

Liftcrane Boom Capacities

Boom No. B15:505-500
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.

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 386,200 lb VPC.

Consult chart **No. 9685-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

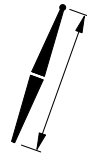
Over End or Side of Crawlers	
Boom Length (ft)	Block Weight (lb)
137.8	22,900
157.5	22,900
177.2	22,900
196.9	22,900
216.5	22,900
236.2	15,800
255.9	8,300
275.6	#
295.3	#


Explanation of Symbols


B15  Boom No. B15:505-500

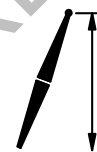
 VPC (Variable Position Counterweight)


 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-2

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	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

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	56.5	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	64,600
145	28.6	79.3	60,900
150	24.3	68.7	57,400
155	19.1	55.2	54,200

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	76,300
130	46.3	132.7	71,600
135	44.0	127.6	67,400
140	41.5	121.9	63,400
145	39.0	115.8	59,800
150	36.2	109.0	56,400
155	33.3	101.5	53,200
160	30.1	93.0	50,200
165	26.6	83.3	47,400
170	22.5	71.8	44,800
175	17.5	57.1	42,300

MLC300 S-2

ASME B30.5



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	85,500
120	55.3	167.0	80,000
125	53.5	163.2	75,000
130	51.6	159.3	70,300
135	49.7	155.0	66,100
140	47.7	150.5	62,100
145	45.7	145.6	58,500
150	43.6	140.3	55,100
155	41.4	134.7	52,000
160	39.1	128.5	49,000
165	36.7	121.9	46,200
170	34.1	114.6	43,600
175	31.3	106.5	41,200
180	28.3	97.4	38,900
185	24.9	86.9	36,700
190	21.0	74.5	34,600
195	16.2	58.7	32,600

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	281,300
50	79.0	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	90,200
115	60.4	193.7	84,100
120	58.9	190.7	78,500
125	57.3	187.4	73,500
130	55.7	184.0	68,900
135	54.1	180.4	64,600
140	52.4	176.5	60,700
145	50.7	172.4	57,000
150	48.9	168.0	53,700
155	47.1	163.4	50,500
160	45.2	158.4	47,600
165	43.3	153.1	44,800
170	41.3	147.4	42,200
175	39.2	141.3	39,800
180	37.0	134.7	37,500
185	34.7	127.6	35,300
190	32.3	119.7	33,300
195	29.6	111.1	31,300
200	26.7	101.4	29,500
205	23.5	90.2	27,700
210	19.8	77.0	26,000
215	15.1	60.1	24,300

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	76.2	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	103,000
105	65.8	221.2	95,400
110	64.5	218.8	88,700
115	63.1	216.2	82,600
120	61.7	213.5	77,000
125	60.3	210.6	72,000
130	58.9	207.6	67,400
135	57.5	204.4	63,100
140	56.0	201.0	59,200
145	54.5	197.4	55,500
150	53.0	193.7	52,100
155	51.5	189.7	49,000
160	49.9	185.4	46,000
165	48.2	181.0	43,300
170	46.6	176.2	40,700
175	44.8	171.2	38,300
180	43.1	165.9	36,000
185	41.2	160.2	33,800
190	39.3	154.1	31,800
195	37.3	147.5	29,900
200	35.2	140.5	28,000
205	33.0	132.9	26,300
210	30.7	124.6	24,600
215	28.1	115.4	23,000
220	25.4	105.1	21,500
225	22.2	93.2	20,000
230	18.6	79.2	18,600

MLC300 S-2

ASME B30.5



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	110,100
100	69.0	244.8	101,700
105	67.8	242.7	94,200
110	66.6	240.5	87,400
115	65.3	238.2	81,300
120	64.1	235.8	75,700
125	62.8	233.2	70,700
130	61.6	230.5	66,000
135	60.3	227.6	61,800
140	59.0	224.6	57,800
145	57.6	221.4	54,200
150	56.3	218.0	50,800
155	54.9	214.5	47,700
160	53.5	210.8	44,700
165	52.1	206.9	42,000
170	50.7	202.8	39,400
175	49.2	198.5	37,000
180	47.7	193.9	34,700
185	46.1	189.1	32,500
190	44.5	184.0	30,500
195	42.9	178.6	28,500
200	41.2	172.9	26,700
205	39.4	166.8	25,000
210	37.6	160.4	23,300
215	35.7	153.4	21,700
220	33.7	146.0	20,200
225	31.5	137.9	18,800
230	29.3	129.1	17,400
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	°	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	75.0	272.4	137,500
85	73.9	270.9	127,700
90	72.8	269.3	117,700
95	71.7	267.7	108,200
100	70.6	265.9	99,700
105	69.5	264.0	92,200
110	68.3	262.0	85,400
115	67.2	259.9	79,300
120	66.1	257.6	73,700
125	64.9	255.3	68,600
130	63.8	252.8	64,000
135	62.6	250.2	59,700
140	61.4	247.4	55,700
145	60.2	244.6	52,100
150	59.0	241.5	48,700
155	57.8	238.4	45,500
160	56.5	235.0	42,600
165	55.3	231.6	39,800
170	54.0	227.9	37,200
175	52.7	224.1	34,800
180	51.3	220.1	32,500
185	50.0	215.9	30,400
190	48.6	211.4	28,300
195	47.2	206.8	26,400
200	45.7	201.9	24,600
205	44.2	196.8	22,800
210	42.7	191.4	21,200
215	41.1	185.6	19,600
220	39.5	179.6	18,100
225	37.8	173.2	16,700
230	36.0	166.3	15,300
235	34.2	159.0	14,000
240	32.2	151.2	12,700
245	30.2	142.7	11,500
250	28.0	133.4	9,700

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	128,100
90	74.0	289.9	117,300
95	72.9	288.4	107,800
100	71.9	286.7	99,300
105	70.9	285.0	91,700
110	69.9	283.1	85,000
115	68.8	281.2	78,800
120	67.8	279.1	73,200
125	66.7	277.0	68,200
130	65.7	274.7	63,500
135	64.6	272.3	59,200
140	63.5	269.8	55,300
145	62.4	267.1	51,600
150	61.3	264.4	48,200
155	60.2	261.5	45,100
160	59.0	258.5	42,100
165	57.9	255.3	39,400
170	56.7	252.0	36,800
175	55.5	248.6	34,300
180	54.4	245.0	32,100
185	53.1	241.2	29,900
190	51.9	237.3	27,900
195	50.6	233.2	25,900
200	49.4	228.9	24,100
205	48.1	224.4	22,400
210	46.7	219.7	20,700
215	45.4	214.8	19,200
220	44.0	209.6	17,700
225	42.5	204.1	16,200
230	41.1	198.4	14,900
235	39.5	192.3	13,600
240	38.0	186.0	12,300
245	36.3	179.2	11,100
250	34.6	172.0	9,900
255	32.8	164.3	8,500