


Liftcrane Boom Capacities

Boom No. B15:505-500
474,400 lb VPC (Variable Position Counterweight)
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. 80109323**, Wire Rope Specifications chart **No. 9683-A**, Counterweight Arrangements chart **No. 9345-A**, and Wind Conditions chart **No. 9682-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. 9681-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 474,400 lb VPC.

Consult chart **No. 9684-A** when Jib No. 148 is attached.

Luffing Jib Backstay Deduct	
Boom Length (ft)	Deduct (lb)
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	23,000
59.1	25,300
78.7	27,400
98.4	33,300
118.1	41,000
137.8	46,300

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 or Side of Crawlers	
Boom Length (ft)	Block Weight (lb)
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	#
275.6	Raising Not Permitted
295.3	

Table 2: Without Luffing Jib Backstays


Over End or Side of Crawlers	
Boom Length (ft)	Block Weight (lb)
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	8,300
275.6	#
295.3	#


Explanation of Symbols


B15  Boom No. B15:505-500


 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)

REFERENCE ONLY!

MLC300 S-3

ASME B30.5



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	395,100
40	76.8	140.5	366,900
45	74.6	139.1	311,000
50	72.4	137.4	269,600
55	70.2	135.6	237,700
60	68.0	133.5	212,400
65	65.7	131.2	191,800
70	63.3	128.7	174,700
75	61.0	125.9	160,300
80	58.5	122.8	148,000
85	56.0	119.4	137,400
90	53.4	115.7	128,200
95	50.7	111.5	120,000
100	47.9	107.0	112,800
105	45.0	102.0	106,300
110	41.9	96.4	100,500
115	38.5	90.2	95,200
120	34.9	83.1	90,500
125	31.0	75.0	86,100
130	26.4	65.2	82,100
135	20.9	53.0	78,500

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	369,300
45	76.6	159.5	312,900
50	74.7	158.1	271,200
55	72.8	156.5	239,100
60	70.9	154.8	213,600
65	68.9	152.8	192,900
70	66.9	150.6	175,700
75	64.9	148.3	161,200
80	62.9	145.7	148,800
85	60.8	142.8	138,200
90	58.6	139.8	128,800
95	56.5	136.4	120,600
100	54.2	132.8	113,300
105	51.9	128.9	106,800
110	49.5	124.6	101,000
115	47.0	119.9	95,700
120	44.4	114.8	90,900
125	41.7	109.2	86,500
130	38.8	103.0	82,500
135	35.7	96.1	78,800
140	32.3	88.3	75,400
145	28.6	79.3	72,300
150	24.3	68.7	69,300
155	19.1	55.2	66,300

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	315,600
50	76.4	178.5	273,700
55	74.8	177.1	241,400
60	73.1	175.6	215,800
65	71.4	173.9	195,000
70	69.6	172.0	177,700
75	67.9	169.9	163,100
80	66.1	167.7	150,700
85	64.3	165.3	140,000
90	62.5	162.6	130,600
95	60.6	159.8	122,300
100	58.7	156.7	115,000
105	56.8	153.4	108,500
110	54.8	149.9	102,600
115	52.8	146.1	97,300
120	50.7	142.0	92,500
125	48.5	137.5	88,100
130	46.3	132.7	84,100
135	44.0	127.6	80,400
140	41.5	121.9	76,900
145	39.0	115.8	73,800
150	36.2	109.0	70,000
155	33.3	101.5	66,000
160	30.1	93.0	62,100
165	26.6	83.3	58,400
170	22.5	71.8	54,800
175	17.5	57.1	51,100

MLC300 S-3

ASME B30.5



196.9 ft

ft	o	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	318,100
50	77.8	198.8	275,900
55	76.3	197.6	243,400
60	74.8	196.2	217,600
65	73.3	194.7	196,600
70	71.8	193.0	179,200
75	70.2	191.2	164,600
80	68.6	189.2	152,100
85	67.1	187.0	141,200
90	65.5	184.7	131,800
95	63.8	182.3	123,500
100	62.2	179.6	116,100
105	60.5	176.7	109,500
110	58.8	173.7	103,600
115	57.1	170.4	98,300
120	55.3	167.0	93,400
125	53.5	163.2	89,000
130	51.6	159.3	84,900
135	49.7	155.0	81,200
140	47.7	150.5	76,600
145	45.7	145.6	72,200
150	43.6	140.3	68,100
155	41.4	134.7	64,200
160	39.1	128.5	60,600
165	36.7	121.9	57,100
170	34.1	114.6	53,800
175	31.3	106.5	50,600
180	28.3	97.4	47,600
185	24.9	86.9	44,600
190	21.0	74.5	41,700
195	16.2	58.7	38,700

216.5 ft

ft	o	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	277,400
55	77.6	217.9	244,800
60	76.2	216.6	218,800
65	74.9	215.2	197,800
70	73.5	213.7	180,300
75	72.1	212.1	165,500
80	70.7	210.3	153,000
85	69.3	208.4	142,100
90	67.8	206.3	132,600
95	66.4	204.1	124,300
100	64.9	201.8	116,900
105	63.4	199.2	110,200
110	61.9	196.6	104,300
115	60.4	193.7	98,900
120	58.9	190.7	94,100
125	57.3	187.4	89,100
130	55.7	184.0	83,700
135	54.1	180.4	78,700
140	52.4	176.5	74,100
145	50.7	172.4	69,800
150	48.9	168.0	65,700
155	47.1	163.4	61,900
160	45.2	158.4	58,300
165	43.3	153.1	55,000
170	41.3	147.4	51,800
175	39.2	141.3	48,800
180	37.0	134.7	45,900
185	34.7	127.6	43,100
190	32.3	119.7	40,500
195	29.6	111.1	37,900
200	26.7	101.4	35,400
205	23.5	90.2	33,000
210	19.8	77.0	30,600
215	15.1	60.1	28,100

236.2 ft

ft	o	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	229,500
65	76.2	235.6	199,300
70	74.9	234.3	181,700
75	73.6	232.8	166,900
80	72.4	231.2	154,200
85	71.1	229.4	143,300
90	69.8	227.6	133,700
95	68.5	225.6	125,300
100	67.2	223.5	117,800
105	65.8	221.2	111,200
110	64.5	218.8	105,200
115	63.1	216.2	98,500
120	61.7	213.5	92,100
125	60.3	210.6	86,300
130	58.9	207.6	81,000
135	57.5	204.4	76,000
140	56.0	201.0	71,400
145	54.5	197.4	67,200
150	53.0	193.7	63,200
155	51.5	189.7	59,400
160	49.9	185.4	55,900
165	48.2	181.0	52,600
170	46.6	176.2	49,400
175	44.8	171.2	46,500
180	43.1	165.9	43,700
185	41.2	160.2	41,000
190	39.3	154.1	38,500
195	37.3	147.5	36,000
200	35.2	140.5	33,700
205	33.0	132.9	31,400
210	30.7	124.6	29,300
215	28.1	115.4	27,200
220	25.4	105.1	25,100
225	22.2	93.2	23,100
230	18.6	79.2	21,000

MLC300 S-3

ASME B30.5



255.9 ft

ft	o	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	221,800
65	77.2	255.9	200,500
70	76.1	254.7	182,800
75	74.9	253.3	167,900
80	73.8	251.8	155,200
85	72.6	250.3	144,200
90	71.4	248.5	134,600
95	70.2	246.7	126,100
100	69.0	244.8	118,600
105	67.8	242.7	110,400
110	66.6	240.5	102,800
115	65.3	238.2	95,900
120	64.1	235.8	89,600
125	62.8	233.2	83,900
130	61.6	230.5	78,500
135	60.3	227.6	73,600
140	59.0	224.6	69,100
145	57.6	221.4	64,800
150	56.3	218.0	60,800
155	54.9	214.5	57,100
160	53.5	210.8	53,600
165	52.1	206.9	50,400
170	50.7	202.8	47,300
175	49.2	198.5	44,400
180	47.7	193.9	41,600
185	46.1	189.1	39,000
190	44.5	184.0	36,500
195	42.9	178.6	34,100
200	41.2	172.9	31,800
205	39.4	166.8	29,700
210	37.6	160.4	27,600
215	35.7	153.4	25,500
220	33.7	146.0	23,000
225	31.5	137.9	20,600
230	29.3	129.1	18,300
235	26.8	119.4	16,000
240	24.1	108.5	13,800
245	21.1	96.0	11,700
250	17.6	81.1	9,700

275.6 ft

ft	o	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	184,200
75	76.0	273.7	169,200
80	75.0	272.4	156,300
85	73.9	270.9	145,000
90	72.8	269.3	133,500
95	71.7	267.7	123,300
100	70.6	265.9	114,100
105	69.5	264.0	105,800
110	68.3	262.0	98,400
115	67.2	259.9	91,600
120	66.1	257.6	85,300
125	64.9	255.3	79,600
130	63.8	252.8	74,300
135	62.6	250.2	69,500
140	61.4	247.4	65,000
145	60.2	244.6	60,800
150	59.0	241.5	56,900
155	57.8	238.4	53,200
160	56.5	235.0	49,800
165	55.3	231.6	46,500
170	54.0	227.9	43,500
175	52.7	224.1	40,600
180	51.3	220.1	37,900
185	50.0	215.9	35,300
190	48.6	211.4	32,900
195	47.2	206.8	30,600
200	45.7	201.9	28,400
205	44.2	196.8	26,300
210	42.7	191.4	24,200
215	41.1	185.6	22,300
220	39.5	179.6	20,400
225	37.8	173.2	18,700
230	36.0	166.3	16,900
235	34.2	159.0	15,300
240	32.2	151.2	13,700
245	30.2	142.7	12,000
250	28.0	133.4	9,700

295.3 ft

ft	o	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	113,400
105	70.9	285.0	105,100
110	69.9	283.1	97,600
115	68.8	281.2	90,800
120	67.8	279.1	84,600
125	66.7	277.0	78,800
130	65.7	274.7	73,600
135	64.6	272.3	68,700
140	63.5	269.8	64,200
145	62.4	267.1	60,000
150	61.3	264.4	56,100
155	60.2	261.5	52,400
160	59.0	258.5	49,000
165	57.9	255.3	45,800
170	56.7	252.0	42,800
175	55.5	248.6	39,900
180	54.4	245.0	37,200
185	53.1	241.2	34,700
190	51.9	237.3	32,200
195	50.6	233.2	29,900
200	49.4	228.9	27,700
205	48.1	224.4	25,600
210	46.7	219.7	23,600
215	45.4	214.8	21,700
220	44.0	209.6	19,900
225	42.5	204.1	18,200
230	41.1	198.4	16,500
235	39.5	192.3	14,800
240	38.0	186.0	13,300
245	36.3	179.2	11,800
250	34.6	172.0	10,300
255	32.8	164.3	8,900