

Liftcrane Boom Capacities

Boom No. 83
24 040 kg Counterweight
360 Degree Rating

European Standards
10 m/s Maximum Wind
Conditions include jib when attached

LIFTING CAPACITIES: Lifting capacities for various boom lengths and operating radii are for freely suspended loads and are calculated to comply with prEN 13000, ISO 4305 and include factors based on a 4.0 degree tipping angle. Capacities based on structural competence are denoted by an asterisk (*). Capacities are not shown for boom positions which, without load, provide less than required 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, etc., beneath boom and jib point sheaves, is considered part of main boom load. Reeved hoist line included in boom weight. 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. 8490-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.

WIND CONDITIONS: Machine may be operated in winds up to 10 m/s provided crane operator judgment is used to allow for wind effect on lifted load and other considerations noted on capacity chart are followed. Wind will have a considerable effect on load. Loads must be compensated for

accordingly by reducing load ratings, reducing operating speeds, or by a combination of both. Recommend stopping operation and lowering boom and jib to 60 degree boom angle when wind exceeds 10 m/s. Lower boom and jib to ground when wind is above 22 m/s.

MACHINE TRAVEL: Machine to travel on a firm, level [up to 1 percent (0.5 degrees) grade] and uniformly supporting surface. *Travel with 100 percent of rated load prohibited.* Travel restricted to 90 percent of rated capacity with speed not to exceed 1.4 km/hr. Boom must be within boom angle range shown in capacity chart. Refer to Maximum Allowable Travel Specification chart **No. 8491-A** for travel on grade.

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.

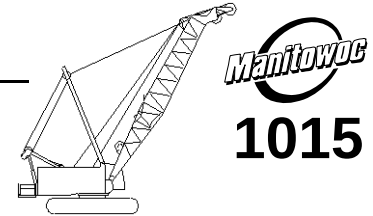
BOOM POINT ELEVATION: Boom point elevation is vertical distance from ground level to centerline of boom point shaft.

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.

Maximum Wind Speeds	
Working Wind	Lower To Ground
10 m/s	22 m/s
Jib included when attached.	

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

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



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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) 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.

Upper Boom Point Deduct

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

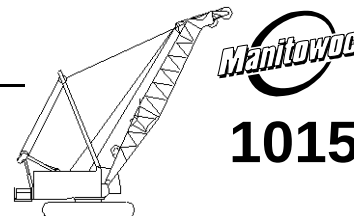
Auxiliary Drum Deduct

Deduct 910 kg from boom capacities when boom butt is equipped with auxiliary drum.

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		108 700 d
5.0	79.2	17.3		93 700 c
5.5	77.2	17.2		83 100 c
6.0	75.3	17.0		74 500 b
7.0	71.3	16.7		61 500 b
8.0	67.2	16.2		52 100
9.0	62.9	15.7		43 700
10.0	58.5	15.1		37 500
11.0	53.8	14.4		32 600
12.0	48.8	13.5		28 700
14.0	37.1	11.1	17 800	22 900
18.3m (60 Ft.) Boom				
4.6	82.4	20.5		99 200 d
5.0	81.0	20.5		88 900 c
5.5	79.4	20.3		79 100 c
6.0	77.8	20.2		71 200 b
7.0	74.5	19.9		59 100 b
8.0	71.2	19.6		50 300
9.0	67.8	19.1		43 500
10.0	64.3	18.6		37 400
11.0	60.7	18.1		32 600
12.0	56.9	17.4		28 700
14.0	48.8	15.8	17 800	22 900
16.0	39.4	13.5	14 400	18 700
18.0	27.1	10.2	11 900	15 600

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		86 800 c
5.0	82.3	23.5		84 400 c
5.5	80.9	23.5		75 400 c
6.0	79.6	23.4		68 100 b
7.0	76.8	23.1		56 800 b
8.0	74.0	22.8		48 500
9.0	71.1	22.5		42 200
10.0	68.2	22.0		37 100
11.0	65.3	21.6		32 500
12.0	62.2	21.0		28 600
14.0	55.8	19.7	17 600	22 800
16.0	48.8	18.1	14 300	18 600
18.0	40.9	15.9	11 900	15 600
20.0	31.3	12.9	9 900	13 100

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.


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Boom No. 83
24 040 kg Counterweight
360 Degree Rating

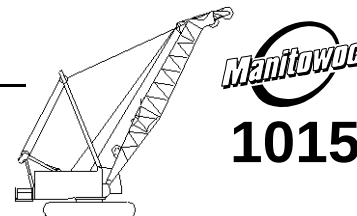
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Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Crawlers Retracted Kilograms	Boom Capacity Crawlers Extended Kilograms
24.4m (80 Ft.) Boom				
5.2	82.8	26.6		76 500 c
5.5	82.1	26.5		71 500 c
6.0	80.9	26.5		64 700 b
7.0	78.5	26.2		54 200 b
8.0	76.1	26.0		46 400
9.0	73.6	25.7		40 400
10.0	71.1	25.3		35 600
11.0	68.6	24.9		31 700
12.0	66.0	24.5		28 200
14.0	60.6	23.4	17 200	22 400
16.0	55.0	22.0	14 000	18 300
18.0	48.9	20.4	11 500	15 200
20.0	42.0	18.3	9 600	12 800
22.0	34.1	15.5	8 000	10 900
24.0	23.8	11.6	6 800	9 400
27.4m (90 Ft.) Boom				
5.5	83.0	29.6		68 600 c
6.0	81.9	29.6		62 100 b
7.0	79.8	29.4		52 300 b
8.0	77.6	29.1		45 000
9.0	75.5	28.9		39 200
10.0	73.3	28.6		34 600
11.0	71.1	28.2		30 900
12.0	68.8	27.8		27 700
14.0	64.2	26.9	17 200	22 400
16.0	59.4	25.7	13 900	18 200
18.0	54.3	24.3	11 500	15 200
20.0	48.9	22.7	9 500	12 800
22.0	42.9	20.6	8 000	10 800
24.0	36.1	18.0	6 700	9 300
26.0	27.8	14.6	5 700	8 000

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Crawlers Retracted Kilograms	Boom Capacity Crawlers Extended Kilograms
30.5m (100 Ft.) Boom				
6.1	82.5	32.6		58 600 b
7.0	80.8	32.5		50 300 b
8.0	78.9	32.3		43 300
9.0	77.0	32.0		37 900
10.0	75.0	31.7		33 500
11.0	73.0	31.4		29 800
12.0	71.1	31.1	20 500	26 800
14.0	67.0	30.3	16 700	22 000
16.0	62.8	29.3	13 700	18 000
18.0	58.4	28.1	11 200	14 900
20.0	53.8	26.6	9 300	12 500
22.0	48.9	25.0	7 700	10 600
24.0	43.5	22.9	6 400	9 000
26.0	37.6	20.5	5 400	7 700
28.0	30.6	17.4	4 500	6 600
30.0	21.6	13.0	3 700	5 700
33.5m (110 Ft.) Boom				
6.7	82.2	35.6		51 000 b
7.0	81.7	35.6		48 800 b
8.0	79.9	35.4		42 100
9.0	78.2	35.2		36 900
10.0	76.4	34.9		32 700
11.0	74.6	34.6		29 200
12.0	72.8	34.3	20 100	26 300
14.0	69.2	33.6	16 500	21 700
16.0	65.5	32.7	13 600	18 100
18.0	61.6	31.6	11 300	15 000
20.0	57.6	30.4	9 400	12 600
22.0	53.4	29.0	7 800	10 700
24.0	48.9	27.3	6 500	9 100
26.0	44.1	25.3	5 500	7 800
28.0	38.8	22.9	4 600	6 700
30.0	32.7	20.0	3 800	5 800
32.0	25.4	16.2	3 200	5 000

Capacities indicated by (b) require 1 770 kg minimum weight.
 Capacities indicated by (c) require 4 540 kg minimum weight.
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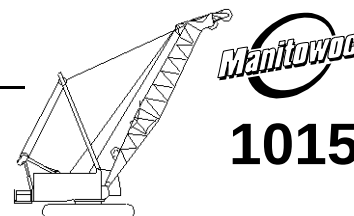
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Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Crawlers Retracted Kilograms	Boom Capacity Crawlers Extended Kilograms
36.6m (120 Ft.) Boom				
6.7	82.8	38.7		49 100
7.0	82.4	38.7		47 000
8.0	80.8	38.5		40 700
9.0	79.2	38.3		35 700
10.0	77.6	38.1		31 600
11.0	76.0	37.8	21 600	28 300
12.0	74.3	37.5	19 300	25 400
14.0	71.0	36.8	15 800	21 000
16.0	67.6	36.0	13 100	17 600
18.0	64.2	35.1	10 900	14 700
20.0	60.6	34.0	9 000	12 300
22.0	56.9	32.7	7 500	10 400
24.0	53.0	31.3	6 200	8 800
26.0	48.9	29.6	5 200	7 500
28.0	44.5	27.6	4 300	6 500
30.0	39.7	25.3	3 500	5 500
32.0	34.4	22.5	2 900	4 700
34.0	28.1	19.1	2 300	4 000
36.0	20.0	14.3		3 500
39.6m (130 Ft.) Boom				
7.3	82.5	41.7		43 400
8.0	81.5	41.6		39 500
9.0	80.0	41.4		34 700
10.0	78.5	41.2		30 800
11.0	77.1	41.0	21 000	27 600
12.0	75.6	40.7	18 900	24 900
14.0	72.5	40.1	15 400	20 500
16.0	69.5	39.3	12 800	17 200
18.0	66.3	38.5	10 700	14 600
20.0	63.1	37.5	9 000	12 300
22.0	59.8	36.3	7 500	10 400
24.0	56.3	35.0	6 200	8 800
26.0	52.7	33.6	5 200	7 500
28.0	48.9	31.9	4 300	6 400
30.0	44.9	29.9	3 500	5 500
32.0	40.5	27.7	2 800	4 700
34.0	35.7	25.0	2 200	4 000
36.0	30.2	21.8		3 300
38.0	23.6	17.6		2 800

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		41 900
8.0	82.1	44.7		38 100
9.0	80.7	44.5		33 500
10.0	79.4	44.3		29 800
11.0	78.0	44.1	20 200	26 700
12.0	76.6	43.8	18 100	24 100
14.0	73.8	43.3	14 800	19 800
16.0	71.0	42.6	12 200	16 600
18.0	68.1	41.8	10 200	14 000
20.0	65.2	40.9	8 500	12 000
22.0	62.1	39.9	7 100	10 200
24.0	59.0	38.7	5 900	8 600
26.0	55.8	37.4	4 900	7 200
28.0	52.4	35.9	4 000	6 100
30.0	48.9	34.2	3 200	5 200
32.0	45.2	32.2	2 500	4 400
34.0	41.2	30.0		3 600
36.0	36.8	27.5		3 000
38.0	31.9	24.4		2 500
40.0	26.2	20.7		2 000
45.7m (150 Ft.) Boom				
7.9	82.7	47.8		37 400
8.0	82.6	47.7		37 000
9.0	81.4	47.6		32 600
10.0	80.1	47.4		29 100
11.0	78.8	47.2	19 700	26 000
12.0	77.5	47.0	17 700	23 500
14.0	74.9	46.5	14 500	19 400
16.0	72.3	45.8	11 900	16 300
18.0	69.6	45.1	10 000	13 700
20.0	66.9	44.3	8 300	11 700
22.0	64.2	43.3	7 000	10 000
24.0	61.3	42.2	5 800	8 500
26.0	58.4	41.0	4 900	7 200
28.0	55.4	39.7	4 000	6 100
30.0	52.2	38.2	3 200	5 100
32.0	48.9	36.5	2 500	4 400
34.0	45.4	34.5		3 600
36.0	41.7	32.4		3 000
38.0	37.7	29.9		2 500

Capacities indicated by (b) require 1 770 kg minimum weight.
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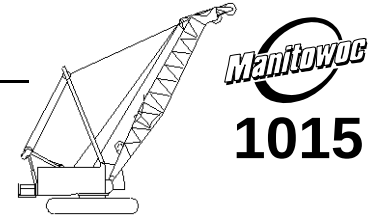
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Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Crawlers Retracted Kilograms	Boom Capacity Crawlers Extended Kilograms
48.8m (160 Ft.) Boom				
8.5	82.5	50.7		33 400
9.0	81.9	50.7		31 600
10.0	80.7	50.5	21 300	28 100
11.0	79.5	50.3	18 900	25 200
12.0	78.3	50.1	17 000	22 700
14.0	75.9	49.6	13 900	18 700
16.0	73.5	49.0	11 400	15 600
18.0	71.0	48.4	9 400	13 200
20.0	68.5	47.6	7 900	11 200
22.0	65.9	46.7	6 500	9 600
24.0	63.3	45.7	5 400	8 200
26.0	60.6	44.6	4 400	7 000
28.0	57.8	43.4	3 600	5 800
30.0	55.0	42.0	2 900	4 900
32.0	52.0	40.5	2 200	4 100
34.0	48.9	38.8		3 400
36.0	45.7	36.9		2 700
38.0	42.2	34.7		2 200
51.8m (170 Ft.) Boom				
8.5	82.9	53.8		32 300
9.0	82.4	53.8		30 600
10.0	81.3	53.6	20 500	27 200
11.0	80.1	53.4	18 300	24 400
12.0	79.0	53.2	16 400	22 000
14.0	76.8	52.8	13 300	18 100
16.0	74.5	52.2	10 900	15 100
18.0	72.1	51.6	9 000	12 700
20.0	69.8	50.9	7 400	10 800
22.0	67.4	50.0	6 100	9 100
24.0	65.0	49.1	5 000	7 800
26.0	62.5	48.1	4 000	6 600
28.0	59.9	47.0	3 200	5 600
30.0	57.3	45.7	2 500	4 600
32.0	54.6	44.3	1 900	3 800
34.0	51.8	42.8		3 100
36.0	48.9	41.1		2 500
38.0	45.9	39.2		1 900

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Crawlers Retracted Kilograms	Boom Capacity Crawlers Extended Kilograms
54.9m (180 Ft.) Boom				
9.1	82.7	56.8	21 800	29 000
10.0	81.8	56.7	19 700	26 300
11.0	80.7	56.5	17 500	23 600
12.0	79.6	56.3	15 700	21 200
14.0	77.5	55.9	12 700	17 400
16.0	75.3	55.4	10 400	14 500
18.0	73.2	54.8	8 500	12 200
20.0	71.0	54.1	6 900	10 300
22.0	68.7	53.3	5 700	8 700
24.0	66.5	52.5	4 500	7 300
26.0	64.1	51.5	3 600	6 200
28.0	61.8	50.5	2 800	5 200
30.0	59.4	49.3	2 100	4 300
32.0	56.9	48.0		3 500
34.0	54.3	46.6		2 800
36.0	51.7	45.1		2 200
57.9m (190 Ft.) Boom				
9.8	82.4	59.8	19 600	26 300
10.0	82.2	59.8	19 100	25 600
11.0	81.2	59.6	17 000	22 900
12.0	80.2	59.4	15 200	20 700
14.0	78.2	59.0	12 300	17 000
16.0	76.1	58.5	10 100	14 100
18.0	74.1	58.0	8 200	11 800
20.0	72.0	57.3	6 700	9 900
22.0	69.9	56.6	5 400	8 400
24.0	67.8	55.8	4 300	7 100
26.0	65.6	54.9	3 400	5 900
28.0	63.4	53.9	2 600	4 900
30.0	61.1	52.9	1 900	4 100
32.0	58.8	51.7		3 400
34.0	56.5	50.4		2 700
36.0	54.0	48.9		2 100

Capacities indicated by (b) require 1 770 kg minimum weight.
 Capacities indicated by (c) require 4 540 kg minimum weight.
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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	17 600	23 800
11.0	81.6	62.7	16 400	22 200
12.0	80.7	62.5	14 600	20 000
14.0	78.8	62.2	11 800	16 400
16.0	76.8	61.7	9 500	13 600
18.0	74.9	61.2	7 700	11 300
20.0	72.9	60.6	6 300	9 500
22.0	71.0	59.9	5 000	7 900
24.0	68.9	59.1	3 900	6 600
26.0	66.9	58.3	3 000	5 500
28.0	64.8	57.3	2 200	4 500
30.0	62.7	56.3		3 700
32.0	60.6	55.2		2 900
34.0	58.4	54.0		2 300

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.