

Table No. 30.—Shackle-iron.

TABLE OF SAFE-WORKING LOADS FOR SHACKLE-IRON.

(The safe-working load for any shackle is the safe-working load of the iron, or of the pin, whichever is less. (See Table No. 31 and Diagrams Nos. 16 and 17.) The safe-working load for the iron of a shackle having an intermediate gap may be obtained by interpolation. The safe-working load varies inversely as the width of the gap.

Diameter of Shackle-iron, in Inches.	Width of Gap, in Inches.	Working-load in Tons, &c.		Working-load, in Pounds.	Width of Gap, in Inches.	Working-load, in Tons, &c.		Working-load in Pounds.
		T. cwt.	qr. lb.			T. cwt.	qr. lb.	
$\frac{3}{8}$	$\frac{7}{16}$	0 13	3 13	1,553	$\frac{7}{8}$	0 6	3 20	776
$\frac{7}{16}$	$\frac{9}{16}$	0 17	0 14	1,918	$1\frac{1}{8}$	0 8	2 7	959
$\frac{1}{2}$	$\frac{5}{8}$	1 3	0 1	2,577	$1\frac{1}{4}$	0 11	2 0	1,288
$\frac{9}{16}$	$\frac{11}{16}$	1 9	3 3	3,335	$1\frac{3}{8}$	0 14	3 16	1,668
$\frac{5}{8}$	$\frac{3}{4}$	1 17	1 22	4,194	$1\frac{1}{2}$	0 18	2 25	2,097
$\frac{11}{16}$	$\frac{7}{8}$	2 2	2 25	4,785	$1\frac{3}{4}$	1 1	1 12	2,392
$\frac{3}{4}$	$1\frac{1}{16}$	2 11	3 2	5,798	$1\frac{7}{8}$	1 5	3 15	2,899
$\frac{13}{16}$	$1\frac{1}{8}$	3 1	2 22	6,910	2	1 10	3 11	3,455
$\frac{7}{8}$	$1\frac{1}{4}$	3 12	2 3	8,123	$2\frac{1}{8}$	1 16	1 2	4,062
$1\frac{1}{16}$	$1\frac{1}{2}$	3 19	3 7	8,939	$2\frac{3}{8}$	1 19	3 18	4,470
1	$1\frac{3}{8}$	4 12	0 3	10,307	$2\frac{1}{2}$	2 6	0 1	5,153
$1\frac{1}{8}$	$1\frac{5}{8}$	5 19	0 13	13,341	$2\frac{3}{4}$	2 19	2 6	6,670
$1\frac{1}{4}$	$1\frac{7}{8}$	7 3	3 4	16,104	$3\frac{1}{8}$	3 11	3 16	8,052
$1\frac{3}{8}$	$1\frac{9}{8}$	8 17	0 23	19,847	$3\frac{3}{8}$	4 8	2 11	9,923
$1\frac{1}{2}$	$1\frac{7}{4}$	10 7	0 6	23,190	$3\frac{1}{2}$	5 3	2 3	11,595
$1\frac{5}{8}$	2	12 6	3 5	27,641	4	6 3	1 17	13,821
$1\frac{3}{4}$	$2\frac{1}{8}$	14 1	3 8	31,564	$4\frac{3}{8}$	7 0	3 18	15,782
$1\frac{7}{8}$	$2\frac{1}{4}$	16 7	3 16	36,724	$4\frac{1}{2}$	8 3	3 22	18,362
2	$2\frac{3}{8}$	18 8	0 11	41,227	5	9 4	0 5	20,613
$2\frac{1}{8}$	$2\frac{5}{8}$	21 0	1 27	47,095	$5\frac{1}{4}$	10 10	1 0	23,548
$2\frac{1}{4}$	$2\frac{7}{8}$	23 5	3 13	52,177	$5\frac{3}{8}$	11 12	3 21	26,089
$2\frac{3}{8}$	$2\frac{9}{8}$	26 4	2 10	58,754	$5\frac{1}{2}$	13 2	1 5	29,377
$2\frac{1}{2}$	$3\frac{1}{8}$	28 15	0 17	64,417	$6\frac{1}{4}$	14 7	2 8	32,208

Table No. 31.—Shackle-pins.

TABLE OF SAFE-WORKING LOADS FOR THE PINS OF SHACKLES.

(The safe-working load for any shackle is the safe-working load of the pin, or of the iron of the shackle, whichever is less. (See Table No. 30 and Diagrams Nos. 16 and 17.) The safe-working load for a pin in a shackle of an intermediate gap may be obtained by interpolation. The safe-working load varies inversely as the width of the gap.)

Diameter of Pin, in Inches.	Width of Gap equal to Diameter of Pin.			Width of Gap twice the Diameter of Pin.				
	Width of Gap, in Inches.	Working-load, in Tons, &c.	Working-load, in Pounds.	Width of Gap, in Inches.	Working-load, in Tons, &c.	Working-load, in Pounds.		
$\frac{3}{8}$	$\frac{3}{8}$	T. cwt. qr. lb.		$\frac{3}{4}$	T. cwt. qr. lb.			
$\frac{7}{16}$	$\frac{7}{16}$	0 9	1 11	1,047	0 4	2 20	524	
$\frac{1}{2}$	$\frac{1}{2}$	0 12	2 26	1,426	0 6	1 13	713	
$\frac{9}{16}$	$\frac{9}{16}$	0 16	2 16	1,864	1	0 8	1 8	932
$\frac{5}{8}$	$\frac{5}{8}$	1 1	0 6	2,358	$1\frac{1}{8}$	0 10	2 3	1,179
$\frac{11}{16}$	$\frac{11}{16}$	1 6	0 0	2,912	$1\frac{1}{4}$	0 13	0 0	1,456
$\frac{3}{4}$	$\frac{3}{4}$	1 11	1 24	3,524	$1\frac{3}{8}$	0 15	2 26	1,762
$\frac{13}{16}$	$\frac{13}{16}$	1 17	1 22	4,194	$1\frac{1}{2}$	0 18	2 25	2,097
$\frac{7}{8}$	$\frac{7}{8}$	2 3	3 22	4,922	$1\frac{5}{8}$	1 1	3 25	2,461
$1\frac{1}{16}$	$1\frac{1}{16}$	2 10	3 24	5,708	$1\frac{3}{4}$	1 5	1 26	2,854
1	1	2 18	2 1	6,553	$1\frac{7}{8}$	1 9	1 0	3,276
$1\frac{1}{8}$	$1\frac{1}{8}$	3 6	2 8	7,456	2	1 13	1 4	3,728
$1\frac{1}{4}$	$1\frac{1}{4}$	4 4	1 0	9,436	$2\frac{1}{4}$	2 2	0 14	4,718
$1\frac{3}{8}$	$1\frac{3}{8}$	5 4	0 2	11,650	$2\frac{1}{2}$	2 12	0 1	5,825
$1\frac{1}{2}$	$1\frac{1}{2}$	6 5	3 12	14,096	$2\frac{3}{4}$	3 2	3 20	7,048
$1\frac{5}{8}$	$1\frac{5}{8}$	7 9	3 4	16,776	3	3 14	3 16	8,388
$1\frac{3}{4}$	$1\frac{3}{4}$	8 15	3 4	19,688	$3\frac{1}{4}$	4 7	3 16	9,844
$1\frac{7}{8}$	$1\frac{7}{8}$	10 3	3 13	22,833	$3\frac{1}{2}$	5 1	3 20	11,416
$2$	2	11 14	0 4	26,212	$3\frac{3}{4}$	5 17	0 2	13,106
$2\frac{1}{8}$	$2\frac{1}{8}$	13 6	1 4	29,824	4	6 13	0 16	14,912
$2\frac{1}{4}$	$2\frac{1}{4}$	15 0	2 12	33,668	$4\frac{1}{4}$	7 10	1 6	16,834
$2\frac{3}{8}$	$2\frac{3}{8}$	16 17	0 2	37,746	$4\frac{1}{2}$	8 8	2 1	18,873
$2\frac{1}{2}$	$2\frac{1}{2}$	18 15	2 0	42,056	$4\frac{3}{4}$	9 7	3 0	21,028
		20 16	0 8	46,600	5	10 8	0 4	23,300

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