

Liftcrane Boom Capacities

Boom No. B10:680

300 000 kg VPC (Variable Position Counterweight)

Rating Over End of Blocked Crawlers

No Travel - Limited Swing

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 over end of machine with crawlers blocked 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.**

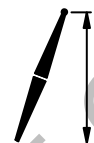
OPERATING CONDITIONS: Machine to operate on a firm, level, and uniformly supporting surface. Drive and idler tumblers must be properly blocked so that centerline of tumblers become tipping fulcrum. Swing is limited to that sector shown on Operating Range Diagram **No. 9347-A**. Refer to Boom Rigging **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, wind conditions, as well as adverse operating conditions and physical machine depreciation. Refer to the Operator Manual for operating guidelines.



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 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. 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 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	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 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	#

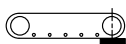
Explanation of Symbols



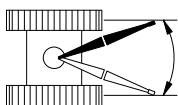
Boom No. B10:680



VPC (Variable Position Counterweight)



Blocked Crawler



Limited Swing



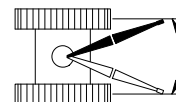
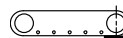
Boom Length

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



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	276 500
16,0	65,7	31,7	244 200
18,0	61,6	30,6	218 600
20,0	57,3	29,3	197 500
22,0	52,8	27,8	175 800
24,0	48,0	25,9	156 300
26,0	42,7	23,8	140 800
28,0	36,8	21,2	128 000
30,0	29,8	17,8	117 200
32,0	20,5	13,0	108 000

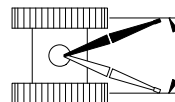
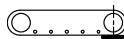
38,0 m			
m	°	m	kg
6,7	84,3	40,8	514 500 c
7,0	83,9	40,8	497 900 c
8,0	82,3	40,6	446 400 b
9,0	80,8	40,4	404 800
10,0	79,3	40,2	370 100
11,0	77,7	40,0	340 700
12,0	76,1	39,7	315 600
14,0	73,0	39,0	274 700
16,0	69,8	38,3	243 000
18,0	66,5	37,4	217 800
20,0	63,1	36,4	197 100
22,0	59,6	35,2	178 400
24,0	55,9	33,8	158 300
26,0	52,1	32,2	142 700
28,0	48,0	30,4	129 800
30,0	43,7	28,3	118 900
32,0	38,9	25,9	109 600
34,0	33,5	22,9	101 600
36,0	27,1	19,2	94 600
38,0	18,6	13,9	88 500

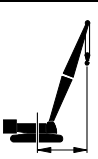
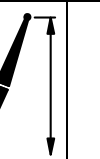
44,0 m			
m	°	m	kg
7,3	84,3	46,8	471 000 b
8,0	83,4	46,7	438 700
9,0	82,1	46,5	398 600
10,0	80,7	46,3	365 100
11,0	79,4	46,1	336 600
12,0	78,1	45,9	312 100
14,0	75,4	45,3	272 100
16,0	72,7	44,7	241 000
18,0	69,9	44,0	216 100
20,0	67,0	43,1	195 800
22,0	64,1	42,1	178 100
24,0	61,2	41,0	159 700
26,0	58,1	39,7	143 700
28,0	54,9	38,3	130 700
30,0	51,6	36,7	119 700
32,0	48,0	34,9	110 400
34,0	44,3	32,9	102 300
36,0	40,3	30,5	95 300
38,0	35,9	27,8	89 100
40,0	30,9	24,5	83 600
42,0	25,0	20,5	78 700
44,0	17,1	14,7	73 200

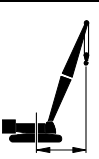
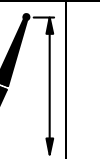
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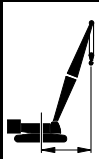
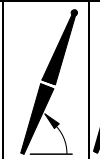


300 000 kg



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	239 300
18,0	72,4	50,3	214 900
20,0	69,9	49,6	194 800
22,0	67,5	48,7	178 000
24,0	64,9	47,8	161 600
26,0	62,3	46,7	145 300
28,0	59,7	45,5	132 100
30,0	56,9	44,2	121 100
32,0	54,1	42,8	111 700
34,0	51,1	41,1	103 500
36,0	48,0	39,3	96 400
38,0	44,8	37,3	90 200
40,0	41,3	35,1	84 600
42,0	37,6	32,5	78 900
44,0	33,5	29,5	73 000
46,0	28,8	26,0	67 800
48,0	23,3	21,6	62 900

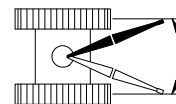
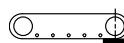
56,0 m			
 m	 °	 m	 kg
7,9	84,9	58,8	425 800
8,0	84,8	58,7	423 000
9,0	83,8	58,6	386 100
10,0	82,7	58,5	355 000
11,0	81,7	58,3	328 400
12,0	80,7	58,1	305 300
14,0	78,6	57,7	267 400
16,0	76,5	57,2	237 600
18,0	74,3	56,6	213 600
20,0	72,2	56,0	193 800
22,0	70,0	55,2	177 300
24,0	67,8	54,4	162 500
26,0	65,5	53,5	147 000
28,0	63,2	52,5	133 700
30,0	60,9	51,3	122 500
32,0	58,5	50,1	113 000
34,0	56,0	48,7	104 700
36,0	53,5	47,3	97 600
38,0	50,8	45,6	91 200
40,0	48,1	43,8	84 100
42,0	45,2	41,8	77 700
44,0	42,1	39,6	72 000
46,0	38,9	37,2	66 800
48,0	35,4	34,4	62 100
50,0	31,5	31,2	57 800
52,0	27,1	27,4	53 800
54,0	21,9	22,7	49 800

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	235 500
18,0	75,9	62,9	212 100
20,0	74,0	62,3	192 700
22,0	72,0	61,6	176 400
24,0	70,1	60,9	162 500
26,0	68,1	60,1	148 600
28,0	66,0	59,2	135 100
30,0	64,0	58,2	123 800
32,0	61,9	57,1	114 200
34,0	59,7	55,9	105 900
36,0	57,5	54,7	98 100
38,0	55,3	53,3	90 100
40,0	53,0	51,7	83 000
42,0	50,6	50,1	76 600
44,0	48,1	48,3	70 900
46,0	45,5	46,3	65 700
48,0	42,8	44,2	61 000
50,0	39,9	41,8	56 700
52,0	36,8	39,1	52 700
54,0	33,5	36,2	49 100
56,0	29,9	32,7	45 700
58,0	25,7	28,7	42 500
60,0	20,8	23,8	38 300

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300 000 kg

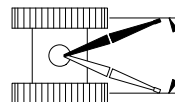
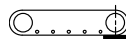


68,0 m			
m	°	m	kg
9,1	84,8	70,7	364 200
10,0	84,0	70,6	340 600
11,0	83,2	70,5	316 500
12,0	82,3	70,3	295 300
14,0	80,6	70,0	260 100
16,0	78,9	69,6	232 100
18,0	77,2	69,1	209 200
20,0	75,4	68,6	190 300
22,0	73,7	68,0	174 400
24,0	71,9	67,3	160 700
26,0	70,1	66,6	148 800
28,0	68,3	65,8	135 200
30,0	66,4	64,9	123 900
32,0	64,6	63,9	114 200
34,0	62,7	62,9	105 900
36,0	60,7	61,7	98 100
38,0	58,8	60,5	90 100
40,0	56,7	59,2	82 900
42,0	54,7	57,8	76 600
44,0	52,5	56,2	70 800
46,0	50,4	54,6	65 700
48,0	48,1	52,8	61 000
50,0	45,7	50,8	56 700
52,0	43,3	48,7	52 700
54,0	40,7	46,4	49 100
56,0	38,0	43,8	45 800
58,0	35,1	41,0	42 600
60,0	31,9	37,9	39 700
62,0	28,4	34,2	36 900
64,0	24,5	30,0	33 400
66,0	19,8	24,8	29 700

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	207 200
20,0	76,6	74,8	188 700
22,0	75,0	74,2	173 100
24,0	73,4	73,6	159 700
26,0	71,8	73,0	148 200
28,0	70,1	72,2	136 800
30,0	68,5	71,4	125 100
32,0	66,8	70,6	115 400
34,0	65,1	69,6	106 000
36,0	63,3	68,6	96 800
38,0	61,6	67,5	88 700
40,0	59,8	66,3	81 600
42,0	57,9	65,1	75 200
44,0	56,1	63,7	69 500
46,0	54,2	62,3	64 300
48,0	52,2	60,7	59 600
50,0	50,2	59,1	55 300
52,0	48,1	57,3	51 300
54,0	45,9	55,3	47 700
56,0	43,7	53,2	44 400
58,0	41,4	51,0	41 300
60,0	38,9	48,5	38 400
62,0	36,3	45,8	35 700
64,0	33,5	42,8	32 700
66,0	30,5	39,5	29 600
68,0	27,2	35,7	26 400
70,0	23,4	31,2	23 300
72,0	18,9	25,7	20 100

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	187 400
22,0	76,2	80,5	172 000
24,0	74,7	79,9	158 900
26,0	73,2	79,3	147 500
28,0	71,7	78,6	137 200
30,0	70,2	77,9	126 100
32,0	68,6	77,1	115 800
34,0	67,1	76,3	105 300
36,0	65,5	75,3	96 100
38,0	63,9	74,3	88 000
40,0	62,3	73,3	80 900
42,0	60,6	72,1	74 500
44,0	59,0	70,9	68 800
46,0	57,2	69,6	63 600
48,0	55,5	68,3	58 900
50,0	53,7	66,8	54 600
52,0	51,9	65,2	50 600
54,0	50,0	63,5	47 000
56,0	48,1	61,7	43 700
58,0	46,1	59,8	40 600
60,0	44,1	57,7	37 700
62,0	41,9	55,5	35 000
64,0	39,7	53,1	32 500
66,0	37,3	50,5	29 700
68,0	34,8	47,7	26 800
70,0	32,2	44,5	24 100
72,0	29,3	41,0	21 400
74,0	26,1	37,0	18 700
76,0	22,5	32,4	16 000

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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	185 600
22,0	77,2	86,7	170 600
24,0	75,8	86,2	157 800
26,0	74,4	85,6	146 600
28,0	73,0	85,0	136 800
30,0	71,6	84,3	126 600
32,0	70,2	83,6	114 400
34,0	68,8	82,8	103 800
36,0	67,3	81,9	94 600
38,0	65,9	81,0	86 500
40,0	64,4	80,1	79 400
42,0	62,9	79,0	73 000
44,0	61,4	77,9	67 200
46,0	59,8	76,8	62 000
48,0	58,2	75,5	57 300
50,0	56,6	74,2	53 000
52,0	55,0	72,8	49 100
54,0	53,4	71,3	45 400
56,0	51,7	69,7	42 100
58,0	49,9	68,0	39 000
60,0	48,1	66,2	36 100
62,0	46,3	64,3	33 500
64,0	44,4	62,3	30 800
66,0	42,4	60,1	28 000
68,0	40,3	57,7	25 300
70,0	38,2	55,2	22 700
72,0	35,9	52,4	20 200
74,0	33,5	49,5	17 800
76,0	31,0	46,2	15 400
78,0	28,2	42,5	13 100
80,0	25,1	38,4	10 800
82,0	21,6	33,5	8 500

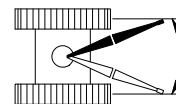
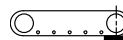
92,0 m			
m	°	m	kg
11,0	85,0	94,6	235 000
12,0	84,3	94,5	233 700
14,0	83,1	94,3	231 200
16,0	81,8	94,0	223 200
18,0	80,6	93,6	200 800
20,0	79,3	93,2	183 700
22,0	78,0	92,8	169 100
24,0	76,7	92,3	156 500
26,0	75,5	91,8	145 600
28,0	74,2	91,2	135 700
30,0	72,9	90,6	125 400
32,0	71,5	89,9	113 600
34,0	70,2	89,2	103 100
36,0	68,9	88,4	93 800
38,0	67,5	87,6	85 800
40,0	66,2	86,7	78 600
42,0	64,8	85,7	72 200
44,0	63,4	84,7	66 400
46,0	62,0	83,6	61 200
48,0	60,5	82,5	56 500
50,0	59,1	81,3	52 200
52,0	57,6	80,0	48 200
54,0	56,1	78,7	44 600
56,0	54,6	77,3	41 300
58,0	53,0	75,7	38 200
60,0	51,4	74,1	35 300
62,0	49,8	72,4	32 600
64,0	48,1	70,6	29 800
66,0	46,4	68,7	27 000
68,0	44,6	66,7	24 400
70,0	42,8	64,6	21 900
72,0	40,9	62,3	19 500
74,0	38,9	59,8	17 200
76,0	36,8	57,1	15 000
78,0	34,7	54,3	12 900
80,0	32,3	51,1	10 800
82,0	29,9	47,7	8 800

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	168 400
24,0	77,6	98,5	156 100
26,0	76,4	98,0	145 300
28,0	75,2	97,5	133 000
30,0	73,9	96,9	122 000
32,0	72,7	96,3	112 200
34,0	71,5	95,6	101 600
36,0	70,2	94,9	92 400
38,0	69,0	94,1	84 300
40,0	67,7	93,2	77 000
42,0	66,4	92,4	70 600
44,0	65,1	91,4	64 800
46,0	63,8	90,4	59 600
48,0	62,5	89,4	54 900
50,0	61,2	88,3	50 600
52,0	59,8	87,1	46 600
54,0	58,5	85,9	43 000
56,0	57,1	84,6	39 600
58,0	55,6	83,2	36 200
60,0	54,2	81,8	33 000
62,0	52,7	80,2	30 000
64,0	51,2	78,6	27 100
66,0	49,7	76,9	24 500
68,0	48,1	75,1	21 900
70,0	46,5	73,2	19 500
72,0	44,8	71,2	17 200
74,0	43,1	69,1	15 000
76,0	41,4	66,8	12 900
78,0	39,5	64,4	10 800
80,0	37,6	61,8	8 900

B10



300 000 kg



m	°	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	164 200
24,0	78,3	104,7	155 000
26,0	77,2	104,2	142 500
28,0	76,0	103,7	130 400
30,0	74,9	103,1	119 600
32,0	73,7	102,6	110 000
34,0	72,6	101,9	100 900
36,0	71,4	101,2	91 500
38,0	70,2	100,5	83 400
40,0	69,1	99,7	76 100
42,0	67,9	98,9	69 700
44,0	66,7	98,1	63 900
46,0	65,5	97,1	58 700
48,0	64,2	96,2	54 000
50,0	63,0	95,1	49 600
52,0	61,7	94,1	45 700
54,0	60,5	92,9	42 000
56,0	59,2	91,7	38 400
58,0	57,9	90,5	35 000
60,0	56,6	89,1	31 800
62,0	55,2	87,7	28 800
64,0	53,9	86,3	26 000
66,0	52,5	84,7	23 400
68,0	51,1	83,1	20 900
70,0	49,6	81,4	18 500
72,0	48,1	79,6	16 200
74,0	46,6	77,7	14 000
76,0	45,0	75,7	12 000
78,0	43,4	73,6	10 000