

# MANITOWOC ENGINEERING CO.

Division of the Manitowoc Company, Inc. Manitowoc, Wisconsin 54220



## LIFT CRANE BOOM CAPACITIES

## M-1200

**BOOM NO. 72/75A OR NO. 72A/75A**

**MAST NO. 75 OR NO. 75A**

**18.3m RINGER ATTACHMENT ON SCREW JACK PEDESTALS**

**23 590 kg CRANE COUNTERWEIGHT**

**815 380 kg AUXILIARY COUNTERWEIGHT**

**360 DEGREE RATING**

CAPACITIES FOR VARIOUS BOOM LENGTHS AND OPERATING RADII ARE FOR FREELY SUSPENDED LOADS AND DO NOT EXCEED 75% OF A STATIC TIPPING LOAD. CAPACITIES BASED ON STRUCTURAL COMPETENCE ARE DENOTED BY AN ASTERISK (\*).

UPPER BOOM POINT CAPACITY FOR LIFT CRANE SERVICE WITH 6 PART LINE IS 81 650 kg. IN ALL CASES, UPPER BOOM POINT CAPACITIES CANNOT EXCEED THOSE LISTED FOR MAIN BOOM CAPACITY. UPPER BOOM POINT MINIMUM OPERATING RADIUS WILL BE RESTRICTED WITH BOOM AT MAXIMUM ANGLE.

WEIGHT OF ALL LOAD BLOCKS, HOOKS, SLINGS, HOIST LINES, ETC., BENEATH BOOM SHEAVES, IS CONSIDERED PART OF THE MAIN BOOM 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.

MACHINE TO OPERATE IN A LEVEL POSITION ON A FIRM UNIFORMLY SUPPORTING SURFACE WITH ROLLER PATH LEVEL WITHIN A TOLERANCE OF 32 mm IN 18.3m AND PROPERLY SUPPORTED. REFER TO BOOM RIGGING NO. 174950, NO. 175729 OR NO. 175956 AND WIRE ROPE SPECIFICATION CHART NO. 7683-B. 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.

MACHINE MAY BE OPERATED IN WINDS UP TO 13 m/s PROVIDED CRANE OPERATOR JUDGMENT IS USED TO ALLOW FOR WIND EFFECT ON THE LIFTED LOAD AND OTHER CONSIDERATIONS NOTED ON CAPACITY CHART ARE FOLLOWED. WIND WILL HAVE A CONSIDERABLE EFFECT ON A LOAD WITH A LARGE 'SAIL AREA' AND MUST BE COMPENSATED FOR ACCORDINGLY BY REDUCING LOAD RATINGS, REDUCING OPERATING SPEEDS OR BY A COMBINATION OF BOTH. RECOMMEND STOPPING OPERATION AND LOWERING BOOM TO APPROXIMATELY 75 DEGREE BOOM ANGLE WHEN WIND EXCEEDS 13 m/s. LOWER BOOM TO GROUND WHEN WIND IS ABOVE 22 m/s.

OPERATING RADIUS IS HORIZONTAL DISTANCE FROM AXIS OF ROTATION TO CENTER OF VERTICAL HOIST LINE OR LOAD BLOCK. BOOM ANGLE 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 IS VERTICAL DISTANCE FROM GROUND LEVEL TO CENTERLINE OF BOOM POINT SHAFT.

MACHINE EQUIPPED WITH 18.3m RINGER ATTACHMENT, 9 373 mm CRAWLERS, 1 219 mm TREADS, 8 534 mm RETRACTABLE GANTRY, 45.7m NO. 75 MAST WITH 32 PART BOOM HOIST REEVING OR NO. 75A MAST WITH 36 PART BOOM HOIST REEVING, STRAP BOOM PENDANTS, 23 590 kg CRANE COUNTERWEIGHT AND 815 380 kg AUXILIARY COUNTERWEIGHT.

MAXIMUM BOOM LENGTH  
LIFTED UNASSISTED = 107.6m

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LOAD BLOCKS ON GROUND AT START.

JIB AND JIB BACKSTAYS MUST BE REMOVED FOR USE OF THIS CHART.

**WARNING:** CHECK AMOUNT OF AUXILIARY COUNTERWEIGHT ON MACHINE BEFORE USE OF THIS CHART.

BOOM LENGTH METERS	BOOM LGTH. FEET	OPER. RADIUS METERS	BOOM ANG. DEG.	BOOM POINT ELEV. METERS	BOOM CAPACITY KI LOGRAMS	BOOM LENGTH METERS	BOOM LGTH. FEET	OPER. RADIUS METERS	BOOM ANG. DEG.	BOOM POINT ELEV. METERS	BOOM CAPACITY KI LOGRAMS
<b>9 2 · 4</b>	<b>3 0 3</b>	22.9	81.6	94.7	800 000*	<b>9 2 · 4</b>	<b>3 0 3</b>	56.0	59.6	82.7	198 400
		24.0	80.9	94.6	740 200			58.0	58.1	81.5	187 700
		26.0	79.6	94.2	648 000			60.0	56.7	80.2	177 900
		28.0	78.4	93.8	575 200			62.0	55.1	78.8	168 800
		30.0	77.1	93.3	515 900			64.0	53.6	77.4	160 400
		32.0	75.8	92.8	466 700			66.0	52.0	75.8	152 500
		34.0	74.5	92.3	425 100			68.0	50.4	74.2	145 200
		36.0	73.2	91.7	389 600			70.0	48.8	72.4	138 300
		38.0	71.9	91.0	358 900			72.0	47.1	70.6	131 900
		40.0	70.6	90.3	332 000			74.0	45.4	68.7	125 900
		42.0	69.3	89.6	308 400			76.0	43.6	66.6	120 200
		44.0	67.9	88.8	287 400			78.0	41.7	64.4	114 900
		46.0	66.6	87.9	268 600			80.0	39.8	62.0	109 800
		48.0	65.2	87.0	251 700			82.0	37.8	59.5	105 000
		50.0	63.8	86.0	236 500			84.0	35.7	56.8	100 500
		52.0	62.4	85.0	222 600			86.0	33.5	53.8	96 200
		54.0	61.0	83.9	209 900			88.0	31.2	50.6	92 100

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BOOM LENGTH METERS	BOOM LGTH. FEET	OPER. RADIUS METERS	BOOM ANG. DEG.	BOOM POINT ELEV. METERS	BOOM CAPACITY KI LOGRAMS
<b>1 0 0 · 0</b>	<b>3 2 8</b>	24.4	81.4	102.2	600 400*
		26.0	80.4	101.9	570 500*
		28.0	79.3	101.6	536 900*
		30.0	78.1	101.1	506 200*
		32.0	76.9	100.7	465 600
		34.0	75.7	100.2	424 000
		36.0	74.5	99.6	388 400
		38.0	73.3	99.0	357 700
		40.0	72.1	98.4	330 900
		42.0	70.9	97.7	307 200
		44.0	69.7	97.0	286 200
		46.0	68.5	96.2	267 400
		48.0	67.2	95.4	250 600
		50.0	66.0	94.5	235 300
		52.0	64.7	93.5	221 400
		54.0	63.4	92.5	208 800
		56.0	62.1	91.5	197 200
		58.0	60.8	90.4	186 600
		60.0	59.5	89.2	176 700
		62.0	58.2	88.0	167 700
		64.0	56.8	86.7	159 200
		66.0	55.4	85.3	151 400
		68.0	54.0	83.9	144 100
		70.0	52.5	82.4	137 200
		72.0	51.1	80.8	130 800
		74.0	49.6	79.1	124 800
		76.0	48.0	77.3	119 100
		78.0	46.5	75.4	113 700
80.0	44.9	73.4	108 700		
82.0	43.2	71.3	103 900		
84.0	41.5	69.1	99 300		
86.0	39.7	66.7	95 100		
88.0	37.8	64.2	90 500*		
90.0	35.9	61.5	83 000*		
92.0	33.9	58.6	75 000*		
94.0	31.7	55.4	67 300*		
96.0	29.5	52.0	59 600*		

BOOM LENGTH METERS	BOOM LGTH. FEET	OPER. RADIUS METERS	BOOM ANG. DEG.	BOOM POINT ELEV. METERS	BOOM CAPACITY KI LOGRAMS
<b>1 0 7 · 6</b>	<b>3 5 3</b>	24.4	82.0	109.9	576 500*
		26.0	81.1	109.7	548 000*
		28.0	80.0	109.3	515 700*
		30.0	78.9	108.9	486 200*
		32.0	77.8	108.5	458 900*
		34.0	76.8	108.0	422 900
		36.0	75.7	107.5	387 400
		38.0	74.6	107.0	356 700
		40.0	73.4	106.4	329 800
		42.0	72.3	105.8	306 200
		44.0	71.2	105.1	285 200
		46.0	70.1	104.4	266 400
		48.0	68.9	103.6	249 500
		50.0	67.8	102.8	234 300
		52.0	66.6	101.9	220 400
		54.0	65.5	101.0	207 800
		56.0	64.3	100.1	196 200
		58.0	63.1	99.1	185 600
		60.0	61.9	98.0	175 700
		62.0	60.7	96.9	166 600
		64.0	59.4	95.7	158 200
		66.0	58.2	94.5	150 300
		68.0	56.9	93.2	143 000
		70.0	55.6	91.8	136 200
		72.0	54.3	90.4	129 700
		74.0	53.0	88.9	123 700
		76.0	51.6	87.3	118 100
		78.0	50.2	85.7	112 700
80.0	48.8	83.9	107 700		
82.0	47.4	82.1	102 900		
84.0	45.9	80.2	95 900*		
86.0	44.4	78.2	87 600*		
88.0	42.8	76.1	79 600*		
90.0	41.2	73.8	71 900*		
92.0	39.6	71.4	64 300*		
94.0	37.9	68.9	56 800*		
96.0	36.1	66.2	49 500*		