



**Manitowoc**

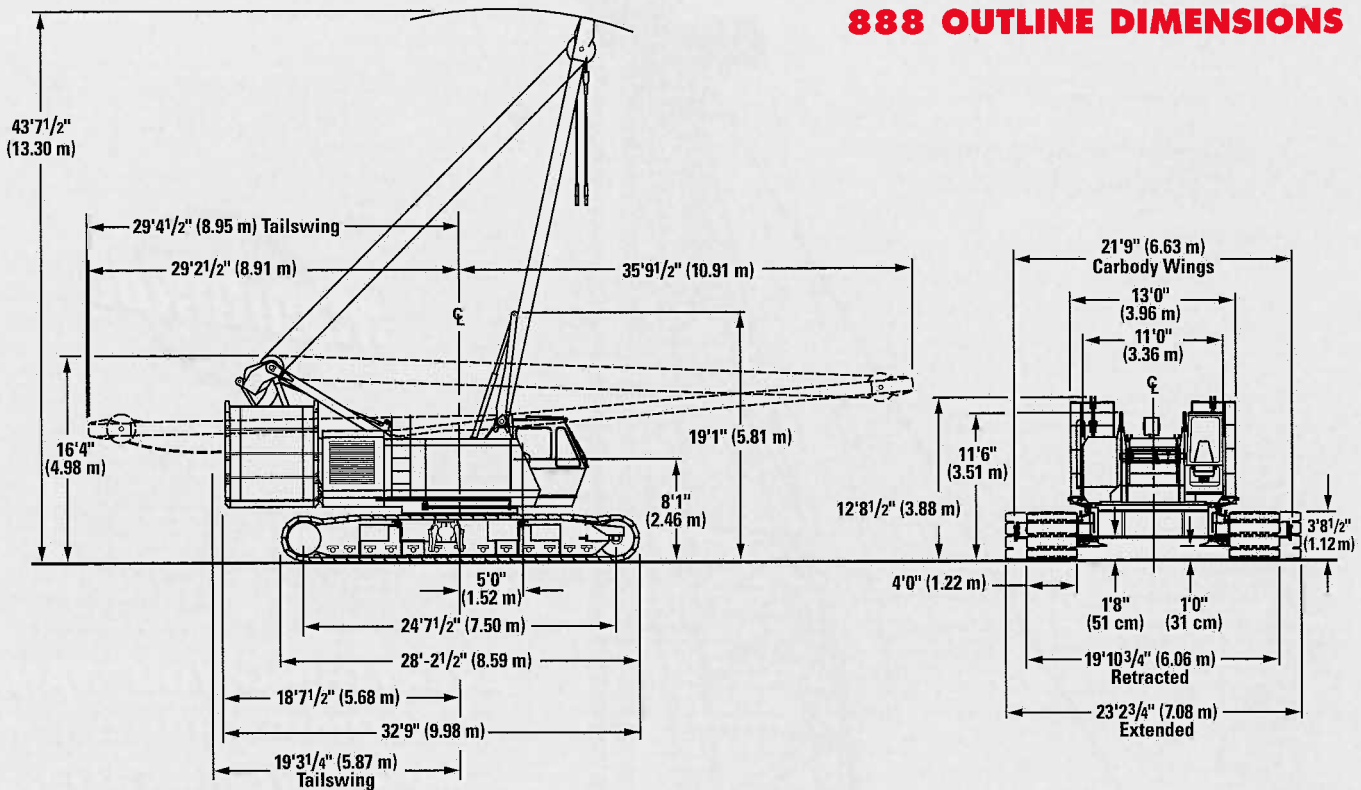
**888**

**EVERYTHING YOU WANT  
FROM A CRANE...  
CAPACITY, MOBILITY,  
& RELIABILITY**

**230-Ton (209-mton) Liftcrane  
32,000 Lb. (14,515 Kg) Clamshell  
20,000 Lb. (9,072 Kg) Dragline**



## 888 OUTLINE DIMENSIONS



### UPPERWORKS

**ROTATING BED:** High-strength fabricated steel rotating bed is mounted on 108" (2.76 m) diameter turntable bearing.

**HOIST DRUMS:** Two full-width hoist drums are standard. Both drums are 37" (94 cm) wide and 19 1/2" (49.5 cm) in diameter. Each is antifriction bearing mounted and driven independently by a variable-displacement hydraulic motor coupled to a planetary reduction. External contracting brakes mounted to the drum shafts are air applied and equipped with spring-set air-released parking brakes. A bi-directional redundant brake mounted between the hydraulic motor and planetary drive is standard for each hoist, and each drum is equipped with ratchet and pawl. A freefall clutch, laggings, and other options are available.

**BOOM HOIST:** Independent boom hoist is powered by a variable-displacement hydraulic motor coupled to a planetary reduction. It is equipped with a bi-directional brake and a ratchet-and-pawl. The boom hoist drum is grooved and measures 13 3/4" (34.6 cm) wide by 18 3/4" (47.6 cm) in diameter.

**SWING SYSTEM:** Independent swing is powered by a fixed-displacement hydraulic motor coupled to an internal brake and planetary reduction. System includes swing lock.

**OPERATOR'S STATION:** Fully enclosed and insulated steel module mounted to the left front corner of the rotating bed. Module is equipped with sliding door, large safety glass windows on all sides and in roof. Standard equipment includes electric horn, cab space heater, dome light, fire extinguisher, air-circulating fan, and windshield wipers for upper front window, lower front window, and roof window.

**ENGINE:** Cummins M11 diesel engine rated 330 HP (246 kW) at 2,100 RPM provides independent power for all machine operations through the multi-hydraulic-pump transmission. Power system includes engine block heater (120V), ether starting aid, transmission disconnect clutch, high-silencing muffler, alcohol injector in air line, hydraulic oil cooler, radiator, and fan.

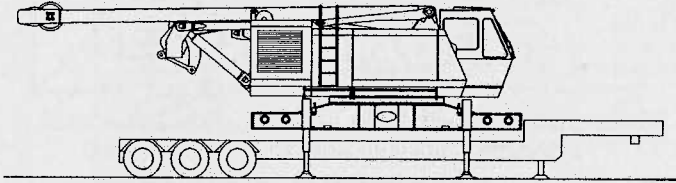
**CONTROLS:** Modulating electronic-over-hydraulic controls provide infinite speed response directly proportional to control lever movement. Controls include Manitowoc's exclusive EPIC® control system providing microprocessor driven control logic, pump control, on-board diagnostics and service information. Block up limit control and drum-rotation indicator are standard for hoist and whip falls.

### LOWERWORKS

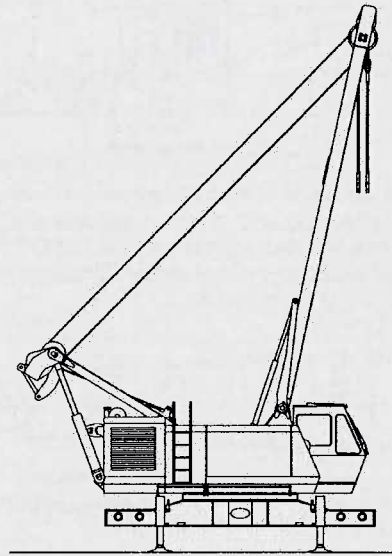
**CARBODY:** Connects rotating bed to crawlers. High-strength fabricated steel assembly with patented FACT™ connection system for fast removal of crawler assemblies. Optional self-assembly system includes four hydraulic jacks that raise entire upperworks-and-carbody unit off the transport trailer. Hydraulic jacks support this unit during crawler installation and removal.

**CRAWLERS:** Crawlers are 28'2 1/2" (8.59 m) long steel fabrication with 48" (1.22 m) wide cast steel crawler tread and sealed low-maintenance intermediate rollers. Each crawler is powered independently by a variable-displacement hydraulic motor. Crawlers provide ample tractive effort to counter rotate with full rated lifter capacities. Each crawler includes two hydraulically powered pins for fast installation and removal from carbody.

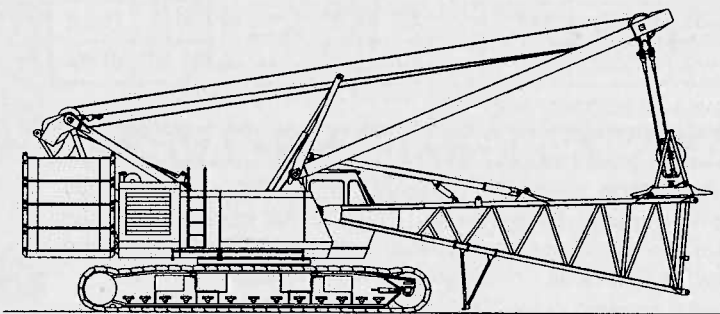
## 888 SELF-ASSEMBLY



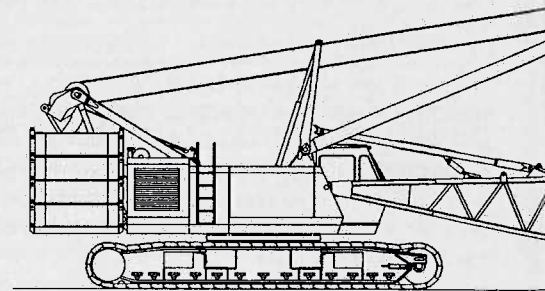
**1** The main shipping module, including carbody, upperworks, gantry, mast, and boom-hoist reeving, arrives as a unit. Optional hydraulic jacks mounted on the carbody raise the unit off its transport trailer.

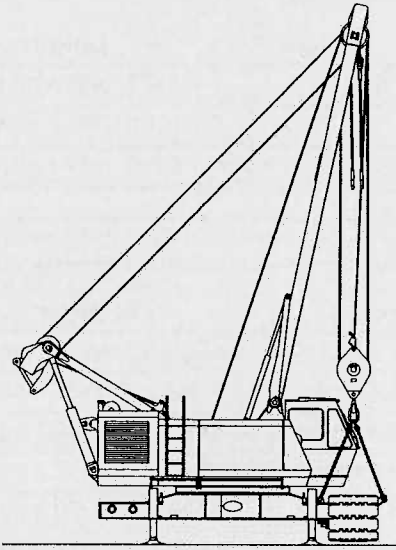


**2** Hydraulic cylinders raise the gantry to working position and lift the mast to vertical. The boom hoist rigging then lowers the mast so it can be rigged with the set-up load block. Wire rope from one of the hoist drums is reeved through sheaves in the mast to rig the block.



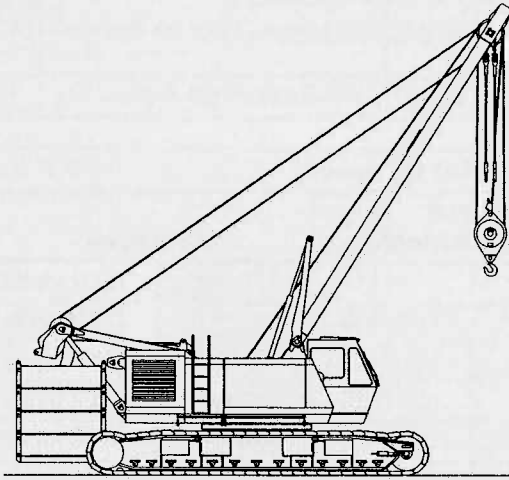
**5** The mast is used to lay out boom sections and install the boom butt. Power-activated pins simplify installation of the butt.





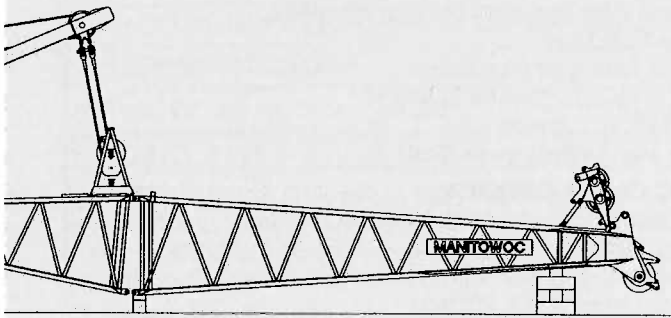
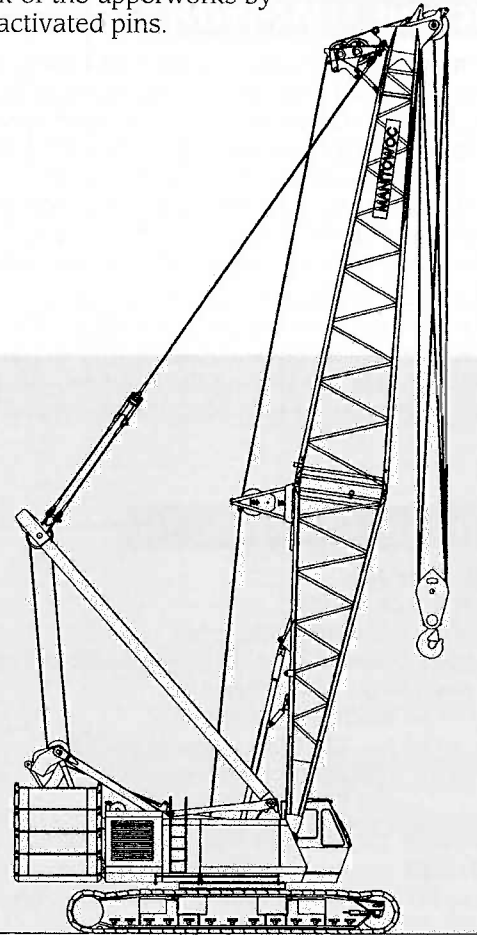
**3**

The mast is used to install the crawlers, handle boom sections, stack the counterweights, and lift other components. Crawlers attach using FACT alignment surfaces and powered pins.



**4**

The gantry is lowered and pinned to the assembled counterweight. Hydraulic cylinders raise the gantry and counterweight to working position. The counterweight is then connected to the back of the upperworks by power-activated pins.



**6**

Boom inserts and top are pinned to the boom butt. Boom-support pendants are pinned to the mast and boom top. Main and auxiliary load lines are reeved.

**7**

The assembled 888 booms up and is ready to work.



## PERFORMANCE DATA

Wire Rope Specifications					
Application	Dia.	Description	Breaking Strength	Weight	Length
Lift	26 mm	2160 Grade, Rotation Resistant	147,500 lb (657 kN)	2.13 lb/ft (3.17 kg/m)	1,625' (495.3 m) Hoist 1,010' (307.8 m) Whip
Boom Hoist	22 mm	1960 Grade, Right Regular Lay	97,000 lb (431 kN)	1.46 lb/ft (2.17 kg/m)	1,060' (323.1 m)

Single Line Pull vs. Speed*							
Line Pull (Infinitely Variable)		1st Layer		4th Layer		7th Layer	
0 lb	(0 kN)	272 fpm	(83.0 mpm)	351 fpm	(107.0 mpm)	430 fpm	(131.1 mpm)
5,000 lb	(22.2 kN)	261 fpm	(79.6 mpm)	333 fpm	(101.5 mpm)	404 fpm	(123.1 mpm)
10,000 lb	(44.5 kN)	251 fpm	(76.5 mpm)	316 fpm	(96.3 mpm)	378 fpm	(115.2 mpm)
15,000 lb	(66.7 kN)	240 fpm	(73.2 mpm)	298 fpm	(90.8 mpm)	319 fpm	(97.2 mpm)
20,000 lb	(89.0 kN)	229 fpm	(69.8 mpm)	245 fpm	(74.7 mpm)	260 fpm	(79.2 mpm)
25,000 lb	(111.2 kN)	194 fpm	(59.1 mpm)	209 fpm	(63.7 mpm)	225 fpm	(68.6 mpm)
29,500 lb	(131.2 kN)	172 fpm	(52.4 mpm)	188 fpm	(53.3 mpm)	203 fpm	(61.9 mpm)

\*Based on 1 9/16" (49.5 cm) diameter smooth drum.

**SWING SPEED:** 2.0 RPM.

**GRADEABILITY:** 30%

**TRAVEL SPEED:** 1.0 MPH (1.61 KPH.)

**BOOM HOIST SPEED:** 290' (88.4 m) boom, 0° to 82°, 2 minutes, 50 seconds.

### LIFTCRANE ATTACHMENT

**BASIC BOOM:** The liftcrane is equipped with 70' (21.34 m) No. 22EL basic boom consisting of 30' (9.14 m) butt and 40' (12.19 m) No. 22L top with seven 30" (76.2 cm) diameter sheaves (eighth sheave optional). Includes rope guides, boom-hoist wire rope, boom-angle indicator, and hook and weight ball. Boom inserts available in 10' (3.05 m), 20' (6.10 m), and 40' (12.19 m) lengths. Powered boom-hinge pins are standard.

**MAST:** The 32' (9.75 m) long moving mast connects the boom-hoist reeving to the boom pendants. The mast facilitates self assembly and disassembly of the Model 888. It is capable of handling the crawlers, stacking the counterweights, and assembling the boom and jib.

**GANTRY:** Gantry includes hydraulic gantry-raising cylinders capable of lifting the entire upperworks counterweight for self-removal and installation.

**BOOM STOP:** Air-cushioned physical boom stop and automatic boom stop.

**COUNTERWEIGHT:** The 8-piece counterweight assembly for the 888 Series-1 weighs 144,100 lb (65,360 kg). It consists of a counterweight tray 21,050 lb (9,548 kg), a center counterweight 18,000 lb (8,165 kg), and six upper side counterweights 17,500 (7,938 kg) each. The Series-2 counterweight option includes two additional upper side counterweights 17,500 lb (7,938 kg) each and two carbody counterweights 22,000 lb (9,979 kg) each, for a total counterweight of 223,100 lb (101,200 kg).

### OPTIONAL EQUIPMENT

#### BOOM AND JIB:

##### Boom No. 22E or 22EL

- 10' (3.05 m) Insert with pendants
- 10' (3.05 m) Insert with pendants (used with auxiliary drum)
- 20' (6.10 m) Insert with pendants
- 40' (12.19 m) Insert with pendants
- 40' (12.19 m) No. 22C Open-throat boom top
- 30' (9.14 m) Tapered insert with pendants  
(used with light tapered top)
- 50' (15.24 m) Light tapered top

##### Jib No. 123

- 30' (9.14 m) Jib with mounting parts
- 10' (3.05 m) Insert with pendants

##### Jib No. 134

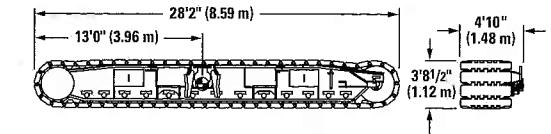
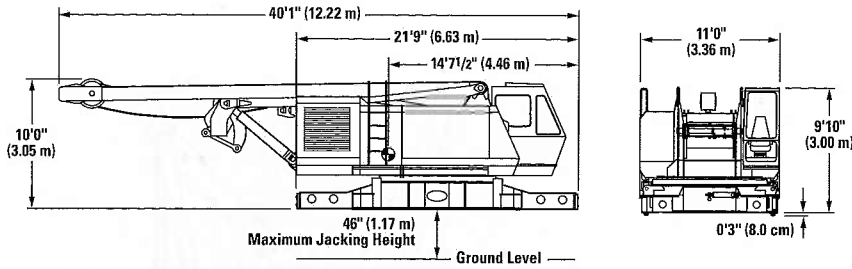
- 30' (9.14 m) Jib with mounting parts
- 10' (3.05 m) Insert with pendants
- 20' (6.10 m) Insert with pendants

#### ATTACHMENTS:

- Load blocks
- Single-sheave upper boom point (whipline)
- Series-2 package
- No. 135 luffing-jib attachment
- No. 138 jib extension for luffing-jib
- RINGER® attachment
- Other attachments on request

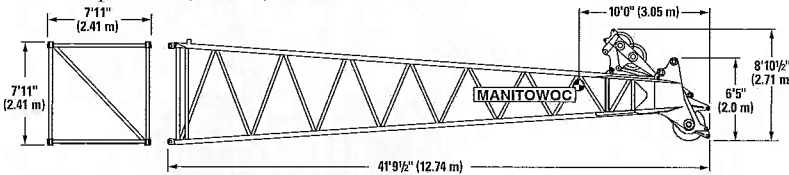
#### BASIC CRANE OPTIONS:

- Air conditioner in operator's cab
- Foot control for travel
- Self-assembly system with jacks
- Grooved laggings for liftcrane
- Grooved laggings for clamshell
- Load-moment indicator (LMI)
- High-speed third drum with 20,000-lb (9,072 kg) line pull
- Free-fall clutch
- High-speed hoist drive

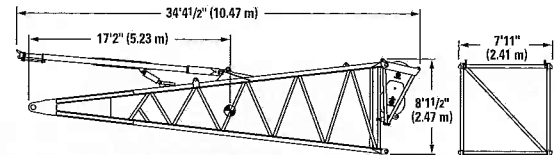


Crawler assembly (2), each 41,300 lb. (18,733 kg).

Main shipping module (carbody, upperworks, operator's cab, gantry, mast, boom-hoist wire rope, and optional self-assembly jacks): 84,500 lb. (38,329 kg). For maximum hoist and whip lines, add 6,000 lb. (2,722 kg). Maximum trailer height for self assembly: 42" (1.07 m). Space between jacks will accommodate trailers up to 10' (3.05 m) wide.



Boom top with seven-sheave lower point, upper wire-rope guide, and basic pendants: 11,090 lb. (5,030 kg).



Boom butt with lower wire-rope guide and air-cushioned physical boom stop: 10,260 lb. (4,654 kg).

Component	Weight		Length		Width		Height	
	Lbs.	(kg)	Ft.	(m)	Ft.	(m)	Ft.	(m)
Upperworks counterweight tray	21,050	(9,548)	13'0"	(3.96)	7'4"	(2.24)	1'0 1/2"	(0.32)
Upperworks center counterweight	18,000	(8,165)	7'6 1/2"	(2.30)	4'1 1/2"	(1.26)	5'0"	(1.52)
Upperworks side counterweight (6 for Series-1; 8 for Series-2) ea.	17,500	(7,938)	7'4"	(2.24)	3'6"	(1.07)	2'3"	(0.69)
Carbody counterweight (2) (used only on Series-2) ea.	22,000	(9,979)	9'10 1/2"	(3.01)	4'10 1/2"	(1.49)	2'4"	(0.72)
10' (3.05 m) No. 22 boom insert with pendants	1,935	(878)	10'6"	(3.20)	7'11"	(2.41)	7'11"	(2.41)
20' (6.10 m) No. 22 boom insert with pendants	3,130*	(1,420)*	20'6"	(6.25)	7'11"	(2.41)	7'11"	(2.41)*
40' (12.19 m) No. 22 boom insert with pendants	5,300*	(2,404)*	40'6"	(12.34)	7'11"	(2.41)	7'11"	(2.41)*
40' (12.19 m) No. 22C open-throat boom top with pendants and wire-rope guide	11,795	(4,668)	45'9"	(13.94)	7'11"	(2.41)	10'6 1/2"	(3.21)
30' (9.14 m) basic No. 123 jib with strut and pendants	2,095	(950)	31'6"	(9.60)	2'6"	(0.76)	3'0"	(0.91)
30' (9.14 m) basic No. 134 jib with strut and pendants	3,443	(1,562)	31'6"	(9.60)	2'6"	(0.76)	3'0"	(0.91)
10' (3.05 m) insert (with pendants) for No.123 or No. 134 jib	480	(218)	10'6"	(3.20)	2'6"	(0.76)	2'6"	(0.76)
20' (6.10 m) No. 134 jib insert with pendants	750	(340)	20'3"	(6.17)	2'7"	(0.79)	2'7"	(0.79)
27' (8.23 m) No. 135 luffing-jib butt	2,285	(1,036)	27'7"	(8.41)	5'0"	(1.52)	4'1"	(1.24)
23' (7.01 m) No. 135 luffing-jib top with pendants	3,150	(1,429)	25'7"	(7.80)	5'0"	(1.52)	4'10"	(1.47)
Main strut for No. 135 luffing-jib	3,400	(1,542)	24'11"	(7.59)	5'1"	(1.55)	2'3"	(0.69)
Jib strut for No. 135 luffing-jib	4,500	(2,041)	28'5"	(8.66)	5'0"	(1.52)	2'3"	(0.69)
10' (3.05 m) No. 135 luffing-jib insert with pendants	845	(383)	10'4"	(3.15)	5'0"	(1.52)	4'1"	(1.24)
20' (6.10 m) No. 135 luffing-jib insert with pendants	1,350	(612)	20'4"	(6.20)	5'0"	(1.52)	4'1"	(1.24)
40' (12.19 m) No. 135 luffing-jib insert with pendants	2,320	(1,052)	40'4"	(12.29)	5'0"	(1.52)	4'1"	(1.24)
Box of miscellaneous parts	4,700	(2,132)	7'6"	(2.29)	3'4"	(1.02)	2'10"	(0.86)

\*Add 100 lbs. (45 kg) to weight and 5" (13 cm) to height for inserts with jib backstay lugs.

**MANITOWOC'S 888...EVERYTHING YOU WANT FROM A CRANE:**

**CAPACITY:** 230-ton (209-mton) maximum capacity. Outlifts many 275-ton (250 mt) lattice-boom cranes and 400-ton (400 mt) telescopic-boom cranes at useful boom lengths and normal working radii.

**MOBILITY:** Complete 888 Series-1 with 260' (79.2 m) of boom ships on 10 trucks. 888 Series-2 with 290' (88.4 m) of boom ships on 11 trucks.

**RELIABILITY:** The 888 is designed and manufactured to deliver the same performance and long life that have earned other Manitowoc cranes a worldwide reputation for reliability and high resale value.

**CODE COMPLIANCE:** Manitowoc has built the 888 to comply with all major operating codes. Consult your Manitowoc distributor for details.

