

Liftcrane Boom Capacities

Meets
ANSI B30.5
Requirements

Boom No. 83
24 040 kg 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 1 770 kg minimum weight. Capacities indicated by (c) require 4 540 kg minimum weight. Capacities indicated by (d) require 6 800 kg 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 29 940 kg with single part 38 mm whip line. Upper boom point capacity for liftcrane service is 19 960 kg with single part 32 mm whip line or 29 940 kg 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 14 970 kg or 29 940 kg 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 7 163 mm extendible crawlers, 1 000 mm treads, 2 921 mm gantry, 7 620 mm live mast, 12 part boom hoist reeving, two 38 mm pendants and 24 040 kg counterweight.

Deduct From Capacities When Jib Is Attached	
Jib Length	Jib No. 134A
6.1m	1 950 kg
9.1m	2 310 kg
12.2m	2 770 kg
15.2m	3 220 kg
18.3m	3 540 kg
21.3m	4 040 kg

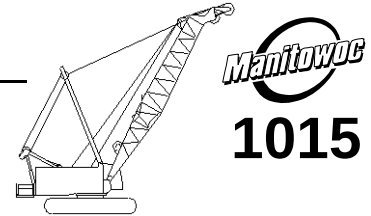
Upper Boom Point Deduct
Deduct 590 kg from capacities when upper boom point is attached.

Auxiliary Drum Deduct
Deduct 910 kg 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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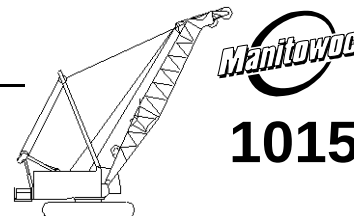
Boom No. 83
53,000 Lb. Counterweight
360 Degree Rating

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) 61.0m	—	54.9m	—	48.8m	—	39.6m	—
57.9m	—	51.8m	6.1m	45.7m	—	36.6m	9.1m
54.9m	—	48.8m	12.2m	42.7m	9.1m	33.5m	18.3m
51.8m	9.1m	45.7m	21.3m	39.6m	15.2m	30.5m	21.3m
48.8m	15.2m			36.6m	21.3m		
45.7m	21.3m						

Load block, hook and weight ball on ground at start. (a) Upper boom point cannot be attached on 61.0m boom.

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Crawlers Retracted Kilograms	Boom Capacity Crawlers Extended Kilograms
15.2m (50 Ft.) Boom				
4.3	82.0	17.5		120 000 *d
4.5	81.1	17.5		115 800 *d
5.0	79.2	17.3		106 500 c
5.5	77.2	17.2		89 200 c
6.0	75.3	17.1		77 200 b
7.0	71.3	16.7		60 500 b
8.0	67.2	16.3		49 500
9.0	62.9	15.7		41 700
10.0	58.5	15.1		35 800
11.0	53.8	14.4		31 300
12.0	48.8	13.5		27 600
14.0	37.1	11.1	17 300	22 100
18.3m (60 Ft.) Boom				
4.6	82.4	20.5		115 600 *d
5.0	81.0	20.5		106 700 c
5.5	79.4	20.4		89 500 c
6.0	77.8	20.2		77 400 b
7.0	74.5	19.9		60 700 b
8.0	71.2	19.6		49 700
9.0	67.8	19.1		41 800
10.0	64.3	18.7		35 900
11.0	60.7	18.1		31 400
12.0	56.9	17.4		27 700
14.0	48.8	15.8	17 400	22 200
16.0	39.4	13.5	14 200	18 300
18.0	27.1	10.2	11 800	15 300

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Crawlers Retracted Kilograms	Boom Capacity Crawlers Extended Kilograms
21.3m (70 Ft.) Boom				
4.9	82.6	23.6		110 700 c
5.0	82.3	23.5		106 100 c
5.5	80.9	23.5		89 600 c
6.0	79.6	23.4		77 500 b
7.0	76.8	23.1		60 700 b
8.0	74.0	22.8		49 700
9.0	71.2	22.5		41 800
10.0	68.2	22.0		36 000
11.0	65.3	21.6		31 400
12.0	62.2	21.0		27 800
14.0	55.8	19.7	17 500	22 300
16.0	48.8	18.1	14 300	18 400
18.0	40.9	15.9	11 900	15 400
20.0	31.3	12.9	10 000	13 000
24.4m (80 Ft.) Boom				
5.2	82.8	26.6		98 800 c
5.5	82.1	26.6		89 200 c
6.0	80.9	26.5		77 100 b
7.0	78.5	26.2		60 400 b
8.0	76.1	26.0		49 400
9.0	73.6	25.7		41 500
10.0	71.1	25.3		35 700
11.0	68.6	24.9		31 100
12.0	66.0	24.5		27 500
14.0	60.7	23.4	17 200	22 000
16.0	55.0	22.0	14 100	18 100
18.0	48.9	20.4	11 700	15 200
20.0	42.0	18.3	9 900	12 900
22.0	34.1	15.5	8 400	11 100
24.0	23.8	11.6	7 100	9 500


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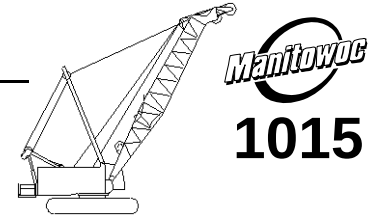
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27.4m (90 Ft.) Boom				
5.5	83.0	29.6		89 500 c
6.0	81.9	29.6		77 100 b
7.0	79.8	29.4		60 300 b
8.0	77.6	29.1		49 300
9.0	75.5	28.9		41 400
10.0	73.3	28.6		35 600
11.0	71.1	28.2		31 000
12.0	68.8	27.8		27 400
14.0	64.2	26.9	17 100	22 000
16.0	59.4	25.7	14 000	18 100
18.0	54.3	24.4	11 700	15 100
20.0	48.9	22.7	9 800	12 900
22.0	42.9	20.6	8 300	11 000
24.0	36.1	18.0	7 100	9 500
26.0	27.8	14.6	6 100	8 200
30.5m (100 Ft.) Boom				
6.1	82.5	32.6		75 100 b
7.0	80.8	32.5		60 300 b
8.0	78.9	32.3		49 200
9.0	77.0	32.0		41 300
10.0	75.0	31.8		35 500
11.0	73.1	31.4		30 900
12.0	71.1	31.1	21 200	27 300
14.0	67.0	30.3	16 900	21 800
16.0	62.8	29.3	13 800	17 900
18.0	58.4	28.1	11 500	15 000
20.0	53.8	26.6	9 700	12 700
22.0	48.9	25.0	8 200	10 900
24.0	43.5	23.0	7 000	9 400
26.0	37.6	20.5	5 900	8 100
28.0	30.6	17.4	5 000	7 100
30.0	21.6	13.0	4 300	6 100
33.5m (110 Ft.) Boom				
6.7	82.2	35.6		64 600 b
7.0	81.7	35.6		60 700 b
8.0	79.9	35.4		49 300
9.0	78.2	35.2		41 400
10.0	76.4	34.9		35 600
11.0	74.6	34.6		31 000
12.0	72.9	34.3	21 300	27 400
14.0	69.2	33.6	17 000	21 900
16.0	65.5	32.7	13 900	18 000
18.0	61.6	31.6	11 600	15 100
20.0	57.6	30.4	9 800	12 900
22.0	53.4	29.0	8 300	11 000
24.0	48.9	27.3	7 100	9 600
26.0	44.1	25.3	6 100	8 300
28.0	38.8	22.9	5 200	7 200
30.0	32.7	20.0	4 500	6 300
32.0	25.4	16.2	3 800	5 500

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Crawlers Retracted Kilograms	Boom Capacity Crawlers Extended Kilograms
36.6m (120 Ft.) Boom				
6.7	82.8	38.7		64 600
7.0	82.4	38.7		60 600
8.0	80.8	38.5		49 300
9.0	79.2	38.3		41 400
10.0	77.6	38.1		35 500
11.0	76.0	37.8	24 000	30 900
12.0	74.3	37.5	21 100	27 300
14.0	71.0	36.8	16 800	21 800
16.0	67.7	36.0	13 800	17 900
18.0	64.2	35.1	11 500	15 000
20.0	60.6	34.0	9 600	12 700
22.0	56.9	32.7	8 200	10 900
24.0	53.0	31.3	7 000	9 400
26.0	48.9	29.6	5 900	8 200
28.0	44.5	27.6	5 100	7 100
30.0	39.7	25.3	4 300	6 100
32.0	34.4	22.5	3 600	5 300
34.0	28.1	19.1	3 000	4 600
36.0	20.0	14.3	2 500	4 000
39.6m (130 Ft.) Boom				
7.3	82.5	41.7		56 300
8.0	81.5	41.6		49 100
9.0	80.0	41.4		41 200
10.0	78.6	41.2		35 300
11.0	77.1	41.0	23 800	30 800
12.0	75.6	40.7	21 000	27 100
14.0	72.5	40.1	16 700	21 600
16.0	69.5	39.3	13 600	17 700
18.0	66.3	38.5	11 300	14 800
20.0	63.1	37.5	9 500	12 500
22.0	59.8	36.3	8 000	10 700
24.0	56.3	35.0	6 800	9 200
26.0	52.7	33.6	5 800	8 000
28.0	48.9	31.9	4 900	6 900
30.0	44.9	29.9	4 100	6 000
32.0	40.5	27.7	3 500	5 200
34.0	35.7	25.0	2 900	4 600
36.0	30.2	21.8	2 400	3 900
38.0	23.6	17.6	1 900	3 300



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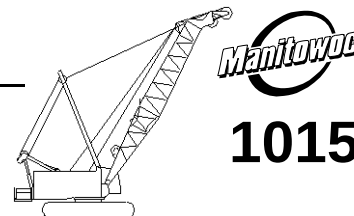
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Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Crawlers Retracted Kilograms	Boom Capacity Crawlers Extended Kilograms
42.7m (140 Ft.) Boom				
7.3	83.0	44.8		56 200
8.0	82.1	44.7		49 000
9.0	80.7	44.5		41 100
10.0	79.4	44.3		35 200
11.0	78.0	44.1	23 600	30 600
12.0	76.6	43.8	20 800	27 000
14.0	73.8	43.3	16 500	21 500
16.0	71.0	42.6	13 400	17 600
18.0	68.1	41.8	11 100	14 600
20.0	65.2	40.9	9 300	12 400
22.0	62.1	39.9	7 800	10 500
24.0	59.0	38.7	6 600	9 100
26.0	55.8	37.4	5 600	7 800
28.0	52.4	35.9	4 700	6 700
30.0	48.9	34.2	4 000	5 900
32.0	45.2	32.2	3 300	5 000
34.0	41.2	30.0	2 800	4 400
36.0	36.8	27.5	2 200	3 700
38.0	31.9	24.4	1 800	3 200
40.0	26.2	20.7		2 700
42.0	18.9	15.6		2 200
45.7m (150 Ft.) Boom				
7.9	82.7	47.8		49 800
8.0	82.6	47.8		49 100
9.0	81.4	47.6		41 100
10.0	80.1	47.4		35 200
11.0	78.8	47.2	23 600	30 600
12.0	77.5	47.0	20 800	27 000
14.0	74.9	46.5	16 500	21 500
16.0	72.3	45.8	13 500	17 600
18.0	69.7	45.1	11 200	14 600
20.0	66.9	44.3	9 300	12 400
22.0	64.2	43.3	7 800	10 600
24.0	61.3	42.2	6 600	9 100
26.0	58.4	41.0	5 600	7 800
28.0	55.4	39.7	4 800	6 800
30.0	52.2	38.2	4 000	5 900
32.0	48.9	36.5	3 400	5 100
34.0	45.5	34.5	2 800	4 400
36.0	41.8	32.4	2 300	3 800
38.0	37.7	29.9	1 800	3 200
40.0	33.3	27.0		2 800
42.0	28.3	23.5		2 300
44.0	22.2	19.1		1 900

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Crawlers Retracted Kilograms	Boom Capacity Crawlers Extended Kilograms
48.8m (160 Ft.) Boom				
8.5	82.5	50.8		44 400
9.0	81.9	50.7		41 100
10.0	80.7	50.5	26 900	35 100
11.0	79.5	50.3	23 500	30 500
12.0	78.3	50.1	20 600	26 800
14.0	75.9	49.6	16 400	21 300
16.0	73.5	49.0	13 300	17 400
18.0	71.0	48.4	11 000	14 500
20.0	68.5	47.6	9 100	12 200
22.0	65.9	46.7	7 700	10 400
24.0	63.3	45.7	6 500	8 900
26.0	60.6	44.6	5 400	7 700
28.0	57.8	43.4	4 600	6 600
30.0	55.0	42.0	3 800	5 700
32.0	52.0	40.5	3 200	4 900
34.0	48.9	38.8	2 600	4 200
36.0	45.7	36.9	2 100	3 600
38.0	42.2	34.7		3 100
40.0	38.5	32.3		2 600
42.0	34.5	29.5		2 100
51.8m (170 Ft.) Boom				
8.5	82.9	53.8		44 300
9.0	82.4	53.8		40 900
10.0	81.3	53.6	26 800	35 000
11.0	80.2	53.4	23 300	30 400
12.0	79.0	53.2	20 500	26 700
14.0	76.8	52.8	16 200	21 200
16.0	74.5	52.2	13 100	17 300
18.0	72.1	51.6	10 800	14 300
20.0	69.8	50.9	9 000	12 000
22.0	67.4	50.0	7 500	10 200
24.0	65.0	49.1	6 300	8 700
26.0	62.5	48.1	5 300	7 500
28.0	59.9	47.0	4 400	6 400
30.0	57.3	45.7	3 700	5 500
32.0	54.6	44.3	3 000	4 800
34.0	51.8	42.8	2 500	4 100
36.0	48.9	41.1	1 900	3 400
38.0	45.9	39.2		2 900
40.0	42.7	37.1		2 400
42.0	39.2	34.7		2 000


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54.9m (180 Ft.) Boom				
9.1	82.7	56.8	30 300	39 800
10.0	81.8	56.7	26 600	34 800
11.0	80.7	56.5	23 100	30 200
12.0	79.6	56.3	20 300	26 500
14.0	77.5	55.9	16 000	21 000
16.0	75.4	55.4	12 900	17 100
18.0	73.2	54.8	10 600	14 100
20.0	71.0	54.1	8 800	11 900
22.0	68.7	53.4	7 300	10 000
24.0	66.5	52.5	6 100	8 600
26.0	64.1	51.5	5 100	7 300
28.0	61.8	50.5	4 200	6 200
30.0	59.4	49.3	3 500	5 300
32.0	56.9	48.0	2 800	4 500
34.0	54.3	46.6	2 200	3 900
36.0	51.7	45.1		3 200
38.0	48.9	43.4		2 700
40.0	46.1	41.5		2 200
57.9m (190 Ft.) Boom				
9.8	82.4	59.8	27 500	29 900 *
10.0	82.2	59.8	26 500	29 900 *
11.0	81.2	59.6	23 000	29 800
12.0	80.2	59.5	20 300	26 500
14.0	78.2	59.0	16 000	21 000
16.0	76.1	58.5	12 900	17 000
18.0	74.1	58.0	10 600	14 100
20.0	72.0	57.3	8 700	11 800
22.0	69.9	56.6	7 200	10 000
24.0	67.8	55.8	6 100	8 500
26.0	65.6	54.9	5 000	7 200
28.0	63.4	54.0	4 200	6 200
30.0	61.1	52.9	3 400	5 300
32.0	58.8	51.7	2 800	4 500
34.0	56.5	50.4	2 200	3 800
36.0	54.1	48.9		3 200
38.0	51.5	47.4		2 700
40.0	48.9	45.7		2 200

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Crawlers Retracted Kilograms	Boom Capacity Crawlers Extended Kilograms
61.0m (200 Ft.) Boom				
10.4	82.2	62.8	25 000	29 900 *
11.0	81.6	62.7	22 900	29 800
12.0	80.7	62.5	20 100	26 400
14.0	78.8	62.2	15 800	20 800
16.0	76.9	61.7	12 700	16 900
18.0	74.9	61.2	10 400	14 000
20.0	72.9	60.6	8 500	11 700
22.0	71.0	59.9	7 100	9 800
24.0	68.9	59.1	5 900	8 300
26.0	66.9	58.3	4 900	7 100
28.0	64.8	57.4	4 000	6 000
30.0	62.7	56.3	3 200	5 100
32.0	60.6	55.2	2 600	4 400
34.0	58.4	54.0	2 000	3 600
36.0	56.1	52.7		3 000
38.0	53.8	51.2		2 500
40.0	51.4	49.7		2 000