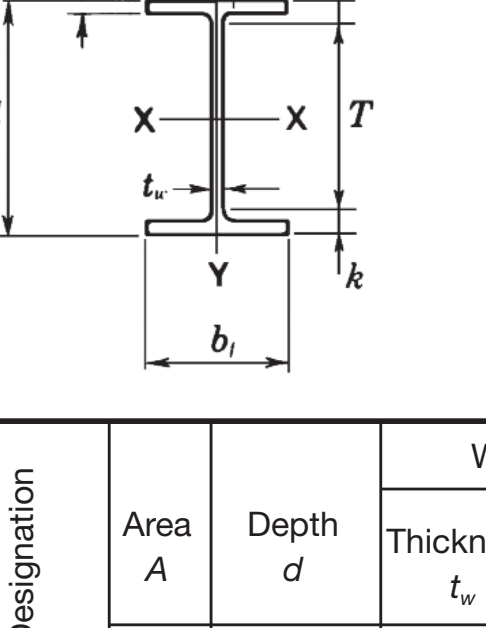


WIDE FLANGE BEAMS

ASTM A36 & A992

W SHAPES

Dimensions

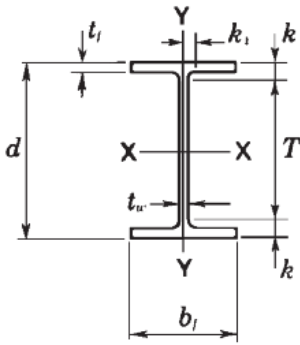


Designation	Area A		Depth d		Web			Flange				Distance		
					Thickness t _w		t _w /2	Width b _f		Thickness t _f		T	k	k ₁
	In.	In.	In.	In.	In.	In.		In.	In.	In.				
W 4x13	3.83	4.16	4%	0.280	1/4	1/8	4.060	4	0.345	3/8	2 1/2	3/4	1/2	
W 5x16	4.71	5.01	5	0.240	1/4	1/8	5.000	5	0.360	3/8	3 1/2	3/4	7/16	
x19	5.56	5.15	5 1/2	0.270	1/4	1/8	5.030	5	0.430	7/16	3 1/2	1 3/16	7/16	
W 6x9	2.68	5.90	5 1/2	0.170	3/16	1/8	3.940	4	0.215	3/16	4 1/2	1 1/16	1/2	
x12	3.55	6.03	6	0.230	1/4	1/8	4.000	4	0.280	1/4	4 1/2	3/4	9/16	
x16	4.74	6.28	6 1/4	0.260	1/4	1/8	4.030	4	0.405	3/8	4 1/2	7/8	9/16	
W 6x15	4.45	5.99	6	0.230	1/4	1/8	5.990	6	0.260	1/4	4 1/2	3/4	9/16	
x20	5.89	6.20	6 1/4	0.260	1/4	1/8	6.020	6	0.365	3/8	4 1/2	7/8	9/16	
x25	7.36	6.38	6 3/4	0.320	5/16	3/16	6.080	6 1/2	0.455	7/16	4 1/2	1 5/16	9/16	
W 8x10	2.96	7.89	7 1/2	0.170	3/16	1/8	3.940	4	0.205	3/16	6 1/2	1 1/16	1/2	
x13	3.84	7.99	8	0.230	1/4	1/8	4.000	4	0.255	1/4	6 1/2	3/4	9/16	
x15	4.44	8.11	8 1/2	0.245	1/4	1/8	4.015	4	0.315	3/16	6 1/2	1 3/16	9/16	
W 8x18	5.26	8.14	8 1/2	0.230	1/4	1/8	5.250	5 1/4	0.330	5/16	6 1/2	1 3/16	9/16	
x21	6.16	8.28	8 1/2	0.250	1/4	1/8	5.270	5 1/4	0.400	3/8	6 1/2	7/8	9/16	
W 8x24	7.08	7.93	7 1/2	0.245	1/4	1/8	6.495	6 1/2	0.400	3/8	6 1/2	7/8	9/16	
x28	8.24	8.06	8	0.285	5/16	3/16	6.535	6 1/2	0.465	7/16	6 1/2	1 5/16	5/8	
W 8x31	9.12	8.00	8	0.285	5/16	3/16	7.995	8	0.435	7/16	5 3/4	1 1/8	3/4	
x35	10.3	8.12	8 1/2	0.310	5/16	3/16	8.020	8	0.495	1/2	5 3/4	1 3/16	3/4	
x40	11.7	8.25	8 1/2	0.360	3/8	3/16	8.070	8 1/2	0.560	1/2	5 3/4	1 1/4	1 3/16	
x48	14.1	8.50	8 1/2	0.400	3/8	3/16	8.110	8 1/2	0.685	1 1/16	5 3/4	1 1/8	1 3/16	
x58	17.1	8.75	8 1/2	0.510	1/2	1/4	8.220	8 1/4	0.810	1 3/16	5 3/4	1 1/2	7/8	
x67	19.7	9.00	9	0.570	5/16	3/16	8.280	8 1/4	0.935	1 5/16	5 3/4	1 1/8	1 5/16	
W 10x 12	3.54	9.87	9 1/2	0.190	3/16	1/8	3.960	4	0.210	3/16	8 3/4	3/4	9/16	
x 15	4.41	9.99	10	0.230	1/4	1/8	4.000	4	0.270	1/4	8 3/4	1 3/16	9/16	
x 17	4.99	10.11	10 1/2	0.240	1/4	1/8	4.010	4	0.330	5/16	8 3/4	7/8	9/16	
x 19	5.62	10.24	10 1/2	0.250	1/4	1/8	4.020	4	0.395	3/8	8 3/4	1 5/16	5/8	
W 10x 22	6.49	10.17	10 1/2	0.240	1/4	1/8	5.750	5 1/4	0.360	3/8	8 3/4	1 5/16	5/8	
x 26	7.61	10.33	10 1/2	0.260	1/4	1/8	5.770	5 1/4	0.440	7/16	8 3/4	1 1/16	1 1/16	
x 30	8.84	10.47	10 1/2	0.300	5/16	3/16	5.810	5 1/4	0.510	1/2	8 3/4	1 1/8	1 1/16	
W 10x 33	9.71	9.73	9 1/2	0.290	5/16	3/16	7.960	8	0.435	7/16	7 1/2	1 1/8	3/4	
x 39	11.5	9.92	9 1/2	0.315	5/16	3/16	7.985	8	0.530	1/2	7 1/2	1 3/16	1 3/16	
x 45	13.3	10.10	10 1/2	0.350	3/8	3/16	8.020	8	0.620	5/8	7 1/2	1 5/16	1 3/16	
W 10x 49	14.4	9.98	10	0.340	5/16	3/16	10.000	10	0.560	9/16	7 1/2	1 1/4	1 3/16	
x 54	15.8	10.09	10 1/2	0.370	3/8	3/16	10.030	10	0.615	5/8	7 1/2	1 5/16	1 3/16	
x 60	17.6	10.22	10 1/2	0.420	7/16	1/4	10.080	10 1/2	0.680	1 1/16	7 1/2	1 3/8	1 3/16	
x 68	20.0	10.40	10 1/2	0.470	1/2	1/4	10.130	10 1/2	0.770	3/4	7 1/2	1 1/16	7/8	
x 77	22.6	10.60	10 1/2	0.530	1/2	1/4	10.190	10 1/2	0.870	7/8	7 1/2	1 1/16	7/8	
x 88	25.9	10.84	10 1/2	0.605	5/8	3/16	10.265	10 1/2	0.990	1	7 1/2	1 1 1/16	1 5/16	
x100	29.4	11.10	11 1/2	0.680	1 1/16	3/8	10.340	10 1/2	1.120	1 1/8	7 1/2	1 1 3/16	1	
x112	32.9	11.36	11 1/2	0.755	3/4	3/8	10.415	10 1/2	1.250	1 1/4	7 1/2	1 1 5/16	1	
W 12x 14	4.16	11.91	11 1/2	0.200	3/16	1/8	3.970	4	0.225	1/4	10 3/4	3/4	9/16	
x 16	4.71	11.99	12	0.220	1/4	1/8	3.990	4	0.265	1/4	10 3/4	1 3/16	9/16	
x 19	5.57	12.16	12 1/2	0.235	1/4	1/8	4.005	4	0.350	3/8	10 3/4	7/8	9/16	
x 22	6.48	12.31	12 1/2	0.260	1/4	1/8	4.030	4	0.425	7/16	10 3/4	1 5/16	5/8	
W 12x 26	7.65	12.22	12 1/2	0.230	1/4	1/8	6.490	6 1/2	0.380	3/8	10 3/4	1 1/16	3/4	
x 30	8.79	12.34	12 1/2	0.260	1/4	1/8	6.520	6 1/2	0.440	7/16	10 3/4	1 1/8	3/4	
x 35	10.3	12.50	12 1/2	0.300	5/16	3/16	6.560	6 1/2	0.520	1/2	10 3/4	1 3/16	3/4	
W 12x 40	11.7	11.94	12	0.295	5/16	3/16	8.005	8	0.515	1/2	9 3/4	1 3/8	7/8	
x 45	13.1	12.06	12	0.335	5/16	3/16	8.045	8	0.575	9/16	9 3/4	1 1/8	1 5/16	
x 50	14.6	12.19	12 1/2	0.370	3/8	3/16	8.080	8 1/2	0.640	5/8	9 3/4	1 1/2	1 5/16	
W 12x 53	15.6	12.06	12	0.345	3/8	3/16	9.995	10	0.575	9/16	9 3/4	1 3/8	1 5/16	
x 58	17.0	12.19	12 1/2	0.360	3/8	3/16	10.010	10	0.640	5/8	9 3/4	1 1/2	1 5/16	
W 12x 65	19.1	12.12	12 1/2	0.390	3/8	3/16	12.000	12	0.605	5/8	9 3/4	1 1/2	1	
x 72	21.1	12.25	12 1/2	0.430	7/16	1/4	12.040	12	0.670	1 1/16	9 3/4	1 3/16	1 1/16	
x 79	23.2	12.38	12 1/2	0.470	1/2	1/4	12.080	12 1/2	0.735	3/4	9 3/4	1 5/16	1 1/16	
x 87	25.6	12.53	12 1/2	0.515	1/2	1/4	12.125	12 1/2	0.810	7/8	9 3/4	1 1 1/16	1 1/16	
x 96	28.2	12.71	12 1/2	0.550	5/8	3/16	12.160	12 1/2	0.900	7/8	9 3/4	1 1 3/16	1 1/16	
x106	31.2	12.89	12 1/2	0.610	5/8	3/16	12.220	12 1/2	0.990	1	9 3/4	1 1/8	1 1/8	
x120	35.3	13.12	13 1/2	0.710	1 1/16	3/8	12.320	12 1/2	1.105	1 1/8	9 3/4	2	1 3/16	
x136	39.9	13.41	13 1/2	0.790	1 3/16	7/16	12.400	12 1/2	1.250	1 1/4	9 3/4	2 1/8	1 1/4	
x152	44.7	13.71	13 1/2	0.870	7/8	3/8	12.480	12 1/2	1.400	1 3/8	9 3/4	2 3/16	1 1/4	
x170	50.0	14.03	14	0.960	1 5/16	1/2	12.570	12 1/2	1.560	1 5/8	9 3/4	2 3/16	1 3/16	
x210	61.8	14.71	14 1/2	1.180	1 5/8	1/2	12.790	12 1/2	1.900	1 7/8	9 3/4	2 5/16	1 3/16	
x230	67.7	15.05	15	1.285	1 7/8	5/8	12.895	12 1/2	2.070	2 1/16	9 3/4	2 5/16	1 1/2	
x252	74.0	15.41	15 1/2	1.395	1 7/8	1 1/16	13.005	13	2.250	2 1/4	9 3/4	3 1/8	1 1/2	
x279	81.9	15.85	15 1/2	1.530	1 1/2	3/4	13.140	13 1/2	2.470	2 1/2	9 3/4	3 3/8	1 1/2	
x305	89.6	16.32	16 1/2	1.625	1 3/4	7/8	13.235	13 1/2	2.705	2 1 1/16	9 3/4	3 3/8	1 1/2	
x336	98.8	16.82	16 1/2	1.775	1 3/4	1 1/8	13.385	13 1/2	2.955	2 1 5/16	9 3/4	3 3/8	1 1 1/16	
W 14x 22	6.49	13.74	13 1/2	0.230	1/4	1/8	5.000	5 1/2	0.335	5/16	11 3/4	1 1/16	3/4	
x 26	7.69	13.91	13 1/2	0.255	1/4	1/8	5.025	5 1/2	0.420	7/16	11 3/4	1 1/8	3/4	
W 14x 30	8.85	13.8	13 1/2	0.270	1/4	1/8	6.730	6 1/2	0.385	3/8	11 3/4	1 1/8	3/4	
x 34	10.0	14.0	14	0.285	5/16	3/16	6.745	6 1/2	0.455	7/16	11 3/4	1 3/16	3/4	
x 38	11.2	14.1	14 1/2	0.310	5/16	3/16	6.770	6 1/2	0.515	1/2	11 3/4	1 1/4	1 3/16	
W 14x 43	12.6	13.66	13 1/2	0.305	5/16	3/16	7.995	8	0.530	1/2	10 3/4	1 3/8	1	
x 48	14.1	13.79	13 1/2	0.340	5/16	3/16	8.030	8	0.595	5/8	10 3/4	1 3/16	1	
x 53	15.6	13.92	13 1/2	0.370	3/8	3/16	8.060	8	0.660	1 1/16	10 3/4	1 1/2	1	
W 14x 61	17.9	13.89	13 1/2	0.375	3/8	3/16	9.995	10	0.645	5/8	10 3/4	1 1/2	1	
x 68	20.0	14.04	14	0.415	7/16	1/4	10.035	10	0.720	3/4	10 3/4	1 3/16	1 1/16	
x 74	21.8	14.17	14 1/2	0.450	7/16	1/4	10.070	10 1/2	0.785	1 3/16	10 3/4	1 1/8	1 1/16	
x 82	24.0	14.31	14 1/2	0.510	1/2	1/4	10.130	10 1/2	0.855	7/8	10 3/4	1 1 1/16	1 1/16	
W 14x 90	26.5	14.02	14	0.440	7/16	1/4	14.520	14 1/2	0.710	1 1/16	10	2	1 3/16	
x 99	29.1	14.16	14 1/2	0.485	1/2	1/4	14.565	14 1/2	0.780	3/4	10	2 1/16	1 3/16	
x109	32.0	14.32	14 1/2	0.525	1/2	1/4	14.605	14 1/2	0.860	7/8	10	2 3/16	1 1/2	
x120	35.3	14.48	14 1/2	0.590	5/8	3/16	14.670	14 1/2	0.940	1 5/16	10	2 1/4	1 1/2	
x132	38.8	14.66	14 1/2	0.645	5/8	3/16	14.725	14 1/2	1.030	1	10	2 3/16	1 3/16	

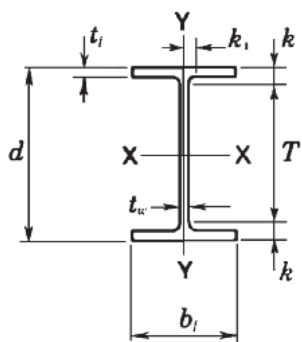
WIDE FLANGE BEAMS

ASTM A36 & A992

W SHAPES Dimensions



Designation (Nominal Depth in Millimetres and Mass in Kilograms per Metre)	Area A In. ²	Depth d In.	Flange		Web Thickness t_w In.
			Width b_f In.	Thickness t_f In.	
W 40x149	43.8	38.2	11.8	0.830	0.630
x167	49.2	38.6	11.8	1.02	0.650
x183	53.8	39.0	11.8	1.22	0.650
x211	62.0	39.4	11.8	1.42	0.750
x235	69.0	39.7	11.9	1.58	0.830
x264	77.6	40.0	11.9	1.73	0.960
x278	81.8	40.2	12.0	1.81	1.02
x327	96.0	40.8	12.1	2.13	1.18
x331	97.5	40.8	12.2	2.13	1.22
x392	115	41.6	12.4	2.52	1.42
W 40x199	58.5	38.7	15.8	1.07	0.650
x215	63.4	39.0	15.8	1.22	0.650
x249	73.3	39.4	15.8	1.42	0.750
x277	81.4	39.7	15.8	1.58	0.830
x297	87.4	39.8	15.8	1.65	0.930
x324	95.3	40.2	15.9	1.81	1.00
x362	107	40.6	16.0	2.01	1.12
x372	109	40.6	16.1	2.05	1.16
x397	117	41.0	16.1	2.20	1.22
x431	127	41.3	16.2	2.36	1.34
x503	148	42.1	16.4	2.76	1.54
x593	174	43.0	16.7	3.23	1.79
W 44x230	67.7	42.9	15.8	1.22	0.710
x262	77.2	43.3	15.8	1.42	0.790
x290	85.8	43.6	15.8	1.58	0.870
x335	96.3	44.0	16.0	1.77	1.02



MISCELLANEOUS BEAMS

M SHAPES Dimensions

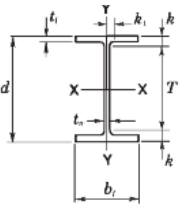
ZX Designation	Area A	Depth d		Web			Flange				Distance		Grip	Max. Flge. Fas- ten- er
				Thickness	$\frac{t_w}{2}$	Width	Thickness	T	k					
				t_w	In.	b_f	t_f	In.	In.	In.				
In. ²	In.	In.	In.	In.	In.	In.	In.	In.	In.					
M 4x13	3.81	4.00	4	0.254	$\frac{1}{4}$	$\frac{1}{8}$	3.940	4	0.371	$\frac{3}{8}$	$2\frac{3}{8}$	$1\frac{13}{16}$	$\frac{3}{8}$	$\frac{3}{4}$
M 5x18.9	5.55	5.00	5	0.316	$\frac{5}{16}$	$\frac{3}{16}$	5.003	5	0.416	$\frac{7}{16}$	$3\frac{3}{8}$	$1\frac{13}{16}$	$\frac{7}{16}$	$\frac{7}{8}$
M 6x4.4	1.29	6.00	6	0.114	$\frac{1}{8}$	$\frac{1}{16}$	1.844	$1\frac{7}{8}$	0.171	$\frac{3}{16}$	$5\frac{1}{4}$	$\frac{3}{8}$	$\frac{3}{16}$	—
M 6x20	5.89	6.00	6	0.250	$\frac{1}{4}$	$\frac{1}{8}$	5.938	6	0.379	$\frac{3}{8}$	$4\frac{1}{4}$	$\frac{7}{8}$	$\frac{3}{8}$	$\frac{7}{8}$
M 8x6.5	1.92	8.00	8	0.135	$\frac{1}{8}$	$\frac{1}{16}$	2.281	$2\frac{1}{4}$	0.189	$\frac{3}{16}$	$6\frac{7}{8}$	$\frac{9}{16}$	$\frac{3}{16}$	—
M10x9	2.65	10.00	10	0.157	$\frac{3}{16}$	$\frac{1}{8}$	2.690	$2\frac{3}{4}$	0.206	$\frac{3}{16}$	$8\frac{7}{8}$	$\frac{9}{16}$	$\frac{3}{16}$	—
M12x11.8	3.47	12.00	12	0.177	$\frac{3}{16}$	$\frac{1}{8}$	3.065	$3\frac{3}{8}$	0.225	$\frac{1}{4}$	$10\frac{7}{8}$	$\frac{9}{16}$	$\frac{1}{4}$	—
M14x18	5.10	14.00	14	0.215	$\frac{3}{16}$	$\frac{1}{8}$	4.000	4	0.270	$\frac{1}{4}$	$12\frac{3}{4}$	$\frac{5}{8}$	$\frac{1}{4}$	$\frac{3}{4}$ xx

STANDARD BEAMS

(S SHAPES)

Dimensions

ASTM-A36 & A992



Designation	Area <i>A</i>		Depth <i>d</i>		Web			Flange			Distance		<i>Grip</i>	Max. Flge. Fastener
					Thickness <i>t_w</i>	$\frac{t_w}{2}$	Width <i>b_f</i>	Thickness <i>t_f</i>	<i>T</i>	<i>k</i>				
	In. ²	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.		
S 3x5.7 x7.5	1.67	3.00	3	0.170	$\frac{3}{16}$	$\frac{1}{8}$	2.330	$2\frac{3}{8}$	0.260	$\frac{1}{4}$	$1\frac{3}{4}$	$\frac{5}{8}$	$\frac{1}{4}$	—
	2.21	3.00	3	0.349	$\frac{3}{8}$	$\frac{3}{16}$	2.509	$2\frac{1}{2}$	0.260	$\frac{1}{4}$	$1\frac{3}{4}$	$\frac{5}{8}$	$\frac{1}{4}$	—
S 4x7.7 x9.5	2.26	4.00	4	0.193	$\frac{3}{16}$	$\frac{1}{8}$	2.663	$2\frac{5}{8}$	0.293	$\frac{5}{16}$	$2\frac{1}{2}$	$\frac{3}{4}$	$\frac{5}{16}$	—
	2.79	4.00	4	0.326	$\frac{5}{16}$	$\frac{3}{16}$	2.796	$2\frac{3}{4}$	0.293	$\frac{5}{16}$	$2\frac{1}{2}$	$\frac{3}{4}$	$\frac{5}{16}$	—
S 5x10	2.94	5.00	5	0.214	$\frac{3}{16}$	$\frac{1}{8}$	3.004	3	0.326	$\frac{5}{16}$	$3\frac{1}{2}$	$\frac{3}{4}$	$\frac{5}{16}$	—
S 6x12.5 x17.25	3.66	6.00	6	0.232	$\frac{1}{4}$	$\frac{1}{8}$	3.332	$3\frac{3}{8}$	0.359	$\frac{3}{8}$	$4\frac{1}{4}$	$\frac{7}{8}$	$\frac{3}{8}$	—
	5.06	6.00	6	0.465	$\frac{7}{16}$	$\frac{1}{4}$	3.565	$3\frac{5}{8}$	0.359	$\frac{3}{8}$	$4\frac{1}{4}$	$\frac{7}{8}$	$\frac{3}{8}$	$\frac{5}{8}$
S 7x15.3 x20	4.50	7.00	7	0.252	$\frac{1}{4}$	$\frac{1}{8}$	3.662	$3\frac{5}{8}$	0.392	$\frac{3}{8}$	$5\frac{1}{8}$	$\frac{15}{16}$	$\frac{3}{8}$	$\frac{5}{8}$
	5.88	7.00	7	0.45	$\frac{7}{16}$	$\frac{1}{4}$	3.860	$3\frac{7}{8}$	0.392	$\frac{3}{8}$	$5\frac{1}{8}$	$\frac{15}{16}$	$\frac{3}{8}$	$\frac{5}{8}$
S 8x18.4 x23	5.41	8.00	8	0.271	$\frac{1}{4}$	$\frac{1}{8}$	4.001	4	0.426	$\frac{7}{16}$	6	1	$\frac{7}{16}$	$\frac{3}{4}$
	6.76	8.00	8	0.441	$\frac{7}{16}$	$\frac{1}{4}$	4.171	$4\frac{1}{8}$	0.426	$\frac{7}{16}$	6	1	$\frac{7}{16}$	$\frac{3}{4}$
S10x25.4 x35	7.45	10.00	10	0.311	$\frac{5}{16}$	$\frac{3}{16}$	4.661	$4\frac{5}{8}$	0.491	$\frac{1}{2}$	$7\frac{3}{4}$	$1\frac{1}{8}$	$\frac{1}{2}$	$\frac{3}{4}$
	10.3	10.00	10	0.594	$\frac{5}{8}$	$\frac{5}{16}$	4.944	5	0.491	$\frac{1}{2}$	$7\frac{3}{4}$	$1\frac{1}{8}$	$\frac{1}{2}$	$\frac{3}{4}$
S12x31.8 x 35	9.31	12.00	12	0.350	$\frac{3}{8}$	$\frac{3}{16}$	5.00	5	0.544	$\frac{9}{16}$	$9\frac{5}{8}$	$1\frac{3}{16}$	$\frac{1}{2}$	$\frac{3}{4}$
	10.2	12.00	12	0.428	$\frac{7}{16}$	$\frac{1}{4}$	5.078	$5\frac{1}{8}$	0.544	$\frac{9}{16}$	$9\frac{5}{8}$	$1\frac{3}{16}$	$\frac{1}{2}$	$\frac{3}{4}$
S12x40.8 x50	11.9	12.00	12	0.462	$\frac{7}{16}$	$\frac{1}{4}$	5.252	$5\frac{1}{4}$	0.659	$\frac{11}{16}$	$9\frac{1}{8}$	$1\frac{7}{16}$	$\frac{5}{8}$	$\frac{3}{4}$
	14.6	12.00	12	0.687	$\frac{11}{16}$	$\frac{3}{8}$	5.477	$5\frac{1}{2}$	0.659	$\frac{11}{16}$	$9\frac{1}{8}$	$1\frac{7}{16}$	$\frac{11}{16}$	$\frac{3}{4}$
S15x42.9 x50	12.6	15.00	15	0.411	$\frac{7}{16}$	$\frac{1}{4}$	5.501	$5\frac{1}{2}$	0.622	$\frac{5}{8}$	$12\frac{1}{4}$	$1\frac{3}{8}$	$\frac{9}{16}$	$\frac{3}{4}$
	14.7	15.00	15	0.550	$\frac{9}{16}$	$\frac{5}{16}$	5.640	$5\frac{5}{8}$	0.622	$\frac{5}{8}$	$12\frac{1}{4}$	$1\frac{3}{8}$	$\frac{9}{16}$	$\frac{3}{4}$
S18x54.7 x70	16.0	18.00	18	0.461	$\frac{7}{16}$	$\frac{1}{4}$	6.001	6	0.691	$\frac{11}{16}$	15	$1\frac{1}{2}$	$\frac{11}{16}$	$\frac{7}{8}$
	20.5	18.00	18	0.711	$\frac{11}{16}$	$\frac{3}{8}$	6.251	$6\frac{1}{4}$	0.691	$\frac{11}{16}$	15	$1\frac{1}{2}$	$\frac{11}{16}$	$\frac{7}{8}$
S20x66 x75	19.4	20.00	20	0.505	$\frac{1}{2}$	$\frac{1}{4}$	6.255	$6\frac{1}{4}$	0.795	$\frac{13}{16}$	$16\frac{3}{4}$	$1\frac{5}{8}$	$\frac{13}{16}$	$\frac{7}{8}$
	22.0	20.00	20	0.635	$\frac{5}{8}$	$\frac{5}{16}$	6.385	$6\frac{3}{8}$	0.795	$\frac{13}{16}$	$16\frac{3}{4}$	$1\frac{5}{8}$	$\frac{13}{16}$	$\frac{7}{8}$
S20x86 x96	25.3	20.30	$20\frac{1}{4}$	0.660	$\frac{11}{16}$	$\frac{3}{8}$	7.060	7	0.920	$\frac{15}{16}$	$16\frac{3}{4}$	$1\frac{3}{4}$	$\frac{15}{16}$	1
	28.2	20.30	$20\frac{1}{4}$	0.800	$\frac{13}{16}$	$\frac{7}{16}$	7.200	$7\frac{1}{4}$	0.920	$\frac{15}{16}$	$16\frac{3}{4}$	$1\frac{3}{4}$	$\frac{15}{16}$	1
S24x80 x90 x100	23.5	24.00	24	0.500	$\frac{1}{2}$	$\frac{1}{4}$	7.00	7	0.870	$\frac{7}{8}$	$20\frac{1}{2}$	$1\frac{3}{4}$	$\frac{7}{8}$	1
	26.5	24.00	24	0.625	$\frac{5}{8}$	$\frac{5}{16}$	7.125	$7\frac{1}{8}$	0.870	$\frac{7}{8}$	$20\frac{1}{2}$	$1\frac{3}{4}$	$\frac{7}{8}$	1
	29.3	24.00	24	0.745	$\frac{3}{4}$	$\frac{3}{8}$	7.245	$7\frac{1}{4}$	0.870	$\frac{7}{8}$	$20\frac{1}{2}$	$1\frac{3}{4}$	$\frac{7}{8}$	1
S24x106 x121	31.1	24.50	$24\frac{1}{2}$	0.620	$\frac{5}{8}$	$\frac{5}{16}$	7.870	$7\frac{7}{8}$	1.090	$1\frac{1}{16}$	$20\frac{1}{2}$	2	$1\frac{1}{8}$	1
	35.5	24.50	$24\frac{1}{2}$	0.800	$\frac{13}{16}$	$\frac{7}{16}$	8.050	8	1.090	$1\frac{1}{16}$	$20\frac{1}{2}$	2	$1\frac{1}{8}$	1