MAXIM
1-877-MAX-LIFT

Manitowoc®




# MLC650

## Product Guide

ASME B30.5
Imperial

## Features

- 717 USt capacity
- 772 USt capacity with VPC-MAX™
- 27,227 ft-kips maximum load moment
- 65,962 ft-kips maximum load moment with VPC-MAX
- 341.2 ft B10:680 boom
- 479.0 ft B60:680 boom with VPC-MAX
- 137.8 ft No. 148 fixed jib on B10:680 boom
- 331.4 ft LJ:681-682 luffing jib on B10:680 boom

# MANITOWOC MLC650

The MLC650 combines revolutionary VPC™ technology with the dynamic Crane Control System (CCS) to deliver class-leading load charts. Ultimate jobsite productivity and versatility ensure outstanding ROI.

## 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 that 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 utilizes all of the standard VPC components, and only requires the addition of a 118.1 ft fixed mast and the VPC-MAX beam. With the VPC-MAX attachment, the load moment of the MLC650 more than doubles its load. The position of the VPC-MAX counterweight is automatically positioned based on lifted load, boom length, or boom and jib length and load radius.



### FACT™ Connectors

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

### 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 for more information.

# MLC650 benefits



## Transportation

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.

## Productivity

Revolutionary Variable Position Counterweight (VPC) helps deliver class-leading lift capacities with less counterweight. The system works by automatically moving the counterweight into a maximized position for the given configuration and load case. No commands are necessary, so the operator is free to focus on the load and jobsite.

## Ease of use

The Crane Control System (CCS) features a user-friendly interface with all necessary crane control information within easy view on two display screens. A fully enclosed and insulated galvannealed steel cab features power tilt and full-view glass for unmatched visibility.



Manitowoc Crane Care™

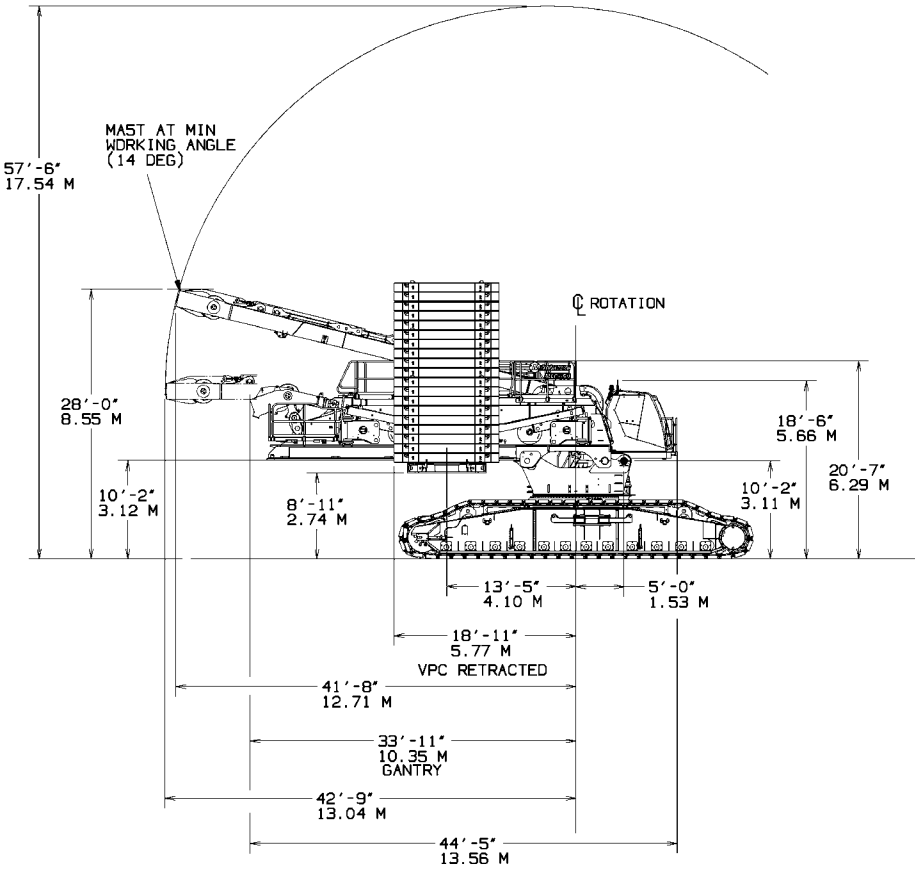
**Manitowoc Crane Care when you need it.**
The assurance of the world's most advanced crane service and support to get you back to work fast.

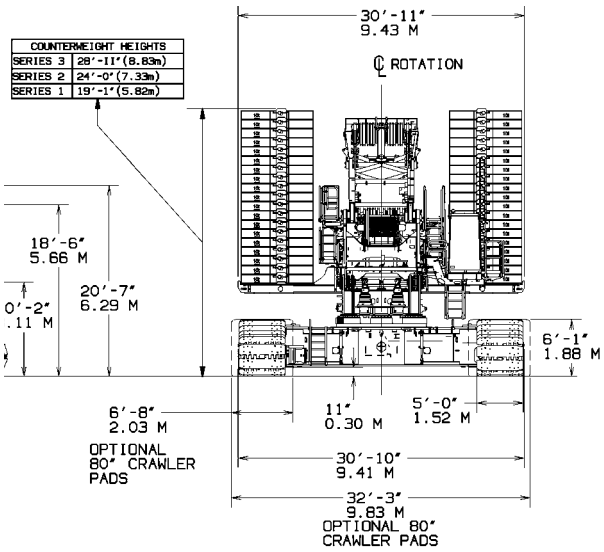
Manitowoc Finance™

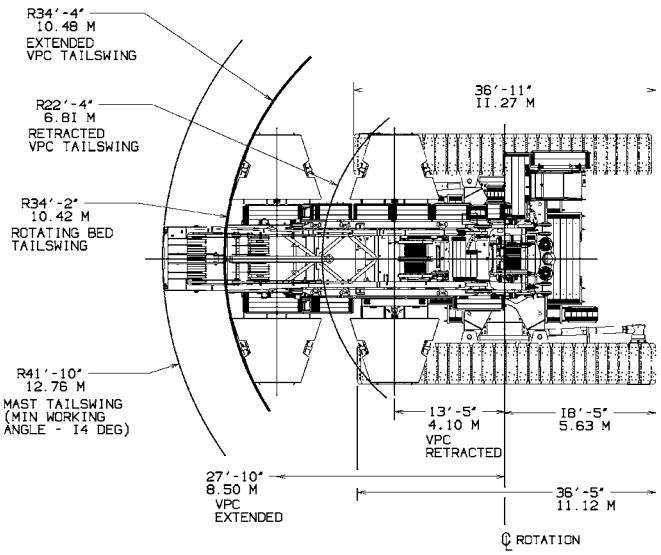
**Manitowoc Finance helps you get right to work generating profits for your business.**
Financial tools that help you capitalize on opportunity with solutions that fit your needs.

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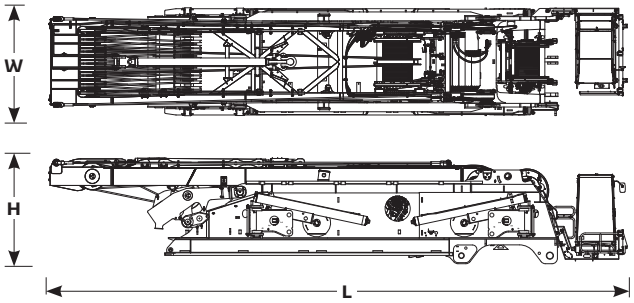

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MAST AT MIN
WORKING ANGLE
(14 DEG)
57'-6"
17.54 M
℄ ROTATION
28'-0"
8.55 M
18'-6"
5.66 M
20'-7"
6.29 M
10'-2"
3.12 M
8'-11"
2.74 M
10'-2"
3.11 M
13'-5"
4.10 M
5'-0"
1.53 M
18'-11"
5.77 M
VPC RETRACTED
41'-8"
12.71 M
33'-11"
10.35 M
GANTRY
42'-9"
13.04 M
44'-5"
13.56 M


COUNTERWEIGHT HEIGHTS
SERIES 3 28'-11"(8.83m)
SERIES 2 24'-0"(7.33m)
SERIES 1 19'-1"(5.82m)
30'-11"
9.43 M
℄ ROTATION
18'-6"
5.66 M
20'-7"
6.29 M
6'-1"
1.88 M
6'-8"
2.03 M
OPTIONAL
80" CRAWLER
PADS
11"
0.30 M
5'-0"
1.52 M
30'-10"
9.41 M
32'-3"
9.83 M
OPTIONAL 80"
CRAWLER PADS

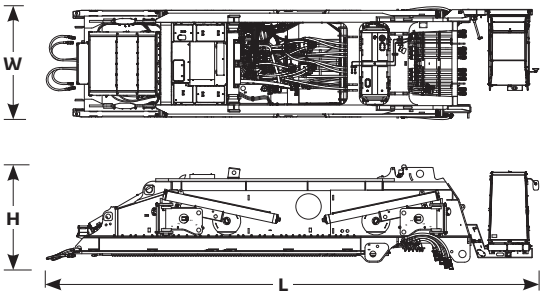

R34'-4"
10.48 M
EXTENDED
VPC TAILSWING
R22'-4"
6.81 M
RETRACTED
VPC TAILSWING
R34'-2"
10.42 M
ROTATING BED
TAILSWING
R41'-10"
12.76 M
MAST TAILSWING
(MIN WORKING
ANGLE - 14 DEG)
36'-11"
11.27 M
13'-5"
4.10 M
18'-5"
5.63 M
VPC
RETRACTED
27'-10"
8.50 M
VPC
EXTENDED
36'-5"
11.12 M
℄ ROTATION

# Outline dimensions



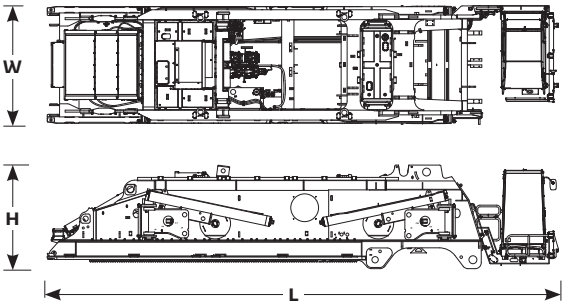

| Rotating bed assembly | |
|---|---|
| Length | 52' 10" |
| Width | 9' 10" |
| Height | 9' 10" |
| Weight | 157,900 lb |

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



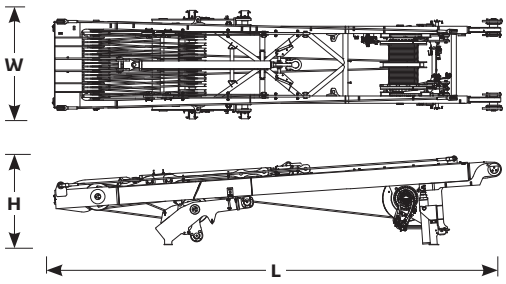

| Rotating bed assembly | |
|---|---|
| Length | 42' 4" |
| Width | 9' 10" |
| Height | 8' 6" |
| Weight | 98,300 lb |

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



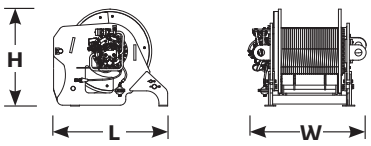

| Rotating bed assembly | |
|---|---|
| Length | 42' 4" |
| Width | 9' 10" |
| Height | 8' 6" |
| Weight | 85,800 lb |

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




| Live mast package | |
|---|---|
| Length | 40' 8" |
| Width | 9' 10" |
| Height | 8' 2" |
| Weight | 59,300 lb |

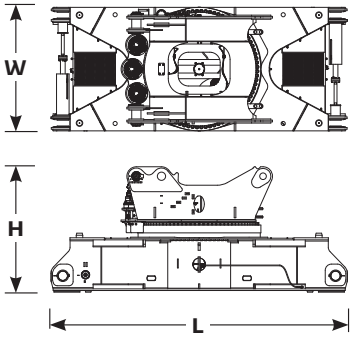
*Note: includes live mast, boom hoist, gantry.*




| Whip hoist package | |
|---|---|
| Length | 5' 3" |
| Width | 5' 3" |
| Height | 4' 7" |
| Weight | 12,800 lb |

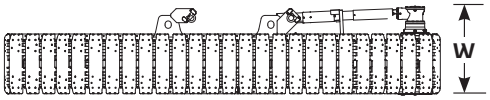
*Note: includes wire rope.*

# Outline dimensions

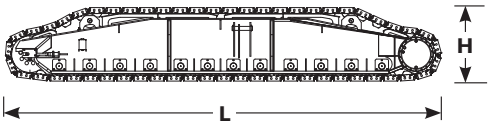



| Carbody assembly without jacks | |
|---|---|
| Length | 23' 7" |
| Width | 9' 10" |
| Height | 9' 10" |
| Weight | 91,500 lb |

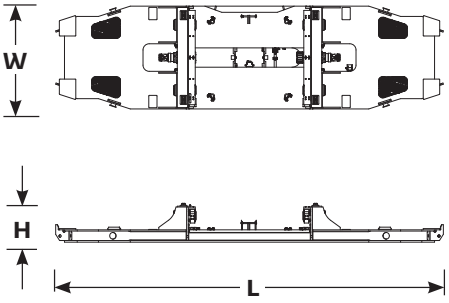
*Note: includes carbody, adapter frame, three swing drives, slewing ring.*



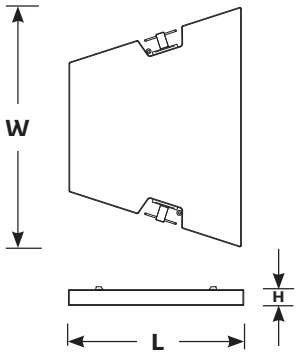

| Crawler assembly 80 inch pads | |
|---|---|
| Length | 36' 5" |
| Width | 7' 7" |
| Height | 6' 3" |
| Weight | 85,800 lb |




| Crawler assembly 80 inch pads | |
|---|---|
| Weight | 103,200 lb |

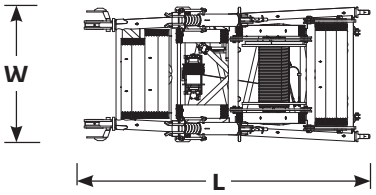



| Counterweight tray assembly | |
|---|---|
| Length | 30' 10" |
| Width | 8' 2" |
| Height | 2' 11" |
| Weight | 44,100 lb |



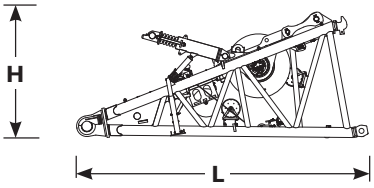

| Counterweight box | |
|---|---|
| Length | 7' 10" |
| Width | 10' 10" |
| Height | 1' 4" |
| Weight | 22,000 lb |

# Outline dimensions



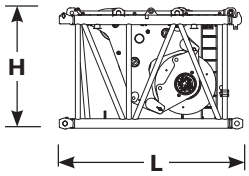

| 19.7 ft No. 680 boom butt | |
|---|---|
| Length | 21' 4" |
| Width | 9' 10" |
| Height | 9' 2" |
| Weight | 42,300 lb |

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



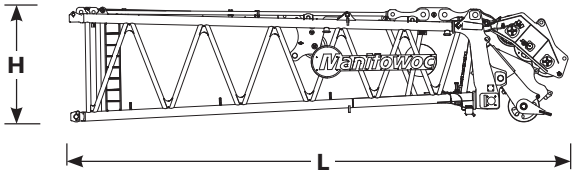

| 19.7 ft No. 680 boom butt with luffing hoist | |
|---|---|
| Weight | 57,800 lb |

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



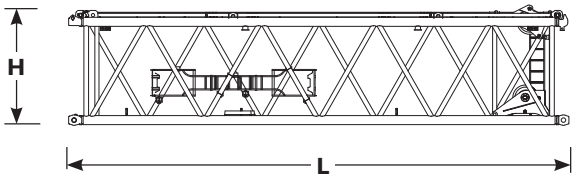

| 13.1 ft No. 680 boom insert | |
|---|---|
| Length | 14' 1" |
| Width | 9' 10" |
| Height | 9' 2" |
| Weight | 39,000 lb |

*Note: includes main load hoist #2, wire rope and backstay straps.*



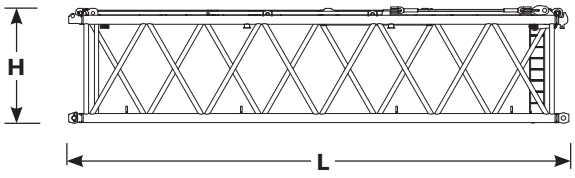

| 32.8 ft No. 680 boom top | |
|---|---|
| Length | 40' 0" |
| Width | 9' 10" |
| Height | 9' 2" |
| Weight | 41,400 lb |

*Note: includes lower boom points, wire rope guides..*




| 39.4 ft No. 680 boom insert, extra heavy with sheaves | |
|---|---|
| Length | 40' 0" |
| Width | 9' 10" |
| Height | 9' 2" |
| Weight | 27,800 lb |

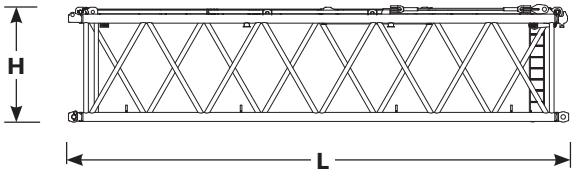
*Note: includes boom straps, backstay straps, luffing jib wire rope guide.*




| 39.4 ft No. 680 boom insert, heavy with equalizer | |
|---|---|
| Length | 40' 0" |
| Width | 9' 10" |
| Height | 9' 2" |
| Weight | 23,100 lb |

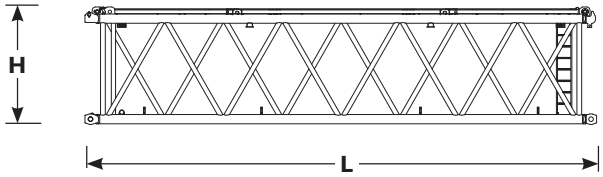
*Note: includes boom straps, backstay straps.*

# Outline dimensions



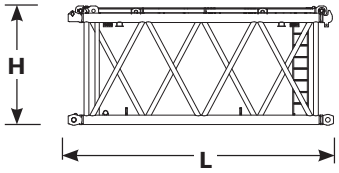

| 39.4 ft No. 680 boom insert, extra heavy | |
|---|---|
| Length | 40' 0" |
| Width | 9' 10" |
| Height | 9' 2" |
| Weight | 25,600 lb |

*Note: includes boom straps, backstay straps.*



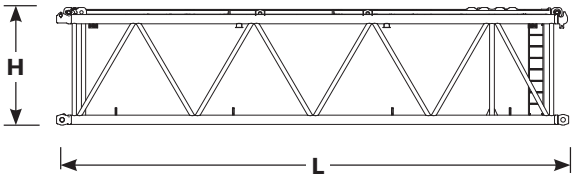

| 39.4 ft No. 680 boom insert, heavy | |
|---|---|
| Length | 40' 0" |
| Width | 9' 10" |
| Height | 9' 2" |
| Weight | 21,400 lb |

*Note: includes boom straps, backstay straps.*



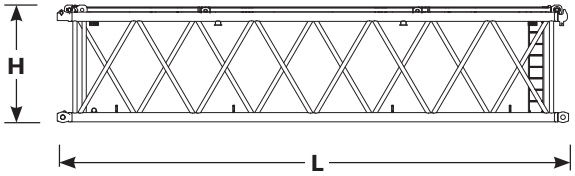

| 19.7 ft No. 680 boom insert, heavy | |
|---|---|
| Length | 20' 8" |
| Width | 9' 10" |
| Height | 9' 2" |
| Weight | 12,600 lb |

*Note: includes boom straps, backstay straps.*



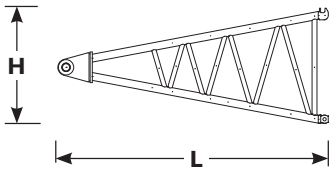

| 39.4 ft No. 680 boom insert, medium with suspension | |
|---|---|
| Length | 40' 0" |
| Width | 9' 10" |
| Height | 9' 2" |
| Weight | 17,600 lb |

*Note: includes boom straps, backstay straps.*




| 39.4 ft No. 680 boom insert, medium | |
|---|---|
| Length | 40' 0" |
| Width | 9' 10" |
| Height | 9' 2" |
| Weight | 17,400 lb |

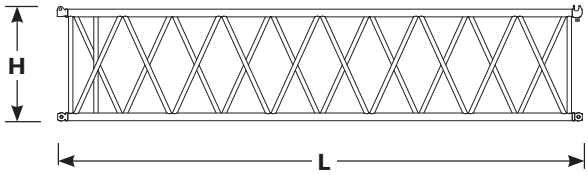
*Note: includes boom straps, backstay straps.*




| 19.7 ft No. 681 luffing jib butt | |
|---|---|
| Length | 20' 12" |
| Width | 9' 10" |
| Height | 8' 10" |
| Weight | 12,600 lb |

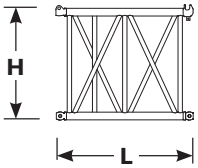
*Note: includes jib stops.*

# Outline dimensions



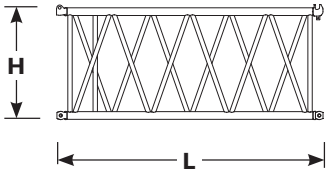

| 39.4 ft No. 681 luffing jib insert | |
|---|---|
| Length | 40' 4" |
| Width | 9' 10" |
| Height | 9' 2" |
| Weight | 12,600 lb |

*Note: includes jib straps.*



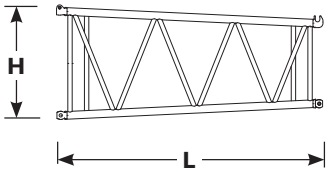

| 9.8 ft No. 681 luffing jib insert | |
|---|---|
| Length | 10' 6" |
| Width | 9' 10" |
| Height | 9' 2" |
| Weight | 4600 lb |

*Note: includes jib straps.*



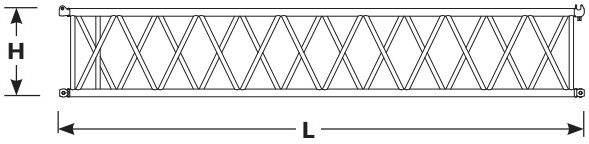

| 19.7 ft No. 681 luffing jib insert | |
|---|---|
| Length | 20' 8" |
| Width | 9' 10" |
| Height | 9' 2" |
| Weight | 7500 lb |

*Note: includes jib straps.*



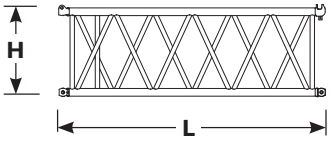

| 19.7 ft No. 681-682 transition insert | |
|---|---|
| Length | 20' 8" |
| Width | 9' 10" |
| Height | 9' 2" |
| Weight | 9500 lb |

*Note: includes jib straps.*



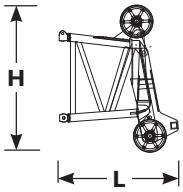

| 39.4 ft No. 682 luffing jib insert | |
|---|---|
| Length | 20' 4" |
| Width | 8' 2" |
| Height (max) | 8' 2" |
| Weight | 6400 lb |

*Note: includes jib straps.*




| 19.7 ft No. 682 luffing jib insert | |
|---|---|
| Length | 20' 4" |
| Width | 8' 2" |
| Height | 8' 2" |
| Weight | 6400 lb |

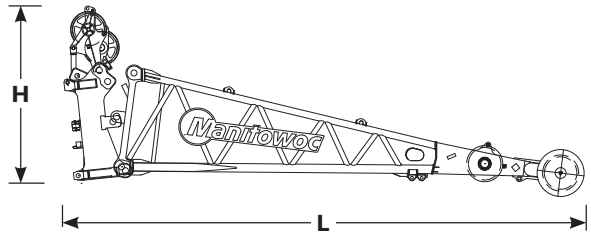
*Note: includes jib straps.*




| 6.7 ft No. 681-682 luffing jib top | |
|---|---|
| Length | 10' 10" |
| Width | 8' 2" |
| Height (max) | 9' 2" |
| Weight | 16,800 lb |

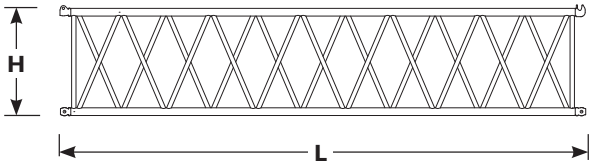
*Note: includes (8) sheave pack, wire rope guide.*

# Outline dimensions



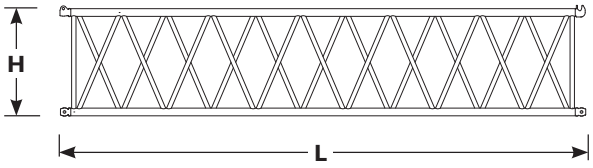

| 3.3 ft No. 682 cap + extended upper boom point | |
|---|---|
| Length | 37' 9" |
| Width | 8' 10" |
| Height (max) | 9' 2" |
| Weight | 20,900 lb |

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



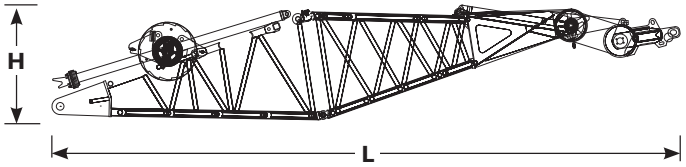

| 39.4 ft No. 684 mast lower mast insert | |
|---|---|
| Length | 40' 0" |
| Width | 8' 2" |
| Height (max) | 9' 2" |
| Weight | 13,000 lb |

*Note: includes backhitch and counterweight straps.*



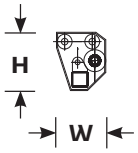

| 39.4 ft No. 684 mast upper mast insert | |
|---|---|
| Length | 40' 0" |
| Width | 8' 2" |
| Height (max) | 9' 2" |
| Weight | 13,700 lb |

*Note: includes backhitch and counterweight straps.*



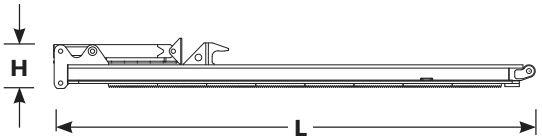

| No. 684 mast top + butt transport package | |
|---|---|
| Length | 47' 11" |
| Width | 8' 6" |
| Height | 9' 2" |
| Weight | 54,900 lb |

*Note: includes boom hoist drum and equalizer.*




| VPC-MAX actuator assembly | |
|---|---|
| Length | 16' 5" |
| Width | 3' 11" |
| Height | 3' 11" |
| Weight | 13,900 lb |

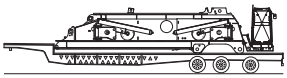
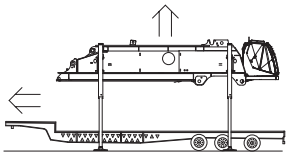
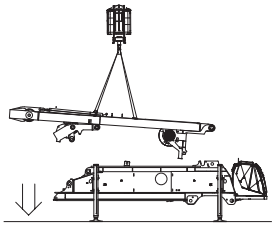
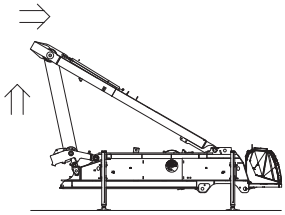
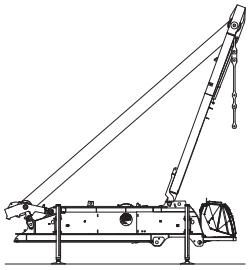
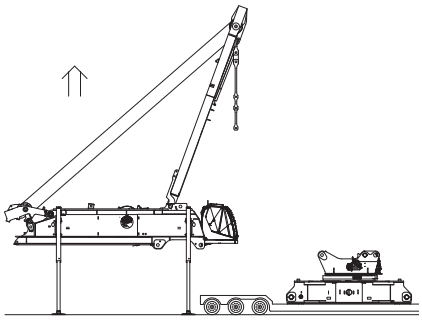
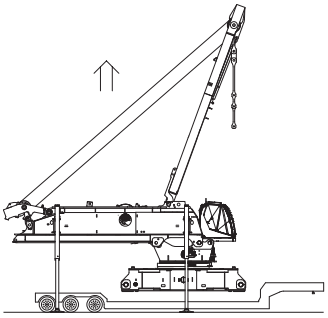
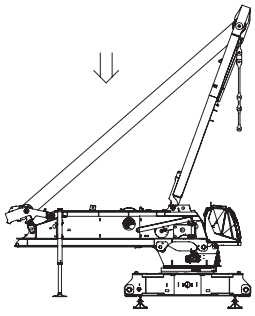
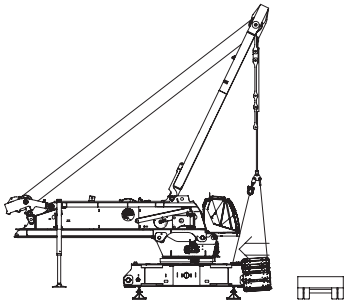
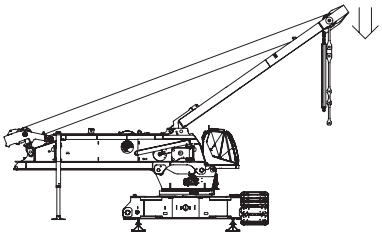
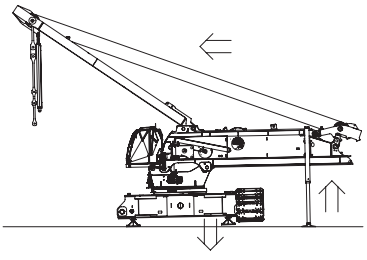
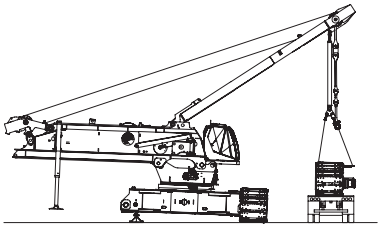
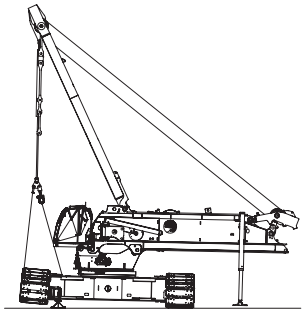
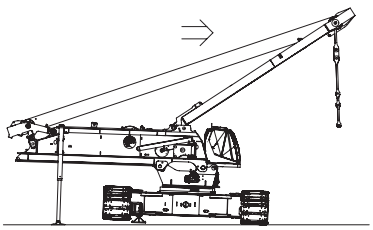
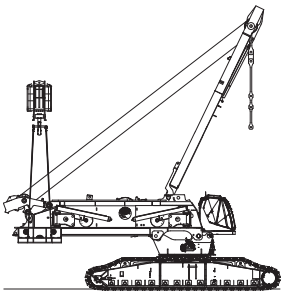
| VPC-MAX beam assembly | |
|---|---|
| Length | 36' 9" |
| Width | 9' 10" |
| Height | 3' 11" |
| Weight | 47,000 lb |



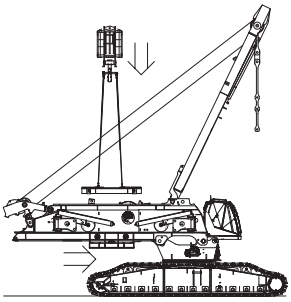

| VPC-MAX aux member assembly | |
|---|---|
| Length | 9' 10" |
| Width | 7' 10" |
| Height | 1' 8" |
| Weight | 9,500 lb |

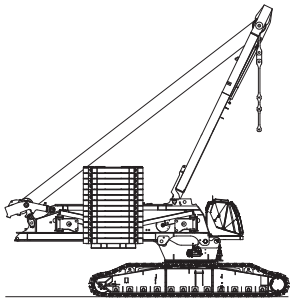
# Transport data

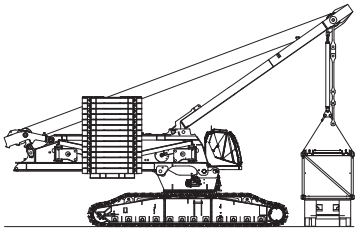
| Load summary | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 282 ft boom with series 2 counterweight<br>Quantity on trailer load #<br>(Does not include blocking, strapping, etc.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Item** | **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 | 85,800 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Whip hoist** | 1 | 12,800 | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| **Live mast package** | 1 | 59,300 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Carbody + adapter** | 1 | 91,500 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Crawler assembly (1,5 m pads)** | 2 | 85,800 | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| **Counterweight tray** | 1 | 44,100 | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| **Counterweight box** | 28 | 22,000 | | | | | | | | | | | | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **Boom butt with drum 1** | 1 | 42,300 | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| **13.1 ft No. 680 boom insert with drum 2** | 1 | 39,000 | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| **39.4 ft No. 680 extra heavy boom insert with sheaves** | 1 | 27,800 | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| **39.4 ft No. 680 extra heavy boom insert** | 1 | 25,600 | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| **39.4 ft No. 680 heavy boom insert** | 1 | 21,400 | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| **39.4 ft No. 680 heavy boom insert with equalizer rails** | 1 | 23,400 | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| **19.7 ft No. 680 heavy boom insert** | 1 | 12,600 | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| **39.4 ft No. 680 medium insert with suspension** | 1 | 19,600 | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| **32.8 ft No. 680 boom top** | 1 | 41,400 | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| **350 USt block** | 1 | 17,400 | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| **24.5 USt weight ball** | 1 | 2,900 | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| **Approximate total shipping weight lb** | | | 85,800 | 59,300 | 91,500 | 85,800 | 85,800 | 44,100 | 42,300 | 39,000 | 40,600 | 25,600 | 24,300 | 23,400 | 30,000 | 19,600 | 41,400 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 | 44,000 |

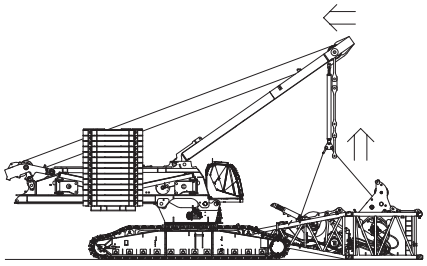
















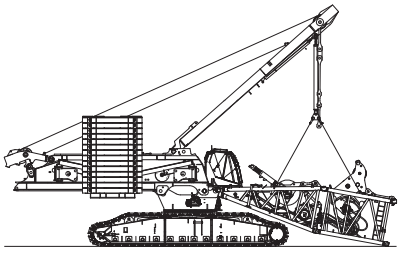
# Assembly

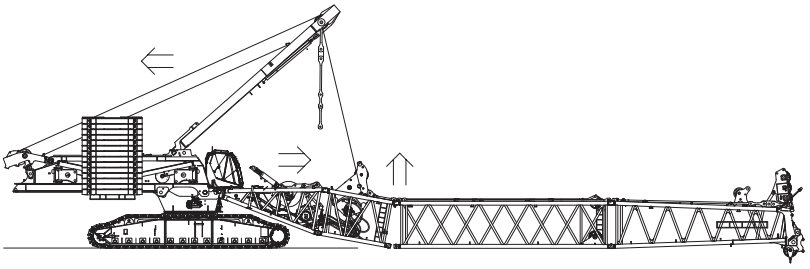


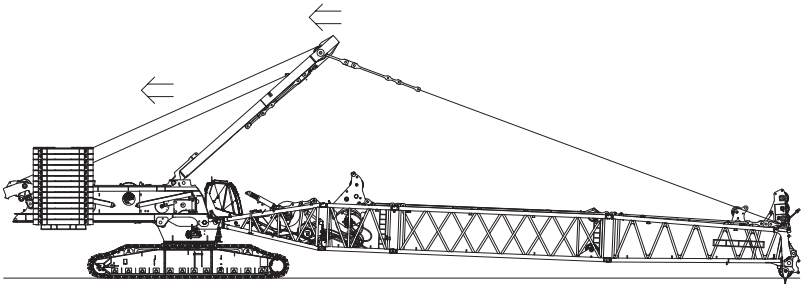


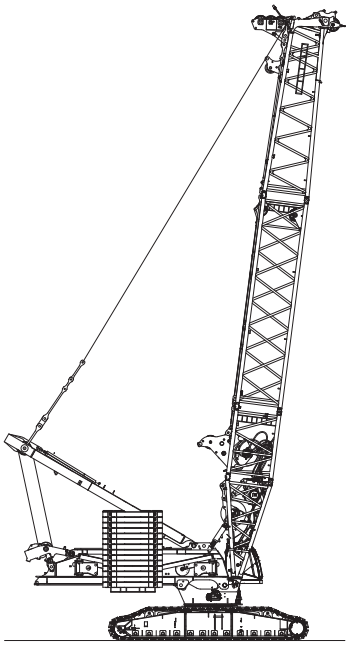


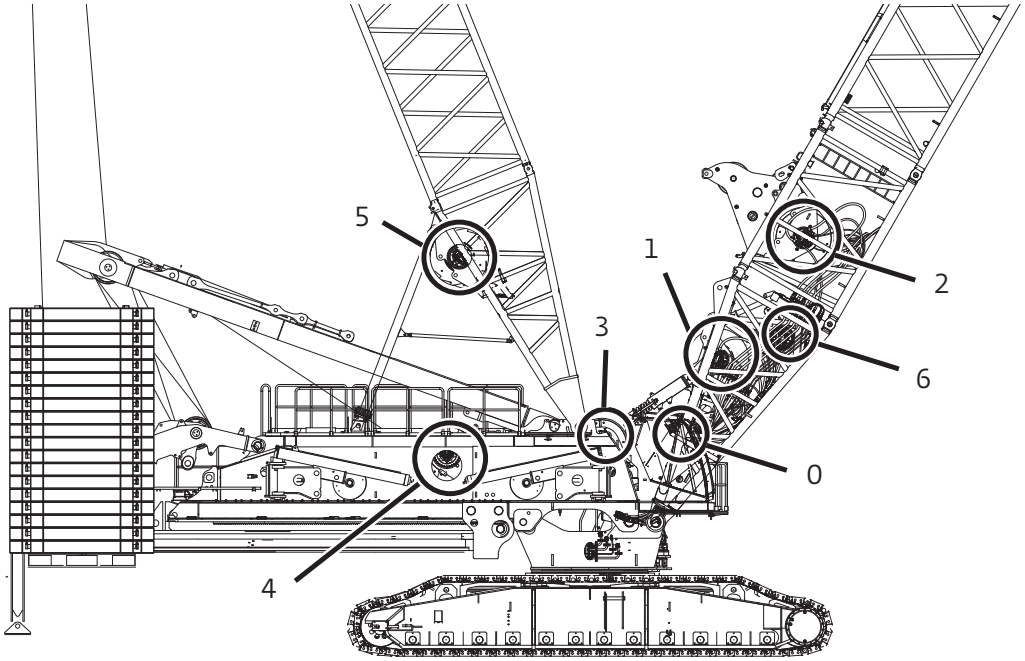













| Drum identification | |
|---|---|
| **Drum number** | **Function** |
| **1** | Main hoist – standard |
| **2** | Auxiliary main hoist – standard |
| **3** | Whip hoist – standard |
| **4** | Boom hoist (VPC™) – standard mast hoist (VPC-MAX) – standard |
| **5** | Boom hoist (VPC-MAX) – standard with VPC-MAX |
| **6** | Luffing hoist – standard with luffing jib |
| **0** | Rigging winch – standard |

| Working weight | |
|---|---|
| **105.0 ft No. 680 main boom** | 1,427,108 lb |
| **upper boom point** | |
| **689 USt hook block** | |
| **881,800 lb counterweight** | |

# Performance data

**B10: 680/B60: 680 boom**
**Hoist reeving for main load block single lead line – 32 mm wire rope**

| No. Parts of Line | Maximum Load 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 |

**B10: 680/B60: 680 boom**
**Hoist reeving for main load block two lead lines – 32 mm wire rope**

| No. Parts of Line | Maximum Load lb |
|---|---|
| 8 | 390,400 |
| 12 | 585,600 |
| 16 | 780,800 |
| 20 | 976,000 |
| 24 | 1,171,200 |
| 28 | 1,366,400 |
| 32 | 1,543,240 |

**B10: 680/B60: 680 boom**
**Hoist reeving for whip load block single lead line – 28 mm wire rope**

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

**B40: 680-681-682**
**B80: 680-681-682 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 lb |
|---|---|
| 2 | 97,600 |
| 4 | 195,200 |
| 6 | 292,800 |
| 7 | 341,600 |

**Maximum spooling capacities**

| | |
|---|---|
| Drum 1 (hoist line) 32 mm wire rope* | 3,608 ft 10 layers |
| Drum 2 (hoist line) 32 mm wire rope* | 3,608 ft 10 layers |
| Drum 3 (whip line) 28 mm wire rope* | 1,900 ft 8 layers |

**22 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/single line speed ft/min Layer | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Single line pull lb | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 0 | 308 | 335 | 364 | 394 | 420 | 449 | 476 | 505 | 535 | 561 |
| 10000 | 292 | 318 | 344 | 371 | 394 | 420 | 443 | 466 | 492 | 515 |
| 20000 | 279 | 302 | 325 | 344 | 367 | 387 | 410 | 430 | 440 | 446 |
| 28800 | 266 | 285 | 295 | 299 | 305 | 312 | 315 | 322 | 328 | 331 |
| 40000 | 226 | 233 | 240 | 243 | 249 | 256 | 259 | 266 | 276 | 289 |
| 48800 | 197 | 203 | 207 | 213 | 220 | 230 | 243 | 253 | 253 | 253 |

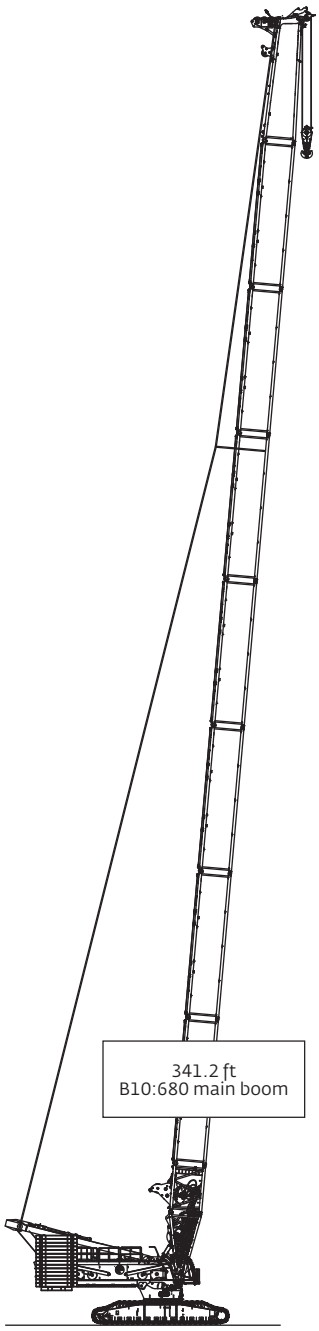
**Performance for whip (drum #3)**
**28 mm wire rope**
**Single line speed in ft per minute**

| | Single line pull/single line speed ft/min Layer | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Single line pull lb | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 0 | 295 | 322 | 348 | 371 | 397 | 420 | 446 | 469 |
| 5000 | 282 | 305 | 328 | 351 | 374 | 394 | 417 | 436 |
| 10000 | 269 | 292 | 312 | 331 | 348 | 367 | 387 | 404 |
| 15000 | 256 | 276 | 292 | 295 | 302 | 305 | 308 | 315 |
| 20000 | 226 | 230 | 236 | 240 | 243 | 249 | 253 | 259 |
| 25000 | 190 | 197 | 200 | 207 | 210 | 217 | 230 | 240 |
| 30000 | 171 | 174 | 177 | 190 | 203 | 213 | 226 | 236 |

# Boom combinations

| B10: 680 main boom combinations | | | | | |
|---|---|---|---|---|---|
| Boom length (ft) | Main boom inserts (ft) | | | | |
| | 13.1 XH No. 680 | 39.4 XH No. 680 | 19.7 H No. 680 | 39.4 H No. 680 | 39.4 M No. 680 |
| **105.0** | 1 | 1 | 0 | 0 | 0 |
| **124.7** | 1 | 1 | 1 | 0 | 0 |
| **144.4** | 1 | 1 | 0 | 1 | 0 |
| **164.0** | 1 | 1 | 1 | 1 | 0 |
| **183.7** | 1 | 2 | 0 | 1 | 0 |
| **203.4** | 1 | 2 | 1 | 1 | 0 |
| **223.1** | 1 | 2 | 0 | 1 | 1 |
| **242.8** | 1 | 2 | 1 | 1 | 1 |
| **265.5** | 1 | 2 | 0 | 2 | 1 |
| **282.2** | 1 | 2 | 1 | 2 | 1 |
| **301.8** | 1 | 2 | 0 | 3 | 1 |
| **321.5** | 1 | 2 | 1 | 3 | 1 |
| **341.2** | 1 | 2 | 0 | 4 | 1 |

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

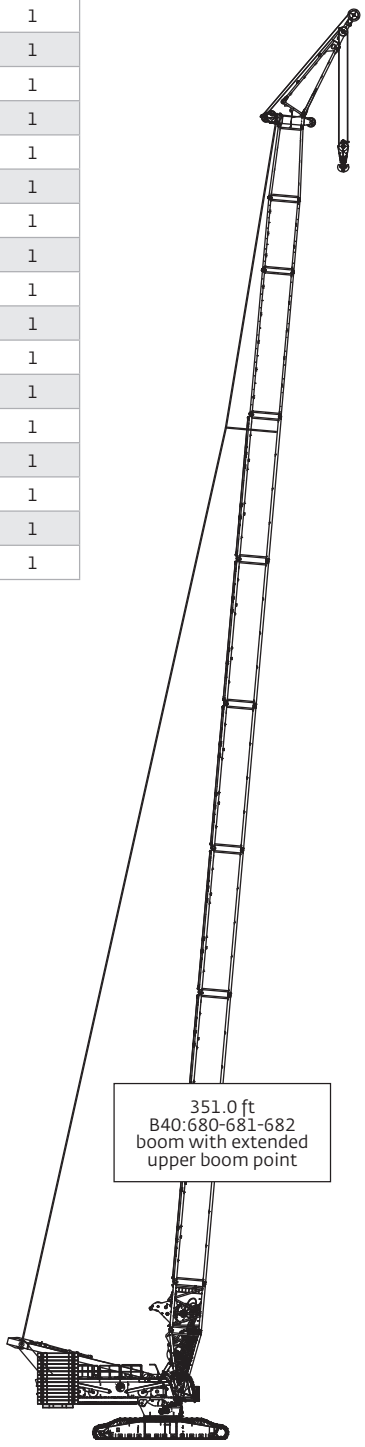


# Boom combinations

| B40: 680-681-682 boom with 25 ft extended upper boom point | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Boom length (ft)** | **Main boom inserts** | | | | | | | | |
| | 13.1 ft XH No. 680 | 39.4 ft XH No. 680 | 39.4 ft H No. 680 | 39.4 ft M No. 680 | 19.7 ft No. 680-681 | 9.8 ft No. 681 | 19.7 ft No. 681 | 39.7 ft No. 681 | 39.7 ft No. 681-682 |
| **144.4** | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **164.0** | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 |
| **183.7** | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| **203.4** | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 |
| **223.1** | 1 | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| **242.8** | 1 | 2 | 1 | 0 | 1 | 1 | 1 | 0 | 1 |
| **252.6** | 1 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 1 |
| **262.5** | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 1 |
| **272.3** | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 1 |
| **282.2** | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| **292.0** | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 1 |
| **301.8** | 1 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 1 |
| **311.7** | 1 | 2 | 2 | 1 | 1 | 0 | 1 | 0 | 1 |
| **321.5** | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 0 | 1 |
| **331.4** | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 1 |
| **341.2** | 1 | 2 | 2 | 1 | 1 | 1 | 0 | 1 | 1 |
| **351.0** | 1 | 2 | 2 | 1 | 1 | 0 | 1 | 1 | 1 |
| **360.9** | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 |

*XH: Extra heavy insert*
*H: Heavy insert*
*M: Medium insert*
** luffing jib insert*
*** luffing jib transition insert*

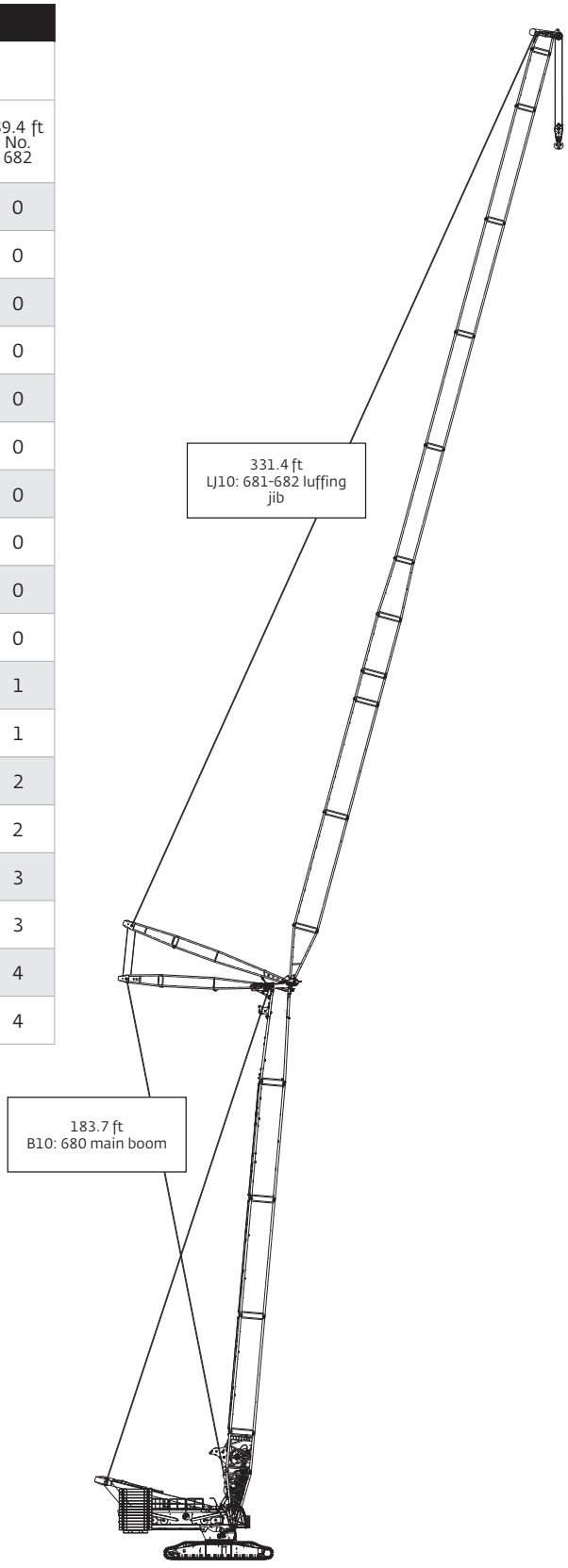
*For specific configurations refer to www.cranelibrary.com.*




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# Boom combinations

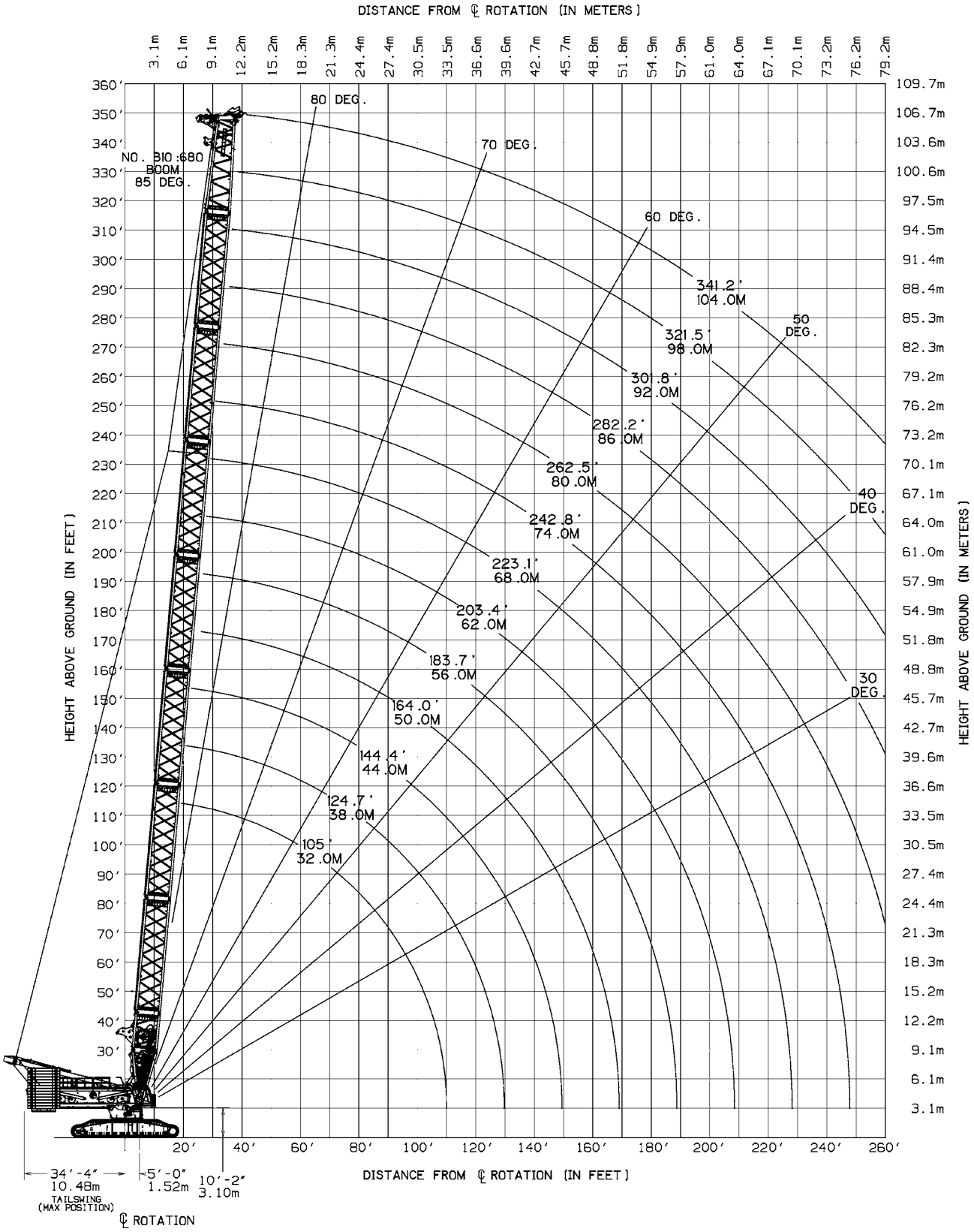
| LJ: 681-682 luffing jib combinations | | | | | | | |
|---|---|---|---|---|---|---|---|
| Luffing jib length (ft) | Luffing jib inserts | | | | | | |
| | 39.4 ft No. 680-681 | 9.8 ft No. 681 | 19.7 ft No. 681 | 39.4 ft No 681 | 19.7 ft No. 681-682 | 19.7 ft No. 682 | 39.4 ft No. 682 |
| **85.3** | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| **95.1** | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| **105.0** | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| **114.8** | 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| **124.7** | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| **134.5** | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| **144.4** | 1 | 0 | 1 | 1 | 1 | 0 | 0 |
| **154.2** | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| **164.0** | 1 | 0 | 1 | 1 | 1 | 1 | 0 |
| **173.9** | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| **193.6** | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| **213.3** | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| **232.9** | 1 | 1 | 1 | 1 | 1 | 0 | 2 |
| **252.6** | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| **272.3** | 1 | 1 | 1 | 1 | 1 | 0 | 3 |
| **292.0** | 1 | 1 | 1 | 1 | 1 | 1 | 3 |
| **311.7** | 1 | 1 | 1 | 1 | 1 | 0 | 4 |
| **331.4** | 1 | 1 | 1 | 1 | 1 | 1 | 4 |




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# Main boom range diagram

## B10: 680 boom




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*The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane*

# Main boom load chart

| B10: 680 boom with series 3 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **881,800 lb counterweight** | | | | | | | | | | | | | |
| **360° Rating** | | | | | | **lb x 1000** | | | | | | | |
| **Radius (ft)** | **Boom length (ft)** | | | | | | | | | | | | |
| | **105** | **125** | **144** | **164** | **184** | **203** | **223** | **243** | **262** | **282** | **302** | **322** | **341** |
| 19 | 1433.0 | | | | | | | | | | | | |
| 20 | 1300.8 | | | | | | | | | | | | |
| 24 | 1123.2 | 1105.3 | 1083.9 | 1061.4 | | | | | | | | | |
| 28 | 987.5 | 974.5 | 958.5 | 942.0 | 925.5 | 905.5 | | | | | | | |
| 32 | 880.5 | 870.8 | 858.4 | 845.9 | 833.4 | 818.1 | 797.8 | 778.8 | | | | | |
| 36 | 794.1 | 786.6 | 776.8 | 767.1 | 757.3 | 745.5 | 729.1 | 714.0 | 702.4 | 604.2 | 518.1 | | |
| 40 | 722.7 | 716.9 | 708.9 | 701.3 | 693.5 | 684.1 | 670.7 | 658.6 | 649.1 | 600.5 | 514.7 | 443.1 | 384.5 |
| 45 | 649.4 | 645.1 | 638.7 | 632.9 | 627.0 | 619.8 | 609.0 | 599.7 | 592.2 | 582.6 | 510.5 | 439.5 | 381.2 |
| 50 | 589.3 | 586.0 | 580.8 | 576.3 | 571.7 | 566.1 | 557.2 | 549.8 | 543.9 | 536.2 | 506.5 | 435.8 | 378.0 |
| 60 | 496.6 | 494.6 | 490.9 | 488.1 | 485.1 | 481.6 | 475.2 | 470.4 | 466.4 | 461.3 | 455.7 | 428.9 | 371.9 |
| 70 | 409.2 | 413.6 | 416.1 | 419.9 | 420.6 | 418.3 | 413.3 | 410.1 | 407.3 | 403.8 | 399.8 | 397.6 | 365.7 |
| 80 | 345.3 | 349.2 | 351.3 | 354.6 | 358.0 | 361.2 | 361.5 | 362.8 | 360.8 | 358.2 | 355.4 | 354.3 | 350.7 |
| 90 | 298.1 | 301.7 | 303.4 | 306.3 | 309.3 | 312.1 | 312.2 | 314.8 | 316.8 | 319.3 | 319.3 | 308.3 | 303.7 |
| 100 | 261.8 | 265.1 | 266.6 | 269.2 | 271.9 | 274.4 | 274.3 | 276.7 | 278.4 | 280.6 | 278.2 | 265.9 | 261.9 |
| 110 | | 236.1 | 237.4 | 239.8 | 242.2 | 244.5 | 244.3 | 246.4 | 248.0 | 245.1 | 241.3 | 231.2 | 227.5 |
| 120 | | 212.5 | 213.7 | 215.9 | 218.1 | 220.2 | 219.9 | 221.8 | 220.3 | 214.4 | 210.7 | 202.2 | 198.7 |
| 130 | | | 194.1 | 196.1 | 198.1 | 200.1 | 199.7 | 197.3 | 194.2 | 188.4 | 184.8 | 177.1 | 174.2 |
| 140 | | | 175.8 | 179.4 | 181.3 | 180.6 | 180.3 | 174.7 | 171.8 | 166.2 | 162.7 | 155.2 | 152.4 |
| 150 | | | | 160.0 | 161.7 | 160.0 | 160.2 | 154.9 | 152.3 | 146.8 | 143.5 | 136.3 | 133.5 |
| 160 | | | | 137.1 | 142.2 | 141.7 | 142.5 | 137.5 | 135.1 | 129.9 | 126.7 | 119.7 | 116.9 |
| 170 | | | | | 123.9 | 125.0 | 126.6 | 121.9 | 119.9 | 114.8 | 111.8 | 105.0 | 102.3 |
| 180 | | | | | 105.5 | 109.5 | 112.1 | 107.9 | 106.2 | 101.4 | 98.5 | 92.0 | 89.3 |
| 190 | | | | | | 94.6 | 98.7 | 95.1 | 93.8 | 89.2 | 86.6 | 80.2 | 77.6 |
| 200 | | | | | | 79.5 | 86.0 | 83.3 | 82.4 | 78.1 | 75.7 | 69.6 | 67.0 |
| 210 | | | | | | | 73.8 | 72.2 | 71.9 | 68.0 | 65.8 | 59.9 | 57.4 |
| 220 | | | | | | | 61.0 | 61.6 | 62.1 | 58.6 | 56.6 | 510 | 48.6 |
| 230 | | | | | | | | 51.2 | 52.8 | 49.8 | 48.1 | 42.7 | 40.5 |
| 240 | | | | | | | | 40.1 | 43.8 | 41.5 | 40.2 | 35.1 | 33.0 |
| 250 | | | | | | | | | 34.8 | 33.5 | 32.7 | 28.0 | 26.0 |
| 260 | | | | | | | | | | 25.8 | 25.6 | 21.2 | 19.5 |
| 270 | | | | | | | | | | 18.0 | 18.7 | | |

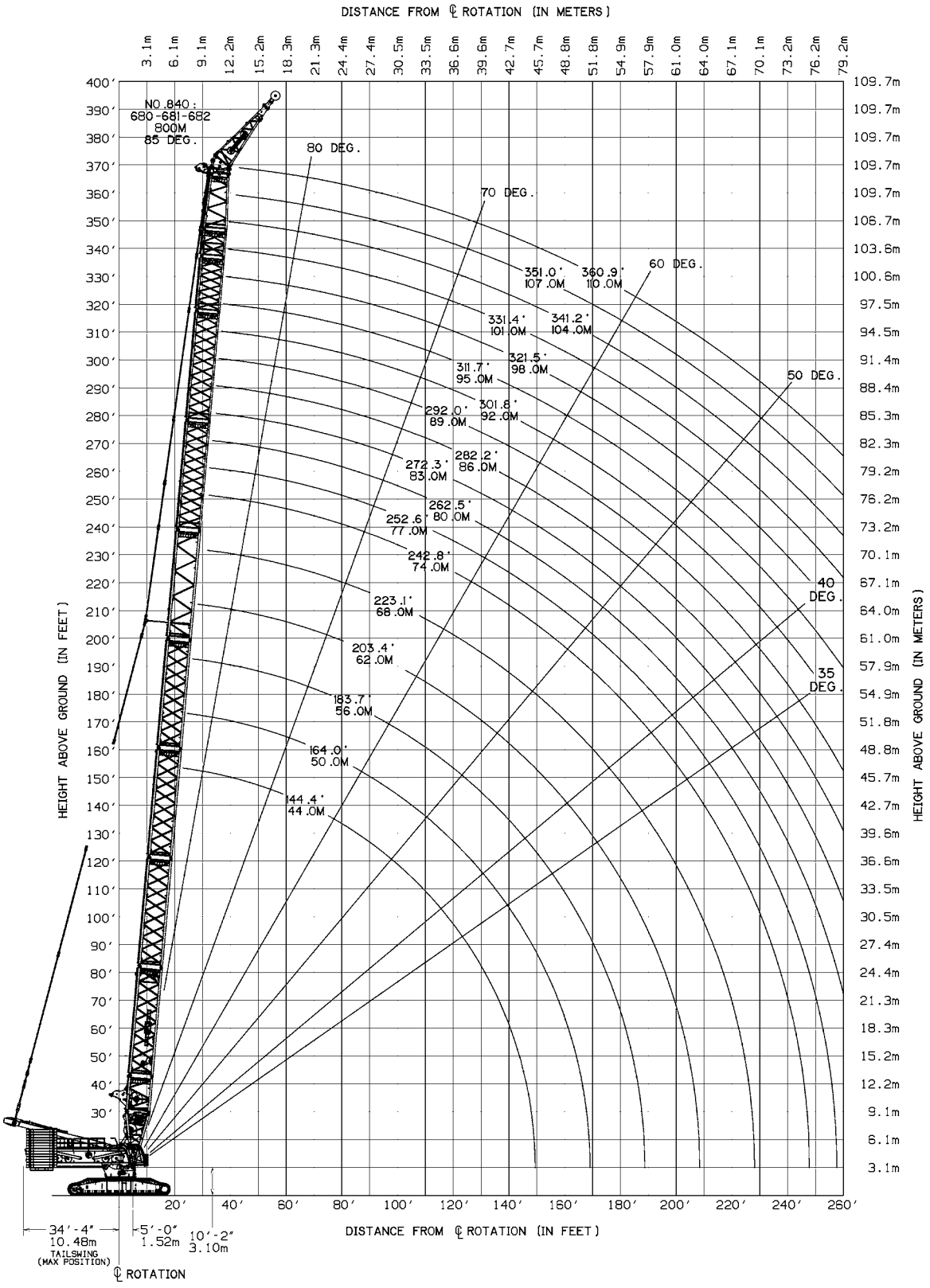
| B10: 680 boom with series 2 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **661,300 lb counterweight** | | | | | | | | | | | | | |
| **360° Rating** | | | | | | **lb x 1000** | | | | | | | |
| Radius (ft) | Boom length (ft) | | | | | | | | | | | | |
| | 105 | 125 | 144 | 164 | 184 | 203 | 223 | 243 | 262 | 282 | 302 | 322 | 341 |
| 19 | 1433.0 | | | | | | | | | | | | |
| 20 | 1245.8 | | | | | | | | | | | | |
| 24 | 1075.4 | 1058.6 | 1038.5 | 1017.4 | | | | | | | | | |
| 28 | 945.3 | 933.1 | 918.1 | 902.6 | 887.2 | 868.5 | | | | | | | |
| 32 | 842.8 | 833.6 | 822.0 | 810.4 | 798.7 | 784.4 | 765.3 | 747.6 | | | | | |
| 36 | 759.9 | 752.9 | 743.7 | 734.7 | 725.6 | 714.5 | 699.1 | 685.1 | 674.2 | 604.2 | 518.1 | | |
| 40 | 691.5 | 686.1 | 678.6 | 671.5 | 664.3 | 655.5 | 642.9 | 631.7 | 622.8 | 600.5 | 514.7 | 443.1 | 384.5 |
| 45 | 621.3 | 617.2 | 611.3 | 605.9 | 600.4 | 593.7 | 583.5 | 574.9 | 567.9 | 559 | 510.5 | 439.5 | 381.2 |
| 50 | 538.0 | 544.4 | 548.4 | 551.6 | 547.3 | 542.1 | 533.7 | 526.9 | 521.3 | 514.2 | 506.5 | 435.8 | 378 |
| 60 | 418.9 | 424.2 | 427.2 | 431.8 | 436.6 | 441.1 | 441.9 | 446.2 | 446.8 | 442.1 | 436.9 | 428.9 | 371.9 |
| 70 | 342.0 | 346.5 | 348.9 | 352.8 | 356.7 | 360.5 | 361.0 | 364.5 | 367.2 | 370.6 | 373.1 | 378.7 | 365.7 |
| 80 | 288.3 | 292.2 | 294.2 | 297.5 | 300.9 | 304.1 | 304.4 | 307.4 | 309.7 | 312.5 | 314.7 | 319.7 | 321.6 |
| 90 | 248.5 | 252.1 | 253.8 | 256.7 | 259.7 | 262.5 | 262.6 | 265.2 | 267.2 | 269.7 | 271.5 | 271.2 | 269.3 |
| 100 | 218.0 | 221.2 | 222.7 | 225.3 | 228 | 230.5 | 230.5 | 232.8 | 234.6 | 234.1 | 232.4 | 229.2 | 227.2 |
| 110 | | 196.8 | 198.1 | 200.5 | 202.9 | 205.2 | 205.0 | 205.9 | 204.3 | 201 | 199.2 | 195.9 | 193.9 |
| 120 | | 176.9 | 178.1 | 180.3 | 182.5 | 182.3 | 182.1 | 179.0 | 177.5 | 174 | 172.2 | 168.8 | 166.8 |
| 130 | | | 161.5 | 163.5 | 162.8 | 160.1 | 159.9 | 156.8 | 155.2 | 151.7 | 149.8 | 146.4 | 144.3 |
| 140 | | | 147.4 | 146.3 | 144 | 141.3 | 141.1 | 138.0 | 136.4 | 132.8 | 131.0 | 127.4 | 125.4 |
| 150 | | | | 130.1 | 127.9 | 125.3 | 125.1 | 121.9 | 120.3 | 116.8 | 114.9 | 111.3 | 109.2 |
| 160 | | | | 115.8 | 113.8 | 111.3 | 111.2 | 108.0 | 106.4 | 102.8 | 100.9 | 97.3 | 95.2 |
| 170 | | | | | 101.5 | 99.1 | 99.0 | 95.9 | 94.2 | 90.7 | 88.8 | 85.1 | 83.0 |
| 180 | | | | | 90.4 | 88.3 | 88.3 | 85.1 | 83.5 | 80.0 | 78.0 | 74.4 | 72.2 |
| 190 | | | | | | 78.6 | 78.7 | 75.6 | 74.0 | 70.4 | 68.5 | 64.8 | 62.7 |
| 200 | | | | | | 69.7 | 70.1 | 67.0 | 65.5 | 61.9 | 60.0 | 56.3 | 54.2 |
| 210 | | | | | | | 62.2 | 59.3 | 57.8 | 54.2 | 52.3 | 48.6 | 46.5 |
| 220 | | | | | | | 54.9 | 52.2 | 50.8 | 47.3 | 45.4 | 41.7 | 39.6 |
| 230 | | | | | | | | 45.7 | 44.4 | 40.9 | 39.0 | 35.4 | 33.2 |
| 240 | | | | | | | | 39.7 | 38.5 | 35.1 | 33.3 | 29.6 | 27.5 |
| 250 | | | | | | | | | 33.1 | 29.7 | 27.9 | 24.3 | 22.2 |
| 260 | | | | | | | | | | 24.8 | 23.0 | 19.4 | 17.3 |
| 270 | | | | | | | | | | 18.0 | 18.4 | | |

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

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# Extended upper boom point range diagram

## B40: 680-681-682 with 25 ft extended upper boom point




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# Extended upper boom point load charts

| B40: 680-681-682 boom with 23 ft extended upper boom point series 2 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **661,300 lb counterweight** | | | | | | | | | | | | |
| **360° Rating** | | | | | | lb x 1000 | 28° Offset | | | | | |
| **Radius (ft)** | **Boom length (ft)** | | | | | | | | | | | |
| | **144** | **164** | **184** | **203** | **223** | **243** | **262** | **282** | **302** | **322** | **341** | **361** |
| **32** | 292.8 | | | | | | | | | | | |
| **34** | 292.8 | 292.8 | | | | | | | | | | |
| **36** | 292.8 | 292.8 | 292.8 | | | | | | | | | |
| **38** | 292.8 | 292.8 | 292.8 | 292.8 | | | | | | | | |
| **40** | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | | | | | | |
| **45** | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | | | | |
| **50** | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | |
| **60** | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 276.8 | 250 |
| **70** | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 262.5 | 236 |
| **80** | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 280 | 249.7 | 223.5 |
| **90** | 257.8 | 259.8 | 262.3 | 264.2 | 267.7 | 269.5 | 270.8 | 273.9 | 277.2 | 268.4 | 238.2 | 212.2 |
| **100** | 227.1 | 229 | 231.1 | 232.8 | 235.9 | 237.5 | 238.5 | 241.4 | 244.3 | 245.8 | 227.7 | 202.1 |
| **110** | 202.8 | 204.5 | 206.4 | 208 | 210.7 | 212.2 | 213 | 215.6 | 218.3 | 218.5 | 218 | 193 |
| **120** | 183.1 | 184.6 | 186.3 | 187.7 | 190.2 | 191.5 | 192.2 | 194.7 | 192.7 | 190.9 | 190.5 | 184.6 |
| **130** | 166.7 | 168.1 | 169.7 | 171 | 173.2 | 174.5 | 174.6 | 173.2 | 169.9 | 168.1 | 167.6 | 165.7 |
| **140** | 152.9 | 154.3 | 155.6 | 156.9 | 158.9 | 158 | 155.5 | 154.1 | 150.7 | 148.9 | 148.4 | 146.4 |
| **150** | 141.1 | 142.4 | 143.7 | 144.9 | 143.2 | 141.8 | 139.2 | 137.7 | 134.3 | 132.5 | 131.9 | 129.9 |
| **160** | | 132.2 | 133.4 | 133.3 | 129.1 | 127.7 | 125.1 | 123.6 | 120.1 | 118.3 | 117.7 | 115.7 |
| **170** | | 123.3 | 122.1 | 121 | 116.8 | 115.4 | 112.7 | 111.2 | 107.7 | 105.9 | 105.3 | 103.2 |
| **180** | | | 111.2 | 110.1 | 105.9 | 104.5 | 101.8 | 100.3 | 96.8 | 94.9 | 94.4 | 92.3 |
| **190** | | | 101.3 | 100.4 | 96.3 | 94.8 | 92.2 | 90.6 | 87.1 | 85.2 | 84.7 | 82.6 |
| **200** | | | | 91.7 | 87.6 | 86.2 | 83.5 | 82 | 78.4 | 76.5 | 76 | 73.9 |
| **220** | | | | | 72.5 | 71.2 | 68.6 | 67.1 | 63.5 | 61.7 | 61.1 | 59 |
| **240** | | | | | | 58.7 | 56.2 | 54.8 | 51.2 | 49.4 | 48.8 | 46.7 |
| **260** | | | | | | | 45.7 | 44.3 | 40.8 | 39 | 38.5 | 36.4 |
| **280** | | | | | | | | 35.3 | 31.8 | 30.1 | 29.6 | 27.5 |
| **300** | | | | | | | | | | 22.3 | 21.9 | 19.9 |
| **320** | | | | | | | | | | | 15.2 | |

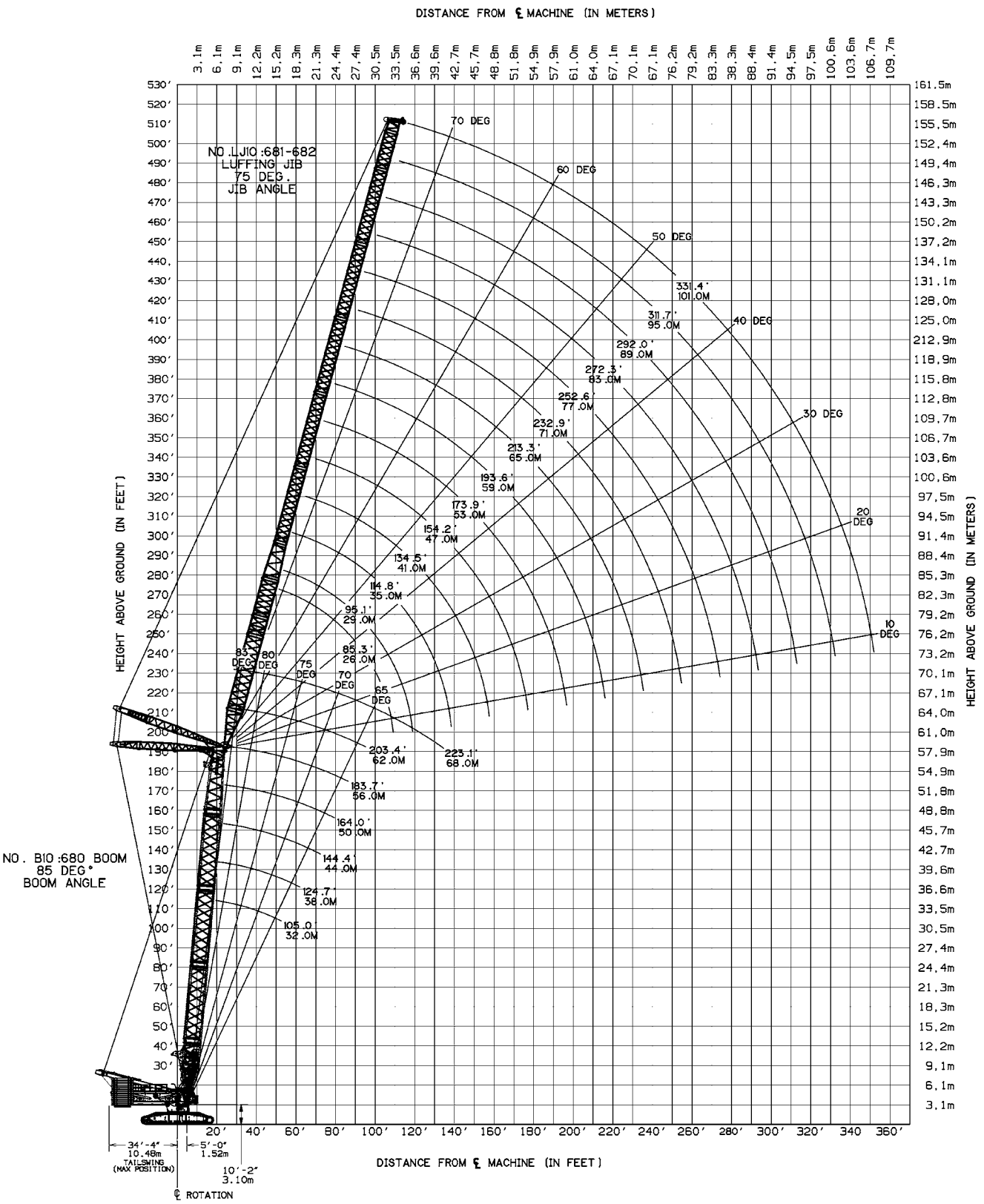
| B40: 680-681-682 boom with 23 ft extended upper boom point series 2 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **661,300 lb counterweight** | | | | | | | | | | | | |
| **360° Rating** | | | | | | lb x 1000 | 35° Offset | | | | | |
| **Radius (ft)** | **Boom length (ft)** | | | | | | | | | | | |
| | **144** | **164** | **184** | **203** | **223** | **243** | **262** | **282** | **302** | **322** | **341** | **361** |
| **34** | 292.8 | | | | | | | | | | | |
| **36** | 292.8 | 292.8 | | | | | | | | | | |
| **38** | 292.8 | 292.8 | 292.8 | | | | | | | | | |
| **40** | 292.8 | 292.8 | 292.8 | 292.8 | | | | | | | | |
| **45** | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | | | | | |
| **50** | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | | |
| **60** | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 289.9 | 263.4 | 239.5 |
| **70** | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 277.5 | 250.5 | 226.6 |
| **80** | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 292.8 | 266.2 | 239 | 215.1 |
| **90** | 258 | 260 | 262.5 | 264.4 | 267.9 | 269.7 | 271 | 274.1 | 277.4 | 255.9 | 228.5 | 204.7 |
| **100** | 227.3 | 229.1 | 231.3 | 233 | 236.1 | 237.7 | 238.7 | 241.5 | 244.5 | 246 | 219.1 | 195.3 |
| **110** | 202.9 | 204.6 | 206.5 | 208.1 | 210.8 | 212.3 | 213.1 | 215.8 | 218.5 | 219.8 | 210.4 | 186.8 |
| **120** | 183.2 | 184.7 | 186.4 | 187.9 | 190.3 | 191.7 | 192.3 | 194.8 | 194.1 | 192.4 | 192 | 179.1 |
| **130** | 166.8 | 168.2 | 169.8 | 171.1 | 173.3 | 174.6 | 175.1 | 174.3 | 171.2 | 169.4 | 169 | 167.1 |
| **140** | 153 | 154.3 | 155.7 | 157 | 159 | 158.9 | 156.5 | 155.1 | 151.8 | 150.1 | 149.6 | 147.6 |
| **150** | | 142.5 | 143.8 | 144.9 | 143.9 | 142.5 | 140 | 138.6 | 135.3 | 133.5 | 133 | 131.1 |
| **160** | | 132.3 | 133.4 | 133.8 | 129.8 | 128.3 | 125.8 | 124.4 | 121 | 119.2 | 118.7 | 116.7 |
| **170** | | | 122.4 | 121.4 | 117.4 | 115.9 | 113.4 | 111.9 | 108.5 | 106.7 | 106.2 | 104.2 |
| **180** | | | 111.4 | 110.5 | 106.4 | 105 | 102.4 | 101 | 97.5 | 95.7 | 95.2 | 93.2 |
| **190** | | | | 100.7 | 96.6 | 95.3 | 92.7 | 91.2 | 87.8 | 85.9 | 85.4 | 83.4 |
| **200** | | | | | 87.9 | 86.5 | 84 | 82.5 | 79 | 77.2 | 76.7 | 74.6 |
| **220** | | | | | | 71.5 | 69 | 67.5 | 64 | 62.2 | 61.7 | 59.6 |
| **240** | | | | | | | 56.4 | 55.1 | 51.6 | 49.8 | 49.3 | 47.2 |
| **260** | | | | | | | | 44.5 | 41.1 | 39.3 | 38.8 | 36.8 |
| **280** | | | | | | | | | | 30.3 | 29.9 | 27.9 |
| **300** | | | | | | | | | | | 22.1 | 20.1 |
| **315** | | | | | | | | | | | 16.5 | 15 |

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

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# Luffing jib range diagram

## LJ10: 681-682 luffing jib on B10:680 boom




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## LJ10: 681-682 luffing jib on B10:680 boom series 3

**881,800 lb counterweight  360° Rating  kg x 1000  85° boom angle**

**125 ft boom length**

| Radius (ft) | luffing jib length (ft | | | | |
|---|---|---|---|---|---|
| | 85 | 135 | 194 | 272 | 331 |
| 50 | 549.4 | | | | |
| 60 | 471.1 | 455.2 | | | |
| 70 | 412.1 | 400.5 | | | |
| 80 | 366.2 | 357.3 | 342.1 | | |
| 90 | 320.8 | 322.3 | 310.2 | | |
| 100 | 283.4 | 286.4 | 283.6 | 201.4 | |
| 110 | | 256.4 | 258.4 | 199.3 | 122.9 |
| 120 | | 232.1 | 233.7 | 197 | 121.2 |
| 130 | | 211.9 | 213.3 | 194.5 | 119 |
| 140 | | 194.9 | 196.1 | 188.9 | 117.1 |
| 150 | | 180.3 | 181.4 | 171.9 | 115.2 |
| 160 | | | 166.5 | 156.9 | 113.3 |
| 170 | | | 153 | 143.7 | 111.4 |
| 180 | | | 141 | 131.9 | 109.5 |
| 190 | | | 130.3 | 121.3 | 107.7 |
| 200 | | | 120.5 | 111.9 | 103.2 |
| 220 | | | | 95.5 | 87.1 |
| 240 | | | | 81.9 | 73.7 |
| 260 | | | | 70.3 | 62.3 |
| 280 | | | | 60.1 | 52.5 |
| 300 | | | | | 43.9 |
| 320 | | | | | 36.3 |
| 340 | | | | | 29.1 |

**164 ft boom length**

| Radius (ft) | luffing jib length (ft) | | | | |
|---|---|---|---|---|---|
| | 85 | 135 | 194 | 272 | 331 |
| 50 | 534.2 | | | | |
| 60 | 460.9 | | | | |
| 70 | 404.9 | 390.6 | | | |
| 80 | 360.8 | 350 | 330.9 | | |
| 90 | 325.4 | 316.7 | 303.9 | | |
| 100 | 287.5 | 289.1 | 278.6 | 177 | |
| 110 | | 260.1 | 257 | 175.6 | |
| 120 | | 235.4 | 235.5 | 174 | 110.4 |
| 130 | | 214.9 | 212.7 | 172.1 | 109 |
| 140 | | 197.7 | 193.2 | 170.2 | 107.6 |
| 150 | | 182.9 | 176.3 | 165.3 | 106.1 |
| 160 | | | 161.5 | 150.9 | 104.5 |
| 170 | | | 148.4 | 138.3 | 103 |
| 180 | | | 136.8 | 126.9 | 101.4 |
| 190 | | | 126.3 | 116.7 | 99.9 |
| 200 | | | 116.8 | 107.6 | 98.3 |
| 220 | | | | 91.8 | 82.9 |
| 240 | | | | 78.5 | 69.9 |
| 260 | | | | 67.2 | 58.9 |
| 280 | | | | 57.4 | 49.3 |
| 300 | | | | | 41 |
| 320 | | | | | 33.7 |
| 340 | | | | | 26.8 |

**203 ft boom length**

| Radius (ft) | luffing jib length (ft) | | | |
|---|---|---|---|---|
| | 85 | 135 | 194 | 272 |
| 55 | 480.5 | | | |
| 60 | 448.9 | | | |
| 70 | 396.4 | 380.7 | | |
| 80 | 354.6 | 342.6 | | |
| 90 | 320.6 | 311.1 | 279.9 | |
| 100 | 292 | 284.7 | 273.6 | |
| 110 | 261.4 | 262.4 | 252.5 | 157.5 |
| 120 | | 237.6 | 226.7 | 156.1 |
| 130 | | 215.1 | 204.9 | 154.4 |
| 140 | | 195.7 | 186.1 | 152.6 |
| 150 | | 178.9 | 169.8 | 150.7 |
| 160 | | 163.8 | 155.5 | 144.1 |
| 170 | | | 142.9 | 131.9 |
| 180 | | | 131.6 | 121 |
| 190 | | | 121.5 | 111.3 |
| 200 | | | 112.4 | 102.5 |
| 220 | | | | 87.2 |
| 240 | | | | 74.4 |
| 260 | | | | 63.5 |
| 280 | | | | 54 |

**223 ft boom length**

| Radius(ft) | luffing jib length (ft) | | |
|---|---|---|---|
| | 85 | 135 | 194 |
| 55 | 471.3 | | |
| 60 | 441.2 | | |
| 70 | 390.7 | 356.8 | |
| 80 | 350.3 | 337.8 | |
| 90 | 317.3 | 307.4 | 238.3 |
| 100 | 289.9 | 281.7 | 234.9 |
| 110 | 262.4 | 258.8 | 230.2 |
| 120 | | 232.9 | 220.9 |
| 130 | | 210.9 | 199.9 |
| 140 | | 192.1 | 181.7 |
| 150 | | 175.7 | 165.8 |
| 160 | | 161 | 151.9 |
| 170 | | | 139.6 |
| 180 | | | 128.7 |
| 190 | | | 118.8 |
| 200 | | | 109.9 |
| 220 | | | 94 |

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

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# Luffing jib load charts

## LJ10: 681-682 luffing jib on B10: 680 boom series 2

**661,300 lb counterweight** **360° Rating** **kg x 1000 85° boom angle**

### 125 ft boom length

| Radius (ft) | luffing jib length (ft) | | | | |
|---|---|---|---|---|---|
| | 85 | 135 | 194 | 272 | 331 |
| 50 | 527 | | | | |
| 60 | 451.8 | 437 | | | |
| 70 | 371.6 | 376.3 | | | |
| 80 | 315.3 | 319.2 | 322.7 | | |
| 90 | 273.7 | 277.1 | 279.9 | | |
| 100 | 241.7 | 244.7 | 247.1 | 201.4 | |
| 110 | | 219.1 | 221 | 199.3 | 122.9 |
| 120 | | 198.2 | 199.9 | 197 | 121.2 |
| 130 | | 180.9 | 182.3 | 179.1 | 119 |
| 140 | | 166.4 | 167.1 | 161.1 | 117.1 |
| 150 | | 153.9 | 151.7 | 145.6 | 115.2 |
| 160 | | | 138.3 | 132.3 | 113.3 |
| 170 | | | 126.5 | 120.7 | 111.4 |
| 180 | | | 116.1 | 110.4 | 104.6 |
| 190 | | | 106.8 | 101.3 | 95.5 |
| 200 | | | 98.4 | 93.1 | 87.3 |
| 220 | | | | 79.2 | 73.4 |
| 240 | | | | 67.6 | 61.9 |
| 260 | | | | 57.7 | 52.2 |
| 280 | | | | 49.1 | 44 |
| 300 | | | | | 36.8 |
| 320 | | | | | 30.4 |
| 340 | | | | | 24.7 |

### 164 ft boom length

| Radius (ft) | luffing jib length (ft) | | | | |
|---|---|---|---|---|---|
| | 85 | 135 | 194 | 272 | 331 |
| 50 | 512.9 | | | | |
| 60 | 442.3 | | | | |
| 70 | 377.8 | 375.1 | | | |
| 80 | 320.6 | 324.5 | 320.8 | | |
| 90 | 278.3 | 281.7 | 284.5 | | |
| 100 | 245.8 | 248.8 | 251.1 | 177 | |
| 110 | | 222.7 | 224.7 | 175.6 | |
| 120 | | 201.5 | 203.2 | 174 | 110.4 |
| 130 | | 184 | 183.2 | 172.1 | 109 |
| 140 | | 169.2 | 165.3 | 158.9 | 107.6 |
| 150 | | 154.5 | 150 | 143.6 | 106.1 |
| 160 | | | 136.7 | 130.4 | 104.5 |
| 170 | | | 125.1 | 118.9 | 103 |
| 180 | | | 114.8 | 108.8 | 101.4 |
| 190 | | | 105.6 | 99.8 | 93.8 |
| 200 | | | 97.3 | 91.7 | 85.7 |
| 220 | | | | 77.9 | 72 |
| 240 | | | | 66.4 | 60.6 |
| 260 | | | | 56.7 | 51 |
| 280 | | | | 48.2 | 42.9 |
| 300 | | | | | 35.8 |
| 320 | | | | | 29.5 |
| 340 | | | | | 23.9 |

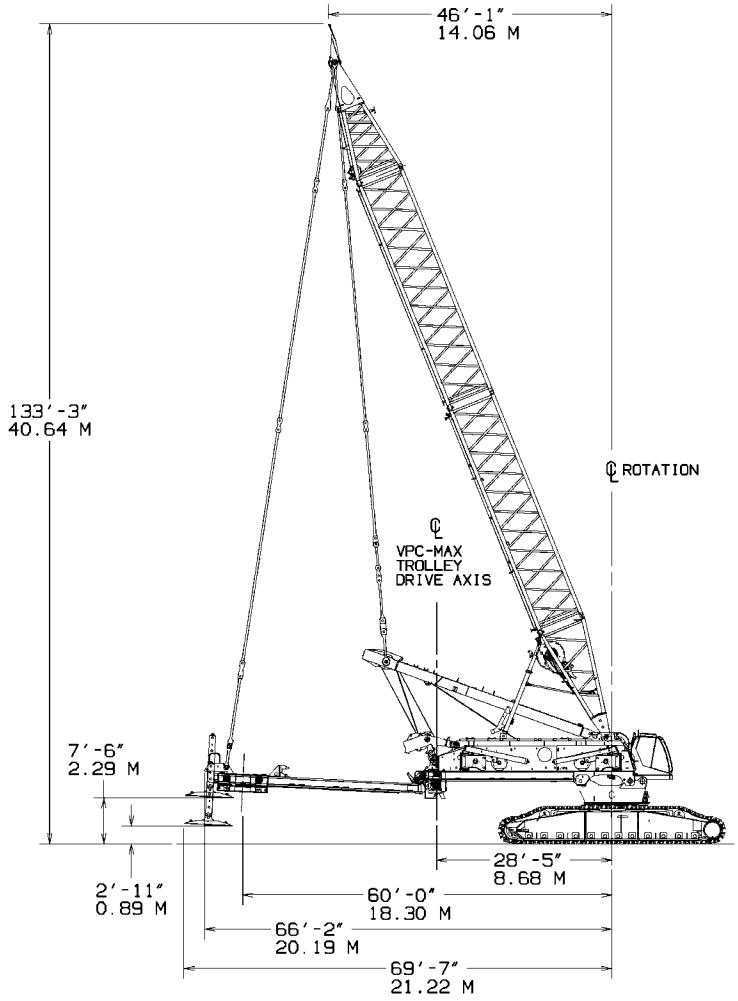
### 203 ft boom length

| Radius (ft) | luffing jib length (ft) | | | |
|---|---|---|---|---|
| | 85 | 135 | 194 | 272 |
| 55 | 461.6 | | | |
| 60 | 431.1 | | | |
| 70 | 380.5 | 365.8 | | |
| 80 | 326.5 | 329 | | |
| 90 | 283.4 | 286.8 | 279.9 | |
| 100 | 250.3 | 253.3 | 255.6 | |
| 110 | 224 | 226.7 | 227 | 157.5 |
| 120 | | 205.2 | 201.7 | 156.1 |
| 130 | | 186.4 | 180.7 | 154.4 |
| 140 | | 168.4 | 163 | 152.6 |
| 150 | | 152.8 | 147.8 | 141.2 |
| 160 | | 138.6 | 134.7 | 128.2 |
| 170 | | | 123.2 | 116.8 |
| 180 | | | 113.1 | 106.8 |
| 190 | | | 104 | 97.9 |
| 200 | | | 95.8 | 89.9 |
| 220 | | | | 76.3 |
| 240 | | | | 65 |
| 260 | | | | 55.4 |
| 280 | | | | 47.1 |

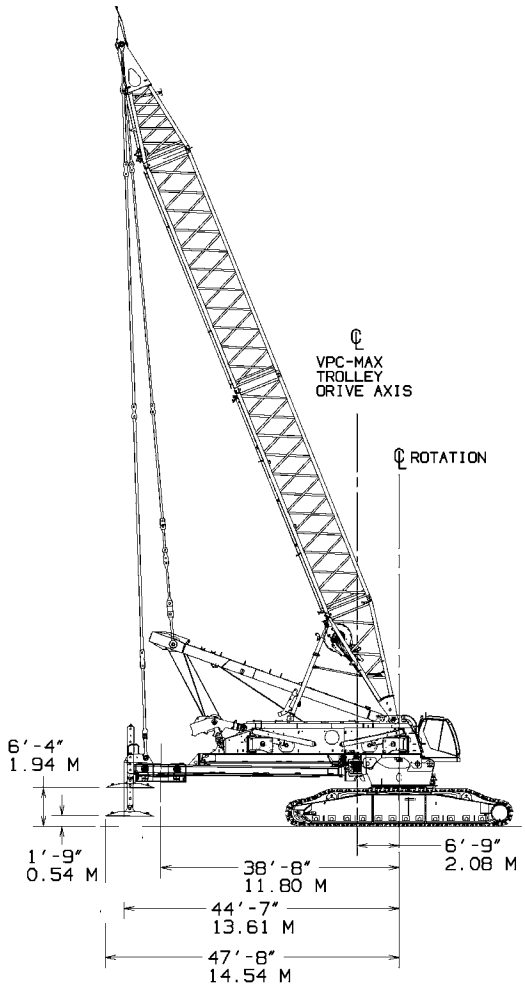
### 223 ft boom length

| Radius (ft) | luffing jib length (ft) | | |
|---|---|---|---|
| | 85 | 135 | 194 |
| 55 | 452.9 | | |
| 60 | 423.8 | | |
| 70 | 375.2 | 356.8 | |
| 80 | 327.8 | 324.6 | |
| 90 | 284.6 | 288 | 238.3 |
| 100 | 251.4 | 254.3 | 234.9 |
| 110 | 225 | 227.7 | 225.4 |
| 120 | | 206 | 200.3 |
| 130 | | 185.3 | 179.4 |
| 140 | | 167.4 | 161.8 |
| 150 | | 151.9 | 146.7 |
| 160 | | 138.1 | 133.7 |
| 170 | | | 122.3 |
| 180 | | | 112.2 |
| 190 | | | 103.2 |
| 200 | | | 95 |
| 220 | | | 80.5 |

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**VPC-MAX BEAM: MAX POSITION**
**CWT TRAY: MAX POSITION**




**VPC-MAX BEAM: MIN POSITION**
**CWT TRAY: MAX POSITION**

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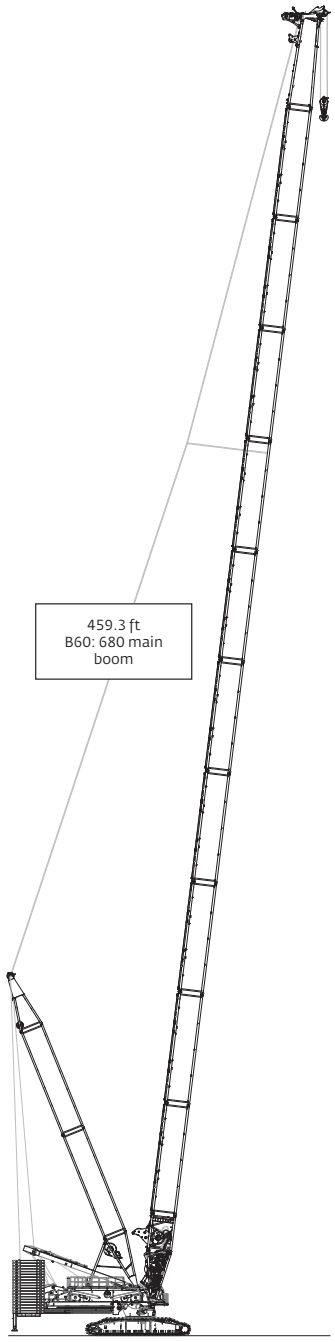
# Transport data
VPC-MAX

| Load summary | | |

**B60: 680 VPC-MAX main boom combinations**

| Boom length (ft) | Main boom inserts | | | | |
|---|---|---|---|---|---|
| | 13.1 ft XH No. 680 | 39.4 ft XH No. 680 | 19.7 ft H No. 680 | 39.4 ft H No. 680 | 39.4 ft M No. 680 |
| 144.4 | 1 | 1 | 0 | 1 | 0 |
| 164 | 1 | 1 | 1 | 1 | 0 |
| 183.7 | 1 | 2 | 0 | 1 | 0 |
| 203.4 | 1 | 2 | 1 | 1 | 0 |
| 223.1 | 1 | 2 | 0 | 1 | 1 |
| 242.8 | 1 | 2 | 1 | 1 | 1 |
| 262.5 | 1 | 2 | 0 | 2 | 1 |
| 282.2 | 1 | 2 | 1 | 2 | 1 |
| 301.8 | 1 | 2 | 0 | 3 | 1 |
| 321.5 | 1 | 2 | 1 | 3 | 1 |
| 341.2 | 1 | 2 | 0 | 4 | 1 |
| 360.9 | 1 | 2 | 1 | 4 | 1 |
| 380.6 | 1 | 2 | 0 | 4 | 2 |
| 400.3 | 1 | 2 | 1 | 4 | 2 |
| 419.9 | 1 | 2 | 0 | 4 | 3 |
| 439.6 | 1 | 2 | 1 | 4 | 3 |
| 459.3 | 1 | 2 | 0 | 4 | 4 |
| 479.0 | 1 | 2 | 1 | 4 | 4 |

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



# Boom combinations

VPC-MAX

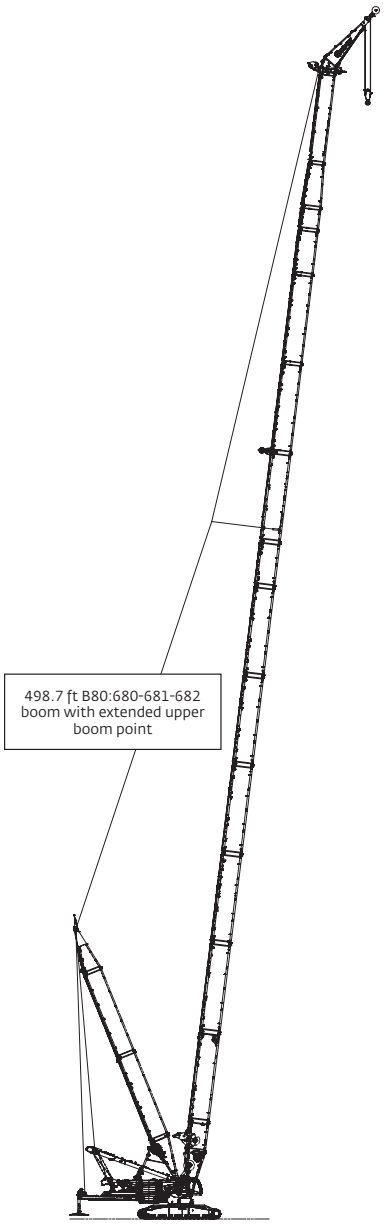
**B80: 680-681-682 boom with 25 ft extended upper boom point**

| Boom length (ft) | Main boom inserts | | | | |
|---|---|---|---|---|---|
| | 13.1 ft XH No. 680 | 39.4 ft XH No. 680 | 39.4 ft H No. 680 | 19.7 ft H No. 680 | 39.4 ft M No. 680 |
| 301.8 | 1 | 2 | 1 | 0 | 1 |
| 321.5 | 1 | 2 | 1 | 0 | 1 |
| 341.2 | 1 | 2 | 1 | 0 | 1 |
| 360.9 | 1 | 2 | 2 | 1 | 1 |
| 370.7 | 1 | 2 | 2 | 1 | 1 |
| 380.6 | 1 | 2 | 2 | 1 | 1 |
| 390.4 | 1 | 2 | 2 | 1 | 1 |
| 400.3 | 1 | 2 | 2 | 1 | 1 |
| 410.1 | 1 | 2 | 2 | 1 | 1 |
| 419.9 | 1 | 2 | 3 | 1 | 1 |
| 429.8 | 1 | 2 | 3 | 1 | 1 |
| 439.6 | 1 | 2 | 3 | 1 | 1 |
| 449.5 | 1 | 2 | 3 | 1 | 1 |
| 459.3 | 1 | 2 | 3 | 1 | 1 |
| 469.2 | 1 | 2 | 3 | 1 | 1 |
| 479.0 | 1 | 2 | 3 | 1 | 1 |
| 488.8 | 1 | 2 | 3 | 1 | 1 |
| 498.7 | 1 | 2 | 3 | 1 | 1 |

| Boom length (ft) | Liffing jib inserts | | | | | |
|---|---|---|---|---|---|---|
| | 19.7 ft No. 680-681 | 9.8 ft No. 681 | 19.7 ft No. 681 | 39.7 ft No. 681 | 39.7 ft No. 681-682 | 39.7 ft No. 682 |
| 301.8 | 1 | 1 | 0 | 0 | 1 | 0 |
| 321.5 | 1 | 1 | 1 | 0 | 1 | 0 |
| 341.2 | 1 | 1 | 0 | 1 | 1 | 0 |
| 360.9 | 1 | 1 | 0 | 0 | 1 | 0 |
| 370.7 | 1 | 0 | 1 | 0 | 1 | 0 |
| 380.6 | 1 | 1 | 1 | 0 | 1 | 0 |
| 390.4 | 1 | 0 | 0 | 1 | 1 | 0 |
| 400.3 | 1 | 1 | 0 | 1 | 1 | 0 |
| 410.1 | 1 | 0 | 1 | 1 | 1 | 0 |
| 419.9 | 1 | 1 | 1 | 0 | 1 | 0 |
| 429.8 | 1 | 0 | 0 | 1 | 1 | 0 |
| 439.6 | 1 | 1 | 0 | 1 | 1 | 0 |
| 449.5 | 1 | 0 | 1 | 1 | 1 | 0 |
| 459.3 | 1 | 1 | 1 | 1 | 1 | 0 |
| 469.2 | 1 | 0 | 0 | 1 | 1 | 1 |
| 479.0 | 1 | 1 | 0 | 1 | 1 | 1 |
| 488.8 | 1 | 0 | 1 | 1 | 1 | 1 |
| 498.7 | 1 | 1 | 1 | 1 | 1 | 1 |

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

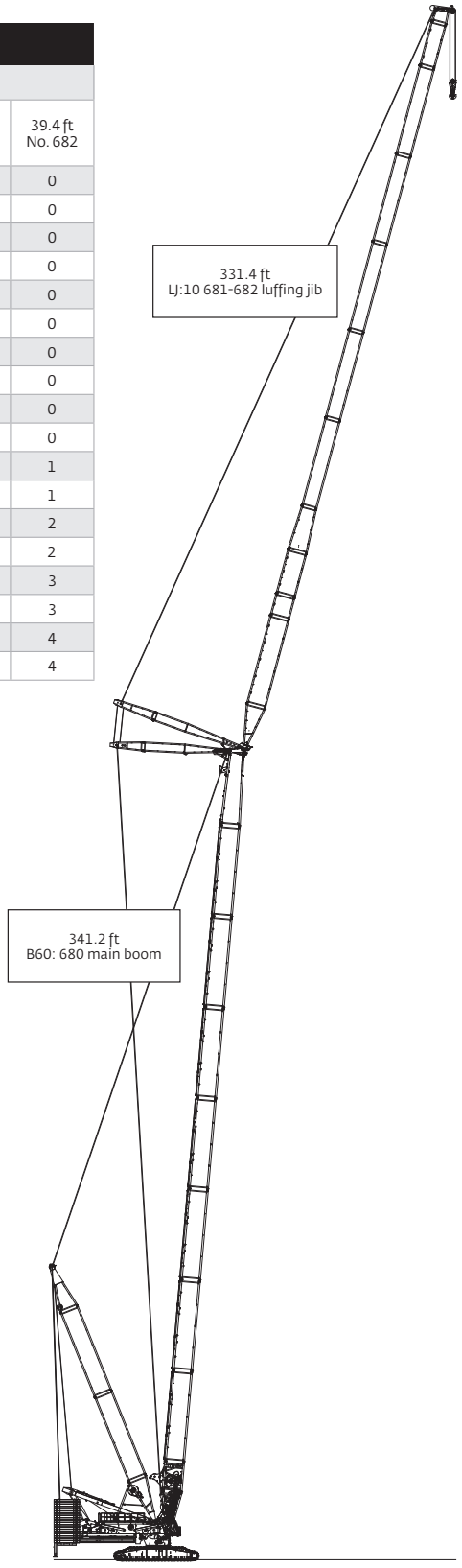
*For complete chart, refer to www.cranelibrary.com.*




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**LJ10: 681-682 VPC-MAX luffing jib combinations**

| Luffing jib length (ft) | Luffing jib inserts | | | | | | |
|---|---|---|---|---|---|---|---|
| | 39.4 ft No.680-681 | 9.8 ft No. 681 | 19.7 ft No. 681 | 39.4 ft No. 681 | 19.7 ft No. 681-682 | 19.7 ft No. 682 | 39.4 ft No. 682 |
| 85.3 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 95.1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| 105.0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| 114.8 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| 124.7 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| 134.5 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| 144.4 | 1 | 0 | 1 | 1 | 1 | 0 | 0 |
| 154.2 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| 164.0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 |
| 173.9 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 193.6 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| 213.3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 232.9 | 1 | 1 | 1 | 1 | 1 | 0 | 2 |
| 252.6 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| 272.3 | 1 | 1 | 1 | 1 | 1 | 0 | 3 |
| 292.0 | 1 | 1 | 1 | 1 | 1 | 1 | 3 |
| 311.7 | 1 | 1 | 1 | 1 | 1 | 0 | 4 |
| 331.4 | 1 | 1 | 1 | 1 | 1 | 1 | 4 |

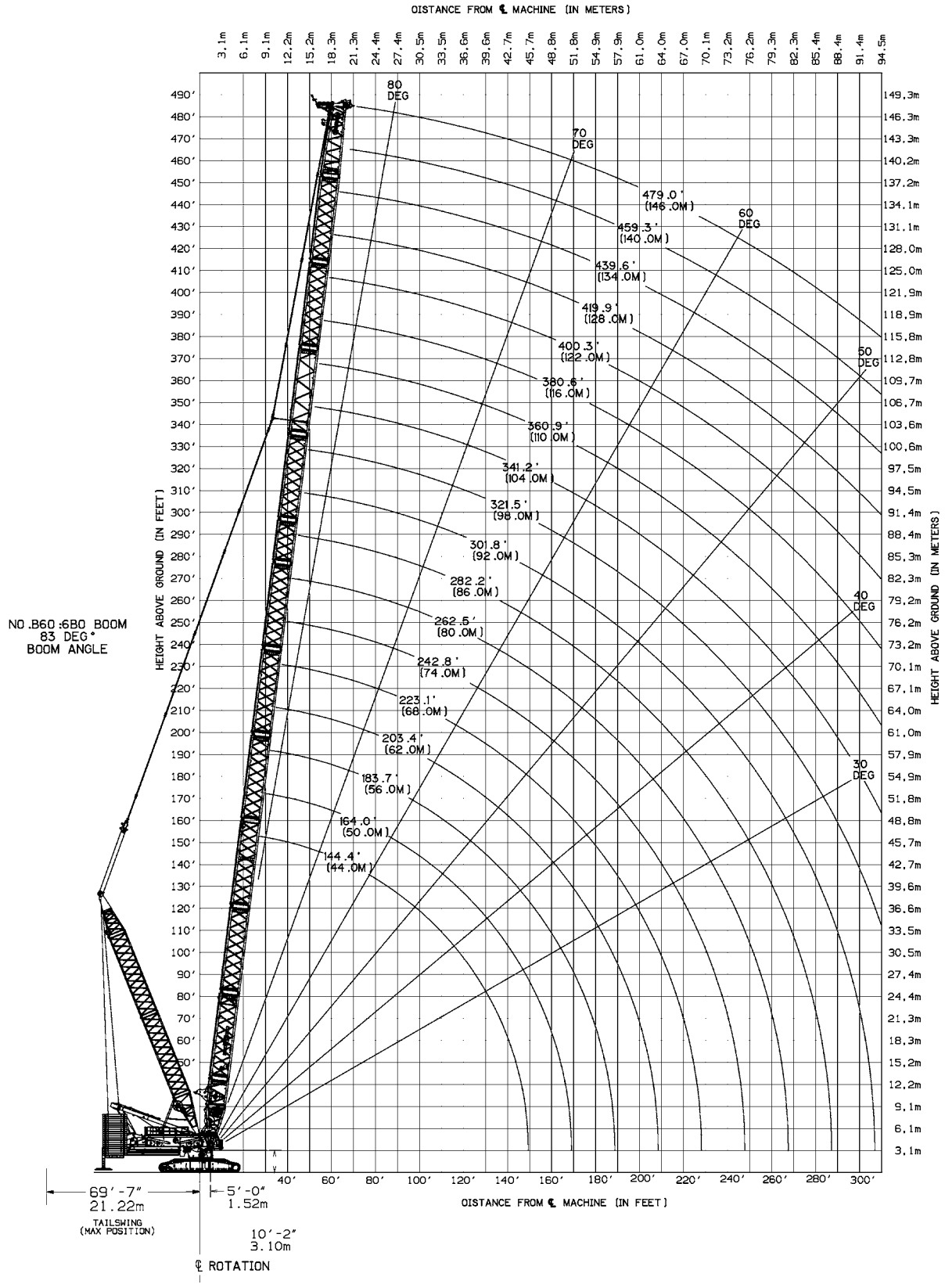



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# Main boom range diagram

VPC-MAX

## B60:680 boom with VPC-MAX




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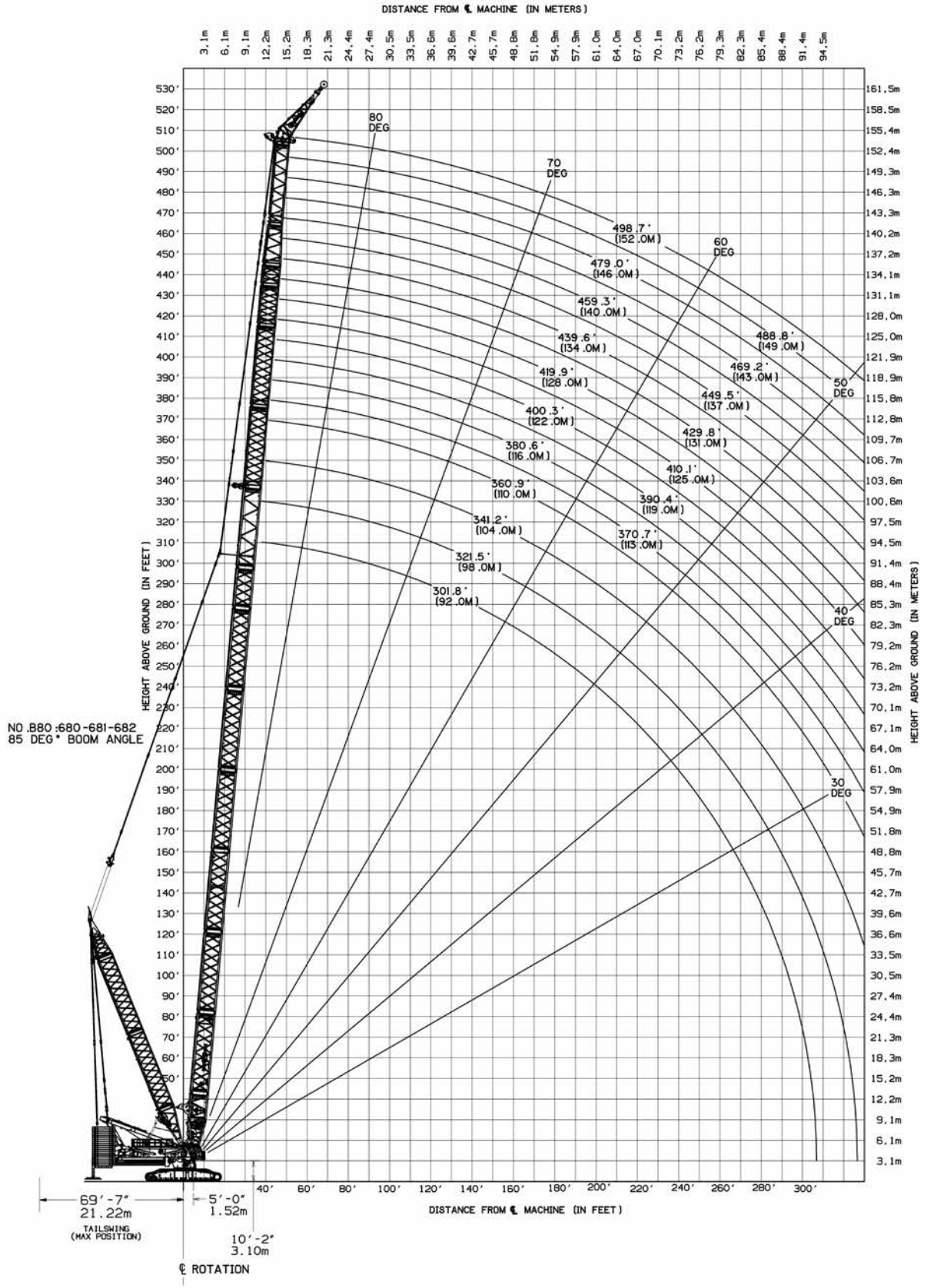
| B60:680 boom with VPC-MAX | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 881,800 lb Counterweight | | | | | | | | | |
| 360° Rating | lb x 1000 | | | | | | | | | |
| Radius (ft) | Boom Length (ft) | | | | | | | | | |
| | 144 | 184 | 223 | 262 | 302 | 341 | 381 | 420 | 459 | 479 |
| 28 | 1349.5 | | | | | | | | | |
| 30 | 1312.3 | | | | | | | | | |
| 32 | 1277 | 1155.3 | | | | | | | | |
| 34 | 1243.5 | 1127.2 | | | | | | | | |
| 36 | 1211.6 | 1100.3 | | | | | | | | |
| 38 | 1181.2 | 1074.5 | 973.3 | | | | | | | |
| 40 | 1152.2 | 1049.9 | 953 | | | | | | | |
| 45 | 1085.3 | 992.5 | 905.2 | 809.3 | | | | | | |
| 50 | 1085.3 | 940.6 | 861.5 | 786.5 | 589.7 | | | | | |
| 60 | 1085.3 | 940.6 | 813.5 | 720.9 | 589.7 | 461.3 | 348.1 | | | |
| 70 | 932.3 | 923.6 | 813.5 | 691.5 | 589.7 | 461.3 | 348.1 | 264.2 | 215.1 | 188.5 |
| 80 | 810.1 | 801.6 | 797.8 | 691.5 | 589.7 | 461.3 | 348.1 | 264.2 | 215 | 188.1 |
| 90 | 714.4 | 706.1 | 702.3 | 691.5 | 589.7 | 461.3 | 348.1 | 264.2 | 214.7 | 187.9 |
| 100 | 634.8 | 629 | 625.4 | 619.7 | 589.7 | 461.3 | 348.1 | 264.1 | 214.3 | 187.5 |
| 110 | 561.9 | 556.1 | 554.3 | 550.5 | 546 | 461.3 | 348.1 | 263.8 | 213.9 | 187.1 |
| 120 | 502.7 | 496.9 | 494.9 | 491 | 486.4 | 461.3 | 348.1 | 263.3 | 213.5 | 186.7 |
| 130 | 453.4 | 447.8 | 445.7 | 441.7 | 437 | 431.8 | 348.1 | 262.9 | 213 | 186.2 |
| 140 | 411.8 | 406.4 | 404.2 | 400.1 | 395.4 | 390.1 | 347.8 | 262.4 | 212.5 | 185.7 |
| 150 | | 371 | 368.8 | 364.7 | 359.8 | 354.5 | 347.2 | 261.8 | 211.7 | 185.1 |
| 160 | | 340.3 | 338.2 | 334 | 329.1 | 323.7 | 320.3 | 261.2 | 211.1 | 184.5 |
| 170 | | 313.5 | 311.4 | 307.2 | 302.3 | 296.9 | 293.4 | 260.5 | 210.6 | 184 |
| 180 | | 289.8 | 287.8 | 283.6 | 278.7 | 273.3 | 269.8 | 259.8 | 209.9 | 182.5 |
| 190 | | | 266.8 | 262.7 | 257.7 | 252.3 | 248.8 | 244.7 | 208.4 | 180.7 |
| 200 | | | 248.1 | 244 | 239 | 233.5 | 230 | 226 | 206.4 | 179 |
| 210 | | | 231.1 | 227.1 | 222.2 | 216.7 | 213.2 | 209.1 | 204.3 | 177.3 |
| 220 | | | 215.7 | 211.8 | 206.9 | 201.4 | 197.9 | 193.9 | 189.6 | 175.6 |
| 230 | | | | 197.9 | 193.1 | 187.6 | 184.1 | 180 | 175.7 | 171.9 |
| 240 | | | | 185.2 | 180.4 | 174.9 | 171.5 | 167.4 | 163.1 | 159.2 |
| 250 | | | | 173.5 | 168.8 | 163.3 | 159.9 | 155.8 | 151.5 | 147.6 |
| 260 | | | | | 158.1 | 152.7 | 149.2 | 145.1 | 140.9 | 137 |
| 270 | | | | | 148.2 | 142.8 | 139.4 | 135.3 | 131 | 127.1 |
| 280 | | | | | 139 | 133.7 | 130.3 | 126.2 | 121.9 | 118 |
| 290 | | | | | 130.4 | 125.2 | 121.8 | 117.8 | 113.5 | 109.6 |
| 300 | | | | | | 117.2 | 114 | 109.9 | 105.6 | 101.7 |
| 320 | | | | | | 102.8 | 99.7 | 95.6 | 91.4 | 87.5 |
| 340 | | | | | | | 87.1 | 83.1 | 78.9 | 75 |
| 360 | | | | | | | 75.8 | 72 | 67.8 | 63.9 |
| 380 | | | | | | | | 62 | 57.8 | 54 |
| 400 | | | | | | | | 52.9 | 48.9 | 45 |
| 420 | | | | | | | | | 40.8 | 36.7 |
| 440 | | | | | | | | | 33.3 | 28 |
| 460 | | | | | | | | | | 19.8 |

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# Main boom extended boom point range diagram

VPC-MAX

**B80: 680-681-682 boom with 25 ft extended upper boom point**




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| B80: 680-681-682 Boom with extended upper boom point | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 881,800 lb Counterweight | | | | | | | | | | | |
| 360° Rating | lb x 1000 28° Offset | | | | | | | | | | |
| Radius (ft) | Boom Length (ft) | | | | | | | | | | |
| | 302 | 322 | 341 | 361 | 381 | 400 | 420 | 440 | 459 | 479 | 499 |
| 50 | 328.6 | 334 | 336 | | | | | | | | |
| 60 | 327.8 | 334 | 336 | 341.6 | 310.5 | 274.5 | 250.9 | 223 | 197.5 | | |
| 70 | 325.7 | 334 | 336 | 341.6 | 310.5 | 274.4 | 250.7 | 222.8 | 197.2 | 173.7 | 153.9 |
| 80 | 322.7 | 334 | 336 | 341.6 | 310.5 | 274.3 | 250.5 | 222.6 | 196.9 | 173.3 | 153.4 |
| 90 | 319.2 | 334 | 335.8 | 341.6 | 310.5 | 274.1 | 250.3 | 222.2 | 196.6 | 172.8 | 152.9 |
| 100 | 315.5 | 332.4 | 333 | 341.6 | 310.5 | 273.9 | 250 | 221.9 | 196.1 | 172.3 | 152.4 |
| 110 | 311.6 | 330.2 | 330 | 338.8 | 310.5 | 273.7 | 249.7 | 221.6 | 195.7 | 171.8 | 151.9 |
| 120 | 307.7 | 327.7 | 326.3 | 335.3 | 305.4 | 270 | 249.3 | 221.1 | 195.3 | 171.3 | 151.3 |
| 130 | 304 | 325.3 | 322.7 | 330.5 | 294.6 | 259.8 | 248.9 | 220.7 | 194.8 | 170.8 | 150.9 |
| 140 | 300.6 | 315.3 | 319.4 | 321.8 | 284.3 | 249.8 | 248.5 | 220.3 | 194.4 | 170.3 | 150.3 |
| 150 | 295.2 | 303.8 | 312 | 313.4 | 274.4 | 240.4 | 248.1 | 219.9 | 193.9 | 169.9 | 149.7 |
| 160 | 284.8 | 293.3 | 301.4 | 305.5 | 265 | 231.5 | 247.7 | 217.2 | 190.7 | 169.1 | 148.2 |
| 170 | 275.2 | 283.6 | 291.6 | 297.1 | 256.2 | 223.1 | 241.1 | 210.2 | 184.1 | 163.4 | 145 |
| 180 | 266.5 | 274.6 | 281.5 | 274.4 | 248.1 | 215.3 | 234 | 203.6 | 177.9 | 157.6 | 139.6 |
| 190 | 258.4 | 261.8 | 261.4 | 254.3 | 240.4 | 208 | 227.3 | 197.2 | 171.9 | 152.1 | 134.6 |
| 200 | 245.4 | 243.9 | 243.5 | 236.3 | 233.4 | 201.2 | 221 | 191.2 | 166.3 | 146.9 | 129.7 |
| 220 | 214.7 | 213.1 | 212.8 | 205.5 | 203.8 | 189.1 | 198.1 | 180.2 | 155.9 | 137.3 | 120.7 |
| 240 | 189.3 | 187.8 | 187.4 | 180.1 | 178.4 | 177.9 | 172.7 | 170.4 | 146.7 | 128.7 | 112.6 |
| 260 | 168 | 166.5 | 166.1 | 158.8 | 157.1 | 156.6 | 151.3 | 150.8 | 138.6 | 121.1 | 105.5 |
| 280 | 149.7 | 148.3 | 148 | 140.6 | 138.9 | 138.5 | 133.1 | 132.6 | 130.6 | 114.4 | 99.1 |
| 300 | | 132.5 | 132.3 | 124.9 | 123.2 | 122.8 | 117.4 | 117 | 115 | 108.6 | 93.4 |
| 320 | | | 118.5 | 111.1 | 109.5 | 109.1 | 103.7 | 103.3 | 101.3 | 100.8 | 88.5 |
| 340 | | | | 99 | 97.4 | 97.1 | 91.7 | 91.3 | 89.3 | 88.8 | 84.2 |
| 360 | | | | | 86.6 | 86.3 | 81 | 80.6 | 78.6 | 78.1 | 76 |
| 380 | | | | | | 76.7 | 71.3 | 71 | 69.1 | 68.6 | 66.5 |
| 400 | | | | | | | 62.7 | 62.4 | 60.5 | 60 | 57.9 |
| 420 | | | | | | | | | 52.6 | 52.2 | 50.2 |
| 440 | | | | | | | | | | 45.1 | 43.1 |
| 460 | | | | | | | | | | | 36.6 |

# Main boom extended boom point load charts

VPC-MAX

| B80: 680-681-682 Boom with extended upper boom point | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 881,800 lb Counterweight | | | | | | | | | | | |
| 360° Rating | lb x 1000 35° Offset | | | | | | | | | | |
| Radius (ft) | Boom Length (ft) | | | | | | | | | | |
| | 302 | 322 | 341 | 361 | 381 | 400 | 420 | 440 | 459 | 479 | 499 |
| 50 | 264.0 | 268.9 | | | | | | | | | |
| 60 | 264.0 | 268.9 | 274.8 | 285.3 | 286.9 | 272.2 | 249.2 | 222.0 | | | |
| 70 | 264.0 | 268.9 | 274.8 | 285.3 | 286.9 | 272.1 | 249.2 | 221.8 | 196.5 | 172.8 | 153.4 |
| 80 | 264.0 | 268.9 | 274.8 | 285.3 | 286.9 | 272.1 | 249.1 | 221.6 | 196.2 | 172.4 | 152.9 |
| 90 | 264.0 | 268.9 | 274.8 | 285.3 | 286.9 | 272.0 | 248.8 | 221.3 | 195.9 | 172 | 152.4 |
| 100 | 264.0 | 268.9 | 274.8 | 285.3 | 286.9 | 271.9 | 248.6 | 221.0 | 195.5 | 171.5 | 151.9 |
| 110 | 263.1 | 268.9 | 274.8 | 285.3 | 286.9 | 270.2 | 248.4 | 220.7 | 195.1 | 171.1 | 151.4 |
| 120 | 261.9 | 268.9 | 274.8 | 285.3 | 286.9 | 260.4 | 248.1 | 220.4 | 194.7 | 170.7 | 150.9 |
| 130 | 260.8 | 268.9 | 274.8 | 281.4 | 282.9 | 250.9 | 247.8 | 220.1 | 194.3 | 170.1 | 150.4 |
| 140 | 256.6 | 262.4 | 267.9 | 273 | 273.5 | 241.7 | 247.6 | 219.7 | 193.9 | 169.7 | 149.9 |
| 150 | 248.9 | 254.7 | 260.1 | 265.3 | 264.4 | 232.9 | 247.2 | 217.8 | 192.4 | 169.3 | 149.4 |
| 160 | 241.8 | 247.5 | 253 | 258.1 | 255.9 | 224.6 | 240.2 | 211.0 | 185.9 | 165.6 | 147.7 |
| 170 | 235.2 | 240.9 | 246.3 | 251.4 | 247.9 | 216.8 | 233.4 | 204.4 | 179.7 | 159.9 | 142.3 |
| 180 | 229.2 | 234.8 | 240.1 | 245.2 | 240.4 | 209.5 | 226.9 | 198.2 | 173.8 | 154.4 | 137.1 |
| 190 | 223.7 | 229.1 | 234.4 | 239.4 | 233.4 | 202.7 | 220.7 | 192.2 | 168.2 | 149.2 | 132.2 |
| 200 | 218.6 | 223.9 | 229.1 | 234.0 | 227.0 | 196.4 | 214.9 | 186.5 | 162.7 | 144.1 | 127.5 |
| 220 | 209.6 | 213.6 | 213.3 | 206.1 | 204.5 | 185.1 | 198.9 | 176.2 | 152.9 | 134.9 | 118.8 |
| 240 | 189.7 | 188.2 | 187.9 | 180.6 | 178.9 | 175.6 | 173.3 | 167 | 144.1 | 126.7 | 111.0 |
| 260 | 168.2 | 166.8 | 166.5 | 159.2 | 157.5 | 157.1 | 151.9 | 151.4 | 136.4 | 119.4 | 104.1 |
| 280 | 149.9 | 148.5 | 148.2 | 140.9 | 139.3 | 138.9 | 133.6 | 133.1 | 129.6 | 112.9 | 97.9 |
| 300 | | | 132.4 | 125.1 | 123.5 | 123.1 | 117.8 | 117.4 | 115.4 | 107.3 | 92.4 |
| 320 | | | | 111.3 | 109.7 | 109.4 | 104.1 | 103.6 | 101.7 | 101.2 | 87.7 |
| 340 | | | | | 97.6 | 97.3 | 91.9 | 91.5 | 89.6 | 89.1 | 83.5 |
| 360 | | | | | | 86.5 | 81.2 | 80.8 | 78.9 | 78.4 | 76.3 |
| 380 | | | | | | | | 71.2 | 69.3 | 68.8 | 66.8 |
| 400 | | | | | | | | | 60.6 | 60.2 | 58.1 |
| 420 | | | | | | | | | | 52.4 | 50.3 |
| 440 | | | | | | | | | | | 43.2 |

*THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.*
*The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane*

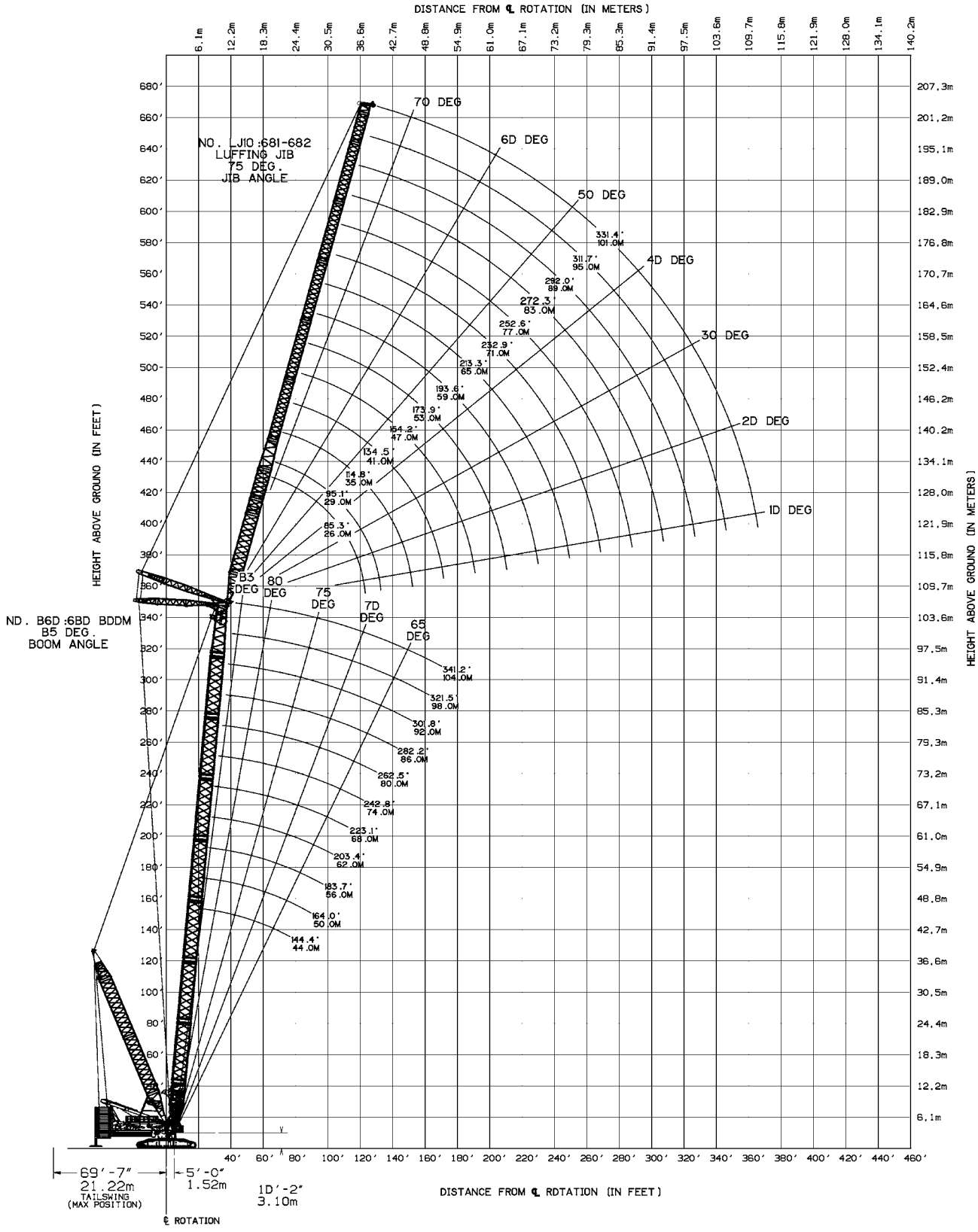
| B80: 680-681-682 Boom with extended upper boom point | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 881,800 lb Counterweight | | | | | | | | | | | |
| 360° Rating | lb x 1000 41° Offset | | | | | | | | | | |
| Radius (ft) | Boom Length (ft) | | | | | | | | | | |
| | 302 | 322 | 341 | 361 | 381 | 400 | 420 | 440 | 459 | 479 | 499 |
| 50 | 228.4 | | | | | | | | | | |
| 60 | 228.4 | 234.9 | 238.5 | 243.9 | 243.9 | 243.9 | | | | | |
| 70 | 228.4 | 234.9 | 238.5 | 243.9 | 243.9 | 243.9 | 243.9 | 221.4 | 196.3 | 172.4 | 153.2 |
| 80 | 228.4 | 234.9 | 238.5 | 243.9 | 243.9 | 243.9 | 243.9 | 221.2 | 196.1 | 172 | 152.7 |
| 90 | 228.4 | 234.9 | 238.5 | 243.9 | 243.9 | 243.9 | 243.9 | 221.1 | 195.8 | 171.6 | 152.3 |
| 100 | 228.4 | 234.9 | 238.5 | 243.9 | 243.9 | 243.9 | 243.9 | 220.8 | 195.4 | 171.3 | 151.8 |
| 110 | 228.4 | 234.9 | 238.5 | 243.9 | 243.9 | 243.9 | 243.9 | 220.6 | 195.1 | 170.9 | 151.3 |
| 120 | 228.4 | 234.9 | 238.5 | 243.9 | 243.9 | 243.9 | 243.9 | 220.4 | 194.8 | 170.5 | 150.9 |
| 130 | 228.4 | 234.9 | 238.5 | 243.9 | 243.9 | 243.8 | 243.9 | 220.1 | 194.5 | 170.1 | 150.4 |
| 140 | 228.4 | 234.9 | 238.5 | 243.9 | 243.9 | 235.2 | 243.9 | 218.5 | 194.1 | 169.7 | 150 |
| 150 | 227.2 | 231.4 | 235.4 | 239.1 | 242.7 | 227 | 240.1 | 211.9 | 187.8 | 168.1 | 149.5 |
| 160 | 222 | 226.2 | 230.1 | 233.9 | 237.4 | 219.2 | 233.6 | 205.5 | 181.7 | 162.4 | 145.1 |
| 170 | 217.2 | 221.3 | 225.2 | 229 | 232.5 | 211.9 | 227.3 | 199.4 | 175.8 | 156.8 | 139.9 |
| 180 | 212.8 | 216.8 | 220.7 | 224.4 | 227.9 | 205 | 221.2 | 193.5 | 170.2 | 151.6 | 134.9 |
| 190 | 208.7 | 212.7 | 216.5 | 220.2 | 223.7 | 198.6 | 215.5 | 187.9 | 164.8 | 146.5 | 130.2 |
| 200 | 205 | 208.9 | 212.6 | 216.2 | 219.7 | 192.6 | 210.1 | 182.6 | 159.6 | 141.7 | 125.6 |
| 220 | 198.7 | 202.2 | 205.7 | 206.7 | 205 | 182 | 199.6 | 172.8 | 150.3 | 132.9 | 117.2 |
| 240 | 189.9 | 188.5 | 188.2 | 181.1 | 179.4 | 173 | 173.9 | 164.1 | 141.9 | 125 | 109.6 |
| 260 | 168.4 | 167 | 166.8 | 159.6 | 157.9 | 157.5 | 152.3 | 151.9 | 134.6 | 117.9 | 102.9 |
| 280 | | | 148.4 | 141.2 | 139.6 | 139.2 | 134 | 133.6 | 128.1 | 111.7 | 96.9 |
| 300 | | | | 125.3 | 123.7 | 123.4 | 118.1 | 117.7 | 115.8 | 106.2 | 91.6 |
| 320 | | | | | | 109.6 | 104.3 | 103.9 | 102 | 101.5 | 86.9 |
| 340 | | | | | | | 92.1 | 91.8 | 89.9 | 89.4 | 82.8 |
| 360 | | | | | | | | 81 | 79.1 | 78.6 | 76.6 |
| 380 | | | | | | | | | | 69 | 67 |
| 400 | | | | | | | | | | | 58.3 |

*THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.*
*The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane*

# Luffing jib range diagram

VPC-MAX

## LJ10: 681-682 luffing jib on B60: 680 boom with VPC-MAX




*THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.*
*The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane*

## LJ10: 681-682 luffing jib on B60: 680 boom VPC-MAX

**881,800 lb counterweight** **360° Rating** **lb x 1000** **85° boom angle**

### 144 ft boom length

| Radius (ft) | Luffing jib length(ft) | | | | |
|---|---|---|---|---|---|
| | 85 | 135 | 194 | 272 | 331 |
| 50 | 733 | | | | |
| 55 | 733 | | | | |
| 60 | 733 | 592.5 | | | |
| 70 | 715 | 571.7 | | | |
| 80 | 649.5 | 550.2 | 379.4 | | |
| 90 | 537.6 | 528.9 | 378.5 | | |
| 100 | 380.4 | 490.1 | 370.4 | 195.3 | |
| 110 | | 429.2 | 359.6 | 193.8 | |
| 120 | | 380.4 | 338.1 | 192 | 118.8 |
| 130 | | 338.9 | 311.8 | 190 | 117.3 |
| 140 | | 295.7 | 285.9 | 187.9 | 115.6 |
| 150 | | 228.4 | 261.4 | 185.7 | 113.9 |
| 160 | | | 238.8 | 183.4 | 112.1 |
| 170 | | | 218.7 | 177.9 | 110.4 |
| 180 | | | 201.2 | 168.5 | 108.6 |
| 190 | | | 186.6 | 159 | 106.9 |
| 200 | | | 168.2 | 149.7 | 105.3 |
| 220 | | | | 132.2 | 102.1 |
| 240 | | | | 116.8 | 97.4 |
| 260 | | | | 104.2 | 88.6 |
| 280 | | | | 84.4 | 80.2 |
| 300 | | | | | 72.8 |
| 320 | | | | | 60.9 |
| 340 | | | | | 45.4 |

### 203 ft boom length

| Radius (ft) | Luffing jib length (ft) | | | | |
|---|---|---|---|---|---|
| | 85 | 135 | 194 | 272 | 331 |
| 55 | 654.3 | | | | |
| 60 | 631.7 | | | | |
| 70 | 590.5 | 481.8 | | | |
| 80 | 562.8 | 476.6 | | | |
| 90 | 525.8 | 439.3 | 303.9 | | |
| 100 | 459.6 | 399.8 | 301.9 | | |
| 110 | 302.1 | 361.6 | 293.2 | 165.6 | |
| 120 | | 326.6 | 274.7 | 164.7 | 106 |
| 130 | | 296.4 | 255.4 | 163.5 | 104.9 |
| 140 | | 271.9 | 236.3 | 162.1 | 103.8 |
| 150 | | 255 | 217.9 | 160.4 | 102.5 |
| 160 | | 189.1 | 200.8 | 157.3 | 101.3 |
| 170 | | | 185.3 | 149.6 | 99.9 |
| 180 | | | 171.7 | 141.7 | 98.5 |
| 190 | | | 160.2 | 133.9 | 97.1 |
| 200 | | | 151.2 | 126.2 | 95.8 |
| 220 | | | | 111.7 | 90.5 |
| 240 | | | | 99 | 82.2 |
| 260 | | | | 88.7 | 74.3 |
| 280 | | | | 81.5 | 67 |
| 300 | | | | | 60.5 |
| 320 | | | | | 55.4 |
| 340 | | | | | 50.7 |

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

# Luffing jib load charts
VPC-MAX

## LJ10: 681-682 luffing jib on B60: 680 boom VPC-MAX

**881,800 lb counterweight** **360° Rating** **lb x 1000** **85° boom angle**

### 282 ft boom length

| Radius (ft) | Luffing jib length (ft) | | | | |
|---|---|---|---|---|---|
| | 85 | 135 | 194 | 272 | 331 |
| 60 | 389.8 | | | | |
| 70 | 385.2 | | | | |
| 80 | 374.2 | 280.2 | | | |
| 90 | 345 | 275.3 | 193.9 | | |
| 100 | 314.4 | 268.1 | 192.8 | | |
| 110 | 296.3 | 249.3 | 190.5 | 118.5 | |
| 120 | | 230.5 | 186.2 | 117.9 | |
| 130 | | 213.1 | 175.4 | 117 | 76.9 |
| 140 | | 198.2 | 164.4 | 115.8 | 76.4 |
| 150 | | 186.6 | 153.6 | 114.1 | 75.8 |
| 160 | | 180.5 | 143.4 | 109 | 75 |
| 170 | | | 133.9 | 103.9 | 74.2 |
| 180 | | | 125.4 | 98.6 | 73.2 |
| 190 | | | 118 | 93.4 | 71.4 |
| 200 | | | 111.9 | 88.2 | 68.5 |
| 220 | | | 106.5 | 78.6 | 62.5 |
| 240 | | | | 70.1 | 56.6 |
| 260 | | | | 63.2 | 50.9 |
| 280 | | | | 58.4 | 45.8 |
| 300 | | | | 57.2 | 41.3 |
| 320 | | | | | 37.7 |
| 340 | | | | | 35.3 |

### 341 ft boom length

| Radius (ft) | Luffing jib length (ft) | | | | |
|---|---|---|---|---|---|
| | 85 | 135 | 194 | 272 | 331 |
| 65 | 270.9 | | | | |
| 70 | 266.8 | | | | |
| 80 | 251.4 | 193 | | | |
| 90 | 245.2 | 190.5 | | | |
| 100 | 240.8 | 186.4 | 136.2 | | |
| 110 | 233 | 181.7 | 134.5 | | |
| 120 | 225.9 | 175.9 | 132.1 | 84.9 | |
| 130 | | 165.4 | 129.1 | 84.3 | 58 |
| 140 | | 155.2 | 124.7 | 83.3 | 57.6 |
| 150 | | 146.8 | 117.5 | 82.2 | 57.2 |
| 160 | | 141 | 110.6 | 80.6 | 56.5 |
| 170 | | 139.7 | 104.1 | 77 | 55.5 |
| 180 | | | 98.1 | 73.3 | 53.4 |
| 190 | | | 92.8 | 69.6 | 51.2 |
| 200 | | | 88.3 | 66.1 | 48.9 |
| 220 | | | 83.1 | 59.2 | 44.3 |
| 240 | | | | 53 | 39.8 |
| 260 | | | | 47.9 | 35.6 |
| 280 | | | | 44.3 | 31.7 |
| 300 | | | | 43 | 28.3 |
| 320 | | | | | 25.7 |

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

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## Upperworks

### Engine
Cummins Model QSX15 Tier 4 Final diesel, 600 HP 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 aftertreatment, hydraulic oil cooler, radiator and variable speed hydraulic controlled fan. Variable speed fan provides increased fuel efficiency, decreased engine loading and reduced noise emission.
Multiple hydraulic pump drive transmission provides power for all machine functions. Two 12 volt, 1375 CCA at -18° C, 24 volt system and 110 amp alternator. 295 gal 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 gal 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 two 49 inch wide and 26 inch diameter main hoist drum, mounted in the boom butt and 4 m insert and 32 inch wide and 25 inch 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 32 mm 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.

### VPC-MAX boom hoist
VPC-MAX is equipped with a 39 inch wide and 22 inch diameter boom hoist drum mounted in the mast butt. The drum is driven by a variable displacement hydraulic motor, through a planetary gearbox with an internal brake. The drum utilizes a ratchet and pawl assembly and is grooved for 28 mm wire rope. Includes 28 mm wire rope for 16-part boom hoist reeving.

### Moving mast system
Independent moving mast hoist with two grooved drums, each 19 inch wide and 31 inch diameter drum grooved for 32 mm. Includes 32 mm wire rope for 30-part boom hoist reeving. Drum is powered by variable-displacement hydraulic motors coupled to internal brake and planetary reduction gearboxes. Ratcheting pawl and rotation indicator are standard.
Raise 341.2 ft main boom from 0° - 85° in 7 minutes and 40 seconds.

### Boom support system
Moving mast is 36 ft 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 can be equipped with 881,800 lb upperworks only counterweight made up of a single piece counterweight tray and 38 22,000 lb 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 galvannealed 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 ft long with 60 inch wide cast steel crawler pads and automatically lubricated intermediate rollers. Left and right side crawlers are interchangeable to provide assembly/disassembly flexibility on jobsites. 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 0.8 mph.
- Optional: 80 inch wide cast steel crawler pads.

## Attachments

### B10: 680 boom
The liftcrane is equipped with 105.0 ft 680 basic boom consisting of 19.7 ft butt, 13.1 ft insert, 39.4 ft insert with luffing hoist sheaves, and 32.8 ft top with 16 30 inch 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: 19.7 ft and 39.4 ft No. 680 boom inserts with steel boom suspension straps and FACT connection system.

# Specifications

## Attachments *(cont'd)*

- Optional: detachable upper boom point with one 30 inch diameter tapered roller bearing steel sheave grooved for 32 mm rope with rope guard for liftcrane.

### No. 148 fixed jib

39.4 ft No. 148 fixed jib including pin 19.7 ft butt, 19.7 ft top, jib strut and mounting hardware.

- Optional: 19.7 ft and 39.4 ft No. 148 inserts with pin connectors and pendants for a maximum jib length of 137.8 ft.

### LJ:10 681-682 luffing jib

85.3 ft basic LJ10: 681-682 luffing jib including 6 m butt, one 12 m insert, 19.7 ft transition insert and 6.6 ft top, main and jib struts, jib and backstay steel suspension straps, upper 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: 9.8 ft, 19.7 ft and 39.4 ft No. 681 and 682 luffing jib inserts with steel boom suspension straps. Utilize luffing jib inserts in combination with the LJ10: 681-682 basic luffing jib for total luffing jib lengths up to 331.3 ft.

### VPC-MAX

The VPC-MAX components include:

- 118 ft of No. 684 mast consisting of a 19.7 ft butt, (2) 39.4 ft inserts and a 19.7 ft top.
- One additional swing drive (for a total of three) mounted on the adapter frame. Each swing drive is powered by a fixed-displacement hydraulic motor coupled to a planetary reduction gearbox and internal brake.

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.
- 24.5 USt swivel hook and weight ball.
- Carbody jacking cylinders to allow 360° swing with crawler assembly during self erect.

# Symbols glossary


B10: 680 Boom


Drums


Hydraulic System


Cab


Engine


LJ:10 681-681 Luffing Jib


Counterweight


No. 148 Fixed Jib


Mast System


Crane Control System


Frame


Crawlers


Hoist

# Manitowoc Cranes

## Regional headquarters


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