

Liftcrane Boom Capacities

Boom No. 78
47 630 kg Counterweight
360 Degree Rating

Meets
ANSI B30.5
Requirements

777 SERIES 1

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 (*).

Upper boom point capacity for liftcrane service with single part whip line is 13 380 kg or 26 760 kg with two part whip line. When boom butt mounted auxiliary drum is used, capacity with single part whip line is 9 070 kg or 18 140 kg with two part whip line. In all cases, upper boom point capacities cannot exceed those listed for main boom capacity.

Weight of 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. Refer to boom rigging **No. 178288** and Wire Rope Specification chart **No. 7940-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. 7957-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 7 544 mm crawlers, 965 mm or 1 219 mm treads, two 305 mm boom hoist cylinders, 7 925 mm mast, four 32 mm boom pendants, and 47 630 kg counterweight.

Deduct From Capacities When Jib Is Attached	
Jib Length	Jib No. 134
9.1m	1 770 kg
12.2m	2 130 kg
15.2m	2 540 kg
18.3m	2 990 kg
21.3m	3 450 kg
24.4m	3 950 kg

Upper Boom Point Deduct
Deduct 450 kg from boom capacities when upper boom point is attached.

Auxiliary Drum Deduct
Deduct 770 kg from boom capacities when boom butt is equipped with auxiliary drum.

Multi-Part Rope Guard Deduct
Deduct 230 kg from boom capacities when lower boom point is equipped with multi-part rope guard (No. A02744).

Wire Rope Guide Deduct (For Third Line)
Deduct 230 kg from boom capacities when boom top wire rope guide (No. 192312) for third line is attached.

Consult jib chart for jib capacities.

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Maximum Boom and Jib Lengths Lifted Unassisted					
Over Front of Blocked Crawlers		Over Rear of Blocked Crawlers		Over Side of Crawlers	
Boom Length	Jib No. 134	Boom Length	Jib No. 134	Boom Length	Jib No. 134
64.0m	—	(a) 64.0m	—	(a) 57.9m	—
61.0m	—	61.0m	—	54.9m	—
57.9m	15.2m	57.9m	12.2m	51.8m	15.2m
54.9m	24.4m	54.9m	21.3m	48.8m	21.3m
		51.8m	24.4m	45.7m	24.4m
Load block, hook and weight ball on ground at start. (a) When multi-part rope guard (No. A02744) is attached to lower boom point, 64.0m boom cannot be lifted over rear of blocked crawlers or 57.9m boom cannot be lifted over side of crawlers.					

Upper boom point, multi-part rope guard (No. A02744) and boom top wire rope guide (No. 192312) for third line cannot be used when jib is attached.

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Kilograms
18.3m (60 Ft.) BOOM			
4.0	82.4	20.4	153 900 *
4.5	80.7	20.3	136 600 *
5.0	79.1	20.2	123 700 *
5.5	77.5	20.1	112 900 *
6.0	75.9	19.9	103 700 *
7.0	72.6	19.6	84 200
8.0	69.2	19.2	67 200
9.0	65.8	18.8	55 800
10.0	62.3	18.3	47 600
11.0	58.6	17.7	41 300
12.0	54.8	17.0	36 300
14.0	46.5	15.2	29 000
16.0	36.8	12.9	23 900
18.0	23.8	9.2	20 000
21.3m (70 Ft.) BOOM			
4.3	82.7	23.4	140 500 *
4.5	82.0	23.4	136 000 *
5.0	80.7	23.3	123 700 *
5.5	79.3	23.2	112 900 *
6.0	77.9	23.1	103 700 *
7.0	75.2	22.8	84 700
8.0	72.3	22.5	67 500
9.0	69.5	22.1	56 100
10.0	66.6	21.7	47 800
11.0	63.6	21.2	41 500
12.0	60.5	20.6	36 600
14.0	54.0	19.3	29 300
16.0	46.9	17.6	24 100
18.0	38.8	15.3	20 300
20.0	28.8	12.2	17 300

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Kilograms
24.4m (80 Ft.) BOOM			
4.6	82.9	26.4	124 900 *
5.0	81.9	26.4	119 900 *
5.5	80.7	26.3	112 800 *
6.0	79.5	26.2	103 600 *
7.0	77.1	26.0	85 000
8.0	74.6	25.7	67 800
9.0	72.2	25.4	56 300
10.0	69.6	25.0	48 000
11.0	67.1	24.6	41 700
12.0	64.5	24.1	36 700
14.0	59.1	23.0	29 400
16.0	53.4	21.6	24 200
18.0	47.2	19.9	20 400
20.0	40.2	17.7	17 400
22.0	32.0	14.8	15 000
24.0	21.0	10.6	13 100
27.4m (90 Ft.) BOOM			
4.9	83.0	29.5	116 400 *
5.0	82.8	29.5	115 100 *
5.5	81.7	29.4	110 100 *
6.0	80.6	29.3	103 700 *
7.0	78.5	29.1	85 100
8.0	76.4	28.9	67 800
9.0	74.2	28.6	56 300
10.0	72.0	28.3	48 000
11.0	69.8	27.9	41 700
12.0	67.5	27.5	36 700

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Kilograms
27.4m (90 Ft.) BOOM			
14.0	62.9	26.5	29 400
16.0	58.0	25.3	24 200
18.0	52.9	23.9	20 400
20.0	47.4	22.2	17 500
22.0	41.3	20.0	15 100
24.0	34.3	17.4	13 200
26.0	25.7	13.8	11 600
30.5m (100 Ft.) BOOM			
5.5	82.6	32.5	100 400 *
6.0	81.6	32.4	96 300 *
7.0	79.7	32.2	86 000
8.0	77.8	32.0	67 800
9.0	75.8	31.7	56 400
10.0	73.9	31.5	48 000
11.0	71.9	31.1	41 700
12.0	69.9	30.8	36 700
14.0	65.8	29.9	29 400
16.0	61.6	28.9	24 200
18.0	57.2	27.7	20 400
20.0	52.5	26.2	17 400
22.0	47.5	24.5	15 100
24.0	42.1	22.4	13 200
26.0	36.0	19.8	11 600
28.0	28.8	16.6	10 200
30.0	19.3	11.9	9 000

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33.5m (110 Ft.) BOOM			
5.8	82.7	35.5	95 700 *
6.0	82.4	35.5	94 000 *
7.0	80.6	35.3	84 500
8.0	78.9	35.1	67 900
9.0	77.1	34.9	56 400
10.0	75.4	34.6	48 100
11.0	73.6	34.3	41 700
12.0	71.8	34.0	36 700
14.0	68.1	33.2	29 400
16.0	64.4	32.3	24 200
18.0	60.5	31.3	20 400
20.0	56.4	30.0	17 400
22.0	52.2	28.5	15 100
24.0	47.7	26.8	13 200
26.0	42.8	24.7	11 600
28.0	37.4	22.3	10 200
30.0	31.2	19.3	9 100
32.0	23.5	15.3	8 100
36.6m (120 Ft.) BOOM			
6.1	82.9	38.5	87 100 *
7.0	81.4	38.4	81 200
8.0	79.8	38.2	68 000
9.0	78.2	38.0	56 500
10.0	76.6	37.8	48 100
11.0	75.0	37.5	41 800
12.0	73.4	37.2	36 700
14.0	70.1	36.5	29 300
16.0	66.7	35.7	24 200
18.0	63.2	34.7	20 400
20.0	59.6	33.6	17 400
22.0	55.8	32.3	15 100
24.0	51.9	30.8	13 200
26.0	47.8	29.1	11 600
28.0	43.3	27.1	10 300
30.0	38.5	24.7	9 100
32.0	33.0	21.8	8 100
34.0	26.6	18.2	7 200
39.6m (130 Ft.) BOOM			
6.7	82.5	41.5	79 800 *
7.0	82.1	41.5	78 100 *
8.0	80.6	41.3	68 200
9.0	79.1	41.1	56 500
10.0	77.7	40.9	48 100
11.0	76.2	40.7	41 800
12.0	74.7	40.4	36 700
14.0	71.6	39.8	29 300
16.0	68.6	39.0	24 200
18.0	65.4	38.1	20 300

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Kilograms
39.6m (130 Ft.) BOOM			
20.0	62.2	37.1	17 400
22.0	58.8	36.0	15 000
24.0	55.3	34.6	13 100
26.0	51.7	33.1	11 500
28.0	47.9	31.4	10 200
30.0	43.8	29.4	9 000
32.0	39.4	27.1	8 100
34.0	34.5	24.3	7 200
36.0	28.9	21.0	6 400
38.0	21.9	16.7	5 700
42.7m (140 Ft.) BOOM			
7.3	82.2	44.5	71 600 *
8.0	81.3	44.4	68 100
9.0	79.9	44.2	56 500
10.0	78.6	44.0	48 100
11.0	77.2	43.8	41 700
12.0	75.8	43.6	36 700
14.0	73.0	43.0	29 300
16.0	70.2	42.3	24 000
18.0	67.3	41.5	20 200
20.0	64.3	40.6	17 300
22.0	61.3	39.5	14 900
24.0	58.1	38.3	13 000
26.0	54.9	36.9	11 400
28.0	51.5	35.4	10 100
30.0	48.0	33.7	8 900
32.0	44.2	31.7	7 900
34.0	40.1	29.4	7 100
36.0	35.7	26.8	6 300
38.0	30.7	23.7	5 600
40.0	24.8	19.8	5 000
45.7m (150 Ft.) BOOM			
7.3	82.8	47.6	69 100 *
8.0	81.9	47.5	65 800
9.0	80.6	47.3	56 700
10.0	79.3	47.2	48 000
11.0	78.1	46.9	41 600
12.0	76.8	46.7	36 600
14.0	74.2	46.2	29 200
16.0	71.5	45.5	23 900
18.0	68.9	44.8	20 100
20.0	66.1	43.9	17 200
22.0	63.4	43.0	14 800
24.0	60.5	41.9	12 900
26.0	57.6	40.6	11 300
28.0	54.5	39.3	10 000
30.0	51.3	37.7	8 800

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Kilograms
45.7m (150 Ft.) BOOM			
32.0	48.0	36.0	7 800
34.0	44.5	34.0	7 000
36.0	40.8	31.8	6 200
38.0	36.7	29.3	5 500
40.0	32.2	26.3	4 900
42.0	27.1	22.7	4 300
44.0	20.7	18.0	3 800
48.8m (160 Ft.) BOOM			
7.9	82.5	50.6	63 000 *
8.0	82.4	50.6	62 700 *
9.0	81.2	50.4	56 600
10.0	80.0	50.3	48 000
11.0	78.8	50.1	41 600
12.0	77.6	49.8	36 500
14.0	75.2	49.3	29 100
16.0	72.7	48.7	23 900
18.0	70.3	48.0	20 100
20.0	67.7	47.3	17 100
22.0	65.1	46.4	14 700
24.0	62.5	45.4	12 800
26.0	59.8	44.2	11 300
28.0	57.0	43.0	9 900
30.0	54.2	41.6	8 800
32.0	51.2	40.0	7 800
34.0	48.1	38.3	6 900
36.0	44.8	36.3	6 100
38.0	41.3	34.2	5 500
40.0	37.6	31.7	4 800
42.0	33.5	28.8	4 300
44.0	28.9	25.4	3 800
46.0	23.4	21.3	3 300



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51.8m (170 Ft.) BOOM			
7.9	82.9	53.7	60 500 *
8.0	82.8	53.7	60 200 *
9.0	81.7	53.5	55 800
10.0	80.6	53.4	47 900
11.0	79.5	53.2	41 500
12.0	78.4	53.0	36 500
14.0	76.1	52.5	29 000
16.0	73.8	51.9	23 800
18.0	71.5	51.3	20 000
20.0	69.1	50.5	17 000
22.0	66.7	49.7	14 600
24.0	64.3	48.8	12 700
26.0	61.8	47.7	11 100
28.0	59.2	46.6	9 800
30.0	56.6	45.3	8 700
32.0	53.9	43.9	7 700
34.0	51.1	42.3	6 800
36.0	48.1	40.6	6 000
38.0	45.1	38.7	5 300
40.0	41.8	36.5	4 700
42.0	38.4	34.1	4 200
44.0	34.6	31.3	3 700
46.0	30.4	28.1	3 200
48.0	25.6	24.3	2 800
50.0	19.7	19.4	2 400
54.9m (180 Ft.) BOOM			
8.5	82.7	56.7	55 300 *
9.0	82.2	56.6	53 700 *
10.0	81.1	56.4	48 100
11.0	80.1	56.3	41 500
12.0	79.0	56.1	36 400
14.0	76.9	55.6	28 900
16.0	74.7	55.1	23 700
18.0	72.5	54.5	19 800
20.0	70.3	53.8	16 800
22.0	68.1	53.0	14 500
24.0	65.8	52.2	12 600
26.0	63.5	51.2	11 000
28.0	61.1	50.1	9 700
30.0	58.7	48.9	8 500
32.0	56.2	47.6	7 500
34.0	53.6	46.2	6 600
36.0	51.0	44.6	5 900
38.0	48.2	42.9	5 200
40.0	45.3	41.0	4 600
42.0	42.3	38.8	4 000
44.0	39.0	36.5	3 500
46.0	35.5	33.8	3 100
48.0	31.7	30.7	2 700
50.0	27.4	27.1	2 300

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Kilograms
57.9m (190 Ft.) BOOM			
9.1	82.5	59.7	52 800 *
10.0	81.6	59.5	48 000
11.0	80.6	59.4	41 300
12.0	79.6	59.2	36 200
14.0	77.6	58.8	28 700
16.0	75.5	58.3	23 500
18.0	73.5	57.7	19 600
20.0	71.4	57.0	16 700
22.0	69.3	56.3	14 300
24.0	67.1	55.5	12 400
26.0	65.0	54.6	10 800
28.0	62.8	53.6	9 400
30.0	60.5	52.5	8 300
32.0	58.2	51.3	7 300
34.0	55.8	49.9	6 400
36.0	53.4	48.5	5 600
38.0	50.9	46.9	4 900
40.0	48.2	45.2	4 300
42.0	45.5	43.3	3 800
44.0	42.6	41.2	3 300
46.0	39.6	38.8	2 800
48.0	36.3	36.2	2 400
50.0	32.8	33.3	2 000
61.0m (200 Ft.) BOOM			
9.1	82.8	62.7	49 700 *
10.0	82.0	62.6	47 100
11.0	81.1	62.5	41 300
12.0	80.1	62.3	36 100
14.0	78.2	61.9	28 700
16.0	76.3	61.4	23 400
18.0	74.3	60.9	19 500
20.0	72.4	60.3	16 500
22.0	70.4	59.6	14 200
24.0	68.4	58.8	12 200
26.0	66.3	57.9	10 600
28.0	64.2	57.0	9 300
30.0	62.1	56.0	8 200
32.0	60.0	54.8	7 200
34.0	57.8	53.6	6 300
36.0	55.5	52.3	5 500
38.0	53.2	50.8	4 800
40.0	50.8	49.2	4 200
42.0	48.3	47.5	3 700
44.0	45.7	45.6	3 200
46.0	43.0	43.5	2 700
48.0	40.1	41.2	2 300
50.0	37.1	38.7	2 000

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Kilograms
64.0m (210 Ft.) BOOM			
9.8	82.6	65.7	47 900 *
10.0	82.4	65.7	46 700
11.0	81.5	65.5	41 100
12.0	80.6	65.4	36 000
14.0	78.8	65.0	28 500
16.0	76.9	64.6	23 300
18.0	75.1	64.0	19 400
20.0	73.2	63.5	16 400
22.0	71.3	62.8	14 100
24.0	69.4	62.1	12 100
26.0	67.5	61.3	10 500
28.0	65.5	60.4	9 200
30.0	63.6	59.4	8 000
32.0	61.5	58.3	7 000
34.0	59.5	57.2	6 200
36.0	57.4	55.9	5 400
38.0	55.2	54.6	4 700
40.0	53.0	53.1	4 100
42.0	50.7	51.5	3 600
44.0	48.3	49.8	3 100
46.0	45.8	47.9	2 600
48.0	43.3	45.8	2 200
50.0	40.6	43.6	1 800