

# Liftcrane Boom

## Extended Upper Point Capacities

# MLC300 SERIES 1

**Boom No. B45:505-500**  
**with 7,0 m Extended Upper Boom Point**  
**135 200 kg VPC (Variable Position Counterweight)**  
**360 Degree Rating**



**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 (upper sheave) capacity for liftcrane service with single part whip line from Drum 6 is 13 600 kg. When Drum 2 or Drum 3 is used, capacity with single part whip line is 16 600 kg. In all cases, upper boom point capacities cannot exceed those listed for extended upper boom point (lower sheave) capacity.

Weight of all load blocks, hooks, weight ball, slings, hoist lines, etc., beneath 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. 84049567**, Wire Rope Specifications chart **No. 9647-A**, Counterweight Arrangements chart **No. 9345-A**, and Wind Conditions chart **No. 9646-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. 9645-A**.

**EXTENDED UPPER BOOM POINT OPERATING RADIUS:** Extended upper boom point 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.

**EXTENDED UPPER BOOM POINT ELEVATION:** Extended upper boom point elevation is vertical distance from ground level to centerline of extended upper 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.

Luffing Jib Backstay Deduct	
Boom Length (m)	Deduct (kg)
35,0	1 400
41,0	1 700
47,0	2 000
53,0	2 200
59,0	2 400
65,0	2 700
71,0	3 000
77,0	3 200
Deduct the appropriate value from capacities when luffing jib backstays are stored on boom.	

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 extended upper boom point (lower or upper 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 extended upper boom point (lower or upper 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)
35,0	3 400
41,0	3 400
47,0	3 400
53,0	3 400
59,0	3 400
65,0	3 400
71,0	#
77,0	<b>Raising Not Permitted</b>
83,0	

**Table 1b: With Luffing Jib Backstays**

Over End of Blocked Crawlers	
Boom Length (m)	Block Weight (kg)
35,0	3 400
41,0	3 400
47,0	3 400
53,0	3 400
59,0	3 400
65,0	3 400
71,0	#
77,0	#
83,0	<b>Raising Not Permitted</b>

**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)
35,0	3 400
41,0	3 400
47,0	3 400
53,0	3 400
59,0	3 400
65,0	3 400
71,0	#
77,0	<b>Raising Not Permitted</b>
83,0	

**Table 2b: Without Luffing Jib Backstays**

Over End of Blocked Crawlers	
Boom Length (m)	Block Weight (kg)
35,0	3 400
41,0	3 400
47,0	3 400
53,0	3 400
59,0	3 400
65,0	3 400
71,0	#
77,0	#
83,0	#

**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



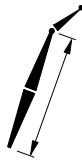
Boom No. B45:505-500



VPC (Variable Position Counterweight)



360 Degree Rating



Boom Length



Extended Upper Boom Point Operating Radius  
(see page 1)



Boom Angle  
(see page 1)



Extended Upper Boom Point Elevation  
(see page 1)



Lifting Capacities  
(see page 1)

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ASME B30.5



135 200 kg



**35,0 m**

m	°	m	kg
11,0	82,7	42,5	86 600
11,5	81,9	42,4	86 000
12,0	81,2	42,3	85 500
12,5	80,5	42,1	84 900
13,0	79,8	42,0	84 400
14,0	78,3	41,7	83 400
16,0	75,4	41,0	81 500
18,0	72,4	40,2	75 200
20,0	69,4	39,3	66 100
22,0	66,2	38,2	58 700
24,0	63,0	37,0	52 700
26,0	59,6	35,6	47 800
28,0	56,1	34,0	43 700
30,0	52,4	32,3	40 200
32,0	48,5	30,2	37 200
34,0	44,2	27,9	34 500
36,0	39,5	25,2	31 800

**41,0 m**

m	°	m	kg
11,6	82,9	48,5	94 100
12,0	82,3	48,4	93 800
12,5	81,7	48,3	93 500
13,0	81,1	48,2	93 200
13,5	80,5	48,0	92 900
14,0	79,9	47,9	92 600
16,0	77,3	47,3	87 700
18,0	74,8	46,6	76 500
20,0	72,2	45,8	66 900
22,0	69,5	44,9	59 500
24,0	66,8	43,9	53 400
26,0	64,0	42,8	48 400
28,0	61,2	41,5	44 300
30,0	58,2	40,1	40 800
32,0	55,1	38,5	37 700
34,0	51,9	36,7	34 400
36,0	48,5	34,7	31 500
38,0	44,8	32,5	28 900
40,0	40,9	29,9	26 500

**47,0 m**

m	°	m	kg
12,5	82,7	54,4	100 000
13,0	82,1	54,3	100 000
13,5	81,6	54,2	100 000
14,0	81,0	54,1	99 200
14,5	80,5	54,0	97 900
16,0	78,8	53,6	90 200
18,0	76,6	53,0	77 300
20,0	74,3	52,3	67 700
22,0	72,0	51,5	60 200
24,0	69,6	50,6	54 100
26,0	67,3	49,6	49 000
28,0	64,8	48,5	44 900
30,0	62,3	47,3	41 100
32,0	59,7	46,0	37 300
34,0	57,1	44,6	34 000
36,0	54,3	42,9	31 000
38,0	51,4	41,2	28 400
40,0	48,4	39,2	26 100
42,0	45,2	37,0	24 000
44,0	41,8	34,5	22 100
46,0	38,1	31,7	20 400

REFERENCED

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ASME B30.5



**53,0 m**

m	o	m	kg
13,1	82,8	60,4	100 000
13,5	82,4	60,3	100 000
14,0	82,0	60,2	100 000
14,5	81,5	60,1	99 400
15,0	81,0	60,0	97 600
16,0	80,0	59,8	91 200
18,0	78,0	59,2	78 200
20,0	76,0	58,6	68 400
22,0	73,9	57,9	60 800
24,0	71,8	57,1	54 700
26,0	69,7	56,3	49 600
28,0	67,6	55,3	45 100
30,0	65,4	54,3	40 700
32,0	63,2	53,1	36 800
34,0	60,9	51,9	33 500
36,0	58,6	50,5	30 500
38,0	56,2	49,0	27 900
40,0	53,7	47,4	25 600
42,0	51,1	45,6	23 500
44,0	48,4	43,7	21 600
46,0	45,6	41,5	19 900
48,0	42,6	39,1	18 300
50,0	39,4	36,5	16 900

**59,0 m**

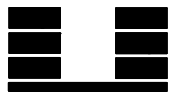
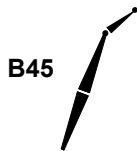
m	o	m	kg
13,7	83,0	66,4	100 000
14,0	82,7	66,3	100 000
14,5	82,3	66,2	100 000
15,0	81,8	66,1	99 500
15,5	81,4	66,0	95 800
16,0	80,9	65,9	92 100
18,0	79,1	65,4	78 900
20,0	77,3	64,9	69 100
22,0	75,5	64,3	61 500
24,0	73,6	63,6	55 200
26,0	71,7	62,8	49 900
28,0	69,8	61,9	44 600
30,0	67,9	61,0	40 200
32,0	65,9	60,0	36 300
34,0	63,9	58,9	32 900
36,0	61,9	57,7	30 000
38,0	59,8	56,4	27 300
40,0	57,6	55,0	25 000
42,0	55,4	53,5	22 900
44,0	53,2	51,9	21 000
46,0	50,8	50,1	19 300
48,0	48,4	48,1	17 700
50,0	45,8	46,0	16 300
52,0	43,2	43,7	15 000
54,0	40,3	41,2	13 700
56,0	37,3	38,3	12 600

**65,0 m**

m	o	m	kg
14,6	82,8	72,3	100 000
15,0	82,5	72,3	99 700
15,5	82,1	72,2	96 500
16,0	81,7	72,1	92 700
16,5	81,3	72,0	89 100
18,0	80,0	71,6	79 700
20,0	78,4	71,1	69 800
22,0	76,7	70,5	62 100
24,0	75,0	69,9	55 600
26,0	73,3	69,2	49 400
28,0	71,6	68,4	44 100
30,0	69,9	67,6	39 600
32,0	68,1	66,7	35 700
34,0	66,3	65,7	32 300
36,0	64,5	64,7	29 400
38,0	62,7	63,5	26 700
40,0	60,8	62,3	24 400
42,0	58,8	61,0	22 300
44,0	56,9	59,5	20 400
46,0	54,8	58,0	18 700
48,0	52,8	56,3	17 100
50,0	50,6	54,5	15 700
52,0	48,4	52,6	14 400
54,0	46,1	50,5	13 100
56,0	43,6	48,3	12 000
58,0	41,1	45,8	10 900
60,0	38,4	43,1	10 000

# MLC300 S-1

ASME B30.5



135 200 kg



**71,0 m**

m	o	m	kg
15,2	82,9	78,3	99 100
15,5	82,7	78,2	96 900
16,0	82,3	78,1	92 900
16,5	82,0	78,0	89 200
17,0	81,6	77,9	86 000
18,0	80,8	77,7	79 900
20,0	79,3	77,3	69 900
22,0	77,8	76,7	62 100
24,0	76,2	76,2	55 200
26,0	74,7	75,5	48 900
28,0	73,1	74,8	43 600
30,0	71,5	74,1	39 100
32,0	69,9	73,2	35 200
34,0	68,3	72,4	31 800
36,0	66,7	71,4	28 900
38,0	65,0	70,4	26 200
40,0	63,3	69,3	23 900
42,0	61,6	68,1	21 800
44,0	59,8	66,8	19 900
46,0	58,0	65,4	18 200
48,0	56,2	64,0	16 600
50,0	54,3	62,4	15 200
52,0	52,4	60,8	13 800
54,0	50,4	59,0	12 600
56,0	48,3	57,1	11 500
58,0	46,2	55,0	10 400
60,0	44,0	52,8	9 400
62,0	41,7	50,4	8 500
64,0	39,2	47,7	7 700
66,0	36,6	44,9	6 900

**77,0 m**

m	o	m	kg
16,2	82,8	84,2	92 600
16,5	82,6	84,1	90 100
17,0	82,2	84,1	86 700
17,5	81,9	84,0	83 600
18,0	81,5	83,9	80 600
20,0	80,1	83,4	70 600
22,0	78,7	82,9	62 400
24,0	77,3	82,4	54 800
26,0	75,8	81,8	48 300
28,0	74,4	81,2	43 000
30,0	72,9	80,5	38 500
32,0	71,5	79,7	34 500
34,0	70,0	78,9	31 200
36,0	68,5	78,0	28 200
38,0	66,9	77,1	25 600
40,0	65,4	76,1	23 200
42,0	63,8	75,0	21 100
44,0	62,3	73,9	19 200
46,0	60,6	72,6	17 500
48,0	59,0	71,3	15 900
50,0	57,3	69,9	14 500
52,0	55,6	68,5	13 100
54,0	53,9	66,9	11 900
56,0	52,1	65,2	10 800
58,0	50,2	63,4	9 700
60,0	48,3	61,5	8 800
62,0	46,4	59,5	7 800
64,0	44,3	57,3	7 000
66,0	42,2	55,0	6 200
68,0	40,0	52,4	5 400
70,0	37,6	49,7	4 700

**83,0 m**

m	o	m	kg
16,8	82,9	90,2	89 000
17,0	82,7	90,1	87 400
17,5	82,4	90,1	84 200
18,0	82,1	90,0	81 200
18,5	81,8	89,9	78 500
20,0	80,8	89,6	71 100
22,0	79,5	89,1	62 400
24,0	78,1	88,6	54 600
26,0	76,8	88,1	48 100
28,0	75,5	87,5	42 800
30,0	74,1	86,8	38 200
32,0	72,8	86,1	34 300
34,0	71,4	85,4	30 900
36,0	70,0	84,6	27 900
38,0	68,6	83,7	25 200
40,0	67,2	82,8	22 900
42,0	65,8	81,8	20 800
44,0	64,3	80,8	18 900
46,0	62,8	79,6	17 100
48,0	61,4	78,5	15 600
50,0	59,8	77,2	14 100
52,0	58,3	75,9	12 800
54,0	56,7	74,5	11 600
56,0	55,1	73,0	10 400
58,0	53,5	71,4	9 400
60,0	51,8	69,7	8 400
62,0	50,1	67,9	7 500
64,0	48,3	66,0	6 600
66,0	46,5	64,0	5 800
68,0	44,6	61,8	5 100