

Liftcrane Boom Capacities

Boom No. 83A
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 EN 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. A14196** and Wire Rope Specification chart **No. 8690-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.

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 positioning boom and jib at 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. 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. 8715-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.

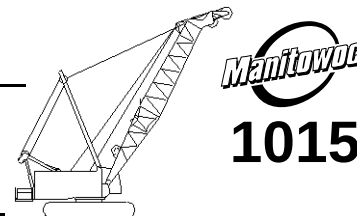
BOOM POINT ELEVATION: Boom point elevation is vertical distance from ground level to centerline of boom point shaft.

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.

Maximum Wind Speeds	
Working Wind	Lower To Ground
10 m/s	22 m/s

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 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.



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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) 54,9m	—	51,8m	—	42,7m	—	39,6m	—
51,8m	—	48,8m	—	39,6m	9,1m	36,6m	—
48,8m	6,1m	45,7m	12,2m	36,6m	18,3m	33,5m	12,2m
45,7m	15,2m	42,7m	21,3m	33,5m	21,3m	30,5m	18,3m
42,7m	21,3m					27,4m	21,3m

Load block, hook and weight ball on ground at start. (a) Upper boom point cannot be attached on 54,9m boom.

Upper Boom Point Deduct

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

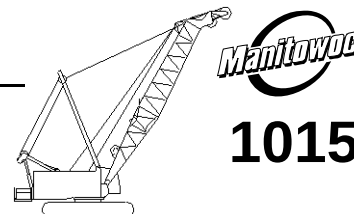
Auxiliary Drum Deduct

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		115 000 d
5,0	79,2	17,3		93 700 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		37 400
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

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Crawlers Retracted Kilograms	Boom Capacity Crawlers Extended Kilograms
18,3m (60 Ft.) Boom				
4,6	82,4	20,5		99 100 d
5,0	81,0	20,5		88 800 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		32 500
12,0	56,9	17,4		28 600
14,0	48,8	15,8	17 700	22 800
16,0	39,4	13,5	14 400	18 600
18,0	27,1	10,2	11 900	15 500

Capacities indicated by (b) require 1 770 kg minimum weight.
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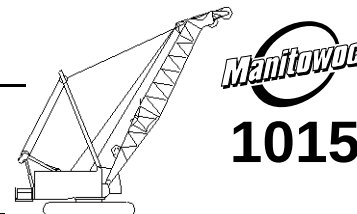
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Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Crawlers Retracted Kilograms	Boom Capacity Crawlers Extended Kilograms
21,3m (70 Ft.) Boom				
4,9	82,6	23,6		86 800 c
5,0	82,3	23,5		84 400 c
6,0	79,6	23,4		68 100 b
7,0	76,8	23,1		56 800 b
8,0	74,0	22,8		48 500
9,0	71,1	22,5		42 100
10,0	68,2	22,0		37 100
11,0	65,3	21,6		32 400
12,0	62,2	21,0		28 500
14,0	55,8	19,7	17 600	22 700
16,0	48,8	18,1	14 300	18 600
18,0	40,9	15,9	11 800	15 500
20,0	31,3	12,9	9 900	13 100
24,4m (80 Ft.) Boom				
5,2	82,8	26,6		76 400 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		31 600
12,0	66,0	24,5		28 200
14,0	60,6	23,4	17 100	22 300
16,0	55,0	22,0	13 900	18 200
18,0	48,9	20,4	11 400	15 200
20,0	42,0	18,3	9 500	12 800
22,0	34,1	15,5	8 000	10 900
24,0	23,8	11,6	6 800	9 300

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Crawlers Retracted Kilograms	Boom Capacity Crawlers Extended Kilograms
27,4m (90 Ft.) Boom				
5,5	83,0	29,6		68 500 c
6,0	81,9	29,6		62 100 b
7,0	79,8	29,4		52 200 b
8,0	77,6	29,1		44 900
9,0	75,5	28,9		39 200
10,0	73,3	28,6		34 600
11,0	71,1	28,2		30 800
12,0	68,8	27,8		27 700
14,0	64,2	26,9	17 200	22 300
16,0	59,4	25,7	13 900	18 200
18,0	54,3	24,3	11 400	15 100
20,0	48,9	22,7	9 500	12 700
22,0	42,9	20,6	8 000	10 800
24,0	36,1	18,0	6 700	9 200
26,0	27,8	14,6	5 600	8 000
30,5m (100 Ft.) Boom				
6,1	82,5	32,6		58 500 b
7,0	80,8	32,5		50 200 b
8,0	78,9	32,3		43 300
9,0	77,0	32,0		37 800
10,0	75,0	31,7		33 400
11,0	73,0	31,4		29 800
12,0	71,1	31,1	20 400	26 800
14,0	67,0	30,3	16 700	21 900
16,0	62,8	29,3	13 600	17 900
18,0	58,4	28,1	11 100	14 800
20,0	53,8	26,6	9 200	12 400
22,0	48,9	25,0	7 600	10 500
24,0	43,5	22,9	6 400	9 000
26,0	37,6	20,5	5 300	7 700
28,0	30,6	17,4	4 400	6 600
30,0	21,6	13,0	3 700	5 600

Capacities indicated by (b) require 1 770 kg minimum weight.
 Capacities indicated by (c) require 4 540 kg minimum weight.
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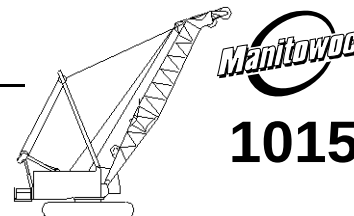
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Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Crawlers Retracted Kilograms	Boom Capacity Crawlers Extended Kilograms
33,5m (110 Ft.) Boom				
6,7	82,2	35,6		50 800 b
7,0	81,7	35,6		48 500 b
8,0	79,9	35,4		41 800
9,0	78,2	35,2		36 600
10,0	76,4	34,9		32 400
11,0	74,6	34,6		28 900
12,0	72,8	34,3	19 800	26 000
14,0	69,2	33,6	16 100	21 400
16,0	65,5	32,7	13 300	17 800
18,0	61,6	31,6	11 000	14 700
20,0	57,6	30,4	9 100	12 300
22,0	53,4	29,0	7 500	10 400
24,0	48,9	27,3	6 200	8 800
26,0	44,1	25,3	5 200	7 600
28,0	38,8	22,9	4 300	6 500
30,0	32,7	20,0	3 600	5 500
32,0	25,4	16,2	2 900	4 800
36,6m (120 Ft.) Boom				
6,7	82,8	38,7		48 800 b
7,0	82,4	38,7		46 700 b
8,0	80,8	38,5		40 300
9,0	79,2	38,3		35 400
10,0	77,6	38,1		31 300
11,0	76,0	37,8	21 300	27 900
12,0	74,3	37,5	19 000	25 100
14,0	71,0	36,8	15 500	20 700
16,0	67,6	36,0	12 700	17 200
18,0	64,2	35,1	10 600	14 400
20,0	60,6	34,0	8 800	12 000
22,0	56,9	32,7	7 200	10 100
24,0	53,0	31,3	5 900	8 500
26,0	48,9	29,6	4 900	7 200
28,0	44,5	27,6	4 000	6 100
30,0	39,7	25,3	3 200	5 200
32,0	34,4	22,5	2 600	4 400
34,0	28,1	19,1	2 000	3 700
36,0	20,0	14,3		3 200

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Crawlers Retracted Kilograms	Boom Capacity Crawlers Extended Kilograms
39,6m (130 Ft.) Boom				
7,3	82,5	41,7		43 100
8,0	81,5	41,6		39 100
9,0	80,0	41,4		34 400
10,0	78,5	41,2		30 500
11,0	77,1	41,0	20 700	27 300
12,0	75,6	40,7	18 500	24 500
14,0	72,5	40,1	15 100	20 200
16,0	69,5	39,3	12 400	16 900
18,0	66,3	38,5	10 400	14 200
20,0	63,1	37,5	8 600	12 000
22,0	59,8	36,3	7 200	10 100
24,0	56,3	35,0	5 900	8 500
26,0	52,7	33,6	4 800	7 200
28,0	48,9	31,9	3 900	6 100
30,0	44,9	29,9	3 200	5 100
32,0	40,5	27,7	2 500	4 400
34,0	35,7	25,0		3 600
36,0	30,2	21,8		3 000
38,0	23,6	17,6		2 500
42,7m (140 Ft.) Boom				
7,3	83,0	44,8		41 500
8,0	82,1	44,7		37 800
9,0	80,7	44,5		33 200
10,0	79,4	44,3		29 500
11,0	78,0	44,1	19 800	26 400
12,0	76,6	43,8	17 800	23 700
14,0	73,8	43,3	14 400	19 500
16,0	71,0	42,6	11 900	16 200
18,0	68,1	41,8	9 800	13 700
20,0	65,2	40,9	8 200	11 600
22,0	62,1	39,9	6 800	9 800
24,0	59,0	38,7	5 600	8 200
26,0	55,8	37,4	4 500	6 900
28,0	52,4	35,9	3 700	5 800
30,0	48,9	34,2	2 900	4 900
32,0	45,2	32,2	2 200	4 000
34,0	41,2	30,0		3 300
36,0	36,8	27,5		2 700
38,0	31,9	24,4		2 200

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Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Crawlers Retracted Kilograms	Boom Capacity Crawlers Extended Kilograms
45,7m (150 Ft.) Boom				
7,9	82,7	47,8		36 900
8,0	82,6	47,7		36 500
9,0	81,4	47,6		32 100
10,0	80,1	47,4		28 500
11,0	78,8	47,2	19 200	25 500
12,0	77,5	47,0	17 200	23 000
14,0	74,9	46,5	13 900	18 800
16,0	72,3	45,8	11 400	15 700
18,0	69,6	45,1	9 400	13 200
20,0	66,9	44,3	7 800	11 200
22,0	64,2	43,3	6 400	9 500
24,0	61,3	42,2	5 300	8 000
26,0	58,4	41,0	4 300	6 700
28,0	55,4	39,7	3 400	5 600
30,0	52,2	38,2	2 700	4 700
32,0	48,9	36,5	2 000	3 900
34,0	45,4	34,5		3 100
36,0	41,7	32,4		2 500
38,0	37,7	29,9		2 000
48,8m (160 Ft.) Boom				
8,5	82,5	50,7		32 900
9,0	81,9	50,7		31 000
10,0	80,7	50,5	20 700	27 500
11,0	79,5	50,3	18 400	24 600
12,0	78,3	50,1	16 400	22 200
14,0	75,9	49,6	13 300	18 200
16,0	73,5	49,0	10 800	15 100
18,0	71,0	48,4	8 900	12 600
20,0	68,5	47,6	7 300	10 700
22,0	65,9	46,7	5 900	9 000
24,0	63,3	45,7	4 800	7 600
26,0	60,6	44,6	3 900	6 400
28,0	57,8	43,4	3 000	5 300
30,0	55,0	42,0	2 300	4 400
32,0	52,0	40,5		3 500
34,0	48,9	38,8		2 800
36,0	45,7	36,9		2 200

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Crawlers Retracted Kilograms	Boom Capacity Crawlers Extended Kilograms
51,8m (170 Ft.) Boom				
8,5	82,9	53,8		31 700
9,0	82,4	53,8		30 000
10,0	81,3	53,6	19 800	26 600
11,0	80,1	53,4	17 600	23 800
12,0	79,0	53,2	15 800	21 400
14,0	76,8	52,8	12 700	17 500
16,0	74,5	52,2	10 300	14 500
18,0	72,1	51,6	8 400	12 100
20,0	69,8	50,9	6 800	10 100
22,0	67,4	50,0	5 500	8 500
24,0	65,0	49,1	4 400	7 100
26,0	62,5	48,1	3 400	6 000
28,0	59,9	47,0	2 600	5 000
30,0	57,3	45,7		4 100
32,0	54,6	44,3		3 300
34,0	51,8	42,8		2 600
36,0	48,9	41,1		1 900
54,9m (180 Ft.) Boom				
9,1	82,7	56,8	21 100	28 400
10,0	81,8	56,7	19 000	25 700
11,0	80,7	56,5	16 900	23 000
12,0	79,6	56,3	15 100	20 600
14,0	77,5	55,9	12 100	16 800
16,0	75,3	55,4	9 700	13 900
18,0	73,2	54,8	7 900	11 500
20,0	71,0	54,1	6 300	9 600
22,0	68,7	53,3	5 000	8 000
24,0	66,5	52,5	3 900	6 700
26,0	64,1	51,5	2 900	5 500
28,0	61,8	50,5	2 100	4 500
30,0	59,4	49,3		3 600
32,0	56,9	48,0		2 900
34,0	54,3	46,6		2 200

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.