

Liftcrane Boom Capacities

Boom No. B10:680

400 000 kg VPC (Variable Position Counterweight)

360 Degree Rating

MLC650 SERIES 3



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 400 000 kg VPC.

Consult chart **No. 9488-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 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	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	#
(a) 104,0 m	#

Explanation of Symbols



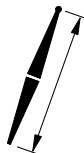
Boom No. B10:680



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)



32,0 m			
m	°	m	kg
5,8	84,9	34,9	650 000 c
6,0	84,5	34,8	608 900 c
7,0	82,7	34,7	528 100 c
8,0	80,9	34,5	473 000 b
9,0	79,0	34,3	428 000 b
10,0	77,2	34,0	390 800
11,0	75,3	33,7	359 400
12,0	73,4	33,4	332 500
14,0	69,6	32,6	289 000
16,0	65,7	31,7	255 400
18,0	61,6	30,6	228 600
20,0	57,3	29,3	201 900
22,0	52,8	27,8	178 400
24,0	48,0	25,9	159 700
26,0	42,7	23,8	144 500
28,0	36,8	21,2	131 800
30,0	29,8	17,8	121 100
32,0	20,5	13,0	111 900

38,0 m			
m	°	m	kg
6,7	84,3	40,8	537 200 c
7,0	83,9	40,8	519 900 c
8,0	82,3	40,6	466 200 b
9,0	80,8	40,4	422 800
10,0	79,3	40,2	386 600
11,0	77,7	40,0	356 000
12,0	76,1	39,7	329 700
14,0	73,0	39,0	287 100
16,0	69,8	38,3	254 000
18,0	66,5	37,4	227 700
20,0	63,1	36,4	204 200
22,0	59,6	35,2	180 300
24,0	55,9	33,8	161 500
26,0	52,1	32,2	146 200
28,0	48,0	30,4	133 400
30,0	43,7	28,3	122 600
32,0	38,9	25,9	113 300
34,0	33,5	22,9	105 300
36,0	27,1	19,2	98 200
38,0	18,6	13,9	92 000

44,0 m			
m	°	m	kg
7,3	84,3	46,8	491 600 b
8,0	83,4	46,7	458 000
9,0	82,1	46,5	416 200
10,0	80,7	46,3	381 300
11,0	79,4	46,1	351 600
12,0	78,1	45,9	326 000
14,0	75,4	45,3	284 400
16,0	72,7	44,7	251 900
18,0	69,9	44,0	225 900
20,0	67,0	43,1	204 400
22,0	64,1	42,1	181 600
24,0	61,2	41,0	162 500
26,0	58,1	39,7	147 000
28,0	54,9	38,3	134 100
30,0	51,6	36,7	123 300
32,0	48,0	34,9	113 900
34,0	44,3	32,9	105 800
36,0	40,3	30,5	98 800
38,0	35,9	27,8	92 500
40,0	30,9	24,5	87 000
42,0	25,0	20,5	81 700
44,0	17,1	14,7	73 700

B10



400 000 kg



360°

50,0 m			
m	o	m	kg
7,3	85,0	52,8	481 400
8,0	84,2	52,7	449 500
9,0	83,0	52,6	409 500
10,0	81,9	52,4	375 900
11,0	80,7	52,2	347 200
12,0	79,5	52,0	322 400
14,0	77,2	51,5	281 900
16,0	74,8	51,0	250 100
18,0	72,4	50,3	224 600
20,0	69,9	49,6	203 600
22,0	67,5	48,7	183 600
24,0	64,9	47,8	164 000
26,0	62,3	46,7	148 400
28,0	59,7	45,5	135 400
30,0	56,9	44,2	124 500
32,0	54,1	42,8	115 100
34,0	51,1	41,1	106 900
36,0	48,0	39,3	99 800
38,0	44,8	37,3	93 500
40,0	41,3	35,1	87 900
42,0	37,6	32,5	82 900
44,0	33,5	29,5	78 200
46,0	28,8	26,0	71 600
48,0	23,3	21,6	64 800

56,0 m			
m	o	m	kg
7,9	84,9	58,8	444 100
8,0	84,8	58,7	441 100
9,0	83,8	58,6	402 800
10,0	82,7	58,5	370 500
11,0	81,7	58,3	342 800
12,0	80,7	58,1	318 800
14,0	78,6	57,7	279 300
16,0	76,5	57,2	248 200
18,0	74,3	56,6	223 200
20,0	72,2	56,0	202 600
22,0	70,0	55,2	184 500
24,0	67,8	54,4	165 700
26,0	65,5	53,5	149 900
28,0	63,2	52,5	136 800
30,0	60,9	51,3	125 700
32,0	58,5	50,1	116 200
34,0	56,0	48,7	108 000
36,0	53,5	47,3	100 800
38,0	50,8	45,6	94 500
40,0	48,1	43,8	88 800
42,0	45,2	41,8	83 800
44,0	42,1	39,6	78 600
46,0	38,9	37,2	72 500
48,0	35,4	34,4	66 600
50,0	31,5	31,2	61 100
52,0	27,1	27,4	55 700
54,0	21,9	22,7	50 200

62,0 m			
m	o	m	kg
8,5	84,8	64,7	410 700
9,0	84,4	64,7	394 800
10,0	83,5	64,5	363 900
11,0	82,5	64,4	337 400
12,0	81,6	64,2	314 400
14,0	79,7	63,9	276 200
16,0	77,8	63,4	246 000
18,0	75,9	62,9	221 500
20,0	74,0	62,3	201 300
22,0	72,0	61,6	184 300
24,0	70,1	60,9	167 500
26,0	68,1	60,1	151 200
28,0	66,0	59,2	138 000
30,0	64,0	58,2	126 900
32,0	61,9	57,1	117 300
34,0	59,7	55,9	109 000
36,0	57,5	54,7	101 800
38,0	55,3	53,3	95 400
40,0	53,0	51,7	89 700
42,0	50,6	50,1	84 100
44,0	48,1	48,3	77 700
46,0	45,5	46,3	71 800
48,0	42,8	44,2	66 200
50,0	39,9	41,8	61 100
52,0	36,8	39,1	56 200
54,0	33,5	36,2	51 600
56,0	29,9	32,7	47 100
58,0	25,7	28,7	42 700
60,0	20,8	23,8	38 300

B10



400 000 kg



360°

68,0 m			
m	°	m	kg
9,1	84,8	70,7	379 600
10,0	84,0	70,6	355 100
11,0	83,2	70,5	330 000
12,0	82,3	70,3	308 100
14,0	80,6	70,0	271 500
16,0	78,9	69,6	242 300
18,0	77,2	69,1	218 500
20,0	75,4	68,6	198 800
22,0	73,7	68,0	182 200
24,0	71,9	67,3	167 000
26,0	70,1	66,6	151 300
28,0	68,3	65,8	138 000
30,0	66,4	64,9	126 800
32,0	64,6	63,9	117 200
34,0	62,7	62,9	108 900
36,0	60,7	61,7	101 700
38,0	58,8	60,5	95 200
40,0	56,7	59,2	89 500
42,0	54,7	57,8	84 000
44,0	52,5	56,2	77 700
46,0	50,4	54,6	71 900
48,0	48,1	52,8	66 500
50,0	45,7	50,8	61 600
52,0	43,3	48,7	57 000
54,0	40,7	46,4	52 600
56,0	38,0	43,8	48 500
58,0	35,1	41,0	44 600
60,0	31,9	37,9	40 800
62,0	28,4	34,2	37 100
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	353 200
10,0	84,5	76,6	347 000
11,0	83,7	76,5	323 300
12,0	83,0	76,4	302 400
14,0	81,4	76,1	267 400
16,0	79,8	75,7	239 300
18,0	78,2	75,3	216 300
20,0	76,6	74,8	197 100
22,0	75,0	74,2	180 900
24,0	73,4	73,6	167 000
26,0	71,8	73,0	152 600
28,0	70,1	72,2	139 200
30,0	68,5	71,4	127 900
32,0	66,8	70,6	118 200
34,0	65,1	69,6	109 900
36,0	63,3	68,6	102 500
38,0	61,6	67,5	95 600
40,0	59,8	66,3	88 100
42,0	57,9	65,1	81 300
44,0	56,1	63,7	75 100
46,0	54,2	62,3	69 500
48,0	52,2	60,7	64 200
50,0	50,2	59,1	59 400
52,0	48,1	57,3	54 900
54,0	45,9	55,3	50 700
56,0	43,7	53,2	46 700
58,0	41,4	51,0	43 000
60,0	38,9	48,5	39 400
62,0	36,3	45,8	36 000
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	323 200
11,0	84,2	82,6	318 200
12,0	83,5	82,4	298 000
14,0	82,0	82,2	264 200
16,0	80,6	81,8	236 900
18,0	79,1	81,4	214 400
20,0	77,7	81,0	195 700
22,0	76,2	80,5	179 700
24,0	74,7	79,9	166 000
26,0	73,2	79,3	153 600
28,0	71,7	78,6	140 100
30,0	70,2	77,9	128 700
32,0	68,6	77,1	119 000
34,0	67,1	76,3	110 600
36,0	65,5	75,3	102 500
38,0	63,9	74,3	94 100
40,0	62,3	73,3	86 700
42,0	60,6	72,1	80 000
44,0	59,0	70,9	73 900
46,0	57,2	69,6	68 300
48,0	55,5	68,3	63 100
50,0	53,7	66,8	58 400
52,0	51,9	65,2	54 000
54,0	50,0	63,5	49 800
56,0	48,1	61,7	46 000
58,0	46,1	59,8	42 400
60,0	44,1	57,7	38 900
62,0	41,9	55,5	35 700
64,0	39,7	53,1	32 600
66,0	37,3	50,5	29 600
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

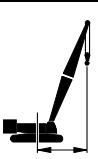
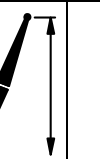
B10

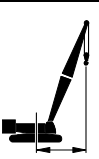
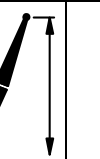


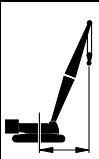
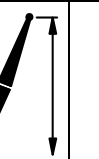
400 000 kg



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	261 300
16,0	81,3	87,9	233 800
18,0	79,9	87,5	212 000
20,0	78,5	87,1	193 800
22,0	77,2	86,7	178 200
24,0	75,8	86,2	164 800
26,0	74,4	85,6	153 200
28,0	73,0	85,0	141 400
30,0	71,6	84,3	129 700
32,0	70,2	83,6	119 200
34,0	68,8	82,8	108 800
36,0	67,3	81,9	99 700
38,0	65,9	81,0	91 500
40,0	64,4	80,1	84 100
42,0	62,9	79,0	77 400
44,0	61,4	77,9	71 400
46,0	59,8	76,8	65 800
48,0	58,2	75,5	60 700
50,0	56,6	74,2	56 000
52,0	55,0	72,8	51 700
54,0	53,4	71,3	47 600
56,0	51,7	69,7	43 800
58,0	49,9	68,0	40 300
60,0	48,1	66,2	36 900
62,0	46,3	64,3	33 800
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	226 600
18,0	80,6	93,6	210 200
20,0	79,3	93,2	191 700
22,0	78,0	92,8	176 500
24,0	76,7	92,3	163 500
26,0	75,5	91,8	152 100
28,0	74,2	91,2	141 500
30,0	72,9	90,6	129 200
32,0	71,5	89,9	117 400
34,0	70,2	89,2	107 100
36,0	68,9	88,4	98 000
38,0	67,5	87,6	89 800
40,0	66,2	86,7	82 500
42,0	64,8	85,7	75 900
44,0	63,4	84,7	69 800
46,0	62,0	83,6	64 300
48,0	60,5	82,5	59 300
50,0	59,1	81,3	54 600
52,0	57,6	80,0	50 300
54,0	56,1	78,7	46 300
56,0	54,6	77,3	42 600
58,0	53,0	75,7	39 100
60,0	51,4	74,1	35 800
62,0	49,8	72,4	32 700
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	190 900
22,0	78,8	99,0	175 700
24,0	77,6	98,5	162 900
26,0	76,4	98,0	150 400
28,0	75,2	97,5	135 900
30,0	73,9	96,9	123 400
32,0	72,7	96,3	112 400
34,0	71,5	95,6	102 600
36,0	70,2	94,9	94 000
38,0	69,0	94,1	86 200
40,0	67,7	93,2	79 000
42,0	66,4	92,4	72 400
44,0	65,1	91,4	66 500
46,0	63,8	90,4	61 100
48,0	62,5	89,4	56 100
50,0	61,2	88,3	51 500
52,0	59,8	87,1	47 200
54,0	58,5	85,9	43 300
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



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	165 300
24,0	78,3	104,7	160 800
26,0	77,2	104,2	148 100
28,0	76,0	103,7	133 900
30,0	74,9	103,1	121 500
32,0	73,7	102,6	110 600
34,0	72,6	101,9	101 000
36,0	71,4	101,2	92 400
38,0	70,2	100,5	84 700
40,0	69,1	99,7	77 700
42,0	67,9	98,9	71 100
44,0	66,7	98,1	65 200
46,0	65,5	97,1	59 800
48,0	64,2	96,2	54 800
50,0	63,0	95,1	50 200
52,0	61,7	94,1	46 000
54,0	60,5	92,9	42 100
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