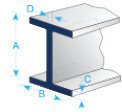




Wide Flange Shapes

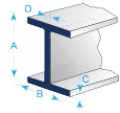
Standard Lengths 20'-70' in 5'0" increments



Shapes	Area A	Depth <i>d</i>		Web		Flange				Distance		
				Thickness <i>t_w</i>		Width <i>b_f</i>		Thickness <i>t_f</i>		<i>k_f</i>	<i>T</i>	Work-able Gage
				in.		in.		in.		in.		in.
W 4 x 13	3.83	4.16	4 ⁷ / ₈	0.280	1/4	4.06	4	0.345	3/8	1/2	2 ⁵ / ₈	2 ¹ / ₄
W 5 x 16 x 19	4.71	5.01	5	0.240	1/4	5.00	5	0.360	3/8	7/16	3 ¹ / ₂	2 ³ / ₄
	5.56	5.15	5 ¹ / ₈	0.270	1/4	5.03	5	0.430	7/16	7/16	3 ¹ / ₂	2 ³ / ₄
W 6 x 9 x 12 x 16	2.68	5.90	5 ⁷ / ₈	0.170	3/16	3.94	4	0.215	3/16	1/2	4 ¹ / ₂	2 ¹ / ₄
	3.55	6.03	6	0.230	1/4	4.00	4	0.280	1/4	9/16	↓	↓
	4.74	6.28	6 ¹ / ₄	0.260	1/4	4.03	4	0.405	3/8	9/16	↓	↓
W 6 x 15 x 20 x 25	4.43	5.99	6	0.230	1/4	5.99	6	0.260	1/4	9/16	4 ¹ / ₂	3 ¹ / ₂
	5.87	6.20	6 ¹ / ₄	0.260	1/4	6.02	6	0.365	3/8	9/16	↓	↓
	7.34	6.38	6 ³ / ₈	0.320	5/16	6.08	6 ¹ / ₈	0.455	7/16	9/16	↓	↓
W 8 x 10 x 13 x 15	2.96	7.89	7 ⁷ / ₈	0.170	3/16	3.94	4	0.205	3/16	1/2	6 ¹ / ₂	2 ¹ / ₄
	3.84	7.99	8	0.230	1/4	4.00	4	0.255	1/4	9/16	↓	↓
	4.44	8.11	8 ¹ / ₈	0.245	1/4	4.02	4	0.315	5/16	9/16	↓	↓
W 8 x 18 x 21	5.26	8.14	8 ¹ / ₈	0.230	1/4	5.25	5 ¹ / ₄	0.330	5/16	9/16	6 ¹ / ₂	2 ³ / ₄
	6.16	8.28	8 ¹ / ₄	0.250	1/4	5.27	5 ¹ / ₄	0.400	3/8	9/16	6 ¹ / ₂	2 ³ / ₄
W 8 x 24 x 28	7.08	7.93	7 ⁷ / ₈	0.245	1/4	6.50	6 ¹ / ₂	0.400	3/8	9/16	6 ¹ / ₈	4
	8.24	8.06	8	0.285	5/16	6.54	6 ¹ / ₂	0.465	7/16	5/8	6 ¹ / ₈	4
W 8 x 31 x 35 x 40 x 48 x 58 x 67	9.12	8.00	8	0.285	5/16	8.00	8	0.435	7/16	3/4	5 ³ / ₄	5 ¹ / ₂
	10.3	8.12	8 ¹ / ₈	0.310	5/16	8.02	8	0.495	1/2	13/16	↓	↓
	11.7	8.25	8 ¹ / ₄	0.360	3/8	8.07	8 ¹ / ₈	0.560	9/16	13/16	↓	↓
	14.1	8.50	8 ¹ / ₂	0.400	3/8	8.11	8 ¹ / ₈	0.685	11/16	13/16	↓	↓
	17.1	8.75	8 ³ / ₄	0.510	1/2	8.22	8 ¹ / ₄	0.810	13/16	7/8	↓	↓
	19.7	9.00	9	0.570	9/16	8.28	8 ¹ / ₄	0.935	15/16	15/16	↓	↓

Wide Flange Shapes

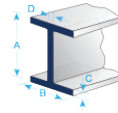
Standard Lengths 20'-70' in 5'0" increments



Shapes	Area A	Depth <i>d</i>		Web		Flange				Distance		
				Thickness <i>t_w</i>		Width <i>b_f</i>		Thickness <i>t_f</i>		<i>k_f</i>	<i>T</i>	Work- able Gage
				in.		in.		in.		in.		in.
W 10 x 12	3.54	9.87	9 ⁷ / ₈	0.190	3 ¹ / ₁₆	3.96	4	0.210	3 ¹ / ₁₆	9 ¹ / ₁₆	8 ³ / ₈	2 ¹ / ₄
x 15	4.41	10.0	10	0.230	1 ⁴ / ₄	4.00	4	0.270	1 ⁴ / ₄	9 ¹ / ₁₆	↓	↓
x 17	4.99	10.1	10 ¹ / ₈	0.240	1 ⁴ / ₄	4.01	4	0.330	5 ¹ / ₁₆	9 ¹ / ₁₆	↓	↓
x 19	5.62	10.2	10 ¹ / ₄	0.250	1 ⁴ / ₄	4.02	4	0.395	3 ⁸ / ₈	5 ⁸ / ₈	↓	↓
W 10 x 22	6.49	10.2	10 ¹ / ₈	0.240	1 ⁴ / ₄	5.75	5 ³ / ₄	0.360	3 ⁸ / ₈	5 ⁸ / ₈	8 ¹ / ₄	2 ³ / ₄
x 26	7.61	10.3	10 ³ / ₈	0.260	1 ⁴ / ₄	5.77	5 ³ / ₄	0.440	7 ¹ / ₁₆	11 ¹ / ₁₆	↓	↓
x 30	8.84	10.5	10 ¹ / ₂	0.300	5 ¹ / ₁₆	5.81	5 ³ / ₄	0.510	1 ² / ₂	11 ¹ / ₁₆	↓	↓
W 10 x 33	9.71	9.73	9 ³ / ₄	0.290	5 ¹ / ₁₆	7.96	8	0.435	7 ¹ / ₁₆	3 ⁴ / ₄	7 ¹ / ₂	5 ¹ / ₂
x 39	11.5	9.92	9 ⁷ / ₈	0.315	5 ¹ / ₁₆	7.99	8	0.530	1 ² / ₂	13 ¹ / ₁₆	↓	↓
x 45	13.3	10.1	10 ¹ / ₈	0.350	3 ⁸ / ₈	8.02	8	0.620	5 ⁸ / ₈	13 ¹ / ₁₆	↓	↓
W 10 x 49	14.4	10.0	10	0.340	5 ¹ / ₁₆	10.0	10	0.560	9 ¹ / ₁₆	13 ¹ / ₁₆	7 ¹ / ₂	5 ¹ / ₂
x 54	15.8	10.1	10 ¹ / ₈	0.370	3 ⁸ / ₈	10.0	10	0.615	5 ⁸ / ₈	13 ¹ / ₁₆	↓	↓
x 60	17.6	10.2	10 ¹ / ₄	0.420	7 ¹ / ₁₆	10.1	10 ¹ / ₈	0.680	11 ¹ / ₁₆	13 ¹ / ₁₆	↓	↓
x 68	20.0	10.4	10 ³ / ₈	0.470	1 ² / ₂	10.1	10 ¹ / ₈	0.770	3 ⁴ / ₄	7 ⁸ / ₈	↓	↓
x 77	22.6	10.6	10 ⁵ / ₈	0.530	1 ² / ₂	10.2	10 ¹ / ₄	0.870	7 ⁸ / ₈	7 ⁸ / ₈	↓	↓
x 88	25.9	10.8	10 ⁷ / ₈	0.605	5 ⁸ / ₈	10.3	10 ¹ / ₄	0.990	1	15 ¹ / ₁₆	↓	↓
x100	29.4	11.1	11 ¹ / ₈	0.680	11 ¹ / ₁₆	10.3	10 ³ / ₈	1.12	1 ¹ / ₈	1	↓	↓
x112	32.9	11.4	11 ³ / ₈	0.755	3 ⁴ / ₄	10.4	10 ³ / ₈	1.25	1 ¹ / ₄	1	↓	↓

Wide Flange Shapes

Standard Lengths 20'-70' in 5'0" increments

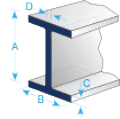


Shapes	Area A	Depth d		Web		Flange				Distance		
				Thickness t _w		Width b _f		Thickness t _f		k ₁	T	Work-able Gage
				in.	in.	in.	in.	in.	in.	in.	in.	in.
W 12 x 14	4.16	11.9	11 ⁷ / ₈	0.200	³ / ₁₆	3.97	4	0.225	¹ / ₄	⁹ / ₁₆	10 ³ / ₈	2 ¹ / ₄
x 16	4.71	12.0	12	0.220	¹ / ₄	3.99	4	0.265	¹ / ₄	⁹ / ₁₆	↓	↓
x 19	5.57	12.2	12 ¹ / ₈	0.235	¹ / ₄	4.01	4	0.350	³ / ₈	⁹ / ₁₆	↓	↓
x 22	6.48	12.3	12 ¹ / ₄	0.260	¹ / ₄	4.03	4	0.425	⁷ / ₁₆	⁵ / ₈	↓	↓
W 12 x 26	7.65	12.2	12 ¹ / ₄	0.230	¹ / ₄	6.49	6 ¹ / ₂	0.380	³ / ₈	³ / ₄	10 ¹ / ₈	3 ¹ / ₂
x 30	8.79	12.3	12 ³ / ₈	0.260	¹ / ₄	6.52	6 ¹ / ₂	0.440	⁷ / ₁₆	³ / ₄	↓	↓
x 35	10.3	12.5	12 ¹ / ₂	0.300	⁵ / ₁₆	6.56	6 ¹ / ₂	0.520	¹ / ₂	³ / ₄	↓	↓
W 12 x 40	11.7	11.9	12	0.295	⁵ / ₁₆	8.01	8	0.515	¹ / ₂	⁷ / ₈	9 ¹ / ₄	5 ¹ / ₂
x 45	13.1	12.1	12	0.335	⁵ / ₁₆	8.05	8	0.575	⁹ / ₁₆	¹⁵ / ₁₆	↓	↓
x 50	14.6	12.2	12 ¹ / ₄	0.370	³ / ₈	8.08	8 ¹ / ₈	0.640	⁵ / ₈	¹⁵ / ₁₆	↓	↓
W 12 x 53	15.6	12.1	12	0.345	³ / ₈	10.0	10	0.575	⁹ / ₁₆	¹⁵ / ₁₆	9 ¹ / ₄	5 ¹ / ₂
x 58	17.0	12.2	12 ¹ / ₄	0.360	³ / ₈	10.0	10	0.640	⁵ / ₈	¹⁵ / ₁₆	9 ¹ / ₄	5 ¹ / ₂
W 12 x 65	19.1	12.1	12 ¹ / ₈	0.390	³ / ₈	12.0	12	0.605	⁵ / ₈	1	9 ¹ / ₈	5 ¹ / ₂
x 72	21.1	12.3	12 ¹ / ₄	0.430	⁷ / ₁₆	12.0	12	0.670	¹ / ₁₆	¹ / ₁₆	↓	↓
x 79	23.2	12.4	12 ³ / ₈	0.470	¹ / ₂	12.1	12 ¹ / ₈	0.735	³ / ₄	¹ / ₁₆	↓	↓
x 87	25.6	12.5	12 ¹ / ₂	0.515	¹ / ₂	12.1	12 ¹ / ₈	0.810	¹ / ₁₆	¹ / ₁₆	↓	↓
x 96	28.2	12.7	12 ³ / ₄	0.550	⁹ / ₁₆	12.2	12 ¹ / ₈	0.900	⁷ / ₈	¹ / ₈	↓	↓
x 106	31.2	12.9	12 ⁷ / ₈	0.610	⁵ / ₈	12.2	12 ¹ / ₄	0.990	1	¹ / ₈	↓	↓
x 120	35.3	13.1	13 ¹ / ₈	0.710	¹ / ₁₆	12.3	12 ³ / ₈	1.11	¹ / ₈	¹ / ₁₆	↓	↓
x 136	39.9	13.4	13 ³ / ₈	0.790	¹ / ₁₆	12.4	12 ³ / ₈	1.25	¹ / ₄	¹ / ₄	↓	↓
x 152	44.7	13.7	13 ³ / ₄	0.870	⁷ / ₈	12.5	12 ¹ / ₂	1.40	¹ / ₈	¹ / ₄	↓	↓
x 170	50.0	14.0	14	0.960	¹⁵ / ₁₆	12.6	12 ⁵ / ₈	1.56	¹ / ₁₆	¹⁵ / ₁₆	↓	↓
x 190	55.8	14.4	14 ³ / ₈	1.060	1 ¹ / ₈	12.7	12 ⁵ / ₈	1.74	¹ / ₄	¹ / ₈	↓	↓
x 210	61.8	14.7	14 ³ / ₄	1.180	¹ / ₁₆	12.8	12 ³ / ₄	1.90	¹ / ₈	¹ / ₁₆	↓	↓
x 230	67.7	15.1	15	1.290	¹⁵ / ₁₆	12.9	12 ⁷ / ₈	2.07	² / ₁₆	¹ / ₂	↓	↓
x 252	74.0	15.4	15 ³ / ₈	1.400	¹ / ₈	13.0	13	2.25	² / ₄	¹ / ₂	↓	↓
x 279	81.9	15.9	15 ⁷ / ₈	1.530	1 ¹ / ₂	13.1	13 ¹ / ₈	2.47	² / ₂	¹⁵ / ₈	↓	↓
x 305	89.6	16.3	16 ³ / ₈	1.630	¹⁵ / ₈	13.2	13 ¹ / ₄	2.71	² / ₁₆	¹⁵ / ₈	↓	↓
x 336	98.8	16.8	16 ³ / ₄	1.780	1 ³ / ₄	13.4	13 ³ / ₈	2.96	² / ₁₆	¹ / ₁₆	↓	↓



Wide Flange Shapes

Standard Lengths 20'-70' in 5'0" increments

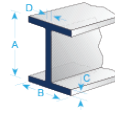


Shapes	Area A	Depth d		Web		Flange				Distance		
				Thickness t _w		Width b _f		Thickness t _f		k _f	T	Work-able Gage
	in. ²	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
W 14 x 22	6.49	13.7	13¾	0.230	¼	5.00	5	0.335	5/16	¾	11½	2¾
x 26	7.69	13.9	13⅞	0.255	¼	5.03	5	0.420	7/16	¾	11½	2¾
W 14 x 30	8.85	13.8	13⅞	0.270	¼	6.73	6¾	0.385	¾	¾	11½	3½
x 34	10.0	14.0	14	0.285	5/16	6.75	6¾	0.455	7/16	¾	↓	↓
x 38	11.2	14.1	14⅛	0.310	5/16	6.77	6¾	0.515	½	13/16	↓	↓
W 14 x 43	12.6	13.7	13⅝	0.305	5/16	8.00	8	0.530	½	1	10⅞	5½
x 48	14.1	13.8	13¾	0.340	5/16	8.03	8	0.595	5/8	1	↓	↓
x 53	15.6	13.9	13⅞	0.370	¾	8.06	8	0.660	11/16	1	↓	↓
W 14 x 61	17.9	13.9	13⅞	0.375	¾	10.0	10	0.645	5/8	1	10⅞	5½
x 68	20.0	14.0	14	0.415	7/16	10.0	10	0.720	¾	11/16	↓	↓
x 74	21.8	14.2	14⅛	0.450	7/16	10.1	10½	0.785	13/16	11/16	↓	↓
x 82	24.0	14.3	14¼	0.510	½	10.1	10½	0.855	7/8	11/16	↓	↓
W 14 x 90	26.5	14.0	14	0.440	7/16	14.5	14½	0.710	11/16	17/16	10	5½
x 99	29.1	14.2	14⅛	0.485	½	14.6	14⅝	0.780	¾	17/16	↓	↓
x 109	32.0	14.3	14⅜	0.525	½	14.6	14⅝	0.860	7/8	1½	↓	↓
x 120	35.3	14.5	14½	0.590	9/16	14.7	14⅝	0.940	15/16	1½	↓	↓
x 132	38.8	14.7	14⅞	0.645	5/8	14.7	14¾	1.03	1	19/16	↓	↓
W 14 x 145	42.7	14.8	14¾	0.680	11/16	15.5	15½	1.09	11/16	19/16	10	3-7½-3
x 159	46.7	15.0	15	0.745	¾	15.6	15⅝	1.19	13/16	19/16	↓	↓
x 176	51.8	15.2	15¼	0.830	13/16	15.7	15⅝	1.31	15/16	19/16	↓	↓
x 193	56.8	15.5	15½	0.890	7/8	15.7	15¾	1.44	17/16	111/16	↓	↓
x 211	62.0	15.7	15¾	0.980	1	15.8	15¾	1.56	19/16	111/16	↓	↓
x 233	68.5	16.0	16	1.070	11/16	15.9	15⅞	1.72	1¾	1¾	↓	↓
x 257	75.6	16.4	16⅜	1.180	13/16	16.0	16	1.89	17/8	113/16	↓	↓
x 283	83.3	16.7	16¾	1.290	15/16	16.1	16⅞	2.07	21/16	17/8	↓	↓
x 311	91.4	17.1	17⅛	1.410	17/16	16.2	16¾	2.26	2¼	115/16	↓	↓
x 342	101.0	17.5	17½	1.540	19/16	16.4	16⅞	2.47	2½	2	↓	↓
x 370	109.0	17.9	17⅞	1.660	1⅝	16.5	16½	2.66	211/16	21/16	↓	↓
x 398	117.0	18.3	18¼	1.770	1¾	16.6	16⅞	2.85	27/8	21/8	↓	↓
x 426	125.0	18.7	18⅝	1.880	1⅞	16.7	16¾	3.04	3 1/16	21/8	↓	↓
x 455	134.0	19.0	19	2.020	2	16.8	16⅞	3.21	33/16	2¼	↓	↓
x 500	147.0	19.6	19⅝	2.190	23/16	17.0	17	3.50	3½	25/16	↓	↓
x 550	162.0	20.2	20¼	2.380	2⅞	17.2	17¼	3.82	313/16	2⅞	↓	↓
x 605	178.0	20.9	20⅞	2.600	2⅞	17.4	17⅞	4.16	43/16	21/12	↓	↓
x 665	196.0	21.6	21⅝	2.830	213/16	17.7	17⅞	4.52	4½	2⅝	↓	↓
x 730	215.0	22.4	22⅜	3.070	31/16	17.9	17⅞	4.91	415/16	2¾	↓	↓



Wide Flange Shapes

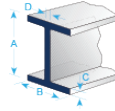
Standard Lengths 20'-70' in 5'0" increments



Shapes	Area		Depth		Web		Flange				Distance		
	A	in. ²	d	in.	Thickness		Width		Thickness		k ₁	T	Workable Gage
					t _w	t _f	b _f	t _f	in.	in.			
W 16 x 26 x 31	7.68	15.7	15 3/8	0.250	1/4	5.50	5 1/2	0.345	3/8	3/4	13 3/8	3 1/2	
	9.13	15.9	15 7/8	0.275	1/4	5.53	5 1/2	0.440	7/16	3/4	13 3/8	3 1/2	
W 16 x 36 x 40 x 45 x 50 x 57	10.6	15.9	15 7/8	0.295	5/16	6.99	7	0.430	7/16	3/4	13 3/8	3 1/2	
	11.8	16.0	16	0.305	5/16	7.00	7	0.505	1/2	13/16	↓	↓	
	13.3	16.1	16 1/8	0.345	3/8	7.04	7	0.565	9/16	13/16	↓	↓	
	14.7	16.3	16 1/4	0.380	3/8	7.07	7 1/8	0.630	5/8	13/16	↓	↓	
	16.8	16.4	16 3/8	0.430	7/16	7.12	7 1/8	0.715	1 1/16	7/8	↓	↓	
W 16 x 67 x 77 x 89 x 100	19.7	16.3	16 3/8	0.395	3/8	10.2	10 1/4	0.665	1 1/16	1	13 1/4	5 1/2	
	22.6	16.5	16 1/2	0.455	7/16	10.3	10 1/4	0.760	3/4	1 1/16	↓	↓	
	26.2	16.8	16 3/4	0.525	1/2	10.4	10 3/8	0.875	7/8	1 1/16	↓	↓	
	29.5	17.0	17	0.585	9/16	10.4	10 3/8	0.985	1	1 1/8	↓	↓	
W 18 x 35 x 40 x 46	10.3	17.7	17 3/4	0.300	5/16	6.00	6	0.425	7/16	3/4	15 1/2	3 1/2	
	11.8	17.9	17 7/8	0.315	5/16	6.02	6	0.525	1/2	13/16	↓	↓	
	13.5	18.1	18	0.360	3/8	6.06	6	0.605	5/8	13/16	↓	↓	
W 18 x 50 x 55 x 60 x 65 x 71	14.7	18.0	18	0.355	3/8	7.50	7 1/2	0.570	9/16	13/16	15 1/2	3 1/2	
	16.2	18.1	18 1/8	0.390	3/8	7.53	7 1/2	0.630	5/8	13/16	↓	↓	
	17.6	18.2	18 1/4	0.415	7/16	7.56	7 1/2	0.695	1 1/16	13/16	↓	↓	
	19.1	18.4	18 3/8	0.450	7/16	7.59	7 5/8	0.750	3/4	7/8	↓	↓	
	20.8	18.5	18 1/2	0.495	1/2	7.64	7 5/8	0.810	13/16	7/8	↓	↓	
W 18 x 76 x 86 x 97 x 106 x 119 x 130 x 143 x 158 x 175 x 192 x 211 x 234 x 258 x 283 x 311	22.3	18.2	18 1/4	0.425	7/16	11.0	11	0.680	1 1/16	1 1/16	15 1/8	5 1/2	
	25.3	18.4	18 3/8	0.480	1/2	11.1	11 1/8	0.770	3/4	1 1/16	↓	↓	
	28.5	18.6	18 3/8	0.535	9/16	11.1	11 1/8	0.870	7/8	1 1/8	↓	↓	
	31.1	18.7	18 3/4	0.590	9/16	11.2	11 1/4	0.940	15/16	1 1/8	↓	↓	
	35.1	19.0	19	0.655	5/8	11.3	11 1/4	1.06	1 1/16	13/16	↓	↓	
	38.2	19.3	19 1/4	0.670	1 1/16	11.2	11 1/8	1.20	13/16	13/16	↓	↓	
	42.1	19.5	19 1/2	0.730	3/4	11.2	11 1/4	1.32	15/16	13/16	↓	↓	
	46.3	19.7	19 3/4	0.810	13/16	11.3	11 1/4	1.44	17/16	1 1/4	↓	↓	
	51.3	20.0	20	0.890	7/8	11.4	11 3/8	1.59	19/16	1 1/4	↓	↓	
	56.4	20.4	20 3/8	0.960	15/16	11.5	11 1/2	1.75	1 3/4	1 1/8	↓	↓	
	62.1	20.7	20 3/4	1.060	1 1/16	11.6	11 1/2	1.91	1 15/16	13/16	15 1/2	↓	
	68.8	21.1	21	1.160	1 3/16	11.7	11 3/8	2.11	2 1/8	13/16	↓	↓	
	75.9	21.5	21 1/2	1.280	1 1/4	11.8	11 3/4	2.30	2 5/16	1 1/4	↓	↓	
	83.3	21.9	21 7/8	1.400	1 3/8	11.9	11 7/8	2.50	2 1/2	15/16	↓	↓	
91.6	22.3	22 3/8	1.520	1 1/2	12.0	12	2.74	2 3/4	1 5/8	↓	↓		

Wide Flange Shapes

Standard Lengths 20'-70' in 5'0" increments

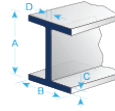


Shapes	Area		Depth		Web		Flange				Distance		
	A	in. ²	d		Thickness t_w		Width b_f		Thickness t_f		k_1	T	Workable Gage
			in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	
W 21 x 44	13.0	20.7	20%	20%	0.350	3/8	6.50	6 1/2	0.450	7/16	1 3/16	18 3/8	3 1/2
x 50	14.7	20.8	20%	20%	0.380	3/8	6.53	6 1/2	0.535	9/16	1 3/16	↓	↓
x 57	16.7	21.1	21	21	0.405	3/8	6.56	6 1/2	0.650	5/8	1 3/16	↓	↓
W 21 x 48	14.1	20.6	20%	20%	0.350	3/8	8.14	8 1/8	0.430	7/16	1 3/16	18 3/8	5 1/2
x 55	16.2	20.8	20%	20%	0.375	3/8	8.22	8 1/4	0.522	1/2	1 3/16	↓	↓
x 62	18.3	21.0	21	21	0.400	3/8	8.24	8 1/4	0.615	5/8	1 3/16	↓	↓
x 68	20.0	21.1	21 1/8	21 1/8	0.430	7/16	8.27	8 1/4	0.685	1 1/16	7/8	↓	↓
x 73	21.5	21.2	21 1/4	21 1/4	0.455	7/16	8.30	8 1/4	0.740	3/4	7/8	↓	↓
x 83	24.3	21.4	21 3/8	21 3/8	0.515	1/2	8.36	8 3/8	0.835	1 3/16	7/8	↓	↓
x 93	27.3	21.6	21 3/4	21 3/4	0.058	9/16	8.42	8 3/8	0.930	1 5/16	1 5/16	↓	↓
W 21 x 101	29.8	21.4	21 3/8	21 3/8	0.500	1/2	12.3	12 1/4	0.800	1 3/16	1 1/16	18	5 1/2
x 111	32.7	21.5	21 1/2	21 1/2	0.550	9/16	12.3	12 3/8	0.875	7/8	1 1/8	↓	↓
x 122	35.9	21.7	21 5/8	21 5/8	0.600	5/8	12.4	12 3/8	0.960	1 5/16	1 1/8	↓	↓
x 132	38.8	21.8	21 7/8	21 7/8	0.650	5/8	12.4	12 1/2	1.04	1 1/16	1 1/8	↓	↓
x 147	43.2	22.1	22	22	0.720	3/4	12.5	12 1/2	1.15	1 1/8	1 3/16	↓	↓
x 166	48.8	22.5	22 1/2	22 1/2	0.750	3/4	12.4	12 3/8	1.36	1 3/8	1 3/16	↓	↓
x 182	53.6	22.7	22 3/4	22 3/4	0.830	13/16	12.5	12 1/2	1.48	1 1/2	1 1/4	↓	↓
x 201	59.2	23.0	23	23	0.910	1 5/16	12.6	12 5/8	1.63	1 5/8	1 5/16	↓	↓



Wide Flange Shapes

Standard Lengths 20'-70' in 5'0" increments

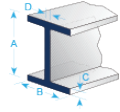


Shapes	Area		Depth		Web		Flange				Distance		
	A	in. ²	d	in.	Thickness		Width		Thickness		k ₁	T	Workable Gage
					t _w	in.	b _f	in.	t _f	in.			
W 24 x 55 x 62	16.2	23.6	23 ⁵ / ₈	0.395	³ / ₈	7.01	7	0.505	¹ / ₂	1	20 ³ / ₄	3 ¹ / ₂	
	18.2	23.7	23 ³ / ₄	0.430	⁷ / ₁₆	7.04	7	0.590	⁹ / ₁₆	1 ¹ / ₁₆	20 ³ / ₄	3 ¹ / ₂	
W 24 x 68 x 76 x 84 x 94 x 103	20.1	23.7	23 ³ / ₄	0.415	⁷ / ₁₆	8.97	9	0.585	⁹ / ₁₆	1 ¹ / ₁₆	20 ³ / ₄	5 ¹ / ₂	
	22.4	23.9	23 ⁷ / ₈	0.440	⁷ / ₁₆	8.99	9	0.680	¹¹ / ₁₆	1 ¹ / ₁₆	↓	↓	
	24.7	24.1	24 ¹ / ₈	0.470	¹ / ₂	9.02	9	0.770	³ / ₄	1 ¹ / ₁₆	↓	↓	
	27.7	24.3	24 ¹ / ₄	0.515	¹ / ₂	9.07	9 ¹ / ₈	0.875	⁷ / ₈	1 ¹ / ₁₆	↓	↓	
	30.3	24.5	24 ¹ / ₂	0.550	⁹ / ₁₆	9.00	9	0.980	1	1 ¹ / ₈	↓	↓	
W 24 x 104 x 117 x 131 x 146 x 162 x 176 x 192 x 207 x 229 x 250 x 279 x 306 x 335 x 370	30.6	24.1	24	0.500	¹ / ₂	12.8	12 ³ / ₄	0.750	³ / ₄	1 ¹ / ₁₆	20 ³ / ₄	5 ¹ / ₂	
	34.4	24.3	24 ¹ / ₄	0.550	⁹ / ₁₆	12.8	12 ³ / ₄	0.850	⁷ / ₈	1 ¹ / ₈	↓	↓	
	38.5	24.5	24 ¹ / ₂	0.605	⁵ / ₈	12.9	12 ⁷ / ₈	0.960	¹⁵ / ₁₆	1 ¹ / ₈	↓	↓	
	43.0	24.7	24 ³ / ₄	0.650	⁵ / ₈	12.9	12 ⁷ / ₈	1.09	1 ¹ / ₁₆	1 ¹ / ₈	↓	↓	
	47.7	25.0	25	0.705	¹¹ / ₁₆	13.0	13	1.22	1 ¹ / ₄	1 ³ / ₁₆	↓	↓	
	51.7	25.2	25 ¹ / ₄	0.750	³ / ₄	12.9	12 ⁷ / ₈	1.34	¹⁵ / ₁₆	1 ³ / ₁₆	↓	↓	
	56.3	25.5	25 ¹ / ₂	0.810	¹³ / ₁₆	13.0	13	1.46	¹⁷ / ₁₆	1 ¹ / ₄	↓	↓	
	60.7	25.7	25 ³ / ₄	0.870	⁷ / ₈	13.0	13	1.57	¹⁹ / ₁₆	1 ¹ / ₄	↓	↓	
	67.2	26.0	26	0.960	¹⁵ / ₁₆	13.1	13 ¹ / ₈	1.73	¹³ / ₄	1 ⁵ / ₁₆	↓	↓	
	73.5	26.3	26 ³ / ₈	1.04	1 ¹ / ₁₆	13.2	13 ¹ / ₈	1.89	1 ⁷ / ₈	1 ³ / ₈	↓	↓	
	82.0	26.7	26 ³ / ₄	1.16	¹³ / ₁₆	13.3	13 ¹ / ₄	2.09	2 ¹ / ₁₆	1 ⁷ / ₁₆	↓	↓	
	89.9	27.1	27 ¹ / ₈	1.26	1 ¹ / ₄	13.4	13 ³ / ₈	2.28	2 ¹ / ₄	1 ⁷ / ₁₆	↓	↓	
	98.4	27.5	27 ¹ / ₂	1.38	¹³ / ₈	13.5	13 ¹ / ₂	2.48	2 ¹ / ₂	1 ¹ / ₂	↓	↓	
109.0	28.0	28	1.52	1 ¹ / ₂	13.7	13 ⁵ / ₈	2.72	2 ³ / ₄	⁹ / ₁₆	↓	↓		



Wide Flange Shapes

Standard Lengths 20'-70' in 5'0" increments

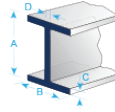


Shapes	Area A		Depth d		Web		Flange				Distance		
	in. ²	in.	in.	in.	Thickness t _w		Width b _f		Thickness t _f		k _f	T	Workable Gage
					in.	in.	in.	in.	in.	in.	in.	in.	in.
W 27 x 84	24.8	26.7	26¾	0.460	7/16	10.0	10	0.640	5/8	1 1/16	23 5/8	5 1/2	
x 94	27.7	26.9	26 7/8	0.490	1/2	10.0	10	0.745	3/4	1 1/16	↓	↓	
x 102	30.0	27.1	27 1/8	0.515	1/2	10.0	10	0.830	13/16	1 1/16			
x 114	33.5	27.3	27 1/4	0.570	9/16	10.1	10 1/8	0.930	1 5/16	1 1/8	↓	↓	
x 129	37.8	27.6	27 3/8	0.610	5/8	10.0	10	1.10	1 1/8	1 1/8			
W 27 x 146	43.1	27.4	27 3/8	0.605	5/8	14.0	14	0.975	1	1 1/8	23 5/8	5 1/2	
x 161	47.6	27.6	27 3/8	0.660	1 1/16	14.0	14	1.08	1 1/16	1 3/16	↓	↓	
x 178	52.5	27.8	27 3/4	0.725	3/4	14.1	14 1/8	1.19	1 3/16	1 3/16			
x 194	57.2	28.1	28 1/8	0.750	3/4	14.0	14	1.34	1 3/16	1 3/16	↓	↓	
x 217	64.0	28.4	28 3/8	0.830	13/16	14.1	14 1/8	1.50	1 1/2	1 1/4			
x 235	69.4	28.7	28 5/8	0.910	1 5/16	14.2	14 1/4	1.61	1 5/8	1 5/16	↓	↓	
x 258	76.0	29.0	29	0.980	1 1/2	14.3	14 1/4	1.77	1 3/4	1 5/16			
x 281	82.9	29.3	29 1/4	1.060	1 1/16	14.4	14 3/8	1.93	1 15/16	1 3/8	↓	↓	
W 27 x 307	90.4	29.6	29 5/8	1.160	1 3/16	14.4	14 1/2	2.09	2 1/16	1 7/16			
x 336	98.9	30.0	30	1.260	1 1/4	14.6	14 1/2	2.28	2 1/4	1 7/16	↓	↓	
x 368	108.0	30.4	30 3/8	1.380	1 3/8	14.7	14 5/8	2.48	2 1/2	1 1/2			
x 539	159	32.5	32 1/2	1.970	2	15.3	15 1/4	3.54	3 3/16	1 13/16	↓	↓	



Wide Flange Shapes

Standard Lengths 20'-70' in 5'0" increments

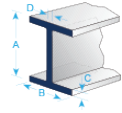


Shapes	Area A	Depth d		Web		Flange				Distance				
				Thickness t _w		Width b _f		Thickness t _f		k ₁	T	Work-able Gage		
				in.	in.	in.	in.	in.	in.	in.	in.	in.		
W 30 x 90	26.4	29.5	29½	0.470	½	10.4	10¾	0.610	⅝	1¼	26½	5½		
x 99	29.1	29.7	29⅝	0.520	½	10.5	10½	0.670	11/16	1¼	↓	↓		
x 108	31.7	29.8	29⅞	0.545	9/16	10.5	10½	0.760	¾	1½				
x 116	34.2	30.0	30	0.565	9/16	10.5	10½	0.850	7/8	1½				
x 124	36.5	30.2	30⅞	0.585	9/16	10.5	10½	0.930	15/16	1½				
x 132	38.9	30.3	30¼	0.615	⅝	10.5	10½	1.00	1	1½				
x 148	43.5	30.7	30⅝	0.650	⅝	10.5	10½	1.18	1¼	1½				
W 30 x 173	51.0	30.4	30½	0.655	⅝	15.0	15	1.07	1¼	1½			26½	5½
x 191	56.3	30.7	30⅝	0.710	11/16	15.0	15	1.19	1¾	1¾			↓	↓
x 211	62.2	30.9	31	0.775	¾	15.1	15½	1.32	15/16	1¾				
x 235	69.2	31.3	31¼	0.830	13/16	15.1	15	1.50	1½	1¼				
x 261	76.9	31.6	31⅝	0.930	15/16	15.2	15½	1.65	1⅞	15/16				
x 292	85.9	32.0	32	1.02	1	15.3	15¼	1.85	1⅞	15/16				
x 326	95.8	32.4	32⅝	1.14	1⅞	15.4	15⅝	2.05	2¼	1⅞				
x 357	105.0	32.8	32¾	1.24	1¼	15.5	15½	2.24	2¼	17/16				
x 391	115.0	33.2	32¼	1.36	1⅞	15.6	15⅝	2.44	27/16	1½				
W 33 x 118	34.7	32.9	32⅞	0.550	9/16	11.5	11½	0.740	¾	1⅞	29⅝	5½		
x 130	38.3	33.1	33⅞	0.580	9/16	11.5	11½	0.855	7/8	1⅞	↓	↓		
x 141	41.6	33.3	33¼	0.605	⅝	11.5	11½	0.960	15/16	1⅞				
x 152	44.8	33.5	33½	0.635	⅝	11.6	11⅝	1.06	1¼	1⅞				
x 169	49.5	33.8	33⅞	0.670	11/16	11.5	11½	1.22	1¼	1¾				
W 33 x 201	59.2	33.7	33⅝	0.715	11/16	15.7	15¾	1.15	1⅞	1¾			29⅝	5½
x 221	65.2	33.9	33⅞	0.775	¾	15.8	15¾	1.28	1¼	1¾	↓	↓		
x 241	71.0	34.2	34⅞	0.830	13/16	15.9	15⅞	1.40	1⅞	1¼				
x 263	77.5	34.5	34½	0.870	7/8	15.8	15¾	1.57	19/16	1¼				
x 291	85.7	34.8	34⅞	0.960	15/16	15.9	15⅞	1.73	1¾	15/16				
x 318	93.6	35.2	35⅞	1.04	1¼	16.0	16	1.89	1⅞	19/16				
x 354	104.0	35.6	35½	1.16	1¾	16.1	16⅞	2.09	2¼	1⅞				
x 387	114.0	36.0	36	1.26	1¼	16.2	16¼	2.28	2¼	17/16				



Wide Flange Shapes

Standard Lengths 20'-70' in 5'0" increments

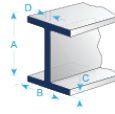


Shapes	Area A		Depth d		Web		Flange				Distance			
	in. ²	in.	Thickness t _w		Width b _f		Thickness t _f		k ₁	T	Workable Gage			
			in.		in.		in.							
W 36 x 135	39.7	35.6	35½	0.600	5/8	12.0	12	0.790	13/16	1 1/8	32 1/8	5 1/2		
x 150	44.2	35.9	35 7/8	0.625	5/8	12.0	12	0.940	19/16	1 1/8	↓	↓		
x 160	47.0	36.0	36	0.650	5/8	12.0	12	1.02	1	1 1/8				
x 170	50.1	36.2	36 1/8	0.680	11/16	12.0	12	1.10	1 1/8	1 3/16				
x 182	53.6	36.3	36 3/8	0.725	3/4	12.1	12 1/8	1.18	1 3/16	1 3/16				
x 194	57.0	36.5	36 1/2	0.765	3/4	12.1	12 1/8	1.26	1 1/4	1 3/16				
x 210	61.8	36.7	36 3/4	0.830	13/16	12.2	12 1/8	1.36	1 3/8	1 1/4				
x 232	68.1	37.1	37 1/8	0.870	7/8	12.1	12 1/8	1.57	1 9/16	1 1/4				
x 256	75.4	37.4	37 3/8	0.960	15/16	12.2	12 1/4	1.73	1 3/4	1 1/4				
W 36 x 231	68.1	36.5	36 1/2	0.760	3/4	16.5	16 1/2	1.26	1 1/4	1 9/16			31 3/8	7 1/2
x 247	72.5	36.7	36 3/8	0.800	13/16	16.5	16 1/2	1.35	1 3/8	1 5/8			↓	↓
x 262	77.0	36.9	36 7/8	0.840	13/16	16.6	16 1/2	1.44	1 7/16	1 5/8				
x 282	82.9	37.1	37 1/8	0.885	7/8	16.6	16 5/8	1.57	1 9/16	1 5/8				
x 302	88.8	37.3	37 3/8	0.945	15/16	16.7	16 5/8	1.68	1 11/16	1 11/16				
x 330	97.0	37.7	37 3/8	1.02	1	16.6	16 3/8	1.85	1 7/8	1 3/4				
x 361	106.0	38.0	38	1.12	1 1/8	16.7	16 3/4	2.01	2	1 3/4				
x 395	116.0	38.4	38 3/8	1.22	1 1/4	16.8	16 7/8	2.20	2 3/16	1 13/16				
x 441	130.0	38.9	38 7/8	1.36	1 3/8	17.0	17	2.44	2 7/16	1 7/8				
x 487	143.0	39.3	39 3/8	1.50	1 1/2	17.1	17 1/8	2.68	2 11/16	1 15/16				
x 529	156.0	39.8	39 3/4	1.61	1 5/8	17.2	17 1/4	2.91	2 15/16	2				
x 652	192.0	41.1	41	1.97	2	17.6	17 3/8	3.54	3 3/16	2 3/16				
x 800	236.0	42.6	42 1/2	2.38	2 3/8	18.0	18	4.29	4 5/16	2 3/8				



Wide Flange Shapes

Standard Lengths 20'-70' in 5'0" increments

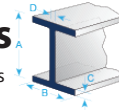


Shapes	Area A	Depth d		Web		Flange				Distance				
				Thickness t_w		Width b_f		Thickness t_f		k_1	T	Work-able Gage		
				in.	in.	in.	in.	in.	in.	in.	in.	in.		
W 40 x 149	43.8	38.2	38¼	0.630	5/8	11.8	11¾	0.830	13/16	1½	34	7½		
x 167	49.2	38.6	385/8	0.650	5/8	11.8	11¾	1.03	1	19/16	↓	↓		
x 183	53.3	39.0	39	0.650	5/8	11.8	11¾	1.20	13/16	19/16				
x 211	62.0	39.4	393/8	0.750	3/4	11.8	11¾	1.42	17/16	19/16				
x 235	69.0	39.7	39¾	0.830	13/16	11.9	117/8	1.58	19/16	19/8				
x 264	77.6	40.0	40	0.960	15/16	11.9	117/8	1.73	1¾	111/16				
x 278	82.0	40.2	401/8	1.03	1	12.0	12	1.81	113/16	1¾				
x 294	86.3	40.4	403/8	1.06	11/16	12.0	12	1.93	115/16	1¾				
x 327	96.0	40.8	40¾	1.18	13/16	12.1	121/8	2.13	21/8	113/16				
x 331	97.5	40.8	40¾	1.22	1¼	12.2	121/8	2.13	21/8	113/16				
x 392	115.0	41.6	415/8	1.42	17/16	12.4	123/8	2.52	21/2	115/16				
W 40 x 199	58.5	38.7	385/8	0.650	5/8	15.8	15¾	1.07	11/16	19/16			34	7½
x 215	63.4	39.0	39	0.650	5/8	15.8	15¾	1.22	1¼	19/16			↓	↓
x 249	73.3	39.4	393/8	0.750	3/4	15.8	15¾	1.42	17/16	19/16				
x 277	81.4	39.7	39¾	0.830	13/16	15.8	157/8	1.58	19/16	19/8				
x 297	87.4	39.8	397/8	0.930	15/16	15.8	157/8	1.65	19/8	111/16				
x 324	95.3	40.2	401/8	1.00	1	15.9	157/8	1.81	113/16	111/16				
x 362	107.0	40.6	40½	1.12	11/8	16.0	16	2.01	2	1¾				
x 372	109.0	40.6	405/8	1.16	13/16	16.1	161/8	2.05	21/16	113/16				
x 397	117.0	41.0	41	1.22	1¼	16.1	161/8	2.20	23/16	113/16				
x 431	127.0	41.3	41¼	1.34	15/16	16.2	16¼	2.36	23/8	17/8				
x 503	148.0	42.1	42	1.54	19/16	16.4	163/8	2.76	2¾	2				
x 593	174.0	43.0	43	1.79	113/16	16.7	16¾	3.23	3¼	21/8				
W 44 x 230	67.7	42.9	427/8	0.710	11/16	15.8	15¾	1.22	1¼	13/16	38¾	5½		
x 262	76.9	43.3	43¼	0.785	13/16	15.8	1¾	1.42	17/16	13/16	↓	↓		
x 290	85.4	43.6	433/8	0.865	7/8	15.8	157/8	1.58	19/16	1¼				
x 335	98.5	44.0	44	1.03	1	15.9	16	1.77	1¾	15/16				



Wide Flange Beams

Standard Lengths 20'-70' in 5'0" increments

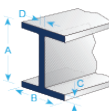


Shapes	Area A	Depth d		Web		Flange				Distance		
				Thickness t_w		Width b_f		Thickness t_f		k_1	T	Work-able Gage
				in.	in.	in.	in.	in.	in.	in.	in.	in.
W 10 x 12	3.54	9.87	9 $\frac{7}{8}$	0.190	$\frac{3}{16}$	3.96	4	0.210	$\frac{3}{16}$	$\frac{9}{16}$	8 $\frac{3}{8}$	2 $\frac{1}{4}$
x 15	4.41	10.0	10	0.230	$\frac{1}{4}$	4.00	4	0.270	$\frac{1}{4}$	$\frac{9}{16}$	↓	↓
x 17	4.99	10.1	10 $\frac{3}{8}$	0.240	$\frac{1}{4}$	4.01	4	0.330	$\frac{5}{16}$	$\frac{9}{16}$	↓	↓
x 19	5.62	10.2	10 $\frac{1}{4}$	0.250	$\frac{1}{4}$	4.02	4	0.395	$\frac{3}{8}$	$\frac{5}{8}$	↓	↓
W 10 x 22	6.49	10.2	10 $\frac{3}{8}$	0.240	$\frac{1}{4}$	5.75	5 $\frac{3}{4}$	0.360	$\frac{3}{8}$	$\frac{5}{8}$	8 $\frac{1}{4}$	2 $\frac{3}{4}$
x 26	7.61	10.3	10 $\frac{3}{8}$	0.260	$\frac{1}{4}$	5.77	5 $\frac{3}{4}$	0.440	$\frac{7}{16}$	$\frac{11}{16}$	↓	↓
x 30	8.84	10.5	10 $\frac{1}{2}$	0.300	$\frac{5}{16}$	5.81	5 $\frac{3}{4}$	0.510	$\frac{1}{2}$	$\frac{11}{16}$	↓	↓
W 10 x 33	9.71	9.73	9 $\frac{3}{4}$	0.290	$\frac{5}{16}$	7.96	8	0.435	$\frac{7}{16}$	$\frac{3}{4}$	7 $\frac{1}{2}$	5 $\frac{1}{2}$
x 39	11.5	9.92	9 $\frac{7}{8}$	0.315	$\frac{5}{16}$	7.99	8	0.530	$\frac{1}{2}$	$\frac{13}{16}$	↓	↓
x 45	13.3	10.1	10 $\frac{3}{8}$	0.350	$\frac{3}{8}$	8.02	8	0.620	$\frac{5}{8}$	$\frac{13}{16}$	↓	↓
W 10 x 49	14.4	10.0	10	0.340	$\frac{5}{16}$	10.0	10	0.560	$\frac{9}{16}$	$\frac{13}{16}$	7 $\frac{1}{2}$	5 $\frac{1}{2}$
x 54	15.8	10.1	10 $\frac{3}{8}$	0.370	$\frac{3}{8}$	10.0	10	0.615	$\frac{5}{8}$	$\frac{13}{16}$	↓	↓
x 60	17.6	10.2	10 $\frac{1}{4}$	0.420	$\frac{7}{16}$	10.1	10 $\frac{3}{8}$	0.680	$\frac{11}{16}$	$\frac{13}{16}$	↓	↓
x 68	20.0	10.4	10 $\frac{3}{8}$	0.470	$\frac{1}{2}$	10.1	10 $\frac{3}{8}$	0.770	$\frac{3}{4}$	$\frac{7}{8}$	↓	↓
x 77	22.6	10.6	10 $\frac{5}{8}$	0.530	$\frac{1}{2}$	10.2	10 $\frac{1}{4}$	0.870	$\frac{7}{8}$	$\frac{7}{8}$	↓	↓
x 88	25.9	10.8	10 $\frac{3}{8}$	0.605	$\frac{5}{8}$	10.3	10 $\frac{1}{4}$	0.990	1	$\frac{15}{16}$	↓	↓
x100	29.4	11.1	11 $\frac{1}{8}$	0.680	$\frac{11}{16}$	10.3	10 $\frac{3}{8}$	1.12	1 $\frac{1}{8}$	1	↓	↓
x112	32.9	11.4	11 $\frac{3}{8}$	0.755	$\frac{3}{4}$	10.4	10 $\frac{3}{8}$	1.25	1 $\frac{1}{4}$	1	↓	↓
W 12 x 14	4.16	11.9	11 $\frac{7}{8}$	0.200	$\frac{3}{16}$	3.97	4	0.225	$\frac{1}{4}$	$\frac{9}{16}$	10 $\frac{3}{8}$	2 $\frac{1}{4}$
x 16	4.71	12.0	12	0.220	$\frac{1}{4}$	3.99	4	0.265	$\frac{1}{4}$	$\frac{9}{16}$	↓	↓
x 19	5.57	12.2	12 $\frac{1}{8}$	0.235	$\frac{1}{4}$	4.01	4	0.350	$\frac{3}{8}$	$\frac{9}{16}$	↓	↓
x 22	6.48	12.3	12 $\frac{1}{4}$	0.260	$\frac{1}{4}$	4.03	4	0.425	$\frac{7}{16}$	$\frac{5}{8}$	↓	↓
W 12 x 26	7.65	12.2	12 $\frac{1}{4}$	0.230	$\frac{1}{4}$	6.49	6 $\frac{1}{2}$	0.380	$\frac{3}{8}$	$\frac{3}{4}$	10 $\frac{3}{8}$	3 $\frac{1}{2}$
x 30	8.79	12.3	12 $\frac{3}{8}$	0.260	$\frac{1}{4}$	6.52	6 $\frac{1}{2}$	0.440	$\frac{7}{16}$	$\frac{3}{4}$	↓	↓
x 35	10.3	12.5	12 $\frac{1}{2}$	0.300	$\frac{5}{16}$	6.56	6 $\frac{1}{2}$	0.520	$\frac{1}{2}$	$\frac{3}{4}$	↓	↓
W 12 x 40	11.7	11.9	12	0.295	$\frac{5}{16}$	8.01	8	0.515	$\frac{1}{2}$	$\frac{7}{8}$	9 $\frac{1}{4}$	5 $\frac{1}{2}$
x 45	13.1	12.1	12	0.335	$\frac{5}{16}$	8.05	8	0.575	$\frac{9}{16}$	$\frac{15}{16}$	↓	↓
x 50	14.6	12.2	12 $\frac{1}{4}$	0.370	$\frac{3}{8}$	8.08	8 $\frac{1}{8}$	0.640	$\frac{5}{8}$	$\frac{15}{16}$	↓	↓
W 12 x 53	15.6	12.1	12	0.345	$\frac{3}{8}$	10.0	10	0.575	$\frac{9}{16}$	$\frac{15}{16}$	9 $\frac{1}{4}$	5 $\frac{1}{2}$
x 58	17.0	12.2	12 $\frac{1}{4}$	0.360	$\frac{3}{8}$	10.0	10	0.640	$\frac{5}{8}$	$\frac{15}{16}$	9 $\frac{1}{4}$	5 $\frac{1}{2}$



Wide Flange Beams

Standard Lengths 20'-70' in 5'0" increments

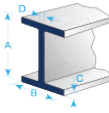


Shapes	Area		Depth		Web		Flange			Distance			
	A	in. ²	d	in.	Thickness		Width		Thickness		k ₁	T	Workable Gage
					t _w	in.	b _f	in.	t _f	in.			
W 12 x 65	19.1	12.1	12 1/8	0.390	3/8	12.0	12	0.605	5/8	1	9 1/8	5 1/2	
x 72	21.1	12.3	12 1/4	0.430	7/16	12.0	12	0.670	1 1/16	1 1/16	↓	↓	
x 79	23.2	12.4	12 3/8	0.470	1/2	12.1	12 1/8	0.735	3/4	1 1/16			
x 87	25.6	12.5	12 1/2	0.515	1/2	12.1	12 1/8	0.810	13/16	1 1/16			
x 96	28.2	12.7	12 3/4	0.550	9/16	12.2	12 1/8	0.900	7/8	1 1/8			
x 106	31.2	12.9	12 7/8	0.610	5/8	12.2	12 1/4	0.990	1	1 1/8			
x 120	35.3	13.1	13 1/8	0.710	1 1/16	12.3	12 3/8	1.11	1 1/8	1 3/16			
x 136	39.9	13.4	13 3/8	0.790	1 3/16	12.4	12 3/8	1.25	1 1/4	1 1/4			
x 152	44.7	13.7	13 3/4	0.870	7/8	12.5	12 1/2	1.40	1 3/8	1 1/4			
x 170	50.0	14.0	14	0.960	1 5/16	12.6	12 5/8	1.56	1 9/16	1 5/16			
x 190	55.8	14.4	14 1/8	1.060	1 1/8	12.7	12 5/8	1.74	1 3/4	1 3/8			
x 210	61.8	14.7	14 1/4	1.180	1 3/16	12.8	12 3/4	1.90	1 7/8	1 7/16			
x 230	67.7	15.1	15	1.290	1 5/16	12.9	12 7/8	2.07	2 1/16	1 1/2			
x 252	74.0	15.4	15 3/8	1.400	1 3/8	13.0	13	2.25	2 1/4	1 1/2			
x 279	81.9	15.9	15 7/8	1.530	1 1/2	13.1	13 1/8	2.47	2 1/2	1 3/8			
x 305	89.6	16.3	16 3/8	1.630	1 5/8	13.2	13 1/4	2.71	2 11/16	1 5/8			
x 336	98.8	16.8	16 7/8	1.780	1 3/4	13.4	13 3/8	2.96	2 15/16	1 11/16			
W 14 x 22	6.49	13.7	13 3/4	0.230	1/4	5.00	5	0.335	5/16	3/4	11 5/8	2 3/4	
x 26	7.69	13.9	13 7/8	0.255	1/4	5.03	5	0.420	7/16	3/4	11 5/8	2 3/4	
W 14 x 30	8.85	13.8	13 3/8	0.270	1/4	6.73	6 3/4	0.385	3/8	3/4	11 5/8	3 1/2	
x 34	10.0	14.0	14	0.285	5/16	6.75	6 3/4	0.455	7/16	3/4	↓	↓	
x 38	11.2	14.1	14 1/8	0.310	5/16	6.77	6 3/4	0.515	1/2	13/16	↓	↓	
W 14 x 43	12.6	13.7	13 5/8	0.305	5/16	8.00	8	0.530	1/2	1	10 7/8	5 1/2	
x 48	14.1	13.8	13 3/4	0.340	5/16	8.03	8	0.595	5/8	1	↓	↓	
x 53	15.6	13.9	13 7/8	0.370	3/8	8.06	8	0.660	1 1/16	1	↓	↓	
W 14 x 61	17.9	13.9	13 7/8	0.375	3/8	10.0	10	0.645	5/8	1	10 7/8	5 1/2	
x 68	20.0	14.0	14	0.415	7/16	10.0	10	0.720	3/4	1 1/16	↓	↓	
x 74	21.8	14.2	14 1/8	0.450	7/16	10.1	10 1/8	0.785	13/16	1 1/16	↓	↓	
x 82	24.0	14.3	14 1/4	0.510	1/2	10.1	10 1/8	0.855	7/8	1 1/16	↓	↓	
W 14 x 90	26.5	14.0	14	0.440	7/16	14.5	14 1/2	0.710	1 1/16	1 7/16	10	5 1/2	
x 99	29.1	14.2	14 1/8	0.485	1/2	14.6	14 5/8	0.780	3/4	1 7/16	↓	↓	
x 109	32.0	14.3	14 3/8	0.525	1/2	14.6	14 3/8	0.860	7/8	1 1/2	↓	↓	
x 120	35.3	14.5	14 1/2	0.590	9/16	14.7	14 1/2	0.940	15/16	1 1/2	↓	↓	
x 132	38.8	14.7	14 3/4	0.645	5/8	14.7	14 3/4	1.03	1	1 9/16	↓	↓	



Wide Flange Beams

Standard Lengths 20'-70' in 5'0" increments

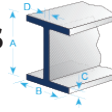


Shapes	Area A	Depth d		Web		Flange				Distance		
				Thickness t _w		Width b _f		Thickness t _f		k ₁	T	Work-able Gage
				in.	in.	in.	in.	in.	in.	in.	in.	in.
W 14 x 145	42.7	14.8	14¾	0.680	1½	15.5	15½	1.09	1½	19½	10	3-7½-3
x 159	46.7	15.0	15	0.745	¾	15.6	15⅝	1.19	1¾	19½		
x 176	51.8	15.2	15¼	0.830	13/16	15.7	15⅝	1.31	1½	15½		
x 193	56.8	15.5	15½	0.890	7/8	15.7	15¾	1.44	17/16	11½		
x 211	62.0	15.7	15¾	0.980	1	15.8	15¾	1.56	19/16	11½		
x 233	68.5	16.0	16	1.070	1½	15.9	15⅞	1.72	1¾	1¾		
x 257	75.6	16.4	16⅝	1.180	1¾	16.0	16	1.89	17/8	11¾		
x 283	83.3	16.7	16¾	1.290	1½	16.1	16½	2.07	21/16	17/8		
x 311	91.4	17.1	17⅛	1.410	17/16	16.2	16¼	2.26	2¼	115/16		
x 342	101.0	17.5	17½	1.540	19/16	16.4	16⅝	2.47	2½	2		
x 370	109.0	17.9	17⅞	1.660	15/8	16.5	16½	2.66	211/16	21/16		
x 398	117.0	18.3	18¼	1.770	1¾	16.6	16⅝	2.85	27/8	2½		
x 426	125.0	18.7	18⅝	1.880	17/8	16.7	16¾	3.04	3/16	2½		
x 455	134.0	19.0	19	2.020	2	16.8	16⅞	3.21	33/16	2¼		
x 500	147.0	19.6	19⅝	2.190	23/16	17.0	17	3.50	3½	23/16		
x 550	162.0	20.2	20¼	2.380	23/8	17.2	17¼	3.82	313/16	23/8		
x 605	178.0	20.9	20⅞	2.600	25/8	17.4	17⅝	4.16	43/16	21/2		
x 665	196.0	21.6	21⅝	2.830	213/16	17.7	17⅞	4.52	4½	25/8		
x 730	215.0	22.4	22⅝	3.070	31/16	17.9	17⅞	4.91	415/16	2¾	↓	↓
W 16 x 26	7.68	15.7	15¾	0.250	¼	5.50	5½	0.345	3/8	¾	135/8	3½
x 31	9.13	15.9	15⅞	0.275	¼	5.53	5½	0.440	7/16	¾	135/8	3½
W 16 x 36	10.6	15.9	15⅞	0.295	5/16	6.99	7	0.430	7/16	¾	135/8	3½
x 40	11.8	16.0	16	0.305	5/16	7.00	7	0.505	½	13/16		
x 45	13.3	16.1	16⅛	0.345	3/8	7.04	7	0.565	9/16	13/16		
x 50	14.7	16.3	16¼	0.380	3/8	7.07	7⅛	0.630	5/8	13/16		
x 57	16.8	16.4	16⅝	0.430	7/16	7.12	7⅛	0.715	11/16	7/8	↓	↓
W 16 x 67	19.7	16.3	16⅝	0.395	3/8	10.2	10¼	0.665	11/16	1	13¼	5½
x 77	22.6	16.5	16½	0.455	7/16	10.3	10¼	0.760	¾	11/16		
x 89	26.2	16.8	16¾	0.525	½	10.4	10⅝	0.875	7/8	11/16		
x 100	29.5	17.0	17	0.585	9/16	10.4	10⅝	0.985	1	11/8	↓	↓



Wide flange Beams

Standard Lengths 20'-70' in 5'0" increments

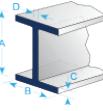


Shapes	Area A	Depth d		Web		Flange			Distance			
				Thickness t_w		Width b_f	Thickness t_f	k_1	T	Work-able Gage		
				in.							in.	in.
W 18 x 35	10.3	17.7	17 $\frac{3}{4}$	0.300	$\frac{5}{16}$	6.00	6	0.425	$\frac{7}{16}$	$\frac{3}{4}$	15 $\frac{1}{2}$	3 $\frac{1}{2}$
x 40	11.8	17.9	17 $\frac{7}{8}$	0.315	$\frac{5}{16}$	6.02	6	0.525	$\frac{1}{2}$	$\frac{13}{16}$	↓	↓
x 46	13.5	18.1	18	0.360	$\frac{3}{8}$	6.06	6	0.605	$\frac{5}{8}$	$\frac{13}{16}$	↓	↓
W 18 x 50	14.7	18.0	18	0.355	$\frac{3}{8}$	7.50	7 $\frac{1}{2}$	0.570	$\frac{9}{16}$	$\frac{13}{16}$	15 $\frac{1}{2}$	3 $\frac{1}{2}$
x 55	16.2	18.1	18 $\frac{1}{8}$	0.390	$\frac{3}{8}$	7.53	7 $\frac{1}{2}$	0.630	$\frac{5}{8}$	$\frac{13}{16}$	↓	↓
x 60	17.6	18.2	18 $\frac{1}{4}$	0.415	$\frac{7}{16}$	7.56	7 $\frac{1}{2}$	0.695	$\frac{11}{16}$	$\frac{13}{16}$	↓	↓
x 65	19.1	18.4	18 $\frac{3}{8}$	0.450	$\frac{7}{16}$	7.59	7 $\frac{3}{8}$	0.750	$\frac{3}{4}$	$\frac{7}{8}$	↓	↓
x 71	20.8	18.5	18 $\frac{1}{2}$	0.495	$\frac{1}{2}$	7.64	7 $\frac{3}{8}$	0.810	$\frac{13}{16}$	$\frac{7}{8}$	↓	↓
W 18 x 76	22.3	18.2	18 $\frac{1}{4}$	0.425	$\frac{7}{16}$	11.0	11	0.680	$\frac{1}{16}$	$\frac{1}{16}$	15 $\frac{1}{8}$	5 $\frac{1}{2}$
x 86	25.3	18.4	18 $\frac{3}{8}$	0.480	$\frac{1}{2}$	11.1	11 $\frac{1}{8}$	0.770	$\frac{3}{4}$	$\frac{1}{16}$	↓	↓
x 97	28.5	18.6	18 $\frac{5}{8}$	0.535	$\frac{9}{16}$	11.1	11 $\frac{1}{8}$	0.870	$\frac{7}{8}$	$\frac{1}{8}$	↓	↓
x 106	31.1	18.7	18 $\frac{3}{4}$	0.590	$\frac{9}{16}$	11.2	11 $\frac{1}{4}$	0.940	$\frac{15}{16}$	$\frac{1}{8}$	↓	↓
x 119	35.1	19.0	19	0.655	$\frac{5}{8}$	11.3	11 $\frac{1}{4}$	1.06	$\frac{1}{16}$	$\frac{1}{16}$	↓	↓
x 130	38.2	19.3	19 $\frac{1}{4}$	0.670	$\frac{1}{16}$	11.2	11 $\frac{1}{8}$	1.20	$\frac{13}{16}$	$\frac{13}{16}$	↓	↓
x 143	42.1	19.5	19 $\frac{1}{2}$	0.730	$\frac{3}{4}$	11.2	11 $\frac{1}{4}$	1.32	$\frac{15}{16}$	$\frac{13}{16}$	↓	↓
x 158	46.3	19.7	19 $\frac{3}{4}$	0.810	$\frac{13}{16}$	11.3	11 $\frac{1}{4}$	1.44	$\frac{1}{16}$	$\frac{1}{4}$	↓	↓
x 175	51.3	20.0	20	0.890	$\frac{7}{8}$	11.4	11 $\frac{3}{8}$	1.59	$\frac{19}{16}$	$\frac{1}{4}$	↓	↓
x 192	56.4	20.4	20 $\frac{3}{8}$	0.960	$\frac{15}{16}$	11.5	11 $\frac{1}{2}$	1.75	$\frac{13}{4}$	$\frac{1}{8}$	↓	↓
x 211	62.1	20.7	20 $\frac{5}{8}$	1.060	$\frac{1}{16}$	11.6	11 $\frac{1}{2}$	1.91	$\frac{15}{16}$	$\frac{13}{16}$	15 $\frac{1}{2}$	↓
x 234	68.8	21.1	21	1.160	$\frac{13}{16}$	11.7	11 $\frac{5}{8}$	2.11	$\frac{2}{8}$	$\frac{13}{16}$	↓	↓
x 258	75.9	21.5	21 $\frac{1}{2}$	1.280	$\frac{1}{4}$	11.8	11 $\frac{3}{4}$	2.30	$\frac{25}{16}$	$\frac{1}{4}$	↓	↓
x 283	83.3	21.9	21 $\frac{7}{8}$	1.400	$\frac{1}{8}$	11.9	11 $\frac{7}{8}$	2.50	$\frac{2}{2}$	$\frac{15}{16}$	↓	↓
x 311	91.6	22.3	22 $\frac{3}{8}$	1.520	$\frac{1}{2}$	12.0	12	2.74	$\frac{2}{4}$	$\frac{1}{8}$	↓	↓
W 21 x 44	13.0	20.7	20 $\frac{5}{8}$	0.350	$\frac{3}{8}$	6.50	6 $\frac{1}{2}$	0.450	$\frac{7}{16}$	$\frac{13}{16}$	18 $\frac{3}{8}$	3 $\frac{1}{2}$
x 50	14.7	20.8	20 $\frac{7}{8}$	0.380	$\frac{3}{8}$	6.53	6 $\frac{1}{2}$	0.535	$\frac{9}{16}$	$\frac{13}{16}$	↓	↓
x 57	16.7	21.1	21	0.405	$\frac{3}{8}$	6.56	6 $\frac{1}{2}$	0.650	$\frac{5}{8}$	$\frac{13}{16}$	↓	↓
W 21 x 48	14.1	20.6	20 $\frac{5}{8}$	0.350	$\frac{3}{8}$	8.14	8 $\frac{1}{8}$	0.430	$\frac{7}{16}$	$\frac{13}{16}$	18 $\frac{3}{8}$	5 $\frac{1}{2}$
x 55	16.2	20.8	20 $\frac{3}{4}$	0.375	$\frac{3}{8}$	8.22	8 $\frac{1}{4}$	0.522	$\frac{1}{2}$	$\frac{13}{16}$	↓	↓
x 62	18.3	21.0	21	0.400	$\frac{3}{8}$	8.24	8 $\frac{1}{4}$	0.615	$\frac{5}{8}$	$\frac{13}{16}$	↓	↓
x 68	20.0	21.1	21 $\frac{1}{8}$	0.430	$\frac{7}{16}$	8.27	8 $\frac{1}{4}$	0.685	$\frac{1}{16}$	$\frac{7}{8}$	↓	↓
x 73	21.5	21.2	21 $\frac{1}{4}$	0.455	$\frac{7}{16}$	8.30	8 $\frac{1}{4}$	0.740	$\frac{3}{4}$	$\frac{7}{8}$	↓	↓
x 83	24.3	21.4	21 $\frac{3}{8}$	0.515	$\frac{1}{2}$	8.36	8 $\frac{3}{8}$	0.835	$\frac{13}{16}$	$\frac{7}{8}$	↓	↓
x 93	27.3	21.6	21 $\frac{5}{8}$	0.058	$\frac{9}{16}$	8.42	8 $\frac{3}{8}$	0.930	$\frac{15}{16}$	$\frac{15}{16}$	↓	↓



Wide Flange Beams

Standard Lengths 20'-70' in 5'0" increments

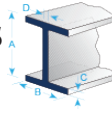


Shapes	Area A	Depth d		Web		Flange				Distance		
				Thickness t_w		Width b_f		Thickness t_f		k_1	T	Work-able Gage
				in.	in.	in.	in.	in.	in.	in.	in.	in.
W 21 x 101	29.8	21.4	21 $\frac{3}{8}$	0.500	$\frac{1}{2}$	12.3	12 $\frac{1}{4}$	0.800	$\frac{13}{16}$	$\frac{1}{16}$	18	5 $\frac{1}{2}$
x 111	32.7	21.5	21 $\frac{1}{2}$	0.550	$\frac{9}{16}$	12.3	12 $\frac{3}{8}$	0.875	$\frac{7}{8}$	$\frac{1}{8}$	↓	↓
x 122	35.9	21.7	21 $\frac{5}{8}$	0.600	$\frac{5}{8}$	12.4	12 $\frac{3}{8}$	0.960	$\frac{15}{16}$	$\frac{1}{8}$		
x 132	38.8	21.8	21 $\frac{7}{8}$	0.650	$\frac{5}{8}$	12.4	12 $\frac{1}{2}$	1.04	$\frac{1}{16}$	$\frac{1}{8}$		
x 147	43.2	22.1	22	0.720	$\frac{3}{4}$	12.5	12 $\frac{1}{2}$	1.15	$\frac{1}{16}$	$\frac{1}{8}$		
x 166	48.8	22.5	22 $\frac{1}{2}$	0.750	$\frac{3}{4}$	12.4	12 $\frac{3}{8}$	1.36	$\frac{1}{8}$	$\frac{1}{8}$		
x 182	53.6	22.7	22 $\frac{3}{4}$	0.830	$\frac{13}{16}$	12.5	12 $\frac{1}{2}$	1.48	$\frac{1}{2}$	$\frac{1}{4}$		
x 201	59.2	23.0	23	0.910	$\frac{15}{16}$	12.6	12 $\frac{3}{8}$	1.63	$\frac{1}{8}$	$\frac{15}{16}$		
W 24 x 55	16.2	23.6	23 $\frac{3}{8}$	0.395	$\frac{3}{8}$	7.01	7	0.505	$\frac{1}{2}$	1	20 $\frac{3}{4}$	3 $\frac{1}{2}$
x 62	18.2	23.7	23 $\frac{3}{4}$	0.430	$\frac{7}{16}$	7.04	7	0.590	$\frac{9}{16}$	$\frac{1}{16}$	20 $\frac{3}{4}$	3 $\frac{1}{2}$
W 24 x 68	20.1	23.7	23 $\frac{3}{4}$	0.415	$\frac{7}{16}$	8.97	9	0.585	$\frac{9}{16}$	$\frac{1}{16}$	20 $\frac{3}{4}$	5 $\frac{1}{2}$
x 76	22.4	23.9	23 $\frac{7}{8}$	0.440	$\frac{7}{16}$	8.99	9	0.680	$\frac{11}{16}$	$\frac{1}{16}$	↓	↓
x 84	24.7	24.1	24 $\frac{1}{8}$	0.470	$\frac{1}{2}$	9.02	9	0.770	$\frac{3}{4}$	$\frac{1}{16}$		
x 94	27.7	24.3	24 $\frac{1}{4}$	0.515	$\frac{1}{2}$	9.07	9 $\frac{1}{8}$	0.875	$\frac{7}{8}$	$\frac{1}{16}$		
x 103	30.3	24.5	24 $\frac{1}{2}$	0.550	$\frac{9}{16}$	9.00	9	0.980	1	$\frac{1}{8}$		
W 24 x 104	30.6	24.1	24	0.500	$\frac{1}{2}$	12.8	12 $\frac{3}{4}$	0.750	$\frac{3}{4}$	$\frac{1}{16}$		
x 117	34.4	24.3	24 $\frac{1}{4}$	0.550	$\frac{9}{16}$	12.8	12 $\frac{3}{4}$	0.850	$\frac{7}{8}$	$\frac{1}{8}$	↓	↓
x 131	38.5	24.5	24 $\frac{1}{2}$	0.605	$\frac{5}{8}$	12.9	12 $\frac{7}{8}$	0.960	$\frac{15}{16}$	$\frac{1}{8}$		
x 146	43.0	24.7	24 $\frac{3}{4}$	0.650	$\frac{5}{8}$	12.9	12 $\frac{7}{8}$	1.09	$\frac{1}{16}$	$\frac{1}{8}$		
x 162	47.7	25.0	25	0.705	$\frac{11}{16}$	13.0	13	1.22	$\frac{1}{4}$	$\frac{1}{8}$		
x 176	51.7	25.2	25 $\frac{1}{4}$	0.750	$\frac{3}{4}$	12.9	12 $\frac{7}{8}$	1.34	$\frac{1}{16}$	$\frac{1}{8}$		
x 192	56.3	25.5	25 $\frac{1}{2}$	0.810	$\frac{13}{16}$	13.0	13	1.46	$\frac{1}{16}$	$\frac{1}{4}$		
x 207	60.7	25.7	25 $\frac{3}{4}$	0.870	$\frac{7}{8}$	13.0	13	1.57	$\frac{1}{16}$	$\frac{1}{4}$		
x 229	67.2	26.0	26	0.960	$\frac{15}{16}$	13.1	13 $\frac{1}{8}$	1.73	$\frac{1}{4}$	$\frac{1}{8}$		
x 250	73.5	26.3	26 $\frac{3}{8}$	1.04	$\frac{1}{16}$	13.2	13 $\frac{1}{8}$	1.89	$\frac{1}{8}$	$\frac{1}{8}$		
x 279	82.0	26.7	26 $\frac{3}{4}$	1.16	$\frac{13}{16}$	13.3	13 $\frac{1}{4}$	2.09	$\frac{2}{16}$	$\frac{1}{8}$		
x 306	89.9	27.1	27 $\frac{1}{8}$	1.26	$\frac{1}{4}$	13.4	13 $\frac{3}{8}$	2.28	$\frac{2}{16}$	$\frac{1}{8}$		
x 335	98.4	27.5	27 $\frac{1}{2}$	1.38	$\frac{1}{8}$	13.5	13 $\frac{1}{2}$	2.48	$\frac{2}{16}$	$\frac{1}{2}$		
x 370	109.0	28.0	28	1.52	$\frac{1}{2}$	13.7	13 $\frac{3}{8}$	2.72	$\frac{2}{16}$	$\frac{9}{16}$		



Wide Flange Beams

Standard Lengths 20'-70' in 5'0" increments

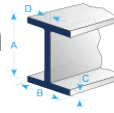


Shapes	Area A	Depth d		Web		Flange				Distance				
				Thickness t _w		Width b _f		Thickness t _f		k ₁	T	Workable Gage		
				in.	in.	in.	in.	in.	in.	in.	in.	in.		
W 27 x 84	24.8	26.7	26¾	0.460	7/16	10.0	10	0.640	5/8	1 1/16	23 3/8	5 1/2		
x 94	27.7	26.9	26 7/8	0.490	1/2	10.0	10	0.745	3/4	1 1/16	↓	↓		
x 102	30.0	27.1	27 1/8	0.515	1/2	10.0	10	0.830	13/16	1 1/16				
x 114	33.5	27.3	27 1/4	0.570	9/16	10.1	10 1/8	0.930	1 5/16	1 1/8				
x 129	37.8	27.6	27 3/8	0.610	5/8	10.0	10	1.10	1 1/8	1 1/8				
W 27 x 146	43.1	27.4	27 3/8	0.605	5/8	14.0	14	0.975	1	1 1/8			23 3/8	5 1/2
x 161	47.6	27.6	27 3/8	0.660	1 1/16	14.0	14	1.08	1 1/16	1 3/16	↓	↓		
x 178	52.5	27.8	27 3/4	0.725	3/4	14.1	14 1/8	1.19	1 3/16	1 3/16				
x 194	57.2	28.1	28 1/8	0.750	3/4	14.0	14	1.34	1 5/16	1 3/16				
x 217	64.0	28.4	28 3/8	0.830	1 3/16	14.1	14 1/8	1.50	1 1/2	1 1/4				
x 235	69.4	28.7	28 3/8	0.910	1 5/16	14.2	14 1/4	1.61	1 5/8	1 5/16				
x 258	76.0	29.0	29	0.980	1 1/2	14.3	14 1/4	1.77	1 3/4	1 5/16				
x 281	82.9	29.3	29 1/4	1.060	1 1/16	14.4	14 3/8	1.93	1 15/16	1 3/8				
x 307	90.4	29.6	29 3/8	1.160	1 3/16	14.4	14 1/2	2.09	2 1/16	1 7/16				
x 336	98.9	30.0	30	1.260	1 1/4	14.6	14 1/2	2.28	2 1/4	1 7/16				
x 368	108.0	30.4	30 3/8	1.380	1 3/8	14.7	14 3/8	2.48	2 1/2	1 1/2				
x 539	159	32.5	32 1/2	1.970	2	15.3	15 1/4	3.54	3 3/16	1 13/16				
W 30 x 90	26.4	29.5	29 1/2	0.470	1/2	10.4	10 3/8	0.610	5/8	1 1/16			26 1/2	5 1/2
x 99	29.1	29.7	29 3/8	0.520	1/2	10.5	10 1/2	0.670	1 1/16	1 1/16			↓	↓
x 108	31.7	29.8	29 3/8	0.545	9/16	10.5	10 1/2	0.760	3/4	1 1/8				
x 116	34.2	30.0	30	0.565	9/16	10.5	10 1/2	0.850	7/8	1 1/8				
x 124	36.5	30.2	30 1/8	0.585	9/16	10.5	10 1/2	0.930	1 5/16	1 1/8				
x 132	38.9	30.3	30 1/4	0.615	5/8	10.5	10 1/2	1.00	1	1 1/8				
x 148	43.5	30.7	30 3/8	0.650	5/8	10.5	10 1/2	1.18	1 3/16	1 1/8				
W 30 x 173	51.0	30.4	30 1/2	0.655	5/8	15.0	15	1.07	1 1/16	1 1/8	26 1/2	5 1/2		
x 191	56.3	30.7	30 3/8	0.710	1 1/16	15.0	15	1.19	1 3/16	1 3/16	↓	↓		
x 211	62.2	30.9	31	0.775	3/4	15.1	15 1/8	1.32	1 5/16	1 3/16				
x 235	69.2	31.3	31 1/4	0.830	1 3/16	15.1	15	1.50	1 1/2	1 1/4				
x 261	76.9	31.6	31 3/8	0.930	1 5/16	15.2	15 1/8	1.65	1 5/8	1 5/16				
x 292	85.9	32.0	32	1.02	1	15.3	15 1/4	1.85	1 7/8	1 5/16				
x 326	95.8	32.4	32 3/8	1.14	1 1/8	15.4	15 3/8	2.05	2 1/16	1 3/8				
x 357	105.0	32.8	32 3/4	1.24	1 1/4	15.5	15 1/2	2.24	2 1/4	1 7/16				
x 391	115.0	33.2	32 1/4	1.36	1 3/8	15.6	15 3/8	2.44	2 7/16	1 1/2				



Wide Flange Beam

Standard Lengths 20'-70' in 5'0" increments

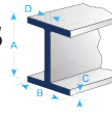


Shapes	Area A	Depth d		Web		Flange				Distance			
				Thickness t _w		Width b _f		Thickness t _f		k ₁	T	Workable Gage	
				in.		in.		in.		in.		in.	in.
W 33 x 118 x 130 x 141 x 152 x 169	34.7	32.9	32 ⁷ / ₈	0.550	9 ¹ / ₁₆	11.5	11 ¹ / ₂	0.740	3 ⁴ / ₄	1 ¹ / ₈	29 ⁵ / ₈	5 ¹ / ₂	
	38.3	33.1	33 ¹ / ₈	0.580	9 ¹ / ₁₆	11.5	11 ¹ / ₂	0.855	7 ⁸ / ₈	1 ¹ / ₈	↓	↓	
	41.6	33.3	33 ³ / ₈	0.605	5 ⁸ / ₈	11.5	11 ¹ / ₂	0.960	15 ¹ / ₁₆	1 ¹ / ₈	↓	↓	
	44.8	33.5	33 ¹ / ₂	0.635	5 ⁸ / ₈	11.6	11 ¹ / ₈	1.06	1 ¹ / ₁₆	1 ¹ / ₈	↓	↓	
	49.5	33.8	33 ³ / ₈	0.670	1 ¹ / ₁₆	11.5	11 ¹ / ₂	1.22	1 ¹ / ₄	1 ³ / ₁₆	↓	↓	
W 33 x 201 x 221 x 241 x 263 x 291 x 318 x 354 x 387	59.2	33.7	33 ⁵ / ₈	0.715	1 ¹ / ₁₆	15.7	15 ³ / ₄	1.15	1 ¹ / ₈	1 ³ / ₁₆	29 ⁵ / ₈	5 ¹ / ₂	
	65.2	33.9	33 ⁷ / ₈	0.775	3 ⁴ / ₄	15.8	15 ³ / ₄	1.28	1 ¹ / ₄	1 ³ / ₁₆	↓	↓	
	71.0	34.2	34 ¹ / ₈	0.830	1 ³ / ₁₆	15.9	15 ⁷ / ₈	1.40	1 ³ / ₈	1 ¹ / ₄	↓	↓	
	77.5	34.5	34 ¹ / ₂	0.870	7 ⁸ / ₈	15.8	15 ³ / ₄	1.57	1 ⁹ / ₁₆	1 ¹ / ₄	↓	↓	
	85.7	34.8	34 ³ / ₈	0.960	1 ⁹ / ₁₆	15.9	15 ⁷ / ₈	1.73	1 ³ / ₄	1 ⁵ / ₁₆	↓	↓	
	93.6	35.2	35 ¹ / ₈	1.04	1 ¹ / ₁₆	16.0	16	1.89	1 ⁷ / ₈	1 ⁵ / ₁₆	↓	↓	
	104.0	35.6	35 ¹ / ₂	1.16	1 ³ / ₁₆	16.1	16 ¹ / ₈	2.09	2 ¹ / ₁₆	1 ³ / ₈	↓	↓	
	114.0	36.0	36	1.26	1 ¹ / ₄	16.2	16 ¹ / ₄	2.28	2 ¹ / ₄	1 ⁷ / ₁₆	↓	↓	
	W 36 x 135 x 150 x 160 x 170 x 182 x 194 x 210 x 232 x 256	39.7	35.6	35 ¹ / ₂	0.600	5 ⁸ / ₈	12.0	12	0.790	1 ³ / ₁₆	1 ¹ / ₈	32 ¹ / ₈	5 ¹ / ₂
44.2		35.9	35 ⁵ / ₈	0.625	5 ⁸ / ₈	12.0	12	0.940	1 ⁵ / ₁₆	1 ¹ / ₈	↓	↓	
47.0		36.0	36	0.650	5 ⁸ / ₈	12.0	12	1.02	1	1 ¹ / ₈	↓	↓	
50.1		36.2	36 ¹ / ₈	0.680	1 ¹ / ₁₆	12.0	12	1.10	1 ¹ / ₈	1 ³ / ₁₆	↓	↓	
53.6		36.3	36 ³ / ₈	0.725	3 ⁴ / ₄	12.1	12 ¹ / ₈	1.18	1 ³ / ₁₆	1 ³ / ₁₆	↓	↓	
57.0		36.5	36 ¹ / ₂	0.765	3 ⁴ / ₄	12.1	12 ¹ / ₈	1.26	1 ¹ / ₄	1 ³ / ₁₆	↓	↓	
61.8		36.7	36 ³ / ₄	0.830	1 ³ / ₁₆	12.2	12 ¹ / ₈	1.36	1 ³ / ₈	1 ¹ / ₄	↓	↓	
68.1		37.1	37 ¹ / ₈	0.870	7 ⁸ / ₈	12.1	12 ¹ / ₈	1.57	1 ⁹ / ₁₆	1 ¹ / ₄	↓	↓	
75.4		37.4	37 ³ / ₈	0.960	1 ⁵ / ₁₆	12.2	12 ¹ / ₄	1.73	1 ³ / ₄	1 ⁵ / ₁₆	↓	↓	
W 36 x 231 x 247 x 262 x 282 x 302 x 330 x 361 x 395 x 441 x 487 x 529 x 652 x 800		68.1	36.5	36 ¹ / ₂	0.760	3 ⁴ / ₄	16.5	16 ¹ / ₂	1.26	1 ¹ / ₄	1 ⁹ / ₁₆	31 ³ / ₈	7 ¹ / ₂
		72.5	36.7	36 ⁵ / ₈	0.800	1 ³ / ₁₆	16.5	16 ¹ / ₂	1.35	1 ³ / ₈	1 ⁵ / ₈	↓	↓
	77.0	36.9	36 ⁷ / ₈	0.840	1 ³ / ₁₆	16.6	16 ¹ / ₂	1.44	1 ⁷ / ₁₆	1 ⁵ / ₈	↓	↓	
	82.9	37.1	37 ¹ / ₈	0.885	7 ⁸ / ₈	16.6	16 ⁵ / ₈	1.57	1 ⁹ / ₁₆	1 ⁵ / ₈	↓	↓	
	88.8	37.3	37 ³ / ₈	0.945	1 ⁵ / ₁₆	16.7	16 ⁵ / ₈	1.68	1 ¹¹ / ₁₆	1 ¹¹ / ₁₆	↓	↓	
	97.0	37.7	37 ⁵ / ₈	1.02	1	16.6	16 ⁵ / ₈	1.85	1 ⁷ / ₈	1 ³ / ₄	↓	↓	
	106.0	38.0	38	1.12	1 ¹ / ₈	16.7	16 ³ / ₄	2.01	2	1 ³ / ₄	↓	↓	
	116.0	38.4	38 ³ / ₈	1.22	1 ¹ / ₄	16.8	16 ⁷ / ₈	2.20	2 ³ / ₁₆	1 ¹³ / ₁₆	↓	↓	
	130.0	38.9	38 ⁷ / ₈	1.36	1 ³ / ₈	17.0	17	2.44	2 ⁷ / ₁₆	1 ⁷ / ₈	↓	↓	
	143.0	39.3	39 ¹ / ₈	1.50	1 ¹ / ₂	17.1	17 ¹ / ₈	2.68	2 ¹¹ / ₁₆	1 ¹⁵ / ₁₆	↓	↓	
	156.0	39.8	39 ³ / ₄	1.61	1 ⁵ / ₈	17.2	17 ¹ / ₄	2.91	2 ¹⁵ / ₁₆	2	↓	↓	
	192.0	41.1	41	1.97	2	17.6	17 ⁵ / ₈	3.54	3 ⁹ / ₁₆	2 ³ / ₁₆	↓	↓	
	236.0	42.6	42 ¹ / ₂	2.38	2 ³ / ₈	18.0	18	4.29	4 ⁵ / ₁₆	2 ³ / ₈	↓	↓	



Wide Flange Beams

Standard Lengths 20'-70' in 5'0" increments



Shapes	Area A	Depth d		Web		Flange				Distance		
				Thickness t_w		Width b_f		Thickness t_f		k_1	T	Work-able Gage
				in.	in.	in.	in.	in.	in.	in.	in.	in.
W 40 x 149	43.8	38.2	38¼	0.630	5/8	11.8	11¾	0.830	13/16	1½	34	7½
x 167	49.2	38.6	385/8	0.650	5/8	11.8	11¾	1.03	1	19/16	↓	↓
x 183	53.3	39.0	39	0.650	5/8	11.8	11¾	1.20	13/16	19/16		
x 211	62.0	39.4	393/8	0.750	3/4	11.8	11¾	1.42	17/16	19/16		
x 235	69.0	39.7	39¾	0.830	13/16	11.9	117/8	1.58	19/16	19/8		
x 264	77.6	40.0	40	0.960	15/16	11.9	117/8	1.73	1¾	111/16		
x 278	82.0	40.2	401/8	1.03	1	12.0	12	1.81	113/16	1¾		
x 294	86.3	40.4	403/8	1.06	11/16	12.0	12	1.93	115/16	1¾		
x 327	96.0	40.8	40¾	1.18	13/16	12.1	121/8	2.13	21/8	113/16		
x 331	97.5	40.8	40¾	1.22	1¼	12.2	121/8	2.13	21/8	113/16		
x 392	115.0	41.6	415/8	1.42	17/16	12.4	123/8	2.52	2½	115/16		
W 40 x 199	58.5	38.7	385/8	0.650	5/8	15.8	15¾	1.07	11/16	19/16	34	7½
x 215	63.4	39.0	39	0.650	5/8	15.8	15¾	1.22	1¼	19/16	↓	↓
x 249	73.3	39.4	393/8	0.750	3/4	15.8	15¾	1.42	17/16	19/16		
x 277	81.4	39.7	39¾	0.830	13/16	15.8	157/8	1.58	19/16	19/8		
x 297	87.4	39.8	397/8	0.930	15/16	15.8	157/8	1.65	19/8	111/16		
x 324	95.3	40.2	401/8	1.00	1	15.9	157/8	1.81	113/16	111/16		
x 362	107.0	40.6	40½	1.12	11/8	16.0	16	2.01	2	1¾		
x 372	109.0	40.6	405/8	1.16	13/16	16.1	161/8	2.05	21/16	113/16		
x 397	117.0	41.0	41	1.22	1¼	16.1	161/8	2.20	23/16	113/16		
x 431	127.0	41.3	41¼	1.34	15/16	16.2	16¼	2.36	23/8	17/8		
x 503	148.0	42.1	42	1.54	19/16	16.4	163/8	2.76	2¾	2		
x 593	174.0	43.0	43	1.79	113/16	16.7	16¾	3.23	3¼	21/8		
W 44 x 230	67.7	42.9	427/8	0.710	11/16	15.8	15¾	1.22	1¼	13/16	38¾	5½
x 262	76.9	43.3	43¼	0.785	13/16	15.8	1¾	1.42	17/16	13/16	↓	↓
x 290	85.4	43.6	433/8	0.865	7/8	15.8	157/8	1.58	19/16	1¼		
x 335	98.5	44.0	44	1.03	1	15.9	16	1.77	1¾	15/16		