



Liftcrane Boom Capacities

**No Crane Counterweight
Extended Position Crawlers
360 Degree Rating**

**Meets
ANSI B30.5
Requirements**



8500 SERIES 1

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 de-rate 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).
- 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.
- Attempting to lift more than rated loads may cause machine to tip or collapse. Do not tip machine to determine capacity.
- Do not attempt to lift where no radius on load chart is listed as crane may tip or collapse.
- Weight of hooks, hook blocks, slings and other lifting devices beneath boom and jib 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.
- 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.
- Least stable position is over the side.
- Boom point elevation is vertical distance from ground level to centerline of boom point shaft.
- Auxiliary sheave (upper boom point) capacity for liftcrane service with single part line is 17,000 lbs. In all cases, auxiliary sheave (upper boom point) capacities cannot exceed those listed for Liftcrane Boom capacity reduced by 320 lbs.
- When lifting over auxiliary sheave (upper point), rated loads for the boom must be reduced as shown below.

Jib length	Aux.	30 ft.	40 ft.	50 ft.	60 ft.
Deduct (lbs)	320	Not Applicable			

- 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.
- Machine travel with load (pick and carry).
 - Travel with crane upperworks in-line with crawlers. Grade in any direction must not exceed 1 percent (0.5 degrees).

- 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, jib and rigging.

- Jib installation is prohibited.

OPERATING CONDITION:

- The machine must be reeved and set-up as stated in the Operators 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 operators manual for operating guidelines.

Maximum Boom Lengths Lifted Unassisted	
Over End Of Crawlers	
120 ft. (a)	
110 ft.	
Load block, hook and weight ball on ground at start.	
(a) Auxiliary sheave (upper point) cannot be attached on 120 ft. boom.	

- Front and rear load hoist drum wire rope: 7/8 inch, 6 x 25, FI, IWRC C/O, Minimum breaking strength: 79,586 lbs. Front Drum: 869 feet, Rear Drum: 673 feet.
- Boom hoist wire rope: 492 feet, 5/8 inch, 6 x 31, WS, IWRC O/O, Minimum breaking strength: 41,234 lbs.
- Machine equipped with 19 ft. 8 in. crawlers, 36 in. treads, 12 parts of boom hoist reeving, no crane counterweight.

Hoist Reeving for Main Boom Loads

No. of Parts of Line	1	2	3	4	5
Maximum Loads (lbs)	17,000	34,000	51,000	68,000	85,000

No. of Parts of Line	6	7	8	9
Maximum Loads (lbs)	102,000	119,000	136,000	151,200

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



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Load Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	360° Rated Load (lbs)
40 Ft. Boom			
10	81.7	45.2	151,200
11	80.3	45.1	114,400
12	78.8	44.9	91,200
13	77.4	44.6	75,800
14	75.9	44.4	64,500
15	74.4	44.1	56,200
16	72.9	43.8	49,800
17	71.4	43.4	44,500
18	69.9	43.1	40,300
19	68.3	42.7	36,500
20	66.7	42.2	33,700
22	63.6	41.3	28,800
24	60.3	40.2	25,100
26	56.9	38.9	22,200
28	53.4	37.5	19,800
30	49.7	35.8	17,800
32	45.7	33.9	16,300
34	41.5	31.8	14,900
36	36.9	29.2	13,600
38	31.6	26.2	12,700
50 Ft. Boom			
12	81.1	55.0	91,200
13	79.9	54.9	75,800
14	78.8	54.7	64,500
15	77.6	54.4	56,200
16	76.4	54.2	49,600
17	75.2	53.9	44,500
18	74.0	53.6	40,100
19	72.8	53.3	36,500
20	71.6	53.0	33,500
22	69.2	52.2	28,600
24	66.7	51.4	24,900
26	64.2	50.5	22,000
28	61.6	49.4	19,600
30	58.9	48.2	17,600
32	56.2	46.9	16,000
34	53.3	45.5	14,500
36	50.4	43.8	13,400
38	47.3	42.0	12,300
40	44.1	40.0	11,400
45	34.9	33.8	9,550

Load Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	360° Rated Load (lbs)
60 Ft. Boom			
13	81.6	65.0	75,800
14	80.7	64.8	64,500
15	79.7	64.7	56,200
16	78.7	64.5	49,600
17	77.7	64.2	44,300
18	76.8	64.0	39,900
19	75.8	63.7	36,300
20	74.8	63.5	33,200
22	72.8	62.9	28,400
24	70.8	62.2	24,600
26	68.7	61.4	21,800
28	66.6	60.6	19,400
30	64.5	59.6	17,400
32	62.4	58.6	15,600
34	60.2	57.5	14,300
36	58.0	56.3	13,200
38	55.7	54.9	12,100
40	53.3	53.5	11,200
45	47.0	49.2	9,350
50	40.0	43.8	7,900
55	31.7	36.7	6,800
70 Ft. Boom			
14	82.0	75.0	64,300
15	81.2	74.8	55,900
16	80.3	74.6	49,600
17	79.5	74.5	44,300
18	78.7	74.2	39,900
19	77.8	74.0	36,300
20	77.0	73.8	33,200
22	75.3	73.3	28,400
24	73.6	72.7	24,600
26	71.9	72.1	21,600
28	70.1	71.4	19,100
30	68.4	70.6	17,100
32	66.6	69.7	15,600
34	64.8	68.8	14,100
36	63.0	67.8	13,000
38	61.1	66.7	11,900
40	59.2	65.5	11,000
45	54.3	62.2	9,100
50	49.0	58.2	7,700
55	43.3	53.3	6,600
60	36.9	47.2	5,700

Load Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	360° Rated Load (lbs)
80 Ft. Boom			
16	81.6	84.8	49,300
17	80.8	84.6	44,000
18	80.1	84.4	39,900
19	79.4	84.2	36,100
20	78.6	84.0	33,000
22	77.2	83.6	28,200
24	75.7	83.1	24,400
26	74.2	82.5	21,300
28	72.7	81.9	19,100
30	71.2	81.3	17,100
32	69.7	80.5	15,400
34	68.1	79.7	14,100
36	66.6	78.9	12,700
38	65.0	78.0	11,600
40	63.4	77.0	10,800
45	59.3	74.2	8,850
50	55.0	70.9	7,400
55	50.5	67.1	6,300
60	45.6	62.5	5,500
65	40.3	57.0	4,600
70	34.4	50.4	4,100
90 Ft. Boom			
17	81.9	94.7	44,000
18	81.2	94.6	39,600
19	80.6	94.4	36,100
20	79.9	94.2	33,000
22	78.6	93.8	28,200
24	77.3	93.4	24,400
26	76.0	92.9	21,300
28	74.7	92.4	18,900
30	73.4	91.8	16,900
32	72.0	91.1	15,400
34	70.7	90.5	13,800
36	69.3	89.7	12,500
38	68.0	88.9	11,600
40	66.6	88.1	10,500
45	63.0	85.7	8,650
50	59.4	82.9	7,200
55	55.6	79.6	6,100
60	51.6	75.9	5,200
65	47.4	71.6	4,400
70	42.9	66.5	3,900
75	37.9	60.5	3,300
80	32.3	53.3	2,800



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100 Ft. Boom			
19	81.5	104.6	36,100
20	80.9	104.4	33,000
22	79.8	104.0	27,900
24	78.6	103.6	24,200
26	77.4	103.2	21,300
28	76.3	102.7	18,900
30	75.1	102.2	16,700
32	73.9	101.6	15,200
34	72.7	101.0	13,600
36	71.5	100.4	12,500
38	70.3	99.6	11,400
40	69.0	98.9	10,500
45	65.9	96.8	8,550
50	62.7	94.3	7,000
55	59.5	91.5	5,900
60	56.1	88.3	5,000
65	52.5	84.7	4,100
70	48.8	80.5	3,700
75	44.8	75.8	3,000
80	40.6	70.3	2,600
110 Ft. Boom			
20	81.8	114.5	32,800
22	80.7	114.2	27,900
24	79.7	113.8	24,200
26	78.6	113.4	21,100
28	77.5	113.0	18,700
30	76.5	112.5	16,700
32	75.4	112.0	14,900
34	74.3	111.5	13,600
36	73.2	110.9	12,300
38	72.1	110.2	11,200
40	71.0	109.5	10,300
45	68.2	107.7	8,450
50	65.4	105.5	7,000
55	62.5	103.0	5,700
60	59.5	100.2	4,800
65	56.4	97.0	4,100
70	53.2	93.4	3,500
75	49.9	89.4	2,800

Load Radius (ft)	Boom Angle (deg)	Boom Point Elev. (ft)	360° Rated Load (lbs)
120 Ft. Boom			
22	81.5	124.3	27,900
24	80.5	124.0	24,000
26	79.6	123.6	21,100
28	78.6	123.2	18,700
30	77.6	122.8	16,700
32	76.6	122.3	14,900
34	75.6	121.8	13,400
36	74.7	121.3	12,300
38	73.7	120.7	11,200
40	72.7	120.1	10,300
45	70.1	118.4	8,200
50	67.6	116.4	6,800
55	65.0	114.2	5,700
60	62.3	111.7	4,600
65	59.5	108.9	3,900
70	56.7	105.7	3,300
75	53.8	102.2	2,600