# Liftcrane Boom Capacities With Luffing Jib Attached

Luffing Jib Attached at 23 Degree Boom
to Luffing Jib Offset Angle
63,500 LB. Crane Counterweight
14,700 LB. Carbody Counterweight (S/N 10001001 thru 10001037)
16,100 LB. Carbody Counterweight (S/N 10001038 and greater)

16,100 LB. Carbody Counterweight (S/N 10001038 and greater) Extended Position Crawlers

Extended Position Craw
360 Degree Rating

#### LIFTING CAPACITIES:

- Rated loads included in the charts are the maximum allowable for freely suspended loads at the given boom lenghts, boom angles, luffing jib lenghts, luffing jib angles, and load radii. The rated loads have determined for the machine standing level on a firm supporting surface under ideal conditions. The user must limit or de-rate rated loads to allow for adverse conditions (such as soft or uneven ground, out-of-level conditions, wind, side loads, pendulum action, jerking or sudden stopping of loads, inexperience of personnel, and multiple machine lifts).
- 2. Capacities do not exceed 75% of minimum tipping loads.
- 3. The total load that can be lifted over the luffing jib is limited by the rated jib loads.
- 4. Attempting to lift more than rated loads may cause machine to tip or collapse. Do not tip machine to determine capacity.
- 5. Do not attempt to lift where no radius on load chart is listed as crane may tip or collapse.
- 6. Weight of hooks, hook blocks, slings and other lifting devices beneath boom and luffing jib point sheaves are part of the total load. Their total weight must be subtracted from the rated load to obtain the weight that can be lifted.
- 7. Load radius is horizontal distance from axis of rotation to center of gravity of the freely suspended load. Boom angle is angle between horizontal and centerline of boom butt and inserts, and is an indication of radius. In all cases, operating radius shall govern capacity.
- 8. Least stable position is over the side.
- 9. Boom point elevation is vertical distance from ground level to centerline of boom point shaft.

Meets ANSI B30.5 Requirements

> 10000 SERIES 3

- 10. The total load that can be lifted over an auxilialy sheave is value 850 lbs. deducted from rated load for the jib without auxiliary sheave, but should not exceed 25,000 lbs. See lift crane capacities with luffing jib.
- 11. When lifting over jib point with auxiliary sheave or pin connected boom point sheave attached, rated loads for the jib must be deducted as shown below. See lift crane capacities with luffing jib.

	Auxiliary sheave	Pin connected boom point sheave
Deductions (lbs)	850	480

Three parts of hoist line is not recommended for lifting.

- 12. Machine travel with load (pick and carry).
  - A. Travel with crane upperworks in-line with crawlers. Grade in any direction must not exceed 1 percent (0.5 degrees).
  - B. Travel surface must be firm, level and uniformly supporting. Capacity charts are based on static conditions; therefore judgment must be used to allow for dynamic effects of traveling with load. Carry load as close to ground as possible. Stabilize load with taglines. Travel slowly and smoothly to avoid shock loading boom, jib and rigging.
- 13. Lifting capacities listed apply only to the machine as originally manufactured and designed. Modifications to this machine or use of equipment other than that specified can reduce operating capacity.

Hoist Reeving For Auxiliary Sheave (Upper Point) Loads

No.of Parts of Line	1
Maximum Loads (lbs)	25,000

## Manitowoc Cranes, Inc. Manitowoc, Wisconsin 54220 U.S.A.

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16,100 LB. Carbody Counterweight (S/N 10001038 and greater)

**Extended Position Crawlers** 

360 Degree Rating

#### **OPERATING CONDITION:**

- 1. The machine must be reeved and set-up as stated in the Operators Manual. If this manual is missing, obtain replacement.
  - Boom backstops are required for all boom lengths.
  - Gantry must be fully raised position for all operation.
  - Crawlers must be fully extended and be locked in position.
  - The crane must be leveled to within 1% on a firm supporting surface.
  - Refer to operators manual for operating guidelines.

Maximum	Boom and Jib	Lengths Lifted	Unassisted			
Over End of Bl	ocked Crawlers	Over End of Crawlers				
Boom Length	Luffing Jib Length	Boom Length	Luffing Jib Length			
55 ft	50 ft - 170 ft	50 ft	50 ft - 170 ft			
65 ft	50 ft - 170 ft	65 ft	50 ft - 170 ft			
75 ft	50 ft - 170 ft	75 ft	50 ft - 170 ft			
85 ft	50 ft - 170 ft					
95 ft	50 ft - 170 ft	_				
105 ft	50 ft - 150 ft (a)					
115 ft	50 ft - 100 ft (b)					

(a) Pin connected boom point sheave (lower boom point) can not be attached with 140 ft. or 150 ft. luffing jib length.

(b) Pin connected boom point sheave (lower boom point) can not be attached with 90 ft. or 100 ft. luffing jib length.

Refer to The Operators Manual for boom and luffing jib raising procedure.

2. For Serial Numbers 10001001 thru 10001037: Front and rear load hoist drum wire rope: 1.00 inch, 6 x 25, FI,

IWRC, C/O, Minimum breaking strength: 103,400 lbs. Front

Drum: 771 feet, Rear Drum: 525 feet.

For all other Serial Numbers: Front and rear load hoist drum wire rope: 26 mm, 6 x 29, FI, IWRC, C/O, Minimum breaking

strength: 120,000 lbs. Front Drum: 771 feet,

Rear Drum: 525 feet.

Meets **ANSI B30.5** Requirements



3. Boom hoist wire rope: 492 feet, 5/8 inch, 6 x 31, WS, IWRC O/O, Minimum breaking strength: 47,200 lbs.

Minimum weight of hook block required for lowering

No.of Parts of Line	1	2	4
Weight (lbs)	600	1,200	1,500

For Serial Numbers 10001001 thru 10001037: Machine equipped with 20 ft. 8 in. crawlers, 36 in. treads, 12 parts of boom hoist reeving, 63,500 lbs. crane counterweight and two 7,350 lbs. carbody counterweights.

For all other Serial Numbers: Machine equipped with 20 ft. 8 in. crawlers, 36 in. treads, 12 parts of boom hoist reeying, 63,500 lbs. crane counterweight and two 8,050 lbs. carbody counterweights.

Operation of this equipment in excess of rated loads or disregard of instruction voids the warranty.

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14,700 LB. Carbody Counterweight (S/N 10001001 thru 10001037)
16,100 LB. Carbody Counterweight (S/N 10001038 and greater)
Extended Position Crawlers

360 Degree Rating





Load	Boom	Boom Point	Jib Lenght (ft)												T 3	
Load Radius (ft)	Angle (deg)	Elev. (ft)	50	60	70	80	90	100	110	120	130	140	150	160	170	Load Radius (ft)
55 Ft. Boom																
15	82.0	58.4	90,000	90,000	88,400	82,200	76,200	74,900	73,600	67,000	60,800	53,300	47,800	39,600	32,100	15
16	80.9	58.2	90,000	90,000	88,400	82,200	76,200	74,900	73,600	67,000	60,800	53,300	47,800	39,600	32,100	16
17 18	79.8 78.7	58.0 57.7	90,000 90,000	90,000 86,800	88,400 82,400	82,200 76,900	76,200 71,800	74,900 70,600	73,600 69,400	67,000 63,700	60,800 58,200	53,300 51,500	47,800 46,700	39,600 39,600	32,100 32,100	17 18
19	77.7	57.4	81,800	77,100	72,700	67,400	62,400	61,400	60,400	54,600	49,300	42,900	38,300	31,500	25,100	19
20	76.6	57.1	73,400	69,000	64,800	59,500	54,900	53,800	52,600	47,100	42,100	35,900	31,500	24,900	18,700	20
22	74.4	56.4	60,100	56,000	52,000	46,900	42,500	41,500	40,500	35,200	30,400	24,600	20,500	14,300	8,500	22
24	72.1	55.6	50,000	46,000	42,300	37,400	33,200	32,300	31,300	26,400	21,800	16,300	12,300	6,300		24
26	69.9	54.8	42,300	38,300	34,800	30,200	26,200	25,300	24,400	19,600	15,200	9,900				26
28 30	67.6 65.3	53.8 52.7	35,900 30,600	32,100 27,100	28,600	24,200	20,200 15,600	19,400	18,500	13,800 9,400	9,700					28 30
32	62.9	51.6	26,400	27,100	23,500 19,600	19,400 15,400	11,600	10,900	13,800 10,100	9,400						30
34	60.4	50.3	22,700	19,100	16,000	12,100	8,300	7,600	6,800	1						34
36	57.9	48.8	19,400	16,000	13,000	9,000	/ /									36
38	55.3	47.2	16,700	13,400	10,300	6,600										38
40	52.6	45.5	14,300	11,000	8,100	,										40
45	45.2	40.2	9,400	6,600		<i>\</i>										45
						,	65		Boom							
17	81.4	68.2	89,300	89,300	89,300	85,700	84,000	82,200	78,400	72,500	67,000	60,400	55,500	48,500	41,800	17
18	80.5	68.0	89,300	87,300	82,900	77,600	76,000	74,500	70,700	65,000	59,700	53,500	48,700	42,100	35,700	18
19 20	79.6 78.7	67.8 67.5	82,000 73,800	77,600 69,400	73,400 65,200	68,100 60,400	66,500 58,800	65,000 57,300	61,500 54,000	56,000 48,700	50,900 43,800	44,900 37,900	40,300 33,500	33,900 27,300	27,700 21,300	19 20
22	76.7 76.9	66.9	60,600	56,400	52,400	47,800	46,400	44,900	41,800	36,800	32,100	26,600	22,700	16,700	11,200	20
24	75.0	66.3	50,400	46,500	42,700	38,300	37,000	35,700	32,600	28,000	23,500	18,300	14,500	8,800	11,200	24
26	73.2	65.6	42,500	38,500	35,200	30,800	29,600	28,400	25,500	20,900	16,700	11,600	8,100			26
28	71.3	64.8	36,100	32,600	29,300	25,100	23,900	22,700	19,800	15,400	11,400	6,600				28
30	69.4	63.9	30,800	27,300	24,000	20,000	18,800	17,600	14,900	10,800	7,000					30
32 34	67.4 65.5	63.0 61.9	26,400 22,700	22,900 19,400	19,800 16,300	16,000 12,500	14,800 11,400	13,600 10,300	11,200 7,900	7,000						32 34
36	63.5	60.8	19,600	16,300	13,400	9,700	8,700	7,700	7,900							36
38	61.4	59.6	16,700	13,600	10,800	7,200	0,700	7,700								38
40	59.3	58.2	14,500	11,400	8,500	.,										40
45	53.8	54.4	9,400	6,600												45
							75	Ft. E	Boom							
19	81.0	78.0	82,200	77,800	73,600	68,500	67,200	65,900	62,400	57,100	52,000	46,300	41,800	35,500	29,700	19
20	80.2	77.8	73,600	69,400	65,400	60,600	59,300	57,900	54,600	49,300	44,700	39,000	34,800	28,600	23,100	20
22	78.7	77.3	60,600	56,600	52,900	48,200	47,000	45,800	42,700	37,900	33,500	28,200	24,200	18,500	13,200	22
24 26	77.1 75.5	76.7 76.1	50,400 42,500	46,700 39,000	43,200 35,500	38,800 31,500	37,700 30,300	36,600 29,100	33,500 26,400	28,800 22,000	24,600 18,000	19,800 13,200	16,000 9,700	10,500		24 26
28	73.9	75.5	36,100	32,600	29,300	25,300	24,200	23,100	20,500	16,300	12,500	7,900	3,700		<b>-</b>	28
30	72.3	74.7	30,800	27,500	24,400	20,500	19,500	18,500	15,800	11,900	8,100	,,,,,,				30
32	70.6	73.9	26,600	23,300	20,200	16,500	15,500	14,500	12,100	8,100						32
34	69.0	73.1	22,900	19,600	16,700	13,200	12,200	11,200	8,800							34
36	67.3	72.1	19,600	16,500	13,600	10,100	9,100	8,100		ļ					ļ	36
38 40	65.6	71.1	16,900	13,800	11,000	7,700										38
40	63.9 59.4	70.0 66.9	14,500 9,700	11,400 6,800	8,800											40 45
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### **Liftcrane Boom Capacities** With Luffing Jib Attached

Luffing Jib Attached at 23 Degree Boom to Luffing Jib Offset Angle 63,500 LB. Crane Counterweight

14,700 LB. Carbody Counterweight (S/N 10001001 thru 10001037)
16,100 LB. Carbody Counterweight (S/N 10001038 and greater)
Extended Position Crawlers

360 Degree Rating





Radius   Angle   Elev.   (ft)   (deg)   (ft)   (f	T.,										
20	Load Radius (ft)										
22											
24											
26											
28	00 24 26										
30	28										
34	30										
36	32										
38	34 36										
40	38										
95 Ft. Boom           22         81.1         97.8         60.600         56.600         53.100         52.000         50.900         46.700         43.600         39.000         34.800         29.700         26.000         20.500         15.4         70.9         97.4         50.400         46.900         43.400         41.400         37.200         34.600         30.200         26.200         21.300         17.800         12.700         8.1           26         78.6         96.9         42.500         39.000         35.900         33.900         29.900         27.300         23.100         19.400         14.900         11.600         6.600           28         77.4         96.4         36.100         32.800         22.900         19.400         16.900         13.200         9.700         6.600           30         76.1         95.8         30.800         27.700         24.600         23.800         22.900         19.400         16.900         13.200         9.700         6.600           32         74.9         95.2         26.400         23.100         20.200         19.400         18.500         13.000         9.200           34         73.6         94.5	40										
22	45										
24											
26         78.6         96.9         42,500         39,000         35,900         34,900         33,900         29,700         27,700         24,000         21,600         17,600         14,100         9,700         6,600           30         76.1         95.8         30,800         27,700         24,600         23,800         22,900         19,400         16,900         13,200         9,700         6,600           32         74.9         95.2         26,400         23,100         20,200         19,400         18,500         15,200         13,000         9,200           34         73.6         94.5         22,700         19,600         16,500         13,800         13,100         12,300         9,000         6,800           38         71.0         93.1         16,700         13,600         11,200         10,300         9,400         6,300           40         69.7         92.3         14,400         11,400         8,800         8,000         7,200         46,700         43,800         39,400         35,200           24         80.8         107.6         50,400         46,700         45,700         44,700         41,400         37,400         34,800         30,600 </td <td></td>											
28	00 24 26										
30	28										
34       73.6       94.5       22,700       19,600       16,700       15,900       15,200       11,900       9,700         36       72.3       93.8       19,600       16,500       13,800       13,100       12,300       9,000       6,800         38       71.0       93.1       16,700       13,600       11,200       10,300       9,400       6,300         40       69.7       92.3       14,400       11,400       8,800       8,000       7,200     **Total Color Page 2.8  **Total Col	30										
36	32										
38	34 36										
40   69.7   92.3   14,400   11,400   8,800   8,000   7,200	38										
105 Ft. Boom         22       81.9       107.9       60,400       56,600       55,500       54,400       50,900       46,700       43,800       39,400       35,200         24       80.8       107.6       50,400       46,700       44,700       41,400       37,400       34,800       30,600       26,600         26       79.7       107.2       42,500       39,000       38,000       37,000       33,900       30,200       27,700       23,500       19,800         28       78.6       106.7       35,900       32,600       31,700       30,800       28,000       24,200       21,800       18,000       14,500         30       77.5       106.2       30,800       27,500       26,600       25,700       23,100       19,600       17,100       13,400       10,100         32       76.4       105.6       26,400       23,300       22,400       21,600       18,900       15,600       13,400       9,700       6,600         34       75.2       105.0       22,700       19,800       18,900       15,400       12,300       9,200       7,200         38       72.9       103.7       16,500       13,600	40										
22         81.9         107.9         60,400         56,600         55,500         54,400         50,900         46,700         43,800         39,400         35,200           24         80.8         107.6         50,400         46,700         44,700         41,400         37,400         34,800         30,600         26,600           26         79.7         107.2         42,500         39,000         38,000         37,000         33,900         27,700         23,500         19,800           28         78.6         106.7         35,900         32,600         31,700         30,800         28,000         24,200         21,800         18,000         14,500           30         77.5         106.2         30,800         27,500         26,600         25,700         23,100         19,600         17,100         13,400         10,100           32         76.4         105.6         26,400         23,300         22,400         21,600         18,900         15,600         13,400         9,700         6,600           34         75.2         105.0         22,700         19,800         18,900         15,400         12,300         10,100         6,600           38         72	45										
24     80.8     107.6     50,400     46,700     45,700     44,700     41,400     37,400     34,800     30,600     26,600       26     79.7     107.2     42,500     39,000     38,000     37,000     33,900     30,200     27,700     23,500     19,800       28     78.6     106.7     35,900     32,600     31,700     30,800     28,000     24,200     21,800     18,000     14,500       30     77.5     106.2     30,800     27,500     26,600     25,700     23,100     19,600     17,100     13,400     10,100       32     76.4     105.6     26,400     23,300     22,400     21,600     18,900     15,600     13,400     9,700     6,600       34     75.2     105.0     22,700     19,800     18,900     15,400     12,300     10,100     6,600       36     74.1     104.4     19,400     16,500     15,700     14,900     12,300     9,200     7,200       38     72.9     103.7     16,500     13,600     12,100     9,700     6,600       40     71.8     103.0     14,300     11,400     10,800     10,100     7,700											
26       79.7       107.2       42,500       39,000       38,000       37,000       33,900       30,200       27,700       23,500       19,800         28       78.6       106.7       35,900       32,600       31,700       30,800       28,000       24,200       21,800       18,000       14,500         30       77.5       106.2       30,800       27,500       26,600       25,700       23,100       19,600       17,100       13,400       10,100         32       76.4       105.6       26,400       23,300       22,400       21,600       18,900       15,600       13,400       9,700       6,600         34       75.2       105.0       22,700       19,800       18,900       15,400       12,300       10,100       6,600         36       74.1       104.4       19,400       16,500       13,600       12,100       9,700       6,600         38       72.9       103.7       16,500       13,600       12,100       9,700       6,600         40       71.8       103.0       14,300       11,400       10,800       10,100       7,700	22										
28     78.6     106.7     35,900     32,600     31,700     30,800     28,000     24,200     21,800     18,000     14,500       30     77.5     106.2     30,800     27,500     26,600     25,700     23,100     19,600     17,100     13,400     10,100       32     76.4     105.6     26,400     23,300     22,400     21,600     18,900     15,600     13,400     9,700     6,600       34     75.2     105.0     22,700     19,800     18,900     18,000     15,400     12,300     10,100     6,600       36     74.1     104.4     19,400     16,500     15,700     14,900     12,300     9,200     7,200       38     72.9     103.7     16,500     13,600     12,100     9,700     6,600       40     71.8     103.0     14,300     11,400     10,800     10,100     7,700	24 26										
30	28										
32     76.4     105.6     26,400     23,300     22,400     21,600     18,900     15,600     13,400     9,700     6,600       34     75.2     105.0     22,700     19,800     18,900     18,000     15,400     12,300     10,100     6,600       36     74.1     104.4     19,400     16,500     15,700     14,900     12,300     9,200     7,200       38     72.9     103.7     16,500     13,600     12,800     12,100     9,700     6,600       40     71.8     103.0     14,300     11,400     10,800     10,100     7,700	30										
36     74.1     104.4     19,400     16,500     15,700     14,900     12,300     9,200     7,200       38     72.9     103.7     16,500     13,600     12,800     12,100     9,700     6,600       40     71.8     103.0     14,300     11,400     10,800     10,100     7,700	32										
38     72.9     103.7     16,500     13,600     12,100     9,700     6,600       40     71.8     103.0     14,300     11,400     10,800     10,100     7,700	34										
40 71.8 103.0 14,300 11,400 10,800 10,100 7,700	36 38										
45   68 8   101 0   9 200   6 600	40										
TO   00:0   101:0   7,200   0,000	45										
115 Ft. Boom											
24 81.6 117.7 50,400 49,300 48,200 44,900	24										
26   80.6   117.4   42,500   41,500   40,500   37,200	26										
28	28 30										
30	32										
34   76.5   115.5   22,400   21,700   20,900   18,000	34										
36   75.5   114.9   19,400   18,700   18,000   15,200	36										
38	38 40										
40   73.4   113.6   14,100   13,400   12,700   10,100   45   70.8   111.8   9,200   8,500   7,900	45										