



Manitowoc 4000W

MANITOWOC 4000W - 24' CRAWLERS EXTENDED

LIFTCRANE CAPACITIES - 104,400# CWT.

BOOM #22 WITH OPEN THROAT TOP

CRAWLER MACHINE ON BARGE - 3 DEGREE MACHINE LIST

RAD. IN FT.	CAPACITIES IN THOUSANDS OF LBS.													RAD. IN FT.	
	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
18	193.9*	184.6*	175.2	153.9	148.5	143.5	124.3								18
19			168.0*												19
20				137.1	132.6	128.4	112.5								20
22				123.4	119.6	116.0	105.5	109.2							22
24				112.1	108.8	105.7	102.6	99.8	96.9						24
26															26
28															28
30	102.6	99.7	97.0	94.2	91.7	89.1	87.1								30
32	94.5	91.9	89.4	86.9	84.7	82.4	80.6	78.4							32
34	87.5	85.1	82.9	80.6	78.6	76.5	74.9	72.9							34
36	81.4	79.2	77.2	75.1	73.2	71.3	69.9	68.0	66.3	64.6					36
38	76.0	74.0	72.2	70.2	68.5	66.7	65.4	63.7	62.1	60.5	59.2				38
40	71.3	69.4	67.7	65.8	64.2	62.6	61.4	59.8	58.3	56.8	55.6	54.2			40
45	61.5	59.9	58.4	56.7	55.4	53.9	52.9	51.6	50.3	48.9	47.9	46.7			45
50	53.9	52.4	51.1	49.6	48.4	47.1	46.3	45.0	43.9	42.7	41.8	40.7	39.6		50
55	47.8	46.4	45.2	43.9	42.8	41.6	40.9	39.7	38.7	37.6	36.8	35.8	34.8		55
60	42.8	41.5	40.4	39.1	38.1	37.0	36.4	35.3	34.3	33.3	32.6	31.7	30.8		60
65	38.8	37.5	36.4	35.2	34.2	33.2	32.6	31.6	30.7	29.7	29.0	28.2	27.3		65
70	35.4	34.0	33.0	31.8	30.9	29.9	29.4	28.4	27.6	26.6	26.0	25.2	24.4		70
80		31.1	30.1	28.9	28.1	27.1	26.6	25.6	24.8	23.9	23.4	22.6	21.8		80
85		28.7	27.5	26.4	25.6	24.6	23.2	22.5	21.6	21.1	20.3	19.5	18.7		85
90			25.4	24.2	23.4	22.5	22.0	21.1	20.4	19.5	18.3	17.5	16.7		90
95			23.5	22.3	21.5	20.6	20.1	19.3	18.5	17.7	17.2	16.5	15.8		95
100				19.2	18.3	17.3	16.9	16.1	15.4	14.6	14.1	13.4	12.7		100
105					16.9	16.0	15.6	14.8	14.1	13.3	12.8	12.1	11.4		105
110						14.8	13.5	12.8	12.1	11.6	10.9	10.3	9.6		110
115						13.7	13.3	12.4	11.7	10.9	10.5	9.8	9.2		115
120							12.2	11.4	10.7	9.9	9.5	8.8	8.2		120
125							11.3	10.5	9.8	9.0	8.6	7.9	7.3		125
130								9.6	9.0	8.2	7.8	7.1	6.5		130
135								8.9	8.2	7.4	7.0	6.3	5.7		135
140									7.5	6.7	6.2	5.6	5.0		140
145									6.8	6.0	5.6	4.9	4.3		145
150										5.4	4.9	4.3	4.2		150
155										4.8	4.4				155

CAPACITIES ARE FOR A CRAWLER MACHINE WHEN OPERATING ON A BARGE. MACHINE SHALL BE POSITIVELY SECURED TO PREVENT SHIFTING. 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 (*).

WEIGHT OF ALL LOAD BLOCKS, HOOKS, WEIGHT BALL, SLINGS, HOIST LINES BENEATH BOOM POINT SHEAVES, ETC. IS CONSIDERED PART OF THE MAIN BOOM LOAD. DEDUCT 1,200# FROM ABOVE CAPACITIES WHEN SINGLE SHEAVE UPPER BOOM POINT IS ATTACHED AND 1,500# WHEN TWO SHEAVE UPPER CAPACITY IS ATTACHED. BOOM IS NOT TO BE LOWERED BEYOND RADII WHERE COMBINED WEIGHTS ARE GREATER THAN RATED CAPACITY. WHERE NO OPERATION IS NOT INTENDED OR APPROVED.

REFER TO RIGGING #48168, LOAD LINE SPECIFICATION CHART #5320 AND RANGE CHART #5359. CRANE OPERATOR JUDGMENT MUST BE USED TO ALLOW FOR DYNAMIC LOAD EFFECTS OF SWINGING, HOISTING OR LOWERING, AS WELL AS ADVERSE OPERATING CONDITIONS AND PHYSICAL MACHINE DEPRECIATION.

OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM THE AXIS OF ROTATION AT BARGE DECK TO THE CENTER OF VERTICAL HOIST LINE OR LOAD BLOCK.

MACHINE EQUIPPED WITH 24' EXTENDIBLE CRAWLERS, 48 IN. TREADS, 15' RETRACTABLE GANTRY, 12 PART BOOM HOIST REEVING, FOUR 1-3/8 IN. BOOM PENDANTS, 1ST CWT. = 40,100#, 2ND CWT. = 35,800#, 3RD CWT. = 28,500#.

S/N: 40500

DJK
04/27/77, Rev. 8/1/78
DRHG. #6909-C

MANITOWOC ENGINEERING CO.
MANITOWOC, WISCONSIN

 **CROFTON**
INDUSTRIES

MANITOWOC 4000W - 24' CRAWLERS EXTENDED

LIFTCRANE CAPACITIES - 104,400# CWT.

BCCM #22 WITH OPEN THROAT TOP

CRAWLER MACHINE ON BARGE - 2 DEGREE MACHINE LIST

RAD. IN FT.	CAPACITIES IN THOUSANDS OF LBS.													RAD. IN FT.	
	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
17	230.8*														17
18	218.0*														18
19	206.5*	199.1*													19
20	196.0	189.2*	182.8*												20
22	170.3	165.9	161.7	157.6											22
24	150.3	146.7	143.3	139.8	136.7										24
26	134.3	131.3	128.4	125.5	122.8										26
28	121.3	118.7	116.2	113.6	111.3	108.9	107.0								28
30	110.4	108.1	105.9	103.6	101.6	99.5	97.9	95.9							30
32	101.2	99.2	97.2	95.2	93.4	91.5	90.0	88.2	86.5						32
34	93.4	91.5	89.8	87.9	86.2	84.5	83.2	81.6	80.0						34
36	86.6	84.9	83.3	81.5	80.0	78.4	77.3	75.7	74.3	72.4	70.6	69.3			36
38	80.7	79.1	77.6	75.9	74.6	73.1	72.0	70.6	69.3	67.9	66.8	65.5			38
40	75.4	73.9	72.5	71.0	69.7	68.3	67.4	66.0	64.8	63.5	62.5	61.5	60.1		40
45	64.7	63.4	62.2	60.8	59.7	58.5	57.7	56.5	55.4	54.3	53.4	52.4	51.3	50.2	45
50	56.4	55.2	54.1	52.9	51.9	50.8	50.1	49.1	48.1	47.0	46.3	45.4	44.4	43.4	50
55	49.8	48.7	47.7	46.6	45.7	44.6	44.1	43.1	42.2	41.2	40.6	39.7	38.8	37.9	55
60	44.5	43.4	42.5	41.4	40.6	39.6	39.1	38.1	37.3	36.4	35.8	35.0	34.2	33.3	60
65	40.1	39.1	38.1	37.1	36.3	35.4	34.9	34.0	33.2	32.4	31.8	31.0	30.3	29.4	65
70	36.5	35.4	34.5	33.4	32.7	31.8	31.4	30.5	30.0	29.8	28.9	28.4	27.7	26.9	70
75		32.2	31.4	30.3	29.6	28.7	28.3	27.5	26.8	26.0	25.5	24.8	24.1	23.3	75
80		29.6	28.7	27.6	26.9	26.1	25.7	24.9	24.2	23.4	22.9	22.2	21.5	20.8	80
85			26.3	25.3	24.6	23.8	23.4	22.6	21.9	21.1	20.7	20.0	19.3	18.6	85
90			24.3	23.2	22.5	21.7	21.4	20.6	19.9	19.1	18.7	18.0	17.4	16.6	90
95					19.8	19.1	18.3	17.7	17.2	16.5	15.8	15.4	14.7	13.4	95
100							16.5	15.7	15.1	14.3	13.9	13.3	12.7	12.0	100
105							15.5	14.7	14.1	13.3	12.6	12.0	11.4	10.7	105
110							14.4	13.8	13.0	12.6	12.0	11.2	10.7	11.0	115
115							14.0	13.2	12.6	11.8	11.5	10.8	10.2	9.5	115
120								12.9	12.1	11.5	10.8	10.4	9.8	9.1	120
125								11.9	11.1	10.5	9.8	9.4	8.8	8.2	125
130									10.2	9.6	8.9	8.5	7.9	7.3	130
135									9.4	8.8	8.0	7.6	7.0	6.4	135
140										8.0	7.2	6.9	6.2	5.6	140
145										7.3	6.5	6.1	5.5	4.9	145
150											5.2	4.9	4.2	4.2	150
155											4.3				155
160															160

CAPACITIES ARE FOR A CRAWLER MACHINE WHEN OPERATING ON A BARGE. MACHINE SHALL BE POSITIVELY SECURED TO PREVENT SHIFTING. 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 (*).

WEIGHT OF ALL LOAD BLOCKS, HOOKS, WEIGHT BALL, SLINGS, HOIST LINES BENEATH BOOM POINT SHEAVES, ETC. IS CONSIDERED PART OF THE MAIN BOOM LOAD. DEDUCT 1,200# FROM ABOVE CAPACITIES WHEN SINGLE SHEAVE UPPER BOOM POINT IS ATTACHED AND 1,500# WHEN TWO SHEAVE UPPER CAPACITY IS ATTACHED. BOOM IS NOT TO BE LOWERED BEYOND RADII WHERE COMBINED WEIGHTS ARE GREATER THAN RATED CAPACITY. WHERE NO OPERATION IS NOT INTENDED OR APPROVED.

REFER TO RIGGING #48168, LOAD LINE SPECIFICATION CHART #5320 AND RANGE CHART #5359. CRANE OPERATOR JUDGMENT MUST BE USED TO ALLOW FOR DYNAMIC LOAD EFFECTS OF SWINGING, HOISTING OR LOWERING, AS WELL AS ADVERSE OPERATING CONDITIONS AND PHYSICAL MACHINE DEPRECIATION.

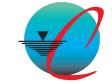
OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM THE AXIS OF ROTATION AT BARGE DECK TO THE CENTER OF VERTICAL HOIST LINE OR LOAD BLOCK.

MACHINE EQUIPPED WITH 24' EXTENDIBLE CRAWLERS, 48 IN. TREADS, 15' RETRACTABLE GANTRY, 12 PART BOOM HOIST REEVING, FOUR 1-3/8 IN. BOOM PENDANTS, 1ST CWT. = 40,100#, 2ND CWT. = 35,800#, 3RD CWT. = 28,500#.

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04/27/77 Rev. 8/1/78
DRWG. #6909-B

MANITOWOC ENGINEERING CO.
MANITOWOC, WISCONSIN

 CROFTON
INDUSTRIES

MANITOWOC 4000W - 24' CRAWLERS EXTENDED

LIFTCRANE CAPACITIES - 104,400# CWT.

BOOM #22 WITH OPEN THROAT TOP

CRAWLER MACHINE ON BARGE - 0 DEGREE MACHINE LIST

RAD. IN FT.	CAPACITIES IN THOUSANDS OF LBS. BOOM LENGTH - FT.													RAD. IN FT.	
	70	80	90	100	110	120	130	140	150	160	170	180	190	200	
17	300.0*	294.0*	267.1*												17
18	285.0*	281.6*	262.0*												18
19	267.3*	266.5*	256.0*	243.0*	215.9*	211.2*	186.8*								19
20	249.9*	249.1*	249.3*	240.0*	215.9*	211.2*	181.5*	181.4							20
22	212.5	212.2	211.9	211.5	183.3	182.6	181.9	159.4	158.8	141.0	140.5	157.0*	157.0*		22
24	183.3	183.0	182.6	182.2	181.9	181.5	105.5	104.6	104.0	95.4	94.9	94.4	94.2		24
26	160.9	160.5	160.2	159.7	159.4	158.9	105.1	104.6	103.5	96.0	95.4	94.9	94.2		26
28	143.2	142.8	142.4	141.9	141.5	141.1	105.5	104.6	103.5	96.0	95.4	94.9	94.2		28
30	128.8	128.4	128.0	127.5	127.1	126.6	126.5	125.6	125.6	125.2	125.7	124.9			30
32	116.9	116.5	116.1	115.5	115.1	114.6	114.5	114.1	113.6	113.0	112.9	112.5	112.1		32
34	106.9	106.5	106.0	105.5	105.1	104.6	104.5	104.0	103.5	103.0	102.8	102.4	102.0	95.5*	34
36	98.4	97.9	97.5	96.9	96.5	96.0	95.9	95.4	94.9	94.4	94.2	93.8	93.3	92.8	36
38	91.0	90.5	90.1	89.5	89.1	88.6	88.5	87.9	87.5	87.0	86.7	86.3	85.9	85.4	38
40	84.6	84.1	83.7	83.1	82.7	82.1	82.0	81.5	81.0	80.5	80.2	79.8	79.4	78.9	40
45	71.7	71.2	70.7	70.1	69.7	69.1	69.0	68.4	68.0	67.4	67.2	66.7	66.3	65.7	45
50	61.9	61.4	60.9	60.2	59.8	59.3	59.1	58.6	58.1	57.5	57.3	56.8	56.3	55.8	50
55	54.2	53.7	53.2	52.5	52.1	51.5	51.4	50.8	50.4	49.8	49.5	49.1	48.6	48.0	55
60	48.0	47.5	47.0	46.3	45.9	45.3	45.2	44.6	44.1	43.6	43.3	42.8	42.3	41.8	60
65	43.0	42.4	41.9	41.2	40.8	40.2	40.1	39.5	39.0	38.4	38.2	37.7	37.2	36.6	65
70	38.7	38.2	37.7	37.0	36.6	35.9	35.8	35.2	34.7	34.1	33.9	33.4	32.9	32.3	70
75															
80															
85															
90															
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160															
165															

CAPACITIES ARE FOR A CRAWLER MACHINE WHEN OPERATING ON A BARGE. MACHINE SHALL BE POSITIVELY SECURED TO PREVENT SHIFTING. LOAD. CAPACITIES BASED ON STRUCTURAL COMPETENCE ARE DENOTED BY AN ASTERISK (*).

WEIGHT OF ALL LOAD BLOCKS, HOOKS, WEIGHT BALL, SLINGS, HOIST LINES BENEATH BOOM POINT SHEAVES, ETC. IS CONSIDERED PART OF THE MAIN BOOM LOAD. DEDUCT 1,200# FROM ABOVE CAPACITIES WHEN SINGLE SHEAVE UPPER BOOM POINT IS ATTACHED AND 1,500# WHEN TWO SHEAVE UPPER CAPACITY IS SHOWN, OPERATION IS NOT INTENDED OR APPROVED.

REFER TO RIGGING #48168, LOAD LINE SPECIFICATION CHART #5320 AND RANGE CHART #5359. CRANE OPERATOR JUDGMENT MUST BE USED TO ALLOW DEPRECIATION.

OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM THE AXIS OF ROTATION AT BARGE DECK TO THE CENTER OF VERTICAL HOIST LINE OR LOAD BLOCK.

MACHINE EQUIPPED WITH 24' EXTENDIBLE CRAWLERS, 48" IN. TREADS, 15' RETRACTABLE GANTRY, 12 PART BOOM HOIST REEVING, FOUR 1-3/8 IN.

S/N: 40500

DJK
7/77 Rev. 8/1/78
#6909-A

MANITOWOC ENGINEERING CO.
MANITOWOC, WISCONSIN



CROFTON
INDUSTRIES

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 RATINGMEETS
ANSI B30.5
REQUIREMENTS

400 N

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., BEHIND 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' EXTENDABLE CRAWLERS, 48" TREADS, 15' RETRACTABLE GANTRY, 12 PART BOOM HOIST REEVEING, 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	
JIB LGTH.	JIB NO. 123	JIB LGTH.	JIB NO. 123
ONE SHEAVE POINT	1,200 LBS.	30'	3,000 LBS.
TWO SHEAVE POINT	1,500 LBS.	40'	3,600 LBS.
JIB DEDUCTS INCLUDE JIB ADAPTOR.			
50'	4,200 LBS.	50'	4,900 LBS.
60'			

CONSULT JIB CHART FOR JIB CAPACITIES.

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY CRAWLERS RETRACTED POUNDS	CAPACITY CRAWLERS EXTENDED POUNDS
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	265,200*	
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	59.5	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 RETRACTED POUNDS	CAPACITY CRAWLERS EXTENDED POUNDS
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	69.5	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	

CHART NO. 6274-A, 3-22-1
PAGE 1 OF 4CROFTON
INDUSTRIES

S/N: 40500

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 RATINGMEETS
ANSI B30.5
REQUIREMENTS

4000W

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY CRAWLERS RETRACTED POUNDS	CAPACITY CRAWLERS EXTENDED POUNDS
	17	81.5	95.1	267,100*	267,100*
	18	80.8	96.0	247,400	267,100*
	19	80.2	95.8	225,000	263,000*
	20	79.5	95.6	206,200	250,500*
	22	78.2	95.2	176,500	213,400
90	24	76.9	94.8	154,000	184,200
	26	75.5	94.3	136,400	161,800
	28	74.3	93.8	122,200	144,100
	30	73.0	93.2	110,500	129,700
	32	71.7	92.5	100,900	117,800
	34	70.3	91.8	92,600	107,800
	36	68.9	91.1	85,500	99,200
	38	67.6	90.3	79,400	91,900
	40	66.2	89.4	74,000	85,500
	45	62.7	87.1	63,000	72,500
100	50	59.0	84.3	54,600	62,700
	55	55.2	81.0	48,000	55,100
	60	51.2	77.3	42,700	48,900
	65	47.0	73.0	38,200	43,800
	70	42.5	67.9	34,500	39,600
	75	37.6	62.0	31,400	36,000
	80	32.0	54.8	28,600	32,900
	85	25.4	45.6	26,300	30,200
	90	16.4	32.5	24,200	27,800
	19	81.2	105.9	224,600	243,000*
110	20	80.6	105.8	205,800	243,000*
	22	79.4	105.4	176,100	213,100
	24	78.3	105.0	153,500	183,800
	26	77.1	104.6	135,900	151,400
	28	75.9	104.1	121,800	143,600
	30	74.7	103.6	110,100	129,200
	32	73.5	103.0	100,400	117,300
	34	72.3	102.4	92,100	107,300
	36	71.1	101.7	85,000	98,800
	38	69.9	101.0	78,800	91,400
120	40	68.7	100.3	73,400	85,000
	45	65.6	98.2	62,500	72,000
	50	62.4	95.7	54,100	62,200
	55	59.1	92.9	47,400	54,500
	60	55.7	89.7	42,100	48,300
	65	52.2	86.1	37,700	43,300
	70	48.4	81.9	33,900	39,000
	75	44.5	77.2	30,800	35,400
	80	40.2	71.7	28,000	32,300
	85	35.6	65.3	25,700	29,600
130	90	30.3	57.6	23,600	27,200
	95	24.0	47.8	21,700	25,200
	100	15.6	33.9	20,100	23,300
	20	81.5	115.9	205,500	215,900*
	22	80.4	115.6	175,700	212,800
	24	79.3	115.2	153,200	183,500
	26	78.3	114.8	135,600	161,100
	28	77.2	114.4	121,400	143,300
	30	76.1	113.9	109,700	128,900
	32	75.1	113.4	100,000	117,000
	34	74.0	112.8	91,700	107,000
	36	72.9	112.2	84,600	98,400
	38	71.8	111.6	78,500	91,000
140	40	70.7	110.9	73,100	84,600
	45	67.9	109.0	62,100	71,600
	50	65.1	106.9	53,700	61,800
	55	62.2	104.4	47,000	54,100
	60	59.2	101.6	41,700	47,900
	65	56.1	98.4	37,200	42,900
	70	52.9	94.9	33,500	38,500
	75	49.6	90.8	30,400	35,000
	80	46.1	86.3	27,600	31,900
	85	42.3	81.2	25,300	29,200
150	90	38.3	75.3	23,200	26,800
	95	33.9	68.4	21,300	24,700
	100	28.9	60.2	19,700	22,900
	105	22.9	49.9	18,200	21,200

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY CRAWLERS RETRACTED POUNDS	CAPACITY CRAWLERS EXTENDED POUNDS
22	81.2	125.7	175,500	186,800*	
24	80.2	125.4	153,000	183,400	
26	79.3	125.0	135,300	160,900	
28	78.3	124.6	121,100	143,100	
30	77.3	124.2	109,500	128,700	
120	32	76.3	123.7	99,700	116,800
	34	75.4	123.2	91,500	106,700
	36	74.4	122.7	84,400	98,200
	38	73.4	122.1	78,200	90,800
	40	72.4	121.5	72,800	84,300
	45	69.9	119.8	61,800	71,400
	50	67.3	117.8	53,400	61,500
	55	64.7	115.6	46,700	53,800
	60	62.0	113.1	41,400	47,600
	65	59.3	110.2	36,900	42,600
130	70	56.4	107.1	33,200	38,300
	75	53.5	103.6	30,000	34,700
	80	50.5	99.7	27,300	31,600
	85	47.3	95.3	24,900	28,900
	90	44.0	90.5	22,800	26,500
	95	40.4	84.9	21,000	24,400
	100	36.6	78.7	19,300	22,600
	105	32.4	71.4	17,900	20,900
	110	27.6	62.7	16,500	19,400
	115	21.9	51.9	15,300	18,000
140	24	81.0	135.5	152,600	183,300
	26	80.1	135.2	135,000	160,600
	28	79.2	134.8	120,800	142,800
	30	78.3	134.4	109,100	128,300
	32	77.1	134.0	99,400	116,400
	34	76.5	133.5	91,100	106,400
	36	75.6	133.0	84,000	97,800
	38	74.7	132.5	77,800	90,400
	40	73.8	131.9	72,400	84,000
	45	71.5	130.4	61,400	71,000
150	50	69.1	128.6	53,000	61,100
	55	65.7	126.5	46,300	53,400
	60	64.3	124.3	41,000	47,200
	65	61.8	121.7	36,500	42,100
	70	59.3	118.9	32,800	37,900
	75	55.7	115.8	29,600	34,300
	80	54.0	112.3	26,900	31,200
	85	51.3	108.5	24,500	28,500
	90	48.4	104.3	22,400	26,100
	95	45.4	99.6	20,600	24,000
160	100	42.2	94.4	18,900	22,100
	105	38.8	88.5	17,400	20,500
	110	35.1	81.9	16,100	19,000
	115	31.1	74.2	14,900	17,600
	120	26.5	65.1	13,800	16,400
170	125	21.0	53.8	12,800	15,200



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 RATINGMEETS
ANSI B30.5
REQUIREMENTS

400

W

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY CRAWLERS RETRACTED POUNDS	CAPACITY CRAWLERS EXTENDED POUNDS	BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY CRAWLERS RETRACTED POUNDS	CAPACITY CRAWLERS EXTENDED POUNDS
1 4 0	26	80.8	145.3	134,500	157,000*	1 6 0	105	50.7	130.9	16,000	19,100
	28	80.0	145.0	120,300	142,400		110	48.3	126.7	14,700	17,600
	30	79.2	144.6	108,600	127,900		115	45.9	122.0	13,500	16,200
	32	78.3	144.2	98,900	116,000		120	43.4	117.0	12,400	15,000
	34	77.5	143.8	90,600	105,900		125	40.7	111.4	11,300	13,800
	36	76.6	143.3	83,500	97,300		130	37.9	105.3	10,400	12,800
	38	75.8	142.8	77,300	89,900		135	34.8	98.5	9,600	11,800
	40	75.0	142.3	71,900	83,500		140	31.6	90.8	8,800	10,900
	45	72.8	140.9	60,800	70,500		145	28.0	82.1	8,000	10,100
	50	70.7	139.2	52,400	60,600		150	23.9	71.8	7,300	9,400
	55	68.5	137.4	45,800	52,900		155	18.9	59.0	6,700	8,600
	60	66.3	135.3	40,400	46,700	1 7 0	30	81.1	175.1	107,500	126,200*
	65	64.0	133.0	36,000	41,600		32	80.4	174.7	97,700	114,900
	70	61.7	130.4	32,200	37,300		34	79.7	174.4	89,400	104,800
	75	59.4	127.6	29,100	33,700		36	79.0	174.0	82,300	96,200
	80	57.0	124.5	26,300	30,600		38	78.3	173.6	76,100	88,800
	85	54.5	121.1	23,900	27,900		40	77.7	173.2	70,700	82,400
	90	51.9	117.3	21,800	25,500		45	75.9	172.0	59,600	69,300
	95	49.3	113.2	20,000	23,400		50	74.2	170.7	51,200	59,500
	100	46.5	108.7	18,300	21,600		55	72.4	169.2	44,500	51,700
	105	43.6	103.7	16,900	19,900		60	70.6	167.5	39,200	45,500
	110	40.6	98.2	15,500	18,400		65	68.9	165.7	34,700	40,400
	115	37.3	92.0	14,300	17,000		70	67.0	163.8	31,000	36,100
	120	33.8	85.0	13,200	15,800		75	65.2	161.4	27,800	32,500
	125	29.9	76.9	12,200	14,700		80	63.3	159.0	25,100	29,400
	130	25.5	67.4	11,300	13,500		85	61.4	156.4	22,700	26,700
	135	20.3	55.6	10,400	12,700	1 8 0	90	59.5	153.6	20,600	24,300
	26	81.4	155.4	134,100	157,000*		95	57.5	150.5	18,700	22,200
	28	80.7	155.1	119,900	142,000		100	55.5	147.2	17,100	20,300
	30	79.9	154.8	108,200	127,500		105	53.4	143.6	15,600	18,600
	32	79.1	154.4	98,500	115,600		110	51.3	139.7	14,200	17,100
	34	78.3	154.0	90,200	105,500		115	49.1	135.6	13,000	15,800
	36	77.6	153.6	83,100	96,900		120	46.8	131.1	11,900	14,500
	38	76.8	153.1	76,900	89,500		125	44.5	126.2	10,900	13,400
	40	76.0	152.6	71,400	83,100		130	42.0	120.9	10,000	12,300
	45	74.0	151.3	60,400	70,100		135	39.4	115.0	9,100	11,400
	50	72.0	149.8	52,000	60,200		140	36.7	108.7	8,300	10,500
	55	70.0	148.0	45,300	52,500		145	33.8	101.6	7,600	9,700
	60	67.9	146.1	40,000	46,300		150	30.6	93.6	6,800	8,900
	65	65.9	144.0	35,500	41,200		155	27.1	84.6	6,200	8,200
	70	63.8	141.6	31,800	36,900		160	23.1	73.9	5,700	7,500
	75	61.6	139.1	28,600	33,300		165	18.4	60.7	5,100	6,900
	80	59.4	136.2	25,900	30,200	1 9 0	32	80.9	184.9	97,300	114,500
	85	57.2	133.1	23,500	27,500		34	80.3	184.5	89,000	104,400
	90	54.9	129.8	21,400	25,100		36	79.7	184.2	81,800	95,800
	95	52.5	126.1	19,500	23,000		38	79.0	183.8	75,600	88,400
	100	50.0	122.1	17,900	21,100		40	78.4	183.4	70,200	81,900
	105	47.5	117.7	16,400	19,500		45	76.7	182.3	59,100	68,600
	110	44.9	112.9	15,100	17,900		50	75.1	181.0	50,700	59,000
	115	42.1	107.6	13,800	16,600		55	73.4	179.6	44,000	51,200
	120	39.1	101.8	12,700	15,300		60	71.8	178.1	38,600	45,000
	125	36.0	95.3	11,700	14,200		65	70.1	176.3	34,200	39,900
	130	32.6	88.0	10,800	13,200		70	68.4	174.4	30,400	35,600
	135	28.9	79.6	9,900	12,200		75	66.7	172.4	27,300	32,000
	140	24.6	69.7	9,100	11,300		80	64.9	170.1	24,500	28,800
	145	19.6	57.4	8,400	10,500		85	63.1	167.7	22,100	26,100
	28	81.3	165.2	119,600	141,700		90	61.3	165.0	20,000	23,700
	30	80.5	164.9	107,900	127,300		95	59.5	162.2	18,200	21,600
	32	79.8	164.6	98,100	115,300		100	57.6	159.2	16,500	19,800
	34	79.1	164.2	89,800	105,200		105	55.7	155.9	15,000	18,100
	36	78.3	163.8	82,700	96,600		110	53.8	152.3	13,700	16,600
	38	77.6	163.4	76,500	89,200		115	51.8	148.5	12,500	15,200
	40	76.9	162.9	71,100	82,800		120	49.7	144.5	11,300	14,000
	45	75.0	161.7	60,100	69,700		125	47.6	140.1	10,300	12,800
	50	73.2	160.2	51,600	59,900		130	45.4	135.3	9,400	11,800
	55	71.3	158.6	45,000	52,200		135	43.1	130.2	8,500	10,800
	60	69.4	156.9	39,600	45,900		140	40.8	124.6	7,700	9,900
	65	67.5	154.9	35,200	40,800		145	38.3	118.6	7,000	9,100
	70	65.5	152.7	31,400	36,600		150	35.6	111.9	6,300	8,300
	75	63.5	150.3	28,200	32,900		155	32.8	104.6	5,700	7,600
	80	61.5	147.7	25,500	29,800		160	29.7	96.3	5,100	7,000
	85	59.4	144.9	23,100	27,100		165	26.3	86.9	4,500	6,300
	90	57.3	141.8	21,000	24,700		170	22.5	75.9	4,000	5,800
	95	55.2	138.5	19,200	22,600		175	17.9	62.3	5,200	5,200
	100	53.0	134.9	17,500	20,800						

CHART NO. 6274-A, 3-22-93,
PAGE 3 OF 4CROFTON
INDUSTRIES

S/N: 40500

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 RATINGMEETS
ANSI B30.5
REQUIREMENTS

4000W

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY CRAWLERS RETRACTED POUNDS	CAPACITY CRAWLERS EXTENDED POUNDS
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	
34	81.3	204.8	88,200	95,500	
36	80.7	204.5	81,000	95,000	
38	80.1	204.1	74,800	87,600	
40	79.5	203.8	69,400	81,100	
45	78.1	202.8	58,300	68,100	
50	76.6	201.7	49,900	58,200	
55	75.1	200.4	43,200	50,400	
60	73.6	199.0	37,800	44,200	
65	72.1	197.5	33,300	39,000	
70	70.6	195.8	29,600	34,800	
75	69.1	194.0	26,400	31,100	
80	67.6	192.0	23,600	28,000	
85	66.0	189.8	21,300	25,300	
90	64.4	187.5	19,200	22,900	
95	62.8	185.0	17,300	20,800	
100	61.2	182.4	15,600	18,900	
105	59.6	179.5	14,100	17,200	
110	57.9	176.5	12,800	15,700	
115	56.2	173.3	11,600	14,300	
120	54.4	169.8	10,500	13,100	
125	52.7	166.1	9,400	12,000	
130	50.8	162.2	8,500	10,900	
135	49.0	157.9	7,700	9,900	
140	47.0	153.4	6,900	9,100	
145	45.0	148.6	6,100	8,200	
150	43.0	143.4	5,400	7,500	
155	40.8	137.9	4,800	6,700	
160	38.6	131.8	4,200	6,100	
165	36.2	125.3		5,500	
170	33.7	118.2		4,900	
175	31.1	110.3		4,300	

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY CRAWLERS RETRACTED POUNDS	CAPACITY CRAWLERS EXTENDED POUNDS
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	207.3		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
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		28,500	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		11,600	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	166.6			5,700
160	44.7	161.9			5,100
165	42.8	156.7			4,400

