

# MANITOWOC ENGINEERING CO.

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



## LIFTCRANE BOOM CAPACITIES

# M-1200

**BOOM NO. 72 OR NO. 72A WITH 1,433 TON BOOM POINT**

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

**60' RINGER ATTACHMENT ON SCREW JACK PEDESTALS**

**52,000 LB. CRANE COUNTERWEIGHT**

**2,061,600 LB. AUXILIARY COUNTERWEIGHT**

**360 DEGREE RATING**

CAPACITIES FOR VARIOUS BOOM LENGTHS AND OPERATING RADIUS 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 LIFTCRANE SERVICE WITH 6 PART LINE IS 180,000 LBS. 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 MAIN BOOM AND UPPER BOOM POINT SHEAVES, IS CONSIDERED PART OF MAIN BOOM LOAD. BOOM IS NOT TO BE LOWERED BEYOND RADIUS 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 1-1/4" IN 60' AND PROPERLY SUPPORTED. REFER TO BOOM RIGGING NO. 173399, NO. 175673 OR NO. 175955 AND WIRE ROPE SPECIFICATION CHART NO. 7683-A. 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 35 MPH PROVIDED CRANE OPERATOR JUDGMENT IS USED TO ALLOW FOR WIND EFFECT ON 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 35 MPH. LOWER BOOM TO GROUND WHEN WIND IS ABOVE 50 MPH.

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 60' RINGER ATTACHMENT, 30' 9" CRAWLERS, 48" TREADS, 28' RETRACTABLE GANTRY, 150' NO. 75 MAST WITH 32 PART BOOM HOIST REEVING OR NO. 75A MAST WITH 36 PART BOOM HOIST REEVING, STRAP BOOM PENDANTS, 52,000 LB. CRANE COUNTERWEIGHT AND 2,061,600 LB. AUXILIARY COUNTERWEIGHT.

MAXIMUM BOOM LENGTH  
LIFTED UNASSISTED = 253'

LOAD BLOCKS ON GROUND AT START.

UPPER BOOM POINT CANNOT BE USED ON BOOM NO. 72.

CONSULT JIB CHART FOR JIB CAPACITIES. 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 LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	BOOM CAPACITY POUNDS
<b>1 5 3</b>	56	82.0	162.0	2,866,500*
	58	81.2	161.7	2,866,500*
	60	80.5	161.2	2,866,500*
	65	78.5	160.1	2,595,700
	70	76.6	158.8	2,277,200
	75	74.7	157.2	2,025,500
	80	72.7	155.5	1,821,700
	85	70.7	153.6	1,653,200
	90	68.6	151.5	1,511,500
	95	66.6	149.2	1,390,900
	100	64.5	146.7	1,286,800
	105	62.3	143.9	1,196,100
	110	60.2	140.8	1,116,300
	115	57.9	137.5	1,045,700
	120	55.6	133.9	982,600
	125	53.2	130.0	926,000
	130	50.8	125.8	874,900

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	BOOM CAPACITY POUNDS
<b>1 5 3</b>	135	48.2	121.1	824,300*
	140	45.5	116.0	765,900*
	145	42.7	110.4	747,600*
	150	39.7	104.1	700,600*
	155	36.5	97.1	649,100*
<b>1 7 8</b>	160	33.0	89.2	599,300*
	165	29.1	80.0	550,200*
	170	25.0	70.0	500,000*
<b>1 7 8</b>	65	80.2	185.7	2,587,800
	70	78.5	184.6	2,269,200
	75	76.9	183.3	2,017,400
	80	75.2	181.8	1,813,400
	85	73.5	180.2	1,644,900
	90	71.8	178.5	1,503,200
	95	70.1	176.5	1,382,500
	100	68.3	174.4	1,278,300
	105	66.6	172.1	1,187,600
	110	64.8	169.6	1,107,900

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	BOOM CAPACITY POUNDS
<b>1 7 8</b>	110	64.8	169.6	1,107,900
	115	62.9	166.9	1,037,200
	120	61.1	164.0	974,200
	125	59.2	160.9	917,600
	130	57.2	157.5	866,500
	135	55.3	153.9	820,100
	140	53.2	150.0	777,800
	145	51.1	145.8	739,200
	150	48.9	141.3	703,600
	155	46.7	136.4	670,900
	160	44.4	131.1	640,600
	165	41.9	125.4	612,400
	170	39.3	119.1	586,300
	175	36.6	112.2	561,900
	180	33.6	104.4	530,700*
	185	30.4	95.7	492,200*

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BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	BOOM CAPACITY POUNDS
<b>203</b>	65	81.4	211.2	2,582,000
	70	80.0	210.2	2,263,200
	75	78.5	209.1	2,011,400
	80	77.1	207.8	1,807,400
	85	75.6	206.4	1,638,700
	90	74.1	204.9	1,497,000
	95	72.6	203.2	1,376,200
	100	71.1	201.4	1,272,100
	105	69.6	199.4	1,181,400
	110	68.1	197.3	1,101,600
	115	66.5	195.0	1,030,900
	120	65.0	192.6	967,900
	125	63.4	189.9	911,300
	130	61.8	187.1	860,200
	135	60.1	184.1	813,800
	140	58.4	180.9	771,600
	145	56.7	177.5	732,900
	150	55.0	173.9	697,400
	155	53.2	170.0	664,600
	160	51.4	165.9	634,300
	165	49.5	161.5	606,200
	170	47.6	156.8	580,100
	175	45.5	151.7	555,700
	180	43.5	146.3	533,000
	185	41.3	140.4	511,600
	190	39.0	134.1	491,500
	195	36.6	127.2	472,700
	200	34.1	119.6	454,900
	205	31.3	111.2	436,600*
	210	28.3	101.8	406,300*

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	BOOM CAPACITY POUNDS
<b>228</b>	70	81.1	235.7	2,254,800
	75	79.8	234.7	2,002,800
	80	78.5	233.6	1,798,600
	85	77.2	232.3	1,629,900
	90	75.9	231.0	1,488,100
	95	74.6	229.5	1,367,300
	100	73.3	227.9	1,263,100
	105	72.0	226.2	1,172,300
	110	70.6	224.3	1,092,500
	115	69.3	222.3	1,021,800
	120	67.9	220.2	958,700
	125	66.5	217.9	902,100
	130	65.1	215.5	851,000
	135	63.7	212.9	804,600
	140	62.3	210.2	762,400
	145	60.8	207.3	723,700
	150	59.4	204.2	688,200
	155	57.9	201.0	655,400
	160	56.3	197.5	625,100
	165	54.8	193.9	597,100
	170	53.2	190.0	570,900
	175	51.6	185.9	546,600
	180	49.9	181.6	523,800
	185	48.2	177.0	502,400
	190	46.4	172.1	482,400
	195	44.6	166.9	463,600
	200	42.8	161.4	445,800
	205	40.8	155.4	429,000
	210	38.8	149.0	413,200
	215	36.6	142.2	397,800
	220	34.4	134.7	383,000
	225	32.0	126.6	368,800
	230	29.4	117.5	355,300

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	BOOM CAPACITY POUNDS
<b>253</b>	70	82.0	261.0	2,246,300
	75	80.8	260.2	1,994,100
	80	79.7	259.2	1,789,900
	85	78.5	258.1	1,621,100
	90	77.3	256.9	1,479,200
	95	76.2	255.5	1,358,300
	100	75.0	254.1	1,254,100
	105	73.8	252.6	1,163,300
	110	72.6	250.9	1,083,400
	115	71.4	249.1	1,012,700
	120	70.2	247.3	949,600
	125	69.0	245.3	892,900
	130	67.8	243.1	841,800
	135	66.5	240.8	795,400
	140	65.3	238.5	753,100
	145	64.0	235.9	714,400
	150	62.7	233.2	678,900
	155	61.4	230.4	646,100
	160	60.1	227.4	615,900
	165	58.8	224.3	587,800
	170	57.4	221.0	561,600
	175	56.0	217.5	537,300
	180	54.6	213.9	514,500
	185	53.2	210.0	493,200
	190	51.7	206.0	473,100
	195	50.2	201.7	454,300
	200	48.7	197.2	436,500
	205	47.2	192.4	419,800
	210	45.6	187.4	403,900
	215	43.9	182.1	388,900
	220	42.2	176.4	374,700
	225	40.4	170.4	360,600
	230	38.6	164.0	347,100
	235	36.7	157.2	334,300
	240	34.6	149.8	322,100
	245	32.5	141.8	310,400
	250	30.2	133.1	299,200
	255	27.8	123.5	286,400*