

Liftcrane Boom Capacities

180

Boom No. 180 With Open Throat Top
28,500 Lb. Counterweight
360 Degree Rating

Meets
ANSI B30.5
Requirements

LIFTING CAPACITIES: 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 18,700 Lbs. In all cases, upper boom point capacities cannot exceed those listed for main boom capacity.

Weight of all load blocks, hooks, weight ball, slings, hoist lines, etc., beneath boom 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 with gantry up. Refer to boom rigging **No. A10177** and Wire Rope Specification chart **No. 9199-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. 9201-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 22 Ft. 4 in. extendible crawlers, 36 in. treads, 15 Ft. 6 in. retractable gantry, 10 part boom hoist reeving, two 1-1/4 in. boom pendants and 28,500 Lb. counterweight.

Maximum Boom Lengths Lifted Unassisted		
Over End of Blocked Crawlers	Over Side of Extended Crawlers	Over Side of Retracted Crawlers
Boom Length	Boom Length	Boom Length
190 Ft.	160 Ft.	140 Ft.
Load block, hook and weight ball on ground at start.		

Jib is not to be used with this chart.

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Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
40 Ft. BOOM				
14	74.8	44.0	75,900	133,100
15	73.3	43.7	68,200	115,800
16	71.8	43.3	61,900	102,400
17	70.3	43.0	56,600	91,800
18	68.8	42.6	52,100	83,100
19	67.2	42.2	48,300	75,800
20	65.6	41.7	44,900	69,700
22	62.4	40.7	39,400	60,000
24	59.1	39.6	35,000	52,500
26	55.7	38.3	31,500	46,700
28	52.1	36.8	28,500	41,900
30	48.4	35.1	26,000	38,000
32	44.4	33.2	23,900	34,700
34	40.1	30.9	22,100	31,900
36	35.4	28.3	20,500	29,500
38	30.0	25.1	19,100	27,400
40	23.5	21.1	17,800	25,600
50 Ft. BOOM				
14	77.9	54.3	75,800	133,300
15	76.7	54.0	68,100	115,900
16	75.5	53.8	61,800	102,500
17	74.4	53.5	56,500	91,800
18	73.2	53.2	52,000	83,100
19	72.0	52.9	48,200	75,800
20	70.7	52.5	44,800	69,700
22	68.3	51.8	39,300	59,900
24	65.8	50.9	34,900	52,500
26	63.2	49.9	31,300	46,600
28	60.6	48.9	28,400	41,800
30	58.0	47.6	25,900	37,900
32	55.2	46.3	23,800	34,600
34	52.3	44.8	21,900	31,800
36	49.4	43.2	20,300	29,400
38	46.3	41.3	18,900	27,300
40	43.0	39.3	17,700	25,400
45	33.6	32.8	15,100	21,700
50	20.9	23.0	13,100	18,800

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
60 Ft. BOOM				
14	79.9	64.5	75,800	133,400
15	79.0	64.3	68,000	116,000
16	78.0	64.1	61,700	102,500
17	77.0	63.8	56,400	91,800
18	76.0	63.6	51,900	83,000
19	75.0	63.3	48,000	75,800
20	74.1	63.0	44,700	69,600
22	72.1	62.4	39,100	59,800
24	70.0	61.7	34,700	52,300
26	68.0	60.9	31,100	46,500
28	65.9	60.1	28,200	41,700
30	63.8	59.1	25,700	37,800
32	61.6	58.1	23,600	34,500
34	59.4	56.9	21,700	31,600
36	57.2	55.7	20,100	29,200
38	54.9	54.3	18,700	27,100
40	52.5	52.8	17,500	25,300
45	46.1	48.5	14,900	21,500
50	39.0	43.0	12,900	18,600
55	30.6	35.7	11,200	16,300
60	19.0	24.7	9,900	14,400
70 Ft. BOOM				
14	81.4	74.6	75,700	132,300 *
15	80.6	74.5	67,900	116,000
16	79.7	74.3	61,600	102,500
17	78.9	74.1	56,300	91,800
18	78.1	73.9	51,800	83,000
19	77.2	73.6	47,900	75,700
20	76.4	73.4	44,500	69,600
22	74.7	72.9	39,000	59,800
24	73.0	72.3	34,600	52,300
26	71.3	71.6	31,000	46,400
28	69.5	70.9	28,000	41,600
30	67.8	70.1	25,600	37,700
32	66.0	69.2	23,400	34,400
34	64.2	68.3	21,600	31,500
36	62.3	67.3	20,000	29,100
38	60.5	66.2	18,600	27,000
40	58.6	65.0	17,300	25,200
45	53.6	61.6	14,700	21,400
50	48.3	57.5	12,700	18,500
55	42.5	52.5	11,100	16,200
60	36.0	46.3	9,800	14,300
65	28.3	38.3	8,700	12,800
70	17.6	26.3	7,700	11,500

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28,500 Lb. Counterweight
360 Degree Rating

**Meets
ANSI B30.5
Requirements**

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
80 Ft. BOOM				
15	81.8	84.6	67,800	116,000
16	81.0	84.4	61,500	102,500
17	80.3	84.3	56,100	91,700
18	79.6	84.1	51,600	82,900
19	78.8	83.9	47,700	75,600
20	78.1	83.7	44,400	69,500
22	76.6	83.2	38,800	59,600
24	75.2	82.7	34,400	52,100
26	73.7	82.1	30,800	46,200
28	72.2	81.5	27,800	41,400
30	70.7	80.8	25,300	37,500
32	69.1	80.1	23,200	34,200
34	67.6	79.3	21,400	31,400
36	66.0	78.4	19,800	28,900
38	64.4	77.5	18,400	26,800
40	62.8	76.5	17,100	25,000
45	58.7	73.7	14,500	21,200
50	54.4	70.3	12,500	18,300
55	49.9	66.4	10,900	16,000
60	45.0	61.8	9,500	14,100
65	39.6	56.2	8,400	12,500
70	33.6	49.4	7,500	11,200
75	26.4	40.7	6,700	10,100
80	16.4	27.7	6,000	9,100
90 Ft. BOOM				
16	82.0	94.5	61,300	102,000
17	81.4	94.4	56,000	91,600
18	80.7	94.2	51,500	82,900
19	80.1	94.1	47,600	75,500
20	79.5	93.9	44,200	69,400
22	78.2	93.5	38,600	59,500
24	76.8	93.0	34,200	52,000
26	75.5	92.5	30,600	46,100
28	74.2	92.0	27,700	41,300
30	72.9	91.4	25,200	37,300
32	71.5	90.7	23,000	34,000
34	70.2	90.0	21,200	31,200
36	68.8	89.3	19,600	28,800
38	67.5	88.4	18,200	26,700
40	66.1	87.6	16,900	24,800
45	62.5	85.1	14,300	21,000
50	58.9	82.3	12,300	18,100
55	55.1	79.0	10,700	15,800
60	51.1	75.2	9,400	13,900
65	46.8	70.9	8,300	12,400
70	42.3	65.7	7,300	11,100
75	37.3	59.7	6,500	10,000
80	31.6	52.3	5,800	9,000
85	24.8	42.9	5,200	8,200
90	15.5	29.1	4,600	7,400

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
100 Ft. BOOM				
18	81.7	104.4	51,400	82,800
19	81.1	104.2	47,500	75,500
20	80.5	104.0	44,100	69,300
22	79.4	103.7	38,500	59,400
24	78.2	103.3	34,100	51,900
26	77.0	102.8	30,500	46,000
28	75.8	102.3	27,500	41,200
30	74.6	101.8	25,000	37,200
32	73.5	101.2	22,900	33,900
34	72.3	100.6	21,100	31,100
36	71.0	99.9	19,500	28,700
38	69.8	99.2	18,000	26,500
40	68.6	98.4	16,800	24,700
45	65.5	96.3	14,200	20,900
50	62.3	93.8	12,200	18,000
55	59.0	91.0	10,600	15,700
60	55.6	87.7	9,200	13,800
65	52.0	84.1	8,100	12,300
70	48.3	79.8	7,200	10,900
75	44.3	75.0	6,400	9,800
80	40.0	69.5	5,700	8,900
85	35.3	62.9	5,100	8,000
90	29.9	55.1	4,500	7,300
95	23.5	45.0	4,000	6,600
100	14.7	30.4		6,000
110 Ft. BOOM				
19	81.9	114.3	47,300	75,400
20	81.4	114.2	43,900	69,200
22	80.3	113.8	38,300	59,300
24	79.3	113.5	33,900	51,800
26	78.2	113.1	30,300	45,800
28	77.1	112.6	27,300	41,000
30	76.1	112.1	24,800	37,100
32	75.0	111.6	22,700	33,800
34	73.9	111.0	20,900	30,900
36	72.8	110.4	19,300	28,500
38	71.7	109.8	17,800	26,400
40	70.6	109.1	16,600	24,500
45	67.8	107.2	14,000	20,700
50	65.0	105.0	12,000	17,800
55	62.1	102.5	10,400	15,500
60	59.1	99.6	9,000	13,600
65	56.0	96.4	7,900	12,100
70	52.8	92.8	7,000	10,800
75	49.4	88.8	6,200	9,600
80	45.9	84.2	5,500	8,700
85	42.1	79.0	4,900	7,800
90	38.1	73.0	4,300	7,100
95	33.6	66.0		6,500
100	28.5	57.6		5,900
105	22.4	47.1		5,300
110	14.0	31.7		4,800

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Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
120 Ft. BOOM				
22	81.1	124.0	38,200	59,200
24	80.2	123.6	33,700	51,600
26	79.2	123.3	30,100	45,700
28	78.2	122.9	27,100	40,900
30	77.3	122.4	24,600	36,900
32	76.3	121.9	22,500	33,600
34	75.3	121.4	20,600	30,700
36	74.3	120.9	19,000	28,300
38	73.3	120.3	17,600	26,200
40	72.3	119.7	16,400	24,300
45	69.8	117.9	13,800	20,500
50	67.2	115.9	11,700	17,600
55	64.6	113.7	10,100	15,300
60	61.9	111.1	8,800	13,400
65	59.2	108.3	7,700	11,800
70	56.3	105.1	6,700	10,500
75	53.4	101.6	5,900	9,400
80	50.4	97.6	5,200	8,400
85	47.2	93.2	4,600	7,600
90	43.8	88.3	4,100	6,900
95	40.2	82.7		6,200
100	36.4	76.3		5,600
105	32.1	68.9		5,100
110	27.3	60.1		4,600
115	21.4	49.0		4,200
130 Ft. BOOM				
22	81.8	134.1	38,000	59,000
24	80.9	133.8	33,500	51,500
26	80.0	133.4	29,900	45,500
28	79.1	133.1	26,900	40,700
30	78.2	132.7	24,400	36,700
32	77.3	132.2	22,300	33,400
34	76.4	131.7	20,400	30,600
36	75.5	131.2	18,800	28,100
38	74.6	130.7	17,400	26,000
40	73.7	130.1	16,200	24,100
45	71.4	128.5	13,600	20,300
50	69.0	126.7	11,500	17,400
55	66.7	124.7	9,900	15,100
60	64.2	122.4	8,600	13,200
65	61.8	119.8	7,500	11,600
70	59.2	117.0	6,500	10,300
75	56.6	113.8	5,700	9,200
80	53.9	110.3	5,000	8,200
85	51.1	106.5	4,400	7,400
90	48.3	102.2		6,700
95	45.2	97.5		6,000
100	42.0	92.2		5,400
105	38.6	86.3		4,900
110	34.9	79.5		4,400
115	30.8	71.7		4,000

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
140 Ft. BOOM				
24	81.6	143.9	33,400	51,400
26	80.8	143.6	29,800	45,400
28	79.9	143.2	26,800	40,600
30	79.1	142.9	24,300	36,600
32	78.3	142.5	22,100	33,200
34	77.4	142.0	20,300	30,400
36	76.6	141.6	18,700	28,000
38	75.7	141.1	17,200	25,800
40	74.9	140.5	16,000	24,000
45	72.8	139.1	13,400	20,100
50	70.6	137.4	11,400	17,200
55	68.4	135.5	9,700	14,900
60	66.2	133.4	8,400	13,000
65	63.9	131.1	7,300	11,500
70	61.6	128.5	6,400	10,200
75	59.3	125.6	5,500	9,000
80	56.9	122.5	4,800	8,100
85	54.4	119.1	4,200	7,200
90	51.8	115.3		6,500
95	49.2	111.1		5,800
100	46.4	106.6		5,300
105	43.5	101.5		4,700
110	40.4	95.9		4,200
150 Ft. BOOM				
26	81.4	153.7	29,600	45,200
28	80.6	153.4	26,600	40,400
30	79.8	153.0	24,100	36,400
32	79.1	152.7	21,900	33,100
34	78.3	152.3	20,100	30,200
36	77.5	151.8	18,400	27,800
38	76.7	151.4	17,000	25,600
40	75.9	150.9	15,800	23,800
45	73.9	149.5	13,200	19,900
50	71.9	148.0	11,100	17,000
55	69.9	146.2	9,500	14,700
60	67.9	144.3	8,200	12,800
65	65.8	142.1	7,100	11,300
70	63.7	139.7	6,100	9,900
75	61.5	137.1	5,300	8,800
80	59.3	134.3	4,600	7,900
85	57.1	131.2	4,000	7,000
90	54.8	127.8		6,300
95	52.4	124.1		5,600
100	49.9	120.0		5,000
105	47.4	115.6		4,500
110	44.7	110.8		4,000

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160 Ft. BOOM				
26	81.9	163.8	29,400	44,200 *
28	81.2	163.5	26,400	40,200
30	80.5	163.2	23,900	36,200
32	79.7	162.8	21,700	32,900
34	79.0	162.5	19,800	30,000
36	78.3	162.1	18,200	27,600
38	77.6	161.6	16,800	25,400
40	76.8	161.2	15,500	23,600
45	75.0	159.9	12,900	19,700
50	73.1	158.5	10,900	16,800
55	71.2	156.8	9,300	14,500
60	69.3	155.0	7,900	12,600
65	67.4	153.0	6,800	11,000
70	65.4	150.8	5,900	9,700
75	63.5	148.4	5,100	8,600
80	61.4	145.8	4,400	7,600
85	59.4	142.9		6,800
90	57.3	139.8		6,000
95	55.1	136.5		5,400
100	52.9	132.8		4,800
105	50.6	128.9		4,300
170 Ft. BOOM				
28	81.7	173.6	26,200	37,700 *
30	81.0	173.3	23,600	36,100
32	80.4	173.0	21,500	32,700
34	79.7	172.6	19,600	29,800
36	79.0	172.3	18,000	27,400
38	78.3	171.9	16,600	25,200
40	77.6	171.4	15,300	23,400
45	75.9	170.2	12,700	19,500
50	74.1	168.9	10,700	16,600
55	72.4	167.4	9,100	14,300
60	70.6	165.7	7,700	12,400
65	68.8	163.8	6,600	10,800
70	67.0	161.8	5,700	9,500
75	65.1	159.5	4,900	8,400
80	63.3	157.1	4,200	7,400
85	61.3	154.5		6,600
90	59.4	151.6		5,800
95	57.4	148.5		5,200
100	55.4	145.2		4,600
105	53.3	141.6		4,100

Oper. Rad. Feet	Boom Ang. Deg.	Boom Point Elev. Feet	Boom Capacity Crawlers Retracted Pounds	Boom Capacity Crawlers Extended Pounds
180 Ft. BOOM				
30	81.5	183.4	23,500	32,800 *
32	80.9	183.1	21,300	32,500 *
34	80.3	182.8	19,400	29,700
36	79.6	182.4	17,800	27,200
38	79.0	182.1	16,400	25,100
40	78.3	181.6	15,100	23,200
45	76.7	180.5	12,500	19,400
50	75.0	179.3	10,500	16,400
55	73.4	177.8	8,900	14,100
60	71.7	176.3	7,500	12,200
65	70.0	174.5	6,400	10,600
70	68.3	172.6	5,500	9,300
75	66.6	170.5	4,700	8,200
80	64.8	168.2	4,000	7,200
85	63.1	165.8		6,400
90	61.3	163.1		5,600
95	59.4	160.3		5,000
100	57.6	157.2		4,400
190 Ft. BOOM				
30	82.0	193.6	23,200	28,700 *
32	81.4	193.3	21,100	28,500 *
34	80.8	192.9	19,200	28,300 *
36	80.2	192.6	17,600	27,000
38	79.5	192.2	16,200	24,900
40	78.9	191.9	14,900	23,000
45	77.4	190.8	12,300	19,100
50	75.8	189.6	10,300	16,200
55	74.3	188.3	8,600	13,900
60	72.7	186.8	7,300	12,000
65	71.1	185.1	6,200	10,400
70	69.5	183.3	5,200	9,100
75	67.9	181.4	4,400	8,000
80	66.3	179.2		7,000
85	64.6	176.9		6,200
90	62.9	174.5		5,400
95	61.2	171.8		4,800
100	59.5	168.9		4,200