



MANITOWOC ENGINEERING CO.

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



LIFTCRANE CAPACITIES BOOM NO. 22 WITH OPEN THROAT TOP 104,400 LB. COUNTERWEIGHT 360 DEGREE RATING

MEETS
ANSI B30.5
REQUIREMENTS

4000W

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 OR COMBINATION OF TWO SINGLE PART LINES IS 28,300 LBS. (20,000 LBS. WHEN REAR AUXILIARY DRUM IS USED). IN ALL CASES, UPPER BOOM POINT CAPACITIES CANNOT EXCEED THOSE LISTED FOR THE MAIN BOOM CAPACITY.

WEIGHT OF UPPER BOOM POINT, 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 GANTRY UP. REFER TO BOOM RIGGING NO. 4816B AND WIRE ROPE SPECIFICATION CHART NO. 6664-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.

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 24' EXTENDIBLE CRAWLERS, 48" TREADS, 15' RETRACTABLE GANTRY, 12 PART BOOM HOIST REEVING, FOUR 1-3/8" BOOM PENDANTS, 1ST COUNTERWEIGHT = 40,100 LBS. (39,000 LBS. WITH COUNTERWEIGHT ASSEMBLY NO. 48998), 2ND COUNTERWEIGHT = 35,800 LBS., AND 3RD COUNTERWEIGHT = 28,500 LBS.

MAXIMUM BOOM AND JIB LENGTHS LIFTED UNASSISTED					
OVER END OF BLOCKED CRAWLERS		OVER SIDE OF EXTENDED CRAWLERS		OVER SIDE OF RETRACTED CRAWLERS	
BOOM LGTH.	JIB NO. 123	BOOM LGTH.	JIB NO. 123	BOOM LGTH.	JIB NO. 123
220'	---	200'	---	190'	---
210'	---	190'	---	180'	---
200'	40'	180'	50'	170'	50'
190'	60'	170'	50'	160'	60'

LOAD BLOCK, HOOK AND WEIGHT BALL ON GROUND AT START. UPPER BOOM POINT CANNOT BE USED ON 220' BOOM.

DEDUCT FROM CAPACITIES WHEN UPPER BOOM POINT IS ATTACHED		DEDUCT FROM CAPACITIES WHEN JIB IS ATTACHED	
ONE SHEAVE POINT	TWO SHEAVE POINT	JIB LGTH.	JIB NO. 123
1,200 LBS.	1,500 LBS.	30'	3,000 LBS.
		40'	3,600 LBS.
		50'	4,200 LBS.
		60'	4,900 LBS.

JIB DEDUCTS INCLUDE JIB ADAPTOR.

CONSULT JIB CHART FOR JIB CAPACITIES.

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY CRAWLERS	CAPACITY CRAWLERS
				RETRACTED POUNDS	EXTENDED POUNDS
70	15	80.7	76.2	350,000*	350,000*
	16	79.9	76.0	308,600	332,800*
	17	79.0	75.8	275,000	307,800*
	18	78.2	75.6	248,000	285,200*
	19	77.3	75.4	225,600	270,100*
	20	76.5	75.2	206,900	253,500*
	22	74.8	74.7	177,200	214,000
	24	73.1	74.1	154,800	184,800
	26	71.4	73.4	137,200	162,500
	28	69.7	72.7	123,100	144,800
	30	67.9	72.0	111,500	130,500
	32	66.1	71.1	101,700	118,600
	34	64.3	70.2	93,500	108,600
	36	62.5	69.2	86,400	100,100
	38	60.6	68.1	80,300	92,700
	40	58.7	66.9	74,900	86,300
	45	53.8	63.6	63,900	73,400
	50	48.6	59.6	55,600	63,700
	55	42.8	54.7	49,000	56,000
	60	36.4	48.7	43,600	49,800
65	28.8	40.8	39,200	44,800	
70	18.6	29.5	35,500	40,500	

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY CRAWLERS	CAPACITY CRAWLERS
				RETRACTED POUNDS	EXTENDED POUNDS
80	16	81.1	86.1	308,300	311,000*
	17	80.4	86.0	274,700	306,300*
	18	79.7	85.8	247,600	283,800*
	19	78.9	85.6	225,200	268,800*
	20	78.2	85.4	206,500	252,600*
	22	76.8	85.0	176,800	213,600
	24	75.3	84.5	154,300	184,400
	26	73.8	83.9	136,700	162,100
	28	72.3	83.3	122,500	144,300
	30	70.8	82.6	110,900	130,000
	32	69.3	81.9	101,200	118,100
	34	67.7	81.1	93,000	108,100
	36	66.2	80.3	85,900	99,600
	38	64.6	79.4	79,700	92,200
	40	63.0	78.4	74,300	85,800
	45	58.9	75.6	63,400	72,900
	50	54.6	72.3	55,000	63,100
	55	50.1	68.5	48,400	55,400
	60	45.2	63.9	43,000	49,200
	65	39.9	58.5	38,600	44,200
70	34.0	51.8	34,900	39,900	
75	26.9	43.3	31,700	36,300	
80	17.4	31.0	29,000	33,200	



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MEETS ANSI B30.5 REQUIREMENTS

4000W

Table with columns: BOOM LGTH. FEET, OPER. RAD. FEET, BOOM ANG. DEG., BOOM POINT ELEV. FEET, CAPACITY CRAWLERS RETRACTED POUNDS, CAPACITY CRAWLERS EXTENDED POUNDS. Rows are grouped by boom length (90, 100, 110).

Table with columns: BOOM LGTH. FEET, OPER. RAD. FEET, BOOM ANG. DEG., BOOM POINT ELEV. FEET, CAPACITY CRAWLERS RETRACTED POUNDS, CAPACITY CRAWLERS EXTENDED POUNDS. Rows are grouped by boom length (120, 130).



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Table with columns: BOOM LGTH. FEET, OPER. RAD. FEET, BOOM ANG. DEG., BOOM POINT ELEV. FEET, CAPACITY CRAWLERS RETRACTED POUNDS, CAPACITY CRAWLERS EXTENDED POUNDS. Rows are grouped by boom length: 160, 170, 180.



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BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY CRAWLERS	
				RETRACTED POUNDS	EXTENDED POUNDS
109	32	81.4	195.0	96,900	114,100
	34	80.8	194.7	88,500	104,000
	36	80.2	194.3	81,400	95,400
	38	79.6	194.0	75,200	88,000
	40	79.0	193.6	69,700	81,500
	45	77.4	192.6	58,700	68,400
	50	75.9	191.4	50,200	58,500
	55	74.3	190.0	43,600	50,800
	60	72.8	188.6	38,200	44,600
	65	71.2	186.9	33,700	39,400
	70	69.6	185.1	30,000	35,100
	75	67.9	183.2	26,800	31,500
	80	66.3	181.1	24,000	28,400
	85	64.7	178.8	21,700	25,700
	90	63.0	176.4	19,600	23,300
	95	61.3	173.7	17,700	21,200
	100	59.5	170.9	16,000	19,300
	105	57.8	167.8	14,500	17,600
	110	56.0	164.6	13,200	16,100
	115	54.1	161.1	12,000	14,700
120	52.2	157.3	10,900	13,500	
125	50.3	153.3	9,900	12,400	
130	48.3	149.0	8,900	11,300	
135	46.3	144.4	8,100	10,300	
140	44.1	139.4	7,300	9,500	
145	41.9	134.1	6,500	8,600	
150	39.6	128.3	5,800	7,900	
155	37.2	122.0	5,200	7,200	
160	34.6	115.1	4,600	6,500	
165	31.9	107.5	4,100	5,900	
170	28.9	98.9		5,300	
175	25.6	89.2		4,700	
180	21.9	77.9		4,200	
200	34	81.3	204.8	88,200	95,500*
	36	80.7	204.5	81,000	85,000
	38	80.1	204.1	74,800	77,600
	40	79.5	203.8	69,400	71,100
	45	78.1	202.8	58,300	61,100
	50	76.6	201.7	49,900	51,200
	55	75.1	200.4	43,200	44,200
	60	73.6	199.0	37,800	37,800
	65	72.1	197.5	33,300	33,000
	70	70.6	195.8	29,600	29,800
	75	69.1	194.0	26,400	26,400
	80	67.6	192.0	23,600	23,000
	85	66.0	189.8	21,300	20,500
	90	64.4	187.5	19,200	18,000
	95	62.8	185.0	17,300	16,000
	100	61.2	182.4	15,600	14,000
	105	59.6	179.6	14,100	12,200
	110	57.9	176.5	12,800	10,700
	115	56.2	173.3	11,600	9,400
	120	54.4	169.8	10,500	8,200
125	52.7	166.1	9,400	7,200	
130	50.8	162.2	8,500	6,400	
135	49.0	157.9	7,700	5,700	
140	47.0	153.4	6,900	5,100	
145	45.0	148.6	6,100	4,600	
150	43.0	143.4	5,400	4,100	
155	40.8	137.9	4,800	3,700	
160	38.6	131.8	4,200	3,300	
165	36.2	125.3		2,900	
170	33.7	118.2		2,500	
175	31.1	110.3		2,100	

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY CRAWLERS	
				RETRACTED POUNDS	EXTENDED POUNDS
210	36	81.1	214.6	80,600	94,600
	38	80.6	214.3	74,400	87,200
	40	80.0	213.9	68,900	80,700
	45	78.6	213.0	57,900	67,600
	50	77.3	211.9	49,400	57,700
	55	75.9	210.7	42,700	50,000
	60	74.4	209.4	37,300	43,700
	65	73.0	207.9	32,900	38,600
	70	71.6	206.4	29,100	34,300
	75	70.1	204.6	25,900	30,700
	80	68.7	202.7	23,200	27,500
	85	67.2	200.7	20,800	24,800
	90	65.7	198.5	18,700	22,400
	95	64.2	196.2	16,800	20,300
	100	62.7	193.7	15,200	18,500
	105	61.1	191.0	13,700	16,800
	110	59.6	188.2	12,300	15,300
	115	58.0	185.2	11,100	13,900
	120	56.4	181.9	10,000	12,600
	125	54.7	178.5	9,000	11,500
130	53.0	174.9	8,000	10,400	
135	51.3	171.0	7,200	9,500	
140	49.5	166.8	6,400	8,600	
145	47.7	162.4	5,700	7,800	
150	45.8	157.7	5,000	7,000	
155	43.9	152.7	4,300	6,300	
160	41.9	147.3		5,600	
165	39.8	141.5		5,000	
170	37.6	135.3		4,400	
220	38	81.0	224.4	73,900	86,800
	40	80.5	224.1	68,500	80,300
	45	79.2	223.2	57,400	67,200
	50	77.8	222.2	48,900	57,300
	55	76.5	221.0	42,200	49,500
	60	75.2	219.8	36,800	43,200
	65	73.8	218.4	32,400	38,100
	70	72.5	216.9	28,600	33,800
	75	71.1	215.2	25,400	30,200
	80	69.7	213.4	22,700	27,000
	85	68.3	211.5	20,300	24,300
	90	66.9	209.5	18,200	21,900
	95	65.5	207.2	16,300	19,800
	100	64.0	204.9	14,600	17,900
	105	62.6	202.4	13,100	16,200
110	61.1	199.7	11,800	14,700	
115	59.6	196.9	10,600	13,300	
120	58.1	193.8	9,500	12,100	
125	56.5	190.6	8,400	11,000	
130	55.0	187.2	7,500	9,900	
135	53.3	183.6	6,600	8,900	
140	51.7	179.8	5,800	8,000	
145	50.0	175.7	5,100	7,200	
150	48.3	171.4	4,400	6,500	
155	46.5	166.8		5,700	
160	44.7	161.9		5,100	
165	42.8	156.7		4,400	