

Drywall Framing System - ProSTUD™ & ProTRAK™

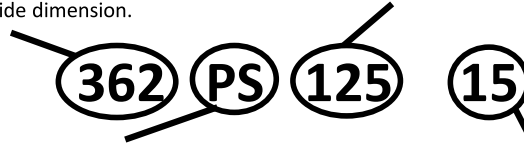
Industry standard nomenclature is used to identify MBA's products. The standard designation codes for drywall studs and track can be found on each finished product member. In each case, the identification starts with the measurement of the width of the member, followed by a letter (PS = stud and PT = track) followed by the flange dimension. A hyphen is used to separate all of this from the thickness of the metal.

Member Depth:

(Example: 3-5/8" = 3.625" ≈ 362 x 1/100 inches)
All member depths are taken in 1/100 inches. For all "PT" sections member depth is the inside to inside dimension.

Flange Width:

(Example: 1-1/4" = 1.25" = 125 x 1/100 inches)
All flange widths are taken in 1/100 inches.



Style:

(Example: Stud or Joist Section = PS)
Relevant alpha characters utilized by the designation system are:
PS = Stud or Joist Sections PT = Track Sections

Material Thickness:

(Example: 0.015 in. = 15 mils; 1 mil = 1/1000 in.)
Material thickness is the minimum base metal thickness in mils. Minimum base metal thickness represents 95% of the design thickness.

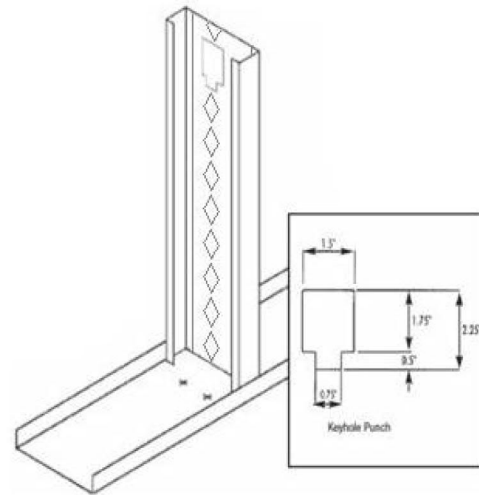
Steel Thickness

Mils	Gauge	Thickness (in)	
		Design	Minimum ¹
15	25	0.0158	0.0150
18	20	0.0190	0.0181

¹ Minimum Thickness represents 95% of the design thickness and is the minimum acceptable thickness delivered to the job site based on Section A3.4 of the 1996 AISI Specification.

Design Stiffening Lip Length

Section	Flange Width	Design Stiffening Lip Length (in)
PS125-15	1-1/4"	0.250
162PS125-18	1-1/4"	0.275
250PS125-18	1-1/4"	0.315
362PS125-18	1-1/4"	0.325
400PS125-18	1-1/4"	0.340
600PS125-18	1-1/4"	0.386



ProSTUD™ Punchouts

Drywall studs are manufactured with punchouts to enable plumbing and wiring installation. The lowest punchout is centered 12" from the bottom and 24" or 48" o.c thereafter, with the final opening 12" minimum from the top. Care should be taken during installation to orient all studs in the same top-to-bottom direction.

General Notes

1. Calculated properties are based on AISI S100-12, North American Specification for Design of Cold-Formed Steel Structural Members and AISI S220-15, North American Standard for Cold-Formed Steel Framing - Nonstructural Members.
2. Effective properties incorporate the strength increase from the cold work of forming as applicable per AISI A7.2.
3. Allowable moment includes cold-work of forming.
4. Tabulated gross properties including torsional properties are based on full-unreduced cross section of the studs, away from punchouts.
5. For deflection calculations, use the effective moment of inertia.
6. Allowable moment is taken as the lowest value based on local or distortional buckling. Distortional buckling strength is based on a k-phi = 0.
7. Drywall framing members have a protective coating conforming to ASTM spec A 653/A 653M, G-40 min, or equivalent corrosion resistance.
8. Reference ASTM specification A 1003/A 1003 M table 1 for the universe of allowable coatings for light gauge steel framing.
9. Drywall framing members are marked with product information per the requirements of ASTM C 645 section 14.
10. All delivered material must be kept dry. If it is necessary to store material outside, it must 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.
11. Drywall framing [nonstructural 25 gauge, 22 gauge and 20 gauge] is not permitted in load bearing (i.e. axial load greater than 200 lbs.) or exterior applications (i.e. transverse load greater than 10 PSF). Reference ASTM C 645 section 3.2.2.

LEED Green Building Credits

LEED v4 MR Credit - Building Product Disclosure Optimization: EPD (1 Point), Raw Material Sourcing (1 Point), Material Ingredients (1 Point), Construction and Demolition Waste (up to 2 points), Innovation Credit (up to 2 points)

LEED 2009 Credit - MBA steel products are 100% recyclable with a minimum recycle content of 32.7% (25.5% Post-Consumer and 6.8% Pre-Consumer/Post-Industrial). Higher rates can be achieved for MRS by pre-planning with MBA sales@mbastuds.com or (888) 248-8076.

Section Properties

Section Properties Table Notes

1. Section properties were determined in accordance with AISI S100-12, North American Specification for Design of Cold-Formed Steel Structural Members and AISI S220-15 North American Standard for Cold-Formed Steel Framing - Nonstructural Members.
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3. Tabulated gross properties including torsional properties are based on full-unreduced cross section of the studs, away from punchouts.
4. For deflection calculations, use the effective moment of inertia.
5. Allowable moment includes cold-work of forming.
6. 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 rack sections are ignored.
7. Allowable moment is taken as the lowest value based on local or distortional buckling. Distortional buckling strength is based on a $k\text{-}\phi = 0$.

Non-Structural (PS) ProSTUD® Section Properties

Section	Design Thickness (in)	F _y (ksi)	Gross Section Properties						Effective Section Properties at F _y						Torsional Properties					L _u (in)
			Area (in ²)	Weight (lb/ft)	I _x (in ⁴)	R _x (in)	I _y (in ⁴)	R _y (in)	A _e (in ²)	I _x (in ⁴)	S _x (in ³)	M _a (in-lbs)	V _a (lb)	V _{a,net} (lb)	Jx1000 (in ⁴)	C _w (in ⁶)	X _o (in)	R _o (in)	β	
162PS125-15	0.0158	50	0.071	0.24	0.033	0.688	0.015	0.466	0.033	0.030	0.024	719	232	104	0.006	0.009	-1.088	1.369	0.368	24.8
250PS125-15	0.0158	50	0.085	0.29	0.088	1.020	0.018	0.459	0.033	0.080	0.044	1198	147	141	0.007	0.023	-0.959	1.473	0.576	24.5
350PS125-15 ¹	0.0158	50	0.100	0.34	0.190	1.377	0.020	0.444	0.034	0.177	0.054	1629	104	104	0.008	0.048	-0.849	1.677	0.744	24.3
362PS125-15 ¹	0.0158	50	0.102	0.35	0.206	1.420	0.020	0.442	0.034	0.190	0.056	1689	100	100	0.009	0.051	-0.837	1.706	0.760	24.3
400PS125-15 ¹	0.0158	50	0.108	0.37	0.260	1.549	0.021	0.436	0.034	0.233	0.062	1870	90	90	0.009	0.064	-0.803	1.798	0.800	24.2
550PS125-15 ²	0.0158	50	0.132	0.45	0.553	2.047	0.022	0.411	0.034	0.444	0.097	2590	65	65	0.011	0.132	-0.695	2.201	0.900	23.8
600PS125-15 ²	0.0158	50	0.140	0.48	0.683	2.209	0.023	0.404	0.034	0.537	0.105	2781	60	60	0.012	0.161	-0.666	2.343	0.919	23.6
162PS125-18	0.0190	70	0.086	0.29	0.040	0.685	0.019	0.468	0.039	0.035	0.028	1194	405	149	0.011	0.012	-1.105	1.382	0.361	24.8
250PS125-18	0.0190	70	0.104	0.35	0.107	1.017	0.023	0.470	0.043	0.099	0.056	2361	256	204	0.013	0.031	-1.004	1.504	0.555	24.5
350PS125-18	0.0190	70	0.123	0.42	0.234	1.377	0.026	0.458	0.044	0.217	0.071	2992	181	166	0.015	0.065	-0.896	1.705	0.724	24.3
362PS125-18	0.0190	70	0.126	0.43	0.254	1.421	0.026	0.456	0.044	0.234	0.074	3102	174	170	0.015	0.070	-0.884	1.734	0.740	24.3
400PS125-18 ¹	0.0190	70	0.133	0.45	0.321	1.551	0.027	0.453	0.046	0.286	0.084	3532	157	157	0.016	0.089	-0.859	1.830	0.780	24.2
550PS125-18 ²	0.0190	70	0.163	0.55	0.688	2.057	0.031	0.434	0.046	0.552	0.129	5405	113	113	0.020	0.185	-0.756	2.234	0.886	23.8
600PS125-18 ²	0.0190	70	0.173	0.59	0.855	2.223	0.032	0.431	0.046	0.669	0.141	5891	104	104	0.021	0.233	-0.739	2.382	0.904	23.6
162PS125-22	0.0232	57	0.103	0.35	0.048	0.685	0.022	0.462	0.053	0.044	0.038	1302	605	181	0.018	0.013	-1.079	1.359	0.369	23.2
250PS125-22	0.0232	57	0.123	0.42	0.127	1.016	0.026	0.455	0.055	0.115	0.075	2226	468	303	0.022	0.033	-0.950	1.464	0.579	22.9
350PS125-22	0.0232	57	0.147	0.50	0.276	1.372	0.028	0.440	0.055	0.256	0.088	3008	329	246	0.026	0.068	-0.840	1.668	0.746	22.7
362PS125-22	0.0232	57	0.149	0.51	0.300	1.416	0.029	0.438	0.055	0.279	0.091	3121	318	253	0.027	0.074	-0.828	1.698	0.762	22.7
400PS125-22	0.0232	57	0.158	0.54	0.377	1.544	0.030	0.432	0.055	0.353	0.101	3459	287	272	0.028	0.092	-0.795	1.790	0.803	22.6
550PS125-22 ¹	0.0232	57	0.193	0.66	0.805	2.043	0.032	0.408	0.056	0.680	0.161	4959	207	207	0.035	0.190	-0.688	2.194	0.902	22.2
600PS125-22 ¹	0.0232	57	0.205	0.70	0.997	2.205	0.033	0.402	0.056	0.830	0.178	5404	189	189	0.037	0.233	-0.662	2.337	0.920	22.1

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

² Web-depth to thickness ratio exceeds 260. Web stiffeners are required at all bearing and intermediate locations, and no web holes are permitted in non-composite conditions

Section Properties

Section Properties Table Notes

1. Section properties were determined in accordance with AISI S100-12, North American Specification for Design of Cold-Formed Steel Structural Members and AISI S220-15 North American Standard for Cold-Formed Steel Framing - Nonstructural Members.
2. Effective properties incorporate the strength increase from the cold work of forming as applicable per AISI A7.2.
3. Tabulated gross properties including torsional properties are based on full-unreduced cross section of the tracks.
4. For deflection calculations, use the effective moment of inertia.
5. Allowable moment includes cold-work of forming.
6. 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 rack sections are ignored.

Non-Structural (PT) ProTRAK® (1" Leg) Section Properties

Section	Design Thickness (in)	F _y (ksi)	Gross Section Properties						Effective Section Properties at F _y					Torsional Properties				
			Area (in ²)	Weight (lb/ft)	I _x (in ⁴)	R _x (in)	I _y (in ⁴)	R _y (in)	A _e (in ²)	I _x (in ⁴)	S _x (in ³)	M _a (in-lbs)	V _a (lb)	Jx1000 (in ⁴)	C _w (in ⁶)	X _o (in)	R _o (in)	β
162PT100-15	0.0158	50	0.057	0.19	0.028	0.698	0.006	0.325	0.020	0.019	0.016	470	222	0.005	0.003	-0.659	1.014	0.578
250PT100-15	0.0158	50	0.071	0.24	0.072	1.007	0.007	0.311	0.020	0.054	0.024	725	143	0.006	0.008	-0.566	1.197	0.776
350PT100-15 ¹	0.0158	50	0.087	0.30	0.156	1.341	0.007	0.294	0.021	0.112	0.034	1017	101	0.007	0.017	-0.490	1.458	0.887
362PT100-15 ¹	0.0158	50	0.089	0.30	0.170	1.382	0.008	0.292	0.021	0.120	0.035	1054	98	0.007	0.019	-0.482	1.492	0.896
400PT100-15 ¹	0.0158	50	0.095	0.32	0.214	1.503	0.008	0.286	0.021	0.138	0.038	1147	89	0.008	0.023	-0.459	1.597	0.917
550PT100-15 ²	0.0158	50	0.118	0.40	0.463	1.976	0.008	0.264	0.021	0.277	0.053	1595	64	0.010	0.049	-0.388	2.031	0.964
600PT100-15 ²	0.0158	50	0.126	0.43	0.574	2.131	0.008	0.257	0.021	0.334	0.058	1744	59	0.011	0.059	-0.369	2.178	0.971
162PT100-18	0.0190	50	0.069	0.23	0.034	0.699	0.007	0.325	0.028	0.024	0.022	647	380	0.08	0.004	-0.657	1.013	0.580
250PT100-18	0.0190	50	0.085	0.29	0.087	1.008	0.008	0.311	0.029	0.067	0.035	1035	248	0.010	0.010	-0.564	1.196	0.777
350PT100-18	0.0190	50	0.104	0.36	0.188	1.342	0.009	0.293	0.029	0.153	0.048	1440	176	0.013	0.021	-0.488	1.458	0.888
362PT100-18	0.0190	50	0.107	0.36	0.204	1.382	0.009	0.291	0.029	0.167	0.050	1491	170	0.013	0.022	-0.480	1.492	0.896
400PT100-18	0.0190	50	0.114	0.39	0.258	1.504	0.009	0.285	0.029	0.182	0.053	1601	154	0.014	0.028	-0.458	1.597	0.918
550PT100-18 ²	0.0190	50	0.142	0.48	0.557	1.977	0.010	0.263	0.029	0.368	0.075	2233	112	0.017	0.058	-0.387	2.031	0.964
600PT100-18 ²	0.0190	50	0.152	0.52	0.690	2.132	0.010	0.257	0.029	0.446	0.082	2443	102	0.018	0.071	-0.368	2.178	0.971
162PT100-22	0.0232	50	0.084	0.29	0.041	0.701	0.009	0.324	0.040	0.031	0.028	844	566	0.015	0.004	-0.655	1.012	0.582
250PT100-22	0.0232	50	0.104	0.35	0.106	1.009	0.010	0.310	0.041	0.084	0.052	1550	452	0.019	0.012	-0.562	1.196	0.779
350PT100-22	0.0232	50	0.128	0.43	0.230	1.343	0.011	0.292	0.042	0.192	0.071	2123	321	0.023	0.025	-0.487	1.458	0.889
362PT100-22	0.0232	50	0.130	0.44	0.250	1.384	0.011	0.290	0.042	0.210	0.073	2197	310	0.023	0.027	-0.478	1.493	0.897
400PT100-22	0.0232	50	0.139	0.47	0.315	1.504	0.011	0.284	0.042	0.244	0.076	2289	281	0.025	0.034	-0.456	1.598	0.918
550PT100-22 ¹	0.0232	50	0.174	0.59	0.680	1.977	0.012	0.262	0.043	0.498	0.107	3209	204	0.031	0.071	-0.385	2.032	0.964
600PT100-22 ¹	0.0232	50	0.186	0.63	0.843	2.132	0.012	0.256	0.043	0.604	0.117	3516	186	0.033	0.086	-0.367	2.178	0.972

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

² Web-depth to thickness ratio exceeds 260. Web stiffeners are required at all bearing and intermediate locations, and no web holes are permitted in non-composite conditions

Section Properties

Section Properties Table Notes

1. Section properties were determined in accordance with AISI S100-12, North American Specification for Design of Cold-Formed Steel Structural Members and AISI S220-15 North American Standard for Cold-Formed Steel Framing - Nonstructural Members.
2. Effective properties incorporate the strength increase from the cold work of forming as applicable per AISI A7.2.
3. Tabulated gross properties including torsional properties are based on full-unreduced cross section of the tracks.
4. For deflection calculations, use the effective moment of inertia.
5. Allowable moment includes cold-work of forming.
6. 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 rack sections are ignored.

Non-Structural (PT) ProTRAK® (1-1/4" Leg) Section Properties

Section	Design Thickness (in)	F _y (ksi)	Gross Section Properties						Effective Section Properties at F _y					Torsional Properties				
			Area (in ²)	Weight (lb/ft)	I _x (in ⁴)	R _x (in)	I _y (in ⁴)	R _y (in)	A _e (in ²)	I _x (in ⁴)	S _x (in ³)	M _a (in-lbs)	V _a (lb)	Jx1000 (in ⁴)	C _w (in ⁶)	X _o (in)	R _o (in)	β
162PT125-15	0.0158	50	0.065	0.22	0.034	0.717	0.011	0.412	0.020	0.021	0.016	464	222	0.005	0.006	-0.881	1.208	0.468
250PT125-15	0.0158	50	0.079	0.27	0.085	1.038	0.013	0.400	0.020	0.059	0.024	724	143	0.007	0.015	-0.771	1.353	0.675
350PT125-15 ¹	0.0158	50	0.095	0.32	0.181	1.383	0.014	0.383	0.021	0.116	0.034	1022	101	0.008	0.031	-0.678	1.587	0.818
362PT125-15 ¹	0.0158	50	0.097	0.33	0.196	1.425	0.014	0.381	0.021	0.125	0.035	1059	98	0.008	0.034	-0.668	1.619	0.830
400PT125-15 ¹	0.0158	50	0.103	0.35	0.247	1.550	0.014	0.374	0.021	0.153	0.039	1171	89	0.009	0.043	-0.640	1.718	0.861
550PT125-15 ²	0.0158	50	0.126	0.43	0.524	2.036	0.015	0.350	0.021	0.290	0.054	1611	64	0.011	0.089	-0.549	2.137	0.934
600PT125-15 ²	0.0158	50	0.134	0.46	0.646	2.194	0.016	0.343	0.021	0.350	0.059	1762	59	0.011	0.108	-0.524	2.282	0.947
162PT125-18	0.0190	50	0.078	0.27	0.040	0.718	0.013	0.411	0.028	0.027	0.022	663	380	0.009	0.007	-0.879	1.207	0.470
250PT125-18	0.0190	50	0.095	0.32	0.102	1.038	0.015	0.400	0.029	0.073	0.034	1029	248	0.011	0.017	-0.770	1.353	0.676
350PT125-18	0.0190	50	0.114	0.39	0.218	1.384	0.017	0.383	0.029	0.162	0.048	1445	176	0.014	0.038	-0.676	1.587	0.818
362PT125-18	0.0190	50	0.116	0.40	0.236	1.426	0.017	0.380	0.029	0.173	0.050	1497	170	0.014	0.041	-0.666	1.619	0.831
400PT125-18	0.0190	50	0.123	0.42	0.297	1.550	0.017	0.374	0.029	0.211	0.055	1653	154	0.015	0.051	-0.638	1.718	0.862
550PT125-18 ²	0.0190	50	0.152	0.52	0.630	2.036	0.019	0.349	0.029	0.388	0.075	2260	112	0.018	0.107	-0.548	2.137	0.934
600PT125-18 ²	0.0190	50	0.161	0.55	0.778	2.195	0.019	0.342	0.029	0.469	0.083	2473	102	0.019	0.130	-0.523	2.282	0.947
162PT125-22	0.0232	50	0.096	0.33	0.050	0.720	0.016	0.411	0.040	0.034	0.029	877	566	0.017	0.008	-0.877	1.206	0.472
250PT125-22	0.0232	50	0.116	0.39	0.125	1.040	0.018	0.399	0.041	0.092	0.051	1525	452	0.021	0.021	-0.767	1.352	0.678
350PT125-22	0.0232	50	0.139	0.47	0.267	1.384	0.020	0.382	0.042	0.209	0.071	2120	321	0.025	0.046	-0.674	1.587	0.819
362PT125-22	0.0232	50	0.142	0.48	0.290	1.428	0.020	0.379	0.042	0.228	0.073	2197	310	0.025	0.050	-0.664	1.620	0.832
400PT125-22	0.0232	50	0.151	0.51	0.363	1.551	0.021	0.373	0.042	0.290	0.081	2419	281	0.027	0.062	-0.636	1.718	0.863
550PT125-22 ¹	0.0232	50	0.186	0.63	0.770	2.037	0.023	0.349	0.043	0.527	0.109	3258	204	0.033	0.130	-0.546	2.138	0.935
600PT125-22 ¹	0.0232	50	0.197	0.67	0.950	2.195	0.023	0.341	0.043	0.638	0.119	3568	186	0.035	0.158	-0.522	2.282	0.948

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5. Allowable moment includes cold-work of forming.
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Non-Structural (PT) ProTRAK® (1-1/2" Leg) Section Properties

Section	Design Thickness (in)	F _y (ksi)	Gross Section Properties						Effective Section Properties at F _y					Torsional Properties				
			Area (in ²)	Weight (lb/ft)	I _x (in ⁴)	R _x (in)	I _y (in ⁴)	R _y (in)	A _e (in ²)	I _x (in ⁴)	S _x (in ³)	M _a (in-lbs)	V _a (lb)	Jx1000 (in ⁴)	C _w (in ⁶)	X _o (in)	R _o (in)	β
162PT150-15	0.0158	50	0.073	0.25	0.039	0.731	0.018	0.497	0.020	0.023	0.015	460	222	0.006	0.009	-1.110	1.419	0.388
250PT150-15	0.0158	50	0.087	0.30	0.098	1.062	0.021	0.489	0.020	0.061	0.024	723	143	0.007	0.024	-0.985	1.529	0.585
350PT150-15 ¹	0.0158	50	0.103	0.35	0.206	1.417	0.023	0.473	0.021	0.120	0.034	1024	101	0.009	0.051	-0.877	1.732	0.744
362PT150-15 ¹	0.0158	50	0.105	0.36	0.223	1.460	0.023	0.470	0.021	0.129	0.035	1061	98	0.009	0.056	-0.865	1.761	0.759
400PT150-15 ¹	0.0158	50	0.111	0.38	0.279	1.589	0.024	0.464	0.021	0.158	0.039	1175	89	0.009	0.070	-0.832	1.852	0.798
550PT150-15 ²	0.0158	50	0.134	0.46	0.585	2.087	0.026	0.438	0.021	0.307	0.054	1628	64	0.011	0.145	-0.722	2.251	0.897
600PT150-15 ²	0.0158	50	0.142	0.48	0.719	2.249	0.026	0.430	0.021	0.363	0.059	1774	59	0.012	0.177	-0.692	2.392	0.916
162PT150-18	0.0190	50	0.088	0.30	0.047	0.733	0.022	0.496	0.028	0.029	0.022	653	380	0.011	0.011	-1.108	1.418	0.390
250PT150-18	0.0190	50	0.104	0.36	0.118	1.063	0.025	0.488	0.029	0.079	0.034	1024	248	0.012	0.029	-0.984	1.528	0.586
350PT150-18	0.0190	50	0.123	0.42	0.248	1.418	0.028	0.472	0.029	0.166	0.048	1446	176	0.014	0.062	-0.875	1.732	0.745
362PT150-18	0.0190	50	0.126	0.43	0.269	1.461	0.028	0.470	0.029	0.178	0.050	1499	170	0.015	0.067	-0.863	1.761	0.760
400PT150-18	0.0190	50	0.133	0.45	0.336	1.589	0.029	0.463	0.029	0.218	0.055	1658	154	0.016	0.084	-0.830	1.852	0.799
550PT150-18 ²	0.0190	50	0.161	0.55	0.704	2.087	0.031	0.437	0.029	0.419	0.077	2295	112	0.019	0.174	-0.721	2.251	0.897
600PT150-18 ²	0.0190	50	0.171	0.58	0.865	2.249	0.032	0.429	0.030	0.489	0.083	2494	102	0.020	0.213	-0.691	2.392	0.916
162PT150-22	0.0232	50	0.107	0.36	0.058	0.734	0.026	0.496	0.040	0.037	0.030	902	566	0.019	0.013	-1.105	1.417	0.391
250PT150-22	0.0232	50	0.128	0.43	0.144	1.064	0.030	0.487	0.042	0.100	0.050	1508	452	0.023	0.035	-0.981	1.527	0.587
350PT150-22	0.0232	50	0.151	0.51	0.303	1.419	0.033	0.471	0.042	0.224	0.071	2117	321	0.027	0.075	-0.873	1.731	0.746
362PT150-22	0.0232	50	0.154	0.52	0.329	1.463	0.034	0.469	0.042	0.244	0.073	2195	310	0.028	0.082	-0.861	1.761	0.761
400PT150-22	0.0232	50	0.162	0.55	0.411	1.590	0.035	0.462	0.043	0.311	0.081	2422	281	0.029	0.102	-0.828	1.852	0.800
550PT150-22 ¹	0.0232	50	0.197	0.67	0.859	2.088	0.038	0.437	0.043	0.591	0.112	3342	204	0.035	0.212	-0.719	2.251	0.898
600PT150-22 ¹	0.0232	50	0.209	0.71	1.056	2.250	0.038	0.429	0.043	0.668	0.120	3604	186	0.037	0.259	-0.690	2.392	0.917

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

² Web-depth to thickness ratio exceeds 260. Web stiffeners are required at all bearing and intermediate locations, and no web holes are permitted in non-composite conditions

Section Properties

Section Properties Table Notes

1. Section properties were determined in accordance with AISI S100-12, North American Specification for Design of Cold-Formed Steel Structural Members and AISI S220-15 North American Standard for Cold-Formed Steel Framing - Nonstructural Members.
2. Effective properties incorporate the strength increase from the cold work of forming as applicable per AISI A7.2.
3. Tabulated gross properties including torsional properties are based on full-unreduced cross section of the tracks.
4. For deflection calculations, use the effective moment of inertia.
5. Allowable moment includes cold-work of forming.
6. 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 rack sections are ignored.

Non-Structural (PT) ProTRAK® (2" Leg) Section Properties

Section	Design Thickness (in)	F _y (ksi)	Gross Section Properties						Effective Section Properties at F _y					Torsional Properties				
			Area (in ²)	Weight (lb/ft)	I _x (in ⁴)	R _x (in)	I _y (in ⁴)	R _y (in)	A _e (in ²)	I _x (in ⁴)	S _x (in ³)	M _a (in-lbs)	V _a (lb)	Jx1000 (in ⁴)	C _w (in ⁶)	X _o (in)	R _o (in)	β
162PT200-15	0.0158	50	0.089	0.30	0.050	0.752	0.039	0.663	0.020	0.025	0.015	455	222	0.007	0.020	-1.579	1.870	0.287
250PT200-15	0.0158	50	0.103	0.35	0.124	1.098	0.045	0.662	0.021	0.064	0.024	720	143	0.009	0.052	-1.431	1.921	0.445
350PT200-15 ¹	0.0158	50	0.118	0.40	0.256	1.470	0.050	0.650	0.021	0.127	0.034	1025	101	0.010	0.111	-1.297	2.066	0.606
362PT200-15 ¹	0.0158	50	0.120	0.41	0.277	1.516	0.051	0.648	0.021	0.137	0.036	1063	98	0.010	0.120	-1.282	2.088	0.623
400PT200-15 ¹	0.0158	50	0.126	0.43	0.344	1.650	0.052	0.642	0.021	0.168	0.039	1178	89	0.011	0.151	-1.240	2.162	0.671
550PT200-15 ²	0.0158	50	0.150	0.51	0.707	2.170	0.057	0.617	0.021	0.325	0.055	1637	64	0.012	0.314	-1.098	2.509	0.809
600PT200-15 ²	0.0158	50	0.158	0.54	0.864	2.338	0.058	0.608	0.021	0.389	0.060	1789	59	0.013	0.383	-1.058	2.638	0.839
162PT200-18	0.0019	50	0.107	0.36	0.061	0.753	0.047	0.662	0.028	0.032	0.021	642	380	0.013	0.024	-1.577	1.869	0.288
250PT200-18	0.0019	50	0.123	0.42	0.149	1.099	0.054	0.661	0.029	0.088	0.034	1016	248	0.015	0.063	-1.429	1.920	0.446
350PT200-18	0.0019	50	0.142	0.48	0.308	1.471	0.060	0.650	0.029	0.175	0.048	1446	176	0.017	0.134	-1.295	2.065	0.607
362PT200-18	0.0019	50	0.145	0.49	0.333	1.517	0.061	0.648	0.029	0.188	0.050	1500	170	0.017	0.145	-1.280	2.088	0.624
400PT200-18	0.0019	50	0.152	0.52	0.414	1.651	0.063	0.642	0.029	0.230	0.055	1661	154	0.018	0.181	-1.238	2.161	0.672
550PT200-18 ²	0.0019	50	0.180	0.61	0.850	2.171	0.068	0.616	0.030	0.444	0.077	2309	112	0.021	0.377	-1.096	2.509	0.809
600PT200-18 ²	0.0019	50	0.190	0.65	1.039	2.339	0.070	0.607	0.030	0.532	0.084	2525	102	0.022	0.461	-1.057	2.637	0.840
162PT200-22	0.0232	50	0.130	0.44	0.074	0.755	0.057	0.661	0.041	0.041	0.031	935	566	0.023	0.030	-1.574	1.867	0.289
250PT200-22	0.0232	50	0.151	0.51	0.182	1.100	0.066	0.660	0.042	0.112	0.050	1485	452	0.027	0.076	-1.427	1.919	0.447
350PT200-22	0.0232	50	0.174	0.59	0.377	1.473	0.073	0.649	0.043	0.249	0.070	2109	321	0.031	0.163	-1.293	2.064	0.608
362PT200-22	0.0232	50	0.177	0.60	0.408	1.519	0.074	0.647	0.043	0.268	0.073	2189	310	0.032	0.177	-1.278	2.088	0.625
400PT200-22	0.0232	50	0.186	0.63	0.506	1.652	0.076	0.641	0.043	0.326	0.081	2421	281	0.033	0.221	-1.236	2.161	0.673
550PT200-22 ¹	0.0232	50	0.220	0.75	1.039	2.172	0.083	0.615	0.043	0.623	0.112	3361	204	0.040	0.460	-1.094	2.508	0.810
600PT200-22 ¹	0.0232	50	0.232	0.79	1.270	2.340	0.085	0.606	0.043	0.746	0.123	3675	186	0.042	0.562	-1.055	2.637	0.840

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

² Web-depth to thickness ratio exceeds 260. Web stiffeners are required at all bearing and intermediate locations, and no web holes are permitted in non-composite conditions

Section Properties

Section Properties Table Notes

1. Section properties were determined in accordance with AISI S100-12, North American Specification for Design of Cold-Formed Steel Structural Members and AISI S220-15 North American Standard for Cold-Formed Steel Framing - Nonstructural Members.
2. Effective properties incorporate the strength increase from the cold work of forming as applicable per AISI A7.2.
3. Tabulated gross properties including torsional properties are based on full-unreduced cross section of the tracks.
4. For deflection calculations, use the effective moment of inertia.
5. Allowable moment includes cold-work of forming.
6. 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 rack sections are ignored.

Non-Structural (PT) ProTRAK® (2-1/2" Leg) Section Properties

Section	Design Thickness (in)	F _y (ksi)	Gross Section Properties						Effective Section Properties at F _y					Torsional Properties				
			Area (in ²)	Weight (lb/ft)	I _x (in ⁴)	R _x (in)	I _y (in ⁴)	R _y (in)	A _e (in ²)	I _x (in ⁴)	S _x (in ³)	M _a (in-lbs)	V _a (lb)	Jx1000 (in ⁴)	C _w (in ⁶)	X _o (in)	R _o (in)	β
162PT250-15	0.0158	50	0.105	0.36	0.061	0.766	0.071	0.824	0.020	0.027	0.015	455	222	0.009	0.038	-2.058	2.345	0.230
250PT250-15	0.0158	50	0.118	0.40	0.150	1.123	0.082	0.831	0.021	0.066	0.024	725	143	0.010	0.096	-1.892	2.352	0.353
350PT250-15 ¹	0.0158	50	0.134	0.46	0.306	1.510	0.091	0.825	0.021	0.132	0.035	1034	101	0.011	0.203	-1.737	2.445	0.495
362PT250-15 ¹	0.0158	50	0.136	0.46	0.330	1.557	0.092	0.823	0.021	0.142	0.036	1073	98	0.011	0.220	-1.720	2.462	0.512
400PT250-15 ¹	0.0158	50	0.142	0.48	0.409	1.696	0.095	0.819	0.021	0.174	0.040	1189	89	0.012	0.275	-1.670	2.517	0.560
550PT250-15 ²	0.0158	50	0.166	0.56	0.829	2.235	0.105	0.795	0.021	0.337	0.055	1654	64	0.014	0.570	-1.500	2.807	0.714
600PT250-15 ²	0.0158	50	0.174	0.59	1.009	2.409	0.108	0.787	0.021	0.404	0.060	1809	59	0.014	0.697	-1.452	2.921	0.753
162PT250-18	0.0190	50	0.126	0.43	0.074	0.767	0.085	0.823	0.028	0.035	0.021	635	380	0.015	0.045	-2.056	2.344	0.231
250PT250-18	0.0190	50	0.142	0.48	0.180	1.125	0.098	0.830	0.029	0.091	0.034	1011	248	0.017	0.115	-1.891	2.351	0.353
350PT250-18	0.0190	50	0.161	0.55	0.369	1.511	0.110	0.824	0.029	0.182	0.048	1444	176	0.019	0.244	-1.736	2.444	0.496
362PT250-18	0.0190	50	0.164	0.56	0.398	1.558	0.111	0.823	0.029	0.195	0.050	1498	170	0.020	0.264	-1.718	2.461	0.512
400PT250-18	0.0190	50	0.171	0.58	0.492	1.697	0.114	0.818	0.029	0.239	0.055	1661	154	0.021	0.331	-1.669	2.517	0.560
550PT250-18 ²	0.0190	50	0.199	0.68	0.997	2.236	0.126	0.795	0.030	0.463	0.077	2315	112	0.024	0.685	-1.499	2.806	0.715
600PT250-18 ²	0.0190	50	0.209	0.71	1.214	2.410	0.129	0.786	0.030	0.555	0.085	2533	102	0.025	0.838	-1.450	2.920	0.753
162PT250-22	0.0232	50	0.154	0.52	0.091	0.769	0.104	0.823	0.041	0.045	0.031	921	566	0.028	0.055	-2.053	2.342	0.231
250PT250-22	0.0232	50	0.174	0.59	0.221	1.126	0.120	0.829	0.042	0.122	0.049	1472	452	0.031	0.141	-1.888	2.350	0.354
350PT250-22	0.0232	50	0.197	0.67	0.451	1.512	0.134	0.823	0.043	0.258	0.070	2102	321	0.035	0.298	-1.733	2.443	0.497
362PT250-22	0.0232	50	0.200	0.68	0.487	1.560	0.135	0.822	0.043	0.277	0.073	2183	310	0.036	0.324	-1.716	2.460	0.514
400PT250-22	0.0232	50	0.209	0.71	0.602	1.698	0.139	0.817	0.043	0.338	0.081	2418	281	0.037	0.404	-1.666	2.516	0.561
550PT250-22 ¹	0.0232	50	0.244	0.83	1.218	2.237	0.154	0.794	0.043	0.651	0.113	3369	204	0.044	0.836	-1.496	2.806	0.716
600PT250-22 ¹	0.0232	50	0.255	0.87	1.483	2.411	0.157	0.785	0.043	0.779	0.123	3687	186	0.046	1.022	-1.448	2.920	0.754

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

² Web-depth to thickness ratio exceeds 260. Web stiffeners are required at all bearing and intermediate locations, and no web holes are permitted in non-composite conditions

Section Properties

Section Properties Table Notes

1. Section properties were determined in accordance with AISI S100-12, North American Specification for Design of Cold-Formed Steel Structural Members and AISI S220-15 North American Standard for Cold-Formed Steel Framing - Nonstructural Members.
2. Effective properties incorporate the strength increase from the cold work of forming as applicable per AISI A7.2.
3. Tabulated gross properties including torsional properties are based on full-unreduced cross section of the tracks.
4. For deflection calculations, use the effective moment of inertia.
5. Allowable moment includes cold-work of forming.
6. 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 rack sections are ignored.

Non-Structural (PT) ProTRAK® (3" Leg) Section Properties

Section	Design Thickness (in)	F _y (ksi)	Gross Section Properties						Effective Section Properties at F _y					Torsional Properties				
			Area (in ²)	Weight (lb/ft)	I _x (in ⁴)	R _x (in)	I _y (in ⁴)	R _y (in)	A _e (in ²)	I _x (in ⁴)	S _x (in ³)	M _a (in-lbs)	V _a (lb)	Jx1000 (in ⁴)	C _w (in ⁶)	X _o (in)	R _o (in)	β
162PT300-15	0.0158	50	0.120	0.41	0.073	0.776	0.116	0.981	0.020	0.027	0.016	465	222	0.010	0.063	-2.542	2.834	0.195
250PT300-15	0.0158	50	0.134	0.46	0.175	1.143	0.133	0.996	0.021	0.067	0.025	748	143	0.011	0.158	-2.363	2.807	0.291
350PT300-15 ¹	0.0158	50	0.150	0.51	0.356	1.540	0.149	0.996	0.021	0.135	0.035	1051	101	0.012	0.334	-2.191	2.858	0.412
362PT300-15 ¹	0.0158	50	0.152	0.52	0.384	1.589	0.151	0.995	0.021	0.145	0.036	1090	98	0.013	0.361	-2.172	2.869	0.427
400PT300-15 ¹	0.0158	50	0.158	0.54	0.474	1.732	0.155	0.992	0.021	0.178	0.040	1204	89	0.013	0.450	-2.116	2.909	0.471
550PT300-15 ²	0.0158	50	0.182	0.62	0.951	2.287	0.172	0.973	0.021	0.338	0.056	1664	64	0.015	0.930	-1.921	3.142	0.626
600PT300-15 ²	0.0158	50	0.190	0.64	1.153	2.467	0.177	0.965	0.021	0.412	0.061	1818	59	0.016	1.136	-1.865	3.239	0.669
162PT300-18	0.0019	50	0.145	0.49	0.088	0.777	0.139	0.981	0.028	0.036	0.021	633	380	0.017	0.075	-2.540	2.832	0.195
250PT300-18	0.0019	50	0.161	0.55	0.211	1.144	0.160	0.995	0.029	0.092	0.034	1009	248	0.019	0.191	-2.361	2.806	0.292
350PT300-18	0.0019	50	0.180	0.61	0.429	1.541	0.179	0.995	0.029	0.184	0.048	1443	176	0.021	0.401	-2.189	2.857	0.413
362PT300-18	0.0019	50	0.183	0.62	0.462	1.590	0.181	0.994	0.029	0.198	0.050	1498	170	0.022	0.434	-2.170	2.868	0.427
400PT300-18	0.0019	50	0.190	0.65	0.571	1.733	0.187	0.991	0.030	0.243	0.055	1661	154	0.023	0.542	-2.114	2.908	0.472
550PT300-18 ²	0.0019	50	0.218	0.74	1.144	2.288	0.207	0.972	0.030	0.473	0.079	2365	112	0.026	1.119	-1.919	3.141	0.627
600PT300-18 ²	0.0019	50	0.228	0.78	1.388	2.468	0.212	0.965	0.030	0.568	0.086	2582	102	0.027	1.366	-1.863	3.239	0.669
162PT300-22	0.0232	50	0.177	0.60	0.107	0.779	0.170	0.980	0.041	0.048	0.030	912	566	0.032	0.093	-2.538	2.830	0.196
250PT300-22	0.0232	50	0.197	0.67	0.259	1.145	0.195	0.994	0.042	0.131	0.049	1462	452	0.035	0.233	-2.359	2.804	0.293
350PT300-22	0.0232	50	0.220	0.75	0.524	1.543	0.218	0.994	0.043	0.265	0.070	2095	321	0.040	0.490	-2.187	2.855	0.413
362PT300-22	0.0232	50	0.223	0.76	0.566	1.592	0.220	0.994	0.043	0.286	0.073	2177	310	0.040	0.532	-2.167	2.867	0.429
400PT300-22	0.0232	50	0.232	0.79	0.698	1.735	0.228	0.991	0.043	0.349	0.081	2414	281	0.042	0.662	-2.112	2.907	0.472
550PT300-22 ¹	0.0232	50	0.267	0.91	1.398	2.290	0.252	0.972	0.043	0.674	0.113	3371	204	0.048	1.366	-1.917	3.140	0.627
600PT300-22 ¹	0.0232	50	0.278	0.95	1.696	2.469	0.258	0.964	0.044	0.807	0.123	3691	186	0.050	1.667	-1.861	3.238	0.670

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

² Web-depth to thickness ratio exceeds 260. Web stiffeners are required at all bearing and intermediate locations, and no web holes are permitted in non-composite conditions

Limiting Wall Heights

Interior Non-Structural Composite Table Notes

1. Allowable composite limiting heights were determined in accordance with ICC-ES AC86-2015. In accordance with current building codes and AISI design standards, the 1/3 Stress Increase for strength was not used.
2. Additional composite wall testing and analysis requirements of the SFIA Code Compliance Certification Program was observed.
2. The composite limiting heights provided in the tables are based on a single layer of Type X Gypsum Board from the following manufacturers: American, CertainTeed, Georgia Pacific, Continental, National, PABCO, and USG.
3. The gypsum board must be applied full height in the vertical orientation to each stud flange and installed in accordance with ASTM C754 using minimum No. 6 Type S Drywall screws spaced a minimum of 12-in on-center to the framing members.
4. No fasteners are required for attaching the stud to the track except as detailed in ASTM C754-2004.
5. Stud end bearing must be a minimum of 1 inch.
7. 'f' adjacent to the height value indicates that flexural stress controls the allowable wall height.
8. 's' adjacent to the height value indicates that shear/end reaction controls the allowable wall height.

Interior Composite data with 1 layer 5/8" Type X Gypsum Board

Section	Spacing o/c (in)	5 psf			7.5 psf			10 psf		
		L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
162PS125-15	12	14' 1"	11' 7"	10' 1"	12' 3"	10' 1"	8' 7"	11' 2"	9' 1"	
162PS125-15	16	12' 9"	10' 6"	9' 0"	11' 2"	9' 1"		10' 2"	8' 1"	
162PS125-15	24	11' 2"	9' 1"		9' 9"			8' 5"		
162PS125-18	12	13' 2"	11' 5"	10' 0"	11' 6"	10' 0"	8' 5"	10' 6"	8' 9"	
162PS125-18	16	12' 10"	11' 1"	9' 9"	11' 2"	9' 8"	7' 11"	10' 2"	8' 4"	
162PS125-18	24	11' 10"	10' 3"	8' 6"	10' 4"	8' 5"		9' 2"		
250PS125-15	12	17' 2"	14' 8"	13' 0"	15' 0"	12' 10"	11' 4"	13' 3" f	11' 8"	10' 4"
250PS125-15	16	15' 7"	13' 4"	11' 9"	13' 3" f	11' 8"	10' 4"	11' 5" f	10' 7"	9' 1"
250PS125-15	24	13' 3" f	11' 8"	10' 4"	10' 10" f	10' 2"	8' 6"	9' 4" f	8' 11"	
250PS125-18	12	17' 5"	14' 8"	12' 11"	15' 3"	12' 10"	11' 3"	13' 10"	11' 8"	10' 3"
250PS125-18	16	16' 8"	14' 0"	12' 4"	14' 6"	12' 3"	10' 9"	13' 2"	11' 2" f	9' 9"
250PS125-18	24	15' 2"	12' 10"	11' 3"	13' 2" f	11' 2"	9' 10"	11' 5"	10' 2"	8' 5"
350PS125-15	12	21' 4" f	16' 11"	15' 0"	17' 5" f	14' 9"	13' 1"	15' 1" f	13' 5"	11' 10"
350PS125-15	16	18' 6" f	15' 4"	13' 7"	15' 1" f	13' 5"	11' 10"	13' 1" f	12' 2"	10' 8"
350PS125-15	24	15' 1" f	13' 5"	11' 10"	12' 4" f	11' 8"	10' 2"	10' 8" f	10' 5"	9' 1"
362PS125-15	12	21' 6"	17' 1"	14' 11"	18' 4" f	14' 11"	13' 0"	15' 10" f	13' 7"	11' 10"
362PS125-15	16	19' 5" f	15' 6"	13' 7"	15' 10" f	13' 7"	11' 10"	13' 9" f	12' 4"	10' 7"
362PS125-15	24	15' 10" f	13' 7"	11' 10"	12' 11" f	11' 10"	10' 1"	11' 2" f	10' 7"	9' 0"
362PS125-18	12	22' 0"	18' 2"	15' 8"	19' 3"	15' 10"	13' 8"	17' 6"	14' 5"	12' 5"
362PS125-18	16	20' 6"	16' 10"	14' 7"	17' 11"	14' 9"	12' 9"	16' 3" f	13' 5"	11' 6"
362PS125-18	24	18' 4"	15' 1"	13' 0"	15' 11" f	13' 2"	11' 4"	13' 9" f	12' 0"	10' 1"
400PS125-15	12	22' 8"	18' 0"	15' 9"	19' 1" f	15' 9"	13' 9"	16' 6" f	14' 4"	12' 6"
400PS125-15	16	20' 3" f	16' 4"	14' 4"	16' 6" f	14' 4"	12' 6"	14' 4" f	13' 0"	11' 3"
400PS125-15	24	16' 6" f	14' 4"	12' 6"	13' 6" f	12' 6"	10' 8"	11' 8" f	11' 3"	9' 6"
400PS125-18	12	22' 9"	18' 8"	16' 4"	19' 11"	16' 4"	14' 3"	18' 1"	14' 10"	13' 0"
400PS125-18	16	21' 4"	17' 7"	15' 4"	18' 8"	15' 4"	13' 5"	16' 11"	13' 11"	12' 2"
400PS125-18	24	19' 3"	15' 10"	13' 10"	16' 7" f	13' 10"	12' 1"	14' 4" f	12' 6"	10' 9"
550PS125-15	12	26' 11" f	22' 9"	20' 3"	22' 0" f	19' 11"	17' 9"	19' 0" f	18' 1"	16' 1"
550PS125-15	16	23' 4" f	20' 8"	18' 5"	19' 0" f	18' 1"	16' 1"	16' 6" f	16' 5"	14' 7"
550PS125-15	24	19' 0" f	18' 1"	16' 1"	15' 7" f	15' 7" f	14' 1"	13' 6" f	13' 6" f	12' 9"
600PS125-15	12	27' 10" f	24' 2"	21' 5"	22' 9" f	21' 1"	18' 8"	19' 8" f	19' 2"	17' 0"
600PS125-15	16	24' 1" f	21' 11"	19' 5"	19' 8" f	19' 2"	17' 0"	17' 1" f	17' 1" f	15' 5"
600PS125-15	24	19' 8" f	19' 2"	17' 0"	16' 1" f	16' 1" f	14' 9"	13' 11" f	13' 11" f	13' 4"
600PS125-18	12	32' 1"	25' 6"	22' 3"	28' 1"	22' 3"	19' 5"	24' 4" f	20' 03'	17' 8"
600PS125-18	16	29' 10"	23' 8"	20' 8"	24' 10" f	20' 8"	18' 1"	21' 6" f	18' 9"	16' 5"
600PS125-18	24	25' 5" f	21' 1"	18' 5"	20' 9" f	18' 5"	16' 1"	18' 0" f	16' 9"	14' 6"