

SUPPLEMENT TO
POCKET COMPANION
ABRIDGED EDITION

CB SECTIONS



NEW CB SERIES TO BE AVAILABLE

APRIL 1, 1934

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CARNEGIE STEEL COMPANY

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SUPPLEMENT TO
POCKET COMPANION

ABRIDGED EDITION


CB SECTIONS

UNIFORM SERIES

INFORMATION
FOR
ENGINEERS AND DESIGNERS

CARNEGIE STEEL COMPANY
Pittsburgh, Pa.

ILLINOIS STEEL COMPANY
Chicago, Ill.

Subsidiaries of United  States Steel Corporation

Export Distributors
United States Steel Products Co.
New York, N. Y.

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Pittsburgh, Pa.
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Chicago, Ill.

Printed in U. S. A.

FOREWORD

This catalogue supersedes all information relating to CB Sections given in prior publications. It contains the properties and all essential detail dimensions of a modified CB Series, the changes in this series being incidental to full standardization with other makers of wide flange beams.

It is intended that this book be considered supplementary to the Abridged Pocket Companion. The form in which it is issued provides for convenient insertion in that book.

The tables of safe loads and of web resistances for CB Sections as shown in the Abridged Pocket Companion are no longer applicable as a whole. Values for the new series can be ascertained by use of the simple formulas on page 21.

From the economy table with respect to section modulus designers can readily select the proper beam for a given section modulus.

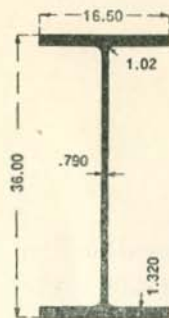
The standard tolerances for wide flange beams have been included.

The new standard mill beams, B-41 and B-42, have been added and are offered to the trade for general purposes.

Two new angles, 8" x 4" and 7" x 4" are offered in various weights, superseding the 8" x 3½" and 7" x 3½" angles which are no longer available.

The new CB series, while not effective until April 1, 1934, is announced at this time in order to make the values for these beams available for new designs.

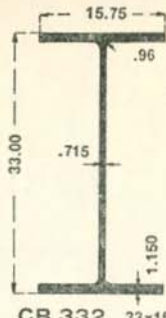
C B SECTIONS



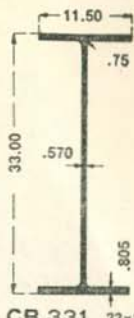
CB 362 36x16½
300, 280, 260,
250, 240, 230 lbs.



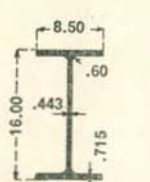
CB 361 36x12
194, 182, 170, 160, 150 lbs.



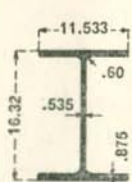
CB 332 33x15½
240, 220, 210, 200 lbs.



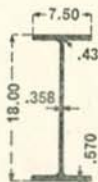
CB 331 33x11½
152, 141, 132, 125 lbs.



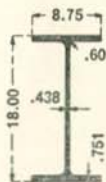
CB 162 16x8½
78, 71, 64, 58 lbs.



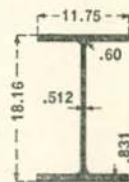
CB 163 16x11½
114, 105, 96, 88 lbs.



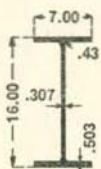
CB 181 18x7½
55, 50, 47 lbs.



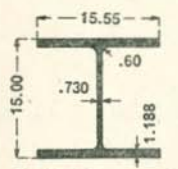
CB 182 18x8¾
85, 77, 70, 64 lbs.



CB 183 18x11¾
124, 114, 105, 96 lbs.

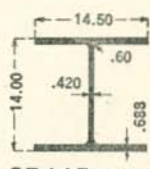


CB 161 16x7
50, 45, 40, 36 lbs.

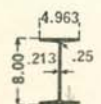


CB 146 15x15½

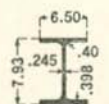
426, 300, 211,
412, 287, 202,
398, 273, 193,
384, 264, 184,
370, 255, 176,
356, 246, 167,
342, 237, 158,
328, 228, 150,
320, 219, 142 lbs.
314,



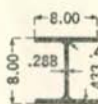
CB 145 14x14½
136, 127, 119, 111,
103, 95, 87 lbs.



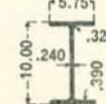
B 39 8x5
21, 19, 17 lbs.



CB 82 8x6½
27, 24 lbs.



CB 83 8x8
67, 58, 48, 40,
35, 33, 31 lbs.



CB 101 10x5¾
29, 26, 23, 21 lbs.



CB 102 10x8
45, 41, 37, 33 lbs.

DIAGRAMS SHOWING NORMAL DIMENSIONS IN INCHES
RANGE OF WEIGHTS PER LINEAR FOOT

NOTE: WEIGHTS UNDERLINED THUS 80 CORRESPOND TO DIMENSIONS SHOWN

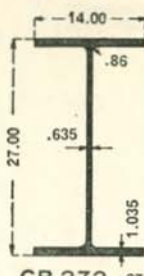
C B SECTIONS



CB 302 30x15
210, 200, 190,
180, 172 lbs.



CB 301 30x10½
132, 124, 116, 108 lbs.



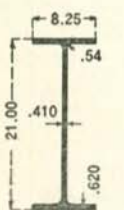
CB 272 27x14
177, 163, 154, 145 lbs.



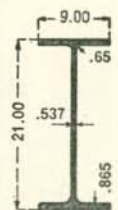
CB 271 27x10
114, 106, 98, 91 lbs.



CB 243 24x14
160, 150, 140, 130 lbs.



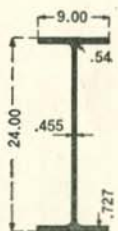
CB 211 21x8½
73, 68, 63, 59 lbs.



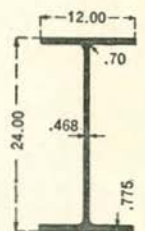
CB 212 21x9
103, 96, 89, 82 lbs.



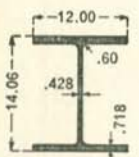
CB 213 21x13
142, 132, 122, 112 lbs.



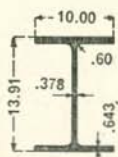
CB 241 24x9
94, 87, 80, 74 lbs.



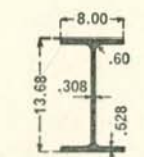
CB 242 24x12
120, 110, 100 lbs.



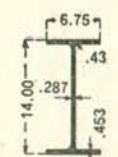
CB 144 14x12
84, 78 lbs.



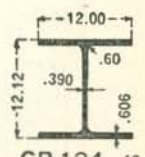
CB 143 14x10
74, 68, 61 lbs.



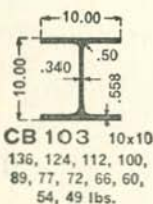
CB 142 14x8
58, 53, 48, 43 lbs.



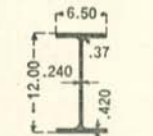
CB 141 14x6½
42, 38, 34, 30 lbs.



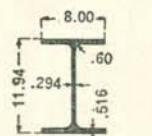
CB 124 12x12
190, 176, 161, 147, 133,
120, 106, 99, 92, 85,
79, 72, 65 lbs.



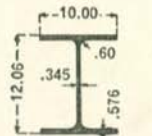
CB 103 10x10
136, 124, 112, 100,
89, 77, 72, 66, 60,
54, 49 lbs.



CB 121 12x6½
36, 32, 28, 25 lbs.



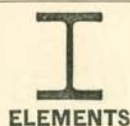
CB 122 12x8
50, 45, 40 lbs.



CB 123 12x10
64, 58, 53 lbs.

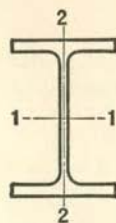
DIAGRAMS SHOWING NORMAL DIMENSIONS IN INCHES
RANGE OF WEIGHTS PER LINEAR FOOT

NOTE: WEIGHTS UNDERLINED THUS 80 CORRESPOND TO DIMENSIONS SHOWN

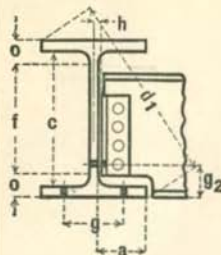


CB SECTIONS

ELEMENTS OF SECTIONS



Section Index and Nominal Size	Depth of Section In.	Weight per Foot Lbs.	Area of Section In. ²	Flange		Web Thickness In.	Axis 1-1			Axis 2-2		
				Width In.	Thick-ness In.		I In. ⁴	S In. ³	r In.	I In. ⁴	S In. ³	r In.
CB 362 36 x 16½	36.72	300	88.17	16.655	1.680	.945	20290.2	1105.1	15.17	1225.2	147.1	3.73
	36.50	280	82.32	16.595	1.570	.885	18819.3	1031.2	15.12	1127.5	135.9	3.70
	36.24	260	76.56	16.555	1.440	.845	17233.8	951.1	15.00	1020.6	123.3	3.65
	36.12	250	73.49	16.525	1.380	.815	16465.9	911.7	14.97	969.6	117.4	3.63
	36.00	240	70.60	16.500	1.320	.790	15724.0	873.6	14.92	920.1	111.5	3.61
	35.88	230	67.73	16.475	1.260	.765	14988.4	835.5	14.88	870.9	105.7	3.59
CB 361 36 x 12	36.48	194	57.11	12.117	1.260	.770	12103.4	663.6	14.56	355.4	58.7	2.49
	36.32	182	53.54	12.072	1.180	.725	11281.5	621.2	14.52	327.7	54.3	2.47
	36.16	170	49.98	12.027	1.100	.680	10470.0	579.1	14.47	300.6	50.0	2.45
	36.00	160	47.09	12.000	1.020	.653	9738.8	541.0	14.38	275.4	45.9	2.42
	35.84	150	44.16	11.972	.940	.625	9012.1	502.9	14.29	250.4	41.8	2.38
CB 332 33 x 15¾	33.50	240	70.52	15.865	1.400	.830	13585.1	811.1	13.88	874.3	110.2	3.52
	33.25	220	64.73	15.810	1.275	.775	12312.1	740.6	13.79	782.4	99.0	3.48
	33.12	210	61.78	15.783	1.210	.748	11664.5	704.4	13.74	735.6	93.2	3.45
	33.00	200	58.79	15.750	1.150	.715	11048.2	669.6	13.71	691.7	87.8	3.43
CB 331 33 x 11½	33.50	152	44.71	11.565	1.055	.635	8147.6	486.4	13.50	256.1	44.3	2.39
	33.31	141	41.51	11.535	.960	.605	7442.2	446.8	13.39	229.7	39.8	2.35
	33.15	132	38.84	11.510	.880	.580	6856.8	413.7	13.29	207.8	36.1	2.31
	33.00	125	36.78	11.500	.805	.570	6354.7	385.1	13.14	188.2	32.7	2.26
CB 302 30 x 15	30.38	210	61.78	15.105	1.315	.775	9872.4	649.9	12.64	707.9	93.7	3.38
	30.25	200	58.76	15.070	1.250	.740	9340.5	617.6	12.61	665.7	88.3	3.37
	30.12	190	55.90	15.040	1.185	.710	8825.9	586.1	12.57	624.6	83.1	3.34
	30.00	180	52.89	15.000	1.125	.670	8328.2	555.2	12.55	585.6	78.1	3.33
	29.88	172	50.65	14.985	1.065	.655	7891.5	528.2	12.48	550.1	73.4	3.30
CB 301 30 x 10½	30.30	132	38.83	10.551	1.000	.615	5753.1	379.7	12.17	185.0	35.1	2.18
	30.16	124	36.45	10.521	.930	.585	5347.1	354.6	12.11	169.7	32.3	2.16
	30.00	116	34.13	10.500	.850	.564	4919.1	327.9	12.00	153.2	29.2	2.12
	29.82	108	31.77	10.484	.760	.548	4461.0	299.2	11.85	135.1	25.8	2.06

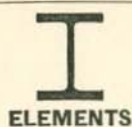


CB SECTIONS

DIMENSIONS OF SECTIONS FOR DETAILING

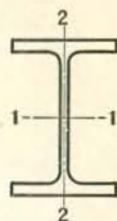


Section Index and Nominal Depth	Weight per Foot	Depth of Section	Flange		Web		Distance						Usual Gage g	
			Width	Thick-ness	Thick-ness	Half Thick-ness +	a	c	f	o	d ₁	Min. g ₂		Clear h
CB 362 36	300	36 ³ / ₄	16 ⁵ / ₈	1 ¹ / ₁₆	1 ⁵ / ₁₆	1/2	7 ⁷ / ₈	33 ³ / ₈	31 ³ / ₈	2 ¹ / ₁₆	40 ³ / ₈	3 ³ / ₄	9 ¹ / ₁₆	5 ¹ / ₂
	280	36 ¹ / ₂	16 ³ / ₈	1 ¹ / ₁₆	7/8	7/16	7 ⁷ / ₈	33 ³ / ₈	31 ³ / ₈	2 ¹ / ₁₆	40 ¹ / ₈	3 ³ / ₄	1 ¹ / ₂	5 ¹ / ₂
	260	36 ¹ / ₄	16 ¹ / ₂	1 ⁷ / ₁₆	7/8	7/16	7 ⁷ / ₈	33 ³ / ₈	31 ³ / ₈	2 ⁷ / ₁₆	39 ⁷ / ₈	3 ¹ / ₂	1 ¹ / ₂	5 ¹ / ₂
	250	36 ¹ / ₈	16 ¹ / ₂	1 ³ / ₈	9/16	7/16	7 ⁷ / ₈	33 ³ / ₈	31 ³ / ₈	2 ³ / ₁₆	39 ³ / ₄	3 ¹ / ₂	1 ¹ / ₂	5 ¹ / ₂
	240	36	16 ¹ / ₂	1 ¹ / ₁₆	9/16	7/16	7 ⁷ / ₈	33 ³ / ₈	31 ³ / ₈	2 ¹ / ₁₆	39 ¹ / ₂	3 ¹ / ₂	1 ¹ / ₂	5 ¹ / ₂
	230	35 ⁷ / ₈	16 ¹ / ₂	1 ¹ / ₄	3/4	3/8	7 ⁷ / ₈	33 ³ / ₈	31 ³ / ₈	2 ¹ / ₄	39 ¹ / ₂	3 ¹ / ₂	7/16	5 ¹ / ₂
CB 361 36	194	36 ¹ / ₂	12 ⁵ / ₈	1 ¹ / ₄	1 ¹ / ₁₆	3/8	5 ⁵ / ₈	34	32 ³ / ₈	2 ¹ / ₁₆	38 ¹ / ₂	3 ³ / ₄	7/16	5 ¹ / ₂
	182	36 ³ / ₈	12 ³ / ₈	1 ³ / ₁₆	3/4	3/8	5 ⁵ / ₈	34	32 ³ / ₈	2	38 ³ / ₈	3 ³ / ₄	7/16	5 ¹ / ₂
	170	36 ¹ / ₈	12	1 ¹ / ₈	1 ¹ / ₁₆	3/8	5 ⁵ / ₈	34	32 ³ / ₈	1 ⁷ / ₁₆	38 ¹ / ₈	3	7/16	5 ¹ / ₂
	160	36	12	1	1 ¹ / ₁₆	5/16	5 ⁵ / ₈	34	32 ³ / ₈	1 ¹ / ₁₆	38	3	3/8	5 ¹ / ₂
	150	35 ⁷ / ₈	12	1 ¹ / ₈	5/8	5/8	5 ⁵ / ₈	34	32 ³ / ₈	1 ³ / ₄	37 ⁷ / ₈	3	3/8	5 ¹ / ₂
CB 332 33	240	33 ¹ / ₂	15 ⁷ / ₈	1 ³ / ₈	7/8	7/16	7 ¹ / ₂	30 ³ / ₄	28 ³ / ₄	2 ³ / ₈	37 ¹ / ₈	3 ¹ / ₂	1 ¹ / ₂	5 ¹ / ₂
	220	33 ¹ / ₄	15 ³ / ₄	1 ¹ / ₄	9/16	3/8	7 ¹ / ₂	30 ³ / ₄	28 ³ / ₄	2 ¹ / ₄	36 ⁷ / ₈	3 ¹ / ₂	7/16	5 ¹ / ₂
	210	33 ¹ / ₈	15 ³ / ₄	1 ³ / ₁₆	3/4	3/8	7 ¹ / ₂	30 ³ / ₄	28 ³ / ₄	2 ³ / ₁₆	36 ³ / ₄	3 ¹ / ₄	7/16	5 ¹ / ₂
	200	33	15 ³ / ₄	1 ¹ / ₈	3/4	3/8	7 ¹ / ₂	30 ³ / ₄	28 ³ / ₄	2 ¹ / ₈	36 ³ / ₈	3 ¹ / ₄	7/16	5 ¹ / ₂
CB 331 33	152	33 ¹ / ₂	11 ⁵ / ₈	1 ¹ / ₁₆	5/8	5/16	5 ¹ / ₂	31 ³ / ₈	29 ⁷ / ₈	1 ⁹ / ₁₆	35 ¹ / ₂	3	3/8	5 ¹ / ₂
	141	33 ¹ / ₄	11 ¹ / ₂	1 ¹ / ₁₆	5/8	5/16	5 ¹ / ₂	31 ³ / ₈	29 ⁷ / ₈	1 ¹ / ₁₆	35 ¹ / ₄	3	3/8	5 ¹ / ₂
	132	33 ¹ / ₈	11 ¹ / ₂	7/8	5/8	5/16	5 ¹ / ₂	31 ³ / ₈	29 ⁷ / ₈	1 ⁵ / ₈	35 ¹ / ₈	2 ³ / ₄	3/8	5 ¹ / ₂
	125	33	11 ¹ / ₂	9/16	9/16	5/16	5 ¹ / ₂	31 ³ / ₈	29 ⁷ / ₈	1 ⁹ / ₁₆	35	2 ³ / ₄	3/8	5 ¹ / ₂
CB 302 30	210	30 ³ / ₈	15 ⁵ / ₈	1 ⁵ / ₁₆	9/16	3/8	7 ¹ / ₈	27 ³ / ₄	25 ⁷ / ₈	2 ¹ / ₄	34	3 ¹ / ₂	7/16	5 ¹ / ₂
	200	30 ¹ / ₄	15 ¹ / ₂	1 ¹ / ₄	3/4	3/8	7 ¹ / ₈	27 ³ / ₄	25 ⁷ / ₈	2 ³ / ₁₆	33 ⁷ / ₈	3 ¹ / ₂	7/16	5 ¹ / ₂
	190	30 ¹ / ₈	15	1 ³ / ₁₆	3/4	3/8	7 ¹ / ₈	27 ³ / ₄	25 ⁷ / ₈	2 ¹ / ₈	33 ³ / ₄	3 ¹ / ₄	7/16	5 ¹ / ₂
	180	30	15	1 ¹ / ₈	1 ¹ / ₁₆	3/8	7 ¹ / ₈	27 ³ / ₄	25 ⁷ / ₈	2 ¹ / ₁₆	33 ³ / ₈	3 ¹ / ₄	7/16	5 ¹ / ₂
	172	29 ⁷ / ₈	15	1 ¹ / ₁₆	1 ¹ / ₁₆	5/16	7 ¹ / ₈	27 ³ / ₄	25 ⁷ / ₈	2	33 ¹ / ₂	3 ¹ / ₄	3/8	5 ¹ / ₂
CB 301 30	132	30 ¹ / ₄	10 ¹ / ₂	1	5/8	5/16	5	28 ¹ / ₄	26 ⁷ / ₈	1 ¹ / ₁₆	32	3	3/8	5 ¹ / ₂
	124	30 ¹ / ₈	10 ¹ / ₂	1 ¹ / ₁₆	5/8	5/16	5	28 ¹ / ₄	26 ⁷ / ₈	1 ¹ / ₈	31 ⁷ / ₈	2 ³ / ₄	3/8	5 ¹ / ₂
	116	30	10 ¹ / ₂	7/8	9/16	5/16	5	28 ¹ / ₄	26 ⁷ / ₈	1 ¹ / ₁₆	31 ³ / ₄	2 ³ / ₄	3/8	5 ¹ / ₂
	108	29 ⁷ / ₈	10 ¹ / ₂	3/4	9/16	5/16	5	28 ¹ / ₄	26 ⁷ / ₈	1 ¹ / ₁₆	31 ³ / ₄	2 ³ / ₄	3/8	5 ¹ / ₂

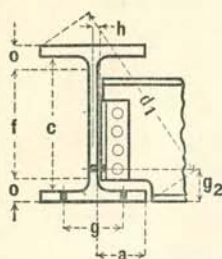


CB SECTIONS

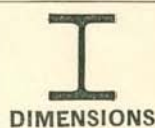
ELEMENTS OF SECTIONS



Section Index and Nominal Size	Depth of Section	Weight per Foot	Area of Section	Flange		Web Thickness	Axis 1-1			Axis 2-2		
				Width	Thickness		I	S	r	I	S	r
	In.	Lbs.	In. ²	In.	In.	In.	In. ⁴	In. ³	In.	In. ⁴	In. ³	In.
CB 272 27 x 14	27.31	177	52.10	14.090	1.190	.725	6728.6	492.8	11.36	518.9	73.7	3.16
	27.12	163	47.93	14.035	1.095	.670	6141.5	452.9	11.32	468.7	66.8	3.13
	27.00	154	45.30	14.000	1.035	.635	5775.8	427.8	11.29	437.6	62.5	3.11
	26.88	145	42.68	13.965	.975	.600	5414.3	402.9	11.26	406.9	58.3	3.09
CB 271 27 x 10	27.28	114	33.53	10.070	.932	.570	4080.5	299.2	11.03	149.6	29.7	2.11
	27.14	106	31.17	10.035	.862	.535	3761.2	277.2	10.98	136.1	27.1	2.09
	27.00	98	28.82	10.000	.792	.500	3446.5	255.3	10.94	122.9	24.6	2.07
	26.84	91	26.77	9.983	.712	.483	3129.2	233.2	10.81	109.0	21.8	2.02
CB 243 24 x 14	24.72	160	47.04	14.091	1.135	.656	5110.3	413.5	10.42	492.6	69.9	3.23
	24.56	150	44.10	14.063	1.055	.628	4733.5	385.5	10.36	452.5	64.3	3.20
	24.41	140	41.16	14.029	.980	.594	4376.1	358.6	10.31	414.5	59.1	3.17
	24.25	130	38.21	14.000	.900	.565	4009.5	330.7	10.24	375.2	53.6	3.13
CB 242 24 x 12	24.31	120	35.29	12.088	.930	.556	3635.3	299.1	10.15	254.0	42.0	2.68
	24.16	110	32.36	12.042	.855	.510	3315.0	274.4	10.12	229.1	38.0	2.66
	24.00	100	29.43	12.000	.775	.468	2987.3	248.9	10.08	203.5	33.9	2.63
CB 241 24 x 9	24.29	94	27.63	9.061	.872	.516	2683.0	220.9	9.85	102.2	22.6	1.92
	24.16	87	25.58	9.025	.807	.480	2467.8	204.3	9.82	92.9	20.6	1.91
	24.00	80	23.54	9.000	.727	.455	2229.7	185.8	9.73	82.4	18.3	1.87
	23.87	74	21.77	8.975	.662	.430	2033.8	170.4	9.67	73.8	16.5	1.84
CB 213 21 x 13	21.46	142	41.76	13.132	1.095	.659	3403.1	317.2	9.03	385.9	58.8	3.04
	21.31	132	38.81	13.087	1.020	.614	3141.6	294.8	9.00	353.8	54.1	3.02
	21.16	122	35.85	13.040	.945	.567	2883.2	272.5	8.97	322.1	49.4	3.00
	21.00	112	32.93	13.000	.865	.527	2620.6	249.6	8.92	289.7	44.6	2.96
CB 212 21 x 9	21.29	103	30.27	9.071	1.010	.608	2268.0	213.1	8.66	119.9	26.4	1.99
	21.14	96	28.21	9.038	.935	.575	2088.9	197.6	8.60	109.3	24.2	1.97
	21.00	89	26.15	9.000	.865	.537	1919.2	182.8	8.57	99.4	22.1	1.95
	20.86	82	24.10	8.962	.795	.499	1752.4	168.0	8.53	89.6	20.0	1.93
CB 211 21 x 8 1/4	21.24	73	21.46	8.295	.740	.455	1600.3	150.7	8.64	66.2	16.0	1.76
	21.13	68	20.02	8.270	.685	.430	1478.3	139.9	8.59	60.4	14.6	1.74
	21.00	63	18.52	8.250	.620	.410	1343.6	128.0	8.52	53.8	13.0	1.70
	20.91	59	17.36	8.230	.575	.390	1246.8	119.3	8.47	49.2	12.0	1.68

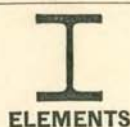


CB SECTIONS



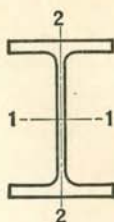
DIMENSIONS OF SECTIONS FOR DETAILING

Section Index and Nominal Depth	Weight per Foot	Depth of Section	Flange		Web		Distance					Clear h	Usual Gage g	
			Width	Thick-ness	Thick-ness	Half Thick-ness+	a	c	f	o	d ₁			Min. g ₂
	Lbs.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	
CB 272 27	177	27 $\frac{1}{4}$	14 $\frac{1}{8}$	1 $\frac{3}{16}$	$\frac{3}{4}$	$\frac{3}{8}$	6 $\frac{3}{4}$	24 $\frac{7}{8}$	23 $\frac{1}{4}$	2 $\frac{1}{16}$	30 $\frac{3}{4}$	3 $\frac{1}{4}$	$\frac{7}{16}$	5 $\frac{1}{2}$
	163	27 $\frac{1}{8}$	14	1 $\frac{1}{8}$	$\frac{11}{16}$	$\frac{3}{8}$	6 $\frac{3}{4}$	24 $\frac{7}{8}$	23 $\frac{1}{4}$	1 $\frac{15}{16}$	30 $\frac{5}{8}$	3 $\frac{1}{4}$	$\frac{7}{16}$	5 $\frac{1}{2}$
	154	27	14	1 $\frac{1}{16}$	$\frac{5}{8}$	$\frac{5}{16}$	6 $\frac{3}{4}$	24 $\frac{7}{8}$	23 $\frac{1}{4}$	1 $\frac{7}{8}$	30 $\frac{1}{2}$	3	$\frac{3}{8}$	5 $\frac{1}{2}$
	145	26 $\frac{7}{8}$	14	1	$\frac{5}{8}$	$\frac{5}{16}$	6 $\frac{3}{4}$	24 $\frac{7}{8}$	23 $\frac{1}{4}$	1 $\frac{15}{16}$	30 $\frac{3}{8}$	3	$\frac{3}{8}$	5 $\frac{1}{2}$
CB 271 27	114	27 $\frac{1}{4}$	10 $\frac{1}{8}$	$\frac{15}{16}$	$\frac{9}{16}$	$\frac{5}{16}$	4 $\frac{3}{4}$	25 $\frac{3}{8}$	24 $\frac{1}{8}$	1 $\frac{9}{16}$	29 $\frac{1}{8}$	2 $\frac{3}{4}$	$\frac{3}{8}$	5 $\frac{1}{2}$
	106	27 $\frac{1}{8}$	10	$\frac{7}{8}$	$\frac{9}{16}$	$\frac{5}{16}$	4 $\frac{3}{4}$	25 $\frac{3}{8}$	24 $\frac{1}{8}$	1 $\frac{1}{2}$	29	2 $\frac{3}{4}$	$\frac{3}{8}$	5 $\frac{1}{2}$
	98	27	10	$\frac{13}{16}$	$\frac{1}{2}$	$\frac{1}{4}$	4 $\frac{3}{4}$	25 $\frac{3}{8}$	24 $\frac{1}{8}$	1 $\frac{7}{16}$	28 $\frac{7}{8}$	2 $\frac{3}{4}$	$\frac{5}{16}$	5 $\frac{1}{2}$
	91	26 $\frac{7}{8}$	10	$\frac{11}{16}$	$\frac{1}{2}$	$\frac{1}{4}$	4 $\frac{3}{4}$	25 $\frac{3}{8}$	24 $\frac{1}{8}$	1 $\frac{3}{8}$	28 $\frac{3}{4}$	2 $\frac{1}{2}$	$\frac{5}{16}$	5 $\frac{1}{2}$
CB 243 24	160	24 $\frac{3}{4}$	14 $\frac{1}{8}$	1 $\frac{1}{8}$	$\frac{11}{16}$	$\frac{5}{16}$	6 $\frac{3}{4}$	22 $\frac{1}{2}$	21	1 $\frac{13}{16}$	28 $\frac{1}{2}$	3	$\frac{3}{8}$	5 $\frac{1}{2}$
	150	24 $\frac{1}{2}$	14 $\frac{1}{8}$	1 $\frac{1}{16}$	$\frac{5}{8}$	$\frac{5}{16}$	6 $\frac{3}{4}$	22 $\frac{1}{2}$	21	1 $\frac{3}{4}$	28 $\frac{1}{4}$	3	$\frac{3}{8}$	5 $\frac{1}{2}$
	140	24 $\frac{3}{8}$	14	1	$\frac{5}{8}$	$\frac{5}{16}$	6 $\frac{3}{4}$	22 $\frac{1}{2}$	21	1 $\frac{11}{16}$	28 $\frac{1}{8}$	3	$\frac{3}{8}$	5 $\frac{1}{2}$
	130	24 $\frac{1}{4}$	14	$\frac{7}{8}$	$\frac{9}{16}$	$\frac{5}{16}$	6 $\frac{3}{4}$	22 $\frac{1}{2}$	21	1 $\frac{5}{8}$	28	2 $\frac{3}{4}$	$\frac{3}{8}$	5 $\frac{1}{2}$
CB 242 24	120	24 $\frac{1}{4}$	12 $\frac{1}{8}$	$\frac{15}{16}$	$\frac{9}{16}$	$\frac{5}{16}$	5 $\frac{3}{4}$	22 $\frac{1}{2}$	21	1 $\frac{5}{8}$	27 $\frac{1}{8}$	2 $\frac{3}{4}$	$\frac{3}{8}$	5 $\frac{1}{2}$
	110	24 $\frac{1}{8}$	12	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{1}{4}$	5 $\frac{3}{4}$	22 $\frac{1}{2}$	21	1 $\frac{9}{16}$	27	2 $\frac{3}{4}$	$\frac{5}{16}$	5 $\frac{1}{2}$
	100	24	12	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{4}$	5 $\frac{3}{4}$	22 $\frac{1}{2}$	21	1 $\frac{1}{2}$	26 $\frac{7}{8}$	2 $\frac{3}{4}$	$\frac{5}{16}$	5 $\frac{1}{2}$
CB 241 24	94	24 $\frac{1}{4}$	9	$\frac{7}{8}$	$\frac{9}{16}$	$\frac{1}{4}$	4 $\frac{1}{4}$	22 $\frac{1}{2}$	21 $\frac{1}{2}$	1 $\frac{7}{16}$	25 $\frac{7}{8}$	2 $\frac{3}{4}$	$\frac{5}{16}$	5 $\frac{1}{2}$
	87	24 $\frac{1}{8}$	9	$\frac{13}{16}$	$\frac{1}{2}$	$\frac{1}{4}$	4 $\frac{1}{4}$	22 $\frac{1}{2}$	21 $\frac{1}{2}$	1 $\frac{3}{8}$	25 $\frac{3}{4}$	2 $\frac{1}{2}$	$\frac{5}{16}$	5 $\frac{1}{2}$
	80	24	9	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{4}$	4 $\frac{1}{4}$	22 $\frac{1}{2}$	21 $\frac{1}{2}$	1 $\frac{1}{4}$	25 $\frac{5}{8}$	2 $\frac{1}{2}$	$\frac{5}{16}$	5 $\frac{1}{2}$
	74	23 $\frac{7}{8}$	9	$\frac{11}{16}$	$\frac{7}{16}$	$\frac{1}{4}$	4 $\frac{1}{4}$	22 $\frac{1}{2}$	21 $\frac{1}{2}$	1 $\frac{3}{16}$	25 $\frac{1}{2}$	2 $\frac{1}{2}$	$\frac{5}{16}$	5 $\frac{1}{2}$
CB 213 21	142	21 $\frac{1}{2}$	13 $\frac{1}{8}$	1 $\frac{1}{8}$	$\frac{11}{16}$	$\frac{3}{8}$	6 $\frac{1}{4}$	19 $\frac{1}{4}$	18	1 $\frac{3}{4}$	25 $\frac{1}{4}$	3	$\frac{7}{16}$	5 $\frac{1}{2}$
	132	21 $\frac{1}{4}$	13 $\frac{1}{8}$	1	$\frac{5}{8}$	$\frac{5}{16}$	6 $\frac{1}{4}$	19 $\frac{1}{4}$	18	1 $\frac{11}{16}$	25	3	$\frac{3}{8}$	5 $\frac{1}{2}$
	122	21 $\frac{1}{8}$	13	$\frac{15}{16}$	$\frac{9}{16}$	$\frac{5}{16}$	6 $\frac{1}{4}$	19 $\frac{1}{4}$	18	1 $\frac{5}{8}$	24 $\frac{7}{8}$	2 $\frac{3}{4}$	$\frac{3}{8}$	5 $\frac{1}{2}$
	112	21	13	$\frac{7}{8}$	$\frac{9}{16}$	$\frac{1}{4}$	6 $\frac{1}{4}$	19 $\frac{1}{4}$	18	1 $\frac{1}{2}$	24 $\frac{3}{4}$	2 $\frac{3}{4}$	$\frac{5}{16}$	5 $\frac{1}{2}$
CB 212 21	103	21 $\frac{1}{4}$	9 $\frac{1}{8}$	1	$\frac{5}{8}$	$\frac{5}{16}$	4 $\frac{1}{4}$	19 $\frac{1}{4}$	18	1 $\frac{11}{16}$	23 $\frac{1}{8}$	3	$\frac{3}{8}$	5 $\frac{1}{2}$
	96	21 $\frac{1}{8}$	9	$\frac{15}{16}$	$\frac{9}{16}$	$\frac{5}{16}$	4 $\frac{1}{4}$	19 $\frac{1}{4}$	18	1 $\frac{9}{16}$	23	2 $\frac{3}{4}$	$\frac{3}{8}$	5 $\frac{1}{2}$
	89	21	9	$\frac{7}{8}$	$\frac{9}{16}$	$\frac{5}{16}$	4 $\frac{1}{4}$	19 $\frac{1}{4}$	18	1 $\frac{1}{2}$	22 $\frac{7}{8}$	2 $\frac{3}{4}$	$\frac{3}{8}$	5 $\frac{1}{2}$
	82	20 $\frac{7}{8}$	9	$\frac{13}{16}$	$\frac{1}{2}$	$\frac{1}{4}$	4 $\frac{1}{4}$	19 $\frac{1}{4}$	18	1 $\frac{7}{16}$	22 $\frac{3}{4}$	2 $\frac{3}{4}$	$\frac{5}{16}$	5 $\frac{1}{2}$
CB 211 21	73	21 $\frac{1}{4}$	8 $\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{4}$	4	19 $\frac{3}{4}$	18 $\frac{5}{8}$	1 $\frac{1}{4}$	22 $\frac{7}{8}$	2 $\frac{1}{2}$	$\frac{5}{16}$	5 $\frac{1}{2}$
	68	21 $\frac{1}{8}$	8 $\frac{1}{4}$	$\frac{11}{16}$	$\frac{7}{16}$	$\frac{1}{4}$	4	19 $\frac{3}{4}$	18 $\frac{5}{8}$	1 $\frac{1}{4}$	22 $\frac{3}{4}$	2 $\frac{1}{2}$	$\frac{5}{16}$	5 $\frac{1}{2}$
	63	21	8 $\frac{1}{4}$	$\frac{5}{8}$	$\frac{7}{16}$	$\frac{1}{4}$	4	19 $\frac{3}{4}$	18 $\frac{5}{8}$	1 $\frac{3}{16}$	22 $\frac{5}{8}$	2 $\frac{1}{2}$	$\frac{5}{16}$	5 $\frac{1}{2}$
	59	20 $\frac{7}{8}$	8 $\frac{1}{4}$	$\frac{9}{16}$	$\frac{3}{8}$	$\frac{3}{16}$	4	19 $\frac{3}{4}$	18 $\frac{5}{8}$	1 $\frac{1}{8}$	22 $\frac{1}{2}$	2 $\frac{1}{2}$	$\frac{1}{4}$	5 $\frac{1}{2}$

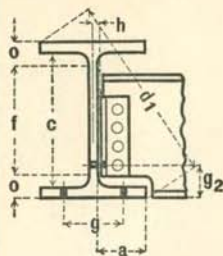


CB SECTIONS

ELEMENTS OF SECTIONS

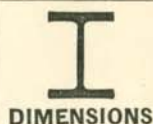


Section Index and Nominal Size	Depth of Section In.	Weight per Foot Lbs.	Area of Section In. ²	Flange		Web Thickness In.	Axis 1-1			Axis 2-2		
				Width In.	Thickness In.		I In. ⁴	S In. ³	r In.	I In. ⁴	S In. ³	r In.
CB 183 18 x 11 ³ / ₄	18.64	124	36.45	11.889	1.071	.651	2227.1	239.0	7.82	281.9	47.4	2.78
	18.48	114	33.51	11.833	.991	.595	2033.8	220.1	7.79	255.6	43.2	2.76
	18.32	105	30.86	11.792	.911	.554	1852.5	202.2	7.75	231.0	39.2	2.73
	18.16	96	28.22	11.750	.831	.512	1674.7	184.4	7.70	206.8	35.2	2.71
CB 182 18 x 8 ³ / ₄	18.32	85	24.97	8.838	.911	.526	1429.9	156.1	7.57	99.4	22.5	2.00
	18.16	77	22.63	8.787	.831	.475	1286.8	141.7	7.54	88.6	20.2	1.98
	18.00	70	20.56	8.750	.751	.438	1153.9	128.2	7.49	78.5	17.9	1.95
	17.87	64	18.80	8.715	.686	.403	1045.8	117.0	7.46	70.3	16.1	1.93
CB 181 18 x 7 ¹ / ₂	18.12	55	16.19	7.532	.630	.390	889.9	98.2	7.41	42.0	11.1	1.61
	18.00	50	14.71	7.500	.570	.358	800.6	89.0	7.38	37.2	9.9	1.59
	17.90	47	13.81	7.492	.520	.350	736.4	82.3	7.30	33.5	9.0	1.56
CB 163 16 x 11 ¹ / ₂	16.64	114	33.51	11.629	1.035	.631	1642.6	197.4	7.00	254.6	43.8	2.76
	16.48	105	30.87	11.582	.955	.584	1497.5	181.7	6.96	230.7	39.8	2.73
	16.32	96	28.22	11.533	.875	.535	1355.1	166.1	6.93	207.2	35.9	2.71
	16.16	88	25.87	11.502	.795	.504	1222.6	151.3	6.87	185.2	32.2	2.67
CB 162 16 x 8 ¹ / ₂	16.32	78	22.92	8.586	.875	.529	1042.6	127.8	6.74	87.5	20.4	1.95
	16.16	71	20.86	8.543	.795	.486	936.9	115.9	6.70	77.9	18.2	1.93
	16.00	64	18.80	8.500	.715	.443	833.8	104.2	6.66	68.4	16.1	1.91
	15.86	58	17.04	8.464	.645	.407	746.4	94.1	6.62	60.5	14.3	1.88
CB 161 16 x 7	16.25	50	14.70	7.073	.628	.380	655.4	80.7	6.68	34.8	9.8	1.54
	16.12	45	13.24	7.039	.563	.346	583.3	72.4	6.64	30.5	8.7	1.52
	16.00	40	11.77	7.000	.503	.307	515.5	64.4	6.62	26.5	7.6	1.50
	15.85	36	10.59	6.992	.428	.299	446.3	56.3	6.49	22.1	6.3	1.45

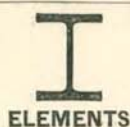


CB SECTIONS

DIMENSIONS OF SECTIONS FOR DETAILING

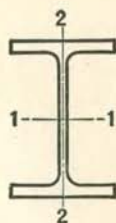


Section Index and Nominal Depth	Weight per Foot	Depth of Section	Flange		Web		Distance					Min. g ₂	Clear h	Usual Gage g
			Width	Thick-ness	Thick-ness	Half Thick-ness+	a	c	f	o	d ₁			
	Lbs.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
CB 183 18	124	18 ⁵ / ₈	11 ⁷ / ₈	1 ¹ / ₁₆	11 ¹ / ₁₆	5 ⁵ / ₁₆	5 ⁵ / ₈	16 ¹ / ₂	15 ¹ / ₄	11 ¹ / ₁₆	22 ¹ / ₈	3	3 ³ / ₈	5 ¹ / ₂
	114	18 ¹ / ₂	11 ⁷ / ₈	1	5 ⁵ / ₁₆	5 ⁵ / ₁₆	5 ⁵ / ₈	16 ¹ / ₂	15 ¹ / ₄	1 ⁹ / ₁₆	22	2 ³ / ₄	3 ³ / ₈	5 ¹ / ₂
	105	18 ³ / ₈	11 ³ / ₄	5 ⁵ / ₁₆	9 ⁵ / ₁₆	5 ⁵ / ₁₆	5 ⁵ / ₈	16 ¹ / ₂	15 ¹ / ₄	1 ¹ / ₂	21 ⁷ / ₈	2 ³ / ₄	3 ³ / ₈	5 ¹ / ₂
	96	18 ¹ / ₈	11 ³ / ₄	5 ⁵ / ₁₆	1 ¹ / ₂	1 ¹ / ₄	5 ⁵ / ₈	16 ¹ / ₂	15 ¹ / ₄	1 ⁷ / ₁₆	21 ³ / ₄	2 ³ / ₄	5 ⁵ / ₁₆	5 ¹ / ₂
CB 182 18	85	18 ³ / ₈	8 ⁷ / ₈	5 ⁵ / ₁₆	9 ⁵ / ₁₆	1 ¹ / ₄	4 ¹ / ₈	16 ¹ / ₂	15 ¹ / ₄	1 ¹ / ₂	20 ¹ / ₂	2 ³ / ₄	5 ⁵ / ₁₆	5 ¹ / ₂
	77	18 ¹ / ₈	8 ³ / ₄	5 ⁵ / ₁₆	1 ¹ / ₂	1 ¹ / ₄	4 ¹ / ₈	16 ¹ / ₂	15 ¹ / ₄	1 ⁷ / ₁₆	20 ¹ / ₈	2 ³ / ₄	5 ⁵ / ₁₆	5 ¹ / ₂
	70	18	8 ³ / ₄	3 ¹ / ₄	7 ¹ / ₁₆	1 ¹ / ₄	4 ¹ / ₈	16 ¹ / ₂	15 ¹ / ₄	1 ³ / ₈	20	2 ³ / ₄	5 ⁵ / ₁₆	5 ¹ / ₂
	64	17 ⁷ / ₈	8 ³ / ₄	11 ¹ / ₁₆	7 ¹ / ₁₆	3 ¹ / ₁₆	4 ¹ / ₈	16 ¹ / ₂	15 ¹ / ₄	1 ¹ / ₁₆	20	2 ¹ / ₂	1 ¹ / ₄	5 ¹ / ₂
CB 181 18	55	18 ¹ / ₈	7 ¹ / ₂	5 ⁵ / ₈	3 ³ / ₈	3 ¹ / ₁₆	3 ⁵ / ₈	16 ⁷ / ₈	16	1 ¹ / ₁₆	19 ⁵ / ₈	2 ¹ / ₄	1 ¹ / ₄	4
	50	18	7 ¹ / ₂	9 ¹ / ₁₆	3 ³ / ₈	3 ¹ / ₁₆	3 ⁵ / ₈	16 ⁷ / ₈	16	1	19 ¹ / ₂	2 ¹ / ₄	1 ¹ / ₄	4
	47	17 ⁷ / ₈	7 ¹ / ₂	1 ¹ / ₂	3 ³ / ₈	3 ¹ / ₁₆	3 ⁵ / ₈	16 ⁷ / ₈	16	1 ⁵ / ₁₆	19 ³ / ₈	2 ¹ / ₄	1 ¹ / ₄	4
CB 163 16	114	16 ⁵ / ₈	11 ⁵ / ₈	1 ¹ / ₁₆	5 ⁵ / ₈	5 ⁵ / ₁₆	5 ¹ / ₂	14 ⁵ / ₈	13 ³ / ₈	1 ⁵ / ₈	20 ³ / ₈	2 ³ / ₄	3 ³ / ₈	5 ¹ / ₂
	105	16 ¹ / ₂	11 ⁵ / ₈	5 ⁵ / ₁₆	5 ⁵ / ₈	5 ⁵ / ₁₆	5 ¹ / ₂	14 ⁵ / ₈	13 ³ / ₈	1 ⁹ / ₁₆	20 ¹ / ₄	2 ³ / ₄	3 ³ / ₈	5 ¹ / ₂
	96	16 ³ / ₈	11 ¹ / ₂	7 ⁵ / ₈	9 ⁵ / ₁₆	5 ⁵ / ₁₆	5 ¹ / ₂	14 ⁵ / ₈	13 ³ / ₈	1 ¹ / ₂	20 ¹ / ₈	2 ³ / ₄	3 ³ / ₈	5 ¹ / ₂
	88	16 ¹ / ₈	11 ¹ / ₂	9 ⁵ / ₁₆	1 ¹ / ₂	1 ¹ / ₄	5 ¹ / ₂	14 ⁵ / ₈	13 ³ / ₈	1 ³ / ₈	19 ⁷ / ₈	2 ¹ / ₂	5 ⁵ / ₁₆	5 ¹ / ₂
CB 162 16	78	16 ³ / ₈	8 ⁵ / ₈	7 ⁵ / ₈	9 ⁵ / ₁₆	1 ¹ / ₄	4	14 ⁵ / ₈	13 ³ / ₈	1 ¹ / ₂	18 ¹ / ₂	2 ³ / ₄	5 ⁵ / ₁₆	5 ¹ / ₂
	71	16 ¹ / ₈	8 ¹ / ₂	5 ⁵ / ₁₆	1 ¹ / ₂	1 ¹ / ₄	4	14 ⁵ / ₈	13 ³ / ₈	1 ³ / ₈	18 ¹ / ₄	2 ¹ / ₂	5 ⁵ / ₁₆	5 ¹ / ₂
	64	16	8 ¹ / ₂	11 ¹ / ₁₆	7 ⁵ / ₁₆	1 ¹ / ₄	4	14 ⁵ / ₈	13 ³ / ₈	1 ⁵ / ₁₆	18 ¹ / ₈	2 ¹ / ₂	5 ⁵ / ₁₆	5 ¹ / ₂
	58	15 ⁷ / ₈	8 ¹ / ₂	5 ⁵ / ₈	7 ⁵ / ₁₆	1 ¹ / ₄	4	14 ⁵ / ₈	13 ³ / ₈	1 ¹ / ₄	18	2 ¹ / ₂	5 ⁵ / ₁₆	5 ¹ / ₂
CB 161 16	50	16 ¹ / ₄	7 ¹ / ₈	5 ⁵ / ₈	3 ³ / ₈	3 ¹ / ₁₆	3 ³ / ₈	15	14 ¹ / ₈	1 ¹ / ₁₆	17 ³ / ₄	2 ¹ / ₄	1 ¹ / ₄	4
	45	16 ¹ / ₈	7	9 ⁵ / ₁₆	3 ³ / ₈	3 ¹ / ₁₆	3 ³ / ₈	15	14 ¹ / ₈	1	17 ⁵ / ₈	2 ¹ / ₄	1 ¹ / ₄	4
	40	16	7	1 ¹ / ₂	5 ⁵ / ₁₆	3 ¹ / ₁₆	3 ³ / ₈	15	14 ¹ / ₈	1 ⁵ / ₁₆	17 ¹ / ₂	2 ¹ / ₄	1 ¹ / ₄	4
	36	15 ⁷ / ₈	7	7 ¹ / ₁₆	5 ⁵ / ₁₆	3 ¹ / ₁₆	3 ³ / ₈	15	14 ¹ / ₈	7 ⁵ / ₈	17 ³ / ₈	2 ¹ / ₄	1 ¹ / ₄	4



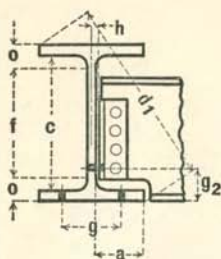
CB SECTIONS

ELEMENTS OF SECTIONS



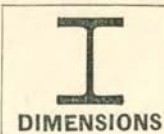
Section Index and Nominal Size	Depth of Section In.	Weight per Foot Lbs.	Area of Section In. ²	Flange		Web Thickness In.	Axis 1-1			Axis 2-2		
				Width In.	Thick-ness In.		I In. ⁴	S In. ³	r In.	I In. ⁴	S In. ³	r In.
CB 146 14 x 16	18.69	426	125.25	16.695	3.033	1.875	6610.3	707.4	7.26	2359.5	282.7	4.34
	18.50	412	121.15	16.645	2.938	1.825	6309.7	682.1	7.22	2264.9	272.1	4.32
	18.31	398	116.98	16.590	2.843	1.770	6013.7	656.9	7.17	2169.7	261.6	4.31
	18.12	384	112.93	16.540	2.748	1.720	5727.5	632.2	7.12	2078.1	251.3	4.29
	17.94	370	108.78	16.475	2.658	1.655	5454.2	608.1	7.08	1986.0	241.1	4.27
	17.75	356	104.68	16.420	2.563	1.600	5179.4	583.6	7.03	1895.7	230.9	4.26
	17.56	342	100.59	16.365	2.468	1.545	4911.5	559.4	6.99	1806.9	220.8	4.24
	17.38	328	96.43	16.295	2.378	1.475	4656.1	535.8	6.95	1718.5	210.9	4.22
	17.19	314	92.30	16.235	2.283	1.415	4399.4	511.9	6.90	1631.4	201.0	4.20
	17.00	300	88.20	16.175	2.188	1.355	4149.5	488.2	6.86	1546.0	191.2	4.19
	16.81	287	84.37	16.130	2.093	1.310	3912.1	465.5	6.81	1466.5	181.8	4.17
	16.62	273	80.22	16.065	1.998	1.245	3673.2	442.0	6.77	1382.9	172.2	4.15
	16.50	264	77.63	16.025	1.938	1.205	3526.0	427.4	6.74	1331.2	166.1	4.14
	16.37	255	74.98	15.990	1.873	1.170	3372.6	412.0	6.71	1278.1	159.9	4.13
	16.25	246	72.33	15.945	1.813	1.125	3228.9	397.4	6.68	1226.6	153.9	4.12
	16.12	237	69.69	15.910	1.748	1.090	3080.9	382.2	6.65	1174.8	147.7	4.11
	16.00	228	67.06	15.865	1.688	1.045	2942.4	367.8	6.62	1124.8	141.8	4.10
	15.87	219	64.36	15.825	1.623	1.005	2798.2	352.6	6.59	1073.2	135.6	4.08
	15.75	211	62.07	15.800	1.563	.980	2671.4	339.2	6.56	1028.6	130.2	4.07
	15.63	202	59.39	15.750	1.503	.930	2538.8	324.9	6.54	979.7	124.4	4.06
	15.50	193	56.73	15.710	1.438	.890	2402.4	310.0	6.51	930.1	118.4	4.05
	15.38	184	54.07	15.660	1.378	.840	2274.8	295.8	6.49	882.7	112.7	4.04
	15.25	176	51.73	15.640	1.313	.820	2149.6	281.9	6.45	837.9	107.1	4.02
15.12	167	49.09	15.600	1.248	.780	2020.8	267.3	6.42	790.2	101.3	4.01	
15.00	158	46.47	15.550	1.188	.730	1900.6	253.4	6.40	745.0	95.8	4.00	
14.88	150	44.08	15.515	1.128	.695	1786.9	240.2	6.37	702.5	90.6	3.99	
14.75	142	41.85	15.500	1.063	.680	1672.2	226.7	6.32	660.1	85.2	3.97	
14.61	*320	94.12	16.710	2.093	1.890	4141.7	492.8	6.63	1635.1	195.7	4.17	
CB 145 14 x 14 1/2	14.75	136	39.58	14.740	1.063	.660	1593.0	216.0	6.31	567.7	77.0	3.77
	14.62	127	37.33	14.690	.998	.610	1476.7	202.0	6.29	527.6	71.8	3.76
	14.50	119	34.99	14.650	.938	.570	1373.1	189.4	6.26	491.8	67.1	3.75
	14.37	111	32.65	14.620	.873	.540	1266.5	176.3	6.23	454.9	62.2	3.73
	14.25	103	30.26	14.575	.813	.495	1165.8	163.6	6.21	419.7	57.6	3.72
	14.12	95	27.94	14.545	.748	.465	1063.5	150.6	6.17	383.7	52.8	3.71
	14.00	87	25.56	14.500	.688	.420	966.9	138.1	6.15	349.7	48.2	3.70

*Column Core Section.



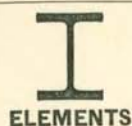
CB SECTIONS

DIMENSIONS OF SECTIONS FOR DETAILING



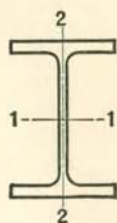
Section Index and Nominal Depth	Weight per Foot	Depth of Section	Flange		Web		Distance					Clear h	Usual Gage g	
			Width	Thick-ness	Thick-ness	Half Thick-ness+	a	c	f	o	d ₁			Min. g ₂
	Lbs.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	
CB 146 14	426	18 3/4	16 3/4	3 1/16	1 7/8	15/16	7 3/8	12 5/8	11 3/8	3 5/8	25 1/8	4 3/4	1	3 — 5 1/2 — 3
	412	18 1/2	16 5/8	2 15/16	1 9/16	1 5/16	7 3/8	12 5/8	11 3/8	3 9/16	24 7/8	4 3/4	1	
	398	18 1/4	16 5/8	2 9/16	1 9/16	7/8	7 3/8	12 5/8	11 3/8	3 7/16	24 3/4	4 1/2	15/16	
	384	18 1/8	16 1/2	2 3/4	1 3/4	7/8	7 3/8	12 5/8	11 3/8	3 3/8	24 5/8	4 1/2	15/16	
	370	18	16 1/2	2 11/16	1 11/16	13/16	7 3/8	12 5/8	11 3/8	3 1/4	24 1/2	4 1/2	7/8	
	356	17 3/4	16 3/8	2 9/16	1 5/8	13/16	7 3/8	12 5/8	11 3/8	3 3/16	24 1/4	4 1/4	7/8	
	342	17 1/2	16 3/8	2 7/16	1 9/16	13/16	7 3/8	12 5/8	11 3/8	3 1/16	24	4 1/4	7/8	
	328	17 3/8	16 1/4	2 5/8	1 1/2	3/4	7 3/8	12 5/8	11 3/8	3	23 7/8	4 1/4	13/16	
	314	17 1/4	16 1/4	2 3/8	1 7/16	3/4	7 3/8	12 5/8	11 3/8	2 7/8	23 3/4	4	13/16	
	300	17	16 1/8	2 3/8	1 3/8	11/16	7 3/8	12 5/8	11 3/8	2 13/16	23 1/2	4	3/4	
	287	16 3/4	16 1/8	2 1/16	1 5/16	11/16	7 3/8	12 5/8	11 3/8	2 11/16	23 3/8	3 3/4	3/4	
	273	16 5/8	16 1/8	2	1 1/4	5/8	7 3/8	12 5/8	11 3/8	2 5/8	23 1/4	3 3/4	11/16	
	264	16 1/2	16	1 5/16	1 1/4	5/8	7 3/8	12 5/8	11 3/8	2 9/16	23	3 3/4	11/16	
	255	16 3/8	16	1 7/8	1 3/16	5/8	7 3/8	12 5/8	11 3/8	2 1/2	23	3 3/4	11/16	
	246	16 1/4	16	1 15/16	1 1/8	9/16	7 3/8	12 5/8	11 3/8	2 3/16	22 7/8	3 1/2	5/8	
	237	16 1/8	15 7/8	1 3/4	1 1/8	9/16	7 3/8	12 5/8	11 3/8	2 3/8	22 3/4	3 1/2	5/8	
	228	16	15 7/8	1 11/16	1 1/16	9/16	7 3/8	12 5/8	11 3/8	2 5/16	22 5/8	3 1/2	5/8	
	219	15 7/8	15 7/8	1 5/8	1	1/2	7 3/8	12 5/8	11 3/8	2 1/4	22 1/2	3 1/2	9/16	
	211	15 3/4	15 3/4	1 9/16	1	1/2	7 3/8	12 5/8	11 3/8	2 3/16	22 3/8	3 1/4	9/16	
	202	15 5/8	15 3/4	1 1/2	15/16	1/2	7 3/8	12 5/8	11 3/8	2 1/8	22 1/4	3 1/4	9/16	
	193	15 1/2	15 3/4	1 7/16	7/8	7/8	7 3/8	12 5/8	11 3/8	2 1/16	22 1/8	3 1/4	1/2	
	184	15 3/8	15 5/8	1 3/8	7/8	7/8	7 3/8	12 5/8	11 3/8	2	22	3 1/4	1/2	
	176	15 1/4	15 5/8	1 5/16	13/16	7/8	7 3/8	12 5/8	11 3/8	1 15/16	21 7/8	3	1/2	
167	15 3/8	15 5/8	1 1/4	13/16	3/8	7 3/8	12 5/8	11 3/8	1 7/8	21 3/4	3	7/16		
158	15	15 1/2	1 3/16	3/4	3/8	7 3/8	12 5/8	11 3/8	1 13/16	21 5/8	3	7/16		
150	14 7/8	15 1/2	1 1/8	11/16	3/8	7 3/8	12 5/8	11 3/8	1 3/4	21 1/2	3	7/16		
142	14 3/4	15 1/2	1 1/16	11/16	3/8	7 3/8	12 5/8	11 3/8	1 11/16	21 1/2	2 3/4	7/16		
*320	16 3/4	16 3/4	2 1/16	1 7/8	15/16	7 3/8	12 5/8	11 3/8	2 11/16	23 3/4	3 3/4	1		
CB 145 14	136	14 3/4	14 3/4	1 1/16	11/16	3/8	7	12 5/8	11 3/8	1 11/16	20 7/8	2 3/4	7/16	5 1/2
	127	14 5/8	14 3/4	1	5/8	5/16	7	12 5/8	11 3/8	1 5/8	20 3/4	2 3/4	3/8	5 1/2
	119	14 1/2	14 5/8	15/16	9/16	5/16	7	12 5/8	11 3/8	1 9/16	20 5/8	2 3/4	3/8	5 1/2
	111	14 3/8	14 5/8	7/8	9/16	5/16	7	12 5/8	11 3/8	1 1/2	20 5/8	2 3/4	3/8	5 1/2
	103	14 1/4	14 5/8	15/16	1/2	1/4	7	12 5/8	11 3/8	1 7/16	20 1/2	2 1/2	5/16	5 1/2
	95	14 3/8	14 1/2	3/4	1/2	1/4	7	12 5/8	11 3/8	1 3/8	20 1/4	2 1/2	5/16	5 1/2
	87	14	14 1/2	11/16	7/16	1/4	7	12 5/8	11 3/8	1 5/16	20 1/4	2 1/2	5/16	5 1/2

*Column Core Section.

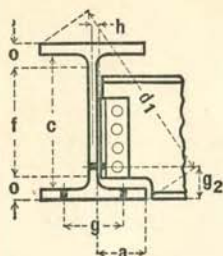


CB SECTIONS

ELEMENTS OF SECTIONS

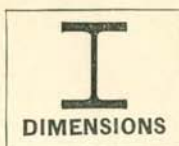


Section Index and Nominal Size	Depth of Section	Weight per Foot	Area of Section	Flange		Web Thickness	Axis 1-1			Axis 2-2		
				Width	Thickness		I	S	r	I	S	r
CB 144 14 x 12	14.18	84	24.71	12.023	.778	.451	928.4	130.9	6.13	225.5	37.5	3.02
	14.06	78	22.94	12.000	.718	.428	851.2	121.1	6.09	206.9	34.5	3.00
CB 143 14 x 10	14.19	74	21.76	10.072	.783	.450	796.8	112.3	6.05	133.5	26.5	2.48
	14.06	68	20.00	10.040	.718	.418	724.1	103.0	6.02	121.2	24.1	2.46
	13.91	61	17.94	10.000	.643	.378	641.5	92.2	5.98	107.3	21.5	2.45
CB 142 14 x 8	14.06	58	17.06	8.098	.718	.406	597.9	85.0	5.92	63.7	15.7	1.93
	13.94	53	15.59	8.062	.658	.370	542.1	77.8	5.90	57.5	14.3	1.92
	13.81	48	14.11	8.031	.593	.339	484.9	70.2	5.86	51.3	12.8	1.91
	13.68	43	12.65	8.000	.528	.308	429.0	62.7	5.82	45.1	11.3	1.89
CB 141 14 x 6 ³ / ₄	14.24	42	12.34	6.801	.573	.338	432.2	60.7	5.92	28.1	8.3	1.51
	14.12	38	11.17	6.776	.513	.313	385.3	54.6	5.87	24.6	7.3	1.49
	14.00	34	10.00	6.750	.453	.287	339.2	48.5	5.83	21.3	6.3	1.46
	13.86	30	8.81	6.733	.383	.270	289.6	41.8	5.73	17.5	5.2	1.41
	14.38	190	55.86	12.670	1.736	1.060	1892.5	263.2	5.82	589.7	93.1	3.25
CB 124 12 x 12	14.12	176	51.79	12.615	1.606	1.005	1712.5	242.6	5.75	538.4	85.4	3.22
	13.88	161	47.38	12.515	1.486	.905	1541.8	222.2	5.70	486.2	77.7	3.20
	13.62	147	43.24	12.450	1.356	.840	1374.4	201.8	5.64	436.8	70.2	3.18
	13.38	133	39.11	12.365	1.236	.755	1221.2	182.5	5.59	389.9	63.1	3.16
	13.12	120	35.31	12.320	1.106	.710	1071.7	163.4	5.51	345.1	56.0	3.13
	12.88	106	31.19	12.230	.986	.620	930.7	144.5	5.46	300.9	49.2	3.11
	12.75	99	29.09	12.190	.921	.580	858.5	134.7	5.43	278.2	45.7	3.09
	12.62	92	27.06	12.155	.856	.545	788.9	125.0	5.40	256.4	42.2	3.08
	12.50	85	24.98	12.105	.796	.495	723.3	115.7	5.38	235.5	38.9	3.07
	12.38	79	23.22	12.080	.736	.470	663.0	107.1	5.34	216.4	35.8	3.05
	12.25	72	21.16	12.040	.671	.430	597.4	97.5	5.31	195.3	32.4	3.04
	12.12	65	19.11	12.000	.606	.390	533.4	88.0	5.28	174.6	29.1	3.02
CB 123 12 x 10	12.31	64	18.83	10.060	.701	.405	528.3	85.8	5.29	119.0	23.7	2.51
	12.19	58	17.06	10.014	.641	.359	476.1	78.1	5.28	107.4	21.4	2.51
	12.06	53	15.59	10.000	.576	.345	426.2	70.7	5.23	96.1	19.2	2.48
CB 122 12 x 8	12.19	50	14.71	8.077	.641	.371	394.5	64.7	5.18	56.4	14.0	1.96
	12.06	45	13.24	8.042	.576	.336	350.8	58.2	5.15	50.0	12.4	1.94
	11.94	40	11.77	8.000	.516	.294	310.1	51.9	5.13	44.1	11.0	1.94
CB 121 12 x 6 ¹ / ₂	12.24	36	10.59	6.565	.540	.305	280.8	45.9	5.15	23.7	7.2	1.50
	12.12	32	9.41	6.533	.480	.273	246.8	40.7	5.12	20.6	6.3	1.48
	12.00	28	8.23	6.500	.420	.240	213.5	35.6	5.09	17.5	5.4	1.46
	11.87	25	7.39	6.500	.355	.240	183.4	30.9	4.98	14.5	4.5	1.40



CB SECTIONS

DIMENSIONS OF SECTIONS FOR DETAILING



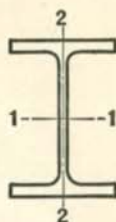
Section Index and Nominal Depth	Weight per Foot	Depth of Section	Flange		Web		Distance						Usual Gage g	
			Width	Thick-ness	Thick-ness	Half Thick-ness +	a	c	f	o	d ₁	Min. g ₂		Clear h
	Lbs.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
CB 144 14	84	14 ¹ / ₈	12	3/4	7/16	1/4	5 ³ / ₄	12 ⁵ / ₈	11 ³ / ₈	1 ³ / ₈	18 ⁵ / ₈	2 ¹ / ₂	5/16	5 ¹ / ₂
	78	14	12	11/16	7/16	1/4	5 ³ / ₄	12 ⁵ / ₈	11 ³ / ₈	1 ³ / ₁₆	18 ¹ / ₂	2 ¹ / ₂	5/16	5 ¹ / ₂
CB 143 14	74	14 ¹ / ₄	10 ¹ / ₈	13/16	7/16	1/4	4 ³ / ₄	12 ⁵ / ₈	11 ³ / ₈	1 ³ / ₈	17 ¹ / ₂	2 ¹ / ₂	5/16	5 ¹ / ₂
	68	14	10	11/16	7/16	1/4	4 ³ / ₄	12 ⁵ / ₈	11 ³ / ₈	1 ³ / ₁₆	17 ¹ / ₄	2 ¹ / ₂	5/16	5 ¹ / ₂
	61	13 ⁷ / ₈	10	5/8	3/8	3/16	4 ³ / ₄	12 ⁵ / ₈	11 ³ / ₈	1 ¹ / ₄	17 ¹ / ₈	2 ¹ / ₂	1/4	5 ¹ / ₂
CB 142 14	58	14	8 ¹ / ₈	11/16	7/16	3/16	3 ⁷ / ₈	12 ⁵ / ₈	11 ³ / ₈	1 ⁵ / ₁₆	16 ¹ / ₄	2 ¹ / ₂	1/4	5 ¹ / ₂
	53	14	8	11/16	3/8	3/16	3 ⁷ / ₈	12 ⁵ / ₈	11 ³ / ₈	1 ¹ / ₄	16 ¹ / ₂	2 ¹ / ₂	1/4	5 ¹ / ₂
	48	13 ³ / ₄	8	9/16	3/8	3/16	3 ⁷ / ₈	12 ⁵ / ₈	11 ³ / ₈	1 ³ / ₁₆	15 ⁵ / ₈	2 ³ / ₈	1/4	5 ¹ / ₂
	43	13 ⁵ / ₈	8	1/2	5/8	3/16	3 ⁷ / ₈	12 ⁵ / ₈	11 ³ / ₈	1 ¹ / ₈	15 ⁷ / ₈	2 ³ / ₈	1/4	5 ¹ / ₂
CB 141 14	42	14 ¹ / ₄	6 ³ / ₄	9/16	3/8	3/16	3 ¹ / ₄	13 ¹ / ₈	12 ¹ / ₄	1	15 ³ / ₄	2 ¹ / ₄	1/4	4
	38	14 ¹ / ₈	6 ³ / ₄	1/2	5/8	3/16	3 ¹ / ₄	13 ¹ / ₈	12 ¹ / ₄	1 ⁵ / ₁₆	15 ³ / ₄	2 ¹ / ₄	1/4	4
	34	14	6 ³ / ₄	7/16	5/8	3/16	3 ¹ / ₄	13 ¹ / ₈	12 ¹ / ₄	7/8	15 ⁵ / ₈	2 ¹ / ₄	1/4	4
	30	13 ⁷ / ₈	6 ³ / ₄	3/8	5/8	1/8	3 ¹ / ₄	13 ¹ / ₈	12 ¹ / ₄	1 ³ / ₁₆	15 ¹ / ₂	2	3/8	4
	190	14 ³ / ₈	12 ⁵ / ₈	1 ³ / ₄	11/16	9/16	5 ³ / ₄	10 ⁷ / ₈	9 ³ / ₄	2 ⁵ / ₁₆	19 ¹ / ₄	3 ¹ / ₂	5/8	5 ¹ / ₂
	176	14 ¹ / ₈	12 ⁵ / ₈	1 ⁵ / ₈	1	1/2	5 ³ / ₄	10 ⁷ / ₈	9 ³ / ₄	2 ³ / ₁₆	19	3 ¹ / ₄	9/16	5 ¹ / ₂
	161	13 ⁷ / ₈	12 ¹ / ₂	1 ¹ / ₂	15/16	7/16	5 ³ / ₄	10 ⁷ / ₈	9 ³ / ₄	2 ¹ / ₁₆	18 ³ / ₄	3 ¹ / ₄	1/2	5 ¹ / ₂
	147	13 ⁵ / ₈	12 ¹ / ₂	1 ³ / ₈	7/8	7/16	5 ³ / ₄	10 ⁷ / ₈	9 ³ / ₄	1 ¹ / ₁₆	18 ¹ / ₂	3	1/2	5 ¹ / ₂
	133	13 ³ / ₈	12 ³ / ₈	1 ¹ / ₄	3/4	3/8	5 ³ / ₄	10 ⁷ / ₈	9 ³ / ₄	1 ⁹ / ₁₆	18 ¹ / ₄	3	7/16	5 ¹ / ₂
CB 124 12	120	13 ¹ / ₈	12 ³ / ₈	1 ¹ / ₈	3/4	3/8	5 ³ / ₄	10 ⁷ / ₈	9 ³ / ₄	1 ¹ / ₁₆	18 ¹ / ₈	2 ³ / ₄	7/16	5 ¹ / ₂
	106	12 ⁷ / ₈	12 ¹ / ₄	1	5/8	5/8	5 ³ / ₄	10 ⁷ / ₈	9 ³ / ₄	1 ⁹ / ₁₆	17 ⁷ / ₈	2 ³ / ₄	3/8	5 ¹ / ₂
	99	12 ³ / ₄	12 ¹ / ₄	15/16	5/8	5/8	5 ³ / ₄	10 ⁷ / ₈	9 ³ / ₄	1 ¹ / ₂	17 ³ / ₄	2 ³ / ₄	3/8	5 ¹ / ₂
	92	12 ⁵ / ₈	12 ¹ / ₈	7/8	9/16	5/8	5 ³ / ₄	10 ⁷ / ₈	9 ³ / ₄	1 ⁷ / ₁₆	17 ¹ / ₂	2 ¹ / ₂	3/8	5 ¹ / ₂
	85	12 ¹ / ₂	12 ¹ / ₈	15/16	1/2	1/4	5 ³ / ₄	10 ⁷ / ₈	9 ³ / ₄	1 ³ / ₈	17 ¹ / ₂	2 ¹ / ₂	5/8	5 ¹ / ₂
	79	12 ³ / ₈	12 ¹ / ₈	3/4	1/2	1/4	5 ³ / ₄	10 ⁷ / ₈	9 ³ / ₄	1 ⁹ / ₁₆	17 ³ / ₈	2 ¹ / ₂	5/8	5 ¹ / ₂
	72	12 ¹ / ₄	12	11/16	7/16	1/4	5 ³ / ₄	10 ⁷ / ₈	9 ³ / ₄	1 ¹ / ₄	17 ¹ / ₄	2 ¹ / ₂	5/8	5 ¹ / ₂
	65	12 ¹ / ₈	12	5/8	3/8	3/8	5 ³ / ₄	10 ⁷ / ₈	9 ³ / ₄	1 ³ / ₁₆	17 ¹ / ₈	2 ¹ / ₄	1/4	5 ¹ / ₂
CB 123 12	64	12 ¹ / ₄	10	11/16	7/16	3/16	4 ⁷ / ₈	10 ⁷ / ₈	9 ³ / ₄	1 ³ / ₁₆	15 ⁷ / ₈	2 ¹ / ₂	1/4	5 ¹ / ₂
	58	12 ¹ / ₄	10	5/8	3/8	3/16	4 ⁷ / ₈	10 ⁷ / ₈	9 ³ / ₄	1 ¹ / ₄	15 ⁵ / ₈	2 ¹ / ₂	1/4	5 ¹ / ₂
	53	12	10	9/16	3/8	3/16	4 ⁷ / ₈	10 ⁷ / ₈	9 ³ / ₄	1 ³ / ₁₆	15 ⁵ / ₈	2 ¹ / ₂	1/4	5 ¹ / ₂
CB 122 12	50	12 ¹ / ₄	8 ¹ / ₈	5/8	3/8	3/16	3 ⁷ / ₈	10 ⁷ / ₈	9 ³ / ₄	1 ¹ / ₄	14 ³ / ₄	2 ¹ / ₂	1/4	5 ¹ / ₂
	45	12	8	9/16	3/8	3/16	3 ⁷ / ₈	10 ⁷ / ₈	9 ³ / ₄	1 ³ / ₁₆	14 ¹ / ₂	2 ¹ / ₂	1/4	5 ¹ / ₂
	40	12	8	1/2	5/8	3/16	3 ⁷ / ₈	10 ⁷ / ₈	9 ³ / ₄	1 ¹ / ₈	14 ¹ / ₂	2 ¹ / ₄	1/4	5 ¹ / ₂
CB 121 12	36	12 ¹ / ₄	6 ⁵ / ₈	9/16	5/8	3/16	3 ¹ / ₈	11 ¹ / ₈	10 ³ / ₈	15/16	14	2 ¹ / ₄	1/4	4
	32	12 ¹ / ₈	6 ¹ / ₂	1/2	5/8	1/8	3 ¹ / ₈	11 ¹ / ₈	10 ³ / ₈	7/8	13 ³ / ₄	2 ¹ / ₄	3/16	4
	28	12	6 ¹ / ₂	7/16	1/4	1/8	3 ¹ / ₈	11 ¹ / ₈	10 ³ / ₈	15/16	13 ³ / ₄	2 ¹ / ₄	3/16	4
	25	11 ⁷ / ₈	6 ¹ / ₂	3/8	1/4	1/8	3 ¹ / ₈	11 ¹ / ₈	10 ³ / ₈	3/4	13 ⁵ / ₈	2 ¹ / ₄	3/16	4



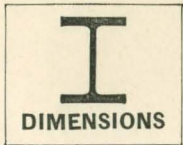
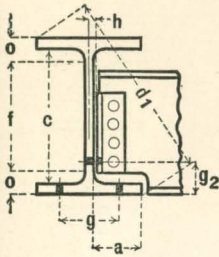
ELEMENTS

CB SECTIONS

ELEMENTS OF SECTIONS



Section Index and Nominal Size	Depth of Section	Weight per Foot	Area of Section	Flange		Web Thickness	Axis 1-1			Axis 2-2		
				Width	Thick-ness		I	S	r	I	S	r
				In.	In.		In. ⁴	In. ³	In.	In. ⁴	In. ³	In.
CB 103 10 x 10	11.88	136	40.03	10.575	1.498	.915	917.2	154.4	4.79	295.9	56.0	2.72
	11.62	124	36.46	10.505	1.368	.845	813.1	139.9	4.72	264.8	50.4	2.69
	11.38	112	32.92	10.415	1.248	.755	718.7	126.3	4.67	235.4	45.2	2.67
	11.12	100	29.43	10.345	1.118	.685	625.0	112.4	4.61	206.6	39.9	2.65
	10.88	89	26.19	10.275	.998	.615	542.4	99.7	4.55	180.6	35.2	2.63
	10.62	77	22.67	10.195	.868	.535	457.2	86.1	4.49	153.4	30.1	2.60
	10.50	72	21.18	10.170	.808	.510	420.7	80.1	4.46	141.8	27.9	2.59
	10.38	66	19.41	10.117	.748	.457	382.5	73.7	4.44	129.2	25.5	2.58
	10.25	60	17.66	10.075	.683	.415	343.7	67.1	4.41	116.5	23.1	2.57
	10.12	54	15.88	10.028	.618	.368	305.7	60.4	4.39	103.9	20.7	2.56
10.00	49	14.40	10.000	.558	.340	272.9	54.6	4.35	93.0	18.6	2.54	
CB 102 10 x 8	10.12	45	13.24	8.022	.618	.350	248.6	49.1	4.33	53.2	13.3	2.00
	10.00	41	12.06	8.000	.558	.328	222.4	44.5	4.29	47.7	11.9	1.99
	9.88	37	10.88	7.978	.498	.306	196.9	39.9	4.25	42.2	10.6	1.97
	9.75	33	9.71	7.964	.433	.292	170.9	35.0	4.20	36.5	9.2	1.94
CB 101 10 x 5 3/4	10.22	29	8.53	5.799	.500	.289	157.3	30.8	4.29	15.2	5.2	1.34
	10.12	26	7.65	5.769	.450	.259	139.7	27.6	4.27	13.4	4.6	1.32
	10.00	23	6.77	5.750	.390	.240	120.6	24.1	4.22	11.3	3.9	1.29
	9.90	21	6.19	5.750	.340	.240	106.3	21.5	4.14	9.7	3.4	1.25
CB 83 8 x 8	9.00	67	19.70	8.287	.933	.575	271.8	60.4	3.71	88.6	21.4	2.12
	8.75	58	17.06	8.222	.808	.510	227.3	52.0	3.65	74.9	18.2	2.10
	8.50	48	14.11	8.117	.683	.405	183.7	43.2	3.61	60.9	15.0	2.08
	8.25	40	11.76	8.077	.558	.365	146.3	35.5	3.53	49.0	12.1	2.04
	8.12	35	10.30	8.027	.493	.315	126.5	31.1	3.50	42.5	10.6	2.03
	8.06	33	9.70	8.012	.463	.300	117.9	29.3	3.49	39.7	9.9	2.02
	8.00	31	9.12	8.000	.433	.288	109.7	27.4	3.47	37.0	9.2	2.01
CB 82 8 x 6 1/2	8.03	27	7.93	6.528	.448	.273	94.1	23.4	3.44	20.8	6.4	1.62
	7.93	24	7.06	6.500	.398	.245	82.5	20.8	3.42	18.2	5.6	1.61



CB SECTIONS

DIMENSIONS OF SECTIONS FOR DETAILING

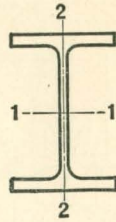
Section Index and Nominal Depth	Weight per Foot	Depth of Section	Flange		Web		Distance						Usual Gage g	
			Width	Thick-ness	Thick-ness	Half Thick-ness+	a	c	f	o	d ₁	Min. g ₂		Clear h
	Lbs.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
CB 103 10	136	11 ⁷ / ₈	10 ⁵ / ₈	1 ¹ / ₂	5 ¹⁵ / ₁₆	1 ¹ / ₂	4 ⁷ / ₈	8 ⁷ / ₈	7 ⁷ / ₈	2	16	3 ¹ / ₄	9 ¹⁶ / ₁₆	5 ¹ / ₂
	124	11 ⁵ / ₈	10 ¹ / ₂	1 ³ / ₈	7 ⁸ / ₁₆	7 ⁷ / ₁₆	4 ⁷ / ₈	8 ⁷ / ₈	7 ⁷ / ₈	1 ⁷ / ₈	15 ³ / ₄	3 ¹ / ₄	1 ¹ / ₂	5 ¹ / ₂
	112	11 ³ / ₈	10 ³ / ₈	1 ¹ / ₄	3 ⁴ / ₈	3 ³ / ₈	4 ⁷ / ₈	8 ⁷ / ₈	7 ⁷ / ₈	1 ³ / ₄	15 ¹ / ₂	3	7 ¹⁶ / ₁₆	5 ¹ / ₂
	100	11 ¹ / ₈	10 ³ / ₈	1 ¹ / ₈	1 ¹ / ₁₆	3 ⁸ / ₁₆	4 ⁷ / ₈	8 ⁷ / ₈	7 ⁷ / ₈	1 ⁵ / ₈	15 ¹ / ₄	3	7 ¹⁶ / ₁₆	5 ¹ / ₂
	89	10 ⁷ / ₈	10 ¹ / ₄	1	5 ⁵ / ₁₆	5 ⁵ / ₁₆	4 ⁷ / ₈	8 ⁷ / ₈	7 ⁷ / ₈	1 ¹ / ₂	15	2 ³ / ₄	3 ⁸ / ₈	5 ¹ / ₂
	77	10 ⁵ / ₈	10 ¹ / ₄	7 ⁸ / ₁₆	5 ⁹ / ₁₆	5 ⁹ / ₁₆	4 ⁷ / ₈	8 ⁷ / ₈	7 ⁷ / ₈	1 ³ / ₈	14 ³ / ₄	2 ³ / ₄	3 ⁸ / ₈	5 ¹ / ₂
72	10 ¹ / ₂	10 ¹ / ₈	1 ³ / ₁₆	1 ¹ / ₂	1 ¹ / ₄	4 ⁷ / ₈	8 ⁷ / ₈	7 ⁷ / ₈	1 ⁵ / ₁₆	14 ⁵ / ₈	2 ¹ / ₂	5 ¹⁶ / ₁₆	5 ¹ / ₂	

CB 101 10	29	10 ¹ / ₄	5 ³ / ₄	1 ¹ / ₂	5 ⁵ / ₁₆	3 ³ / ₁₆	2 ³ / ₄	9 ¹ / ₄	8 ⁵ / ₈	1 ¹⁵ / ₁₆	11 ³ / ₄	2	1 ⁴ / ₄	3
	26	10 ¹ / ₈	5 ³ / ₄	7 ¹⁶ / ₁₆	1 ¹ / ₄	1 ⁸ / ₈	2 ³ / ₄	9 ¹ / ₄	8 ⁵ / ₈	3 ⁴ / ₄	11 ³ / ₄	2	3 ¹⁶ / ₁₆	3
	23	10	5 ³ / ₄	3 ⁸ / ₈	1 ⁴ / ₄	1 ⁸ / ₈	2 ³ / ₄	9 ¹ / ₄	8 ⁵ / ₈	1 ¹¹ / ₁₆	11 ⁵ / ₈	2	3 ¹⁶ / ₁₆	3
	21	9 ⁷ / ₈	5 ³ / ₄	5 ¹⁶ / ₁₆	1 ⁴ / ₄	1 ⁸ / ₈	2 ³ / ₄	9 ¹ / ₄	8 ⁵ / ₈	1 ¹¹ / ₁₆	11 ¹ / ₂	2	3 ¹⁶ / ₁₆	3
CB 83 8	67	9	8 ¹ / ₄	1 ¹⁵ / ₁₆	9 ¹⁶ / ₁₆	5 ¹⁶ / ₁₆	3 ⁷ / ₈	7 ¹ / ₈	6 ³ / ₈	1 ¹⁵ / ₁₆	12 ¹ / ₄	2 ¹ / ₂	3 ⁸ / ₈	5 ¹ / ₂
	58	8 ³ / ₄	8 ¹ / ₄	1 ¹³ / ₁₆	1 ¹ / ₂	1 ⁴ / ₄	3 ⁷ / ₈	7 ¹ / ₈	6 ³ / ₈	1 ¹³ / ₁₆	12	2 ¹ / ₂	5 ¹⁶ / ₁₆	5 ¹ / ₂
	48	8 ¹ / ₂	8 ¹ / ₈	1 ¹¹ / ₁₆	7 ¹⁶ / ₁₆	3 ¹⁶ / ₁₆	3 ⁷ / ₈	7 ¹ / ₈	6 ³ / ₈	1 ¹¹ / ₁₆	11 ⁷ / ₈	2 ¹ / ₄	1 ⁴ / ₄	5 ¹ / ₂
	40	8 ¹ / ₄	8 ¹ / ₈	9 ¹⁶ / ₁₆	3 ⁸ / ₈	3 ¹⁶ / ₁₆	3 ⁷ / ₈	7 ¹ / ₈	6 ³ / ₈	1 ¹⁵ / ₁₆	11 ⁵ / ₈	2 ¹ / ₄	1 ⁴ / ₄	5 ¹ / ₂
	35	8 ¹ / ₈	8	1 ¹ / ₂	5 ¹⁶ / ₁₆	3 ¹⁶ / ₁₆	3 ⁷ / ₈	7 ¹ / ₈	6 ³ / ₈	7 ⁸ / ₈	11 ¹ / ₂	2 ¹ / ₄	1 ⁴ / ₄	5 ¹ / ₂
	31	8	8	7 ¹⁶ / ₁₆	5 ¹⁶ / ₁₆	3 ¹⁶ / ₁₆	3 ⁷ / ₈	7 ¹ / ₈	6 ³ / ₈	7 ⁸ / ₈	11 ³ / ₈	2 ¹ / ₄	1 ⁴ / ₄	5 ¹ / ₂
CB 82 8	27	8	6 ¹ / ₂	7 ¹⁶ / ₁₆	5 ¹⁶ / ₁₆	1 ⁸ / ₈	3 ⁷ / ₈	7 ¹ / ₈	6 ³ / ₈	7 ⁸ / ₈	10 ³ / ₈	2 ¹ / ₄	3 ¹⁶ / ₁₆	4
	24	7 ⁷ / ₈	6 ¹ / ₂	3 ⁸ / ₈	1 ⁴ / ₄	1 ⁸ / ₈	3 ⁷ / ₈	7 ¹ / ₈	6 ³ / ₈	1 ¹³ / ₁₆	10 ¹ / ₄	2	3 ¹⁶ / ₁₆	4



CB SECTIONS

ELEMENTS OF SECTIONS



Section Index and Nominal Size	Depth of Section In.	Weight per Foot Lbs.	Area of Section In. ²	Flange		Web	Axis 1-1			Axis 2-2		
				Width In.	Thick-ness In.	Thick-ness In.	I	S	r	I	S	r
							In. ⁴	In. ³	In.	In. ⁴	In. ³	In.
CB 61 5 ³ / ₄ x 9 ¹ / ₂ ☐	6.842	88	25.87	10.046	1.035	1.035	187.3	54.7	2.69	175.4	34.9	2.60
	6.666	80	23.52	9.959	.947	.948	164.9	49.5	2.65	156.3	31.4	2.58
	6.444	70	20.58	9.846	.836	.835	138.7	43.0	2.60	133.3	27.1	2.54
	6.216	60	17.63	9.733	.722	.722	113.9	36.7	2.54	111.1	22.8	2.51
	5.986	50	14.70	9.617	.607	.606	91.0	30.4	2.49	90.1	18.7	2.48
	5.750	40	11.76	9.500	.489	.489	69.6	24.2	2.43	69.9	14.7	2.44

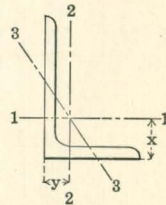
BEAMS-STANDARD MILL

☐ Carnegie Steel Company only.

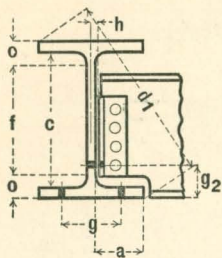


UNEQUAL ANGLES

ELEMENTS OF SECTIONS

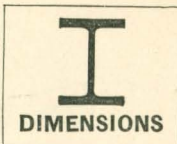


Section Index	Size Inches	Thick-ness In.	Weight per Foot Lbs.	Area of Section In. ²	Axis 1-1				Axis 2-2				Axis 3-3
					I	S	r	x	I	S	r	y	r min.
					In. ⁴	In. ³	In.	In.	In. ⁴	In. ³	In.	In.	In.
A 50	8 x 4	1	37.4	11.00	69.6	14.1	2.52	3.05	11.6	3.9	1.03	1.05	.85
		15/16	35.3	10.37	66.1	13.3	2.52	3.02	11.1	3.7	1.03	1.02	.85
		7/8	33.1	9.73	62.4	12.5	2.53	3.00	10.5	3.5	1.04	1.00	.85
		13/16	30.9	9.09	58.7	11.7	2.54	2.98	10.0	3.3	1.05	.98	.85
		3/4	28.7	8.44	54.9	10.9	2.55	2.95	9.4	3.1	1.05	.95	.85
		11/16	26.4	7.78	51.0	10.0	2.56	2.93	8.7	2.8	1.06	.93	.85
		5/8	24.2	7.11	46.9	9.2	2.56	2.91	8.1	2.6	1.07	.91	.86
		9/16	21.9	6.43	42.8	8.4	2.58	2.88	7.4	2.4	1.07	.88	.86
		1/2	19.6	5.75	38.5	7.5	2.59	2.86	6.7	2.2	1.08	.86	.86
		7/16	17.2	5.06	34.1	6.6	2.60	2.83	6.0	1.9	1.09	.83	.87



CB SECTIONS

DIMENSIONS OF SECTIONS FOR DETAILING

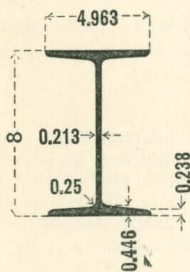


Section Index and Nominal Depth	Weight per Foot	Depth of Section	Flange		Web		Distance					Min. g ₂	Clear h	Usual Gage g	Max. Flange Rivet	
			Width	Thickness	Thickness	Half Thickness +	a	c	f	o	d ₁					
	Lbs.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
CB 61 ☐	88	6 ⁷ / ₈	10	1 ¹ / ₁₆	1 ¹ / ₁₆	9 ⁹ / ₁₆	4 ¹ / ₂	4 ³ / ₄	3 ⁷ / ₈	1 ¹ / ₂	12 ³ / ₁₆			5 ¹ / ₂		
	80	6 ⁵ / ₈	10	1 ⁵ / ₁₆	1 ⁵ / ₁₆	1 ¹ / ₂	4 ¹ / ₂	4 ³ / ₄	3 ⁷ / ₈	1 ³ / ₈	12			5 ¹ / ₂		
	70	6 ¹ / ₂	9 ⁷ / ₈	9 ⁷ / ₈	1 ³ / ₁₆	7 ⁸ / ₈	1 ⁷ / ₈	4 ¹ / ₂	4 ³ / ₄	3 ⁷ / ₈	1 ¹ / ₄	11 ¹³ / ₁₆		5 ¹ / ₂		
	60	6 ¹ / ₄	9 ³ / ₄	9 ³ / ₄	3 ⁴ / ₄	3 ⁴ / ₄	3 ³ / ₈	4 ¹ / ₂	4 ³ / ₄	3 ⁷ / ₈	1 ³ / ₈	11 ⁹ / ₁₆		5 ¹ / ₂		
	50	6	9 ³ / ₈	9 ³ / ₈	5 ⁸ / ₈	5 ⁸ / ₈	5 ¹⁶ / ₁₆	4 ¹ / ₂	4 ³ / ₄	3 ⁷ / ₈	1 ¹ / ₁₆	11 ³ / ₈		5 ¹ / ₂		
	40	5 ³ / ₄	9 ¹ / ₂	9 ¹ / ₂	1 ² / ₂	1 ² / ₂	1 ⁴ / ₄	4 ¹ / ₂	4 ³ / ₄	3 ⁷ / ₈	1 ¹⁵ / ₁₆	11 ¹ / ₈		5 ¹ / ₂		

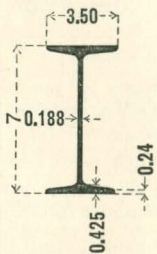
BEAMS-STANDARD MILL

B 39 ☐	21	8	5 ¹ / ₈	5 ⁵ / ₁₆	3 ³ / ₈	3 ³ / ₁₆	2 ³ / ₈		6 ³ / ₈	1 ¹ / ₁₆	9 ¹ / ₂	2	1 ¹ / ₄	3	3 ⁴ / ₄
	19	8	5 ¹ / ₁₆	5 ⁵ / ₁₆	5 ⁵ / ₁₆	3 ³ / ₁₆	2 ³ / ₈		6 ⁵ / ₈	1 ¹ / ₁₆	9 ¹ / ₂	2	1 ¹ / ₄	3	3 ⁴ / ₄
	17	8	5	5 ⁵ / ₁₆	3 ³ / ₁₆	1 ¹ / ₈	2 ³ / ₈		6 ⁵ / ₈	1 ¹ / ₁₆	9 ¹ / ₁₆	2	3 ³ / ₁₆	3	3 ⁴ / ₄

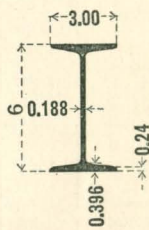
STANDARD MILL BEAMS



☐ B 39 8 x 5

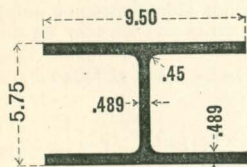


☐ B 42 7 x 3¹/₂



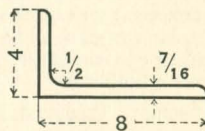
☐ B 41 6 x 3

CB SECTION



☐ CB 61 9¹/₂ x 5³/₄

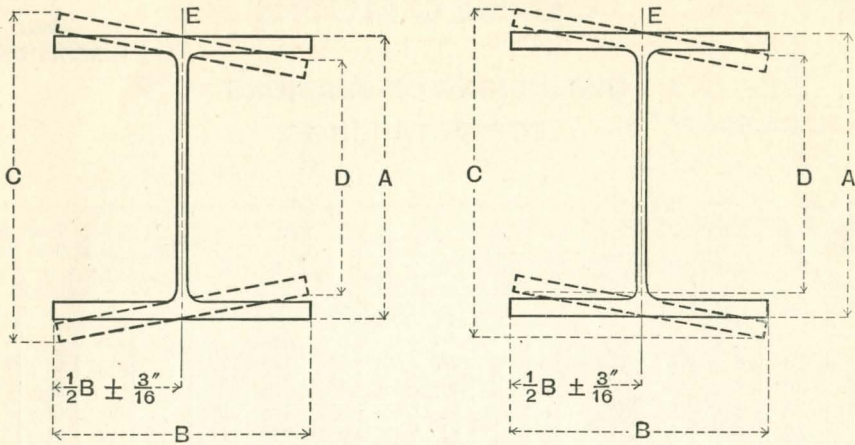
UNEQUAL ANGLE



☐ A 50 7/16 to 1

☐ Carnegie Steel Company only.

TOLERANCES FOR CB SECTIONS



ROLLING TOLERANCES

SIZE, DEPTH	A DEPTH		B WIDTH OF FLANGE		C and D OUT OF SQUARE OR PARALLEL	C MAXIMUM DEPTH AT ANY POINT	E WEB OFF CENTER
	OVER	UNDER	OVER	UNDER			

CUTTING TOLERANCES

SIZE, DEPTH	UP TO 30'-0", INCL.		OVER 30'-0"		SPECIAL TOLERANCES
	OVER	UNDER	OVER	UNDER	
Beams 8" to 24", inclusive	3/8"	3/8"	3/8" plus 1/16" for each 5'-0" or fraction thereof above 30'-0"	3/8"	Where tolerances are shown all over, nothing under, the plus tolerance applying to ordered length is the sum of the plus and minus tolerances shown in this table.
Beams over 24"	1/2"	1/2"	1/2" plus 1/16" for each 5'-0" or fraction thereof above 30'-0"	1/2"	
Columns all Sizes	1/2"	1/2"	1/2" plus 1/16" for each 5'-0" or fraction thereof above 30'-0"	1/2"	

Ends Out of Square: 1/64" per inch of depth or flange width if greater than depth.

Allowance for Milling: For material which is to be milled customer should state on orders whether one or both ends are to be milled, what allowance has been made and whether we are to cut to standard or special tolerances as given above.

We recommend for material to be milled that ordered lengths be made as follows:

For milling one end only: Finished length plus 3/8".

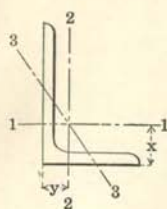
For milling both ends: Finished length plus 1/2".

Camber and Sweep: Tolerances for Beams: 1/8" x $\frac{\text{total length (in feet)}}{\text{ten feet}}$ or 1/2" maximum.

Where sections are specified on orders as columns, the following tolerances will apply:

Lengths up to 30'-0": 1/8" x $\frac{\text{total length (in feet)}}{\text{ten feet}}$.

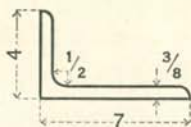
Lengths over 30'-0": Not over 3/8" total.



UNEQUAL ANGLES



ELEMENTS OF SECTIONS



A 60 $\frac{3}{8}$ to 1

Section Index	Size	Thickness	Weight per Foot	Area of Section	Axis 1-1				Axis 2-2				Axis 3-3
					I	S	r	x	I	S	r	y	r min.
	Inches	In.	Lbs.	In. ²	In. ⁴	In. ³	In.	In.	In. ⁴	In. ³	In.	In.	In.
A 60	7 x 4	1	34.0	10.00	47.7	10.8	2.18	2.60	11.2	3.9	1.06	1.10	0.85
		$\frac{15}{16}$	32.1	9.44	45.4	10.3	2.19	2.58	10.7	3.7	1.07	1.08	0.86
		$\frac{7}{8}$	30.2	8.86	42.9	9.7	2.20	2.55	10.2	3.5	1.07	1.05	0.86
		$\frac{11}{16}$	28.2	8.28	40.4	9.0	2.21	2.53	9.6	3.2	1.08	1.03	0.86
		$\frac{3}{4}$	26.2	7.69	37.8	8.4	2.22	2.51	9.1	3.0	1.09	1.01	0.86
		$\frac{11}{16}$	24.2	7.09	35.1	7.8	2.23	2.49	8.5	2.8	1.09	0.99	0.86
		$\frac{5}{8}$	22.1	6.49	32.4	7.1	2.24	2.46	7.8	2.6	1.10	0.96	0.86
		$\frac{9}{16}$	20.0	5.88	29.6	6.5	2.24	2.44	7.2	2.4	1.11	0.94	0.87
		$\frac{1}{2}$	17.9	5.25	26.7	5.8	2.25	2.42	6.5	2.1	1.11	0.92	0.87
		$\frac{7}{16}$	15.8	4.63	23.7	5.1	2.26	2.39	5.8	1.9	1.12	0.89	0.88
$\frac{3}{8}$	13.6	3.99	20.6	4.4	2.27	2.37	5.1	1.6	1.13	0.87	0.88		

NOTE: The 8" x 4" Angle, A 50, shown on page 19 as rolled by Carnegie Steel Company only, will be rolled by Illinois Steel Company also.

SAFE LOADS FOR SECTIONS USED AS BEAMS

Safe Loads on Beams. The following formulas are useful in determining the safe loads for structural steel beams and are based on an allowable unit stress of 18,000 pounds per square inch.

Coefficient of strength, $Q = 12 S$ kips.

Safe uniform load = Q/L kips, with a maximum of $2V$.

Vertical Deflection. When floor beams carry plastered ceilings, the maximum span L for a uniform load = $1.79 d$ for $D_{\max.} = l/360$.

Lateral Deflection. When beams are not supported laterally, the value of f for the compression flange must be reduced:

$$f = \frac{20,000}{1 + \frac{1}{2,000} (l/b)^2} \text{ when } l/b > 15 \text{ but not } > 40$$

The full value of f may be used when l/b is 15 or less.

The maximum allowable ratio of $l/b = 40$.

Value of Web in Resistance to Shear.

$$V_{\max.} = 12 dt \text{ kips} \quad L_{\min., \text{ span limit to develop } V} = \frac{12S}{2V} \text{ kips.}$$

Value of Web in Resistance to Buckling.

Maximum end reaction = $tf_b (B + \frac{d}{4})$ up to $V_{\max.}$ pounds.

B , minimum end bearing to develop $V = \frac{V}{tf_b} - \frac{d}{4} = \frac{12d}{f_b} - \frac{d}{4}$ kips.

$$f_b = \frac{18,000}{1 + \frac{1}{18,000} (l/r)^2} \text{ pounds} \quad l = \frac{d}{2} \quad r^2 = \frac{1}{12} t^2$$

$$f_b = \frac{18,000}{1 + \frac{1}{6,000} (d/t)^2} \text{ pounds.}$$

NOTATIONS USED IN FORMULAS

S	= Section modulus, in inches ³ .
V	= Vertical shear, in kips.
L	= Length of span, in feet.
l	= Length of span, in inches.
B	= Inches of bearing in direction of beam.
b	= Width of flange, in inches.
d	= Depth of section, in inches.
t	= Web thickness, in inches.
f	= Unit stress, in pounds per square inch.
f_b	= Unit resistance to buckling, in pounds per square inch.
r	= Radius of gyration, in inches.
$D_{\max.}$	= Maximum deflection, in inches.
Kip	= 1,000 pounds.

ECONOMY WITH RESPECT TO SECTION MODULUS FOR CB SECTIONS USED AS BEAMS

Section Modulus, Inches ³	CB SECTION—INDEX AND WEIGHT PER FOOT					
	First Selection	Second Selection	Third Selection	Fourth Selection	Fifth Selection	Sixth Selection
1105.1	CB 362 x 300					
1031.2	CB 362 x 280					
951.1	CB 362 x 260					
911.7	CB 362 x 250					
873.6	CB 362 x 240					
835.5	CB 362 x 230					
811.1	CB 362 x 230	CB 332 x 240				
740.6	CB 332 x 220					
704.4	CB 332 x 210					
669.6	CB 332 x 200					
663.6	CB 361 x 194	CB 332 x 200				
649.9	CB 361 x 194	CB 332 x 200	CB 302 x 210			
621.2	CB 361 x 182	CB 332 x 200	CB 302 x 210			
617.6	CB 361 x 182	CB 332 x 200	CB 302 x 200			
586.1	CB 361 x 182	CB 302 x 190				
579.1	CB 361 x 170	CB 302 x 190				
555.2	CB 361 x 170	CB 302 x 180				
541.0	CB 361 x 160	CB 302 x 180				
528.2	CB 361 x 160	CB 302 x 172				
502.9	CB 361 x 150	CB 302 x 172				
492.8	CB 361 x 150	CB 302 x 172	CB 272 x 177			
486.4	CB 361 x 150	CB 331 x 152	CB 302 x 172	CB 272 x 177		
452.9	CB 361 x 150	CB 331 x 152	CB 272 x 163			
446.8	CB 331 x 141	CB 272 x 163				
427.8	CB 331 x 141	CB 272 x 154				
413.5	CB 331 x 132	CB 272 x 154	CB 243 x 160			
402.9	CB 331 x 132	CB 272 x 145	CB 243 x 160			
385.5	CB 331 x 132	CB 272 x 145	CB 243 x 150			
385.1	CB 331 x 125	CB 272 x 145	CB 243 x 150			
379.7	CB 331 x 125	CB 301 x 132	CB 272 x 145	CB 243 x 150		
358.6	CB 331 x 125	CB 301 x 132	CB 243 x 140			
354.6	CB 301 x 124	CB 243 x 140				
330.7	CB 301 x 124	CB 243 x 130				
327.9	CB 301 x 116	CB 242 x 130				
317.2	CB 301 x 116	CB 242 x 130	CB 213 x 142			
299.1	CB 301 x 108	CB 271 x 114	CB 242 x 120	CB 213 x 142		
294.8	CB 301 x 108	CB 271 x 114	CB 242 x 120	CB 213 x 132		
277.2	CB 271 x 106	CB 242 x 120	CB 213 x 132			
274.4	CB 271 x 106	CB 242 x 110	CB 213 x 132			
272.5	CB 271 x 106	CB 242 x 110	CB 213 x 122			
255.3	CB 271 x 98	CB 242 x 110	CB 213 x 122			
249.6	CB 271 x 98	CB 242 x 110	CB 213 x 112			
248.9	CB 271 x 98	CB 242 x 100	CB 213 x 112			
239.0	CB 271 x 98	CB 242 x 100	CB 213 x 112	CB 183 x 124		

ECONOMY WITH RESPECT TO SECTION MODULUS FOR CB SECTIONS USED AS BEAMS

Section Modulus, Inches ³	CB SECTION—INDEX AND WEIGHT PER FOOT					
	First Selection	Second Selection	Third Selection	Fourth Selection	Fifth Selection	Sixth Selection
233.2	CB 271 x 91	CB 242 x 100	CB 213 x 112	CB 183 x 124		
220.9	CB 271 x 91	CB 241 x 94	CB 213 x 112	CB 183 x 124		
220.1	CB 271 x 91	CB 241 x 94	CB 213 x 112	CB 183 x 114		
216.0	CB 271 x 91	CB 241 x 94	CB 213 x 112	CB 183 x 114	CB 145 x 136	
213.1	CB 271 x 91	CB 241 x 94	CB 212 x 103	CB 183 x 114	CB 145 x 136	
204.3	CB 241 x 87	CB 212 x 103	CB 183 x 114	CB 145 x 136		
202.0	CB 241 x 87	CB 212 x 103	CB 183 x 105	CB 145 x 127		
197.4	CB 241 x 87	CB 212 x 96	CB 183 x 105	CB 163 x 114	CB 145 x 127	
189.4	CB 241 x 87	CB 212 x 96	CB 183 x 105	CB 163 x 114	CB 145 x 119	
185.8	CB 241 x 80	CB 212 x 96	CB 183 x 105	CB 163 x 114	CB 145 x 119	
184.4	CB 241 x 80	CB 212 x 96	CB 183 x 96	CB 163 x 114	CB 145 x 119	
182.8	CB 241 x 80	CB 212 x 89	CB 183 x 96	CB 163 x 114	CB 145 x 119	
181.7	CB 241 x 80	CB 212 x 89	CB 183 x 96	CB 163 x 105	CB 145 x 119	
176.3	CB 241 x 80	CB 212 x 89	CB 183 x 96	CB 163 x 105	CB 145 x 111	
170.4	CB 241 x 74	CB 212 x 89	CB 183 x 96	CB 163 x 105	CB 145 x 111	
168.0	CB 241 x 74	CB 212 x 82	CB 183 x 96	CB 163 x 105	CB 145 x 111	
166.1	CB 241 x 74	CB 212 x 82	CB 183 x 96	CB 163 x 96	CB 145 x 111	
163.4	CB 241 x 74	CB 212 x 82	CB 183 x 96	CB 163 x 96	CB 145 x 103	CB 124 x 120
156.1	CB 241 x 74	CB 212 x 82	CB 182 x 85	CB 163 x 96	CB 145 x 103	CB 124 x 120
151.3	CB 241 x 74	CB 212 x 82	CB 182 x 85	CB 163 x 88	CB 145 x 103	CB 124 x 120
150.6	CB 211 x 73	CB 182 x 85	CB 163 x 88	CB 145 x 95	CB 124 x 120	
144.5	CB 211 x 73	CB 182 x 85	CB 163 x 88	CB 145 x 95	CB 124 x 106	
141.7	CB 211 x 73	CB 182 x 77	CB 163 x 88	CB 145 x 95	CB 124 x 106	
139.9	CB 211 x 68	CB 182 x 77	CB 163 x 88	CB 145 x 95	CB 124 x 106	
138.1	CB 211 x 68	CB 182 x 77	CB 145 x 87	CB 124 x 106		
134.7	CB 211 x 68	CB 182 x 77	CB 145 x 87	CB 124 x 99		
130.9	CB 211 x 68	CB 182 x 77	CB 144 x 84	CB 124 x 99		
128.2	CB 211 x 68	CB 182 x 70	CB 144 x 84	CB 124 x 99		
127.8	CB 211 x 63	CB 182 x 70	CB 162 x 78	CB 144 x 84	CB 124 x 99	
125.0	CB 211 x 63	CB 182 x 70	CB 162 x 78	CB 144 x 84	CB 124 x 92	
121.1	CB 211 x 63	CB 182 x 70	CB 162 x 78	CB 144 x 78	CB 124 x 92	
119.3	CB 211 x 59	CB 182 x 70	CB 162 x 78	CB 144 x 78	CB 124 x 92	
117.0	CB 211 x 59	CB 182 x 64	CB 162 x 78	CB 144 x 78	CB 124 x 92	
115.7	CB 211 x 59	CB 182 x 64	CB 162 x 71	CB 144 x 78	CB 124 x 85	
112.3	CB 211 x 59	CB 182 x 64	CB 162 x 71	CB 143 x 74	CB 124 x 85	CB 103 x 100
107.1	CB 211 x 59	CB 182 x 64	CB 162 x 71	CB 143 x 74	CB 124 x 79	CB 103 x 100
104.2	CB 211 x 59	CB 182 x 64	CB 162 x 64	CB 143 x 74	CB 124 x 79	CB 103 x 100
103.0	CB 211 x 59	CB 182 x 64	CB 162 x 64	CB 143 x 68	CB 124 x 79	CB 103 x 100
99.7	CB 211 x 59	CB 182 x 64	CB 162 x 64	CB 143 x 68	CB 124 x 79	CB 103 x 89
98.2	CB 181 x 55	CB 162 x 64	CB 143 x 68	CB 124 x 79	CB 103 x 89	
97.5	CB 181 x 55	CB 162 x 64	CB 143 x 68	CB 124 x 72	CB 103 x 89	
94.1	CB 181 x 55	CB 162 x 58	CB 143 x 68	CB 124 x 72	CB 103 x 89	
92.2	CB 181 x 55	CB 162 x 58	CB 143 x 61	CB 124 x 72	CB 103 x 89	
89.0	CB 181 x 50	CB 162 x 58	CB 143 x 61	CB 124 x 72	CB 103 x 89	

ECONOMY WITH RESPECT TO SECTION MODULUS FOR CB SECTIONS USED AS BEAMS

Section Modulus, Inches ³	CB SECTION—INDEX AND WEIGHT PER FOOT					
	First Selection	Second Selection	Third Selection	Fourth Selection	Fifth Selection	Sixth Selection
88.0	CB 181 x 50	CB 162 x 58	CB 143 x 61	CB 124 x 65	CB 103 x 89	
86.1	CB 181 x 50	CB 162 x 58	CB 143 x 61	CB 124 x 65	CB 103 x 77	
85.8	CB 181 x 50	CB 162 x 58	CB 143 x 61	CB 123 x 64	CB 103 x 77	
85.0	CB 181 x 50	CB 162 x 58	CB 142 x 58	CB 123 x 64	CB 103 x 77	
82.3	CB 181 x 47	CB 162 x 58	CB 142 x 58	CB 123 x 64	CB 103 x 77	
80.7	CB 181 x 47	CB 161 x 50	CB 142 x 58	CB 123 x 64	CB 103 x 77	
80.1	CB 181 x 47	CB 161 x 50	CB 142 x 58	CB 123 x 64	CB 103 x 72	
78.1	CB 181 x 47	CB 161 x 50	CB 142 x 58	CB 123 x 58	CB 103 x 72	
77.8	CB 181 x 47	CB 161 x 50	CB 142 x 53	CB 123 x 58	CB 103 x 72	
73.7	CB 181 x 47	CB 161 x 50	CB 142 x 53	CB 123 x 58	CB 103 x 66	
72.4	CB 161 x 45	CB 142 x 53	CB 123 x 58	CB 103 x 66		
70.7	CB 161 x 45	CB 142 x 53	CB 123 x 53	CB 103 x 66		
70.2	CB 161 x 45	CB 142 x 48	CB 123 x 53	CB 103 x 66		
67.1	CB 161 x 45	CB 142 x 48	CB 123 x 53	CB 103 x 60		
64.7	CB 161 x 45	CB 142 x 48	CB 122 x 50	CB 103 x 60		
64.4	CB 161 x 40	CB 142 x 48	CB 122 x 50	CB 103 x 60		
62.7	CB 161 x 40	CB 142 x 43	CB 122 x 50	CB 103 x 60		
60.7	CB 161 x 40	CB 141 x 42	CB 122 x 50	CB 103 x 60		
60.4	CB 161 x 40	CB 141 x 42	CB 122 x 50	CB 103 x 54	CB 83 x 67	
58.2	CB 161 x 40	CB 141 x 42	CB 122 x 45	CB 103 x 54	CB 83 x 67	
56.3	CB 161 x 36	CB 141 x 42	CB 122 x 45	CB 103 x 54	CB 83 x 67	
54.6	CB 161 x 36	CB 141 x 38	CB 122 x 45	CB 103 x 49	CB 83 x 67	
51.9	CB 161 x 36	CB 141 x 38	CB 122 x 40	CB 103 x 49	CB 83 x 58	
49.1	CB 161 x 36	CB 141 x 38	CB 122 x 40	CB 102 x 45	CB 83 x 58	
48.5	CB 141 x 34	CB 122 x 40	CB 102 x 45	CB 83 x 58		
45.9	CB 141 x 34	CB 121 x 36	CB 102 x 45	CB 83 x 58		
44.5	CB 141 x 34	CB 121 x 36	CB 102 x 41	CB 83 x 58		
43.2	CB 141 x 34	CB 121 x 36	CB 102 x 41	CB 83 x 48		
41.8	CB 141 x 30	CB 121 x 36	CB 102 x 41	CB 83 x 48		
40.7	CB 141 x 30	CB 121 x 32	CB 102 x 41	CB 83 x 48		
39.9	CB 141 x 30	CB 121 x 32	CB 102 x 37	CB 83 x 48		
35.5	CB 121 x 28	CB 102 x 37	CB 83 x 40			
35.0	CB 121 x 28	CB 102 x 33	CB 83 x 40			
31.1	CB 121 x 28	CB 102 x 33	CB 83 x 35			
30.8	CB 121 x 25	CB 101 x 29	CB 83 x 35			
29.3	CB 121 x 25	CB 101 x 29	CB 83 x 33			
27.6	CB 121 x 25	CB 101 x 26	CB 83 x 33			
27.4	CB 121 x 25	CB 101 x 26	CB 83 x 31			
24.1	CB 101 x 23	CB 83 x 31				
23.4	CB 101 x 23	CB 82 x 27				
21.5	CB 101 x 21	CB 82 x 27				
20.8	CB 101 x 21	CB 82 x 24				
15.9	CB 101 x 21	B 39 x 21				
15.1	B 39 x 19					
14.3	B 39 x 17					

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