

Liftcrane Boom Capacities

Boom No. B10:500
with 441,400 lb Fixed Position Counterweight
at 13.4 ft Position
360 Degree Rating

MLC300
SERIES 3

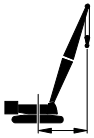
 **LIFTING CAPACITIES:** Lifting capacities for various boom lengths and operating radii are for freely suspended loads and may be based on percent of static tipping or strength of structural components. Capacities must be reduced by applicable deducts.

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.

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 441,400 lb Fixed Position Counterweight.

Consult chart **No. 9604-A** when Jib No. 148 is attached.

Luffing Jib Backstay Deduct	
Boom Length (ft)	Deduct (lb)
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
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 1a: With Luffing Jib Backstays

Over End or Side of Crawlers	
Boom Length (ft)	Block Weight (lb)
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	Raising Not Permitted
(a)295.3	

Table 1b: With Luffing Jib Backstays

Over End of Blocked Crawlers	
Boom Length (ft)	Block Weight (lb)
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	Raising Not Permitted
(a)295.3	
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>	

Table 2a: Without Luffing Jib Backstays

Over End or Side of Crawlers	
Boom Length (ft)	Block Weight (lb)
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	8,300
275.6	#
(a)295.3	Raising Not Permitted

Table 2b: Without Luffing Jib Backstays

Over End of Blocked Crawlers	
Boom Length (ft)	Block Weight (lb)
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	8,300
275.6	#
(a)295.3	#
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. B10:500



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)

B10



441,400 lb



360°

118.1 ft			
ft	°	ft	lb
40	74.5	120.0	348,800
45	71.9	118.3	292,700
50	69.3	116.4	251,100
55	66.7	114.2	219,000
60	64.0	111.7	193,600
65	61.2	108.9	172,800
70	58.4	105.8	155,600
75	55.4	102.3	141,100
80	52.3	98.5	128,700
85	49.1	94.1	118,000
90	45.7	89.2	108,600
95	42.1	83.7	100,300
100	38.2	77.4	92,900
105	33.9	70.1	86,300
110	29.0	61.3	80,300
115	23.2	50.3	74,800

137.8 ft			
ft	°	ft	lb
38	77.6	141.0	377,300
40	76.8	140.5	348,900
45	74.6	139.1	292,600
50	72.4	137.4	250,900
55	70.2	135.6	218,800
60	68.0	133.5	193,300
65	65.7	131.2	172,500
70	63.3	128.7	155,300
75	61.0	125.9	140,700
80	58.5	122.8	128,300
85	56.0	119.4	117,600
90	53.4	115.7	108,200
95	50.7	111.5	99,900
100	47.9	107.0	92,600
105	45.0	102.0	86,000
110	41.9	96.4	80,000
115	38.5	90.2	74,700
120	34.9	83.1	69,800
125	31.0	75.0	65,300
130	26.4	65.2	61,100
135	20.9	53.0	57,300

157.5 ft			
ft	°	ft	lb
34	80.7	162.0	432,200
36	79.9	161.6	410,200
38	79.2	161.2	377,000
40	78.5	160.7	348,500
45	76.6	159.5	292,000
50	74.7	158.1	250,200
55	72.8	156.5	218,000
60	70.9	154.8	192,500
65	68.9	152.8	171,700
70	66.9	150.6	154,400
75	64.9	148.3	139,800
80	62.9	145.7	127,400
85	60.8	142.8	116,700
90	58.6	139.8	107,300
95	56.5	136.4	99,000
100	54.2	132.8	91,600
105	51.9	128.9	85,100
110	49.5	124.6	79,100
115	47.0	119.9	73,800
120	44.4	114.8	68,900
125	41.7	109.2	64,500
130	38.8	103.0	60,400
135	35.7	96.1	56,600
140	32.3	88.3	53,100
145	28.6	79.3	49,900
150	24.3	68.7	46,800
155	19.1	55.2	43,900

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177.2 ft			
ft	°	ft	lb
32	82.4	182.3	440,600
34	81.7	182.0	419,900
36	81.1	181.6	400,900
38	80.4	181.2	377,300
40	79.8	180.9	348,700
45	78.1	179.8	292,200
50	76.4	178.5	250,300
55	74.8	177.1	218,100
60	73.1	175.6	192,400
65	71.4	173.9	171,600
70	69.6	172.0	154,300
75	67.9	169.9	139,700
80	66.1	167.7	127,300
85	64.3	165.3	116,500
90	62.5	162.6	107,100
95	60.6	159.8	98,800
100	58.7	156.7	91,500
105	56.8	153.4	84,900
110	54.8	149.9	79,000
115	52.8	146.1	73,700
120	50.7	142.0	68,800
125	48.5	137.5	64,400
130	46.3	132.7	60,300
135	44.0	127.6	56,500
140	41.5	121.9	53,100
145	39.0	115.8	49,900
150	36.2	109.0	46,900
155	33.3	101.5	44,100
160	30.1	93.0	41,500
165	26.6	83.3	39,000
170	22.5	71.8	36,700
175	17.5	57.1	34,400

196.9 ft			
ft	°	ft	lb
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	347,900
45	79.3	199.9	291,200
50	77.8	198.8	249,300
55	76.3	197.6	216,900
60	74.8	196.2	191,200
65	73.3	194.7	170,300
70	71.8	193.0	153,000
75	70.2	191.2	138,400
80	68.6	189.2	125,900
85	67.1	187.0	115,100
90	65.5	184.7	105,700
95	63.8	182.3	97,400
100	62.2	179.6	90,100
105	60.5	176.7	83,500
110	58.8	173.7	77,600
115	57.1	170.4	72,200
120	55.3	167.0	67,300
125	53.5	163.2	62,900
130	51.6	159.3	58,800
135	49.7	155.0	55,100
140	47.7	150.5	51,600
145	45.7	145.6	48,400
150	43.6	140.3	45,500
155	41.4	134.7	42,700
160	39.1	128.5	40,100
165	36.7	121.9	37,700
170	34.1	114.6	35,400
175	31.3	106.5	33,200
180	28.3	97.4	31,200
185	24.9	86.9	29,200
190	21.0	74.5	27,400
195	16.2	58.7	25,600

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	291,200
50	79.0	219.0	249,100
55	77.6	217.9	216,700
60	76.2	216.6	191,000
65	74.9	215.2	170,000
70	73.5	213.7	152,700
75	72.1	212.1	138,100
80	70.7	210.3	125,600
85	69.3	208.4	114,800
90	67.8	206.3	105,300
95	66.4	204.1	97,000
100	64.9	201.8	89,600
105	63.4	199.2	83,100
110	61.9	196.6	77,100
115	60.4	193.7	71,800
120	58.9	190.7	66,900
125	57.3	187.4	62,500
130	55.7	184.0	58,400
135	54.1	180.4	54,700
140	52.4	176.5	51,200
145	50.7	172.4	48,000
150	48.9	168.0	45,100
155	47.1	163.4	42,300
160	45.2	158.4	39,700
165	43.3	153.1	37,300
170	41.3	147.4	35,000
175	39.2	141.3	32,900
180	37.0	134.7	30,800
185	34.7	127.6	28,900
190	32.3	119.7	27,100
195	29.6	111.1	25,400
200	26.7	101.4	23,800
205	23.5	90.2	22,200
210	19.8	77.0	20,700
215	15.1	60.1	18,400

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441,400 lb



360°

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	247,800
55	78.6	238.0	215,300
60	77.4	236.9	189,500
65	76.2	235.6	168,600
70	74.9	234.3	151,200
75	73.6	232.8	136,500
80	72.4	231.2	124,000
85	71.1	229.4	113,100
90	69.8	227.6	103,700
95	68.5	225.6	95,400
100	67.2	223.5	88,000
105	65.8	221.2	81,400
110	64.5	218.8	75,500
115	63.1	216.2	70,100
120	61.7	213.5	65,200
125	60.3	210.6	60,800
130	58.9	207.6	56,700
135	57.5	204.4	53,000
140	56.0	201.0	49,500
145	54.5	197.4	46,300
150	53.0	193.7	43,300
155	51.5	189.7	40,600
160	49.9	185.4	38,000
165	48.2	181.0	35,600
170	46.6	176.2	33,300
175	44.8	171.2	31,100
180	43.1	165.9	29,100
185	41.2	160.2	27,200
190	39.3	154.1	25,400
195	37.3	147.5	23,700
200	35.2	140.5	22,100
205	33.0	132.9	20,600
210	30.7	124.6	19,100
215	28.1	115.4	17,700
220	25.4	105.1	16,400
225	22.2	93.2	15,100
230	18.6	79.2	13,800

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	215,000
60	78.4	257.1	189,100
65	77.2	255.9	168,100
70	76.1	254.7	150,600
75	74.9	253.3	135,900
80	73.8	251.8	123,400
85	72.6	250.3	112,500
90	71.4	248.5	103,100
95	70.2	246.7	94,700
100	69.0	244.8	87,300
105	67.8	242.7	80,700
110	66.6	240.5	74,800
115	65.3	238.2	69,400
120	64.1	235.8	64,500
125	62.8	233.2	60,100
130	61.6	230.5	56,000
135	60.3	227.6	52,200
140	59.0	224.6	48,800
145	57.6	221.4	45,600
150	56.3	218.0	42,600
155	54.9	214.5	39,800
160	53.5	210.8	37,200
165	52.1	206.9	34,800
170	50.7	202.8	32,500
175	49.2	198.5	30,400
180	47.7	193.9	28,400
185	46.1	189.1	26,500
190	44.5	184.0	24,700
195	42.9	178.6	23,000
200	41.2	172.9	21,400
205	39.4	166.8	19,900
210	37.6	160.4	18,400
215	35.7	153.4	17,000
220	33.7	146.0	15,700
225	31.5	137.9	14,400
230	29.3	129.1	12,900
235	26.8	119.4	11,500
240	24.1	108.5	10,200
245	21.1	96.0	8,900

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	187,700
65	78.2	276.1	166,600
70	77.1	275.0	149,100
75	76.0	273.7	134,400
80	75.0	272.4	121,800
85	73.9	270.9	110,900
90	72.8	269.3	101,400
95	71.7	267.7	93,100
100	70.6	265.9	85,700
105	69.5	264.0	79,000
110	68.3	262.0	73,100
115	67.2	259.9	67,700
120	66.1	257.6	62,800
125	64.9	255.3	58,300
130	63.8	252.8	54,200
135	62.6	250.2	50,500
140	61.4	247.4	47,000
145	60.2	244.6	43,800
150	59.0	241.5	40,800
155	57.8	238.4	38,100
160	56.5	235.0	35,500
165	55.3	231.6	33,000
170	54.0	227.9	30,800
175	52.7	224.1	28,600
180	51.3	220.1	26,600
185	50.0	215.9	24,700
190	48.6	211.4	22,900
195	47.2	206.8	21,200
200	45.7	201.9	19,600
205	44.2	196.8	18,100
210	42.7	191.4	16,600
215	41.1	185.6	15,000
220	39.5	179.6	13,400
225	37.8	173.2	11,900
230	36.0	166.3	10,400
235	34.2	159.0	9,100

MLC300 S-3

ASME B30.5



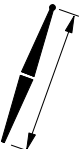
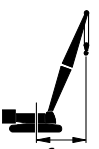
B10



441,400 lb



360°

 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	134,100
80	76.0	292.8	121,500
85	75.0	291.4	110,600
90	74.0	289.9	101,100
95	72.9	288.4	92,800
100	71.9	286.7	85,300
105	70.9	285.0	78,700
110	69.9	283.1	72,700
115	68.8	281.2	67,400
120	67.8	279.1	62,500
125	66.7	277.0	58,000
130	65.7	274.7	53,900
135	64.6	272.3	50,200
140	63.5	269.8	46,700
145	62.4	267.1	43,500
150	61.3	264.4	40,500
155	60.2	261.5	37,700
160	59.0	258.5	35,200
165	57.9	255.3	32,700
170	56.7	252.0	30,500
175	55.5	248.6	28,300
180	54.4	245.0	26,300
185	53.1	241.2	24,400
190	51.9	237.3	22,600
195	50.6	233.2	21,000
200	49.4	228.9	19,300
205	48.1	224.4	17,800
210	46.7	219.7	16,100
215	45.4	214.8	14,400
220	44.0	209.6	12,900
225	42.5	204.1	11,400
230	41.1	198.4	10,000
235	39.5	192.3	8,600