

Liftcrane Boom Capacities

Boom No. B10:680

300 000 kg VPC (Variable Position Counterweight)

360 Degree Rating

MLC650 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 3 is 13 600 kg or 27 200 kg with two part whip line. When Drum 1 or Drum 2 is used, capacity with single part whip line is 22 100 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 5 440 kg minimum weight suspended beneath boom point and (c) require 10 880 kg minimum weight. **Caution: Do not operate in areas indicated by (b) or (c) 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. 81018141**, Wire Rope Specifications chart **No. 9359-A**, Counterweight Arrangements chart **No. 9349-A**, and Wind Conditions chart **No. 9358-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. 9354-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 11 125 mm crawlers, 1 524 mm or 2 032 mm treads, 11 m live mast, 30 part boom hoist reeving, boom support straps, and 300 000 kg VPC.

Consult chart **No. 9489-AM** when Jib No. 148 is attached.

Luffing Jib Backstay Deduct	
Boom Length (m)	Deduct (kg)
32,0	1 600
38,0	2 300
44,0	2 800
50,0	3 500
56,0	3 900
62,0	4 600
68,0	4 600
74,0	4 600
80,0	5 000
86,0	5 700
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	8 600
18,0	10 700
24,0	13 400
30,0	16 100
36,0	19 300
42,0	21 900
Weight of jib and 2 950 kg suspended beneath jib point have been included in determination of deduct.	

Refer to Table 1 (with luffing jib backstays stored) and Tables 2 and 3 (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 and boom top equipped with a maximum of eight (8) sheaves in lower boom point. 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 (m)	Block Weight (kg)
32,0	21 000
38,0	21 000
44,0	21 000
50,0	21 000
56,0	21 000
62,0	21 000
68,0	10 200
74,0	10 200
80,0	7 300
86,0	#
92,0	Raising Not Permitted
98,0	
104,0	

Table 2: Without Luffing Jib Backstays

Over End or Side of Crawlers	
Boom Length (m)	Block Weight (kg)
32,0	21 000
38,0	21 000
44,0	21 000
50,0	21 000
56,0	21 000
62,0	21 000
68,0	21 000
74,0	10 200
80,0	10 200
86,0	7 300
92,0	#
98,0	Raising Not Permitted
104,0	

Table 3: Without Luffing Jib Backstays

Over End of Blocked Crawlers	
Boom Length (m)	Block Weight (kg)
32,0	21 000
38,0	21 000
44,0	21 000
50,0	21 000
56,0	21 000
62,0	21 000
68,0	21 000
74,0	10 200
80,0	10 200
86,0	7 300
92,0	#
98,0	#
(a) 104,0	#
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. B10:680



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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300 000 kg



360°

32,0 m			
m	°	m	kg
5,8	84,9	34,9	650 000 c
6,0	84,5	34,8	591 800 c
7,0	82,7	34,7	505 600 c
8,0	80,9	34,5	452 800 b
9,0	79,0	34,3	409 700 b
10,0	77,2	34,0	374 000
11,0	75,3	33,7	343 900
12,0	73,4	33,4	318 100
14,0	69,6	32,6	275 200
16,0	65,7	31,7	228 000
18,0	61,6	30,6	194 000
20,0	57,3	29,3	168 700
22,0	52,8	27,8	149 100
24,0	48,0	25,9	133 400
26,0	42,7	23,8	120 500
28,0	36,8	21,2	109 800
30,0	29,8	17,8	100 800
32,0	20,5	13,0	93 100

38,0 m			
m	°	m	kg
6,7	84,3	40,8	514 500 c
7,0	83,9	40,8	497 900 c
8,0	82,3	40,6	446 400 b
9,0	80,8	40,4	404 800
10,0	79,3	40,2	370 100
11,0	77,7	40,0	340 700
12,0	76,1	39,7	315 600
14,0	73,0	39,0	273 900
16,0	69,8	38,3	231 400
18,0	66,5	37,4	196 400
20,0	63,1	36,4	170 900
22,0	59,6	35,2	151 000
24,0	55,9	33,8	135 200
26,0	52,1	32,2	122 200
28,0	48,0	30,4	111 400
30,0	43,7	28,3	102 300
32,0	38,9	25,9	94 500
34,0	33,5	22,9	87 700
36,0	27,1	19,2	81 800
38,0	18,6	13,9	76 600

44,0 m			
m	°	m	kg
7,3	84,3	46,8	471 000 b
8,0	83,4	46,7	438 700
9,0	82,1	46,5	398 600
10,0	80,7	46,3	365 100
11,0	79,4	46,1	336 600
12,0	78,1	45,9	312 100
14,0	75,4	45,3	271 800
16,0	72,7	44,7	233 600
18,0	69,9	44,0	197 800
20,0	67,0	43,1	172 100
22,0	64,1	42,1	152 100
24,0	61,2	41,0	136 100
26,0	58,1	39,7	123 100
28,0	54,9	38,3	112 200
30,0	51,6	36,7	103 000
32,0	48,0	34,9	95 100
34,0	44,3	32,9	88 300
36,0	40,3	30,5	82 300
38,0	35,9	27,8	77 100
40,0	30,9	24,5	72 400
42,0	25,0	20,5	68 200
44,0	17,1	14,7	63 400

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300 000 kg



360°

50,0 m			
m	°	m	kg
7,3	85,0	52,8	461 500
8,0	84,2	52,7	430 800
9,0	83,0	52,6	392 400
10,0	81,9	52,4	360 100
11,0	80,7	52,2	332 500
12,0	79,5	52,0	308 700
14,0	77,2	51,5	269 800
16,0	74,8	51,0	235 900
18,0	72,4	50,3	200 000
20,0	69,9	49,6	174 000
22,0	67,5	48,7	153 800
24,0	64,9	47,8	137 600
26,0	62,3	46,7	124 500
28,0	59,7	45,5	113 500
30,0	56,9	44,2	104 200
32,0	54,1	42,8	96 300
34,0	51,1	41,1	89 400
36,0	48,0	39,3	83 300
38,0	44,8	37,3	78 000
40,0	41,3	35,1	73 200
42,0	37,6	32,5	68 200
44,0	33,5	29,5	63 000
46,0	28,8	26,0	58 300
48,0	23,3	21,6	54 100

56,0 m			
m	°	m	kg
7,9	84,9	58,8	425 800
8,0	84,8	58,7	423 000
9,0	83,8	58,6	386 100
10,0	82,7	58,5	355 000
11,0	81,7	58,3	328 400
12,0	80,7	58,1	305 300
14,0	78,6	57,7	267 400
16,0	76,5	57,2	235 600
18,0	74,3	56,6	202 600
20,0	72,2	56,0	175 900
22,0	70,0	55,2	155 500
24,0	67,8	54,4	139 200
26,0	65,5	53,5	125 900
28,0	63,2	52,5	114 800
30,0	60,9	51,3	105 400
32,0	58,5	50,1	97 400
34,0	56,0	48,7	90 400
36,0	53,5	47,3	84 300
38,0	50,8	45,6	78 900
40,0	48,1	43,8	72 700
42,0	45,2	41,8	67 000
44,0	42,1	39,6	62 000
46,0	38,9	37,2	57 300
48,0	35,4	34,4	53 100
50,0	31,5	31,2	49 300
52,0	27,1	27,4	45 700
54,0	21,9	22,7	42 400

62,0 m			
m	°	m	kg
8,5	84,8	64,7	393 900
9,0	84,4	64,7	378 700
10,0	83,5	64,5	348 900
11,0	82,5	64,4	323 400
12,0	81,6	64,2	301 200
14,0	79,7	63,9	264 600
16,0	77,8	63,4	235 100
18,0	75,9	62,9	205 000
20,0	74,0	62,3	177 800
22,0	72,0	61,6	157 100
24,0	70,1	60,9	140 700
26,0	68,1	60,1	127 300
28,0	66,0	59,2	116 100
30,0	64,0	58,2	106 600
32,0	61,9	57,1	98 500
34,0	59,7	55,9	91 500
36,0	57,5	54,7	84 800
38,0	55,3	53,3	77 800
40,0	53,0	51,7	71 500
42,0	50,6	50,1	65 800
44,0	48,1	48,3	60 800
46,0	45,5	46,3	56 200
48,0	42,8	44,2	52 000
50,0	39,9	41,8	48 200
52,0	36,8	39,1	44 600
54,0	33,5	36,2	41 400
56,0	29,9	32,7	38 300
58,0	25,7	28,7	35 500
60,0	20,8	23,8	32 800

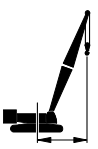
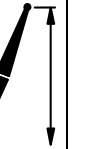
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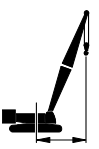
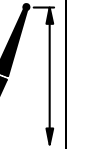


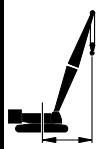
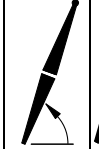
300 000 kg



360°

68,0 m			
			
m	°	m	kg
9,1	84,8	70,7	364 200
10,0	84,0	70,6	340 600
11,0	83,2	70,5	316 500
12,0	82,3	70,3	295 300
14,0	80,6	70,0	260 100
16,0	78,9	69,6	232 100
18,0	77,2	69,1	204 900
20,0	75,4	68,6	178 100
22,0	73,7	68,0	157 300
24,0	71,9	67,3	140 800
26,0	70,1	66,6	127 300
28,0	68,3	65,8	116 100
30,0	66,4	64,9	106 600
32,0	64,6	63,9	98 400
34,0	62,7	62,9	91 400
36,0	60,7	61,7	84 700
38,0	58,8	60,5	77 700
40,0	56,7	59,2	71 400
42,0	54,7	57,8	65 700
44,0	52,5	56,2	60 700
46,0	50,4	54,6	56 100
48,0	48,1	52,8	51 900
50,0	45,7	50,8	48 100
52,0	43,3	48,7	44 600
54,0	40,7	46,4	41 300
56,0	38,0	43,8	38 300
58,0	35,1	41,0	35 500
60,0	31,9	37,9	32 900
62,0	28,4	34,2	30 500
64,0	24,5	30,0	28 200
66,0	19,8	24,8	26 000

74,0 m			
			
m	°	m	kg
9,8	84,7	76,7	339 100
10,0	84,5	76,6	333 100
11,0	83,7	76,5	310 200
12,0	83,0	76,4	290 100
14,0	81,4	76,1	256 400
16,0	79,8	75,7	229 300
18,0	78,2	75,3	205 700
20,0	76,6	74,8	179 800
22,0	75,0	74,2	158 900
24,0	73,4	73,6	142 200
26,0	71,8	73,0	128 600
28,0	70,1	72,2	117 200
30,0	68,5	71,4	107 600
32,0	66,8	70,6	99 400
34,0	65,1	69,6	91 400
36,0	63,3	68,6	83 300
38,0	61,6	67,5	76 200
40,0	59,8	66,3	69 900
42,0	57,9	65,1	64 300
44,0	56,1	63,7	59 200
46,0	54,2	62,3	54 700
48,0	52,2	60,7	50 500
50,0	50,2	59,1	46 700
52,0	48,1	57,3	43 100
54,0	45,9	55,3	39 900
56,0	43,7	53,2	36 900
58,0	41,4	51,0	34 100
60,0	38,9	48,5	31 600
62,0	36,3	45,8	29 100
64,0	33,5	42,8	26 900
66,0	30,5	39,5	24 700
68,0	27,2	35,7	22 700
70,0	23,4	31,2	20 800
72,0	18,9	25,7	19 000

80,0 m			
			
m	°	m	kg
10,4	84,7	82,6	318 800
11,0	84,2	82,6	305 200
12,0	83,5	82,4	285 900
14,0	82,0	82,2	253 300
16,0	80,6	81,8	227 000
18,0	79,1	81,4	205 400
20,0	77,7	81,0	181 200
22,0	76,2	80,5	160 000
24,0	74,7	79,9	143 300
26,0	73,2	79,3	129 600
28,0	71,7	78,6	118 100
30,0	70,2	77,9	108 500
32,0	68,6	77,1	99 800
34,0	67,1	76,3	90 600
36,0	65,5	75,3	82 600
38,0	63,9	74,3	75 500
40,0	62,3	73,3	69 200
42,0	60,6	72,1	63 600
44,0	59,0	70,9	58 500
46,0	57,2	69,6	53 900
48,0	55,5	68,3	49 700
50,0	53,7	66,8	45 900
52,0	51,9	65,2	42 400
54,0	50,0	63,5	39 200
56,0	48,1	61,7	36 200
58,0	46,1	59,8	33 400
60,0	44,1	57,7	30 800
62,0	41,9	55,5	28 400
64,0	39,7	53,1	26 200
66,0	37,3	50,5	24 100
68,0	34,8	47,7	22 100
70,0	32,2	44,5	20 200
72,0	29,3	41,0	18 400
74,0	26,1	37,0	16 700
76,0	22,5	32,4	15 100

B10



300 000 kg



360°

86,0 m			
m	°	m	kg
11,0	84,6	88,6	274 000
12,0	83,9	88,5	272 600
14,0	82,6	88,2	249 800
16,0	81,3	87,9	224 100
18,0	79,9	87,5	203 200
20,0	78,5	87,1	183 000
22,0	77,2	86,7	161 500
24,0	75,8	86,2	144 600
26,0	74,4	85,6	130 800
28,0	73,0	85,0	119 200
30,0	71,6	84,3	108 800
32,0	70,2	83,6	98 300
34,0	68,8	82,8	89 100
36,0	67,3	81,9	81 000
38,0	65,9	81,0	73 900
40,0	64,4	80,1	67 600
42,0	62,9	79,0	62 000
44,0	61,4	77,9	56 900
46,0	59,8	76,8	52 300
48,0	58,2	75,5	48 100
50,0	56,6	74,2	44 300
52,0	55,0	72,8	40 800
54,0	53,4	71,3	37 600
56,0	51,7	69,7	34 600
58,0	49,9	68,0	31 800
60,0	48,1	66,2	29 200
62,0	46,3	64,3	26 800
64,0	44,4	62,3	24 600
66,0	42,4	60,1	22 500
68,0	40,3	57,7	20 500
70,0	38,2	55,2	18 600
72,0	35,9	52,4	16 900
74,0	33,5	49,5	15 200
76,0	31,0	46,2	13 600
78,0	28,2	42,5	12 100
80,0	25,1	38,4	10 600
82,0	21,6	33,5	8 500

92,0 m			
m	°	m	kg
11,0	85,0	94,6	235 000
12,0	84,3	94,5	233 700
14,0	83,1	94,3	231 200
16,0	81,8	94,0	223 200
18,0	80,6	93,6	200 800
20,0	79,3	93,2	183 400
22,0	78,0	92,8	162 700
24,0	76,7	92,3	145 600
26,0	75,5	91,8	131 700
28,0	74,2	91,2	119 800
30,0	72,9	90,6	108 200
32,0	71,5	89,9	97 500
34,0	70,2	89,2	88 300
36,0	68,9	88,4	80 200
38,0	67,5	87,6	73 100
40,0	66,2	86,7	66 800
42,0	64,8	85,7	61 100
44,0	63,4	84,7	56 100
46,0	62,0	83,6	51 400
48,0	60,5	82,5	47 300
50,0	59,1	81,3	43 400
52,0	57,6	80,0	39 900
54,0	56,1	78,7	36 700
56,0	54,6	77,3	33 700
58,0	53,0	75,7	30 900
60,0	51,4	74,1	28 400
62,0	49,8	72,4	26 000
64,0	48,1	70,6	23 700
66,0	46,4	68,7	21 600
68,0	44,6	66,7	19 600
70,0	42,8	64,6	17 800
72,0	40,9	62,3	16 000
74,0	38,9	59,8	14 400
76,0	36,8	57,1	12 800
78,0	34,7	54,3	11 300
80,0	32,3	51,1	9 900
82,0	29,9	47,7	8 500

98,0 m			
m	°	m	kg
11,6	84,9	100,6	201 600
12,0	84,7	100,6	201 200
14,0	83,5	100,3	199 000
16,0	82,3	100,0	196 900
18,0	81,1	99,7	194 800
20,0	80,0	99,4	182 600
22,0	78,8	99,0	165 700
24,0	77,6	98,5	147 900
26,0	76,4	98,0	133 700
28,0	75,2	97,5	119 100
30,0	73,9	96,9	106 600
32,0	72,7	96,3	96 000
34,0	71,5	95,6	86 800
36,0	70,2	94,9	78 700
38,0	69,0	94,1	71 600
40,0	67,7	93,2	65 200
42,0	66,4	92,4	59 600
44,0	65,1	91,4	54 400
46,0	63,8	90,4	49 800
48,0	62,5	89,4	45 600
50,0	61,2	88,3	41 800
52,0	59,8	87,1	38 300
54,0	58,5	85,9	35 000
56,0	57,1	84,6	32 000
58,0	55,6	83,2	29 300
60,0	54,2	81,8	26 700
62,0	52,7	80,2	24 300
64,0	51,2	78,6	22 000
66,0	49,7	76,9	19 900
68,0	48,1	75,1	18 000
70,0	46,5	73,2	16 100
72,0	44,8	71,2	14 400
74,0	43,1	69,1	12 700
76,0	41,4	66,8	11 100
78,0	39,5	64,4	9 600
80,0	37,6	61,8	8 200

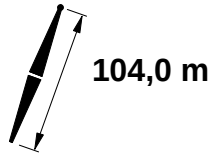
B10



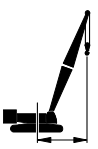
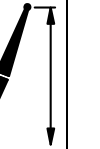
300 000 kg



360°



104,0 m

 m	 α	 m	 kg
12,2	84,9	106,6	174 400
14,0	83,9	106,4	172 600
16,0	82,8	106,1	170 700
18,0	81,7	105,8	168 900
20,0	80,5	105,5	167 100
22,0	79,4	105,1	163 300
24,0	78,3	104,7	149 400
26,0	77,2	104,2	133 000
28,0	76,0	103,7	118 200
30,0	74,9	103,1	105 700
32,0	73,7	102,6	95 100
34,0	72,6	101,9	85 800
36,0	71,4	101,2	77 800
38,0	70,2	100,5	70 600
40,0	69,1	99,7	64 300
42,0	67,9	98,9	58 600
44,0	66,7	98,1	53 500
46,0	65,5	97,1	48 900
48,0	64,2	96,2	44 700
50,0	63,0	95,1	40 800
52,0	61,7	94,1	37 300
54,0	60,5	92,9	34 100
56,0	59,2	91,7	31 100
58,0	57,9	90,5	28 300
60,0	56,6	89,1	25 700
62,0	55,2	87,7	23 300
64,0	53,9	86,3	21 100
66,0	52,5	84,7	19 000
68,0	51,1	83,1	17 000
70,0	49,6	81,4	15 100
72,0	48,1	79,6	13 400
74,0	46,6	77,7	11 700
76,0	45,0	75,7	10 200
78,0	43,4	73,6	8 700