

Liftcrane Boom Capacities

Boom No. B10:290

45,400 lb Crane Counterweight

0 lb Carbody Counterweight

360 Degree Rating

**MLC100-1
SERIES 1**



LIFTING CAPACITIES: Lifting capacities for various boom lengths and operating radii are for freely suspended loads and may be based on percent of static tipping or strength of structural components. Capacities must be reduced by applicable deducts.

Upper boom point capacity for liftcrane service with single part whip line from Drum 3 is 20,000 lb. When Drum 1 or Drum 2 is used, capacity with single part whip line is 27,600 lb. 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 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.

BOOM BACKWARD STABILITY: A minimum of 2 parts hoist line is required when using Drum 2 or 3 on 42.7 ft and 52.5 ft boom lengths to maintain boom stability at high boom angles. **Caution: Do not operate using Drum 2 or 3 without required parts of hoist line. Boom may not lower and boom hoist wire rope may go slack causing wire rope damage or failure.**

OPERATING CONDITIONS: Machine to operate on a firm, level, and uniformly supporting surface. Refer to Boom Rigging **No. 84054317**, Wire Rope Specifications chart **No. 9709-A**, Counterweight Arrangements chart **No. 9703-A**, and Wind Conditions chart **No. 9708-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 the Operator Manual for operating guidelines.

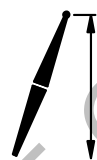
MACHINE TRAVEL: Machine to travel on a firm, level, and uniformly supporting surface. Boom must be within boom angle range shown in capacity chart. Refer to Maximum Allowable Travel Specifications chart **No. 9707-A**.



OPERATING RADIUS: Operating radius is horizontal distance from axis of rotation to center of vertical hoist line or load block.



BOOM ANGLE: Boom angle in degrees (°) 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 21 ft 3 in. crawlers, 35 in. treads, 14 ft 5 in. gantry, 8 part boom hoist reeving, two 32 mm boom pendants, 45,400 lb crane counterweight, and 0 lb carbody counterweight.

Consult chart **No. 9711-A** when Jib No. 117 is attached.

Upper Boom Point Deduct

Deduct 600 lb from capacities when upper boom point is attached. Deduct does not apply to 42.7 ft thru 62.3 ft boom lengths.

Third Line Deduct

Deduct 300 lb from capacities when boom top is equipped with optional 3rd sheave wire rope guide.

Deduct From Capacities When Jib No. 117 Is Attached

Jib Length (ft)	Deduct (lb)
30.0	4,500
40.0	5,300
50.0	6,200
60.0	7,400

Weight of jib and 700 lb suspended beneath jib point have been included in determination of deduct.

Refer to Table 1 for raising ability with the maximum weight of all load blocks, hooks, weight ball, slings, and hoist lines beneath boom point sheaves. For block weights shown with #, load blocks, hooks, weight ball, and slings must remain on ground until combined weights are within rated capacity of chart. Raising is not permitted in shaded areas of table.

Combined weight beneath boom point sheaves must not exceed block weight shown.

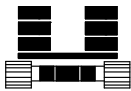
Table 1

Boom Length (ft)	Over End or Side of Crawlers	Over End of Blocked Crawlers
	Block Weight (lb)	
42.7 - 131.2	3,800	3,800
141.1	2,650	2,650
150.9 - 160.8	700	700
170.6		700
180.4		#
Warning: Crane must remain in-line with crawlers when raising over end of blocked crawlers until operating radius is within 360 degree chart. <i>Crane tipping or structural damage can occur.</i>		

Explanation of Symbols



Boom No. B10:290



Crane Counterweight
+
Carbody Counterweight



360 Degree Rating



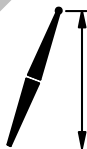
Boom Length



Operating Radius
(see page 1)



Boom Angle
(see page 1)

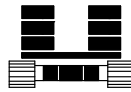


Boom Point Elevation
(see page 1)



Lifting Capacities
(see page 1)

B10



45,400 lb
+
0 lb



360°

42.7 ft			
ft	°	ft	lb
12	79.8	48.8	196,700
13	78.4	48.6	185,200
14	77.1	48.3	172,800
15	75.7	48.1	155,100
16	74.3	47.8	136,600
17	72.9	47.5	121,900
18	71.4	47.1	110,000
19	70.0	46.8	100,200
20	68.6	46.4	91,900
22	65.6	45.5	78,700
24	62.6	44.5	68,700
26	59.5	43.3	60,800
28	56.3	42.0	54,500
30	53.0	40.5	49,200
32	49.5	38.9	44,900
34	45.8	37.0	41,100
36	41.8	34.8	37,900
38	37.5	32.3	35,100
40	32.7	29.3	32,700
42	27.1	25.7	30,500
44	20.1	20.9	28,600

52.5 ft			
ft	°	ft	lb
13	80.6	58.6	185,000
14	79.5	58.4	172,600
15	78.4	58.2	155,400
16	77.3	58.0	136,900
17	76.2	57.7	122,200
18	75.0	57.5	110,200
19	73.9	57.2	100,400
20	72.7	56.8	92,000
22	70.4	56.1	78,800
24	68.1	55.4	68,800
26	65.7	54.5	60,900
28	63.3	53.5	54,500
30	60.8	52.4	49,300
32	58.2	51.2	44,900
34	55.6	49.8	41,200
36	52.9	48.3	38,000
38	50.0	46.7	35,200
40	47.1	44.9	32,700
42	44.0	42.8	30,500
44	40.7	40.6	28,600
46	37.1	38.0	26,900
48	33.3	35.1	25,300
50	29.0	31.7	23,900

62.3 ft			
ft	°	ft	lb
15	80.3	68.3	155,600
16	79.3	68.1	137,000
17	78.4	67.8	122,300
18	77.4	67.6	110,300
19	76.5	67.4	100,400
20	75.5	67.1	92,100
22	73.6	66.5	78,800
24	71.7	65.9	68,800
26	69.7	65.2	60,900
28	67.8	64.4	54,500
30	65.8	63.5	49,200
32	63.7	62.5	44,800
34	61.6	61.4	41,100
36	59.5	60.3	37,900
38	57.3	59.0	35,100
40	55.1	57.6	32,600
42	52.8	56.1	30,500
44	50.4	54.5	28,500
46	48.0	52.7	26,800
48	45.4	50.8	25,200
50	42.7	48.7	23,800
55	35.3	42.4	20,700
60	26.1	33.7	18,300

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ASME B30.5



45,400 lb
+
0 lb



72.2 ft			
ft	°	ft	lb
16	80.8	78.1	137,400
17	80.0	77.9	122,700
18	79.2	77.7	110,700
19	78.4	77.5	100,800
20	77.6	77.3	92,500
22	75.9	76.8	79,200
24	74.3	76.2	69,100
26	72.6	75.6	61,200
28	70.9	74.9	54,800
30	69.2	74.2	49,600
32	67.5	73.3	45,200
34	65.8	72.5	41,400
36	64.0	71.5	38,200
38	62.2	70.5	35,400
40	60.4	69.3	32,900
42	58.6	68.1	30,800
44	56.7	66.8	28,800
46	54.7	65.4	27,100
48	52.7	63.9	25,500
50	50.7	62.3	24,100
55	45.3	57.7	21,100
60	39.3	52.1	18,600
65	32.5	45.0	16,600
70	23.9	35.5	14,800

82.0 ft			
ft	°	ft	lb
18	80.5	87.7	110,700
19	79.8	87.5	100,800
20	79.1	87.3	92,400
22	77.6	86.9	79,100
24	76.2	86.4	69,000
26	74.8	85.9	61,100
28	73.3	85.3	54,700
30	71.8	84.6	49,500
32	70.4	83.9	45,000
34	68.9	83.2	41,300
36	67.3	82.3	38,100
38	65.8	81.4	35,300
40	64.3	80.5	32,800
42	62.7	79.5	30,600
44	61.1	78.4	28,700
46	59.5	77.2	26,900
48	57.8	76.0	25,400
50	56.2	74.6	23,900
55	51.8	70.9	20,900
60	47.2	66.6	18,400
65	42.2	61.4	16,400
70	36.6	55.2	14,700
75	30.2	47.5	13,200
80	22.1	37.0	11,900

91.9 ft			
ft	°	ft	lb
19	80.9	97.5	100,800
20	80.3	97.4	92,400
22	79.0	97.0	79,100
24	77.7	96.5	69,000
26	76.4	96.1	61,100
28	75.1	95.5	54,700
30	73.8	95.0	49,400
32	72.5	94.3	45,000
34	71.2	93.7	41,200
36	69.9	92.9	38,000
38	68.6	92.2	35,200
40	67.2	91.3	32,700
42	65.8	90.4	30,600
44	64.5	89.5	28,600
46	63.1	88.5	26,900
48	61.6	87.4	25,300
50	60.2	86.3	23,900
55	56.5	83.1	20,900
60	52.7	79.5	18,400
65	48.6	75.4	16,300
70	44.3	70.5	14,600
75	39.6	64.9	13,200
80	34.3	58.1	11,900
85	28.2	49.7	10,800
90	20.5	38.4	9,800

B10



45,400 lb
+
0 lb



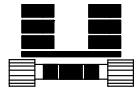
360°

101.7 ft			
ft	°	ft	lb
22	80.1	107.0	79,000
24	78.9	106.6	68,900
26	77.8	106.2	61,000
28	76.6	105.7	54,500
30	75.4	105.2	49,300
32	74.3	104.6	44,800
34	73.1	104.0	41,100
36	71.9	103.4	37,900
38	70.7	102.7	35,000
40	69.5	102.0	32,600
42	68.3	101.2	30,400
44	67.1	100.3	28,400
46	65.9	99.4	26,700
48	64.6	98.5	25,100
50	63.4	97.5	23,700
55	60.1	94.8	20,700
60	56.8	91.6	18,200
65	53.4	88.1	16,100
70	49.8	84.1	14,400
75	45.9	79.5	13,000
80	41.8	74.2	11,700
85	37.4	68.0	10,600
90	32.4	60.8	9,600
95	26.6	51.7	8,700

111.5 ft			
ft	°	ft	lb
22	81.0	117.0	78,900
24	79.9	116.6	68,800
26	78.9	116.2	60,800
28	77.8	115.8	54,400
30	76.8	115.3	49,100
32	75.7	114.8	44,700
34	74.6	114.3	40,900
36	73.6	113.7	37,700
38	72.5	113.1	34,900
40	71.4	112.4	32,400
42	70.3	111.7	30,200
44	69.2	111.0	28,300
46	68.1	110.2	26,500
48	67.0	109.3	25,000
50	65.9	108.4	23,500
55	63.0	106.0	20,500
60	60.1	103.2	18,000
65	57.1	100.1	16,000
70	53.9	96.6	14,300
75	50.7	92.7	12,800
80	47.2	88.3	11,500
85	43.6	83.3	10,400
90	39.7	77.6	9,500
95	35.5	71.0	8,600
100	30.7	63.2	7,800
105	25.1	53.6	7,100

121.4 ft			
ft	°	ft	lb
24	80.7	126.6	68,700
26	79.8	126.3	60,700
28	78.8	125.9	54,300
30	77.9	125.5	49,000
32	76.9	125.0	44,500
34	75.9	124.5	40,800
36	74.9	124.0	37,500
38	74.0	123.4	34,700
40	73.0	122.8	32,200
42	72.0	122.1	30,000
44	71.0	121.5	28,100
46	70.0	120.7	26,300
48	69.0	120.0	24,800
50	67.9	119.2	23,300
55	65.4	117.0	20,300
60	62.7	114.5	17,800
65	60.0	111.7	15,800
70	57.3	108.6	14,000
75	54.4	105.2	12,600
80	51.4	101.4	11,300
85	48.3	97.1	10,200
90	45.1	92.3	9,200
95	41.6	86.9	8,400
100	37.9	80.8	7,600
105	33.8	73.8	6,900
110	29.2	65.6	6,300
115	23.9	55.4	5,700

B10



45,400 lb
+
0 lb



360°

131.2 ft			
ft	°	ft	lb
26	80.6	136.3	60,500
28	79.7	135.9	54,100
30	78.8	135.5	48,800
32	77.9	135.1	44,400
34	77.0	134.6	40,600
36	76.1	134.1	37,400
38	75.2	133.6	34,500
40	74.3	133.1	32,100
42	73.4	132.5	29,900
44	72.5	131.8	27,900
46	71.5	131.2	26,200
48	70.6	130.5	24,600
50	69.7	129.7	23,200
55	67.3	127.7	20,100
60	64.9	125.5	17,700
65	62.5	123.0	15,600
70	60.0	120.2	13,900
75	57.4	117.1	12,400
80	54.8	113.7	11,200
85	52.1	110.0	10,100
90	49.2	105.8	9,100
95	46.3	101.2	8,200
100	43.1	96.1	7,500
105	39.8	90.4	6,800
110	36.2	83.9	6,100
115	32.3	76.5	5,600
120	27.9	67.7	5,000
125	22.8	57.0	4,600

141.1 ft			
ft	°	ft	lb
28	80.4	145.9	54,000
30	79.6	145.5	48,700
32	78.7	145.2	44,200
34	77.9	144.7	40,400
36	77.1	144.3	37,200
38	76.2	143.8	34,400
40	75.4	143.3	31,900
42	74.6	142.7	29,700
44	73.7	142.1	27,700
46	72.9	141.5	26,000
48	72.0	140.9	24,400
50	71.2	140.2	23,000
55	69.0	138.4	19,900
60	66.8	136.3	17,400
65	64.6	134.0	15,400
70	62.3	131.5	13,700
75	60.0	128.7	12,200
80	57.6	125.6	10,900
85	55.1	122.2	9,800
90	52.6	118.5	8,900
95	50.0	114.5	8,000
100	47.3	110.0	7,200
105	44.4	105.1	6,500
110	41.4	99.7	5,900
115	38.2	93.6	5,300
120	34.8	86.8	4,800
125	31.0	79.0	4,300
130	26.8	69.8	3,900

150.9 ft			
ft	°	ft	lb
30	80.3	155.6	48,500
32	79.5	155.2	44,000
34	78.7	154.8	40,300
36	77.9	154.4	37,000
38	77.2	153.9	34,200
40	76.4	153.4	31,700
42	75.6	152.9	29,500
44	74.8	152.4	27,500
46	74.0	151.8	25,800
48	73.2	151.2	24,200
50	72.4	150.6	22,800
55	70.4	148.9	19,700
60	68.4	147.0	17,200
65	66.3	144.9	15,200
70	64.2	142.5	13,500
75	62.1	140.0	12,000
80	59.9	137.2	10,700
85	57.7	134.1	9,600
90	55.4	130.8	8,600
95	53.1	127.1	7,800
100	50.6	123.1	7,000
105	48.1	118.8	6,300
110	45.5	114.1	5,700
115	42.8	108.9	5,100
120	39.9	103.1	4,600
125	36.8	96.7	4,100

B10



45,400 lb
+
0 lb



360°

160.8 ft			
ft	°	ft	lb
30	80.9	165.5	48,300
32	80.1	165.2	43,900
34	79.4	164.8	40,100
36	78.7	164.4	36,800
38	78.0	164.0	34,000
40	77.2	163.6	31,500
42	76.5	163.1	29,300
44	75.8	162.6	27,300
46	75.0	162.0	25,600
48	74.3	161.5	24,000
50	73.5	160.9	22,600
55	71.7	159.3	19,500
60	69.8	157.5	17,000
65	67.9	155.6	15,000
70	65.9	153.4	13,200
75	63.9	151.0	11,800
80	61.9	148.4	10,500
85	59.9	145.6	9,400
90	57.8	142.6	8,400
95	55.7	139.3	7,500
100	53.5	135.7	6,800
105	51.2	131.8	6,100
110	48.9	127.5	5,400
115	46.5	122.9	4,900
120	43.9	117.9	4,400
125	41.3	112.4	3,900

170.6 ft			
ft	°	ft	lb
32	80.7	175.2	43,700
34	80.0	174.8	39,900
36	79.3	174.5	36,600
38	78.7	174.1	33,800
40	78.0	173.6	31,300
42	77.3	173.2	29,100
44	76.6	172.7	27,100
46	75.9	172.2	25,400
48	75.2	171.7	23,800
50	74.5	171.1	22,400
55	72.8	169.7	19,300
60	71.0	168.0	16,800
65	69.2	166.2	14,800
70	67.4	164.1	13,000
75	65.6	161.9	11,600
80	63.7	159.5	10,300
85	61.8	156.9	9,200
90	59.9	154.1	8,200
95	57.9	151.1	7,400
100	55.9	147.8	6,600
105	53.8	144.2	5,900
110	51.7	140.4	5,300
115	49.5	136.2	4,700
120	47.3	131.8	4,200

180.4 ft			
ft	°	ft	lb
34	80.6	184.8	39,700
36	79.9	184.5	36,500
38	79.3	184.1	33,600
40	78.6	183.7	31,100
42	78.0	183.3	28,900
44	77.3	182.8	26,900
46	76.7	182.4	25,200
48	76.0	181.9	23,600
50	75.4	181.3	22,200
55	73.7	179.9	19,100
60	72.1	178.4	16,600
65	70.4	176.7	14,500
70	68.7	174.8	12,800
75	67.0	172.7	11,300
80	65.2	170.5	10,100
85	63.5	168.0	9,000
90	61.7	165.4	8,000
95	59.9	162.6	7,100
100	58.0	159.5	6,300
105	56.1	156.3	5,700
110	54.2	152.8	5,000
115	52.2	149.0	4,500
120	50.1	144.9	3,900