

Liftcrane Boom Capacities

Meets
ANSI B30.5
Requirements

New York City Code
Boom No. 83A
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).

Upper boom point operation not allowed on capacities denoted by (b), (c) or (d).

Upper boom point capacity for liftcrane service is 66,000 Lbs. with single part 38 mm whip line. Upper boom point capacity for liftcrane service is 44,000 Lbs. with single part 32 mm whip line or 66,000 Lbs. with two part whip line. When boom butt mounted auxiliary drum equipped for 28 mm wire rope is used, capacity with single part whip line is 33,000 Lbs. or 66,000 Lbs. with two part whip line. In all cases, upper boom point capacities cannot exceed those listed for main boom capacity.

Weight of upper boom point, jib, all load blocks, hooks, weight ball, slings, hoist lines, etc., beneath boom and jib 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. A14196** and Wire Rope Specification chart **No. 8689-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. 8692-A**.

Consult jib chart for jib capacities. Upper boom point and wire rope guard (**No. A13283**) on boom top must be removed when jib is attached. Wire rope guard (**No. A13283**) on boom top must be removed before use of this chart.

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 and 53,000 Lb. counterweight.

Deduct From Capacities When Jib Is Attached	
Jib Length	Jib No. 134A
20 Ft.	4,300 Lbs.
30 Ft.	5,100 Lbs.
40 Ft.	6,100 Lbs.
50 Ft.	7,100 Lbs.
60 Ft.	7,800 Lbs.
70 Ft.	8,900 Lbs.

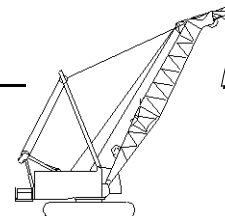
Upper Boom Point Deduct
Deduct 1,300 Lbs. from capacities when upper boom point is attached.

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

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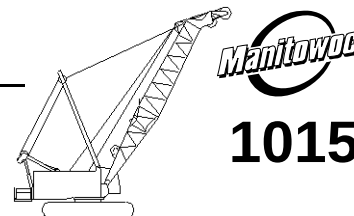
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Maximum Boom and Jib Lengths Lifted Unassisted							
Over Front of Blocked Crawlers		Over Rear of Blocked Crawlers		Over Side of Extended Crawlers		Over Side of Retracted Crawlers	
Boom Length	Jib No. 134A	Boom Length	Jib No. 134A	Boom Length	Jib No. 134A	Boom Length	Jib No. 134A
(a) 190 Ft.	—	170 Ft.	—	150 Ft.	—	130 Ft.	—
180 Ft.	—	160 Ft.	30 Ft.	140 Ft.	20 Ft.	120 Ft.	20 Ft.
170 Ft.	—	150 Ft.	60 Ft.	130 Ft.	40 Ft.	110 Ft.	50 Ft.
160 Ft.	40 Ft.	140 Ft.	70 Ft.	120 Ft.	70 Ft.	100 Ft.	70 Ft.
150 Ft.	70 Ft.						

Load block, hook and weight ball on ground at start. (a) Upper boom point cannot be attached on 190 Ft. boom.

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
50 Ft. Boom				
14	82.0	57.4		264,600 *d
15	80.8	57.2		250,700 *d
16	79.6	57.0		243,100 c
17	78.5	56.7		218,200 c
18	77.3	56.5		197,700 c
19	76.1	56.2		180,600 c
20	74.9	55.8		166,100 b
22	72.5	55.2		142,800 b
24	70.0	54.4		125,000 b
26	67.5	53.5		110,900
28	64.9	52.5		99,400
30	62.3	51.3		90,000
32	59.6	50.1		82,000
34	56.8	48.7		75,200
36	53.9	47.2		69,300
38	50.9	45.5		64,100
40	47.8	43.5		59,600
45	38.9	37.7	39,300	50,300
50	27.6	29.1	33,600	43,000

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
60 Ft. Boom				
15	82.4	67.4		252,800 *d
16	81.4	67.2		243,800 c
17	80.4	67.0		218,700 c
18	79.4	66.8		198,200 c
19	78.5	66.5		181,000 c
20	77.5	66.3		166,500 b
22	75.5	65.7		143,200 b
24	73.5	65.0		125,300 b
26	71.4	64.3		111,100
28	69.4	63.5		99,700
30	67.3	62.6		90,200
32	65.2	61.6		82,200
34	63.0	60.5		75,300
36	60.8	59.4		69,500
38	58.5	58.1		64,300
40	56.2	56.7		59,800
45	50.0	52.6	39,500	50,500
50	43.2	47.4	33,900	43,300
55	35.2	40.7	29,300	37,600
60	24.9	31.2	25,400	32,800


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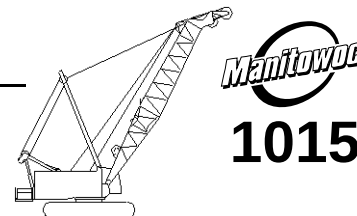
Boom No. 83A

53,000 Lb. Counterweight

360 Degree Rating

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
70 Ft. Boom				
16	82.6	77.3		244,000 c
17	81.8	77.2		218,900 c
18	81.0	77.0		198,400 c
19	80.1	76.8		181,200 c
20	79.3	76.6		166,600 b
22	77.6	76.1		143,300 b
24	75.9	75.5		125,400 b
26	74.2	74.9		111,200
28	72.5	74.2		99,700
30	70.7	73.5		90,200
32	69.0	72.7		82,200
34	67.2	71.8		75,400
36	65.4	70.8		69,500
38	63.5	69.8		64,400
40	61.6	68.6		59,900
45	56.8	65.4	39,600	50,600
50	51.6	61.5	34,000	43,500
55	45.9	56.8	29,500	37,800
60	39.7	51.0	25,700	33,200
65	32.3	43.5	22,600	29,300
70	22.8	33.1	19,800	25,900
80 Ft. Boom				
17	82.8	87.3		218,000 c
18	82.1	87.1		197,400 c
19	81.4	87.0		180,300 b
20	80.7	86.8		165,700 b
22	79.2	86.3		142,400 b
24	77.7	85.9		124,600
26	76.2	85.3		110,400
28	74.7	84.8		99,000
30	73.2	84.1		89,500
32	71.7	83.4		81,500
34	70.2	82.7		74,700
36	68.6	81.8		68,900
38	67.1	80.9		63,800
40	65.5	80.0	46,100	59,200
45	61.4	77.3	39,000	50,000
50	57.2	74.1	33,400	43,000
55	52.7	70.3	29,000	37,300
60	47.9	65.9	25,300	32,700
65	42.7	60.7	22,200	28,900
70	36.9	54.2	19,600	25,700
75	30.1	46.1	17,300	22,900
80	21.2	34.8	15,200	20,400

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
90 Ft. Boom				
18	83.0	97.3		197,400 c
19	82.4	97.1		180,200 b
20	81.7	96.9		165,600 b
22	80.4	96.6		142,300 b
24	79.1	96.1		124,400
26	77.8	95.7		110,300
28	76.5	95.2		98,800
30	75.2	94.6		89,300
32	73.8	94.0		81,400
34	72.5	93.3		74,600
36	71.1	92.6		68,700
38	69.8	91.8		63,600
40	68.4	91.0	45,900	59,100
45	64.9	88.7	38,800	49,900
50	61.3	85.9	33,200	42,800
55	57.5	82.8	28,800	37,200
60	53.6	79.1	25,100	32,600
65	49.4	74.9	22,000	28,800
70	44.9	70.0	19,400	25,600
75	40.1	64.2	17,200	22,800
80	34.6	57.3	15,200	20,400
85	28.2	48.6	13,500	18,300
90	19.9	36.5	11,900	16,400
100 Ft. Boom				
20	82.5	107.1		165,700 b
22	81.4	106.7		142,200 b
24	80.2	106.4		124,300
26	79.0	105.9		110,100
28	77.9	105.5		98,600
30	76.7	105.0		89,100
32	75.5	104.4		81,100
34	74.3	103.8		74,300
36	73.1	103.2		68,400
38	71.9	102.5	49,000	63,300
40	70.7	101.8	45,600	58,800
45	67.6	99.7	38,400	49,500
50	64.4	97.3	32,800	42,500
55	61.1	94.6	28,400	36,800
60	57.8	91.5	24,700	32,200
65	54.2	87.9	21,700	28,400
70	50.6	83.8	19,100	25,200
75	46.6	79.2	16,800	22,500
80	42.5	73.9	14,900	20,100
85	37.9	67.6	13,200	18,000
90	32.7	60.2	11,600	16,100
95	26.7	50.9	10,200	14,500
100	18.8	38.0	9,000	12,900



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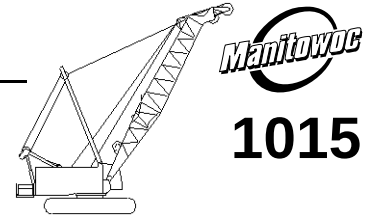
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Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
110 Ft. Boom				
22	82.2	116.9		142,100 b
24	81.1	116.5		124,200
26	80.1	116.2		110,000
28	79.0	115.7		98,500
30	77.9	115.3		89,000
32	76.9	114.8		81,000
34	75.8	114.2		74,200
36	74.7	113.7		68,300
38	73.6	113.1	48,900	63,200
40	72.5	112.4	45,400	58,700
45	69.7	110.6	38,300	49,400
50	66.9	108.4	32,700	42,400
55	64.0	106.0	28,300	36,700
60	61.0	103.2	24,600	32,200
65	58.0	100.2	21,600	28,400
70	54.8	96.7	19,000	25,200
75	51.5	92.7	16,800	22,400
80	48.0	88.3	14,800	20,100
85	44.3	83.2	13,100	18,000
90	40.3	77.5	11,600	16,200
95	36.0	70.8	10,300	14,500
100	31.1	62.9	9,100	13,000
105	25.3	53.0	7,900	11,700
110	17.8	39.5	6,900	10,400
120 Ft. Boom				
22	82.8	127.0		142,000 b
24	81.9	126.7		124,100
26	80.9	126.3		109,800
28	79.9	125.9		98,300
30	78.9	125.5		88,800
32	78.0	125.1		80,700
34	77.0	124.6		73,900
36	76.0	124.1	52,500	68,000
38	75.0	123.5	48,500	62,900
40	74.0	122.9	45,100	58,300
45	71.5	121.2	37,900	49,100
50	68.9	119.3	32,300	42,000
55	66.3	117.1	27,900	36,400
60	63.7	114.7	24,200	31,800
65	60.9	111.9	21,200	28,000
70	58.1	108.8	18,600	24,800
75	55.2	105.4	16,400	22,100
80	52.2	101.6	14,400	19,700
85	49.1	97.3	12,700	17,600
90	45.8	92.5	11,200	15,800
95	42.3	87.1	9,900	14,200
100	38.5	80.9	8,700	12,700
105	34.4	73.9	7,600	11,400
110	29.7	65.5	6,600	10,200
115	24.2	55.1	5,600	9,000
120	17.0	40.9	4,800	8,000

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
130 Ft. Boom				
24	82.5	136.8		123,800
26	81.6	136.5		109,500
28	80.7	136.1		98,000
30	79.8	135.7		88,400
32	78.9	135.3		80,400
34	78.0	134.9		73,600
36	77.1	134.4	52,100	67,700
38	76.2	133.9	48,200	62,500
40	75.3	133.3	44,700	58,000
45	73.0	131.8	37,500	48,700
50	70.6	130.1	32,000	41,600
55	68.3	128.1	27,500	36,000
60	65.9	125.8	23,900	31,400
65	63.4	123.3	20,800	27,600
70	60.9	120.6	18,200	24,400
75	58.3	117.5	16,000	21,700
80	55.6	114.1	14,100	19,300
85	52.9	110.3	12,400	17,300
90	50.0	106.2	10,900	15,400
95	47.0	101.6	9,500	13,800
100	43.9	96.5	8,300	12,400
105	40.5	90.7	7,300	11,100
110	36.9	84.2	6,300	9,900
115	32.9	76.8	5,400	8,800
120	28.5	68.0	4,500	7,800
125	23.2	57.1		6,800
130	16.3	42.2		5,900



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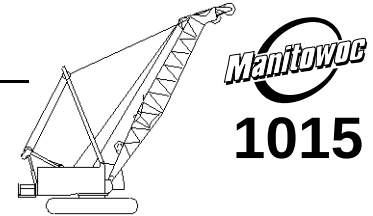
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140 Ft. Boom				
24	83.0	146.9		123,600
26	82.2	146.6		109,300
28	81.4	146.3		97,800
30	80.5	145.9		88,200
32	79.7	145.5		80,100
34	78.9	145.1	56,200	73,300
36	78.0	144.7	51,700	67,300
38	77.2	144.2	47,800	62,200
40	76.4	143.7	44,300	57,600
45	74.2	142.3	37,100	48,400
50	72.1	140.7	31,500	41,300
55	69.9	138.8	27,100	35,600
60	67.7	136.8	23,400	31,000
65	65.4	134.5	20,400	27,200
70	63.2	132.0	17,800	24,000
75	60.8	129.2	15,500	21,300
80	58.4	126.2	13,600	18,900
85	55.9	122.8	11,900	16,800
90	53.4	119.1	10,400	15,000
95	50.8	115.1	9,100	13,400
100	48.0	110.7	7,900	11,900
105	45.2	105.7	6,800	10,600
110	42.2	100.3	5,800	9,400
115	38.9	94.2	4,900	8,400
120	35.5	87.4	4,100	7,400
125	31.7	79.6		6,400
130	27.4	70.3		5,600
135	22.3	59.0		4,800
140	15.6	43.5		4,000

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
150 Ft. Boom				
26	82.7	156.7		109,000
28	82.0	156.4		97,500
30	81.2	156.1		87,900
32	80.4	155.7		79,800
34	79.6	155.3	55,900	73,000
36	78.9	154.9	51,400	67,100
38	78.1	154.5	47,500	61,900
40	77.3	154.0	44,000	57,400
45	75.3	152.7	36,800	48,100
50	73.3	151.2	31,300	41,000
55	71.3	149.5	26,800	35,300
60	69.3	147.6	23,100	30,800
65	67.2	145.5	20,100	27,000
70	65.1	143.2	17,500	23,800
75	62.9	140.7	15,300	21,000
80	60.8	137.9	13,400	18,700
85	58.5	134.8	11,700	16,600
90	56.2	131.5	10,200	14,800
95	53.9	127.9	8,900	13,200
100	51.4	123.9	7,700	11,700
105	48.9	119.6	6,600	10,400
110	46.3	114.9	5,600	9,200
115	43.5	109.7	4,700	8,200
120	40.6	104.0		7,200
125	37.5	97.6		6,300
130	34.2	90.4		5,400
135	30.5	82.2		4,700



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160 Ft. Boom				
28	82.5	166.5		97,200
30	81.7	166.2		87,600
32	81.0	165.9	60,700	79,600
34	80.3	165.5	55,500	72,700
36	79.6	165.1	51,000	66,700
38	78.8	164.7	47,100	61,600
40	78.1	164.3	43,600	57,000
45	76.3	163.1	36,400	47,700
50	74.4	161.7	30,800	40,600
55	72.5	160.1	26,400	34,900
60	70.6	158.3	22,700	30,300
65	68.7	156.4	19,600	26,500
70	66.7	154.2	17,100	23,300
75	64.8	151.9	14,800	20,600
80	62.8	149.3	12,900	18,200
85	60.7	146.5	11,200	16,200
90	58.6	143.5	9,700	14,300
95	56.5	140.2	8,400	12,700
100	54.3	136.6	7,200	11,300
105	52.0	132.8	6,100	10,000
110	49.7	128.6	5,200	8,800
115	47.2	124.0	4,300	7,700
120	44.7	119.0		6,700
125	42.1	113.5		5,800
130	39.3	107.5		5,000
135	36.3	100.8		4,200
170 Ft. Boom				
28	82.9	176.6		96,900
30	82.2	176.3		87,300
32	81.5	176.0	60,300	79,200
34	80.9	175.7	55,100	72,300
36	80.2	175.3	50,600	66,400
38	79.5	174.9	46,700	61,200
40	78.8	174.5	43,200	56,600
45	77.1	173.4	36,000	47,300
50	75.3	172.1	30,400	40,200
55	73.6	170.6	25,900	34,500
60	71.8	168.9	22,300	29,900
65	70.0	167.1	19,200	26,100
70	68.2	165.1	16,600	22,900
75	66.4	163.0	14,400	20,200
80	64.5	160.6	12,500	17,800
85	62.6	158.0	10,800	15,700
90	60.7	155.2	9,300	13,900
95	58.7	152.2	8,000	12,300
100	56.7	148.9	6,800	10,900
105	54.6	145.4	5,700	9,500
110	52.5	141.6	4,700	8,400
115	50.3	137.5		7,300
120	48.1	133.0		6,300
125	45.7	128.2		5,400
130	43.3	122.9		4,600

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
180 Ft. Boom				
30	82.7	186.4	65,900	87,000
32	82.0	186.1	59,900	78,900
34	81.4	185.8	54,700	72,000
36	80.7	185.5	50,200	66,000
38	80.1	185.1	46,300	60,800
40	79.4	184.7	42,800	56,300
45	77.8	183.6	35,600	47,000
50	76.2	182.4	30,000	39,800
55	74.5	181.0	25,500	34,100
60	72.9	179.5	21,800	29,500
65	71.2	177.8	18,700	25,700
70	69.5	175.9	16,200	22,500
75	67.8	173.9	13,900	19,700
80	66.0	171.7	12,000	17,300
85	64.2	169.3	10,300	15,300
90	62.5	166.7	8,800	13,400
95	60.6	163.9	7,500	11,800
100	58.8	160.8	6,300	10,400
105	56.9	157.6	5,200	9,100
110	54.9	154.1	4,200	7,900
115	52.9	150.4		6,800
120	50.9	146.3		5,800
125	48.8	142.0		5,000
130	46.6	137.3		4,100
190 Ft. Boom				
32	82.4	196.3	59,500	66,000 *
34	81.8	196.0	54,400	66,000 *
36	81.2	195.6	49,900	65,700
38	80.6	195.3	45,900	60,500
40	80.0	194.9	42,400	55,900
45	78.5	193.9	35,200	46,600
50	76.9	192.7	29,600	39,400
55	75.4	191.4	25,100	33,800
60	73.8	190.0	21,500	29,200
65	72.2	188.4	18,400	25,300
70	70.6	186.6	15,800	22,100
75	69.0	184.7	13,600	19,400
80	67.4	182.6	11,700	17,000
85	65.7	180.4	10,000	14,900
90	64.0	177.9	8,500	13,100
95	62.3	175.3	7,200	11,500
100	60.6	172.5	6,000	10,100
105	58.8	169.5	4,900	8,800
110	57.0	166.3		7,600
115	55.2	162.8		6,500
120	53.3	159.1		5,500
125	51.4	155.2		4,600