

Liftcrane Boom Capacities

Boom No. 82 or 22EL
51 980 kg Counterweight
360 Degree Rating

Maximum Operating Wind Speeds
 14 m/s with 21.3m thru 54.9m Boom
 10 m/s with 57.9m thru 64.0m Boom

999 SERIES 1

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 indicated by (b) require 5 670 kg minimum weight.

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 all load blocks, hooks, weight ball, slings, etc., beneath boom and 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. 195459** (No. 82) or **No. 195890** (No. 22EL) and Wire Rope Specification chart **No. 8264-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 stated in Maximum Operating Wind Speed table 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 with a large "sail area" and must be compensated for accordingly by reducing load ratings, reducing operating speeds, or by a combination of both. Wind speed to be

measured at boom point elevation. **Operation is not permitted when wind is above conditions stated in Maximum Operating Wind Speed table.** Park crane (upper inline with crawlers) with load block on ground or secured and position boom at 70 degrees. Lower boom onto blocking at ground level 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 0.4 m/s. Boom must be within boom angle range shown in capacity chart. Refer to Maximum Allowable Travel Specification chart **No. 8225-B**.

MAX PERMISSIBLE SLEWING SPEED: Slewing operation with working load shall not exceed 0.4 m/s as measured at the operating radius. The amount of time to brake or start slewing a working load shall not be less than 2.5 seconds.

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.

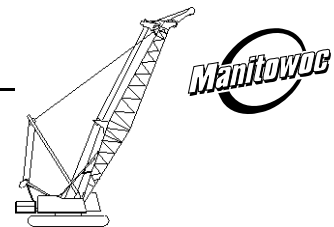
BOOM POINT ELEVATION: Boom point elevation is vertical distance from ground level to centerline of boom point shaft.

MACHINE EQUIPMENT: Machine equipped with 8 585 mm crawlers, 1 219 mm treads, 3 124 mm retractable gantry, 9 144 mm live mast, 20 part boom hoist reeving, boom support straps or four 35 mm boom pendants and 51 980 kg counterweight.

Jib is not to be used with this chart.

Maximum Boom Lengths Lifted Unassisted	
Over End of Blocked Crawlers	Over Side of Crawlers
64.0m	57.9m
Load block, hook and weight ball on ground at start.	

Boom Catwalks Deduct
Deduct 300 kg from capacities when boom catwalks are attached.



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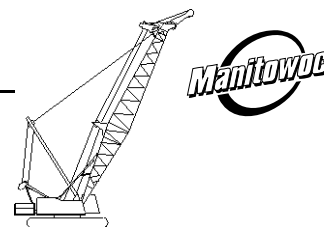
14 m/s with 21.3m thru 54.9m Boom
 10 m/s with 57.9m thru 64.0m Boom

999 SERIES 1

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Kilograms
21.3m (70 Ft.) BOOM			
4.9	82.8	23.5	175 400 b
5.0	82.5	23.5	169 500 b
5.5	81.1	23.4	147 600 b
6.0	79.7	23.3	130 600 b
7.0	77.0	23.1	105 800 b
8.0	74.2	22.8	88 600
9.0	71.3	22.5	75 800
10.0	68.4	22.1	66 000
11.0	65.5	21.6	57 500
12.0	62.5	21.1	50 200
13.0	59.3	20.5	44 200
14.0	56.1	19.8	39 500
15.0	52.7	19.0	35 400
16.0	49.1	18.1	32 000
18.0	41.3	16.0	26 600
20.0	31.9	13.2	22 600
24.4m (80 Ft.) BOOM			
5.2	83.0	26.6	151 700 b
5.5	82.2	26.5	139 800 b
6.0	81.0	26.4	124 400 b
7.0	78.6	26.2	101 400 b
8.0	76.2	26.0	85 300
9.0	73.8	25.7	73 200
10.0	71.3	25.3	63 900
11.0	68.8	24.9	56 500
12.0	66.2	24.5	50 000
13.0	63.5	24.0	44 000
14.0	60.9	23.4	39 200
15.0	58.1	22.8	35 200
16.0	55.2	22.1	31 800
18.0	49.1	20.4	26 400
20.0	42.4	18.4	22 200
22.0	34.5	15.7	19 100
24.0	24.5	11.9	16 500
27.4m (90 Ft.) BOOM			
5.8	82.5	29.6	124 400 b
6.0	82.0	29.5	118 900 b
7.0	79.9	29.3	97 600 b
8.0	77.8	29.1	82 400
9.0	75.6	28.9	71 000
10.0	73.4	28.6	62 100
11.0	71.2	28.2	55 000
12.0	69.0	27.8	49 100
13.0	66.7	27.4	44 100
14.0	64.4	26.9	39 200

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Kilograms
27.4m (90 Ft.) BOOM			
15.0	62.0	26.4	35 100
16.0	59.6	25.8	31 700
18.0	54.5	24.4	26 300
20.0	49.1	22.7	22 100
22.0	43.2	20.7	18 900
24.0	36.4	18.2	16 300
26.0	28.3	14.9	14 200
30.5m (100 Ft.) BOOM			
6.1	82.7	32.6	111 400 b
7.0	80.9	32.5	93 800 b
8.0	79.0	32.3	79 600
9.0	77.1	32.0	68 700
10.0	75.1	31.7	60 300
11.0	73.2	31.4	53 400
12.0	71.2	31.1	47 800
13.0	69.2	30.7	43 100
14.0	67.1	30.3	39 000
15.0	65.1	29.8	35 000
16.0	62.9	29.3	31 600
18.0	58.6	28.1	26 100
20.0	54.0	26.7	22 000
22.0	49.1	25.0	18 700
24.0	43.8	23.1	16 100
26.0	37.9	20.6	14 000
28.0	31.0	17.6	12 200
30.0	22.2	13.4	10 700
33.5m (110 Ft.) BOOM			
6.7	82.3	35.6	95 200
7.0	81.8	35.5	90 700
8.0	80.0	35.4	77 000
9.0	78.3	35.2	66 700
10.0	76.5	34.9	58 600
11.0	74.8	34.6	52 000
12.0	73.0	34.3	46 700
13.0	71.2	34.0	42 100
14.0	69.3	33.6	38 200
15.0	67.5	33.2	34 900
16.0	65.6	32.7	31 700
18.0	61.7	31.7	26 000
20.0	57.7	30.4	21 900
22.0	53.5	29.0	18 600
24.0	49.1	27.3	16 000
26.0	44.3	25.4	13 800
28.0	39.0	23.0	12 000
30.0	33.1	20.2	10 500
32.0	25.8	16.5	9 200

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Kilograms
36.6m (120 Ft.) BOOM			
6.7	82.9	38.7	91 700
7.0	82.5	38.6	87 400
8.0	80.9	38.5	74 500
9.0	79.3	38.3	64 700
10.0	77.7	38.0	57 000
11.0	76.1	37.8	50 700
12.0	74.4	37.5	45 500
13.0	72.8	37.2	41 100
14.0	71.1	36.8	37 400
15.0	69.5	36.5	34 100
16.0	67.8	36.1	31 200
18.0	64.3	35.1	26 000
20.0	60.7	34.0	21 800
22.0	57.0	32.8	18 500
24.0	53.2	31.3	15 800
26.0	49.1	29.6	13 600
28.0	44.7	27.7	11 800
30.0	40.0	25.4	10 300
32.0	34.7	22.7	9 000
34.0	28.5	19.3	7 900
36.0	20.6	14.7	6 900
39.6m (130 Ft.) BOOM			
7.3	82.6	41.7	80 100
8.0	81.6	41.6	72 200
9.0	80.1	41.4	62 900
10.0	78.6	41.2	55 500
11.0	77.2	40.9	49 500
12.0	75.7	40.7	44 400
13.0	74.2	40.4	40 200
14.0	72.6	40.1	36 500
15.0	71.1	39.7	33 400
16.0	69.6	39.4	30 600
18.0	66.4	38.5	25 900
20.0	63.2	37.5	21 700
22.0	59.9	36.4	18 400
24.0	56.4	35.1	15 700
26.0	52.8	33.6	13 600
28.0	49.1	31.9	11 700
30.0	45.1	30.0	10 200
32.0	40.7	27.8	8 800
34.0	36.0	25.2	7 700
36.0	30.5	22.0	6 800
38.0	24.0	18.0	5 900



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Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Kilograms
42.7m (140 Ft.) BOOM			
7.9	82.3	44.7	70 600
8.0	82.2	44.6	69 900
9.0	80.8	44.5	61 000
10.0	79.5	44.3	53 900
11.0	78.1	44.1	48 100
12.0	76.7	43.8	43 200
13.0	75.3	43.6	39 100
14.0	73.9	43.3	35 500
15.0	72.5	43.0	32 500
16.0	71.1	42.6	29 800
18.0	68.2	41.8	25 300
20.0	65.3	40.9	21 500
22.0	62.2	39.9	18 200
24.0	59.1	38.7	15 500
26.0	55.9	37.4	13 300
28.0	52.6	35.9	11 500
30.0	49.1	34.2	9 900
32.0	45.4	32.3	8 600
34.0	41.4	30.1	7 400
36.0	37.0	27.6	6 400
38.0	32.2	24.6	5 600
40.0	26.6	20.9	4 900
42.0	19.4	16.0	4 200
45.7m (150 Ft.) BOOM			
7.9	82.8	47.7	68 400
8.0	82.7	47.7	67 700
9.0	81.4	47.6	59 200
10.0	80.2	47.4	52 400
11.0	78.9	47.2	46 800
12.0	77.6	47.0	42 100
13.0	76.3	46.7	38 100
14.0	75.0	46.4	34 700
15.0	73.7	46.2	31 700
16.0	72.4	45.8	29 000
18.0	69.7	45.1	24 700
20.0	67.0	44.3	21 100
22.0	64.3	43.3	18 000
24.0	61.4	42.3	15 300
26.0	58.5	41.1	13 100
28.0	55.5	39.7	11 200
30.0	52.3	38.2	9 700
32.0	49.1	36.5	8 300
34.0	45.6	34.6	7 200
36.0	41.9	32.5	6 200
38.0	37.9	30.0	5 300
40.0	33.6	27.2	4 500
42.0	28.6	23.7	3 800
44.0	22.6	19.4	3 300

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Kilograms
48.8m (160 Ft.) BOOM			
8.5	82.5	50.7	61 100
9.0	82.0	50.7	57 600
10.0	80.8	50.5	51 000
11.0	79.6	50.3	45 600
12.0	78.4	50.1	41 100
13.0	77.2	49.9	37 200
14.0	76.0	49.6	33 900
15.0	74.8	49.3	30 900
16.0	73.5	49.0	28 400
18.0	71.1	48.4	24 100
20.0	68.5	47.6	20 700
22.0	66.0	46.7	17 800
24.0	63.4	45.7	15 200
26.0	60.7	44.6	13 000
28.0	57.9	43.4	11 100
30.0	55.1	42.1	9 500
32.0	52.1	40.5	8 200
34.0	49.1	38.8	7 000
36.0	45.8	37.0	6 000
38.0	42.4	34.8	5 100
40.0	38.7	32.4	4 300
42.0	34.7	29.7	3 600
44.0	30.2	26.4	3 000
46.0	25.0	22.5	2 500
48.0	18.5	17.3	2 000
51.8m (170 Ft.) BOOM			
8.5	83.0	53.8	59 200
9.0	82.5	53.7	55 900
10.0	81.3	53.6	49 600
11.0	80.2	53.4	44 400
12.0	79.1	53.2	40 000
13.0	78.0	53.0	36 200
14.0	76.8	52.8	33 000
15.0	75.7	52.5	30 200
16.0	74.5	52.2	27 600
18.0	72.2	51.6	23 500
20.0	69.9	50.9	20 100
22.0	67.5	50.1	17 300
24.0	65.1	49.2	14 900
26.0	62.6	48.1	12 700
28.0	60.0	47.0	10 900
30.0	57.4	45.8	9 300
32.0	54.7	44.4	7 900
34.0	52.0	42.8	6 800
36.0	49.1	41.1	5 700
38.0	46.0	39.3	4 800
40.0	42.8	37.2	4 100
42.0	39.4	34.8	3 300
44.0	35.7	32.1	2 700
46.0	31.6	29.1	2 200

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Kilograms
54.9m (180 Ft.) BOOM			
9.1	82.7	56.8	53 400
10.0	81.8	56.7	48 300
11.0	80.8	56.5	43 300
12.0	79.7	56.3	39 000
13.0	78.6	56.1	35 400
14.0	77.6	55.9	32 200
15.0	76.5	55.6	29 500
16.0	75.4	55.4	27 000
18.0	73.2	54.8	22 900
20.0	71.0	54.1	19 600
22.0	68.8	53.4	16 900
24.0	66.5	52.5	14 600
26.0	64.2	51.6	12 700
28.0	61.9	50.5	10 800
30.0	59.5	49.4	9 200
32.0	57.0	48.1	7 800
34.0	54.4	46.7	6 600
36.0	51.8	45.1	5 600
38.0	49.0	43.4	4 700
40.0	46.2	41.6	3 900
42.0	43.2	39.5	3 200
44.0	40.0	37.2	2 500
57.9m (190 Ft.) BOOM			
9.8	82.5	59.8	48 300
10.0	82.3	59.8	47 000
11.0	81.3	59.6	42 100
12.0	80.3	59.4	37 900
13.0	79.2	59.2	34 400
14.0	78.2	59.0	31 300
15.0	77.2	58.8	28 600
16.0	76.2	58.5	26 200
18.0	74.2	58.0	22 200
20.0	72.1	57.3	19 000
22.0	70.0	56.6	16 300
24.0	67.8	55.8	14 000
26.0	65.7	54.9	12 100
28.0	63.5	54.0	10 400
30.0	61.2	52.9	8 900
32.0	58.9	51.7	7 500
34.0	56.6	50.4	6 300
36.0	54.1	49.0	5 300
38.0	51.6	47.4	4 300
40.0	49.0	45.7	3 600
42.0	46.3	43.9	2 800
44.0	43.5	41.8	2 200



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Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Kilograms
61.0m (200 Ft.) BOOM			
9.8	82.9	62.9	47 000
10.0	82.7	62.8	45 700
11.0	81.7	62.7	41 000
12.0	80.7	62.5	37 000
13.0	79.8	62.3	33 600
14.0	78.8	62.1	30 600
15.0	77.9	61.9	28 000
16.0	76.9	61.7	25 600
18.0	75.0	61.2	21 700
20.0	73.0	60.6	18 500
22.0	71.0	59.9	15 900
24.0	69.0	59.1	13 700
26.0	67.0	58.3	11 800
28.0	64.9	57.4	10 100
30.0	62.8	56.4	8 700
32.0	60.7	55.3	7 400
34.0	58.5	54.1	6 200
36.0	56.2	52.7	5 200
38.0	53.9	51.3	4 200
40.0	51.5	49.7	3 400
42.0	49.0	48.0	2 700
44.0	46.5	46.2	2 000

Oper. Rad. Meters	Boom Ang. Deg.	Boom Point Elev. Meters	Boom Capacity Kilograms
64.0m (210 Ft.) BOOM			
10.4	82.7	65.9	42 700
11.0	82.1	65.8	39 900
12.0	81.2	65.6	36 000
13.0	80.3	65.4	32 700
14.0	79.4	65.2	29 800
15.0	78.5	65.0	27 200
16.0	77.5	64.8	24 900
18.0	75.7	64.3	21 100
20.0	73.8	63.7	18 000
22.0	72.0	63.1	15 400
24.0	70.1	62.4	13 200
26.0	68.1	61.6	11 300
28.0	66.2	60.7	9 700
30.0	64.2	59.8	8 300
32.0	62.2	58.8	7 000
34.0	60.1	57.6	6 000
36.0	58.0	56.4	4 900
38.0	55.9	55.1	4 000
40.0	53.7	53.6	3 200
42.0	51.4	52.0	2 400