

Liftcrane Boom Capacities


Boom No. B10:500

474,400 lb VPC (Variable Position Counterweight)

Rating Over End of Blocked Crawlers

No Travel - Limited Swing

MLC300 SERIES 3


 **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 474,400 lb VPC.

Consult chart **No. 9456-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
295.3	8,700

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. For boom lengths shown with (a), upper boom point must be removed. 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 or Side of 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	22,900
236.2	15,800
255.9	15,800
275.6	#
295.3	#
315.0	Raising Not Permitted
334.6	

Table 2: Without Luffing Jib Backstays

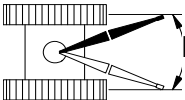
Over End or Side of Crawlers	
Boom Length (ft)	Block Weight (lb)
98.4	22,900
118.1	22,900
137.8	22,900
157.5	22,900
177.2	22,900
196.9	22,900
216.5	22,900
236.2	22,900
255.9	15,800
275.6	8,300
295.3	#
315.0	#
(a)334.6	#

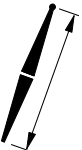
Explanation of Symbols


B10  Boom No. B10:500


 VPC (Variable Position Counterweight)


 Blocked Crawler


 Limited Swing

 Boom Length

 Operating Radius
(see page 1)

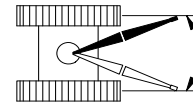
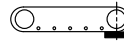
 Boom Angle
(see page 1)

 Boom Point Elevation
(see page 1)

 Lifting Capacities
(see page 1)

MLC300 S-3

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	661,400 b
22	82.1	104.2	654,900 b
24	80.9	103.8	612,400
26	79.8	103.4	575,000
28	78.6	102.9	541,700
30	77.4	102.4	512,000
32	76.2	101.9	484,300
34	74.9	101.3	455,800
36	73.7	100.6	429,300
38	72.5	99.9	409,700
40	71.3	99.2	389,700
45	68.1	97.1	329,200
50	64.9	94.8	282,300
55	61.6	92.0	246,800
60	58.1	88.8	219,100
65	54.5	85.2	196,800
70	50.8	81.1	178,500
75	46.8	76.4	163,100
80	42.5	71.0	150,100
85	37.8	64.6	138,900
90	32.4	56.9	129,200
95	26.0	47.1	120,700
100	17.4	33.1	110,600

118.1 ft

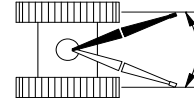
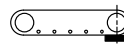
ft	°	ft	lb
19	84.9	124.5	649,700 b
20	84.4	124.4	646,400 b
21	83.9	124.2	643,200
22	83.5	124.1	637,600
24	82.5	123.8	597,800
26	81.5	123.4	562,500
28	80.5	123.0	530,900
30	79.5	122.6	502,600
32	78.5	122.2	477,000
34	77.5	121.7	453,800
36	76.5	121.2	426,000
38	75.5	120.6	404,200
40	74.5	120.0	386,900
45	71.9	118.3	332,900
50	69.3	116.4	285,600
55	66.7	114.2	249,800
60	64.0	111.7	221,800
65	61.2	108.9	199,300
70	58.4	105.8	180,900
75	55.4	102.3	165,400
80	52.3	98.5	152,300
85	49.1	94.1	141,000
90	45.7	89.2	131,200
95	42.1	83.7	122,600
100	38.2	77.4	115,000
105	33.9	70.1	108,300
110	29.0	61.3	102,200
115	23.2	50.3	96,800

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	579,800
26	82.7	143.4	546,900
28	81.9	143.1	517,300
30	81.0	142.7	490,600
32	80.2	142.3	466,300
34	79.3	141.9	444,300
36	78.5	141.5	424,200
38	77.6	141.0	396,700
40	76.8	140.5	380,100
45	74.6	139.1	334,700
50	72.4	137.4	287,100
55	70.2	135.6	251,200
60	68.0	133.5	223,000
65	65.7	131.2	200,400
70	63.3	128.7	181,800
75	61.0	125.9	166,200
80	58.5	122.8	153,000
85	56.0	119.4	141,700
90	53.4	115.7	131,800
95	50.7	111.5	123,200
100	47.9	107.0	115,600
105	45.0	102.0	108,800
110	41.9	96.4	102,700
115	38.5	90.2	97,200
120	34.9	83.1	92,200
125	31.0	75.0	87,700
130	26.4	65.2	83,600
135	20.9	53.0	79,800

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157.5 ft

ft	°	ft	lb
24	84.4	163.5	536,900
26	83.6	163.3	530,400
28	82.9	163.0	502,800
30	82.2	162.7	477,900
32	81.4	162.3	455,100
34	80.7	162.0	434,300
36	79.9	161.6	415,200
38	79.2	161.2	397,600
40	78.5	160.7	373,000
45	76.6	159.5	337,200
50	74.7	158.1	289,200
55	72.8	156.5	253,000
60	70.9	154.8	224,600
65	68.9	152.8	201,700
70	66.9	150.6	183,000
75	64.9	148.3	167,300
80	62.9	145.7	154,000
85	60.8	142.8	142,600
90	58.6	139.8	132,700
95	56.5	136.4	124,000
100	54.2	132.8	116,300
105	51.9	128.9	109,400
110	49.5	124.6	103,300
115	47.0	119.9	97,700
120	44.4	114.8	92,700
125	41.7	109.2	88,200
130	38.8	103.0	84,000
135	35.7	96.1	80,200
140	32.3	88.3	76,000
145	28.6	79.3	72,300
150	24.3	68.7	69,300
155	19.1	55.2	66,600

177.2 ft

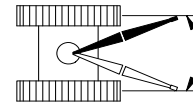
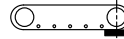
ft	°	ft	lb
24	85.0	183.3	491,000
26	84.3	183.1	486,800
28	83.7	182.8	482,800
30	83.0	182.6	464,400
32	82.4	182.3	443,300
34	81.7	182.0	423,900
36	81.1	181.6	406,000
38	80.4	181.2	389,500
40	79.8	180.9	372,200
45	78.1	179.8	333,000
50	76.4	178.5	292,000
55	74.8	177.1	255,500
60	73.1	175.6	227,000
65	71.4	173.9	204,000
70	69.6	172.0	185,200
75	67.9	169.9	169,400
80	66.1	167.7	156,000
85	64.3	165.3	144,500
90	62.5	162.6	134,600
95	60.6	159.8	125,800
100	58.7	156.7	118,100
105	56.8	153.4	111,200
110	54.8	149.9	105,000
115	52.8	146.1	99,500
120	50.7	142.0	94,400
125	48.5	137.5	89,800
130	46.3	132.7	85,400
135	44.0	127.6	80,500
140	41.5	121.9	76,900
145	39.0	115.8	73,800
150	36.2	109.0	70,900
155	33.3	101.5	67,800
160	30.1	93.0	63,900
165	26.6	83.3	60,200
170	22.5	71.8	56,600
175	17.5	57.1	52,900

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	367,800
40	80.8	200.9	357,900
45	79.3	199.9	326,300
50	77.8	198.8	294,700
55	76.3	197.6	257,900
60	74.8	196.2	229,100
65	73.3	194.7	206,000
70	71.8	193.0	187,000
75	70.2	191.2	171,100
80	68.6	189.2	157,600
85	67.1	187.0	146,000
90	65.5	184.7	135,900
95	63.8	182.3	127,100
100	62.2	179.6	119,300
105	60.5	176.7	112,400
110	58.8	173.7	106,200
115	57.1	170.4	100,600
120	55.3	167.0	95,100
125	53.5	163.2	89,300
130	51.6	159.3	84,900
135	49.7	155.0	81,200
140	47.7	150.5	77,800
145	45.7	145.6	73,800
150	43.6	140.3	69,700
155	41.4	134.7	65,800
160	39.1	128.5	62,200
165	36.7	121.9	58,700
170	34.1	114.6	55,400
175	31.3	106.5	52,200
180	28.3	97.4	49,200
185	24.9	86.9	46,200
190	21.0	74.5	43,300
195	16.2	58.7	40,300

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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	303,600
50	79.0	219.0	285,400
55	77.6	217.9	259,500
60	76.2	216.6	230,600
65	74.9	215.2	207,300
70	73.5	213.7	188,200
75	72.1	212.1	172,200
80	70.7	210.3	158,600
85	69.3	208.4	147,000
90	67.8	206.3	136,900
95	66.4	204.1	128,000
100	64.9	201.8	120,200
105	63.4	199.2	113,200
110	61.9	196.6	106,900
115	60.4	193.7	101,100
120	58.9	190.7	94,700
125	57.3	187.4	89,600
130	55.7	184.0	85,500
135	54.1	180.4	81,700
140	52.4	176.5	77,100
145	50.7	172.4	72,800
150	48.9	168.0	68,700
155	47.1	163.4	64,900
160	45.2	158.4	61,400
165	43.3	153.1	58,000
170	41.3	147.4	54,800
175	39.2	141.3	51,800
180	37.0	134.7	48,900
185	34.7	127.6	46,100
190	32.3	119.7	43,500
195	29.6	111.1	41,000
200	26.7	101.4	38,500
205	23.5	90.2	36,100
210	19.8	77.0	33,600
215	15.1	60.1	31,200

236.2 ft

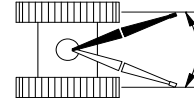
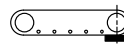
ft	°	ft	lb
30	84.8	242.1	308,900
32	84.3	241.8	307,700
34	83.8	241.6	306,500
36	83.3	241.3	302,800
38	82.8	241.1	295,800
40	82.3	240.8	289,000
45	81.1	240.0	272,500
50	79.9	239.1	257,000
55	78.6	238.0	242,300
60	77.4	236.9	228,300
65	76.2	235.6	209,100
70	74.9	234.3	189,900
75	73.6	232.8	173,700
80	72.4	231.2	160,100
85	71.1	229.4	148,300
90	69.8	227.6	138,100
95	68.5	225.6	129,200
100	67.2	223.5	121,300
105	65.8	221.2	114,300
110	64.5	218.8	106,500
115	63.1	216.2	99,800
120	61.7	213.5	94,900
125	60.3	210.6	89,100
130	58.9	207.6	83,700
135	57.5	204.4	78,800
140	56.0	201.0	74,200
145	54.5	197.4	69,900
150	53.0	193.7	65,900
155	51.5	189.7	62,200
160	49.9	185.4	58,600
165	48.2	181.0	55,300
170	46.6	176.2	52,200
175	44.8	171.2	49,300
180	43.1	165.9	46,400
185	41.2	160.2	43,800
190	39.3	154.1	41,200
195	37.3	147.5	38,800
200	35.2	140.5	36,500
205	33.0	132.9	34,200
210	30.7	124.6	32,100
215	28.1	115.4	30,000
220	25.4	105.1	27,900
225	22.2	93.2	25,900
230	18.6	79.2	23,800

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	243,900
60	78.4	257.1	233,900
65	77.2	255.9	210,500
70	76.1	254.7	191,100
75	74.9	253.3	174,900
80	73.8	251.8	161,200
85	72.6	250.3	149,400
90	71.4	248.5	139,100
95	70.2	246.7	130,100
100	69.0	244.8	122,100
105	67.8	242.7	113,700
110	66.6	240.5	105,900
115	65.3	238.2	99,400
120	64.1	235.8	93,100
125	62.8	233.2	87,400
130	61.6	230.5	82,000
135	60.3	227.6	77,100
140	59.0	224.6	72,600
145	57.6	221.4	68,300
150	56.3	218.0	64,400
155	54.9	214.5	60,700
160	53.5	210.8	57,200
165	52.1	206.9	54,000
170	50.7	202.8	50,900
175	49.2	198.5	48,000
180	47.7	193.9	45,200
185	46.1	189.1	42,600
190	44.5	184.0	40,100
195	42.9	178.6	37,800
200	41.2	172.9	35,500
205	39.4	166.8	33,300
210	37.6	160.4	31,300
215	35.7	153.4	29,300
220	33.7	146.0	27,300
225	31.5	137.9	25,500
230	29.3	129.1	23,700
235	26.8	119.4	21,900
240	24.1	108.5	20,200
245	21.1	96.0	18,500
250	17.6	81.1	16,700

MLC300 S-3

ASME B30.5



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	193,300
70	77.1	275.0	185,000
75	76.0	273.7	176,400
80	75.0	272.4	162,500
85	73.9	270.9	149,500
90	72.8	269.3	137,900
95	71.7	267.7	127,700
100	70.6	265.9	118,500
105	69.5	264.0	110,200
110	68.3	262.0	102,700
115	67.2	259.9	95,900
120	66.1	257.6	89,700
125	64.9	255.3	84,000
130	63.8	252.8	78,700
135	62.6	250.2	73,800
140	61.4	247.4	69,300
145	60.2	244.6	65,100
150	59.0	241.5	61,200
155	57.8	238.4	57,500
160	56.5	235.0	54,100
165	55.3	231.6	50,800
170	54.0	227.9	47,800
175	52.7	224.1	44,900
180	51.3	220.1	42,200
185	50.0	215.9	39,600
190	48.6	211.4	37,200
195	47.2	206.8	34,900
200	45.7	201.9	32,600
205	44.2	196.8	30,500
210	42.7	191.4	28,500
215	41.1	185.6	26,600
220	39.5	179.6	24,700
225	37.8	173.2	22,900
230	36.0	166.3	21,200
235	34.2	159.0	19,500
240	32.2	151.2	17,900
245	30.2	142.7	16,400
250	28.0	133.4	14,800
255	25.6	123.2	13,300
260	23.0	111.7	11,400

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	135,700
85	75.0	291.4	131,000
90	74.0	289.9	126,500
95	72.9	288.4	122,400
100	71.9	286.7	118,400
105	70.9	285.0	110,500
110	69.9	283.1	103,000
115	68.8	281.2	96,100
120	67.8	279.1	89,800
125	66.7	277.0	84,100
130	65.7	274.7	78,800
135	64.6	272.3	73,900
140	63.5	269.8	69,400
145	62.4	267.1	65,100
150	61.3	264.4	61,200
155	60.2	261.5	57,500
160	59.0	258.5	54,100
165	57.9	255.3	50,800
170	56.7	252.0	47,800
175	55.5	248.6	44,900
180	54.4	245.0	42,200
185	53.1	241.2	39,600
190	51.9	237.3	37,200
195	50.6	233.2	34,900
200	49.4	228.9	32,700
205	48.1	224.4	30,600
210	46.7	219.7	28,500
215	45.4	214.8	26,600
220	44.0	209.6	24,800
225	42.5	204.1	23,000
230	41.1	198.4	21,300
235	39.5	192.3	19,700
240	38.0	186.0	18,100
245	36.3	179.2	16,600
250	34.6	172.0	15,100
255	32.8	164.3	13,700
260	31.0	156.1	12,300
265	29.0	147.1	10,900

315.0 ft

ft	°	ft	lb
36	85.0	320.6	156,700
38	84.6	320.4	155,900
40	84.3	320.2	155,200
45	83.4	319.6	153,400
50	82.4	318.9	151,700
55	81.5	318.1	150,100
60	80.6	317.3	148,500
65	79.7	316.4	146,800
70	78.7	315.3	145,200
75	77.8	314.2	143,300
80	76.9	313.1	139,800
85	75.9	311.8	136,600
90	75.0	310.4	133,200
95	74.0	309.0	124,400
100	73.1	307.5	115,200
105	72.1	305.8	106,900
110	71.2	304.1	99,400
115	70.2	302.3	92,600
120	69.2	300.4	86,400
125	68.3	298.4	80,700
130	67.3	296.3	75,400
135	66.3	294.0	70,500
140	65.3	291.7	66,000
145	64.3	289.3	61,800
150	63.2	286.8	57,900
155	62.2	284.1	54,300
160	61.2	281.3	50,900
165	60.1	278.5	47,600
170	59.1	275.5	44,600
175	58.0	272.3	41,800
180	56.9	269.0	39,100
185	55.8	265.6	36,500
190	54.7	262.1	34,100
195	53.6	258.4	31,800
200	52.4	254.5	29,600
205	51.2	250.5	27,600
210	50.0	246.3	25,600
215	48.8	241.9	23,700
220	47.6	237.3	21,900
225	46.3	232.6	20,100
230	45.1	227.6	18,500
235	43.7	222.3	16,900
240	42.4	216.9	15,300
245	41.0	211.1	13,800
250	39.6	205.1	12,400
255	38.1	198.8	11,000

MLC300 S-3

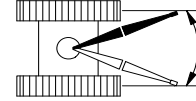
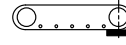
ASME B30.5



B10



474,400 lb



 334.6 ft			
ft	°	ft	lb
38	85.0	340.2	131,800
40	84.6	340.0	131,200
45	83.7	339.4	129,700
50	82.9	338.8	128,100
55	82.0	338.1	126,600
60	81.2	337.3	125,100
65	80.3	336.4	120,600
70	79.4	335.4	115,900
75	78.5	334.4	111,500
80	77.7	333.3	107,400
85	76.8	332.1	103,600
90	75.9	330.8	99,900
95	75.0	329.5	96,600
100	74.1	328.0	93,300
105	73.2	326.5	90,300
110	72.3	324.9	87,400
115	71.4	323.2	84,800
120	70.5	321.4	82,100
125	69.6	319.6	79,700
130	68.7	317.6	74,800
135	67.8	315.5	69,900
140	66.8	313.4	65,400
145	65.9	311.1	61,200
150	64.9	308.8	57,300
155	64.0	306.3	53,700
160	63.0	303.8	50,200
165	62.1	301.1	47,000
170	61.1	298.3	44,000
175	60.1	295.4	41,200
180	59.1	292.4	38,500
185	58.1	289.3	35,900
190	57.1	286.0	33,500
195	56.0	282.6	31,200
200	55.0	279.1	29,000
205	53.9	275.5	27,000
210	52.8	271.7	25,000
215	51.7	267.7	23,100
220	50.6	263.6	21,300
225	49.5	259.3	19,600
230	48.4	254.9	17,900
235	47.2	250.3	16,300
240	46.0	245.4	14,800
245	44.8	240.4	13,300
250	43.6	235.1	11,900
255	42.3	229.6	10,600

REFERENCE ONLY!