


Liftcrane Boom Capacities

Boom No. B10:500
with 309,100 lb Fixed Position Counterweight
at 13.4 ft Position
360 Degree Rating

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 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.

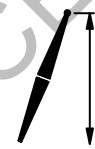
BOOM BACKWARD STABILITY: Capacities indicated by (b) require 5,000 lb minimum weight suspended beneath boom point. **Caution: Do not operate in areas indicated by (b) without required minimum weight.** *Boom may not lower and boom hoist wire rope may go slack causing wire rope damage or failure.*

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 **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. 9598-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 309,100 lb Fixed Position Counterweight.

Consult chart **No. 9606-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

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. 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	15,800
177.2	8,300
196.9	#
216.5	#
236.2	Raising Not Permitted
255.9	

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	15,800
177.2	8,300
196.9	#
216.5	#
236.2	#
255.9	Raising Not Permitted

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	15,800
196.9	8,300
216.5	#
236.2	#
255.9	Raising Not Permitted


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	15,800
196.9	8,300
216.5	#
236.2	#
255.9	#

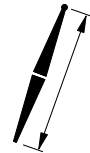
Warning: Crane must remain in-line with crawlers when raising over end of blocked crawlers until operating radius is within 360 degree chart. Crane tipping or structural damage can occur.


Explanation of Symbols


 B10 Boom No. B10:500

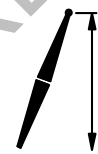
 Fixed Position Counterweight


 360 Degree Rating

 Boom Length

 Operating Radius
(see page 1)

 Boom Angle
(see page 1)

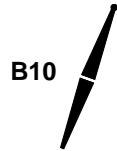
 Boom Point Elevation
(see page 1)

 Lifting Capacities
(see page 1)

REFERENCE ONLY!

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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	648,000 b
22	82.1	104.2	624,800 b
24	80.9	103.8	582,700
26	79.8	103.4	540,000
28	78.6	102.9	471,400
30	77.4	102.4	417,700
32	76.2	101.9	374,400
34	74.9	101.3	338,800
36	73.7	100.6	309,000
38	72.5	99.9	283,700
40	71.3	99.2	261,900
45	68.1	97.1	218,800
50	64.9	94.8	186,900
55	61.6	92.0	162,200
60	58.1	88.8	142,700
65	54.5	85.2	126,700
70	50.8	81.1	113,400
75	46.8	76.4	102,200
80	42.5	71.0	92,600
85	37.8	64.6	84,300
90	32.4	56.9	76,900
95	26.0	47.1	70,400
100	17.4	33.1	64,400

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	627,700
22	83.5	124.1	605,900
24	82.5	123.8	566,300
26	81.5	123.4	531,200
28	80.5	123.0	472,600
30	79.5	122.6	418,600
32	78.5	122.2	375,200
34	77.5	121.7	339,500
36	76.5	121.2	309,600
38	75.5	120.6	284,100
40	74.5	120.0	262,300
45	71.9	118.3	219,100
50	69.3	116.4	187,000
55	66.7	114.2	162,300
60	64.0	111.7	142,700
65	61.2	108.9	126,700
70	58.4	105.8	113,500
75	55.4	102.3	102,300
80	52.3	98.5	92,700
85	49.1	94.1	84,400
90	45.7	89.2	77,100
95	42.1	83.7	70,700
100	38.2	77.4	65,000
105	33.9	70.1	59,900
110	29.0	61.3	55,200
115	23.2	50.3	50,900

137.8 ft

ft	°	ft	lb
21	84.8	144.1	590,500
22	84.4	143.9	584,900
24	83.6	143.7	548,100
26	82.7	143.4	515,300
28	81.9	143.1	473,300
30	81.0	142.7	419,200
32	80.2	142.3	375,600
34	79.3	141.9	339,700
36	78.5	141.5	309,700
38	77.6	141.0	284,200
40	76.8	140.5	262,300
45	74.6	139.1	218,900
50	72.4	137.4	186,800
55	70.2	135.6	162,000
60	68.0	133.5	142,400
65	65.7	131.2	126,400
70	63.3	128.7	113,100
75	61.0	125.9	101,900
80	58.5	122.8	92,300
85	56.0	119.4	84,000
90	53.4	115.7	76,700
95	50.7	111.5	70,400
100	47.9	107.0	64,700
105	45.0	102.0	59,600
110	41.9	96.4	55,000
115	38.5	90.2	50,800
120	34.9	83.1	47,000
125	31.0	75.0	43,500
130	26.4	65.2	40,300
135	20.9	53.0	37,300

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157.5 ft

ft	°	ft	lb
24	84.4	163.5	528,400
26	83.6	163.3	497,900
28	82.9	163.0	470,400
30	82.2	162.7	419,400
32	81.4	162.3	375,600
34	80.7	162.0	339,600
36	79.9	161.6	309,500
38	79.2	161.2	283,900
40	78.5	160.7	261,900
45	76.6	159.5	218,400
50	74.7	158.1	186,200
55	72.8	156.5	161,300
60	70.9	154.8	141,600
65	68.9	152.8	125,500
70	66.9	150.6	112,200
75	64.9	148.3	101,000
80	62.9	145.7	91,400
85	60.8	142.8	83,100
90	58.6	139.8	75,800
95	56.5	136.4	69,400
100	54.2	132.8	63,700
105	51.9	128.9	58,700
110	49.5	124.6	54,100
115	47.0	119.9	49,900
120	44.4	114.8	46,200
125	41.7	109.2	42,700
130	38.8	103.0	39,500
135	35.7	96.1	36,600
140	32.3	88.3	33,900
145	28.6	79.3	31,400
150	24.3	68.7	29,000
155	19.1	55.2	26,700

177.2 ft

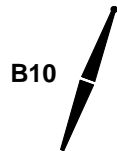
ft	°	ft	lb
24	85.0	183.3	491,000
26	84.3	183.1	480,100
28	83.7	182.8	454,700
30	83.0	182.6	420,000
32	82.4	182.3	376,100
34	81.7	182.0	340,100
36	81.1	181.6	309,900
38	80.4	181.2	284,200
40	79.8	180.9	262,200
45	78.1	179.8	218,500
50	76.4	178.5	186,200
55	74.8	177.1	161,300
60	73.1	175.6	141,600
65	71.4	173.9	125,500
70	69.6	172.0	112,100
75	67.9	169.9	100,900
80	66.1	167.7	91,200
85	64.3	165.3	82,900
90	62.5	162.6	75,700
95	60.6	159.8	69,300
100	58.7	156.7	63,600
105	56.8	153.4	58,500
110	54.8	149.9	53,900
115	52.8	146.1	49,800
120	50.7	142.0	46,000
125	48.5	137.5	42,600
130	46.3	132.7	39,500
135	44.0	127.6	36,500
140	41.5	121.9	33,900
145	39.0	115.8	31,400
150	36.2	109.0	29,000
155	33.3	101.5	26,900
160	30.1	93.0	24,800
165	26.6	83.3	22,900
170	22.5	71.8	21,100
175	17.5	57.1	19,300

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	375,700
34	82.6	201.9	339,500
36	82.0	201.6	309,200
38	81.4	201.2	283,500
40	80.8	200.9	261,400
45	79.3	199.9	217,600
50	77.8	198.8	185,200
55	76.3	197.6	160,200
60	74.8	196.2	140,300
65	73.3	194.7	124,200
70	71.8	193.0	110,800
75	70.2	191.2	99,500
80	68.6	189.2	89,900
85	67.1	187.0	81,600
90	65.5	184.7	74,300
95	63.8	182.3	67,900
100	62.2	179.6	62,200
105	60.5	176.7	57,100
110	58.8	173.7	52,500
115	57.1	170.4	48,400
120	55.3	167.0	44,600
125	53.5	163.2	41,200
130	51.6	159.3	38,000
135	49.7	155.0	35,100
140	47.7	150.5	32,400
145	45.7	145.6	29,900
150	43.6	140.3	27,600
155	41.4	134.7	25,500
160	39.1	128.5	23,500
165	36.7	121.9	21,600
170	34.1	114.6	19,800
175	31.3	106.5	18,100
180	28.3	97.4	16,500
185	24.9	86.9	15,000
190	21.0	74.5	13,500
195	16.2	58.7	11,900

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ASME B30.5



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	339,800
36	82.7	221.5	309,400
38	82.2	221.2	283,600
40	81.6	220.9	261,400
45	80.3	220.0	217,500
50	79.0	219.0	185,000
55	77.6	217.9	160,000
60	76.2	216.6	140,100
65	74.9	215.2	123,900
70	73.5	213.7	110,500
75	72.1	212.1	99,200
80	70.7	210.3	89,500
85	69.3	208.4	81,200
90	67.8	206.3	73,900
95	66.4	204.1	67,500
100	64.9	201.8	61,800
105	63.4	199.2	56,700
110	61.9	196.6	52,100
115	60.4	193.7	47,900
120	58.9	190.7	44,200
125	57.3	187.4	40,700
130	55.7	184.0	37,600
135	54.1	180.4	34,700
140	52.4	176.5	32,000
145	50.7	172.4	29,500
150	48.9	168.0	27,200
155	47.1	163.4	25,100
160	45.2	158.4	23,100
165	43.3	153.1	21,200
170	41.3	147.4	19,400
175	39.2	141.3	17,800
180	37.0	134.7	16,200
185	34.7	127.6	14,700
190	32.3	119.7	13,100
195	29.6	111.1	11,500
200	26.7	101.4	9,900
205	23.5	90.2	8,500

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	282,700
40	82.3	240.8	260,400
45	81.1	240.0	216,400
50	79.9	239.1	183,700
55	78.6	238.0	158,600
60	77.4	236.9	138,700
65	76.2	235.6	122,400
70	74.9	234.3	109,000
75	73.6	232.8	97,600
80	72.4	231.2	87,900
85	71.1	229.4	79,600
90	69.8	227.6	72,300
95	68.5	225.6	65,800
100	67.2	223.5	60,100
105	65.8	221.2	55,000
110	64.5	218.8	50,400
115	63.1	216.2	46,200
120	61.7	213.5	42,500
125	60.3	210.6	39,000
130	58.9	207.6	35,900
135	57.5	204.4	33,000
140	56.0	201.0	30,300
145	54.5	197.4	27,800
150	53.0	193.7	25,500
155	51.5	189.7	23,400
160	49.9	185.4	21,400
165	48.2	181.0	19,500
170	46.6	176.2	17,700
175	44.8	171.2	15,900
180	43.1	165.9	14,000
185	41.2	160.2	12,300
190	39.3	154.1	10,600
195	37.3	147.5	9,100

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	216,200
50	80.7	259.1	183,500
55	79.5	258.1	158,300
60	78.4	257.1	138,200
65	77.2	255.9	122,000
70	76.1	254.7	108,500
75	74.9	253.3	97,100
80	73.8	251.8	87,400
85	72.6	250.3	79,000
90	71.4	248.5	71,600
95	70.2	246.7	65,200
100	69.0	244.8	59,400
105	67.8	242.7	54,300
110	66.6	240.5	49,700
115	65.3	238.2	45,500
120	64.1	235.8	41,800
125	62.8	233.2	38,300
130	61.6	230.5	35,200
135	60.3	227.6	32,200
140	59.0	224.6	29,600
145	57.6	221.4	27,100
150	56.3	218.0	24,800
155	54.9	214.5	22,600
160	53.5	210.8	20,600
165	52.1	206.9	18,700
170	50.7	202.8	16,700
175	49.2	198.5	14,700
180	47.7	193.9	12,900
185	46.1	189.1	11,100
190	44.5	184.0	9,500