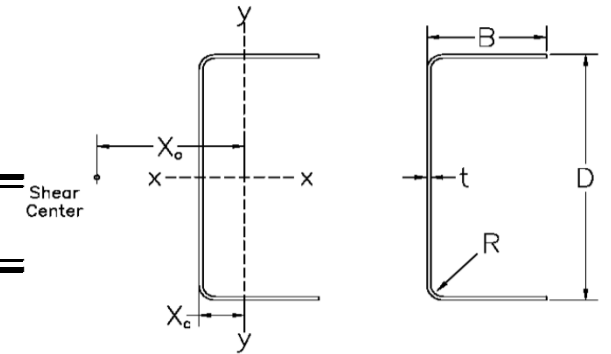




Channel Sections: Effective Section Properties



Member	Ga.	Effective Section Properties																				Web Crippling		
		Compression		Tension	Shear		Positive Moment (X Axis)				Negative Moment (X Axis)				Positive Moment (Y Axis)				Negative Moment (Y Axis)				End	Interior
		A _e (in ²)	P _a (kip)	T _a (kip)	V _{ay} (kip)	V _{ax} (kip)	M _{ax} (kip-in)	I _x (in ⁴)	S _{e TOP} (in ³)	S _{e BOT} (in ³)	M _{ax} (kip-in)	I _x (in ⁴)	S _{e TOP} (in ³)	S _{e BOT} (in ³)	M _{ay} (kip-in)	I _y (in ⁴)	S _{e LEFT} (in ³)	S _{e RIGHT} (in ³)	M _{ay} (kip-in)	I _y (in ⁴)	S _{e LEFT} (in ³)	S _{e RIGHT} (in ³)	P _a (kip)	P _a (kip)
Base Track	16	0.227	6.95	11.56	2.81	3.72	6.69	0.307	0.203	0.276	6.69	0.307	0.276	0.203	0.66	0.029	0.107	0.020	2.84	0.102	0.201	0.086	0.98	1.38
4.1875 x 3	12	0.707	21.59	34.90	7.80	11.73	32.42	2.387	0.984	1.355	32.42	2.387	1.355	0.984	3.81	0.288	0.563	0.116	15.70	0.981	1.041	0.477	2.43	3.82
4.1875 x 3	14	0.355	10.84	23.25	5.30	7.92	18.70	1.451	0.568	0.890	18.70	1.451	0.890	0.568	0.86	0.071	0.241	0.026	10.44	0.647	0.673	0.317	0.90	1.51
4.1875 x 3	16	0.263	8.05	19.59	3.84	6.70	14.91	1.179	0.453	0.744	14.91	1.179	0.744	0.453	0.48	0.040	0.172	0.015	8.65	0.525	0.525	0.263	0.55	1.00
4.1875 x 3	18	0.169	5.62	13.86	2.42	5.01	11.52	0.864	0.321	0.579	11.52	0.864	0.579	0.321	0.22	0.018	0.106	0.006	7.19	0.385	0.358	0.200	0.27	0.59
6.1875 x 3	12	0.756	23.09	41.82	12.13	11.73	56.41	5.985	1.713	2.222	56.41	5.985	2.222	1.713	3.66	0.290	0.737	0.111	16.63	1.111	1.389	0.505	2.30	3.76
6.1875 x 3	14	0.369	11.27	27.86	5.38	7.92	33.37	3.693	1.013	1.452	33.37	3.693	1.452	1.013	0.89	0.075	0.330	0.027	10.69	0.679	0.747	0.325	0.84	1.48
6.1875 x 3	16	0.272	8.30	23.47	3.21	6.70	26.08	2.963	0.792	1.212	26.08	2.963	1.212	0.792	0.51	0.044	0.239	0.016	8.81	0.545	0.566	0.267	0.51	0.98
8.1875 x 2	12	0.756	23.09	41.82	12.17	7.40	77.67	10.070	2.358	2.571	77.67	10.070	2.571	2.358	4.25	0.222	0.786	0.129	7.85	0.384	0.993	0.238	2.20	3.71
8.1875 x 2	14	0.369	11.28	27.86	3.98	5.03	41.56	5.914	1.262	1.689	41.56	5.914	1.689	1.262	1.23	0.068	0.385	0.037	5.11	0.239	0.517	0.155	0.79	1.46
8.1875 x 2	16	0.272	8.31	23.47	2.38	4.27	31.40	4.659	0.953	1.412	31.40	4.659	1.412	0.953	0.72	0.041	0.282	0.022	4.23	0.192	0.381	0.129	0.48	0.96
8.1875 x 3	12	0.779	23.80	48.73	12.17	11.73	85.28	11.758	2.589	3.224	85.28	11.758	3.224	2.589	3.58	0.291	0.900	0.109	16.94	1.158	1.548	0.514	2.20	3.71
8.1875 x 3	14	0.376	11.48	32.47	3.98	7.92	48.32	7.068	1.467	2.097	48.32	7.068	2.097	1.467	0.93	0.079	0.414	0.028	10.81	0.695	0.788	0.328	0.79	1.46
8.1875 x 3	16	0.276	8.43	27.36	2.38	6.70	34.65	5.378	1.052	1.748	34.65	5.378	1.748	1.052	0.53	0.046	0.300	0.016	8.88	0.554	0.587	0.270	0.48	0.96
10.1875 x 3	12	0.792	24.21	55.65	10.73	11.73	118.93	20.130	3.611	4.364	118.93	20.130	4.364	3.611	3.58	0.296	1.061	0.109	17.11	1.185	1.650	0.520	2.10	3.67
10.1875 x 3	14	0.380	11.60	37.08	3.16	7.92	59.79	11.246	1.816	2.816	59.79	11.246	2.816	1.816	0.95	0.082	0.493	0.029	10.87	0.704	0.811	0.330	0.74	1.44
10.1875 x 3	16	0.278	8.50	31.25	1.89	6.70	43.23	8.582	1.313	2.351	43.23	8.582	2.351	1.313	0.54	0.047	0.357	0.016	8.93	0.560	0.600	0.271	0.45	0.94

- Section properties are calculated in accordance with the 2007 AISI North American Specification for the Design of Cold-Formed Steel Structural Members.
- Material: A1011 HSLAS Grade 55 Class 1 Steel or A653 SS Grade 55 Steel
- Strength Increase due to Cold Working has been applied where applicable

- Web Crippling values are based on a 4 inch bearing length, one flange fastened to support
- Appropriate factors of safety have been applied for Allowable Stress Design (ASD)
- Strength calculations based on a fully braced condition
- Consult with an engineering professional before using the above design aids