

**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			
BM. LGTH.	JIB NO. 128	BM. LGTH.	JIB NO. 128	JIB 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
40	34	40.1	30.9	45,200	50	34	52.3	44.8	45,000	60	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

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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	120	22	81.1	124.0	77,000*
	26	71.3	71.6	64,800		32	71.5	90.7	48,000		24	80.2	123.6	72,000
	28	69.5	70.9	58,300		34	70.2	90.0	44,200		26	79.2	123.3	64,000
	30	67.8	70.1	53,000		36	68.8	89.3	40,900		28	78.2	122.9	57,400
	32	66.0	69.2	48,500		38	67.5	88.4	38,000		30	77.3	122.4	52,100
	34	64.2	68.3	44,600		40	66.1	87.6	35,500		32	76.3	121.9	47,500
	36	62.3	67.3	41,300		45	62.5	85.1	30,300		34	75.3	121.4	43,700
	38	60.5	66.2	38,400		50	58.9	82.3	26,400		36	74.3	120.9	40,400
	40	58.6	65.0	35,900		55	55.1	79.0	23,200		38	73.3	120.3	37,500
	45	53.6	61.6	30,800		60	51.1	75.2	20,700		40	72.3	119.7	35,000
	50	48.3	57.5	26,800		65	46.8	70.9	18,600		45	69.8	117.9	29,800
	55	42.5	52.5	23,700		70	42.3	65.7	16,800		50	67.2	115.9	25,800
80	60	36.0	46.3	21,200	100	75	37.3	59.7	15,300		55	64.6	113.7	22,700
	65	28.3	38.3	19,100		80	31.6	52.3	14,000		60	61.9	111.1	20,100
	70	17.6	26.3	17,300		85	24.8	42.9	12,900		65	59.2	108.3	18,000
	15	81.8	84.6	117,500*		90	15.5	29.1	11,900		70	56.3	105.1	16,300
	16	81.0	84.4	114,200*		18	81.7	104.4	97,600*		75	53.4	101.6	14,700
	17	80.3	84.3	111,100*		19	81.1	104.2	95,100*		80	50.4	97.6	13,400
	18	79.6	84.1	108,100*		20	80.5	104.0	92,700*		85	47.2	93.2	12,300
	19	78.8	83.9	104,600		22	79.4	103.7	82,600		90	43.8	88.3	11,300
	20	78.1	83.7	96,200		24	78.2	103.3	72,400		95	40.2	82.7	10,400
	22	76.6	83.2	82,800		26	77.0	102.8	64,300		100	36.4	76.3	9,600
	24	75.2	82.7	72,600		28	75.8	102.3	57,800		105	32.1	68.9	8,900
	26	73.7	82.1	64,600		30	74.6	101.8	52,500		110	27.3	60.1	8,300
	28	72.2	81.5	58,100		32	73.5	101.2	47,900		115	21.4	49.0	7,700
	30	70.7	80.8	52,700	130	34	72.3	100.6	44,100		22	81.8	134.1	70,800*
	32	69.1	80.1	48,200		36	71.0	99.9	40,800		24	80.9	133.8	68,900*
	34	67.6	79.3	44,400		38	69.8	99.2	37,900		26	80.0	133.4	63,800
	36	66.0	78.4	41,100		40	68.6	98.4	35,400		28	79.1	133.1	57,300
	38	64.4	77.5	38,200		45	65.5	96.3	30,200		30	78.2	132.7	51,900
	40	62.8	76.5	35,700		50	62.3	93.8	26,300		32	77.3	132.2	47,300
	45	58.7	73.6	30,500		55	59.0	91.0	23,100		34	76.4	131.7	43,500
	50	54.4	70.3	26,600		60	55.6	87.7	20,600		36	75.5	131.2	40,200
	55	49.9	66.4	23,400		65	52.0	84.1	18,500		38	74.6	130.7	37,300
	60	45.0	61.8	20,900		70	48.3	79.8	16,700		40	73.7	130.1	34,700
	65	39.6	56.2	18,800		75	44.3	75.0	15,200		45	71.4	128.5	29,600
	70	33.6	49.4	17,000		80	40.0	69.5	13,900		50	69.0	126.7	25,600
	75	26.4	40.7	15,500		85	35.3	62.9	12,800		55	66.7	124.7	22,500
	80	16.4	27.7	14,200		90	29.9	55.1	11,800		60	64.2	122.4	19,900
110						95	23.5	45.0	10,900		65	61.8	119.8	17,800
						19	81.9	114.3	88,500*		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					

NOTICE: 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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22'4" CRAWLERS EXTENDED
360 DEGREE RATING

MEETS
ANSI B30.5
REQUIREMENTS

M-80W

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	190	30	82.0	193.6	31,600*
	65	63.9	131.1	17,600		125	40.5	109.2	5,800		32	81.4	193.3	31,300*
	70	61.6	128.5	15,900		130	37.7	103.0	5,400		34	80.8	192.9	31,000*
	75	59.3	125.6	14,400		135	34.6	96.1	5,000		36	80.2	192.6	30,700*
	80	56.9	122.5	13,100		140	31.3	88.4	4,600		38	79.5	192.2	30,500*
	85	54.4	119.1	11,900		145	27.7	79.5	4,200		40	78.9	191.9	30,200*
	90	51.8	115.3	10,900		150	23.5	69.0	3,900		45	77.4	190.8	28,400
	95	49.2	111.1	10,000		155	18.5	55.9	3,600		50	75.8	189.6	24,400
	100	46.4	106.6	9,200	170	28	81.7	173.6	39,800*		55	74.3	188.3	21,200
	105	43.5	101.5	8,500		30	81.0	173.3	39,500*		60	72.7	186.8	18,700
	110	40.4	95.9	7,900		32	80.4	173.0	39,200*		65	71.1	185.1	16,600
	115	37.1	89.7	7,300		34	79.7	172.6	38,800*		70	69.5	183.3	14,800
	120	33.6	82.6	6,800		36	79.0	172.3	38,500*		75	67.9	181.4	13,300
	125	29.7	74.4	6,300		38	78.3	171.9	36,500		80	66.3	179.2	12,000
	130	25.2	64.7	5,800		40	77.6	171.4	34,000		85	64.6	176.9	10,800
	135	19.8	52.6	5,400		45	75.9	170.2	28,800		90	62.9	174.5	9,800
150	26	81.4	153.7	53,200*		50	74.1	168.9	24,800		95	61.2	171.8	8,900
	28	80.6	153.4	52,800*		55	72.4	167.4	21,600		100	59.5	168.9	8,100
	30	79.8	153.0	51,500		60	70.6	165.7	19,100		105	57.7	165.9	7,400
	32	79.1	152.7	47,000		65	68.8	163.8	17,000		110	55.9	162.6	6,800
	34	78.3	152.3	43,200		70	67.0	161.8	15,200		115	54.1	159.1	6,200
	36	77.5	151.8	39,800		75	65.1	159.5	13,700		120	52.2	155.3	5,700
	38	76.7	151.4	36,900		80	63.3	157.1	12,400		125	50.2	151.3	5,200
	40	75.9	150.9	34,400		85	61.3	154.5	11,200		130	48.2	146.9	4,700
	45	73.9	149.5	29,200		90	59.4	151.6	10,200		135	46.2	142.3	4,300
	50	71.9	148.0	25,200		95	57.4	148.5	9,300		140	44.0	137.3	3,900
	55	69.9	146.2	22,100		100	55.4	145.2	8,500	200	145	41.8	131.9	3,600
	60	67.9	144.3	19,500		105	53.3	141.6	7,800		150	39.5	126.0	3,200
	65	65.8	142.1	17,400		110	51.2	137.7	7,200		32	81.8	203.4	27,000*
	70	63.7	139.7	15,700		115	49.0	133.5	6,600		34	81.2	203.1	26,900*
	75	61.5	137.1	14,100		120	46.7	128.9	6,100		36	80.7	202.7	26,800*
	80	59.3	134.3	12,800		125	44.3	124.0	5,600		38	80.1	202.4	26,700*
	85	57.1	131.2	11,700		130	41.9	118.7	5,100		40	79.5	202.0	26,400*
	90	54.8	127.8	10,700		135	39.3	112.8	4,700		45	78.0	201.0	25,700*
	95	52.4	124.1	9,800		140	36.5	106.3	4,300		50	76.6	199.9	24,200
	100	49.9	120.0	9,000		145	33.6	99.2	4,000		55	75.1	198.6	21,000
	105	47.4	115.6	8,300		150	30.4	91.1	3,700		60	73.6	197.2	18,500
	110	44.7	110.8	7,700		155	26.9	81.9	3,400		65	72.1	195.7	16,300
	115	41.9	105.4	7,100	180	160	22.8	71.1	3,100		70	70.6	194.0	14,600
	120	39.0	99.5	6,600		30	81.5	183.4	36,100*		75	69.1	192.1	13,000
	125	35.8	93.0	6,100		32	80.9	183.1	35,800*		80	67.5	190.1	11,700
	130	32.4	85.5	5,600		34	80.3	182.8	35,400*		85	66.0	188.0	10,600
	135	28.6	77.0	5,200		36	79.6	182.4	35,100*		90	64.4	185.6	9,600
	140	24.3	66.9	4,800		38	79.0	182.1	34,800*		95	62.8	183.1	8,700
	145	19.1	54.3	4,500		40	78.3	181.6	33,800		100	61.1	180.5	7,900
160	26	81.9	163.8	46,000*		45	76.7	180.5	28,600		105	59.5	177.6	7,200
	28	81.2	163.5	45,700*		50	75.0	179.3	24,600		110	57.8	174.5	6,500
	30	80.5	163.2	45,400*		55	73.4	177.8	21,500		115	56.1	171.3	5,900
	32	79.7	162.8	45,000*		60	71.7	176.3	18,900		120	54.4	167.8	5,400
	34	79.0	162.5	42,900		65	70.0	174.5	16,800		125	52.6	164.1	4,900
	36	78.3	162.1	39,600		70	68.3	172.6	15,000		130	50.7	160.1	4,500
	38	77.6	161.6	36,700		75	66.6	170.5	13,500		135	48.9	155.9	4,100
	40	76.8	161.2	34,200		80	64.8	168.2	12,200		140	46.9	151.3	3,700
	45	75.0	159.9	29,000		85	63.1	165.8	11,000		145	44.9	146.5	3,300
	50	73.1	158.5	25,000		90	61.3	163.1	10,000		150	42.9	141.3	3,000
	55	71.2	156.8	21,900		95	59.4	160.3	9,200					

NOTICE: 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.