

Liftcrane Boom Capacities

Boom No. B10:500

298,100 lb VPC (Variable Position Counterweight)

Rating Over End of Blocked Crawlers

No Travel - Limited Swing

MLC300 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 over end of machine with crawlers blocked 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 6 is 30,000 lb or 60,000 lb with two part whip line. When Drum 2 or Drum 3 is used, capacity with single part whip line is 36,700 lb or 73,500 lb with two part whip line. 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 and jib 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: Capacities indicated by (b) require 5,000 lb minimum weight. **Caution: Do not operate in areas indicated by (b) without required minimum weight.** 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. Drive and idler tumblers must be properly blocked so that centerline of tumblers becomes tipping fulcrum. Swing is limited to that sector shown on Operating Range Diagram **No. 9348-A**. Refer to Boom Rigging **No. 81023380**, Wire Rope Specifications chart **No. 9341-A**, Counterweight Arrangements chart **No. 9345-A**, and Wind Conditions chart **No. 9344-A**. Crane operator judgment must be used to allow for dynamic load effects of swinging, hoisting or lowering, wind conditions, as well as adverse operating conditions and physical machine depreciation. Refer to the Operator Manual for operating guidelines.



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 31 ft 10 in. crawlers, 48 in. or 60 in. treads, 30 ft live mast, 24 part boom hoist reeving, boom support straps, and 298,100 lb VPC.

Consult chart **No. 9454-A** when Jib No. 148 is attached.

Luffing Jib Backstay Deduct	
Boom Length (ft)	Deduct (lb)
98.4	2,900
118.1	3,500
137.8	4,100
157.5	4,600
177.2	5,200
196.9	5,800
216.5	6,400
236.2	6,900
255.9	7,500
275.6	8,100

Deduct the appropriate value from capacities when luffing jib backstays are stored on boom.

Deduct From Capacities When Jib No. 148 Is Attached	
Jib Length (ft)	Deduct (lb)
39.4	19,900
59.1	30,300
78.7	39,700
98.4	48,700
118.1	61,100
137.8	68,800

Weight of jib and 6,500 lb suspended beneath jib point have been included in determination of deduct.

Refer to Table 1 (with luffing jib backstays stored) and Table 2 (without luffing jib backstays stored) 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.

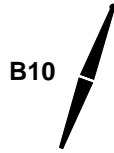
Table 1: With Luffing Jib Backstays

Over End of Blocked Crawlers	
Boom Length (ft)	Block Weight (lb)
98.4	22,900
118.1	22,900
137.8	22,900
157.5	22,900
177.2	22,900
196.9	15,800
216.5	8,300
236.2	#
255.9	#
275.6	#
295.3	Raising Not Permitted

Table 2: Without Luffing Jib Backstays

Over End of Blocked Crawlers	
Boom Length (ft)	Block Weight (lb)
98.4	22,900
118.1	22,900
137.8	22,900
157.5	22,900
177.2	22,900
196.9	22,900
216.5	15,800
236.2	8,300
255.9	#
275.6	#
295.3	#

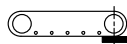
Explanation of Symbols



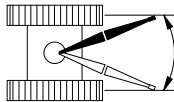
Boom No. B10:500



VPC (Variable Position Counterweight)



Blocked Crawler



Limited Swing



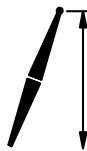
Boom Length



Operating Radius
(see page 1)



Boom Angle
(see page 1)



Boom Point Elevation
(see page 1)



Lifting Capacities
(see page 1)

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ASME B30.5



98.4 ft

ft	°	ft	lb
18	84.5	104.8	661,400 b
19	83.9	104.6	661,400 b
20	83.3	104.5	661,400 b
21	82.7	104.3	648,700 b
22	82.1	104.2	626,300 b
24	80.9	103.8	585,600
26	79.8	103.4	549,700
28	78.6	102.9	517,800
30	77.4	102.4	489,300
32	76.2	101.9	463,600
34	74.9	101.3	440,500
36	73.7	100.6	401,000
38	72.5	99.9	366,900
40	71.3	99.2	338,100
45	68.1	97.1	282,200
50	64.9	94.8	241,900
55	61.6	92.0	211,400
60	58.1	88.8	187,500
65	54.5	85.2	168,300
70	50.8	81.1	152,500
75	46.8	76.4	139,300
80	42.5	71.0	128,100
85	37.7	64.6	118,400
90	32.4	56.9	110,100
95	26.0	47.1	102,700
100	17.4	33.1	96,200

118.1 ft

ft	°	ft	lb
19	84.9	124.5	649,700 b
20	84.4	124.4	646,400 b
21	83.9	124.2	631,200
22	83.5	124.1	610,200
24	82.5	123.8	571,900
26	81.5	123.4	538,000
28	80.5	123.0	507,700
30	79.5	122.6	480,500
32	78.5	122.2	456,000
34	77.5	121.7	433,800
36	76.5	121.2	405,900
38	75.5	120.6	371,500
40	74.5	120.0	342,300
45	71.9	118.3	285,900
50	69.3	116.4	245,200
55	66.7	114.2	214,300
60	64.0	111.7	190,200
65	61.2	108.9	170,800
70	58.3	105.8	154,900
75	55.4	102.3	141,500
80	52.3	98.5	130,200
85	49.1	94.1	120,500
90	45.7	89.2	112,100
95	42.1	83.7	104,700
100	38.2	77.4	98,100
105	33.9	70.1	92,300
110	29.0	61.3	86,100
115	23.1	50.3	80,200

137.8 ft

ft	°	ft	lb
21	84.8	144.1	590,500
22	84.4	143.9	587,600
24	83.6	143.7	555,000
26	82.7	143.4	523,300
28	81.9	143.1	494,900
30	81.0	142.7	469,200
32	80.2	142.3	446,000
34	79.3	141.9	424,800
36	78.5	141.5	405,500
38	77.6	141.0	374,000
40	76.8	140.5	344,600
45	74.6	139.1	287,800
50	72.4	137.4	246,700
55	70.2	135.6	215,700
60	68.0	133.5	191,400
65	65.7	131.2	171,800
70	63.3	128.7	155,800
75	61.0	125.9	142,400
80	58.5	122.8	131,000
85	56.0	119.4	121,200
90	53.4	115.7	112,700
95	50.7	111.5	105,200
100	47.9	107.0	98,600
105	45.0	102.0	92,400
110	41.9	96.4	86,000
115	38.5	90.2	80,200
120	34.9	83.1	74,900
125	31.0	75.0	70,100
130	26.4	65.2	65,600
135	20.9	53.0	61,500

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157.5 ft

ft	°	ft	lb
24	84.4	163.5	536,900
26	83.6	163.3	507,900
28	82.9	163.0	481,400
30	82.2	162.7	457,300
32	81.4	162.3	435,400
34	80.7	162.0	415,400
36	79.9	161.6	397,100
38	79.2	161.2	377,200
40	78.5	160.7	347,600
45	76.6	159.5	290,200
50	74.7	158.1	248,800
55	72.8	156.5	217,500
60	70.9	154.8	192,900
65	68.9	152.8	173,200
70	66.9	150.6	157,000
75	64.9	148.3	143,500
80	62.9	145.7	132,000
85	60.8	142.8	122,100
90	58.6	139.8	113,500
95	56.4	136.4	106,000
100	54.2	132.8	98,700
105	51.9	128.9	91,500
110	49.5	124.6	85,100
115	47.0	119.9	79,300
120	44.4	114.8	74,100
125	41.7	109.2	69,300
130	38.8	103.0	64,900
135	35.7	96.1	60,900
140	32.3	88.3	57,200
145	28.6	79.3	53,700
150	24.3	68.7	50,400
155	19.1	55.2	47,400

177.2 ft

ft	°	ft	lb
24	85.0	183.3	491,000
26	84.3	183.1	486,800
28	83.7	182.8	467,000
30	83.0	182.6	444,800
32	82.4	182.3	424,500
34	81.7	182.0	405,800
36	81.1	181.6	388,600
38	80.4	181.2	372,700
40	79.8	180.9	351,000
45	78.1	179.8	293,300
50	76.4	178.5	251,600
55	74.8	177.1	220,100
60	73.1	175.6	195,400
65	71.4	173.9	175,500
70	69.6	172.0	159,200
75	67.9	169.9	145,600
80	66.1	167.7	134,000
85	64.3	165.3	124,000
90	62.5	162.6	115,400
95	60.6	159.8	106,600
100	58.7	156.7	98,600
105	56.8	153.4	91,500
110	54.8	149.9	85,000
115	52.8	146.1	79,300
120	50.7	142.0	74,000
125	48.5	137.5	69,300
130	46.3	132.7	64,900
135	44.0	127.6	60,900
140	41.5	121.9	57,200
145	39.0	115.8	53,700
150	36.2	109.0	50,500
155	33.3	101.5	47,600
160	30.1	93.0	44,800
165	26.6	83.3	42,200
170	22.5	71.8	39,700
175	17.5	57.1	37,300

196.9 ft

ft	°	ft	lb
26	84.9	202.9	424,000
28	84.3	202.7	420,800
30	83.7	202.4	410,900
32	83.2	202.2	399,600
34	82.6	201.9	388,600
36	82.0	201.6	378,100
38	81.4	201.2	363,500
40	80.8	200.9	349,700
45	79.3	199.9	296,400
50	77.8	198.8	254,300
55	76.3	197.6	222,400
60	74.8	196.2	197,500
65	73.3	194.7	177,500
70	71.8	193.0	161,000
75	70.2	191.2	147,200
80	68.6	189.2	135,600
85	67.1	187.0	124,700
90	65.5	184.7	114,400
95	63.8	182.3	105,300
100	62.2	179.6	97,300
105	60.5	176.7	90,100
110	58.8	173.7	83,700
115	57.1	170.4	77,900
120	55.3	167.0	72,700
125	53.5	163.2	67,900
130	51.6	159.3	63,500
135	49.7	155.0	59,500
140	47.7	150.5	55,800
145	45.7	145.6	52,400
150	43.6	140.3	49,200
155	41.4	134.7	46,200
160	39.1	128.5	43,500
165	36.7	121.9	40,900
170	34.1	114.6	38,500
175	31.3	106.5	36,200
180	28.3	97.4	34,000
185	24.9	86.9	32,000
190	21.0	74.5	30,000
195	16.2	58.7	28,100

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216.5 ft

ft	°	ft	lb
28	84.8	222.5	373,400
30	84.3	222.3	366,500
32	83.8	222.0	357,400
34	83.2	221.8	348,600
36	82.7	221.5	339,900
38	82.2	221.2	331,500
40	81.6	220.9	323,300
45	80.3	220.0	298,400
50	78.9	219.0	256,000
55	77.6	217.9	224,000
60	76.2	216.6	198,900
65	74.9	215.2	178,800
70	73.5	213.7	162,200
75	72.1	212.1	148,300
80	70.7	210.3	136,400
85	69.3	208.4	124,400
90	67.8	206.3	114,100
95	66.4	204.1	105,000
100	64.9	201.8	96,900
105	63.4	199.2	89,700
110	61.9	196.6	83,300
115	60.4	193.7	77,500
120	58.9	190.7	72,300
125	57.3	187.4	67,500
130	55.7	184.0	63,100
135	54.0	180.4	59,100
140	52.4	176.5	55,400
145	50.7	172.4	52,000
150	48.9	168.0	48,800
155	47.1	163.4	45,900
160	45.2	158.4	43,100
165	43.3	153.1	40,500
170	41.3	147.4	38,100
175	39.2	141.3	35,900
180	37.0	134.7	33,700
185	34.7	127.6	31,700
190	32.3	119.7	29,800
195	29.6	111.1	28,000
200	26.7	101.4	26,200
205	23.5	90.2	24,600
210	19.7	77.0	23,000
215	15.1	60.1	21,500

236.2 ft

ft	°	ft	lb
30	84.8	242.1	308,900
32	84.3	241.8	307,700
34	83.8	241.6	306,500
36	83.3	241.3	302,800
38	82.8	241.1	295,800
40	82.3	240.8	289,000
45	81.1	240.0	272,500
50	79.9	239.1	257,000
55	78.6	238.0	226,300
60	77.4	236.9	200,900
65	76.1	235.6	180,600
70	74.9	234.3	163,900
75	73.6	232.8	148,800
80	72.4	231.2	134,900
85	71.1	229.4	122,900
90	69.8	227.6	112,500
95	68.5	225.6	103,400
100	67.2	223.5	95,300
105	65.8	221.2	88,100
110	64.5	218.8	81,700
115	63.1	216.2	75,900
120	61.7	213.5	70,600
125	60.3	210.6	65,800
130	58.9	207.6	61,500
135	57.5	204.4	57,400
140	56.0	201.0	53,700
145	54.5	197.4	50,300
150	53.0	193.7	47,100
155	51.4	189.7	44,200
160	49.9	185.4	41,400
165	48.2	181.0	38,900
170	46.6	176.2	36,400
175	44.8	171.2	34,200
180	43.1	165.9	32,000
185	41.2	160.2	30,000
190	39.3	154.1	28,100
195	37.3	147.5	26,300
200	35.2	140.5	24,600
205	33.0	132.9	23,000
210	30.7	124.6	21,400
215	28.1	115.4	20,000
220	25.3	105.1	18,500
225	22.2	93.2	17,200
230	18.6	79.2	15,900

255.9 ft

ft	°	ft	lb
32	84.7	261.6	256,400
34	84.3	261.4	255,300
36	83.8	261.2	254,300
38	83.4	260.9	253,300
40	82.9	260.7	252,300
45	81.8	259.9	249,900
50	80.7	259.1	247,400
55	79.5	258.1	228,000
60	78.4	257.1	202,500
65	77.2	255.9	182,000
70	76.1	254.7	164,800
75	74.9	253.3	148,400
80	73.8	251.8	134,400
85	72.6	250.3	122,400
90	71.4	248.5	112,000
95	70.2	246.7	102,800
100	69.0	244.8	94,700
105	67.8	242.7	87,500
110	66.6	240.5	81,100
115	65.3	238.2	75,200
120	64.1	235.8	70,000
125	62.8	233.2	65,200
130	61.6	230.5	60,800
135	60.3	227.6	56,800
140	59.0	224.6	53,100
145	57.6	221.4	49,600
150	56.3	218.0	46,400
155	54.9	214.5	43,500
160	53.5	210.8	40,700
165	52.1	206.9	38,200
170	50.7	202.8	35,700
175	49.2	198.5	33,500
180	47.7	193.9	31,300
185	46.1	189.1	29,300
190	44.5	184.0	27,400
195	42.9	178.6	25,600
200	41.2	172.9	23,900
205	39.4	166.8	22,300
210	37.6	160.4	20,800
215	35.7	153.4	19,300
220	33.6	146.0	17,900
225	31.5	137.9	16,600
230	29.3	129.1	15,300
235	26.8	119.4	14,100
240	24.1	108.5	12,900
245	21.1	96.0	11,700
250	17.6	81.1	10,600

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275.6 ft

ft	°	ft	lb
34	84.7	281.2	216,000
36	84.3	281.0	215,100
38	83.9	280.8	214,200
40	83.4	280.5	213,300
45	82.4	279.8	211,000
50	81.3	279.1	208,800
55	80.3	278.2	206,700
60	79.2	277.2	201,900
65	78.2	276.1	183,200
70	77.1	275.0	163,500
75	76.0	273.7	146,900
80	74.9	272.4	132,900
85	73.9	270.9	120,900
90	72.8	269.3	110,400
95	71.7	267.7	101,200
100	70.6	265.9	93,100
105	69.5	264.0	85,900
110	68.3	262.0	79,400
115	67.2	259.9	73,600
120	66.1	257.6	68,300
125	64.9	255.3	63,500
130	63.8	252.8	59,100
135	62.6	250.2	55,100
140	61.4	247.4	51,300
145	60.2	244.6	47,900
150	59.0	241.5	44,700
155	57.8	238.4	41,800
160	56.5	235.0	39,000
165	55.3	231.6	36,400
170	54.0	227.9	34,000
175	52.7	224.1	31,700
180	51.3	220.1	29,600
185	50.0	215.9	27,600
190	48.6	211.4	25,700
195	47.2	206.8	23,900
200	45.7	201.9	22,200
205	44.2	196.8	20,600
210	42.7	191.4	19,000
215	41.1	185.6	17,600
220	39.5	179.6	16,200
225	37.8	173.2	14,900
230	36.0	166.3	13,600
235	34.2	159.0	12,400
240	32.2	151.2	11,200
245	30.2	142.7	10,100

295.3 ft

ft	°	ft	lb
36	84.7	300.8	181,900
38	84.3	300.6	181,100
40	83.9	300.4	180,300
45	82.9	299.7	178,500
50	81.9	299.0	172,400
55	80.9	298.2	165,100
60	80.0	297.3	158,300
65	79.0	296.3	152,100
70	78.0	295.2	146,300
75	77.0	294.0	140,900
80	76.0	292.8	132,700
85	75.0	291.4	120,600
90	74.0	289.9	110,100
95	72.9	288.4	101,000
100	71.9	286.7	92,800
105	70.9	285.0	85,600
110	69.9	283.1	79,100
115	68.8	281.2	73,300
120	67.8	279.1	68,000
125	66.7	277.0	63,200
130	65.6	274.7	58,800
135	64.6	272.3	54,800
140	63.5	269.8	51,100
145	62.4	267.1	47,600
150	61.3	264.4	44,400
155	60.2	261.5	41,500
160	59.0	258.5	38,700
165	57.9	255.3	36,100
170	56.7	252.0	33,700
175	55.5	248.6	31,500
180	54.3	245.0	29,300
185	53.1	241.2	27,300
190	51.9	237.3	25,400
195	50.6	233.2	23,600
200	49.4	228.9	21,900
205	48.1	224.4	20,300
210	46.7	219.7	18,800
215	45.4	214.8	17,300
220	44.0	209.6	16,000
225	42.5	204.1	14,600
230	41.1	198.4	13,400
235	39.5	192.3	12,200
240	38.0	186.0	11,000