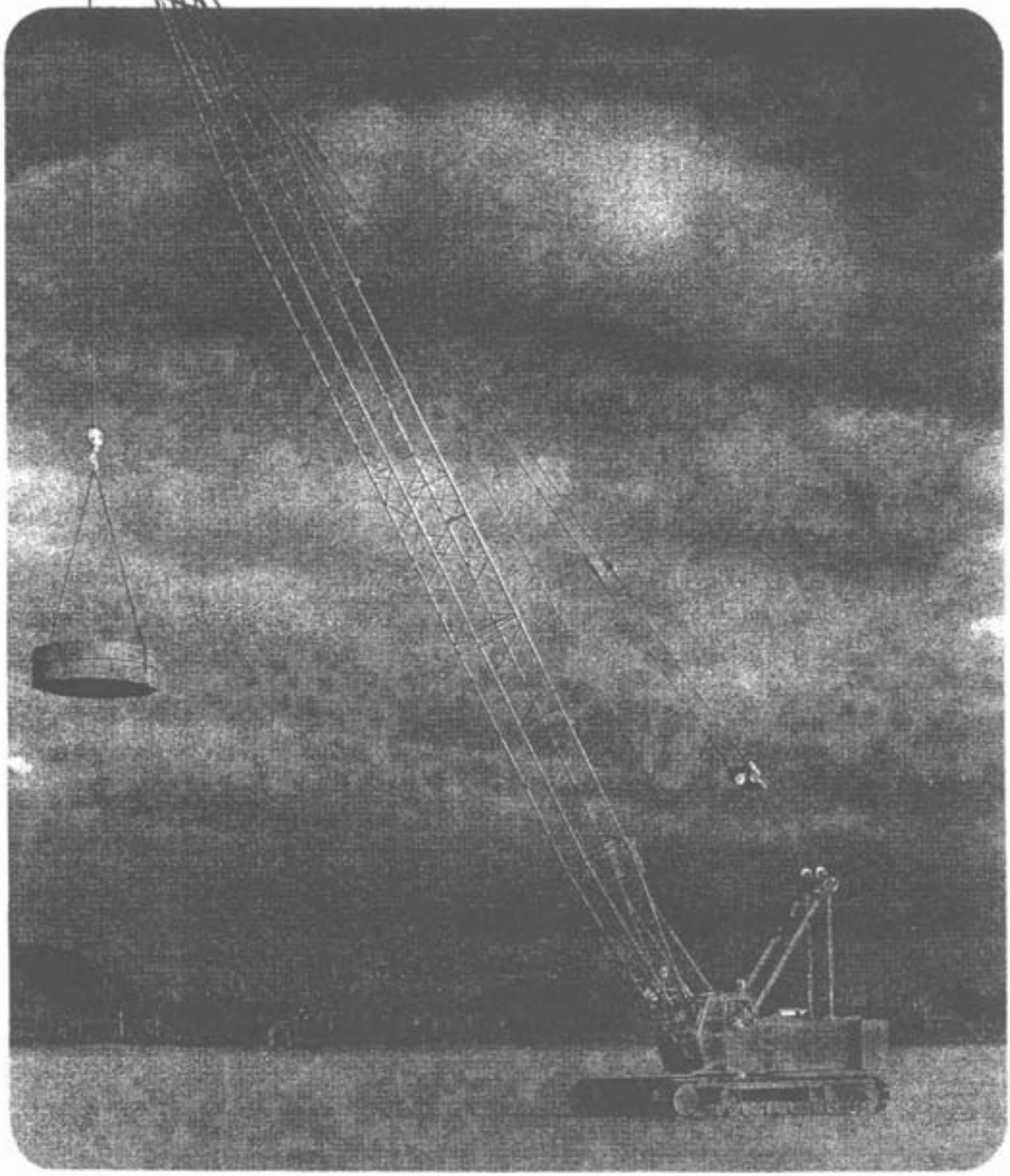
Manitowoc M-80W



88-Ton Liftcrane ■ 20,000-Lb. Clamshell ■ 18,000-Lb. Dragline

LOWERWORKS

CARBODY: Single-piece steel fabrication. Integral turret provides mounting for inner race of turntable bearing. Wings on carbody mate with pockets in crawler frames.

CRAWLER ASSEMBLIES: Two reinforced steel fabrications, each supporting a front idler roller, 12 intermediate rollers, hydraulic drive motor, fully-enclosed travel planetary, crawler tumbler, and tread. Abrasion-resistant steel slide rails along crawler frame top.

FRONT IDLER ROLLER: Double-flanged, 33" (838mm) diameter, fabricated steel roller is mounted on stationary shaft supported at both ends by crawler frame.

INTERMEDIATE ROLLERS: Double-flanged, 12" (305mm) diameter rollers are mounted along underside of crawler frame. Each roller is mounted on a 2¾" (70mm) diameter stationary shaft whose ends are supported by welded frames and held in place by keeper bars.

CRAWLER DRIVE TUMBLER: Planetary driven tumbler transmits drive torque to crawler tread. Tumbler is supported at both ends by crawler frame.

CRAWLER TREADS: 30" (762mm) wide, 49 pads per crawler assembly. Adjacent pads connected by two high-carbon steel pins. Each pad is cast alloy steel with center driving lug.

INDEPENDENT TRAVEL POWER: Two pressure-compensated, variable-displacement hydraulic motors, one driving each crawler. System enables each crawler to be rotated independently in either direction at variable speed.

TURNTABLE BEARING: 66¼" (1.68M) diameter single-row ball bearing bolted to carbody and rotating bed provides circle for swing. Ring gear with machine-cut teeth is integral part of bearing's inner race.

UPPERWORKS

ROTATING BED: Single-piece, welded-steel fabrication with vertical side frames and internal framing provides support for mounting all other upperworks components. Bed rotates on 66¼" (1.68M) diameter turntable bearing. Complete upperworks can be mounted on carbody or truck chassis.

DRUM SHAFTS: Two full-width drums are provided for the main hoist and whip lines. Main hoist drum is 21⅜" (543mm) wide, and has a 19" (483mm) diameter grooved barrel with 37" (940mm) diameter flanges. Whip line drum is 21⅜" (543mm) wide, and has a 23" (584mm) diameter grooved barrel with 37" (940mm) diameter flanges. Each drum is antifriction-bearing mounted on a heat-treated alloy steel shaft that is antifriction-bearing mounted on rotating bed. Each drum shaft is driven independently by a fixed-displacement, low-speed, high-torque, radial-piston motor. Gears are fully enclosed and operate in oil. Clutches are spring-set, air-released, internal-expanding, band type. Service brakes are external-contracting, air-applied, spring-released, band type. Parking brakes are spring-set, air-released. Rated line pulls to 20,000 pounds (9,072kg).

INDEPENDENT SWING: Driven by two fixed-displacement hydraulic motors coupled to planetary reducer. Reducer is splined to swing pinion that engages ring gear on turntable bearing's inner race. Manually-controlled parking brake on one hydraulic motor. Hydraulically-controlled, spring-loaded, gear-segment-type lock engages ring gear for positive locking.

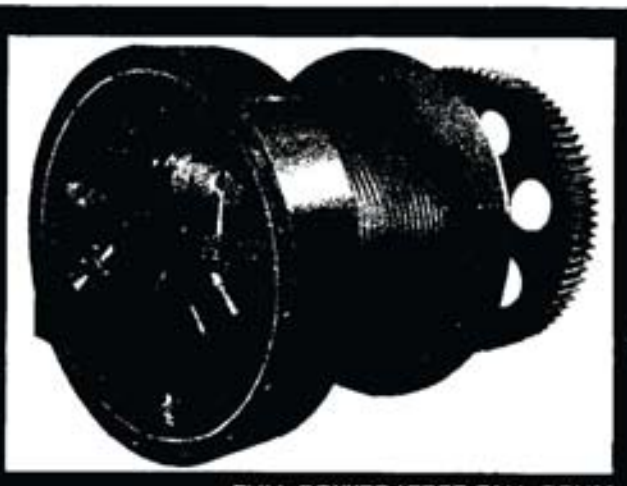
INDEPENDENT BOOM HOIST: Dual drums welded to single shaft antifriction-bearing mounted on rear of rotating bed. Boom hoist drum shaft driven independently by fixed-displacement hydraulic motor coupled to internal brake and planetary reducer. Ratchet and pawl standard.

POWER PLANT ASSEMBLY: Welded steel frame supports engine, radiator, hydraulic pump drive and pumps, fuel tank, and hydraulic reservoir.

POWER TRANSMISSION: Diesel driven, hydrostatic system. Each function driven by its own pump and motor, providing totally independent operation.

POWER LOWERING: An integral function of system. Pump and motor provide hydraulically-powered rotation in either direction, resulting in loads being hoisted and lowered under power for positive control.

FULL-WIDTH TANDEM DRUMS

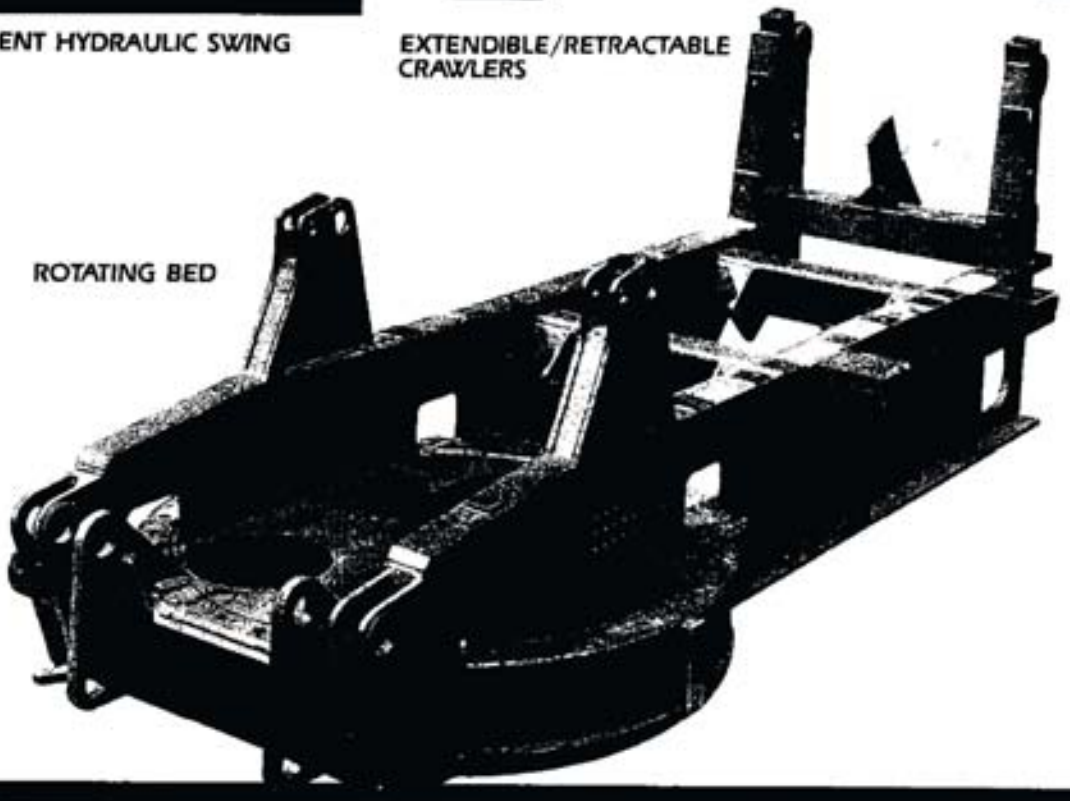


FULL-POWER/FREE-FALL DRUM

INDEPENDENT HYDRAULIC SWING

EXTENDIBLE/RETRACTABLE CRAWLERS

ROTATING BED



FULLY-ENCLOSED UPPERWORKS MACHINERY

WIDE-VIEW OPERATOR'S C

FRONT END ATTACHMENTS

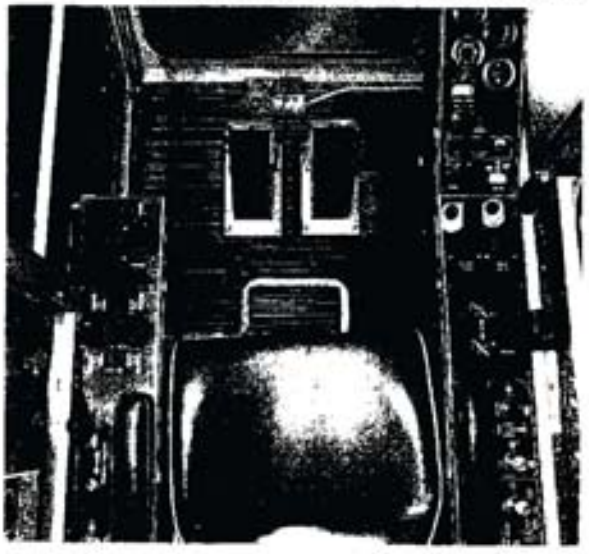
NO. 42 BOOM: 19' (5.79M) butt; 10' (3.05M), 20' (6.10M), and 40' (12.20M) inserts; 21' (6.40M) open throat top. Rectangular box-section design. All-welded construction with tubular chords and lacings. All boom sections are 51" (1.30M) wide x 54½" (1.38M) deep at pin-connected joints. Each insert matched with two 1¼" (32mm) diameter, single-length pendants. Lower boom point equipped with four 20" (508mm) diameter nylon sheaves. Optional, detachable, upper boom point has one 20" (508mm) diameter nylon sheave. All sheaves are antifriction bearing mounted. Basic boom length 40' (12.20M); maximum length 200' (60.95M).

BOOM RIGGING: Single line reeved from boom hoist drums through sheaves on gantry and equalizer forms 10-part rigging. Equalizer is connected to boom point by two 1¼" (32mm) diameter pendants. Rigging used to raise or lower gantry for counterweight installation and removal.

GANTRY AND BACKHITCH: Gantry is fabricated plate with parallel box-section legs. Supported on pins by rotating bed. Link-type backhitch pin-connects to gantry and rotating bed. Nylon gantry sheaves are antifriction-bearing mounted.

EQUALIZER: Fabricated steel frame supports four vertical sheaves and two horizontal sheaves, all made of nylon and antifriction-bearing mounted.

ERGONOMIC CONTROL CONSOLES



FOUR-TRUCK SHIPABILITY

AUTOMATIC BOOM STOP: Boom contacts push rod, stopping boom hoist operation when boom angle reaches 82° from horizontal.

TELESCOPIC BOOM STOP: Hydraulically-cushioned telescoping tubes pinned to boom and rotating bed start cushioning at 75° boom angle and provide positive physical stop at 85° from horizontal. Standard on liftcrane.

WIRE ROPE GUIDE: Two fleeting sheaves bushing-mounted in steel frame on upper side of boom top.

WIRE ROPE ROLLER GUIDES: Optional. Mounted on top of boom inserts. Rollers are induction hardened tubing, antifriction-bearing mounted.

NO. 128 JIB: Optional. 10-ton (9.07-metric ton) maximum capacity. 30' (9.15M) basic length extendible to 40' (12.20M), 50' (15.25M), or 60' (18.30M) with 10' (3.05M) inserts and matching pendants.

Jib offset angle adjustable to 0, 10, or 20 degrees. All-welded construction with tubular chords and lacings. Rectangular box-section 21½" (546mm) wide x 21½" (546mm) deep at pin-connected joints. Jib point has 20" (508mm) OD, nylon sheave, antifriction-bearing mounted. Maximum boom-and-jib combination, 180' (54.86M) + 60' (18.30M).

GENERAL

MACHINERY ENCLOSURES: Steel housings along sides of crane protect engine and hydraulic components. Enclosures swing open to permit access for service. Catwalks and railings, optional.

OPERATOR'S STATION: Fully enclosed and insulated steel module mounted at left front corner of rotating bed on vibration-absorbing rubber cushions. Large, rubber-mounted safety glass windows on all sides and in ceiling provide clear, wide-angle view. Sliding door on left side; large window on right side. Conveniently-located controls. Electric signal horn, heater, windshield wiper, and circulating fan, standard.

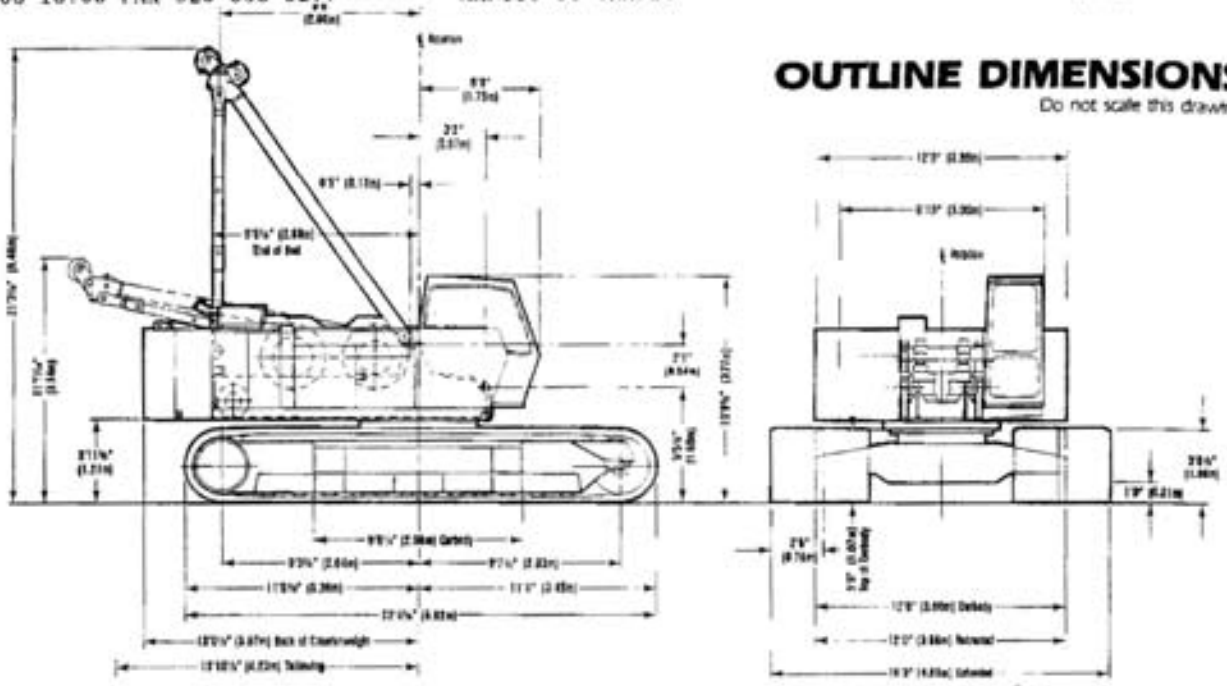
CONTROLS: All functions operated by electric-over-hydraulic controls, with speed directly proportional to control lever movement. First movement of boom hoist and travel controls releases a parking brake; further movement increases speed. Movement of swing control lever immediately regulates power, and free swing exists when lever is in neutral position. Swing parking brake applied by separate switch.

Controls for hoisting drums can be operated in "full-power" (liftcrane) or "free-fall" (excavator) modes as applications require. Operator selects each mode by positioning switch on control console. In "full-power" (liftcrane) mode, drum clutches always remain fully applied and loads are powered down using hydraulic system. In "free-fall" (excavator) mode, drum clutches release automatically when control levers are in neutral position, and all lowering is controlled by pedal-operated service brakes. Additionally, mode-selector switch offers a "clamshell" setting that permits both drums to be controlled simultaneously with one lever. In any mode, hoisting speeds can be doubled by engaging selector switches that divert flow from travel pumps to drum motors.

SWING SPEED: Variable, 3.4 RPM maximum.

TRAVEL SPEED: Variable, 1.0 MPH (1.61 KPH) maximum.

GRADEABILITY: 30%.



OUTLINE DIMENSIONS

Do not scale this drawing

WEIGHTS

	Pounds	Kilograms
LIFTCRANE, complete with 40' (12.20M) No. 42 boom, gantry and backhitch, boom hoist rigging and pendants, front and rear drums with load lines, swing machinery, telescopic boom stop, 22'4" (6.81M) long crawlers, 30" (762mm) wide treads, counterweight, hook and weight ball, and 88-ton (80MT) capacity hook block	149,255	67,701
REMOVABLE COUNTERWEIGHT, (2-piece)		
Inner	28,500	12,927
Outer	24,800	11,249
Total	53,300	24,176

	Pounds	Kilograms
CARBODY AND UPPERWORKS, complete with operator's cab, front and rear drums with load lines, boom hoist wire rope, power plant, gantry, backhitch, equalizer, boom butt, and telescopic boom stops	57,960	26,290
CRAWLER ASSEMBLIES (2), with 30" (762mm) wide treads, each assembly 16,625 lbs. (7,541 kgs.)	33,250	15,082
BOOM NO. 42:		
Butt, 19' (5.79M)	1,275	578
Top, 21' (6.40M) with lower point and wire rope guide	1,695	769
Inserts:		
10' (3.05M)	565	256
20' (6.10M)	1,040	472
40' (12.20M)	1,915	869

POWER PLANTS

	Model	Cylinder	Bore	Stroke	Cubic Inch Displacement	Net HP @ RPM (at flywheel)
BASIC	Detroit Diesel 8V-8.2T	8	4.25" (108mm)	4.41" (112mm)	500.9 (8,208cc)	230 @ 2,600
OPTION	Cummins 6 CTA 8.3	6	4.49" (114mm)	5.31" (135mm)	504.6 (8,270cc)	230 @ 2,200

DRUMS AND LAGGINGS

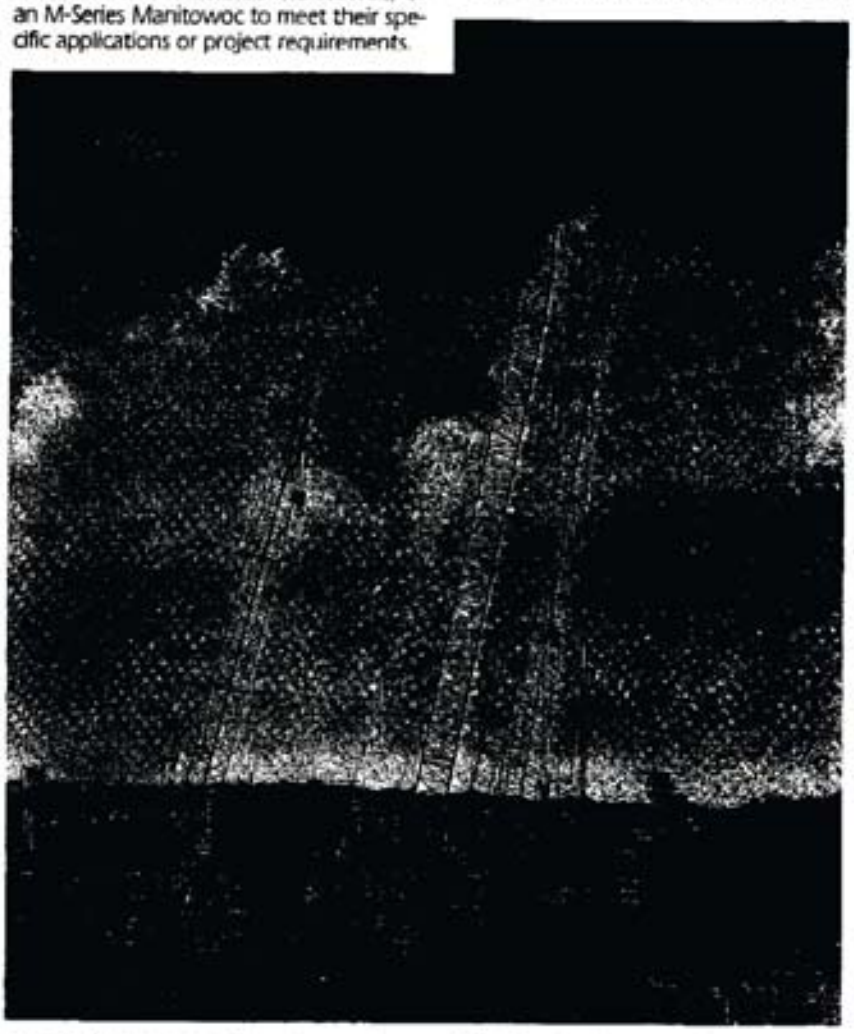
Application	Drum	Drum Diameter	Drum Width	Type of Drum Or Lagging	Wire Rope Size	Spooling Capacity		
						1st Layer	Layers	Maximum
LIFTCRANE								
Hoist	Front	19" (483mm)	21⅜" (543mm)	Grooved Drum	⅞" (22.2mm)	115' (35.1M)	7	1,013' (308.8M)
Whip	Rear	23" (584mm)	21⅜" (543mm)	Grooved Drum	⅞" (22.2mm)	138' (42.1M)	5	788' (240.2M)
Whip (Optional)	Rear	29" (737mm)	21⅜" (543mm)	Grooved Lag.	⅞" (22.2mm)	172' (52.5M)	2	354' (107.9M)
CLAMSHELL								
Closing	Front	19" (483mm)	21⅜" (543mm)	Grooved Drum	⅞" (22.2mm)	115' (35.1M)	—	— —
Holding	Rear	23" (584mm)	21⅜" (543mm)	Grooved Drum	⅞" (22.2mm)	138' (42.1M)	—	— —
DRAGLINE								
Drag	Front	19" (483mm)	21⅜" (543mm)	Grooved Drum	⅞" (22.2mm)	90' (27.4M)[1]	—	— —
Hoist	Rear	23" (584mm)	21⅜" (543mm)	Grooved Drum	⅞" (22.2mm)	138' (42.1M)	—	— —

[1]Spooling capacity limited by fleeting.

NEW MODELS ... MORE CHOICES ... from MANITOWOC!

To complement its field-proven line-up of ViCON®-powered liftcranes and excavators, Manitowoc has recently introduced its new M-Series cranes. Now, contractors worldwide can select a 'traditional' Manitowoc, a remanufactured Manitowoc, or an M-Series Manitowoc to meet their specific applications or project requirements.

Right: In addition to the 88-ton capacity M-80W, Manitowoc's M-Series product line includes the 55-ton capacity M-50W. In the coming months, Manitowoc will also introduce other M-Series cranes, including 70-ton, 110-ton, and 300-ton units.



Above: Developed as a quality, cost-attractive alternative, every remanufactured Manitowoc is rebuilt to our original equipment specifications, is identified with a new serial number and model year designation, is covered by a 12-month, 2,000-hour warranty, and is backed by a worldwide parts and service network.

Right: Ranging in capacity from 100 to 1,000 tons, Manitowoc's 'traditional' crawler cranes, exemplified by two 4100W's and a 4000W, are recognized as industry standards for versatility, dependability, and lifting performance.

Manitowoc **M-Series**

...the new generation of liftcrane performance!

MANITOWOC ENGINEERING CO.
500 South 16th Street, Manitowoc, WI 54221 USA
Telephone: 414-684-6621 ■ Telefax: 414-683-6277

Form 6375 MO/20M Litho in U.S.A.

MANITOWOC ENGINEERING CO.

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

LIFTCRANE CAPACITIES — M-80W

MEETS ANSI B30.5 REQUIREMENTS

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

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. 126	BM. LGTH.	JIB NO. 126	JIB LGTH.	JIB NO. 126
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
40	12	77.8	44.5	176,400*
	13	76.3	44.2	162,600*
	14	74.8	44.0	151,000*
	15	73.3	43.7	140,900*
	16	71.8	43.3	132,100*
	17	70.3	43.0	124,400*
	18	68.8	42.6	115,000
	19	67.2	42.2	105,100
	20	65.6	41.7	96,800
	22	62.4	40.7	83,500
	24	59.1	39.6	73,300
	26	55.7	38.3	65,300
	28	52.1	36.8	58,900
	30	48.4	35.1	53,500
	32	44.4	33.2	49,000
	34	40.1	30.9	45,200
	36	35.4	28.3	41,900
	38	30.0	25.1	39,000
	40	23.5	21.1	36,500

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY POUNDS
50	12	80.2	54.7	153,600*
	13	79.1	54.5	149,400*
	14	77.9	54.3	145,200*
	15	76.7	54.0	140,900*
	16	75.5	53.8	132,100*
	17	74.4	53.5	124,400*
	18	73.2	53.2	114,800
	19	72.0	52.9	105,000
	20	70.7	52.5	96,700
	22	68.3	51.8	83,300
	24	65.8	50.9	73,200
	26	63.2	49.9	65,200
	28	60.6	48.9	58,700
	30	58.0	47.6	53,300
	32	55.2	46.3	48,800
	34	52.3	44.8	45,000
	36	49.4	43.2	41,700
	38	46.3	41.3	38,800
	40	43.0	39.3	36,300
	45	33.6	32.8	31,200
	50	20.9	23.0	27,200

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY POUNDS
60	12	81.9	64.8	145,400*
	13	80.9	64.6	140,900*
	14	79.9	64.5	136,800*
	15	79.0	64.3	132,900*
	16	78.0	64.1	129,300*
	17	77.0	63.8	124,400*
	18	76.0	63.6	114,700
	19	75.0	63.3	104,800
	20	74.1	63.0	96,500
	22	72.1	62.4	83,200
	24	70.0	61.7	73,000
	26	68.0	60.9	65,000
	28	65.9	60.1	58,500
	30	63.8	59.1	53,100
	32	61.6	58.1	48,600
	34	59.4	56.9	44,800
	36	57.2	55.7	41,500
	38	54.9	54.3	38,600
	40	52.5	52.8	36,100
	45	46.1	48.5	30,900
	50	39.0	43.0	27,000
	55	30.6	35.7	23,900
	60	19.0	24.7	21,300

MANITOWOC ENGINEERING CO.

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

LIFTCRANE CAPACITIES — M-80W

MEETS ANSI B30.5 REQUIREMENTS

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
70	14	81.4	74.6	128,600*
	15	80.6	74.5	124,900*
	16	79.7	74.3	121,300*
	17	78.9	74.1	118,100*
	18	78.1	73.9	114,600
	19	77.2	73.6	104,700
	20	76.4	73.4	96,400
	22	74.7	72.9	83,000
	24	73.0	72.3	72,800
	26	71.3	71.6	64,800
	28	69.5	70.9	58,300
	30	67.8	70.1	53,000
	32	66.0	69.2	48,500
	34	64.2	68.3	44,600
	36	62.3	67.3	41,300
	38	60.5	66.2	38,400
	40	58.6	65.0	35,900
	45	53.6	61.6	30,800
	50	48.3	57.5	26,800
	55	42.5	52.5	23,700
	60	36.0	46.3	21,200
	65	28.3	38.3	19,100
	70	17.6	26.3	17,300
80	15	81.8	84.6	117,500*
	16	81.0	84.4	114,200*
	17	80.3	84.3	111,100*
	18	79.6	84.1	108,100*
	19	78.8	83.9	104,600
	20	78.1	83.7	96,200
	22	76.6	83.2	82,800
	24	75.2	82.7	72,600
	26	73.7	82.1	64,600
	28	72.2	81.5	58,100
	30	70.7	80.8	52,700
	32	69.1	80.1	48,200
	34	67.6	79.3	44,400
	36	66.0	78.4	41,100
	38	64.4	77.5	38,200
	40	62.8	76.5	35,700
	45	58.7	73.6	30,500
	50	54.4	70.3	26,600
	55	49.9	66.4	23,400
	60	45.0	61.8	20,900
	65	39.6	56.2	18,800
	70	33.6	49.4	17,000
	75	26.4	40.7	15,500
	80	16.4	27.7	14,200

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY POUNDS
90	17	81.4	94.4	104,500*
	18	80.7	94.2	101,800*
	19	80.1	94.1	99,100*
	20	79.5	93.9	96,100
	22	78.2	93.5	82,700
	24	76.8	93.0	72,500
	26	75.5	92.5	64,400
	28	74.2	92.0	57,900
	30	72.9	91.4	52,600
	32	71.5	90.7	48,000
	34	70.2	90.0	44,200
	36	68.8	89.3	40,900
	38	67.5	88.4	38,000
	40	66.1	87.6	35,500
	45	62.5	85.4	30,300
	50	58.9	82.3	26,400
	55	55.1	79.0	23,200
	60	51.1	75.2	20,700
	65	46.8	70.9	18,600
	70	42.3	65.7	16,800
	75	37.3	59.7	15,300
	80	31.6	52.3	14,000
	85	24.8	42.9	12,900
	90	15.5	29.1	11,900
100	18	81.7	104.4	97,600*
	19	81.1	104.2	95,100*
	20	80.5	104.0	92,700*
	22	79.4	103.7	82,600
	24	78.2	103.3	72,400
	26	77.0	102.8	64,300
	28	75.8	102.3	57,800
	30	74.6	101.8	52,500
	32	73.5	101.2	47,900
	34	72.3	100.6	44,100
	36	71.0	99.9	40,800
	38	69.8	99.2	37,900
	40	68.6	98.4	35,400
	45	65.5	96.3	30,200
	50	62.3	93.8	26,300
	55	59.0	91.0	23,100
	60	55.6	87.7	20,600
	65	52.0	84.1	18,500
	70	48.3	79.8	16,700
	75	44.3	75.0	15,200
	80	40.0	69.5	13,900
	85	35.3	62.9	12,800
	90	29.9	55.1	11,800
	95	23.5	45.0	10,900
110	19	81.9	114.3	88,500*
	20	81.4	114.2	87,200*
	22	80.3	113.8	82,500
	24	79.3	113.5	72,200
	26	78.2	113.1	64,200
	28	77.1	112.6	57,700
	30	76.1	112.1	52,300
	32	75.0	111.6	47,800
	34	73.9	111.0	43,900
	36	72.8	110.4	40,600
	38	71.7	109.8	37,700
	40	70.6	109.1	35,200
	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

BOOM LGTH. FEET	OPER. RAD. FEET	BOOM ANG. DEG.	BOOM POINT ELEV. FEET	CAPACITY POUNDS
110	70	52.8	92.8	16,500
	75	49.4	88.8	15,000
	80	45.9	84.2	13,700
	85	42.1	79.0	12,600
	90	38.1	73.0	11,600
	95	33.6	66.0	10,700
	100	28.5	57.6	9,900
	105	22.4	47.1	9,200
120	22	81.1	124.0	77,000*
	24	80.2	123.6	72,000
	26	79.2	123.3	64,000
	28	78.2	122.9	57,400
	30	77.3	122.4	52,100
	32	76.3	121.9	47,500
	34	75.3	121.4	43,700
	36	74.3	120.9	40,400
	38	73.3	120.3	37,500
	40	72.3	119.7	35,000
	45	69.8	117.9	29,800
	50	67.2	115.9	25,800
	55	64.6	113.7	22,700
	60	61.9	111.1	20,100
	65	59.2	108.3	18,000
	70	56.3	105.1	16,300
	75	53.4	101.6	14,700
	80	50.4	97.6	13,400
	85	47.2	93.2	12,300
	90	43.8	88.3	11,300
	95	40.2	82.7	10,400
	100	36.4	76.3	9,600
	105	32.1	68.9	8,900
	110	27.3	60.1	8,300
	115	21.4	49.0	7,700
130	22	81.8	134.1	70,600*
	24	80.9	133.8	68,900*
	26	80.0	133.4	63,800
	28	79.1	133.1	57,300
	30	78.2	132.7	51,900
	32	77.3	132.2	47,300
	34	76.4	131.7	43,500
	36	75.5	131.2	40,200
	38	74.6	130.7	37,300
	40	73.7	130.1	34,700
	45	71.4	128.5	29,600
	50	69.0	126.7	25,600
	55	66.7	124.7	22,500
	60	64.2	122.4	19,900
	65	61.8	119.8	17,800
	70	59.2	117.0	16,000
	75	56.6	113.8	14,500
	80	53.9	110.3	13,200
	85	51.1	106.5	12,100
	90	48.3	102.2	11,100
	95	45.2	97.5	10,200
	100	42.0	92.2	9,400
	105	38.6	86.3	8,700
	110	34.9	79.5	8,100
	115	30.8	71.7	7,500
	120	26.2	62.5	6,900
	125	20.6	50.8	6,500

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.

MANITOWOC ENGINEERING CO.

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

LIFTCRANE CAPACITIES — M-80W

MEETS ANSI B30.5 REQUIREMENTS

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
140	24	81.6	143.9	63,300*
	26	80.8	143.6	61,700*
	28	79.9	143.2	57,100
	30	79.1	142.9	51,700
	32	78.3	142.5	47,200
	34	77.4	142.0	43,300
	36	76.6	141.6	40,000
	38	75.7	141.1	37,100
	40	74.9	140.5	34,600
	45	72.8	139.1	29,400
	50	70.6	137.4	25,400
	55	68.4	135.5	22,300
	60	66.2	133.4	19,800
	65	63.9	131.1	17,600
	70	61.6	128.5	15,900
	75	59.3	125.6	14,400
	80	56.9	122.5	13,100
	85	54.4	119.1	11,900
	90	51.8	115.3	10,900
	95	49.2	111.1	10,000
	100	46.4	106.6	9,200
	105	43.5	101.8	8,500
	110	40.4	95.9	7,900
	115	37.1	89.7	7,300
	120	33.6	82.6	6,800
	125	29.7	74.4	6,300
	130	25.2	64.7	5,800
	135	19.8	52.6	5,400
150	26	81.4	153.7	53,200*
	28	80.6	153.4	52,800*
	30	79.8	153.0	51,500
	32	79.1	152.7	47,000
	34	78.3	152.3	43,200
	36	77.5	151.8	39,800
	38	76.7	151.4	36,900
	40	75.9	150.9	34,400
	45	73.9	149.5	29,200
	50	71.9	148.0	25,200
	55	69.9	146.2	22,100
	60	67.9	144.3	19,500
	65	65.8	142.1	17,400
	70	63.7	139.7	15,700
	75	61.5	137.1	14,100
	80	59.3	134.3	12,800
	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
160	26	81.9	163.8	46,000*
	28	81.2	163.5	45,700*
	30	80.5	163.2	45,400*
	32	79.7	162.8	45,000*
	34	79.0	162.5	42,900
	36	78.3	162.1	39,600
	38	77.6	161.6	36,700
	40	76.8	161.2	34,200
	45	75.0	159.9	29,000
	50	73.1	158.5	25,000
	55	71.2	156.8	21,900
160	60	69.3	155.0	19,300
	65	67.4	153.0	17,200
	70	65.4	150.8	15,400
	75	63.5	148.4	13,900
	80	61.4	145.8	12,600
	85	59.4	142.9	11,400
	90	57.3	139.8	10,400
	95	55.1	136.5	9,600
	100	52.9	132.8	8,800
	105	50.6	128.9	8,100
	110	48.2	124.6	7,400
	115	45.8	119.9	6,800
	120	43.2	114.8	6,300
	125	40.5	109.2	5,800
	130	37.7	103.0	5,400
	135	34.6	96.1	5,000
	140	31.3	88.4	4,600
	145	27.7	79.5	4,200
	150	23.5	69.0	3,900
	155	18.5	56.9	3,600
170	28	81.7	173.6	39,800*
	30	81.0	173.3	39,500*
	32	80.4	173.0	39,200*
	34	79.7	172.6	38,800*
	36	79.0	172.3	38,500*
	38	78.3	171.9	36,500
	40	77.6	171.4	34,000
	45	75.9	170.2	28,800
	50	74.1	168.9	24,800
	55	72.4	167.4	21,600
	60	70.6	165.7	19,100
	65	68.8	163.8	17,000
	70	67.0	161.8	15,200
	75	65.1	159.5	13,700
	80	63.3	157.1	12,400
	85	61.3	154.5	11,200
	90	59.4	151.6	10,200
	95	57.4	148.5	9,300
	100	55.4	145.2	8,500
	105	53.3	141.6	7,800
	110	51.2	137.7	7,200
	115	49.0	133.5	6,600
	120	46.7	128.9	6,100
	125	44.3	124.0	5,600
	130	41.9	118.7	5,100
	135	39.3	112.8	4,700
	140	36.5	106.3	4,300
	145	33.6	99.2	4,000
	150	30.4	91.1	3,700
	155	26.9	81.9	3,400
	160	22.8	71.1	3,100
180	30	81.5	183.4	36,100*
	32	80.9	183.1	35,800*
	34	80.3	182.8	35,400*
	36	79.6	182.4	35,100*
	38	79.0	182.1	34,800*
	40	78.3	181.6	33,800
	45	76.7	180.5	28,600
	50	75.0	179.3	24,600
	55	73.4	177.8	21,500
	60	71.7	176.3	18,900
	65	70.0	174.5	16,800
	70	68.3	172.6	15,000
	75	66.6	170.5	13,500
	80	64.8	168.2	12,200
	85	63.1	165.8	11,000
	90	61.3	163.1	10,000
	95	59.4	160.3	9,200
180	100	57.6	157.2	8,400
	105	55.7	153.9	7,600
	110	53.7	150.3	7,000
	115	51.7	146.5	6,400
	120	49.6	142.4	5,900
	125	47.5	138.0	5,400
	130	45.3	133.2	4,900
	135	43.0	128.0	4,500
	140	40.6	122.4	4,200
	145	38.1	116.3	3,800
	150	35.5	109.6	3,500
	155	32.6	102.1	3,200
190	30	82.0	193.6	31,600*
	32	81.4	193.3	31,300*
	34	80.8	192.9	31,000*
	36	80.2	192.6	30,700*
	38	79.5	192.2	30,500*
	40	78.9	191.9	30,200*
	45	77.4	190.8	28,400
	50	75.8	189.6	24,400
	55	74.3	188.3	21,200
	60	72.7	186.8	18,700
	65	71.1	185.1	16,600
	70	69.5	183.3	14,800
	75	67.9	181.4	13,300
	80	66.3	179.2	12,000
	85	64.6	176.9	10,800
	90	62.9	174.5	9,800
	95	61.2	171.8	8,900
	100	59.5	168.9	8,100
	105	57.7	165.9	7,400
	110	55.9	162.6	6,800
	115	54.1	159.1	6,200
	120	52.2	155.3	5,700
	125	50.2	151.3	5,200
	130	48.2	146.9	4,700
	135	46.2	142.3	4,300
	140	44.0	137.3	3,900
	145	41.8	131.9	3,600
	150	39.5	126.0	3,200
200	32	81.8	203.4	27,000*
	34	81.2	203.1	26,900*
	36	80.7	202.7	26,800*
	38	80.1	202.4	26,700*
	40	79.5	202.0	26,400*
	45	78.0	201.0	25,700*
	50	76.6	199.9	24,200
	55	75.1	198.6	21,000
	60	73.6	197.2	18,500
	65	72.1	195.7	16,300
	70	70.6	194.0	14,600
	75	69.1	192.1	13,000
	80	67.5	190.1	11,700
	85	66.0	188.0	10,600
	90	64.4	185.6	9,600
	95	62.8	183.1	8,700
	100	61.1	180.5	7,900
	105	59.5	177.6	7,200
	110	57.8	174.5	6,500
	115	56.1	171.3	5,900
	120	54.4	167.8	5,400
	125	52.6	164.1	4,900
	130	50.7	160.1	4,500
	135	48.9	155.9	4,100
	140	46.9	151.3	3,700
	145	44.9	146.5	3,300
	150	42.9	141.3	3,000

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.