Liftcrane Boom Capacities

Boom No. B15:505-500
298,100 lb VPC (Variable Position Counterweight)
360 Degree Rating

MLC300 SERIES 1

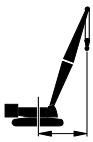
LIFTING CAPACITIES: Lifting capacities for various boom lengths and operating radii are for freely suspended loads and may be based on percent of static tipping or strength of structural components. Capacities must be reduced by applicable deducts.

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.

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 298,100 lb VPC.

Consult chart **No. 9686-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 1a: 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	15,800
216.5	8,300
236.2	#
255.9	**Raising Not Permitted**
275.6	

Table 1b: With Luffing Jib Backstays

Over End of Blocked Crawlers	
Boom Length (ft)	Block Weight (lb)
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**
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)
137.8	22,900
157.5	22,900
177.2	22,900
196.9	22,900
216.5	8,300
236.2	#
255.9	#
275.6	**Raising Not Permitted**

Table 2b: Without Luffing Jib Backstays

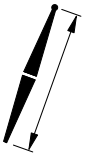
Over End of Blocked Crawlers	
Boom Length (ft)	Block Weight (lb)
137.8	22,900
157.5	22,900
177.2	22,900
196.9	22,900
216.5	8,300
236.2	#
255.9	#
275.6	#
Warning: Crane must remain in-line with crawlers when raising over end of blocked crawlers until operating radius is within 360 degree chart. *Crane tipping or structural damage can occur.*	

Explanation of Symbols

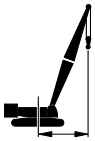
Boom No. B15:505-500

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)

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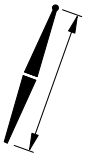
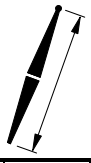
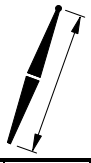


ft	°	ft	lb
21	84.8	144.1	590,500
22	84.4	143.9	587,600
24	83.6	143.7	555,000
26	82.7	143.4	523,300
28	81.9	143.1	482,900
30	81.0	142.7	429,900
32	80.2	142.3	387,200
34	79.3	141.9	352,200
36	78.5	141.5	322,800
38	77.6	141.0	297,800
40	76.8	140.5	276,400
45	74.6	139.1	234,000
50	72.4	137.4	202,600
55	70.2	135.6	178,400
60	68.0	133.5	159,200
65	65.7	131.2	143,600
70	63.3	128.7	130,600
75	61.0	125.9	119,700
80	58.5	122.8	110,400
85	56.0	119.4	102,300
90	53.4	115.7	95,300
95	50.7	111.5	89,100
100	47.9	107.0	83,600
105	45.0	102.0	78,100
110	41.9	96.4	72,500
115	38.5	90.2	67,500
120	34.9	83.1	62,900
125	31.0	75.0	58,700
130	26.4	65.2	54,900
135	20.9	53.0	51,200



ft	°	ft	lb
24	84.4	163.5	536,900
26	83.6	163.3	507,900
28	82.9	163.0	481,400
30	82.2	162.7	433,800
32	81.4	162.3	390,700
34	80.7	162.0	355,300
36	79.9	161.6	325,600
38	79.2	161.2	300,400
40	78.5	160.7	278,800
45	76.6	159.5	236,000
50	74.7	158.1	204,300
55	72.8	156.5	179,800
60	70.9	154.8	160,500
65	68.9	152.8	144,700
70	66.9	150.6	131,600
75	64.9	148.3	120,600
80	62.9	145.7	111,200
85	60.8	142.8	103,100
90	58.6	139.8	96,000
95	56.5	136.4	89,700
100	54.2	132.8	83,300
105	51.9	128.9	77,200
110	49.5	124.6	71,700
115	47.0	119.9	66,700
120	44.4	114.8	62,100
125	41.7	109.2	58,000
130	38.8	103.0	54,100
135	35.7	96.1	50,600
140	32.3	88.3	47,300
145	28.6	79.3	44,300
150	24.3	68.7	41,400
155	19.1	55.2	38,700



ft	°	ft	lb
24	85.0	183.3	491,000
26	84.3	183.1	486,800
28	83.7	182.8	467,000
30	83.0	182.6	437,600
32	82.4	182.3	394,300
34	81.7	182.0	358,700
36	81.1	181.6	328,800
38	80.4	181.2	303,500
40	79.8	180.9	281,700
45	78.1	179.8	238,600
50	76.4	178.5	206,700
55	74.8	177.1	182,100
60	73.1	175.6	162,600
65	71.4	173.9	146,700
70	69.6	172.0	133,600
75	67.9	169.9	122,500
80	66.1	167.7	113,000
85	64.3	165.3	104,900
90	62.5	162.6	96,700
95	60.6	159.8	89,000
100	58.7	156.7	82,100
105	56.8	153.4	76,000
110	54.8	149.9	70,400
115	52.8	146.1	65,400
120	50.7	142.0	60,900
125	48.5	137.5	56,800
130	46.3	132.7	52,900
135	44.0	127.6	49,400
140	41.5	121.9	46,200
145	39.0	115.8	43,200
150	36.2	109.0	40,400
155	33.3	101.5	37,800
160	30.1	93.0	35,300
165	26.6	83.3	33,000
170	22.5	71.8	30,800
175	17.5	57.1	28,700

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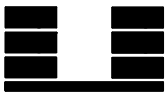

196.9 ft

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	398,300
34	82.6	201.9	362,400
36	82.0	201.6	332,200
38	81.4	201.2	306,700
40	80.8	200.9	284,700
45	79.3	199.9	241,200
50	77.8	198.8	208,900
55	76.3	197.6	184,100
60	74.8	196.2	164,400
65	73.3	194.7	148,400
70	71.8	193.0	135,100
75	70.2	191.2	124,000
80	68.6	189.2	114,400
85	67.1	187.0	104,300
90	65.5	184.7	95,500
95	63.8	182.3	87,700
100	62.2	179.6	80,800
105	60.5	176.7	74,700
110	58.8	173.7	69,200
115	57.1	170.4	64,100
120	55.3	167.0	59,600
125	53.5	163.2	55,500
130	51.6	159.3	51,600
135	49.7	155.0	48,100
140	47.7	150.5	44,900
145	45.7	145.6	41,900
150	43.6	140.3	39,100
155	41.4	134.7	36,500
160	39.1	128.5	34,100
165	36.7	121.9	31,800
170	34.1	114.6	29,700
175	31.3	106.5	27,700
180	28.3	97.4	25,700
185	24.9	86.9	23,900
190	21.0	74.5	22,200
195	16.2	58.7	20,500

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	334,400
38	82.2	221.2	308,700
40	81.6	220.9	286,600
45	80.3	220.0	242,800
50	79.0	219.0	210,400
55	77.6	217.9	185,500
60	76.2	216.6	165,700
65	74.9	215.2	149,500
70	73.5	213.7	136,200
75	72.1	212.1	124,700
80	70.7	210.3	113,000
85	69.3	208.4	102,900
90	67.8	206.3	94,100
95	66.4	204.1	86,300
100	64.9	201.8	79,400
105	63.4	199.2	73,300
110	61.9	196.6	67,700
115	60.4	193.7	62,700
120	58.9	190.7	58,100
125	57.3	187.4	54,000
130	55.7	184.0	50,200
135	54.1	180.4	46,700
140	52.4	176.5	43,400
145	50.7	172.4	40,500
150	48.9	168.0	37,700
155	47.1	163.4	35,100
160	45.2	158.4	32,700
165	43.3	153.1	30,400
170	41.3	147.4	28,300
175	39.2	141.3	26,300
180	37.0	134.7	24,400
185	34.7	127.6	22,600
190	32.3	119.7	20,900
195	29.6	111.1	19,300
200	26.7	101.4	17,700
205	23.5	90.2	16,200
210	19.8	77.0	14,800
215	15.1	60.1	13,400

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	245,300
50	79.9	239.1	212,500
55	78.6	238.0	187,400
60	77.4	236.9	167,400
65	76.2	235.6	151,100
70	74.9	234.3	137,100
75	73.6	232.8	123,400
80	72.4	231.2	111,600
85	71.1	229.4	101,500
90	69.8	227.6	92,700
95	68.5	225.6	84,900
100	67.2	223.5	78,000
105	65.8	221.2	71,800
110	64.5	218.8	66,200
115	63.1	216.2	61,200
120	61.7	213.5	56,600
125	60.3	210.6	52,500
130	58.9	207.6	48,700
135	57.5	204.4	45,200
140	56.0	201.0	41,900
145	54.5	197.4	38,900
150	53.0	193.7	36,100
155	51.5	189.7	33,600
160	49.9	185.4	31,100
165	48.2	181.0	28,900
170	46.6	176.2	26,700
175	44.8	171.2	24,700
180	43.1	165.9	22,900
185	41.2	160.2	21,100
190	39.3	154.1	19,400
195	37.3	147.5	17,800
200	35.2	140.5	16,300
205	33.0	132.9	14,800
210	30.7	124.6	13,500
215	28.1	115.4	12,100
220	25.4	105.1	10,900
225	22.2	93.2	9,600

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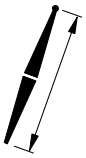
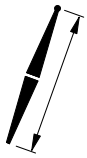


ft	°	ft	lb
32	84.7	261.6	256,400
34	84.3	261.4	255,300
36	83.8	261.2	254,300
38	83.4	260.9	253,300
40	82.9	260.7	252,300
45	81.8	259.9	247,100
50	80.7	259.1	214,200
55	79.5	258.1	188,800
60	78.4	257.1	168,700
65	77.2	255.9	152,300
70	76.1	254.7	136,000
75	74.9	253.3	122,200
80	73.8	251.8	110,500
85	72.6	250.3	100,300
90	71.4	248.5	91,400
95	70.2	246.7	83,600
100	69.0	244.8	76,700
105	67.8	242.7	70,500
110	66.6	240.5	64,900
115	65.3	238.2	59,900
120	64.1	235.8	55,300
125	62.8	233.2	51,200
130	61.6	230.5	47,400
135	60.3	227.6	43,800
140	59.0	224.6	40,600
145	57.6	221.4	37,600
150	56.3	218.0	34,800
155	54.9	214.5	32,200
160	53.5	210.8	29,800
165	52.1	206.9	27,500
170	50.7	202.8	25,400
175	49.2	198.5	23,400
180	47.7	193.9	21,500
185	46.1	189.1	19,800
190	44.5	184.0	18,100
195	42.9	178.6	16,500
200	41.2	172.9	15,000
205	39.4	166.8	13,500
210	37.6	160.4	12,200
215	35.7	153.4	10,900
220	33.7	146.0	9,400



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	190,600
60	79.2	277.2	170,300
65	78.2	276.1	150,600
70	77.1	275.0	134,200
75	76.0	273.7	120,400
80	75.0	272.4	108,600
85	73.9	270.9	98,400
90	72.8	269.3	89,500
95	71.7	267.7	81,700
100	70.6	265.9	74,700
105	69.5	264.0	68,500
110	68.3	262.0	62,900
115	67.2	259.9	57,900
120	66.1	257.6	53,300
125	64.9	255.3	49,100
130	63.8	252.8	45,300
135	62.6	250.2	41,800
140	61.4	247.4	38,500
145	60.2	244.6	35,500
150	59.0	241.5	32,700
155	57.8	238.4	30,100
160	56.5	235.0	27,700
165	55.3	231.6	25,400
170	54.0	227.9	23,300
175	52.7	224.1	21,300
180	51.3	220.1	19,400
185	50.0	215.9	17,600
190	48.6	211.4	15,900
195	47.2	206.8	14,300
200	45.7	201.9	12,800
205	44.2	196.8	11,400
210	42.7	191.4	9,800