

1015

Liftcrane Boom Capacities

Meets
ANSI B30.5
Requirements

Boom No. 83
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. A00005** 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 operators 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 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.

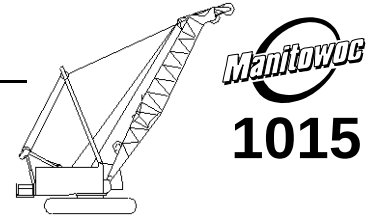
Auxiliary Drum Deduct

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

Consult jib chart for jib capacities. Upper boom point must be removed when jib is attached.

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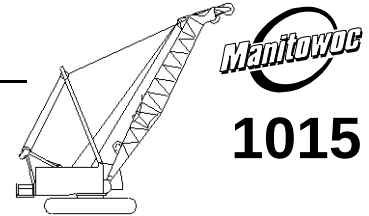
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Maximum Boom and Jib Lengths Lifted Unassisted							
Over Front of Blocked Crawlers		Over Rear of Blocked Crawlers		Over Side of Extended Crawlers		Over Side of Retracted Crawlers	
Boom Length	Jib No. 134A	Boom Length	Jib No. 134A	Boom Length	Jib No. 134A	Boom Length	Jib No. 134A
(a) 200 Ft.	—	180 Ft.	—	160 Ft.	—	130 Ft.	—
190 Ft.	—	170 Ft.	20 Ft.	150 Ft.	—	120 Ft.	30 Ft.
180 Ft.	—	160 Ft.	40 Ft.	140 Ft.	30 Ft.	110 Ft.	60 Ft.
170 Ft.	30 Ft.	150 Ft.	70 Ft.	130 Ft.	50 Ft.	100 Ft.	70 Ft.
160 Ft.	50 Ft.			120 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 200 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		252,700 *d
16	79.6	57.0		243,200 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		142,900 b
24	70.0	54.4		125,000 b
26	67.5	53.5		110,900
28	64.9	52.5		99,500
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		64,200
40	47.8	43.5		59,600
45	38.9	37.7	39,400	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		254,900 *d
16	81.4	67.2		243,800 c
17	80.4	67.0		218,800 c
18	79.4	66.8		198,200 c
19	78.5	66.5		181,100 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		111,200
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		75,400
36	60.8	59.4		69,500
38	58.5	58.1		64,400
40	56.2	56.7		59,800
45	50.0	52.6	39,600	50,600
50	43.2	47.4	33,900	43,400
55	35.2	40.7	29,400	37,700
60	24.9	31.2	25,500	32,900



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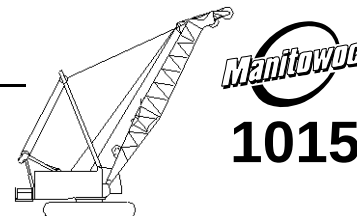
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70 Ft. Boom				
16	82.6	77.3		244,100 c
17	81.8	77.2		219,000 c
18	81.0	77.0		198,400 c
19	80.1	76.8		181,200 c
20	79.3	76.6		166,700 b
22	77.6	76.1		143,300 b
24	75.9	75.5		125,400 b
26	74.2	74.9		111,300
28	72.5	74.2		99,800
30	70.7	73.5		90,300
32	69.0	72.7		82,300
34	67.2	71.8		75,500
36	65.4	70.8		69,600
38	63.5	69.8		64,500
40	61.6	68.6		59,900
45	56.8	65.4	39,700	50,700
50	51.6	61.5	34,100	43,600
55	45.9	56.8	29,500	37,900
60	39.7	51.0	25,800	33,200
65	32.3	43.5	22,600	29,300
70	22.8	33.1	19,900	26,000
80 Ft. Boom				
17	82.8	87.3		218,000 c
18	82.1	87.1		197,500 c
19	81.4	87.0		180,300 b
20	80.7	86.8		165,800 b
22	79.2	86.3		142,500 b
24	77.7	85.9		124,600
26	76.2	85.3		110,500
28	74.7	84.8		99,100
30	73.2	84.1		89,600
32	71.7	83.4		81,600
34	70.2	82.7		74,800
36	68.6	81.8		69,000
38	67.1	80.9		63,800
40	65.5	80.0	46,200	59,300
45	61.4	77.3	39,100	50,100
50	57.2	74.1	33,500	43,100
55	52.7	70.3	29,000	37,400
60	47.9	65.9	25,400	32,800
65	42.7	60.7	22,300	29,000
70	36.9	54.2	19,700	25,800
75	30.1	46.1	17,400	23,000
80	21.2	34.8	15,300	20,500

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		180,300 b
20	81.7	96.9		165,700 b
22	80.4	96.6		142,400 b
24	79.1	96.1		124,500
26	77.8	95.7		110,400
28	76.5	95.2		98,900
30	75.2	94.6		89,400
32	73.8	94.0		81,400
34	72.5	93.3		74,600
36	71.1	92.6		68,800
38	69.8	91.8		63,700
40	68.4	91.0	46,000	59,200
45	64.9	88.7	38,900	50,000
50	61.3	85.9	33,300	42,900
55	57.5	82.8	28,900	37,300
60	53.6	79.1	25,200	32,700
65	49.4	74.9	22,100	28,900
70	44.9	70.0	19,500	25,700
75	40.1	64.2	17,300	22,900
80	34.6	57.3	15,300	20,500
85	28.2	48.6	13,600	18,400
90	19.9	36.5	12,000	16,500
100 Ft. Boom				
20	82.5	107.1		165,700 b
22	81.4	106.7		142,300 b
24	80.2	106.4		124,400
26	79.0	105.9		110,200
28	77.9	105.5		98,700
30	76.7	105.0		89,200
32	75.5	104.4		81,200
34	74.3	103.8		74,400
36	73.1	103.2		68,500
38	71.9	102.5	49,100	63,400
40	70.7	101.8	45,700	58,900
45	67.6	99.7	38,500	49,700
50	64.4	97.3	33,000	42,600
55	61.1	94.6	28,500	36,900
60	57.8	91.5	24,800	32,400
65	54.2	87.9	21,800	28,600
70	50.6	83.8	19,200	25,300
75	46.6	79.2	16,900	22,600
80	42.5	73.9	15,000	20,200
85	37.9	67.6	13,300	18,100
90	32.7	60.2	11,700	16,300
95	26.7	50.9	10,400	14,600
100	18.8	38.0	9,100	13,100



Liftcrane Boom Capacities

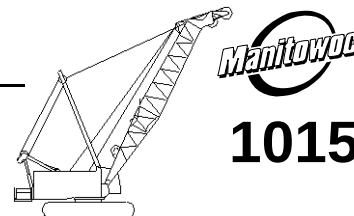
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Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
110 Ft. Boom				
22	82.2	116.9		142,500 b
24	81.1	116.5		124,600
26	80.1	116.2		110,400
28	79.0	115.7		98,900
30	77.9	115.3		89,400
32	76.9	114.8		81,400
34	75.8	114.2		74,600
36	74.7	113.7		68,800
38	73.6	113.1	49,400	63,600
40	72.5	112.4	45,900	59,100
45	69.7	110.6	38,800	49,900
50	66.9	108.4	33,200	42,800
55	64.0	106.0	28,800	37,200
60	61.0	103.2	25,100	32,700
65	58.0	100.2	22,100	28,900
70	54.8	96.7	19,500	25,700
75	51.5	92.7	17,300	23,000
80	48.0	88.3	15,400	20,600
85	44.3	83.2	13,700	18,500
90	40.3	77.5	12,200	16,700
95	36.0	70.8	10,800	15,000
100	31.1	62.9	9,600	13,600
105	25.3	53.0	8,500	12,200
110	17.8	39.5	7,400	11,000

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
120 Ft. Boom				
22	82.8	127.0		142,500
24	81.9	126.7		124,500
26	80.9	126.3		110,300
28	79.9	125.9		98,800
30	78.9	125.5		89,200
32	78.0	125.1		81,200
34	77.0	124.6		74,400
36	76.0	124.1	53,000	68,500
38	75.0	123.5	49,100	63,400
40	74.0	122.9	45,600	58,800
45	71.5	121.2	38,400	49,600
50	68.9	119.3	32,900	42,500
55	66.3	117.1	28,400	36,900
60	63.7	114.7	24,800	32,300
65	60.9	111.9	21,700	28,500
70	58.1	108.8	19,100	25,300
75	55.2	105.4	16,900	22,600
80	52.2	101.6	15,000	20,200
85	49.1	97.3	13,300	18,200
90	45.8	92.5	11,800	16,300
95	42.3	87.1	10,500	14,700
100	38.5	80.9	9,200	13,200
105	34.4	73.9	8,100	11,900
110	29.7	65.5	7,100	10,700
115	24.2	55.1	6,200	9,600
120	17.0	40.9	5,300	8,600


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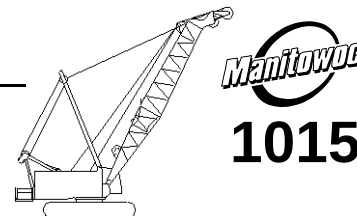
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130 Ft. Boom				
24	82.5	136.8		124,200
26	81.6	136.5		110,000
28	80.7	136.1		98,500
30	79.8	135.7		88,900
32	78.9	135.3		80,900
34	78.0	134.9		74,100
36	77.1	134.4	52,600	68,200
38	76.2	133.9	48,700	63,000
40	75.3	133.3	45,300	58,500
45	73.0	131.8	38,100	49,300
50	70.6	130.1	32,500	42,200
55	68.3	128.1	28,100	36,600
60	65.9	125.8	24,400	32,000
65	63.4	123.3	21,400	28,200
70	60.9	120.6	18,800	25,000
75	58.3	117.5	16,600	22,300
80	55.6	114.1	14,700	19,900
85	52.9	110.3	13,000	17,800
90	50.0	106.2	11,500	16,000
95	47.0	101.6	10,100	14,400
100	43.9	96.5	8,900	13,000
105	40.5	90.7	7,900	11,600
110	36.9	84.2	6,900	10,500
115	32.9	76.8	6,000	9,400
120	28.5	68.0	5,100	8,400
125	23.2	57.1	4,300	7,400
130	16.3	42.2		6,500

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
140 Ft. Boom				
24	83.0	146.9		124,100
26	82.2	146.6		109,800
28	81.4	146.3		98,300
30	80.5	145.9		88,700
32	79.7	145.5		80,700
34	78.9	145.1	56,700	73,800
36	78.0	144.7	52,300	67,900
38	77.2	144.2	48,400	62,700
40	76.4	143.7	44,900	58,200
45	74.2	142.3	37,700	49,000
50	72.1	140.7	32,100	41,800
55	69.9	138.8	27,700	36,200
60	67.7	136.8	24,000	31,600
65	65.4	134.5	21,000	27,800
70	63.2	132.0	18,400	24,600
75	60.8	129.2	16,200	21,900
80	58.4	126.2	14,200	19,500
85	55.9	122.8	12,500	17,400
90	53.4	119.1	11,000	15,600
95	50.8	115.1	9,700	14,000
100	48.0	110.7	8,500	12,600
105	45.2	105.7	7,400	11,200
110	42.2	100.3	6,500	10,100
115	38.9	94.2	5,600	9,000
120	35.5	87.4	4,700	8,000
125	31.7	79.6	4,000	7,100
130	27.4	70.3		6,200
135	22.3	59.0		5,400
140	15.6	43.5		4,600



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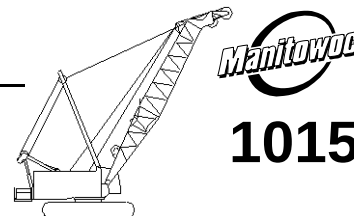
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150 Ft. Boom				
26	82.7	156.7		109,800
28	82.0	156.4		98,200
30	81.2	156.1		88,700
32	80.4	155.7		80,600
34	79.6	155.3	56,700	73,800
36	78.9	154.9	52,300	67,900
38	78.1	154.5	48,400	62,700
40	77.3	154.0	44,900	58,200
45	75.3	152.7	37,700	49,000
50	73.3	151.2	32,200	41,800
55	71.3	149.5	27,700	36,200
60	69.3	147.6	24,100	31,600
65	67.2	145.5	21,000	27,800
70	65.1	143.2	18,400	24,700
75	62.9	140.7	16,200	21,900
80	60.8	137.9	14,300	19,600
85	58.5	134.8	12,600	17,500
90	56.2	131.5	11,100	15,700
95	53.9	127.9	9,800	14,100
100	51.4	123.9	8,600	12,600
105	48.9	119.6	7,500	11,300
110	46.3	114.9	6,600	10,200
115	43.5	109.7	5,700	9,100
120	40.6	104.0	4,800	8,100
125	37.5	97.6	4,100	7,200
130	34.2	90.4		6,400
135	30.5	82.2		5,600
140	26.4	72.6		4,900
145	21.5	60.8		4,200

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
160 Ft. Boom				
28	82.5	166.5		98,000
30	81.7	166.2		88,500
32	81.0	165.9	61,600	80,400
34	80.3	165.5	56,400	73,500
36	79.6	165.1	52,000	67,600
38	78.8	164.7	48,000	62,500
40	78.1	164.3	44,500	57,900
45	76.3	163.1	37,400	48,600
50	74.4	161.7	31,800	41,500
55	72.5	160.1	27,300	35,900
60	70.6	158.3	23,700	31,300
65	68.7	156.4	20,600	27,500
70	66.7	154.2	18,000	24,300
75	64.8	151.9	15,800	21,500
80	62.8	149.3	13,900	19,200
85	60.7	146.5	12,200	17,100
90	58.6	143.5	10,700	15,300
95	56.5	140.2	9,400	13,700
100	54.3	136.6	8,200	12,200
105	52.0	132.8	7,100	10,900
110	49.7	128.6	6,100	9,800
115	47.2	124.0	5,300	8,700
120	44.7	119.0	4,400	7,700
125	42.1	113.5		6,800
130	39.3	107.5		6,000
135	36.3	100.8		5,200
140	33.0	93.4		4,500


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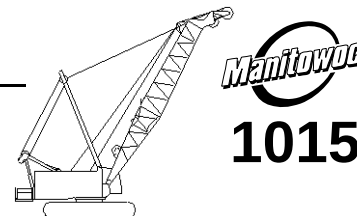
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Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
170 Ft. Boom				
28	82.9	176.6		97,700
30	82.2	176.3		88,100
32	81.5	176.0	61,200	80,100
34	80.9	175.7	56,100	73,200
36	80.2	175.3	51,600	67,300
38	79.5	174.9	47,700	62,100
40	78.8	174.5	44,200	57,600
45	77.1	173.4	37,000	48,300
50	75.3	172.1	31,400	41,200
55	73.6	170.6	26,900	35,500
60	71.8	168.9	23,300	30,900
65	70.0	167.1	20,200	27,100
70	68.2	165.1	17,600	23,900
75	66.4	163.0	15,400	21,200
80	64.5	160.6	13,500	18,800
85	62.6	158.0	11,800	16,700
90	60.7	155.2	10,300	14,900
95	58.7	152.2	9,000	13,300
100	56.7	148.9	7,800	11,900
105	54.6	145.4	6,700	10,600
110	52.5	141.6	5,800	9,400
115	50.3	137.5	4,900	8,300
120	48.1	133.0	4,100	7,300
125	45.7	128.2		6,500
130	43.3	122.9		5,600
135	40.7	117.2		4,900
140	38.0	110.9		4,100

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	66,900	87,900
32	82.0	186.1	60,900	79,800
34	81.4	185.8	55,700	72,900
36	80.7	185.5	51,200	67,000
38	80.1	185.1	47,300	61,800
40	79.4	184.7	43,800	57,300
45	77.8	183.6	36,600	47,900
50	76.2	182.4	31,000	40,800
55	74.5	181.0	26,500	35,100
60	72.9	179.5	22,900	30,500
65	71.2	177.8	19,800	26,700
70	69.5	175.9	17,200	23,500
75	67.8	173.9	15,000	20,800
80	66.0	171.7	13,100	18,400
85	64.2	169.3	11,400	16,300
90	62.5	166.7	9,900	14,500
95	60.6	163.9	8,600	12,900
100	58.8	160.8	7,400	11,400
105	56.9	157.6	6,300	10,100
110	54.9	154.1	5,300	9,000
115	52.9	150.4	4,400	7,900
120	50.9	146.3		6,900
125	48.8	142.0		6,000
130	46.6	137.3		5,200
135	44.3	132.2		4,400



Liftcrane Boom Capacities

Meets
ANSI B30.5
Requirements

Boom No. 83
53,000 Lb. Counterweight
360 Degree Rating

1015

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
190 Ft. Boom				
32	82.4	196.3	60,700	66,000 *
34	81.8	196.0	55,600	66,000 *
36	81.2	195.6	51,100	66,000 *
38	80.6	195.3	47,200	61,700
40	80.0	194.9	43,700	57,100
45	78.5	193.9	36,500	47,800
50	76.9	192.7	30,900	40,700
55	75.4	191.4	26,400	35,000
60	73.8	190.0	22,800	30,400
65	72.2	188.4	19,700	26,600
70	70.6	186.6	17,100	23,400
75	69.0	184.7	14,900	20,700
80	67.4	182.6	13,000	18,300
85	65.7	180.4	11,300	16,200
90	64.0	177.9	9,800	14,400
95	62.3	175.3	8,500	12,800
100	60.6	172.5	7,300	11,400
105	58.8	169.5	6,200	10,100
110	57.0	166.3	5,300	8,900
115	55.2	162.8	4,400	7,800
120	53.3	159.1		6,900
125	51.4	155.2		6,000
130	49.4	150.9		5,200
135	47.4	146.4		4,400

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
200 Ft. Boom				
34	82.2	206.1	55,300	66,000 *
36	81.7	205.8	50,800	66,000 *
38	81.1	205.4	46,900	61,400
40	80.5	205.1	43,400	56,800
45	79.0	204.1	36,100	47,500
50	77.6	203.0	30,500	40,400
55	76.1	201.8	26,100	34,700
60	74.6	200.4	22,400	30,100
65	73.1	198.9	19,300	26,300
70	71.6	197.2	16,700	23,000
75	70.1	195.4	14,500	20,300
80	68.6	193.5	12,600	17,900
85	67.0	191.4	10,900	15,900
90	65.4	189.1	9,400	14,000
95	63.8	186.6	8,100	12,400
100	62.2	184.0	6,900	11,000
105	60.6	181.2	5,800	9,700
110	58.9	178.2	4,800	8,500
115	57.2	175.0	4,000	7,400
120	55.5	171.5		6,500
125	53.7	167.9		5,600
130	51.9	164.0		4,700
135	50.0	159.8		4,000