549	0.0385	0.6072	0.0214	0.4532	–	–	–
200ZFurring-18	33	0.0188	0.0730	0.2484	0.0480	0.8080	0.0150	0.4500	–	–	–
200ZFurring-30	33	0.0312	0.1199	0.4080	0.0745	0.7880	0.0217	0.4256	–	–	–
250ZFurring-18	33	0.0188	0.0830	0.2824	0.0810	0.9890	0.0160	0.4330	–	–	–
250ZFurring-30	33	0.0312	0.1355	0.4611	0.1254	0.9620	0.0220	0.4024	–	–	–
300ZFurring-18	33	0.0188	0.0920	0.3131	0.1250	1.1670	0.0160	0.4190	–	–	–
300ZFurring-30	33	0.0312	0.1511	0.5142	0.1933	1.1308	0.0221	0.3827	–	–	–

1. Refer to the Gypsum Association's "Fire Resistance Design Manual" (GA-600) for assemblies using Resilient Furring Channels.



Z FURRING

Material Certification
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Nonstructural Framing Standards

ASTM C 645 Standard Specification for Nonstructural Steel Framing Members.

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

Structural Framing Standards

ASTM C 955 Standard Specification for Load Bearing (Transverse and Axial) Steel Studs, Runners (Tracks), and Bracing or Bridging for Screw Application of Gypsum Panel Products and Metal Plaster Bases.

ASTM C 1007 Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories.

Protective Coating Standards

ASTM A 924 Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.

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

ASTM A 463 Standard Specification for Steel Sheet, Aluminum-Coated, by the Hot-Dip Process.

ASTM A 591 Steel Sheet, Zinc-Coated, for Light Coating Mass Applications.

ASTM A 792 Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.

ASTM A 875 Standard Specification for Sheet Steel, Zinc-5% Aluminum Alloy-Coated by the Hot-Dip Process.

Sectional and structural properties of steel framing members have been calculated in conformance with the 2001 North American Specification (NASPEC) for the Design of Cold-Formed Steel Structural Members 2001.

CLARKWESTERN Building Systems is a member of the Steel Stud Manufacturer's Association (SSMA).

CLARKWESTERN Building Systems Product Line

	Structural
Web Depths	2 1/2", 3 1/2", 3 5/8", 4", 5 1/2", 6", 7 1/4", 8", 9 1/4", 10", 11 1/2", 13 1/2", 14" and 16"
Flange/[Return Lip]	1 3/8" / [3/8"], 1 5/8" / [1/2"] 1" 2" / [5/8"], 2 1/2" / [5/8"], 3" / [1"] 3 1/2" / [1"]
Yield Strength	33 and 50 ksi
Thickness (Mils/Ga.)	33 (20 ga.), 43 (18 ga.), 54 (16 ga.) 68 (14 ga.), 97 (12 ga.), 118 (10 ga.)
Protective Coating	Galvanized G-60 or equivalent, Per ASTM C 955

	Nonstructural
Web Depths	1 5/8", 2 1/2", 3 1/2", 3 5/8", 4" and 6"
Flange/[Return Lip]	1 1/4" / [3/16"]
Yield Strength	33 ksi
Thickness (Mils/Ga.)	18 (25 ga.), 27 (22 ga.), 30 (20 ga.) 33 (20 ga)
Protective Coating	Galvanized G-40 or equivalent, Per ASTM C-645

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NOTE

For product information and material standards, refer to page 3 of CLARKWESTERN's Product Technical Data & Tables catalog.

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