TRUE-STUD™
DRYWALL FRAMING SYSTEM

TELLING™
BUILDSTRONG

Physical and Structural Section Properties

Section	Design Thickness (in)	Fy (ksi)	Gross Properties Area (in^2)	Weight (lb/ft)	Ixx (in^4)	Rx (in)	Iyy (in^4)	Ry (in)	Effective Properties Ixx (in^4)	Sxx (in^3)	Ma (in-k)	Va (lb)	Ycg (in)	Torsional Properties Jx1000 (in^4)	Cw (in^6)	Xo (in)	Ro (in)	ß
162S125-15	.0160	70	0.070	0.24	0.033	0.685	0.015	0.461	0.030	0.024	0.85	256		0.006	0.010	-1.085	1.364	0.367
162S125-18	.0188	70	0.083	0.28	0.039	0.684	0.017	0.460	0.033	0.027	1.15	417	1.013	0.010	0.011	-1.082	1.360	0.367
162S125-20	.0210	60	0.092	0.31	0.043	0.683	0.019	0.459	0.038	0.033	1.20	508	0.980	0.014	0.012	-1.079	1.357	0.367
162S125-23	.0245	60	0.107	0.36	0.050	0.681	0.022	0.457	0.045	0.041	1.47	692	0.957	0.021	0.014	-1.075	1.353	0.368
162S125-27	.0283	60	0.123	0.42	0.057	0.680	0.026	0.456	0.054	0.050	1.79	897	0.936	0.033	0.016	-1.071	1.348	0.369
162S125-30	.0312	60	0.135	0.46	0.062	0.678	0.028	0.454	0.060	0.057	2.03	987	0.921	0.044	0.017	-1.067	1.344	0.369
162S125-33	.0346	33	0.150	0.51	0.069	0.677	0.031	0.453	0.068	0.077	1.53	601	0.841	0.060	0.019	-1.063	1.339	0.370
250S125-15	.0160	70	0.084	0.29	0.087	1.016	0.017	0.454	0.077	0.040	1.41	159		0.007	0.023	-0.955	1.466	0.576
250S125-18	.0188	70	0.099	0.34	0.102	1.014	0.020	0.453	0.089	0.051	2.13	258	1.496	0.012	0.027	-0.952	1.463	0.577
250S125-20	.0210	60	0.110	0.38	0.113	1.013	0.023	0.452	0.101	0.064	2.31	360	1.422	0.016	0.030	-0.950	1.460	0.577
250S125-23	.0245	60	0.128	0.44	0.131	1.012	0.026	0.451	0.119	0.079	2.85	572	1.388	0.026	0.034	-0.946	1.456	0.578
250S125-27	.0283	60	0.148	0.50	0.151	1.010	0.030	0.449	0.140	0.094	3.38	883	1.373	0.039	0.039	-0.941	1.452	0.580
250S125-30	.0312	60	0.163	0.55	0.165	1.009	0.033	0.448	0.157	0.106	3.79	1122	1.362	0.053	0.042	-0.938	1.448	0.581
250S125-33	.0346	33	0.180	0.61	0.182	1.007	0.036	0.446	0.181	0.137	2.71	975	1.283	0.072	0.046	-0.934	1.444	0.582
350S125-15[1]	.0160	70	0.100	0.34	0.189	1.371	0.019	0.440	0.157	0.056	1.95	111		0.009	0.048	-0.845	1.669	0.744
350S125-18	.0188	70	0.118	0.40	0.221	1.369	0.023	0.438	0.201	0.063	2.64	180	2.294	0.014	0.056	-0.842	1.666	0.745
350S125-20	.0210	60	0.131	0.45	0.246	1.368	0.025	0.437	0.229	0.077	2.78	250	2.222	0.019	0.062	-0.839	1.664	0.746
350S125-23	.0245	60	0.153	0.52	0.286	1.366	0.029	0.436	0.271	0.096	3.46	398	2.170	0.031	0.072	-0.835	1.660	0.747
350S125-27	.0283	60	0.176	0.60	0.328	1.365	0.033	0.434	0.319	0.118	4.25	614	2.118	0.047	0.082	-0.831	1.656	0.748
350S125-30	.0312	60	0.194	0.66	0.360	1.363	0.036	0.433	0.352	0.136	4.88	824	2.083	0.063	0.089	-0.828	1.653	0.749
350S125-33	.0346	33	0.215	0.73	0.398	1.361	0.040	0.431	0.398	0.193	3.81	1024	1.879	0.086	0.098	-0.825	1.649	0.750
362S125-15[1]	.0160	70	0.102	0.35	0.205	1.414	0.020	0.438	0.169	0.058	2.02	107		0.009	0.052	-0.833	1.698	0.760
362S125-18	.0188	70	0.120	0.41	0.240	1.412	0.023	0.436	0.219	0.065	2.74	173	2.384	0.014	0.061	-0.830	1.695	0.760
362S125-20	.0210	60	0.134	0.46	0.267	1.411	0.025	0.435	0.249	0.080	2.89	241	2.310	0.020	0.067	-0.827	1.693	0.761
362S125-23	.0245	60	0.156	0.53	0.310	1.410	0.029	0.434	0.295	0.100	3.59	384	2.256	0.031	0.077	-0.824	1.689	0.762
362S125-27	.0283	60	0.180	0.61	0.356	1.408	0.034	0.432	0.347	0.123	4.41	592	2.203	0.048	0.088	-0.820	1.685	0.763
362S125-30	.0312	60	0.198	0.67	0.391	1.406	0.037	0.431	0.383	0.141	5.07	794	2.167	0.064	0.096	-0.817	1.682	0.764
362S125-33	.0346	33	0.219	0.74	0.432	1.404	0.040	0.429	0.432	0.201	3.96	1024	1.956	0.087	0.106	-0.813	1.678	0.765
400S125-15[1]	.0160	70	0.108	0.37	0.258	1.542	0.020	0.431	0.205	0.061	2.15	96		0.0090	0.0650	-0.8000	1.7900	0.8000
400S125-18[1]	.0188	70	0.127	0.43	0.302	1.541	0.024	0.430	0.270	0.072	3.04	156	2.655	0.015	0.076	-0.797	1.787	0.801
400S125-20	.0210	60	0.142	0.48	0.336	1.539	0.026	0.429	0.316	0.089	3.20	217	2.577	0.021	0.084	-0.794	1.785	0.802
400S125-23	.0245	60	0.165	0.56	0.390	1.538	0.030	0.427	0.374	0.111	3.99	346	2.518	0.033	0.097	-0.791	1.781	0.803
400S125-27	.0283	60	0.190	0.65	0.449	1.536	0.034	0.426	0.439	0.136	4.90	533	2.461	0.051	0.110	-0.787	1.777	0.804
400S125-30	.0312	60	0.209	0.71	0.493	1.534	0.038	0.424	0.483	0.157	5.63	715	2.421	0.068	0.120	-0.784	1.774	0.805
400S125-33	.0346	33	0.232	0.79	0.544	1.532	0.041	0.423	0.544	0.224	4.42	976	2.191	0.093	0.132	-0.780	1.771	0.806
550S125-15[1]	.0155	70	0.128	0.44	0.534	2.039	0.021	0.407						0.010	0.130	-0.692	2.192	0.900
550S125-18[1]	.0188	70	0.155	0.53	0.645	2.037	0.026	0.406						0.018	0.155	-0.689	2.188	0.901
550S125-20[1]	.0210	60	0.173	0.59	0.719	2.036	0.028	0.405	0.584	0.139	5.01	156	3.508	0.025	0.172	-0.686	2.186	0.901
550S125-23[1]	.0245	60	0.202	0.69	0.835	2.034	0.033	0.403	0.708	0.175	6.30	248	3.418	0.040	0.199	-0.683	2.183	0.902
550S125-27	.0283	60	0.233	0.79	0.961	2.032	0.037	0.401	0.858	0.218	7.82	382	3.329	0.062	0.227	-0.679	2.180	0.903
550S125-30	.0312	60	0.256	0.87	1.056	2.030	0.041	0.400	0.977	0.252	9.06	512	3.268	0.083	0.248	-0.677	2.177	0.903
550S125-33	.0346	33	0.284	0.97	1.167	2.028	0.045	0.398	1.153	0.363	7.18	699	2.954	0.113	0.272	-0.673	2.174	0.904
600S125-15[1]	.0155	70	0.136	0.46	0.659	2.201	0.022	0.399						0.011	0.158	-0.662	2.333	0.919
600S125-18[1]	.0188	70	0.165	0.56	0.796	2.199	0.026	0.398						0.019	0.190	-0.659	2.330	0.920
600S125-20[1]	.0210	60	0.184	0.63	0.888	2.197	0.029	0.397						0.027	0.210	-0.657	2.328	0.920
600S125-23[1]	.0245	60	0.214	0.73	1.032	2.195	0.033	0.395	0.860	0.192	6.91	226	3.770	0.043	0.243	-0.654	2.324	0.921
600S125-27[1]	.0283	60	0.247	0.84	1.188	2.193	0.038	0.394	1.045	0.239	8.58	349	3.674	0.066	0.277	-0.650	2.321	0.921
600S125-30	.0312	60	0.272	0.93	1.305	2.191	0.042	0.392	1.191	0.277	9.94	468	3.607	0.088	0.303	-0.648	2.318	0.922
600S125-33	.0346	33	0.301	1.02	1.443	2.189	0.046	0.391	1.411	0.400	7.91	638	3.264	0.120	0.332	-0.645	2.315	0.922

TRUE-STUD Notes:

Section properties were determined in accordance with AISI-NASPEC 2004/ IBC 2006

Effective properties and moment capacity do not incorporate stress increases resulting from cold working during forming.

1. Web-height to thickness ratio exceeds 200. Web Stiffeners are required at all support points and concentrated loads.

15 Mil properties Notations :

(Ixx) is based on Direct Strength method, considering local and distortional buckling, at listed allowable moment for serviceability. For Direct Strength calculations, CUFSM software was utilized see reference citation below:

Ref: Schafer, B.W., Àdány, S. "Buckling analysis of cold-formed steel members using CUFSM: conventional and constrained finite strip methods." Eighteenth International Specialty Conference on Cold-Formed Steel Structures, Orlando, FL. October 2006.

(Sxx) is calculated as Ma/(Fy/ Ωb)

(Ma) is based on the minimum value of $M_{a(distortional)}$ and $M_{a(local)}$ calculated using the Direct Strength Method. Ma(local) adjusted for punchouts via comparison with 2004 NASPEC effective width procedures. See 2004 NASPEC, Appendix 1. Sections do not meet the dimensional limits for Direct Strength pre-qualified sections. Wb = 2.0 applied based on rational analysis requirements of the NASPEC. For Direct Strength calculations, CUFSM software was utilized see reference:

Ref: Schafer, B.W., Àdány, S. "Buckling analysis of cold-formed steel members using CUFSM: conventional and constrained finite strip methods." Eighteenth International Specialty Conference on Cold-Formed Steel Structures, Orlando, FL. October 2006.