

MANITOWOC ENGINEERING CO.

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



LIFTCRANE CAPACITIES

BOOM NO. 42 WITH OPEN THROAT TOP
53,300 LB. COUNTERWEIGHT
22'4" CRAWLERS EXTENDED
360 DEGREE RATING

MEETS
ANSI B30.5
REQUIREMENTS

M-80W

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 LIFTCRANE SERVICE WITH SINGLE PART WHIP LINE IS 20,000 LBS. IN ALL CASES, UPPER BOOM POINT CAPACITIES CANNOT EXCEED THOSE LISTED FOR THE MAIN BOOM CAPACITY.

WEIGHT OF JIB, ALL LOAD BLOCKS, HOOKS, WEIGHT BALL, SLINGS, HOIST LINES, ETC., BENEATH BOOM AND JIB POINT 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 CRAWLERS FULLY EXTENDED AND GANTRY UP. REFER TO BOOM RIGGING NO. 164238 AND WIRE ROPE SPECIFICATION CHART NO. 7487-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.

MACHINE MAY BE OPERATED IN WINDS UP TO 15 MPH PROVIDED CRANE OPERATOR JUDGMENT IS USED TO ALLOW FOR WIND EFFECT ON THE LIFTED LOAD AND OTHER CONSIDERATIONS NOTED ON THE 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 WHEN WIND IS ABOVE 15 MPH AND TIEING OFF OR LOWERING BOOM WHEN WIND IS ABOVE 35 MPH.

MACHINE TO TRAVEL ON A FIRM, LEVEL AND UNIFORMLY SUPPORTING SURFACE AND BOOM WITHIN THE BOOM ANGLE RANGE SHOWN IN CAPACITY CHART.

OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM THE AXIS OF ROTATION TO THE CENTER OF VERTICAL HOIST LINE OR LOAD BLOCK. BOOM ANGLE IS THE 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 22'4" EXTENDIBLE CRAWLERS, 30" OR 36" TREADS, 15'6" RETRACTABLE GANTRY, 10 PART BOOM HOIST REEVING, TWO 1-1/4" BOOM PENDANTS, 1ST COUNTERWEIGHT = 28,500 LBS., AND 2ND COUNTERWEIGHT = 24,800 LBS.

MAXIMUM BOOM AND JIB LENGTHS LIFTED UNASSISTED				DEDUCT FROM CAPACITIES WHEN JIB IS ATTACHED	
OVER END OF CRAWLERS		OVER SIDE OF EXTENDED CRAWLERS		JIB LGTH.	JIB NO. 128
BM. LGTH.	JIB NO. 128	BM. LGTH.	JIB NO. 128		
200'	---	200'	---	30'	1,700 LBS.
190'	40'	190'	40'	40'	2,100 LBS.
180'	60'	180'	60'	50'	2,600 LBS.
LOAD BLOCK, HOOK AND WEIGHT BALL ON GROUND AT START.				60'	3,100 LBS.

CONSULT JIB CHART FOR JIB CAPACITIES.

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY POUNDS	BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY POUNDS	BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY POUNDS
40	12	77.8	44.5	176,400*	50	12	80.2	54.7	153,800*	60	12	81.9	64.8	145,400*
	13	76.3	44.2	162,600*		13	79.1	54.5	149,400*		13	80.9	64.6	140,900*
	14	74.8	44.0	151,000*		14	77.9	54.3	145,200*		14	79.9	64.5	136,800*
	15	73.3	43.7	140,900*		15	76.7	54.0	140,900*		15	79.0	64.3	132,900*
	16	71.8	43.3	132,100*		16	75.5	53.8	132,100*		16	78.0	64.1	129,300*
	17	70.3	43.0	124,400*		17	74.4	53.5	124,400*		17	77.0	63.8	124,400*
	18	68.8	42.6	115,000		18	73.2	53.2	114,800		18	76.0	63.6	114,700
	19	67.2	42.2	105,100		19	72.0	52.9	105,000		19	75.0	63.3	104,800
	20	65.6	41.7	96,800		20	70.7	52.5	96,700		20	74.1	63.0	96,500
	22	62.4	40.7	83,500		22	68.3	51.8	83,300		22	72.1	62.4	83,200
	24	59.1	39.6	73,300		24	65.8	50.9	73,200		24	70.0	61.7	73,000
	26	55.7	38.3	65,300		26	63.2	49.9	65,200		26	68.0	60.9	65,000
	28	52.1	36.8	58,900		28	60.6	48.9	58,700		28	65.9	60.1	58,500
	30	48.4	35.1	53,500		30	58.0	47.6	53,300		30	63.8	59.1	53,100
	32	44.4	33.2	49,000		32	55.2	46.3	48,800		32	61.6	58.1	48,600
	34	40.1	30.9	45,200		34	52.3	44.8	45,000		34	59.4	56.9	44,800
36	35.4	28.3	41,900	36	49.4	43.2	41,700	36	57.2	55.7	41,500			
38	30.0	25.1	39,000	38	46.3	41.3	38,800	38	54.9	54.3	38,600			
40	23.5	21.1	36,500	40	43.0	39.3	36,300	40	52.5	52.8	36,100			
				45	33.6	32.8	31,200	45	46.1	48.5	30,900			
				50	20.9	23.0	27,200	50	39.0	43.0	27,000			
								55	30.6	35.7	23,900			
								60	19.0	24.7	21,300			

WARNING: THIS CAPACITY CHART IS FOR REFERENCE USE ONLY AND MUST NOT BE USED FOR A SPECIFIC SERIAL NUMBER CRANE. SERIAL NUMBERED LAMINATED CAPACITY CHARTS FOR A SPECIFIC CRANE CAN BE PURCHASED FROM AN AUTHORIZED MANITOWOC DISTRIBUTOR.

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LIFT CRANE CAPACITIES

MEETS
ANSI B30.5
REQUIREMENTS

M-80W

BOOM NO. 42 WITH OPEN THROAT TOP
53,300 LB. COUNTERWEIGHT
22'4" CRAWLERS EXTENDED
360 DEGREE RATING

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY POUNDS	BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY POUNDS	BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY POUNDS
70	14	81.4	74.6	128,600*	90	17	81.4	94.4	104,500*	110	70	52.8	92.8	16,500
	15	80.6	74.5	124,900*		18	80.7	94.2	101,800*		75	49.4	88.8	15,000
	16	79.7	74.3	121,300*		19	80.1	94.1	99,100*		80	45.9	84.2	13,700
	17	78.9	74.1	118,100*		20	79.5	93.9	96,100		85	42.1	79.0	12,600
	18	78.1	73.9	114,600		22	78.2	93.5	82,700		90	38.1	73.0	11,600
	19	77.2	73.6	104,700		24	76.8	93.0	72,500		95	33.6	66.0	10,700
	20	76.4	73.4	96,400		26	75.5	92.5	64,400		100	28.5	57.6	9,900
	22	74.7	72.9	83,000		28	74.2	92.0	57,900		105	22.4	47.1	9,200
	24	73.0	72.3	72,800		30	72.9	91.4	52,600					
	26	71.3	71.6	64,800		32	71.5	90.7	48,000					
	28	69.5	70.9	58,300		34	70.2	90.0	44,200					
	30	67.8	70.1	53,000		36	68.8	89.3	40,900					
	32	66.0	69.2	48,500		38	67.5	88.4	38,000					
	34	64.2	68.3	44,600		40	66.1	87.6	35,500					
	36	62.3	67.3	41,300		45	62.5	85.1	30,300					
	38	60.5	66.2	38,400		50	58.9	82.3	26,400					
	40	58.6	65.0	35,900		55	55.1	79.0	23,200					
	45	53.6	61.6	30,800		60	51.1	75.2	20,700					
50	48.3	57.5	26,800	65	46.8	70.9	18,600							
55	42.5	52.5	23,700	70	42.3	65.7	16,800							
60	36.0	46.3	21,200	75	37.3	59.7	15,300							
65	28.3	38.3	19,100	80	31.6	52.3	14,000							
70	17.6	26.3	17,300	85	24.8	42.9	12,900							
				90	15.5	29.1	11,900							
80	15	81.8	84.6	117,500*	100	18	81.7	104.4	97,600*	120	70	56.3	105.1	16,300
	16	81.0	84.4	114,200*		19	81.1	104.2	95,100*		75	53.4	101.6	14,700
	17	80.3	84.3	111,100*		20	80.5	104.0	92,700*		80	50.4	97.6	13,400
	18	79.6	84.1	108,100*		22	79.4	103.7	82,600		85	47.2	93.2	12,300
	19	78.8	83.9	104,600		24	78.2	103.3	72,400		90	43.8	88.3	11,300
	20	78.1	83.7	96,200		26	77.0	102.8	64,300		95	40.2	82.7	10,400
	22	76.6	83.2	82,800		28	75.8	102.3	57,800		100	36.4	76.3	9,600
	24	75.2	82.7	72,600		30	74.6	101.8	52,500		105	32.1	68.9	8,900
	26	73.7	82.1	64,600		32	73.5	101.2	47,900		110	27.3	60.1	8,300
	28	72.2	81.5	58,100		34	72.3	100.6	44,100		115	21.4	49.0	7,700
	30	70.7	80.8	52,700		36	71.0	99.9	40,800					
	32	69.1	80.1	48,200		38	69.8	99.2	37,900					
	34	67.6	79.3	44,400		40	68.6	98.4	35,400					
	36	66.0	78.4	41,100		45	65.5	96.3	30,200					
	38	64.4	77.5	38,200		50	62.3	93.8	26,300					
	40	62.8	76.5	35,700		55	59.0	91.0	23,100					
	45	58.7	73.6	30,500		60	55.6	87.7	20,600					
	50	54.4	70.3	26,600		65	52.0	84.1	18,500					
55	49.9	66.4	23,400	70	48.3	79.8	16,700							
60	45.0	61.8	20,900	75	44.3	75.0	15,200							
65	39.6	56.2	18,800	80	40.0	69.5	13,900							
70	33.6	49.4	17,000	85	35.3	62.9	12,800							
75	26.4	40.7	15,500	90	29.9	55.1	11,800							
80	16.4	27.7	14,200	95	23.5	45.0	10,900							
110	19	81.9	114.3	88,500*	130	70	59.2	117.0	16,000					
	20	81.4	114.2	87,200*		75	56.6	113.8	14,500					
	22	80.3	113.8	82,500		80	53.9	110.3	13,200					
	24	79.3	113.5	72,200		85	51.1	106.5	12,100					
	26	78.2	113.1	64,200		90	48.3	102.2	11,100					
	28	77.1	112.6	57,700		95	45.2	97.5	10,200					
	30	76.1	112.1	52,300		100	42.0	92.2	9,400					
	32	75.0	111.6	47,800		105	38.6	86.3	8,700					
	34	73.9	111.0	43,900		110	34.9	79.5	8,100					
	36	72.8	110.4	40,600		115	30.8	71.7	7,500					
	38	71.7	109.8	37,700		120	26.2	62.5	6,900					
	40	70.6	109.1	35,200		125	20.6	50.8	6,500					
	45	67.8	107.2	30,000										
	50	65.0	105.0	26,100										
	55	62.1	102.5	22,900										
	60	59.1	99.6	20,400										
	65	56.0	96.4	18,300										

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BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY POUNDS	BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY POUNDS	BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY POUNDS
140	24	81.6	143.9	63,300*	160	60	69.3	155.0	19,300	180	100	57.6	157.2	8,400
	26	80.8	143.6	61,700*		65	67.4	153.0	17,200		105	55.7	153.9	7,600
	28	79.9	143.2	57,100		70	65.4	150.8	15,400		110	53.7	150.3	7,000
	30	79.1	142.9	51,700		75	63.5	148.4	13,900		115	51.7	146.5	6,400
	32	78.3	142.5	47,200		80	61.4	145.8	12,600		120	49.6	142.4	5,900
	34	77.4	142.0	43,300		85	59.4	142.9	11,400		125	47.5	138.0	5,400
	36	76.6	141.6	40,000		90	57.3	139.8	10,400		130	45.3	133.2	4,900
	38	75.7	141.1	37,100		95	55.1	136.5	9,600		135	43.0	128.0	4,500
	40	74.9	140.5	34,600		100	52.9	132.8	8,800		140	40.6	122.4	4,200
	45	72.8	139.1	29,400		105	50.6	128.9	8,100		145	38.1	116.3	3,800
	50	70.6	137.4	25,400		110	48.2	124.6	7,400		150	35.5	109.6	3,500
	55	68.4	135.5	22,300		115	45.8	119.9	6,800		155	32.6	102.1	3,200
	60	66.2	133.4	19,800		120	43.2	114.8	6,300					
	65	63.9	131.1	17,600		125	40.5	109.2	5,800					
	70	61.6	128.5	15,900		130	37.7	103.0	5,400					
150	75	59.3	125.6	14,400	170	28	81.7	173.6	39,800*	190	30	82.0	193.6	31,600*
	80	56.9	122.5	13,100		30	81.0	173.3	39,500*		32	81.4	193.3	31,300*
	85	54.4	119.1	11,900		32	80.4	173.0	39,200*		34	80.8	192.9	31,000*
	90	51.8	115.3	10,900		34	79.7	172.6	38,800*		36	80.2	192.6	30,700*
	95	49.2	111.1	10,000		36	79.0	172.3	38,500*		38	79.5	192.2	30,500*
	100	46.4	106.6	9,200		38	78.3	171.9	36,500		40	78.9	191.9	30,200*
	105	43.5	101.5	8,500		40	77.6	171.4	34,000		45	77.4	190.8	28,400
	110	40.4	95.9	7,900		45	75.9	170.2	28,800		50	75.8	189.6	24,400
	115	37.1	89.7	7,300		50	74.1	168.9	24,800		55	74.3	188.3	21,200
	120	33.6	82.6	6,800		55	72.4	167.4	21,600		60	72.7	186.8	18,700
	125	29.7	74.4	6,300		60	70.6	165.7	19,100		65	71.1	185.1	16,600
	130	25.2	64.7	5,800		65	68.8	163.8	17,000		70	69.5	183.3	14,800
	135	19.8	52.6	5,400		70	67.0	161.8	15,200		75	67.9	181.4	13,300
						75	65.1	159.5	13,700		80	66.3	179.2	12,000
						80	63.3	157.1	12,400		85	64.6	176.9	10,800
160	26	81.4	153.7	53,200*	180	85	61.3	154.5	11,200	200	90	62.9	174.5	9,800
	28	80.6	153.4	52,800*		90	59.4	151.6	10,200		95	61.2	171.8	8,900
	30	79.8	153.0	51,500		95	57.4	148.5	9,300		100	59.5	168.9	8,100
	32	79.1	152.7	47,000		100	55.4	145.2	8,500		105	57.7	165.9	7,400
	34	78.3	152.3	43,200		105	53.3	141.6	7,800		110	55.9	162.6	6,800
	36	77.5	151.8	39,800		110	51.2	137.7	7,200		115	54.1	159.1	6,200
	38	76.7	151.4	36,900		115	49.0	133.5	6,600		120	52.2	155.3	5,700
	40	75.9	150.9	34,400		120	46.7	128.9	6,100		125	50.2	151.3	5,200
	45	73.9	149.5	29,200		125	44.3	124.0	5,600		130	48.2	146.9	4,700
	50	71.9	148.0	25,200		130	41.9	118.7	5,100		135	46.2	142.3	4,300
	55	69.9	146.2	22,100		135	39.3	112.8	4,700		140	44.0	137.3	3,900
	60	67.9	144.3	19,500		140	36.5	106.3	4,300		145	41.8	131.9	3,600
	65	65.8	142.1	17,400		145	33.6	99.2	4,000		150	39.5	126.0	3,200
	70	63.7	139.7	15,700		150	30.4	91.1	3,700					
	75	61.5	137.1	14,100		155	26.9	81.9	3,400					
80	59.3	134.3	12,800	160	22.8	71.1	3,100							
85	57.1	131.2	11,700											
90	54.8	127.8	10,700											
95	52.4	124.1	9,800											
100	49.9	120.0	9,000											
105	47.4	115.6	8,300											
110	44.7	110.8	7,700											
115	41.9	105.4	7,100											
120	39.0	99.5	6,600											
125	35.8	93.0	6,100											
130	32.4	85.5	5,600											
135	28.6	77.0	5,200											
140	24.3	66.9	4,800											
145	19.1	54.3	4,500											
180	26	81.9	163.8	46,000*	200	30	81.5	183.4	36,100*	220	32	81.8	203.4	27,000*
	28	81.2	163.5	45,700*		32	80.9	183.1	35,800*		34	81.2	203.1	26,900*
	30	80.5	163.2	45,400*		34	80.3	182.8	35,400*		36	80.7	202.7	26,800*
	32	79.7	162.8	45,000*		36	79.6	182.4	35,100*		38	80.1	202.4	26,700*
	34	79.0	162.5	42,900		38	79.0	182.1	34,800*		40	79.5	202.0	26,400*
	36	78.3	162.1	39,600		40	78.3	181.6	33,800		45	78.0	201.0	25,700*
	38	77.6	161.6	36,700		45	76.7	180.5	28,600		50	76.6	199.9	24,200
	40	76.8	161.2	34,200		50	75.0	179.3	24,600		55	75.1	198.6	21,000
	45	75.0	159.9	29,000		55	73.4	177.8	21,500		60	73.6	197.2	18,500
	50	73.1	158.5	25,000		60	71.7	176.3	18,900		65	72.1	195.7	16,300
	55	71.2	156.8	21,900		65	70.0	174.5	16,800		70	70.6	194.0	14,600
						70	68.3	172.6	15,000		75	69.1	192.1	13,000
						75	66.6	170.5	13,500		80	67.5	190.1	11,700
						80	64.8	168.2	12,200		85	66.0	188.0	10,600
						85	63.1	165.8	11,000		90	64.4	185.6	9,600
				90	61.3	163.1	10,000	95	62.8	183.1	8,700			
				95	59.4	160.3	9,200	100	61.1	180.5	7,900			

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