

Section Properties Table Notes

1. Calculated properties are based on AISI S100-07, North American Specification for the Design of Cold-Formed Steel Structural Members.
2. The centerline bend radius is based upon inside corner radii shown in thickness chart.
3. Effective properties incorporate the strength increase from the cold work of forming as applicable per AISI A7.2.
4. Tabulated gross properties, including torsional properties, are based upon full-unreduced cross section of the studs, away from punchouts.
5. For deflection calculations, use the effective moment of inertia.
6. Allowable moment includes cold-work of forming.
7. For the steels that have both 33 and 50 ksi listing, if the design is based upon 50 ksi, the 50 ksi steel needs to be specified. (example: 3625 S137 16-50 (50 ksi)).
8. Web depth for track sections is equal to the nominal height plus 2 times the design thickness plus the bend radius. Hems on non-structural track sections are ignored.

Non-Structural (S) Stud Section Properties

Design Thickness F _y			Effective Properties								Gross Properties					Torsional Properties							L _u
			Area	Weight	I _x	S _x	M _x	M _{nd}	V _{ax}	V _{ant}	I _x	S _x	R _x	I _y	R _y	J x 1000	C _w	X _o	m	R _o	b		
Member	(in)	(ksi)	(in ²)	(lb/ft)	(in ⁴)	(in ³)	(in-k)	(in-k)	(lb)	(lb)	(in ⁴)	(in ³)	(in)	(in ⁴)	(in)	(in ⁴)	(in ⁶)	(in)	(in)	(in)	(in)		
162S125-18	0.0188	33	0.080	0.27	0.034	0.031	0.616	1.092	302	100	0.038	0.046	0.686	0.016	0.447	0.009	0.009	-1.029	0.594	1.315	0.388	29.0	
162S125-27	0.0283	33	0.120	0.41	0.055	0.053	1.047	1.901	494	106	0.056	0.069	0.682	0.023	0.443	0.032	0.013	-1.018	0.587	1.303	0.390	29.1	
162S125-30	0.0312	33	0.132	0.45	0.060	0.060	1.192	2.163	543	106	0.061	0.075	0.681	0.026	0.441	0.043	0.014	-1.014	0.585	1.299	0.390	29.2	
162S125-33	0.0346	33	0.145	0.49	0.066	0.069	1.370	2.477	601	105	0.067	0.083	0.679	0.028	0.440	0.058	0.016	-1.010	0.583	1.294	0.391	29.3	
250S125-18	0.0188	33	0.097	0.33	0.089	0.060	1.176	1.719	258	196	0.099	0.079	1.014	0.019	0.439	0.011	0.023	-0.904	0.543	1.428	0.599	29.0	
250S125-27	0.0283	33	0.144	0.49	0.145	0.098	1.927	3.050	685	344	0.147	0.118	1.009	0.027	0.434	0.039	0.034	-0.893	0.537	1.416	0.602	28.9	
250S125-30	0.0312	33	0.159	0.54	0.159	0.110	2.176	3.491	832	378	0.161	0.129	1.008	0.030	0.433	0.052	0.037	-0.890	0.535	1.413	0.603	28.9	
250S125-33	0.0346	33	0.176	0.60	0.175	0.126	2.481	4.022	975	399	0.178	0.142	1.007	0.033	0.431	0.070	0.040	-0.886	0.532	1.409	0.604	28.9	
250S125-43	0.0451	33	0.227	0.77	0.226	0.177	3.494	5.740	1265	394	0.228	0.182	1.002	0.041	0.427	0.154	0.050	-0.874	0.526	1.396	0.608	28.8	
250S125-54	0.0566	33	0.280	0.95	0.277	0.218	4.984	7.318	1553	373	0.277	0.222	0.994	0.049	0.419	0.299	0.060	-0.859	0.518	1.379	0.612	29.0	
250S125-54	0.0566	50	0.280	0.95	0.275	0.209	6.259	10.308	2353	565	0.277	0.222	0.994	0.049	0.419	0.299	0.060	-0.859	0.518	1.379	0.612	23.3	
250S125-68	0.0713	33	0.346	1.18	0.335	0.268	6.328	8.831	1891	342	0.335	0.268	0.984	0.058	0.408	0.586	0.072	-0.840	0.508	1.356	0.617	29.3	
250S125-68	0.0713	50	0.346	1.18	0.335	0.263	7.860	13.381	2866	519	0.335	0.268	0.984	0.058	0.408	0.586	0.072	-0.840	0.508	1.356	0.617	23.3	
350S125-18	0.0188	33	0.115	0.39	0.197	0.075	1.477	2.454	180	159	0.215	0.123	1.366	0.021	0.423	0.014	0.050	-0.798	0.495	1.638	0.763	28.8	
350S125-27	0.0283	33	0.173	0.59	0.313	0.135	2.665	4.429	614	359	0.320	0.183	1.361	0.030	0.419	0.046	0.073	-0.788	0.489	1.627	0.766	28.7	
350S125-30	0.0312	33	0.190	0.65	0.346	0.155	3.071	5.092	824	436	0.351	0.201	1.360	0.033	0.417	0.062	0.079	-0.784	0.488	1.624	0.767	28.6	
350S125-33	0.0346	33	0.210	0.72	0.382	0.181	3.571	5.899	1024	487	0.388	0.222	1.358	0.036	0.416	0.084	0.087	-0.781	0.485	1.621	0.768	28.6	
350S125-43	0.0451	33	0.272	0.93	0.493	0.265	5.237	8.551	1739	631	0.498	0.284	1.352	0.046	0.411	0.185	0.109	-0.769	0.479	1.609	0.771	28.5	
350S125-54	0.0566	33	0.337	1.15	0.609	0.332	7.603	11.477	2253	633	0.609	0.348	1.344	0.055	0.403	0.360	0.131	-0.755	0.472	1.593	0.775	28.4	
350S125-54	0.0566	50	0.337	1.15	0.603	0.316	9.459	15.472	3372	947	0.609	0.348	1.344	0.055	0.403	0.360	0.131	-0.755	0.472	1.593	0.775	22.9	
350S125-68	0.0713	33	0.417	1.42	0.739	0.411	9.718	13.941	2774	592	0.739	0.422	1.332	0.064	0.392	0.706	0.156	-0.737	0.462	1.572	0.780	28.3	
350S125-68	0.0713	50	0.417	1.42	0.739	0.403	12.066	20.967	4203	897	0.739	0.422	1.332	0.064	0.392	0.706	0.156	-0.737	0.462	1.572	0.780	22.8	
362S125-18	0.0188	33	0.118	0.40	0.215	0.078	1.536	2.546	173	163	0.234	0.129	1.409	0.021	0.421	0.014	0.054	-0.786	0.490	1.667	0.778	28.8	
362S125-27	0.0283	33	0.176	0.60	0.340	0.141	2.778	4.603	592	370	0.347	0.192	1.404	0.031	0.416	0.047	0.079	-0.776	0.484	1.657	0.781	28.6	
362S125-30	0.0312	33	0.194	0.66	0.375	0.162	3.203	5.295	794	449	0.381	0.210	1.402	0.033	0.415	0.063	0.086	-0.773	0.482	1.654	0.782	28.6	
362S125-33	0.0346	33	0.215	0.73	0.415	0.189	3.727	6.138	1024	521	0.421	0.232	1.401	0.037	0.413	0.086	0.094	-0.770	0.480	1.651	0.783	28.5	
362S125-43	0.0451	33	0.278	0.95	0.535	0.277	5.474	8.914	1739	676	0.541	0.298	1.395	0.046	0.408	0.188	0.118	-0.758	0.474	1.640	0.786	28.4	
362S125-54	0.0566	33	0.344	1.17	0.661	0.349	7.996	12.023	2341	705	0.661	0.365	1.386	0.055	0.401	0.367	0.142	-0.744	0.466	1.624	0.790	28.3	
362S125-54	0.0566	50	0.344	1.17	0.655	0.331	9.899	16.142	3372	1016	0.661	0.365	1.386	0.055	0.401	0.367	0.142	-0.744	0.466	1.624	0.790	22.8	
362S125-68	0.0713	33	0.426	1.45	0.804	0.432	10.224	14.636	2884	662	0.804	0.444	1.374	0.065	0.390	0.721	0.170	-0.726	0.457	1.602	0.795	28.2	
362S125-68	0.0713	50	0.426	1.45	0.804	0.424	12.699	21.918	4370	1004	0.804	0.444	1.374	0.065	0.390	0.721	0.170	-0.726	0.457	1.602	0.795	22.7	
400S125-18 ¹	0.0188	33	0.125	0.42	0.273	0.087	1.714	2.817	156	156	0.294	0.147	1.536	0.021	0.415	0.015	0.068	-0.755	0.475	1.761	0.816	28.7	
400S125-27	0.0283	33	0.187	0.64	0.428	0.158	3.117	5.124	533	398	0.438	0.219	1.531	0.031	0.410	0.050	0.098	-0.745	0.469	1.751	0.819	28.5	
400S125-30	0.0312	33	0.206	0.70	0.473	0.182	3.600	5.905	715	484	0.481	0.240	1.529	0.034	0.409	0.067	0.108	-0.742	0.467	1.748	0.820	28.5	
400S125-33	0.0346	33	0.228	0.77	0.523	0.212	4.196	6.857	976	595	0.531	0.265	1.527	0.038	0.407	0.091	0.118	-0.738	0.465	1.745	0.821	28.4	
400S125-43	0.0451	33	0.295	1.00	0.676	0.313	6.191	10.011	1739	810	0.682	0.341	1.522	0.048	0.402	0.200	0.148	-0.727	0.459	1.734	0.824	28.2	
400S125-54	0.0566	33	0.365	1.24	0.836	0.399	7.881	13.578	2603	944	0.836	0.418	1.512	0.057	0.394	0.390	0.178	-0.713	0.452	1.718	0.828	28.1	
400S125-54	0.0566	50	0.365	1.24	0.828	0.375	11.229	18.170	3372	1223	0.836	0.418	1.512	0.057	0.394	0.390	0.178	-0.713	0.452	1.718	0.828	22.7	
400S125-68	0.0713	33	0.452	1.54	1.018	0.499	11.793	16.792	3215	895	1.018	0.509	1.500	0.067	0.383	0.767	0.213	-0.695	0.443	1.697	0.832	28.0	
400S125-68	0.0713	50	0.452	1.54	1.018	0.488	14.605	24.817	4871	1356	1.018	0.509	1.500	0.067	0.383	0.767	0.213	-0.695	0.443	1.697	0.832	22.5	
550S125-18 ²	0.0188	33	0.153	0.52	0.630	0.229	2.029	0.023	0.390	0.018	0.141	-0.651	0.423	2.166	0.910	28.2							
550S125-27	0.0283	33	0.229	0.78	0.939	0.341	2.023	0.034	0.385	0.061	0.205	-0.642	0.417	2.158	0.912								