

# Manitowoc MLC650

## Product Guide

ASME B30.5

Imperial

Preliminary

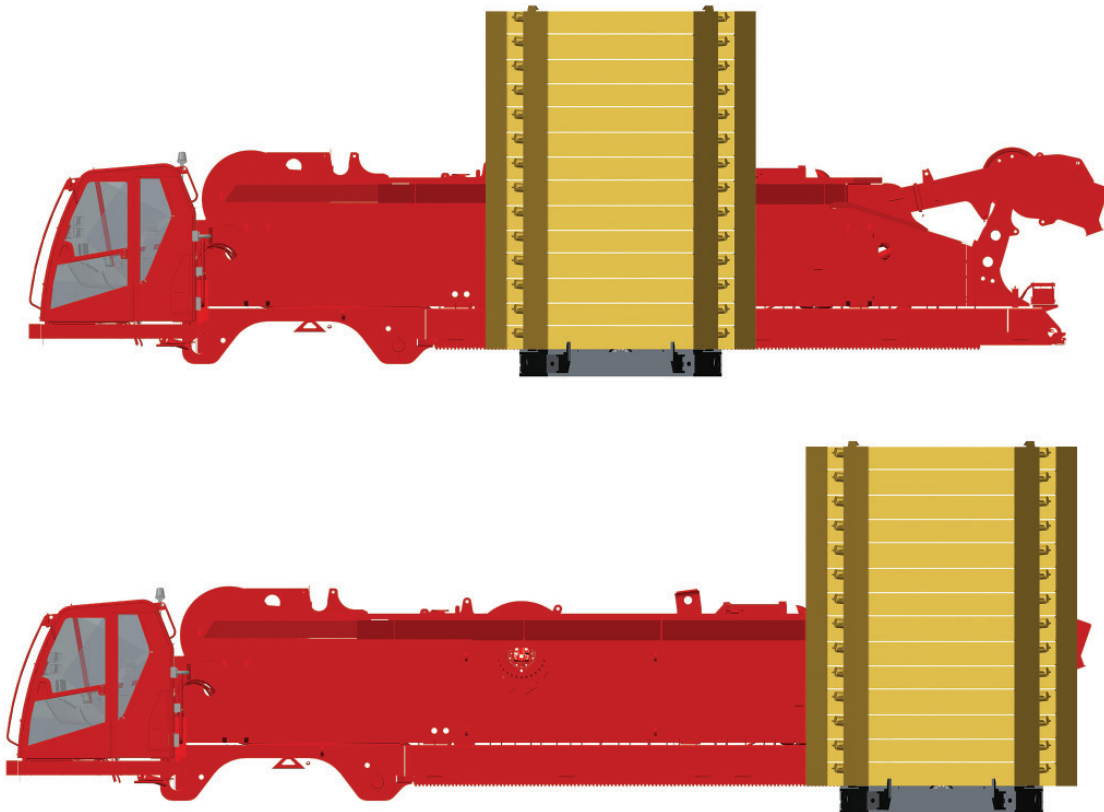


## Features

- 716 USt capacity
- 28,114 ft-kips maximum load moment
- 65,473 ft-kips maximum load moment with VPC-MAX
- 341 ft No. 680 boom
- 98 ft No. 148 fixed jib on No. 680 boom
- 331 ft No. 681-682 luffing jib on No. 680 boom

# Variable Position Counterweight

- The Variable Position Counterweight (VPC) is proprietary technology available exclusively on Manitowoc crawler cranes. By allowing the crane's counterweight to be positioned automatically, the VPC provides an unmatched level of versatility and lifting capability.



## Jobsite benefits

### Reduced ground bearing pressure

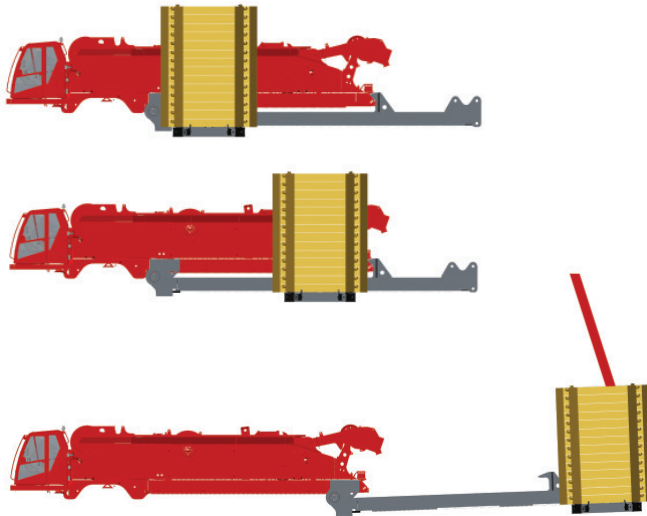
Moving counterweight allows counterweight to be positioned to better distribute ground bearing pressure during setup and lifting operations.

### Less counterweight without sacrificing capacity

The VPC technology allows the upperworks counterweight to move based on stability requirements, eliminating the need for carbody counterweights. The weight typically added to the carbody can now be added to the upperworks to increase capacity while retaining performance and on-site mobility.

## VPC-MAX *(option)*

Unlike VPC counterweight movement which is dictated by changes in boom angle, VPC-MAX counterweight movement is dictated by load and radius (forward moment) changes. As forward moment is increased or decreased VPC-MAX counterweight position is changed to offset changes in moment.



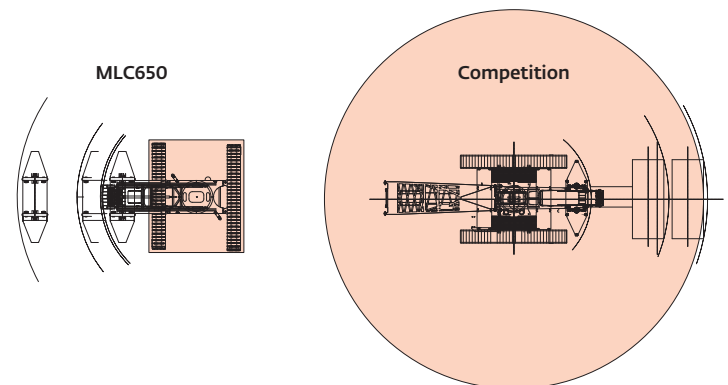
In VPC-MAX configuration, the counterweight tray moves to the end of the VPC-MAX beam prior to beam extension, thus minimizing tailswing and increasing job site mobility.

Counterweight is automatically positioned to optimize rearward moment as forward moment is increased or decreased.

### Minimal ground preparation

In VPC-MAX configuration the counterweight assembly never touches the ground, allowing for minimal ground preparation. The MLC650 ground preparation area is approximately one-tenth of that required by the leading competition, saving time and cost during job site preparation.

### Ground prep area comparison



### Water applications

Counterweight never touches ground allowing use in barge applications where wheeled or hanging attachments that contact the operating surface are typically not allowed. Moving counterweight also better maintains center of gravity for reduced ground bearing pressures.

# Features



## Crane Control System

The Crane Control System offers a user-friendly interface, two full graphic displays mounted horizontally for better visibility, a jog dial for easier data input and ergonomic joysticks.

## Variable Position Counterweight (VPC)

The Manitowoc MLC650 features a counterweight system which automatically positions the crane's counterweight as required to match lifting demands. Crane lifting capability is optimized by automatic positioning of the counterweight; eliminating the need for carbody counterweight. Additionally, counterweight boxes are designed to be common across multiple crane platforms and will be utilized on Manitowoc Model MLC300 as well as future new models.

## VPC-MAX

Capacity and boom and jib combination lengths can be increased through addition of the exclusive VPC-MAX attachment. The VPC-MAX attachment, utilizing all of the standard VPC components, increases the max load moment of the MLC650 when a 118' 1" fixed mast, VPC-MAX counterweight beam and additional 220,460 lb of counterweight is added to the base MLC650. The position of the VPC-MAX counterweight is automatically positioned based on lifted load, boom length or boom and jib length and load radius.

## Transport

The MLC650 is designed to be transported globally with optimized component weights and dimensions. The MLC650 features a removable live mast shipping module and boom inserts designed to allow luffing jib inserts to ship within the boom inserts for cost effective transport.

## FACT™ Connectors

Manitowoc's Fast Aligning Connection Technology (FACT) automatically aligns crane components for fast, easy assembly.



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# Specifications

## Upperworks



### Engine

Cummins Model QSX15 Tier 4 Final diesel, 600 BHP at 1800 RPM.

Or

Cummins QSX15 Tier 3 diesel, rated 600 HP at 1800 RPM

Includes pump drive disconnect for easier starting, engine block heater (240V), high silencing muffler or emissions compliant Tier 4 Final after treatment, hydraulic oil cooler, radiator and variable speed hydraulic controlled fan. Variable speed fan provides increased fuel efficiency, decreased engine loading and reduces noise emission.

Multiple hydraulic pump drive transmission provides power for all machine functions. Two 12 volt, 1375 CCA at 0° F, 24 volt system and 110 amp alternator. 295 gallon fuel tank, with level indicator in operator's cab.

■ Optional: Cold-weather package with heater for fluids.



### Crane Control System

The Crane Control System offers a user-friendly interface, two full graphic displays mounted horizontally for better visibility, a jog dial for easier data input and ergonomic joysticks.



### Hydraulic system

High-pressure piston pumps, driven by a multi-pump transmission, provide independent closed-loop hydraulic power for the hoisting drums, boom hoist, swing, left crawler and right crawler.

250 gallon hydraulic reservoir is equipped with breather, clean out access, and internal diffuser.

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

System includes oil cooler and replaceable, full flow return filters. All oil is filtered before entering the hydraulic reservoir.



### Drums

Basic machine is equipped with 49" wide and 26" diameter main hoist drum, mounted in the boom butt and 32" wide and 25.25" diameter whip drum, mounted in the rotating bed. Each drum is driven by a variable-displacement hydraulic motor through a planetary reduction system. Main hoist drum is grooved for 32mm rope and whip drum is grooved for 28 mm rope.

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

■ Optional: auxiliary main hoist with 49" wide and 26" diameter mounted in the 13' 1" insert. Aux main hoist drum is grooved for 32mm rope.



### Moving mast system

Independent moving mast hoist with two grooved drums, each 18.5" wide and 31" diameter drum grooved for 32 mm diameter wire rope.

Drum is powered by variable-displacement hydraulic motors coupled to integral brake and planetary reduction gearboxes. Ratcheting pawl and rotation indicator are standard.

Raise 341' full main boom from 0° - 85° in 7 minutes 40 seconds.



### Swing system

High strength steel adapter module is mounted on 118" diameter triple row roller turntable bearing. Bearing adapter-mounted independent swing is powered by two fixed-displacement hydraulic motors coupled to internal brakes and planetary reductions.

Swing system maximum speed: 1.3 rpm liftcrane, 0.9 rpm VPC-MAX.

# Specifications



## Boom support system

Moving mast is 36' long and connects the boom hoist reeving to the steel boom suspension strap rigging. When used with the optional self-erect package, the mast is used for crane assembly and disassembly. It is capable of lifting and positioning the crawler assemblies, and assembling the boom and luffing jib.

Spring cushioned boom stop and automatic boom stop are standard.



## Variable Position Counterweight

The Variable Position Counterweight (VPC) system of rotating bed only counterweight maintains optimum crane stability by automatically positioning crane counterweight based on boom angle and length. No carbody counterweight is required.

The crane is equipped with 661,386 lbs upperworks only counterweight made up of a single piece counterweight tray and twenty-eight 22,046 lbs counterweight boxes. Left and right side counterweights are interchangeable and common with MLC300 counterweight.



## Vision operator's cab

The Vision Cab™ is a fully enclosed and insulated galvanized steel fabricated module mounted to the left front corner of rotating bed. Operator's cab is equipped with power tilt, sliding door, large safety glass windows, front and roof windshield wipers, dome light, sun visor and shade, fire extinguisher, air conditioning, swing and travel alarms, and radio/CD player. Operator's station swings over front of rotating bed for transportation.

Optional: Polyethylene protective window covers.

## Lowerworks



## Carbody and adapter assembly

Connects rotating bed and crawler frames. Each frame is mounted to the carbody with FACT connection system and hydraulic power-actuated pins. Crawler drive motors are mounted on carbody, permitting crawler removal without opening travel drive hydraulic circuit.



## Crawlers

Crawler assemblies are 36'5" long with 60" wide cast steel crawler pads and automatically lubricated intermediate rollers. Left and right side crawlers are interchangeable to provide assembly/disassembly flexibility on job sites. Carbody mounted drive motors are connected to crawler final reduction via drive shafts. Crawlers provide ample tractive effort for travel and counter-rotating with full rated load.

Maximum ground speed of 0.78 mph.

Optional: 80" wide cast steel crawler pads

## Attachments



## No. 680 boom

The liftcrane is equipped with 105' 680 basic boom consisting of 19' 8" butt, 13' 1" insert, 39' 5" insert with luffing hoist sheaves, and 32' 10" top with sixteen 30" diameter tapered roller bearing sheaves. Includes rope guides, boom hoist wire rope, boom angle indicator and hook and weight ball. The boom utilizes Manitowoc's exclusive FACT™ connection system boom connector. Spring cushioned boom stop. Automatic boom stop.

- Optional: 19' 8" and 39' 5" No. 680 boom inserts with steel boom suspension straps and FACT connection system.
- Optional: detachable upper boom point with one 30" diameter tapered roller bearing steel sheave grooved for 32 mm rope with rope guard for liftcrane.
- Optional: Heavy-duty 146.4 USt detachable extended upper boom point with three 30" diameter tapered roller bearing steel sheave grooved for 32mm rope with rope guard for liftcrane.

# Specifications



## No. 681-682 luffing jib

85' basic No. 681-682 luffing jib including 19' 8" butt, one 39' 5" insert, 19' 8" transition insert and 6' 7" top, main and jib struts, jib and backstay steel suspension straps, boom point guide wheel, luffing jib hoist with ratchet and pawl; quick disconnect for jib hoist piping, and 28 mm luffing jib hoist line.

- Optional: 9' 10", 19' 8" and 39' 5" No. 681 and 682 luffing jib inserts with steel boom suspension straps.

Utilize luffing jib inserts in combination with the No. 681-682 basic luffing jib for total luffing jib lengths up to 331'.



## No. 148 fixed jib

39'4" No. 148 fixed jib including pin 19'8" butt, 19'8" top, jib strut and mounting hardware.

- Optional: 19'8" No. 148 inserts with pin connectors and pendants for a maximum jib length of 98' 5".



## VPC-MAX

The VPC-MAX attachment components include:

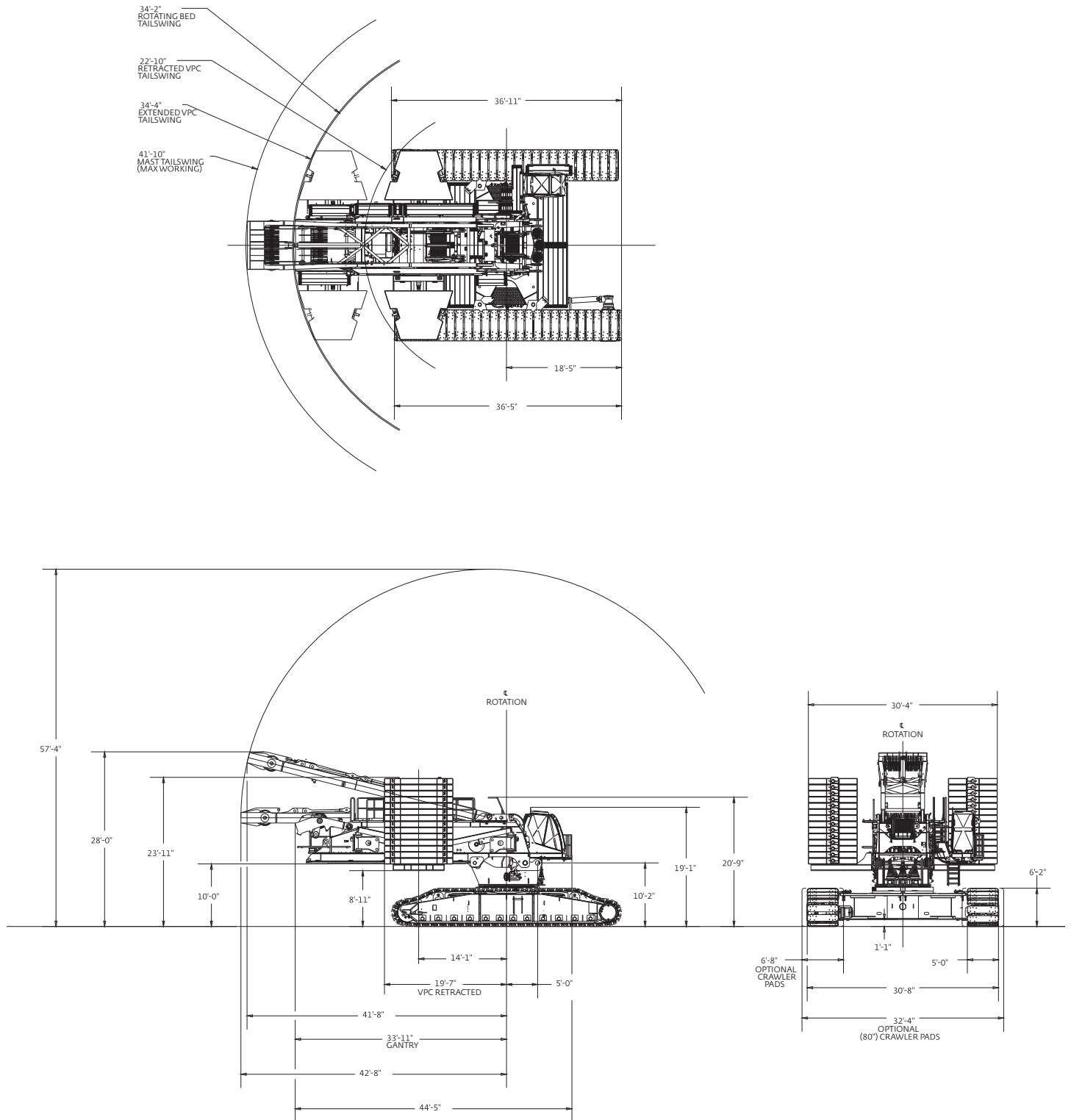
- 118' 1" of No. 684 mast consisting of a 19' 8" butt, (2) 39' 4" inserts, and a 19' 8" top.
- One additional swing drive (for a total of three) mounted on the rotating module. Each swing drive is powered by a fixed-displacement hydraulic motor coupled to a planetary reduction gearbox and internal brake.
- Counterweight includes an additional ten 22,046 lb boxes.

The VPC-MAX system maintains optimum crane stability by automatically positioning crane counterweight behind the crane's centerline of rotation based on lifted load, boom length and load radius.

## Optional equipment

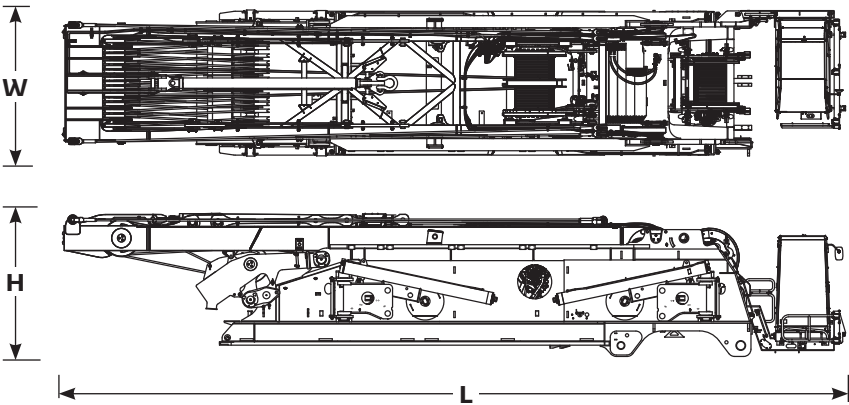
- Self-erect system includes, jacking cylinders with pads, self assembly cylinder and crawler handling chains.
- Hydraulic Test Kit: required to properly analyze the performance of the CCS.
- Service Interval Kits for the regularly scheduled maintenance of general crane operations.
- Special paint color(s) other than Manitowoc standard red and black.
- Custom vinyl decal(s) of customer name and/or logo from artwork supplied by customer.
- 20 USt swivel hook and weight ball.

# Outline dimensions



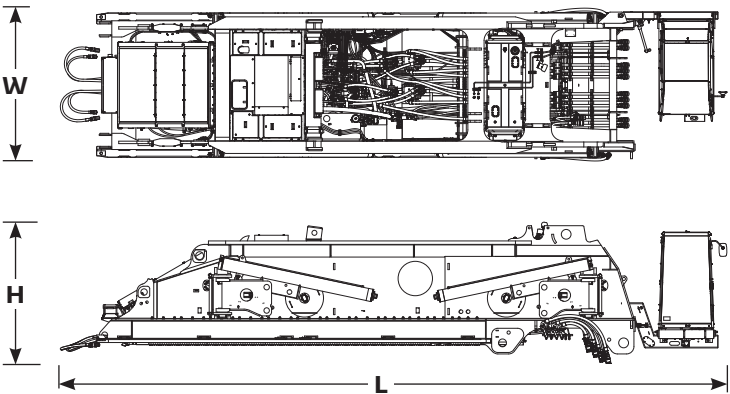


# Outline dimensions



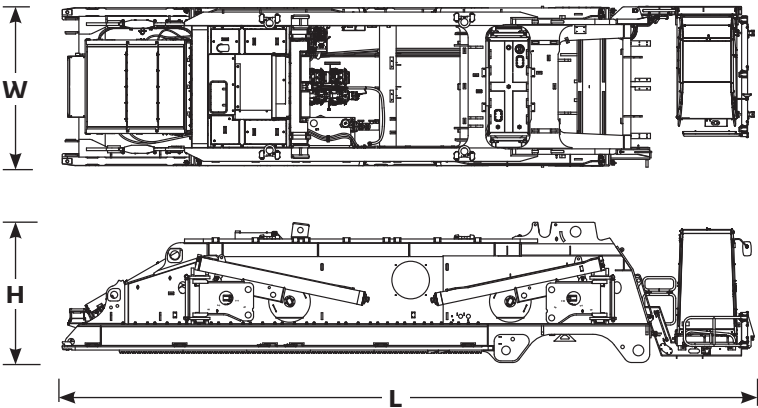
| Rotating bed assembly |            |
|-----------------------|------------|
| Length                | 52' 9"     |
| Width                 | 9' 10"     |
| Height                | 9' 8"      |
| Weight                | 157,850 lb |

*Note: includes live mast, boom hoist, gantry, rotating bed jacks, whip hoist.*



| Rotating bed assembly |           |
|-----------------------|-----------|
| Length                | 42' 3"    |
| Width                 | 9' 10"    |
| Height                | 8' 7"     |
| Weight                | 98,450 lb |

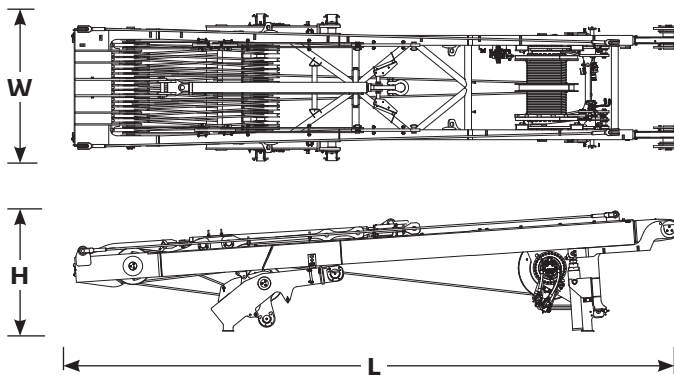
*Note: includes rotating bed jacks, whip hoist.*  
*Note: excludes live mast, boom hoist, gantry.*



| Rotating bed assembly |           |
|-----------------------|-----------|
| Length                | 42' 3"    |
| Width                 | 9' 10"    |
| Height                | 8' 7"     |
| Weight                | 85,950 lb |

*Note: includes rotating bed jacks.*  
*Note: excludes whip hoist, live mast, boom hoist, gantry.*

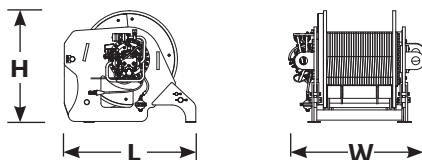
# Outline dimensions



## Live mast package

|        |           |
|--------|-----------|
| Length | 40' 7"    |
| Width  | 9' 10"    |
| Height | 8' 1"     |
| Weight | 59,400 lb |

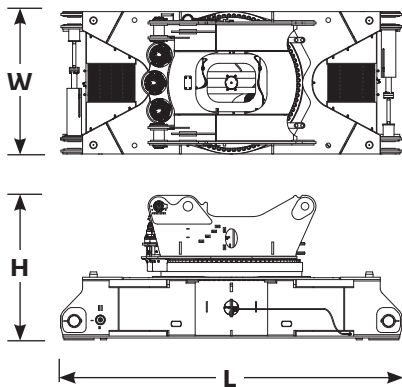
*Note: includes live mast, boom hoist, gantry.*



## Whip hoist package

|        |           |
|--------|-----------|
| Length | 5' 4"     |
| Width  | 5' 4"     |
| Height | 4' 7"     |
| Weight | 12,500 lb |

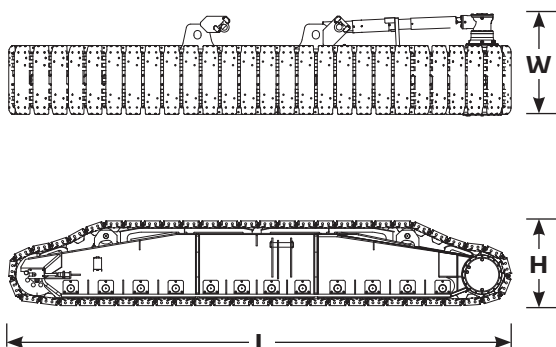
*Note: includes wire rope.*



## Carbody assembly without jacks

|        |           |
|--------|-----------|
| Length | 23' 7"    |
| Width  | 9' 10"    |
| Height | 10' 0"    |
| Weight | 92,300 lb |

*Note: includes carbody, adapter frame, three swing drives, slewing ring.*



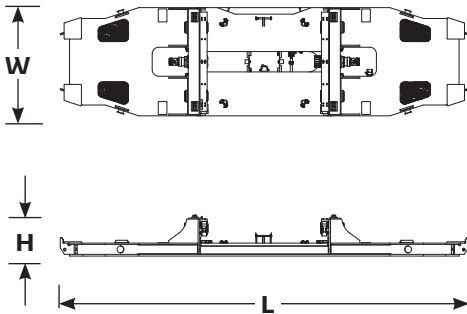
## Crawler assembly 60" pads

|        |           |
|--------|-----------|
| Length | 36' 6"    |
| Width  | 7' 5"     |
| Height | 6' 2"     |
| Weight | 86,000 lb |

## Crawler assembly 80" pads

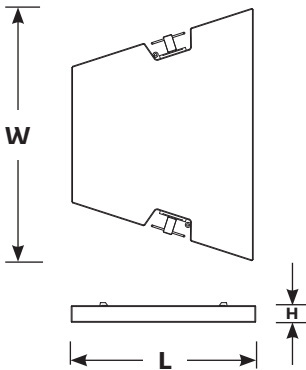
|        |            |
|--------|------------|
| Weight | 104,760 lb |
|--------|------------|

# Outline dimensions



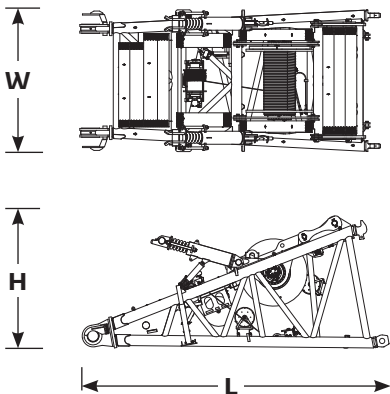
## Counterweight tray assembly

|        |           |
|--------|-----------|
| Length | 30' 11"   |
| Width  | 8' 2"     |
| Height | 3' 1"     |
| Weight | 44,000 lb |



## Counterweight box

|        |           |
|--------|-----------|
| Length | 7' 10"    |
| Width  | 10' 11"   |
| Height | 1' 2"     |
| Weight | 22,046 lb |



## 19' 8" No. 680 boom butt

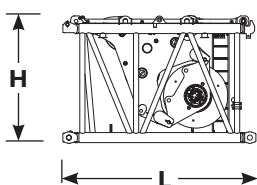
|        |           |
|--------|-----------|
| Length | 21' 4"    |
| Width  | 9' 10"    |
| Height | 9' 2"     |
| Weight | 43,150 lb |

*Note: main load hoist #1, wire rope, rigging winch.*

## 19' 8" No. 680 boom butt with luffing hoist

|        |           |
|--------|-----------|
| Weight | 53,750 lb |
|--------|-----------|

*Note: includes main load hoist #1, wire rope, rigging winch, luffing hoist.*

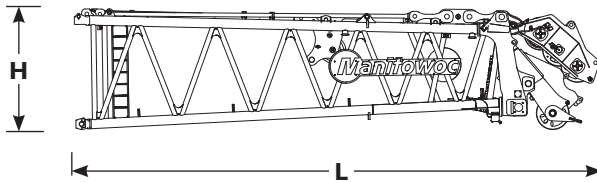


## 13' 1" No. 680 boom insert

|        |           |
|--------|-----------|
| Length | 14' 0"    |
| Width  | 9' 10"    |
| Height | 9' 2"     |
| Weight | 39,460 lb |

*Note: main load hoist #2, wire rope.*

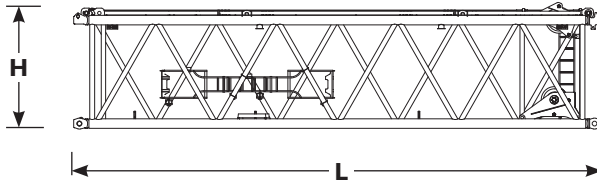
# Outline dimensions



## 32' 10" No. 680 boom top

|        |           |
|--------|-----------|
| Length | 40' 0"    |
| Width  | 9' 10"    |
| Height | 9' 2"     |
| Weight | 41,550 lb |

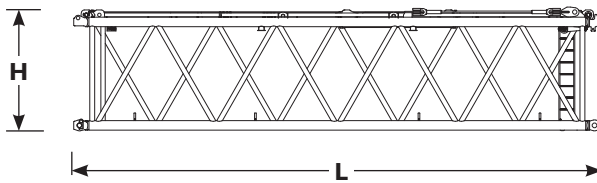
*Note: lower boom point, wire rope guides.*



## 39' 4" No. 680 boom insert with sheaves

|        |           |
|--------|-----------|
| Length | 40' 3"    |
| Width  | 9' 10"    |
| Height | 9' 2"     |
| Weight | 27,150 lb |

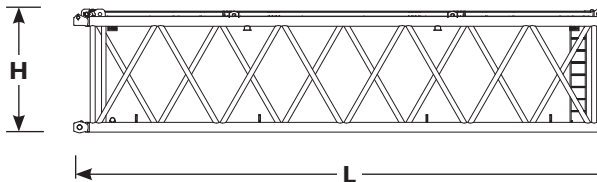
*Note: boom straps, backstay straps, luffing jib wire rope guide.*



## 39' 4" No. 680 boom insert, heavy with equalizer

|        |           |
|--------|-----------|
| Length | 40' 3"    |
| Width  | 9' 10"    |
| Height | 9' 2"     |
| Weight | 23,140 lb |

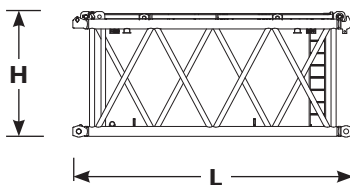
*Note: boom straps, backstay straps.*



## 39' 4" No. 680 boom insert, heavy

|        |           |
|--------|-----------|
| Length | 40' 3"    |
| Width  | 9' 10"    |
| Height | 9' 2"     |
| Weight | 21,460 lb |

*Note: boom straps, backstay straps.*

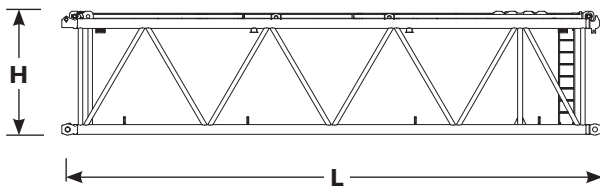


## 19' 8" No. 680 boom insert, heavy

|        |           |
|--------|-----------|
| Length | 20' 7"    |
| Width  | 9' 10"    |
| Height | 9' 2"     |
| Weight | 12,520 lb |

*Note: boom straps, backstay straps.*

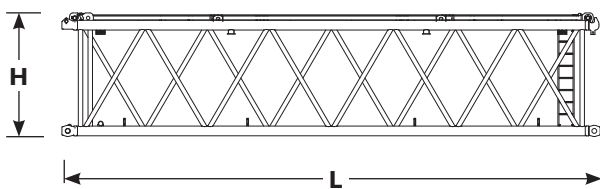
# Outline dimensions



## 39' 4" No. 680 boom insert, medium with suspension

|        |           |
|--------|-----------|
| Length | 40' 3"    |
| Width  | 9' 10"    |
| Height | 9' 2"     |
| Weight | 22,740 lb |

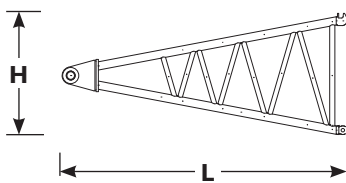
*Note: boom straps, backstay straps.*



## 39' 4" No. 680 boom insert, medium

|        |           |
|--------|-----------|
| Length | 40' 3"    |
| Width  | 9' 10"    |
| Height | 9' 2"     |
| Weight | 17,560 lb |

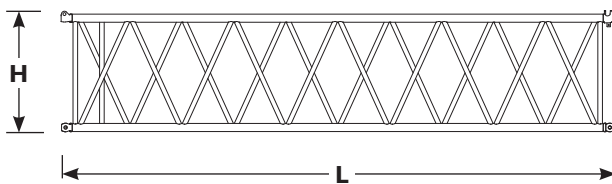
*Note: boom straps, backstay straps.*



## 19' 8" No. 681 luffing jib butt

|        |           |
|--------|-----------|
| Length | 21' 0"    |
| Width  | 9' 10"    |
| Height | 8' 11"    |
| Weight | 16,262 lb |

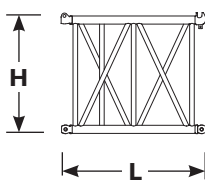
*Note: includes jib stops.*



## 39' 4" No. 681 luffing jib insert

|        |           |
|--------|-----------|
| Length | 40' 3"    |
| Width  | 9' 10"    |
| Height | 9' 3"     |
| Weight | 13,485 lb |

*Note: includes jib straps.*

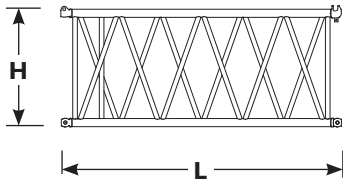


## 9' 10" No. 681 luffing jib insert

|        |          |
|--------|----------|
| Length | 10' 5"   |
| Width  | 9' 10"   |
| Height | 9' 3"    |
| Weight | 4,955 lb |

*Note: includes jib straps.*

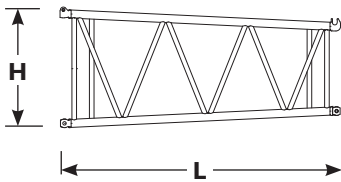
# Outline dimensions



## 19' 8" No. 681 luffing jib insert

|        |          |
|--------|----------|
| Length | 20' 3"   |
| Width  | 9' 10"   |
| Height | 9' 3"    |
| Weight | 8,080 lb |

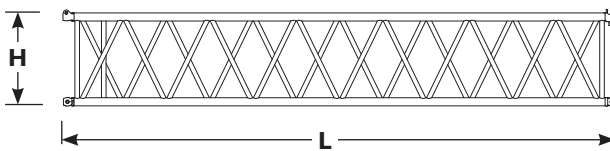
*Note: includes jib straps.*



## 19' 8" No. 681-682 transition insert

|        |          |
|--------|----------|
| Length | 20' 3"   |
| Width  | 9' 10"   |
| Height | 9' 3"    |
| Weight | 7,900 lb |

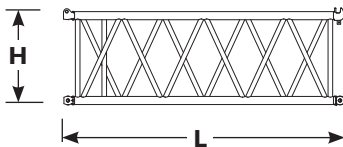
*Note: includes jib straps.*



## 39' 4" No. 682 luffing jib insert

|              |           |
|--------------|-----------|
| Length       | 40' 0"    |
| Width        | 8' 2"     |
| Height (max) | 7' 6"     |
| Weight       | 13,155 lb |

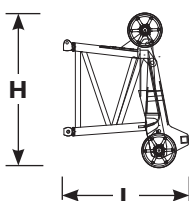
*Note: includes jib straps.*



## 19' 8" No. 682 luffing jib insert

|        |          |
|--------|----------|
| Length | 20' 3"   |
| Width  | 8' 2"    |
| Height | 7' 6"    |
| Weight | 7,520 lb |

*Note: includes jib straps.*

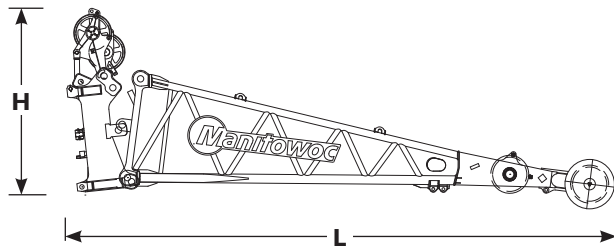


## 6' 6" No. 681-682 luffing jib top

|              |           |
|--------------|-----------|
| Length       | 10' 11"   |
| Width        | 8' 2"     |
| Height (max) | 9' 3"     |
| Weight       | 12,620 lb |

*Note: includes (8) sheave pack, wire rope guide.*

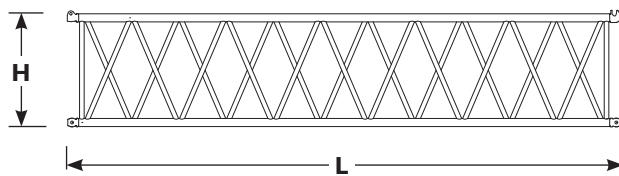
# Outline dimensions



## Wind cap + extended upper boom point

|              |           |
|--------------|-----------|
| Length       | 37' 9"    |
| Width        | 8' 10"    |
| Height (max) | 9' 3"     |
| Weight       | 20,538 lb |

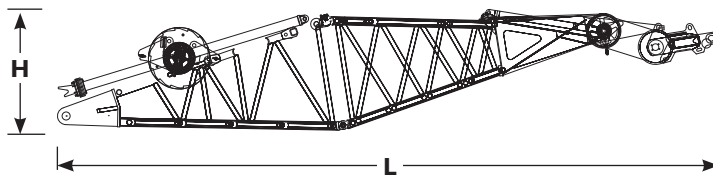
*Note: includes 2 sheave lower boom point in wind cap.*



## 39' 4" No. 684 mast insert

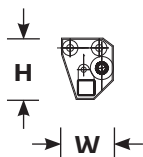
|              |           |
|--------------|-----------|
| Length       | 40' 5"    |
| Width        | 8' 2"     |
| Height (max) | 9' 3"     |
| Weight       | 15,230 lb |

*Note: includes backhitch and counterweight straps.*



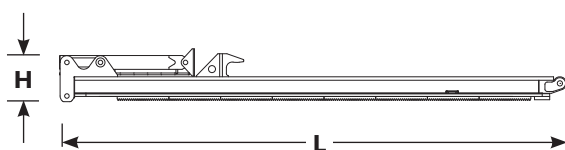
## No. 684 mast top + butt transport package

|        |           |
|--------|-----------|
| Length | 47' 10"   |
| Width  | 8' 7"     |
| Height | 9' 3"     |
| Weight | 56,703 lb |



## VPC-MAX actuator assembly

|        |           |
|--------|-----------|
| Length | 16' 5"    |
| Width  | 3' 10"    |
| Height | 3' 10"    |
| Weight | 10,000 lb |



## VPC-MAX beam assembly

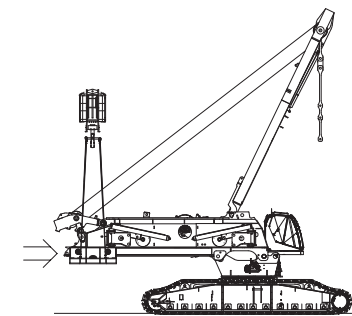
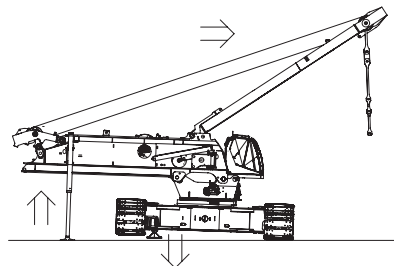
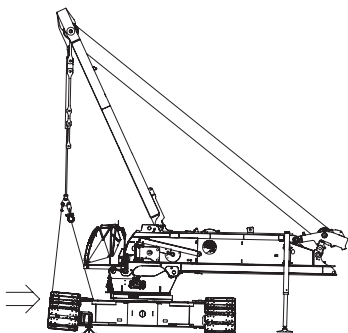
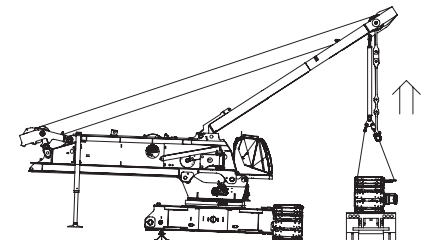
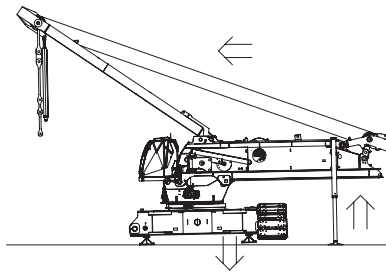
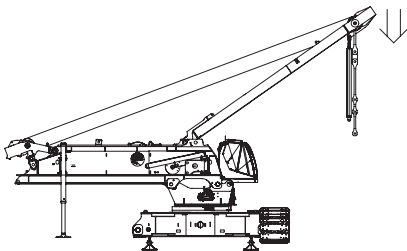
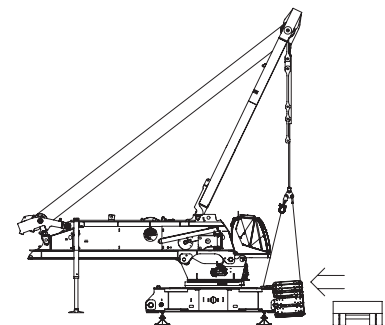
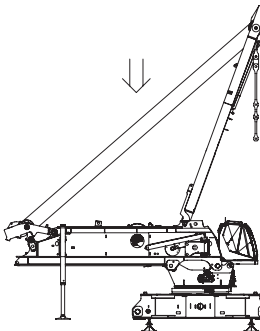
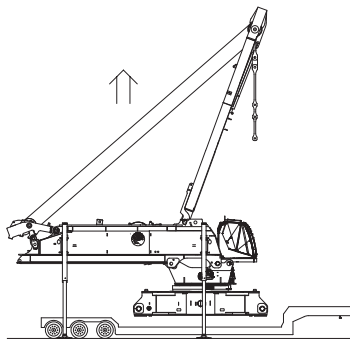
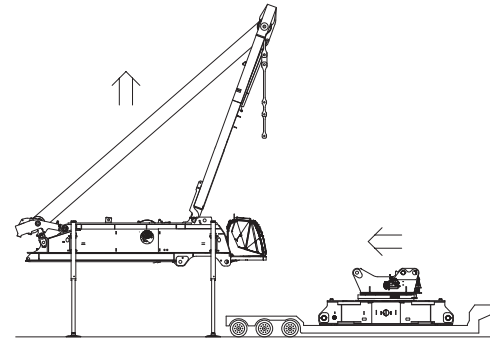
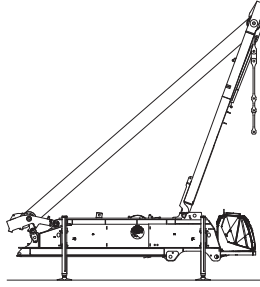
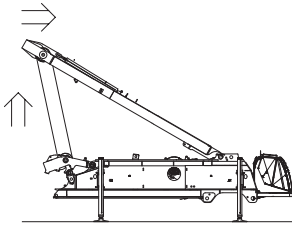
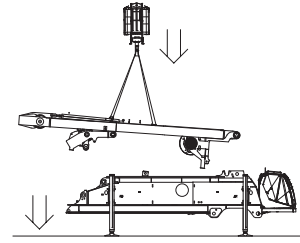
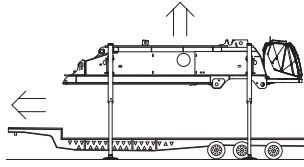
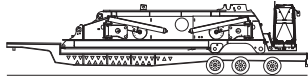
|        |           |
|--------|-----------|
| Length | 36' 8"    |
| Width  | 9' 10"    |
| Height | 3' 10"    |
| Weight | 47,000 lb |



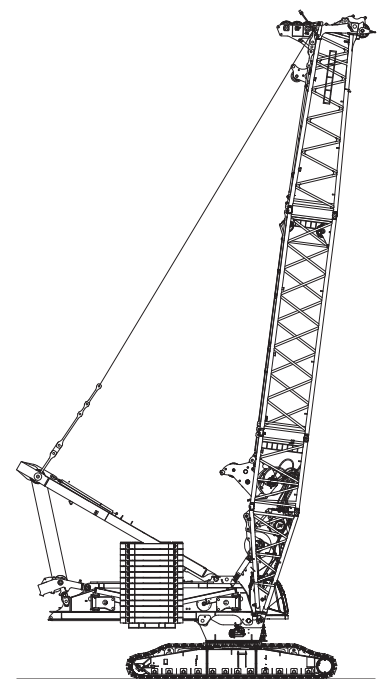
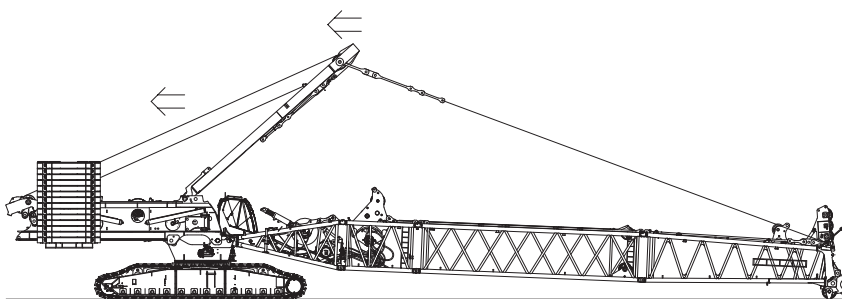
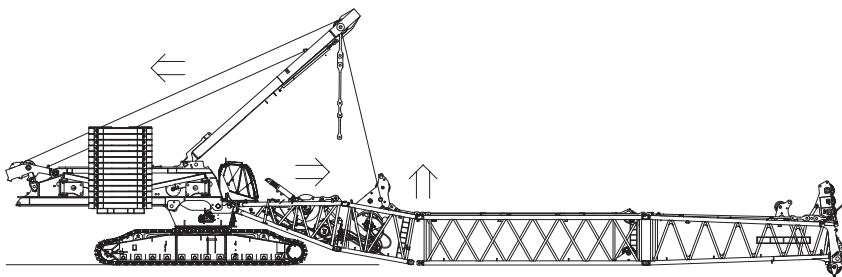
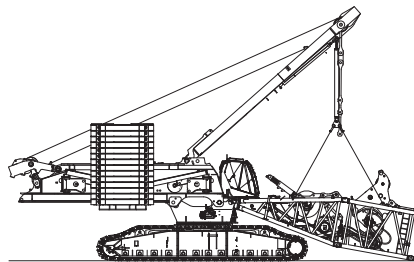
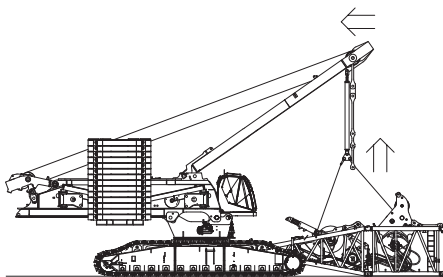
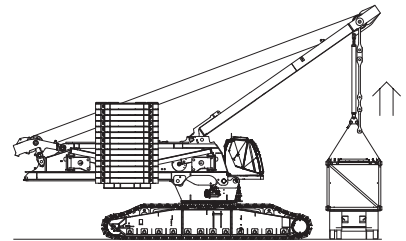
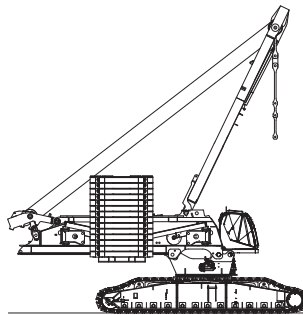
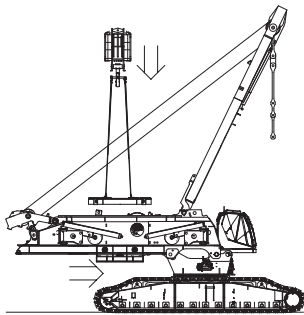
# Transport data

| Load summary                                          |                                                                                           |           |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-------------------------------------------------------|-------------------------------------------------------------------------------------------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Item                                                  | 282 ft boom<br>Quantity on trailer load #<br>(Does not include blocking, strapping, etc.) |           |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                                       | Qty                                                                                       | Weight lb | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     | 12     | 13     | 14     | 15     | 16     | 17     | 18     | 19     | 20     | 21     | 22     | 23     | 24     | 25     | 26     | 27     | 28     | 29     |
| Upperworks module                                     | 1                                                                                         | 85,950    | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Whip hoist                                            | 1                                                                                         | 12,500    |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Live mast package                                     | 1                                                                                         | 59,400    |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Carbody + adapter                                     | 1                                                                                         | 92,300    |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Crawler assembly (60" pads)                           | 2                                                                                         | 86,000    |        |        |        | 1      | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Counterweight tray                                    | 1                                                                                         | 44,000    |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Counterweight box                                     | 28                                                                                        | 22,046    |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| Boom butt with drum 1                                 | 1                                                                                         | 43,150    |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 13' 1" No. 680 boom insert with drum 2                | 1                                                                                         | 39,460    |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 39' 4" No. 680 heavy boom insert                      | 1                                                                                         | 27,150    |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 39' 4" No. 680 heavy boom insert                      | 1                                                                                         | 21,460    |        |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 39' 4" No. 680 heavy boom insert with equalizer rails | 1                                                                                         | 23,140    |        |        |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 19' 8" heavy boom insert                              | 1                                                                                         | 12,520    |        |        |        |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 39' 4" medium insert with suspension                  | 1                                                                                         | 22,740    |        |        |        |        |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 39' 4" medium insert                                  | 1                                                                                         | 17,560    |        |        |        |        |        |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 32' 10" boom top                                      | 1                                                                                         | 41,550    |        |        |        |        |        |        |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 350 t block (32 mm)                                   | 1                                                                                         | 17,400    |        |        |        |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 22,2 mt weight ball                                   | 1                                                                                         | 2,800     |        |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Approximate total shipping weight lb                  |                                                                                           |           | 85,950 | 59,400 | 92,300 | 86,000 | 86,000 | 44,000 | 43,150 | 39,460 | 39,650 | 24,260 | 23,140 | 29,920 | 22,740 | 17,560 | 41,550 | 44,092 | 44,092 | 44,092 | 44,092 | 44,092 | 44,092 | 44,092 | 44,092 | 44,092 | 44,092 | 44,092 | 44,092 | 44,092 | 44,092 |

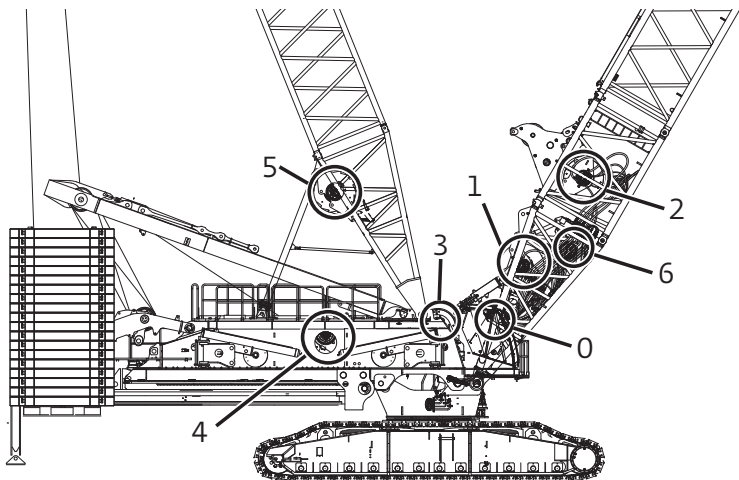
# Assembly



# Assembly



# Performance data



| Drum identification |                                                                |
|---------------------|----------------------------------------------------------------|
| Drum number         | Function                                                       |
| 1                   | Main hoist - standard                                          |
| 2                   | Auxiliary main hoist - optional                                |
| 3                   | Whip hoist - standard                                          |
| 4                   | Boom hoist (VPC) - standard<br>Mast hoist (VPC-MAX) - standard |
| 5                   | Boom hoist (VPC-MAX) - optional                                |
| 6                   | Luffing hoist - optional                                       |
| 0                   | Rigging winch - optional                                       |

| Working weight                                                                                 |           |
|------------------------------------------------------------------------------------------------|-----------|
|                                                                                                | lb        |
| 105' No. 680 main boom,<br>upper boom point,<br>600 ton hook block<br>661,390 lb counterweight | 1,243,700 |

# Performance data

## No. 680 boom Hoist reeving for main load block single lead line - 32 mm wire rope

| No. Parts of Line | Maximum Load<br>lb |
|-------------------|--------------------|
| 2                 | 97,600             |
| 4                 | 195,200            |
| 6                 | 292,800            |
| 8                 | 390,400            |
| 10                | 488,000            |
| 12                | 585,600            |
| 14                | 683,200            |
| 16                | 773,610            |
| 18                | 861,860            |
| 20                | 948,350            |
| 22                | 1,033,110          |
| 24                | 1,116,200          |
| 26                | 1,197,620          |
| 28                | 1,277,430          |
| 30                | 1,355,650          |
| 32                | 1,432,310          |

## No. 680 boom Hoist reeving for main load block two lead lines - 32 mm wire rope

| No. Parts of Line | Maximum Load<br>lb |
|-------------------|--------------------|
| 8                 | 390,400            |
| 12                | 585,600            |
| 16                | 780,800            |
| 20                | 976,000            |
| 24                | 1,171,200          |
| 28                | 1,366,400          |
| 32                | 1,543,230          |

## No. 680 boom Hoist reeving for whip load block single lead line - 28 mm wire rope

| No. Parts of Line | Maximum Load<br>lb |
|-------------------|--------------------|
| 1                 | 30,000             |
| 2                 | 60,000             |

## No. 680-681 boom with 25 ft extended upper boom point Hoist reeving for main load block single lead line - 32 mm wire rope

| No. Parts of Line | Maximum Load<br>lb |
|-------------------|--------------------|
| 2                 | 97,600             |
| 4                 | 195,200            |
| 6                 | 292,800            |

## Maximum spooling capacities

|                                         |                       |
|-----------------------------------------|-----------------------|
| Drum 1 (hoist line)<br>32 mm wire rope* | 3,609 ft<br>10 layers |
| Drum 2 (hoist line)<br>32 mm wire rope* | 3,609 ft<br>10 layers |
| Drum 3 (whip line)<br>28 mm wire rope*  | 1,900 ft<br>8 layers  |

*\*21 ft is deducted from maximum spooling capacities for 3 dead wraps per drum*

## Performance for main hoist (drum #1) and auxiliary main hoist (drum #2) 32 mm wire rope Single line speed in ft per minute

| Single line pull lb | Single line pull/single line speed ft/min<br>Layer |     |     |     |     |     |     |     |     |     |
|---------------------|----------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                     | 1                                                  | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |
| 0                   | 307                                                | 335 | 364 | 392 | 421 | 449 | 477 | 506 | 534 | 563 |
| 10,000              | 293                                                | 319 | 344 | 369 | 394 | 419 | 443 | 467 | 491 | 515 |
| 20,000              | 279                                                | 302 | 324 | 346 | 368 | 389 | 409 | 429 | 439 | 445 |
| 30,000              | 265                                                | 285 | 294 | 300 | 305 | 311 | 316 | 321 | 327 | 332 |
| 40,000              | 227                                                | 233 | 238 | 244 | 249 | 254 | 260 | 265 | 274 | 288 |
| 48,800              | 197                                                | 202 | 208 | 213 | 218 | 230 | 244 | 254 | 253 | 252 |

## Performance for whip (drum #3) 28 mm wire rope Single line speed in ft per minute

| Single line pull lb | Single line pull/single line speed ft/min<br>Layer |     |     |     |     |     |     |     |
|---------------------|----------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|
|                     | 1                                                  | 2   | 3   | 4   | 5   | 6   | 7   | 8   |
| 0                   | 297                                                | 322 | 347 | 371 | 396 | 421 | 446 | 471 |
| 5,000               | 284                                                | 306 | 329 | 351 | 373 | 394 | 416 | 437 |
| 10,000              | 270                                                | 291 | 311 | 330 | 349 | 368 | 386 | 404 |
| 15,000              | 257                                                | 275 | 291 | 296 | 301 | 305 | 310 | 315 |
| 20,000              | 225                                                | 230 | 235 | 240 | 244 | 249 | 254 | 258 |
| 25,000              | 192                                                | 196 | 201 | 206 | 211 | 216 | 228 | 240 |
| 30,000              | 169                                                | 174 | 179 | 190 | 202 | 214 | 225 | 237 |

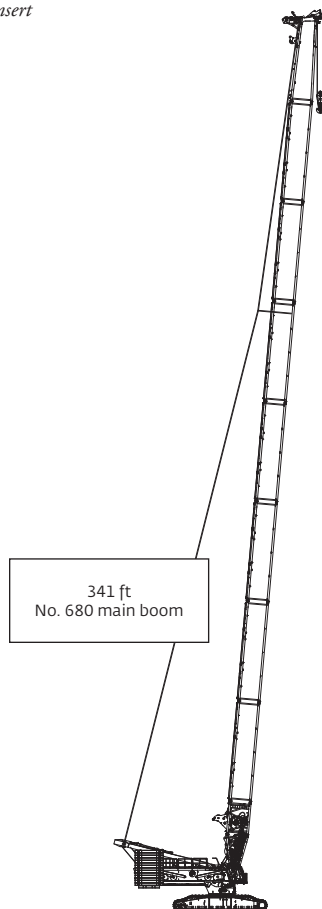
# Boom combinations

| No. 680 main boom combinations |                      |        |         |        |        |
|--------------------------------|----------------------|--------|---------|--------|--------|
| Boom length<br>ft              | Main boom inserts ft |        |         |        |        |
|                                | 13.1 XH              | 19.7 H | 39.4 XH | 39.4 H | 39.4 M |
| 105                            | 1                    | 0      | 1       | 0      | 0      |
| 124.7                          | 1                    | 1      | 1       | 0      | 0      |
| 144.4                          | 1                    | 0      | 1       | 1      | 0      |
| 164                            | 1                    | 1      | 1       | 1      | 0      |
| 183.7                          | 1                    | 0      | 2       | 1      | 0      |
| 203.4                          | 1                    | 1      | 2       | 1      | 0      |
| 223.1                          | 1                    | 0      | 2       | 1      | 1      |
| 242.8                          | 1                    | 1      | 2       | 1      | 1      |
| 262.5                          | 1                    | 0      | 2       | 2      | 1      |
| 282.2                          | 1                    | 1      | 2       | 2      | 1      |
| 301.8                          | 1                    | 0      | 2       | 3      | 1      |
| 321.5                          | 1                    | 1      | 2       | 3      | 1      |
| 341.2                          | 1                    | 0      | 2       | 4      | 1      |

*XH: Extra heavy insert*

*H: Heavy insert*

*M: Medium insert*



# Boom combinations

No. 680-681 WA boom with 24.9 ft extended upper boom point

| Boom length<br>ft | Main boom inserts ft |         |        |        |      |       |        |       |
|-------------------|----------------------|---------|--------|--------|------|-------|--------|-------|
|                   | 13.1 XH              | 39.4 XH | 39.4 H | 39.4 M | 9.8* | 19.7* | 19.7** | 39.4* |
| 292               | 1                    | 2       | 2      | 1      | 0    | 0     | 1      | 1     |
| 301.8             | 1                    | 2       | 2      | 1      | 1    | 0     | 1      | 1     |
| 311.7             | 1                    | 2       | 2      | 1      | 0    | 1     | 1      | 1     |
| 321.5             | 1                    | 2       | 2      | 1      | 1    | 1     | 1      | 1     |
| 331.4             | 1                    | 2       | 2      | 1      | 0    | 0     | 1      | 2     |
| 341.2             | 1                    | 2       | 2      | 1      | 1    | 0     | 1      | 2     |
| 351               | 1                    | 2       | 2      | 1      | 0    | 1     | 1      | 2     |
| 360.9             | 1                    | 2       | 2      | 1      | 1    | 1     | 1      | 2     |

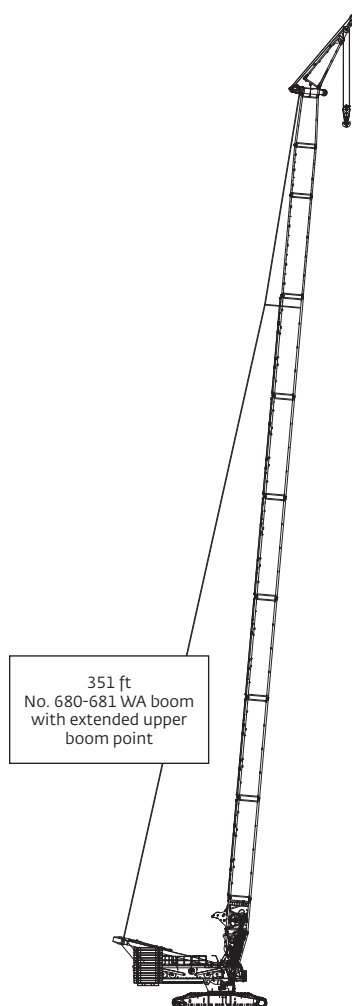
*XH: Extra heavy insert*

*H: Heavy insert*

*M: Medium insert*

*\* luffing jib insert*

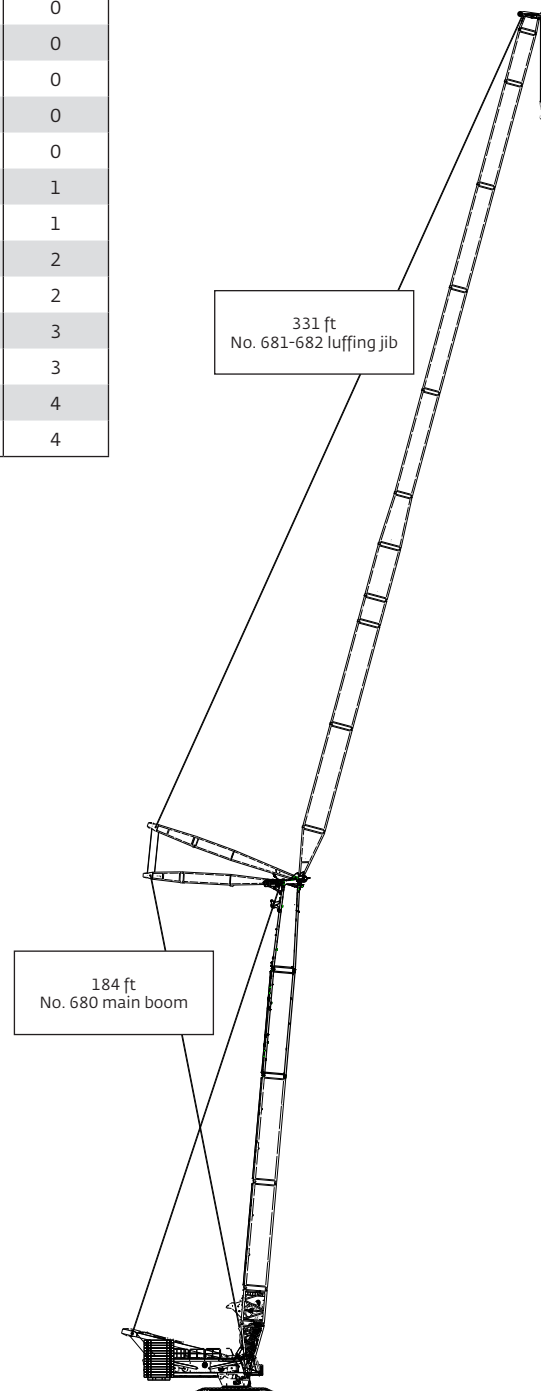
*\*\* luffing jib transition insert*



# Boom combinations

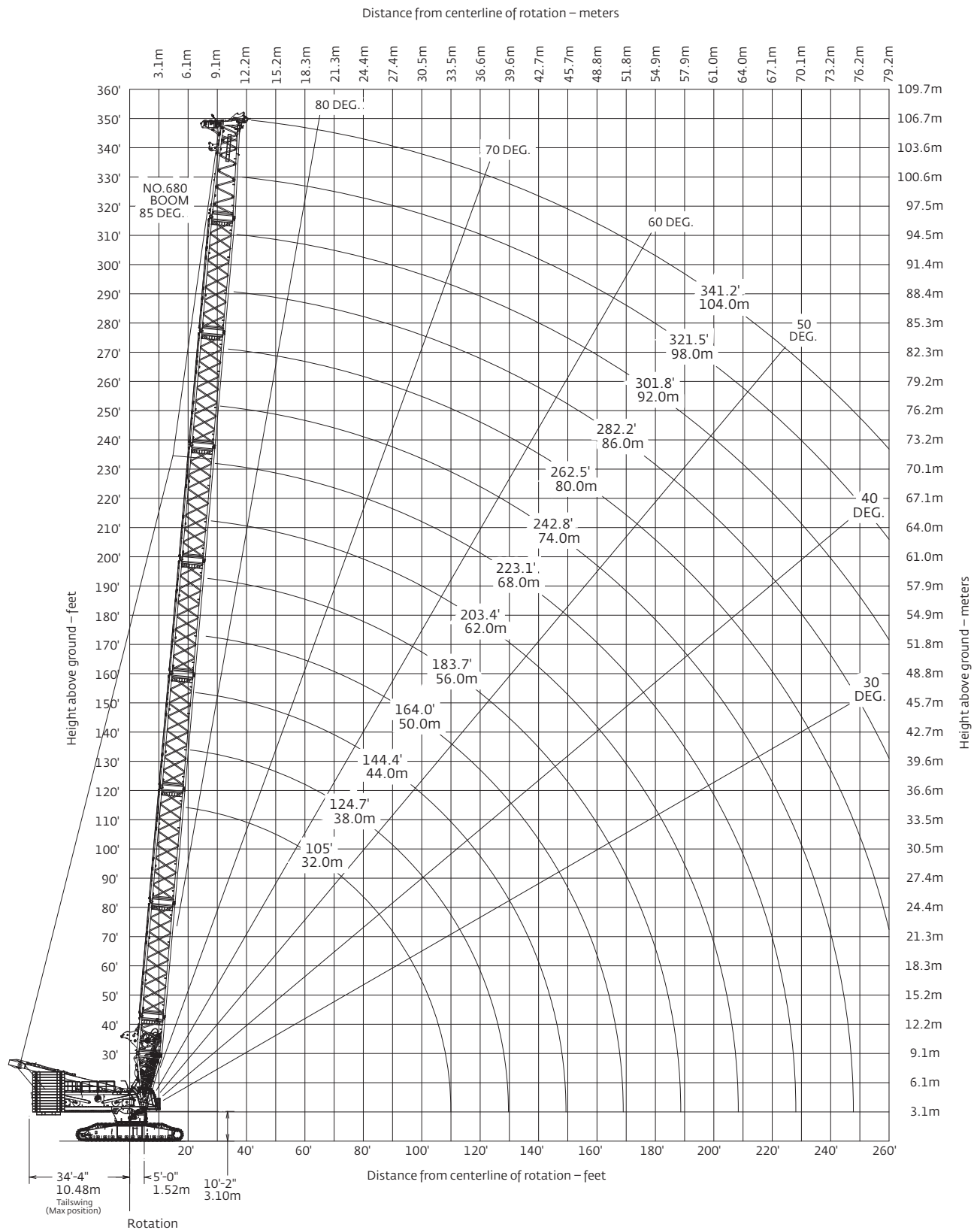
| No. 681-682 luffing jib combinations |                        |      |       |      |       |
|--------------------------------------|------------------------|------|-------|------|-------|
| Luffing jib length ft                | Luffing jib inserts ft |      |       |      |       |
|                                      | 9.8                    | 19.7 | 19.7* | 39.4 | 39.4* |
| 85.3                                 | 0                      | 0    | 0     | 1    | 0     |
| 95.1                                 | 1                      | 0    | 0     | 1    | 0     |
| 114.8                                | 1                      | 1    | 0     | 1    | 0     |
| 134.5                                | 1                      | 0    | 0     | 2    | 0     |
| 154.2                                | 1                      | 1    | 0     | 2    | 0     |
| 173.9                                | 1                      | 1    | 1     | 2    | 0     |
| 193.6                                | 1                      | 1    | 0     | 2    | 1     |
| 213.3                                | 1                      | 1    | 1     | 2    | 1     |
| 232.9                                | 1                      | 1    | 0     | 2    | 2     |
| 252.6                                | 1                      | 1    | 1     | 2    | 2     |
| 272.3                                | 1                      | 1    | 0     | 2    | 3     |
| 292                                  | 1                      | 1    | 1     | 2    | 3     |
| 311.7                                | 1                      | 1    | 0     | 2    | 4     |
| 331.4                                | 1                      | 1    | 1     | 2    | 4     |

\* Shallow depth inserts





# Main boom range diagram

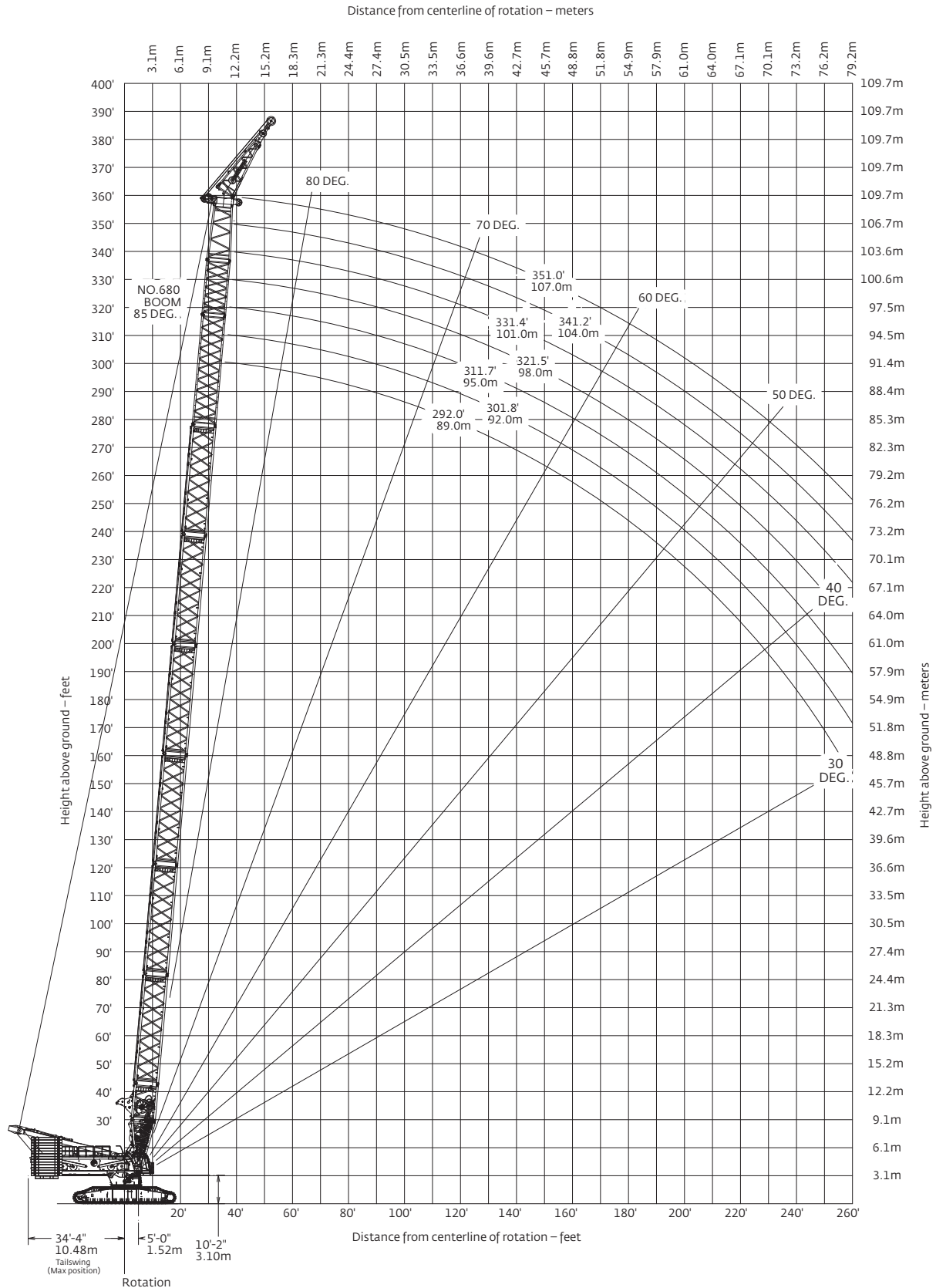


# Main boom load charts

| No. 680 boom             |                |        |        |        |       |       |       |       |       |       |       |       |       |
|--------------------------|----------------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 661,386 lb counterweight |                |        |        |        |       |       |       |       |       |       |       |       |       |
| 360° Rating              |                |        |        |        |       |       |       |       |       |       |       |       |       |
| Radius ft                | lb x 1000      |        |        |        |       |       |       |       |       |       |       |       |       |
|                          | Boom length ft |        |        |        |       |       |       |       |       |       |       |       |       |
|                          | 105            | 125    | 144    | 164    | 184   | 203   | 223   | 243   | 262   | 282   | 302   | 322   | 341   |
| 19                       | 1433.0         |        |        |        |       |       |       |       |       |       |       |       |       |
| 20                       | 1241.0         |        |        |        |       |       |       |       |       |       |       |       |       |
| 22                       | 1150.4         | 1130.5 | 1107.8 |        |       |       |       |       |       |       |       |       |       |
| 24                       | 1071.9         | 1055.2 | 1036.0 | 1015.1 |       |       |       |       |       |       |       |       |       |
| 26                       | 1003.3         | 989.1  | 972.8  | 954.9  | 934.3 |       |       |       |       |       |       |       |       |
| 28                       | 942.8          | 930.6  | 916.6  | 901.2  | 883.4 | 863.4 |       |       |       |       |       |       |       |
| 30                       | 889.1          | 878.5  | 866.4  | 853.0  | 837.6 | 820.1 | 799.4 |       |       |       |       |       |       |
| 32                       | 841.0          | 831.9  | 821.3  | 809.6  | 796.0 | 780.8 | 762.5 | 744.0 |       |       |       |       |       |
| 34                       | 797.8          | 789.8  | 780.5  | 770.3  | 758.3 | 744.9 | 728.7 | 712.3 | 691.9 | 591.2 |       |       |       |
| 36                       | 758.8          | 751.7  | 743.5  | 734.5  | 723.9 | 712.0 | 697.6 | 682.9 | 667.7 | 586.6 | 483.9 |       |       |
| 38                       | 723.3          | 717.1  | 709.8  | 701.8  | 692.4 | 681.7 | 668.9 | 655.8 | 642.1 | 581.9 | 479.8 | 426.4 |       |
| 40                       | 690.9          | 685.4  | 678.9  | 671.8  | 663.4 | 653.9 | 642.3 | 630.5 | 618.1 | 577.2 | 475.8 | 423.9 | 357.7 |
| 45                       | 613.7          | 617.0  | 612.1  | 606.7  | 600.2 | 592.9 | 583.9 | 574.8 | 565.0 | 555.8 | 465.7 | 416.3 | 350.6 |
| 50                       | 528.0          | 534.2  | 539.1  | 544.8  | 547.7 | 542.0 | 534.9 | 527.6 | 519.8 | 512.4 | 455.9 | 408.5 | 344.1 |
| 55                       | 462.9          | 468.4  | 472.9  | 477.9  | 481.8 | 486.6 | 489.4 | 487.3 | 480.9 | 474.9 | 446.3 | 401.0 | 337.8 |
| 60                       | 411.8          | 416.8  | 420.9  | 425.4  | 428.9 | 433.2 | 435.7 | 439.8 | 441.6 | 442.3 | 436.0 | 393.6 | 331.6 |
| 65                       | 370.6          | 375.3  | 378.9  | 383.1  | 386.3 | 390.2 | 392.4 | 396.1 | 397.8 | 401.5 | 403.1 | 386.5 | 325.6 |
| 70                       | 336.7          | 341.0  | 344.4  | 348.2  | 351.2 | 354.7 | 356.8 | 360.2 | 361.7 | 365.1 | 366.5 | 370.2 | 319.4 |
| 75                       | 308.3          | 312.4  | 315.6  | 319.1  | 321.8 | 325.1 | 327.0 | 330.1 | 331.5 | 334.6 | 335.9 | 339.3 | 313.7 |
| 80                       | 284.2          | 288.0  | 291.0  | 294.3  | 296.8 | 299.9 | 301.6 | 304.5 | 305.8 | 308.7 | 309.9 | 313.0 | 308.0 |
| 85                       | 263.5          | 267.1  | 269.9  | 273.0  | 275.3 | 278.2 | 279.8 | 282.5 | 283.7 | 286.4 | 287.5 | 290.5 | 291.4 |
| 90                       | 245.4          | 248.9  | 251.5  | 254.4  | 256.7 | 259.3 | 260.9 | 263.4 | 264.5 | 267.0 | 268.1 | 270.8 | 271.7 |
| 95                       | 229.6          | 232.9  | 235.4  | 238.2  | 240.3 | 242.8 | 244.3 | 246.6 | 247.7 | 250.0 | 251.0 | 252.1 | 251.0 |
| 100                      | 215.6          | 218.7  | 221.2  | 223.8  | 225.8 | 228.2 | 229.6 | 231.8 | 232.8 | 235.0 | 235.9 | 233.0 | 231.9 |
| 105                      | 203.1          | 206.1  | 208.5  | 211.0  | 212.9 | 215.1 | 216.5 | 218.5 | 219.5 | 219.7 | 219.3 | 215.9 | 214.8 |
| 110                      |                | 194.9  | 197.1  | 199.5  | 201.3 | 203.4 | 204.7 | 206.7 | 207.6 | 204.5 | 204.1 | 200.5 | 199.4 |
| 115                      |                | 184.7  | 186.9  | 189.1  | 190.9 | 192.9 | 194.2 | 193.7 | 193.9 | 190.7 | 190.3 | 186.7 | 185.6 |
| 120                      |                | 175.4  | 177.6  | 179.7  | 181.4 | 183.4 | 184.6 | 181.3 | 181.4 | 178.2 | 177.8 | 174.2 | 173.1 |
| 125                      |                | 167.0  | 169.1  | 171.2  | 172.8 | 173.5 | 173.3 | 170.0 | 170.1 | 166.8 | 166.4 | 162.8 | 161.7 |
| 130                      |                |        | 161.4  | 163.4  | 165.0 | 163.2 | 163.0 | 159.6 | 159.7 | 156.4 | 156.0 | 152.3 | 151.3 |
| 135                      |                |        | 154.3  | 156.2  | 156.5 | 153.7 | 153.5 | 150.1 | 150.2 | 146.9 | 146.4 | 142.8 | 141.7 |
| 140                      |                |        | 147.7  | 148.8  | 147.8 | 144.9 | 144.7 | 141.3 | 141.4 | 138.1 | 137.6 | 133.9 | 132.9 |
| 145                      |                |        | 141.6  | 140.6  | 139.6 | 136.8 | 136.6 | 133.2 | 133.3 | 130.0 | 129.5 | 125.8 | 124.7 |
| 150                      |                |        |        | 133.0  | 132.1 | 129.2 | 129.0 | 125.6 | 125.7 | 122.4 | 121.9 | 118.2 | 117.1 |
| 155                      |                |        |        | 125.8  | 125.0 | 122.2 | 122.0 | 118.6 | 118.7 | 115.4 | 114.9 | 111.2 | 110.1 |
| 160                      |                |        |        | 119.1  | 118.4 | 115.7 | 115.5 | 112.1 | 112.2 | 108.9 | 108.4 | 104.6 | 103.6 |
| 165                      |                |        |        |        | 112.2 | 109.5 | 109.4 | 106.0 | 106.1 | 102.7 | 102.2 | 98.5  | 97.5  |
| 170                      |                |        |        |        | 106.4 | 103.8 | 103.6 | 100.3 | 100.4 | 97.0  | 96.5  | 92.8  | 91.7  |
| 175                      |                |        |        |        | 100.9 | 98.3  | 98.3  | 94.9  | 95.0  | 91.6  | 91.1  | 87.4  | 86.3  |
| 180                      |                |        |        |        | 95.6  | 93.2  | 93.2  | 89.8  | 89.9  | 86.6  | 86.1  | 82.3  | 81.3  |
| 185                      |                |        |        |        |       | 88.4  | 88.4  | 85.1  | 85.2  | 81.8  | 81.3  | 77.6  | 76.5  |
| 190                      |                |        |        |        |       | 83.8  | 83.8  | 80.5  | 80.7  | 77.3  | 76.8  | 73.1  | 72.0  |
| 195                      |                |        |        |        |       | 79.4  | 79.5  | 76.3  | 76.4  | 73.1  | 72.6  | 68.8  | 67.8  |
| 200                      |                |        |        |        |       | 75.1  | 75.4  | 72.2  | 72.4  | 69.0  | 68.5  | 64.8  | 63.7  |
| 205                      |                |        |        |        |       |       | 71.5  | 68.3  | 68.5  | 65.2  | 64.7  | 60.9  | 59.9  |
| 210                      |                |        |        |        |       |       | 67.8  | 64.7  | 64.9  | 61.5  | 61.1  | 57.3  | 56.3  |
| 215                      |                |        |        |        |       |       | 64.2  | 61.2  | 61.4  | 58.1  | 57.6  | 53.8  | 52.8  |
| 220                      |                |        |        |        |       |       | 60.7  | 57.8  | 58.1  | 54.8  | 54.3  | 50.5  | 49.5  |
| 225                      |                |        |        |        |       |       |       | 54.6  | 54.9  | 51.6  | 51.2  | 47.4  | 46.4  |
| 230                      |                |        |        |        |       |       |       | 51.5  | 51.9  | 48.6  | 48.2  | 44.4  | 43.4  |
| 235                      |                |        |        |        |       |       |       | 48.5  | 49.0  | 45.7  | 45.3  | 41.5  | 40.6  |
| 240                      |                |        |        |        |       |       |       | 45.6  | 46.2  | 42.9  | 42.5  | 38.8  | 37.8  |
| 245                      |                |        |        |        |       |       |       |       | 43.5  | 40.3  | 39.9  | 36.1  | 35.2  |
| 250                      |                |        |        |        |       |       |       |       | 40.9  | 37.7  | 37.4  | 33.6  | 32.7  |
| 255                      |                |        |        |        |       |       |       |       | 38.3  | 35.3  | 34.9  | 31.2  | 30.3  |
| 260                      |                |        |        |        |       |       |       |       |       | 32.9  | 32.6  | 28.9  | 27.9  |
| 265                      |                |        |        |        |       |       |       |       |       | 30.6  | 30.3  | 26.6  | 25.7  |
| 270                      |                |        |        |        |       |       |       |       |       | 28.4  | 28.1  | 24.5  | 23.6  |
| 275                      |                |        |        |        |       |       |       |       |       | 26.2  | 24.2  | 22.4  | 21.5  |
| 280                      |                |        |        |        |       |       |       |       |       |       | 20.4  | 20.3  | 19.5  |
| 285                      |                |        |        |        |       |       |       |       |       |       | 16.6  | 18.4  | 17.6  |
| 290                      |                |        |        |        |       |       |       |       |       |       |       | 16.5  | 15.7  |

For complete chart, refer to [www.cranelibrary.com](http://www.cranelibrary.com).

# Extended UBP range diagram



# Extended UBP load charts

| No. 680-681 WA boom with 24.9 ft extended UBP |                |       |       |                         |       |       |       |
|-----------------------------------------------|----------------|-------|-------|-------------------------|-------|-------|-------|
| 661,386 lb counterweight<br>360° Rating       |                |       |       | lb x 1000<br>28° Offset |       |       |       |
|                                               | Boom length ft |       |       |                         |       |       |       |
|                                               | 292            | 302   | 312   | 322                     | 331   | 341   | 351   |
| Radius ft                                     |                |       |       |                         |       |       |       |
| 45                                            | 292.8          |       |       |                         |       |       |       |
| 50                                            | 292.8          | 292.8 | 292.8 | 292.8                   | 292.8 | 292.3 | 273.0 |
| 55                                            | 292.8          | 292.8 | 292.8 | 292.8                   | 292.8 | 287.8 | 268.7 |
| 60                                            | 292.8          | 292.8 | 292.8 | 292.8                   | 292.8 | 283.3 | 264.4 |
| 65                                            | 292.8          | 292.8 | 292.8 | 292.8                   | 292.8 | 278.8 | 260.1 |
| 70                                            | 292.8          | 292.8 | 292.8 | 289.7                   | 292.8 | 274.5 | 255.9 |
| 75                                            | 292.8          | 292.8 | 292.8 | 283.3                   | 287.3 | 267.5 | 250.0 |
| 80                                            | 292.8          | 292.8 | 292.8 | 277.1                   | 280.9 | 261.0 | 243.7 |
| 85                                            | 292.1          | 292.8 | 292.0 | 271.3                   | 274.8 | 254.8 | 237.6 |
| 90                                            | 272.6          | 274.1 | 274.8 | 265.7                   | 268.9 | 249.0 | 231.7 |
| 95                                            | 255.5          | 256.9 | 257.6 | 258.6                   | 259.1 | 243.4 | 226.1 |
| 100                                           | 240.3          | 241.7 | 242.3 | 243.3                   | 243.7 | 238.0 | 220.8 |
| 105                                           | 226.8          | 228.1 | 228.7 | 229.6                   | 230.1 | 228.4 | 215.7 |
| 110                                           | 214.8          | 215.9 | 216.1 | 214.4                   | 214.4 | 212.7 | 210.9 |
| 115                                           | 203.9          | 202.5 | 202.0 | 200.3                   | 200.3 | 198.5 | 198.0 |
| 120                                           | 191.8          | 189.7 | 189.2 | 187.5                   | 187.4 | 185.7 | 185.1 |
| 125                                           | 180.2          | 178.1 | 177.5 | 175.8                   | 175.8 | 174.0 | 173.4 |
| 130                                           | 169.6          | 167.4 | 166.9 | 165.2                   | 165.1 | 163.4 | 162.7 |
| 135                                           | 159.8          | 157.7 | 157.1 | 155.4                   | 155.3 | 153.5 | 152.9 |
| 140                                           | 150.8          | 148.7 | 148.1 | 146.4                   | 146.3 | 144.5 | 143.9 |
| 145                                           | 142.5          | 140.4 | 139.8 | 138.0                   | 138.0 | 136.2 | 135.5 |
| 150                                           | 134.9          | 132.6 | 132.1 | 130.3                   | 130.2 | 128.4 | 127.8 |
| 155                                           | 127.7          | 125.5 | 124.9 | 123.1                   | 123.0 | 121.2 | 120.6 |
| 160                                           | 121.0          | 118.8 | 118.2 | 116.4                   | 116.3 | 114.5 | 113.9 |
| 165                                           | 114.8          | 112.5 | 111.9 | 110.2                   | 110.1 | 108.2 | 107.6 |
| 170                                           | 108.9          | 106.7 | 106.1 | 104.3                   | 104.2 | 102.4 | 101.7 |
| 175                                           | 103.5          | 101.2 | 100.6 | 98.8                    | 98.7  | 96.8  | 96.2  |
| 180                                           | 98.3           | 96.0  | 95.4  | 93.6                    | 93.5  | 91.7  | 91.0  |
| 185                                           | 93.4           | 91.1  | 90.5  | 88.7                    | 88.6  | 86.8  | 86.1  |
| 190                                           | 88.8           | 86.5  | 85.9  | 84.1                    | 84.0  | 82.2  | 81.5  |
| 195                                           | 84.5           | 82.2  | 81.6  | 79.8                    | 79.7  | 77.8  | 77.1  |
| 200                                           | 80.4           | 78.1  | 77.5  | 75.6                    | 75.5  | 73.7  | 73.0  |
| 205                                           | 76.5           | 74.1  | 73.5  | 71.7                    | 71.6  | 69.8  | 69.1  |
| 210                                           | 72.8           | 70.4  | 69.8  | 68.0                    | 67.9  | 66.0  | 65.4  |
| 215                                           | 69.2           | 66.9  | 66.3  | 64.5                    | 64.4  | 62.5  | 61.8  |
| 220                                           | 65.9           | 63.5  | 62.9  | 61.1                    | 61.0  | 59.1  | 58.5  |
| 225                                           | 62.7           | 60.3  | 59.7  | 57.9                    | 57.8  | 55.9  | 55.2  |
| 230                                           | 59.6           | 57.2  | 56.6  | 54.8                    | 54.7  | 52.8  | 52.2  |
| 235                                           | 56.7           | 54.3  | 53.7  | 51.9                    | 51.8  | 49.9  | 49.2  |
| 240                                           | 53.8           | 51.5  | 50.9  | 49.1                    | 49.0  | 47.1  | 46.4  |
| 245                                           | 51.1           | 48.8  | 48.2  | 46.4                    | 46.3  | 44.4  | 43.7  |
| 250                                           | 48.6           | 46.2  | 45.6  | 43.8                    | 43.7  | 41.8  | 41.2  |
| 255                                           | 46.1           | 43.7  | 43.1  | 41.3                    | 41.2  | 39.3  | 38.7  |
| 260                                           | 43.7           | 41.3  | 40.7  | 38.9                    | 38.8  | 37.0  | 36.3  |
| 265                                           | 41.4           | 39.0  | 38.4  | 36.6                    | 36.6  | 34.7  | 34.0  |
| 270                                           | 39.1           | 36.8  | 36.2  | 34.4                    | 34.3  | 32.5  | 31.8  |
| 275                                           | 37.0           | 34.6  | 34.1  | 32.3                    | 32.2  | 30.3  | 29.7  |
| 280                                           | 34.9           | 32.6  | 32.0  | 30.2                    | 30.2  | 28.3  | 27.7  |
| 285                                           | 32.9           | 30.6  | 30.0  | 28.3                    | 28.2  | 26.3  | 25.7  |
| 290                                           | 30.1           | 28.6  | 28.1  | 26.3                    | 26.3  | 24.4  | 23.8  |
| 295                                           | 25.0           | 26.7  | 26.2  | 24.5                    | 24.4  | 22.6  | 21.9  |
| 300                                           | 20.0           | 24.9  | 24.4  | 22.7                    | 22.6  | 20.8  | 20.1  |
| 305                                           | 15.0           | 23.1  | 22.7  | 20.9                    | 20.9  | 19.0  | 18.4  |
| 310                                           |                | 21.4  | 20.9  | 19.2                    | 19.2  | 17.4  | 16.7  |
| 315                                           |                | 18.4  | 19.3  | 17.6                    | 17.6  | 15.7  | 15.1  |
| 320                                           |                | 15.0  | 16.9  | 15.9                    | 16.0  |       |       |

| No. 680-681 WA boom with 24.9 ft extended UBP |                |       |                         |       |       |       |
|-----------------------------------------------|----------------|-------|-------------------------|-------|-------|-------|
| 661,386 lb counterweight<br>360° Rating       |                |       | lb x 1000<br>35° Offset |       |       |       |
|                                               | Boom length ft |       |                         |       |       |       |
|                                               | 292            | 302   | 322                     | 331   | 341   | 351   |
| Radius ft                                     |                |       |                         |       |       |       |
| 50                                            | 292.8          | 292.8 | 292.8                   |       |       |       |
| 55                                            | 292.8          | 292.8 | 292.8                   | 292.8 | 280.3 | 256.6 |
| 60                                            | 292.8          | 292.8 | 287.6                   | 290.2 | 273.3 | 256.6 |
| 65                                            | 292.8          | 292.8 | 281.3                   | 283.7 | 266.5 | 251.3 |
| 70                                            | 292.8          | 292.8 | 275.3                   | 277.5 | 260.1 | 244.8 |
| 75                                            | 292.8          | 292.8 | 269.6                   | 271.6 | 254.1 | 238.6 |
| 80                                            | 292.8          | 292.8 | 264.1                   | 265.9 | 248.3 | 232.7 |
| 85                                            | 292.3          | 292.8 | 259.0                   | 260.6 | 242.7 | 227.1 |
| 90                                            | 272.8          | 274.3 | 254.0                   | 255.4 | 237.5 | 221.8 |
| 95                                            | 255.6          | 257.0 | 249.3                   | 250.5 | 232.4 | 216.7 |
| 100                                           | 240.5          | 241.8 | 243.4                   | 243.9 | 227.6 | 211.9 |
| 105                                           | 227.0          | 228.2 | 229.8                   | 230.2 | 223.0 | 207.3 |
| 110                                           | 214.9          | 216.1 | 216.0                   | 216.0 | 214.4 | 202.9 |
| 115                                           | 204.0          | 203.9 | 201.8                   | 201.8 | 200.1 | 198.6 |
| 120                                           | 193.0          | 191.1 | 188.9                   | 188.9 | 187.2 | 186.6 |
| 125                                           | 181.4          | 179.3 | 177.2                   | 177.1 | 175.4 | 174.9 |
| 130                                           | 170.7          | 168.6 | 166.4                   | 166.4 | 164.7 | 164.1 |
| 135                                           | 160.9          | 158.8 | 156.6                   | 156.5 | 154.8 | 154.2 |
| 140                                           | 151.9          | 149.7 | 147.5                   | 147.4 | 145.7 | 145.1 |
| 145                                           | 143.5          | 141.4 | 139.1                   | 139.0 | 137.3 | 136.7 |
| 150                                           | 135.8          | 133.6 | 131.3                   | 131.3 | 129.5 | 128.9 |
| 155                                           | 128.5          | 126.4 | 124.1                   | 124.0 | 122.2 | 121.6 |
| 160                                           | 121.8          | 119.6 | 117.3                   | 117.3 | 115.5 | 114.9 |
| 165                                           | 115.6          | 113.3 | 111.0                   | 111.0 | 109.2 | 108.5 |
| 170                                           | 109.7          | 107.4 | 105.1                   | 105.0 | 103.2 | 102.6 |
| 175                                           | 104.1          | 101.9 | 99.6                    | 99.5  | 97.7  | 97.1  |
| 180                                           | 99.0           | 96.7  | 94.4                    | 94.3  | 92.5  | 91.8  |
| 185                                           | 94.1           | 91.8  | 89.4                    | 89.4  | 87.5  | 86.9  |
| 190                                           | 89.4           | 87.2  | 84.8                    | 84.7  | 82.9  | 82.3  |
| 195                                           | 85.1           | 82.8  | 80.4                    | 80.3  | 78.5  | 77.9  |
| 200                                           | 80.9           | 78.6  | 76.3                    | 76.2  | 74.3  | 73.7  |
| 205                                           | 77.0           | 74.7  | 72.3                    | 72.2  | 70.4  | 69.7  |
| 210                                           | 73.2           | 70.9  | 68.6                    | 68.5  | 66.6  | 66.0  |
| 215                                           | 69.7           | 67.4  | 65.0                    | 64.9  | 63.1  | 62.4  |
| 220                                           | 66.3           | 64.0  | 61.6                    | 61.5  | 59.7  | 59.0  |
| 225                                           | 63.0           | 60.7  | 58.4                    | 58.3  | 56.4  | 55.8  |
| 230                                           | 59.9           | 57.6  | 55.3                    | 55.2  | 53.3  | 52.7  |
| 235                                           | 57.0           | 54.7  | 52.3                    | 52.2  | 50.4  | 49.7  |
| 240                                           | 54.1           | 51.8  | 49.5                    | 49.4  | 47.5  | 46.9  |
| 245                                           | 51.4           | 49.1  | 46.8                    | 46.7  | 44.8  | 44.2  |
| 250                                           | 48.8           | 46.5  | 44.1                    | 44.1  | 42.2  | 41.6  |
| 255                                           | 46.3           | 44.0  | 41.6                    | 41.6  | 39.7  | 39.1  |
| 260                                           | 43.9           | 41.6  | 39.2                    | 39.2  | 37.3  | 36.7  |
| 265                                           | 41.5           | 39.2  | 36.9                    | 36.9  | 35.0  | 34.4  |
| 270                                           | 39.3           | 37.0  | 34.7                    | 34.6  | 32.8  | 32.2  |
| 275                                           | 37.1           | 34.8  | 32.5                    | 32.5  | 30.6  | 30.0  |
| 280                                           | 35.0           | 32.7  | 30.5                    | 30.4  | 28.6  | 27.9  |
| 285                                           | 33.0           | 30.7  | 28.4                    | 28.4  | 26.6  | 26.0  |
| 290                                           | 30.6           | 28.7  | 26.5                    | 26.5  | 24.6  | 24.0  |
| 295                                           | 25.3           | 26.8  | 24.6                    | 24.6  | 22.8  | 22.2  |
| 300                                           | 20.1           | 24.9  | 22.8                    | 22.8  | 21.0  | 20.4  |
| 305                                           |                | 23.1  | 21.0                    | 21.0  | 19.2  | 18.6  |
| 310                                           |                | 21.3  | 19.3                    | 19.3  | 17.5  | 16.9  |
| 315                                           |                | 18.3  | 17.6                    | 17.7  | 15.9  | 15.3  |
| 320                                           |                |       | 16.0                    | 16.0  |       |       |

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# Luffing jib load charts

## No. 681-682 luffing jib on No. 680 boom

661,386 lb counterweight

360° Rating

lb x 1000

85° boom angle

| 115 ft luffing jib length |                |       |       |       |       |
|---------------------------|----------------|-------|-------|-------|-------|
| Radius ft                 | Boom length ft |       |       |       |       |
|                           | 144            | 164   | 184   | 203   | 223   |
| 55                        | 502.1          |       |       |       |       |
| 60                        | 466.5          | 463.7 | 455.2 | 448.0 |       |
| 65                        | 426.4          | 432.4 | 426.1 | 420.1 | 395.4 |
| 70                        | 388.3          | 393.8 | 394.6 | 395.3 | 383.3 |
| 75                        | 356.5          | 361.5 | 362.2 | 365.4 | 366.9 |
| 80                        | 329.4          | 334.0 | 334.7 | 337.6 | 339.1 |
| 85                        | 306.1          | 310.4 | 311.0 | 313.8 | 315.1 |
| 90                        | 285.8          | 289.9 | 290.4 | 293.0 | 294.2 |
| 95                        | 268.0          | 271.8 | 272.4 | 274.8 | 276.0 |
| 100                       | 252.3          | 255.9 | 256.4 | 258.7 | 259.8 |
| 105                       | 238.3          | 241.7 | 242.2 | 244.3 | 245.4 |
| 110                       | 225.8          | 229.0 | 229.4 | 231.5 | 232.5 |
| 115                       | 214.4          | 217.5 | 217.9 | 219.9 | 220.8 |
| 120                       | 204.2          | 207.1 | 207.5 | 209.4 | 210.3 |
| 125                       | 194.8          | 197.6 | 198.0 | 199.8 | 200.6 |
| 130                       | 186.3          | 188.9 | 189.3 | 191.0 | 191.9 |
| 135                       | 178.4          | 181.0 | 181.4 | 183.0 | 183.8 |
| 140                       |                |       |       | 175.5 | 174.8 |

| 154 ft luffing jib length |                |       |       |       |       |
|---------------------------|----------------|-------|-------|-------|-------|
| Radius ft                 | Boom length ft |       |       |       |       |
|                           | 144            | 164   | 184   | 203   | 223   |
| 70                        | 392.2          | 397.7 | 392.8 |       |       |
| 75                        | 360.0          | 365.1 | 365.8 | 357.0 | 296.7 |
| 80                        | 332.7          | 337.3 | 338.0 | 340.9 | 295.1 |
| 85                        | 309.1          | 313.5 | 314.1 | 316.8 | 292.8 |
| 90                        | 288.7          | 292.7 | 293.3 | 295.8 | 290.1 |
| 95                        | 270.7          | 274.5 | 275.0 | 277.4 | 278.6 |
| 100                       | 254.8          | 258.4 | 258.9 | 261.2 | 262.3 |
| 105                       | 240.7          | 244.1 | 244.6 | 246.7 | 247.7 |
| 110                       | 228.0          | 231.2 | 231.7 | 233.7 | 234.7 |
| 115                       | 216.6          | 219.6 | 220.1 | 222.0 | 222.9 |
| 120                       | 206.2          | 209.1 | 209.5 | 211.4 | 212.0 |
| 125                       | 196.8          | 199.6 | 200.0 | 201.7 | 200.9 |
| 130                       | 188.2          | 190.8 | 191.2 | 192.0 | 190.7 |
| 135                       | 180.3          | 182.8 | 183.2 | 182.5 | 181.3 |
| 140                       | 173.0          | 175.4 | 175.0 | 173.8 | 172.6 |
| 145                       | 166.3          | 168.6 | 166.9 | 165.7 | 164.6 |
| 150                       | 160.0          | 161.1 | 159.3 | 158.2 | 157.2 |
| 155                       | 154.0          | 154.0 | 152.3 | 151.2 | 150.2 |
| 160                       | 147.4          | 147.4 | 145.7 | 144.7 | 143.7 |
| 165                       | 141.0          | 141.1 | 139.5 | 138.5 | 137.6 |
| 170                       | 135.0          | 135.1 | 133.6 | 132.7 | 131.8 |
| 175                       | 128.8          | 129.3 | 127.9 | 127.1 | 126.3 |
| 180                       |                |       |       | 121.4 | 120.9 |

For complete chart, refer to [www.cranelibrary.com](http://www.cranelibrary.com).

# Luffing jib load charts

## No. 681-682 luffing jib on No. 680 boom

661,386 lb counterweight

360° Rating

lb x 1000

85° boom angle

| 194 ft luffing jib length |                |       |       |       |
|---------------------------|----------------|-------|-------|-------|
| Radius ft                 | Boom length ft |       |       |       |
|                           | 144            | 164   | 184   | 203   |
| 80                        | 335.9          | 327.3 | 296.8 |       |
| 85                        | 312.1          | 316.4 | 296.5 | 268.1 |
| 90                        | 291.5          | 295.5 | 296.0 | 265.8 |
| 95                        | 273.3          | 277.1 | 277.6 | 264.9 |
| 100                       | 257.3          | 260.8 | 261.3 | 263.6 |
| 105                       | 243.0          | 246.4 | 246.8 | 248.9 |
| 110                       | 230.2          | 233.4 | 233.8 | 235.0 |
| 115                       | 218.6          | 221.7 | 222.1 | 221.4 |
| 120                       | 208.2          | 211.1 | 210.7 | 209.2 |
| 125                       | 198.7          | 201.4 | 199.4 | 198.0 |
| 130                       | 190.0          | 191.4 | 189.1 | 187.7 |
| 135                       | 182.0          | 181.9 | 179.7 | 178.4 |
| 140                       | 173.2          | 173.1 | 171.0 | 169.7 |
| 145                       | 165.1          | 164.9 | 162.9 | 161.7 |
| 150                       | 157.5          | 157.4 | 155.4 | 154.3 |
| 155                       | 150.5          | 150.4 | 148.5 | 147.3 |
| 160                       | 143.9          | 143.8 | 142.0 | 140.9 |
| 165                       | 137.8          | 137.7 | 135.9 | 134.9 |
| 170                       | 132.0          | 131.9 | 130.2 | 129.2 |
| 175                       | 126.6          | 126.5 | 124.9 | 123.9 |
| 180                       | 121.5          | 121.4 | 119.8 | 118.9 |
| 185                       | 116.7          | 116.6 | 115.1 | 114.1 |
| 190                       | 112.1          | 112.0 | 110.6 | 109.7 |
| 195                       | 107.8          | 107.7 | 106.3 | 105.4 |
| 200                       | 103.6          | 103.6 | 102.2 | 101.4 |
| 205                       | 99.6           | 99.6  | 98.3  | 97.5  |
| 210                       | 95.8           | 95.8  | 94.5  | 93.8  |
| 215                       |                | 91.9  | 90.8  | 90.1  |

For complete chart, refer to [www.cranelibrary.com](http://www.cranelibrary.com).

# Luffing jib load charts

No. 681-682 luffing jib on No. 680 boom

661,386 lb counterweight

360° Rating

lb x 1000

85° boom angle

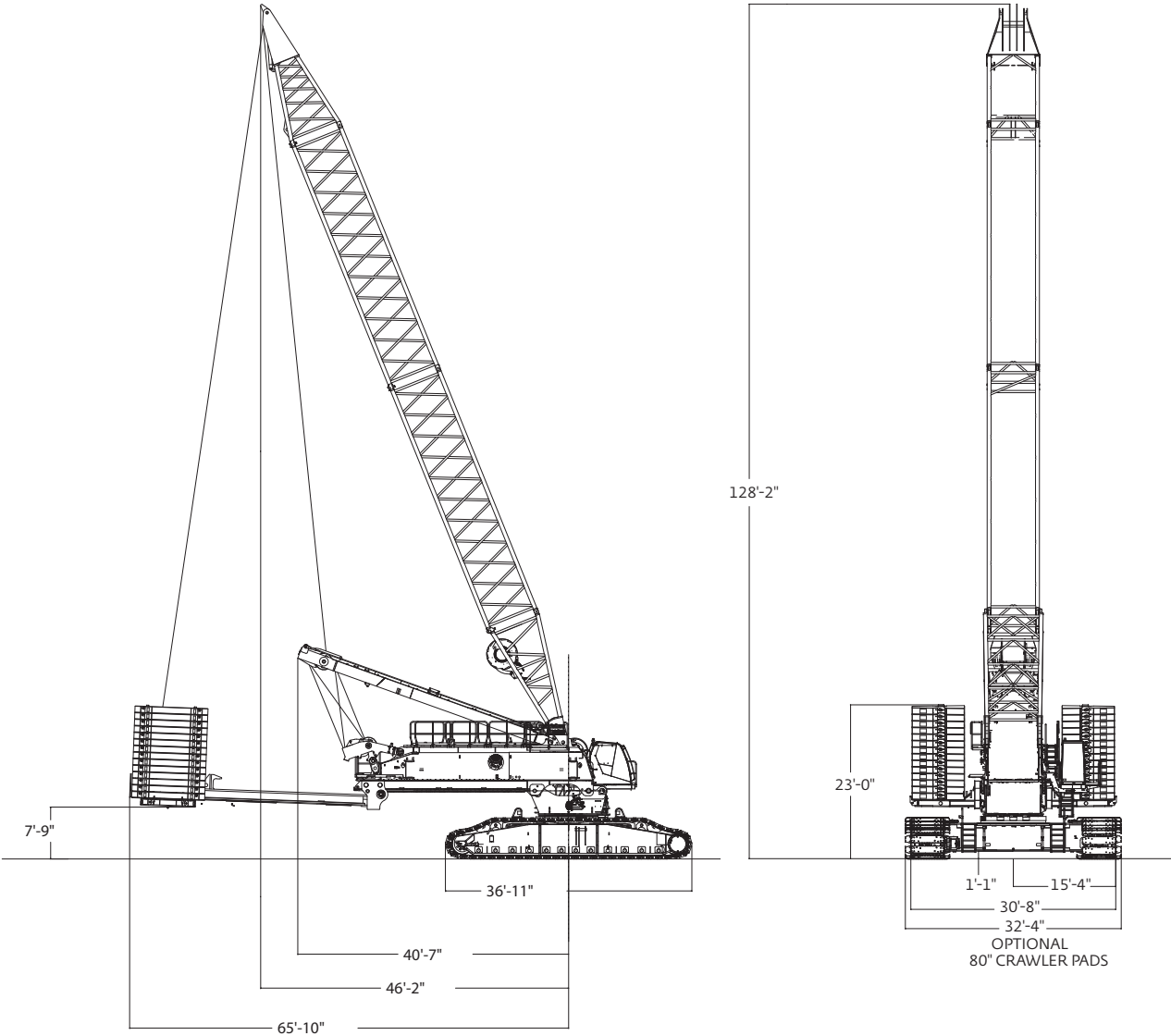
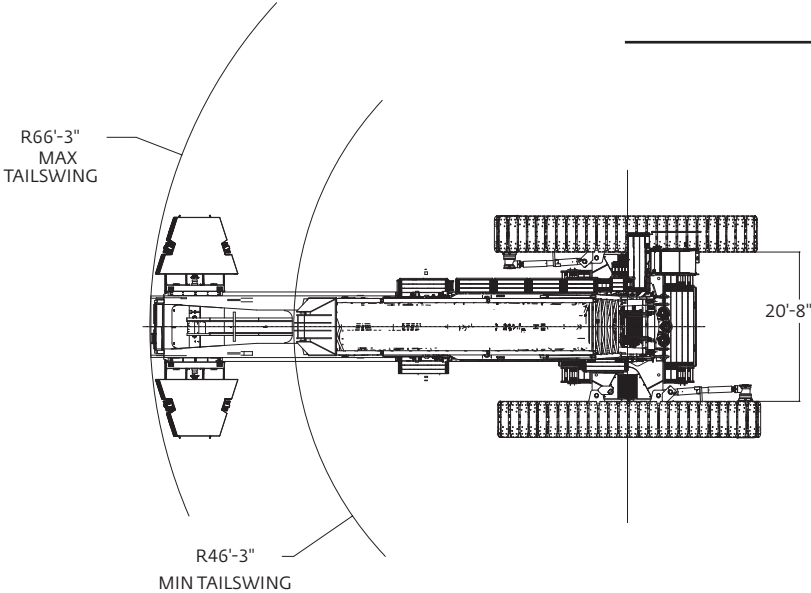
| 253 ft luffing jib length |                |       |       |       |
|---------------------------|----------------|-------|-------|-------|
| Radius ft                 | Boom length ft |       |       |       |
|                           | 144            | 164   | 184   | 203   |
| 95                        | 215.9          | 202.9 | 188.9 |       |
| 100                       | 215.4          | 201.8 | 187.9 | 173.2 |
| 105                       | 214.8          | 201.4 | 187.5 | 172.8 |
| 110                       | 214.2          | 200.9 | 187.1 | 171.9 |
| 115                       | 213.5          | 200.3 | 186.5 | 171.4 |
| 120                       | 205.5          | 199.7 | 186.0 | 170.8 |
| 125                       | 194.1          | 193.8 | 185.4 | 170.2 |
| 130                       | 183.7          | 183.4 | 181.0 | 169.6 |
| 135                       | 174.2          | 173.9 | 171.5 | 168.9 |
| 140                       | 165.4          | 165.1 | 162.9 | 161.5 |
| 145                       | 157.2          | 157.0 | 154.8 | 153.5 |
| 150                       | 149.7          | 149.4 | 147.4 | 146.1 |
| 155                       | 142.7          | 142.4 | 140.5 | 139.2 |
| 160                       | 136.2          | 135.9 | 134.0 | 132.8 |
| 165                       | 130.1          | 129.8 | 128.0 | 126.8 |
| 170                       | 124.3          | 124.1 | 122.3 | 121.2 |
| 175                       | 119.0          | 118.8 | 117.0 | 115.9 |
| 180                       | 113.9          | 113.7 | 112.0 | 111.0 |
| 185                       | 109.2          | 109.0 | 107.3 | 106.3 |
| 190                       | 104.7          | 104.5 | 102.9 | 101.9 |
| 195                       | 100.4          | 100.2 | 98.7  | 97.7  |
| 200                       | 96.4           | 96.2  | 94.7  | 93.8  |
| 205                       | 92.6           | 92.4  | 90.9  | 90.0  |
| 210                       | 88.9           | 88.8  | 87.3  | 86.4  |
| 215                       | 85.5           | 85.3  | 83.9  | 83.0  |
| 220                       | 82.2           | 82.0  | 80.7  | 79.8  |
| 225                       | 79.0           | 78.9  | 77.5  | 76.7  |
| 230                       | 76.0           | 75.9  | 74.6  | 73.8  |
| 235                       | 73.1           | 73.0  | 71.7  | 70.9  |
| 240                       | 70.3           | 70.2  | 69.0  | 68.2  |
| 245                       | 67.7           | 67.6  | 66.4  | 65.6  |
| 250                       | 65.1           | 65.0  | 63.8  | 63.1  |
| 255                       | 62.6           | 62.5  | 61.4  | 60.7  |
| 260                       | 60.2           | 60.1  | 59.0  | 58.3  |
| 265                       | 57.9           | 57.8  | 56.7  | 56.1  |
| 270                       | 55.5           | 55.5  | 54.5  | 53.8  |
| 275                       |                | 53.0  | 52.2  | 51.6  |

For complete chart, refer to [www.cranelibrary.com](http://www.cranelibrary.com).



# Outline dimensions

## VPC-MAX



# Transport data

## VPC-MAX

### Load summary

| Item                                                  | Qty | Weight<br>lb | 282 ft boom                                  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-------------------------------------------------------|-----|--------------|----------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                                                       |     |              | Quantity on trailer load #                   |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                                       |     |              | (Does not include blocking, strapping, etc.) |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Item                                                  | Qty | Weight<br>lb | 1                                            | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     | 12     | 13     | 14     | 15     | 16     | 17     | 18     | 19     | 20     |
| Upperworks module                                     | 1   | 85,950       | 1                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Whip hoist                                            | 1   | 12,500       |                                              |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |
| Live mast package                                     | 1   | 59,400       |                                              | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Carbody + adapter                                     | 1   | 92,300       |                                              |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Crawler assembly (60" pads)                           | 2   | 86,000       |                                              |        |        | 1      | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Counterweight tray                                    | 1   | 44,000       |                                              |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Counterweight box                                     | 28  | 22,046       |                                              |        |        |        |        |        |        |        |        |        |        |        |        |        |        | 2      | 2      | 2      | 2      | 2      |
| Boom butt with drum 1                                 | 1   | 43,150       |                                              |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 13' 1" No. 680 boom insert with drum 2                | 1   | 39,460       |                                              |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |        |
| 39' 4" No. 680 heavy boom insert                      | 1   | 27,150       |                                              |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |        |
| 39' 4" No. 680 heavy boom insert                      | 1   | 21,460       |                                              |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |
| 39' 4" No. 680 heavy boom insert with equalizer rails | 1   | 23,140       |                                              |        |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |
| 19' 8" heavy boom insert                              | 1   | 12,520       |                                              |        |        |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |
| 39' 4" medium insert with suspension                  | 1   | 22,740       |                                              |        |        |        |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |
| 39' 4" medium insert                                  | 1   | 17,560       |                                              |        |        |        |        |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |
| 32' 10" boom top                                      | 1   | 41,550       |                                              |        |        |        |        |        |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |
| 350 t block (32 mm)                                   | 1   | 17,400       |                                              |        |        |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |
| 22,2 mt weight ball                                   | 1   | 2,800        |                                              |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |        |        |
| VPC-MAX beam                                          | 1   | 47,000       |                                              |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| VPC-MAX actuator                                      | 1   | 10,000       |                                              |        |        |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |        |
| Fixed mast 19' 7" butt + 19' 7" top                   | 1   | 56,700       |                                              |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 39' 4" mast insert                                    | 2   | 15,230       |                                              |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| VPC-MAX counterweight box                             | 10  | 22,046       |                                              |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Approximate total shipping weight lb                  |     |              | 85,950                                       | 59,400 | 92,300 | 86,000 | 86,000 | 44,000 | 43,150 | 39,460 | 39,650 | 24,260 | 23,140 | 39,920 | 22,740 | 17,560 | 41,550 | 44,092 | 44,092 | 44,092 | 44,092 | 44,092 |

# Transport data

## VPC-MAX

(continued)

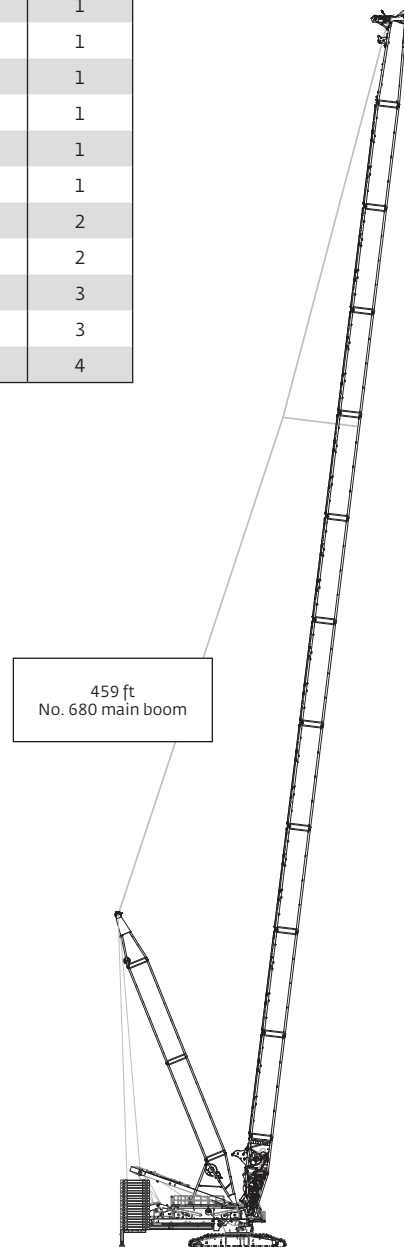
| Load summary                                          |     |           |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-------------------------------------------------------|-----|-----------|----------------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Item                                                  | Qty | Weight lb | 282 ft boom                                                                |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                                       |     |           | Quantity on trailer load #<br>(Does not include blocking, strapping, etc.) |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|                                                       |     |           | 21                                                                         | 22     | 23     | 24     | 25     | 26     | 27     | 28     | 29     | 30     | 31     | 32     | 33     | 34     | 35     | 36     | 37     |
| Upperworks module                                     | 1   | 85,950    |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Whip hoist                                            | 1   | 12,500    |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Live mast package                                     | 1   | 59,400    |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Carbody + adapter                                     | 1   | 92,300    |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Crawler assembly (60" pads)                           | 2   | 86,000    |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Counterweight tray                                    | 1   | 44,000    |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Counterweight box                                     | 28  | 22,046    | 2                                                                          | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2      |        |        |        |        |        |        |        |        |
| Boom butt with drum 1                                 | 1   | 43,150    |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 13' 1" No. 680 boom insert with drum 2                | 1   | 39,460    |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 39' 4" No. 680 heavy boom insert                      | 1   | 27,150    |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 39' 4" No. 680 heavy boom insert                      | 1   | 21,460    |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 39' 4" No. 680 heavy boom insert with equalizer rails | 1   | 23,140    |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 19' 8" heavy boom insert                              | 1   | 12,520    |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 39' 4" medium insert with suspension                  | 1   | 22,740    |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 39' 4" medium insert                                  | 1   | 17,560    |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 32' 10" boom top                                      | 1   | 41,550    |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 350 t block (32 mm)                                   | 1   | 17,400    |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 22,2 mt weight ball                                   | 1   | 2,800     |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| VPC-MAX beam                                          | 1   | 47,000    |                                                                            |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |        |
| VPC-MAX actuator                                      | 1   | 10,000    |                                                                            |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Fixed mast 19' 7" butt + 19' 7" top                   | 1   | 56,700    |                                                                            |        |        |        |        |        |        |        |        |        | 1      |        |        |        |        |        |        |
| 39' 4" mast insert                                    | 2   | 15,230    |                                                                            |        |        |        |        |        |        |        |        |        |        | 1      | 1      |        |        |        |        |
| VPC-MAX counterweight box                             | 10  | 22,046    |                                                                            |        |        |        |        |        |        |        |        |        |        | 1      | 1      | 2      | 2      | 2      | 2      |
| Approximate total shipping weight lb                  |     |           | 44,092                                                                     | 44,092 | 44,092 | 44,092 | 44,092 | 44,092 | 44,092 | 44,092 | 44,092 | 47,000 | 56,700 | 37,276 | 37,276 | 44,092 | 44,092 | 44,092 | 44,092 |

# Boom combinations

## VPC-MAX

| No. 680 VPC-MAX main boom combinations |                      |        |         |        |        |
|----------------------------------------|----------------------|--------|---------|--------|--------|
| Boom length<br>ft                      | Main boom inserts ft |        |         |        |        |
|                                        | 13.1 XH              | 19.7 H | 39.4 XH | 39.4 H | 39.4 M |
| 144.4                                  | 1                    | 0      | 1       | 1      | 0      |
| 164                                    | 1                    | 1      | 1       | 1      | 0      |
| 183.7                                  | 1                    | 0      | 2       | 1      | 0      |
| 203.4                                  | 1                    | 1      | 2       | 1      | 0      |
| 223.1                                  | 1                    | 0      | 2       | 1      | 1      |
| 242.8                                  | 1                    | 1      | 2       | 1      | 1      |
| 262.5                                  | 1                    | 0      | 2       | 2      | 1      |
| 282.2                                  | 1                    | 1      | 2       | 2      | 1      |
| 301.8                                  | 1                    | 0      | 2       | 3      | 1      |
| 321.5                                  | 1                    | 1      | 2       | 3      | 1      |
| 341.2                                  | 1                    | 0      | 2       | 4      | 1      |
| 360.9                                  | 1                    | 1      | 2       | 4      | 1      |
| 380.6                                  | 1                    | 0      | 2       | 4      | 2      |
| 400.3                                  | 1                    | 1      | 2       | 4      | 2      |
| 419.9                                  | 1                    | 0      | 2       | 4      | 3      |
| 439.6                                  | 1                    | 1      | 2       | 4      | 3      |
| 459.3                                  | 1                    | 0      | 2       | 4      | 4      |

*XH: Extra heavy insert*  
*H: Heavy insert*  
*M: Medium insert*

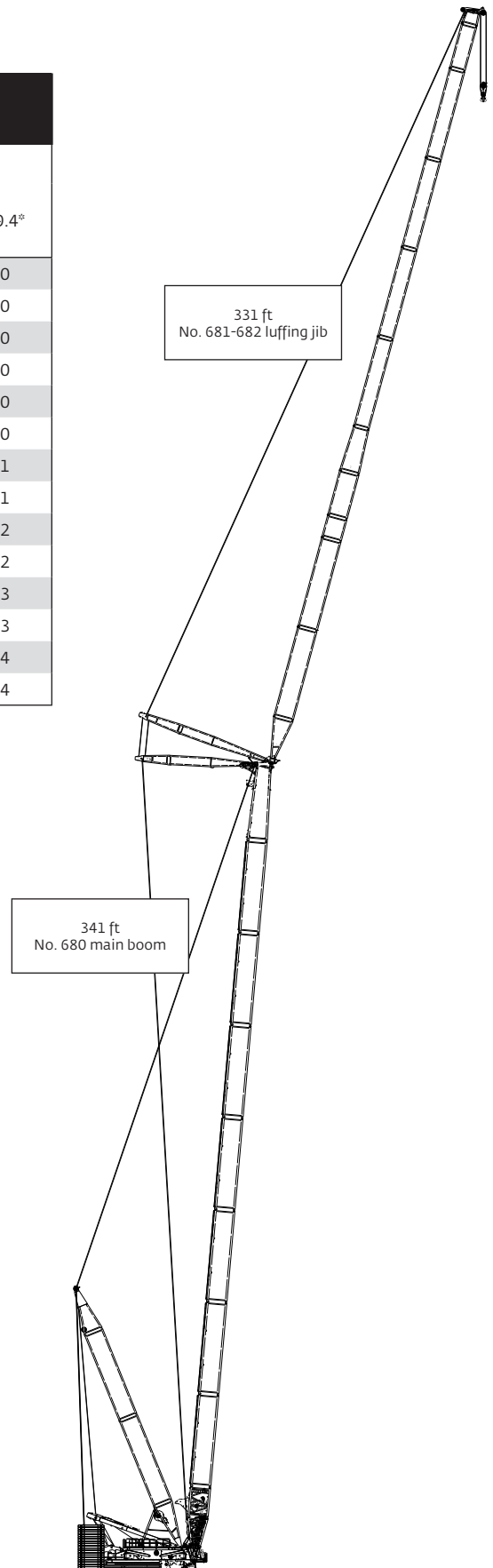


# Boom combinations

## VPC-MAX

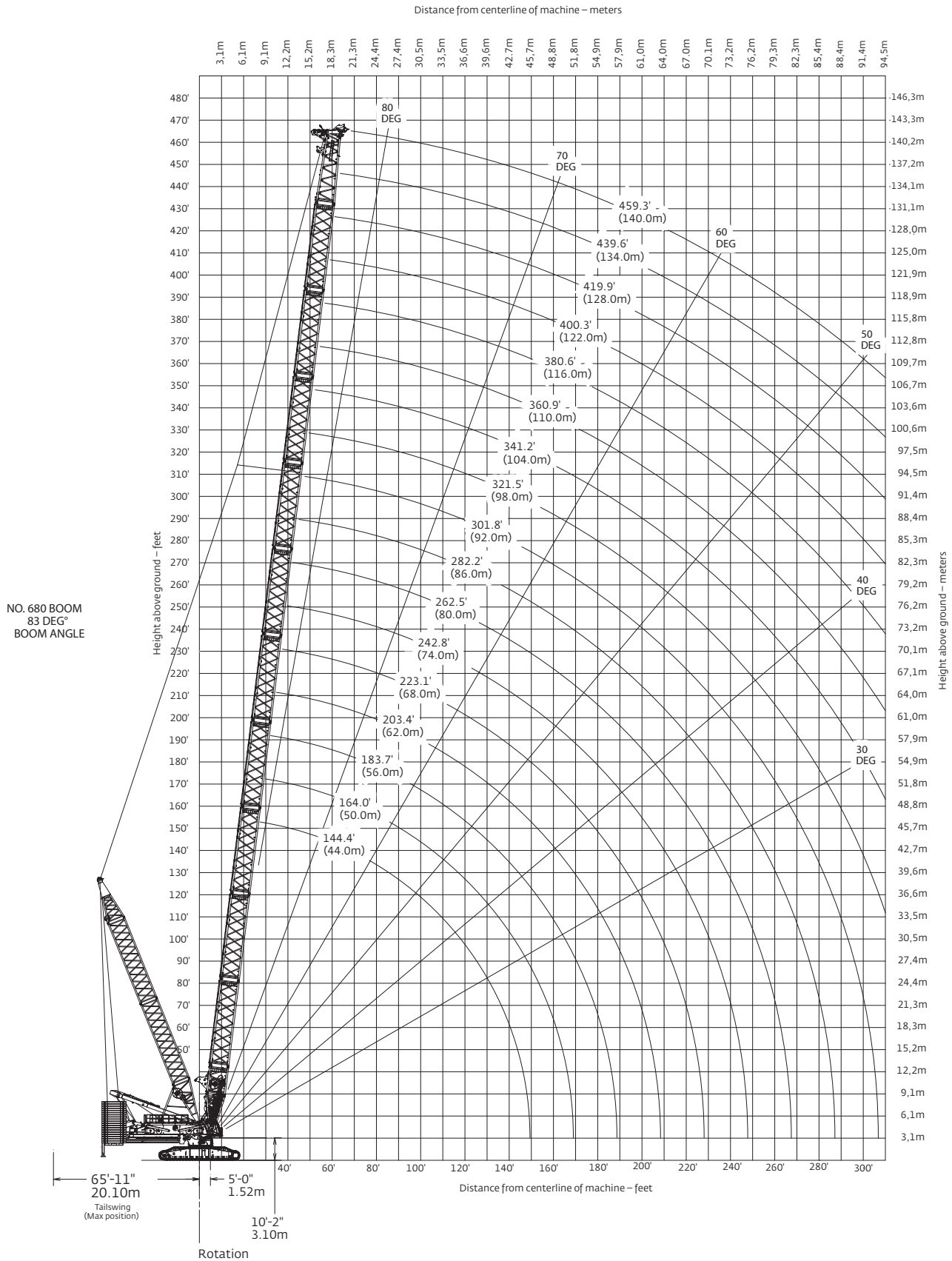
| No. 681-682 VPC-MAX luffing jib combinations |                        |      |       |      |       |
|----------------------------------------------|------------------------|------|-------|------|-------|
| Luffing jib length ft                        | Luffing jib inserts ft |      |       |      |       |
|                                              | 9.8                    | 19.7 | 19.7* | 39.4 | 39.4* |
| 85.3                                         | 0                      | 0    | 0     | 1    | 0     |
| 95.1                                         | 1                      | 0    | 0     | 1    | 0     |
| 114.8                                        | 1                      | 1    | 0     | 1    | 0     |
| 134.5                                        | 1                      | 0    | 0     | 2    | 0     |
| 154.2                                        | 1                      | 1    | 0     | 2    | 0     |
| 173.9                                        | 1                      | 1    | 1     | 2    | 0     |
| 193.6                                        | 1                      | 1    | 0     | 2    | 1     |
| 213.3                                        | 1                      | 1    | 1     | 2    | 1     |
| 232.9                                        | 1                      | 1    | 0     | 2    | 2     |
| 252.6                                        | 1                      | 1    | 1     | 2    | 2     |
| 272.3                                        | 1                      | 1    | 0     | 2    | 3     |
| 292                                          | 1                      | 1    | 1     | 2    | 3     |
| 311.7                                        | 1                      | 1    | 0     | 2    | 4     |
| 331.4                                        | 1                      | 1    | 1     | 2    | 4     |

\* Shallow inserts



# Main boom range diagram

## VPC-MAX



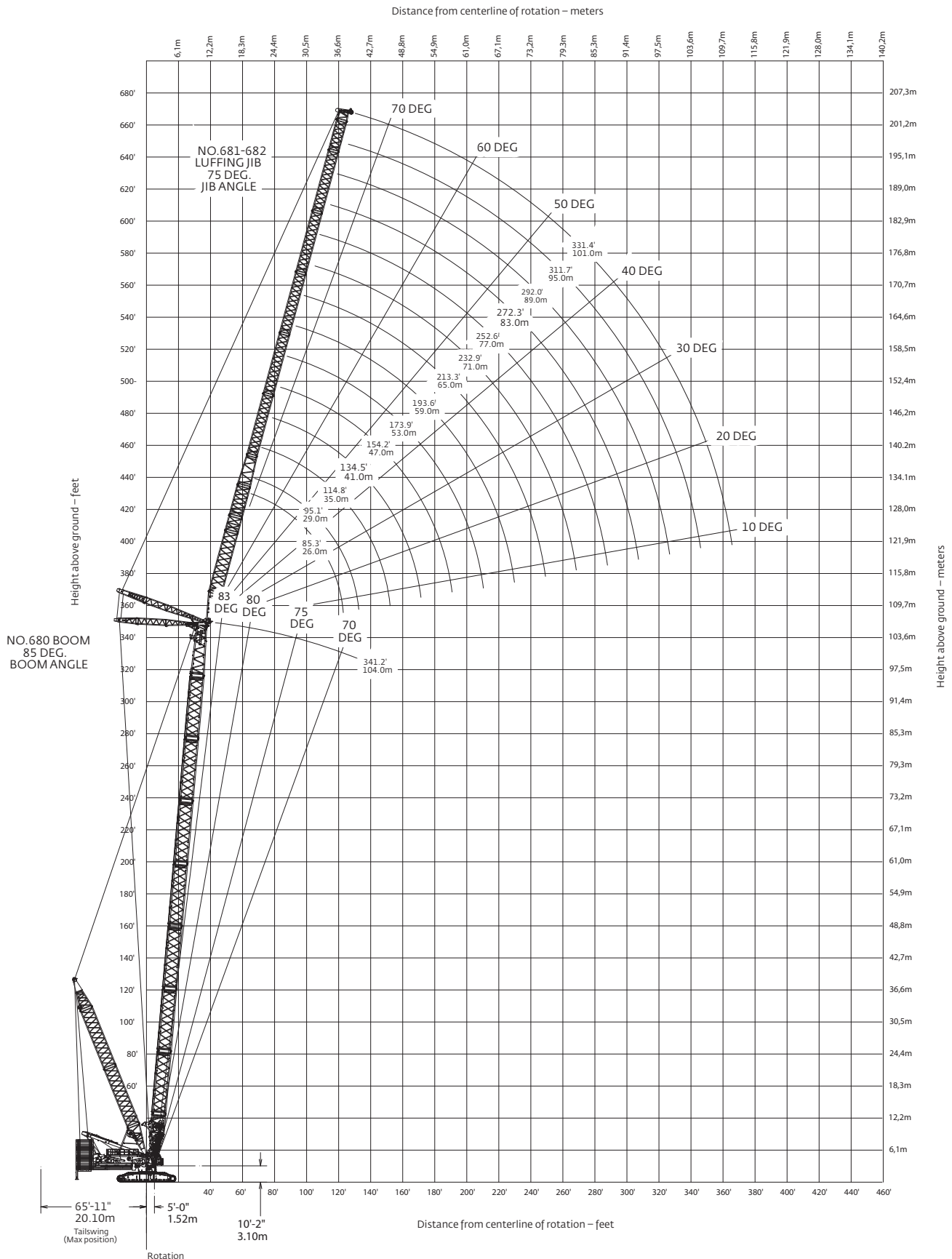
# Main boom load charts

## VPC-MAX

| No. 680 boom VPC-MAX     |                |        |        |        |        |       |       |       |       |       |       |       |       |       |       |       |
|--------------------------|----------------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 881,848 lb counterweight |                |        |        |        |        |       |       |       |       |       |       |       |       |       |       |       |
| 360° Rating              |                |        |        |        |        |       |       |       |       |       |       |       |       |       |       |       |
| Radius ft                | lb x 1000      |        |        |        |        |       |       |       |       |       |       |       |       |       |       |       |
|                          | Boom length ft |        |        |        |        |       |       |       |       |       |       |       |       |       |       |       |
|                          | 144            | 164    | 184    | 203    | 223    | 243   | 262   | 282   | 302   | 322   | 341   | 361   | 381   | 400   | 420   | 440   |
| 28                       | 1543.2         |        |        |        |        |       |       |       |       |       |       |       |       |       |       |       |
| 30                       | 1466.3         | 1391.0 |        |        |        |       |       |       |       |       |       |       |       |       |       |       |
| 32                       | 1428.4         | 1356.6 |        |        |        |       |       |       |       |       |       |       |       |       |       |       |
| 34                       | 1392.3         | 1323.8 | 1257.6 |        |        |       |       |       |       |       |       |       |       |       |       |       |
| 36                       | 1392.3         | 1292.4 | 1229.2 | 1164.2 |        |       |       |       |       |       |       |       |       |       |       |       |
| 38                       | 1392.3         | 1286.7 | 1201.9 | 1139.6 | 1084.1 |       |       |       |       |       |       |       |       |       |       |       |
| 40                       | 1392.3         | 1286.7 | 1184.6 | 1116.0 | 1062.9 | 999.2 |       |       |       |       |       |       |       |       |       |       |
| 45                       | 1392.3         | 1286.7 | 1184.6 | 1116.0 | 1012.8 | 955.1 | 842.0 | 720.3 |       |       |       |       |       |       |       |       |
| 50                       | 1309.5         | 1286.7 | 1184.6 | 1116.0 | 1012.8 | 938.9 | 842.0 | 720.3 | 601.6 | 525.1 |       |       |       |       |       |       |
| 55                       | 1189.5         | 1186.0 | 1183.1 | 1116.0 | 1012.8 | 938.9 | 842.0 | 720.3 | 601.6 | 525.1 | 443.3 | 391.9 |       |       |       |       |
| 60                       | 1088.7         | 1085.3 | 1082.4 | 1078.8 | 1012.8 | 938.9 | 842.0 | 720.3 | 601.6 | 525.1 | 443.3 | 391.9 | 332.4 | 296.5 |       |       |
| 65                       | 1002.9         | 999.6  | 996.8  | 993.1  | 990.7  | 938.9 | 842.0 | 720.3 | 601.6 | 525.1 | 443.3 | 391.9 | 331.0 | 296.5 | 265.3 | 237.6 |
| 70                       | 929.1          | 925.8  | 923.0  | 919.3  | 919.5  | 905.5 | 842.0 | 720.3 | 601.6 | 525.1 | 443.3 | 391.9 | 330.1 | 296.1 | 265.3 | 237.6 |
| 75                       | 864.8          | 861.5  | 858.7  | 855.1  | 855.2  | 849.7 | 835.9 | 720.3 | 601.6 | 525.1 | 443.1 | 391.9 | 328.9 | 295.0 | 264.9 | 237.5 |
| 80                       | 808.2          | 805.0  | 802.3  | 798.6  | 798.8  | 795.0 | 787.7 | 720.3 | 601.6 | 525.1 | 441.4 | 391.5 | 327.6 | 293.8 | 263.9 | 237.4 |
| 85                       | 758.2          | 755.0  | 752.4  | 748.7  | 748.8  | 745.0 | 744.0 | 720.3 | 601.6 | 525.1 | 439.5 | 390.1 | 326.4 | 292.6 | 262.9 | 237.2 |
| 90                       | 713.6          | 710.4  | 707.8  | 704.1  | 704.3  | 700.4 | 700.1 | 691.5 | 599.7 | 523.9 | 437.5 | 388.6 | 325.1 | 291.8 | 261.8 | 236.2 |
| 95                       | 673.6          | 670.4  | 667.8  | 664.1  | 664.3  | 660.4 | 660.2 | 656.2 | 590.8 | 521.6 | 435.5 | 387.1 | 323.8 | 290.7 | 260.9 | 235.2 |
| 100                      | 637.4          | 634.4  | 631.8  | 628.0  | 628.3  | 624.4 | 624.1 | 620.1 | 576.9 | 519.1 | 433.4 | 385.6 | 322.5 | 289.4 | 260.0 | 234.2 |
| 105                      | 602.3          | 600.3  | 598.5  | 595.3  | 595.6  | 591.7 | 591.4 | 587.4 | 563.1 | 511.8 | 431.3 | 384.0 | 321.1 | 288.2 | 258.9 | 233.4 |
| 110                      | 567.9          | 565.9  | 564.1  | 561.5  | 562.4  | 559.6 | 559.9 | 556.9 | 549.5 | 498.7 | 421.2 | 382.4 | 319.7 | 287.0 | 257.8 | 232.4 |
| 115                      | 536.9          | 534.9  | 533.1  | 530.5  | 531.3  | 528.5 | 528.7 | 525.8 | 525.4 | 486.0 | 410.7 | 380.8 | 318.4 | 285.7 | 256.8 | 231.4 |
| 120                      | 508.8          | 506.8  | 505.0  | 502.4  | 503.2  | 500.3 | 500.5 | 497.5 | 497.2 | 473.3 | 400.2 | 379.1 | 317.0 | 284.5 | 255.6 | 230.4 |
| 125                      | 483.1          | 481.2  | 479.4  | 476.7  | 477.5  | 474.6 | 474.8 | 471.8 | 471.4 | 461.0 | 389.9 | 377.4 | 315.6 | 283.2 | 254.5 | 229.3 |
| 130                      | 459.6          | 457.8  | 456.0  | 453.3  | 454.1  | 451.1 | 451.3 | 448.3 | 447.9 | 444.8 | 379.8 | 375.7 | 314.1 | 281.9 | 253.4 | 228.3 |
| 135                      | 438.1          | 436.2  | 434.5  | 431.8  | 432.5  | 429.6 | 429.8 | 426.7 | 426.3 | 423.2 | 369.7 | 374.0 | 312.7 | 280.6 | 252.3 | 227.2 |
| 140                      | 418.1          | 416.4  | 414.7  | 411.9  | 412.7  | 409.7 | 409.9 | 406.8 | 406.4 | 403.3 | 359.9 | 372.3 | 311.3 | 279.3 | 251.2 | 226.2 |
| 145                      | 399.6          | 398.0  | 396.4  | 393.6  | 394.4  | 391.4 | 391.5 | 388.4 | 388.0 | 384.9 | 350.2 | 370.5 | 309.8 | 278.0 | 250.0 | 225.1 |
| 150                      |                | 381.0  | 379.4  | 376.6  | 377.4  | 374.3 | 374.5 | 371.4 | 371.0 | 367.8 | 340.7 | 363.4 | 308.4 | 276.7 | 248.9 | 224.1 |
| 155                      |                | 365.1  | 363.6  | 360.8  | 361.5  | 358.5 | 358.7 | 355.5 | 355.1 | 351.9 | 331.3 | 347.4 | 306.9 | 275.4 | 247.7 | 223.0 |
| 160                      |                | 350.3  | 348.8  | 346.0  | 346.8  | 343.7 | 343.9 | 340.8 | 340.3 | 337.1 | 322.1 | 332.6 | 305.4 | 274.0 | 246.6 | 222.0 |
| 165                      |                |        | 335.0  | 332.3  | 333.0  | 330.0 | 330.1 | 327.0 | 326.5 | 323.3 | 313.0 | 318.8 | 303.4 | 272.7 | 245.4 | 220.9 |
| 170                      |                |        | 322.1  | 319.3  | 320.1  | 317.0 | 317.2 | 314.0 | 313.6 | 310.4 | 304.1 | 305.8 | 299.6 | 271.4 | 244.2 | 219.8 |
| 175                      |                |        | 309.9  | 307.2  | 308.0  | 304.9 | 305.1 | 301.9 | 301.5 | 298.2 | 295.3 | 293.6 | 292.5 | 270.0 | 243.1 | 218.7 |
| 180                      |                |        | 298.4  | 295.8  | 296.6  | 293.5 | 293.7 | 290.5 | 290.1 | 286.8 | 285.9 | 282.2 | 281.0 | 268.7 | 241.9 | 217.7 |
| 185                      |                |        |        | 285.0  | 285.8  | 282.8 | 282.9 | 279.7 | 279.3 | 276.0 | 275.2 | 271.4 | 270.3 | 266.8 | 240.7 | 216.6 |
| 190                      |                |        |        | 274.8  | 275.7  | 272.6 | 272.8 | 269.6 | 269.2 | 265.9 | 265.0 | 261.2 | 260.1 | 256.6 | 239.5 | 215.5 |
| 195                      |                |        |        | 265.1  | 266.1  | 263.0 | 263.2 | 260.0 | 259.6 | 256.3 | 255.4 | 251.6 | 250.5 | 247.0 | 238.4 | 213.5 |
| 200                      |                |        |        | 255.9  | 256.9  | 253.9 | 254.1 | 250.9 | 250.5 | 247.2 | 246.3 | 242.5 | 241.4 | 237.9 | 235.1 | 209.0 |
| 205                      |                |        |        |        | 248.3  | 245.3 | 245.5 | 242.3 | 241.9 | 238.6 | 237.7 | 233.9 | 232.7 | 229.2 | 226.5 | 204.6 |
| 210                      |                |        |        |        | 240.0  | 237.1 | 237.3 | 234.1 | 233.7 | 230.4 | 229.5 | 225.7 | 224.5 | 221.0 | 218.3 | 200.4 |
| 215                      |                |        |        |        | 232.2  | 229.2 | 229.5 | 226.3 | 225.9 | 222.6 | 221.7 | 217.9 | 216.7 | 213.2 | 210.5 | 196.4 |
| 220                      |                |        |        |        | 224.6  | 221.8 | 222.1 | 218.9 | 218.5 | 215.2 | 214.3 | 210.5 | 209.3 | 205.8 | 203.1 | 192.5 |
| 225                      |                |        |        |        |        | 214.7 | 215.0 | 211.8 | 211.4 | 208.1 | 207.3 | 203.4 | 202.3 | 198.7 | 196.0 | 188.7 |
| 230                      |                |        |        |        |        | 207.8 | 208.2 | 205.0 | 204.7 | 201.3 | 200.5 | 196.7 | 195.5 | 192.0 | 189.3 | 185.0 |
| 235                      |                |        |        |        |        | 201.3 | 201.7 | 198.6 | 198.2 | 194.9 | 194.1 | 190.2 | 189.1 | 185.5 | 182.8 | 179.2 |
| 240                      |                |        |        |        |        | 195.0 | 195.5 | 192.4 | 192.0 | 188.7 | 187.9 | 184.0 | 182.9 | 179.4 | 176.6 | 173.0 |
| 245                      |                |        |        |        |        |       | 189.6 | 186.4 | 186.1 | 182.8 | 182.0 | 178.1 | 177.0 | 173.5 | 170.7 | 167.1 |
| 250                      |                |        |        |        |        |       | 183.8 | 180.8 | 180.4 | 177.1 | 176.3 | 172.5 | 171.3 | 167.8 | 165.1 | 161.4 |
| 255                      |                |        |        |        |        |       | 178.3 | 175.3 | 175.0 | 171.7 | 170.9 | 167.0 | 165.9 | 162.4 | 159.7 | 156.0 |
| 260                      |                |        |        |        |        |       |       | 170.0 | 169.8 | 166.5 | 165.7 | 161.8 | 160.7 | 157.2 | 154.5 | 150.8 |
| 265                      |                |        |        |        |        |       |       | 165.0 | 164.7 | 161.5 | 159.3 | 156.8 | 155.7 | 152.2 | 149.5 | 145.8 |
| 270                      |                |        |        |        |        |       |       | 160.1 | 159.9 | 156.6 | 152.7 | 152.0 | 150.9 | 147.4 | 144.6 | 141.0 |
| 275                      |                |        |        |        |        |       |       | 155.3 | 155.2 | 152.0 | 146.1 | 146.2 | 145.2 | 142.7 | 140.0 | 136.4 |
| 280                      |                |        |        |        |        |       |       |       | 150.7 | 147.5 | 139.6 | 142.9 | 141.8 | 138.3 | 135.6 | 131.9 |
| 285                      |                |        |        |        |        |       |       |       | 146.3 | 143.1 | 133.3 | 138.6 | 137.5 | 134.0 | 131.3 | 127.6 |
| 290                      |                |        |        |        |        |       |       |       | 142.1 | 139.0 | 126.9 | 134.4 | 133.3 | 129.8 | 127.1 | 123.5 |
| 295                      |                |        |        |        |        |       |       |       | 138.0 | 134.9 | 120.5 | 130.4 | 129.3 | 125.8 | 123.1 | 119.5 |
| 300                      |                |        |        |        |        |       |       |       |       | 131.0 | 114.2 | 126.5 | 125.5 | 121.9 | 119.3 | 115.6 |
| 305                      |                |        |        |        |        |       |       |       |       | 124.7 | 108.0 | 122.8 | 121.7 | 118.2 | 115.5 | 111.9 |
| 310                      |                |        |        |        |        |       |       |       |       | 116.5 | 101.7 | 119.1 | 118.1 | 114.6 | 111.9 | 108.3 |
| 315                      |                |        |        |        |        |       |       |       |       | 107.7 | 95.3  | 115.6 | 114.6 | 111.1 | 108.4 | 104.8 |
| 320                      |                |        |        |        |        |       |       |       |       |       | 89.0  | 112.2 | 111.2 | 107.7 | 105.0 | 101.4 |
| 325                      |                |        |        |        |        |       |       |       |       |       | 82.5  | 108.9 | 107.9 | 104.4 | 101.8 | 98.1  |
| 330                      |                |        |        |        |        |       |       |       |       |       | 75.9  | 105.7 | 104.7 | 101.2 | 98.6  | 95.0  |
| 335                      |                |        |        |        |        |       |       |       |       |       | 68.9  | 102.6 | 101.6 | 98.2  | 95.5  | 91.9  |
| 340                      |                |        |        |        |        |       |       |       |       |       |       | 99.5  | 98.6  | 95.2  | 92.5  | 88.9  |
| 345                      |                |        |        |        |        |       |       |       |       |       |       | 96.5  | 93.7  | 92.2  | 89.6  | 86.0  |
| 350                      |                |        |        |        |        |       |       |       |       |       |       | 93.6  | 84.8  | 89.4  | 86.8  | 83.2  |
| 355                      |                |        |        |        |        |       |       |       |       |       |       |       | 75.8  | 86.7  | 84.1  | 80.5  |
| 360                      |                |        |        |        |        |       |       |       |       |       |       |       | 66.4  | 84.0  | 81.4  | 77.8  |
| 365                      |                |        |        |        |        |       |       |       |       |       |       |       | 56.6  | 81.4  | 78.8  | 75.2  |
| 370                      |                |        |        |        |        |       |       |       |       |       |       |       | 46.3  | 78.8  | 76.3  | 72.7  |
| 375                      |                |        |        |        |        |       |       |       |       |       |       |       |       | 76.3  | 73.8  | 70.2  |
| 380                      |                |        |        |        |        |       |       |       |       |       |       |       |       | 68.9  | 71.4  | 67.9  |
| 385                      |                |        |        |        |        |       |       |       |       |       |       |       |       | 56.2  | 69.1  | 65.5  |
| 390                      |                |        |        |        |        |       |       |       |       |       |       |       |       | 43.2  | 66.8  | 63.3  |
| 395                      |                |        |        |        |        |       |       |       |       |       |       |       |       |       | 64.5  | 61.0  |
| 400                      |                |        |        |        |        |       |       |       |       |       |       |       |       |       | 62.4  | 58.9  |
| 405                      |                |        |        |        |        |       |       |       |       |       |       |       |       |       | 60.2  | 56.8  |
| 410                      |                |        |        |        |        |       |       |       |       |       |       |       |       |       | 58.1  | 54.7  |
| 415                      |                |        |        |        |        |       |       |       |       |       |       |       |       |       |       | 52.7  |
| 420                      |                |        |        |        |        |       |       |       |       |       |       |       |       |       |       | 50.7  |
| 425                      |                |        |        |        |        |       |       |       |       |       |       |       |       |       |       | 48.7  |
| 430                      |                |        |        |        |        |       |       |       |       |       |       |       |       |       |       | 46.8  |

# Luffing jib range diagram

## VPC-MAX





# Luffing jib load charts

## VPC-MAX

### No. 681-682 luffing jib on No. 680 boom VPC-MAX

881,848 lb counterweight

360° Rating

lb x 1000

85° boom angle

| 115 ft luffing jib length |                |       |       |       |       |
|---------------------------|----------------|-------|-------|-------|-------|
|                           | Boom length ft |       |       |       |       |
| Radius ft                 | 184            | 223   | 262   | 302   | 341   |
| 60                        | 649.8          |       |       |       |       |
| 65                        | 633.4          | 450.2 |       |       |       |
| 70                        | 614.7          | 450.2 | 328.7 | 252.1 |       |
| 75                        | 595.8          | 445.4 | 327.5 | 243.3 | 189.9 |
| 80                        | 577.1          | 429.8 | 325.2 | 239.3 | 187.2 |
| 85                        | 558.8          | 402.9 | 322.1 | 237.6 | 178.0 |
| 90                        | 539.2          | 379.3 | 318.5 | 235.2 | 175.1 |
| 95                        | 510.2          | 358.7 | 311.4 | 232.5 | 173.4 |
| 100                       | 482.4          | 340.6 | 299.1 | 229.7 | 171.5 |
| 105                       | 456.1          | 324.6 | 287.1 | 227.0 | 169.4 |
| 110                       | 431.7          | 310.8 | 275.7 | 222.3 | 167.5 |
| 115                       | 409.4          | 298.8 | 264.8 | 214.6 | 165.7 |
| 120                       | 389.5          | 288.6 | 254.8 | 207.2 | 163.1 |
| 125                       | 362.5          | 280.3 | 245.8 | 200.6 | 161.4 |
| 130                       | 316.0          | 274.3 | 238.1 | 194.6 | 156.8 |
| 135                       | 267.8          | 271.2 | 232.0 | 189.6 | 152.9 |
| 140                       |                | 262.4 | 228.7 | 186.1 | 149.6 |
| 145                       |                |       | 228.7 | 184.8 | 147.6 |
| 150                       |                |       |       |       | 147.6 |

| 194 ft luffing jib length |                |       |       |       |       |
|---------------------------|----------------|-------|-------|-------|-------|
|                           | Boom length ft |       |       |       |       |
| Radius ft                 | 184            | 223   | 262   | 302   | 341   |
| 80                        | 331.0          |       |       |       |       |
| 85                        | 331.0          | 254.0 |       |       |       |
| 90                        | 331.0          | 254.0 | 197.9 | 154.7 |       |
| 95                        | 331.0          | 254.0 | 197.9 | 150.6 | 118.4 |
| 100                       | 331.0          | 254.0 | 197.6 | 150.1 | 117.5 |
| 105                       | 330.7          | 254.0 | 196.9 | 149.4 | 116.3 |
| 110                       | 327.5          | 252.7 | 196.1 | 148.7 | 112.1 |
| 115                       | 317.7          | 245.7 | 195.0 | 147.7 | 111.3 |
| 120                       | 307.5          | 238.4 | 191.6 | 146.6 | 110.4 |
| 125                       | 297.0          | 230.9 | 186.1 | 145.4 | 109.4 |
| 130                       | 286.7          | 223.6 | 180.5 | 144.1 | 108.3 |
| 135                       | 276.2          | 216.1 | 175.0 | 140.5 | 107.2 |
| 140                       | 265.8          | 208.7 | 169.4 | 136.4 | 106.1 |
| 145                       | 255.5          | 201.3 | 163.9 | 132.3 | 104.7 |
| 150                       | 245.5          | 194.1 | 158.6 | 128.3 | 101.8 |
| 155                       | 235.9          | 187.2 | 153.3 | 124.5 | 98.9  |
| 160                       | 226.5          | 180.5 | 148.2 | 120.7 | 96.0  |
| 165                       | 217.5          | 174.0 | 143.4 | 117.0 | 93.3  |
| 170                       | 209.2          | 167.9 | 138.7 | 113.5 | 90.6  |
| 175                       | 201.2          | 162.1 | 134.2 | 110.1 | 88.1  |
| 180                       | 193.8          | 156.6 | 130.1 | 106.9 | 85.6  |
| 185                       | 186.8          | 151.6 | 126.2 | 103.9 | 83.3  |
| 190                       | 180.5          | 146.9 | 122.5 | 101.1 | 81.2  |
| 195                       | 174.8          | 142.6 | 119.3 | 98.6  | 79.2  |
| 200                       | 169.8          | 139.0 | 116.4 | 96.3  | 77.5  |
| 205                       | 165.8          | 136.0 | 113.9 | 94.3  | 75.9  |
| 210                       | 161.4          | 133.7 | 112.0 | 92.7  | 74.6  |
| 215                       | 139.4          | 132.8 | 110.9 | 91.6  | 73.6  |
| 220                       |                | 132.8 | 110.9 | 91.2  | 73.0  |
| 225                       |                |       |       | 91.2  | 73.0  |
| 230                       |                |       |       |       | 73.0  |

For complete chart, refer to [www.cranelibrary.com](http://www.cranelibrary.com).

# Luffing jib load charts

## VPC-MAX

No. 681-682 luffing jib on No. 680 boom VPC-MAX

881,848 lb counterweight

360° Rating

lb x 1000

85° boom angle

| 253 ft luffing jib length |                |       |       |       |      |
|---------------------------|----------------|-------|-------|-------|------|
| Radius ft                 | Boom length ft |       |       |       |      |
|                           | 184            | 223   | 262   | 302   | 341  |
| 95                        | 203.2          |       |       |       |      |
| 100                       | 203.2          | 165.8 |       |       |      |
| 105                       | 203.1          | 165.7 | 134.0 | 105.1 |      |
| 110                       | 202.9          | 165.7 | 134.0 | 104.8 | 80.1 |
| 115                       | 202.5          | 165.5 | 134.0 | 104.7 | 79.7 |
| 120                       | 202.1          | 165.2 | 133.8 | 104.5 | 79.2 |
| 125                       | 201.6          | 164.8 | 133.5 | 104.2 | 77.0 |
| 130                       | 201.1          | 164.4 | 133.1 | 103.8 | 76.6 |
| 135                       | 200.6          | 163.9 | 132.7 | 103.3 | 76.2 |
| 140                       | 200.0          | 163.3 | 132.1 | 102.7 | 75.6 |
| 145                       | 199.3          | 159.9 | 129.3 | 102.0 | 75.1 |
| 150                       | 197.2          | 156.2 | 126.3 | 100.2 | 74.4 |
| 155                       | 192.3          | 152.3 | 123.3 | 97.9  | 73.8 |
| 160                       | 187.3          | 148.5 | 120.2 | 95.4  | 73.1 |
| 165                       | 182.3          | 144.6 | 117.1 | 93.0  | 71.5 |
| 170                       | 177.3          | 140.7 | 114.1 | 90.6  | 69.7 |
| 175                       | 172.3          | 136.8 | 111.0 | 88.2  | 67.9 |
| 180                       | 167.3          | 133.0 | 108.0 | 85.9  | 66.1 |
| 185                       | 162.4          | 129.2 | 105.0 | 83.6  | 64.4 |
| 190                       | 157.6          | 125.4 | 102.0 | 81.3  | 62.7 |
| 195                       | 152.8          | 121.8 | 99.2  | 79.1  | 61.1 |
| 200                       | 148.2          | 118.3 | 96.4  | 76.9  | 59.4 |
| 205                       | 143.7          | 114.8 | 93.7  | 74.8  | 57.8 |
| 210                       | 139.4          | 111.5 | 91.1  | 72.8  | 56.3 |
| 215                       | 135.2          | 108.3 | 88.6  | 70.9  | 54.8 |
| 220                       | 131.2          | 105.3 | 86.2  | 69.0  | 53.4 |
| 225                       | 127.4          | 102.4 | 83.9  | 67.3  | 52.0 |
| 230                       | 123.8          | 99.7  | 81.8  | 65.6  | 50.8 |
| 235                       | 120.5          | 97.1  | 79.8  | 64.0  | 49.5 |
| 240                       | 117.3          | 94.7  | 77.9  | 62.6  | 48.4 |
| 245                       | 114.4          | 92.5  | 76.2  | 61.2  | 47.4 |
| 250                       | 111.8          | 90.6  | 74.6  | 60.0  | 46.4 |
| 255                       | 109.5          | 88.8  | 73.2  | 58.9  | 45.6 |
| 260                       | 107.5          | 87.4  | 72.1  | 58.0  | 44.8 |
| 265                       | 106.2          | 86.4  | 71.2  | 57.3  | 44.2 |
| 270                       | 96.4           | 85.8  | 70.7  | 56.8  | 43.8 |
| 275                       | 81.2           | 85.8  | 70.7  | 56.6  | 43.6 |
| 280                       |                | 79.7  | 70.7  | 56.6  | 43.6 |
| 285                       |                |       |       | 56.6  | 43.6 |
| 290                       |                |       |       |       | 43.6 |

| 331 ft luffing jib length |                |      |      |      |      |
|---------------------------|----------------|------|------|------|------|
| Radius ft                 | Boom length ft |      |      |      |      |
|                           | 184            | 223  | 262  | 302  | 341  |
| 115                       | 108.9          |      |      |      |      |
| 120                       | 108.2          | 90.1 |      |      |      |
| 125                       | 107.8          | 89.9 | 75.9 | 60.9 |      |
| 130                       | 107.3          | 89.7 | 75.8 | 60.7 | 45.5 |
| 135                       | 106.7          | 89.5 | 75.7 | 60.7 | 45.4 |
| 140                       | 106.3          | 89.2 | 75.6 | 60.6 | 45.3 |
| 145                       | 105.9          | 88.9 | 75.4 | 60.5 | 45.1 |
| 150                       | 105.3          | 88.6 | 75.2 | 60.3 | 44.9 |
| 155                       | 104.8          | 88.3 | 75.0 | 60.0 | 44.7 |
| 160                       | 104.2          | 87.9 | 74.7 | 59.8 | 44.4 |
| 165                       | 103.6          | 87.6 | 74.4 | 59.6 | 44.0 |
| 170                       | 103.1          | 87.2 | 74.1 | 59.3 | 43.1 |
| 175                       | 102.5          | 86.9 | 73.8 | 58.4 | 42.3 |
| 180                       | 102.0          | 86.5 | 73.4 | 57.3 | 41.3 |
| 185                       | 101.5          | 86.1 | 72.9 | 56.2 | 40.4 |
| 190                       | 100.9          | 85.8 | 71.5 | 55.0 | 39.5 |
| 195                       | 100.4          | 85.4 | 70.2 | 53.9 | 38.6 |
| 200                       | 99.9           | 85.0 | 68.8 | 52.7 | 37.6 |
| 205                       | 99.4           | 84.0 | 67.4 | 51.6 | 36.7 |
| 210                       | 98.8           | 82.4 | 66.0 | 50.4 | 35.7 |
| 215                       | 98.4           | 80.8 | 64.6 | 49.3 | 34.8 |
| 220                       | 97.9           | 79.2 | 63.2 | 48.1 | 33.9 |
| 225                       | 97.4           | 77.5 | 61.9 | 47.0 | 32.9 |
| 230                       | 95.4           | 75.9 | 60.5 | 45.8 | 32.0 |
| 235                       | 93.5           | 74.3 | 59.1 | 44.7 | 31.1 |
| 240                       | 91.5           | 72.7 | 57.8 | 43.6 | 30.2 |
| 245                       | 89.7           | 71.2 | 56.4 | 42.5 | 29.4 |
| 250                       | 87.8           | 69.6 | 55.1 | 41.5 | 28.5 |
| 255                       | 86.0           | 68.1 | 53.9 | 40.4 | 27.7 |
| 260                       | 84.1           | 66.6 | 52.6 | 39.4 | 26.9 |
| 265                       | 82.3           | 65.1 | 51.4 | 38.5 | 26.2 |
| 270                       | 80.6           | 63.7 | 50.2 | 37.5 | 25.4 |
| 275                       | 78.9           | 62.3 | 49.1 | 36.6 | 24.7 |
| 280                       | 77.2           | 60.9 | 48.0 | 35.7 | 24.0 |
| 285                       | 75.6           | 59.7 | 46.9 | 34.9 | 23.3 |
| 290                       | 74.1           | 58.4 | 46.0 | 34.1 | 22.7 |
| 295                       | 72.6           | 57.2 | 45.0 | 33.3 | 22.1 |
| 300                       | 71.1           | 56.1 | 44.0 | 32.6 | 21.5 |
| 305                       | 69.8           | 55.0 | 43.2 | 31.9 | 21.0 |
| 310                       | 68.5           | 54.0 | 42.4 | 31.3 | 20.5 |
| 315                       | 67.4           | 53.2 | 41.7 | 30.7 | 20.1 |
| 320                       | 66.3           | 52.3 | 41.0 | 30.2 | 19.7 |
| 325                       | 65.3           | 51.6 | 40.5 | 29.8 | 19.3 |
| 330                       | 64.5           | 51.0 | 40.0 | 29.4 | 19.0 |
| 335                       | 61.3           | 50.5 | 39.6 | 29.1 | 18.8 |
| 340                       | 56.5           | 50.2 | 39.4 | 28.9 | 18.6 |
| 345                       | 50.9           | 50.1 | 39.3 | 28.8 | 18.5 |
| 350                       | 42.7           | 47.7 | 39.3 | 28.8 | 18.5 |
| 355                       | 31.0           | 41.1 | 39.3 | 28.8 | 18.5 |
| 360                       |                |      | 39.3 | 28.8 | 18.5 |
| 365                       |                |      |      | 28.8 | 18.5 |

For complete chart, refer to [www.cranelibrary.com](http://www.cranelibrary.com).

# Manitowoc Crane Care

Manitowoc Crane Care is the industry's most advanced service and support program, designed to keep your cranes up and running. Manitowoc's distributor network and customer support personnel are available to support you 24 hours a day, 7 days a week, 365 days a year. There are five key disciplines of Manitowoc Crane Care:

## **Parts**

Genuine Manitowoc replacement parts are accessible through your distributor.

## **Service and technical support**

Assistance with crane selection, lift planning and ground bearing calculations or field service and maintenance.

## **Technical publications**

Operator, parts, service and capacity chart manuals are available in multiple formats in major languages.

## **Training**

A variety of training courses are available online or through Manitowoc training centers.

## **EnCORE**

Rebuild, repair, remanufacture or exchange your current crane through our local network, for a fraction of the cost of a new crane.

[www.manitowoccranecare.com](http://www.manitowoccranecare.com)

## **CraneSTAR**

CraneSTAR is an exclusive and innovative crane asset management system that helps improve your profitability and reduce costs by remotely monitoring critical crane data. Visit [www.cranestar.com](http://www.cranestar.com) for more information.

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Baudemont

Cergy

Decines

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### Portugal

Baltar

Fânzeres

### Slovakia

Saris

### USA

Manitowoc

Port Washington

Shady Grove

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