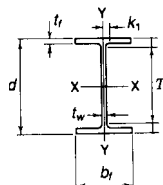
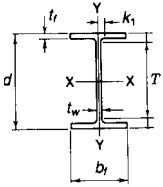


W Shapes Dimensions



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.
W 4 x 13	3.83	4.16	4 1/8	0.280	1/4	4.06	4	0.345	3/8	1/2	2 5/8	2 1/4
W 5 x 16	4.71	5.01	5	0.240	1/4	5.00	5	0.360	3/8	7/16	3 1/2	2 3/4
x 19	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	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
x 12	3.55	6.03	6	0.230	1/4	4.00	4	0.280	1/4	9/16	↓	↓
x 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	4.43	5.99	6	0.230	1/4	5.99	6	0.260	1/4	9/16	4 1/2	3 1/2
x 20	5.87	6.20	6 1/4	0.260	1/4	6.02	6	0.365	3/8	9/16	↓	↓
x 25	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	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
x 13	3.84	7.99	8	0.230	1/4	4.00	4	0.255	1/4	9/16	↓	↓
x 15	4.44	8.11	8 1/8	0.245	1/4	4.02	4	0.315	5/16	9/16	↓	↓
W 8 x 18	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
x 21	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	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
x 28	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	9.12	8.00	8	0.285	5/16	8.00	8	0.435	7/16	3/4	5 3/4	5 1/2
x 35	10.3	8.12	8 1/8	0.310	5/16	8.02	8	0.495	1/2	13/16	↓	↓
x 40	11.7	8.25	8 1/4	0.360	3/8	8.07	8 1/8	0.560	9/16	13/16	↓	↓
x 48	14.1	8.50	8 1/2	0.400	3/8	8.11	8 1/8	0.685	1 1/16	13/16	↓	↓
x 58	17.1	8.75	8 3/4	0.510	1/2	8.22	8 1/4	0.810	1 3/16	7/8	↓	↓
x 67	19.7	9.00	9	0.570	9/16	8.28	8 1/4	0.935	1 5/16	1 5/16	↓	↓



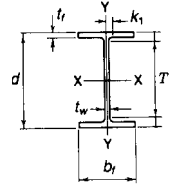
W Shapes

Dimensions

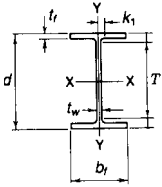
Shapes	Area A	Depth d		Web		Flange				Distance		
				Thickness t _w		Width b _f		Thickness t _f		k ₁	T	Work-able Gage
				in.	in.	in.	in.	in.	in.	in.	in.	in.
W 10 x 12	3.54	9.87	9 ⁷ / ₈	0.190	³ / ₁₆	3.96	4	0.210	³ / ₁₆	⁹ / ₁₆	8 ³ / ₈	2 ¹ / ₄
x 15	4.41	10.0	10	0.230	¹ / ₄	4.00	4	0.270	¹ / ₄	⁹ / ₁₆	↓	↓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

Dimensions



Shapes	Area		Depth		Web		Flange			Distance		
	A		d		Thickness		Width		Thickness	k ₁	T	Workable Gage
	in. ²		in.		t _w		b _f		t _f			
										in.	in.	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	¹¹ / 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	¹¹ / 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	¹³ / 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	¹⁵ / ₁₆	12.6	12 ⁵ / ₈	1.56	1 ⁹ / ₁₆	1 ⁵ / ₁₆		
x 190	55.8	14.4	14 ¹ / ₂	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 ³ / ₄	1.180	¹³ / ₁₆	12.8	12 ³ / ₄	1.90	1 ⁷ / ₈	1 ⁷ / ₁₆		
x 230	67.7	15.1	15	1.290	¹⁵ / 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 ⁵ / ₈		
x 305	89.6	16.3	16 ¹ / 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 ¹ / ₂	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 / ₂	0.310	⁵ / ₁₆	6.77	6 ³ / ₄	0.515	¹ / ₂	1 ³ / 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	¹¹ / 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	¹¹ / 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 ¹ / ₂	0.525	¹ / ₂	14.6	14 ⁵ / ₈	0.860	⁷ / ₈	1 ¹ / ₂	↓	↓
x 120	35.3	14.5	14 ¹ / ₂	0.590	⁹ / ₁₆	14.7	14 ⁵ / ₈	0.940	¹⁵ / ₁₆	1 ¹ / ₂	↓	↓
x 132	38.8	14.7	14 ³ / ₈	0.645	⁵ / ₈	14.7	14 ³ / ₄	1.03	1	1 ⁹ / ₁₆	↓	↓



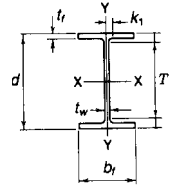
W Shapes

Dimensions

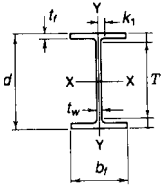
Shapes	Area A	Depth d		Web		Flange				Distance		
				Thickness t _w		Width b _f		Thickness t _f		k ₁	T	Work-able Gage
				in.	in.	in.	in.	in.	in.	in.	in.	in.
W 14 x 145	42.7	14.8	14¾	0.680	1¼	15.5	15½	1.09	1¼	1¼	10	3-7½-3
x 159	46.7	15.0	15	0.745	¾	15.6	15⅝	1.19	1¼	1¼		
x 176	51.8	15.2	15¼	0.830	13/16	15.7	15⅝	1.31	1¼	1⅝		
x 193	56.8	15.5	15½	0.890	7/8	15.7	15¾	1.44	1¼	1⅞		
x 211	62.0	15.7	15¾	0.980	1	15.8	15¾	1.56	1¼	1⅞		
x 233	68.5	16.0	16	1.070	1¼	15.9	15⅞	1.72	1¼	1¾		
x 257	75.6	16.4	16⅜	1.180	1¾	16.0	16	1.89	1⅞	1¾		
x 283	83.3	16.7	16¾	1.290	1⅞	16.1	16⅞	2.07	2¼	1⅞		
x 311	91.4	17.1	17⅞	1.410	1⅞	16.2	16¼	2.26	2¼	1⅞		
x 342	101.0	17.5	17½	1.540	1¾	16.4	16⅜	2.47	2½	2		
x 370	109.0	17.9	17⅞	1.660	1⅝	16.5	16½	2.66	2⅞	2¼		
x 398	117.0	18.3	18¼	1.770	1¾	16.6	16⅝	2.85	2⅞	2⅞		
x 426	125.0	18.7	18⅝	1.880	1⅞	16.7	16¾	3.04	3¼	2⅞		
x 455	134.0	19.0	19	2.020	2	16.8	16⅞	3.21	3¼	2¼		
x 500	147.0	19.6	19⅝	2.190	2⅞	17.0	17	3.50	3½	2⅞		
x 550	162.0	20.2	20¼	2.380	2⅞	17.2	17¼	3.82	3⅞	2⅞		
x 605	178.0	20.9	20⅞	2.600	2⅞	17.4	17⅝	4.16	4⅞	2½		
x 665	196.0	21.6	21⅝	2.830	2¼	17.7	17⅞	4.52	4½	2⅞		
x 730	215.0	22.4	22⅝	3.070	3¼	17.9	17⅞	4.91	4⅞	2¾	↓	↓
W 16 x 26	7.68	15.7	15¾	0.250	¼	5.50	5½	0.345	⅝	¾	13⅝	3½
x 31	9.13	15.9	15⅞	0.275	¼	5.53	5½	0.440	7/16	¾	13⅝	3½
W 16 x 36	10.6	15.9	15⅞	0.295	5/16	6.99	7	0.430	7/16	¾	13⅝	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	16⅞	0.345	⅝	7.04	7	0.565	9/16	13/16		
x 50	14.7	16.3	16¼	0.380	⅝	7.07	7⅞	0.630	⅝	13/16		
x 57	16.8	16.4	16⅜	0.430	7/16	7.12	7⅞	0.715	11/16	7/8	↓	↓
W 16 x 67	19.7	16.3	16⅜	0.395	⅝	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	1¼		
x 89	26.2	16.8	16¾	0.525	½	10.4	10⅝	0.875	7/8	1¼		
x 100	29.5	17.0	17	0.585	9/16	10.4	10⅝	0.985	1	1⅞	↓	↓

W Shapes

Dimensions



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.
W 18 x 35	10.3	17.7	17¾	0.300	⅝	6.00	6	0.425	⅞	¾	15½	3½
x 40	11.8	17.9	17⅞	0.315	⅝	6.02	6	0.525	½	13/16	↓	↓
x 46	13.5	18.1	18	0.360	⅜	6.06	6	0.605	⅝	13/16	↓	↓
W 18 x 50	14.7	18.0	18	0.355	⅜	7.50	7½	0.570	⅞	13/16	15½	3½
x 55	16.2	18.1	18⅞	0.390	⅜	7.53	7½	0.630	⅝	13/16	↓	↓
x 60	17.6	18.2	18¼	0.415	⅞	7.56	7½	0.695	11/16	13/16	↓	↓
x 65	19.1	18.4	18⅝	0.450	⅞	7.59	7⅝	0.750	¾	⅞	↓	↓
x 71	20.8	18.5	18½	0.495	½	7.64	7⅝	0.810	13/16	⅞	↓	↓
W 18 x 76	22.3	18.2	18¼	0.425	⅞	11.0	11	0.680	11/16	11/16	15⅝	5½
x 86	25.3	18.4	18⅝	0.480	½	11.1	11⅞	0.770	¾	11/16	↓	↓
x 97	28.5	18.6	18⅝	0.535	⅞	11.1	11⅞	0.870	⅞	11/8	↓	↓
x 106	31.1	18.7	18¾	0.590	⅞	11.2	11¼	0.940	15/16	11/8	↓	↓
x 119	35.1	19.0	19	0.655	⅝	11.3	11¼	1.06	11/16	13/16	↓	↓
x 130	38.2	19.3	19¼	0.670	11/16	11.2	11⅞	1.20	13/16	13/16	↓	↓
x 143	42.1	19.5	19½	0.730	¾	11.2	11¼	1.32	15/16	13/16	↓	↓
x 158	46.3	19.7	19¾	0.810	13/16	11.3	11¼	1.44	17/16	11/4	↓	↓
x 175	51.3	20.0	20	0.890	⅞	11.4	11⅝	1.59	19/16	11/4	↓	↓
x 192	56.4	20.4	20⅝	0.960	15/16	11.5	11½	1.75	1¾	11/8	↓	↓
x 211	62.1	20.7	20⅝	1.060	11/16	11.6	11½	1.91	115/16	13/16	15½	↓
x 234	68.8	21.1	21	1.160	13/16	11.7	11⅝	2.11	21/8	13/16	↓	↓
x 258	75.9	21.5	21½	1.280	1¼	11.8	11¾	2.30	25/16	11/4	↓	↓
x 283	83.3	21.9	21⅞	1.400	1⅝	11.9	11⅞	2.50	21/2	15/16	↓	↓
x 311	91.6	22.3	22⅝	1.520	1½	12.0	12	2.74	2¾	1⅝	↓	↓
W 21 x 44	13.0	20.7	20⅝	0.350	⅜	6.50	6½	0.450	⅞	13/16	18⅝	3½
x 50	14.7	20.8	20⅞	0.380	⅜	6.53	6½	0.535	⅞	13/16	↓	↓
x 57	16.7	21.1	21	0.405	⅜	6.56	6½	0.650	⅝	13/16	↓	↓
W 21 x 48	14.1	20.6	20⅝	0.350	⅜	8.14	8⅞	0.430	⅞	13/16	18⅝	5½
x 55	16.2	20.8	20¾	0.375	⅜	8.22	8¼	0.522	½	13/16	↓	↓
x 62	18.3	21.0	21	0.400	⅜	8.24	8¼	0.615	⅝	13/16	↓	↓
x 68	20.0	21.1	21⅞	0.430	⅞	8.27	8¼	0.685	11/16	⅞	↓	↓
x 73	21.5	21.2	21¼	0.455	⅞	8.30	8¼	0.740	¾	⅞	↓	↓
x 83	24.3	21.4	21⅝	0.515	½	8.36	8⅝	0.835	13/16	⅞	↓	↓
x 93	27.3	21.6	21⅝	0.058	⅞	8.42	8⅝	0.930	15/16	15/16	↓	↓



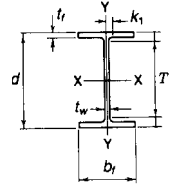
W Shapes

Dimensions

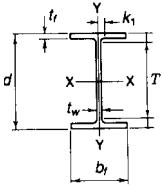
Shapes	Area A	Depth d		Web		Flange				Distance		
				Thickness t _w		Width b _f		Thickness t _f		k ₁	T	Work-able Gage
				in.	in.	in.	in.	in.	in.	in.	in.	in.
W 21 x 101	29.8	21.4	21 ³ / ₈	0.500	1/2	12.3	12 ¹ / ₄	0.800	1 ³ / ₁₆	1 ¹ / ₁₆	18	5 ¹ / ₂
x 111	32.7	21.5	21 ¹ / ₂	0.550	9 ¹ / ₁₆	12.3	12 ³ / ₈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

W Shapes

Dimensions



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.	
W 27 x 84	24.8	26.7	26¾	0.460	7/16	10.0	10	0.640	5/8	11/16	23¾	5½
x 94	27.7	26.9	26⅞	0.490	½	10.0	10	0.745	¾	11/16	↓	↓
x 102	30.0	27.1	27⅞	0.515	½	10.0	10	0.830	13/16	11/16	↓	↓
x 114	33.5	27.3	27¼	0.570	9/16	10.1	10½	0.930	15/16	11/8	↓	↓
x 129	37.8	27.6	27⅝	0.610	5/8	10.0	10	1.10	11/8	11/8	↓	↓
W 27 x 146	43.1	27.4	27⅝	0.605	5/8	14.0	14	0.975	1	11/8	23¾	5½
x 161	47.6	27.6	27⅝	0.660	11/16	14.0	14	1.08	11/16	13/16	↓	↓
x 178	52.5	27.8	27¼	0.725	¾	14.1	14½	1.19	13/16	13/16	↓	↓
x 194	57.2	28.1	28⅞	0.750	¾	14.0	14	1.34	15/16	13/16	↓	↓
x 217	64.0	28.4	28⅞	0.830	13/16	14.1	14½	1.50	11/2	11/4	↓	↓
x 235	69.4	28.7	28⅝	0.910	15/16	14.2	14¼	1.61	15/8	15/16	↓	↓
x 258	76.0	29.0	29	0.980	1½	14.3	14¼	1.77	1¾	15/16	↓	↓
x 281	82.9	29.3	29¼	1.060	11/16	14.4	14¾	1.93	115/16	13/8	↓	↓
x 307	90.4	29.6	29⅝	1.160	13/16	14.4	14½	2.09	21/16	17/16	↓	↓
x 336	98.9	30.0	30	1.260	1¼	14.6	14½	2.28	2¼	17/16	↓	↓
x 368	108.0	30.4	30⅝	1.380	1⅝	14.7	14⅝	2.48	21/2	11/2	↓	↓
x 539	159	32.5	32½	1.970	2	15.3	15¼	3.54	39/16	113/16	↓	↓
W 30 x 90	26.4	29.5	29½	0.470	½	10.4	10¾	0.610	5/8	11/16	26½	5½
x 99	29.1	29.7	29⅝	0.520	½	10.5	10½	0.670	11/16	11/16	↓	↓
x 108	31.7	29.8	29⅞	0.545	9/16	10.5	10½	0.760	¾	11/8	↓	↓
x 116	34.2	30.0	30	0.565	9/16	10.5	10½	0.850	7/8	11/8	↓	↓
x 124	36.5	30.2	30⅞	0.585	9/16	10.5	10½	0.930	15/16	11/8	↓	↓
x 132	38.9	30.3	30¼	0.615	5/8	10.5	10½	1.00	1	11/8	↓	↓
x 148	43.5	30.7	30⅝	0.650	5/8	10.5	10½	1.18	13/16	11/8	↓	↓
W 30 x 173	51.0	30.4	30½	0.655	5/8	15.0	15	1.07	11/16	11/8	26½	5½
x 191	56.3	30.7	30⅝	0.710	11/16	15.0	15	1.19	13/16	13/16	↓	↓
x 211	62.2	30.9	31	0.775	¾	15.1	15½	1.32	15/16	13/16	↓	↓
x 235	69.2	31.3	31¼	0.830	13/16	15.1	15	1.50	11/2	11/4	↓	↓
x 261	76.9	31.6	31⅝	0.930	15/16	15.2	15⅞	1.65	15/8	15/16	↓	↓
x 292	85.9	32.0	32	1.02	1	15.3	15¼	1.85	17/8	15/16	↓	↓
x 326	95.8	32.4	32⅝	1.14	11/8	15.4	15¾	2.05	21/16	13/8	↓	↓
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	1⅝	15.6	15⅝	2.44	27/16	11/2	↓	↓



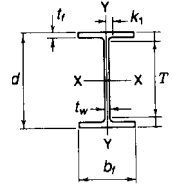
W Shapes

Dimensions

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	34.7	32.9	32 ⁷ / ₈	0.550	9 ¹ / ₁₆	11.5	11 ¹ / ₂	0.740	3 ⁴ / ₈	1 ¹ / ₈	29 ⁵ / ₈	5 ¹ / ₂
x 130	38.3	33.1	33 ¹ / ₈	0.580	9 ¹ / ₁₆	11.5	11 ¹ / ₂	0.855	7 ⁸ / ₁₆	1 ¹ / ₈	↓	↓
x 141	41.6	33.3	33 ³ / ₈	0.605	5 ⁸ / ₁₆	11.5	11 ¹ / ₂	0.960	15 ¹ / ₁₆	1 ¹ / ₈	↓	↓
x 152	44.8	33.5	33 ¹ / ₂	0.635	5 ⁸ / ₁₆	11.6	11 ⁵ / ₈	1.06	1 ¹ / ₁₆	1 ¹ / ₈	↓	↓
x 169	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	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
x 221	65.2	33.9	33 ⁷ / ₈	0.775	3 ⁴ / ₈	15.8	15 ³ / ₄	1.28	1 ¹ / ₄	1 ³ / ₁₆	↓	↓
x 241	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	↓	↓
x 263	77.5	34.5	34 ¹ / ₂	0.870	7 ⁸ / ₁₆	15.8	15 ³ / ₄	1.57	1 ⁹ / ₁₆	1 ¹ / ₄	↓	↓
x 291	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	↓	↓
x 318	93.6	35.2	35 ¹ / ₈	1.04	1 ¹ / ₁₆	16.0	16	1.89	1 ⁷ / ₈	1 ⁵ / ₁₆	↓	↓
x 354	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	↓	↓
x 387	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	39.7	35.6	35 ¹ / ₂	0.600	5 ⁸ / ₁₆	12.0	12	0.790	1 ³ / ₁₆	1 ¹ / ₈	32 ¹ / ₈	5 ¹ / ₂
x 150	44.2	35.9	35 ⁵ / ₈	0.625	5 ⁸ / ₁₆	12.0	12	0.940	1 ⁵ / ₁₆	1 ¹ / ₈	↓	↓
x 160	47.0	36.0	36	0.650	5 ⁸ / ₁₆	12.0	12	1.02	1	1 ¹ / ₈	↓	↓
x 170	50.1	36.2	36 ¹ / ₈	0.680	1 ¹ / 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 / ₈	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 / ₈	12.1	12 ¹ / ₈	1.26	1 ¹ / ₄	1 ³ / ₁₆	↓	↓
x 210	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	↓	↓
x 232	68.1	37.1	37 ¹ / ₈	0.870	7 ⁸ / ₁₆	12.1	12 ¹ / ₈	1.57	1 ⁹ / ₁₆	1 ¹ / ₄	↓	↓
x 256	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	68.1	36.5	36 ¹ / ₂	0.760	3 ⁴ / ₈	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 ⁵ / ₈	0.800	1 ³ / 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	1 ³ / 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	16.6	16 ⁵ / ₈	1.57	1 ⁹ / ₁₆	1 ⁵ / ₈	↓	↓
x 302	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	↓	↓
x 330	97.0	37.7	37 ⁵ / ₈	1.02	1	16.6	16 ⁵ / 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 / ₄	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 ⁵ / ₈	3.54	3 ⁹ / ₁₆	2 ³ / ₁₆	↓	↓
x 800	236.0	42.6	42 ¹ / ₂	2.38	2 ⁵ / ₈	18.0	18	4.29	4 ⁵ / ₁₆	2 ³ / ₈	↓	↓

W Shapes

Dimensions



Shapes	Area		Depth		Web		Flange			Distance				
	A		d		t _w		b _f		t _f	k ₁	T	Workable Gage		
	in. ²	in.	in.	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	15/8				
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	15/8				
x 297	87.4	39.8	397/8	0.930	15/16	15.8	157/8	1.65	15/8	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				