GUAY

Manitowoc

# model 14000

## PROVISIONAL

## product guide

## features

- 200 mton (220 ton) capacity
- 865 m-ton (6,267 ft-kips) Maximum Load Moment
- 89 m (292') Heavy-Lift Boom
- 98,4 m (323') Fixed Jib on Heavy-Lift Boom
- 113,8 m (373') Luffing Jib on Heavy-Lift Boom
- 253 kW (340 HP) engine
- EPIC® with CANbus controls
- 140 m/min (460 fpm) line speed standard
- 140 kN (31,500 lb) line pull standard
- Fast, efficient self-assembly and disassembly
- Complete crane, maximum boom, fixed jib and counterweights ships on only 12 trucks
- Heaviest module weight of 39 689 kg (87,500 lb) maximum module width of 3,0 m (9' 10")
- Manitowoc Crane CARE comprehensive support



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Manitowoc Crane Group

*Above. Beyond. Everywhere.™*

## Upperworks

### Engine

Cummins Model QSL 8.9l diesel, 6 cylinder, 253 kW (340 BHP) @ 1800 governed RPM.

Includes engine block heater (120 V), air heater starting aid (24 V), oil heater starting aid (120 V), high silencing muffler, radiator and fan.

Multiple hydraulic pump drive transmission provides independent power for all machine functions.

Two 12 volt maintenance-free, Group 8D batteries, 1300 CCA at -18°C (0° F), 24 volt starting and 70 amp alternator.

One 568 l (150 gal) capacity diesel fuel tank, mounted on rear of upperworks, with level indicator in operator's cab.

### Controls

Modulating electronic-over-hydraulic controls provide infinite speed response directly proportional to control lever movement. Controls include Manitowoc's exclusive EPIC Electronically Processed Independent Control system providing microprocessor driven control logic, pump control, on-board diagnostics, and service information.

Block-up limit control is standard for hoist and whip lines.

Rated Capacity Indicator system (RCI) is standard for main boom and upper boom point. "Function cut-out" or "warning only" operation is available via programmable configuration.

Travel and swing alarms are standard.

### Hydraulic System

Six high-pressure piston pumps are driven through a multi-hydraulic pump transmission. These six pumps provide independent "closed loop" hydraulic power for front drum, rear drum, boom hoist system, swing system, and both left and right crawler operation.

| System | kg/cm2 (psi) | lpm (gpm) |
|---|---|---|
| Front Drum | 422 (6,000) | 300 (80) |
| Rear Drum | 422 (6,000) | 300 (80) |
| Boom Hoist | 422 (6,000) | 227 (60) |
| Swing System | 422 (6,000) | 227 (60) |
| Left Crawler | 422 (6,000) | 227 (60) |
| Right Crawler | 422 (6,000) | 227 (60) |
| Auxiliary Pump* | 422 (6,000) | 227 (60) |

Hydraulic reservoir capacity is 300 l (79.25 gal) and is equipped with breather, sight and electrical level indicator, clean out access, and internal diffuser.

Each function is equipped with relief valves to protect the hydraulic circuit from overload or shock.

Replaceable, ten micron (absolute) full flow tank filter is furnished in the hydraulic circuit. All oil is filtered prior to return to the hydraulic reservoir.

Hydraulic system also includes pump transmission disconnect clutch & hydraulic oil cooler.

### Drums

Two equal width winches are driven by independent variable displacement axial piston hydraulic motors through planetary reduction mounted on separate front and rear shafts with anti-friction bearings. Drums are grooved for 26 mm rope.

Powered hoisting/lowering operation is standard with automatic (spring applied, hydraulically released) multi-disc brakes, and drum rotation indicators.

- Optional: Free-fall operation for front and/or rear drums(s).
- Optional: Auxiliary (third) hydraulic powered drum mounted in boom butt. Includes third drum control system. Auxiliary drum is used as the luffing hoist when machine is equipped with a luffing jib.
- Optional: Auxiliary drum preparation includes electric wiring, controls, hydraulic selector valve and plumbing.

### Boom Hoist

Independent boom hoist consists of drum grooved for 22 mm diameter wire rope. Includes 22 mm diameter wire rope for 20 part line reeving.

Drum is powered by a variable displacement hydraulic motor coupled to an internal brake and planetary gearbox equipped with ratchet and pawl.

### Mast and Gantry

Moving mast is 8,2 m (27') long and connects the boom hoist reeving to the steel boom suspension

# specifications

4 strap rigging. When used with optional self-erect package, the mast is utilized for crane assembly and disassembly. It is capable of lifting and positioning the crawler assemblies, stacking the counterweights, and assembling the boom and jib.

Gantry includes gantry raising cylinders capable of lifting the entire upperworks counterweight for removal and installation. Back hitch telescopes from storage to working position and is locked with power-actuated pins. Counterweight is suspended from gantry with pendants.

Spring cushioned boom stop and automatic boom stop standard.

## Counterweight

| QTY. | ITEM | UNIT WEIGHT | | TOTAL WEIGHT | |
|---|---|---|---|---|---|
| | | kg | lb | kg | lb |
| 1 | **Upperworks** Tray | 9 965 | 22,092 | 9 965 | 22,092 |
| 6 | Upper Side Box | 7 938 | 17,500 | 47 628 | 105,000 |
| | | **Series 1 Total** | | **57 593** | **127,092** |
| 1 | **Upperworks** Center Box | 2 680 | 5,908 | 2 680 | 5,908 |
| 2 | Upper Side Box | 7 938 | 17,500 | 15 876 | 35,000 |
| 2 | **Carbody** Lower Box | 12 020 | 26,500 | 24 040 | 53,000 |
| | Optional: Add to **Series 1** for **Series 2 Total** | | | **100 189** | **221,000** |

Series 1 and Series 2 counterweight configurations. Includes connecting pins, brackets, and stops

## Swing System

High strength fabricated steel alloy rotating bed is mounted on 2,76 m (108-9/16") diameter turntable single-row ball bearing.

Independent swing powered by a fixed displacement hydraulic motor coupled to a planetary gearbox with internal brake.

Swing system maximum speed: 2.3 rpm.

## Operator's Cab

Fully enclosed and insulated steel module is equipped with sliding door, large safety glass windows on all sides and roof. Signal horn, cab space heater, front and roof windshield wipers, air conditioning, dome light, sun visor and shade, fire extinguisher and air circulating fan are standard.

- Optional: Tilt cab.
- Optional: Nylon protective window covers.

# Lowerworks

## Carbody

Connects rotating bed to crawler assemblies. High strength fabricated steel assembly with FACT™ connection system for fast installation and removal of crawler assemblies.

## Crawlers

Crawler assemblies are 8,3 m (27' 2") long with 1,22 m (48") wide cast steel crawler pads. Each crawler is identical and can be mounted on either side of the carbody. Each crawler is powered independently by a variable displacement hydraulic motor and includes two hydraulically powered pin actuators for fast installation and removal from carbody. Carbody mounted drive motors are connected to crawler final reduction via telescoping shafts. This permits crawlers to be removed without opening their hydraulic circuits. Crawlers provide ample tractive effort that allows counter rotation with full rated load. Maximum ground speed of 1,8 kph (1.1 mph).

- Optional: Self-Erect system includes: carbody jacking cylinders with pads, controls, 27,2 mton (30 ton) assembly block, boom-butt installation support, gantry cylinders, and crawler handling chain.

# Attachments

## No. 76 Heavy-Lift Main Boom

The liftcrane is equipped with a 20 m (65.6') No. 76 basic heavy-lift tubular chord boom consisting of a 5,5 m (18') butt, 5,5 m (18') insert, and 9 m (30') top with seven 76,2 cm (30") diameter roller bearing sheaves in 3 sheave packs. Includes rope guides, boom hoist wire rope, and boom angle indicator. The No. 76 boom utilizes steel suspension straps and Manitowoc's patented, exclusive FACT™ connection system. The FACT™ connection system consists of two hooks, two horizontal connection pins and alignment pads for each boom connection location,

Powered boom hinge system including cylinder, piping, operating controls and locking device standard.

Luffing jib preparation included as standard.

- Optional: 3,0 m (10’), 6 m (19’), and 12 m (39’) No. 76 boom inserts with steel boom suspension straps, and FACT™ connection system.

Note: Only one 3,0 m (10’) insert is allowed in the boom configuration.



### No. 134 Fixed Jib

- Optional: No. 134 basic tubular chord fixed jib 9,1 m (30’) in length consisting of 4,6 m (15’) jib butt and 4,6 m (15’) jib top with 3,7 m (12’) jib strut, pendants and backstay. Includes RCI hardware. For use with boom No. 76.

- Optional: No. 134 fixed jib inserts 3,0 m (10’) and 6,1 m (20’) with pendants.

Utilize fixed jib inserts in combination with the No. 134 basic fixed jib for total lengths up to 24,4 m (80’).

Note: Jib lengths greater than 18,3 m (60’) require the use of at least one 6,1 m (20’) No. 134 fixed jib insert.



### No. 135 Luffing Jib

- Optional: 21,3 m (70’) basic No. 135 tubular chord luffing jib assembly with RCI hardware consisting of 8,2 m (27’) butt, 6,1 m (20’) insert, and 7,0 m (23’) top with two 68,6 cm (27”) straight roller bearing sheaves and pin connected jib sections, pendants, fixed strut, jib strut, backstay pendants, boom point wheel, 26 mm luffing jib hoist line. For use with No. 76 boom.

- Optional: 3,0 m (10’), 6,1 m (20’), and 12,2 m (40’) No. 135 inserts with pendants. Utilize luffing jib inserts in combination with the No. 135 basic luffing jib for total lengths up to 57,8 m (170’).

Note: Only one 3,0 m (10’) insert is allowed in the luffing jib.

## Optional Equipment

- Optional: Blocks and Hooks –

  13,6 mton (15 ton) swivel hook and weight ball.

  27,2 mton (30 ton) hook block with one 76,2 cm (30”) sheave for 26 mm wire rope with swivel hook, hook latch, and swivel lock (assembly block).

  54 mton (60 ton) hook block with two 76,2 cm (30”) sheaves for 26 mm wire rope with swivel hook, hook latch, and swivel lock.

  91 mton (100 ton) hook block with three 76,2 cm (30”) sheaves for 26 mm wire rope with swivel hook, hook latch, and swivel lock.

  140,6 mton (155 ton) hook block with six 76,2 cm (30”) sheaves for 26 mm wire rope with swivel hook, hook latch, and swivel lock.

  200 mton (220 ton) hook block with seven 76,2 cm (30”) sheaves for 26 mm wire rope with swivel hook, hook latch, and swivel lock.

**Hoist Reeving for Main Load Block - Single Lead Line 28 mm - No. 76 Main Boom**

| No. Parts of Line | Maximum Load | |
|---|---|---|
| | kg | (lb) |
| 1 | 14 290 | 31,500 |
| 2 | 28 580 | 63,000 |
| 3 | 42 860 | 94,500 |
| 4 | 57 150 | 126,000 |
| 5 | 71 440 | 157,500 |
| 6 | 85 730 | 189,000 |
| 7 | 100 020 | 220,500 |
| 8 | 114 310 | 252,000 |
| 9 | 128 590 | 283,500 |
| 10 | 142 880 | 315,000 |
| 11 | 157 170 | 346,500 |
| 12 | 171 460 | 378,000 |
| 13 | 185 750 | 409,500 |
| 14 | 200 030 | 441,000 |

- Optional Hydraulic Test Kit: required to properly analyze the performance of the EPIC® control system.

- Optional Service Interval Kits: for the regularly scheduled maintenance of general crane operations.

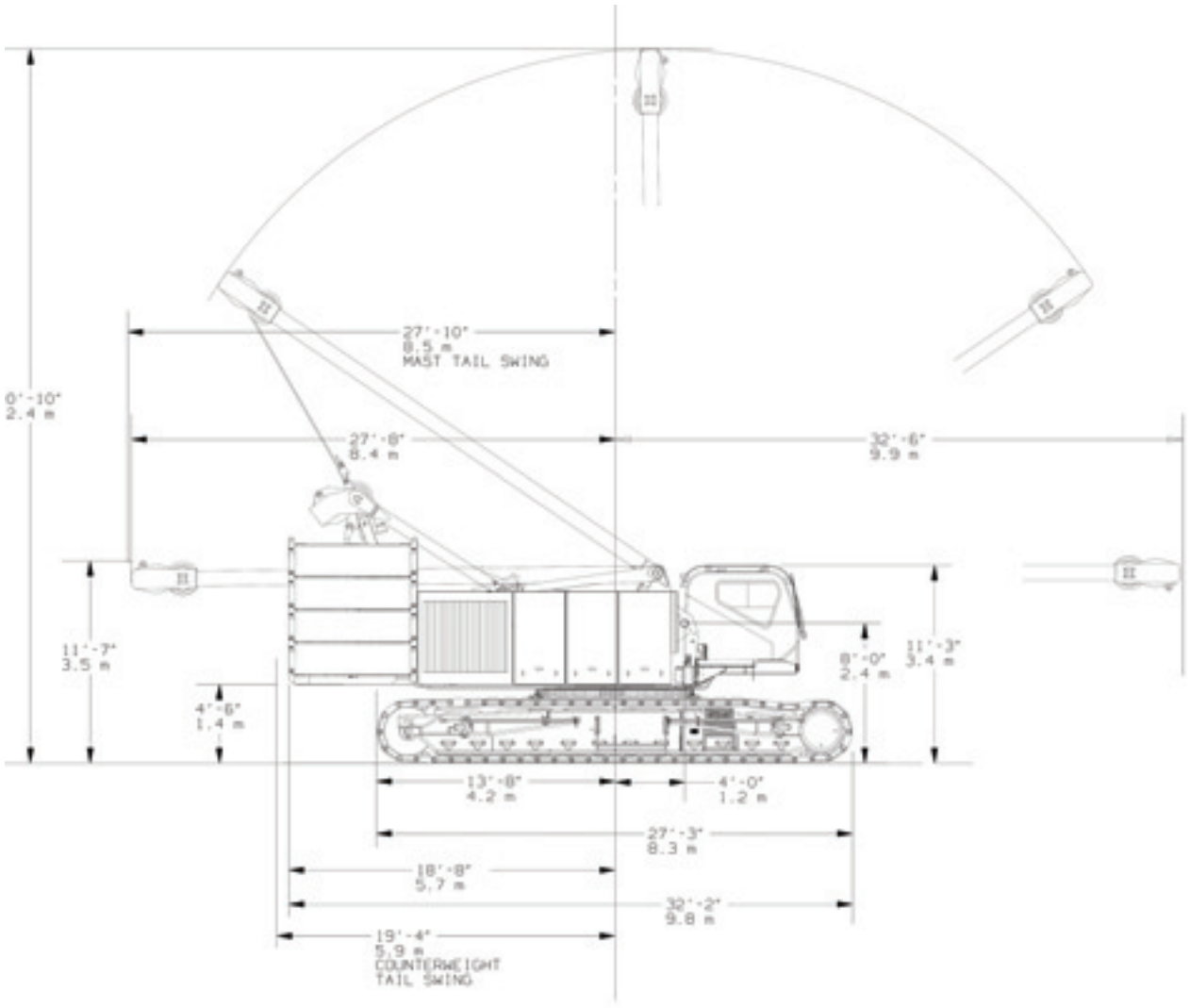
- Optional Special Paint: in color(s) other than Manitowoc standard red and black.

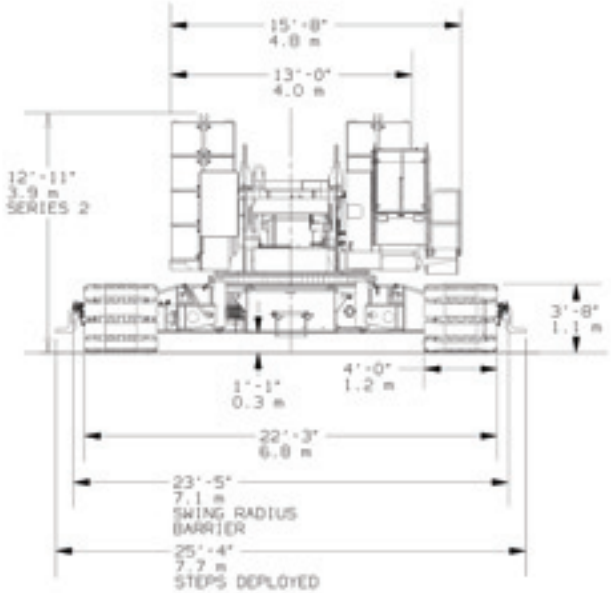
- Optional Special Customer Decals: custom vinyl decal(s) of name and/or logo from artwork supplied by customer.

- Optional Export Packaging: basic crane, boom and jib sections.

# outline dimensions

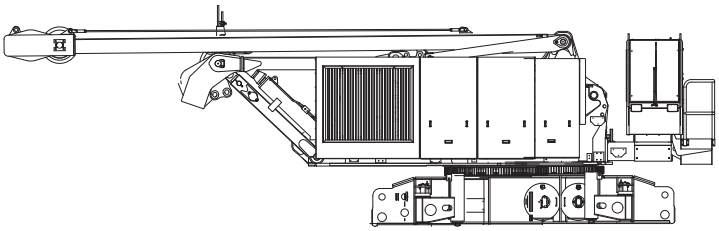


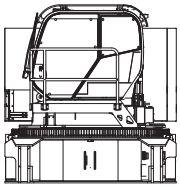


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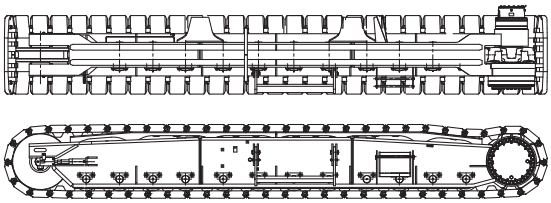




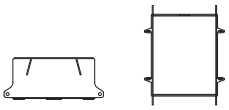


| Basic Crane | | |
|---|---|---|
| Length | 11,63 m | 38' 2" |
| Width | 3,00 m | 9' 10" |
| Height | 3,20 m | 10' 6" |
| Weight | 39 689 kg | 87,500 lb |

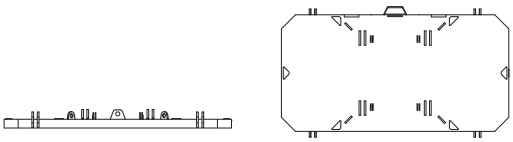
Note: Weight includes carbody, upperworks, operator's cab, gantry, backhitch, mast, boom-hoist wire rope, maximum hoist and whip lines on drums, optional self-assembly jacks, full hydraulic fluid reservoir, and half tank of fuel.



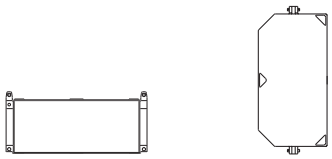
| Crawlers | | x 2 |
|---|---|---|
| Length | 8,31 m | 27' 3" |
| Width | 1,55 m | 5' 1" |
| Height | 1,14 m | 3' 9" |
| Weight | 17 706 kg | 39,000 lb |



| Upper Center Counterweight | | x 1 |
|---|---|---|
| Length | 1,30 m | 4' 3" |
| Width | 1,04 m | 3' 5" |
| Height | 0,56 m | 1' 10" |
| Weight | 9 716 kg | 6,200 lb |



| Counterweight Tray | | x 1 |
|---|---|---|
| Length | 3,71 m | 12' 2" |
| Width | 2,36 m | 7' 9" |
| Height | 0,33 m | 1' 1" |
| Weight | 9 716 kg | 21,400 lb |

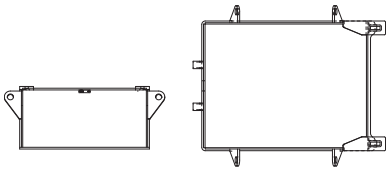


| Upper Side Counterweight<br>Series 1<br>Series 2 | | x 6<br>x 8 |
|---|---|---|
| Length | 2,24 m | 7' 4" |
| Width | 1,07 m | 3' 6" |
| Height | 0,69 m | 2' 3" |
| Weight | 7 938 kg | 17,500 lb |

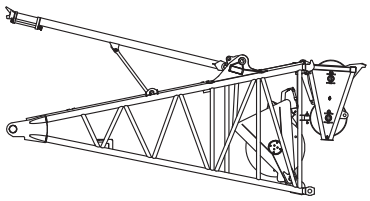
**Option**

# outline dimensions

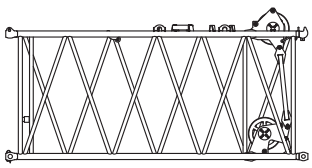




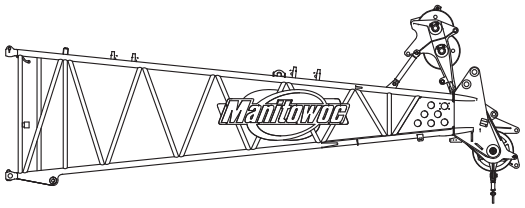
| Lower Carbody Counterweight Series 2,3 | | x 2 |
|---|---|---|
| Length | 2,24 m | 7' 4" |
| Width | 1,85 m | 6' 1" |
| Height | 0,74 m | 2' 5" |
| Weight | 12 122 kg | 26,700 lb |



| No. 76 Boom Butt 5,5 m (18.0') & Wire Rope Guide, Boom Stop | | x 1 |
|---|---|---|
| Length | 6,76 m | 22' 2" |
| Width | 2,44 m | 8' 0" |
| Height | 2,64 m | 8' 8" |
| Weight | 2 860 kg | 6,300 lb |



| No. 76 Boom Insert 5,5 m (18.0') w/ Sheaves | | x 1 |
|---|---|---|
| Length | 5,69 m | 18' 8" |
| Width | 2,54 m | 8' 4" |
| Height | 2,59 m | 8' 6" |
| Weight | 1 634 kg | 3,600 lb |

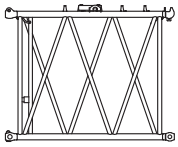



| No. 76 Boom Top 9,0 m (29.5') & Wire Rope Guide, Straps | | x 1 |
|---|---|---|
| Length | 9,58 m | 31' 5" |
| Width | 2,51 m | 8' 3" |
| Height | 2,97 m | 9' 9" |
| Weight | 4 495 kg | 9,900 lb |

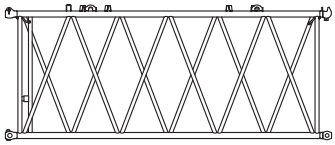
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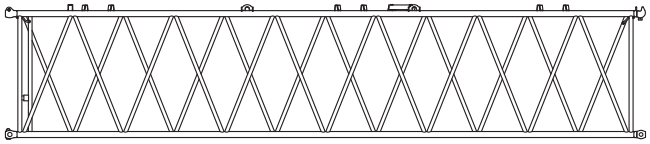




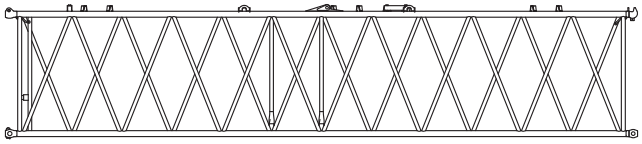
| No. 76 Main Boom 3,0 m (9.8') Insert & Straps | | x 1 |
|---|---|---|
| Length | 3,17 m | 10' 5" |
| Width | 2,54 m | 8' 4" |
| Height | 2,59 m | 8' 6" |
| Weight | 772 kg | 1,700 lb |



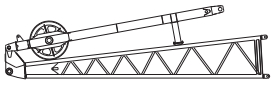
| No. 76 Main Boom 6,0 m (19.7') Insert & Straps | | x 1 |
|---|---|---|
| Length | 6,17 m | 20' 3" |
| Width | 2,54 m | 8' 4" |
| Height | 2,59 m | 8' 6" |
| Weight | 1 126 kg | 2,700 lb |



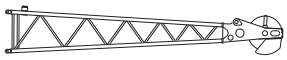
| No. 76 Main Boom 12,0 m (39.4') Insert & Straps | | x 1, 2, 3, 4 |
|---|---|---|
| Length | 12,17 m | 39' 11" |
| Width | 2,54 m | 8' 4" |
| Height | 2,59 m | 8' 6" |
| Weight | 2 134 kg | 4,700 lb |



| No. 76 Main Boom 12,0 m (39.4') w/ Backstay Insert & Straps | | x 1 |
|---|---|---|
| Length | 12,17 m | 39' 11" |
| Width | 2,54 m | 8' 4" |
| Height | 2,59 m | 8' 6" |
| Weight | 2 179 kg | 4,800 lb |



| No. 134 Jib Butt 4,6 m (15') & Strut, Stop | | x 1 |
|---|---|---|
| Length | 4,67 m | 15' 4" |
| Width | 0,86 m | 2' 10" |
| Height | 1,29 m | 4' 3" |
| Weight | 635 kg | 1,400 lb |

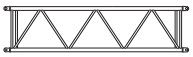


| No. 134 Jib Top 4,6 m (15') & Pendants | | x 1 |
|---|---|---|
| Length | 4,93 m | 16' 2" |
| Width | 0,79 m | 2' 7" |
| Height | 0,79 m | 2' 7" |
| Weight | 553 kg | 1,220 lb |

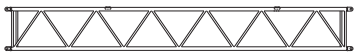
**Option**

# outline dimensions

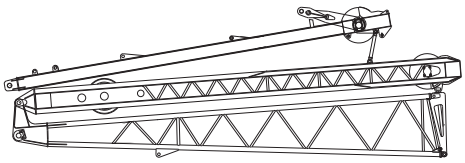




| No. 134 Jib Insert 3,0 m (10') & Pendants | | x 1 |
|---|---|---|
| Length | 3,12 m | 10' 3" |
| Width | 0,79 m | 2' 7" |
| Height | 0,79 m | 2' 7" |
| Weight | 218 kg | 480 lb |



| No. 134 Jib Insert 6,1 m (20') & Pendants | | x 1, 2 |
|---|---|---|
| Length | 6,17 m | 20' 3" |
| Width | 0,79 m | 2' 7" |
| Height | 0,79 m | 2' 7" |
| Weight | 340 kg | 750 lb |

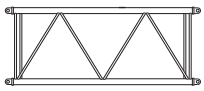


| No. 135 Luffing Jib 8,2 m (27') Butt & Struts | | x 1 |
|---|---|---|
| Length | 8,81 m | 28' 11" |
| Width | 1,57 m | 5' 2" |
| Height | 2,92 m | 9' 7" |
| Weight | 4 477 kg | 9,870 lb |

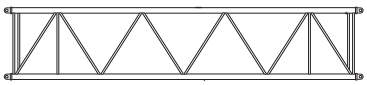



| No. 135 Luffing Jib Top 7,0 m (23') & Roller, Pendants | | x 1 |
|---|---|---|
| Length | 7,80 m | 25' 7" |
| Width | 1,52 m | 5' 0" |
| Height | 2,02 m | 6' 8" |
| Weight | 1 984 kg | 4,375 lb |

Note: Includes wire rope guide.



| No. 135 Luffing Jib Insert 3,0 m (10') & Pendants | | x 1 |
|---|---|---|
| Length | 3,15 m | 10' 4" |
| Width | 1,52 m | 5' 0" |
| Height | 1,30 m | 4' 3" |
| Weight | 381 kg | 840 lb |

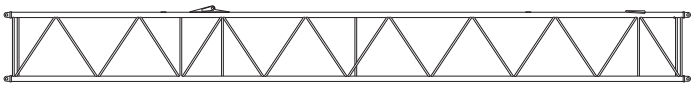


| No. 135 Luffing Jib Insert 6,1 m (20') & Pendants | | x 1, 2 |
|---|---|---|
| Length | 6,20 m | 20' 4" |
| Width | 1,52 m | 5' 0" |
| Height | 1,30 m | 4' 3" |
| Weight | 612 kg | 1,350 lb |

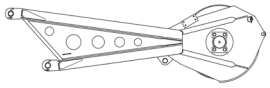
**Option**

# outline dimensions

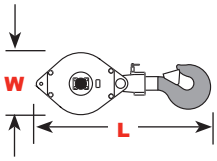




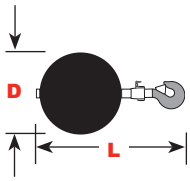
| No. 135 Luffing Jib Insert 12,2 m (40') & Pendants | | x 1, 2, 3 |
|---|---|---|
| Length | 12,29 m | 40' 4" |
| Width | 1,52 m | 5' 0" |
| Height | 1,30 m | 4' 3" |
| Weight | 1 050 kg | 2,315 lb |



| No. 76 Upper Boom Point | | x 1 |
|---|---|---|
| Length | 2,64 m | 8' 8" |
| Width | 0,41 m | 1' 4" |
| Height | 0,81 m | 2' 8" |
| Weight | 420 kg | 925 lb |




| Hook block for 26 mm (1") wire rope | | | | | |
|---|---|---|---|---|---|
| Capacity | 200 mt | 220 t | Length | 2,27 m | 7' 5" |
| Weight | 2 472 kg | 5,450 lb | Width | 0,84 m | 2' 9" |
| Capacity | 150 mt | 165 t | Length | 2,11 m | 6' 11" |
| Weight | 2 730 kg | 6,000 lb | Width | 0,90 m | 2' 11" |
| Capacity | 91 mt | 100 t | Length | 1,98 m | 6' 6" |
| Weight | 1 770 kg | 3,900 lb | Width | 0,88 m | 2' 11" |
| Capacity | 27 mt | 30 t | Length | 1,50 m | 4' 11" |
| Weight | 1 724 kg | 3,801 lb | Width | 0,71 m | 2' 4" |




| Weight Ball | | | | | |
|---|---|---|---|---|---|
| Capacity/Swivel | 14 mt | 15 t | Diameter | 0,53 m | 1' 9" |
| Weight | 594 kg | 1,310 lb | Length | 1,13 m | 3' 9" |

Option

## Model 14000 Load Out Summary

| Weight Each Item | No. 76 Boom 65 m (213') Series 2 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Quantity on Trailer Load # | | | | | | | | | |
| Item | kg (lb) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Upperworks Structure with Carbody, Gantry & Mast | 39 689 (87,500) | 1 | | | | | | | | | |
| Crawler Assembly | 17 690 (39,000) | | 1 | | | | | | | | |
| Crawler Assembly | 17 690 (39,000) | | | 1 | | | | | | | |
| 9,0 m (29'8") Boom Top | 4 536 (10,000) | | | | 1 | | | | | | |
| 5,5 m (18'6") Boom Butt | 2 858 (6,300) | | | | 1 | | | | | | |
| Upper Side Counterweight | 7 938 (17,500) | | | | 1 | 2 | 2 | 2 | | | 1 |
| 12,0 m (39'5") Boom Insert | 2 132 (4,700) | | | | | 1 | 1 | 1 | | | |
| 5,5 m (18'6") Boom Insert | 1 633 (3,600) | | | | | | | | 1 | | |
| 6,0 m (19'8") Boom Insert | 1 678 (3,700) | | | | | | | | 1 | | |
| Counterweight Tray | 9 707 (21,400) | | | | | | | | 1 | | |
| Upper Center Counterweight | 10 691 (23,570) | | | | | | | | | 1 | |
| Detachable Upper Boom Point | 499 (1,100) | | | | | | | | | 1 | |
| Reel Cable - 980 m (3,215') | 1 225 (2,700) | | | | | | | | | 1 | |
| Load Block - 91 mton (100 USt) | 1 814 (4,000) | | | | | | | | | 1 | |
| Lower Carbody Counterweight | 12 111 (26,700) | | | | | | | | | 1 | 1 |
| 3,0 m (10'0") Boom Insert | 771 (1,700) | | | | | | | | | | 1 |
| 14 mton (15 USt) Weight Ball | 2 604 (5,740) | | | | | | | | | | 1 |
| Miscellaneous | 2 722 (6,000) | | | | | | | | | | 1 |
| | | 39 689 (87,500) | 17 690 (39,000) | 17 690 (39,000) | 15 332 (33,800) | 18 008 (39,700) | 8 008 (39,700) | 8 008 (39,700) | 13 018 (28,700) | 24 526 (54,070) | 26 146 (57,640) |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

* Note: Does not include blocking, strapping etc.

## Main Drum - 140 kN (31,500 lb)

| Layer<br>Single Line Pull<br>Radius | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Single Line Pull kg<br>(lb) | | | | | | |
| 0<br>(0) | 97<br>(318) | 106<br>(347) | 115<br>(377) | 124<br>(406) | 133<br>(435) | 141<br>(464) |
| 2 268<br>(5,000) | 91<br>(299) | 99<br>(324) | 106<br>(349) | 114<br>(374) | 121<br>(399) | 129<br>(423) |
| 4 536<br>(10,000) | 85<br>(279) | 92<br>(301) | 98<br>(322) | 104<br>(340) | 105<br>(344) | 106<br>(347) |
| 6 804<br>(15,000) | 71<br>(232) | 72<br>(236) | 73<br>(240) | 74<br>(243) | 75<br>(247) | 76<br>(250) |
| 9 072<br>(20,000) | 56<br>(184) | 57<br>(188) | 58<br>(191) | 59<br>(195) | 60<br>(198) | 62<br>(202) |
| 11 340<br>(25,000) | 47<br>(155) | 48<br>(158) | 49<br>(162) | 50<br>(166) | 52<br>(169) | 53<br>(173) |
| 14 288<br>(31,500) | 40<br>(131) | 41<br>(134) | 42<br>(138) | 43<br>(142) | 44<br>(145) | 45<br>(149) |

## Standard Whip Drum - 89 kN (20,000 lb)

| Layer<br>Single Line Pull<br>Radius | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Single Line Pull kg<br>(lb) | | | | | | | | |
| 0<br>(0) | 85<br>(280) | 92<br>(303) | 99<br>(326) | 106<br>(349) | 113<br>(372) | 120<br>(395) | 127<br>(418) | 134<br>(441) |
| 2 268<br>(5,000) | 79<br>(260) | 85<br>(279) | 91<br>(298) | 97<br>(318) | 103<br>(336) | 108<br>(355) | 114<br>(373) | 119<br>(391) |
| 4 536<br>(10,000) | 73<br>(239) | 78<br>(255) | 79<br>(258) | 80<br>(261) | 81<br>(264) | 82<br>(267) | 82<br>(271) | 83<br>(274) |
| 6 804<br>(15,000) | 55<br>(180) | 56<br>(184) | 57<br>(187) | 58<br>(190) | 59<br>(193) | 60<br>(196) | 61<br>(199) | 62<br>(202) |
| 9 072<br>(20,000) | 44<br>(145) | 45<br>(148) | 46<br>(151) | 47<br>(154) | 48<br>(157) | 49<br>(161) | 50<br>(164) | 51<br>(167) |

## Wire Rope Lengths - Single Hoist Line Drum - 28 mm No. 76 Main Boom

| Boom or Boom and Jib Length | Whip Line - Drum 1 or 3 (Front or Auxiliary Drum) | | | | Hoist Line - Drum 2 (Rear Drum) | | |
|---|---|---|---|---|---|---|---|
| | 1 Part | | 2 Part | | | | Total Parts of Line |
| m (ft) | m | (ft) | m | (ft) | m | (ft) | |
| 20 (66) | 58 | (190) | 82 | (270) | 335 | (1100) | 14 |
| 23 (76) | 64 | (210) | 91 | (300) | 366 | (1200) | 13 |
| 29 (95) | 76 | (250) | 110 | (360) | 373 | (1225) | 11 |
| 35 (115) | 88 | (290) | 128 | (420) | 411 | (1350) | 10 |
| 41 (135) | 101 | (330) | 146 | (480) | 434 | (1425) | 9 |
| 47 (154) | 113 | (370) | 165 | (540) | 450 | (1475) | 8 |
| 53 (174) | 125 | (410) | 183 | (600) | 450 | (1475) | 7 |
| 59 (194) | 137 | (450) | 201 | (660) | 450 | (1475) | 6 |
| 65 (213) | 149 | (490) | 219 | (720) | 450 | (1475) | 5 |
| 71 (233) | 162 | (530) | 238 | (780) | 450 | (1475) | 4 |
| 77 (253) | 174 | (570) | 256 | (840) | 450 | (1475) | 4 |
| 83 (272) | 186 | (610) | 274 | (900) | 450 | (1475) | 3 |
| 89 (292) | 198 | (650) | 293 | (960) | 450 | (1475) | 3 |
| 95 (312) | 210 | (690) | 311 | (1020) | — | — | — |
| 98 (322) | 216 | (710) | — | — | — | — | — |

NOTE: Hoist and whip line lengths given in table will allow hook to touch ground. When block travel below ground is required, add additional rope equal to parts of line times added travel distance. Hoisting distance or line pull may be limited when block travel below ground is required.

Maximum wire rope length allowed on Drum 3 (Auxiliary Drum) is 235 m (770 ft).

## Hoist Reeving for Main Load Block - Single Lead Line 28 mm - No. 76 Main Boom

| No. Parts of Line | Maximum Load | |
|---|---|---|
| | kg | (lb) |
| 1 | 14 290 | 31,500 |
| 2 | 28 580 | 63,000 |
| 3 | 42 860 | 94,500 |
| 4 | 57 150 | 126,000 |
| 5 | 71 440 | 157,500 |
| 6 | 85 730 | 189,000 |
| 7 | 100 020 | 220,500 |
| 8 | 114 310 | 252,000 |
| 9 | 128 590 | 283,500 |
| 10 | 142 880 | 315,000 |
| 11 | 157 170 | 346,500 |
| 12 | 171 460 | 378,000 |
| 13 | 185 750 | 409,500 |
| 14 | 200 030 | 441,000 |

# boom combinations

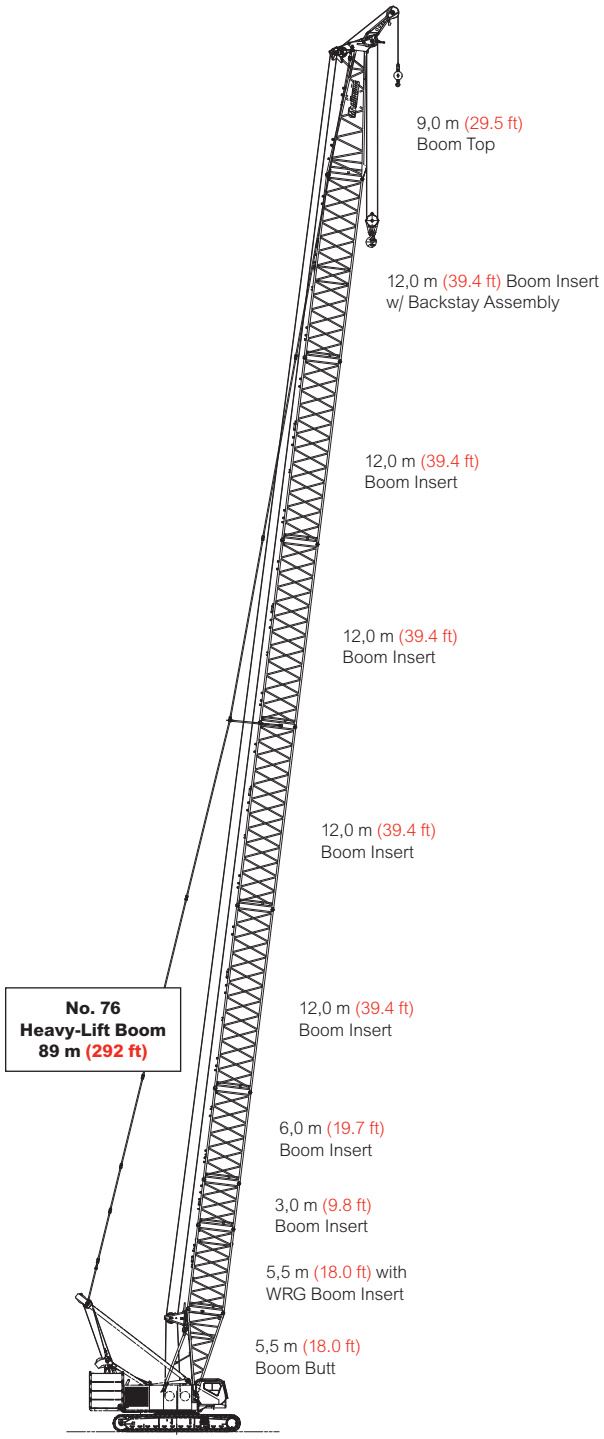
**ANSI B30.5**



## No. 76 Main Boom with Heavy-Lift Top Combinations

| Boom Length m (ft) | Boom Inserts m (ft) | | | |
|---|---|---|---|---|
| | 3,0 (9.8) | 6,0 (9.7) | 12,0 (39.4) | 12,0* (39.4) |
| 20 (65.6) | 0 | 0 | 0 | 0 |
| 23 (75.5) | 1 | 0 | 0 | 0 |
| 26 (85.3) | 0 | 1 | 0 | 0 |
| 29 (95.1) | 1 | 1 | 0 | 0 |
| 32 (105.0) | 0 | 0 | 0 | 1 |
| 35 (114.8) | 1 | 0 | 0 | 1 |
| 38 (124.7) | 0 | 1 | 0 | 1 |
| 41 (134.5) | 1 | 1 | 0 | 1 |
| 44 (144.4) | 0 | 0 | 1 | 1 |
| 47 (154.2) | 1 | 0 | 1 | 1 |
| 50 (164.0) | 0 | 1 | 1 | 1 |
| 53 (173.9) | 1 | 1 | 1 | 1 |
| 56 (183.7) | 0 | 0 | 2 | 1 |
| 59 (193.6) | 1 | 0 | 2 | 1 |
| 62 (203.4) | 0 | 1 | 2 | 1 |
| 65 (213.3) | 1 | 1 | 2 | 1 |
| 68 (223.1) | 0 | 0 | 3 | 1 |
| 71 (233.0) | 1 | 0 | 3 | 1 |
| 74 (242.8) | 0 | 1 | 3 | 1 |
| 77 (252.6) | 1 | 1 | 3 | 1 |
| 80 (262.5) | 0 | 0 | 4 | 1 |
| 83 (272.3) | 1 | 0 | 4 | 1 |
| 86 (282.2) | 0 | 1 | 4 | 1 |
| 89 (292.0) | 1 | 1 | 4 | 1 |

* with backstay assembly.




**Model 14000**
**No. 76 Heavy-Lift Main Boom**
**89 m (292 ft)**

# heavy-lift boom load charts

**ANSI B30.5**



## Liftcrane Boom Capacities - Model 14000 Series 2
## No. 76 Heavy Lift Main Boom

**76 200 kg (168,000 lb) Counterweight** **24 040 kg (53,000 lb) Carbody Counterweight**

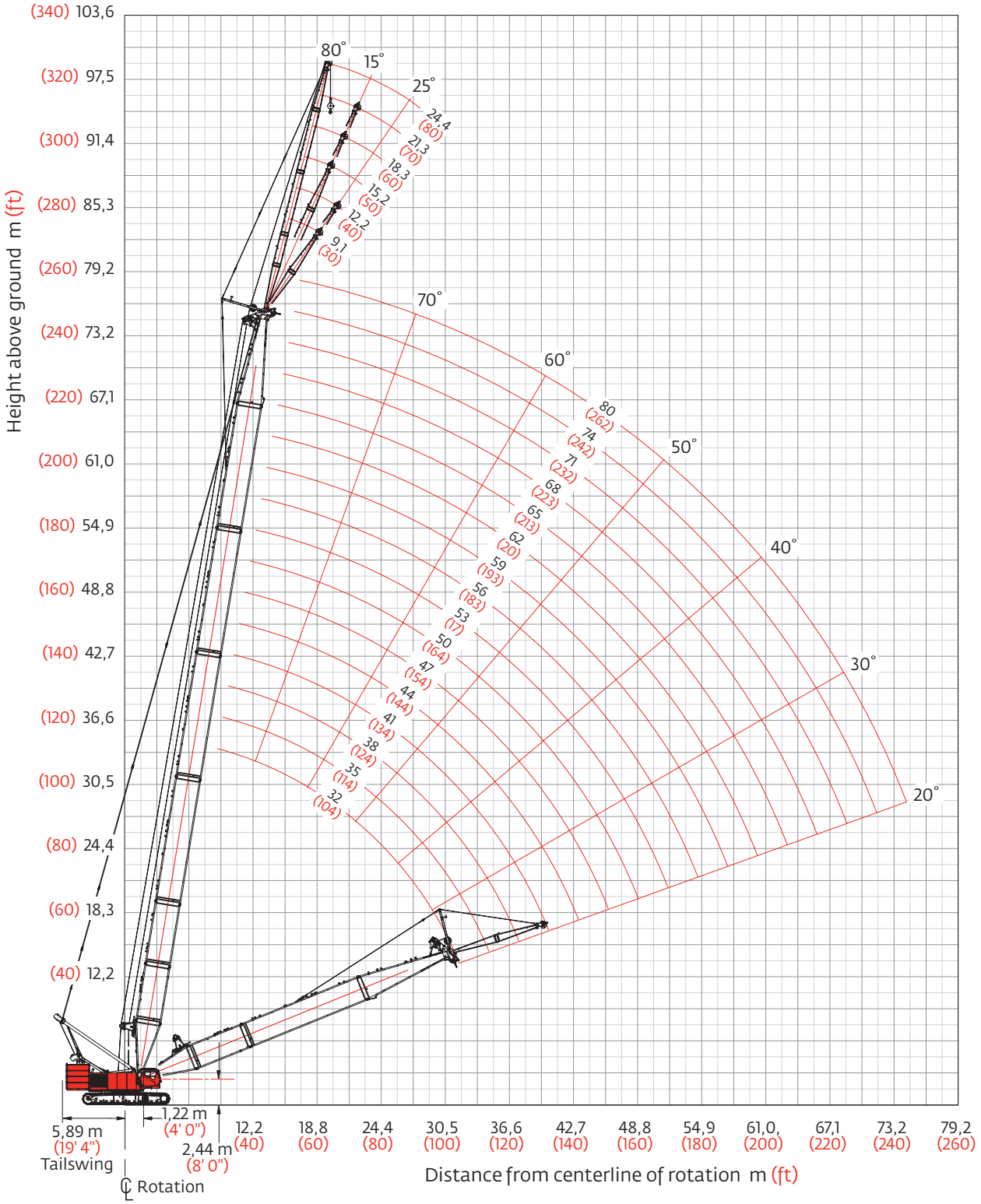
**360° Rating** **kg (lb) x 1 000**

| Boom m (ft) | 20,0 (66) | 26,0 (85) | 32,0 (105) | 38,0 (125) | 44,0 (144) | 50,0 (164) | 56,0 (184) | 62,0 (203) | 68,0 (223) | 74,0 (243) | 80,0 (263) | 86,0 (282) | 89,0 (292) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radius | | | | | | | | | | | | | |
| 4,3 (14) | 200,0 (441.0) | | | | | | | | | | | | |
| 8,0 (26) | 109,3 (243.4) | 109,0 (242.4) | 108,7 (242.1) | 108,5 (241.6) | | | | | | | | | |
| 10,0 (32) | 87,1 (198.0) | 87,0 (197.5) | 86,8 (196.9) | 86,7 (196.5) | 104,7 (195.7) | 86,5 (195.0) | 77,9 (173.4) | 67,9 (150.4) | | | | | |
| 12,0 (40) | 67,0 (144.6) | 67,1 (144.8) | 67,1 (144.8) | 67,1 (144.8) | 86,4 (144.5) | 66,9 (144.2) | 66,8 (143.8) | 65,4 (143.4) | 58,8 (129.4) | 50,2 (110.6) | | | |
| 14,0 (46) | 53,9 (118.8) | 54,0 (119.0) | 54,0 (118.9) | 53,9 (118.8) | 67,0 (118.4) | 53,6 (118.0) | 53,4 (117.6) | 53,2 (117.2) | 52,9 (116.5) | 49,4 (109.0) | 40,6 (9.5) | 35,2 (77.6) | 32,4 (71.5) |
| 18,0 (60) | 38,0 (82.2) | 38,1 (82.4) | 38,1 (82.3) | 38,0 (82.2) | 53,8 (81.7) | 37,6 (81.3) | 37,4 (80.7) | 37,1 (80.2) | 36,8 (79.4) | 36,8 (79.5) | 36,7 (78.9) | 34,1 (75.0) | 31,3 (69.0) |
| 22,0 (70) | | 28,9 (66.6) | 28,8 (66.5) | 28,8 (66.4) | 37,8 (65.8) | 28,3 (65.4) | 28,1 (64.8) | 27,8 (64.3) | 27,4 (63.4) | 27,5 (63.5) | 27,1 (62.8) | 26,8 (62.1) | 26,7 (61.8) |
| 26,0 (85) | | | 22,8 (50.6) | 22,7 (50.4) | 28,5 (49.9) | 22,3 (49.5) | 22,0 (48.8) | 21,7 (48.2) | 21,3 (47.4) | 21,3 (47.4) | 21,0 (46.7) | 20,7 (46.0) | 20,5 (45.6) |
| 30,0 (100) | | | 18,4 (39.8) | 18,4 (39.7) | 22,5 (39.2) | 18,0 (38.8) | 17,7 (38.1) | 17,4 (37.5) | 17,0 (36.6) | 17,0 (36.6) | 16,7 (35.9) | 16,4 (35.2) | 16,2 (34.8) |
| 34,0 (110) | | | | 15,2 (34.3) | 18,2 (33.8) | 14,8 (33.4) | 14,4 (32.7) | 14,2 (32.2) | 13,8 (31.3) | 13,8 (31.2) | 13,4 (30.5) | 13,1 (29.8) | 12,9 (29.4) |
| 38,0 (120) | | | | | 14,9 (29.4) | 12,3 (29.0) | 12,0 (28.3) | 11,7 (27.7) | 11,3 (26.8) | 11,3 (26.8) | 10,9 (26.0) | 10,6 (25.3) | 10,4 (24.9) |
| 40,0 (130) | | | | | 12,5 (25.7) | 11,2 (25.3) | 10,9 (24.6) | 10,7 (24.1) | 10,3 (23.2) | 10,2 (23.1) | 9,9 (22.3) | 9,6 (21.6) | 9,4 (21.2) |
| 44,0 (140) | | | | | 11,4 (22.5) | 9,5 (22.2) | 9,1 (21.5) | 8,9 (20.9) | 8,5 (20.0) | 8,5 (20.0) | 8,1 (19.2) | 7,8 (18.5) | 7,6 (18.1) |
| 48,0 (155) | | | | | | 7,9 (18.2) | 7,7 (17.6) | 7,4 (17.0) | 7,0 (16.1) | 7,0 (16.1) | 6,6 (15.3) | 6,3 (14.6) | 6,1 (14.2) |
| 52,0 (170) | | | | | | | 6,4 (14.4) | 6,2 (13.8) | 5,7 (12.9) | 5,7 (12.9) | 5,4 (12.1) | 5,1 (11.4) | 4,9 (11.0) |
| 56,0 (180) | | | | | | | | 5,1 (12.0) | 4,7 (11.1) | 4,7 (11.1) | 4,3 (10.3) | 4,0 (9.6) | 3,8 (9.2) |
| 60,0 (195) | | | | | | | | 4,2 (9.6) | 3,8 (8.7) | 3,8 (8.7) | 3,4 (7.9) | 3,1 (7.2) | 2,9 (6.8) |
| 64,0 (210) | | | | | | | | | 3,0 (6.7) | 3,0 (6.7) | 2,6 (5.9) | 2,3 (5.2) | 2,1 (4.8) |
| 68,0 (220) | | | | | | | | | | 2,3 (5.5) | 1,9 (4.7) | | |
| 70,0 (230) | | | | | | | | | | 2,0 (4.4) | | | |

# Fixed jib range diagram

ANSI B30.5

**Liftcrane boom capacities**
**Fixed jib capacities - No. 134 fixed jib on No. 76 main boom**



# Fixed jib load charts

ANSI B30.5

**Liftcrane boom capacities**
**Fixed jib capacities - No. 134 fixed jib on No. 76 main boom**

76 200 kg (168,000 lb) counterweight
360° Rating

24 000 kg (53,000 lb) carbody counterweight
kg (lb) x 1 000

Jib length 9,1 m (30.0 ft)

| | 5° offset | | | | | 25° offset | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Boom m (ft) | 32,0 (105.0) | 44,0 (144.4) | 56,0 (183.7) | 68,0 (223.1) | 80,0 (262.5) | 32,0 (105.0) | 44,0 (144.4) | 56,0 (183.7) | 68,0 (223.1) | 80,0 (262.5) |
| Radius | | | | | | | | | | |
| 9,1 (30) | 28,5 (63.0) | | | | | | | | | |
| 12,0 (40) | 28,5 (63.0) | 28,5 (63.0) | — (63.0) | | | | | | | |
| 16,0 (50) | 27,2 (60.6) | 27,9 (62.1) | 27,9 (62.0) | 27,2 (60.5) | | 19,9 (45.1) | 21,6 (48.6) | | | |
| 22,0 (70) | 25,2 (56.1) | 26,2 (58.2) | 26,4 (58.7) | 26,0 (57.7) | 24,8 (55.5) | 17,0 (38.3) | 18,8 (42.1) | 20,1 (45.0) | 21,2 (47.3) | 22,0 (49.1) |
| 28,0 (90) | 21,0 (47.8) | 20,4 (46.4) | 19,7 (45.0) | 19,0 (43.4) | 18,5 (42.4) | 15,0 (33.6) | 16,8 (37.4) | 18,2 (40.5) | 19,2 (43.0) | 19,7 (44.6) |
| 36,0 (120) | 14,5 (31.3) | 13,9 (30.0) | 13,2 (28.5) | 12,5 (26.8) | 12,0 (25.7) | | 14,3 (30.8) | 13,7 (29.5) | 13,1 (28.1) | 12,6 (27.2) |
| 48,0 (150) | | 8,4 (20.4) | 7,7 (18.9) | 7,0 (17.2) | 6,5 (16.2) | | | 8,0 (19.6) | 7,3 (18.1) | 6,9 (17.2) |
| 56,0 (180) | | | 5,4 (12.7) | 4,7 (11.0) | 4,2 (9.9) | | | | 4,9 (11.6) | 4,5 (10.7) |
| 64,0 (210) | | | | 29,0 (6.6) | 2,5 (5.6) | | | | | 2,7 (6.1) |
| 70,0 (235) | | | | 1,9 (4.3) | | | | | | |
| 76,0 (255) | | | | | | | | | | |

Jib length 15,2 m (50.0 ft)

| | 5° offset | | | | 25° offset | | | |
|---|---|---|---|---|---|---|---|---|
| Boom m (ft) | 32,0 (105.0) | 44,0 (144.4) | 56,0 (183.7) | 68,0 (223.1) | 32,0 (105.0) | 44,0 (144.4) | 56,0 (183.7) | 68,0 (223.1) |
| Radius | | | | | | | | |
| 9,1 (30) | | | | | | | | |
| 12,0 (40) | 20,1 (44.2) | — (44.7) | | | | | | |
| 16,0 (50) | 18,8 (42.1) | 19,3 (43.0) | 19,3 (42.9) | | | | | |
| 22,0 (70) | 17,2 (38.5) | 18,0 (40.0) | 18,2 (40.4) | 18,0 (39.9) | 12,3 (27.7) | 13,3 (30.0) | 14,2 (31.8) | 14,8 (33.2) |
| 28,0 (90) | 15,8 (35.1) | 16,8 (37.4) | 17,2 (38.3) | 17,2 (38.1) | 10,6 (23.8) | 11,7 (26.2) | 12,6 (28.2) | 13,3 (29.7) |
| 36,0 (120) | 13,4 (29.2) | 14,4 (30.9) | 13,6 (29.4) | 12,9 (27.7) | 9,1 (20.0) | 10,1 (22.3) | 11,0 (24.2) | 11,8 (25.9) |
| 48,0 (150) | — (22.8) | 8,8 (21.4) | 8,1 (19.8) | 7,3 (18.1) | | — (19.7) | 8,6 (21.0) | 8,0 (19.6) |
| 56,0 (180) | | 6,5 (15.1) | 5,8 (13.5) | 5,0 (11.8) | | | 6,1 (14.3) | 5,5 (12.9) |
| 64,0 (210) | | | 4,1 (9.1) | 3,3 (7.4) | | | | 3,6 (8.1) |
| 70,0 (235) | | | | 2,3 (4.5) | | | | |
| 76,0 (255) | | | | | | | | |

*For complete chart, refer to www.cranelibrary.com.*

# Fixed jib load charts

ANSI B30.5

## Liftcrane boom capacities
## Fixed jib capacities - No. 134 fixed jib on No. 76 main boom

76 200 kg (168,000 lb) counterweight
360° Rating

24 000 kg (53,000 lb) carbody counterweight
kg (lb) x 1 000

Jib length 18,3 m (60.0 ft)

| | 5° offset | | | | 25° offset | | | |
|---|---|---|---|---|---|---|---|---|
| Boom m (ft) | 32,0 (105.0) | 44,0 (144.4) | 56,0 (183.7) | 68,0 (223.1) | 32,0 (105.0) | 44,0 (144.4) | 56,0 (183.7) | 68,0 (223.1) |
| Radius | | | | | | | | |
| 9,1 (30) | | | | | | | | |
| 12,0 (40) | 17,2 (38.0) | | | | | | | |
| 16,0 (50) | 16,1 (36,2) | 16,5 (36.8) | 16,5 (36.7) | | | | | |
| 22,0 (70) | 14,5 (32.5) | 15,3 (34.1) | 15,5 (34.5) | 15,3 (34.1) | 11,1 (25.0) | 12,0 (27.0) | 12,6 (28.3) | |
| 28,0 (90) | 13,2 (29.5) | 14,1 (31.4) | 14,6 (32.4) | 14,6 (32.5) | 9,4 (21.2) | 10,4 (23.3) | 11,1 (24.9) | 11,8 (26.3) |
| 36,0 (120) | 11,7 (25.4) | 12,8 (28.1) | 13,4 (29.5) | 13,1 (27.9) | 7,9 (17.4) | 8,9 (19.4) | 9,6 (21.1) | 10,3 (22.6) |
| 48,0 (150) | 8,6 (20.1) | 9,0 (21.7) | 8,2 (20.1) | 7,4 (18.3) | | 7,4 (16.9) | 8,1 (18.5) | 8,3 (19.9) |
| 56,0 (180) | | 6,7 (15.4) | 5,9 (13.8) | 5,1 (12.0) | | | 6,4 (14.9) | 5,8 (13.5) |
| 64,0 (210) | | | 4,2 (9.4) | 3,4 (7.6) | | | | 3,9 (8.7) |
| 70,0 (235) | | | 3,1 (7.0) | 2,4 (5.3) | | | | |
| 76,0 (255) | | | | | | | | |

Jib length 24,4 m (80.0 ft)

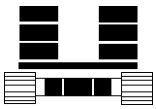
| | 5° offset | | | | 25° offset | | | |
|---|---|---|---|---|---|---|---|---|
| Boom m (ft) | 32,0 (105.0) | 44,0 (144.4) | 56,0 (183.7) | 68,0 (223.1) | 32,0 (105.0) | 44,0 (144.4) | 56,0 (183.7) | 68,0 (223.1) |
| Radius | | | | | | | | |
| 9,1 (30) | | | | | | | | |
| 12,0 (40) | — (23.4) | | | | | | | |
| 16,0 (50) | 10,2 (22.7) | 10,1 (22.6) | 9,9 (22.0) | | | | | |
| 22,0 (70) | 9,4 (21.1) | 9,5 (21.3) | 9,5 (21.2) | 9,3 (20.7) | 8,9 (19.8) | | | |
| 28,0 (90) | 8,8 (19.6) | 8,9 (19.9) | 9,0 (20.0) | 8,9 (19.8) | 7,5 (16.9) | 8,2 (18.5) | 8,6 (19.2) | 8,7 (19.3) |
| 36,0 (120) | 8,1 (17.8) | 8,2 (18.2) | 8,4 (18.4) | 8,3 (18.4) | 6,1 (13.5) | 6,8 (15.0) | 7,4 (16.3) | 7,9 (17.4) |
| 48,0 (150) | 6,8 (15.5) | 7,4 (16.8) | 7,5 (17.0) | 7,5 (17.1) | 4,9 (11.2) | 5,5 (12.7) | 6,1 (14.0) | 6,6 (15.1) |
| 56,0 (180) | — (13.3) | 6,8 (15.4) | 6,1 (14.2) | 5,3 (12.4) | | 4,9 (11.1) | 5,4 (12.3) | 5,9 (13.3) |
| 64,0 (210) | | 5,2 (11.5) | 4,4 (9.8) | 3,6 (8.0) | | | 4,9 (10.9) | 4,2 (9.4) |
| 70,0 (235) | | | 3,4 (7.5) | 2,6 (5.7) | | | | 3,1 (6.3) |
| 76,0 (255) | | | 2,5 (5.6) | | | | | 2,1 (4.2) |

*For complete chart, refer to www.cranelibrary.com.*

# 14000 S-1

**ANSI B30.5**



**127,000 lb**
**+**
**0 lb**




| ft | o | ft | lb |
|---|---|---|---|
| 65.6 ft | | | |
| 14 | 83.2 | 72.9 | 410,600 ***b** |
| 15 | 82.3 | 72.7 | 385,600 ***b** |
| 16 | 81.4 | 72.5 | 363,400 ***b** |
| 17 | 80.5 | 72.3 | 343,500 ***b** |
| 18 | 79.7 | 72.1 | 325,600 ***b** |
| 19 | 78.8 | 71.9 | 309,500 ***b** |
| 20 | 77.9 | 71.7 | 294,800 ***b** |
| 22 | 76.1 | 71.1 | 269,100 ***** |
| 24 | 74.2 | 70.5 | 239,300 |
| 26 | 72.4 | 69.8 | 208,900 |
| 28 | 70.5 | 69.1 | 185,000 |
| 30 | 68.6 | 68.3 | 165,800 |
| 32 | 66.7 | 67.4 | 150,000 |
| 34 | 64.8 | 66.4 | 136,800 |
| 36 | 62.8 | 65.3 | 125,600 |
| 38 | 60.8 | 64.2 | 115,900 |
| 40 | 58.7 | 62.9 | 107,500 |
| 42 | 56.6 | 61.5 | 100,100 |
| 44 | 54.4 | 60.0 | 93,600 |
| 46 | 52.2 | 58.5 | 87,800 |
| 48 | 49.9 | 56.7 | 82,600 |
| 50 | 47.5 | 54.8 | 77,900 |
| 55 | 41.0 | 49.3 | 67,900 |
| 60 | 33.4 | 42.3 | 59,800 |
| 65 | 23.7 | 32.3 | 53,100 |

| ft | o | ft | lb |
|---|---|---|---|
| 75.5 ft | | | |
| 16 | 82.6 | 82.5 | 363,000 ***b** |
| 17 | 81.8 | 82.3 | 343,200 ***b** |
| 18 | 81.0 | 82.2 | 325,300 ***b** |
| 19 | 80.2 | 82.0 | 309,200 ***b** |
| 20 | 79.5 | 81.8 | 294,500 ***b** |
| 22 | 77.9 | 81.3 | 268,800 ***** |
| 24 | 76.3 | 80.8 | 239,800 |
| 26 | 74.8 | 80.2 | 209,300 |
| 28 | 73.2 | 79.6 | 185,400 |
| 30 | 71.6 | 78.9 | 166,100 |
| 32 | 69.9 | 78.1 | 150,300 |
| 34 | 68.3 | 77.3 | 137,000 |
| 36 | 66.6 | 76.4 | 125,800 |
| 38 | 64.9 | 75.4 | 116,100 |
| 40 | 63.2 | 74.3 | 107,700 |
| 42 | 61.5 | 73.2 | 100,300 |
| 44 | 59.7 | 72.0 | 93,800 |
| 46 | 57.9 | 70.7 | 87,900 |
| 48 | 56.1 | 69.3 | 82,700 |
| 50 | 54.2 | 67.8 | 78,000 |
| 55 | 49.2 | 63.6 | 68,000 |
| 60 | 43.8 | 58.6 | 60,000 |
| 65 | 37.8 | 52.5 | 53,400 |
| 70 | 30.8 | 44.6 | 47,800 |
| 75 | 21.6 | 33.6 | 43,000 |

| ft | o | ft | lb |
|---|---|---|---|
| 85.3 ft | | | |
| 17 | 82.7 | 92.3 | 342,800 ***** |
| 18 | 82.1 | 92.2 | 324,900 ***** |
| 19 | 81.4 | 92.0 | 308,800 ***** |
| 20 | 80.7 | 91.8 | 294,100 ***** |
| 22 | 79.3 | 91.4 | 268,500 ***** |
| 24 | 78.0 | 90.9 | 240,100 |
| 26 | 76.6 | 90.4 | 209,500 |
| 28 | 75.2 | 89.9 | 185,500 |
| 30 | 73.8 | 89.3 | 166,300 |
| 32 | 72.4 | 88.6 | 150,400 |
| 34 | 70.9 | 87.9 | 137,100 |
| 36 | 69.5 | 87.1 | 125,800 |
| 38 | 68.0 | 86.2 | 116,100 |
| 40 | 66.6 | 85.3 | 107,700 |
| 42 | 65.1 | 84.4 | 100,300 |
| 44 | 63.6 | 83.4 | 93,800 |
| 46 | 62.0 | 82.3 | 87,900 |
| 48 | 60.5 | 81.1 | 82,700 |
| 50 | 58.9 | 79.8 | 78,000 |
| 55 | 54.8 | 76.4 | 68,000 |
| 60 | 50.5 | 72.4 | 60,000 |
| 65 | 45.9 | 67.7 | 53,400 |
| 70 | 40.8 | 62.1 | 47,900 |
| 75 | 35.2 | 55.3 | 43,200 |
| 80 | 28.6 | 46.8 | 39,100 |
| 85 | 19.8 | 34.8 | 35,500 |

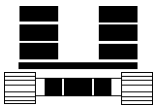


**Manitowoc Cranes, Inc.**
Manitowoc, Wisconsin 54220 U.S.A.

# 14000 S-1

**ANSI B30.5**



**127,000 lb**
**+**
**0 lb**




| ft | o | ft | lb |
|---|---|---|---|
| 95.1 ft | | | |
| 18 | 82.9 | 102.1 | 324,700 * |
| 19 | 82.3 | 102.0 | 308,600 * |
| 20 | 81.7 | 101.8 | 293,900 * |
| 22 | 80.5 | 101.4 | 268,300 * |
| 24 | 79.2 | 101.0 | 240,400 |
| 26 | 78.0 | 100.6 | 209,800 |
| 28 | 76.7 | 100.1 | 185,800 |
| 30 | 75.5 | 99.5 | 166,500 |
| 32 | 74.2 | 98.9 | 150,600 |
| 34 | 73.0 | 98.3 | 137,300 |
| 36 | 71.7 | 97.6 | 126,000 |
| 38 | 70.4 | 96.9 | 116,300 |
| 40 | 69.1 | 96.1 | 107,800 |
| 42 | 67.8 | 95.2 | 100,400 |
| 44 | 66.5 | 94.3 | 93,900 |
| 46 | 65.2 | 93.4 | 88,000 |
| 48 | 63.8 | 92.4 | 82,800 |
| 50 | 62.5 | 91.3 | 78,100 |
| 55 | 59.0 | 88.3 | 68,100 |
| 60 | 55.3 | 84.9 | 60,100 |
| 65 | 51.5 | 81.0 | 53,500 |
| 70 | 47.4 | 76.6 | 48,000 |
| 75 | 43.1 | 71.4 | 43,300 |
| 80 | 38.4 | 65.3 | 39,300 |
| 85 | 33.0 | 58.0 | 35,700 |
| 90 | 26.7 | 48.7 | 32,600 |
| 95 | 18.4 | 35.8 | 29,800 |

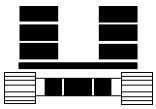
| ft | o | ft | lb |
|---|---|---|---|
| 105.0 ft | | | |
| 19 | 83.0 | 111.9 | 308,100 * |
| 20 | 82.5 | 111.8 | 293,500 * |
| 22 | 81.4 | 111.4 | 267,800 * |
| 24 | 80.2 | 111.1 | 240,600 |
| 26 | 79.1 | 110.7 | 209,900 |
| 28 | 78.0 | 110.2 | 185,800 |
| 30 | 76.9 | 109.7 | 166,500 |
| 32 | 75.8 | 109.2 | 150,500 |
| 34 | 74.6 | 108.6 | 137,200 |
| 36 | 73.5 | 108.0 | 125,900 |
| 38 | 72.3 | 107.3 | 116,200 |
| 40 | 71.2 | 106.6 | 107,700 |
| 42 | 70.0 | 105.9 | 100,300 |
| 44 | 68.8 | 105.1 | 93,700 |
| 46 | 67.7 | 104.2 | 87,900 |
| 48 | 66.5 | 103.3 | 82,600 |
| 50 | 65.2 | 102.4 | 77,900 |
| 55 | 62.2 | 99.8 | 67,900 |
| 60 | 59.0 | 96.8 | 59,900 |
| 65 | 55.7 | 93.5 | 53,300 |
| 70 | 52.3 | 89.7 | 47,800 |
| 75 | 48.7 | 85.3 | 43,100 |
| 80 | 44.9 | 80.4 | 39,100 |
| 85 | 40.8 | 74.8 | 35,600 |
| 90 | 36.2 | 68.2 | 32,500 |
| 95 | 31.2 | 60.4 | 29,700 |
| 100 | 25.1 | 50.5 | 27,300 |
| 105 | 17.1 | 36.7 | 25,000 |

| ft | o | ft | lb |
|---|---|---|---|
| 114.8 ft | | | |
| 22 | 82.1 | 121.4 | 267,600 * |
| 24 | 81.1 | 121.1 | 240,800 |
| 26 | 80.1 | 120.7 | 210,000 |
| 28 | 79.1 | 120.3 | 185,900 |
| 30 | 78.0 | 119.8 | 166,500 |
| 32 | 77.0 | 119.4 | 150,600 |
| 34 | 76.0 | 118.8 | 137,200 |
| 36 | 74.9 | 118.3 | 125,900 |
| 38 | 73.9 | 117.7 | 116,100 |
| 40 | 72.9 | 117.1 | 107,700 |
| 42 | 71.8 | 116.4 | 100,200 |
| 44 | 70.7 | 115.6 | 93,700 |
| 46 | 69.7 | 114.9 | 87,800 |
| 48 | 68.6 | 114.1 | 82,600 |
| 50 | 67.5 | 113.2 | 77,800 |
| 55 | 64.8 | 110.9 | 67,800 |
| 60 | 61.9 | 108.3 | 59,800 |
| 65 | 59.0 | 105.3 | 53,200 |
| 70 | 56.0 | 102.0 | 47,700 |
| 75 | 52.9 | 98.3 | 43,000 |
| 80 | 49.7 | 94.1 | 39,000 |
| 85 | 46.3 | 89.4 | 35,500 |
| 90 | 42.6 | 84.1 | 32,400 |
| 95 | 38.7 | 78.1 | 29,700 |
| 100 | 34.4 | 71.0 | 27,300 |
| 105 | 29.6 | 62.7 | 25,100 |
| 110 | 23.8 | 52.2 | 23,100 |
| 115 | 16.0 | 37.5 | 21,200 |

# 14000 S-1

**ANSI B30.5**



**127,000 lb**
**+**
**0 lb**




## 124.7 ft

| ft | o | ft | lb |
|---|---|---|---|
| 22 | 82.7 | 131.4 | 267,300 * |
| 24 | 81.8 | 131.1 | 241,000 |
| 26 | 80.9 | 130.7 | 210,200 |
| 28 | 79.9 | 130.3 | 186,100 |
| 30 | 79.0 | 129.9 | 166,600 |
| 32 | 78.1 | 129.5 | 150,700 |
| 34 | 77.1 | 129.0 | 137,300 |
| 36 | 76.2 | 128.5 | 125,900 |
| 38 | 75.2 | 127.9 | 116,200 |
| 40 | 74.3 | 127.4 | 107,700 |
| 42 | 73.3 | 126.7 | 100,200 |
| 44 | 72.3 | 126.1 | 93,700 |
| 46 | 71.4 | 125.4 | 87,800 |
| 48 | 70.4 | 124.7 | 82,500 |
| 50 | 69.4 | 123.9 | 77,800 |
| 55 | 66.9 | 121.8 | 67,800 |
| 60 | 64.3 | 119.4 | 59,700 |
| 65 | 61.7 | 116.7 | 53,100 |
| 70 | 59.1 | 113.8 | 47,600 |
| 75 | 56.3 | 110.5 | 43,000 |
| 80 | 53.5 | 106.8 | 38,900 |
| 85 | 50.5 | 102.8 | 35,400 |
| 90 | 47.4 | 98.3 | 32,400 |
| 95 | 44.2 | 93.2 | 29,700 |
| 100 | 40.7 | 87.6 | 27,200 |
| 105 | 36.9 | 81.1 | 25,000 |
| 110 | 32.8 | 73.7 | 23,100 |
| 115 | 28.1 | 64.8 | 21,300 |
| 120 | 22.6 | 53.7 | 19,600 |

## 134.5 ft

| ft | o | ft | lb |
|---|---|---|---|
| 24 | 82.4 | 141.0 | 241,100 |
| 26 | 81.5 | 140.7 | 210,300 |
| 28 | 80.7 | 140.4 | 186,100 |
| 30 | 79.8 | 140.0 | 166,600 |
| 32 | 78.9 | 139.6 | 150,600 |
| 34 | 78.1 | 139.1 | 137,200 |
| 36 | 77.2 | 138.7 | 125,900 |
| 38 | 76.3 | 138.1 | 116,100 |
| 40 | 75.4 | 137.6 | 107,600 |
| 42 | 74.6 | 137.0 | 100,100 |
| 44 | 73.7 | 136.4 | 93,500 |
| 46 | 72.8 | 135.8 | 87,700 |
| 48 | 71.9 | 135.1 | 82,400 |
| 50 | 71.0 | 134.4 | 77,700 |
| 55 | 68.7 | 132.5 | 67,600 |
| 60 | 66.4 | 130.3 | 59,600 |
| 65 | 64.0 | 127.9 | 53,000 |
| 70 | 61.6 | 125.2 | 47,500 |
| 75 | 59.1 | 122.3 | 42,800 |
| 80 | 56.6 | 119.0 | 38,800 |
| 85 | 53.9 | 115.4 | 35,300 |
| 90 | 51.2 | 111.4 | 32,200 |
| 95 | 48.4 | 107.1 | 29,500 |
| 100 | 45.4 | 102.2 | 27,100 |
| 105 | 42.3 | 96.9 | 24,900 |
| 110 | 39.0 | 90.8 | 22,900 |
| 115 | 35.4 | 84.0 | 21,100 |
| 120 | 31.4 | 76.1 | 19,500 |
| 125 | 26.9 | 66.8 | 18,000 |
| 130 | 21.5 | 55.1 | 16,600 |

## 144.4 ft

| ft | o | ft | lb |
|---|---|---|---|
| 24 | 82.9 | 151.0 | 238,600 * |
| 26 | 82.1 | 150.7 | 210,300 |
| 28 | 81.3 | 150.4 | 186,000 |
| 30 | 80.5 | 150.0 | 166,500 |
| 32 | 79.7 | 149.6 | 150,500 |
| 34 | 78.9 | 149.2 | 137,100 |
| 36 | 78.1 | 148.8 | 125,700 |
| 38 | 77.3 | 148.3 | 115,900 |
| 40 | 76.5 | 147.8 | 107,400 |
| 42 | 75.6 | 147.3 | 99,900 |
| 44 | 74.8 | 146.7 | 93,300 |
| 46 | 74.0 | 146.1 | 87,400 |
| 48 | 73.1 | 145.5 | 82,100 |
| 50 | 72.3 | 144.8 | 77,400 |
| 55 | 70.2 | 143.1 | 67,300 |
| 60 | 68.1 | 141.1 | 59,300 |
| 65 | 65.9 | 138.8 | 52,600 |
| 70 | 63.7 | 136.4 | 47,100 |
| 75 | 61.4 | 133.7 | 42,400 |
| 80 | 59.1 | 130.7 | 38,400 |
| 85 | 56.8 | 127.5 | 34,900 |
| 90 | 54.3 | 123.9 | 31,800 |
| 95 | 51.8 | 120.1 | 29,100 |
| 100 | 49.2 | 115.8 | 26,700 |
| 105 | 46.5 | 111.2 | 24,500 |
| 110 | 43.7 | 106.0 | 22,600 |
| 115 | 40.6 | 100.3 | 20,800 |
| 120 | 37.4 | 93.9 | 19,200 |
| 125 | 34.0 | 86.7 | 17,700 |
| 130 | 30.1 | 78.5 | 16,300 |
| 135 | 25.7 | 68.7 | 15,000 |
| 140 | 20.5 | 56.4 | 13,800 |

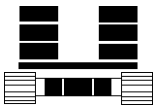


**Manitowoc Cranes, Inc.**
Manitowoc, Wisconsin 54220 U.S.A.

# 14000 S-1

**ANSI B30.5**



**127,000 lb**
**+**
**0 lb**




| ft | o | ft | lb |
|---|---|---|---|
| 154.2 ft | | | |
| 26 | 82.6 | 160.6 | 210,200 |
| 28 | 81.9 | 160.3 | 186,000 |
| 30 | 81.1 | 160.0 | 166,400 |
| 32 | 80.4 | 159.6 | 150,400 |
| 34 | 79.6 | 159.2 | 136,900 |
| 36 | 78.9 | 158.8 | 125,500 |
| 38 | 78.1 | 158.4 | 115,700 |
| 40 | 77.3 | 157.9 | 107,200 |
| 42 | 76.6 | 157.4 | 99,700 |
| 44 | 75.8 | 156.9 | 93,100 |
| 46 | 75.0 | 156.4 | 87,200 |
| 48 | 74.3 | 155.8 | 81,900 |
| 50 | 73.5 | 155.2 | 77,200 |
| 55 | 71.5 | 153.5 | 67,100 |
| 60 | 69.5 | 151.7 | 59,000 |
| 65 | 67.5 | 149.6 | 52,400 |
| 70 | 65.5 | 147.4 | 46,900 |
| 75 | 63.4 | 144.9 | 42,200 |
| 80 | 61.3 | 142.2 | 38,200 |
| 85 | 59.2 | 139.2 | 34,700 |
| 90 | 56.9 | 136.0 | 31,600 |
| 95 | 54.7 | 132.5 | 28,900 |
| 100 | 52.3 | 128.7 | 26,500 |
| 105 | 49.9 | 124.5 | 24,300 |
| 110 | 47.4 | 120.0 | 22,300 |
| 115 | 44.8 | 115.0 | 20,600 |
| 120 | 42.1 | 109.6 | 18,900 |
| 125 | 39.2 | 103.6 | 17,500 |
| 130 | 36.0 | 96.9 | 16,100 |
| 135 | 32.7 | 89.4 | 14,800 |
| 140 | 29.0 | 80.7 | 13,600 |
| 145 | 24.7 | 70.4 | 12,500 |
| 150 | 19.6 | 57.7 | 11,500 |

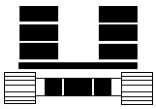
| ft | o | ft | lb |
|---|---|---|---|
| 164.0 ft | | | |
| 28 | 82.4 | 170.3 | 186,000 |
| 30 | 81.7 | 170.0 | 166,400 |
| 32 | 81.0 | 169.6 | 150,400 |
| 34 | 80.2 | 169.3 | 136,900 |
| 36 | 79.5 | 168.9 | 125,500 |
| 38 | 78.8 | 168.5 | 115,600 |
| 40 | 78.1 | 168.0 | 107,100 |
| 42 | 77.4 | 167.6 | 99,600 |
| 44 | 76.7 | 167.1 | 93,000 |
| 46 | 76.0 | 166.6 | 87,100 |
| 48 | 75.2 | 166.0 | 81,800 |
| 50 | 74.5 | 165.5 | 77,000 |
| 55 | 72.7 | 163.9 | 67,000 |
| 60 | 70.8 | 162.2 | 58,900 |
| 65 | 69.0 | 160.3 | 52,300 |
| 70 | 67.1 | 158.2 | 46,700 |
| 75 | 65.1 | 155.9 | 42,000 |
| 80 | 63.2 | 153.4 | 38,000 |
| 85 | 61.2 | 150.6 | 34,500 |
| 90 | 59.2 | 147.7 | 31,400 |
| 95 | 57.1 | 144.5 | 28,700 |
| 100 | 55.0 | 141.0 | 26,300 |
| 105 | 52.8 | 137.3 | 24,100 |
| 110 | 50.5 | 133.2 | 22,200 |
| 115 | 48.2 | 128.8 | 20,400 |
| 120 | 45.8 | 124.0 | 18,800 |
| 125 | 43.3 | 118.8 | 17,300 |
| 130 | 40.6 | 113.1 | 15,900 |
| 135 | 37.8 | 106.7 | 14,700 |
| 140 | 34.8 | 99.7 | 13,500 |
| 145 | 31.5 | 91.8 | 12,400 |
| 150 | 27.9 | 82.8 | 11,400 |
| 155 | 23.8 | 72.1 | 10,400 |
| 160 | 18.8 | 58.8 | 9,500 |

| ft | o | ft | lb |
|---|---|---|---|
| 173.9 ft | | | |
| 28 | 82.8 | 180.2 | 185,900 |
| 30 | 82.1 | 179.9 | 166,300 |
| 32 | 81.5 | 179.6 | 150,200 |
| 34 | 80.8 | 179.3 | 136,700 |
| 36 | 80.1 | 178.9 | 125,300 |
| 38 | 79.5 | 178.5 | 115,500 |
| 40 | 78.8 | 178.1 | 106,900 |
| 42 | 78.1 | 177.7 | 99,400 |
| 44 | 77.4 | 177.2 | 92,800 |
| 46 | 76.8 | 176.7 | 86,900 |
| 48 | 76.1 | 176.2 | 81,600 |
| 50 | 75.4 | 175.7 | 76,800 |
| 55 | 73.7 | 174.2 | 66,700 |
| 60 | 72.0 | 172.6 | 58,600 |
| 65 | 70.2 | 170.8 | 52,000 |
| 70 | 68.4 | 168.9 | 46,400 |
| 75 | 66.6 | 166.7 | 41,700 |
| 80 | 64.8 | 164.4 | 37,700 |
| 85 | 63.0 | 161.9 | 34,200 |
| 90 | 61.1 | 159.1 | 31,100 |
| 95 | 59.2 | 156.2 | 28,400 |
| 100 | 57.2 | 153.0 | 26,000 |
| 105 | 55.2 | 149.6 | 23,800 |
| 110 | 53.2 | 145.8 | 21,900 |
| 115 | 51.1 | 141.9 | 20,100 |
| 120 | 48.9 | 137.5 | 18,500 |
| 125 | 46.6 | 132.9 | 17,000 |
| 130 | 44.3 | 127.8 | 15,700 |
| 135 | 41.9 | 122.3 | 14,400 |
| 140 | 39.3 | 116.4 | 13,200 |
| 145 | 36.6 | 109.8 | 12,200 |
| 150 | 33.6 | 102.4 | 11,200 |
| 155 | 30.5 | 94.2 | 10,200 |
| 160 | 27.0 | 84.8 | 9,300 |
| 165 | 22.9 | 73.7 | 8,500 |
| 170 | 18.1 | 59.8 | 7,700 |

# 14000 S-1

**ANSI B30.5**



**127,000 lb**
**+**
**0 lb**




| ft | o | ft | lb |
|---|---|---|---|
| 183.7 ft | | | |
| 30 | 82.6 | 189.9 | 166,200 |
| 32 | 81.9 | 189.6 | 150,100 |
| 34 | 81.3 | 189.3 | 136,600 |
| 36 | 80.7 | 188.9 | 125,100 |
| 38 | 80.0 | 188.6 | 115,200 |
| 40 | 79.4 | 188.2 | 106,700 |
| 42 | 78.8 | 187.7 | 99,200 |
| 44 | 78.1 | 187.3 | 92,500 |
| 46 | 77.5 | 186.9 | 86,600 |
| 48 | 76.8 | 186.4 | 81,300 |
| 50 | 76.2 | 185.9 | 76,500 |
| 55 | 74.6 | 184.5 | 66,400 |
| 60 | 73.0 | 183.0 | 58,300 |
| 65 | 71.3 | 181.3 | 51,600 |
| 70 | 69.7 | 179.5 | 46,100 |
| 75 | 68.0 | 177.4 | 41,400 |
| 80 | 66.3 | 175.3 | 37,300 |
| 85 | 64.5 | 172.9 | 33,800 |
| 90 | 62.8 | 170.4 | 30,700 |
| 95 | 61.0 | 167.6 | 28,000 |
| 100 | 59.2 | 164.6 | 25,600 |
| 105 | 57.4 | 161.5 | 23,400 |
| 110 | 55.5 | 158.1 | 21,500 |
| 115 | 53.5 | 154.4 | 19,700 |
| 120 | 51.6 | 150.5 | 18,100 |
| 125 | 49.5 | 146.3 | 16,600 |
| 130 | 47.4 | 141.7 | 15,200 |
| 135 | 45.2 | 136.8 | 14,000 |
| 140 | 43.0 | 131.5 | 12,800 |
| 145 | 40.6 | 125.8 | 11,800 |
| 150 | 38.1 | 119.5 | 10,700 |
| 155 | 35.4 | 112.7 | 9,800 |
| 160 | 32.6 | 105.1 | 8,900 |
| 165 | 29.5 | 96.5 | 8,100 |
| 170 | 26.1 | 86.7 | 7,300 |
| 175 | 22.2 | 75.2 | 6,600 |
| 180 | 17.4 | 60.7 | 5,900 |

| ft | o | ft | lb |
|---|---|---|---|
| 193.6 ft | | | |
| 30 | 82.9 | 199.8 | 166,100 |
| 32 | 82.3 | 199.5 | 149,900 |
| 34 | 81.8 | 199.2 | 136,400 |
| 36 | 81.2 | 198.9 | 124,900 |
| 38 | 80.6 | 198.6 | 115,000 |
| 40 | 79.9 | 198.2 | 106,400 |
| 42 | 79.3 | 197.8 | 98,900 |
| 44 | 78.7 | 197.4 | 92,300 |
| 46 | 78.1 | 196.9 | 86,300 |
| 48 | 77.5 | 196.5 | 81,000 |
| 50 | 76.9 | 196.0 | 76,300 |
| 55 | 75.4 | 194.7 | 66,100 |
| 60 | 73.9 | 193.3 | 58,000 |
| 65 | 72.3 | 191.7 | 51,300 |
| 70 | 70.7 | 190.0 | 45,800 |
| 75 | 69.1 | 188.1 | 41,100 |
| 80 | 67.5 | 186.0 | 37,000 |
| 85 | 65.9 | 183.8 | 33,500 |
| 90 | 64.3 | 181.4 | 30,400 |
| 95 | 62.6 | 178.8 | 27,700 |
| 100 | 60.9 | 176.1 | 25,300 |
| 105 | 59.2 | 173.1 | 23,100 |
| 110 | 57.5 | 170.0 | 21,100 |
| 115 | 55.7 | 166.6 | 19,400 |
| 120 | 53.9 | 163.0 | 17,800 |
| 125 | 52.0 | 159.1 | 16,300 |
| 130 | 50.1 | 154.9 | 14,900 |
| 135 | 48.1 | 150.5 | 13,700 |
| 140 | 46.0 | 145.7 | 12,500 |
| 145 | 43.9 | 140.6 | 11,400 |
| 150 | 41.7 | 135.1 | 10,400 |
| 155 | 39.4 | 129.1 | 9,500 |
| 160 | 37.0 | 122.6 | 8,600 |
| 165 | 34.4 | 115.5 | 7,800 |
| 170 | 31.6 | 107.6 | 7,000 |
| 175 | 28.6 | 98.7 | 6,300 |
| 180 | 25.3 | 88.6 | 5,600 |
| 185 | 21.4 | 76.6 | 4,900 |
| 190 | 16.8 | 61.6 | 4,300 |

| ft | o | ft | lb |
|---|---|---|---|
| 203.4 ft | | | |
| 32 | 82.7 | 209.5 | 149,800 |
| 34 | 82.2 | 209.2 | 136,300 |
| 36 | 81.6 | 208.9 | 124,800 |
| 38 | 81.0 | 208.6 | 114,900 |
| 40 | 80.4 | 208.2 | 106,300 |
| 42 | 79.9 | 207.8 | 98,800 |
| 44 | 79.3 | 207.4 | 92,100 |
| 46 | 78.7 | 207.0 | 86,200 |
| 48 | 78.1 | 206.6 | 80,800 |
| 50 | 77.6 | 206.1 | 76,100 |
| 55 | 76.1 | 204.9 | 65,900 |
| 60 | 74.7 | 203.6 | 57,800 |
| 65 | 73.2 | 202.1 | 51,100 |
| 70 | 71.7 | 200.4 | 45,500 |
| 75 | 70.2 | 198.6 | 40,800 |
| 80 | 68.7 | 196.7 | 36,800 |
| 85 | 67.2 | 194.6 | 33,200 |
| 90 | 65.6 | 192.3 | 30,200 |
| 95 | 64.1 | 189.9 | 27,400 |
| 100 | 62.5 | 187.3 | 25,000 |
| 105 | 60.9 | 184.6 | 22,800 |
| 110 | 59.2 | 181.6 | 20,900 |
| 115 | 57.6 | 178.4 | 19,100 |
| 120 | 55.9 | 175.1 | 17,500 |
| 125 | 54.1 | 171.5 | 16,000 |
| 130 | 52.4 | 167.7 | 14,700 |
| 135 | 50.5 | 163.6 | 13,400 |
| 140 | 48.7 | 159.3 | 12,300 |
| 145 | 46.8 | 154.6 | 11,200 |
| 150 | 44.8 | 149.6 | 10,200 |
| 155 | 42.7 | 144.3 | 9,300 |
| 160 | 40.6 | 138.5 | 8,400 |
| 165 | 38.3 | 132.3 | 7,600 |
| 170 | 35.9 | 125.6 | 6,800 |
| 175 | 33.4 | 118.2 | 6,100 |
| 180 | 30.7 | 110.0 | 5,400 |
| 185 | 27.8 | 100.8 | 4,700 |
| 190 | 24.5 | 90.4 | 4,100 |

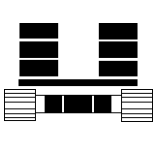


**Manitowoc Cranes, Inc.**
Manitowoc, Wisconsin 54220 U.S.A.

# 14000 S-1

**ANSI B30.5**

**76**





**127,000 lb**
**+**
**0 lb**



**360°**

| ft | ° | ft | lb |
|---|---|---|---|
| 213.2 ft | | | |
| 34 | 82.5 | 219.1 | 136,100 |
| 36 | 82.0 | 218.8 | 124,600 |
| 38 | 81.4 | 218.5 | 114,700 |
| 40 | 80.9 | 218.2 | 106,100 |
| 42 | 80.3 | 217.8 | 98,500 |
| 44 | 79.8 | 217.5 | 91,800 |
| 46 | 79.2 | 217.1 | 85,900 |
| 48 | 78.7 | 216.7 | 80,600 |
| 50 | 78.1 | 216.2 | 75,800 |
| 55 | 76.8 | 215.1 | 65,600 |
| 60 | 75.4 | 213.8 | 57,500 |
| 65 | 74.0 | 212.3 | 50,800 |
| 70 | 72.6 | 210.8 | 45,200 |
| 75 | 71.2 | 209.1 | 40,500 |
| 80 | 69.7 | 207.2 | 36,500 |
| 85 | 68.3 | 205.3 | 32,900 |
| 90 | 66.8 | 203.1 | 29,800 |
| 95 | 65.3 | 200.9 | 27,100 |
| 100 | 63.9 | 198.4 | 24,700 |
| 105 | 62.3 | 195.8 | 22,500 |
| 110 | 60.8 | 193.0 | 20,600 |
| 115 | 59.2 | 190.1 | 18,800 |
| 120 | 57.7 | 186.9 | 17,200 |
| 125 | 56.0 | 183.6 | 15,700 |
| 130 | 54.4 | 180.1 | 14,300 |
| 135 | 52.7 | 176.3 | 13,100 |
| 140 | 51.0 | 172.3 | 11,900 |
| 145 | 49.2 | 168.0 | 10,800 |
| 150 | 47.4 | 163.4 | 9,900 |
| 155 | 45.5 | 158.6 | 8,900 |
| 160 | 43.6 | 153.4 | 8,100 |
| 165 | 41.6 | 147.9 | 7,200 |
| 170 | 39.5 | 141.9 | 6,500 |
| 175 | 37.3 | 135.4 | 5,700 |
| 180 | 35.0 | 128.4 | 5,100 |
| 185 | 32.5 | 120.8 | 4,400 |

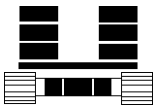
| ft | ° | ft | lb |
|---|---|---|---|
| 223.1 ft | | | |
| 34 | 82.9 | 229.1 | 135,800 * |
| 36 | 82.3 | 228.8 | 124,300 |
| 38 | 81.8 | 228.5 | 114,300 |
| 40 | 81.3 | 228.2 | 105,700 |
| 42 | 80.8 | 227.8 | 98,200 |
| 44 | 80.2 | 227.5 | 91,500 |
| 46 | 79.7 | 227.1 | 85,500 |
| 48 | 79.2 | 226.7 | 80,200 |
| 50 | 78.7 | 226.3 | 75,400 |
| 55 | 77.4 | 225.2 | 65,200 |
| 60 | 76.0 | 223.9 | 57,000 |
| 65 | 74.7 | 222.6 | 50,300 |
| 70 | 73.4 | 221.1 | 44,700 |
| 75 | 72.0 | 219.5 | 40,000 |
| 80 | 70.7 | 217.7 | 35,900 |
| 85 | 69.3 | 215.9 | 32,400 |
| 90 | 67.9 | 213.9 | 29,300 |
| 95 | 66.5 | 211.7 | 26,600 |
| 100 | 65.1 | 209.4 | 24,100 |
| 105 | 63.7 | 206.9 | 22,000 |
| 110 | 62.2 | 204.3 | 20,000 |
| 115 | 60.7 | 201.5 | 18,200 |
| 120 | 59.3 | 198.6 | 16,600 |
| 125 | 57.7 | 195.4 | 15,100 |
| 130 | 56.2 | 192.1 | 13,800 |
| 135 | 54.6 | 188.6 | 12,500 |
| 140 | 53.0 | 184.9 | 11,300 |
| 145 | 51.4 | 180.9 | 10,300 |
| 150 | 49.7 | 176.7 | 9,300 |
| 155 | 48.0 | 172.2 | 8,300 |
| 160 | 46.2 | 167.5 | 7,500 |
| 165 | 44.4 | 162.4 | 6,700 |
| 170 | 42.5 | 157.1 | 5,900 |
| 175 | 40.5 | 151.3 | 5,200 |
| 180 | 38.5 | 145.1 | 4,500 |

| ft | ° | ft | lb |
|---|---|---|---|
| 232.9 ft | | | |
| 36 | 82.7 | 238.7 | 122,600 * |
| 38 | 82.2 | 238.4 | 114,700 |
| 40 | 81.7 | 238.1 | 106,100 |
| 42 | 81.2 | 237.8 | 98,500 |
| 44 | 80.7 | 237.5 | 91,800 |
| 46 | 80.2 | 237.1 | 85,900 |
| 48 | 79.7 | 236.7 | 80,500 |
| 50 | 79.2 | 236.4 | 75,700 |
| 55 | 77.9 | 235.3 | 65,500 |
| 60 | 76.6 | 234.1 | 57,300 |
| 65 | 75.4 | 232.8 | 50,600 |
| 70 | 74.1 | 231.4 | 45,000 |
| 75 | 72.8 | 229.9 | 40,300 |
| 80 | 71.5 | 228.2 | 36,200 |
| 85 | 70.2 | 226.4 | 32,700 |
| 90 | 68.9 | 224.5 | 29,600 |
| 95 | 67.6 | 222.4 | 26,800 |
| 100 | 66.2 | 220.2 | 24,400 |
| 105 | 64.9 | 217.9 | 22,200 |
| 110 | 63.5 | 215.4 | 20,300 |
| 115 | 62.1 | 212.8 | 18,500 |
| 120 | 60.7 | 210.0 | 16,900 |
| 125 | 59.3 | 207.0 | 15,400 |
| 130 | 57.8 | 203.9 | 14,000 |
| 135 | 56.3 | 200.6 | 12,800 |
| 140 | 54.8 | 197.1 | 11,600 |
| 145 | 53.3 | 193.4 | 10,500 |
| 150 | 51.7 | 189.5 | 9,500 |
| 155 | 50.1 | 185.4 | 8,600 |
| 160 | 48.5 | 181.0 | 7,700 |
| 165 | 46.8 | 176.3 | 6,900 |
| 170 | 45.1 | 171.4 | 6,200 |
| 175 | 43.3 | 166.2 | 5,400 |
| 180 | 41.5 | 160.6 | 4,800 |
| 185 | 39.6 | 154.6 | 4,100 |

# 14000 S-1

**ANSI B30.5**

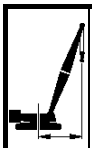


**127,000 lb**
**+**
**0 lb**



**360°**

|  ft |  o |  ft |  lb |
|---|---|---|---|
|  242.8 ft | | | |
| 36 | 83.0 | 248.7 | 111,600 * |
| 38 | 82.5 | 248.4 | 111,100 * |
| 40 | 82.0 | 248.1 | 105,900 |
| 42 | 81.5 | 247.8 | 98,300 |
| 44 | 81.0 | 247.5 | 91,600 |
| 46 | 80.6 | 247.1 | 85,700 |
| 48 | 80.1 | 246.8 | 80,300 |
| 50 | 79.6 | 246.4 | 75,500 |
| 55 | 78.4 | 245.4 | 65,300 |
| 60 | 77.2 | 244.2 | 57,100 |
| 65 | 76.0 | 243.0 | 50,400 |
| 70 | 74.8 | 241.6 | 44,800 |
| 75 | 73.5 | 240.2 | 40,000 |
| 80 | 72.3 | 238.6 | 35,900 |
| 85 | 71.0 | 236.9 | 32,400 |
| 90 | 69.8 | 235.0 | 29,300 |
| 95 | 68.5 | 233.1 | 26,600 |
| 100 | 67.2 | 231.0 | 24,100 |
| 105 | 65.9 | 228.8 | 21,900 |
| 110 | 64.6 | 226.4 | 20,000 |
| 115 | 63.3 | 223.9 | 18,200 |
| 120 | 62.0 | 221.3 | 16,600 |
| 125 | 60.6 | 218.5 | 15,100 |
| 130 | 59.3 | 215.5 | 13,700 |
| 135 | 57.9 | 212.4 | 12,500 |
| 140 | 56.5 | 209.1 | 11,300 |
| 145 | 55.0 | 205.6 | 10,200 |
| 150 | 53.6 | 202.0 | 9,200 |
| 155 | 52.1 | 198.1 | 8,300 |
| 160 | 50.6 | 194.0 | 7,400 |
| 165 | 49.0 | 189.7 | 6,600 |
| 170 | 47.4 | 185.2 | 5,800 |
| 175 | 45.8 | 180.3 | 5,100 |
| 180 | 44.1 | 175.2 | 4,400 |

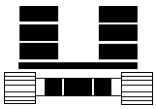


**Manitowoc Cranes, Inc.**
Manitowoc, Wisconsin 54220 U.S.A.

# 14000 S-2

**ANSI B30.5**



**168,000 lb**
**+**
**53,000 lb**



**360°**

## 65.6 ft

| ft | o | ft | lb |
|---|---|---|---|
| 14 | 83.2 | 72.9 | 441,000 ***b** |
| 15 | 82.3 | 72.7 | 409,500 ***b** |
| 16 | 81.4 | 72.5 | 386,000 ***b** |
| 17 | 80.5 | 72.3 | 364,900 ***b** |
| 18 | 79.7 | 72.1 | 346,000 ***b** |
| 19 | 78.8 | 71.9 | 328,900 ***b** |
| 20 | 77.9 | 71.7 | 313,300 ***b** |
| 22 | 76.1 | 71.1 | 286,100 ***** |
| 24 | 74.2 | 70.5 | 263,100 ***** |
| 26 | 72.4 | 69.8 | 243,400 ***** |
| 28 | 70.5 | 69.1 | 226,300 ***** |
| 30 | 68.6 | 68.3 | 211,300 ***** |
| 32 | 66.7 | 67.4 | 198,000 ***** |
| 34 | 64.8 | 66.4 | 183,000 |
| 36 | 62.8 | 65.3 | 168,300 |
| 38 | 60.8 | 64.2 | 155,600 |
| 40 | 58.7 | 62.9 | 144,600 |
| 42 | 56.6 | 61.5 | 135,000 |
| 44 | 54.4 | 60.0 | 126,400 |
| 46 | 52.2 | 58.5 | 118,800 |
| 48 | 49.9 | 56.7 | 112,000 |
| 50 | 47.5 | 54.8 | 105,800 |
| 55 | 41.0 | 49.3 | 92,700 |
| 60 | 33.4 | 42.3 | 82,200 |
| 65 | 23.7 | 32.3 | 73,500 |

## 75.5 ft

| ft | o | ft | lb |
|---|---|---|---|
| 16 | 82.6 | 82.5 | 385,600 ***b** |
| 17 | 81.8 | 82.3 | 364,600 ***b** |
| 18 | 81.0 | 82.2 | 345,700 ***b** |
| 19 | 80.2 | 82.0 | 328,500 ***b** |
| 20 | 79.5 | 81.8 | 313,000 ***b** |
| 22 | 77.9 | 81.3 | 285,800 ***** |
| 24 | 76.3 | 80.8 | 262,800 ***** |
| 26 | 74.8 | 80.2 | 243,100 ***** |
| 28 | 73.2 | 79.6 | 226,000 ***** |
| 30 | 71.6 | 78.9 | 211,100 ***** |
| 32 | 69.9 | 78.1 | 197,900 ***** |
| 34 | 68.3 | 77.3 | 183,300 |
| 36 | 66.6 | 76.4 | 168,500 |
| 38 | 64.9 | 75.4 | 155,800 |
| 40 | 63.2 | 74.3 | 144,800 |
| 42 | 61.5 | 73.2 | 135,100 |
| 44 | 59.7 | 72.0 | 126,600 |
| 46 | 57.9 | 70.7 | 119,000 |
| 48 | 56.1 | 69.3 | 112,100 |
| 50 | 54.2 | 67.8 | 106,000 |
| 55 | 49.2 | 63.6 | 92,900 |
| 60 | 43.8 | 58.6 | 82,400 |
| 65 | 37.8 | 52.5 | 73,800 |
| 70 | 30.8 | 44.6 | 66,500 |
| 75 | 21.6 | 33.6 | 60,300 |

## 85.3 ft

| ft | o | ft | lb |
|---|---|---|---|
| 17 | 82.7 | 92.3 | 356,600 ***** |
| 18 | 82.1 | 92.2 | 345,300 ***** |
| 19 | 81.4 | 92.0 | 328,100 ***** |
| 20 | 80.7 | 91.8 | 312,600 ***** |
| 22 | 79.3 | 91.4 | 285,400 ***** |
| 24 | 78.0 | 90.9 | 262,400 ***** |
| 26 | 76.6 | 90.4 | 242,700 ***** |
| 28 | 75.2 | 89.9 | 225,600 ***** |
| 30 | 73.8 | 89.3 | 210,700 ***** |
| 32 | 72.4 | 88.6 | 197,500 ***** |
| 34 | 70.9 | 87.9 | 183,300 |
| 36 | 69.5 | 87.1 | 168,600 |
| 38 | 68.0 | 86.2 | 155,900 |
| 40 | 66.6 | 85.3 | 144,800 |
| 42 | 65.1 | 84.4 | 135,100 |
| 44 | 63.6 | 83.4 | 126,600 |
| 46 | 62.0 | 82.3 | 119,000 |
| 48 | 60.5 | 81.1 | 112,100 |
| 50 | 58.9 | 79.8 | 106,000 |
| 55 | 54.8 | 76.4 | 92,900 |
| 60 | 50.5 | 72.4 | 82,400 |
| 65 | 45.9 | 67.7 | 73,800 |
| 70 | 40.8 | 62.1 | 66,600 |
| 75 | 35.2 | 55.3 | 60,400 |
| 80 | 28.6 | 46.8 | 55,100 |
| 85 | 19.8 | 34.8 | 50,500 |

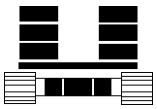


**Manitowoc Cranes, Inc.**
Manitowoc, Wisconsin 54220 U.S.A.

# 14000 S-2

**ANSI B30.5**

**76**



**168,000 lb**
**+**
**53,000 lb**



**360°**

## 95.1 ft

| ft | o | ft | lb |
|---|---|---|---|
| 18 | 82.9 | 102.1 | 343,500 * |
| 19 | 82.3 | 102.0 | 328,000 * |
| 20 | 81.7 | 101.8 | 312,400 * |
| 22 | 80.5 | 101.4 | 285,200 * |
| 24 | 79.2 | 101.0 | 262,200 * |
| 26 | 78.0 | 100.6 | 242,500 * |
| 28 | 76.7 | 100.1 | 225,500 * |
| 30 | 75.5 | 99.5 | 210,600 * |
| 32 | 74.2 | 98.9 | 197,400 * |
| 34 | 73.0 | 98.3 | 183,500 |
| 36 | 71.7 | 97.6 | 168,700 |
| 38 | 70.4 | 96.9 | 156,000 |
| 40 | 69.1 | 96.1 | 145,000 |
| 42 | 67.8 | 95.2 | 135,300 |
| 44 | 66.5 | 94.3 | 126,700 |
| 46 | 65.2 | 93.4 | 119,100 |
| 48 | 63.8 | 92.4 | 112,200 |
| 50 | 62.5 | 91.3 | 106,100 |
| 55 | 59.0 | 88.3 | 93,000 |
| 60 | 55.3 | 84.9 | 82,500 |
| 65 | 51.5 | 81.0 | 73,900 |
| 70 | 47.4 | 76.6 | 66,700 |
| 75 | 43.1 | 71.4 | 60,600 |
| 80 | 38.4 | 65.3 | 55,300 |
| 85 | 33.0 | 58.0 | 50,700 |
| 90 | 26.7 | 48.7 | 46,700 |
| 95 | 18.4 | 35.8 | 43,000 |

## 105.0 ft

| ft | o | ft | lb |
|---|---|---|---|
| 19 | 83.0 | 111.9 | 315,000 * |
| 20 | 82.5 | 111.8 | 311,900 * |
| 22 | 81.4 | 111.4 | 284,800 * |
| 24 | 80.2 | 111.1 | 261,800 * |
| 26 | 79.1 | 110.7 | 242,100 * |
| 28 | 78.0 | 110.2 | 225,000 * |
| 30 | 76.9 | 109.7 | 210,100 * |
| 32 | 75.8 | 109.2 | 196,900 * |
| 34 | 74.6 | 108.6 | 183,400 |
| 36 | 73.5 | 108.0 | 168,600 |
| 38 | 72.3 | 107.3 | 155,900 |
| 40 | 71.2 | 106.6 | 144,800 |
| 42 | 70.0 | 105.9 | 135,100 |
| 44 | 68.8 | 105.1 | 126,500 |
| 46 | 67.7 | 104.2 | 118,900 |
| 48 | 66.5 | 103.3 | 112,000 |
| 50 | 65.2 | 102.4 | 105,900 |
| 55 | 62.2 | 99.8 | 92,800 |
| 60 | 59.0 | 96.8 | 82,300 |
| 65 | 55.7 | 93.5 | 73,700 |
| 70 | 52.3 | 89.7 | 66,500 |
| 75 | 48.7 | 85.3 | 60,400 |
| 80 | 44.9 | 80.4 | 55,100 |
| 85 | 40.8 | 74.8 | 50,600 |
| 90 | 36.2 | 68.2 | 46,500 |
| 95 | 31.2 | 60.4 | 43,000 |
| 100 | 25.1 | 50.5 | 39,800 |
| 105 | 17.1 | 36.7 | 36,800 |

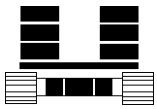
## 114.8 ft

| ft | o | ft | lb |
|---|---|---|---|
| 22 | 82.1 | 121.4 | 284,500 * |
| 24 | 81.1 | 121.1 | 261,500 * |
| 26 | 80.1 | 120.7 | 241,800 * |
| 28 | 79.1 | 120.3 | 224,800 * |
| 30 | 78.0 | 119.8 | 209,900 * |
| 32 | 77.0 | 119.4 | 196,700 * |
| 34 | 76.0 | 118.8 | 183,400 |
| 36 | 74.9 | 118.3 | 168,600 |
| 38 | 73.9 | 117.7 | 155,900 |
| 40 | 72.9 | 117.1 | 144,800 |
| 42 | 71.8 | 116.4 | 135,100 |
| 44 | 70.7 | 115.6 | 126,500 |
| 46 | 69.7 | 114.9 | 118,800 |
| 48 | 68.6 | 114.1 | 112,000 |
| 50 | 67.5 | 113.2 | 105,800 |
| 55 | 64.8 | 110.9 | 92,700 |
| 60 | 61.9 | 108.3 | 82,200 |
| 65 | 59.0 | 105.3 | 73,600 |
| 70 | 56.0 | 102.0 | 66,400 |
| 75 | 52.9 | 98.3 | 60,300 |
| 80 | 49.7 | 94.1 | 55,100 |
| 85 | 46.3 | 89.4 | 50,500 |
| 90 | 42.6 | 84.1 | 46,500 |
| 95 | 38.7 | 78.1 | 42,900 |
| 100 | 34.4 | 71.0 | 39,800 |
| 105 | 29.6 | 62.7 | 36,900 |
| 110 | 23.8 | 52.2 | 34,300 |
| 115 | 16.0 | 37.5 | 31,900 |

# 14000 S-2

**ANSI B30.5**



**168,000 lb**
**+**
**53,000 lb**



**360°**

## 124.7 ft

| ft | ° | ft | lb |
|---|---|---|---|
| 22 | 82.7 | 131.4 | 281,600 * |
| 24 | 81.8 | 131.1 | 261,300 * |
| 26 | 80.9 | 130.7 | 241,600 * |
| 28 | 79.9 | 130.3 | 224,500 * |
| 30 | 79.0 | 129.9 | 209,600 * |
| 32 | 78.1 | 129.5 | 196,500 * |
| 34 | 77.1 | 129.0 | 183,500 |
| 36 | 76.2 | 128.5 | 168,700 |
| 38 | 75.2 | 127.9 | 155,900 |
| 40 | 74.3 | 127.4 | 144,800 |
| 42 | 73.3 | 126.7 | 135,100 |
| 44 | 72.3 | 126.1 | 126,500 |
| 46 | 71.4 | 125.4 | 118,800 |
| 48 | 70.4 | 124.7 | 112,000 |
| 50 | 69.4 | 123.9 | 105,800 |
| 55 | 66.9 | 121.8 | 92,700 |
| 60 | 64.3 | 119.4 | 82,200 |
| 65 | 61.7 | 116.7 | 73,600 |
| 70 | 59.1 | 113.8 | 66,400 |
| 75 | 56.3 | 110.5 | 60,200 |
| 80 | 53.5 | 106.8 | 55,000 |
| 85 | 50.5 | 102.8 | 50,400 |
| 90 | 47.4 | 98.3 | 46,400 |
| 95 | 44.2 | 93.2 | 42,900 |
| 100 | 40.7 | 87.6 | 39,700 |
| 105 | 36.9 | 81.1 | 36,900 |
| 110 | 32.8 | 73.7 | 34,300 |
| 115 | 28.1 | 64.8 | 32,000 |
| 120 | 22.6 | 53.7 | 29,900 |

## 134.5 ft

| ft | ° | ft | lb |
|---|---|---|---|
| 24 | 82.4 | 141.0 | 261,000 * |
| 26 | 81.5 | 140.7 | 241,300 * |
| 28 | 80.7 | 140.4 | 224,200 * |
| 30 | 79.8 | 140.0 | 209,300 * |
| 32 | 78.9 | 139.6 | 196,200 * |
| 34 | 78.1 | 139.1 | 183,400 |
| 36 | 77.2 | 138.7 | 168,600 |
| 38 | 76.3 | 138.1 | 155,800 |
| 40 | 75.4 | 137.6 | 144,700 |
| 42 | 74.6 | 137.0 | 135,000 |
| 44 | 73.7 | 136.4 | 126,400 |
| 46 | 72.8 | 135.8 | 118,700 |
| 48 | 71.9 | 135.1 | 111,800 |
| 50 | 71.0 | 134.4 | 105,600 |
| 55 | 68.7 | 132.5 | 92,500 |
| 60 | 66.4 | 130.3 | 82,000 |
| 65 | 64.0 | 127.9 | 73,400 |
| 70 | 61.6 | 125.2 | 66,200 |
| 75 | 59.1 | 122.3 | 60,100 |
| 80 | 56.6 | 119.0 | 54,800 |
| 85 | 53.9 | 115.4 | 50,300 |
| 90 | 51.2 | 111.4 | 46,300 |
| 95 | 48.4 | 107.1 | 42,700 |
| 100 | 45.4 | 102.2 | 39,600 |
| 105 | 42.3 | 96.9 | 36,700 |
| 110 | 39.0 | 90.8 | 34,200 |
| 115 | 35.4 | 84.0 | 31,900 |
| 120 | 31.4 | 76.1 | 29,800 |
| 125 | 26.9 | 66.8 | 27,800 |
| 130 | 21.5 | 55.1 | 26,000 |

## 144.4 ft

| ft | ° | ft | lb |
|---|---|---|---|
| 24 | 82.9 | 151.0 | 238,600 * |
| 26 | 82.1 | 150.7 | 231,900 * |
| 28 | 81.3 | 150.4 | 223,700 * |
| 30 | 80.5 | 150.0 | 208,800 * |
| 32 | 79.7 | 149.6 | 195,700 * |
| 34 | 78.9 | 149.2 | 183,300 |
| 36 | 78.1 | 148.8 | 168,400 |
| 38 | 77.3 | 148.3 | 155,600 |
| 40 | 76.5 | 147.8 | 144,500 |
| 42 | 75.6 | 147.3 | 134,700 |
| 44 | 74.8 | 146.7 | 126,100 |
| 46 | 74.0 | 146.1 | 118,400 |
| 48 | 73.1 | 145.5 | 111,500 |
| 50 | 72.3 | 144.8 | 105,300 |
| 55 | 70.2 | 143.1 | 92,200 |
| 60 | 68.1 | 141.1 | 81,700 |
| 65 | 65.9 | 138.8 | 73,000 |
| 70 | 63.7 | 136.4 | 65,800 |
| 75 | 61.4 | 133.7 | 59,700 |
| 80 | 59.1 | 130.7 | 54,500 |
| 85 | 56.8 | 127.5 | 49,900 |
| 90 | 54.3 | 123.9 | 45,900 |
| 95 | 51.8 | 120.1 | 42,400 |
| 100 | 49.2 | 115.8 | 39,200 |
| 105 | 46.5 | 111.2 | 36,400 |
| 110 | 43.7 | 106.0 | 33,800 |
| 115 | 40.6 | 100.3 | 31,500 |
| 120 | 37.4 | 93.9 | 29,400 |
| 125 | 34.0 | 86.7 | 27,500 |
| 130 | 30.1 | 78.5 | 25,700 |
| 135 | 25.7 | 68.7 | 24,000 |
| 140 | 20.5 | 56.4 | 22,500 |

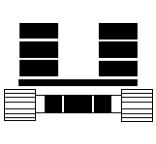


**Manitowoc Cranes, Inc.**
Manitowoc, Wisconsin 54220 U.S.A.

# 14000 S-2

**ANSI B30.5**

**76**





**168,000 lb**
**+**
**53,000 lb**



**360°**

| ft | o | ft | lb |
|---|---|---|---|
| 154.2 ft | | | |
| 26 | 82.6 | 160.6 | 225,200 * |
| 28 | 81.9 | 160.3 | 218,900 * |
| 30 | 81.1 | 160.0 | 208,500 * |
| 32 | 80.4 | 159.6 | 195,300 * |
| 34 | 79.6 | 159.2 | 183,200 |
| 36 | 78.9 | 158.8 | 168,300 |
| 38 | 78.1 | 158.4 | 155,500 |
| 40 | 77.3 | 157.9 | 144,300 |
| 42 | 76.6 | 157.4 | 134,600 |
| 44 | 75.8 | 156.9 | 125,900 |
| 46 | 75.0 | 156.4 | 118,200 |
| 48 | 74.3 | 155.8 | 111,300 |
| 50 | 73.5 | 155.2 | 105,100 |
| 55 | 71.5 | 153.5 | 92,000 |
| 60 | 69.5 | 151.7 | 81,500 |
| 65 | 67.5 | 149.6 | 72,800 |
| 70 | 65.5 | 147.4 | 65,600 |
| 75 | 63.4 | 144.9 | 59,500 |
| 80 | 61.3 | 142.2 | 54,200 |
| 85 | 59.2 | 139.2 | 49,700 |
| 90 | 56.9 | 136.0 | 45,700 |
| 95 | 54.7 | 132.5 | 42,100 |
| 100 | 52.3 | 128.7 | 39,000 |
| 105 | 49.9 | 124.5 | 36,100 |
| 110 | 47.4 | 120.0 | 33,600 |
| 115 | 44.8 | 115.0 | 31,300 |
| 120 | 42.1 | 109.6 | 29,200 |
| 125 | 39.2 | 103.6 | 27,300 |
| 130 | 36.0 | 96.9 | 25,500 |
| 135 | 32.7 | 89.4 | 23,800 |
| 140 | 29.0 | 80.7 | 22,300 |
| 145 | 24.7 | 70.4 | 20,900 |
| 150 | 19.6 | 57.7 | 19,600 |

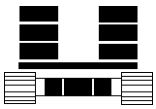
| ft | o | ft | lb |
|---|---|---|---|
| 164.0 ft | | | |
| 28 | 82.4 | 170.3 | 206,800 * |
| 30 | 81.7 | 170.0 | 201,800 * |
| 32 | 81.0 | 169.6 | 195,000 * |
| 34 | 80.2 | 169.3 | 183,100 |
| 36 | 79.5 | 168.9 | 168,200 |
| 38 | 78.8 | 168.5 | 155,400 |
| 40 | 78.1 | 168.0 | 144,200 |
| 42 | 77.4 | 167.6 | 134,500 |
| 44 | 76.7 | 167.1 | 125,800 |
| 46 | 76.0 | 166.6 | 118,100 |
| 48 | 75.2 | 166.0 | 111,200 |
| 50 | 74.5 | 165.5 | 105,000 |
| 55 | 72.7 | 163.9 | 91,900 |
| 60 | 70.8 | 162.2 | 81,300 |
| 65 | 69.0 | 160.3 | 72,700 |
| 70 | 67.1 | 158.2 | 65,400 |
| 75 | 65.1 | 155.9 | 59,300 |
| 80 | 63.2 | 153.4 | 54,000 |
| 85 | 61.2 | 150.6 | 49,500 |
| 90 | 59.2 | 147.7 | 45,500 |
| 95 | 57.1 | 144.5 | 41,900 |
| 100 | 55.0 | 141.0 | 38,800 |
| 105 | 52.8 | 137.3 | 36,000 |
| 110 | 50.5 | 133.2 | 33,400 |
| 115 | 48.2 | 128.8 | 31,100 |
| 120 | 45.8 | 124.0 | 29,000 |
| 125 | 43.3 | 118.8 | 27,100 |
| 130 | 40.6 | 113.1 | 25,300 |
| 135 | 37.8 | 106.7 | 23,700 |
| 140 | 34.8 | 99.7 | 22,200 |
| 145 | 31.5 | 91.8 | 20,800 |
| 150 | 27.9 | 82.8 | 19,500 |
| 155 | 23.8 | 72.1 | 18,200 |
| 160 | 18.8 | 58.8 | 17,100 |

| ft | o | ft | lb |
|---|---|---|---|
| 173.9 ft | | | |
| 28 | 82.8 | 180.2 | 199,400 * |
| 30 | 82.1 | 179.9 | 194,500 * |
| 32 | 81.5 | 179.6 | 189,800 * |
| 34 | 80.8 | 179.3 | 183,000 |
| 36 | 80.1 | 178.9 | 168,000 |
| 38 | 79.5 | 178.5 | 155,200 |
| 40 | 78.8 | 178.1 | 144,000 |
| 42 | 78.1 | 177.7 | 134,300 |
| 44 | 77.4 | 177.2 | 125,600 |
| 46 | 76.8 | 176.7 | 117,900 |
| 48 | 76.1 | 176.2 | 111,000 |
| 50 | 75.4 | 175.7 | 104,800 |
| 55 | 73.7 | 174.2 | 91,600 |
| 60 | 72.0 | 172.6 | 81,100 |
| 65 | 70.2 | 170.8 | 72,400 |
| 70 | 68.4 | 168.9 | 65,200 |
| 75 | 66.6 | 166.7 | 59,000 |
| 80 | 64.8 | 164.4 | 53,800 |
| 85 | 63.0 | 161.9 | 49,200 |
| 90 | 61.1 | 159.1 | 45,200 |
| 95 | 59.2 | 156.2 | 41,700 |
| 100 | 57.2 | 153.0 | 38,500 |
| 105 | 55.2 | 149.6 | 35,700 |
| 110 | 53.2 | 145.8 | 33,100 |
| 115 | 51.1 | 141.9 | 30,800 |
| 120 | 48.9 | 137.5 | 28,700 |
| 125 | 46.6 | 132.9 | 26,800 |
| 130 | 44.3 | 127.8 | 25,100 |
| 135 | 41.9 | 122.3 | 23,400 |
| 140 | 39.3 | 116.4 | 21,900 |
| 145 | 36.6 | 109.8 | 20,500 |
| 150 | 33.6 | 102.4 | 19,200 |
| 155 | 30.5 | 94.2 | 18,000 |
| 160 | 27.0 | 84.8 | 16,800 |
| 165 | 22.9 | 73.7 | 15,800 |
| 170 | 18.1 | 59.8 | 14,700 |

# 14000 S-2

**ANSI B30.5**



**168,000 lb**
**+**
**53,000 lb**



**360°**

## 183.7 ft

| ft | ° | ft | lb |
|---|---|---|---|
| 30 | 82.6 | 189.9 | 177,400 * |
| 32 | 81.9 | 189.6 | 173,400 * |
| 34 | 81.3 | 189.3 | 169,600 * |
| 36 | 80.7 | 188.9 | 166,000 * |
| 38 | 80.0 | 188.6 | 155,000 |
| 40 | 79.4 | 188.2 | 143,800 |
| 42 | 78.8 | 187.7 | 134,000 |
| 44 | 78.1 | 187.3 | 125,300 |
| 46 | 77.5 | 186.9 | 117,600 |
| 48 | 76.8 | 186.4 | 110,700 |
| 50 | 76.2 | 185.9 | 104,500 |
| 55 | 74.6 | 184.5 | 91,300 |
| 60 | 73.0 | 183.0 | 80,700 |
| 65 | 71.3 | 181.3 | 72,000 |
| 70 | 69.7 | 179.5 | 64,800 |
| 75 | 68.0 | 177.4 | 58,700 |
| 80 | 66.3 | 175.3 | 53,400 |
| 85 | 64.5 | 172.9 | 48,800 |
| 90 | 62.8 | 170.4 | 44,800 |
| 95 | 61.0 | 167.6 | 41,300 |
| 100 | 59.2 | 164.6 | 38,100 |
| 105 | 57.4 | 161.5 | 35,300 |
| 110 | 55.5 | 158.1 | 32,700 |
| 115 | 53.5 | 154.4 | 30,400 |
| 120 | 51.6 | 150.5 | 28,300 |
| 125 | 49.5 | 146.3 | 26,400 |
| 130 | 47.4 | 141.7 | 24,600 |
| 135 | 45.2 | 136.8 | 23,000 |
| 140 | 43.0 | 131.5 | 21,500 |
| 145 | 40.6 | 125.8 | 20,100 |
| 150 | 38.1 | 119.5 | 18,800 |
| 155 | 35.4 | 112.7 | 17,600 |
| 160 | 32.6 | 105.1 | 16,500 |
| 165 | 29.5 | 96.5 | 15,400 |
| 170 | 26.1 | 86.7 | 14,400 |
| 175 | 22.2 | 75.2 | 13,400 |
| 180 | 17.4 | 60.7 | 12,500 |

## 193.6 ft

| ft | ° | ft | lb |
|---|---|---|---|
| 30 | 82.9 | 199.8 | 170,200 * |
| 32 | 82.3 | 199.5 | 166,400 * |
| 34 | 81.8 | 199.2 | 162,800 * |
| 36 | 81.2 | 198.9 | 159,200 * |
| 38 | 80.6 | 198.6 | 154,800 |
| 40 | 79.9 | 198.2 | 143,600 |
| 42 | 79.3 | 197.8 | 133,800 |
| 44 | 78.7 | 197.4 | 125,100 |
| 46 | 78.1 | 196.9 | 117,400 |
| 48 | 77.5 | 196.5 | 110,500 |
| 50 | 76.9 | 196.0 | 104,200 |
| 55 | 75.4 | 194.7 | 91,000 |
| 60 | 73.9 | 193.3 | 80,400 |
| 65 | 72.3 | 191.7 | 71,700 |
| 70 | 70.7 | 190.0 | 64,500 |
| 75 | 69.1 | 188.1 | 58,300 |
| 80 | 67.5 | 186.0 | 53,100 |
| 85 | 65.9 | 183.8 | 48,500 |
| 90 | 64.3 | 181.4 | 44,500 |
| 95 | 62.6 | 178.8 | 40,900 |
| 100 | 60.9 | 176.1 | 37,800 |
| 105 | 59.2 | 173.1 | 35,000 |
| 110 | 57.5 | 170.0 | 32,400 |
| 115 | 55.7 | 166.6 | 30,100 |
| 120 | 53.9 | 163.0 | 28,000 |
| 125 | 52.0 | 159.1 | 26,100 |
| 130 | 50.1 | 154.9 | 24,300 |
| 135 | 48.1 | 150.5 | 22,700 |
| 140 | 46.0 | 145.7 | 21,200 |
| 145 | 43.9 | 140.6 | 19,800 |
| 150 | 41.7 | 135.1 | 18,500 |
| 155 | 39.4 | 129.1 | 17,300 |
| 160 | 37.0 | 122.6 | 16,200 |
| 165 | 34.4 | 115.5 | 15,100 |
| 170 | 31.6 | 107.6 | 14,100 |
| 175 | 28.6 | 98.7 | 13,100 |
| 180 | 25.3 | 88.6 | 12,200 |
| 185 | 21.4 | 76.6 | 11,400 |
| 190 | 16.8 | 61.6 | 10,600 |

## 203.4 ft

| ft | ° | ft | lb |
|---|---|---|---|
| 32 | 82.7 | 209.5 | 150,400 * |
| 34 | 82.2 | 209.2 | 149,000 * |
| 36 | 81.6 | 208.9 | 147,600 * |
| 38 | 81.0 | 208.6 | 146,100 * |
| 40 | 80.4 | 208.2 | 143,400 |
| 42 | 79.9 | 207.8 | 133,600 |
| 44 | 79.3 | 207.4 | 124,900 |
| 46 | 78.7 | 207.0 | 117,200 |
| 48 | 78.1 | 206.6 | 110,300 |
| 50 | 77.6 | 206.1 | 104,000 |
| 55 | 76.1 | 204.9 | 90,800 |
| 60 | 74.7 | 203.6 | 80,200 |
| 65 | 73.2 | 202.1 | 71,500 |
| 70 | 71.7 | 200.4 | 64,300 |
| 75 | 70.2 | 198.6 | 58,100 |
| 80 | 68.7 | 196.7 | 52,800 |
| 85 | 67.2 | 194.6 | 48,200 |
| 90 | 65.6 | 192.3 | 44,200 |
| 95 | 64.1 | 189.9 | 40,700 |
| 100 | 62.5 | 187.3 | 37,500 |
| 105 | 60.9 | 184.6 | 34,700 |
| 110 | 59.2 | 181.6 | 32,200 |
| 115 | 57.6 | 178.4 | 29,800 |
| 120 | 55.9 | 175.1 | 27,700 |
| 125 | 54.1 | 171.5 | 25,800 |
| 130 | 52.4 | 167.7 | 24,100 |
| 135 | 50.5 | 163.6 | 22,400 |
| 140 | 48.7 | 159.3 | 20,900 |
| 145 | 46.8 | 154.6 | 19,500 |
| 150 | 44.8 | 149.6 | 18,200 |
| 155 | 42.7 | 144.3 | 17,000 |
| 160 | 40.6 | 138.5 | 15,900 |
| 165 | 38.3 | 132.3 | 14,800 |
| 170 | 35.9 | 125.6 | 13,800 |
| 175 | 33.4 | 118.2 | 12,900 |
| 180 | 30.7 | 110.0 | 12,000 |
| 185 | 27.8 | 100.8 | 11,200 |
| 190 | 24.5 | 90.4 | 10,400 |
| 195 | 20.8 | 78.0 | 9,600 |
| 200 | 16.2 | 62.4 | 8,900 |

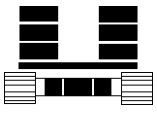


**Manitowoc Cranes, Inc.**
Manitowoc, Wisconsin 54220 U.S.A.

# 14000 S-2

**ANSI B30.5**

**76**





**168,000 lb**
**+**
**53,000 lb**



**360°**

| ft | o | ft | lb |
|---|---|---|---|
| 213.2 ft | | | |
| 34 | 82.5 | 219.1 | 136,500 * |
| 36 | 82.0 | 218.8 | 132,700 * |
| 38 | 81.4 | 218.5 | 131,400 * |
| 40 | 80.9 | 218.2 | 130,100 * |
| 42 | 80.3 | 217.8 | 128,800 * |
| 44 | 79.8 | 217.5 | 124,700 |
| 46 | 79.2 | 217.1 | 116,900 |
| 48 | 78.7 | 216.7 | 110,000 |
| 50 | 78.1 | 216.2 | 103,700 |
| 55 | 76.8 | 215.1 | 90,500 |
| 60 | 75.4 | 213.8 | 79,900 |
| 65 | 74.0 | 212.3 | 71,200 |
| 70 | 72.6 | 210.8 | 64,000 |
| 75 | 71.2 | 209.1 | 57,800 |
| 80 | 69.7 | 207.2 | 52,500 |
| 85 | 68.3 | 205.3 | 47,900 |
| 90 | 66.8 | 203.1 | 43,900 |
| 95 | 65.3 | 200.9 | 40,400 |
| 100 | 63.9 | 198.4 | 37,200 |
| 105 | 62.3 | 195.8 | 34,400 |
| 110 | 60.8 | 193.0 | 31,800 |
| 115 | 59.2 | 190.1 | 29,500 |
| 120 | 57.7 | 186.9 | 27,400 |
| 125 | 56.0 | 183.6 | 25,500 |
| 130 | 54.4 | 180.1 | 23,700 |
| 135 | 52.7 | 176.3 | 22,100 |
| 140 | 51.0 | 172.3 | 20,600 |
| 145 | 49.2 | 168.0 | 19,200 |
| 150 | 47.4 | 163.4 | 17,900 |
| 155 | 45.5 | 158.6 | 16,700 |
| 160 | 43.6 | 153.4 | 15,600 |
| 165 | 41.6 | 147.9 | 14,500 |
| 170 | 39.5 | 141.9 | 13,500 |
| 175 | 37.3 | 135.4 | 12,600 |
| 180 | 35.0 | 128.4 | 11,700 |
| 185 | 32.5 | 120.8 | 10,900 |
| 190 | 29.9 | 112.3 | 10,100 |
| 195 | 27.0 | 102.9 | 9,300 |
| 200 | 23.8 | 92.1 | 8,600 |
| 205 | 20.1 | 79.3 | 7,900 |
| 210 | 15.6 | 63.2 | 7,200 |

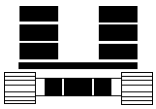
| ft | o | ft | lb |
|---|---|---|---|
| 223.1 ft | | | |
| 34 | 82.9 | 229.1 | 135,800 * |
| 36 | 82.3 | 228.8 | 132,000 * |
| 38 | 81.8 | 228.5 | 130,700 * |
| 40 | 81.3 | 228.2 | 129,400 * |
| 42 | 80.8 | 227.8 | 128,100 * |
| 44 | 80.2 | 227.5 | 124,300 |
| 46 | 79.7 | 227.1 | 116,500 |
| 48 | 79.2 | 226.7 | 109,600 |
| 50 | 78.7 | 226.3 | 103,300 |
| 55 | 77.4 | 225.2 | 90,100 |
| 60 | 76.0 | 223.9 | 79,400 |
| 65 | 74.7 | 222.6 | 70,700 |
| 70 | 73.4 | 221.1 | 63,400 |
| 75 | 72.0 | 219.5 | 57,300 |
| 80 | 70.7 | 217.7 | 52,000 |
| 85 | 69.3 | 215.9 | 47,400 |
| 90 | 67.9 | 213.9 | 43,400 |
| 95 | 66.5 | 211.7 | 39,800 |
| 100 | 65.1 | 209.4 | 36,600 |
| 105 | 63.7 | 206.9 | 33,800 |
| 110 | 62.2 | 204.3 | 31,300 |
| 115 | 60.7 | 201.5 | 28,900 |
| 120 | 59.3 | 198.6 | 26,800 |
| 125 | 57.7 | 195.4 | 24,900 |
| 130 | 56.2 | 192.1 | 23,200 |
| 135 | 54.6 | 188.6 | 21,500 |
| 140 | 53.0 | 184.9 | 20,000 |
| 145 | 51.4 | 180.9 | 18,600 |
| 150 | 49.7 | 176.7 | 17,300 |
| 155 | 48.0 | 172.2 | 16,100 |
| 160 | 46.2 | 167.5 | 15,000 |
| 165 | 44.4 | 162.4 | 13,900 |
| 170 | 42.5 | 157.1 | 12,900 |
| 175 | 40.5 | 151.3 | 12,000 |
| 180 | 38.5 | 145.1 | 11,100 |
| 185 | 36.4 | 138.4 | 10,300 |
| 190 | 34.1 | 131.2 | 9,500 |
| 195 | 31.7 | 123.3 | 8,700 |
| 200 | 29.1 | 114.6 | 8,000 |
| 205 | 26.3 | 104.8 | 7,300 |
| 210 | 23.2 | 93.7 | 6,700 |
| 215 | 19.5 | 80.5 | 6,100 |
| 220 | 15.1 | 63.8 | 5,500 |

| ft | o | ft | lb |
|---|---|---|---|
| 232.9 ft | | | |
| 36 | 82.7 | 238.7 | 122,600 * |
| 38 | 82.2 | 238.4 | 122,100 * |
| 40 | 81.7 | 238.1 | 121,600 * |
| 42 | 81.2 | 237.8 | 121,000 * |
| 44 | 80.7 | 237.5 | 120,500 * |
| 46 | 80.2 | 237.1 | 116,900 |
| 48 | 79.7 | 236.7 | 109,900 |
| 50 | 79.2 | 236.4 | 103,700 |
| 55 | 77.9 | 235.3 | 90,400 |
| 60 | 76.6 | 234.1 | 79,700 |
| 65 | 75.4 | 232.8 | 71,000 |
| 70 | 74.1 | 231.4 | 63,700 |
| 75 | 72.8 | 229.9 | 57,600 |
| 80 | 71.5 | 228.2 | 52,300 |
| 85 | 70.2 | 226.4 | 47,700 |
| 90 | 68.9 | 224.5 | 43,600 |
| 95 | 67.6 | 222.4 | 40,100 |
| 100 | 66.2 | 220.2 | 36,900 |
| 105 | 64.9 | 217.9 | 34,100 |
| 110 | 63.5 | 215.4 | 31,500 |
| 115 | 62.1 | 212.8 | 29,200 |
| 120 | 60.7 | 210.0 | 27,100 |
| 125 | 59.3 | 207.0 | 25,200 |
| 130 | 57.8 | 203.9 | 23,400 |
| 135 | 56.3 | 200.6 | 21,800 |
| 140 | 54.8 | 197.1 | 20,300 |
| 145 | 53.3 | 193.4 | 18,900 |
| 150 | 51.7 | 189.5 | 17,600 |
| 155 | 50.1 | 185.4 | 16,400 |
| 160 | 48.5 | 181.0 | 15,300 |
| 165 | 46.8 | 176.3 | 14,200 |
| 170 | 45.1 | 171.4 | 13,200 |
| 175 | 43.3 | 166.2 | 12,300 |
| 180 | 41.5 | 160.6 | 11,400 |
| 185 | 39.6 | 154.6 | 10,600 |
| 190 | 37.6 | 148.2 | 9,800 |
| 195 | 35.5 | 141.3 | 9,000 |
| 200 | 33.3 | 133.9 | 8,300 |
| 205 | 30.9 | 125.7 | 7,600 |
| 210 | 28.4 | 116.7 | 7,000 |
| 215 | 25.6 | 106.7 | 6,400 |
| 220 | 22.5 | 95.2 | 5,800 |
| 225 | 19.0 | 81.6 | 5,200 |

# 14000 S-2

**ANSI B30.5**



**168,000 lb**
**+**
**53,000 lb**



**360°**

| ft | o | ft | lb |
|---|---|---|---|
| 242.8 ft | | | |
| 36 | 83.0 | 248.7 | 111,600 * |
| 38 | 82.5 | 248.4 | 111,100 * |
| 40 | 82.0 | 248.1 | 110,600 * |
| 42 | 81.5 | 247.8 | 110,000 * |
| 44 | 81.0 | 247.5 | 109,500 * |
| 46 | 80.6 | 247.1 | 109,000 * |
| 48 | 80.1 | 246.8 | 108,500 * |
| 50 | 79.6 | 246.4 | 103,400 |
| 55 | 78.4 | 245.4 | 90,200 |
| 60 | 77.2 | 244.2 | 79,500 |
| 65 | 76.0 | 243.0 | 70,800 |
| 70 | 74.8 | 241.6 | 63,500 |
| 75 | 73.5 | 240.2 | 57,300 |
| 80 | 72.3 | 238.6 | 52,000 |
| 85 | 71.0 | 236.9 | 47,400 |
| 90 | 69.8 | 235.0 | 43,400 |
| 95 | 68.5 | 233.1 | 39,800 |
| 100 | 67.2 | 231.0 | 36,600 |
| 105 | 65.9 | 228.8 | 33,800 |
| 110 | 64.6 | 226.4 | 31,200 |
| 115 | 63.3 | 223.9 | 28,900 |
| 120 | 62.0 | 221.3 | 26,800 |
| 125 | 60.6 | 218.5 | 24,900 |
| 130 | 59.3 | 215.5 | 23,100 |
| 135 | 57.9 | 212.4 | 21,500 |
| 140 | 56.5 | 209.1 | 20,000 |
| 145 | 55.0 | 205.6 | 18,600 |
| 150 | 53.6 | 202.0 | 17,300 |
| 155 | 52.1 | 198.1 | 16,100 |
| 160 | 50.6 | 194.0 | 15,000 |
| 165 | 49.0 | 189.7 | 13,900 |
| 170 | 47.4 | 185.2 | 12,900 |
| 175 | 45.8 | 180.3 | 12,000 |
| 180 | 44.1 | 175.2 | 11,100 |
| 185 | 42.3 | 169.8 | 10,300 |
| 190 | 40.5 | 164.0 | 9,500 |
| 195 | 38.7 | 157.9 | 8,700 |
| 200 | 36.7 | 151.3 | 8,000 |
| 205 | 34.7 | 144.2 | 7,300 |
| 210 | 32.5 | 136.5 | 6,700 |
| 215 | 30.2 | 128.1 | 6,100 |
| 220 | 27.7 | 118.8 | 5,500 |
| 225 | 25.0 | 108.5 | 4,900 |
| 230 | 22.0 | 96.7 | 4,400 |

| ft | o | ft | lb |
|---|---|---|---|
| 252.6 ft | | | |
| 38 | 82.8 | 258.3 | 101,300 * |
| 40 | 82.3 | 258.0 | 100,700 * |
| 42 | 81.9 | 257.7 | 100,200 * |
| 44 | 81.4 | 257.4 | 99,700 * |
| 46 | 80.9 | 257.1 | 99,200 * |
| 48 | 80.5 | 256.8 | 98,700 * |
| 50 | 80.0 | 256.4 | 98,200 * |
| 55 | 78.9 | 255.4 | 89,900 |
| 60 | 77.7 | 254.3 | 79,200 |
| 65 | 76.5 | 253.1 | 70,500 |
| 70 | 75.4 | 251.8 | 63,200 |
| 75 | 74.2 | 250.4 | 57,000 |
| 80 | 73.0 | 248.9 | 51,700 |
| 85 | 71.8 | 247.3 | 47,100 |
| 90 | 70.6 | 245.5 | 43,000 |
| 95 | 69.4 | 243.7 | 39,500 |
| 100 | 68.2 | 241.7 | 36,300 |
| 105 | 66.9 | 239.6 | 33,400 |
| 110 | 65.7 | 237.3 | 30,900 |
| 115 | 64.4 | 234.9 | 28,600 |
| 120 | 63.2 | 232.4 | 26,500 |
| 125 | 61.9 | 229.8 | 24,500 |
| 130 | 60.6 | 226.9 | 22,800 |
| 135 | 59.3 | 224.0 | 21,100 |
| 140 | 57.9 | 220.9 | 19,600 |
| 145 | 56.6 | 217.6 | 18,200 |
| 150 | 55.2 | 214.2 | 16,900 |
| 155 | 53.8 | 210.5 | 15,700 |
| 160 | 52.4 | 206.7 | 14,600 |
| 165 | 50.9 | 202.7 | 13,500 |
| 170 | 49.4 | 198.4 | 12,500 |
| 175 | 47.9 | 193.9 | 11,600 |
| 180 | 46.4 | 189.2 | 10,700 |
| 185 | 44.7 | 184.2 | 9,900 |
| 190 | 43.1 | 178.9 | 9,100 |
| 195 | 41.4 | 173.3 | 8,400 |
| 200 | 39.6 | 167.4 | 7,700 |
| 205 | 37.8 | 161.0 | 7,000 |
| 210 | 35.9 | 154.2 | 6,300 |
| 215 | 33.9 | 146.9 | 5,700 |
| 220 | 31.8 | 139.0 | 5,100 |
| 225 | 29.5 | 130.4 | 4,600 |
| 230 | 27.1 | 120.9 | 4,000 |

| ft | o | ft | lb |
|---|---|---|---|
| 262.5 ft | | | |
| 40 | 82.6 | 268.0 | 91,000 * |
| 42 | 82.2 | 267.7 | 90,500 * |
| 44 | 81.7 | 267.4 | 90,000 * |
| 46 | 81.3 | 267.1 | 89,500 * |
| 48 | 80.8 | 266.7 | 89,100 * |
| 50 | 80.4 | 266.4 | 88,600 * |
| 55 | 79.3 | 265.5 | 87,500 * |
| 60 | 78.2 | 264.4 | 78,900 |
| 65 | 77.1 | 263.3 | 70,100 |
| 70 | 75.9 | 262.0 | 62,800 |
| 75 | 74.8 | 260.7 | 56,600 |
| 80 | 73.7 | 259.2 | 51,300 |
| 85 | 72.5 | 257.6 | 46,700 |
| 90 | 71.4 | 256.0 | 42,600 |
| 95 | 70.2 | 254.2 | 39,000 |
| 100 | 69.0 | 252.3 | 35,900 |
| 105 | 67.9 | 250.2 | 33,000 |
| 110 | 66.7 | 248.1 | 30,500 |
| 115 | 65.5 | 245.8 | 28,100 |
| 120 | 64.3 | 243.4 | 26,000 |
| 125 | 63.0 | 240.9 | 24,100 |
| 130 | 61.8 | 238.2 | 22,300 |
| 135 | 60.6 | 235.4 | 20,700 |
| 140 | 59.3 | 232.5 | 19,200 |
| 145 | 58.0 | 229.4 | 17,800 |
| 150 | 56.7 | 226.1 | 16,500 |
| 155 | 55.4 | 222.7 | 15,300 |
| 160 | 54.0 | 219.1 | 14,100 |
| 165 | 52.7 | 215.3 | 13,100 |
| 170 | 51.3 | 211.3 | 12,100 |
| 175 | 49.8 | 207.1 | 11,200 |
| 180 | 48.4 | 202.7 | 10,300 |
| 185 | 46.9 | 198.1 | 9,400 |
| 190 | 45.4 | 193.2 | 8,700 |
| 195 | 43.8 | 188.0 | 7,900 |
| 200 | 42.2 | 182.6 | 7,200 |
| 205 | 40.5 | 176.8 | 6,500 |
| 210 | 38.8 | 170.6 | 5,900 |
| 215 | 37.0 | 164.1 | 5,300 |
| 220 | 35.1 | 157.1 | 4,700 |
| 225 | 33.1 | 149.6 | 4,100 |

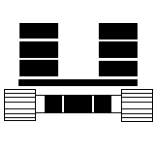


**Manitowoc Cranes, Inc.**
Manitowoc, Wisconsin 54220 U.S.A.

# 14000 S-2

**ANSI B30.5**

**76**





**168,000 lb**
**+**
**53,000 lb**



**360°**

| ft | o | ft | lb |
|---|---|---|---|
| 272.3 ft | | | |
| 40 | 82.9 | 277.9 | 85,500 * |
| 42 | 82.5 | 277.6 | 85,100 * |
| 44 | 82.0 | 277.4 | 84,700 * |
| 46 | 81.6 | 277.0 | 84,300 * |
| 48 | 81.2 | 276.7 | 83,900 * |
| 50 | 80.7 | 276.4 | 83,500 * |
| 55 | 79.7 | 275.5 | 82,500 * |
| 60 | 78.6 | 274.5 | 78,500 |
| 65 | 77.5 | 273.4 | 69,700 |
| 70 | 76.4 | 272.2 | 62,400 |
| 75 | 75.4 | 270.9 | 56,200 |
| 80 | 74.3 | 269.5 | 50,900 |
| 85 | 73.2 | 268.0 | 46,300 |
| 90 | 72.1 | 266.4 | 42,200 |
| 95 | 71.0 | 264.6 | 38,700 |
| 100 | 69.8 | 262.8 | 35,500 |
| 105 | 68.7 | 260.9 | 32,600 |
| 110 | 67.6 | 258.8 | 30,100 |
| 115 | 66.4 | 256.6 | 27,800 |
| 120 | 65.3 | 254.4 | 25,600 |
| 125 | 64.1 | 251.9 | 23,700 |
| 130 | 62.9 | 249.4 | 21,900 |
| 135 | 61.7 | 246.7 | 20,300 |
| 140 | 60.5 | 243.9 | 18,800 |
| 145 | 59.3 | 241.0 | 17,400 |
| 150 | 58.1 | 237.9 | 16,100 |
| 155 | 56.8 | 234.6 | 14,900 |
| 160 | 55.5 | 231.2 | 13,800 |
| 165 | 54.2 | 227.6 | 12,700 |
| 170 | 52.9 | 223.9 | 11,700 |
| 175 | 51.6 | 219.9 | 10,800 |
| 180 | 50.2 | 215.8 | 9,900 |
| 185 | 48.8 | 211.4 | 9,100 |
| 190 | 47.4 | 206.9 | 8,300 |
| 195 | 45.9 | 202.1 | 7,500 |
| 200 | 44.4 | 197.0 | 6,800 |
| 205 | 42.9 | 191.7 | 6,200 |
| 210 | 41.3 | 186.1 | 5,500 |
| 215 | 39.7 | 180.1 | 4,900 |
| 220 | 38.0 | 173.8 | 4,300 |

| ft | o | ft | lb |
|---|---|---|---|
| 282.1 ft | | | |
| 42 | 82.7 | 287.6 | 78,400 * |
| 44 | 82.3 | 287.3 | 78,000 * |
| 46 | 81.9 | 287.0 | 77,600 * |
| 48 | 81.5 | 286.7 | 77,300 * |
| 50 | 81.1 | 286.4 | 76,900 * |
| 55 | 80.0 | 285.5 | 76,000 * |
| 60 | 79.0 | 284.5 | 75,000 * |
| 65 | 78.0 | 283.5 | 69,400 |
| 70 | 76.9 | 282.3 | 62,100 |
| 75 | 75.9 | 281.1 | 55,900 |
| 80 | 74.8 | 279.7 | 50,600 |
| 85 | 73.8 | 278.3 | 46,000 |
| 90 | 72.7 | 276.7 | 41,900 |
| 95 | 71.6 | 275.1 | 38,400 |
| 100 | 70.6 | 273.3 | 35,200 |
| 105 | 69.5 | 271.5 | 32,300 |
| 110 | 68.4 | 269.5 | 29,800 |
| 115 | 67.3 | 267.4 | 27,400 |
| 120 | 66.2 | 265.2 | 25,300 |
| 125 | 65.1 | 262.9 | 23,400 |
| 130 | 63.9 | 260.5 | 21,600 |
| 135 | 62.8 | 257.9 | 20,000 |
| 140 | 61.6 | 255.2 | 18,500 |
| 145 | 60.5 | 252.4 | 17,100 |
| 150 | 59.3 | 249.4 | 15,800 |
| 155 | 58.1 | 246.3 | 14,600 |
| 160 | 56.9 | 243.1 | 13,400 |
| 165 | 55.7 | 239.7 | 12,400 |
| 170 | 54.4 | 236.1 | 11,400 |
| 175 | 53.2 | 232.4 | 10,500 |
| 180 | 51.9 | 228.5 | 9,600 |
| 185 | 50.6 | 224.4 | 8,700 |
| 190 | 49.2 | 220.2 | 8,000 |
| 195 | 47.9 | 215.7 | 7,200 |
| 200 | 46.5 | 211.0 | 6,500 |
| 205 | 45.0 | 206.0 | 5,800 |
| 210 | 43.6 | 200.8 | 5,200 |
| 215 | 42.1 | 195.3 | 4,600 |
| 220 | 40.5 | 189.5 | 4,000 |

| ft | o | ft | lb |
|---|---|---|---|
| 292.0 ft | | | |
| 42 | 83.0 | 297.5 | 72,300 * |
| 44 | 82.6 | 297.2 | 71,900 * |
| 46 | 82.2 | 297.0 | 71,500 * |
| 48 | 81.8 | 296.6 | 71,200 * |
| 50 | 81.4 | 296.3 | 70,800 * |
| 55 | 80.4 | 295.5 | 70,000 * |
| 60 | 79.4 | 294.6 | 69,000 * |
| 65 | 78.4 | 293.5 | 68,200 * |
| 70 | 77.4 | 292.4 | 61,800 |
| 75 | 76.4 | 291.2 | 55,600 |
| 80 | 75.4 | 289.9 | 50,300 |
| 85 | 74.3 | 288.5 | 45,600 |
| 90 | 73.3 | 287.0 | 41,600 |
| 95 | 72.3 | 285.4 | 38,000 |
| 100 | 71.2 | 283.7 | 34,800 |
| 105 | 70.2 | 282.0 | 32,000 |
| 110 | 69.2 | 280.1 | 29,400 |
| 115 | 68.1 | 278.1 | 27,100 |
| 120 | 67.0 | 276.0 | 24,900 |
| 125 | 66.0 | 273.7 | 23,000 |
| 130 | 64.9 | 271.4 | 21,200 |
| 135 | 63.8 | 269.0 | 19,600 |
| 140 | 62.7 | 266.4 | 18,100 |
| 145 | 61.6 | 263.7 | 16,700 |
| 150 | 60.4 | 260.9 | 15,400 |
| 155 | 59.3 | 257.9 | 14,200 |
| 160 | 58.1 | 254.8 | 13,100 |
| 165 | 57.0 | 251.6 | 12,000 |
| 170 | 55.8 | 248.2 | 11,000 |
| 175 | 54.6 | 244.7 | 10,100 |
| 180 | 53.4 | 241.0 | 9,200 |
| 185 | 52.1 | 237.1 | 8,400 |
| 190 | 50.9 | 233.1 | 7,600 |
| 195 | 49.6 | 228.9 | 6,800 |
| 200 | 48.3 | 224.4 | 6,100 |
| 205 | 46.9 | 219.8 | 5,500 |
| 210 | 45.6 | 214.9 | 4,800 |
| 215 | 44.2 | 209.8 | 4,200 |

## RATING REDUCTIONS/OPERATION NOT PERMITTED

### Boom No. 76

***Operation Permitted***

Operation is permitted in steady winds or wind gusts up to the maximum speed given in Table 1, provided ratings are reduced the specified amount.

**Table 1**
Rating Reductions for Various Wind Speeds and Wind Gusts

| **Boom Length** ft (m) | | 66.0 - 115.0 (20,0 - 35,0) | 125.0 - 213.0 (38,0 - 65,0) | 223.0 - 262 (68,0 - 80,0) | 272.0 - 292.0 (83,0 - 89,0) |
|---|---|---|---|---|---|
| **Maximum Wind Speed** | | **Percent Rating Reduction** | | | |
| mph | m/s | | | | |
| 15 | 7 | 0 | 0 | 0 | 0 |
| 20 | 9 | 0 | 0 | 0 | 0 |
| 25 | 11 | 0 | 10 | 10 | 20 |
| 30 | 13 | 10 | 20 | 20 | 30 |
| 35 | 16 | 10 | 20 | 30 | 40 |
| Above 35 mph (16 m/s) | | **OPERATION NOT PERMITTED** | | | |

Wind speed to be measured at boom point elevation

For operation in steady winds or wind gusts above 25 mph (11 m/s) *at front of boom,* do not operate boom higher than 75° with loads less than 6,000 lb (2 720 kg). **Boom could be blown over backwards if this precaution is not observed. Refer to capacity chart for specific backward stability problems ("b" on capacity chart).**

### *Operation Not Permitted*

Operation is not permitted in the areas indicated in Table 1. Observe the following options:

**Boom**

- ***Up to 50 mph (22 m/s) -***
  Park crane (upper in line with crawlers) with load blocks and weight balls on ground or secured and position boom at 70°.
- ***50 mph (22 m/s) and Above -***
  Lower boom onto blocking at ground level.

# Wind Conditions

## Boom No. 76 with Jib No. 134

### *Operation Permitted*

Operation is permitted in steady winds or wind gusts up to the maximum speed given in Table 2, provided ratings are reduced the specified amount.

**Table 2**
Rating Reductions for Various Wind Speeds and Wind Gusts

| **Jib Length** ft (m) | | 30 - 60 (9,1 - 18,3) | | 70 - 80 (21.3 - 24.4) | |
|---|---|---|---|---|---|
| **Boom Length** ft (m) | | 105.0 - 203.4 (32,0 - 62,0) | 213.3 - 262.5 (65,0 - 80,0) | 105.0 - 203.4 (32,0 - 62,0) | 213.3 - 252.6 (65,0 - 77,0) |
| **Maximum Wind Speed** | | **Percent Rating Reduction** | | | |
| mph | m/s | | | | |
| 15 | 7 | 0 | 0 | 0 | 0 |
| 20 | 9 | 0 | 0 | 0 | 0 |
| 25 | 11 | 0 | 10 | 0 | 0 |
| 30 | 13 | 10 | 40 | 10 | 30 |
| 35 | 16 | 20 | | 20 | |
| Above 35 mph (16 m/s) | | **OPERATION NOT PERMITTED** | | | |

Wind speed to be measured at jib point elevation.

For operation in steady winds or wind gusts above 20 mph (9 m/s) *at front of boom,* do not operate boom higher than 70° with loads less than 6,000 lb (2 720 kg). **Boom and jib could be blown over backwards if this precaution is not observed.**

### *Operation Not Permitted*

Operation is not permitted in the areas indicated in Table 2. Observe the following options:

- ***Up to 50 mph (22 m/s)*** -
  Park crane (upper in line with crawlers) with load blocks and weight balls on ground or secured and position boom at 70°.
- 50 mph (22 m/s) and Above -
  Lower boom and jib onto blocking at ground level.



**Manitowoc Cranes, Inc.**
Manitowoc, Wisconsin 54220 U.S.A.

# Maximum Allowable Travel Specifications

# 14000 SERIES 1 & 2

**Boom No. 76**
**Jib No. 134 with 12 ft 6 in. (3 810 mm) Strut**

**Jobsite Travel**

14000 SERIES 1 must be equipped with 127,000 lb (57 610 kg) crane counterweight and 0 lb (0 kg) carbody counterweight; 14000 SERIES 2 must be equipped with 168,000 lb (76 200 kg) crane counterweight and 53,000 lb (24 040 kg) carbody counterweight. Refer to Wind Conditions chart for maximum wind speed for various boom and jib lengths and capacity charts for maximum boom and jib lengths lifted unassisted.

**1. Machine Travel With Load**

A. Machine can swing and travel with 360 degree rating.

B. Grade in any direction must not exceed 1 percent (0.5 degrees).

C. Travel surface must be firm, level and uniformly supporting. Capacity charts are based on static conditions; therefore judgment must be used to allow for dynamic effects of traveling with load. Carry load as close to ground as possible. Stabilize load with taglines. Travel slowly and smoothly to avoid shock loading boom and rigging.

**2. Machine Travel Without Load**

A. Load blocks and/or hook and weight balls may be suspended beneath lower and upper boom point, jib point, or tied off to machine. Total combined suspended weight beneath lower and upper boom points must not exceed 9,000 lb (4 080 kg). Total suspended weight beneath jib point must not exceed 2,000 lbs (910 kg).

B. Machine to travel on a firm and uniformly supporting surface. Travel allowed with 360 degree swing up to 1 percent (0.5 degrees) grade; crane upperworks must be in-line with crawlers and grade when grade exceeds 1 percent. Grade in direction of travel should not exceed 30 percent (16.7 degrees); side-to-side grade must not exceed 2 percent (1.1 degrees) measured at boom hinge pins.

C. Refer to tables 1 thru 4 on pages 2 thru 4 for boom angle, boom length and direction for various grades. Adjust boom within boom angle range shown in table with machine in a level position before traveling onto grade. Do not change boom angle after crane has been traveled onto grade. Boom angle is angle between horizontal and centerline of boom butt and inserts. Refer to table below for grade vs. angle when traveling.

D. Do not exceed 2 percent (1.1 degrees) side-to-side grade at boom hinge pins when cutting (turning on grade).

E. Boom lengths shown in tables 1 and 2 on pages 2 and 3 do not include jib. Boom lengths shown in tables 3 and 4 on page 4 include all jib lengths and offset angles.

F. ***Warning:*** Travel prohibited for boom angle range not shown in tables 1 thru 4 on page 2 thru 4. *Crane could tip.*

| **Percent Grade Vs. Angle In Degrees** | |
|---|---|
| Percent Grade | Angle |
| 1 | 0.5 |
| 10 | 5.7 |
| 20 | 11.3 |
| 30 | 16.7 |

# Maximum Allowable Travel Specifications

**Boom No. 76**
**Jib No. 134 with 12 ft 6 in. (3 810 mm) Strut**

**Table 1: Boom No.76, SERIES 1**

| MACHINE TRAVEL WITHOUT LOAD | | | | | |
|---|---|---|---|---|---|
| **Boom Length** (not including jib) | | **Boom Angle Range in Degrees** | | | |
| | | Percent Grade | | | |
| Feet | Meters | 0 - 1% | 2 - 10% | 11 - 20% | 21 - 30% |
| **BOOM FACING DOWNHILL OR UPHILL** | | | | | |
| 65.6 | 20,0 | 30 - 72 | 30 - 55 | — | — |
| 75.5 | 23,0 | 30 - 72 | 30 - 60 | 30 - 40 | — |
| 85.3 | 26,0 | 30 - 72 | 30 - 66 | 30 - 50 | 30 - 35 |
| 95.1 | 29,0 | 30 - 72 | 30 - 66 | 30 - 55 | 30 - 40 |
| 105.0 | 32,0 | 30 - 72 | 30 - 66 | 30 - 55 | 30 - 40 |
| 114.8 | 35,0 | 30 - 72 | 30 - 66 | 30 - 60 | 30 - 45 |
| 124.7 | 38,0 | 30 - 72 | 30 - 66 | 30 - 60 | 30 - 50 |
| 134.5 | 41,0 | 30 - 72 | 30 - 66 | 30 - 60 | 40 - 50 |
| 144.4 | 44,0 | 30 - 72 | 30 - 66 | 40 - 60 | 50 - 55 |
| 154.2 | 47,0 | 30 - 72 | 35 - 66 | 45 - 60 | — |
| 164.0 | 50,0 | 35 - 72 | 45 - 66 | 55 - 60 | — |
| 173.9 | 53,0 | 40 - 72 | 45 - 66 | — | — |
| 183.7 | 56,0 | 45 - 72 | 50 - 66 | — | — |
| 193.6 | 59,0 | 50 - 72 | 55 - 66 | — | — |
| 203.4 | 62,0 | 50 - 72 | 60 - 66 | — | — |
| 213.3 | 65,0 | 55 - 72 | 60 - 66 | — | — |
| 223.1 | 68,0 | 60 - 72 | 65 - 66 | — | — |
| 232.9 | 71,0 | 60 - 72 | 65 - 66 | — | — |
| 242.8 | 74,0 | 60 - 72 | — | — | — |



**Manitowoc Cranes, Inc.**
Manitowoc, Wisconsin 54220 U.S.A.

# Maximum Allowable Travel Specifications

# 14000 SERIES 1 & 2

**Boom No. 76**
**Jib No. 134 with 12 ft 6 in. (3 810 mm) Strut**

**Table 2: Boom No. 76, SERIES 2**

| MACHINE TRAVEL WITHOUT LOAD | | | | | |
|---|---|---|---|---|---|
| **Boom Length** (not including jib) | | **Boom Angle Range in Degrees** | | | |
| | | Percent Grade | | | |
| Feet | Meters | 0 - 1% | 2 - 10% | 11 - 20% | 21 - 30% |
| **BOOM FACING DOWNHILL OR UPHILL** | | | | | |
| 65.6 | 20,0 | 30 - 72 | 30 - 50 | — | — |
| 75.5 | 23,0 | 30 - 72 | 30 - 55 | 30 - 35 | — |
| 85.3 | 26,0 | 30 - 72 | 30 - 60 | 30 - 45 | — |
| 95.1 | 29,0 | 30 - 72 | 30 - 66 | 30 - 50 | — |
| 105.0 | 32,0 | 30 - 72 | 30 - 66 | 30 - 55 | 30 - 40 |
| 114.8 | 35,0 | 30 - 72 | 30 - 66 | 30 - 55 | 30 - 40 |
| 124.7 | 38,0 | 30 - 72 | 30 - 66 | 30 - 55 | 30 - 45 |
| 134.5 | 41,0 | 30 - 72 | 30 - 66 | 30 - 60 | 30 - 50 |
| 144.4 | 44,0 | 30 - 72 | 30 - 66 | 30 - 60 | 30 - 50 |
| 154.2 | 47,0 | 30 - 72 | 30 - 66 | 30 - 60 | 30 - 50 |
| 164.0 | 50,0 | 30 - 72 | 30 - 66 | 30 - 60 | 40 - 55 |
| 173.9 | 53,0 | 30 - 72 | 30 - 66 | 35 - 60 | 50 - 55 |
| 183.7 | 56,0 | 30 - 72 | 30 - 66 | 45 - 60 | — |
| 193.6 | 59,0 | 30 - 72 | 40 - 66 | 50 - 60 | — |
| 203.4 | 62,0 | 35 - 72 | 45 - 66 | 55 - 60 | — |
| 213.3 | 65,0 | 40 - 72 | 50 - 66 | — | — |
| 223.1 | 68,0 | 45 - 72 | 50 - 66 | — | — |
| 232.9 | 71,0 | 50 - 72 | 55 - 66 | — | — |
| 242.8 | 74,0 | 50 - 72 | 55 - 66 | — | — |
| 252.6 | 77,0 | 55 - 72 | 60 - 66 | — | — |
| 262.5 | 80,0 | 55 - 72 | 65 - 66 | — | — |
| 272.3 | 83,0 | 60 - 72 | 65 - 66 | — | — |
| 282.2 | 86,0 | 60 - 72 | 65 - 66 | — | — |
| 292.0 | 89,0 | 60 - 72 | — | — | — |

# Maximum Allowable Travel Specifications

# 14000 SERIES 1 & 2

**Boom No. 76**
**Jib No. 134 with 12 ft 6 in. (3 810 mm) Strut**

**Table 3: Boom No.76 Jib No. 134, SERIES 1**

| MACHINE TRAVEL WITHOUT LOAD | | | | | |
|---|---|---|---|---|---|
| **Boom Length** (including all jib lengths and offsets) | | **Boom Angle Range in Degrees** | | | |
| | | Percent Grade | | | |
| Feet | Meters | 0 - 1% | 2 - 10% | 11 - 20% | 21 - 30% |
| **BOOM FACING DOWNHILL OR UPHILL** | | | | | |
| 105.0 | 32,0 | 50 - 72 | 50 - 66 | 50 - 60 | — |
| 114.8 | 35,0 | 50 - 72 | 50 - 66 | 50 - 60 | — |
| 124.7 | 38,0 | 50 - 72 | 50 - 66 | 55 - 60 | — |
| 134.5 | 41,0 | 50 - 72 | 50 - 66 | — | — |
| 144.4 | 44,0 | 50 - 72 | 55 - 66 | — | — |
| 154.2 | 47,0 | 50 - 72 | 60 - 66 | — | — |
| 164.0 | 50,0 | 55 - 72 | 60 - 66 | — | — |
| 173.9 | 53,0 | 55 - 72 | — | — | — |
| 183.7 | 56,0 | 60 - 72 | — | — | — |
| 193.6 | 59,0 | 60 - 72 | — | — | — |
| 203.4 | 62,0 | 65 - 72 | — | — | — |
| 213.3 | 65,0 | 65 - 72 | — | — | — |

**Table 4: Boom No. 76, Jib No. 134, SERIES 2**

| MACHINE TRAVEL WITHOUT LOAD | | | | | |
|---|---|---|---|---|---|
| **Boom Length** (including all jib lengths and offsets) | | **Boom Angle Range in Degrees** | | | |
| | | Percent Grade | | | |
| Feet | Meters | 0 - 1% | 2 - 10% | 11 - 20% | 21 - 30% |
| **BOOM FACING DOWNHILL OR UPHILL** | | | | | |
| 105.0 | 32,0 | 50 - 72 | 50 - 66 | 50 - 60 | — |
| 114.8 | 35,0 | 50 - 72 | 50 - 66 | 50 - 60 | 50 - 52 |
| 124.7 | 38,0 | 50 - 72 | 50 - 66 | 50 - 60 | 50 - 54 |
| 134.5 | 41,0 | 50 - 72 | 50 - 66 | 50 - 60 | 50 - 55 |
| 144.4 | 44,0 | 50 - 72 | 50 - 66 | 50 - 60 | — |
| 154.2 | 47,0 | 50 - 72 | 50 - 66 | 55 - 60 | — |
| 164.0 | 50,0 | 50 - 72 | 50 - 66 | 55 - 60 | — |
| 173.9 | 53,0 | 50 - 72 | 50 - 66 | — | — |
| 183.7 | 56,0 | 50 - 72 | 55 - 66 | — | — |
| 193.6 | 59,0 | 50 - 72 | 60 - 66 | — | — |
| 203.4 | 62,0 | 55 - 72 | 60 - 66 | — | — |
| 213.3 | 65,0 | 55 - 72 | 65 - 66 | — | — |
| 223.1 | 68,0 | 60 - 72 | — | — | — |
| 232.9 | 71,0 | 60 - 72 | — | — | — |
| 242.8 | 74,0 | 60 - 72 | — | — | — |
| 252.6 | 77,0 | 65 - 72 | — | — | — |
| 262.5 | 80,0 | 65 - 72 | — | — | — |



**Manitowoc Cranes, Inc.**
Manitowoc, Wisconsin 54220 U.S.A.

# Manitowoc Crane CARE



**Crane CARE** is Manitowoc's comprehensive service and support program. It includes classroom and on-site training, prompt parts availability, expert field service, technical support and documentation — for every one of the more than 7,000 Manitowoc cranes currently in use throughout the world.

That's commitment you won't find anywhere else.

That's **Crane CARE**.

## Service Training

Manitowoc specialists work with you in our training center and in the field to make sure you know how to get maximum performance, reliability and life from your cranes.

Manitowoc Cranes Technical Training Center provides valuable multi-level training, which is available for all models and attachments, in the following format:

- **Basic** – Provides technicians with the basic skills required in our Level I and II classes covering hydraulic and electrical theory and schematics, pump, motor, control, and LMI operation and the use of meters and gauges.

- **Level 1** – This model-specific class covers theory and offers hands-on training and trouble shooting or all crane systems.

- **Level 2** – This model-specific class provides in-depth coverage of all crane systems and components, and advanced troubleshooting of simulated faults. (Requires Level 1.)

- **Level 3 / Master** – Covering all EPIC models and the 4100W, this class stresses high level system knowledge and trouble shooting of simulated faults. (Requires Level 2.)

## Parts Availability

Genuine Manitowoc replacement parts are accessible through your distributor 24 hours a day, 7 days a week, 365 days a year.

### Service Interval Kits

Provides all the parts required by Manitowoc's Preventative Maintenance Checklist.

### Hydraulic Filter Kit

Consists of the following:
- Filter Element - Hydraulic in Tank (4)

### Cummins Model QSZ15-C600 Diesel

### – Service Interval Kits

### 200 Hour Kit

Consists of the following:

**Engine**
- Filter Oil (1)
- Filter Water (1)
- Filter Fuel (1)

### 1,000 Hour Kit

Consists of the following:

**Engine**
- Filter Air Cleaner - Primary (1)
- Filter Oil (1)
- Filter Water (14)
- Filter Fuel (1)

**Hydraulic**
- Filter Element - Hydraulic in Tank (4)
- Element - Hydraulic Tank Breather (1)

### 2,000 Hour Kit

Consists of the following:

**Engine**
- Filter, Air Cleaner - Primary (1)
- Filter, Air Cleaner - Safety (1)
- Filter, Oil (1)
- Filter, Water (1)
- Filter, Fuel (1)
- Ether, (Bottle) (1)
- Sensor, Coolant Level (10)
- Belt, Fan (1)
- Belt, Alternator (set of two) (1)
- Filter, Element (1)

**Hydraulic**
- Filter Element - No substitutions allowed
- Filter - Hydraulic In-Tank Suction (4)

**Kit, Engine Coolant Additive (SCA) Test (1)**
**Kit, Seal (for hydraulic in tank filter) (1)**
**Seal, Radial (for air cleaner) (1)**

### Hydraulic Test Kit

Protect your investment by demanding Genuine Manitowoc Parts Service Kits. The Hydraulic Service Kit consist of the following:
- All hydraulic fittings to access all pressures and flows
- Hydraulic flow meters and pressure gauges to record hydraulic data.
- Electrical "Break out" harnesses to access voltages on all electrical circuits on all machines.
- Fluke® Digital volt ohm meter, as used in all Manitowoc service literature.

# Manitowoc Crane CARE



**Hydraulic Test Kit with case**
The above kit plus a custom heavy-duty carrying case.

**U.S. Standard Tools Kit**
All standard tools needed to properly maintain and service your crane. (Does not include torque wrench.)

## Field Service

Factory-trained service experts are always ready to help maintain your crane's peak performance.

For a worldwide listing of dealer locations, please consult our website at:
**www.manitowoccranegroup.com**

## Technical Support

Manitowoc's dealer network and factory personnel are available 24 hours a day, 7 days a week, 365 days a year to answer your technical questions and more, with the help of computerized programs that simplify crane selection, lift planning and ground-bearing calculations.

For a worldwide listing of dealer locations, please consult our website at:
**www.manitowoccranegroup.com**

## Technical Documentation

Manitowoc has the industry's most extensive documentation, and the easiest to understand, available in major languages and formats that include print, disk and videotape.

Additional copies available through your Authorized Manitowoc Distributor.

- **Crane Operator's Manual**
- **Crane Parts Manual**
- **Crane Capacity Manual**
- **Crane Vendor Manual**
- **Service Manual (EPIC)**
- **Luffing Jib Operator's/Parts Manual**
- **Capacity Chart Manual - Attachments**

CD rom versions of the Operator's and Parts Manuals are shipped with each crane.
Also available are the following CDs:

- Crane CARE Owner CD –
- Ground Bearing Pressure Estimator CD
- Crane Selection and Planning Software (CompuCRANE©)
- EPIC® Crane Library CD consisting of capacity charts, range diagrams, wire rope specifications, travel specifications, crane weights, counterweight arrangements, luffing jib raising procedures, operating range diagrams, drum and lagging charts, boom rigging drawings, jib rigging drawings, outline dimensions and wind condition charts.

Available from your Authorized Manitowoc Cranes Distributor, these VHS videos are available in NTSC, PAL and SECAM formats.

- Your Capacity Chart Video
- Respect the Limits Video
- Crane Safety Video
- Boom Inspection/Repair Video

**Crane CARE Package**
Manitowoc has assembled all of the available literature, CD's and videos listed above plus several Manitowoc premiums into one complete Crane CARE Package.



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Manitowoc Crane Group

**www.manitowoccranegroup.com**



**Constant improvement and engineering progress make it necessary that we reserve the right to make specification, equipment and price changes without notice. Illustrations shown may include optional equipment and accessories, and may not include all standard equipment.**

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