

Liftcrane Boom Upper Point Capacities

Meets
ANSI B30.5
Requirements

2250 SPECIAL

Boom No. 44 With Heavy Lift Top
47 in. Dia. Upper Boom Point, 2-Sheave
Auxiliary Power Plant Mounted on
169,200 Lb. Crane Counterweight
60,000 Lb. Carbody Counterweight
360 Degree Rating

LIFTING CAPACITIES: Upper boom point 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 capacities are based on two part line with both drums continuously reeved to load block.

Lower boom point capacity using auxiliary drum in front of rotating bed for liftcrane service with single part whip line is 27,700 Lbs. In all cases lower boom point capacity cannot exceed those listed for upper boom point capacities.

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. 179809** with upper boom point **No. 192977** and Counterweight Arrangement chart **No. 8026-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. 8027-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.

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

MACHINE EQUIPMENT: Machine equipped with 30 Ft. 9 in. crawlers, 48 in. treads, 28 Ft. retractable gantry, independently powered full width front and rear drums, dual swing drive, 12 part boom hoist reeving, boom support straps, 47 in. dia. upper boom point with 2 sheaves, auxiliary power plant mounted on 169,200 Lb. crane counterweight and two 30,000 Lb. carbody counterweights.

Drum and Lagging Specifications

Front drum **No. 194960** and rear drum **No. 194959**
Optional lagging **No. 502408**
28-7/8 in. dia. x 66-11/16 in. wide grooved for
1-3/8 in. wire rope

1,576 Ft. spooling capacity with 1-3/8 in. wire rope
on 4 layers with 24 Ft. deducted for 3 dead wraps on
lagging **No. 502408**.

Auxiliary drum **No. 193814** on front of rotating bed
with lagging **No. 502407**. 19 in. dia. x 31-17/64 in.
wide grooved for 1 in. rope.

1,104 Ft. spooling capacity with 1 in. wire rope on
6 layers with 21 Ft. deducted for 3 dead wraps on
lagging **No. 502407**

Boom Catwalks Deduct

Deduct 400 Lbs. from capacities when
boom catwalks are attached.

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Wire Rope Specifications			
Hoist Rope: 1-3/8 in. - 1 960 N/mm ² Rotation Resistant Wire Rope Minimum Breaking Strength = 240,600 Lbs. Approx. Weight = 3.73 Lbs. Per Ft.			
Whip Line: 1 in. - 1 960 N/mm ² Rotation Resistant Wire Rope Right Hand Regular Lay Minimum Breaking Strength = 139,600 Lbs. Maximum Load = 27,700 Lbs. MCC Part No. 719417 Approx. Weight = 2.03 Lbs. Per Ft. No Load Dia. = 1.012 in. to 1.028 in.			
Or			
1 in. - Rotation Resistant Wire Rope (MCC Part No. 719436) Right Hand Lang Lay Minimum Breaking Strength = 153,800 Lbs. Maximum Load = 27,700 Lbs. Approx. Weight = 2.26 Lbs. Per Ft. No Load Dia. = 1.020 in. to 1.036 in.			

Oper. Rad. Feet	Boom Ang. Deg.	Upper Boom Point Elev. Feet	Upper Boom Point Capacity Pounds
70 Ft. BOOM			
20	83.0	82.1	80,000 *
22	81.4	81.8	80,000 *
24	79.9	81.4	80,000 *
26	78.3	80.9	80,000 *
28	76.7	80.4	80,000 *
30	75.1	79.8	80,000 *
35	71.1	78.1	80,000 *
40	67.0	76.0	80,000 *
45	62.7	73.5	80,000 *
50	58.2	70.4	80,000 *
55	53.5	66.8	80,000 *
60	48.4	62.4	80,000 *
65	42.9	57.2	80,000 *
70	36.7	50.7	80,000 *
75	29.2	42.4	80,000 *

Oper. Rad. Feet	Boom Ang. Deg.	Upper Boom Point Elev. Feet	Upper Boom Point Capacity Pounds
80 Ft. BOOM			
22	82.5	91.9	80,000 *
24	81.1	91.6	80,000 *
26	79.7	91.2	80,000 *
28	78.3	90.7	80,000 *
30	76.9	90.2	80,000 *
35	73.4	88.7	80,000 *
40	69.8	86.9	80,000 *
45	66.2	84.7	80,000 *
50	62.4	82.1	80,000 *
55	58.4	79.1	80,000 *
60	54.3	75.5	80,000 *
65	49.9	71.4	80,000 *
70	45.2	66.5	80,000 *
75	40.1	60.8	80,000 *
80	34.3	53.7	80,000 *
85	27.3	44.7	80,000 *

Oper. Rad. Feet	Boom Ang. Deg.	Upper Boom Point Elev. Feet	Upper Boom Point Capacity Pounds
90 Ft. BOOM			
24	82.0	101.7	80,000 *
26	80.8	101.4	80,000 *
28	79.6	101.0	80,000 *
30	78.3	100.5	80,000 *
35	75.2	99.2	80,000 *
40	72.1	97.6	80,000 *
45	68.8	95.7	80,000 *
50	65.5	93.4	80,000 *
55	62.1	90.8	80,000 *
60	58.6	87.7	80,000 *
65	54.9	84.3	80,000 *
70	51.1	80.3	80,000 *
75	47.0	75.7	80,000 *
80	42.6	70.4	80,000 *
85	37.7	64.1	80,000 *
90	32.3	56.6	76,300
95	25.7	46.9	70,600

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100 Ft. BOOM			
24	82.8	111.9	80,000 *
26	81.7	111.5	80,000 *
28	80.6	111.2	80,000 *
30	79.5	110.8	80,000 *
35	76.7	109.6	80,000 *
40	73.8	108.1	80,000 *
45	70.9	106.4	80,000 *
50	68.0	104.4	80,000 *
55	65.0	102.1	80,000 *
60	61.9	99.4	80,000 *
65	58.7	96.4	80,000 *
70	55.4	93.0	80,000 *
75	52.0	89.1	80,000 *
80	48.3	84.8	80,000 *
85	44.5	79.8	80,000 *
90	40.3	74.0	75,900
95	35.8	67.3	70,200
100	30.6	59.2	65,100
110 Ft. BOOM			
26	82.4	121.7	80,000 *
28	81.4	121.3	80,000 *
30	80.4	121.0	80,000 *
35	77.9	119.9	80,000 *
40	75.3	118.6	80,000 *
45	72.7	117.0	80,000 *
50	70.0	115.2	80,000 *
55	67.3	113.1	80,000 *
60	64.6	110.8	80,000 *
65	61.7	108.1	80,000 *
70	58.8	105.1	80,000 *
75	55.8	101.7	80,000 *
80	52.7	98.0	80,000 *
85	49.5	93.7	80,000 *
90	46.0	89.0	75,600
95	42.4	83.6	69,900
100	38.4	77.5	64,900
105	34.1	70.3	60,400
110	29.1	61.8	56,300

Oper. Rad. Feet	Boom Ang. Deg.	Upper Boom Point Elev. Feet	Upper Boom Point Capacity Pounds
120 Ft. BOOM			
26	83.0	131.8	80,000 *
28	82.1	131.5	80,000 *
30	81.2	131.1	80,000 *
35	78.8	130.1	80,000 *
40	76.5	128.9	80,000 *
45	74.1	127.5	80,000 *
50	71.7	125.9	80,000 *
55	69.2	124.0	80,000 *
60	66.7	121.8	80,000 *
65	64.2	119.4	80,000 *
70	61.6	116.7	80,000 *
75	58.9	113.8	80,000 *
80	56.2	110.4	80,000 *
85	53.3	106.7	80,000 *
90	50.4	102.6	75,100
95	47.3	98.1	69,400
100	44.0	93.0	64,400
105	40.5	87.3	59,900
110	36.7	80.7	55,800
115	32.6	73.2	52,100
120	27.9	64.2	48,800
130 Ft. BOOM			
28	82.7	141.6	80,000 *
30	81.8	141.3	80,000 *
35	79.7	140.4	80,000 *
40	77.5	139.3	80,000 *
45	75.3	137.9	80,000 *
50	73.1	136.4	80,000 *
55	70.9	134.7	80,000 *
60	68.6	132.7	80,000 *
65	66.3	130.5	80,000 *
70	63.9	128.1	80,000 *
75	61.5	125.4	80,000 *
80	59.0	122.4	80,000 *
85	56.5	119.1	80,000 *
90	53.9	115.5	75,000
95	51.1	111.5	69,300
100	48.3	107.1	64,300
105	45.3	102.2	59,800
110	42.2	96.8	55,700
115	38.9	90.8	52,000
120	35.3	83.9	48,700
125	31.3	75.9	45,600
130	26.8	66.5	42,800

Oper. Rad. Feet	Boom Ang. Deg.	Upper Boom Point Elev. Feet	Upper Boom Point Capacity Pounds
140 Ft. BOOM			
30	82.4	151.4	80,000 *
35	80.4	150.5	80,000 *
40	78.4	149.5	80,000 *
45	76.4	148.3	80,000 *
50	74.3	146.9	80,000 *
55	72.2	145.3	80,000 *
60	70.1	143.5	80,000 *
65	68.0	141.5	80,000 *
70	65.8	139.3	80,000 *
75	63.6	136.8	80,000 *
80	61.4	134.1	80,000 *
85	59.1	131.1	80,000 *
90	56.7	127.8	74,400
95	54.3	124.3	68,800
100	51.8	120.4	63,700
105	49.2	116.1	59,200
110	46.5	111.4	55,200
115	43.6	106.2	51,500
120	40.6	100.5	48,100
125	37.4	94.1	45,100
130	34.0	86.9	42,300
135	30.1	78.6	39,700
140	25.8	68.7	37,300



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150 Ft. BOOM			
30	82.9	161.5	80,000 *
35	81.0	160.7	80,000 *
40	79.1	159.8	80,000 *
45	77.3	158.6	80,000 *
50	75.3	157.3	80,000 *
55	73.4	155.8	80,000 *
60	71.5	154.2	80,000 *
65	69.5	152.3	80,000 *
70	67.5	150.2	80,000 *
75	65.5	147.9	80,000 *
80	63.4	145.5	80,000 *
85	61.3	142.7	80,000 *
90	59.1	139.8	74,000
95	56.9	136.5	68,300
100	54.7	133.0	63,300
105	52.4	129.2	58,700
110	49.9	125.0	54,700
115	47.5	120.5	51,000
120	44.8	115.5	47,700
125	42.1	110.1	44,600
130	39.2	104.0	41,900
135	36.1	97.3	39,300
140	32.8	89.8	36,900
145	29.1	81.1	34,700

Oper. Rad. Feet	Boom Ang. Deg.	Upper Boom Point Elev. Feet	Upper Boom Point Capacity Pounds
160 Ft. BOOM			
35	81.6	170.9	80,000 *
40	79.8	170.0	80,000 *
45	78.0	168.9	80,000 *
50	76.3	167.7	80,000 *
55	74.4	166.3	80,000 *
60	72.6	164.7	80,000 *
65	70.8	163.0	80,000 *
70	68.9	161.1	80,000 *
75	67.0	158.9	80,000 *
80	65.1	156.6	80,000 *
85	63.2	154.1	79,800
90	61.2	151.4	73,400
95	59.2	148.4	67,700
100	57.1	145.2	62,700
105	55.0	141.7	58,100
110	52.8	138.0	54,100
115	50.6	133.9	50,400
120	48.3	129.5	47,100
125	45.9	124.7	44,000
130	43.4	119.5	41,200
135	40.7	113.7	38,700
140	37.9	107.4	36,300
145	35.0	100.5	34,100
150	31.7	92.6	32,000
155	28.1	83.6	30,100

Oper. Rad. Feet	Boom Ang. Deg.	Upper Boom Point Elev. Feet	Upper Boom Point Capacity Pounds
170 Ft. BOOM			
35	82.1	181.0	80,000 *
40	80.4	180.1	80,000 *
45	78.7	179.1	80,000 *
50	77.1	178.0	80,000 *
55	75.4	176.7	80,000 *
60	73.7	175.2	80,000 *
65	71.9	173.6	80,000 *
70	70.2	171.8	80,000 *
75	68.4	169.8	80,000 *
80	66.7	167.7	80,000 *
85	64.8	165.3	79,700
90	63.0	162.8	73,200
95	61.1	160.0	67,500
100	59.2	157.1	62,500
105	57.3	153.9	58,000
110	55.3	150.4	53,900
115	53.3	146.7	50,300
120	51.2	142.7	46,900
125	49.0	138.4	43,900
130	46.8	133.8	41,100
135	44.5	128.8	38,500
140	42.0	123.3	36,200
145	39.5	117.3	34,000
150	36.8	110.7	31,900
155	33.9	103.5	30,000
160	30.8	95.3	28,200
165	27.3	86.0	26,600

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180 Ft. BOOM			
35	82.5	191.1	80,000 *
40	80.9	190.3	80,000 *
45	79.4	189.3	80,000 *
50	77.8	188.3	80,000 *
55	76.2	187.0	80,000 *
60	74.6	185.7	80,000 *
65	72.9	184.1	80,000 *
70	71.3	182.4	80,000 *
75	69.7	180.6	80,000 *
80	68.0	178.6	80,000 *
85	66.3	176.4	79,100
90	64.6	174.0	72,600
95	62.8	171.5	67,000
100	61.1	168.7	61,900
105	59.3	165.7	57,400
110	57.4	162.6	53,300
115	55.6	159.2	49,700
120	53.7	155.5	46,300
125	51.7	151.6	43,300
130	49.7	147.4	40,500
135	47.6	142.8	37,900
140	45.4	138.0	35,600
145	43.2	132.7	33,400
150	40.8	127.0	31,300
155	38.3	120.8	29,400
160	35.7	113.9	27,600
165	32.9	106.4	26,000
170	29.9	97.9	24,400
175	26.5	88.3	22,900

Oper. Rad. Feet	Boom Ang. Deg.	Upper Boom Point Elev. Feet	Upper Boom Point Capacity Pounds
190 Ft. BOOM			
35	82.9	201.2	80,000 *
40	81.4	200.4	80,000 *
45	79.9	199.5	80,000 *
50	78.4	198.5	80,000 *
55	76.9	197.3	80,000 *
60	75.4	196.0	80,000 *
65	73.8	194.6	80,000 *
70	72.3	193.0	80,000 *
75	70.8	191.3	80,000 *
80	69.2	189.4	80,000 *
85	67.6	187.3	78,600
90	66.0	185.1	72,100
95	64.4	182.7	66,400
100	62.7	180.1	61,400
105	61.0	177.4	56,900
110	59.3	174.4	52,800
115	57.6	171.2	49,100
120	55.8	167.9	45,800
125	54.0	164.3	42,800
130	52.1	160.4	40,000
135	50.2	156.3	37,400
140	48.3	151.8	35,000
145	46.2	147.1	32,800
150	44.1	142.0	30,800
155	42.0	136.5	28,900
160	39.7	130.6	27,100
165	37.3	124.1	25,400
170	34.7	117.0	23,900
175	32.0	109.2	22,400
180	29.1	100.5	21,000
185	25.8	90.5	19,700

Oper. Rad. Feet	Boom Ang. Deg.	Upper Boom Point Elev. Feet	Upper Boom Point Capacity Pounds
200 Ft. BOOM			
40	81.8	210.6	80,000 *
45	80.4	209.7	80,000 *
50	79.0	208.7	80,000 *
55	77.5	207.6	80,000 *
60	76.1	206.4	80,000 *
65	74.7	205.0	80,000 *
70	73.2	203.5	80,000 *
75	71.7	201.9	80,000 *
80	70.2	200.1	80,000 *
85	68.7	198.1	78,000
90	67.2	196.0	71,500
95	65.7	193.8	65,800
100	64.1	191.4	60,800
105	62.6	188.8	56,300
110	61.0	186.0	52,200
115	59.4	183.1	48,500
120	57.7	179.9	45,200
125	56.0	176.6	42,100
130	54.3	173.0	39,300
135	52.5	169.2	36,800
140	50.7	165.1	34,400
145	48.9	160.8	32,200
150	47.0	156.2	30,200
155	45.0	151.2	28,300
160	43.0	145.9	26,500
165	40.9	140.2	24,800
170	38.6	134.0	23,300
175	36.3	127.4	21,800
180	33.8	120.0	20,400
185	31.2	112.0	19,100
190	28.3	103.0	17,900
195	25.1	92.7	16,700