

# Liftcrane Boom Capacities

Meets  
ANSI B30.5  
Requirements

**Boom No. 83 With 48 in. Sheaves**  
**53,000 Lb. Counterweight**  
**360 Degree Rating**

**LIFTING CAPACITIES:** Lifting capacities for various boom lengths and operating radii are for freely suspended loads and do not exceed 75% of a static tipping load. Capacities based on structural competence are denoted by an asterisk (\*). Capacities are not shown for boom positions which, without load, provide less than required ANSI B30.5 backward stability.

Capacities indicated by (b) require 3,900 Lb. minimum weight. Capacities indicated by (c) require 10,000 Lb. minimum weight. Capacities indicated by (d) require 15,000 Lb. minimum weight.

To maintain boom and mast stability at high boom angles, a minimum of 4 parts hoist line is required for capacities denoted by (c) and (d).

Weight of all load blocks, hooks, weight ball, slings, hoist lines, etc., beneath boom point sheaves, is considered part of main boom load. Boom is not to be lowered beyond radii where combined weights are greater than rated capacity. Where no capacity is shown, operation is not intended or approved.

**OPERATING CONDITIONS:** Machine to operate in a level position on a firm uniformly supporting surface with gantry up. Refer to boom rigging **No. A15438** and Wire Rope Specification chart **No. 8474-A**. Crane operator judgment must be used to allow for dynamic load effects of swinging, hoisting or lowering, travel, wind conditions, as well as adverse operating conditions and physical machine depreciation. Refer to Operator's Manual for operating guidelines.

**MACHINE TRAVEL:** Machine to travel on a firm, level and uniformly supporting surface and boom within boom angle range shown in capacity chart. Refer to Maximum Allowable Travel Specification chart **No. 8475-A**.

**OPERATING RADIUS:** Operating radius is horizontal distance from axis of rotation to center of vertical hoist line or load block. Boom angle is angle between horizontal and centerline of boom butt and inserts, and is an indication of operating radius. In all cases, operating radius shall govern capacity.

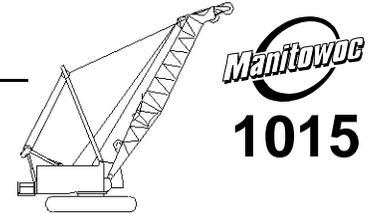
**BOOM POINT ELEVATION:** Boom point elevation is vertical distance from ground level to centerline of boom point shaft.

**MACHINE EQUIPMENT:** Machine equipped with 23 Ft. 6 in. extendible crawlers, 39-3/8 in. treads, 9 Ft. 7 in. gantry, 25 Ft. live mast, 12 part boom hoist reeving, two 1-1/2 in. pendants, two 48 in. sheaves in boom point and 53,000 Lb. counterweight.

<b>Auxiliary Drum Deduct</b>
Deduct 2,000 Lbs. from boom capacities when boom butt is equipped with auxiliary drum.

Boom Length Lifted Unassisted Over Front, Side or Rear = 120 Ft.
Load block on ground at start.

Upper boom point and jib cannot be attached.



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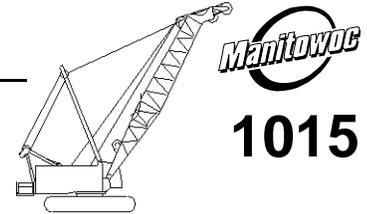
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**1015**

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
<b>50 Ft. Boom</b>				
14	82.0	57.4		264,600 *d
15	80.8	57.2		247,300 *d
16	79.6	57.0		242,700 c
17	78.5	56.7		217,700 c
18	77.3	56.5		197,200 c
19	76.1	56.2		180,100 c
20	74.9	55.8		165,600 b
22	72.5	55.2		142,400 b
24	70.0	54.4		124,500 b
26	67.5	53.5		110,400
28	64.9	52.5		98,900
30	62.3	51.3		89,500
32	59.6	50.1		81,500
34	56.8	48.7		74,600
36	53.9	47.2		68,700
38	50.9	45.5		63,600
40	47.8	43.5		59,100
45	38.9	37.7	38,800	49,700
50	27.6	29.1	33,000	42,400
<b>60 Ft. Boom</b>				
15	82.4	67.4		249,200 *d
16	81.4	67.2		243,400 c
17	80.4	67.0		218,300 c
18	79.4	66.8		197,700 c
19	78.5	66.5		180,600 c
20	77.5	66.3		166,000 b
22	75.5	65.7		142,700 b
24	73.5	65.0		124,800 b
26	71.4	64.3		110,600
28	69.4	63.5		99,200
30	67.3	62.6		89,700
32	65.2	61.6		81,700
34	63.0	60.5		74,800
36	60.8	59.4		68,900
38	58.5	58.1		63,800
40	56.2	56.7		59,300
45	50.0	52.6	39,000	50,000
50	43.2	47.4	33,300	42,800
55	35.2	40.7	28,700	37,100
60	24.9	31.2	24,900	32,300

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
<b>70 Ft. Boom</b>				
16	82.6	77.3		243,600 c
17	81.8	77.2		218,500 c
18	81.0	77.0		197,900 c
19	80.1	76.8		180,700 c
20	79.3	76.6		166,200 b
22	77.6	76.1		142,800 b
24	75.9	75.5		124,900 b
26	74.2	74.9		110,700
28	72.5	74.2		99,200
30	70.7	73.5		89,700
32	69.0	72.7		81,700
34	67.2	71.8		74,900
36	65.4	70.8		69,000
38	63.5	69.8		63,900
40	61.6	68.6		59,300
45	56.8	65.4	39,100	50,100
50	51.6	61.5	33,400	43,000
55	45.9	56.8	28,900	37,300
60	39.7	51.0	25,200	32,600
65	32.3	43.5	22,000	28,700
70	22.8	33.1	19,300	25,400
<b>80 Ft. Boom</b>				
17	82.8	87.3		217,500 c
18	82.1	87.1		197,000 c
19	81.4	87.0		179,800 b
20	80.7	86.8		165,300 b
22	79.2	86.3		142,000 b
24	77.7	85.9		124,100
26	76.2	85.3		110,000
28	74.7	84.8		98,500
30	73.2	84.1		89,000
32	71.7	83.4		81,000
34	70.2	82.7		74,200
36	68.6	81.8		68,400
38	67.1	80.9		63,200
40	65.5	80.0	45,600	58,700
45	61.4	77.3	38,500	49,500
50	57.2	74.1	32,900	42,400
55	52.7	70.3	28,400	36,800
60	47.9	65.9	24,700	32,200
65	42.7	60.7	21,700	28,400
70	36.9	54.2	19,000	25,100
75	30.1	46.1	16,700	22,300
80	21.2	34.8	14,700	19,900



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<b>90 Ft. Boom</b>				
18	83.0	97.3		196,900 <b>c</b>
19	82.4	97.1		179,800 <b>b</b>
20	81.7	96.9		165,200 <b>b</b>
22	80.4	96.6		141,800 <b>b</b>
24	79.1	96.1		124,000
26	77.8	95.7		109,800
28	76.5	95.2		98,300
30	75.2	94.6		88,800
32	73.8	94.0		80,800
34	72.5	93.3		74,000
36	71.1	92.6		68,200
38	69.8	91.8		63,000
40	68.4	91.0	45,400	58,500
45	64.9	88.7	38,200	49,300
50	61.3	85.9	32,700	42,200
55	57.5	82.8	28,200	36,600
60	53.6	79.1	24,600	32,000
65	49.4	74.9	21,500	28,200
70	44.9	70.0	18,900	25,000
75	40.1	64.2	16,600	22,300
80	34.6	57.3	14,700	19,900
85	28.2	48.6	12,900	17,700
90	19.9	36.5	11,300	15,800
<b>100 Ft. Boom</b>				
20	82.5	107.1		165,200 <b>b</b>
22	81.4	106.7		141,800 <b>b</b>
24	80.2	106.4		123,800
26	79.0	105.9		109,600
28	77.9	105.5		98,100
30	76.7	105.0		88,600
32	75.5	104.4		80,600
34	74.3	103.8		73,800
36	73.1	103.2		67,900
38	71.9	102.5	48,500	62,800
40	70.7	101.8	45,000	58,200
45	67.6	99.7	37,900	49,000
50	64.4	97.3	32,300	41,900
55	61.1	94.6	27,900	36,300
60	57.8	91.5	24,200	31,700
65	54.2	87.9	21,100	27,900
70	50.6	83.8	18,500	24,700
75	46.6	79.2	16,300	21,900
80	42.5	73.9	14,300	19,600
85	37.9	67.6	12,600	17,500
90	32.7	60.2	11,100	15,600
95	26.7	50.9	9,700	13,900
100	18.8	38.0	8,400	12,400

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
<b>110 Ft. Boom</b>				
22	82.2	116.9		141,700 <b>b</b>
24	81.1	116.5		123,700
26	80.1	116.2		109,500
28	79.0	115.7		98,000
30	77.9	115.3		88,500
32	76.9	114.8		80,500
34	75.8	114.2		73,700
36	74.7	113.7		67,800
38	73.6	113.1	48,400	62,600
40	72.5	112.4	44,900	58,100
45	69.7	110.6	37,800	48,900
50	66.9	108.4	32,200	41,800
55	64.0	106.0	27,800	36,200
60	61.0	103.2	24,100	31,600
65	58.0	100.2	21,100	27,800
70	54.8	96.7	18,500	24,600
75	51.5	92.7	16,200	21,900
80	48.0	88.3	14,300	19,500
85	44.3	83.2	12,600	17,500
90	40.3	77.5	11,100	15,600
95	36.0	70.8	9,700	14,000
100	31.1	62.9	8,500	12,500
105	25.3	53.0	7,400	11,100
110	17.8	39.5	6,300	9,900
<b>120 Ft. Boom</b>				
22	82.8	127.0		141,600
24	81.9	126.7		123,600
26	80.9	126.3		109,300
28	79.9	125.9		97,800
30	78.9	125.5		88,300
32	78.0	125.1		80,200
34	77.0	124.6		73,400
36	76.0	124.1	51,900	67,500
38	75.0	123.5	48,000	62,300
40	74.0	122.9	44,500	57,800
45	71.5	121.2	37,400	48,600
50	68.9	119.3	31,800	41,500
55	66.3	117.1	27,300	35,800
60	63.7	114.7	23,700	31,300
65	60.9	111.9	20,600	27,500
70	58.1	108.8	18,100	24,300
75	55.2	105.4	15,800	21,500
80	52.2	101.6	13,900	19,100
85	49.1	97.3	12,200	17,100
90	45.8	92.5	10,700	15,200
95	42.3	87.1	9,300	13,600
100	38.5	80.9	8,100	12,100
105	34.4	73.9	7,000	10,800
110	29.7	65.5	6,000	9,600
115	24.2	55.1	5,100	8,500
120	17.0	40.9	4,200	7,400