Liftcrane Boom Capacities

Boom No. B10:290
0 lb Crane Counterweight
0 lb Carbody Counterweight
360 Degree Rating

MLC100-1

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 3 is 20,000 lb. When Drum 1 or Drum 2 is used, capacity with single part whip line is 27,600 lb. 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 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: A minimum of 2 parts hoist line is required when using Drum 2 or 3 on 42.7 ft and 52.5 ft boom lengths to maintain boom stability at high boom angles. **Caution: Do not operate using Drum 2 or 3 without required parts of hoist line**. *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. 84054317,** Wire Rope Specifications chart **No. 9709-A,** and Wind Conditions chart **No. 9708-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. 9812-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 21 ft 3 in. crawlers, 35 in. treads, 14 ft 5 in. gantry, 8 part boom hoist reeving, two 32 mm boom pendants, 0 lb crane counterweight, and 0 lb carbody counterweight.

Upper Boom Point Deduct
Deduct 600 lb from capacities when upper boom point is attached. Deduct does not apply to 42.7 ft thru 62.3 ft boom lengths.

Third Line Deduct
Deduct 300 lb from capacities when boom top is equipped with optional 3rd sheave wire rope guide.

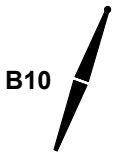
Refer to Table 1 for raising ability with the maximum weight of all load blocks, hooks, weight ball, slings, and hoist lines beneath boom point sheaves. For block weights shown with #, load blocks, hooks, weight ball, and slings must remain on ground until combined weights are within rated capacity of chart. Raising is not permitted in shaded areas of table.

Combined weight beneath boom point sheaves must not exceed block weight shown.

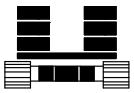
Table 1

Boom Length (ft)	**Over End or Side of Crawlers**
	Block Weight (lb)
42.7 - 62.3	3,800
72.2	2,650
82.0	700
91.9	#

Explanation of Symbols

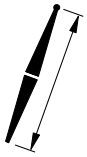


Boom No. B10:290



Crane Counterweight
+
Carbody Counterweight

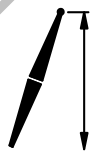
360 Degree Rating



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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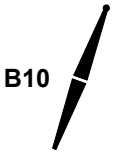

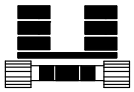

0 lb
+
0 lb

42.7 ft

ft	°	ft	lb
12	79.8	48.8	111,000
13	78.4	48.6	90,500
14	77.1	48.3	76,200
15	75.7	48.1	65,600
16	74.3	47.8	57,500
17	72.9	47.5	51,100
18	71.4	47.1	45,800
19	70.0	46.8	41,500
20	68.6	46.4	37,900
22	65.6	45.5	32,100
24	62.6	44.5	27,700
26	59.5	43.3	24,200
28	56.3	42.0	21,400
30	53.0	40.5	19,100
32	49.5	38.9	17,200
34	45.8	37.0	15,500
36	41.8	34.8	14,100
38	37.5	32.3	12,900
40	32.7	29.3	11,800
42	27.1	25.7	10,800
44	20.1	20.9	9,900

52.5 ft

ft	°	ft	lb
13	80.6	58.6	91,000
14	79.5	58.4	76,600
15	78.4	58.2	66,000
16	77.3	58.0	57,800
17	76.2	57.7	51,300
18	75.0	57.5	46,000
19	73.9	57.2	41,700
20	72.7	56.8	38,000
22	70.4	56.1	32,200
24	68.1	55.4	27,800
26	65.7	54.5	24,300
28	63.3	53.5	21,500
30	60.8	52.4	19,100
32	58.2	51.2	17,200
34	55.6	49.8	15,500
36	52.9	48.3	14,100
38	50.0	46.7	12,900
40	47.1	44.9	11,800
42	44.0	42.8	10,800
44	40.7	40.6	10,000
46	37.1	38.0	9,200
48	33.3	35.1	8,500
50	29.0	31.7	7,900

62.3 ft

ft	°	ft	lb
15	80.3	68.3	66,200
16	79.3	68.1	58,000
17	78.4	67.8	51,400
18	77.4	67.6	46,100
19	76.5	67.4	41,800
20	75.5	67.1	38,100
22	73.6	66.5	32,200
24	71.7	65.9	27,800
26	69.7	65.2	24,200
28	67.8	64.4	21,400
30	65.8	63.5	19,100
32	63.7	62.5	17,100
34	61.6	61.4	15,500
36	59.5	60.3	14,100
38	57.3	59.0	12,800
40	55.1	57.6	11,700
42	52.8	56.1	10,800
44	50.4	54.5	9,900
46	48.0	52.7	9,100
48	45.4	50.8	8,400
50	42.7	48.7	7,800
55	35.3	42.4	6,400
60	26.1	33.7	5,300

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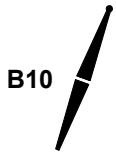
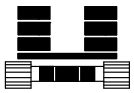
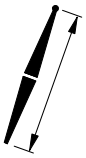


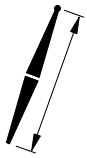


0 lb
+
0 lb



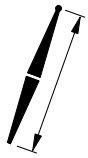
72.2 ft

ft	°	ft	lb
16	80.8	78.1	58,400
17	80.0	77.9	51,800
18	79.2	77.7	46,500
19	78.4	77.5	42,100
20	77.6	77.3	38,400
22	75.9	76.8	32,600
24	74.3	76.2	28,100
26	72.6	75.6	24,600
28	70.9	74.9	21,800
30	69.2	74.2	19,400
32	67.5	73.3	17,500
34	65.8	72.5	15,800
36	64.0	71.5	14,400
38	62.2	70.5	13,100
40	60.4	69.3	12,000
42	58.6	68.1	11,100
44	56.7	66.8	10,200
46	54.7	65.4	9,400
48	52.7	63.9	8,700
50	50.7	62.3	8,100
55	45.3	57.7	6,700
60	39.3	52.1	5,600
65	32.5	45.0	4,700
70	23.9	35.5	3,900



82.0 ft

ft	°	ft	lb
18	80.5	87.7	46,600
19	79.8	87.5	42,100
20	79.1	87.3	38,400
22	77.6	86.9	32,500
24	76.2	86.4	28,000
26	74.8	85.9	24,500
28	73.3	85.3	21,600
30	71.8	84.6	19,300
32	70.4	83.9	17,300
34	68.9	83.2	15,700
36	67.3	82.3	14,200
38	65.8	81.4	13,000
40	64.3	80.5	11,900
42	62.7	79.5	10,900
44	61.1	78.4	10,000
46	59.5	77.2	9,300
48	57.8	76.0	8,600
50	56.2	74.6	7,900
55	51.8	70.9	6,600
60	47.2	66.6	5,500
65	42.2	61.4	4,500
70	36.6	55.2	3,800



91.9 ft

ft	°	ft	lb
19	80.9	97.5	42,100
20	80.3	97.4	38,400
22	79.0	97.0	32,500
24	77.7	96.5	28,000
26	76.4	96.1	24,400
28	75.1	95.5	21,600
30	73.8	95.0	19,200
32	72.5	94.3	17,300
34	71.2	93.7	15,600
36	69.9	92.9	14,200
38	68.6	92.2	12,900
40	67.2	91.3	11,800
42	65.8	90.4	10,900
44	64.5	89.5	10,000
46	63.1	88.5	9,200
48	61.6	87.4	8,500
50	60.2	86.3	7,900
55	56.5	83.1	6,500
60	52.7	79.5	5,400
65	48.6	75.4	4,500