Manitowoc Cranes

Manitowoc, Wisconsin 54220 U.S.A.

Liftcrane Boom Capacities

69,000 lb Crane Counterweight Extended Position Crawlers 360 Degree Rating Meets ASME B30.5 Requirements



1100

LIFTING CAPACITIES:

- Rated loads included in the charts are the maximum allowable freely suspended loads at a given boom length, boom angle and load radius, and have been determined for the machine standing level on firm supporting surface under ideal operating conditions. The user must limit or derate rated loads to allow for adverse conditions (such as soft or uneven ground, out-of-level conditions, wind, side loads, pendulum action, jerking or sudden stopping of loads, inexperience of personnel, and multiple machine lifts).
- 2. Capacities do not exceed 75% of minimum tipping loads. Capacities based on factors other than machine stability such as structural competence are shown by asterisk * in the charts.
- 3. Attempting to lift more than rated loads may cause machine to tip or collapse. Do not tip machine to determine capacity.
- 4. Do not attempt to lift where no radius on load chart is listed as crane may tip or collapse.
- 5. Weight of hooks, hook blocks, slings and other lifting devices beneath boom point sheaves are part of the total load. Their total weight must be subtracted from the rated load to obtain the weight that can be lifted.
- 6. Load radius is horizontal distance from axis of rotation to center of gravity of the freely suspended load. Boom angle is angle between horizontal and centerline of boom butt and inserts, and is an indication of radius. In all cases, operating radius shall govern capacity.
- 7. Least stable position is over the side.

8. Boom point elevation is vertical distance from ground level to centerline of boom point shaft.

- 9. Upper boom point capacity for liftcrane service with single part line is 24,000 lb. In all cases, upper boom point capacities cannot exceed those listed for Liftcrane Boom capacity reduced by 420 lb.
- 10. Lifting capacities listed apply only to the machine as originally manufactured and designed. Modifications to this machine or use of equipment other than that specified can reduce operating capacity.

11. Machine travel with load (pick and carry).

A. Travel with crane upperworks in-line with crawlers. Grade in any direction must not exceed 1 percent (0.5 degrees).

B. Travel surface must be firm, level and uniformly supporting. Capacity charts are based on static conditions; therefore judgment must be used to allow for dynamic effects of traveling with load. Carry load as close to ground as possible. Stabilize load with taglines. Travel slowly and smoothly to avoid shock loading boom and rigging.

Liftcrane Boom Capacities

69,000 lb Crane Counterweight **Extended Position Crawlers** 360 Degree Rating





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OPERATING CONDITION:

- 1. The machine must be reeved and set-up as stated in the Operator Manual. If this manual is missing, obtain replacement.
 - Boom backstops are required for all boom lengths.
 - Gantry must be fully raised position for all operation.
 - Crawlers must be fully extended and be locked in position.
 - The crane must be leveled to within 1% on a firm supporting surface.
 - Refer to operator manual for operating guidelines.

Maximum Boom Lengths Lifted Unassisted		
Over End of Blocked Crawlers	Over End of Crawlers	
Boom Length	Boom Length	
200 ft (a)	190 ft	
Load block, hook and weight ball on ground at start. (a) Upper boom point cannot be attached on 200 ft boom.		

- 2. See Operator Manual Section 6 for Wire Rope Specifications.
- 3. Machine equipped with 20 ft 7 in crawlers, 36 in treads, 12 parts of boom hoist reeving and 69,000 lb crane counterweight.

Hoist Reeving for Main Boom Loads

No. of Parts of Line	1	2	3
Maximum Loads (lb)	25,200	50,400	75,600

No. of Parts	1	5	6
of Line	4	3	0
Maximum	100.800	126,000	151.200
Loads (lb)	100,800	120,000	131,200

Hoist Reeving for Upper Boom Point Loads

I OIIIT LOaus
1
24,000
24,000

Assembling the Counterweight

69,000 lb counterweight (No. 1 - No. 5)

Without carbody weight

	2	. 0	
	No. 4		No. 5
	No. 2		No. 3
		No. 1	
0 1 1			

<u>Counterweights</u>

Operation of this equipment in excess of rated loads or disregard of instruction voids the warranty.

Liftcrane Boom Capacities 69,000 lb Crane Counterweight Extended Position Crawlers 360 Degree Rating



Meets **ASME B30.5 Requirements**



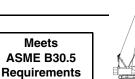
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Load Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	360° Rated Load (lb)	
	80 f	t Boo	m	
42.0	61.8	76.0	40,000	
44.0	60.2	74.9	37,600	
46.0	58.5	73.7	35,200	
48.0	56.8	72.4	33,400	
50.0	55.1	71.0	31,700	
55.0	50.5	67.1	27,900	
60.0	45.7	62.6	24,900	
65.0	40.4	57.1	22,500	
70.0	34.3	50.4	20,400	
75.0	26.9	41.9	18,700	
	90 f	t Boo	m	
40.0	66.6	88.1	42,200	
42.0	65.2	87.2	39,800	
44.0	63.8	86.2	37,300	
46.0	62.4	85.2	34,900	
48.0	60.9	84.1	33,300	
50.0	59.4	82.9	31,600	
55.0	55.7	79.7	27,900	
60.0	51.7	76.0	24,800	
65.0	47.4	71.6	22,300	
70.0	42.9	66.6	20,200	
75.0	37.9	60.6	18,500	
80.0	32.2	53.4	17,000	
85.0	25.7	44.2	15,700	
	100			
36.0	71.6	100.4	48,900	
38.0	70.3	99.7	45,300	
40.0	69.1	99.0	42,000	
42.0	67.9	98.1	39,500	
44.0	66.6	97.3	37,100	
46.0	65.4	96.4 05.4	34,700	
48.0	64.1 62.8	95.4 04.4	33,000	
50.0 55.0		94.4	31,200	
	59.5	91.6 88.4	27,500	
60.0	56.1 52.5	88.4 84.7	24,400 21,900	
65.0 70.0	48.8	84.7 80.6	21,900 19,900	
75.0	46.8	80.8 75.8	19,900	
80.0	44.8	70.3	16,600	
85.0	36.0	63.9	15,200	
90.0	30.5	56.2	13,200	
90.0 95.0	24.0	46.4	13,300	

1			_	
		_	Boom	
	Load	Boom	Point	360°
	Radius	Angle	Elev.	Rated Load
	(ft)	(deg)	(ft)	(lb)
		110	ft Boc	m
	34.0	74.3	111.5	52,600
	36.0	73.2	110.9	48,900
	38.0	72.2	110.3	45,300
	40.0	71.1	109.6	42,000
	42.0	70.0	108.9	39,500
	44.0	68.9	108.1	37,100
	46.0	67.8	107.3	34,700
	48.0	66.6	106.5	33,000
	50.0	65.4	105.5	31,200
	55.0	62.5	103.1	27,500
	60.0	59.5	100.3	24,400
	65.0	56.5	97.1	21,900
	70.0	53.2	93.5	19,900
	75.0	49.9	89.5	18,200
	80.0	46.4	85.0	16,600
	85.0	42.6	79.8	15,200
	90.0	38.6	73.9	14,100
	95.0	34.1	67.0	13,100
	100.0	29.1	58.8	12,300
	105.0	23.2	48.5	11,500
		120	ft Boc	
	32.0	76.7	122.4	56,600
	34.0	75.7	121.9	52,400
	36.0	74.7	121.4	48,700
	38.0	73.7	120.8	45,000
	40.0	72.7	120.2	41,700
	42.0	71.7	119.5	39,300
	44.0	70.7	118.8	36,900
	46.0	69.7	118.1	34,500
	48.0	68.6	117.3	32,800
	50.0	67.6	116.5	31,000
	55.0	65.0	114.2	27,200
	60.0	62.3	111.7	24,200
	65.0 70.0	59.6	108.9	21,600
	70.0	56.8	105.8	19,600
	75.0	53.8	102.3	17,800
	80.0	50.8	98.4	16,400
	85.0	47.7 44.3	94.0 80.1	15,000
	90.0		89.1	13,800
	95.0 100.0	40.7	83.6	12,800
	100.0	36.9 27.8	77.3 61.3	11,900 10,400
	110.0 115.0	27.8	50.4	10,400 9,800
	113.0	LL.L	30.4	9,000

	Load Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	360° Rated Load (lb)
		130	ft Boc	m
	30.0	78.6	133.1	59,900
1	32.0	77.7	132.7	56,000
1	34.0	76.9	132.2	52,200
	36.0	75.9	131.7	48,500
	38.0	75.0	131.2	44,800
	40.0	74.1	130.6	41,500
١	42.0	73.2	130.0	39,100
1	44.0	72.2	129.4	36,700
	46.0	71.3	128.7	34,300
	48.0	70.4	128.0	32,500
	50.0	69.4	127.3	30,800
	55.0	67.1	125.2	27,000
	60.0	64.6	122.9	23,900
	65.0	62.2	120.4	21,400
	70.0	59.6	117.6	19,300
	75.0	57.0	114.5	17,500
	80.0	54.3	111.0	15,900
	85.0	51.6	107.2	14,600
	90.0	48.7	103.0	13,600
	95.0	45.6	98.3	12,500
	100.0	42.4	93.0	11,600
	110.0	35.4	80.5	10,100
	120.0	26.6	63.7	8,800
	125.0	21.3	52.3	8,300

Liftcrane Boom Capacities 69,000 lb Crane Counterweight Extended Position Crawlers 360 Degree Rating





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Load Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	360° Rated Load (lb)
	140	ft Boo	om
26.0	81.1	144.0	65,400
28.0	80.3	143.7	61,800
30.0	79.4	143.3	58,200
32.0	78.6	142.9	54,500
34.0	77.8	142.5	51,100
36.0	76.9	142.0	47,700
38.0	76.1	141.5	44,400
40.0	75.2	141.0	41,300
42.0	74.4	140.4	38,800
44.0	73.5	139.9	36,300
46.0	72.7	139.2	33,800
48.0	71.8	138.6	32,200
50.0	71.0	137.9	30,500
55.0	68.8	136.0	26,700
60.0	66.6	134.0	23,500
65.0	64.3	131.6	21,200
70.0	62.0	129.1	19,100
75.0	59.7	126.2	17,300
80.0	57.3	123.1	15,700
85.0	54.8	119.7	14,400
90.0	52.2	116.0	13,200
95.0	49.5	111.9	12,200
100.0	46.8	107.3	11,400
110.0	40.8	96.8	9,900
120.0	34.0	83.6	8,600
130.0	25.7	66.0	7,600
135.0	20.5	54.1	7,000

Load Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	360° Rated Load (lb)	
	150	ft Boc	om	
26.0	81.7	154.1	56,500	
28.0	80.9	153.8	54,000	
30.0	80.1	153.5	51,700	
32.0	79.4	153.1	49,700	
34.0	78.6	152.7	47,600	
36.0	77.8	152.3	45,500	
38.0	77.0	151.8	43,300	
40.0	76.3	151.3	41,100	
42.0	75.5	150.8	38,700	
44.0	74.7	150.3	36,200	
46.0	73.9	149.7	33,800	
48.0	73.1	149.1	32,100	
50.0	72.3	148.5	30,300	
55.0	70.3	146.7	26,600	
60.0	68.2	144.8	23,500	
65.0	66.2	142.7	21,000	
70.0	64.0	140.3	18,900	
75.0	61.9	137.7	17,100	
80.0	59.6	134.9	15,500	
85.0	<u>57.4</u> 55.2	131.8	14,100	
90.0 95.0		128.4	13,100	
95.0	52.8 50.3	124.8 120.7	12,100 11,100	
110.0	45.1	120.7	9,600	
120.0	39.3	100.4	8,400	
130.0	32.8	86.6	7,300	
140.0	24.3	68.2	6,500	
110.0				
28.0	81.5	ft Boc 163.9	0m 42,200	
28.0 30.0	81.5 80.8	163.9	42,200 40,600	
30.0	80.8 80.1	163.0	40,800 39,000	
32.0 34.0	80.1 79.4	165.5	39,000 37,500	
34.0 36.0	79.4 78.6	162.9	36,200	
38.0	77.9	162.3	34,800	
40.0	77.2	161.6	33,600	
40.0	76.4	161.0	32,600	
44.0	75.6	160.6	31,600	
46.0	74.9	160.0	30,600	
48.0	74.1	159.5	29,700	
50.0	73.4	158.9	28,800	
55.0	71.5	157.3	26,300	
60.0	69.6	155.5	23,500	
65.0	67.7	153.6	21,000	

Load Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	360° Rated Load (lb)
		ft Boc	m
70.0	65.8	151.4	18,900
75.0	63.8	131.4	17,100
80.0	61.8	149.0 146.4	17,100
80.0 85.0	59.7	140.4	13,300
90.0	57.6	143.0 140.5	13,100
95.0	55.4	137.1	12,100
100.0	53.2	133.5	11,100
110.0	48.6	125.3	9,600
120.0	43.6	115.6	8,300
130.0	38.1	103.9	7,100
140.0	31.6	89.5	6,300
150.0	23.7	70.4	5,500
	170	ft Boc	m
30.0	81.3	173.7	36,200
32.0	80.7	173.4	34,700
34.0	80.0	173.1	33,400
36.0	79.3	172.7	32,200
38.0	78.6	172.3	31,000
40.0	77.9	171.9	29,900
42.0	77.2	171.4	28,900
44.0	76.5	170.9	28,000
46.0	75.8	170.4	27,000
48.0	75.1	169.9	26,200
50.0	74.4	169.4	25,400
55.0	72.6	167.9	23,600
60.0	70.9	166.2	22,000
65.0 70.0	69.1	164.3	20,600
70.0	67.3	162.3	18,700
75.0	65.4 63.5	160.1 157.7	17,000
$\begin{array}{c} 80.0\\ 85.0\end{array}$	03.5 61.6	157.7	15,500 14,100
83.0 90.0	59.7	155.1	14,100
90.0 95.0	59.7 57.8	132.2	11,900
100.0	55.8	145.8	10,900
110.0	51.5	138.4	9,400
120.0	47.0	129.7	8,100
130.0	42.2	119.5	6,900
140.0	36.8	107.3	6,000
150.0	30.5	92.2	5,200
160.0	23.2	72.5	4,400

Liftcrane Boom Capacities 69,000 lb Crane Counterweight Extended Position Crawlers 360 Degree Rating



Meets **ASME B30.5** Requirements



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Load	Boom	Boom Point	360°
Radius (ft)	Angle (deg)	Elev. (ft)	Rated Load (lb)
	180	ft Boc	om
30.0	81.8	183.9	31,600
32.0	81.2	183.6	30,300
34.0	80.5	183.2	29,100
36.0	79.9	182.9	28,000
38.0	79.2	182.5	26,900
40.0	78.6	182.1	25,900
42.0	77.9	181.7	25,000
44.0	77.2	181.2	24,200
46.0	76.6	180.7	23,300
48.0	75.9	180.2	22,600
50.0	75.3	179.7	22,000
55.0	73.7	178.3	20,400
60.0	72.0	176.7	18,900
65.0	70.3	175.0	17,700
70.0	68.6	173.1	16,600
75.0	66.9	171.0	15,600
80.0	65.2	168.8	14,700
85.0	63.4	166.4	13,700
90.0	61.6	163.7	12,700
95.0	59.8	160.9	11,700
100.0	57.9	157.8	10,700
110.0	54.0	151.0	9,000
120.0	49.9	143.1	7,900
130.0	45.6	134.0	6,700
140.0	40.9	123.3	5,700
150.0	35.7	110.5	4,900
160.0	29.7	94.9	4,200
165.0	26.5	85.5	3,800

	Load Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	360° Rated Load (lb)	
	190 ft Boom				
	32.0	81.6	193.7	26,700	
	34.0	81.0	193.4	25,600	
	36.0	80.4	193.0	24,600	
	38.0	79.8	192.7	23,600	
	40.0	79.2	192.3	22,600	
	42.0	78.6	191.9	21,900	
	44.0	78.0	191.5	21,200	
	46.0	77.4	191.0	20,400	
	48.0	76.7	190.6	19,800	
	50.0	76.1	190.1	19,100	
	55.0	74.5	188.7	17,600	
	60.0	73.0	187.2	16,300	
	65.0	71.4	185.6	15,100	
	70.0	69.8	183.8	14,200	
	75.0	68.2	181.9	13,400	
	80.0	66.5	179.8	12,500	
	85.0	64.9	177.5	11,700	
	90.0	63.2	175.0	11,000	
	95.0	61.5	172.4	10,300	
	100.0	59.7	169.5	9,700	
	110.0	56.2	163.2	8,700	
	120.0	52.5	156.0	7,600	
	130.0	48.5	147.7	6,500	
	140.0	44.3	138.1	5,500	
	150.0	39.7	126.9	4,600	
	160.0	34.8	113.7	4,000	
ļ	165.0	32.1	106.1	3,600	

		Boom		
Load	Boom	Point	360°	
Radius	Angle	Elev.	Rated Load	
(ft)	(deg)	(ft)	(lb)	
200 ft Boom				
34.0	81.5	203.5	20,000	
36.0	80.9	203.2	19,300	
38.0	80.3	202.8	18,500	
40.0	79.7	202.5	17,800	
42.0	79.1	202.1	17,200	
44.0	78.6	201.7	16,600	
46.0	78.0	201.3	16,000	
48.0	77.4	200.8	15,500	
50.0	76.8	200.4	15,000	
55.0	75.3	199.1	13,800	
60.0	73.8	197.7	12,800	
65.0	72.4	196.2	12,000	
70.0	70.9	194.5	11,100	
75.0	69.3	192.6	10,400	
80.0	67.8	190.6	9,700	
85.0	66.2	188.5	9,000	
90.0	64.6	186.2	8,500	
95.0	63.0	183.7	8,000	
100.0	61.4	181.0	7,500	
110.0	58.1	175.2	6,700	
120.0	54.6	168.5	5,800	
130.0	51.1	160.8	5,100	
140.0	47.2	152.1	4,400	
150.0	43.1	142.1	3,800	
155.0	41.0	136.5	3,400	