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# GMK4090

## Preliminary Product Guide

ASME B30.5  
Imperial 85%



### Features

- 90 t (100 USt) capacity
- 51 m (167 ft) six-section main boom
- 8,7 m - 15 m (28.5 ft - 49.2 ft) swingaway extension
- 6 m (19.7 ft) boom extension
- Single-engine concept design
- MAXbase variable outrigger positioning



# GROVE GMK4090

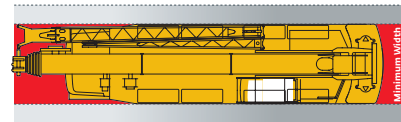
PRELIMINARY

**Compact and Strong:** With high capacities and industry-leading compact dimensions, the GMK4090 allows you to secure more jobs than ever before.

## Features

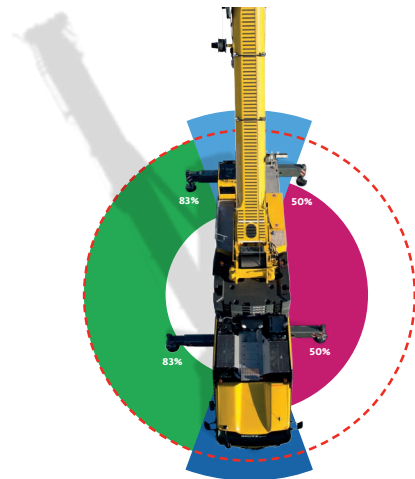
### > Industry-leading compact dimensions

The minimum width of the GMK4090 is 2,55 m (8.4 ft ) and the overall length is 12,68 m (41.6 ft).



### > MAXbase Variable Outrigger Positioning

MAXbase variable outrigger positioning for increased capacities and flexibility at jobsites.



### > Single-engine concept

The new single engine concept on the GMK4090 with the latest EUROMOT 4/Tier 4 final engine reduces fuel consumption to a minimum. Using the ECO mode, the GMK4090 is the most fuel efficient crane in its class.



**CraneSTAR®**

### > CraneSTAR is an exclusive and innovative crane asset management system

Helps improve your profitability and reduce costs by remotely monitoring critical crane data.  
Visit [www.cranestar.com](http://www.cranestar.com) for more information.

PRELIMINARY

## Jobsite benefits

- Access narrow jobsites and utilize a more compact radius to gain a better position for lift performance. The GMK4090's compact size and MAXbase variable outrigger positioning system provides excellent job site flexibility unmatched in the market.
- Human Machine Interface (HMI) allows for control of the MEGATRAK™ suspension system from both sides of the carrier allowing for adjustment of ground clearance independent of the outriggers. The GMK4090 can also be equipped with an outrigger pad load indicator with visibility on both sides of the carrier or from the operators cab.
- MEGATRAK™ independent suspension, all-wheel steering system and steer by wire technology provides increased ground clearance, adjustable suspension and reduces tire-wear to provide maximum maneuverability in all-terrains.



### 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 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.

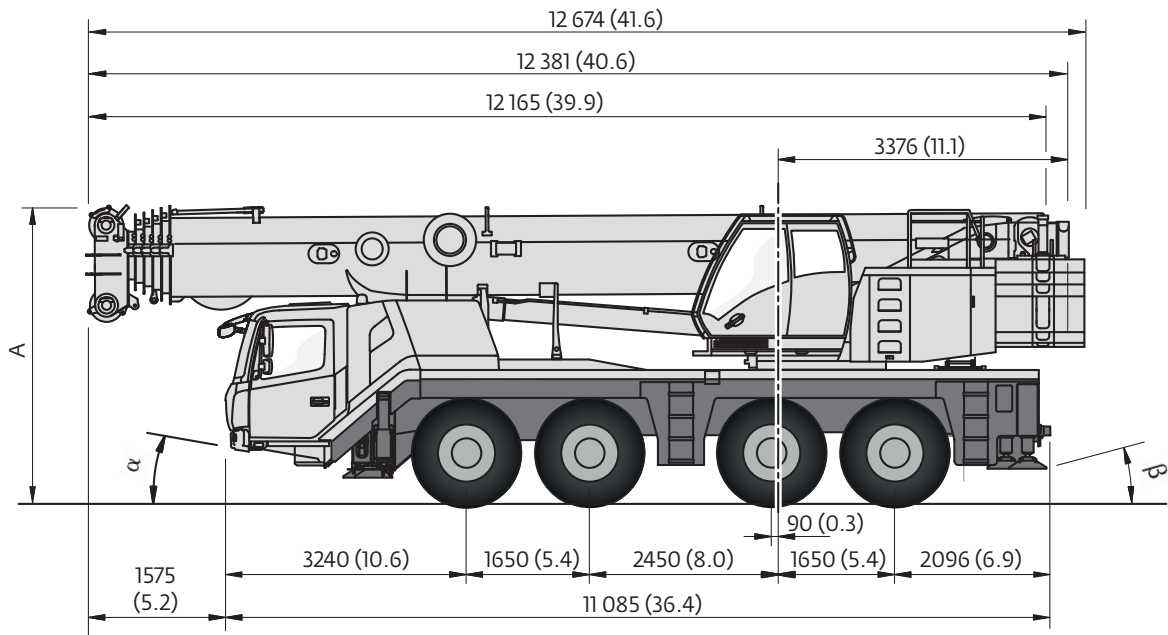
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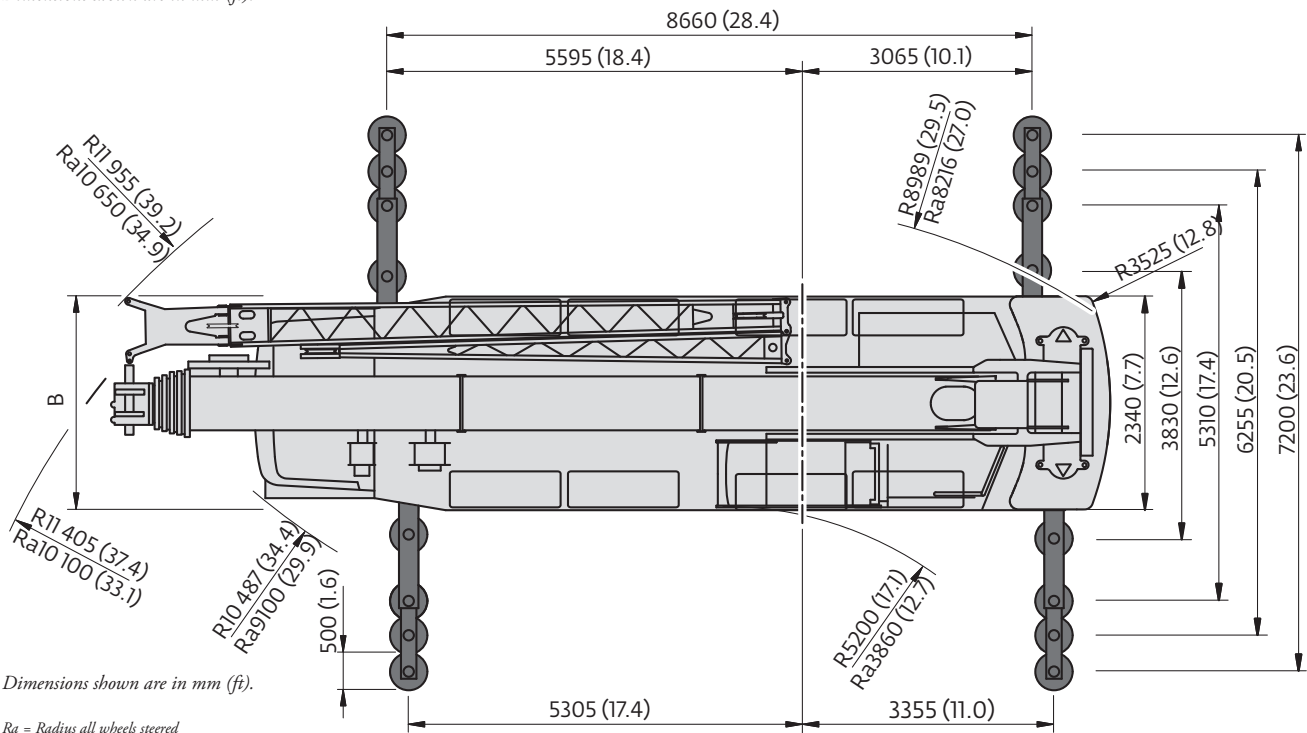
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PRELIMINARY

# Dimensions



Dimensions shown are in mm (ft).



Dimensions shown are in mm (ft).

Ra = Radius all wheels steered

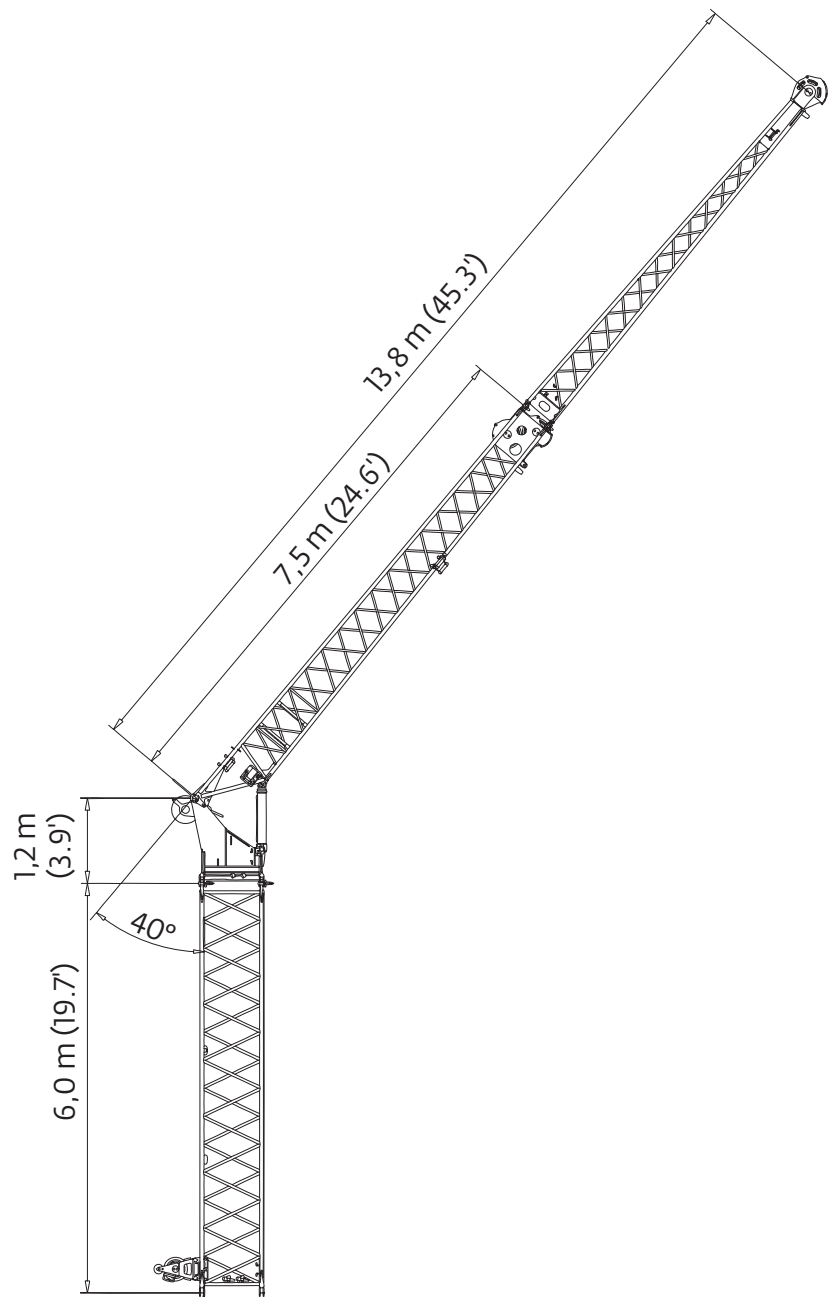
|           | A           | A<br>126 mm*<br>(0.4) | B          | C          | D          | E         | F         | α  | β  | β1 |
|-----------|-------------|-----------------------|------------|------------|------------|-----------|-----------|----|----|----|
| 14.00 R25 | 3940 (12.9) | 3810 (12.5)           | 2550 (8.4) | 2320 (7.6) | 1750 (5.7) | 435 (1.4) | 262 (0.9) | 14 | 21 | 17 |
| 16.00 R25 | 3990 (13.1) | 3860 (12.7)           | 2750 (9.0) | 2280 (7.5) | 1863 (6.1) | 485 (1.6) | 292 (1.0) | 16 | 23 | 19 |
| 20.5 R25  | 3990 (13.1) | 3860 (12.7)           | 2880 (9.4) | 2320 (7.6) | 1863 (6.1) | 485 (1.6) | 292 (1.0) | 16 | 23 | 19 |

\* Lowered

# Dimensions

PRELIMINARY

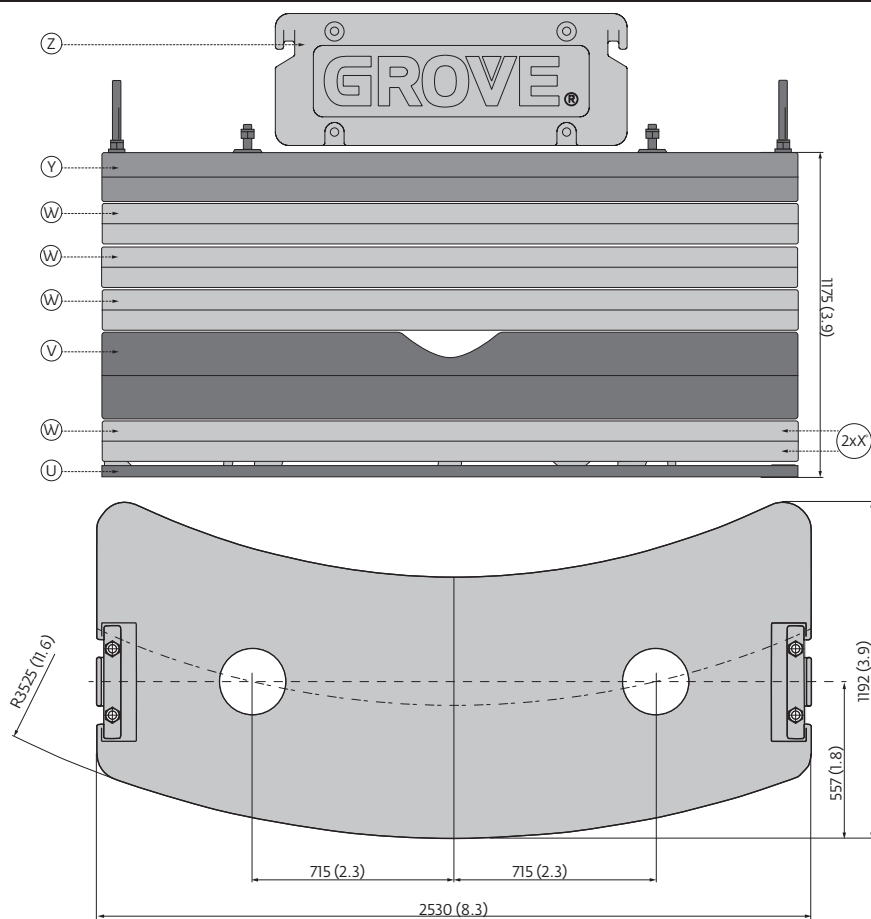
## Jib configurations



| Total Length | Intermediate section boom extension make-up |                |                 |                 |
|--------------|---------------------------------------------|----------------|-----------------|-----------------|
| m (ft)       | 6,0 m (19.7 ft)                             | 1,2 m (3.9 ft) | 7,5 m (24.6 ft) | 6,3 m (20.7 ft) |
| 8,7 (28.5)   | -                                           | 1x             | 1x              | -               |
| 15,0 (49.2)  | -                                           | 1x             | 1x              | 1x              |
| 21,0 (68.9)  | 1 x                                         | 1x             | 1x              | 1x              |



## Counterweight



|                   | <b>Z</b><br>0,5 t (0.6 USt) | <b>Y</b><br>2,9 t (3.2 USt) | <b>*X</b><br>1,15 t (1.3 USt) | <b>W</b><br>2,3 t (2.5 USt) | <b>V</b><br>4,6 t (5.1 USt) | <b>U</b><br>1,1 t (1.2 USt) |
|-------------------|-----------------------------|-----------------------------|-------------------------------|-----------------------------|-----------------------------|-----------------------------|
| 0,5 t (0.6 USt)   | x                           |                             |                               |                             |                             |                             |
| 3,5 t (3.9 USt)   | x                           | x                           |                               |                             |                             |                             |
| 4,5 t (5.0 USt)   | x                           | x                           |                               |                             |                             | x                           |
| 5,6 t (6.2 USt)   | x                           | x                           | x                             |                             |                             | x                           |
| 6,8 t (7.5 USt)   | x                           | x                           |                               | x                           |                             | x                           |
| 7,9 t (8.7 USt)   | x                           | x                           | x                             | x                           |                             | x                           |
| 9,1 t (10.0 USt)  | x                           | x                           |                               | 2x                          |                             | x                           |
| 10,2 t (11.2 USt) | x                           | x                           | x                             | 2x                          |                             | x                           |
| 11,4 t (12.6 USt) | x                           | x                           |                               | 3x                          |                             | x                           |
| 12,5 t (13.8 USt) | x                           | x                           | x                             | 3x                          |                             | x                           |
| 13,7 t (15.1 USt) | x                           | x                           |                               | 2x                          | x                           | x                           |
| 14,8 t (16.3 USt) | x                           | x                           | x                             | 2x                          | x                           | x                           |
| 16,0 t (17.6 USt) | x                           | x                           |                               | 3x                          | x                           | x                           |
| 17,1 t (18.8 USt) | x                           | x                           | x                             | 3x                          | x                           | x                           |
| 18,3 t (20.2 USt) | x                           | x                           | 2x                            | 3x                          | x                           | x                           |
| 18,3 t (20.2 USt) | x                           | x                           |                               | 4 x                         | x                           | x                           |

\*Optional 2 x 1,15 t (1.3 USt) instead of 1 x 2.3 t (2.5 USt)

# Data

PRELIMINARY



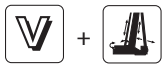
| Lifting Capacity | Sheaves | Weight           | Parts of line | Possible load with crane*     |
|------------------|---------|------------------|---------------|-------------------------------|
| 80 t (88 USt)    | 7       | 800 kg (1770 lb) | 2 - 12 / **15 | 58 t / 74 t** (63.9/81.6 USt) |
| 63 t (69 USt)    | 5       | 650 kg (1430 lb) | 2 - 11        | 54 t (59.5 USt)               |
| 40 t (44 USt)    | 3       | 450 kg (1000 lb) | 2 - 7         | 35 t (35.6 USt)               |
| 16 t (18 USt)    | 1       | 300 kg (660 lb)  | 1 - 3         | 15 t (16.5 USt)               |
| 8 t (9 USt)      | H/B     | 200 kg (440 lb)  | 1             | 5 t (5.5 USt)                 |

\*Varies depending on national regulations

\*\* Requires additional boom nose sheave

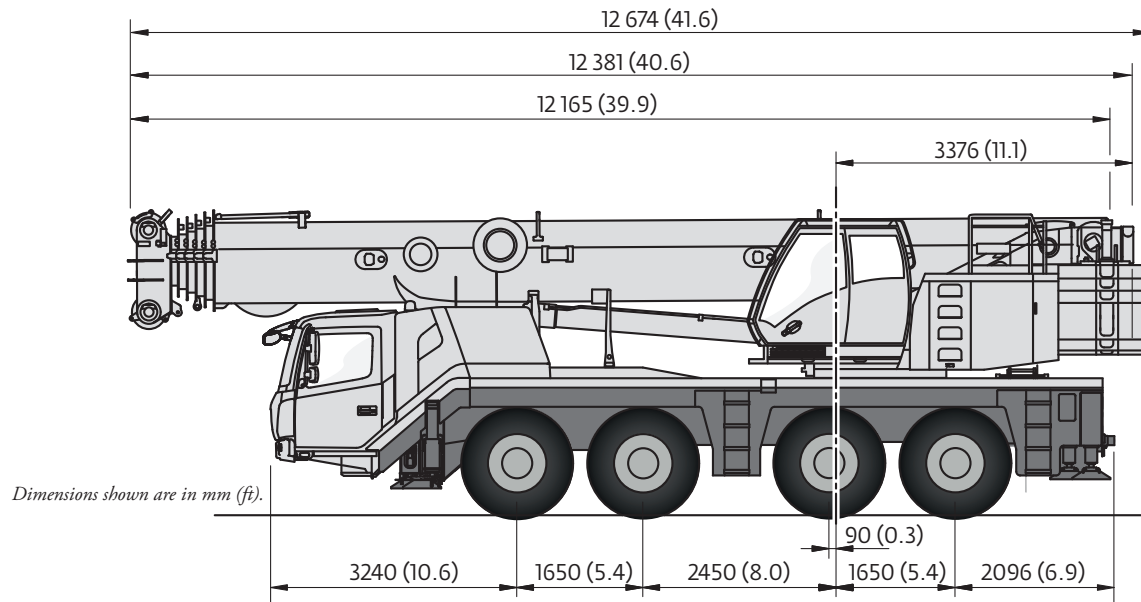


|      | 1         | 2   | 3   | 4   | 5   | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | R1  | R2  |     |
|------|-----------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|
| mp/h | 3.9       | 4.7 | 5.8 | 7.0 | 8.7 | 10.5 | 12.4 | 15.5 | 17.4 | 21.1 | 25.5 | 31.1 | 38.5 | 46.6 | 52.8 | 52.8 | 3.9 | 4.8 |     |
| mp/h | 1.8       | 2.2 | 2.6 | 3.1 | 3.9 | 4.7  | 5.6  | 6.8  | 8.0  | 9.3  | 11.8 | 14.3 | 17.4 | 21.1 | 25.5 | 30.4 | 1.8 | 2.2 | 70% |
|      | 14.00 R25 |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |     |     |     |



|  | Infinitely variable                                  | Rope                   | Max. Single line pull |
|--|------------------------------------------------------|------------------------|-----------------------|
|  | 0 - 120 m/min (394 fpm) Single line                  | 16 mm / 220 m (720 ft) | 50,0 kN (11,240 lb)   |
|  | 0 - 120 m/min (394 fpm) Single line                  | 16 mm / 220 m (720 ft) | 50,0 kN (11,240 lb)   |
|  | 0 - 1,7 min <sup>-1</sup>                            |                        |                       |
|  | -3,0° to + 82° approx. < 45 s                        |                        |                       |
|  | 11,3 m - 51,0 m (37.1 ft - 167.3 ft) approx. < 335 s |                        |                       |

## Boom over front



| Basic Weights - kg (lb)                                                                                                                                                                                                                                  | Axles 1 and 2 | Axles 1 and 2 | Axles 3 and 4 | Axles 3 and 4 | Total     | Total    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|-----------|----------|
| Mercedes power Tier 4 Final, 16.00 R25 tires on steel wheels, 8x6x8 drive/steer, additional oil cooler, nylatron outrigger pads, trailing boom float kit, auxiliary hoist, 2,9 t (3.2 USt) counterweight attached to superstructure, and full fuel tank. | 21 500 kg     | 47,400 lb     | 20 240 kg     | 44,640 lb     | 41 740 kg | 92,040   |
| <b>Additions</b>                                                                                                                                                                                                                                         |               |               |               |               |           |          |
| 8X8X8 drive/steer                                                                                                                                                                                                                                        | 244 kg        | 537 lb        | 59 kg         | 129 lb        | 303 kg    | 666 lb   |
| Spare wheel 14.00 R25 XGC steel rim with stowage                                                                                                                                                                                                         | -206 kg       | -455 lb       | 477 kg        | 1052 lb       | 271 kg    | 597 lb   |
| Spare wheel 16.00 R25 XGC steel rim with stowage                                                                                                                                                                                                         | -247 kg       | -544 lb       | 571 kg        | 1258 lb       | 324 kg    | 714 lb   |
| Spare wheel 20.5 R25 XGC steel rim with stowage                                                                                                                                                                                                          | -295 kg       | -650 lb       | 682 kg        | 1503 lb       | 387 kg    | 853 lb   |
| Brackets for hydraulic swingaway                                                                                                                                                                                                                         | 92 kg         | 203 lb        | -32 kg        | -70 lb        | 60 kg     | 132 lb   |
| Hose reel for hydraulic swingaway                                                                                                                                                                                                                        | 102 kg        | 225 lb        | -42 kg        | -93 lb        | 60 kg     | 132 lb   |
| 8,7 m - 15 m (28.5 ft - 49.2 ft) hydraulic swingaway                                                                                                                                                                                                     | 1211 kg       | 2669 lb       | -326 kg       | -718 lb       | 885 kg    | 1951 lb  |
| <b>Substitutions</b>                                                                                                                                                                                                                                     |               |               |               |               |           |          |
| 14.00R25 tires                                                                                                                                                                                                                                           | -212 kg       | -468 lb       | -212 kg       | -468 lb       | -424 kg   | -936 lb  |
| 20.5R25 tires                                                                                                                                                                                                                                            | 252 kg        | 555 lb        | 252 kg        | 555 lb        | 504 kg    | 1110 lb  |
| <b>Removals</b>                                                                                                                                                                                                                                          |               |               |               |               |           |          |
| Auxiliary hoist                                                                                                                                                                                                                                          | 546 kg        | 1203 lb       | -1398 kg      | -3081 lb      | -852 kg   | -1878 lb |
| Front and rear nylatron outrigger floats                                                                                                                                                                                                                 | -59 kg        | -131 lb       | -72 kg        | -159 lb       | -131 kg   | -290 lb  |

For additional travel configurations, please consult the factory.

# Working range

Main boom

PRELIMINARY



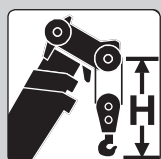
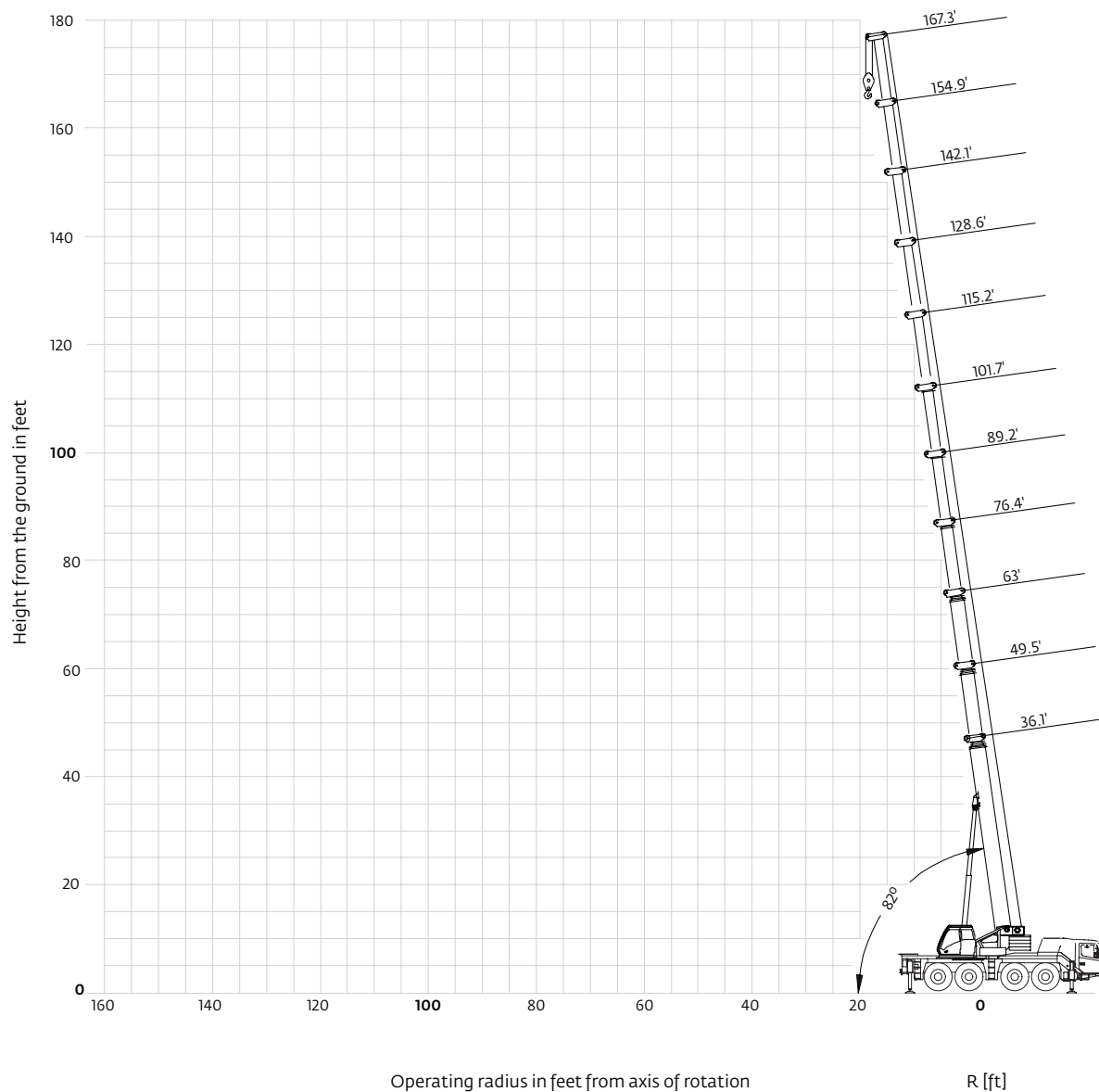
11,0 m - 51,0 m (36 ft - 167 ft)



7,2 m (23.6 ft)



360°



Hook block T (USt)

H  
mm (ft)

80 D (88)

3200 (10.5)

63 D (69)

3000 (9.8)

40 D (44)

2900 (9.5)

16 E (18)

2800 (9.2)

8 H/B (9)

2350 (7.7)

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

PRELIMINARY

# Load charts

Main boom



11,0 m - 51,0 m  
(36 ft - 167 ft)



7,2 m  
(23.6 ft)



360°



18,3 t (20.2 USt)



Pounds x 1000

| ft    | 36.1    | 49.5  | 63.0  | 76.4  | 89.2 | 101.7 | 115.2 | 128.6 | 142.1 | 154.9 | 167.3 | ft    |
|-------|---------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| 10.0  | 200.0 * |       |       |       |      |       |       |       |       |       |       | 10.0  |
| 10.0  | 153.0   | 127.0 | 124.0 | 109.0 |      |       |       |       |       |       |       | 10.0  |
| 15.0  | 108.0   | 105.0 | 100.0 | 96.0  | 79.0 |       |       |       |       |       |       | 15.0  |
| 20.0  | 87.0    | 86.0  | 83.0  | 79.0  | 73.0 | 59.0  | 45.0  |       |       |       |       | 20.0  |
| 25.0  | 67.0    | 70.0  | 69.0  | 68.0  | 66.0 | 56.0  | 43.6  | 33.8  |       |       |       | 25.0  |
| 30.0  |         | 57.0  | 57.0  | 56.0  | 57.0 | 51.0  | 40.6  | 33.6  | 25.4  | 19.6  |       | 30.0  |
| 35.0  |         | 48.0  | 48.0  | 48.0  | 48.0 | 47.0  | 37.0  | 32.4  | 25.4  | 19.6  | 15.8  | 35.0  |
| 40.0  |         | 35.0  | 41.0  | 41.6  | 40.4 | 40.4  | 33.4  | 29.8  | 25.4  | 19.6  | 15.8  | 40.0  |
| 45.0  |         |       | 35.6  | 35.4  | 35.4 | 34.6  | 30.0  | 27.2  | 24.8  | 19.6  | 15.8  | 45.0  |
| 50.0  |         |       | 29.6  | 29.6  | 30.8 | 29.6  | 27.4  | 24.8  | 22.8  | 19.6  | 15.8  | 50.0  |
| 55.0  |         |       |       | 26.2  | 26.6 | 25.4  | 24.2  | 22.6  | 21.0  | 19.2  | 15.8  | 55.0  |
| 60.0  |         |       |       | 23.2  | 22.8 | 21.8  | 21.6  | 20.4  | 19.4  | 18.0  | 15.8  | 60.0  |
| 65.0  |         |       |       | 20.2  | 19.8 | 18.8  | 19.8  | 18.0  | 17.8  | 16.8  | 15.4  | 65.0  |
| 70.0  |         |       |       |       | 17.4 | 17.6  | 17.6  | 15.8  | 16.0  | 15.8  | 14.8  | 70.0  |
| 75.0  |         |       |       |       | 15.4 | 16.2  | 15.4  | 14.6  | 14.2  | 14.4  | 14.0  | 75.0  |
| 80.0  |         |       |       |       |      | 14.6  | 13.8  | 13.8  | 12.8  | 13.0  | 13.2  | 80.0  |
| 85.0  |         |       |       |       |      | 13.0  | 12.2  | 12.6  | 12.2  | 11.8  | 12.0  | 85.0  |
| 90.0  |         |       |       |       |      | 12.0  | 11.0  | 11.4  | 11.4  | 11.0  | 10.6  | 90.0  |
| 95.0  |         |       |       |       |      |       | 9.8   | 10.2  | 10.4  | 10.2  | 9.6   | 95.0  |
| 100.0 |         |       |       |       |      |       | 8.8   | 9.2   | 9.4   | 9.2   | 8.6   | 100.0 |
| 105.0 |         |       |       |       |      |       |       | 8.6   | 8.4   | 8.2   | 7.8   | 105.0 |
| 110.0 |         |       |       |       |      |       |       | 8.2   | 7.8   | 7.4   | 6.8   | 110.0 |
| 115.0 |         |       |       |       |      |       |       | 7.6   | 7.2   | 6.6   | 6.2   | 115.0 |
| 120.0 |         |       |       |       |      |       |       |       | 6.6   | 6.0   | 5.4   | 120.0 |
| 125.0 |         |       |       |       |      |       |       |       | 6.0   | 5.4   | 4.8   | 125.0 |
| 130.0 |         |       |       |       |      |       |       |       | 5.4   | 5.0   | 4.4   | 130.0 |
| 135.0 |         |       |       |       |      |       |       |       |       | 4.4   | 3.8   | 135.0 |
| 140.0 |         |       |       |       |      |       |       |       |       | 4.0   | 3.4   | 140.0 |
| 145.0 |         |       |       |       |      |       |       |       |       |       | 2.8   | 145.0 |
| 150.0 |         |       |       |       |      |       |       |       |       |       | 2.4   | 150.0 |
| 155.0 |         |       |       |       |      |       |       |       |       |       | 2.2   | 155.0 |

\* Over rear with special equipment

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

# Load charts

## Main boom

PRELIMINARY



11,0 m - 51,0 m  
(36 ft - 167 ft)



7,2 m  
(23.6 ft)



360°



14,8 t (16.3 USt)



Pounds x 1000

| ft    | 36.1  | 49.5  | 63.0  | 76.4  | 89.2 | 101.7 | 115.2 | 128.6 | 142.1 | 154.9 | 167.3 | ft    |
|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| 10.0  | 153.0 | 127.0 | 124.0 | 109.0 |      |       |       |       |       |       |       | 10.0  |
| 15.0  | 108.0 | 105.0 | 100.0 | 96.0  | 79.0 |       |       |       |       |       |       | 15.0  |
| 20.0  | 85.0  | 86.0  | 83.0  | 79.0  | 73.0 | 59.0  | 45.0  |       |       |       |       | 20.0  |
| 25.0  | 66.0  | 68.0  | 68.0  | 66.0  | 66.0 | 56.0  | 43.6  | 33.8  |       |       |       | 25.0  |
| 30.0  |       | 55.0  | 55.0  | 54.0  | 54.0 | 51.0  | 40.6  | 33.6  | 25.4  | 19.6  |       | 30.0  |
| 35.0  |       | 47.0  | 47.0  | 46.0  | 44.0 | 43.2  | 37.0  | 32.4  | 25.4  | 19.6  | 15.8  | 35.0  |
| 40.0  |       | 33.8  | 38.6  | 38.2  | 38.4 | 35.8  | 33.2  | 29.8  | 25.4  | 19.6  | 15.8  | 40.0  |
| 45.0  |       |       | 31.4  | 32.0  | 32.6 | 30.2  | 28.2  | 27.0  | 24.8  | 19.6  | 15.8  | 45.0  |
| 50.0  |       |       | 26.6  | 27.6  | 27.4 | 26.0  | 24.6  | 23.2  | 22.8  | 19.6  | 15.8  | 50.0  |
| 55.0  |       |       |       | 23.6  | 23.4 | 22.6  | 22.6  | 20.2  | 20.0  | 19.0  | 15.8  | 55.0  |
| 60.0  |       |       |       | 20.2  | 20.0 | 19.8  | 20.0  | 17.8  | 17.4  | 17.6  | 15.8  | 60.0  |
| 65.0  |       |       |       | 17.8  | 17.4 | 18.0  | 17.4  | 16.4  | 15.4  | 15.4  | 15.4  | 65.0  |
| 70.0  |       |       |       |       | 15.2 | 16.0  | 15.2  | 15.2  | 14.4  | 14.4  | 14.0  | 70.0  |
| 75.0  |       |       |       |       | 13.4 | 14.2  | 13.4  | 13.8  | 13.4  | 13.4  | 12.4  | 75.0  |
| 80.0  |       |       |       |       |      | 12.6  | 11.8  | 12.2  | 12.2  | 12.2  | 11.2  | 80.0  |
| 85.0  |       |       |       |       |      | 11.4  | 10.4  | 11.0  | 10.8  | 10.6  | 10.0  | 85.0  |
| 90.0  |       |       |       |       |      | 10.2  | 9.4   | 10.2  | 10.0  | 9.6   | 9.0   | 90.0  |
| 95.0  |       |       |       |       |      |       | 8.8   | 9.4   | 9.0   | 8.6   | 8.0   | 95.0  |
| 100.0 |       |       |       |       |      |       | 8.2   | 8.6   | 8.2   | 7.6   | 7.0   | 100.0 |
| 105.0 |       |       |       |       |      |       |       | 7.8   | 7.2   | 6.8   | 6.2   | 105.0 |
| 110.0 |       |       |       |       |      |       |       | 6.8   | 6.6   | 6.0   | 5.4   | 110.0 |
| 115.0 |       |       |       |       |      |       |       | 6.2   | 6.0   | 5.4   | 4.8   | 115.0 |
| 120.0 |       |       |       |       |      |       |       |       | 5.2   | 4.8   | 4.2   | 120.0 |
| 125.0 |       |       |       |       |      |       |       |       | 4.6   | 4.2   | 3.6   | 125.0 |
| 130.0 |       |       |       |       |      |       |       |       | 4.2   | 3.6   | 3.2   | 130.0 |
| 135.0 |       |       |       |       |      |       |       |       |       | 3.2   | 2.8   | 135.0 |
| 140.0 |       |       |       |       |      |       |       |       |       | 2.8   | 2.2   | 140.0 |



11,0 m - 51,0 m  
(36 ft - 167 ft)



7,2 m  
(23.6 ft)



360°



10,2 t (11.2 USt)



Pounds x 1000

| ft    | 36.1  | 49.5  | 63.0  | 76.4  | 89.2 | 101.7 | 115.2 | 128.6 | 142.1 | 154.9 | 167.3 | ft    |
|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| 10.0  | 153.0 | 127.0 | 124.0 | 109.0 |      |       |       |       |       |       |       | 10.0  |
| 15.0  | 108.0 | 105.0 | 100.0 | 96.0  | 79.0 |       |       |       |       |       |       | 15.0  |
| 20.0  | 82.0  | 83.0  | 83.0  | 78.0  | 73.0 | 59.0  | 45.0  |       |       |       |       | 20.0  |
| 25.0  | 64.0  | 64.0  | 65.0  | 63.0  | 60.0 | 55.0  | 43.6  | 33.8  |       |       |       | 25.0  |
| 30.0  |       | 53.0  | 52.0  | 50.0  | 49.0 | 45.0  | 40.4  | 33.6  | 25.4  | 19.6  |       | 30.0  |
| 35.0  |       | 40.4  | 41.6  | 39.8  | 39.4 | 36.2  | 33.8  | 31.8  | 25.4  | 19.6  | 15.8  | 35.0  |
| 40.0  |       | 28.8  | 32.8  | 34.2  | 32.4 | 30.0  | 28.2  | 26.8  | 25.0  | 19.6  | 15.8  | 40.0  |
| 45.0  |       |       | 27.6  | 27.8  | 27.4 | 25.0  | 25.4  | 22.4  | 22.0  | 19.6  | 15.8  | 45.0  |
| 50.0  |       |       | 22.8  | 23.2  | 22.8 | 22.6  | 22.0  | 19.8  | 19.0  | 19.0  | 15.8  | 50.0  |
| 55.0  |       |       |       | 19.6  | 19.2 | 20.4  | 19.0  | 18.4  | 17.4  | 17.2  | 15.4  | 55.0  |
| 60.0  |       |       |       | 16.8  | 16.4 | 17.4  | 16.6  | 16.6  | 16.2  | 15.6  | 14.4  | 60.0  |
| 65.0  |       |       |       | 14.6  | 14.0 | 15.0  | 14.2  | 14.6  | 14.6  | 13.6  | 12.6  | 65.0  |
| 70.0  |       |       |       |       | 12.2 | 13.2  | 12.4  | 13.2  | 13.0  | 12.2  | 11.0  | 70.0  |
| 75.0  |       |       |       |       | 10.6 | 11.4  | 11.2  | 12.0  | 11.4  | 10.8  | 9.6   | 75.0  |
| 80.0  |       |       |       |       |      | 10.2  | 10.4  | 10.6  | 10.0  | 9.6   | 8.6   | 80.0  |
| 85.0  |       |       |       |       |      | 9.6   | 9.6   | 9.4   | 8.8   | 8.4   | 7.6   | 85.0  |
| 90.0  |       |       |       |       |      | 8.6   | 8.6   | 8.4   | 7.8   | 7.4   | 6.6   | 90.0  |
| 95.0  |       |       |       |       |      |       | 7.6   | 7.4   | 7.0   | 6.6   | 5.8   | 95.0  |
| 100.0 |       |       |       |       |      |       | 6.8   | 6.6   | 6.2   | 5.6   | 5.0   | 100.0 |
| 105.0 |       |       |       |       |      |       |       | 5.8   | 5.2   | 4.8   | 4.4   | 105.0 |
| 110.0 |       |       |       |       |      |       |       | 5.2   | 4.8   | 4.4   | 3.8   | 110.0 |
| 115.0 |       |       |       |       |      |       |       | 4.6   | 4.2   | 3.8   | 3.0   | 115.0 |
| 120.0 |       |       |       |       |      |       |       |       | 3.6   | 3.2   | 2.6   | 120.0 |
| 125.0 |       |       |       |       |      |       |       |       | 3.2   | 2.6   |       | 125.0 |
| 130.0 |       |       |       |       |      |       |       |       | 2.8   | 2.2   |       | 130.0 |

THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

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PRELIMINARY

# Load charts

Main boom



11,0 m - 51,0 m  
(36 ft - 167 ft)



7,2 m  
(23.6 ft)



360°



9,1 t (10.0 USt)



Pounds x 1000

| ft    | 36.1  | 49.5  | 63.0  | 76.4  | 89.2 | 101.7 | 115.2 | 128.6 | 142.1 | 154.9 | 167.3 | ft    |
|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| 10.0  | 153.0 | 127.0 | 124.0 | 109.0 |      |       |       |       |       |       |       | 10.0  |
| 15.0  | 107.0 | 105.0 | 100.0 | 96.0  | 79.0 |       |       |       |       |       |       | 15.0  |
| 20.0  | 80.0  | 82.0  | 82.0  | 78.0  | 73.0 | 59.0  | 45.0  |       |       |       |       | 20.0  |
| 25.0  | 63.0  | 64.0  | 63.0  | 61.0  | 57.0 | 54.0  | 43.6  | 33.8  |       |       |       | 25.0  |
| 30.0  |       | 51.0  | 51.0  | 47.0  | 46.0 | 43.0  | 40.0  | 33.6  | 25.4  | 19.6  |       | 30.0  |
| 35.0  |       | 38.6  | 39.4  | 39.0  | 37.4 | 34.6  | 32.2  | 30.8  | 25.4  | 19.6  | 15.8  | 35.0  |
| 40.0  |       | 27.6  | 31.6  | 32.6  | 30.8 | 28.4  | 28.0  | 25.2  | 24.8  | 19.6  | 15.8  | 40.0  |
| 45.0  |       |       | 26.2  | 26.6  | 26.0 | 24.6  | 24.4  | 21.6  | 20.8  | 19.6  | 15.8  | 45.0  |
| 50.0  |       |       | 21.6  | 22.0  | 21.6 | 22.4  | 20.6  | 19.8  | 18.8  | 18.0  | 15.8  | 50.0  |
| 55.0  |       |       |       | 18.6  | 18.4 | 19.2  | 18.0  | 18.0  | 17.2  | 16.8  | 15.2  | 55.0  |
| 60.0  |       |       |       | 16.0  | 15.4 | 16.6  | 15.4  | 15.8  | 15.6  | 14.6  | 13.6  | 60.0  |
| 65.0  |       |       |       | 14.6  | 13.2 | 14.2  | 13.2  | 14.2  | 13.8  | 12.8  | 11.6  | 65.0  |
| 70.0  |       |       |       |       | 11.4 | 12.4  | 12.2  | 12.6  | 12.4  | 11.4  | 10.2  | 70.0  |
| 75.0  |       |       |       |       | 9.8  | 11.0  | 11.2  | 11.2  | 10.8  | 10.0  | 9.0   | 75.0  |
| 80.0  |       |       |       |       |      | 9.8   | 10.0  | 9.8   | 9.4   | 8.8   | 8.0   | 80.0  |
| 85.0  |       |       |       |       |      | 9.0   | 8.8   | 8.6   | 8.2   | 7.8   | 6.8   | 85.0  |
| 90.0  |       |       |       |       |      | 8.0   | 7.8   | 7.6   | 7.2   | 6.8   | 6.0   | 90.0  |
| 95.0  |       |       |       |       |      |       | 7.0   | 6.8   | 6.4   | 5.8   | 5.2   | 95.0  |
| 100.0 |       |       |       |       |      |       | 6.2   | 6.0   | 5.6   | 5.0   | 4.4   | 100.0 |
| 105.0 |       |       |       |       |      |       |       | 5.2   | 4.8   | 4.4   | 3.8   | 105.0 |
| 110.0 |       |       |       |       |      |       |       | 4.8   | 4.4   | 4.0   | 3.2   | 110.0 |
| 115.0 |       |       |       |       |      |       |       | 4.2   | 3.8   | 3.2   | 2.8   | 115.0 |
| 120.0 |       |       |       |       |      |       |       |       | 3.4   | 2.8   |       | 120.0 |
| 125.0 |       |       |       |       |      |       |       |       | 2.8   | 2.4   |       | 125.0 |
| 130.0 |       |       |       |       |      |       |       |       | 2.4   | 1.8   |       | 130.0 |



11,0 m - 51,0 m  
(36 ft - 167 ft)



7,2 m  
(23.6 ft)



360°



7,9 t (8.7 USt)



Pounds x 1000

| ft    | 36.1  | 49.5  | 63.0  | 76.4  | 89.2 | 101.7 | 115.2 | 128.6 | 142.1 | 154.9 | 167.3 | ft    |
|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| 10.0  | 153.0 | 127.0 | 124.0 | 109.0 |      |       |       |       |       |       |       | 10.0  |
| 15.0  | 107.0 | 105.0 | 100.0 | 96.0  | 79.0 |       |       |       |       |       |       | 15.0  |
| 20.0  | 80.0  | 80.0  | 80.0  | 78.0  | 73.0 | 59.0  | 45.0  |       |       |       |       | 20.0  |
| 25.0  | 62.0  | 63.0  | 61.0  | 58.0  | 56.0 | 53.0  | 43.6  | 33.8  |       |       |       | 25.0  |
| 30.0  |       | 48.0  | 48.0  | 46.0  | 44.0 | 41.0  | 38.0  | 33.4  | 25.4  | 19.6  |       | 30.0  |
| 35.0  |       | 36.8  | 37.6  | 37.8  | 35.6 | 32.8  | 31.2  | 29.0  | 25.4  | 19.6  | 15.8  | 35.0  |
| 40.0  |       | 26.4  | 30.8  | 31.2  | 29.4 | 27.2  | 27.2  | 24.0  | 23.4  | 19.6  | 15.8  | 40.0  |
| 45.0  |       |       | 25.0  | 25.2  | 24.6 | 24.4  | 23.0  | 21.4  | 20.2  | 19.2  | 15.8  | 45.0  |
| 50.0  |       |       | 20.6  | 20.8  | 20.4 | 21.4  | 19.6  | 19.6  | 18.6  | 17.8  | 15.8  | 50.0  |
| 55.0  |       |       |       | 17.8  | 17.4 | 18.4  | 16.8  | 17.0  | 16.8  | 15.8  | 14.6  | 55.0  |
| 60.0  |       |       |       | 15.4  | 14.6 | 15.4  | 14.8  | 15.2  | 14.8  | 13.8  | 12.6  | 60.0  |
| 65.0  |       |       |       | 13.6  | 12.4 | 13.2  | 13.2  | 13.6  | 13.0  | 12.2  | 11.0  | 65.0  |
| 70.0  |       |       |       |       | 10.6 | 11.6  | 12.0  | 12.0  | 11.4  | 10.6  | 9.6   | 70.0  |
| 75.0  |       |       |       |       | 9.4  | 10.6  | 10.8  | 10.4  | 10.0  | 9.2   | 8.4   | 75.0  |
| 80.0  |       |       |       |       |      | 9.6   | 9.4   | 9.2   | 8.8   | 8.2   | 7.2   | 80.0  |
| 85.0  |       |       |       |       |      | 8.4   | 8.2   | 8.0   | 7.8   | 7.2   | 6.2   | 85.0  |
| 90.0  |       |       |       |       |      | 7.6   | 7.4   | 7.2   | 6.8   | 6.2   | 5.4   | 90.0  |
| 95.0  |       |       |       |       |      |       | 6.6   | 6.4   | 5.8   | 5.4   | 4.6   | 95.0  |
| 100.0 |       |       |       |       |      |       | 5.8   | 5.6   | 5.0   | 4.6   | 4.0   | 100.0 |
| 105.0 |       |       |       |       |      |       |       | 4.8   | 4.4   | 4.0   | 3.4   | 105.0 |
| 110.0 |       |       |       |       |      |       |       | 4.4   | 4.0   | 3.4   | 2.8   | 110.0 |
| 115.0 |       |       |       |       |      |       |       | 3.8   | 3.4   | 3.0   | 2.2   | 115.0 |
| 120.0 |       |       |       |       |      |       |       |       | 2.8   | 2.4   |       | 120.0 |
| 125.0 |       |       |       |       |      |       |       |       | 2.4   |       |       | 125.0 |
| 130.0 |       |       |       |       |      |       |       |       | 2.0   |       |       | 130.0 |

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# Load charts

## Main boom

PRELIMINARY



11,0 m - 51,0 m  
(36 ft - 167 ft)



7,2 m  
(23.6 ft)



360°



6,8 t (7.5 USt)



Pounds x 1000

| ft    | 36.1  | 49.5  | 63.0  | 76.4  | 89.2 | 101.7 | 115.2 | 128.6 | 142.1 | 154.9 | 167.3 | ft    |
|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| 10.0  | 153.0 | 127.0 | 124.0 | 109.0 |      |       |       |       |       |       |       | 10.0  |
| 15.0  | 106.0 | 104.0 | 100.0 | 96.0  | 79.0 |       |       |       |       |       |       | 15.0  |
| 20.0  | 79.0  | 80.0  | 80.0  | 76.0  | 71.0 | 59.0  | 45.0  |       |       |       |       | 20.0  |
| 25.0  | 60.0  | 61.0  | 59.0  | 56.0  | 54.0 | 50.0  | 43.6  | 33.8  |       |       |       | 25.0  |
| 30.0  |       | 44.0  | 45.0  | 44.0  | 42.2 | 38.6  | 35.8  | 33.2  | 25.4  | 19.6  |       | 30.0  |
| 35.0  |       | 33.4  | 35.4  | 36.0  | 33.8 | 31.0  | 30.2  | 27.4  | 25.4  | 19.6  | 15.8  | 35.0  |
| 40.0  |       | 24.0  | 27.6  | 29.2  | 27.6 | 26.4  | 25.6  | 23.4  | 22.2  | 19.6  | 15.8  | 40.0  |
| 45.0  |       |       | 22.2  | 23.8  | 23.0 | 23.4  | 21.6  | 21.2  | 20.0  | 18.6  | 15.8  | 45.0  |
| 50.0  |       |       | 18.2  | 19.6  | 19.2 | 20.0  | 18.4  | 18.4  | 18.2  | 17.0  | 15.6  | 50.0  |
| 55.0  |       |       |       | 16.6  | 16.0 | 17.2  | 16.0  | 16.4  | 15.8  | 14.8  | 13.6  | 55.0  |
| 60.0  |       |       |       | 14.0  | 13.6 | 14.6  | 14.2  | 14.6  | 13.8  | 12.8  | 11.6  | 60.0  |
| 65.0  |       |       |       | 12.0  | 11.4 | 12.4  | 13.0  | 12.8  | 12.2  | 11.2  | 10.2  | 65.0  |
| 70.0  |       |       |       |       | 10.0 | 11.4  | 11.4  | 11.2  | 10.6  | 9.8   | 8.8   | 70.0  |
| 75.0  |       |       |       |       | 9.2  | 10.2  | 10.0  | 9.8   | 9.2   | 8.6   | 7.4   | 75.0  |
| 80.0  |       |       |       |       |      | 9.0   | 8.8   | 8.6   | 8.2   | 7.4   | 6.4   | 80.0  |
| 85.0  |       |       |       |       |      | 7.8   | 7.6   | 7.4   | 7.2   | 6.4   | 5.6   | 85.0  |
| 90.0  |       |       |       |       |      | 7.0   | 6.8   | 6.4   | 6.2   | 5.6   | 4.8   | 90.0  |
| 95.0  |       |       |       |       |      |       | 6.0   | 5.8   | 5.4   | 4.8   | 4.0   | 95.0  |
| 100.0 |       |       |       |       |      |       | 5.2   | 5.0   | 4.6   | 4.2   | 3.4   | 100.0 |
| 105.0 |       |       |       |       |      |       |       | 4.4   | 4.0   | 3.6   | 2.8   | 105.0 |
| 110.0 |       |       |       |       |      |       |       | 3.8   | 3.4   | 2.8   | 2.4   | 110.0 |
| 115.0 |       |       |       |       |      |       |       | 3.2   | 3.0   | 2.4   |       | 115.0 |
| 120.0 |       |       |       |       |      |       |       |       | 2.4   |       |       | 120.0 |

### The lifting capacities correspond to ASME B30.5

The lifting capacities likewise fulfill the requirements of ISO 4305 with regard to stability.

The lifting capacities are given in pounds x 1000.

Lifting capacity = Payload + weight of hook block and suspending device.

The lifting capacities for the main boom only apply with the jib dismantled.

Lifting capacities greater than 130,000 lb require additional equipment.

Lifting capacities greater than 165,000 lb require special equipment.

The right is reserved to modify the load-carrying capacities.

**Note: The details in this brochure serve only as general information. The determinant values for the operation of the crane are the lifting capacity tables belonging to it and the operating instructions.**

**Lifting capacities are indicated by boom length for different levels of extension. The actual boom length will be in accordance with the selected configuration for boom extension.**

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## Superstructure

**Boom**

11,0 m to 51,0 m (36 ft - 167 ft) six section TWIN-LOCK™ boom. Maximum tip height 54,0 m (177 ft).

**Boom elevation**

One cylinder with safety valve, boom angle from -3,0° to +82°.

**Load moment and independent anti-two block system**

Load moment and independent anti-two block system with audio visual warning and control lever lock-out. These systems provide graphic display of boom angle, length, radius, tip height, relative load moment, maximum permissible load, load indication and warning of impending two-block condition with lock-out hoist function.

**Cab**

Aluminium, full vision, tilting (approx. 20°), safety glass, adjustable operator's seat with suspension (optional), engine-independent heater. Armrest integrated crane controls. Ergonomically arranged instrumentation and crane operating controls.

**Slewing**

Two slewing gears with axial piston motors, planetary gears, automatic break.

**Counterweight**

18,3 t (20.2 USt), consisting of various sections (18,3 t [20.2 USt] within 2,55 m [8.4 ft] vehicle width). Hydraulic removal system.

**Hydraulic system**

Two separate circuits, 1 axial piston variable displacement pump with electronic power limiting control and 1 axial piston variable displacement pump for slewing.

Thermostatically controlled oil cooler. Tank capacity: 450 l (119 gallon).

**Control system**

Full electronic control of all crane movements using electrical control levers with automatic reset to zero. Integrated with the RCL and engine management system by CAN-BUS. Crane Control System (CCS) with system with graphic display.

**Hoist**

Axial piston motor with planetary gear and brake. Drum rotation indicator. IR - Hoist camera with light.

**\* Optional equipment**

- Bi-fold swingaway, 8,7 m (28.5 ft)/15 m (49 ft) with hydraulic offset and luffing under load (0°-40°), controlled from the crane cab.
- Bi-fold swingaway, 8,7 m (28.5 ft)/15 m (49 ft) (manual offset 0°, 20°, 40°).
- Lattice extension, 21 m (69 ft)- includes 6 m (19.7 ft) fixed non-offsettable section plus 8,7 m (28.5 ft)/15 m (49 ft) swingaway (see above).
- Auxiliary hoist

## Carrier

**Chassis**

Special 4-axle chassis, all-welded torsion-resistant box type construction in high strength steel.

**Outriggers**

4 double hydraulically telescoping beams with vertical cylinders and outrigger pads. Independent horizontal and vertical movement control on each side of the carrier and from the operators cab. Electronic level indicator with automatic levelling system.

**Engine**

Mercedes Benz OM470LA, diesel, 6 cylinders, water cooled, turbocharged, 320 kW (430 hp) at 1700 rpm (80/1269 EWG fan loose). Max. torque: 2100 Nm at 1300 rpm. Fuel tank: 200 l + 200 l (52.8 gal + 52.8 gal)

Engine emission: Euromot 4 / EPA / CARB Tier 4 final (non road) - optional Euromot 3a / EPA / CARB Tier 3 (non road).

**Transmission**

Mercedes G 280-16 gears forward and 2 reverse. 2-stage transfer case with longitudinal differential lock.

**Drive/Steer**

8 x 6 x 8.

**Axle lines**

4 axle lines, axle lines 1, 2, 3 and 4 steered, axle line 1, 3 and 4 driven.

**Suspension**

MEGATRAK®. All wheels with independent hydropneumatic suspension and hydraulic lockout. Longitudinal and transverse level control with automatic on highway levelling system. Range +170 mm/-126 mm (+6.7 in / -5.1 in). Active suspension control on outrigger control units.

**Tires**

Eight tires, 385/95 R25 (14.00 R25).

**Steering**

Dual circuit, hydraulic power assisted steering with emergency steering pump. Axle lines 1, 2 and 4 steer on highway. Separate electronic hydraulic (steer by wire) steering of the 3rd, and 4th axle line for all wheel steering and crabbing.

**Brakes**

Service brake: pneumatic dual circuit drum brakes acting on all wheels, air dryer. Permanent brake: exhaust brake and constant throttle brake.

Parking brake: pneumatically operated spring-loaded brake acting on axle lines 2, 3 and 4.

**Driver's Cab**

2-mandesign, safety glass, driver seat with pneumatic suspension, engine-independent diesel air heater incl. 24 h timer. Complete instrumentation and driving controls. Air condition. 12 V plug. Two rotating beacons. Fire extinguisher.

**Electrical system**

Three-phase alternator 28 V/150A, 2 batteries 12 V/180 Ah. Lighting system and signals 24 V.

**\* Optional equipment**

- 8 x 8 x 8
- Eight tires, size 445/95 R25 (16.00 R25) - Vehicle width 2,75 m (9.02 ft).
- Eight tires, size 525/80 R25 (20.5 R25) - Vehicle width 2,88 m (9.5 ft).
- Folding bunk bed in carrier cab.
- Secondary water retarder.
- Reverse camera system.

\*Further optional equipment on request.

# Symbols glossary

|                                                                                     |                       |                                                                                     |                   |                                                                                     |                                |                                                                                       |                               |
|-------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------|-------------------------------|
|    | Axles                 |    | Counterweight     |    | Main hoist                     |    | Outriggers                    |
|    | Axle load             |    | Crane functions   |    | Auxiliary hoist                |    | Radius                        |
|    | Boom                  |    | Crane travel      |    | Hookblock / Capacity           |    | Slewing/<br>Working range     |
|    | Boom elevation        |    | Drive/Steer       |    | Hydraulic system               |    | Speed                         |
|  | Boom telescoping      |  | Electrical system |  | Lattice extension              |  | Suspension                    |
|  | Brakes                |  | Engine            |  | Lattice extension<br>(luffing) |  | Transmission / Gear           |
|  | Cab                   |  | Free on wheels    |  | Luffing Jib                    |  | Travel speed                  |
|  | Carrier frame         |  | Gradeability      |  | Low range                      |  | Tyres                         |
|  | Hose reel             |  | Swing-Away        |  | Dolly                          |  | Storage box +<br>rigging gear |
|  | Weight per axle in kg |  | Driveline         |  | Brackets                       |                                                                                       |                               |



**Notes**



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