Liftcrane Boom Capacities

Boom No. B10:500
135 200 kg 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.

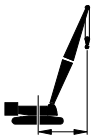
Upper boom point capacity for liftcrane service with single part whip line from Drum 6 is 13 600 kg or 27 200 kg with two part whip line. When Drum 2 or Drum 3 is used, capacity with single part whip line is 16 600 kg or 33 300 kg with two part whip line. In all cases, upper boom point capacities cannot 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 2 270 kg minimum weight. ***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 chart **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. 9342-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 9 700 mm crawlers, 1 219 mm or 1 524 mm treads, 9 144 mm live mast, 24 part boom hoist reeving, boom support straps, and 135 200 kg VPC.

Consult chart **No. 9454-AM** when Jib No. 148 is attached.

Luffing Jib Backstay Deduct	
Boom Length (m)	Deduct (kg)
30,0	1 400
36,0	1 600
42,0	1 900
48,0	2 100
54,0	2 400
60,0	2 700
66,0	3 000
72,0	3 200
78,0	3 500
84,0	3 700
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 (m)	Deduct (kg)
12,0	9 100
18 0	13 800
24,0	18 100
30,0	22 100
36,0	27 800
42,0	31 300
Weight of jib and 3 000 kg 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 (m)	Block Weight (kg)
30,0	10 300
36,0	10 300
42,0	10 300
48,0	10 300
54,0	10 300
60,0	7 100
66,0	3 700
72,0	#
78,0	#
84,0	**Raising Not Permitted**
90,0	

Table 1b: With Luffing Jib Backstays

Over End of Blocked Crawlers	
Boom Length (m)	Block Weight (kg)
30,0	10 300
36,0	10 300
42,0	10 300
48,0	10 300
54,0	10 300
60,0	7 100
66,0	3 700
72,0	#
78,0	#
84,0	#
90,0	**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 (m)	Block Weight (kg)
30,0	10 300
36,0	10 300
42,0	10 300
48,0	10 300
54,0	10 300
60,0	10 300
66,0	7 100
72,0	3 700
78,0	#
84,0	**Raising Not Permitted**
90,0	

Table 2b: Without Luffing Jib Backstays

Over End of Blocked Crawlers	
Boom Length (m)	Block Weight (kg)
30,0	10 300
36,0	10 300
42,0	10 300
48,0	10 300
54,0	10 300
60,0	10 300
66,0	7 100
72,0	3 700
78,0	#
84,0	#
90,0	#

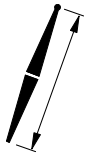
Warning: Crane must remain in-line with crawlers when raising over end of blocked crawlers until operating radius is within 360 degree chart. *Crane tipping or structural damage can occur.*

Explanation of Symbols

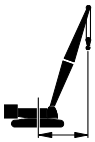
Boom No. B10:500

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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ASME B30.5

30,0 m

m	°	m	kg
5,5	84,5	31,9	300 000 **b**
6,0	83,5	31,9	300 000 **b**
6,5	82,5	31,8	291 400 **b**
7,0	81,6	31,7	274 800 **b**
8,0	79,6	31,5	242 000
9,0	77,6	31,2	196 400
10,0	75,7	31,0	165 700
12,0	71,6	30,3	125 800
14,0	67,5	29,5	101 100
16,0	63,2	28,5	84 200
18,0	58,8	27,3	72 100
20,0	54,1	25,8	62 900
22,0	49,0	24,1	55 700
24,0	43,6	22,1	49 900
26,0	37,4	19,5	45 100
28,0	30,2	16,3	41 100
30,0	20,5	11,7	37 700

36,0 m

m	°	m	kg
5,8	84,9	37,9	294 700 **b**
6,0	84,6	37,9	293 700 **b**
6,5	83,8	37,8	283 400
7,0	83,0	37,8	268 100
8,0	81,4	37,6	241 300
9,0	79,7	37,4	199 100
10,0	78,1	37,2	167 700
12,0	74,8	36,6	127 400
14,0	71,5	36,0	102 400
16,0	68,0	35,2	85 500
18,0	64,5	34,2	73 200
20,0	60,9	33,1	63 900
22,0	57,1	31,8	56 600
24,0	53,1	30,3	50 800
26,0	48,9	28,6	45 900
28,0	44,4	26,6	41 900
30,0	39,5	24,2	38 500
32,0	33,9	21,4	35 500
34,0	27,3	17,7	32 300

42,0 m

m	°	m	kg
6,4	84,8	43,9	267 800
6,5	84,7	43,9	267 400
7,0	84,0	43,8	261 400
8,0	82,6	43,7	235 300
9,0	81,2	43,5	201 200
10,0	79,8	43,3	168 800
12,0	77,0	42,9	128 200
14,0	74,2	42,3	103 100
16,0	71,3	41,6	86 000
18,0	68,4	40,8	73 700
20,0	65,4	39,9	64 300
22,0	62,3	38,9	56 900
24,0	59,1	37,7	51 000
26,0	55,8	36,3	46 200
28,0	52,4	34,8	42 100
30,0	48,8	33,1	38 700
32,0	45,0	31,1	35 500
34,0	40,9	28,8	32 200
36,0	36,3	26,2	29 400
38,0	31,2	23,0	26 800
40,0	25,2	19,1	24 500

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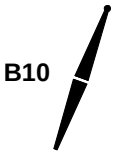

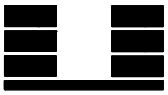

48,0 m

m	°	m	kg
7,3	84,4	49,8	243 500
8,0	83,5	49,8	228 800
9,0	82,3	49,6	202 700
10,0	81,1	49,4	170 300
12,0	78,7	49,0	129 300
14,0	76,2	48,5	103 900
16,0	73,7	48,0	86 700
18,0	71,2	47,3	74 200
20,0	68,7	46,5	64 800
22,0	66,1	45,6	57 400
24,0	63,4	44,6	51 400
26,0	60,6	43,5	46 500
28,0	57,8	42,2	42 400
30,0	54,9	40,8	38 700
32,0	51,9	39,3	35 100
34,0	48,7	37,5	31 800
36,0	45,4	35,6	29 000
38,0	41,9	33,4	26 500
40,0	38,0	30,9	24 200
42,0	33,8	28,0	22 200
44,0	29,1	24,6	20 300
46,0	23,4	20,3	18 600

54,0 m

m	°	m	kg
7,3	85,0	55,9	222 700
8,0	84,3	55,8	220 000
9,0	83,2	55,7	202 000
10,0	82,1	55,5	171 900
12,0	80,0	55,2	130 700
14,0	77,8	54,7	105 100
16,0	75,6	54,2	87 800
18,0	73,4	53,6	75 200
20,0	71,1	52,9	65 700
22,0	68,9	52,2	58 300
24,0	66,6	51,3	52 300
26,0	64,2	50,3	47 300
28,0	61,8	49,3	43 100
30,0	59,3	48,1	38 700
32,0	56,8	46,8	35 000
34,0	54,2	45,3	31 800
36,0	51,5	43,8	28 900
38,0	48,7	42,0	26 400
40,0	45,7	40,1	24 200
42,0	42,6	38,0	22 100
44,0	39,3	35,6	20 300
46,0	35,7	32,8	18 700
48,0	31,8	29,7	17 100
50,0	27,3	26,0	15 700
52,0	22,0	21,4	14 400

60,0 m

m	°	m	kg
7,9	84,9	61,8	192 300
8,0	84,8	61,9	192 100
9,0	83,9	61,7	187 700
10,0	82,9	61,6	175 300
12,0	81,0	61,3	132 100
14,0	79,0	60,9	106 200
16,0	77,1	60,4	88 700
18,0	75,1	59,9	76 100
20,0	73,1	59,3	66 500
22,0	71,1	58,6	58 900
24,0	69,0	57,8	52 900
26,0	67,0	57,0	47 500
28,0	64,9	56,0	42 400
30,0	62,7	55,0	38 100
32,0	60,5	53,9	34 400
34,0	58,3	52,7	31 100
36,0	56,0	51,3	28 300
38,0	53,6	49,8	25 800
40,0	51,2	48,2	23 500
42,0	48,6	46,5	21 500
44,0	46,0	44,6	19 700
46,0	43,2	42,5	18 000
48,0	40,3	40,2	16 500
50,0	37,2	37,6	15 100
52,0	33,8	34,7	13 800
54,0	30,1	31,3	12 700
56,0	25,9	27,4	11 600
58,0	20,8	22,5	10 500

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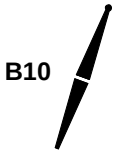

66,0 m

m	°	m	kg
8,5	84,8	67,8	169 300
9,0	84,4	67,8	166 900
10,0	83,6	67,6	160 400
12,0	81,8	67,3	132 900
14,0	80,0	67,0	107 000
16,0	78,3	66,6	89 300
18,0	76,5	66,1	76 600
20,0	74,7	65,5	67 000
22,0	72,9	64,9	59 400
24,0	71,0	64,2	53 200
26,0	69,2	63,5	47 300
28,0	67,3	62,6	42 200
30,0	65,4	61,7	37 900
32,0	63,4	60,7	34 200
34,0	61,5	59,6	30 900
36,0	59,4	58,5	28 100
38,0	57,4	57,2	25 600
40,0	55,3	55,8	23 300
42,0	53,1	54,3	21 300
44,0	50,9	52,7	19 500
46,0	48,6	50,9	17 800
48,0	46,2	49,0	16 300
50,0	43,7	47,0	15 000
52,0	41,0	44,7	13 700
54,0	38,3	42,2	12 500
56,0	35,3	39,4	11 400
58,0	32,1	36,3	10 400
60,0	28,6	32,8	9 500
62,0	24,5	28,6	8 600
64,0	19,7	23,4	7 700

72,0 m

m	°	m	kg
9,1	84,8	73,8	140 100
10,0	84,1	73,7	139 300
12,0	82,5	73,4	132 000
14,0	80,9	73,1	108 100
16,0	79,3	72,7	90 300
18,0	77,6	72,3	77 400
20,0	76,0	71,8	67 700
22,0	74,3	71,2	59 900
24,0	72,7	70,6	52 800
26,0	71,0	69,9	46 600
28,0	69,3	69,1	41 500
30,0	67,6	68,3	37 200
32,0	65,8	67,4	33 400
34,0	64,1	66,4	30 200
36,0	62,3	65,4	27 300
38,0	60,4	64,3	24 800
40,0	58,6	63,0	22 500
42,0	56,7	61,7	20 500
44,0	54,7	60,3	18 700
46,0	52,7	58,8	17 100
48,0	50,7	57,2	15 500
50,0	48,5	55,4	14 200
52,0	46,4	53,5	12 900
54,0	44,1	51,5	11 700
56,0	41,7	49,3	10 700
58,0	39,2	46,8	9 600
60,0	36,6	44,2	8 700
62,0	33,7	41,3	7 800
64,0	30,7	38,0	7 000
66,0	27,3	34,2	6 200
68,0	23,5	29,8	5 500
70,0	18,9	24,4	4 800

78,0 m

m	°	m	kg
9,8	84,7	79,7	116 300
10,0	84,6	79,7	116 100
12,0	83,1	79,5	114 600
14,0	81,6	79,2	110 200
16,0	80,1	78,8	90 900
18,0	78,6	78,4	78 000
20,0	77,1	78,0	68 200
22,0	75,6	77,4	60 000
24,0	74,0	76,9	52 500
26,0	72,5	76,2	46 300
28,0	71,0	75,6	41 200
30,0	69,4	74,8	36 900
32,0	67,8	74,0	33 100
34,0	66,2	73,1	29 900
36,0	64,6	72,2	27 000
38,0	62,9	71,1	24 500
40,0	61,2	70,0	22 200
42,0	59,5	68,9	20 200
44,0	57,8	67,6	18 400
46,0	56,0	66,3	16 700
48,0	54,2	64,8	15 200
50,0	52,4	63,3	13 800
52,0	50,5	61,7	12 600
54,0	48,5	59,9	11 400
56,0	46,5	58,0	10 300
58,0	44,4	56,0	9 300
60,0	42,2	53,8	8 400
62,0	40,0	51,4	7 500
64,0	37,6	48,9	6 700
66,0	35,0	46,1	5 900
68,0	32,3	43,0	5 200

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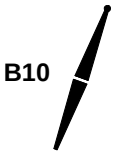
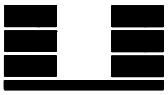
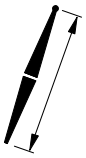
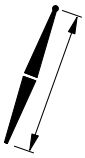






m	°	m	kg
10,4	84,7	85,7	98 000
12,0	83,6	85,5	96 800
14,0	82,2	85,3	95 500
16,0	80,8	84,9	91 500
18,0	79,4	84,6	79 000
20,0	78,0	84,1	68 600
22,0	76,6	83,7	59 200
24,0	75,2	83,1	51 700
26,0	73,8	82,5	45 600
28,0	72,4	81,9	40 500
30,0	70,9	81,2	36 100
32,0	69,5	80,5	32 300
34,0	68,0	79,7	29 100
36,0	66,5	78,8	26 200
38,0	65,0	77,9	23 700
40,0	63,5	76,9	21 400
42,0	61,9	75,8	19 400
44,0	60,4	74,7	17 600
46,0	58,8	73,4	15 900
48,0	57,2	72,2	14 400
50,0	55,5	70,8	13 000
52,0	53,8	69,3	11 800
54,0	52,1	67,8	10 600
56,0	50,3	66,1	9 500
58,0	48,5	64,4	8 500
60,0	46,6	62,5	7 600
62,0	44,7	60,5	6 700
64,0	42,7	58,3	5 900
66,0	40,6	56,0	5 100



m	°	m	kg
11,0	84,7	91,7	82 500
12,0	84,0	91,6	81 900
14,0	82,7	91,3	80 600
16,0	81,4	91,0	76 600
18,0	80,1	90,7	72 400
20,0	78,8	90,3	68 300
22,0	77,5	89,8	59 100
24,0	76,2	89,3	51 600
26,0	74,9	88,8	45 500
28,0	73,6	88,2	40 300
30,0	72,2	87,6	36 000
32,0	70,9	86,9	32 200
34,0	69,5	86,1	28 900
36,0	68,2	85,3	26 100
38,0	66,8	84,5	23 500
40,0	65,4	83,6	21 300
42,0	64,0	82,6	19 300
44,0	62,5	81,5	17 400
46,0	61,1	80,4	15 800
48,0	59,6	79,3	14 300
50,0	58,1	78,0	12 900
52,0	56,6	76,7	11 600
54,0	55,0	75,3	10 500
56,0	53,4	73,8	9 400
58,0	51,8	72,3	8 400
60,0	50,2	70,6	7 400
62,0	48,5	68,8	6 600
64,0	46,7	67,0	5 800
66,0	44,9	65,0	5 000