


Liftcrane Boom Capacities

Boom No. B10:500

386,200 lb VPC (Variable Position Counterweight)

360 Degree Rating

MLC300 SERIES 2

 **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 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. 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, 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. 9342-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 31 ft 10 in. crawlers, 48 in. or 60 in. treads, 30 ft live mast, 24 part boom hoist reeving, boom support straps, and 386,200 lb VPC.

Consult chart **No. 9455-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.

REFERENCE ONLY!

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 1a: 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	8,300
275.6	#
295.3	#
315.0	Raising Not Permitted
334.6	

Table 1b: 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	22,900
216.5	22,900
236.2	15,800
255.9	8,300
275.6	#
295.3	#
315.0	Raising Not Permitted
334.6	

Warning: Crane must remain in-line with crawlers when raising over end of blocked crawlers until operating radius is within 360 degree chart. *Crane tipping or structural damage can occur.*

Table 2a: 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	Raising Not Permitted
334.6	


Table 2b: 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	22,900
236.2	22,900
255.9	15,800
275.6	8,300
295.3	#
315.0	#
(a)334.6	#


Warning: Crane must remain in-line with crawlers when raising over end of blocked crawlers until operating radius is within 360 degree chart. Crane tipping or structural damage can occur.


Explanation of Symbols


B10  Boom No. B10:500

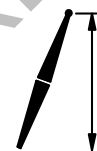
 VPC (Variable Position Counterweight)


 360 Degree Rating

 Boom Length

 Operating Radius
(see page 1)

 Boom Angle
(see page 1)

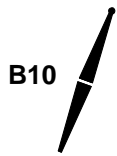
 Boom Point Elevation
(see page 1)

 Lifting Capacities
(see page 1)

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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	661,400 b
22	82.1	104.2	640,600 b
24	80.9	103.8	599,000
26	79.8	103.4	562,300
28	78.6	102.9	529,700
30	77.4	102.4	491,700
32	76.2	101.9	443,000
34	74.9	101.3	402,900
36	73.7	100.6	369,400
38	72.5	99.9	340,900
40	71.3	99.2	316,400
45	68.1	97.1	267,900
50	64.9	94.8	232,000
55	61.6	92.0	204,400
60	58.1	88.8	182,500
65	54.5	85.2	164,600
70	50.8	81.1	149,800
75	46.8	76.4	137,300
80	42.5	71.0	126,700
85	37.7	64.6	117,500
90	32.4	56.9	109,400
95	26.0	47.1	102,300
100	17.4	33.1	96,000

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	623,900
24	82.5	123.8	584,900
26	81.5	123.4	550,200
28	80.5	123.0	519,300
30	79.5	122.6	491,600
32	78.5	122.2	447,600
34	77.5	121.7	407,200
36	76.5	121.2	373,400
38	75.5	120.6	344,600
40	74.5	120.0	319,900
45	71.9	118.3	271,000
50	69.3	116.4	234,900
55	66.7	114.2	207,000
60	64.0	111.7	184,900
65	61.2	108.9	166,900
70	58.3	105.8	151,900
75	55.4	102.3	139,400
80	52.3	98.5	128,600
85	49.1	94.1	119,300
90	45.7	89.2	111,200
95	42.1	83.7	104,100
100	38.2	77.4	97,800
105	33.9	70.1	92,100
110	29.0	61.3	87,000
115	23.1	50.3	82,400

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	567,400
26	82.7	143.4	535,100
28	81.9	143.1	506,100
30	81.0	142.7	479,900
32	80.2	142.3	450,100
34	79.3	141.9	409,400
36	78.5	141.5	375,400
38	77.6	141.0	346,500
40	76.8	140.5	321,600
45	74.6	139.1	272,500
50	72.4	137.4	236,100
55	70.2	135.6	208,000
60	68.0	133.5	185,800
65	65.7	131.2	167,700
70	63.3	128.7	152,700
75	61.0	125.9	140,000
80	58.5	122.8	129,200
85	56.0	119.4	119,900
90	53.4	115.7	111,700
95	50.7	111.5	104,600
100	47.9	107.0	98,200
105	45.0	102.0	92,500
110	41.9	96.4	87,400
115	38.5	90.2	82,800
120	34.9	83.1	78,600
125	31.0	75.0	74,800
130	26.4	65.2	71,300
135	20.9	53.0	68,000

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157.5 ft

ft	°	ft	lb
24	84.4	163.5	536,900
26	83.6	163.3	519,100
28	82.9	163.0	492,100
30	82.2	162.7	467,600
32	81.4	162.3	445,300
34	80.7	162.0	412,500
36	79.9	161.6	378,200
38	79.2	161.2	349,100
40	78.5	160.7	324,000
45	76.6	159.5	274,500
50	74.7	158.1	237,800
55	72.8	156.5	209,500
60	70.9	154.8	187,000
65	68.9	152.8	168,800
70	66.9	150.6	153,700
75	64.9	148.3	140,900
80	62.9	145.7	130,000
85	60.8	142.8	120,600
90	58.6	139.8	112,400
95	56.4	136.4	105,200
100	54.2	132.8	98,700
105	51.9	128.9	93,000
110	49.5	124.6	87,900
115	47.0	119.9	83,200
120	44.4	114.8	79,000
125	41.7	109.2	75,100
130	38.8	103.0	71,600
135	35.7	96.1	68,400
140	32.3	88.3	64,800
145	28.6	79.3	61,100
150	24.3	68.7	57,600
155	19.1	55.2	54,400

177.2 ft

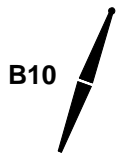
ft	°	ft	lb
24	85.0	183.3	491,000
26	84.3	183.1	486,800
28	83.7	182.8	477,200
30	83.0	182.6	454,600
32	82.4	182.3	433,900
34	81.7	182.0	414,800
36	81.1	181.6	381,400
38	80.4	181.2	352,100
40	79.8	180.9	326,900
45	78.1	179.8	277,100
50	76.4	178.5	240,200
55	74.8	177.1	211,800
60	73.1	175.6	189,200
65	71.4	173.9	170,900
70	69.6	172.0	155,600
75	67.9	169.9	142,800
80	66.1	167.7	131,900
85	64.3	165.3	122,400
90	62.5	162.6	114,200
95	60.6	159.8	106,900
100	58.7	156.7	100,400
105	56.8	153.4	94,700
110	54.8	149.9	89,500
115	52.8	146.1	84,800
120	50.7	142.0	80,600
125	48.5	137.5	76,700
130	46.3	132.7	72,900
135	44.0	127.6	68,700
140	41.5	121.9	64,700
145	39.0	115.8	61,100
150	36.2	109.0	57,700
155	33.3	101.5	54,500
160	30.1	93.0	51,500
165	26.6	83.3	48,700
170	22.5	71.8	46,100
175	17.5	57.1	43,600

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	355,300
40	80.8	200.9	329,900
45	79.3	199.9	279,600
50	77.8	198.8	242,400
55	76.3	197.6	213,800
60	74.8	196.2	191,000
65	73.3	194.7	172,500
70	71.8	193.0	157,200
75	70.2	191.2	144,300
80	68.6	189.2	133,200
85	67.1	187.0	123,700
90	65.5	184.7	115,400
95	63.8	182.3	108,000
100	62.2	179.6	101,500
105	60.5	176.7	95,700
110	58.8	173.7	90,500
115	57.1	170.4	85,800
120	55.3	167.0	81,100
125	53.5	163.2	76,100
130	51.6	159.3	71,500
135	49.7	155.0	67,200
140	47.7	150.5	63,300
145	45.7	145.6	59,700
150	43.6	140.3	56,300
155	41.4	134.7	53,100
160	39.1	128.5	50,200
165	36.7	121.9	47,400
170	34.1	114.6	44,800
175	31.3	106.5	42,400
180	28.3	97.4	40,000
185	24.9	86.9	37,800
190	21.0	74.5	35,800
195	16.2	58.7	33,700

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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	281,300
50	78.9	219.0	243,900
55	77.6	217.9	215,100
60	76.2	216.6	192,200
65	74.9	215.2	173,600
70	73.5	213.7	158,200
75	72.1	212.1	145,200
80	70.7	210.3	134,100
85	69.3	208.4	124,600
90	67.8	206.3	116,200
95	66.4	204.1	108,800
100	64.9	201.8	102,300
105	63.4	199.2	96,400
110	61.9	196.6	91,200
115	60.4	193.7	86,200
120	58.9	190.7	80,700
125	57.3	187.4	75,700
130	55.7	184.0	71,000
135	54.0	180.4	66,800
140	52.4	176.5	62,900
145	50.7	172.4	59,200
150	48.9	168.0	55,900
155	47.1	163.4	52,700
160	45.2	158.4	49,800
165	43.3	153.1	47,000
170	41.3	147.4	44,400
175	39.2	141.3	42,000
180	37.0	134.7	39,700
185	34.7	127.6	37,600
190	32.3	119.7	35,500
195	29.6	111.1	33,600
200	26.7	101.4	31,700
205	23.5	90.2	29,900
210	19.7	77.0	28,200
215	15.1	60.1	26,600

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	246,000
55	78.6	238.0	217,000
60	77.4	236.9	193,900
65	76.1	235.6	175,200
70	74.9	234.3	159,700
75	73.6	232.8	146,600
80	72.4	231.2	135,400
85	71.1	229.4	125,700
90	69.8	227.6	117,300
95	68.5	225.6	109,800
100	67.2	223.5	103,300
105	65.8	221.2	97,400
110	64.5	218.8	90,600
115	63.1	216.2	84,600
120	61.7	213.5	79,000
125	60.3	210.6	74,000
130	58.9	207.6	69,300
135	57.5	204.4	65,100
140	56.0	201.0	61,100
145	54.5	197.4	57,500
150	53.0	193.7	54,100
155	51.4	189.7	51,000
160	49.9	185.4	48,100
165	48.2	181.0	45,300
170	46.6	176.2	42,700
175	44.8	171.2	40,300
180	43.1	165.9	38,000
185	41.2	160.2	35,900
190	39.3	154.1	33,800
195	37.3	147.5	31,900
200	35.2	140.5	30,100
205	33.0	132.9	28,300
210	30.7	124.6	26,600
215	28.1	115.4	25,100
220	25.3	105.1	23,500
225	22.2	93.2	22,100
230	18.6	79.2	20,700

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	218,400
60	78.4	257.1	195,200
65	77.2	255.9	176,400
70	76.1	254.7	160,800
75	74.9	253.3	147,600
80	73.8	251.8	136,300
85	72.6	250.3	126,600
90	71.4	248.5	118,100
95	70.2	246.7	110,700
100	69.0	244.8	104,000
105	67.8	242.7	96,700
110	66.6	240.5	90,000
115	65.3	238.2	83,900
120	64.1	235.8	78,300
125	62.8	233.2	73,200
130	61.6	230.5	68,600
135	60.3	227.6	64,400
140	59.0	224.6	60,400
145	57.6	221.4	56,800
150	56.3	218.0	53,400
155	54.9	214.5	50,300
160	53.5	210.8	47,300
165	52.1	206.9	44,600
170	50.7	202.8	42,000
175	49.2	198.5	39,600
180	47.7	193.9	37,300
185	46.1	189.1	35,100
190	44.5	184.0	33,100
195	42.9	178.6	31,200
200	41.2	172.9	29,300
205	39.4	166.8	27,600
210	37.6	160.4	26,000
215	35.7	153.4	24,400
220	33.6	146.0	22,900
225	31.5	137.9	21,400
230	29.3	129.1	20,100
235	26.8	119.4	18,700
240	24.1	108.5	17,500
245	21.1	96.0	16,200
250	17.6	81.1	15,000

MLC300 S-2

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	196,900
65	78.2	276.1	177,900
70	77.1	275.0	162,100
75	76.0	273.7	148,800
80	74.9	272.4	137,500
85	73.9	270.9	127,700
90	72.8	269.3	119,200
95	71.7	267.7	111,000
100	70.6	265.9	102,600
105	69.5	264.0	95,000
110	68.3	262.0	88,300
115	67.2	259.9	82,100
120	66.1	257.6	76,600
125	64.9	255.3	71,500
130	63.8	252.8	66,900
135	62.6	250.2	62,600
140	61.4	247.4	58,700
145	60.2	244.6	55,000
150	59.0	241.5	51,600
155	57.8	238.4	48,500
160	56.5	235.0	45,500
165	55.3	231.6	42,800
170	54.0	227.9	40,200
175	52.7	224.1	37,800
180	51.3	220.1	35,500
185	50.0	215.9	33,400
190	48.6	211.4	31,300
195	47.2	206.8	29,400
200	45.7	201.9	27,600
205	44.2	196.8	25,800
210	42.7	191.4	24,200
215	41.1	185.6	22,600
220	39.5	179.6	21,100
225	37.8	173.2	19,700
230	36.0	166.3	18,300
235	34.2	159.0	17,000
240	32.2	151.2	15,800
245	30.2	142.7	14,600
250	28.0	133.4	13,400
255	25.6	123.2	12,300
260	23.0	111.7	11,200

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	128,300
90	74.0	289.9	119,700
95	72.9	288.4	110,700
100	71.9	286.7	102,200
105	70.9	285.0	94,700
110	69.9	283.1	87,900
115	68.8	281.2	81,800
120	67.8	279.1	76,300
125	66.7	277.0	71,200
130	65.6	274.7	66,500
135	64.6	272.3	62,300
140	63.5	269.8	58,300
145	62.4	267.1	54,700
150	61.3	264.4	51,300
155	60.2	261.5	48,200
160	59.0	258.5	45,200
165	57.9	255.3	42,500
170	56.7	252.0	39,900
175	55.5	248.6	37,500
180	54.3	245.0	35,200
185	53.1	241.2	33,100
190	51.9	237.3	31,000
195	50.6	233.2	29,100
200	49.4	228.9	27,300
205	48.1	224.4	25,600
210	46.7	219.7	23,900
215	45.4	214.8	22,400
220	44.0	209.6	20,900
225	42.5	204.1	19,400
230	41.1	198.4	18,100
235	39.5	192.3	16,800
240	38.0	186.0	15,500
245	36.3	179.2	14,300
250	34.6	172.0	13,200
255	32.8	164.3	12,100
260	31.0	156.1	11,000
265	29.0	147.1	10,000

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	139,200
85	75.9	311.8	129,300
90	75.0	310.4	118,500
95	74.0	309.0	109,000
100	73.1	307.5	100,600
105	72.1	305.8	93,000
110	71.2	304.1	86,200
115	70.2	302.3	80,100
120	69.2	300.4	74,500
125	68.3	298.4	69,400
130	67.3	296.3	64,800
135	66.3	294.0	60,500
140	65.3	291.7	56,600
145	64.3	289.3	52,900
150	63.2	286.8	49,500
155	62.2	284.1	46,400
160	61.2	281.3	43,400
165	60.1	278.5	40,700
170	59.1	275.5	38,100
175	58.0	272.3	35,700
180	56.9	269.0	33,400
185	55.8	265.6	31,200
190	54.7	262.1	29,200
195	53.5	258.4	27,300
200	52.4	254.5	25,500
205	51.2	250.5	23,700
210	50.0	246.3	22,100
215	48.8	241.9	20,500
220	47.6	237.3	19,000
225	46.3	232.6	17,600
230	45.1	227.6	16,300
235	43.7	222.3	15,000
240	42.4	216.9	13,700
245	41.0	211.1	12,500
250	39.6	205.1	11,400
255	38.1	198.8	10,300

MLC300 S-2

ASME B30.5



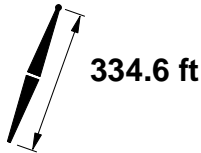
B10



386,200 lb



360°



ft	°	ft	lb
38	84.9	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	81.1	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	85,800
115	71.4	323.2	79,600
120	70.5	321.4	74,100
125	69.6	319.6	69,000
130	68.7	317.6	64,300
135	67.8	315.5	60,000
140	66.8	313.4	56,100
145	65.9	311.1	52,400
150	64.9	308.8	49,100
155	64.0	306.3	45,900
160	63.0	303.8	43,000
165	62.0	301.1	40,200
170	61.1	298.3	37,600
175	60.1	295.4	35,200
180	59.1	292.4	32,900
185	58.1	289.3	30,800
190	57.0	286.0	28,700
195	56.0	282.6	26,800
200	55.0	279.1	25,000
205	53.9	275.5	23,300
210	52.8	271.7	21,600
215	51.7	267.7	20,100
220	50.6	263.6	18,600
225	49.5	259.3	17,200
230	48.4	254.9	15,800
235	47.2	250.3	14,500
240	46.0	245.4	13,300
245	44.8	240.4	12,100
250	43.5	235.1	10,900

REFERENCE ONLY!