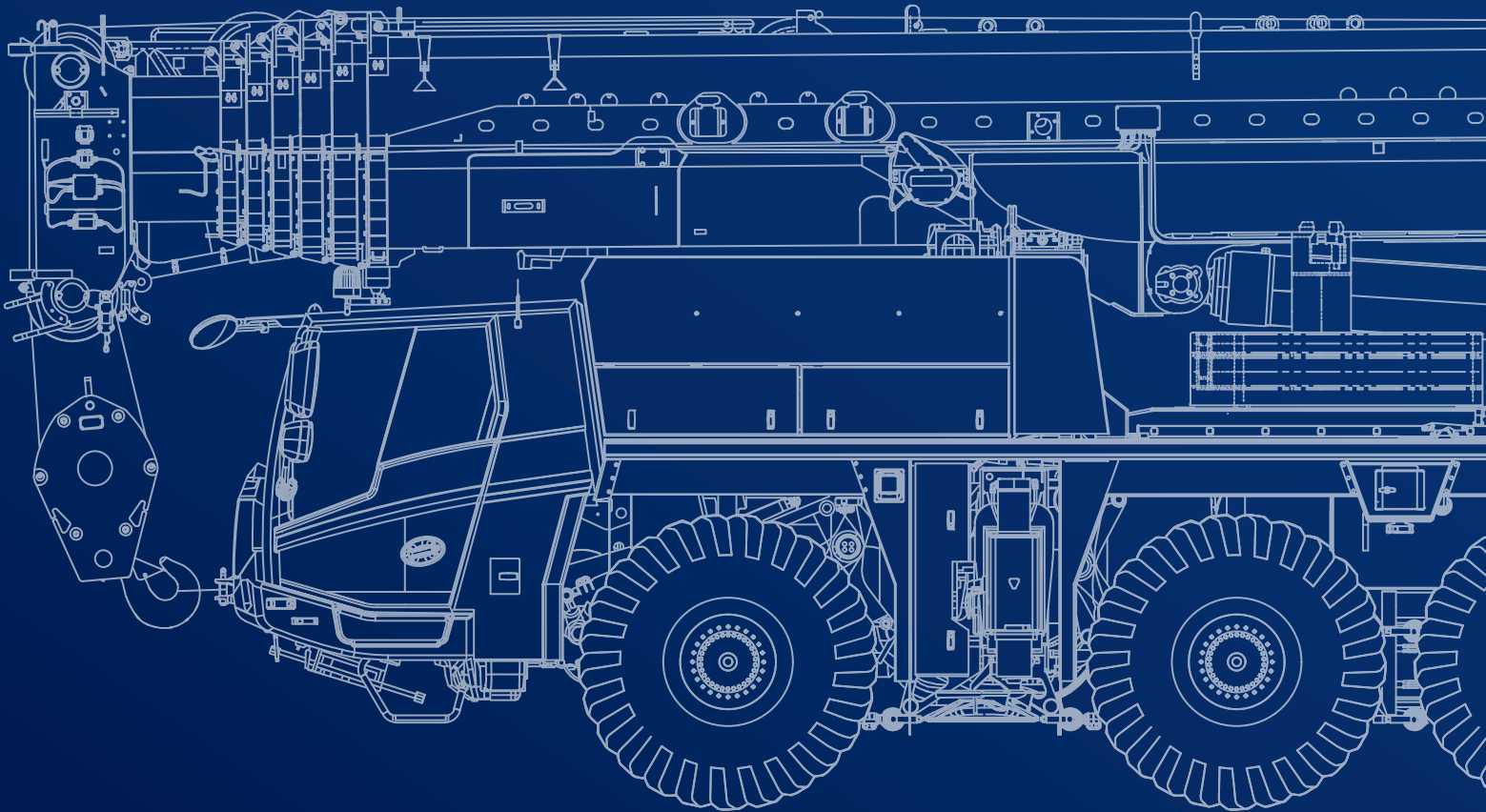


# AC 5.120-1

**130 US TON MAX. CRANE CAPACITY**



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# Contents

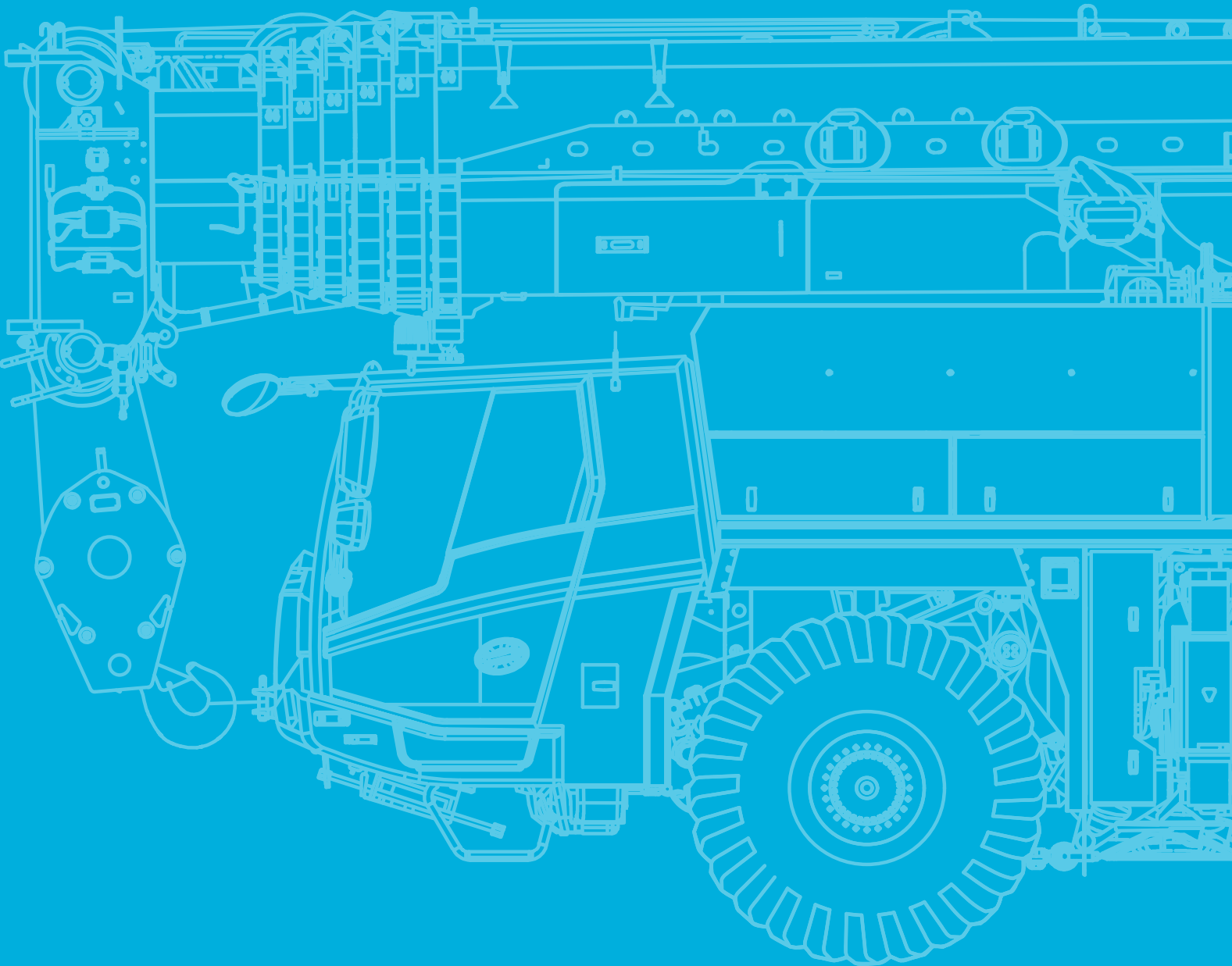
|   |           |
|---|-----------|
| <b>General</b>  | <b>5</b>  |
| Vehicle dimensions .....  | 6         |
| Boom combinations .....   | 7         |
| <b>On-road and off-road driving</b>                             | <b>9</b>  |
| Axle loads .....  | 10        |
| Speeds and gradeability .....                                   | 10        |
| Steering .....  | 10        |
| <b>Transportation</b>   | <b>11</b> |
| Counterweight .....   | 12-13     |
| Configurations .....  | 12        |
| Jib .....   | 14-16     |
| <b>Operation</b>  | <b>17</b> |
| Main boom .....   | 19        |
| Slewing .....   | 19        |
| Hoist .....   | 19        |
| Outrigger cylinders .....                                       | 19        |
| Hook Blocks .....   | 19        |
| <b>HA:</b> Main boom .....                                      | 20-27     |
| <b>HAV:</b> Folding swing-away jib .....                        | 28-36     |
| <b>HAV-VA:</b> Variable extension with swing-away jib .....     | 38-42     |
| <b>HTLJ:</b> Hydraulically telescopable and tilttable jib ..... | 44-50     |
| <b>MS:</b> Runner .....   | 52-56     |
| Notes to Lifting Capacity .....                                 | 58        |
| <b>Technical Description</b>                                    | <b>59</b> |
| Basic machine .....   | 60        |
| Additional equipment .....                                      | 61        |

# Key



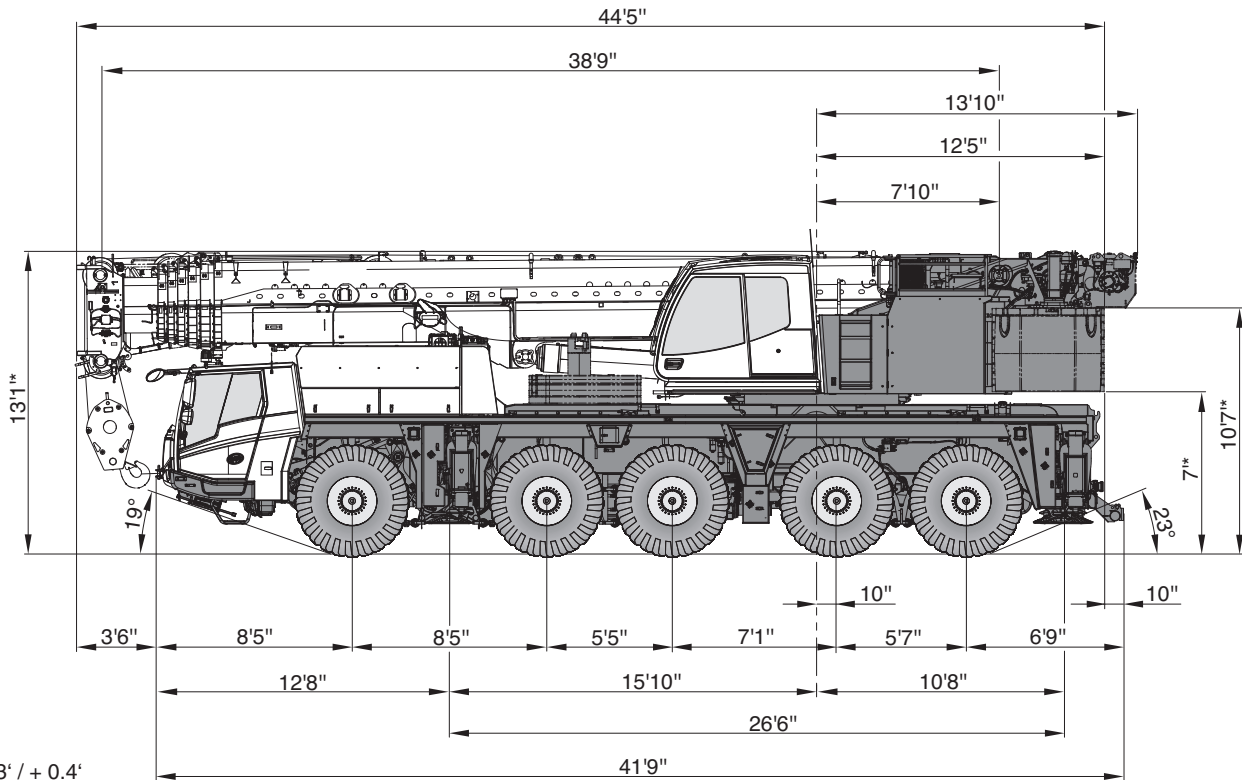
|   |   |   |   |
|---|---|---|---|
|    | Counterweight                           |    | Boom telescoping                        |
|    | Lifting capacities on outriggers · 360° |    | Boom elevation                          |
|    | Radius                                  |    | Working speeds                          |
|    | Main boom                               |    | Slewing                                 |
|    | Folding swing-away jib                  |    | Max. line pull                          |
|    | Runner                                  |    | Rope diameter                           |
|    | Max. axle loads                         |    | Rope length                             |
|  | Mechanism                               |  | Hook block                              |
|  | Tires                                   |  | Number of lines                         |
|  | Hook block                              |  | Possible load of hook block             |
|  | Hoist                                   |  | Weight of hook block                    |
|  | Travel speed                            |  | Distance head sheave axle – hook ground |
|  | Gradeability<br>%                       |  | Number of sheaves in hook block         |
|  | Off road / On road                      |  | Max. outrigger load                     |
|   |   |  | Length of stroke (support cylinders)    |

# GENERAL TECHNICAL DATA

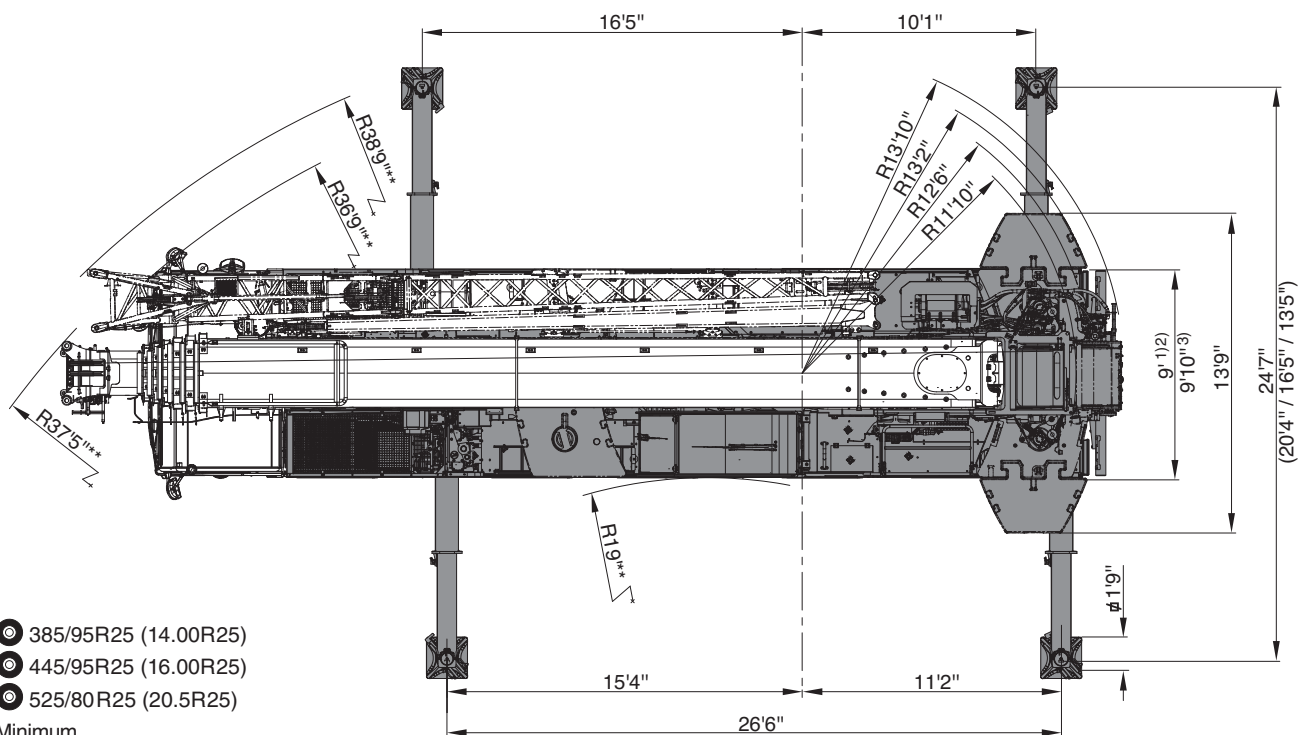


# General

## Vehicle dimensions



\* -0.3' / + 0.4'

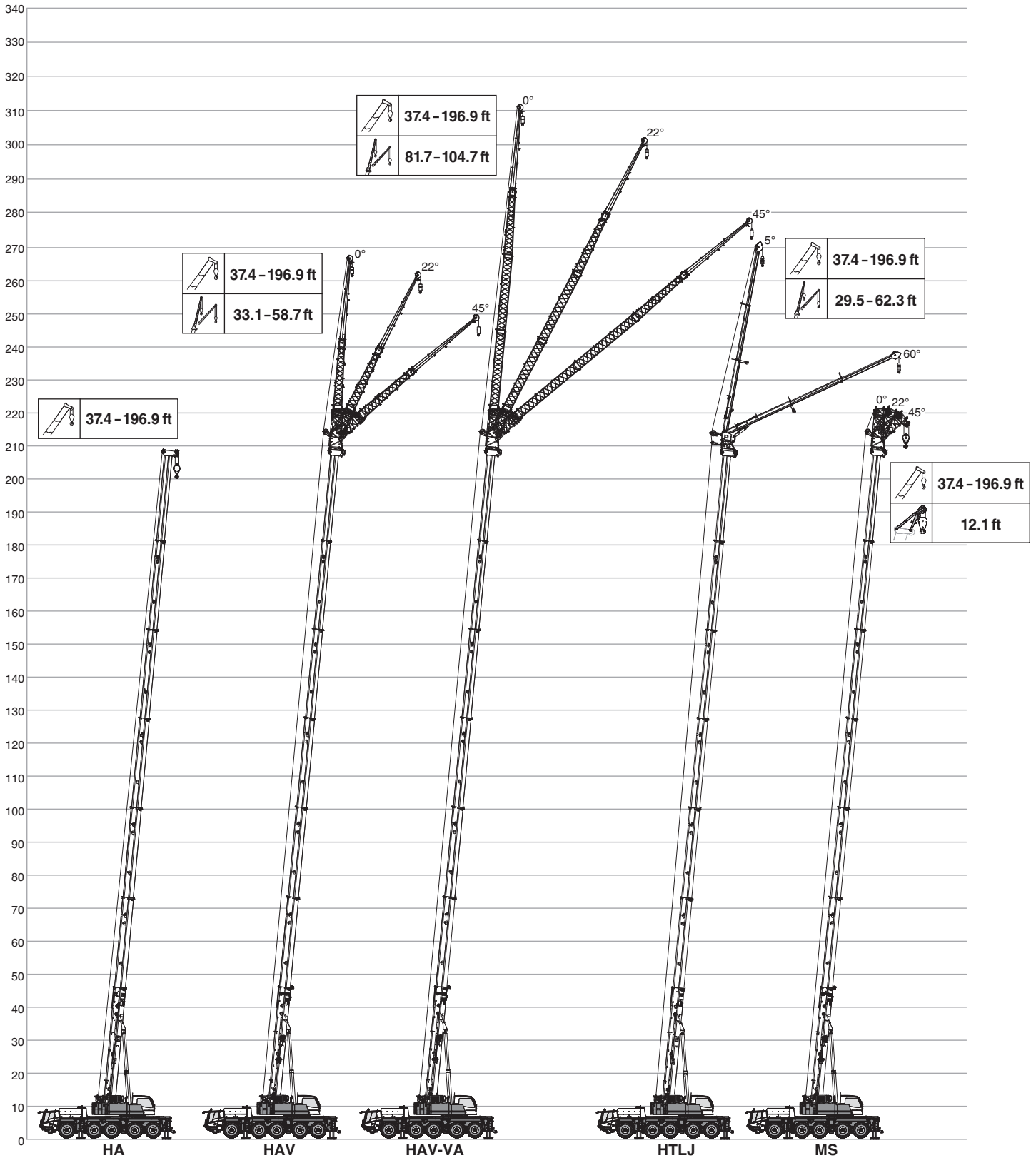


- 1) 385/95R25 (14.00R25)
- 2) 445/95R25 (16.00R25)
- 3) 525/80R25 (20.5R25)

\*\* Minimum

# General

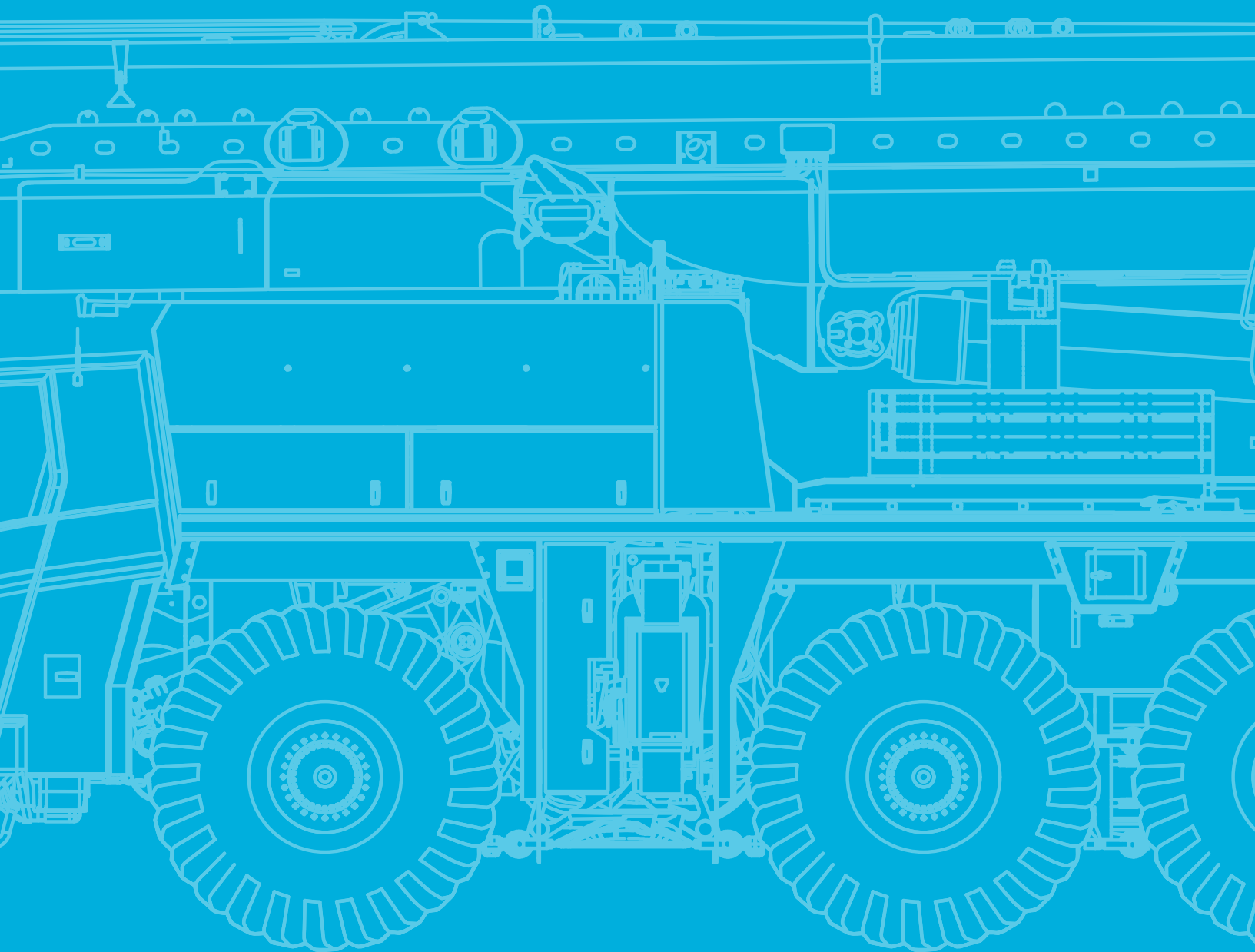
## Boom combinations


















# TECHNICAL DATA FOR ON-ROAD AND OFF-ROAD DRIVING












# On-road and off-road driving

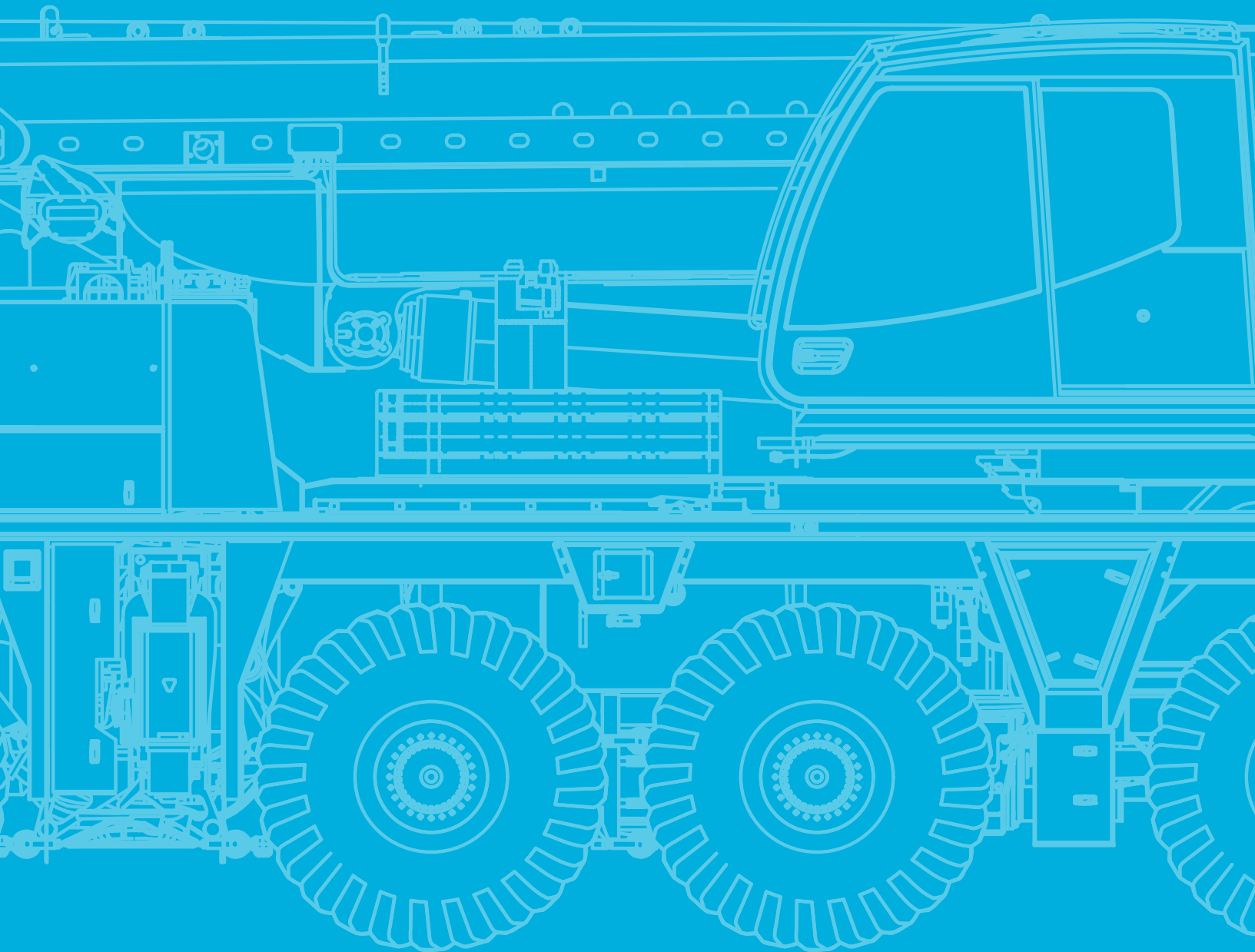
| Axle loads  |               |   |   |  |   |   |
|---|---------------|---|---|--|---|---|
|  | Total         |  |  |  |  |  |
| < 22,050 lbs  | < 105,800 lbs | 10 x 6  | 385/95R25   | 138,900 lbs  | –   | –   |
| < 22,050 lbs  | < 105,800 lbs | 10 x 8  | 445/95R25   | 22,050 lbs   | –   | –   |
| < 24,250 lbs  | < 105,800 lbs | 10 x 6  | 445/95R25   | 138,900 lbs  | –   | –   |
| < 22,050 lbs  | < 110,200 lbs | 10 x 8  | 445/95R25   | 138,900 lbs  | –   | 2,900 lbs   |
| < 26,500 lbs  | < 132,300 lbs | 10 x 8  | 445/95R25   | 138,900/22,050 lbs   | 58.7 ft   | 20,400 lbs  |
| < 26,500 lbs  | < 132,300 lbs | 10 x 8  | 445/95R25   | 138,900 lbs  | –   | 25,500 lbs  |
| < 28,700 lbs  | < 143,300 lbs | 10 x 8  | 445/95R25   | 138,900/22,050 lbs   | 58.7 ft   | 29,200 lbs  |

| Speeds and gradeability   |                           |                           |                           |
|---|---------------------------|---------------------------|---------------------------|
|    | 385/95 R 25<br>14.00 R 25 | 445/95 R 25<br>16.00 R 25 | 525/80 R 25<br>20.50 R 25 |
|   | 64 %                      | 57 %                      | 57 %                      |
|  | 72 %                      | 63 %                      | 63 %                      |
|  | 49.7 mph <sup>1)</sup>    | 52.8 mph <sup>1)</sup>    | 52.8 mph <sup>1)</sup>    |
|  | 23.6 mph <sup>1)</sup>    | 26.1 mph <sup>1)</sup>    | 26.1 mph <sup>1)</sup>    |

<sup>1)</sup> Depending on tire type, size and country specific legislation

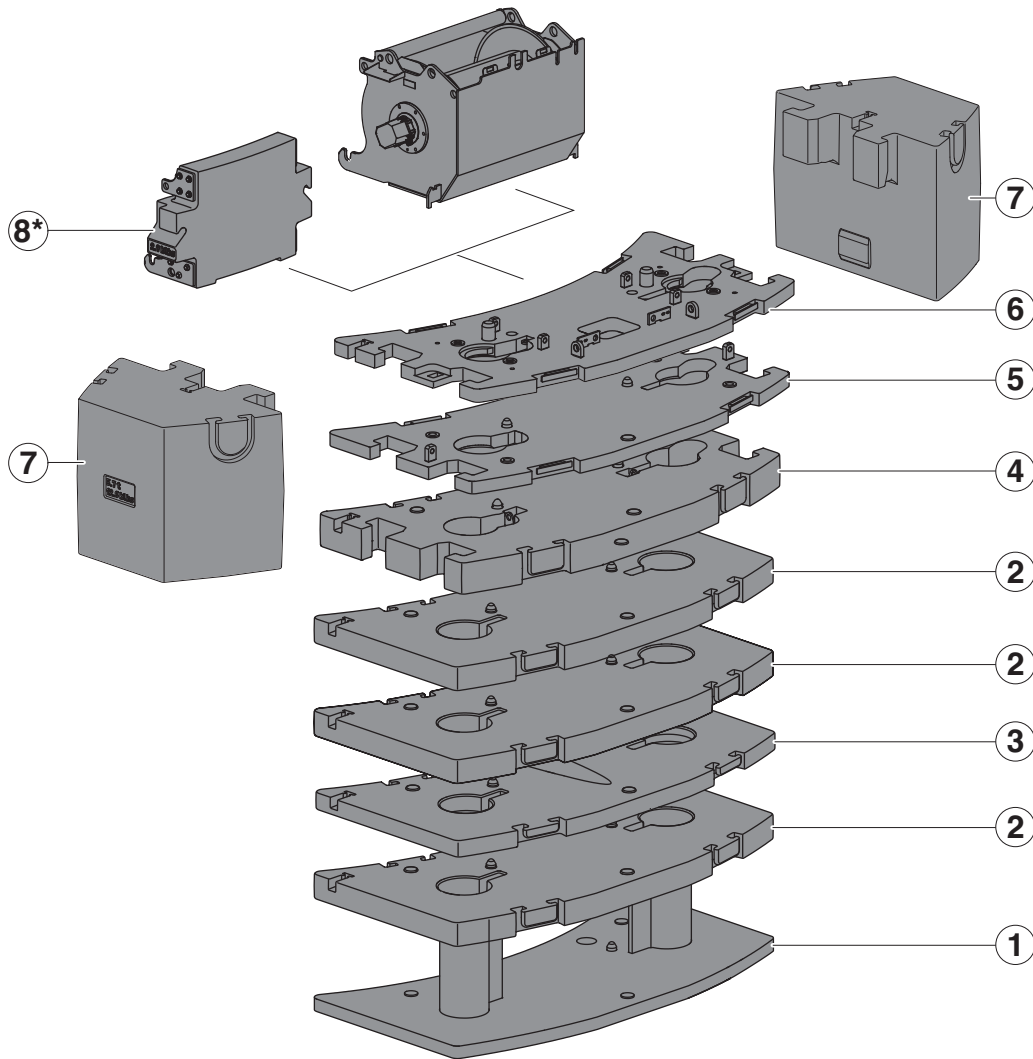
| Steering  |  |
|---|--|
|  |  v < 18.6 mph             |
|   |  18.6 mph ≤ v ≤ 31.1 mph  |
|   |  v > 31.1 mph             |
|  |  Manually steered         |
|   |  Minimum turning radius   |
|   |  Crab steer mode          |
|   |  Rear veering suppression |

# TECHNICAL DATA FOR TRANSPORT



# Transportation

## Counterweight



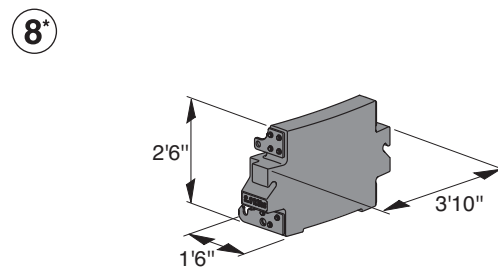
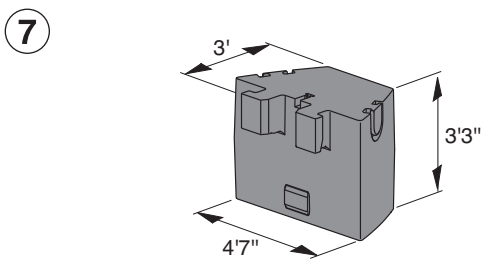
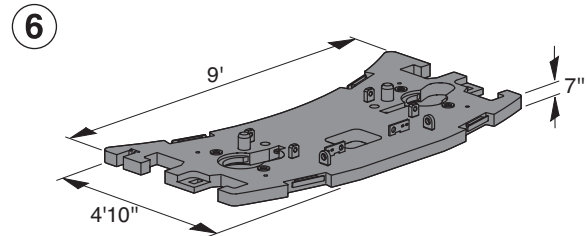
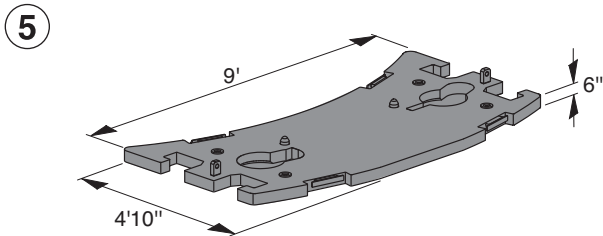
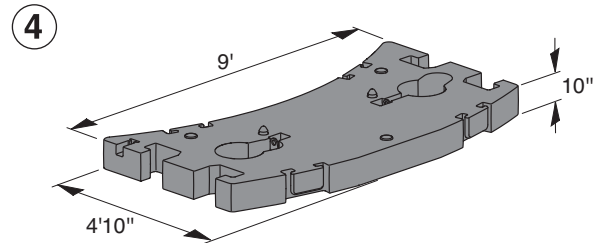
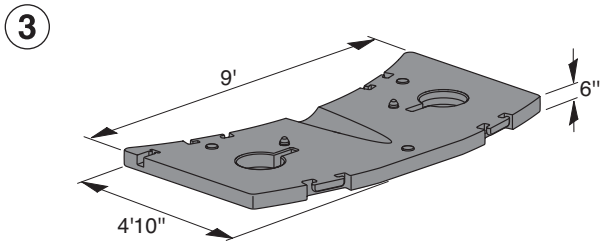
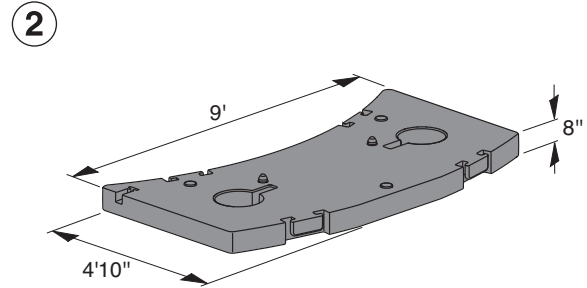
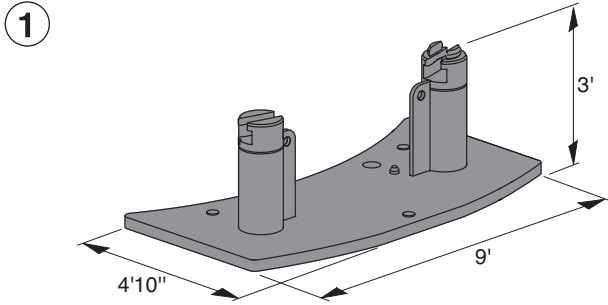
### Configurations

|              | 2,900 lbs | 6,900 lbs | 10,600 lbs | 12,900 lbs | 16,900 lbs | 20,400 lbs | 24,100 lbs | 25,500 lbs | 29,200 lbs | 33,000 lbs | 36,700 lbs | 40,500 lbs | 44,200 lbs | 49,300 lbs | 52,000 lbs | 78,200 lbs |
|--------------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| ① 6,000 lbs  |           |           |            | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          |
| ② 7,500 lbs  |           |           |            |            |            | 1          | 1          | 1          | 1          | 2          | 2          | 3          | 3          | 3          | 3          | 3          |
| ③ 5,100 lbs  |           |           |            |            |            |            |            | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          |
| ④ 8,800 lbs  |           |           |            |            |            |            |            |            |            |            |            |            |            | 1          | 1          | 1          |
| ⑤ 3,700 lbs  |           |           | 1          |            | 1          |            | 1          |            | 1          |            | 1          |            | 1          |            | 1          | 1          |
| ⑥ 4,000 lbs  |           | 1         | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          |
| ⑦ 12,600 lbs |           |           |            |            |            |            |            |            |            |            |            |            |            |            |            | 2          |
| ⑧* 2,900 lbs | 1         | 1         | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          | 1          |

\* Can be replaced by 2<sup>nd</sup> hoist

# Transportation

## Counterweight

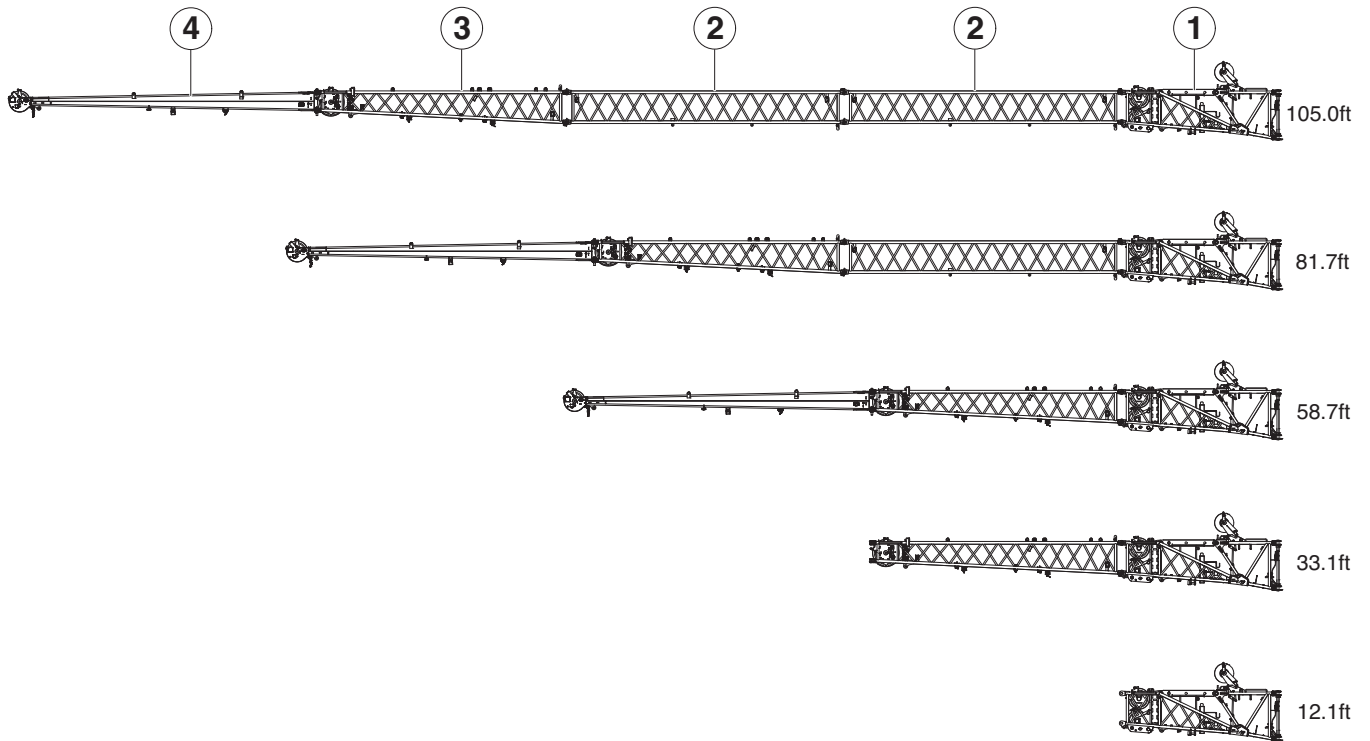


\* Can be replaced by 2<sup>nd</sup> hoist

# Transportation

Jib

HAV

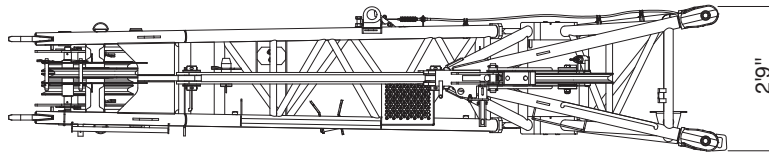
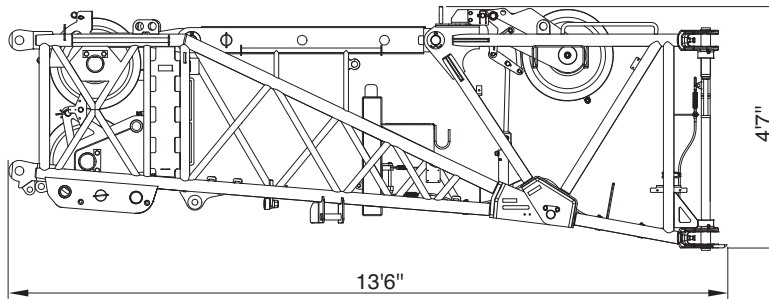


# Transportation

## Jib

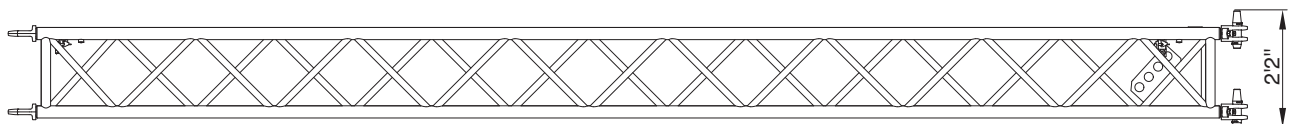
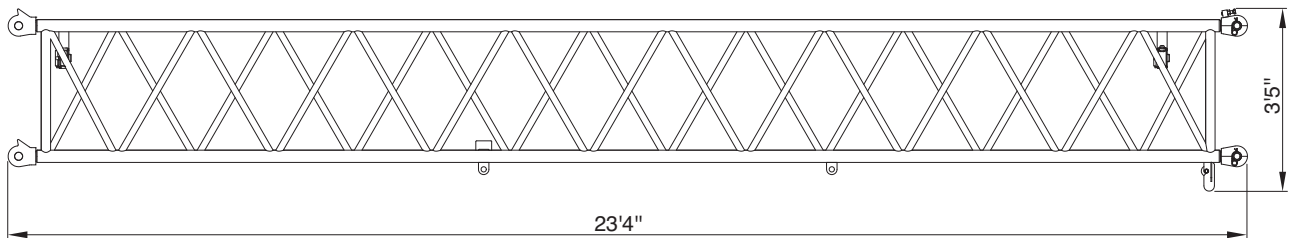
1

lbs  
1,850



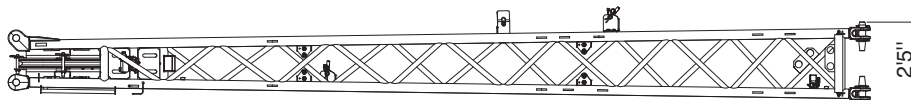
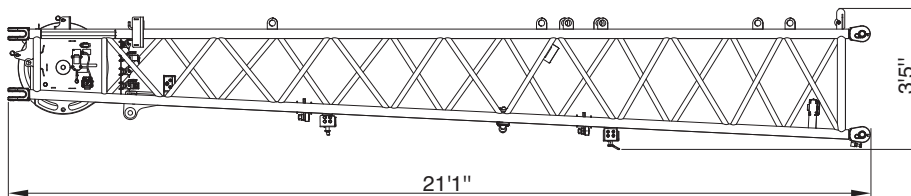
2

lbs  
1,100



3

lbs  
1,000



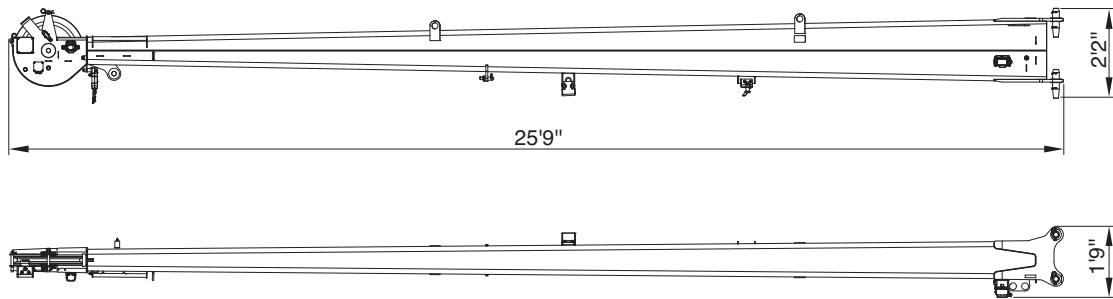
# Transportation

Jib

4

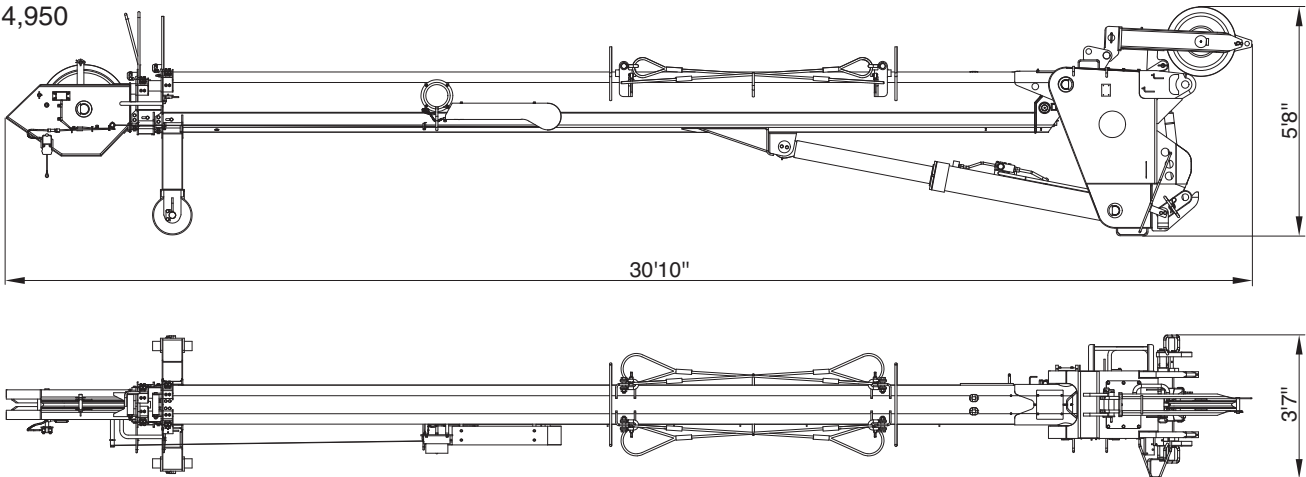
lbs

950



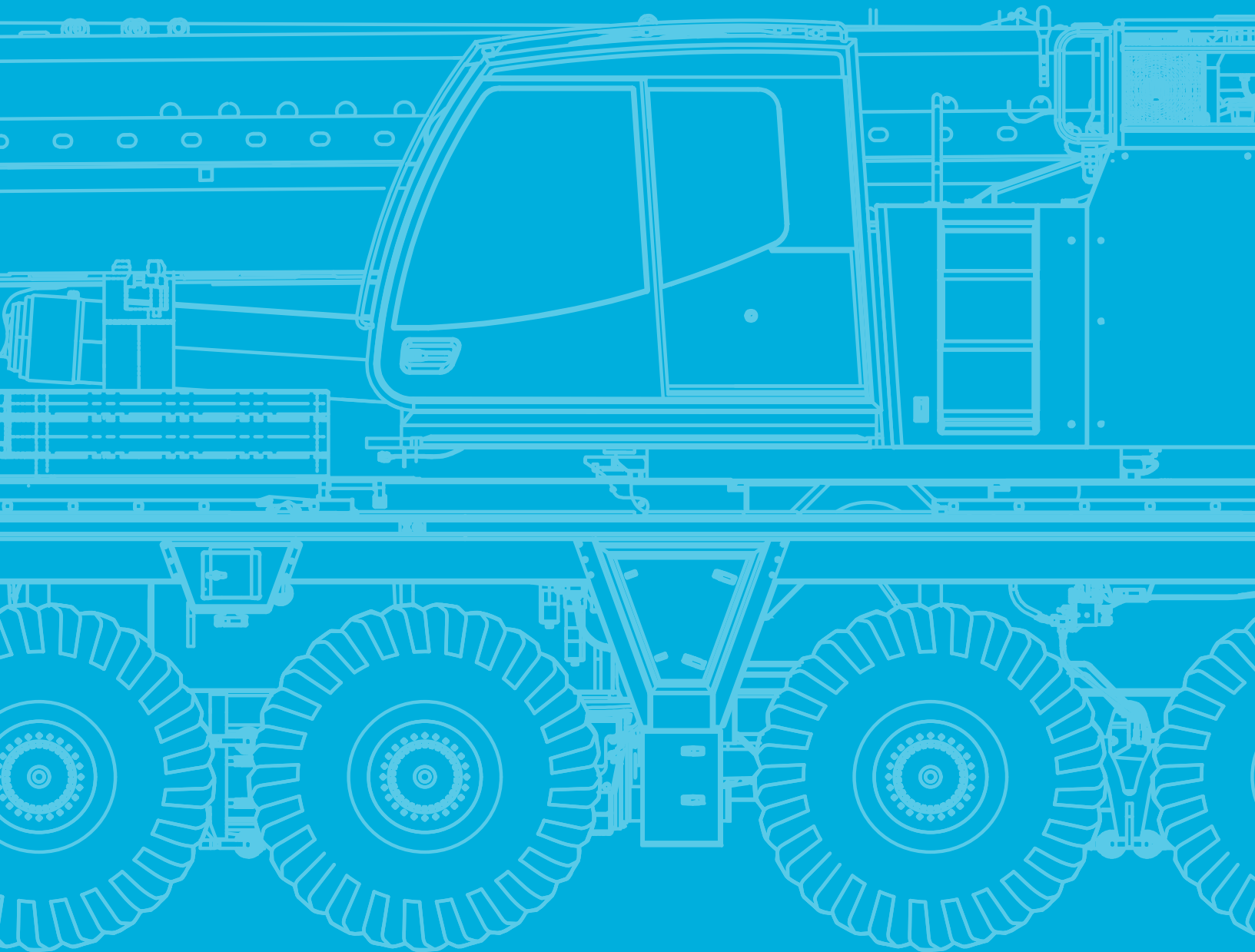
lbs

4,950





# TECHNICAL DATA FOR OPERATION





# Operation

## Main boom



approx. 560 s (37.4 ft - 196.9 ft)



approx. 45 s (-1° - 84,7°)

## Slewing



0 - 2 min<sup>-1</sup>

## Hoist

|  | 377 ft/min | 19,109 lbf | 0.83" | 820 ft |
|--|------------|------------|-------|--------|
|  | 377 ft/min | 19,109 lbf | 0.83" | 820 ft |

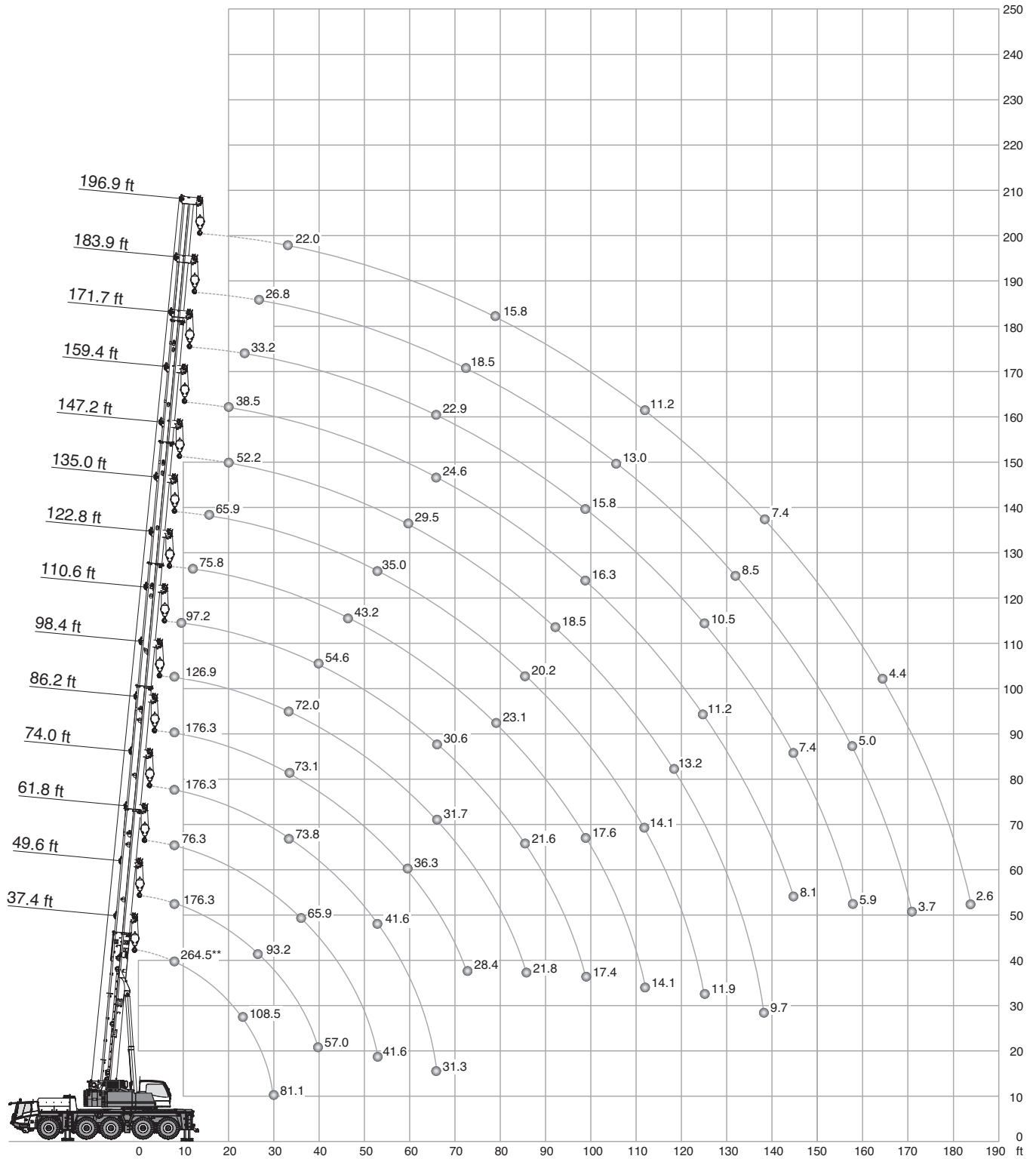
## Outrigger cylinders

|  | 150,000 lbs | 176,400 lbs |
|--|-------------|-------------|
|  | 23.6"       | 23.6"       |

## Hook Blocks



| 22,050 lbs  | 19,100  | — | 1  | 660   |
|-------------|---------|---|----|-------|
| 70,600 lbs  | 56,450  | 1 | 3  | 990   |
| 138,900 lbs | 130,100 | 3 | 7  | 1,320 |
| 220,500 lbs | 202,200 | 5 | 11 | 1,760 |
| 352,800 lbs | 264,600 | 7 | 15 | 2,870 |



\*\* Max. crane capacity – with additional special equipment

# Operation

HA

| 78,200 lbs |         | 24.6 ft x 26.3 ft |       |       |       |       |       |      |       |       |       |       |       |       |       | 360°  |       | ASME B30.5 |  |
|------------|---------|-------------------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|--|
|            |         | (ft)              |       |       |       |       |       |      |       |       |       |       |       |       |       |       |       |            |  |
|            |         | 37.4*             | 37.4  | 49.6  | 61.8  | 74.0  | 86.2  | 98.4 | 110.6 | 122.8 | 135.0 | 147.2 | 159.4 | 171.7 | 183.9 | 196.9 |       |            |  |
| ft         |         | 1,000 lbs         |       |       |       |       |       |      |       |       |       |       |       |       |       | ft    |       |            |  |
| 8.2        | 264.5** | 251.3             | 176.3 | 176.3 | 176.3 | 154.3 | 126.9 | -    | -     | -     | -     | -     | -     | -     | -     | -     | 8.2   |            |  |
| 9.8        | 232.1   | 227.0             | 176.3 | 176.3 | 176.3 | 154.3 | 126.9 | 97.2 | -     | -     | -     | -     | -     | -     | -     | -     | 9.8   |            |  |
| 11.5       | 214.7   | 206.5             | 176.3 | 176.3 | 172.1 | 154.3 | 126.9 | 95.0 | 75.8  | -     | -     | -     | -     | -     | -     | -     | 11.5  |            |  |
| 13.1       | 195.5   | 188.9             | 176.3 | 176.3 | 165.3 | 154.3 | 126.1 | 91.2 | 79.1  | -     | -     | -     | -     | -     | -     | -     | 13.1  |            |  |
| 14.8       | 173.2   | 173.2             | 172.4 | 170.6 | 165.3 | 148.1 | 123.6 | 87.5 | 76.2  | 65.9  | -     | -     | -     | -     | -     | -     | 14.8  |            |  |
| 16.4       | 155.4   | 155.4             | 155.6 | 155.4 | 154.3 | 141.9 | 120.5 | 83.7 | 73.6  | 64.5  | -     | -     | -     | -     | -     | -     | 16.4  |            |  |
| 19.7       | 128.5   | 128.5             | 128.7 | 128.5 | 128.5 | 128.3 | 112.2 | 78.9 | 67.9  | 59.9  | 52.2  | 38.5  | -     | -     | -     | -     | 19.7  |            |  |
| 23.0       | 108.6   | 108.6             | 108.9 | 110.0 | 109.5 | 108.4 | 104.0 | 73.4 | 62.8  | 55.7  | 49.3  | 41.0  | 33.2  | -     | -     | -     | 23.0  |            |  |
| 26.2       | 93.0    | 93.0              | 93.2  | 94.3  | 93.6  | 94.5  | 93.9  | 70.3 | 58.4  | 51.8  | 46.5  | 39.4  | 33.2  | 26.8  | -     | -     | 26.2  |            |  |
| 29.5       | 81.1    | 81.1              | 81.1  | 82.2  | 83.3  | 82.8  | 81.7  | 65.0 | 58.4  | 48.5  | 43.6  | 38.1  | 32.1  | 26.8  | -     | -     | 29.5  |            |  |
| 32.8       | -       | -                 | 71.4  | 72.5  | 73.8  | 73.1  | 72.0  | 60.8 | 54.8  | 48.0  | 41.2  | 37.2  | 31.3  | 26.8  | 22.0  | -     | 32.8  |            |  |
| 36.1       | -       | -                 | 63.4  | 65.9  | 65.9  | 65.2  | 64.3  | 57.5 | 51.5  | 46.0  | 39.0  | 35.0  | 30.2  | 26.8  | 22.0  | -     | 36.1  |            |  |
| 39.4       | -       | -                 | 57.0  | 59.5  | 59.3  | 58.8  | 57.7  | 54.6 | 48.5  | 43.4  | 38.8  | 33.5  | 30.2  | 26.0  | 22.0  | -     | 39.4  |            |  |
| 45.9       | -       | -                 | -     | 49.3  | 49.1  | 48.5  | 47.6  | 48.9 | 43.2  | 38.8  | 35.2  | 32.4  | 27.3  | 24.4  | 22.0  | -     | 45.9  |            |  |
| 52.5       | -       | -                 | -     | 41.6  | 41.6  | 41.0  | 42.3  | 41.2 | 38.5  | 35.0  | 32.1  | 29.5  | 27.1  | 22.9  | 20.5  | -     | 52.5  |            |  |
| 59.1       | -       | -                 | -     | -     | 35.7  | 36.3  | 36.3  | 35.2 | 34.8  | 31.9  | 29.5  | 26.8  | 24.6  | 21.3  | 19.1  | -     | 59.1  |            |  |
| 65.6       | -       | -                 | -     | -     | 31.3  | 32.4  | 31.7  | 30.6 | 30.2  | 29.1  | 27.1  | 24.6  | 22.9  | 19.8  | 18.0  | -     | 65.6  |            |  |
| 72.2       | -       | -                 | -     | -     | -     | 28.4  | 27.7  | 26.8 | 26.4  | 26.6  | 24.9  | 22.7  | 21.1  | 18.5  | 16.9  | -     | 72.2  |            |  |
| 78.7       | -       | -                 | -     | -     | -     | -     | 24.6  | 24.4 | 23.1  | 23.3  | 23.1  | 20.9  | 19.6  | 17.1  | 15.8  | -     | 78.7  |            |  |
| 85.3       | -       | -                 | -     | -     | -     | -     | 21.8  | 21.6 | 20.7  | 20.2  | 21.1  | 19.6  | 18.2  | 15.8  | 14.7  | -     | 85.3  |            |  |
| 91.9       | -       | -                 | -     | -     | -     | -     | -     | 18.9 | 19.4  | 18.7  | 18.5  | 18.0  | 16.9  | 14.7  | 13.8  | -     | 91.9  |            |  |
| 98.4       | -       | -                 | -     | -     | -     | -     | -     | 17.4 | 17.6  | 17.4  | 16.3  | 16.3  | 15.8  | 13.8  | 13.0  | -     | 98.4  |            |  |
| 105.0      | -       | -                 | -     | -     | -     | -     | -     | -    | 15.6  | 15.6  | 14.9  | 14.3  | 14.9  | 13.0  | 12.1  | -     | 105.0 |            |  |
| 111.5      | -       | -                 | -     | -     | -     | -     | -     | -    | 14.1  | 14.1  | 14.1  | 13.2  | 13.4  | 12.1  | 11.2  | -     | 111.5 |            |  |
| 118.1      | -       | -                 | -     | -     | -     | -     | -     | -    | -     | 12.5  | 13.2  | 12.3  | 11.9  | 11.0  | 10.5  | -     | 118.1 |            |  |
| 124.7      | -       | -                 | -     | -     | -     | -     | -     | -    | -     | 11.9  | 11.9  | 11.2  | 10.5  | 9.7   | 9.7   | -     | 124.7 |            |  |
| 131.2      | -       | -                 | -     | -     | -     | -     | -     | -    | -     | -     | 10.8  | 10.1  | 9.4   | 8.5   | 8.5   | -     | 131.2 |            |  |
| 137.8      | -       | -                 | -     | -     | -     | -     | -     | -    | -     | -     | 9.7   | 9.0   | 8.3   | 7.7   | 7.4   | -     | 137.8 |            |  |
| 144.4      | -       | -                 | -     | -     | -     | -     | -     | -    | -     | -     | -     | 8.1   | 7.4   | 6.6   | 6.6   | -     | 144.4 |            |  |
| 150.9      | -       | -                 | -     | -     | -     | -     | -     | -    | -     | -     | -     | -     | 6.6   | 5.9   | 5.7   | -     | 150.9 |            |  |
| 157.5      | -       | -                 | -     | -     | -     | -     | -     | -    | -     | -     | -     | -     | 5.9   | 5.0   | 5.0   | -     | 157.5 |            |  |
| 164.0      | -       | -                 | -     | -     | -     | -     | -     | -    | -     | -     | -     | -     | -     | 4.4   | 4.4   | -     | 164.0 |            |  |
| 170.6      | -       | -                 | -     | -     | -     | -     | -     | -    | -     | -     | -     | -     | -     | 3.7   | 3.7   | -     | 170.6 |            |  |
| 177.2      | -       | -                 | -     | -     | -     | -     | -     | -    | -     | -     | -     | -     | -     | -     | 3.0   | -     | 177.2 |            |  |
| 183.7      | -       | -                 | -     | -     | -     | -     | -     | -    | -     | -     | -     | -     | -     | -     | 2.6   | -     | 183.7 |            |  |

\* over rear

\*\* Max. crane capacity – with additional special equipment

# Operation

HA

| 53,000 lbs |                | 24.6 ft x 26.3 ft |                |                |                | 360° / Max.*   |                |                |                | ASME B30.5     |                |                |                 |                 |      |
|------------|----------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|------|
| ft         | 360°<br>37.4ft | Max.<br>37.4ft    | 360°<br>49.6ft | Max.<br>49.6ft | 360°<br>61.8ft | Max.<br>61.8ft | 360°<br>74.0ft | Max.<br>74.0ft | 360°<br>86.2ft | Max.<br>86.2ft | 360°<br>98.4ft | Max.<br>98.4ft | 360°<br>110.6ft | Max.<br>110.6ft | ft   |
| 1,000 lbs  |                |                   |                |                |                |                |                |                |                |                |                |                |                 |                 |      |
| 8.2        | 249.5          | 251.3             | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 154.3          | 154.3          | 126.9          | 126.9          | -               | -               | 8.2  |
| 9.8        | 224.8          | 227.0             | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 154.3          | 154.3          | 126.9          | 126.9          | 97.2            | 97.2            | 9.8  |
| 11.5       | 204.1          | 206.5             | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 172.1          | 172.1          | 154.3          | 154.3          | 126.9          | 126.9           | 95.0            | 11.5 |
| 13.1       | 182.5          | 183.8             | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 165.3          | 165.3          | 154.3          | 154.3          | 126.1          | 126.1           | 91.2            | 13.1 |
| 14.8       | 162.0          | 162.7             | 162.2          | 162.9          | 162.0          | 162.4          | 160.9          | 161.3          | 148.1          | 148.1          | 123.6          | 123.6          | 87.5            | 87.5            | 14.8 |
| 16.4       | 145.2          | 145.5             | 145.5          | 146.6          | 145.2          | 145.5          | 144.1          | 144.4          | 141.9          | 141.9          | 120.5          | 120.5          | 83.7            | 83.7            | 16.4 |
| 19.7       | 118.8          | 118.8             | 119.0          | 119.9          | 120.1          | 120.1          | 119.7          | 119.7          | 118.6          | 118.6          | 112.2          | 112.2          | 78.9            | 78.9            | 19.7 |
| 23.0       | 99.2           | 99.2              | 99.4           | 100.3          | 100.5          | 100.5          | 100.0          | 100.0          | 101.4          | 101.4          | 100.3          | 100.3          | 73.4            | 73.4            | 23.0 |
| 26.2       | 84.8           | 84.8              | 84.8           | 85.7           | 85.9           | 85.9           | 87.5           | 87.5           | 86.8           | 86.8           | 85.7           | 85.7           | 70.3            | 70.3            | 26.2 |
| 29.5       | 73.8           | 73.8              | 73.6           | 74.5           | 76.0           | 76.0           | 76.2           | 76.2           | 75.6           | 75.6           | 74.5           | 74.5           | 65.0            | 65.0            | 29.5 |
| 32.8       | -              | -                 | 64.8           | 65.6           | 67.2           | 67.2           | 67.2           | 67.2           | 66.5           | 66.5           | 65.6           | 65.6           | 60.8            | 60.8            | 32.8 |
| 36.1       | -              | -                 | 57.7           | 58.4           | 59.9           | 59.9           | 59.9           | 59.9           | 59.3           | 59.3           | 58.4           | 58.4           | 57.5            | 57.5            | 36.1 |
| 39.4       | -              | -                 | 53.1           | 53.1           | 54.0           | 54.0           | 54.0           | 54.0           | 53.3           | 53.3           | 52.2           | 52.2           | 53.5            | 53.5            | 39.4 |
| 45.9       | -              | -                 | -              | -              | 44.5           | 44.5           | 44.5           | 44.5           | 43.8           | 43.8           | 45.1           | 45.1           | 43.4            | 43.4            | 45.9 |
| 52.5       | -              | -                 | -              | -              | 36.8           | 37.6           | 36.5           | 37.6           | 38.3           | 38.8           | 37.4           | 38.1           | 35.9            | 37.2            | 52.5 |
| 59.1       | -              | -                 | -              | -              | -              | -              | 31.7           | 33.0           | 31.5           | 33.2           | 30.6           | 32.8           | 30.4            | 32.4            | 59.1 |
| 65.6       | -              | -                 | -              | -              | -              | -              | 26.8           | 29.3           | 26.4           | 29.1           | 25.7           | 28.4           | 25.3            | 28.2            | 65.6 |
| 72.2       | -              | -                 | -              | -              | -              | -              | -              | -              | 22.4           | 25.5           | 21.8           | 24.9           | 22.0            | 24.6            | 72.2 |
| 78.7       | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | 18.5           | 22.2           | 19.6            | 21.8            | 78.7 |
| 85.3       | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | 16.5           | 19.8           | 16.9            | 19.6            | 85.3 |
| 91.9       | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | 14.7            | 18.0            | 91.9 |
| 98.4       | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | 13.0            | 16.5            | 98.4 |

| ft        | 360°<br>122.8ft | Max.<br>122.8ft | 360°<br>135.0ft | Max.<br>135.0ft | 360°<br>147.2ft | Max.<br>147.2ft | 360°<br>159.4ft | Max.<br>159.4ft | 360°<br>171.7ft | Max.<br>171.7ft | 360°<br>183.9ft | Max.<br>183.9ft | 360°<br>196.9ft | Max.<br>196.9ft | ft    |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------|
| 1,000 lbs |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |       |
| 11.5      | 75.8            | 75.8            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 11.5  |
| 13.1      | 79.1            | 79.1            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 13.1  |
| 14.8      | 76.2            | 76.2            | 65.9            | 65.9            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 14.8  |
| 16.4      | 73.6            | 73.6            | 64.5            | 64.5            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 16.4  |
| 19.7      | 67.9            | 67.9            | 59.9            | 59.9            | 52.2            | 52.2            | 38.5            | 38.5            | -               | -               | -               | -               | -               | -               | 19.7  |
| 23.0      | 62.8            | 62.8            | 55.7            | 55.7            | 49.3            | 49.3            | 41.0            | 41.0            | 33.2            | 33.2            | -               | -               | -               | -               | 23.0  |
| 26.2      | 58.4            | 58.4            | 51.8            | 51.8            | 46.5            | 46.5            | 39.4            | 39.4            | 33.2            | 33.2            | 26.8            | 26.8            | -               | -               | 26.2  |
| 29.5      | 58.4            | 58.4            | 48.5            | 48.5            | 43.6            | 43.6            | 38.1            | 38.1            | 32.1            | 32.1            | 26.8            | 26.8            | -               | -               | 29.5  |
| 32.8      | 54.8            | 54.8            | 48.0            | 48.0            | 41.2            | 41.2            | 37.2            | 37.2            | 31.3            | 31.3            | 26.8            | 26.8            | 22.0            | 22.0            | 32.8  |
| 36.1      | 51.5            | 51.5            | 46.0            | 46.0            | 39.0            | 39.0            | 35.0            | 35.0            | 30.2            | 30.2            | 26.8            | 26.8            | 22.0            | 22.0            | 36.1  |
| 39.4      | 48.5            | 48.5            | 43.4            | 43.4            | 38.8            | 38.8            | 33.5            | 33.5            | 30.2            | 30.2            | 26.0            | 26.0            | 22.0            | 22.0            | 39.4  |
| 45.9      | 41.6            | 43.2            | 38.8            | 38.8            | 35.2            | 35.2            | 32.4            | 32.4            | 27.3            | 27.3            | 24.4            | 24.4            | 22.0            | 22.0            | 45.9  |
| 52.5      | 34.3            | 36.8            | 33.7            | 35.0            | 32.1            | 32.1            | 29.5            | 29.5            | 27.1            | 27.1            | 22.9            | 22.9            | 20.5            | 20.5            | 52.5  |
| 59.1      | 29.5            | 31.3            | 28.4            | 31.5            | 28.8            | 29.5            | 26.8            | 26.8            | 24.6            | 24.6            | 21.3            | 21.3            | 19.1            | 19.1            | 59.1  |
| 65.6      | 24.9            | 27.3            | 25.7            | 27.1            | 24.6            | 27.1            | 24.2            | 24.6            | 22.9            | 22.9            | 19.8            | 19.8            | 18.0            | 18.0            | 65.6  |
| 72.2      | 22.4            | 24.0            | 22.4            | 23.5            | 21.6            | 24.4            | 20.9            | 22.7            | 21.1            | 21.1            | 18.5            | 18.5            | 16.9            | 16.9            | 72.2  |
| 78.7      | 19.4            | 21.8            | 19.1            | 21.8            | 18.7            | 21.6            | 18.9            | 20.9            | 18.5            | 19.6            | 17.1            | 17.1            | 15.8            | 15.8            | 78.7  |
| 85.3      | 16.7            | 20.2            | 16.5            | 20.0            | 17.4            | 19.1            | 16.7            | 19.1            | 16.0            | 18.2            | 14.9            | 15.8            | 14.7            | 14.7            | 85.3  |
| 91.9      | 14.5            | 18.0            | 15.4            | 18.0            | 15.2            | 17.1            | 14.5            | 16.7            | 13.8            | 16.9            | 13.0            | 14.7            | 12.7            | 13.8            | 91.9  |
| 98.4      | 12.7            | 16.0            | 13.4            | 16.0            | 13.2            | 15.6            | 12.5            | 15.2            | 11.9            | 15.6            | 11.2            | 13.8            | 11.0            | 13.0            | 98.4  |
| 105.0     | 11.2            | 14.5            | 11.9            | 14.3            | 11.6            | 14.9            | 11.0            | 14.1            | 10.3            | 13.8            | 9.4             | 13.0            | 9.4             | 12.1            | 105.0 |
| 111.5     | 9.9             | 13.2            | 10.5            | 13.2            | 10.3            | 13.4            | 9.7             | 12.7            | 9.0             | 12.3            | 8.1             | 11.4            | 8.1             | 11.2            | 111.5 |
| 118.1     | -               | -               | 9.4             | 12.3            | 9.0             | 12.1            | 8.3             | 11.4            | 7.7             | 10.8            | 7.0             | 9.4             | 6.8             | 9.9             | 118.1 |
| 124.7     | -               | -               | 8.3             | 11.2            | 7.9             | 10.8            | 7.2             | 10.1            | 6.8             | 9.4             | 5.9             | 8.5             | 5.9             | 8.5             | 124.7 |
| 131.2     | -               | -               | -               | -               | 7.0             | 9.7             | 6.3             | 9.0             | 5.7             | 8.3             | 4.8             | 7.4             | 4.8             | 7.4             | 131.2 |
| 137.8     | -               | -               | -               | -               | 6.3             | 8.8             | 5.5             | 7.9             | 5.0             | 7.0             | 4.1             | 6.1             | 3.9             | 6.3             | 137.8 |
| 144.4     | -               | -               | -               | -               | -               | -               | 4.8             | 7.0             | 4.1             | 6.3             | 3.3             | 5.5             | 3.3             | 5.5             | 144.4 |
| 150.9     | -               | -               | -               | -               | -               | -               | -               | -               | 3.5             | 5.7             | 2.6             | 4.8             | 2.6             | 4.6             | 150.9 |
| 157.5     | -               | -               | -               | -               | -               | -               | -               | -               | 2.8             | 5.0             | 1.9             | 4.1             | 1.9             | 3.9             | 157.5 |
| 164.0     | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 1.5             | 3.5             | 1.5             | 3.3             | 164.0 |
| 170.6     | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 1.1             | 2.8             | -               | 2.6             | 170.6 |
| 177.2     | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 2.2             | 177.2 |
| 183.7     | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 1.7             | 183.7 |

\* Max. values are valid only for specific superstructure positions

# Operation

HA

| 29,200 lbs |                | 24.6 ft x 26.3 ft |                |                |                | 360° / Max.*   |                |                |                | ASME B30.5     |                |                |                 |                 |      |
|------------|----------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|------|
| ft         | 360°<br>37.4ft | Max.<br>37.4ft    | 360°<br>49.6ft | Max.<br>49.6ft | 360°<br>61.8ft | Max.<br>61.8ft | 360°<br>74.0ft | Max.<br>74.0ft | 360°<br>86.2ft | Max.<br>86.2ft | 360°<br>98.4ft | Max.<br>98.4ft | 360°<br>110.6ft | Max.<br>110.6ft | ft   |
| 1,000 lbs  |                |                   |                |                |                |                |                |                |                |                |                |                |                 |                 |      |
| 8.2        | 246.2          | 251.3             | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 154.3          | 154.3          | 126.9          | 126.9          | -               | -               | 8.2  |
| 9.8        | 221.3          | 227.0             | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 154.3          | 154.3          | 126.9          | 126.9          | 97.2            | 97.2            | 9.8  |
| 11.5       | 194.2          | 195.3             | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 172.1          | 172.1          | 154.3          | 154.3          | 126.9          | 126.9           | 95.0            | 11.5 |
| 13.1       | 169.7          | 170.1             | 169.0          | 169.3          | 167.7          | 168.2          | 165.3          | 165.3          | 154.3          | 154.3          | 126.1          | 126.1          | 91.2            | 91.2            | 13.1 |
| 14.8       | 150.3          | 150.3             | 150.5          | 151.6          | 150.3          | 150.3          | 149.0          | 149.0          | 148.1          | 148.1          | 123.6          | 123.6          | 87.5            | 87.5            | 14.8 |
| 16.4       | 133.1          | 133.1             | 133.3          | 134.2          | 134.4          | 134.4          | 134.0          | 134.0          | 132.7          | 132.7          | 120.5          | 120.5          | 83.7            | 83.7            | 16.4 |
| 19.7       | 107.5          | 107.5             | 107.8          | 108.6          | 108.9          | 108.9          | 108.4          | 108.4          | 109.1          | 109.1          | 102.9          | 108.6          | 78.9            | 78.9            | 19.7 |
| 23.0       | 89.7           | 89.7              | 89.9           | 90.8           | 91.0           | 91.0           | 92.3           | 92.3           | 90.6           | 91.9           | 83.9           | 90.8           | 73.4            | 73.4            | 23.0 |
| 26.2       | 76.5           | 76.5              | 76.5           | 77.3           | 79.1           | 79.1           | 79.1           | 79.1           | 75.6           | 78.4           | 69.8           | 77.3           | 68.5            | 70.3            | 26.2 |
| 29.5       | 66.3           | 66.3              | 66.3           | 67.2           | 68.7           | 68.7           | 67.9           | 68.7           | 63.4           | 68.1           | 61.7           | 67.2           | 58.4            | 65.0            | 29.5 |
| 32.8       | -              | -                 | 59.7           | 59.7           | 60.6           | 60.6           | 59.7           | 60.6           | 54.4           | 59.9           | 54.2           | 59.0           | 52.0            | 60.4            | 32.8 |
| 36.1       | -              | -                 | 50.4           | 53.1           | 51.8           | 54.0           | 50.2           | 54.0           | 50.2           | 53.3           | 47.3           | 54.6           | 45.4            | 53.5            | 36.1 |
| 39.4       | -              | -                 | 42.9           | 47.6           | 44.0           | 48.5           | 44.0           | 48.5           | 44.3           | 48.2           | 42.1           | 49.1           | 40.3            | 48.0            | 39.4 |
| 45.9       | -              | -                 | -              | -              | 34.6           | 39.9           | 35.2           | 39.9           | 35.0           | 41.2           | 33.7           | 40.5           | 33.0            | 40.3            | 45.9 |
| 52.5       | -              | -                 | -              | -              | 27.5           | 32.8           | 27.9           | 34.3           | 27.7           | 34.1           | 26.8           | 33.2           | 27.7            | 33.0            | 52.5 |
| 59.1       | -              | -                 | -              | -              | -              | -              | 22.7           | 28.4           | 22.4           | 28.2           | 23.1           | 27.5           | 22.7            | 27.7            | 59.1 |
| 65.6       | -              | -                 | -              | -              | -              | -              | 18.7           | 24.2           | 18.5           | 23.8           | 19.1           | 23.1           | 18.7            | 23.5            | 65.6 |
| 72.2       | -              | -                 | -              | -              | -              | -              | -              | -              | 15.4           | 20.2           | 16.0           | 19.6           | 16.5            | 20.5            | 72.2 |
| 78.7       | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | 13.6           | 17.8           | 14.5            | 17.8            | 78.7 |
| 85.3       | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | 11.4           | 15.8           | 12.3            | 15.4            | 85.3 |
| 91.9       | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | 10.5            | 13.4            | 91.9 |
| 98.4       | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | 9.2             | 12.7            | 98.4 |

| ft        | 360°<br>122.8ft | Max.<br>122.8ft | 360°<br>135.0ft | Max.<br>135.0ft | 360°<br>147.2ft | Max.<br>147.2ft | 360°<br>159.4ft | Max.<br>159.4ft | 360°<br>171.7ft | Max.<br>171.7ft | 360°<br>183.9ft | Max.<br>183.9ft | 360°<br>196.9ft | Max.<br>196.9ft | ft    |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------|
| 1,000 lbs |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |       |
| 11.5      | 75.8            | 75.8            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 11.5  |
| 13.1      | 79.1            | 79.1            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 13.1  |
| 14.8      | 76.2            | 76.2            | 65.9            | 65.9            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 14.8  |
| 16.4      | 73.6            | 73.6            | 64.5            | 64.5            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 16.4  |
| 19.7      | 67.9            | 67.9            | 59.9            | 59.9            | 52.2            | 52.2            | 38.5            | 38.5            | -               | -               | -               | -               | -               | -               | 19.7  |
| 23.0      | 62.8            | 62.8            | 55.7            | 55.7            | 49.3            | 49.3            | 41.0            | 41.0            | 33.2            | 33.2            | -               | -               | -               | -               | 23.0  |
| 26.2      | 58.4            | 58.4            | 51.8            | 51.8            | 46.5            | 46.5            | 39.4            | 39.4            | 33.2            | 33.2            | 26.8            | 26.8            | -               | -               | 26.2  |
| 29.5      | 55.3            | 58.4            | 48.5            | 48.5            | 43.6            | 43.6            | 38.1            | 38.1            | 32.1            | 32.1            | 26.8            | 26.8            | -               | -               | 29.5  |
| 32.8      | 48.2            | 54.8            | 46.2            | 48.0            | 41.2            | 41.2            | 37.2            | 37.2            | 31.3            | 31.3            | 26.8            | 26.8            | 22.0            | 22.0            | 32.8  |
| 36.1      | 42.7            | 51.5            | 41.2            | 46.0            | 39.0            | 39.0            | 35.0            | 35.0            | 30.2            | 30.2            | 26.8            | 26.8            | 22.0            | 22.0            | 36.1  |
| 39.4      | 37.9            | 47.8            | 37.4            | 43.4            | 35.9            | 38.8            | 33.5            | 33.5            | 30.2            | 30.2            | 26.0            | 26.0            | 22.0            | 22.0            | 39.4  |
| 45.9      | 32.1            | 39.0            | 31.5            | 38.8            | 29.7            | 35.2            | 28.2            | 32.4            | 27.3            | 27.3            | 24.4            | 24.4            | 22.0            | 22.0            | 45.9  |
| 52.5      | 27.1            | 32.4            | 26.0            | 31.7            | 25.5            | 32.1            | 24.6            | 29.5            | 23.3            | 27.1            | 21.8            | 22.9            | 20.5            | 20.5            | 52.5  |
| 59.1      | 22.7            | 27.1            | 22.2            | 27.7            | 22.0            | 26.8            | 20.7            | 26.4            | 19.6            | 24.6            | 18.0            | 21.3            | 17.6            | 19.1            | 59.1  |
| 65.6      | 18.5            | 23.8            | 19.6            | 23.8            | 18.9            | 23.1            | 17.6            | 22.4            | 16.5            | 22.9            | 15.2            | 19.8            | 14.7            | 18.0            | 65.6  |
| 72.2      | 15.4            | 20.5            | 16.3            | 20.2            | 16.0            | 20.0            | 14.9            | 20.2            | 13.8            | 19.4            | 12.5            | 18.2            | 12.3            | 16.9            | 72.2  |
| 78.7      | 13.0            | 17.6            | 13.8            | 17.6            | 13.6            | 18.0            | 12.7            | 17.4            | 11.9            | 16.9            | 10.5            | 15.2            | 10.3            | 15.2            | 78.7  |
| 85.3      | 11.0            | 15.2            | 11.6            | 16.0            | 11.4            | 15.8            | 10.8            | 15.2            | 10.1            | 14.5            | 8.8             | 13.2            | 8.5             | 13.0            | 85.3  |
| 91.9      | 9.2             | 13.2            | 9.9             | 14.1            | 9.7             | 13.8            | 9.0             | 13.2            | 8.3             | 12.5            | 7.4             | 11.2            | 7.2             | 11.2            | 91.9  |
| 98.4      | 7.7             | 11.6            | 8.5             | 12.3            | 8.3             | 12.1            | 7.7             | 11.4            | 7.0             | 11.0            | 6.1             | 9.7             | 5.9             | 9.7             | 98.4  |
| 105.0     | 6.6             | 10.3            | 7.2             | 11.0            | 7.0             | 10.8            | 6.3             | 10.1            | 5.7             | 9.4             | 4.8             | 8.3             | 4.8             | 8.3             | 105.0 |
| 111.5     | 5.7             | 9.0             | 6.1             | 9.7             | 5.9             | 9.4             | 5.2             | 8.8             | 4.6             | 8.3             | 3.7             | 7.4             | 3.7             | 7.2             | 111.5 |
| 118.1     | -               | -               | 5.2             | 8.5             | 5.0             | 8.3             | 4.4             | 7.4             | 3.7             | 7.0             | 2.8             | 6.1             | 2.8             | 6.1             | 118.1 |
| 124.7     | -               | -               | 4.6             | 7.7             | 4.1             | 7.2             | 3.5             | 6.6             | 2.8             | 5.9             | 1.9             | 4.8             | 1.9             | 5.0             | 124.7 |
| 131.2     | -               | -               | -               | -               | 3.5             | 6.3             | 2.8             | 5.7             | 2.2             | 4.8             | 1.3             | 3.9             | 1.3             | 3.9             | 131.2 |
| 137.8     | -               | -               | -               | -               | 2.8             | 5.7             | 2.2             | 4.8             | 1.5             | 4.4             | -               | 3.5             | -               | 3.5             | 137.8 |
| 144.4     | -               | -               | -               | -               | -               | -               | 1.5             | 4.4             | -               | 3.7             | -               | 2.8             | -               | 2.8             | 144.4 |
| 150.9     | -               | -               | -               | -               | -               | -               | -               | -               | -               | 2.8             | -               | 2.2             | -               | 2.2             | 150.9 |
| 157.5     | -               | -               | -               | -               | -               | -               | -               | -               | -               | 2.4             | -               | 1.5             | -               | 1.5             | 157.5 |
| 164.0     | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 1.1             | -               | 1.1             | 164.0 |
| 170.6     | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 0.6             | -               | -               | 170.6 |

\* Max. values are valid only for specific superstructure positions

# Operation

HA

| 25,500 lbs     |                | 24.6 ft x 26.3 ft |                |                |                | 360° / Max.*   |                |                |                | ASME B30.5     |                |                 |                 |      |      |
|----------------|----------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|------|------|
| 360°<br>37.4ft | Max.<br>37.4ft | 360°<br>49.6ft    | Max.<br>49.6ft | 360°<br>61.8ft | Max.<br>61.8ft | 360°<br>74.0ft | Max.<br>74.0ft | 360°<br>86.2ft | Max.<br>86.2ft | 360°<br>98.4ft | Max.<br>98.4ft | 360°<br>110.6ft | Max.<br>110.6ft |      |      |
| ft             | 1,000 lbs      |                   |                |                |                |                |                |                |                |                |                |                 | ft              |      |      |
| 8.2            | 245.8          | 251.3             | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 154.3          | 154.3          | 126.9          | 126.9          | -               | -               | 8.2  |      |
| 9.8            | 220.9          | 225.5             | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 154.3          | 154.3          | 126.9          | 126.9          | 97.2            | 97.2            | 9.8  |      |
| 11.5           | 192.0          | 192.9             | 176.3          | 176.3          | 176.3          | 176.3          | 172.1          | 172.1          | 154.3          | 154.3          | 126.9          | 126.9           | 95.0            | 95.0 | 11.5 |
| 13.1           | 167.7          | 167.9             | 166.8          | 167.3          | 165.7          | 166.2          | 165.3          | 165.3          | 154.3          | 154.3          | 126.1          | 126.1           | 91.2            | 91.2 | 13.1 |
| 14.8           | 147.9          | 147.9             | 148.1          | 149.2          | 148.5          | 148.5          | 146.6          | 146.6          | 147.7          | 147.7          | 123.6          | 123.6           | 87.5            | 87.5 | 14.8 |
| 16.4           | 130.9          | 130.9             | 131.1          | 132.0          | 132.4          | 132.4          | 131.8          | 131.8          | 130.7          | 130.7          | 120.5          | 120.5           | 83.7            | 83.7 | 16.4 |
| 19.7           | 105.8          | 105.8             | 106.0          | 106.9          | 107.1          | 107.1          | 106.7          | 106.7          | 106.9          | 108.0          | 98.5           | 106.9           | 78.9            | 78.9 | 19.7 |
| 23.0           | 88.1           | 88.1              | 88.4           | 89.2           | 89.5           | 89.5           | 91.0           | 91.0           | 86.6           | 90.3           | 80.2           | 89.2            | 73.4            | 73.4 | 23.0 |
| 26.2           | 75.1           | 75.1              | 75.3           | 76.0           | 77.8           | 77.8           | 76.7           | 77.8           | 71.6           | 77.1           | 66.3           | 76.0            | 65.0            | 70.3 | 26.2 |
| 29.5           | 65.2           | 65.2              | 65.6           | 65.9           | 67.6           | 67.6           | 64.1           | 67.6           | 60.1           | 67.0           | 59.5           | 65.9            | 56.2            | 65.0 | 29.5 |
| 32.8           | -              | -                 | 57.3           | 58.8           | 57.5           | 59.5           | 54.8           | 59.5           | 54.4           | 59.0           | 51.1           | 57.9            | 49.1            | 59.3 | 32.8 |
| 36.1           | -              | -                 | 47.6           | 52.2           | 48.9           | 53.1           | 47.3           | 53.1           | 47.6           | 52.4           | 44.9           | 53.7            | 42.9            | 52.6 | 36.1 |
| 39.4           | -              | -                 | 41.4           | 46.9           | 41.6           | 47.6           | 43.8           | 47.6           | 41.8           | 48.2           | 39.6           | 48.2            | 38.8            | 47.1 | 39.4 |
| 45.9           | -              | -                 | -              | -              | 32.8           | 39.0           | 33.2           | 39.4           | 33.0           | 40.3           | 31.5           | 39.6            | 31.0            | 39.4 | 45.9 |
| 52.5           | -              | -                 | -              | -              | 25.7           | 31.3           | 26.2           | 32.8           | 26.0           | 32.6           | 25.5           | 31.9            | 26.2            | 31.7 | 52.5 |
| 59.1           | -              | -                 | -              | -              | -              | -              | 21.1           | 27.1           | 20.9           | 26.8           | 21.8           | 26.2            | 21.3            | 26.6 | 59.1 |
| 65.6           | -              | -                 | -              | -              | -              | -              | 17.4           | 22.9           | 17.1           | 22.7           | 17.8           | 22.0            | 17.8            | 22.9 | 65.6 |
| 72.2           | -              | -                 | -              | -              | -              | -              | -              | -              | 14.3           | 19.4           | 14.9           | 19.4            | 15.8            | 19.6 | 72.2 |
| 78.7           | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | 12.5           | 17.1            | 13.4            | 16.7 | 78.7 |
| 85.3           | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | 10.5           | 14.9            | 11.4            | 14.5 | 85.3 |
| 91.9           | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | -              | -               | 9.9             | 13.4 | 91.9 |
| 98.4           | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | -              | -               | 8.3             | 12.3 | 98.4 |

| 360°<br>122.8ft | Max.<br>122.8ft | 360°<br>135.0ft | Max.<br>135.0ft | 360°<br>147.2ft | Max.<br>147.2ft | 360°<br>159.4ft | Max.<br>159.4ft | 360°<br>171.7ft | Max.<br>171.7ft | 360°<br>183.9ft | Max.<br>183.9ft | 360°<br>196.9ft | Max.<br>196.9ft |       |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------|
| ft              | 1,000 lbs       |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 | ft              |       |
| 11.5            | 75.8            | 75.8            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 11.5  |
| 13.1            | 79.1            | 79.1            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 13.1  |
| 14.8            | 76.2            | 76.2            | 65.9            | 65.9            | -               | -               | -               | -               | -               | -               | -               | -               | -               | 14.8  |
| 16.4            | 73.6            | 73.6            | 64.5            | 64.5            | -               | -               | -               | -               | -               | -               | -               | -               | -               | 16.4  |
| 19.7            | 67.9            | 67.9            | 59.9            | 59.9            | 52.2            | 52.2            | 38.5            | 38.5            | -               | -               | -               | -               | -               | 19.7  |
| 23.0            | 62.8            | 62.8            | 55.7            | 55.7            | 49.3            | 49.3            | 41.0            | 41.0            | 33.2            | 33.2            | -               | -               | -               | 23.0  |
| 26.2            | 58.4            | 58.4            | 51.8            | 51.8            | 46.5            | 46.5            | 39.4            | 39.4            | 33.2            | 33.2            | 26.8            | 26.8            | -               | 26.2  |
| 29.5            | 52.2            | 58.4            | 48.5            | 48.5            | 43.6            | 43.6            | 38.1            | 38.1            | 32.1            | 32.1            | 26.8            | 26.8            | -               | 29.5  |
| 32.8            | 46.0            | 54.8            | 43.6            | 48.0            | 41.2            | 41.2            | 37.2            | 37.2            | 31.3            | 31.3            | 26.8            | 26.8            | 22.0            | 32.8  |
| 36.1            | 40.3            | 51.5            | 39.4            | 46.0            | 38.1            | 39.0            | 35.0            | 35.0            | 30.2            | 30.2            | 26.8            | 26.8            | 22.0            | 36.1  |
| 39.4            | 35.7            | 46.9            | 36.8            | 43.4            | 34.1            | 38.8            | 32.8            | 33.5            | 30.2            | 30.2            | 26.0            | 26.0            | 22.0            | 39.4  |
| 45.9            | 30.8            | 37.9            | 29.5            | 36.8            | 27.9            | 35.2            | 27.9            | 32.4            | 26.6            | 27.3            | 24.4            | 24.4            | 22.0            | 45.9  |
| 52.5            | 25.3            | 30.8            | 24.4            | 31.0            | 24.6            | 30.4            | 23.1            | 29.5            | 21.8            | 27.1            | 20.2            | 22.9            | 19.6            | 52.5  |
| 59.1            | 21.1            | 26.8            | 21.6            | 27.1            | 20.7            | 26.2            | 19.4            | 24.9            | 18.2            | 24.6            | 16.7            | 21.3            | 16.3            | 59.1  |
| 65.6            | 17.4            | 22.9            | 18.2            | 22.7            | 17.6            | 22.0            | 16.3            | 22.2            | 15.2            | 21.3            | 13.8            | 19.8            | 13.4            | 65.6  |
| 72.2            | 14.3            | 19.4            | 15.2            | 19.1            | 14.9            | 20.0            | 13.8            | 19.4            | 12.7            | 18.5            | 11.4            | 16.9            | 11.2            | 72.2  |
| 78.7            | 11.9            | 16.7            | 12.7            | 17.4            | 12.5            | 17.1            | 11.6            | 16.5            | 10.8            | 15.8            | 9.7             | 14.3            | 9.2             | 78.7  |
| 85.3            | 9.9             | 14.3            | 10.8            | 15.2            | 10.5            | 14.9            | 9.9             | 14.3            | 9.2             | 13.6            | 7.9             | 12.5            | 7.7             | 85.3  |
| 91.9            | 8.3             | 12.5            | 9.2             | 13.2            | 9.0             | 13.0            | 8.1             | 12.3            | 7.7             | 11.9            | 6.6             | 10.8            | 6.3             | 91.9  |
| 98.4            | 7.0             | 11.0            | 7.7             | 11.6            | 7.4             | 11.4            | 6.8             | 10.8            | 6.1             | 10.1            | 5.2             | 9.2             | 5.0             | 98.4  |
| 105.0           | 5.9             | 9.7             | 6.6             | 10.1            | 6.3             | 9.9             | 5.7             | 9.4             | 5.0             | 8.8             | 4.1             | 7.9             | 3.9             | 105.0 |
| 111.5           | 4.8             | 8.3             | 5.5             | 9.0             | 5.2             | 8.8             | 4.6             | 8.1             | 3.9             | 7.4             | 3.0             | 6.8             | 3.0             | 111.5 |
| 118.1           | -               | -               | 4.6             | 7.9             | 4.4             | 7.7             | 3.7             | 7.0             | 3.0             | 6.3             | 2.2             | 5.7             | 2.2             | 118.1 |
| 124.7           | -               | -               | 3.9             | 7.0             | 3.5             | 6.8             | 2.8             | 6.1             | 2.4             | 5.5             | 1.5             | 4.6             | 1.3             | 124.7 |
| 131.2           | -               | -               | -               | -               | 2.8             | 5.9             | 2.2             | 5.2             | 1.5             | 4.6             | -               | 3.7             | -               | 131.2 |
| 137.8           | -               | -               | -               | -               | 2.4             | 5.2             | 1.5             | 4.4             | 1.1             | 3.9             | -               | 3.0             | -               | 137.8 |
| 144.4           | -               | -               | -               | -               | -               | -               | 1.1             | 3.7             | -               | 3.3             | -               | 2.4             | -               | 144.4 |
| 150.9           | -               | -               | -               | -               | -               | -               | -               | -               | -               | 2.6             | -               | 1.7             | -               | 150.9 |
| 157.5           | -               | -               | -               | -               | -               | -               | -               | -               | -               | 1.9             | -               | 1.1             | -               | 157.5 |
| 164.0           | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 0.6             | -               | 164.0 |

\* Max. values are valid only for specific superstructure positions



# Operation

| 20,400 lbs |                | 24.6 ft x 26.3 ft |                |                |                | 360° / Max.*   |                |                |                | ASME B30.5     |                |                |                 |                 |      |
|------------|----------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|------|
| ft         | 360°<br>37.4ft | Max.<br>37.4ft    | 360°<br>49.6ft | Max.<br>49.6ft | 360°<br>61.8ft | Max.<br>61.8ft | 360°<br>74.0ft | Max.<br>74.0ft | 360°<br>86.2ft | Max.<br>86.2ft | 360°<br>98.4ft | Max.<br>98.4ft | 360°<br>110.6ft | Max.<br>110.6ft | ft   |
| 1,000 lbs  |                |                   |                |                |                |                |                |                |                |                |                |                |                 |                 |      |
| 8.2        | 244.9          | 244.9             | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 154.3          | 154.3          | 126.9          | 126.9          | -               | -               | 8.2  |
| 9.8        | 219.8          | 219.8             | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 154.3          | 154.3          | 126.9          | 126.9          | 97.2            | 97.2            | 9.8  |
| 11.5       | 188.7          | 188.7             | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 172.1          | 154.3          | 154.3          | 126.9          | 126.9          | 95.0            | 95.0            | 11.5 |
| 13.1       | 165.1          | 165.1             | 165.3          | 165.3          | 164.9          | 164.9          | 163.8          | 163.8          | 154.3          | 154.3          | 126.1          | 126.1          | 91.2            | 91.2            | 13.1 |
| 14.8       | 144.6          | 144.8             | 145.0          | 145.0          | 146.1          | 146.1          | 145.7          | 145.7          | 144.4          | 144.4          | 123.6          | 123.6          | 87.5            | 87.5            | 14.8 |
| 16.4       | 128.0          | 128.0             | 128.3          | 129.1          | 129.6          | 129.6          | 128.9          | 128.9          | 124.5          | 127.8          | 117.9          | 120.5          | 83.7            | 83.7            | 16.4 |
| 19.7       | 103.3          | 103.3             | 103.6          | 104.4          | 104.9          | 104.9          | 104.2          | 104.2          | 100.5          | 105.6          | 92.5           | 104.4          | 78.9            | 78.9            | 19.7 |
| 23.0       | 86.2           | 86.2              | 86.4           | 87.3           | 88.8           | 88.8           | 87.0           | 88.8           | 80.9           | 88.1           | 74.2           | 87.3           | 72.5            | 73.4            | 23.0 |
| 26.2       | 73.4           | 73.4              | 73.4           | 74.2           | 75.3           | 76.0           | 70.9           | 76.0           | 66.1           | 75.3           | 65.0           | 74.2           | 60.8            | 70.3            | 26.2 |
| 29.5       | 62.3           | 63.7              | 65.0           | 65.2           | 62.6           | 66.1           | 59.3           | 66.1           | 58.2           | 65.4           | 54.8           | 64.3           | 52.4            | 64.3            | 29.5 |
| 32.8       | -              | -                 | 52.9           | 57.3           | 53.1           | 58.2           | 50.4           | 58.2           | 50.4           | 57.5           | 47.6           | 57.9           | 45.6            | 57.7            | 32.8 |
| 36.1       | -              | -                 | 43.8           | 50.9           | 45.1           | 51.8           | 46.0           | 51.8           | 43.8           | 51.1           | 41.4           | 52.4           | 40.3            | 51.3            | 36.1 |
| 39.4       | -              | -                 | 37.9           | 45.6           | 38.8           | 46.5           | 40.5           | 46.5           | 38.5           | 47.8           | 36.3           | 47.1           | 35.7            | 46.0            | 39.4 |
| 45.9       | -              | -                 | -              | -              | 30.2           | 36.5           | 30.6           | 38.3           | 30.4           | 38.1           | 28.8           | 37.4           | 29.3            | 37.0            | 45.9 |
| 52.5       | -              | -                 | -              | -              | 23.5           | 30.4           | 24.0           | 30.8           | 23.8           | 30.6           | 24.6           | 29.9           | 24.0            | 30.4            | 52.5 |
| 59.1       | -              | -                 | -              | -              | -              | -              | 19.1           | 25.3           | 18.9           | 25.3           | 19.8           | 24.4           | 19.6            | 25.3            | 59.1 |
| 65.6       | -              | -                 | -              | -              | -              | -              | 16.7           | 21.3           | 15.4           | 21.1           | 16.3           | 21.1           | 17.1            | 21.3            | 65.6 |
| 72.2       | -              | -                 | -              | -              | -              | -              | -              | -              | 13.2           | 18.2           | 13.4           | 18.5           | 14.3            | 18.0            | 72.2 |
| 78.7       | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | 11.2           | 15.8           | 12.1            | 15.6            | 78.7 |
| 85.3       | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | 9.4            | 13.8           | 10.1            | 14.3            | 85.3 |
| 91.9       | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | 8.5             | 12.7            | 91.9 |
| 98.4       | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | 7.4             | 11.2            | 98.4 |

| ft        | 360°<br>122.8ft | Max.<br>122.8ft | 360°<br>135.0ft | Max.<br>135.0ft | 360°<br>147.2ft | Max.<br>147.2ft | 360°<br>159.4ft | Max.<br>159.4ft | 360°<br>171.7ft | Max.<br>171.7ft | 360°<br>183.9ft | Max.<br>183.9ft | 360°<br>196.9ft | Max.<br>196.9ft | ft    |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------|
| 1,000 lbs |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |       |
| 11.5      | 75.8            | 75.8            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 11.5  |
| 13.1      | 79.1            | 79.1            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 13.1  |
| 14.8      | 76.2            | 76.2            | 65.9            | 65.9            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 14.8  |
| 16.4      | 73.6            | 73.6            | 64.5            | 64.5            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 16.4  |
| 19.7      | 67.9            | 67.9            | 59.9            | 59.9            | 52.2            | 52.2            | 38.5            | 38.5            | -               | -               | -               | -               | -               | -               | 19.7  |
| 23.0      | 62.8            | 62.8            | 55.7            | 55.7            | 49.3            | 49.3            | 41.0            | 41.0            | 33.2            | 33.2            | -               | -               | -               | -               | 23.0  |
| 26.2      | 56.6            | 58.4            | 51.8            | 51.8            | 46.5            | 46.5            | 39.4            | 39.4            | 33.2            | 33.2            | 26.8            | 26.8            | -               | -               | 26.2  |
| 29.5      | 49.1            | 58.4            | 46.2            | 48.5            | 43.6            | 43.6            | 38.1            | 38.1            | 32.1            | 32.1            | 26.8            | 26.8            | -               | -               | 29.5  |
| 32.8      | 42.3            | 54.8            | 41.4            | 48.0            | 39.9            | 41.2            | 37.2            | 37.2            | 31.3            | 31.3            | 26.8            | 26.8            | 22.0            | 22.0            | 32.8  |
| 36.1      | 37.9            | 49.3            | 38.1            | 46.0            | 35.0            | 39.0            | 33.7            | 35.0            | 30.2            | 30.2            | 26.8            | 26.8            | 22.0            | 22.0            | 36.1  |
| 39.4      | 35.2            | 43.6            | 33.7            | 41.8            | 31.7            | 38.8            | 30.2            | 33.5            | 29.9            | 30.2            | 26.0            | 26.0            | 22.0            | 22.0            | 39.4  |
| 45.9      | 28.2            | 35.7            | 27.1            | 34.6            | 27.3            | 33.7            | 25.5            | 32.4            | 24.2            | 27.3            | 22.4            | 24.4            | 21.6            | 22.0            | 45.9  |
| 52.5      | 23.1            | 29.3            | 23.3            | 30.4            | 22.4            | 28.6            | 20.9            | 26.8            | 19.8            | 27.1            | 18.0            | 22.9            | 17.6            | 20.5            | 52.5  |
| 59.1      | 19.1            | 25.3            | 19.6            | 25.3            | 18.7            | 24.0            | 17.4            | 24.2            | 16.3            | 22.9            | 14.7            | 20.9            | 14.3            | 19.1            | 59.1  |
| 65.6      | 15.6            | 21.1            | 16.5            | 21.1            | 15.8            | 21.6            | 14.5            | 20.5            | 13.6            | 19.4            | 12.1            | 17.8            | 11.9            | 17.1            | 65.6  |
| 72.2      | 12.7            | 18.0            | 13.6            | 18.7            | 13.4            | 18.7            | 12.3            | 17.6            | 11.2            | 16.7            | 9.9             | 15.2            | 9.7             | 14.7            | 72.2  |
| 78.7      | 10.5            | 15.4            | 11.4            | 16.0            | 11.2            | 16.0            | 10.3            | 14.9            | 9.4             | 14.3            | 8.1             | 13.0            | 7.9             | 12.5            | 78.7  |
| 85.3      | 8.8             | 13.2            | 9.4             | 13.8            | 9.2             | 13.8            | 8.5             | 13.0            | 7.9             | 12.3            | 6.6             | 11.0            | 6.3             | 10.8            | 85.3  |
| 91.9      | 7.2             | 11.4            | 7.9             | 12.1            | 7.7             | 11.9            | 7.0             | 11.2            | 6.3             | 10.5            | 5.2             | 9.4             | 5.0             | 9.0             | 91.9  |
| 98.4      | 5.9             | 9.9             | 6.6             | 10.5            | 6.3             | 10.3            | 5.7             | 9.7             | 5.2             | 9.2             | 4.1             | 8.1             | 3.9             | 7.7             | 98.4  |
| 105.0     | 4.8             | 8.5             | 5.5             | 9.2             | 5.2             | 9.0             | 4.6             | 8.3             | 3.9             | 7.9             | 3.0             | 6.8             | 2.8             | 6.6             | 105.0 |
| 111.5     | 3.9             | 7.7             | 4.6             | 8.1             | 4.4             | 7.9             | 3.7             | 7.2             | 3.0             | 6.8             | 2.2             | 5.7             | 1.9             | 5.5             | 111.5 |
| 118.1     | -               | -               | 3.7             | 7.2             | 3.5             | 7.0             | 2.8             | 6.1             | 2.2             | 5.7             | 1.3             | 4.8             | 1.3             | 4.6             | 118.1 |
| 124.7     | -               | -               | 3.0             | 6.3             | 2.8             | 5.9             | 1.9             | 5.2             | 1.5             | 4.6             | -               | 3.9             | -               | 3.7             | 124.7 |
| 131.2     | -               | -               | -               | -               | 2.2             | 5.2             | 1.5             | 4.4             | -               | 3.9             | -               | 3.0             | -               | 2.8             | 131.2 |
| 137.8     | -               | -               | -               | -               | 1.5             | 4.4             | -               | 3.7             | -               | 3.0             | -               | 2.2             | -               | 2.2             | 137.8 |
| 144.4     | -               | -               | -               | -               | -               | -               | -               | 3.0             | -               | 2.4             | -               | 1.5             | -               | 1.5             | 144.4 |
| 150.9     | -               | -               | -               | -               | -               | -               | -               | -               | -               | 1.9             | -               | 1.1             | -               | 0.8             | 150.9 |
| 157.5     | -               | -               | -               | -               | -               | -               | -               | -               | -               | 1.3             | -               | -               | -               | -               | 157.5 |

\* Max. values are valid only for specific superstructure positions

# Operation

HA




| 6,900 lbs |                | 24.6 ft x 26.3 ft |                | 360° / Max.*   |                |                |                |                |                |                |                | ASME B30.5     |                 |                 |      |
|-----------|----------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|------|
| ft        | 360°<br>37.4ft | Max.<br>37.4ft    | 360°<br>49.6ft | Max.<br>49.6ft | 360°<br>61.8ft | Max.<br>61.8ft | 360°<br>74.0ft | Max.<br>74.0ft | 360°<br>86.2ft | Max.<br>86.2ft | 360°<br>98.4ft | Max.<br>98.4ft | 360°<br>110.6ft | Max.<br>110.6ft | ft   |
| 1,000 lbs |                |                   |                |                |                |                |                |                |                |                |                |                |                 |                 |      |
| 8.2       | 242.7          | 242.7             | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 154.3          | 154.3          | 126.9          | 126.9          | -               | -               | 8.2  |
| 9.8       | 210.5          | 210.5             | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 154.3          | 154.3          | 126.9          | 126.9          | 97.2            | 97.2            | 9.8  |
| 11.5      | 180.5          | 180.9             | 176.3          | 176.3          | 176.3          | 176.3          | 176.3          | 172.1          | 172.1          | 154.3          | 154.3          | 126.9          | 126.9           | 95.0            | 11.5 |
| 13.1      | 156.0          | 156.0             | 156.5          | 156.5          | 156.0          | 156.0          | 154.9          | 154.9          | 144.4          | 154.3          | 126.1          | 126.1          | 91.2            | 91.2            | 13.1 |
| 14.8      | 136.2          | 136.2             | 136.4          | 137.3          | 137.7          | 137.7          | 135.3          | 137.1          | 123.6          | 136.0          | 113.5          | 123.6          | 87.5            | 87.5            | 14.8 |
| 16.4      | 120.3          | 120.3             | 120.5          | 121.4          | 121.9          | 121.9          | 114.8          | 121.4          | 108.2          | 120.1          | 98.1           | 120.5          | 83.7            | 83.7            | 16.4 |
| 19.7      | 97.2           | 97.2              | 97.4           | 98.3           | 97.0           | 98.5           | 89.5           | 100.0          | 81.5           | 99.4           | 76.5           | 98.3           | 71.6            | 78.9            | 19.7 |
| 23.0      | 80.6           | 80.9              | 77.8           | 81.7           | 74.5           | 83.5           | 69.4           | 83.5           | 67.4           | 82.8           | 62.8           | 81.7           | 58.8            | 73.4            | 23.0 |
| 26.2      | 62.8           | 68.7              | 62.1           | 70.5           | 59.5           | 71.4           | 57.9           | 71.4           | 55.3           | 70.7           | 51.5           | 68.1           | 49.6            | 66.1            | 26.2 |
| 29.5      | 48.2           | 59.5              | 50.9           | 61.0           | 49.1           | 61.9           | 49.1           | 61.9           | 46.2           | 61.2           | 43.4           | 61.0           | 41.8            | 56.2            | 29.5 |
| 32.8      | -              | -                 | 42.1           | 52.9           | 43.2           | 54.2           | 41.6           | 54.2           | 39.6           | 54.4           | 37.0           | 52.2           | 37.0            | 49.3            | 32.8 |
| 36.1      | -              | -                 | 34.6           | 44.7           | 36.8           | 45.8           | 35.9           | 46.9           | 34.1           | 47.6           | 33.7           | 45.6           | 32.1            | 42.9            | 36.1 |
| 39.4      | -              | -                 | 29.1           | 39.0           | 31.0           | 39.2           | 31.3           | 41.4           | 29.9           | 41.0           | 29.7           | 40.1           | 28.2            | 38.8            | 39.4 |
| 45.9      | -              | -                 | -              | -              | 22.9           | 31.3           | 23.3           | 31.9           | 23.1           | 31.7           | 23.3           | 30.8           | 23.8            | 30.6            | 45.9 |
| 52.5      | -              | -                 | -              | -              | 17.4           | 24.9           | 18.9           | 25.3           | 17.8           | 25.1           | 18.5           | 25.5           | 19.4            | 24.9            | 52.5 |
| 59.1      | -              | -                 | -              | -              | -              | -              | 15.2           | 20.7           | 15.4           | 21.3           | 14.5           | 21.1           | 15.6            | 20.7            | 59.1 |
| 65.6      | -              | -                 | -              | -              | -              | -              | 12.3           | 17.4           | 12.3           | 18.2           | 11.6           | 17.6           | 12.5            | 17.8            | 65.6 |
| 72.2      | -              | -                 | -              | -              | -              | -              | -              | -              | 10.1           | 15.6           | 9.2            | 14.9           | 10.3            | 15.8            | 72.2 |
| 78.7      | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | 7.4            | 13.0           | 8.3             | 13.6            | 78.7 |
| 85.3      | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | 5.9            | 11.0           | 6.8             | 11.9            | 85.3 |
| 91.9      | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | 5.5             | 10.1            | 91.9 |
| 98.4      | -              | -                 | -              | -              | -              | -              | -              | -              | -              | -              | -              | -              | 4.6             | 8.5             | 98.4 |




| ft        | 360°<br>122.8ft | Max.<br>122.8ft | 360°<br>135.0ft | Max.<br>135.0ft | 360°<br>147.2ft | Max.<br>147.2ft | 360°<br>159.4ft | Max.<br>159.4ft | 360°<br>171.7ft | Max.<br>171.7ft | 360°<br>183.9ft | Max.<br>183.9ft | 360°<br>196.9ft | Max.<br>196.9ft | ft    |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------|
| 1,000 lbs |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |       |
| 11.5      | 75.8            | 75.8            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 11.5  |
| 13.1      | 79.1            | 79.1            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 13.1  |
| 14.8      | 76.2            | 76.2            | 65.9            | 65.9            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 14.8  |
| 16.4      | 73.6            | 73.6            | 64.5            | 64.5            | -               | -               | -               | -               | -               | -               | -               | -               | -               | -               | 16.4  |
| 19.7      | 66.3            | 67.9            | 59.9            | 59.9            | 52.2            | 52.2            | 38.5            | 38.5            | -               | -               | -               | -               | -               | -               | 19.7  |
| 23.0      | 54.4            | 62.8            | 50.7            | 55.7            | 48.9            | 49.3            | 41.0            | 41.0            | 33.2            | 33.2            | -               | -               | -               | -               | 23.0  |
| 26.2      | 45.8            | 58.4            | 44.7            | 51.8            | 42.5            | 46.5            | 38.3            | 39.4            | 33.2            | 33.2            | 26.8            | 26.8            | -               | -               | 26.2  |
| 29.5      | 41.0            | 51.8            | 39.0            | 48.5            | 36.8            | 43.6            | 34.1            | 38.1            | 31.5            | 32.1            | 26.8            | 26.8            | -               | -               | 29.5  |
| 32.8      | 35.2            | 45.6            | 33.7            | 42.3            | 33.5            | 41.2            | 31.3            | 37.2            | 29.3            | 31.3            | 26.8            | 26.8            | 22.0            | 22.0            | 32.8  |
| 36.1      | 30.8            | 39.6            | 30.8            | 39.2            | 29.3            | 36.5            | 27.3            | 35.0            | 25.7            | 30.2            | 23.5            | 26.8            | 22.0            | 22.0            | 36.1  |
| 39.4      | 27.1            | 35.7            | 27.1            | 35.9            | 26.0            | 33.2            | 24.2            | 31.0            | 22.7            | 30.2            | 20.7            | 26.0            | 20.0            | 22.0            | 39.4  |
| 45.9      | 21.3            | 30.2            | 21.6            | 28.8            | 20.7            | 27.9            | 19.1            | 26.6            | 17.8            | 25.1            | 16.0            | 22.9            | 15.6            | 22.0            | 45.9  |
| 52.5      | 17.1            | 24.9            | 17.6            | 24.2            | 16.7            | 23.8            | 15.4            | 22.0            | 14.1            | 20.5            | 12.7            | 18.7            | 12.1            | 18.0            | 52.5  |
| 59.1      | 13.8            | 20.5            | 14.3            | 20.9            | 13.6            | 19.8            | 12.3            | 18.2            | 11.2            | 16.9            | 9.9             | 15.4            | 9.4             | 14.7            | 59.1  |
| 65.6      | 11.0            | 17.1            | 11.9            | 17.8            | 11.2            | 16.7            | 10.1            | 15.4            | 9.0             | 14.3            | 7.7             | 12.7            | 7.4             | 12.1            | 65.6  |
| 72.2      | 8.8             | 14.5            | 9.7             | 15.2            | 9.2             | 14.3            | 8.1             | 13.0            | 7.2             | 11.9            | 5.9             | 10.5            | 5.7             | 10.1            | 72.2  |
| 78.7      | 6.8             | 12.3            | 7.7             | 13.0            | 7.4             | 12.3            | 6.6             | 11.0            | 5.7             | 9.9             | 4.4             | 8.5             | 4.1             | 8.3             | 78.7  |
| 85.3      | 5.5             | 10.3            | 6.1             | 11.2            | 5.9             | 10.5            | 5.2             | 9.4             | 4.4             | 8.3             | 3.3             | 7.0             | 3.0             | 6.8             | 85.3  |
| 91.9      | 4.1             | 8.5             | 4.8             | 9.4             | 4.8             | 9.0             | 3.9             | 7.9             | 3.3             | 7.0             | 2.2             | 5.7             | 1.9             | 5.5             | 91.9  |
| 98.4      | 3.0             | 7.0             | 3.9             | 7.9             | 3.7             | 7.7             | 2.8             | 6.6             | 2.2             | 5.7             | 1.1             | 4.6             | 1.1             | 4.4             | 98.4  |
| 105.0     | 2.2             | 5.9             | 3.0             | 6.6             | 2.6             | 6.3             | 1.9             | 5.7             | 1.3             | 4.8             | -               | 3.5             | -               | 3.3             | 105.0 |
| 111.5     | 1.5             | 5.0             | 2.2             | 5.5             | 1.9             | 5.2             | 1.3             | 4.6             | -               | 3.7             | -               | 2.6             | -               | 2.4             | 111.5 |
| 118.1     | -               | -               | 1.5             | 4.6             | 1.3             | 4.4             | -               | 3.7             | -               | 3.0             | -               | 1.7             | -               | 1.5             | 118.1 |
| 124.7     | -               | -               | -               | 3.9             | -               | 3.5             | -               | 2.8             | -               | 2.2             | -               | 1.1             | -               | 0.8             | 124.7 |
| 131.2     | -               | -               | -               | -               | -               | 2.8             | -               | 2.2             | -               | 1.5             | -               | -               | -               | -               | 131.2 |
| 137.8     | -               | -               | -               | -               | -               | 2.2             | -               | 1.5             | -               | 0.8             | -               | -               | -               | -               | 137.8 |
| 144.4     | -               | -               | -               | -               | -               | -               | -               | 0.8             | -               | -               | -               | -               | -               | -               | 144.4 |

\* Max. values are valid only for specific superstructure positions

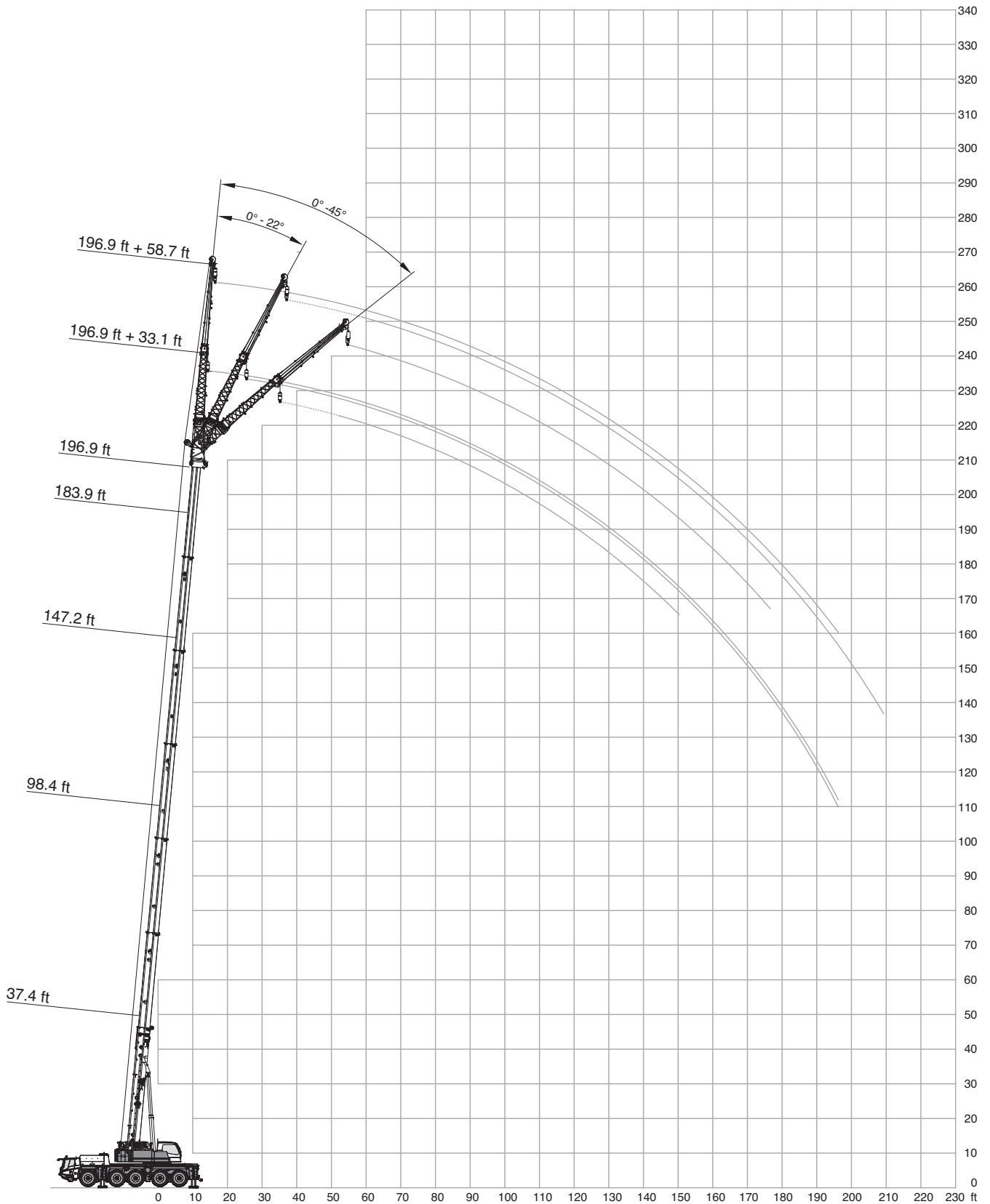
# Operation

HA

| 0 lbs   |   | 24.6 ft x 26.3 ft |        |        |        |        |        |        |        | 360° / Max.* |        |        |        | ASME B30.5 |         |   |
|---|---|-------------------|--------|--------|--------|--------|--------|--------|--------|--------------|--------|--------|--------|------------|---------|---|
|  |  | 360°              | Max.   | 360°   | Max.   | 360°   | Max.   | 360°   | Max.   | 360°         | Max.   | 360°   | Max.   | 360°       | Max.    |  |
| ft  | ft  | 37.4ft            | 37.4ft | 49.6ft | 49.6ft | 61.8ft | 61.8ft | 74.0ft | 74.0ft | 86.2ft       | 86.2ft | 98.4ft | 98.4ft | 110.6ft    | 110.6ft | ft  |
| 1,000 lbs   |   |                   |        |        |        |        |        |        |        |              |        |        |        |            |         |   |
| 8.2   | 241.1   | 247.7             | 176.3  | 176.3  | 176.3  | 176.3  | 176.3  | 176.3  | 176.3  | 154.3        | 154.3  | 126.9  | 126.9  | -          | -       | 8.2   |
| 9.8   | 205.4   | 206.3             | 176.3  | 176.3  | 176.3  | 176.3  | 176.3  | 176.3  | 176.3  | 154.3        | 154.3  | 126.9  | 126.9  | 97.2       | 97.2    | 9.8   |
| 11.5  | 176.1   | 176.3             | 175.4  | 175.4  | 174.1  | 174.1  | 174.1  | 172.1  | 172.1  | 154.3        | 154.3  | 126.9  | 126.9  | 95.0       | 95.0    | 11.5  |
| 13.1  | 151.0   | 151.0             | 151.2  | 152.3  | 152.5  | 152.5  | 147.7  | 152.1  | 129.8  | 150.7        | 120.3  | 126.1  | 91.2   | 91.2       | 13.1    |   |
| 14.8  | 131.6   | 131.6             | 131.8  | 132.7  | 133.1  | 133.1  | 121.9  | 132.7  | 113.7  | 131.3        | 101.4  | 123.6  | 87.5   | 87.5       | 14.8    |   |
| 16.4  | 116.4   | 116.4             | 116.6  | 117.5  | 114.1  | 117.9  | 107.1  | 117.2  | 96.1   | 118.3        | 85.5   | 117.5  | 81.3   | 83.7       | 16.4    |   |
| 19.7  | 93.6  | 93.6              | 87.3   | 94.7   | 84.8   | 96.5   | 78.0   | 96.5   | 73.4   | 96.1         | 69.0   | 92.3   | 63.9   | 78.9       | 19.7    |   |
| 23.0  | 71.8  | 77.8              | 68.1   | 78.9   | 64.8   | 80.6   | 63.0   | 80.6   | 59.0   | 80.0         | 54.6   | 72.9   | 52.2   | 69.8       | 23.0    |   |
| 26.2  | 54.0  | 66.1              | 53.5   | 67.9   | 52.0   | 68.7   | 51.1   | 68.7   | 48.2   | 65.6         | 44.7   | 63.4   | 44.0   | 59.0       | 26.2    |   |
| 29.5  | 41.0  | 55.5              | 44.7   | 57.9   | 44.0   | 59.3   | 42.5   | 59.3   | 40.1   | 58.2         | 38.8   | 53.1   | 37.0   | 50.2       | 29.5    |   |
| 32.8  | -   | -                 | 35.9   | 47.6   | 37.0   | 48.9   | 35.9   | 50.0   | 34.1   | 49.6         | 33.7   | 45.8   | 31.7   | 43.4       | 32.8    |   |
| 36.1  | -   | -                 | 29.3   | 40.7   | 31.5   | 41.4   | 30.8   | 43.2   | 29.3   | 42.7         | 29.1   | 39.6   | 28.8   | 38.1       | 36.1    |   |
| 39.4  | -   | -                 | 24.4   | 34.8   | 26.4   | 36.5   | 26.6   | 37.2   | 25.3   | 36.8         | 25.3   | 34.8   | 25.5   | 34.1       | 39.4    |   |
| 45.9  | -   | -                 | -      | -      | 19.1   | 27.9   | 20.9   | 28.4   | 19.8   | 28.2         | 19.6   | 28.2   | 20.0   | 27.9       | 45.9    |   |
| 52.5  | -   | -                 | -      | -      | 14.3   | 22.2   | 15.8   | 22.7   | 16.3   | 23.5         | 15.4   | 23.1   | 16.0   | 22.9       | 52.5    |   |
| 59.1  | -   | -                 | -      | -      | -      | -      | 12.5   | 18.7   | 12.7   | 19.8         | 11.9   | 19.1   | 13.0   | 19.6       | 59.1    |   |
| 65.6  | -   | -                 | -      | -      | -      | -      | 9.9    | 16.5   | 10.1   | 16.5         | 9.2    | 16.0   | 10.3   | 16.9       | 65.6    |   |
| 72.2  | -   | -                 | -      | -      | -      | -      | -      | -      | 7.9    | 13.8         | 7.2    | 13.2   | 8.1    | 14.3       | 72.2    |   |
| 78.7  | -   | -                 | -      | -      | -      | -      | -      | -      | -      | -            | 5.7    | 11.0   | 6.6    | 11.9       | 78.7    |   |
| 85.3  | -   | -                 | -      | -      | -      | -      | -      | -      | -      | -            | 4.4    | 9.2    | 5.0    | 10.1       | 85.3    |   |
| 91.9  | -   | -                 | -      | -      | -      | -      | -      | -      | -      | -            | -      | -      | 3.9    | 8.5        | 91.9    |   |
| 98.4  | -   | -                 | -      | -      | -      | -      | -      | -      | -      | -            | -      | -      | 3.0    | 7.2        | 98.4    |   |

|  |  | 360°    | Max.    | 360°    | Max.    | 360°    | Max.    | 360°    | Max.    | 360°    | Max.    | 360°    | Max.    | 360°    | Max.    |  |
|--|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--|
| ft   | ft   | 122.8ft | 122.8ft | 135.0ft | 135.0ft | 147.2ft | 147.2ft | 159.4ft | 159.4ft | 171.7ft | 171.7ft | 183.9ft | 183.9ft | 196.9ft | 196.9ft | ft   |
| 1,000 lbs  |  |         |         |         |         |         |         |         |         |         |         |         |         |         |         |  |
| 11.5   | 75.8   | 75.8    | -       | -       | -       | -       | -       | -       | -       | -       | -       | -       | -       | -       | -       | 11.5   |
| 13.1   | 79.1   | 79.1    | -       | -       | -       | -       | -       | -       | -       | -       | -       | -       | -       | -       | -       | 13.1   |
| 14.8   | 76.2   | 76.2    | 65.9    | 65.9    | -       | -       | -       | -       | -       | -       | -       | -       | -       | -       | -       | 14.8   |
| 16.4   | 73.6   | 73.6    | 64.5    | 64.5    | -       | -       | -       | -       | -       | -       | -       | -       | -       | -       | -       | 16.4   |
| 19.7   | 58.6   | 67.9    | 54.6    | 59.9    | 51.8    | 52.2    | 38.5    | 38.5    | -       | -       | -       | -       | -       | -       | -       | 19.7   |
| 23.0   | 49.1   | 62.8    | 47.3    | 55.7    | 43.8    | 49.3    | 38.5    | 41.0    | 33.2    | 33.2    | -       | -       | -       | -       | -       | 23.0   |
| 26.2   | 41.8   | 53.3    | 39.4    | 50.2    | 37.4    | 46.5    | 34.1    | 39.4    | 31.5    | 33.2    | 26.8    | 26.8    | -       | -       | -       | 26.2   |
| 29.5   | 35.2   | 46.0    | 35.0    | 43.6    | 33.2    | 42.1    | 30.8    | 38.1    | 28.8    | 32.1    | 26.4    | 26.8    | -       | -       | -       | 29.5   |
| 32.8   | 30.2   | 40.1    | 30.2    | 39.9    | 28.6    | 37.2    | 26.6    | 35.2    | 24.9    | 31.3    | 22.7    | 26.8    | 21.8    | 22.0    | 32.8    |  |
| 36.1   | 26.2   | 37.2    | 26.2    | 35.4    | 24.9    | 33.2    | 23.1    | 31.9    | 21.6    | 30.2    | 19.6    | 26.8    | 18.7    | 22.0    | 36.1    |  |
| 39.4   | 22.9   | 33.2    | 23.1    | 31.7    | 22.0    | 31.0    | 20.2    | 29.5    | 18.7    | 27.7    | 16.9    | 25.7    | 16.3    | 22.0    | 39.4    |  |
| 45.9   | 17.8   | 26.8    | 18.0    | 26.6    | 17.1    | 25.5    | 15.8    | 24.0    | 14.5    | 22.4    | 13.0    | 20.0    | 12.3    | 19.8    | 45.9    |  |
| 52.5   | 14.1   | 22.0    | 14.5    | 22.2    | 13.6    | 21.1    | 12.3    | 19.8    | 11.2    | 18.5    | 9.9     | 16.7    | 9.4     | 15.6    | 52.5    |  |
| 59.1   | 11.2   | 18.5    | 11.6    | 18.7    | 11.0    | 17.8    | 9.7     | 16.5    | 8.8     | 15.2    | 7.4     | 13.0    | 7.0     | 12.5    | 59.1    |  |
| 65.6   | 8.8  | 15.4    | 9.4     | 15.8    | 8.8     | 14.9    | 7.7     | 13.2    | 6.8     | 12.7    | 5.5     | 11.2    | 5.0     | 10.3    | 65.6    |  |
| 72.2   | 6.6  | 12.7    | 7.4     | 13.4    | 7.0     | 12.7    | 5.9     | 11.6    | 5.0     | 10.5    | 3.7     | 8.5     | 3.5     | 8.3     | 72.2    |  |
| 78.7   | 5.0  | 10.5    | 5.9     | 11.2    | 5.5     | 11.0    | 4.4     | 9.7     | 3.5     | 8.8     | 2.4     | 7.4     | 2.2     | 6.3     | 78.7    |  |
| 85.3   | 3.7  | 8.5     | 4.6     | 9.4     | 4.1     | 9.2     | 3.3     | 8.1     | 2.4     | 6.6     | 1.3     | 5.7     | 1.1     | 5.5     | 85.3    |  |
| 91.9   | 2.6  | 7.0     | 3.3     | 7.9     | 3.0     | 7.7     | 2.2     | 6.8     | 1.3     | 5.5     | -       | 4.8     | -       | 4.6     | 91.9    |  |
| 98.4   | 1.5  | 5.9     | 2.4     | 6.6     | 2.2     | 6.3     | 1.3     | 5.0     | -       | 4.8     | -       | 3.7     | -       | 3.5     | 98.4    |  |
| 105.0  | -  | 4.8     | 1.5     | 5.5     | 1.3     | 5.2     | -       | 4.6     | -       | 3.9     | -       | 2.8     | -       | 2.6     | 105.0   |  |
| 111.5  | -  | 3.9     | -       | 4.6     | -       | 4.4     | -       | 3.5     | -       | 3.0     | -       | 1.9     | -       | 1.7     | 111.5   |  |
| 118.1  | -  | -       | -       | 3.7     | -       | 3.5     | -       | 2.8     | -       | 2.2     | -       | 1.3     | -       | 1.1     | 118.1   |  |
| 124.7  | -  | -       | -       | 3.0     | -       | 2.6     | -       | 1.9     | -       | 1.5     | -       | -       | -       | -       | 124.7   |  |
| 131.2  | -  | -       | -       | -       | -       | 1.9     | -       | 1.3     | -       | 0.8     | -       | -       | -       | -       | 131.2   |  |
| 137.8  | -  | -       | -       | -       | -       | 1.5     | -       | 0.8     | -       | -       | -       | -       | -       | -       | 137.8   |  |

\* Max. values are valid only for specific superstructure positions



# Operation

| 78,200 lbs |      |         | 24.6 ft x 26.3 ft |      |          | 33.1 ft |      |          | 360° |      |          | ASME B30.5 |      |      |       |
|------------|------|---------|-------------------|------|----------|---------|------|----------|------|------|----------|------------|------|------|-------|
| 37.4 ft    |      | 98.4 ft |                   |      | 147.2 ft |         |      | 183.9 ft |      |      | 196.9 ft |            |      |      |       |
| 0°         | 22°  | 45°     | 0°                | 22°  | 45°      | 0°      | 22°  | 45°      | 0°   | 22°  | 45°      | 0°         | 22°  | 45°  |       |
| 1,000 lbs  |      |         |                   |      |          |         |      |          |      |      |          |            |      |      |       |
| ft         |      |         |                   |      |          |         |      |          |      |      |          |            |      | ft   |       |
| 11.5       | -    | 33.0    | -                 | -    | -        | -       | -    | -        | -    | -    | -        | -          | -    | -    | 11.5  |
| 13.1       | -    | 33.0    | -                 | -    | -        | -       | -    | -        | -    | -    | -        | -          | -    | -    | 13.1  |
| 14.8       | -    | 33.0    | -                 | -    | -        | -       | -    | -        | -    | -    | -        | -          | -    | -    | 14.8  |
| 16.4       | -    | 33.0    | -                 | -    | -        | -       | -    | -        | -    | -    | -        | -          | -    | -    | 16.4  |
| 19.7       | -    | 32.8    | -                 | -    | -        | -       | -    | -        | -    | -    | -        | -          | -    | -    | 19.7  |
| 23.0       | -    | 30.2    | 20.9              | -    | 32.1     | -       | -    | -        | -    | -    | -        | -          | -    | -    | 23.0  |
| 26.2       | 33.0 | 27.7    | 20.0              | -    | 30.6     | -       | -    | -        | -    | -    | -        | -          | -    | -    | 26.2  |
| 29.5       | 31.7 | 25.7    | 19.1              | -    | 29.5     | 20.5    | -    | -        | -    | -    | -        | -          | -    | -    | 29.5  |
| 32.8       | 28.4 | 24.2    | 18.2              | -    | 28.2     | 20.0    | -    | -        | -    | -    | -        | -          | -    | -    | 32.8  |
| 36.1       | 25.7 | 22.7    | 17.6              | -    | 28.2     | 19.6    | -    | 15.4     | -    | -    | -        | -          | -    | -    | 36.1  |
| 39.4       | 23.5 | 21.3    | 16.9              | -    | 27.1     | 19.1    | -    | 15.4     | -    | -    | -        | -          | -    | -    | 39.4  |
| 45.9       | 20.0 | 19.4    | 16.0              | -    | 25.3     | 18.2    | 15.4 | 15.4     | 15.4 | -    | 12.5     | -          | -    | -    | 45.9  |
| 52.5       | 17.4 | 17.8    | 15.6              | 31.5 | 23.8     | 17.4    | 15.4 | 15.4     | 15.4 | -    | 12.5     | -          | -    | 11.2 | 52.5  |
| 59.1       | 15.2 | 16.7    | -                 | 29.1 | 22.4     | 16.7    | 15.4 | 15.4     | 15.4 | 12.5 | 12.5     | 12.5       | 11.2 | 11.2 | 59.1  |
| 65.6       | -    | -       | -                 | 26.6 | 21.1     | 16.3    | 15.4 | 15.4     | 15.2 | 12.5 | 12.5     | 12.5       | 11.2 | 11.2 | 65.6  |
| 72.2       | -    | -       | -                 | 24.2 | 20.2     | 15.8    | 15.4 | 15.4     | 14.5 | 12.5 | 12.5     | 12.5       | 11.2 | 10.8 | 72.2  |
| 78.7       | -    | -       | -                 | 22.0 | 19.1     | 15.4    | 15.4 | 15.4     | 13.8 | 12.5 | 12.5     | 11.9       | 11.0 | 10.1 | 78.7  |
| 85.3       | -    | -       | -                 | 20.2 | 18.2     | 14.9    | 14.5 | 14.5     | 13.4 | 11.9 | 11.9     | 11.2       | 10.3 | 9.7  | 85.3  |
| 91.9       | -    | -       | -                 | 18.5 | 17.4     | 14.7    | 14.1 | 14.1     | 13.0 | 11.2 | 11.2     | 10.8       | 9.7  | 9.2  | 91.9  |
| 98.4       | -    | -       | -                 | 16.3 | 16.7     | -       | 14.1 | 13.8     | 12.5 | 10.5 | 10.5     | 10.1       | 9.2  | 8.8  | 98.4  |
| 105.0      | -    | -       | -                 | 14.3 | 14.9     | -       | 13.0 | 13.0     | 12.1 | 9.9  | 9.9      | 9.7        | 8.8  | 8.3  | 105.0 |
| 111.5      | -    | -       | -                 | 12.7 | 13.2     | -       | 12.3 | 12.1     | 11.6 | 9.2  | 9.4      | 9.2        | 8.3  | 7.9  | 111.5 |
| 118.1      | -    | -       | -                 | 11.4 | -        | -       | 11.0 | 11.4     | 11.2 | 8.5  | 8.8      | 8.8        | 7.9  | 7.7  | 118.1 |
| 124.7      | -    | -       | -                 | -    | -        | -       | 9.7  | 10.3     | 10.8 | 8.1  | 8.3      | 8.3        | 7.4  | 7.2  | 124.7 |
| 131.2      | -    | -       | -                 | -    | -        | -       | 8.8  | 9.0      | -    | 7.4  | 7.7      | 7.9        | 7.0  | 6.8  | 131.2 |
| 137.8      | -    | -       | -                 | -    | -        | -       | 8.3  | 8.3      | -    | 7.0  | 7.2      | 7.4        | 6.6  | 6.6  | 137.8 |
| 144.4      | -    | -       | -                 | -    | -        | -       | 7.2  | 7.7      | -    | 6.3  | 6.8      | 6.8        | 6.1  | 6.3  | 144.4 |
| 150.9      | -    | -       | -                 | -    | -        | -       | 7.0  | 6.8      | -    | 5.5  | 5.9      | -          | 5.2  | 5.9  | 150.9 |
| 157.5      | -    | -       | -                 | -    | -        | -       | 6.8  | 6.3      | -    | 4.6  | 5.0      | -          | 4.4  | 5.0  | 157.5 |
| 164.0      | -    | -       | -                 | -    | -        | -       | 6.1  | -        | -    | 3.9  | 4.4      | -          | 3.7  | 4.4  | 164.0 |
| 170.6      | -    | -       | -                 | -    | -        | -       | 5.5  | -        | -    | 3.3  | 3.7      | -          | 3.0  | 3.5  | 170.6 |
| 177.2      | -    | -       | -                 | -    | -        | -       | -    | -        | -    | 2.6  | 3.0      | -          | 2.6  | 2.8  | 177.2 |
| 183.7      | -    | -       | -                 | -    | -        | -       | -    | -        | -    | 2.2  | 2.4      | -          | 1.9  | 2.4  | 183.7 |
| 190.3      | -    | -       | -                 | -    | -        | -       | -    | -        | -    | 1.7  | 1.9      | -          | 1.5  | 1.7  | 190.3 |
| 196.9      | -    | -       | -                 | -    | -        | -       | -    | -        | -    | 1.3  | -        | -          | 1.1  | 1.3  | 196.9 |

# Operation

HAV

| 53,000 lbs |           |      | 24.6 ft x 26.3 ft |      |      | 33.1 ft  |      |      | 360°     |      |      | ASME B30.5 |      |      |      |    |       |
|------------|-----------|------|-------------------|------|------|----------|------|------|----------|------|------|------------|------|------|------|----|-------|
| 37.4 ft    |           |      | 98.4 ft           |      |      | 147.2 ft |      |      | 183.9 ft |      |      | 196.9 ft   |      |      |      |    |       |
| 0°         |           |      | 22°               |      |      | 45°      |      |      | 0°       |      |      | 22°        |      |      | 45°  |    |       |
| ft         | 1,000 lbs |      |                   |      |      |          |      |      |          |      |      |            |      |      |      | ft |       |
| 11.5       | -         | 33.0 | -                 | -    | -    | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 11.5  |
| 13.1       | -         | 33.0 | -                 | -    | -    | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 13.1  |
| 14.8       | -         | 33.0 | -                 | -    | -    | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 14.8  |
| 16.4       | -         | 33.0 | -                 | -    | -    | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 16.4  |
| 19.7       | -         | 32.8 | -                 | -    | -    | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 19.7  |
| 23.0       | -         | 30.2 | 20.9              | -    | 32.1 | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 23.0  |
| 26.2       | 33.0      | 27.7 | 20.0              | -    | 30.6 | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 26.2  |
| 29.5       | 31.7      | 25.7 | 19.1              | -    | 29.5 | 20.5     | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 29.5  |
| 32.8       | 28.4      | 24.2 | 18.2              | -    | 28.2 | 20.0     | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 32.8  |
| 36.1       | 25.7      | 22.7 | 17.6              | -    | 28.2 | 19.6     | -    | 15.4 | -        | -    | -    | -          | -    | -    | -    | -  | 36.1  |
| 39.4       | 23.5      | 21.3 | 16.9              | -    | 27.1 | 19.1     | -    | 15.4 | -        | -    | -    | -          | -    | -    | -    | -  | 39.4  |
| 45.9       | 20.0      | 19.4 | 16.0              | -    | 25.3 | 18.2     | 15.4 | 15.4 | 15.4     | -    | 12.5 | -          | -    | -    | -    | -  | 45.9  |
| 52.5       | 17.4      | 17.8 | 15.6              | 31.5 | 23.8 | 17.4     | 15.4 | 15.4 | 15.4     | -    | 12.5 | -          | -    | 11.2 | -    | -  | 52.5  |
| 59.1       | 15.2      | 16.7 | -                 | 29.1 | 22.4 | 16.7     | 15.4 | 15.4 | 15.4     | 12.5 | 12.5 | 12.5       | 11.2 | 11.2 | -    | -  | 59.1  |
| 65.6       | -         | -    | -                 | 25.1 | 21.1 | 16.3     | 15.4 | 15.4 | 15.2     | 12.5 | 12.5 | 12.5       | 11.2 | 11.2 | 11.0 | -  | 65.6  |
| 72.2       | -         | -    | -                 | 20.9 | 19.8 | 15.8     | 15.4 | 15.4 | 14.5     | 12.5 | 12.5 | 12.5       | 11.2 | 10.8 | 10.3 | -  | 72.2  |
| 78.7       | -         | -    | -                 | 17.8 | 18.9 | 15.4     | 15.4 | 15.4 | 13.8     | 12.5 | 12.5 | 11.9       | 11.0 | 10.1 | 9.9  | -  | 78.7  |
| 85.3       | -         | -    | -                 | 15.2 | 16.3 | 14.9     | 14.5 | 14.5 | 13.4     | 11.9 | 11.9 | 11.2       | 10.3 | 9.7  | 9.4  | -  | 85.3  |
| 91.9       | -         | -    | -                 | 14.3 | 13.8 | 14.5     | 13.4 | 14.1 | 13.0     | 11.2 | 11.2 | 10.8       | 9.7  | 9.2  | 9.0  | -  | 91.9  |
| 98.4       | -         | -    | -                 | 13.4 | 11.9 | -        | 11.9 | 12.1 | 12.3     | 10.3 | 10.5 | 10.1       | 9.2  | 8.8  | 8.5  | -  | 98.4  |
| 105.0      | -         | -    | -                 | 11.9 | 11.4 | -        | 10.3 | 11.0 | 11.0     | 8.8  | 9.9  | 9.7        | 8.5  | 8.3  | 8.1  | -  | 105.0 |
| 111.5      | -         | -    | -                 | 10.5 | 10.8 | -        | 9.7  | 9.7  | 9.9      | 7.7  | 8.5  | 9.2        | 7.2  | 7.9  | 7.9  | -  | 111.5 |
| 118.1      | -         | -    | -                 | 9.2  | -    | -        | 8.8  | 8.5  | 8.8      | 6.6  | 7.4  | 8.1        | 6.1  | 7.0  | 7.4  | -  | 118.1 |
| 124.7      | -         | -    | -                 | -    | -    | -        | 7.7  | 8.1  | 7.7      | 5.5  | 6.3  | 6.8        | 5.2  | 6.1  | 6.6  | -  | 124.7 |
| 131.2      | -         | -    | -                 | -    | -    | -        | 6.8  | 7.2  | -        | 4.6  | 5.2  | 5.7        | 4.4  | 5.0  | 5.7  | -  | 131.2 |
| 137.8      | -         | -    | -                 | -    | -    | -        | 5.9  | 6.3  | -        | 3.7  | 4.4  | 4.8        | 3.5  | 4.1  | 4.8  | -  | 137.8 |
| 144.4      | -         | -    | -                 | -    | -    | -        | 5.0  | 5.5  | -        | 2.8  | 3.5  | 3.9        | 2.8  | 3.5  | 3.9  | -  | 144.4 |
| 150.9      | -         | -    | -                 | -    | -    | -        | 4.4  | 4.6  | -        | 2.2  | 2.8  | -          | 2.2  | 2.6  | 3.0  | -  | 150.9 |
| 157.5      | -         | -    | -                 | -    | -    | -        | 3.7  | 3.9  | -        | 1.5  | 2.2  | -          | 1.5  | 1.9  | -    | -  | 157.5 |
| 164.0      | -         | -    | -                 | -    | -    | -        | 3.3  | -    | -        | 1.1  | 1.5  | -          | -    | 1.3  | -    | -  | 164.0 |
| 170.6      | -         | -    | -                 | -    | -    | -        | 2.6  | -    | -        | -    | -    | -          | -    | -    | -    | -  | 170.6 |

# Operation

| 29,200 lbs |           |      | 24.6 ft x 26.3 ft |      |      | 33.1 ft  |      |      | 360°     |      |      | ASME B30.5 |      |      |      |    |       |
|------------|-----------|------|-------------------|------|------|----------|------|------|----------|------|------|------------|------|------|------|----|-------|
| 37.4 ft    |           |      | 98.4 ft           |      |      | 147.2 ft |      |      | 183.9 ft |      |      | 196.9 ft   |      |      |      |    |       |
| 0°         |           |      | 22°               |      |      | 45°      |      |      | 0°       |      |      | 22°        |      |      | 45°  |    |       |
| ft         | 1,000 lbs |      |                   |      |      |          |      |      |          |      |      |            |      |      |      | ft |       |
| 11.5       | -         | 33.0 | -                 | -    | -    | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 11.5  |
| 13.1       | -         | 33.0 | -                 | -    | -    | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 13.1  |
| 14.8       | -         | 33.0 | -                 | -    | -    | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 14.8  |
| 16.4       | -         | 33.0 | -                 | -    | -    | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 16.4  |
| 19.7       | -         | 32.8 | -                 | -    | -    | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 19.7  |
| 23.0       | -         | 30.2 | 20.9              | -    | 32.1 | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 23.0  |
| 26.2       | 33.0      | 27.7 | 20.0              | -    | 30.6 | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 26.2  |
| 29.5       | 31.7      | 25.7 | 19.1              | -    | 29.5 | 20.5     | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 29.5  |
| 32.8       | 28.4      | 24.2 | 18.2              | -    | 28.2 | 20.0     | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 32.8  |
| 36.1       | 25.7      | 22.7 | 17.6              | -    | 28.2 | 19.6     | -    | 15.4 | -        | -    | -    | -          | -    | -    | -    | -  | 36.1  |
| 39.4       | 23.5      | 21.3 | 16.9              | -    | 27.1 | 19.1     | -    | 15.4 | -        | -    | -    | -          | -    | -    | -    | -  | 39.4  |
| 45.9       | 20.0      | 19.4 | 16.0              | -    | 25.3 | 18.2     | 15.4 | 15.4 | 15.4     | -    | 12.5 | -          | -    | -    | -    | -  | 45.9  |
| 52.5       | 17.4      | 17.8 | 15.6              | 24.4 | 23.8 | 17.4     | 15.4 | 15.4 | 15.4     | -    | 12.5 | -          | -    | 11.2 | -    | -  | 52.5  |
| 59.1       | 15.2      | 16.7 | -                 | 20.9 | 21.8 | 16.7     | 15.4 | 15.4 | 15.4     | 12.5 | 12.5 | 12.5       | 11.2 | 11.2 | -    | -  | 59.1  |
| 65.6       | -         | -    | -                 | 18.9 | 18.5 | 16.3     | 15.4 | 15.4 | 15.2     | 12.5 | 12.5 | 12.5       | 11.2 | 11.2 | 11.0 | -  | 65.6  |
| 72.2       | -         | -    | -                 | 16.3 | 15.4 | 15.6     | 14.7 | 14.9 | 14.5     | 11.2 | 12.5 | 12.5       | 10.8 | 10.8 | 10.3 | -  | 72.2  |
| 78.7       | -         | -    | -                 | 13.8 | 13.8 | 13.6     | 12.7 | 12.7 | 13.0     | 9.4  | 10.8 | 11.9       | 9.0  | 10.1 | 9.9  | -  | 78.7  |
| 85.3       | -         | -    | -                 | 11.6 | 12.5 | 12.1     | 11.0 | 11.4 | 11.9     | 7.7  | 9.0  | 10.1       | 7.2  | 8.8  | 9.4  | -  | 85.3  |
| 91.9       | -         | -    | -                 | 10.3 | 10.8 | 11.2     | 9.4  | 10.3 | 10.1     | 6.3  | 7.4  | 8.5        | 5.9  | 7.2  | 8.1  | -  | 91.9  |
| 98.4       | -         | -    | -                 | 8.8  | 9.4  | -        | 8.1  | 9.0  | 9.4      | 5.0  | 6.1  | 7.0        | 4.8  | 5.9  | 6.8  | -  | 98.4  |
| 105.0      | -         | -    | -                 | 7.7  | 8.1  | -        | 6.8  | 7.7  | 8.1      | 3.9  | 5.0  | 5.9        | 3.7  | 4.8  | 5.5  | -  | 105.0 |
| 111.5      | -         | -    | -                 | 7.0  | 6.8  | -        | 5.7  | 6.3  | 6.8      | 3.0  | 3.9  | 4.6        | 2.6  | 3.7  | 4.4  | -  | 111.5 |
| 118.1      | -         | -    | -                 | 6.3  | -    | -        | 4.8  | 5.2  | 5.7      | 2.2  | 3.0  | 3.7        | 1.9  | 2.8  | 3.5  | -  | 118.1 |
| 124.7      | -         | -    | -                 | -    | -    | -        | 3.9  | 4.4  | 4.8      | 1.5  | 2.2  | 2.8        | 1.1  | 1.9  | 2.6  | -  | 124.7 |
| 131.2      | -         | -    | -                 | -    | -    | -        | 3.0  | 3.5  | -        | -    | 1.5  | 1.9        | -    | 1.3  | 1.7  | -  | 131.2 |
| 137.8      | -         | -    | -                 | -    | -    | -        | 2.4  | 2.8  | -        | -    | -    | 1.1        | -    | -    | 1.1  | -  | 137.8 |
| 144.4      | -         | -    | -                 | -    | -    | -        | 1.7  | 2.2  | -        | -    | -    | -          | -    | -    | -    | -  | 144.4 |
| 150.9      | -         | -    | -                 | -    | -    | -        | 1.3  | 1.5  | -        | -    | -    | -          | -    | -    | -    | -  | 150.9 |
| 157.5      | -         | -    | -                 | -    | -    | -        | -    | 1.1  | -        | -    | -    | -          | -    | -    | -    | -  | 157.5 |

# Operation

HAV

| 20,400 lbs |           |      | 24.6 ft x 26.3 ft |      |      | 33.1 ft  |      |      | 360°     |      |      | ASME B30.5 |      |      |      |    |       |
|------------|-----------|------|-------------------|------|------|----------|------|------|----------|------|------|------------|------|------|------|----|-------|
| 37.4 ft    |           |      | 98.4 ft           |      |      | 147.2 ft |      |      | 183.9 ft |      |      | 196.9 ft   |      |      |      |    |       |
| 0°         |           |      | 22°               |      |      | 45°      |      |      | 0°       |      |      | 22°        |      |      | 45°  |    |       |
| ft         | 1,000 lbs |      |                   |      |      |          |      |      |          |      |      |            |      |      |      | ft |       |
| 11.5       | -         | 33.0 | -                 | -    | -    | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 11.5  |
| 13.1       | -         | 33.0 | -                 | -    | -    | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 13.1  |
| 14.8       | -         | 33.0 | -                 | -    | -    | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 14.8  |
| 16.4       | -         | 33.0 | -                 | -    | -    | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 16.4  |
| 19.7       | -         | 32.8 | -                 | -    | -    | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 19.7  |
| 23.0       | -         | 30.2 | 20.9              | -    | 32.1 | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 23.0  |
| 26.2       | 33.0      | 27.7 | 20.0              | -    | 30.6 | -        | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 26.2  |
| 29.5       | 31.7      | 25.7 | 19.1              | -    | 29.5 | 20.5     | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 29.5  |
| 32.8       | 28.4      | 24.2 | 18.2              | -    | 28.2 | 20.0     | -    | -    | -        | -    | -    | -          | -    | -    | -    | -  | 32.8  |
| 36.1       | 25.7      | 22.7 | 17.6              | -    | 28.2 | 19.6     | -    | 15.4 | -        | -    | -    | -          | -    | -    | -    | -  | 36.1  |
| 39.4       | 23.5      | 21.3 | 16.9              | -    | 27.1 | 19.1     | -    | 15.4 | -        | -    | -    | -          | -    | -    | -    | -  | 39.4  |
| 45.9       | 20.0      | 19.4 | 16.0              | -    | 25.1 | 18.2     | 15.4 | 15.4 | 15.4     | -    | 12.5 | -          | -    | -    | -    | -  | 45.9  |
| 52.5       | 17.4      | 17.8 | 15.6              | 22.7 | 22.9 | 17.4     | 15.4 | 15.4 | 15.4     | -    | 12.5 | -          | -    | 11.2 | -    | -  | 52.5  |
| 59.1       | 15.2      | 16.7 | -                 | 19.6 | 18.7 | 16.7     | 15.4 | 15.4 | 15.4     | 12.5 | 12.5 | 12.5       | 11.2 | 11.2 | -    | -  | 59.1  |
| 65.6       | -         | -    | -                 | 16.5 | 15.6 | 16.0     | 14.5 | 14.7 | 14.3     | 10.8 | 12.5 | 12.5       | 10.3 | 11.2 | 11.0 | -  | 65.6  |
| 72.2       | -         | -    | -                 | 13.6 | 14.5 | 13.8     | 12.1 | 13.0 | 13.4     | 8.8  | 10.3 | 11.9       | 8.3  | 9.9  | 10.3 | -  | 72.2  |
| 78.7       | -         | -    | -                 | 11.9 | 12.3 | 12.5     | 10.3 | 11.4 | 11.4     | 7.0  | 8.5  | 9.7        | 6.6  | 8.1  | 9.4  | -  | 78.7  |
| 85.3       | -         | -    | -                 | 9.9  | 10.8 | 11.0     | 8.8  | 9.9  | 10.5     | 5.5  | 6.8  | 7.9        | 5.2  | 6.6  | 7.7  | -  | 85.3  |
| 91.9       | -         | -    | -                 | 8.8  | 9.0  | 9.4      | 7.2  | 8.3  | 9.0      | 4.4  | 5.5  | 6.6        | 3.9  | 5.2  | 6.1  | -  | 91.9  |
| 98.4       | -         | -    | -                 | 7.9  | 7.7  | -        | 6.1  | 7.0  | 7.7      | 3.0  | 4.4  | 5.2        | 2.8  | 3.9  | 4.8  | -  | 98.4  |
| 105.0      | -         | -    | -                 | 6.6  | 7.0  | -        | 5.0  | 5.9  | 6.3      | 2.2  | 3.3  | 3.9        | 1.9  | 2.8  | 3.7  | -  | 105.0 |
| 111.5      | -         | -    | -                 | 5.7  | 6.1  | -        | 4.1  | 4.8  | 5.2      | 1.3  | 2.2  | 3.0        | 1.1  | 1.9  | 2.8  | -  | 111.5 |
| 118.1      | -         | -    | -                 | 4.8  | -    | -        | 3.3  | 3.9  | 4.1      | -    | 1.5  | 1.9        | -    | 1.1  | 1.7  | -  | 118.1 |
| 124.7      | -         | -    | -                 | -    | -    | -        | 2.4  | 3.0  | 3.3      | -    | -    | 1.3        | -    | -    | 1.1  | -  | 124.7 |
| 131.2      | -         | -    | -                 | -    | -    | -        | 1.7  | 2.2  | -        | -    | -    | -          | -    | -    | -    | -  | 131.2 |
| 137.8      | -         | -    | -                 | -    | -    | -        | 1.1  | 1.5  | -        | -    | -    | -          | -    | -    | -    | -  | 137.8 |
| 144.4      | -         | -    | -                 | -    | -    | -        | -    | 1.1  | -        | -    | -    | -          | -    | -    | -    | -  | 144.4 |



# Operation

| 78,200 lbs |      |         | 24.6 ft x 26.3 ft |      |          | 58.7 ft |     |          | 360° |     |          | ASME B30.5 |     |     |       |
|------------|------|---------|-------------------|------|----------|---------|-----|----------|------|-----|----------|------------|-----|-----|-------|
| 37.4 ft    |      | 98.4 ft |                   |      | 147.2 ft |         |     | 183.9 ft |      |     | 196.9 ft |            |     |     |       |
| 0°         | 22°  | 45°     | 0°                | 22°  | 45°      | 0°      | 22° | 45°      | 0°   | 22° | 45°      | 0°         | 22° | 45° |       |
| 1,000 lbs  |      |         |                   |      |          |         |     |          |      |     |          |            |     |     |       |
| ft         |      |         |                   |      |          |         |     |          |      |     |          |            |     | ft  |       |
| 14.8       | 14.5 | -       | -                 | -    | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 14.8  |
| 16.4       | 13.8 | -       | -                 | -    | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 16.4  |
| 19.7       | 12.7 | -       | -                 | -    | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 19.7  |
| 23.0       | 11.6 | -       | -                 | -    | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 23.0  |
| 26.2       | 10.8 | 8.3     | -                 | 12.3 | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 26.2  |
| 29.5       | 10.1 | 7.7     | -                 | 11.9 | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 29.5  |
| 32.8       | 9.4  | 7.2     | -                 | 11.4 | 7.4      | -       | -   | -        | -    | -   | -        | -          | -   | -   | 32.8  |
| 36.1       | 8.8  | 7.0     | -                 | 11.0 | 7.4      | -       | 8.5 | -        | -    | -   | -        | -          | -   | -   | 36.1  |
| 39.4       | 8.3  | 6.6     | -                 | 10.8 | 7.2      | -       | 8.5 | -        | -    | -   | -        | -          | -   | -   | 39.4  |
| 45.9       | 7.2  | 5.9     | 5.2               | 9.9  | 6.8      | -       | 8.5 | -        | -    | 7.7 | -        | -          | 7.2 | -   | 45.9  |
| 52.5       | 6.6  | 5.5     | 4.8               | 9.0  | 6.3      | 5.0     | 8.5 | 6.1      | -    | 7.7 | -        | -          | 7.0 | -   | 52.5  |
| 59.1       | 5.9  | 5.2     | 4.6               | 8.3  | 5.9      | 4.8     | 8.3 | 5.9      | -    | 7.4 | -        | -          | 7.0 | -   | 59.1  |
| 65.6       | 5.5  | 4.8     | 4.4               | 7.7  | 5.7      | 4.8     | 7.9 | 5.7      | 4.6  | 7.2 | 5.2      | -          | 6.8 | -   | 65.6  |
| 72.2       | 5.0  | 4.6     | 4.4               | 7.2  | 5.5      | 4.6     | 7.4 | 5.5      | 4.4  | 6.8 | 5.0      | -          | 6.6 | 5.0 | 72.2  |
| 78.7       | 4.8  | 4.4     | 4.4               | 6.8  | 5.2      | 4.4     | 7.0 | 5.2      | 4.4  | 6.6 | 5.0      | 4.1        | 6.3 | 4.8 | 78.7  |
| 85.3       | 4.6  | 4.4     | -                 | 6.3  | 5.0      | 4.4     | 6.8 | 5.0      | 4.1  | 6.3 | 4.8      | 4.1        | 6.1 | 4.8 | 85.3  |
| 91.9       | -    | -       | -                 | 5.9  | 4.8      | 4.1     | 6.3 | 4.8      | 4.1  | 6.1 | 4.6      | 3.9        | 5.9 | 4.6 | 91.9  |
| 98.4       | -    | -       | -                 | 5.7  | 4.6      | 4.1     | 6.1 | 4.6      | 4.1  | 5.9 | 4.6      | 3.9        | 5.7 | 4.4 | 98.4  |
| 105.0      | -    | -       | -                 | 5.5  | 4.4      | 4.1     | 5.9 | 4.6      | 3.9  | 5.7 | 4.4      | 3.9        | 5.7 | 4.4 | 105.0 |
| 111.5      | -    | -       | -                 | 5.2  | 4.4      | 4.1     | 5.7 | 4.4      | 3.9  | 5.5 | 4.4      | 3.7        | 5.5 | 4.1 | 111.5 |
| 118.1      | -    | -       | -                 | 5.0  | 4.1      | 3.9     | 5.5 | 4.4      | 3.9  | 5.2 | 4.1      | 3.7        | 5.2 | 4.1 | 118.1 |
| 124.7      | -    | -       | -                 | 4.8  | 4.1      | -       | 5.2 | 4.1      | 3.7  | 5.0 | 4.1      | 3.7        | 5.0 | 3.9 | 124.7 |
| 131.2      | -    | -       | -                 | 4.6  | 4.1      | -       | 5.0 | 4.1      | 3.7  | 5.0 | 3.9      | 3.7        | 5.0 | 3.9 | 131.2 |
| 137.8      | -    | -       | -                 | 4.4  | 3.9      | -       | 4.8 | 3.9      | 3.7  | 4.8 | 3.9      | 3.5        | 4.8 | 3.9 | 137.8 |
| 144.4      | -    | -       | -                 | 4.4  | -        | -       | 4.8 | 3.9      | 3.7  | 4.6 | 3.7      | 3.5        | 4.6 | 3.7 | 144.4 |
| 150.9      | -    | -       | -                 | -    | -        | -       | 4.6 | 3.9      | 3.7  | 4.6 | 3.7      | 3.5        | 4.6 | 3.7 | 150.9 |
| 157.5      | -    | -       | -                 | -    | -        | -       | 4.4 | 3.7      | -    | 4.4 | 3.7      | 3.5        | 4.4 | 3.7 | 157.5 |
| 164.0      | -    | -       | -                 | -    | -        | -       | 4.4 | 3.7      | -    | 4.4 | 3.7      | 3.5        | 4.4 | 3.5 | 164.0 |
| 170.6      | -    | -       | -                 | -    | -        | -       | 4.1 | 3.7      | -    | 3.9 | 3.5      | 3.5        | 3.7 | 3.5 | 170.6 |
| 177.2      | -    | -       | -                 | -    | -        | -       | 4.1 | 3.7      | -    | 3.3 | 3.5      | -          | 3.0 | 3.5 | 177.2 |
| 183.7      | -    | -       | -                 | -    | -        | -       | 3.9 | 3.7      | -    | 2.6 | 3.5      | -          | 2.4 | 3.3 | 183.7 |
| 190.3      | -    | -       | -                 | -    | -        | -       | 3.9 | -        | -    | 2.2 | 2.8      | -          | 1.9 | 2.6 | 190.3 |
| 196.9      | -    | -       | -                 | -    | -        | -       | 3.9 | -        | -    | 1.7 | 2.2      | -          | 1.5 | 2.2 | 196.9 |
| 210.0      | -    | -       | -                 | -    | -        | -       | -   | -        | -    | -   | 1.3      | -          | -   | 1.1 | 210.0 |

# Operation

HAV

| 53,000 lbs |           | 24.6 ft x 26.3 ft |     |      | 58.7 ft  |     |     | 360°     |     |     | ASME B30.5 |     |     |     |     |     |       |
|------------|-----------|-------------------|-----|------|----------|-----|-----|----------|-----|-----|------------|-----|-----|-----|-----|-----|-------|
| 37.4 ft    |           | 98.4 ft           |     |      | 147.2 ft |     |     | 183.9 ft |     |     | 196.9 ft   |     |     |     |     |     |       |
| 0°         |           | 22°               |     | 45°  |          | 0°  |     | 22°      |     | 45° |            | 0°  |     | 22° |     | 45° |       |
| ft         | 1,000 lbs |                   |     |      |          |     |     |          |     |     |            |     |     |     |     |     | ft    |
| 14.8       | 14.5      | -                 | -   | -    | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | 14.8  |
| 16.4       | 13.8      | -                 | -   | -    | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | 16.4  |
| 19.7       | 12.7      | -                 | -   | -    | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | 19.7  |
| 23.0       | 11.6      | -                 | -   | -    | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | 23.0  |
| 26.2       | 10.8      | 8.3               | -   | 12.3 | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | 26.2  |
| 29.5       | 10.1      | 7.7               | -   | 11.9 | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | 29.5  |
| 32.8       | 9.4       | 7.2               | -   | 11.4 | 7.4      | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | 32.8  |
| 36.1       | 8.8       | 7.0               | -   | 11.0 | 7.4      | -   | 8.5 | -        | -   | -   | -          | -   | -   | -   | -   | -   | 36.1  |
| 39.4       | 8.3       | 6.6               | -   | 10.8 | 7.2      | -   | 8.5 | -        | -   | -   | -          | -   | -   | -   | -   | -   | 39.4  |
| 45.9       | 7.2       | 5.9               | 5.2 | 9.9  | 6.8      | -   | 8.5 | -        | -   | 7.7 | -          | -   | 7.2 | -   | -   | -   | 45.9  |
| 52.5       | 6.6       | 5.5               | 4.8 | 9.0  | 6.3      | 5.0 | 8.5 | 6.1      | -   | 7.7 | -          | -   | 7.0 | -   | -   | -   | 52.5  |
| 59.1       | 5.9       | 5.2               | 4.6 | 8.3  | 5.9      | 4.8 | 8.3 | 5.9      | -   | 7.4 | -          | -   | 7.0 | -   | -   | -   | 59.1  |
| 65.6       | 5.5       | 4.8               | 4.4 | 7.7  | 5.7      | 4.8 | 7.9 | 5.7      | 4.6 | 7.2 | 5.2        | -   | 6.8 | -   | -   | -   | 65.6  |
| 72.2       | 5.0       | 4.6               | 4.4 | 7.2  | 5.5      | 4.6 | 7.4 | 5.5      | 4.4 | 6.8 | 5.0        | -   | 6.6 | 5.0 | -   | -   | 72.2  |
| 78.7       | 4.8       | 4.4               | 4.4 | 6.8  | 5.2      | 4.4 | 7.0 | 5.2      | 4.4 | 6.6 | 5.0        | 4.1 | 6.3 | 4.8 | -   | -   | 78.7  |
| 85.3       | 4.6       | 4.4               | -   | 6.3  | 5.0      | 4.4 | 6.8 | 5.0      | 4.1 | 6.3 | 4.8        | 4.1 | 6.1 | 4.8 | 4.1 | -   | 85.3  |
| 91.9       | -         | -                 | -   | 5.9  | 4.8      | 4.1 | 6.3 | 4.8      | 4.1 | 6.1 | 4.6        | 3.9 | 5.9 | 4.6 | 3.9 | -   | 91.9  |
| 98.4       | -         | -                 | -   | 5.7  | 4.6      | 4.1 | 6.1 | 4.6      | 4.1 | 5.9 | 4.6        | 3.9 | 5.7 | 4.4 | 3.9 | -   | 98.4  |
| 105.0      | -         | -                 | -   | 5.5  | 4.4      | 4.1 | 5.9 | 4.6      | 3.9 | 5.7 | 4.4        | 3.9 | 5.7 | 4.4 | 3.7 | -   | 105.0 |
| 111.5      | -         | -                 | -   | 5.2  | 4.4      | 4.1 | 5.7 | 4.4      | 3.9 | 5.5 | 4.4        | 3.7 | 5.5 | 4.1 | 3.7 | -   | 111.5 |
| 118.1      | -         | -                 | -   | 5.0  | 4.1      | 3.9 | 5.5 | 4.4      | 3.9 | 5.2 | 4.1        | 3.7 | 5.2 | 4.1 | 3.7 | -   | 118.1 |
| 124.7      | -         | -                 | -   | 4.8  | 4.1      | -   | 5.2 | 4.1      | 3.7 | 5.0 | 4.1        | 3.7 | 5.0 | 3.9 | 3.7 | -   | 124.7 |
| 131.2      | -         | -                 | -   | 4.6  | 4.1      | -   | 5.0 | 4.1      | 3.7 | 5.0 | 3.9        | 3.7 | 4.8 | 3.9 | 3.5 | -   | 131.2 |
| 137.8      | -         | -                 | -   | 4.4  | 3.9      | -   | 4.8 | 3.9      | 3.7 | 4.4 | 3.9        | 3.5 | 3.9 | 3.9 | 3.5 | -   | 137.8 |
| 144.4      | -         | -                 | -   | 4.4  | -        | -   | 4.6 | 3.9      | 3.7 | 3.5 | 3.7        | 3.5 | 3.3 | 3.7 | 3.5 | -   | 144.4 |
| 150.9      | -         | -                 | -   | -    | -        | -   | 4.4 | 3.9      | 3.7 | 2.8 | 3.7        | 3.5 | 2.6 | 3.7 | 3.5 | -   | 150.9 |
| 157.5      | -         | -                 | -   | -    | -        | -   | 4.4 | 3.7      | -   | 2.2 | 3.3        | 3.5 | 1.9 | 3.0 | 3.5 | -   | 157.5 |
| 164.0      | -         | -                 | -   | -    | -        | -   | 3.7 | 3.7      | -   | 1.5 | 2.6        | 3.0 | 1.3 | 2.4 | 3.0 | -   | 164.0 |
| 170.6      | -         | -                 | -   | -    | -        | -   | 3.3 | 3.7      | -   | 1.1 | 1.9        | 2.4 | -   | 1.7 | 2.4 | -   | 170.6 |
| 177.2      | -         | -                 | -   | -    | -        | -   | 2.6 | 3.0      | -   | -   | 1.3        | -   | -   | 1.3 | 1.7 | -   | 177.2 |
| 183.7      | -         | -                 | -   | -    | -        | -   | 2.2 | 2.6      | -   | -   | -          | -   | -   | -   | -   | -   | 183.7 |
| 190.3      | -         | -                 | -   | -    | -        | -   | 1.9 | -        | -   | -   | -          | -   | -   | -   | -   | -   | 190.3 |
| 196.9      | -         | -                 | -   | -    | -        | -   | 1.5 | -        | -   | -   | -          | -   | -   | -   | -   | -   | 196.9 |

# Operation

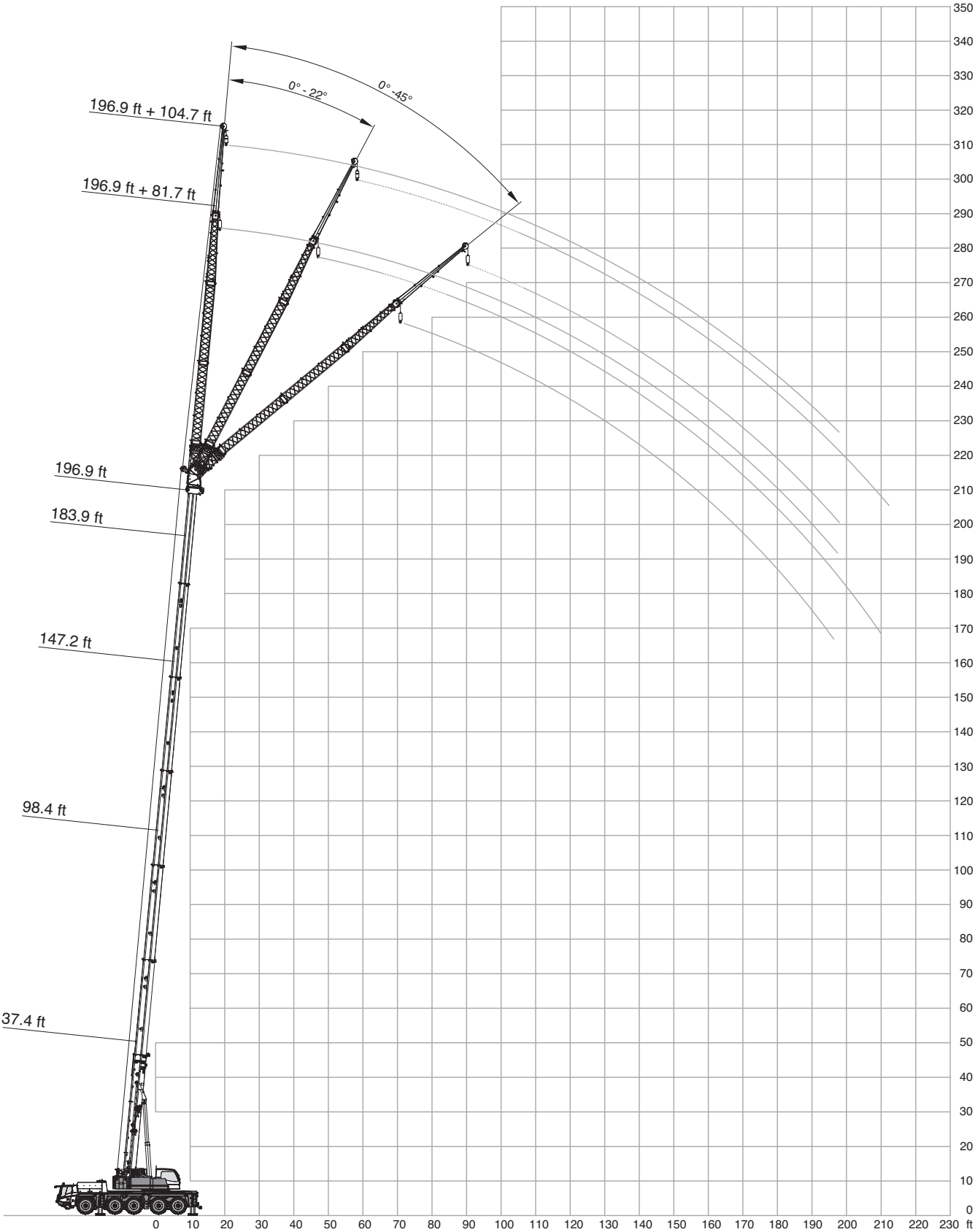
| 29,200 lbs |           | 24.6 ft x 26.3 ft |     |      | 58.7 ft  |     |     | 360°     |     |     | ASME B30.5 |     |     |     |     |     |    |       |
|------------|-----------|-------------------|-----|------|----------|-----|-----|----------|-----|-----|------------|-----|-----|-----|-----|-----|----|-------|
| 37.4 ft    |           | 98.4 ft           |     |      | 147.2 ft |     |     | 183.9 ft |     |     | 196.9 ft   |     |     |     |     |     |    |       |
| 0°         |           | 22°               |     | 45°  |          | 0°  |     | 22°      |     | 45° |            | 0°  |     | 22° |     | 45° |    |       |
| ft         | 1,000 lbs |                   |     |      |          |     |     |          |     |     |            |     |     |     |     |     | ft |       |
| 14.8       | 14.5      | -                 | -   | -    | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 14.8  |
| 16.4       | 13.8      | -                 | -   | -    | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 16.4  |
| 19.7       | 12.7      | -                 | -   | -    | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 19.7  |
| 23.0       | 11.6      | -                 | -   | -    | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 23.0  |
| 26.2       | 10.8      | 8.3               | -   | 12.3 | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 26.2  |
| 29.5       | 10.1      | 7.7               | -   | 11.9 | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 29.5  |
| 32.8       | 9.4       | 7.2               | -   | 11.4 | 7.4      | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 32.8  |
| 36.1       | 8.8       | 7.0               | -   | 11.0 | 7.4      | -   | 8.5 | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 36.1  |
| 39.4       | 8.3       | 6.6               | -   | 10.8 | 7.2      | -   | 8.5 | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 39.4  |
| 45.9       | 7.2       | 5.9               | 5.2 | 9.9  | 6.8      | -   | 8.5 | -        | -   | 7.7 | -          | -   | 7.2 | -   | -   | -   | -  | 45.9  |
| 52.5       | 6.6       | 5.5               | 4.8 | 9.0  | 6.3      | 5.0 | 8.5 | 6.1      | -   | 7.7 | -          | -   | 7.0 | -   | -   | -   | -  | 52.5  |
| 59.1       | 5.9       | 5.2               | 4.6 | 8.3  | 5.9      | 4.8 | 8.3 | 5.9      | -   | 7.4 | -          | -   | 7.0 | -   | -   | -   | -  | 59.1  |
| 65.6       | 5.5       | 4.8               | 4.4 | 7.7  | 5.7      | 4.8 | 7.9 | 5.7      | 4.6 | 7.2 | 5.2        | -   | 6.8 | -   | -   | -   | -  | 65.6  |
| 72.2       | 5.0       | 4.6               | 4.4 | 7.2  | 5.5      | 4.6 | 7.4 | 5.5      | 4.4 | 6.8 | 5.0        | -   | 6.6 | 5.0 | -   | -   | -  | 72.2  |
| 78.7       | 4.8       | 4.4               | 4.4 | 6.8  | 5.2      | 4.4 | 7.0 | 5.2      | 4.4 | 6.6 | 5.0        | 4.1 | 6.3 | 4.8 | -   | -   | -  | 78.7  |
| 85.3       | 4.6       | 4.4               | -   | 6.3  | 5.0      | 4.4 | 6.8 | 5.0      | 4.1 | 6.3 | 4.8        | 4.1 | 6.1 | 4.8 | 4.1 | -   | -  | 85.3  |
| 91.9       | -         | -                 | -   | 5.9  | 4.8      | 4.1 | 6.3 | 4.8      | 4.1 | 6.1 | 4.6        | 3.9 | 5.9 | 4.6 | 3.9 | -   | -  | 91.9  |
| 98.4       | -         | -                 | -   | 5.7  | 4.6      | 4.1 | 6.1 | 4.6      | 4.1 | 5.5 | 4.6        | 3.9 | 5.0 | 4.4 | 3.9 | -   | -  | 98.4  |
| 105.0      | -         | -                 | -   | 5.2  | 4.4      | 4.1 | 5.7 | 4.6      | 3.9 | 4.4 | 4.4        | 3.9 | 4.1 | 4.4 | 3.7 | -   | -  | 105.0 |
| 111.5      | -         | -                 | -   | 5.0  | 4.4      | 4.1 | 5.5 | 4.4      | 3.9 | 3.5 | 4.4        | 3.7 | 3.0 | 4.1 | 3.7 | -   | -  | 111.5 |
| 118.1      | -         | -                 | -   | 4.8  | 4.1      | 3.9 | 5.2 | 4.4      | 3.9 | 2.6 | 4.1        | 3.7 | 2.4 | 3.9 | 3.7 | -   | -  | 118.1 |
| 124.7      | -         | -                 | -   | 4.6  | 4.1      | -   | 4.4 | 4.1      | 3.7 | 1.9 | 3.3        | 3.7 | 1.5 | 3.0 | 3.7 | -   | -  | 124.7 |
| 131.2      | -         | -                 | -   | 4.6  | 3.9      | -   | 3.7 | 3.9      | 3.7 | 1.3 | 2.6        | 3.7 | -   | 2.2 | 3.3 | -   | -  | 131.2 |
| 137.8      | -         | -                 | -   | 4.4  | 3.9      | -   | 3.0 | 3.9      | 3.7 | -   | 1.7        | 2.8 | -   | 1.5 | 2.6 | -   | -  | 137.8 |
| 144.4      | -         | -                 | -   | 4.1  | -        | -   | 2.4 | 3.3      | 3.7 | -   | 1.1        | 1.9 | -   | -   | 1.7 | -   | -  | 144.4 |
| 150.9      | -         | -                 | -   | -    | -        | -   | 1.9 | 2.6      | 2.2 | -   | -          | 1.3 | -   | -   | 1.1 | -   | -  | 150.9 |
| 157.5      | -         | -                 | -   | -    | -        | -   | 1.3 | 1.9      | -   | -   | -          | -   | -   | -   | -   | -   | -  | 157.5 |
| 164.0      | -         | -                 | -   | -    | -        | -   | -   | 1.5      | -   | -   | -          | -   | -   | -   | -   | -   | -  | 164.0 |
| 170.6      | -         | -                 | -   | -    | -        | -   | -   | 1.1      | -   | -   | -          | -   | -   | -   | -   | -   | -  | 170.6 |

# Operation

HAV

| 20,400 lbs |      |         | 24.6 ft x 26.3 ft |      |          | 58.7 ft |     |          | 360° |     |          | ASME B30.5 |     |     |       |
|------------|------|---------|-------------------|------|----------|---------|-----|----------|------|-----|----------|------------|-----|-----|-------|
| 37.4 ft    |      | 98.4 ft |                   |      | 147.2 ft |         |     | 183.9 ft |      |     | 196.9 ft |            |     |     |       |
| 0°         | 22°  | 45°     | 0°                | 22°  | 45°      | 0°      | 22° | 45°      | 0°   | 22° | 45°      | 0°         | 22° | 45° |       |
| 1,000 lbs  |      |         |                   |      |          |         |     |          |      |     |          |            |     |     |       |
| ft         |      |         |                   |      |          |         |     |          |      |     |          |            |     | ft  |       |
| 14.8       | 14.5 | -       | -                 | -    | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 14.8  |
| 16.4       | 13.8 | -       | -                 | -    | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 16.4  |
| 19.7       | 12.7 | -       | -                 | -    | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 19.7  |
| 23.0       | 11.6 | -       | -                 | -    | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 23.0  |
| 26.2       | 10.8 | 8.3     | -                 | 12.3 | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 26.2  |
| 29.5       | 10.1 | 7.7     | -                 | 11.9 | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 29.5  |
| 32.8       | 9.4  | 7.2     | -                 | 11.4 | 7.4      | -       | -   | -        | -    | -   | -        | -          | -   | -   | 32.8  |
| 36.1       | 8.8  | 7.0     | -                 | 11.0 | 7.4      | -       | 8.5 | -        | -    | -   | -        | -          | -   | -   | 36.1  |
| 39.4       | 8.3  | 6.6     | -                 | 10.8 | 7.2      | -       | 8.5 | -        | -    | -   | -        | -          | -   | -   | 39.4  |
| 45.9       | 7.2  | 5.9     | 5.2               | 9.9  | 6.8      | -       | 8.5 | -        | -    | 7.7 | -        | -          | 7.2 | -   | 45.9  |
| 52.5       | 6.6  | 5.5     | 4.8               | 9.0  | 6.3      | 5.0     | 8.5 | 6.1      | -    | 7.7 | -        | -          | 7.0 | -   | 52.5  |
| 59.1       | 5.9  | 5.2     | 4.6               | 8.3  | 5.9      | 4.8     | 8.3 | 5.9      | -    | 7.4 | -        | -          | 7.0 | -   | 59.1  |
| 65.6       | 5.5  | 4.8     | 4.4               | 7.7  | 5.7      | 4.8     | 7.9 | 5.7      | 4.6  | 7.2 | 5.2      | -          | 6.8 | -   | 65.6  |
| 72.2       | 5.0  | 4.6     | 4.4               | 7.2  | 5.5      | 4.6     | 7.4 | 5.5      | 4.4  | 6.8 | 5.0      | -          | 6.6 | 5.0 | 72.2  |
| 78.7       | 4.8  | 4.4     | 4.4               | 6.8  | 5.2      | 4.4     | 7.0 | 5.2      | 4.4  | 6.6 | 5.0      | 4.1        | 6.3 | 4.8 | 78.7  |
| 85.3       | 4.6  | 4.4     | -                 | 6.3  | 5.0      | 4.4     | 6.6 | 5.0      | 4.1  | 5.9 | 4.8      | 4.1        | 5.5 | 4.8 | 85.3  |
| 91.9       | -    | -       | -                 | 5.9  | 4.8      | 4.1     | 6.1 | 4.8      | 4.1  | 4.8 | 4.6      | 3.9        | 4.4 | 4.6 | 91.9  |
| 98.4       | -    | -       | -                 | 5.7  | 4.6      | 4.1     | 5.9 | 4.6      | 4.1  | 3.7 | 4.6      | 3.9        | 3.3 | 4.4 | 98.4  |
| 105.0      | -    | -       | -                 | 5.2  | 4.4      | 4.1     | 5.5 | 4.6      | 3.9  | 2.6 | 4.4      | 3.9        | 2.4 | 4.1 | 105.0 |
| 111.5      | -    | -       | -                 | 5.0  | 4.4      | 4.1     | 4.6 | 4.4      | 3.9  | 1.7 | 3.5      | 3.7        | 1.5 | 3.3 | 111.5 |
| 118.1      | -    | -       | -                 | 4.8  | 4.1      | 3.9     | 3.9 | 4.1      | 3.9  | 1.1 | 2.6      | 3.7        | -   | 2.4 | 118.1 |
| 124.7      | -    | -       | -                 | 4.6  | 4.1      | -       | 3.0 | 4.1      | 3.7  | -   | 1.9      | 3.0        | -   | 1.5 | 124.7 |
| 131.2      | -    | -       | -                 | 4.4  | 3.9      | -       | 2.4 | 3.3      | 3.7  | -   | 1.1      | 2.2        | -   | -   | 131.2 |
| 137.8      | -    | -       | -                 | 3.7  | 3.9      | -       | 1.7 | 2.6      | 3.3  | -   | -        | 1.5        | -   | -   | 137.8 |
| 144.4      | -    | -       | -                 | 3.0  | -        | -       | 1.3 | 1.9      | 2.6  | -   | -        | -          | -   | -   | 144.4 |
| 150.9      | -    | -       | -                 | -    | -        | -       | -   | 1.5      | 1.1  | -   | -        | -          | -   | -   | 150.9 |





# Operation

HAV-VA

| 78,200 lbs |           | 24.6 ft x 26.3 ft |     |     | 81.7 ft    |     |     | 360°       |     |     | ASME B30.5 |     |     |     |     |       |
|------------|-----------|-------------------|-----|-----|------------|-----|-----|------------|-----|-----|------------|-----|-----|-----|-----|-------|
| 37.4 ft    |           | 98.4 ft           |     |     | 147.2 ft   |     |     | 183.9 ft   |     |     | 196.9 ft   |     |     |     |     |       |
| 0° 22° 45° |           | 0° 22° 45°        |     |     | 0° 22° 45° |     |     | 0° 22° 45° |     |     | 0° 22° 45° |     |     |     |     |       |
| ft         | 1,000 lbs |                   |     |     |            |     |     |            |     |     |            |     |     |     | ft  |       |
| 19.7       | 11.2      | -                 | -   | -   | -          | -   | -   | -          | -   | -   | -          | -   | -   | -   | -   | 19.7  |
| 23.0       | 11.2      | -                 | -   | -   | -          | -   | -   | -          | -   | -   | -          | -   | -   | -   | -   | 23.0  |
| 26.2       | 10.8      | -                 | -   | -   | -          | -   | -   | -          | -   | -   | -          | -   | -   | -   | -   | 26.2  |
| 29.5       | 10.3      | -                 | -   | -   | -          | -   | -   | -          | -   | -   | -          | -   | -   | -   | -   | 29.5  |
| 32.8       | 9.9       | -                 | -   | 9.4 | -          | -   | -   | -          | -   | -   | -          | -   | -   | -   | -   | 32.8  |
| 36.1       | 9.4       | 7.9               | -   | 9.4 | -          | -   | -   | -          | -   | -   | -          | -   | -   | -   | -   | 36.1  |
| 39.4       | 9.0       | 7.4               | -   | 9.4 | -          | -   | 6.6 | -          | -   | -   | -          | -   | -   | -   | -   | 39.4  |
| 45.9       | 8.1       | 6.8               | -   | 9.2 | -          | -   | 6.8 | -          | -   | -   | -          | -   | -   | -   | -   | 45.9  |
| 52.5       | 7.4       | 6.3               | -   | 8.8 | 6.6        | -   | 6.8 | -          | -   | 5.2 | -          | -   | -   | -   | -   | 52.5  |
| 59.1       | 6.8       | 5.9               | -   | 8.1 | 6.1        | -   | 6.8 | -          | -   | 5.2 | -          | -   | 4.8 | -   | -   | 59.1  |
| 65.6       | 6.3       | 5.5               | 5.0 | 7.7 | 5.9        | -   | 6.8 | 5.7        | -   | 5.2 | -          | -   | 4.8 | -   | -   | 65.6  |
| 72.2       | 5.9       | 5.2               | 4.8 | 7.2 | 5.7        | 4.8 | 6.8 | 5.5        | -   | 5.2 | -          | -   | 4.8 | -   | -   | 72.2  |
| 78.7       | 5.7       | 5.0               | 4.6 | 7.0 | 5.5        | 4.8 | 6.6 | 5.2        | -   | 5.2 | -          | -   | 4.8 | -   | -   | 78.7  |
| 85.3       | 5.0       | 4.8               | 4.4 | 6.6 | 5.2        | 4.6 | 6.3 | 5.0        | -   | 5.2 | 4.8        | -   | 4.8 | 4.6 | -   | 85.3  |
| 91.9       | 4.6       | 4.6               | 4.4 | 6.3 | 5.0        | 4.4 | 6.1 | 4.8        | 4.4 | 5.2 | 4.6        | -   | 4.8 | 4.6 | -   | 91.9  |
| 98.4       | 4.1       | 4.4               | 4.4 | 5.9 | 4.8        | 4.4 | 5.9 | 4.8        | 4.1 | 5.2 | 4.4        | -   | 4.8 | 4.4 | -   | 98.4  |
| 105.0      | 3.9       | 4.4               | -   | 5.7 | 4.8        | 4.4 | 5.7 | 4.6        | 4.1 | 5.2 | 4.4        | 3.9 | 4.8 | 4.4 | -   | 105.0 |
| 111.5      | -         | -                 | -   | 5.5 | 4.6        | 4.1 | 5.7 | 4.6        | 4.1 | 5.2 | 4.1        | 3.9 | 4.8 | 4.1 | 3.7 | 111.5 |
| 118.1      | -         | -                 | -   | 5.2 | 4.4        | 4.1 | 5.5 | 4.4        | 3.9 | 5.0 | 4.1        | 3.7 | 4.8 | 4.1 | 3.7 | 118.1 |
| 124.7      | -         | -                 | -   | 5.0 | 4.4        | 4.1 | 5.2 | 4.4        | 3.9 | 5.0 | 4.1        | 3.7 | 4.8 | 3.9 | 3.7 | 124.7 |
| 131.2      | -         | -                 | -   | 4.8 | 4.1        | 3.9 | 5.0 | 4.1        | 3.9 | 4.8 | 3.9        | 3.7 | 4.6 | 3.9 | 3.7 | 131.2 |
| 137.8      | -         | -                 | -   | 4.6 | 4.1        | 3.9 | 5.0 | 4.1        | 3.7 | 4.6 | 3.9        | 3.7 | 4.6 | 3.9 | 3.5 | 137.8 |
| 144.4      | -         | -                 | -   | 4.4 | 4.1        | -   | 4.8 | 3.9        | 3.7 | 4.6 | 3.7        | 3.5 | 4.6 | 3.7 | 3.5 | 144.4 |
| 150.9      | -         | -                 | -   | 4.1 | 3.9        | -   | 4.6 | 3.9        | 3.7 | 4.4 | 3.7        | 3.5 | 4.4 | 3.7 | 3.5 | 150.9 |
| 157.5      | -         | -                 | -   | 3.9 | 3.9        | -   | 4.6 | 3.9        | 3.7 | 4.4 | 3.7        | 3.5 | 4.1 | 3.7 | 3.5 | 157.5 |
| 164.0      | -         | -                 | -   | 3.7 | 3.9        | -   | 4.4 | 3.7        | 3.7 | 4.4 | 3.7        | 3.5 | 3.9 | 3.5 | 3.3 | 164.0 |
| 170.6      | -         | -                 | -   | 3.5 | -          | -   | 4.4 | 3.7        | 3.7 | 3.9 | 3.5        | 3.5 | 3.7 | 3.5 | 3.3 | 170.6 |
| 177.2      | -         | -                 | -   | -   | -          | -   | 4.1 | 3.7        | -   | 3.5 | 3.5        | 3.3 | 3.0 | 3.5 | 3.3 | 177.2 |
| 183.7      | -         | -                 | -   | -   | -          | -   | 4.1 | 3.7        | -   | 2.8 | 3.5        | 3.3 | 2.6 | 3.3 | 3.3 | 183.7 |
| 190.3      | -         | -                 | -   | -   | -          | -   | 3.5 | 3.5        | -   | 2.4 | 3.3        | 3.3 | 2.2 | 3.0 | 3.0 | 190.3 |
| 196.9      | -         | -                 | -   | -   | -          | -   | 3.0 | 3.5        | -   | 1.7 | 2.8        | -   | 1.5 | 2.6 | 2.8 | 196.9 |
| 210.0      | -         | -                 | -   | -   | -          | -   | 2.4 | -          | -   | 1.1 | 1.7        | -   | -   | 1.5 | -   | 210.0 |

# Operation

HAV-VA

| 53,000 lbs |           | 24.6 ft x 26.3 ft |     |     |     |     |     | 81.7 ft  |     |     |     |     |     | 360°     |     |     | ASME B30.5 |     |   |     |   |     |       |
|------------|-----------|-------------------|-----|-----|-----|-----|-----|----------|-----|-----|-----|-----|-----|----------|-----|-----|------------|-----|---|-----|---|-----|-------|
| 37.4 ft    |           | 98.4 ft           |     |     |     |     |     | 147.2 ft |     |     |     |     |     | 183.9 ft |     |     | 196.9 ft   |     |   |     |   |     |       |
| 0°         |           | 22°               |     | 45° |     | 0°  |     | 22°      |     | 45° |     | 0°  |     | 22°      |     | 45° |            | 0°  |   | 22° |   | 45° |       |
| ft         | 1,000 lbs |                   |     |     |     |     |     |          |     |     |     |     |     |          |     |     |            |     |   |     |   |     | ft    |
| 19.7       | 11.2      | -                 | -   | -   | -   | -   | -   | -        | -   | -   | -   | -   | -   | -        | -   | -   | -          | -   | - | -   | - | -   | 19.7  |
| 23.0       | 11.2      | -                 | -   | -   | -   | -   | -   | -        | -   | -   | -   | -   | -   | -        | -   | -   | -          | -   | - | -   | - | -   | 23.0  |
| 26.2       | 10.8      | -                 | -   | -   | -   | -   | -   | -        | -   | -   | -   | -   | -   | -        | -   | -   | -          | -   | - | -   | - | -   | 26.2  |
| 29.5       | 10.3      | -                 | -   | -   | -   | -   | -   | -        | -   | -   | -   | -   | -   | -        | -   | -   | -          | -   | - | -   | - | -   | 29.5  |
| 32.8       | 9.9       | -                 | -   | 9.4 | -   | -   | -   | -        | -   | -   | -   | -   | -   | -        | -   | -   | -          | -   | - | -   | - | -   | 32.8  |
| 36.1       | 9.4       | 7.9               | -   | 9.4 | -   | -   | -   | -        | -   | -   | -   | -   | -   | -        | -   | -   | -          | -   | - | -   | - | -   | 36.1  |
| 39.4       | 9.0       | 7.4               | -   | 9.4 | -   | -   | 6.6 | -        | -   | -   | -   | -   | -   | -        | -   | -   | -          | -   | - | -   | - | -   | 39.4  |
| 45.9       | 8.1       | 6.8               | -   | 9.2 | -   | -   | 6.8 | -        | -   | -   | -   | -   | -   | -        | -   | -   | -          | -   | - | -   | - | -   | 45.9  |
| 52.5       | 7.4       | 6.3               | -   | 8.8 | 6.6 | -   | 6.8 | -        | -   | 5.2 | -   | -   | -   | -        | -   | -   | -          | -   | - | -   | - | -   | 52.5  |
| 59.1       | 6.8       | 5.9               | -   | 8.1 | 6.1 | -   | 6.8 | -        | -   | 5.2 | -   | -   | 4.8 | -        | -   | -   | -          | -   | - | -   | - | -   | 59.1  |
| 65.6       | 6.3       | 5.5               | 5.0 | 7.7 | 5.9 | -   | 6.8 | 5.7      | -   | 5.2 | -   | -   | 4.8 | -        | -   | 4.8 | -          | -   | - | -   | - | -   | 65.6  |
| 72.2       | 5.9       | 5.2               | 4.8 | 7.2 | 5.7 | 4.8 | 6.8 | 5.5      | -   | 5.2 | -   | -   | 4.8 | -        | -   | 4.8 | -          | -   | - | -   | - | -   | 72.2  |
| 78.7       | 5.7       | 5.0               | 4.6 | 7.0 | 5.5 | 4.8 | 6.6 | 5.2      | -   | 5.2 | -   | -   | 4.8 | -        | -   | 4.8 | -          | -   | - | -   | - | -   | 78.7  |
| 85.3       | 5.0       | 4.8               | 4.4 | 6.6 | 5.2 | 4.6 | 6.3 | 5.0      | -   | 5.2 | 4.8 | -   | 4.8 | 4.6      | -   | 4.8 | 4.6        | -   | - | -   | - | -   | 85.3  |
| 91.9       | 4.6       | 4.6               | 4.4 | 6.3 | 5.0 | 4.4 | 6.1 | 4.8      | 4.4 | 5.2 | 4.6 | -   | 4.8 | 4.6      | -   | 4.8 | 4.6        | -   | - | -   | - | -   | 91.9  |
| 98.4       | 4.1       | 4.4               | 4.4 | 5.9 | 4.8 | 4.4 | 5.9 | 4.8      | 4.1 | 5.2 | 4.4 | -   | 4.8 | 4.4      | -   | 4.8 | 4.4        | -   | - | -   | - | -   | 98.4  |
| 105.0      | 3.9       | 4.4               | -   | 5.7 | 4.8 | 4.4 | 5.7 | 4.6      | 4.1 | 5.2 | 4.4 | 3.9 | 4.8 | 4.4      | -   | 4.8 | 4.4        | -   | - | -   | - | -   | 105.0 |
| 111.5      | -         | -                 | -   | 5.5 | 4.6 | 4.1 | 5.7 | 4.6      | 4.1 | 5.2 | 4.1 | 3.9 | 4.8 | 4.1      | 3.7 | 4.8 | 4.1        | 3.7 | - | -   | - | -   | 111.5 |
| 118.1      | -         | -                 | -   | 5.2 | 4.4 | 4.1 | 5.5 | 4.4      | 3.9 | 5.0 | 4.1 | 3.7 | 4.8 | 4.1      | 3.7 | 4.8 | 4.1        | 3.7 | - | -   | - | -   | 118.1 |
| 124.7      | -         | -                 | -   | 5.0 | 4.4 | 4.1 | 5.2 | 4.4      | 3.9 | 5.0 | 4.1 | 3.7 | 4.8 | 3.9      | 3.7 | 4.8 | 3.9        | 3.7 | - | -   | - | -   | 124.7 |
| 131.2      | -         | -                 | -   | 4.8 | 4.1 | 3.9 | 5.0 | 4.1      | 3.9 | 4.8 | 3.9 | 3.7 | 4.6 | 3.9      | 3.7 | 4.6 | 3.9        | 3.7 | - | -   | - | -   | 131.2 |
| 137.8      | -         | -                 | -   | 4.6 | 4.1 | 3.9 | 4.8 | 4.1      | 3.7 | 4.4 | 3.9 | 3.7 | 3.9 | 3.9      | 3.7 | 3.9 | 3.9        | 3.5 | - | -   | - | -   | 137.8 |
| 144.4      | -         | -                 | -   | 4.4 | 4.1 | -   | 4.6 | 3.9      | 3.7 | 3.5 | 3.7 | 3.5 | 3.3 | 3.7      | 3.5 | 3.3 | 3.7        | 3.5 | - | -   | - | -   | 144.4 |
| 150.9      | -         | -                 | -   | 4.1 | 3.9 | -   | 4.4 | 3.9      | 3.7 | 2.8 | 3.7 | 3.5 | 2.6 | 3.7      | 3.5 | 2.6 | 3.7        | 3.5 | - | -   | - | -   | 150.9 |
| 157.5      | -         | -                 | -   | 3.9 | 3.9 | -   | 4.1 | 3.9      | 3.7 | 2.4 | 3.7 | 3.5 | 1.9 | 3.5      | 3.5 | 1.9 | 3.5        | 3.5 | - | -   | - | -   | 157.5 |
| 164.0      | -         | -                 | -   | 3.7 | 3.9 | -   | 3.9 | 3.7      | 3.7 | 1.7 | 3.0 | 3.5 | 1.5 | 2.8      | 3.3 | 1.5 | 2.8        | 3.3 | - | -   | - | -   | 164.0 |
| 170.6      | -         | -                 | -   | 3.5 | -   | -   | 3.3 | 3.5      | 3.5 | 1.3 | 2.4 | 3.3 | -   | 2.2      | 3.3 | -   | 2.2        | 3.3 | - | -   | - | -   | 170.6 |
| 177.2      | -         | -                 | -   | -   | -   | -   | 2.8 | 3.3      | -   | -   | 1.9 | 2.6 | -   | 1.7      | 2.6 | -   | 1.7        | 2.6 | - | -   | - | -   | 177.2 |
| 183.7      | -         | -                 | -   | -   | -   | -   | 2.4 | 3.0      | -   | -   | 1.3 | 1.9 | -   | 1.1      | 1.9 | -   | 1.1        | 1.9 | - | -   | - | -   | 183.7 |
| 190.3      | -         | -                 | -   | -   | -   | -   | 1.9 | 2.4      | -   | -   | -   | 1.5 | -   | -        | 1.3 | -   | -          | 1.3 | - | -   | - | -   | 190.3 |
| 196.9      | -         | -                 | -   | -   | -   | -   | 1.5 | 1.9      | -   | -   | -   | -   | -   | -        | -   | -   | -          | -   | - | -   | - | -   | 196.9 |



# Operation

HAV-VA

| 78,200 lbs |     |         | 24.6 ft x 26.3 ft |     |          | 104.7 ft |     |          | 360° |     |          | ASME B30.5 |     |     |     |     |       |
|------------|-----|---------|-------------------|-----|----------|----------|-----|----------|------|-----|----------|------------|-----|-----|-----|-----|-------|
| 37.4 ft    |     | 98.4 ft |                   |     | 147.2 ft |          |     | 183.9 ft |      |     | 196.9 ft |            |     |     |     |     |       |
| 0°         |     | 22°     |                   | 45° |          | 0°       |     | 22°      |      | 45° |          | 0°         |     | 22° |     | 45° |       |
| 1,000 lbs  |     |         |                   |     |          |          |     |          |      |     |          |            |     |     |     |     |       |
| ft         |     |         |                   |     |          |          |     |          |      |     |          |            |     |     |     |     | ft    |
| 26.2       | 8.8 | -       | -                 | -   | -        | -        | -   | -        | -    | -   | -        | -          | -   | -   | -   | -   | 26.2  |
| 29.5       | 8.8 | -       | -                 | -   | -        | -        | -   | -        | -    | -   | -        | -          | -   | -   | -   | -   | 29.5  |
| 32.8       | 8.8 | -       | -                 | -   | -        | -        | -   | -        | -    | -   | -        | -          | -   | -   | -   | -   | 32.8  |
| 36.1       | 8.8 | -       | -                 | 6.8 | -        | -        | -   | -        | -    | -   | -        | -          | -   | -   | -   | -   | 36.1  |
| 39.4       | 8.5 | -       | -                 | 6.8 | -        | -        | -   | -        | -    | -   | -        | -          | -   | -   | -   | -   | 39.4  |
| 45.9       | 7.9 | -       | -                 | 6.8 | -        | -        | 5.0 | -        | -    | -   | -        | -          | -   | -   | -   | -   | 45.9  |
| 52.5       | 7.4 | 6.6     | -                 | 6.8 | -        | -        | 5.0 | -        | -    | -   | -        | -          | -   | -   | -   | -   | 52.5  |
| 59.1       | 7.0 | 6.3     | -                 | 6.8 | -        | -        | 5.0 | -        | -    | 3.9 | -        | -          | -   | -   | -   | -   | 59.1  |
| 65.6       | 6.1 | 5.9     | -                 | 6.8 | 5.9      | -        | 5.0 | -        | -    | 3.9 | -        | -          | 3.5 | -   | -   | -   | 65.6  |
| 72.2       | 5.2 | 5.2     | -                 | 6.8 | 5.7      | -        | 5.0 | -        | -    | 3.9 | -        | -          | 3.5 | -   | -   | -   | 72.2  |
| 78.7       | 4.6 | 4.8     | -                 | 6.6 | 5.5      | -        | 5.0 | 5.0      | -    | 3.9 | -        | -          | 3.5 | -   | -   | -   | 78.7  |
| 85.3       | 4.1 | 4.4     | 3.5               | 6.3 | 5.2      | -        | 5.0 | 4.8      | -    | 3.9 | -        | -          | 3.5 | -   | -   | -   | 85.3  |
| 91.9       | 3.7 | 3.9     | 3.0               | 5.9 | 5.0      | 3.3      | 5.0 | 4.6      | -    | 3.9 | -        | -          | 3.5 | -   | -   | -   | 91.9  |
| 98.4       | 3.3 | 3.7     | 2.8               | 5.5 | 4.6      | 3.0      | 5.0 | 4.6      | -    | 3.9 | 3.9      | -          | 3.5 | -   | -   | -   | 98.4  |
| 105.0      | 3.0 | 3.3     | 2.6               | 5.0 | 4.4      | 3.0      | 5.0 | 4.4      | -    | 3.9 | 3.9      | -          | 3.5 | 3.5 | -   | -   | 105.0 |
| 111.5      | 2.6 | 3.0     | 2.6               | 4.6 | 4.1      | 2.8      | 5.0 | 4.1      | 2.8  | 3.9 | 3.9      | -          | 3.5 | 3.5 | -   | -   | 111.5 |
| 118.1      | 2.4 | 2.8     | 2.4               | 4.1 | 3.7      | 2.6      | 5.0 | 4.1      | 2.8  | 3.9 | 3.7      | -          | 3.5 | 3.5 | -   | -   | 118.1 |
| 124.7      | 2.2 | 2.6     | 2.4               | 3.9 | 3.5      | 2.6      | 4.8 | 3.9      | 2.6  | 3.9 | 3.7      | -          | 3.5 | 3.5 | -   | -   | 124.7 |
| 131.2      | 1.9 | 2.6     | -                 | 3.5 | 3.5      | 2.4      | 4.6 | 3.7      | 2.6  | 3.9 | 3.5      | 2.4        | 3.5 | 3.5 | -   | -   | 131.2 |
| 137.8      | -   | -       | -                 | 3.3 | 3.3      | 2.4      | 4.1 | 3.5      | 2.4  | 3.9 | 3.5      | 2.4        | 3.5 | 3.5 | 2.4 | -   | 137.8 |
| 144.4      | -   | -       | -                 | 3.0 | 3.0      | 2.4      | 3.9 | 3.3      | 2.4  | 3.9 | 3.3      | 2.4        | 3.5 | 3.3 | 2.4 | -   | 144.4 |
| 150.9      | -   | -       | -                 | 2.8 | 2.8      | 2.2      | 3.7 | 3.3      | 2.2  | 3.9 | 3.3      | 2.2        | 3.5 | 3.3 | 2.2 | -   | 150.9 |
| 157.5      | -   | -       | -                 | 2.6 | 2.8      | 2.2      | 3.5 | 3.0      | 2.2  | 3.9 | 3.0      | 2.2        | 3.3 | 3.0 | 2.2 | -   | 157.5 |
| 164.0      | -   | -       | -                 | 2.4 | 2.6      | 2.2      | 3.3 | 2.8      | 2.2  | 3.7 | 3.0      | 2.2        | 3.3 | 3.0 | 2.2 | -   | 164.0 |
| 170.6      | -   | -       | -                 | 2.4 | 2.6      | -        | 3.0 | 2.8      | 1.9  | 3.3 | 2.8      | 1.9        | 3.0 | 2.8 | 1.9 | -   | 170.6 |
| 177.2      | -   | -       | -                 | 2.2 | 2.4      | -        | 2.8 | 2.6      | 1.9  | 3.0 | 2.6      | 1.9        | 2.8 | 2.6 | 1.9 | -   | 177.2 |
| 183.7      | -   | -       | -                 | 1.9 | 2.4      | -        | 2.8 | 2.6      | 1.9  | 2.8 | 2.4      | 1.9        | 2.6 | 2.4 | 1.9 | -   | 183.7 |
| 190.3      | -   | -       | -                 | 1.9 | -        | -        | 2.6 | 2.6      | 1.9  | 2.4 | 2.4      | 1.9        | 1.9 | 2.2 | 1.7 | -   | 190.3 |
| 196.9      | -   | -       | -                 | -   | -        | -        | 2.4 | 2.4      | -    | 1.9 | 2.2      | 1.7        | 1.5 | 1.9 | 1.7 | -   | 196.9 |
| 210.0      | -   | -       | -                 | -   | -        | -        | 2.2 | 2.2      | -    | 1.1 | 1.7      | 1.7        | -   | 1.7 | 1.5 | -   | 210.0 |
| 223.1      | -   | -       | -                 | -   | -        | -        | 1.5 | 1.7      | -    | -   | 1.1      | -          | -   | 1.1 | 1.3 | -   | 223.1 |

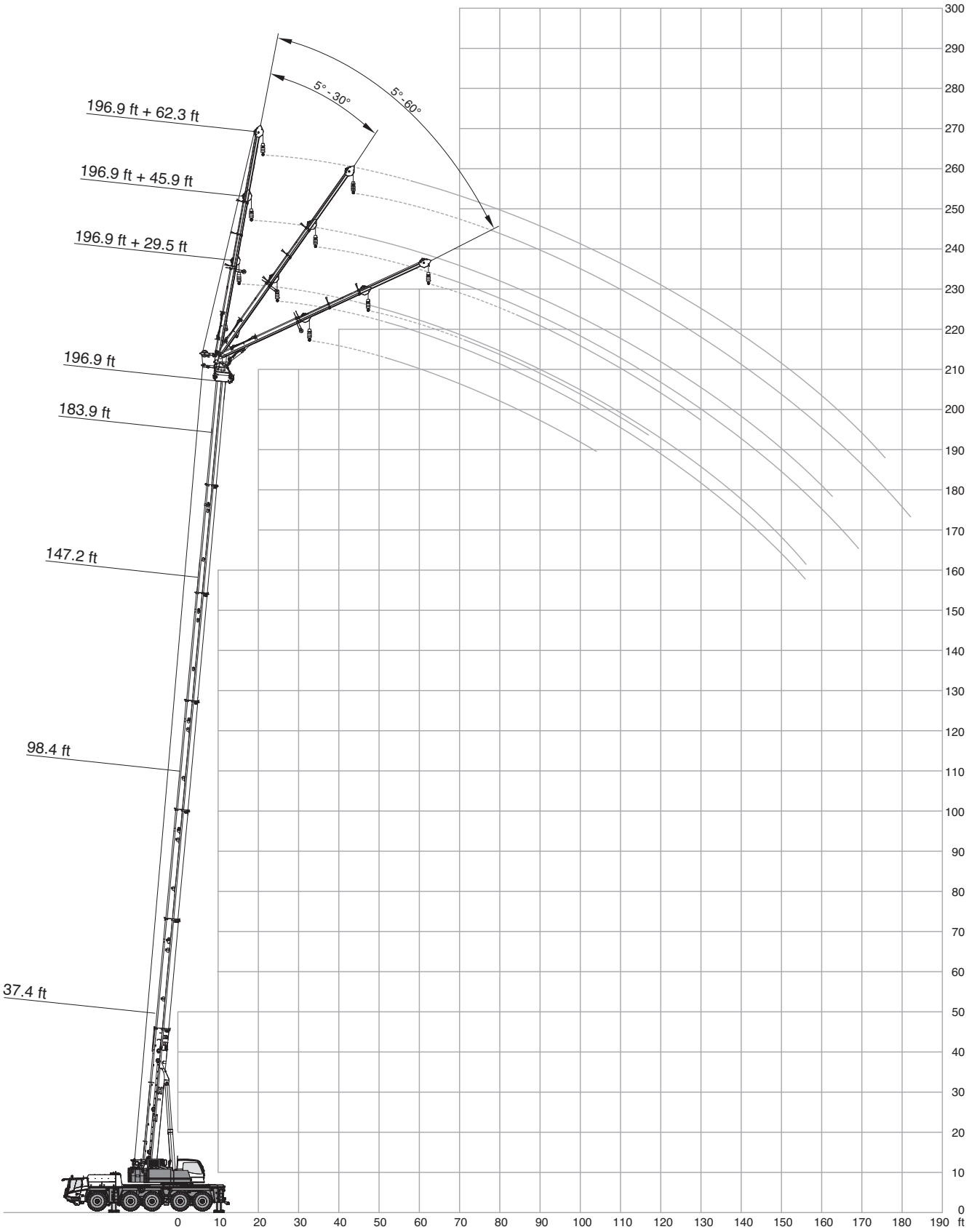
# Operation

HAV-VA

| 53,000 lbs |     |         | 24.6 ft x 26.3 ft |     |          | 104.7 ft |     |          | 360° |     |          | ASME B30.5 |     |     |     |     |       |
|------------|-----|---------|-------------------|-----|----------|----------|-----|----------|------|-----|----------|------------|-----|-----|-----|-----|-------|
| 37.4 ft    |     | 98.4 ft |                   |     | 147.2 ft |          |     | 183.9 ft |      |     | 196.9 ft |            |     |     |     |     |       |
| 0°         |     | 22°     |                   | 45° |          | 0°       |     | 22°      |      | 45° |          | 0°         |     | 22° |     | 45° |       |
| 1,000 lbs  |     |         |                   |     |          |          |     |          |      |     |          |            |     |     |     |     |       |
| ft         |     |         |                   |     |          |          |     |          |      |     |          |            |     |     |     |     | ft    |
| 26.2       | 8.8 | -       | -                 | -   | -        | -        | -   | -        | -    | -   | -        | -          | -   | -   | -   | -   | 26.2  |
| 29.5       | 8.8 | -       | -                 | -   | -        | -        | -   | -        | -    | -   | -        | -          | -   | -   | -   | -   | 29.5  |
| 32.8       | 8.8 | -       | -                 | -   | -        | -        | -   | -        | -    | -   | -        | -          | -   | -   | -   | -   | 32.8  |
| 36.1       | 8.8 | -       | -                 | 6.8 | -        | -        | -   | -        | -    | -   | -        | -          | -   | -   | -   | -   | 36.1  |
| 39.4       | 8.5 | -       | -                 | 6.8 | -        | -        | -   | -        | -    | -   | -        | -          | -   | -   | -   | -   | 39.4  |
| 45.9       | 7.9 | -       | -                 | 6.8 | -        | -        | 5.0 | -        | -    | -   | -        | -          | -   | -   | -   | -   | 45.9  |
| 52.5       | 7.4 | 6.6     | -                 | 6.8 | -        | -        | 5.0 | -        | -    | -   | -        | -          | -   | -   | -   | -   | 52.5  |
| 59.1       | 7.0 | 6.3     | -                 | 6.8 | -        | -        | 5.0 | -        | -    | 3.9 | -        | -          | -   | -   | -   | -   | 59.1  |
| 65.6       | 6.1 | 5.9     | -                 | 6.8 | 5.9      | -        | 5.0 | -        | -    | 3.9 | -        | -          | 3.5 | -   | -   | -   | 65.6  |
| 72.2       | 5.2 | 5.2     | -                 | 6.8 | 5.7      | -        | 5.0 | -        | -    | 3.9 | -        | -          | 3.5 | -   | -   | -   | 72.2  |
| 78.7       | 4.6 | 4.8     | -                 | 6.6 | 5.5      | -        | 5.0 | 5.0      | -    | 3.9 | -        | -          | 3.5 | -   | -   | -   | 78.7  |
| 85.3       | 4.1 | 4.4     | 3.5               | 6.3 | 5.2      | -        | 5.0 | 4.8      | -    | 3.9 | -        | -          | 3.5 | -   | -   | -   | 85.3  |
| 91.9       | 3.7 | 3.9     | 3.0               | 5.9 | 5.0      | 3.3      | 5.0 | 4.6      | -    | 3.9 | -        | -          | 3.5 | -   | -   | -   | 91.9  |
| 98.4       | 3.3 | 3.7     | 2.8               | 5.5 | 4.6      | 3.0      | 5.0 | 4.6      | -    | 3.9 | 3.9      | -          | 3.5 | -   | -   | -   | 98.4  |
| 105.0      | 3.0 | 3.3     | 2.6               | 5.0 | 4.4      | 3.0      | 5.0 | 4.4      | -    | 3.9 | 3.9      | -          | 3.5 | 3.5 | -   | -   | 105.0 |
| 111.5      | 2.6 | 3.0     | 2.6               | 4.6 | 4.1      | 2.8      | 5.0 | 4.1      | 2.8  | 3.9 | 3.9      | -          | 3.5 | 3.5 | -   | -   | 111.5 |
| 118.1      | 2.4 | 2.8     | 2.4               | 4.1 | 3.7      | 2.6      | 5.0 | 4.1      | 2.8  | 3.9 | 3.7      | -          | 3.5 | 3.5 | -   | -   | 118.1 |
| 124.7      | 2.2 | 2.6     | 2.4               | 3.9 | 3.5      | 2.6      | 4.8 | 3.9      | 2.6  | 3.9 | 3.7      | -          | 3.5 | 3.5 | -   | -   | 124.7 |
| 131.2      | 1.9 | 2.6     | -                 | 3.5 | 3.5      | 2.4      | 4.6 | 3.7      | 2.6  | 3.9 | 3.5      | 2.4        | 3.5 | 3.5 | -   | -   | 131.2 |
| 137.8      | -   | -       | -                 | 3.3 | 3.3      | 2.4      | 4.1 | 3.5      | 2.4  | 3.9 | 3.5      | 2.4        | 3.5 | 3.5 | 2.4 | -   | 137.8 |
| 144.4      | -   | -       | -                 | 3.0 | 3.0      | 2.4      | 3.9 | 3.3      | 2.4  | 3.5 | 3.3      | 2.4        | 3.0 | 3.3 | 2.4 | -   | 144.4 |
| 150.9      | -   | -       | -                 | 2.8 | 2.8      | 2.2      | 3.7 | 3.3      | 2.2  | 2.8 | 3.3      | 2.2        | 2.4 | 3.3 | 2.2 | -   | 150.9 |
| 157.5      | -   | -       | -                 | 2.6 | 2.8      | 2.2      | 3.5 | 3.0      | 2.2  | 2.2 | 3.0      | 2.2        | 1.7 | 3.0 | 2.2 | -   | 157.5 |
| 164.0      | -   | -       | -                 | 2.4 | 2.6      | 2.2      | 3.0 | 2.8      | 2.2  | 1.7 | 3.0      | 2.2        | 1.3 | 3.0 | 2.2 | -   | 164.0 |
| 170.6      | -   | -       | -                 | 2.2 | 2.6      | -        | 2.6 | 2.8      | 1.9  | 1.1 | 2.8      | 1.9        | -   | 2.4 | 1.9 | -   | 170.6 |
| 177.2      | -   | -       | -                 | 2.2 | 2.4      | -        | 2.4 | 2.6      | 1.9  | -   | 2.2      | 1.9        | -   | 1.9 | 1.9 | -   | 177.2 |
| 183.7      | -   | -       | -                 | 1.9 | 2.4      | -        | 2.2 | 2.6      | 1.9  | -   | 1.7      | 1.9        | -   | 1.3 | 1.9 | -   | 183.7 |
| 190.3      | -   | -       | -                 | 1.9 | -        | -        | 1.9 | 2.2      | 1.9  | -   | 1.1      | 1.9        | -   | -   | 1.7 | -   | 190.3 |
| 196.9      | -   | -       | -                 | -   | -        | -        | 1.5 | 1.7      | -    | -   | -        | 1.7        | -   | -   | 1.5 | -   | 196.9 |
| 210.0      | -   | -       | -                 | -   | -        | -        | -   | 1.3      | -    | -   | -        | -          | -   | -   | -   | -   | 210.0 |



# Operation



# Operation

HTLJ

| 78,200 lbs |           | 24.6 ft x 26.3 ft |      |      | 29.5 ft  |      |      | 360°     |      |     | ASME B30.5 |     |     |     |     |    |       |
|------------|-----------|-------------------|------|------|----------|------|------|----------|------|-----|------------|-----|-----|-----|-----|----|-------|
| 37.4 ft    |           | 98.4 ft           |      |      | 147.2 ft |      |      | 183.9 ft |      |     | 196.9 ft   |     |     |     |     |    |       |
| 5°         |           | 30°               |      |      | 60°      |      |      | 5°       |      |     | 30°        |     |     | 60° |     |    |       |
| ft         | 1,000 lbs |                   |      |      |          |      |      |          |      |     |            |     |     |     |     | ft |       |
| 9.8        | 16.0      | -                 | -    | -    | -        | -    | -    | -        | -    | -   | -          | -   | -   | -   | -   | -  | 9.8   |
| 11.5       | 16.0      | -                 | -    | -    | -        | -    | -    | -        | -    | -   | -          | -   | -   | -   | -   | -  | 11.5  |
| 13.1       | 16.0      | 16.0              | -    | 16.0 | -        | -    | -    | -        | -    | -   | -          | -   | -   | -   | -   | -  | 13.1  |
| 14.8       | 16.0      | 16.0              | -    | 16.0 | -        | -    | -    | -        | -    | -   | -          | -   | -   | -   | -   | -  | 14.8  |
| 16.4       | 16.0      | 16.0              | -    | 16.0 | -        | -    | -    | -        | -    | -   | -          | -   | -   | -   | -   | -  | 16.4  |
| 19.7       | 16.0      | 16.0              | 11.4 | 16.0 | -        | -    | -    | -        | -    | -   | -          | -   | -   | -   | -   | -  | 19.7  |
| 23.0       | 16.0      | 16.0              | 11.0 | 16.0 | 16.0     | -    | -    | -        | -    | -   | -          | -   | -   | -   | -   | -  | 23.0  |
| 26.2       | 16.0      | 16.0              | 10.8 | 16.0 | 16.0     | -    | 16.0 | -        | -    | -   | -          | -   | -   | -   | -   | -  | 26.2  |
| 29.5       | 16.0      | 15.8              | 10.5 | 16.0 | 16.0     | 11.0 | 16.0 | -        | -    | -   | -          | -   | -   | -   | -   | -  | 29.5  |
| 32.8       | 16.0      | 15.2              | 10.3 | 16.0 | 16.0     | 11.0 | 16.0 | 16.0     | -    | -   | -          | -   | -   | -   | -   | -  | 32.8  |
| 36.1       | 16.0      | 14.5              | 10.3 | 16.0 | 16.0     | 10.8 | 16.0 | 15.6     | -    | 9.4 | -          | -   | -   | -   | -   | -  | 36.1  |
| 39.4       | 16.0      | 13.8              | -    | 16.0 | 16.0     | 10.8 | 16.0 | 15.2     | 11.0 | 9.4 | -          | -   | 8.3 | -   | -   | -  | 39.4  |
| 45.9       | 14.1      | 13.0              | -    | 16.0 | 16.0     | 10.5 | 16.0 | 14.3     | 10.8 | 9.4 | 9.4        | -   | 8.3 | -   | -   | -  | 45.9  |
| 52.5       | 12.5      | 12.3              | -    | 16.0 | 15.8     | 10.3 | 15.8 | 13.4     | 10.5 | 9.4 | 9.4        | 9.4 | 8.3 | 8.3 | 8.3 | -  | 52.5  |
| 59.1       | 11.2      | -                 | -    | 16.0 | 15.2     | 10.3 | 14.9 | 13.0     | 10.5 | 9.4 | 9.4        | 9.0 | 8.3 | 7.9 | 7.7 | -  | 59.1  |
| 65.6       | -         | -                 | -    | 16.0 | 14.5     | 10.3 | 13.8 | 12.3     | 10.3 | 9.4 | 9.2        | 8.8 | 7.7 | 7.4 | 7.2 | -  | 65.6  |
| 72.2       | -         | -                 | -    | 16.0 | 13.8     | -    | 12.5 | 11.9     | 10.3 | 9.4 | 8.8        | 8.3 | 7.2 | 7.0 | 6.8 | -  | 72.2  |
| 78.7       | -         | -                 | -    | 16.0 | 13.4     | -    | 11.6 | 11.4     | 10.1 | 9.0 | 8.3        | 8.1 | 6.8 | 6.6 | 6.3 | -  | 78.7  |
| 85.3       | -         | -                 | -    | 15.2 | 13.0     | -    | 10.5 | 10.8     | 10.1 | 8.3 | 8.1        | 7.9 | 6.3 | 6.1 | 5.9 | -  | 85.3  |
| 91.9       | -         | -                 | -    | 14.1 | 12.5     | -    | 9.7  | 9.9      | -    | 7.7 | 7.7        | 7.4 | 5.9 | 5.7 | 5.7 | -  | 91.9  |
| 98.4       | -         | -                 | -    | 13.2 | 12.3     | -    | 9.2  | 9.0      | -    | 7.2 | 7.2        | 7.0 | 5.5 | 5.5 | 5.2 | -  | 98.4  |
| 105.0      | -         | -                 | -    | 11.4 | 11.9     | -    | 8.3  | 8.3      | -    | 6.6 | 6.8        | -   | 5.2 | 5.0 | 5.0 | -  | 105.0 |
| 111.5      | -         | -                 | -    | 10.5 | -        | -    | 7.9  | 7.7      | -    | 6.1 | 6.3        | -   | 4.8 | 4.8 | -   | -  | 111.5 |
| 118.1      | -         | -                 | -    | 9.9  | -        | -    | 7.2  | 7.2      | -    | 5.7 | 5.9        | -   | 4.6 | 4.6 | -   | -  | 118.1 |
| 124.7      | -         | -                 | -    | -    | -        | -    | 6.6  | 6.8      | -    | 5.2 | 5.2        | -   | 4.4 | 4.1 | -   | -  | 124.7 |
| 131.2      | -         | -                 | -    | -    | -        | -    | 6.1  | 6.1      | -    | 4.8 | 5.0        | -   | 4.1 | 3.9 | -   | -  | 131.2 |
| 137.8      | -         | -                 | -    | -    | -        | -    | 5.7  | 5.7      | -    | 4.4 | 4.6        | -   | 3.7 | 3.7 | -   | -  | 137.8 |
| 144.4      | -         | -                 | -    | -    | -        | -    | 4.8  | 5.2      | -    | 3.9 | 4.1        | -   | 3.5 | 3.5 | -   | -  | 144.4 |
| 150.9      | -         | -                 | -    | -    | -        | -    | 4.4  | -        | -    | 3.0 | 3.5        | -   | 2.8 | 3.3 | -   | -  | 150.9 |
| 157.5      | -         | -                 | -    | -    | -        | -    | 4.1  | -        | -    | 2.2 | 2.6        | -   | 1.9 | 2.4 | -   | -  | 157.5 |
| 164.0      | -         | -                 | -    | -    | -        | -    | 3.7  | -        | -    | -   | -          | -   | -   | -   | -   | -  | 164.0 |

# Operation

HTLJ

| 53,000 lbs |           |         | 24.6 ft x 26.3 ft |      |          | 29.5 ft |      |          | 360° |     |          | ASME B30.5 |     |     |     |     |    |       |
|------------|-----------|---------|-------------------|------|----------|---------|------|----------|------|-----|----------|------------|-----|-----|-----|-----|----|-------|
| 37.4 ft    |           | 98.4 ft |                   |      | 147.2 ft |         |      | 183.9 ft |      |     | 196.9 ft |            |     |     |     |     |    |       |
| 5°         |           | 30°     |                   | 60°  |          | 5°      |      | 30°      |      | 60° |          | 5°         |     | 30° |     | 60° |    |       |
| ft         | 1,000 lbs |         |                   |      |          |         |      |          |      |     |          |            |     |     |     |     | ft |       |
| 9.8        | 16.0      | -       | -                 | -    | -        | -       | -    | -        | -    | -   | -        | -          | -   | -   | -   | -   | -  | 9.8   |
| 11.5       | 16.0      | -       | -                 | -    | -        | -       | -    | -        | -    | -   | -        | -          | -   | -   | -   | -   | -  | 11.5  |
| 13.1       | 16.0      | 16.0    | -                 | 16.0 | -        | -       | -    | -        | -    | -   | -        | -          | -   | -   | -   | -   | -  | 13.1  |
| 14.8       | 16.0      | 16.0    | -                 | 16.0 | -        | -       | -    | -        | -    | -   | -        | -          | -   | -   | -   | -   | -  | 14.8  |
| 16.4       | 16.0      | 16.0    | -                 | 16.0 | -        | -       | -    | -        | -    | -   | -        | -          | -   | -   | -   | -   | -  | 16.4  |
| 19.7       | 16.0      | 16.0    | 11.4              | 16.0 | -        | -       | -    | -        | -    | -   | -        | -          | -   | -   | -   | -   | -  | 19.7  |
| 23.0       | 16.0      | 16.0    | 11.0              | 16.0 | 16.0     | -       | -    | -        | -    | -   | -        | -          | -   | -   | -   | -   | -  | 23.0  |
| 26.2       | 16.0      | 16.0    | 10.8              | 16.0 | 16.0     | -       | 16.0 | -        | -    | -   | -        | -          | -   | -   | -   | -   | -  | 26.2  |
| 29.5       | 16.0      | 15.8    | 10.5              | 16.0 | 16.0     | 11.0    | 16.0 | -        | -    | -   | -        | -          | -   | -   | -   | -   | -  | 29.5  |
| 32.8       | 16.0      | 15.2    | 10.3              | 16.0 | 16.0     | 11.0    | 16.0 | 16.0     | -    | -   | -        | -          | -   | -   | -   | -   | -  | 32.8  |
| 36.1       | 16.0      | 14.5    | 10.3              | 16.0 | 16.0     | 10.8    | 16.0 | 15.6     | -    | 9.4 | -        | -          | -   | -   | -   | -   | -  | 36.1  |
| 39.4       | 16.0      | 13.8    | -                 | 16.0 | 16.0     | 10.8    | 16.0 | 15.2     | 11.0 | 9.4 | -        | -          | 8.3 | -   | -   | -   | -  | 39.4  |
| 45.9       | 14.1      | 13.0    | -                 | 16.0 | 16.0     | 10.5    | 16.0 | 14.3     | 10.8 | 9.4 | 9.4      | -          | 8.3 | -   | -   | -   | -  | 45.9  |
| 52.5       | 12.5      | 12.3    | -                 | 16.0 | 15.8     | 10.3    | 15.8 | 13.4     | 10.5 | 9.4 | 9.4      | 9.4        | 8.3 | 8.3 | 8.3 | -   | -  | 52.5  |
| 59.1       | 11.2      | -       | -                 | 16.0 | 15.2     | 10.3    | 14.9 | 13.0     | 10.5 | 9.4 | 9.4      | 9.0        | 8.3 | 7.9 | 7.7 | -   | -  | 59.1  |
| 65.6       | -         | -       | -                 | 16.0 | 14.5     | 10.3    | 13.8 | 12.3     | 10.3 | 9.4 | 9.2      | 8.8        | 7.7 | 7.4 | 7.2 | -   | -  | 65.6  |
| 72.2       | -         | -       | -                 | 16.0 | 13.8     | -       | 12.5 | 11.9     | 10.3 | 9.4 | 8.8      | 8.3        | 7.2 | 7.0 | 6.8 | -   | -  | 72.2  |
| 78.7       | -         | -       | -                 | 15.2 | 13.4     | -       | 11.6 | 11.4     | 10.1 | 9.0 | 8.3      | 8.1        | 6.8 | 6.6 | 6.3 | -   | -  | 78.7  |
| 85.3       | -         | -       | -                 | 14.1 | 13.0     | -       | 10.5 | 10.8     | 10.1 | 8.3 | 8.1      | 7.9        | 6.3 | 6.1 | 5.9 | -   | -  | 85.3  |
| 91.9       | -         | -       | -                 | 12.1 | 12.5     | -       | 9.7  | 9.9      | -    | 7.7 | 7.7      | 7.4        | 5.9 | 5.7 | 5.7 | -   | -  | 91.9  |
| 98.4       | -         | -       | -                 | 10.1 | 10.5     | -       | 9.2  | 8.5      | -    | 7.2 | 7.2      | 7.0        | 5.5 | 5.5 | 5.2 | -   | -  | 98.4  |
| 105.0      | -         | -       | -                 | 8.5  | 8.8      | -       | 8.1  | 8.1      | -    | 6.3 | 6.8      | -          | 5.2 | 5.0 | 5.0 | -   | -  | 105.0 |
| 111.5      | -         | -       | -                 | 7.2  | -        | -       | 6.8  | 7.2      | -    | 5.0 | 5.9      | -          | 4.6 | 4.8 | -   | -   | -  | 111.5 |
| 118.1      | -         | -       | -                 | 6.8  | -        | -       | 6.3  | 6.1      | -    | 3.9 | 4.6      | -          | 3.5 | 4.4 | -   | -   | -  | 118.1 |
| 124.7      | -         | -       | -                 | -    | -        | -       | 5.2  | 5.7      | -    | 2.8 | 3.5      | -          | 2.6 | 3.3 | -   | -   | -  | 124.7 |
| 131.2      | -         | -       | -                 | -    | -        | -       | 4.4  | 4.8      | -    | 1.9 | 2.6      | -          | -   | 2.4 | -   | -   | -  | 131.2 |
| 137.8      | -         | -       | -                 | -    | -        | -       | 3.5  | 3.7      | -    | -   | -        | -          | -   | -   | -   | -   | -  | 137.8 |
| 144.4      | -         | -       | -                 | -    | -        | -       | 2.6  | 2.8      | -    | -   | -        | -          | -   | -   | -   | -   | -  | 144.4 |
| 150.9      | -         | -       | -                 | -    | -        | -       | 1.9  | -        | -    | -   | -        | -          | -   | -   | -   | -   | -  | 150.9 |

# Operation

HTLJ

| 78,200 lbs |           | 24.6 ft x 26.3 ft |     |     | 45.9 ft  |     |     | 360°     |     |     | ASME B30.5 |     |     |     |     |    |       |
|------------|-----------|-------------------|-----|-----|----------|-----|-----|----------|-----|-----|------------|-----|-----|-----|-----|----|-------|
| 37.4 ft    |           | 98.4 ft           |     |     | 147.2 ft |     |     | 183.9 ft |     |     | 196.9 ft   |     |     |     |     |    |       |
| 5°         |           | 30°               |     |     | 60°      |     |     | 5°       |     |     | 30°        |     |     | 60° |     |    |       |
| ft         | 1,000 lbs |                   |     |     |          |     |     |          |     |     |            |     |     |     |     | ft |       |
| 9.8        | 9.4       | -                 | -   | -   | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -  | 9.8   |
| 11.5       | 9.4       | -                 | -   | -   | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -  | 11.5  |
| 13.1       | 9.4       | -                 | -   | -   | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -  | 13.1  |
| 14.8       | 9.4       | -                 | -   | -   | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -  | 14.8  |
| 16.4       | 9.4       | -                 | -   | -   | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -  | 16.4  |
| 19.7       | 9.4       | -                 | -   | 9.4 | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -  | 19.7  |
| 23.0       | 9.4       | -                 | -   | 9.4 | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -  | 23.0  |
| 26.2       | 9.4       | 9.4               | -   | 9.4 | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -  | 26.2  |
| 29.5       | 9.4       | 9.4               | -   | 9.4 | -        | -   | 9.4 | -        | -   | -   | -          | -   | -   | -   | -   | -  | 29.5  |
| 32.8       | 9.4       | 9.2               | -   | 9.4 | 9.4      | -   | 9.4 | -        | -   | -   | -          | -   | -   | -   | -   | -  | 32.8  |
| 36.1       | 9.4       | 8.5               | 5.9 | 9.4 | 9.4      | -   | 9.4 | -        | -   | -   | -          | -   | -   | -   | -   | -  | 36.1  |
| 39.4       | 9.4       | 8.3               | 5.9 | 9.4 | 9.2      | -   | 9.4 | -        | -   | -   | -          | -   | -   | -   | -   | -  | 39.4  |
| 45.9       | 9.4       | 7.7               | 5.7 | 9.4 | 8.5      | 5.9 | 9.4 | 8.3      | -   | 6.8 | -          | -   | 6.1 | -   | -   | -  | 45.9  |
| 52.5       | 8.3       | 7.0               | 5.5 | 9.4 | 8.1      | 5.7 | 9.4 | 8.1      | -   | 6.8 | -          | -   | 6.1 | -   | -   | -  | 52.5  |
| 59.1       | 7.4       | 6.6               | -   | 9.4 | 7.7      | 5.7 | 9.4 | 7.7      | 5.7 | 6.8 | 6.8        | -   | 6.1 | -   | -   | -  | 59.1  |
| 65.6       | 6.6       | 6.3               | -   | 9.4 | 7.4      | 5.5 | 9.4 | 7.4      | 5.7 | 6.8 | 6.8        | 5.7 | 6.1 | 6.1 | -   | -  | 65.6  |
| 72.2       | 5.9       | -                 | -   | 9.4 | 7.0      | 5.5 | 9.4 | 7.2      | 5.5 | 6.8 | 6.8        | 5.5 | 6.1 | 6.1 | 5.7 | -  | 72.2  |
| 78.7       | -         | -                 | -   | 9.2 | 6.8      | 5.5 | 9.4 | 6.8      | 5.5 | 6.8 | 6.6        | 5.5 | 6.1 | 5.9 | 5.5 | -  | 78.7  |
| 85.3       | -         | -                 | -   | 8.8 | 6.6      | -   | 9.2 | 6.6      | 5.5 | 6.8 | 6.3        | 5.5 | 5.7 | 5.5 | 5.5 | -  | 85.3  |
| 91.9       | -         | -                 | -   | 8.1 | 6.3      | -   | 8.8 | 6.3      | 5.5 | 6.8 | 6.1        | 5.5 | 5.5 | 5.2 | 5.2 | -  | 91.9  |
| 98.4       | -         | -                 | -   | 7.7 | 6.1      | -   | 8.3 | 6.3      | 5.2 | 6.8 | 5.9        | 5.5 | 5.0 | 5.0 | 5.0 | -  | 98.4  |
| 105.0      | -         | -                 | -   | 7.4 | 6.1      | -   | 8.1 | 6.1      | -   | 6.6 | 5.7        | 5.2 | 4.8 | 4.6 | 4.6 | -  | 105.0 |
| 111.5      | -         | -                 | -   | 7.0 | 5.9      | -   | 7.4 | 5.9      | -   | 6.1 | 5.7        | 5.2 | 4.6 | 4.4 | 4.4 | -  | 111.5 |
| 118.1      | -         | -                 | -   | 6.6 | 5.9      | -   | 7.0 | 5.7      | -   | 5.7 | 5.5        | -   | 4.4 | 4.1 | 4.1 | -  | 118.1 |
| 124.7      | -         | -                 | -   | 6.1 | -        | -   | 6.6 | 5.7      | -   | 5.2 | 5.2        | -   | 4.1 | 3.9 | -   | -  | 124.7 |
| 131.2      | -         | -                 | -   | 5.9 | -        | -   | 6.1 | 5.5      | -   | 5.0 | 4.8        | -   | 3.9 | 3.7 | -   | -  | 131.2 |
| 137.8      | -         | -                 | -   | -   | -        | -   | 5.7 | 5.5      | -   | 4.6 | 4.6        | -   | 3.7 | 3.5 | -   | -  | 137.8 |
| 144.4      | -         | -                 | -   | -   | -        | -   | -   | 5.5      | -   | -   | 4.4        | -   | -   | 3.5 | -   | -  | 144.4 |
| 150.9      | -         | -                 | -   | -   | -        | -   | -   | 5.0      | -   | -   | 3.9        | -   | -   | 3.3 | -   | -  | 150.9 |
| 157.5      | -         | -                 | -   | -   | -        | -   | -   | 4.6      | -   | -   | 3.7        | -   | -   | 3.0 | -   | -  | 157.5 |
| 164.0      | -         | -                 | -   | -   | -        | -   | -   | 3.9      | -   | -   | 2.8        | -   | -   | 2.6 | -   | -  | 164.0 |
| 170.6      | -         | -                 | -   | -   | -        | -   | -   | 3.3      | -   | -   | 2.2        | -   | -   | 1.9 | -   | -  | 170.6 |
| 177.2      | -         | -                 | -   | -   | -        | -   | -   | 3.0      | -   | -   | -          | -   | -   | -   | -   | -  | 177.2 |

# Operation

HTLJ

| 53,000 lbs |     |         | 24.6 ft x 26.3 ft |     |          | 45.9 ft |     |          | 360° |     |          | ASME B30.5 |     |     |       |
|------------|-----|---------|-------------------|-----|----------|---------|-----|----------|------|-----|----------|------------|-----|-----|-------|
| 37.4 ft    |     | 98.4 ft |                   |     | 147.2 ft |         |     | 183.9 ft |      |     | 196.9 ft |            |     |     |       |
| 5°         | 30° | 60°     | 5°                | 30° | 60°      | 5°      | 30° | 60°      | 5°   | 30° | 60°      | 5°         | 30° | 60° |       |
| 1,000 lbs  |     |         |                   |     |          |         |     |          |      |     |          |            |     |     |       |
| ft         |     |         |                   |     |          |         |     |          |      |     |          |            |     | ft  |       |
| 9.8        | 9.4 | -       | -                 | -   | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 9.8   |
| 11.5       | 9.4 | -       | -                 | -   | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 11.5  |
| 13.1       | 9.4 | -       | -                 | -   | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 13.1  |
| 14.8       | 9.4 | -       | -                 | -   | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 14.8  |
| 16.4       | 9.4 | -       | -                 | -   | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 16.4  |
| 19.7       | 9.4 | -       | -                 | 9.4 | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 19.7  |
| 23.0       | 9.4 | -       | -                 | 9.4 | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 23.0  |
| 26.2       | 9.4 | 9.4     | -                 | 9.4 | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 26.2  |
| 29.5       | 9.4 | 9.4     | -                 | 9.4 | -        | -       | 9.4 | -        | -    | -   | -        | -          | -   | -   | 29.5  |
| 32.8       | 9.4 | 9.2     | -                 | 9.4 | 9.4      | -       | 9.4 | -        | -    | -   | -        | -          | -   | -   | 32.8  |
| 36.1       | 9.4 | 8.5     | 5.9               | 9.4 | 9.4      | -       | 9.4 | -        | -    | -   | -        | -          | -   | -   | 36.1  |
| 39.4       | 9.4 | 8.3     | 5.9               | 9.4 | 9.2      | -       | 9.4 | -        | -    | -   | -        | -          | -   | -   | 39.4  |
| 45.9       | 9.4 | 7.7     | 5.7               | 9.4 | 8.5      | 5.9     | 9.4 | 8.3      | -    | 6.8 | -        | -          | 6.1 | -   | 45.9  |
| 52.5       | 8.3 | 7.0     | 5.5               | 9.4 | 8.1      | 5.7     | 9.4 | 8.1      | -    | 6.8 | -        | -          | 6.1 | -   | 52.5  |
| 59.1       | 7.4 | 6.6     | -                 | 9.4 | 7.7      | 5.7     | 9.4 | 7.7      | 5.7  | 6.8 | 6.8      | -          | 6.1 | -   | 59.1  |
| 65.6       | 6.6 | 6.3     | -                 | 9.4 | 7.4      | 5.5     | 9.4 | 7.4      | 5.7  | 6.8 | 6.8      | 5.7        | 6.1 | 6.1 | 65.6  |
| 72.2       | 5.9 | -       | -                 | 9.4 | 7.0      | 5.5     | 9.4 | 7.2      | 5.5  | 6.8 | 6.8      | 5.5        | 6.1 | 6.1 | 72.2  |
| 78.7       | -   | -       | -                 | 9.2 | 6.8      | 5.5     | 9.4 | 6.8      | 5.5  | 6.8 | 6.6      | 5.5        | 6.1 | 5.9 | 78.7  |
| 85.3       | -   | -       | -                 | 8.8 | 6.6      | -       | 9.2 | 6.6      | 5.5  | 6.8 | 6.3      | 5.5        | 5.7 | 5.5 | 85.3  |
| 91.9       | -   | -       | -                 | 8.1 | 6.3      | -       | 8.8 | 6.3      | 5.5  | 6.8 | 6.1      | 5.5        | 5.5 | 5.2 | 91.9  |
| 98.4       | -   | -       | -                 | 7.7 | 6.1      | -       | 8.3 | 6.3      | 5.2  | 6.8 | 5.9      | 5.5        | 5.0 | 5.0 | 98.4  |
| 105.0      | -   | -       | -                 | 7.2 | 6.1      | -       | 7.7 | 6.1      | -    | 6.6 | 5.7      | 5.2        | 4.8 | 4.6 | 105.0 |
| 111.5      | -   | -       | -                 | 7.0 | 5.9      | -       | 7.2 | 5.9      | -    | 6.1 | 5.7      | 5.2        | 4.6 | 4.4 | 111.5 |
| 118.1      | -   | -       | -                 | 6.6 | 5.9      | -       | 6.6 | 5.7      | -    | 5.0 | 5.5      | -          | 4.4 | 4.1 | 118.1 |
| 124.7      | -   | -       | -                 | 6.1 | -        | -       | 5.5 | 5.5      | -    | 3.9 | 5.2      | -          | 3.7 | 3.9 | 124.7 |
| 131.2      | -   | -       | -                 | 5.2 | -        | -       | 5.0 | 5.2      | -    | 3.0 | 4.1      | -          | 2.8 | 3.7 | 131.2 |
| 137.8      | -   | -       | -                 | -   | -        | -       | 4.6 | 4.6      | -    | 2.2 | 3.3      | -          | 1.9 | 3.0 | 137.8 |
| 144.4      | -   | -       | -                 | -   | -        | -       | 3.7 | 4.1      | -    | -   | 2.4      | -          | -   | 2.2 | 144.4 |
| 150.9      | -   | -       | -                 | -   | -        | -       | 3.0 | 3.5      | -    | -   | -        | -          | -   | -   | 150.9 |
| 157.5      | -   | -       | -                 | -   | -        | -       | 2.4 | 2.8      | -    | -   | -        | -          | -   | -   | 157.5 |



# Operation

HTLJ

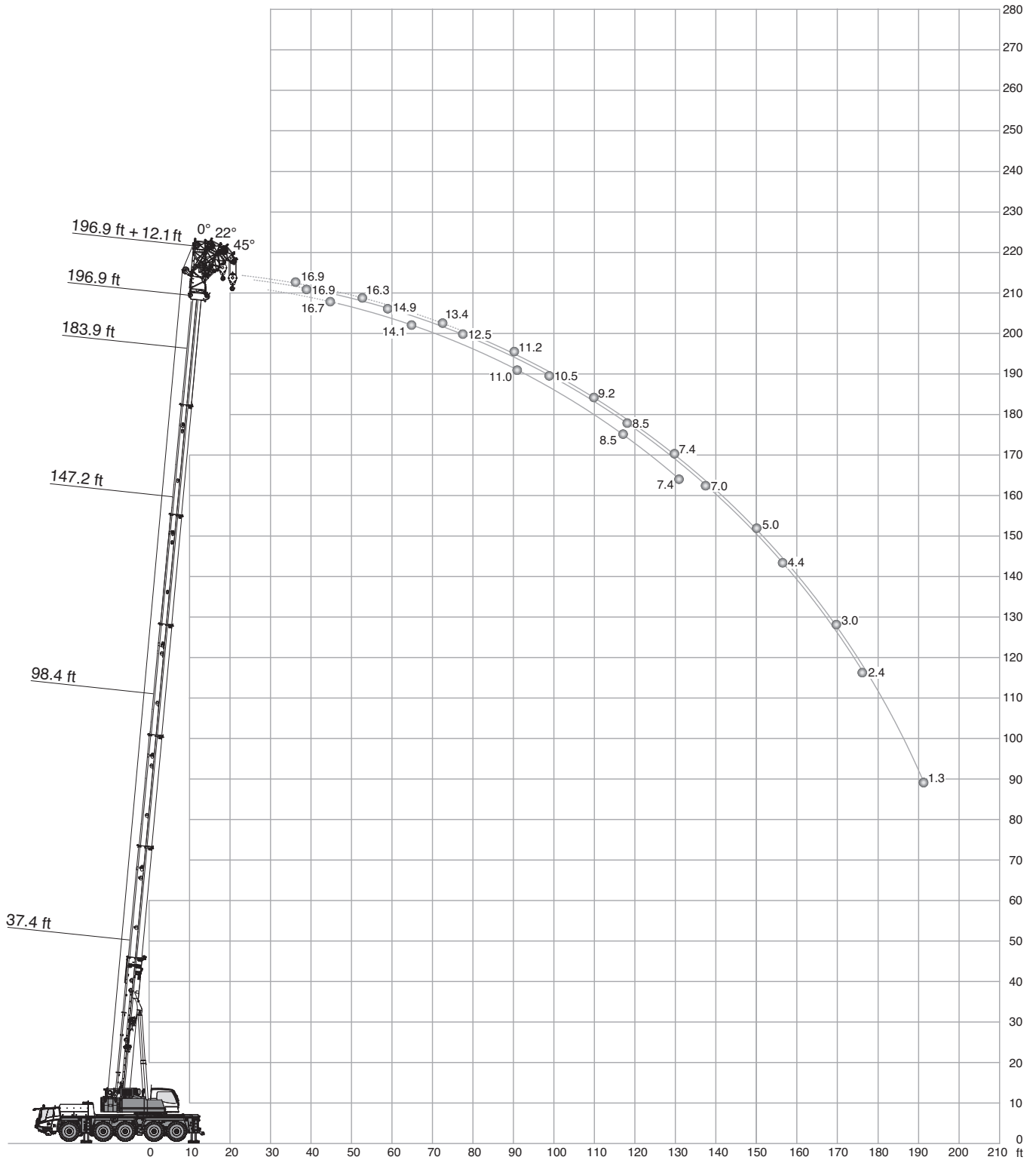
| 78,200 lbs |           | 24.6 ft x 26.3 ft |     |     | 62.3 ft  |     |     | 360°     |     |     | ASME B30.5 |     |     |     |     |     |    |       |
|------------|-----------|-------------------|-----|-----|----------|-----|-----|----------|-----|-----|------------|-----|-----|-----|-----|-----|----|-------|
| 37.4 ft    |           | 98.4 ft           |     |     | 147.2 ft |     |     | 183.9 ft |     |     | 196.9 ft   |     |     |     |     |     |    |       |
| 5°         |           | 30°               |     | 60° |          | 5°  |     | 30°      |     | 60° |            | 5°  |     | 30° |     | 60° |    |       |
| ft         | 1,000 lbs |                   |     |     |          |     |     |          |     |     |            |     |     |     |     |     | ft |       |
| 13.1       | 7.2       | -                 | -   | -   | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 13.1  |
| 14.8       | 7.2       | -                 | -   | -   | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 14.8  |
| 16.4       | 7.2       | -                 | -   | -   | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 16.4  |
| 19.7       | 7.2       | -                 | -   | -   | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 19.7  |
| 23.0       | 7.2       | -                 | -   | 6.8 | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 23.0  |
| 26.2       | 7.2       | -                 | -   | 7.2 | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 26.2  |
| 29.5       | 7.2       | -                 | -   | 7.2 | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 29.5  |
| 32.8       | 7.2       | -                 | -   | 7.2 | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 32.8  |
| 36.1       | 7.2       | 5.7               | -   | 7.2 | -        | -   | -   | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 36.1  |
| 39.4       | 7.0       | 5.5               | -   | 7.2 | -        | -   | 5.5 | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 39.4  |
| 45.9       | 6.3       | 5.0               | -   | 7.2 | 5.2      | -   | 5.5 | -        | -   | -   | -          | -   | -   | -   | -   | -   | -  | 45.9  |
| 52.5       | 5.7       | 4.6               | -   | 7.2 | 5.0      | -   | 5.5 | -        | -   | 4.1 | -          | -   | -   | -   | -   | -   | -  | 52.5  |
| 59.1       | 5.2       | 4.4               | 3.7 | 6.8 | 4.8      | -   | 5.5 | 4.6      | -   | 4.1 | -          | -   | 3.9 | -   | -   | -   | -  | 59.1  |
| 65.6       | 4.8       | 3.9               | 3.5 | 6.3 | 4.6      | 3.7 | 5.5 | 4.4      | -   | 4.1 | -          | -   | 3.9 | -   | -   | -   | -  | 65.6  |
| 72.2       | 4.4       | 3.7               | -   | 5.9 | 4.4      | 3.5 | 5.5 | 4.4      | 3.5 | 4.1 | 4.1        | -   | 3.9 | -   | -   | -   | -  | 72.2  |
| 78.7       | 4.1       | 3.7               | -   | 5.5 | 4.1      | 3.5 | 5.5 | 4.1      | 3.5 | 4.1 | 3.9        | -   | 3.9 | 3.9 | -   | -   | -  | 78.7  |
| 85.3       | 3.9       | 3.5               | -   | 5.2 | 3.9      | 3.5 | 5.5 | 3.9      | 3.5 | 4.1 | 3.9        | 3.3 | 3.9 | 3.7 | 3.3 | -   | -  | 85.3  |
| 91.9       | 3.5       | -                 | -   | 5.0 | 3.9      | 3.5 | 5.2 | 3.9      | 3.5 | 4.1 | 3.7        | 3.3 | 3.9 | 3.7 | 3.3 | -   | -  | 91.9  |
| 98.4       | -         | -                 | -   | 4.8 | 3.7      | 3.5 | 5.0 | 3.7      | 3.3 | 4.1 | 3.7        | 3.3 | 3.9 | 3.5 | 3.3 | -   | -  | 98.4  |
| 105.0      | -         | -                 | -   | 4.6 | 3.5      | -   | 4.8 | 3.7      | 3.3 | 4.1 | 3.5        | 3.3 | 3.9 | 3.5 | 3.0 | -   | -  | 105.0 |
| 111.5      | -         | -                 | -   | 4.4 | 3.5      | -   | 4.6 | 3.5      | 3.3 | 4.1 | 3.5        | 3.0 | 3.9 | 3.5 | 3.0 | -   | -  | 111.5 |
| 118.1      | -         | -                 | -   | 4.1 | 3.5      | -   | 4.4 | 3.5      | 3.3 | 4.1 | 3.3        | 3.0 | 3.9 | 3.3 | 3.0 | -   | -  | 118.1 |
| 124.7      | -         | -                 | -   | 3.9 | 3.5      | -   | 4.4 | 3.5      | -   | 4.1 | 3.3        | 3.0 | 3.7 | 3.3 | 3.0 | -   | -  | 124.7 |
| 131.2      | -         | -                 | -   | 3.9 | 3.3      | -   | 4.1 | 3.3      | -   | 4.1 | 3.3        | 3.0 | 3.5 | 3.3 | 3.0 | -   | -  | 131.2 |
| 137.8      | -         | -                 | -   | 3.7 | 3.3      | -   | 3.9 | 3.3      | -   | 3.9 | 3.0        | -   | 3.5 | 3.0 | -   | -   | -  | 137.8 |
| 144.4      | -         | -                 | -   | -   | 3.5      | -   | -   | 3.5      | -   | -   | 3.5        | -   | -   | 3.3 | -   | -   | -  | 144.4 |
| 150.9      | -         | -                 | -   | -   | -        | -   | -   | 3.5      | -   | -   | 3.3        | -   | -   | 3.0 | -   | -   | -  | 150.9 |
| 157.5      | -         | -                 | -   | -   | -        | -   | -   | 3.3      | -   | -   | 3.3        | -   | -   | 2.8 | -   | -   | -  | 157.5 |
| 164.0      | -         | -                 | -   | -   | -        | -   | -   | 3.3      | -   | -   | 3.3        | -   | -   | 2.8 | -   | -   | -  | 164.0 |
| 170.6      | -         | -                 | -   | -   | -        | -   | -   | 3.3      | -   | -   | 3.0        | -   | -   | 2.6 | -   | -   | -  | 170.6 |
| 177.2      | -         | -                 | -   | -   | -        | -   | -   | 3.0      | -   | -   | 2.6        | -   | -   | 2.4 | -   | -   | -  | 177.2 |
| 183.7      | -         | -                 | -   | -   | -        | -   | -   | 3.0      | -   | -   | 1.9        | -   | -   | -   | -   | -   | -  | 183.7 |
| 190.3      | -         | -                 | -   | -   | -        | -   | -   | 2.6      | -   | -   | -          | -   | -   | -   | -   | -   | -  | 190.3 |

# Operation

HTLJ

| 53,000 lbs |     |         | 24.6 ft x 26.3 ft |     |          | 62.3 ft |     |          | 360° |     |          | ASME B30.5 |     |     |       |
|------------|-----|---------|-------------------|-----|----------|---------|-----|----------|------|-----|----------|------------|-----|-----|-------|
| 37.4 ft    |     | 98.4 ft |                   |     | 147.2 ft |         |     | 183.9 ft |      |     | 196.9 ft |            |     |     |       |
| 5°         | 30° | 60°     | 5°                | 30° | 60°      | 5°      | 30° | 60°      | 5°   | 30° | 60°      | 5°         | 30° | 60° |       |
| 1,000 lbs  |     |         |                   |     |          |         |     |          |      |     |          |            |     |     |       |
| ft         |     |         |                   |     |          |         |     |          |      |     |          |            |     | ft  |       |
| 13.1       | 7.2 | -       | -                 | -   | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 13.1  |
| 14.8       | 7.2 | -       | -                 | -   | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 14.8  |
| 16.4       | 7.2 | -       | -                 | -   | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 16.4  |
| 19.7       | 7.2 | -       | -                 | -   | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 19.7  |
| 23.0       | 7.2 | -       | -                 | 6.8 | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 23.0  |
| 26.2       | 7.2 | -       | -                 | 7.2 | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 26.2  |
| 29.5       | 7.2 | -       | -                 | 7.2 | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 29.5  |
| 32.8       | 7.2 | -       | -                 | 7.2 | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 32.8  |
| 36.1       | 7.2 | 5.7     | -                 | 7.2 | -        | -       | -   | -        | -    | -   | -        | -          | -   | -   | 36.1  |
| 39.4       | 7.0 | 5.5     | -                 | 7.2 | -        | -       | 5.5 | -        | -    | -   | -        | -          | -   | -   | 39.4  |
| 45.9       | 6.3 | 5.0     | -                 | 7.2 | 5.2      | -       | 5.5 | -        | -    | -   | -        | -          | -   | -   | 45.9  |
| 52.5       | 5.7 | 4.6     | -                 | 7.2 | 5.0      | -       | 5.5 | -        | -    | 4.1 | -        | -          | -   | -   | 52.5  |
| 59.1       | 5.2 | 4.4     | 3.7               | 6.8 | 4.8      | -       | 5.5 | 4.6      | -    | 4.1 | -        | -          | 3.9 | -   | 59.1  |
| 65.6       | 4.8 | 3.9     | 3.5               | 6.3 | 4.6      | 3.7     | 5.5 | 4.4      | -    | 4.1 | -        | -          | 3.9 | -   | 65.6  |
| 72.2       | 4.4 | 3.7     | -                 | 5.9 | 4.4      | 3.5     | 5.5 | 4.4      | 3.5  | 4.1 | 4.1      | -          | 3.9 | -   | 72.2  |
| 78.7       | 4.1 | 3.7     | -                 | 5.5 | 4.1      | 3.5     | 5.5 | 4.1      | 3.5  | 4.1 | 3.9      | -          | 3.9 | 3.9 | 78.7  |
| 85.3       | 3.9 | 3.5     | -                 | 5.2 | 3.9      | 3.5     | 5.5 | 3.9      | 3.5  | 4.1 | 3.9      | 3.3        | 3.9 | 3.7 | 85.3  |
| 91.9       | 3.5 | -       | -                 | 5.0 | 3.9      | 3.5     | 5.2 | 3.9      | 3.5  | 4.1 | 3.7      | 3.3        | 3.9 | 3.7 | 91.9  |
| 98.4       | -   | -       | -                 | 4.8 | 3.7      | 3.5     | 5.0 | 3.7      | 3.3  | 4.1 | 3.7      | 3.3        | 3.9 | 3.5 | 98.4  |
| 105.0      | -   | -       | -                 | 4.6 | 3.5      | -       | 4.8 | 3.7      | 3.3  | 4.1 | 3.5      | 3.3        | 3.9 | 3.5 | 105.0 |
| 111.5      | -   | -       | -                 | 4.4 | 3.5      | -       | 4.6 | 3.5      | 3.3  | 4.1 | 3.5      | 3.0        | 3.9 | 3.5 | 111.5 |
| 118.1      | -   | -       | -                 | 4.1 | 3.5      | -       | 4.4 | 3.5      | 3.3  | 4.1 | 3.3      | 3.0        | 3.9 | 3.3 | 118.1 |
| 124.7      | -   | -       | -                 | 3.9 | 3.5      | -       | 4.4 | 3.5      | -    | 4.1 | 3.3      | 3.0        | 3.7 | 3.3 | 124.7 |
| 131.2      | -   | -       | -                 | 3.9 | 3.3      | -       | 4.1 | 3.3      | -    | 4.1 | 3.3      | 3.0        | 3.5 | 3.3 | 131.2 |
| 137.8      | -   | -       | -                 | 3.7 | 3.3      | -       | 3.9 | 3.3      | -    | 3.3 | 3.0      | -          | 2.8 | 3.0 | 137.8 |
| 144.4      | -   | -       | -                 | 3.7 | -        | -       | 3.7 | 3.3      | -    | 2.6 | 3.0      | -          | 2.2 | 3.0 | 144.4 |
| 150.9      | -   | -       | -                 | 3.5 | -        | -       | 3.7 | 3.0      | -    | -   | 3.0      | -          | -   | 2.8 | 150.9 |
| 157.5      | -   | -       | -                 | -   | -        | -       | 3.3 | 3.0      | -    | -   | 2.4      | -          | -   | 1.9 | 157.5 |
| 164.0      | -   | -       | -                 | -   | -        | -       | 2.8 | 3.0      | -    | -   | -        | -          | -   | -   | 164.0 |
| 170.6      | -   | -       | -                 | -   | -        | -       | 2.2 | 2.6      | -    | -   | -        | -          | -   | -   | 170.6 |





# Operation

| 78,200 lbs |         | 24.6 ft x 26.3 ft |      |         |      |      |          | 12.1 ft |      |          | 360° |      |          | ASME B30.5 |      |       |
|------------|---------|-------------------|------|---------|------|------|----------|---------|------|----------|------|------|----------|------------|------|-------|
| ft         | 37.4 ft |                   |      | 98.4 ft |      |      | 147.2 ft |         |      | 183.9 ft |      |      | 196.9 ft |            |      | ft    |
|            | 0°      | 22°               | 45°  | 0°      | 22°  | 45°  | 0°       | 22°     | 45°  | 0°       | 22°  | 45°  | 0°       | 22°        | 45°  |       |
| 1,000 lbs  |         |                   |      |         |      |      |          |         |      |          |      |      |          |            |      |       |
| 9.8        | 110.8   | 78.0              | 56.6 | -       | -    | -    | -        | -       | -    | -        | -    | -    | -        | -          | -    | 9.8   |
| 11.5       | 103.3   | 75.1              | 55.7 | -       | -    | -    | -        | -       | -    | -        | -    | -    | -        | -          | -    | 11.5  |
| 13.1       | 96.7    | 72.5              | 54.6 | -       | 82.2 | -    | -        | -       | -    | -        | -    | -    | -        | -          | -    | 13.1  |
| 14.8       | 90.8    | 70.3              | 53.7 | -       | 80.0 | 58.6 | -        | -       | -    | -        | -    | -    | -        | -          | -    | 14.8  |
| 16.4       | 85.7    | 68.3              | 53.1 | -       | 78.2 | 57.9 | -        | -       | -    | -        | -    | -    | -        | -          | -    | 16.4  |
| 19.7       | 77.3    | 64.5              | 52.0 | 77.8    | 73.4 | 56.6 | -        | -       | -    | -        | -    | -    | -        | -          | -    | 19.7  |
| 23.0       | 70.5    | 61.7              | 51.1 | 77.8    | 68.5 | 55.5 | -        | 33.7    | -    | -        | -    | -    | -        | -          | -    | 23.0  |
| 26.2       | 64.8    | 59.3              | 50.7 | 77.8    | 66.1 | 54.4 | -        | 33.7    | 33.7 | -        | -    | -    | -        | -          | -    | 26.2  |
| 29.5       | 60.4    | 56.4              | 50.7 | 76.5    | 63.7 | 53.5 | -        | 33.7    | 33.7 | -        | -    | -    | -        | -          | -    | 29.5  |
| 32.8       | 56.4    | 54.2              | -    | 72.0    | 61.7 | 52.2 | -        | 33.7    | 33.7 | -        | -    | -    | -        | -          | -    | 32.8  |
| 36.1       | 53.5    | 52.6              | -    | 64.5    | 59.7 | 50.9 | 33.7     | 33.7    | 33.7 | -        | 19.4 | 19.4 | 16.9     | -          | -    | 36.1  |
| 39.4       | 51.3    | 52.2              | -    | 57.9    | 57.9 | 50.2 | 32.4     | 32.4    | 33.5 | -        | 19.4 | 19.4 | 16.9     | 16.9       | -    | 39.4  |
| 45.9       | -       | -                 | -    | 47.8    | 48.2 | 48.7 | 31.5     | 31.0    | 30.8 | 19.4     | 19.4 | 19.4 | 16.9     | 16.9       | 16.7 | 45.9  |
| 52.5       | -       | -                 | -    | 40.1    | 40.5 | 41.0 | 28.4     | 28.2    | 27.9 | 19.4     | 19.4 | 19.4 | 16.3     | 16.0       | 15.8 | 52.5  |
| 59.1       | -       | -                 | -    | 34.3    | 34.6 | 34.8 | 26.0     | 25.5    | 25.5 | 19.4     | 19.4 | 19.4 | 15.2     | 14.9       | 14.9 | 59.1  |
| 65.6       | -       | -                 | -    | 29.5    | 29.9 | 30.2 | 23.5     | 23.5    | 23.5 | 18.0     | 18.2 | 18.0 | 14.3     | 14.1       | 14.1 | 65.6  |
| 72.2       | -       | -                 | -    | 26.0    | 26.0 | 26.2 | 21.8     | 21.6    | 21.6 | 16.9     | 16.9 | 16.9 | 13.4     | 13.2       | 13.2 | 72.2  |
| 78.7       | -       | -                 | -    | 23.8    | 23.1 | -    | 20.0     | 20.0    | 20.0 | 15.8     | 15.8 | 15.8 | 12.5     | 12.5       | 12.3 | 78.7  |
| 85.3       | -       | -                 | -    | 21.6    | 21.3 | -    | 18.5     | 18.5    | 18.5 | 14.7     | 14.7 | 14.7 | 11.9     | 11.6       | 11.6 | 85.3  |
| 91.9       | -       | -                 | -    | 18.9    | 19.1 | -    | 17.1     | 17.1    | 17.1 | 13.6     | 13.6 | 13.6 | 11.2     | 11.0       | 11.0 | 91.9  |
| 98.4       | -       | -                 | -    | 16.7    | -    | -    | 15.4     | 15.6    | 15.6 | 12.7     | 12.7 | 12.7 | 10.5     | 10.5       | 10.3 | 98.4  |
| 105.0      | -       | -                 | -    | -       | -    | -    | 13.4     | 13.6    | 13.6 | 11.9     | 11.9 | 11.9 | 9.9      | 9.9        | 9.9  | 105.0 |
| 111.5      | -       | -                 | -    | -       | -    | -    | 12.3     | 12.3    | -    | 11.0     | 11.0 | 11.0 | 9.2      | 9.2        | 9.2  | 111.5 |
| 118.1      | -       | -                 | -    | -       | -    | -    | 11.2     | 11.4    | -    | 10.3     | 10.3 | 10.3 | 8.5      | 8.5        | 8.5  | 118.1 |
| 124.7      | -       | -                 | -    | -       | -    | -    | 10.3     | 10.1    | -    | 9.0      | 9.2  | 9.2  | 7.9      | 8.1        | 8.1  | 124.7 |
| 131.2      | -       | -                 | -    | -       | -    | -    | 9.9      | 9.7     | -    | 7.7      | 7.9  | -    | 7.4      | 7.4        | 7.4  | 131.2 |
| 137.8      | -       | -                 | -    | -       | -    | -    | 9.0      | 9.0     | -    | 6.8      | 6.8  | -    | 6.8      | 7.0        | -    | 137.8 |
| 144.4      | -       | -                 | -    | -       | -    | -    | 7.9      | -       | -    | 5.9      | 5.9  | -    | 5.9      | 6.1        | -    | 144.4 |
| 150.9      | -       | -                 | -    | -       | -    | -    | -        | -       | -    | 5.0      | 5.0  | -    | 5.0      | 5.2        | -    | 150.9 |
| 157.5      | -       | -                 | -    | -       | -    | -    | -        | -       | -    | 4.1      | 4.4  | -    | 4.4      | 4.4        | -    | 157.5 |
| 164.0      | -       | -                 | -    | -       | -    | -    | -        | -       | -    | 3.5      | 3.5  | -    | 3.7      | 3.7        | -    | 164.0 |
| 170.6      | -       | -                 | -    | -       | -    | -    | -        | -       | -    | 2.8      | 3.0  | -    | 3.0      | 3.0        | -    | 170.6 |
| 177.2      | -       | -                 | -    | -       | -    | -    | -        | -       | -    | 2.4      | -    | -    | 2.4      | 2.4        | -    | 177.2 |
| 183.7      | -       | -                 | -    | -       | -    | -    | -        | -       | -    | 1.7      | -    | -    | 1.7      | -          | -    | 183.7 |
| 190.3      | -       | -                 | -    | -       | -    | -    | -        | -       | -    | -        | -    | -    | 1.3      | -          | -    | 190.3 |

# Operation

MS

| 53,000 lbs |       | 24.6 ft x 26.3 ft |      |      |         |      |      | 12.1 ft  |      |      | 360°     |      |      | ASME B30.5 |      |     |    |       |
|------------|-------|-------------------|------|------|---------|------|------|----------|------|------|----------|------|------|------------|------|-----|----|-------|
|            |       | 37.4 ft           |      |      | 98.4 ft |      |      | 147.2 ft |      |      | 183.9 ft |      |      | 196.9 ft   |      |     |    |       |
|            |       | 0°                | 22°  | 45°  | 0°      | 22°  | 45°  | 0°       | 22°  | 45°  | 0°       | 22°  | 45°  | 0°         | 22°  | 45° |    |       |
| ft         |       | 1,000 lbs         |      |      |         |      |      |          |      |      |          |      |      |            |      |     | ft |       |
| 9.8        | 110.8 | 78.0              | 56.6 | -    | -       | -    | -    | -        | -    | -    | -        | -    | -    | -          | -    | -   | -  | 9.8   |
| 11.5       | 103.3 | 75.1              | 55.7 | -    | -       | -    | -    | -        | -    | -    | -        | -    | -    | -          | -    | -   | -  | 11.5  |
| 13.1       | 96.7  | 72.5              | 54.6 | -    | 82.2    | -    | -    | -        | -    | -    | -        | -    | -    | -          | -    | -   | -  | 13.1  |
| 14.8       | 90.8  | 70.3              | 53.7 | -    | 80.0    | 58.6 | -    | -        | -    | -    | -        | -    | -    | -          | -    | -   | -  | 14.8  |
| 16.4       | 85.7  | 68.3              | 53.1 | -    | 78.2    | 57.9 | -    | -        | -    | -    | -        | -    | -    | -          | -    | -   | -  | 16.4  |
| 19.7       | 77.3  | 64.5              | 52.0 | 77.8 | 73.4    | 56.6 | -    | -        | -    | -    | -        | -    | -    | -          | -    | -   | -  | 19.7  |
| 23.0       | 70.5  | 61.7              | 51.1 | 77.8 | 68.5    | 55.5 | -    | 33.7     | -    | -    | -        | -    | -    | -          | -    | -   | -  | 23.0  |
| 26.2       | 64.8  | 59.3              | 50.7 | 77.8 | 66.1    | 54.4 | -    | 33.7     | 33.7 | -    | -        | -    | -    | -          | -    | -   | -  | 26.2  |
| 29.5       | 60.4  | 56.4              | 50.7 | 74.7 | 63.7    | 53.5 | -    | 33.7     | 33.7 | -    | -        | -    | -    | -          | -    | -   | -  | 29.5  |
| 32.8       | 56.4  | 54.2              | -    | 65.9 | 61.7    | 52.2 | -    | 33.7     | 33.7 | -    | -        | -    | -    | -          | -    | -   | -  | 32.8  |
| 36.1       | 53.5  | 52.6              | -    | 58.6 | 59.5    | 50.9 | 33.7 | 33.7     | 33.7 | -    | 19.4     | 19.4 | 16.9 | -          | -    | -   | -  | 36.1  |
| 39.4       | 51.3  | 52.2              | -    | 52.4 | 53.3    | 50.2 | 32.4 | 32.4     | 33.5 | -    | 19.4     | 19.4 | 16.9 | 16.9       | -    | -   | -  | 39.4  |
| 45.9       | -     | -                 | -    | 42.3 | 43.2    | 43.8 | 31.5 | 31.0     | 30.8 | 19.4 | 19.4     | 19.4 | 16.9 | 16.9       | 16.7 | -   | -  | 45.9  |
| 52.5       | -     | -                 | -    | 35.0 | 35.4    | 35.9 | 28.4 | 28.2     | 27.9 | 19.4 | 19.4     | 19.4 | 16.3 | 16.0       | 15.8 | -   | -  | 52.5  |
| 59.1       | -     | -                 | -    | 29.1 | 29.3    | 29.5 | 26.0 | 25.5     | 25.5 | 19.4 | 19.4     | 19.4 | 15.2 | 14.9       | 14.9 | -   | -  | 59.1  |
| 65.6       | -     | -                 | -    | 25.5 | 24.9    | 24.2 | 23.1 | 23.5     | 23.5 | 18.0 | 18.2     | 18.0 | 14.3 | 14.1       | 14.1 | -   | -  | 65.6  |
| 72.2       | -     | -                 | -    | 21.6 | 22.0    | 22.0 | 19.8 | 20.2     | 20.5 | 16.9 | 16.9     | 16.9 | 13.4 | 13.2       | 13.2 | -   | -  | 72.2  |
| 78.7       | -     | -                 | -    | 19.1 | 19.1    | -    | 18.0 | 18.0     | 17.8 | 15.8 | 15.8     | 15.8 | 12.5 | 12.5       | 12.3 | -   | -  | 78.7  |
| 85.3       | -     | -                 | -    | 16.5 | 16.7    | -    | 15.4 | 15.6     | 15.8 | 13.8 | 14.1     | 14.5 | 11.9 | 11.6       | 11.6 | -   | -  | 85.3  |
| 91.9       | -     | -                 | -    | 14.3 | 14.5    | -    | 13.6 | 13.4     | 13.6 | 11.9 | 12.3     | 12.5 | 11.2 | 11.0       | 11.0 | -   | -  | 91.9  |
| 98.4       | -     | -                 | -    | 12.5 | -       | -    | 12.5 | 12.3     | 12.3 | 10.3 | 10.5     | 10.8 | 10.1 | 10.3       | 10.3 | -   | -  | 98.4  |
| 105.0      | -     | -                 | -    | -    | -       | -    | 11.0 | 11.0     | 11.2 | 8.8  | 9.0      | 9.0  | 8.8  | 9.0        | 9.2  | -   | -  | 105.0 |
| 111.5      | -     | -                 | -    | -    | -       | -    | 9.4  | 9.7      | -    | 7.2  | 7.4      | 7.7  | 7.4  | 7.7        | 7.9  | -   | -  | 111.5 |
| 118.1      | -     | -                 | -    | -    | -       | -    | 8.3  | 8.3      | -    | 6.1  | 6.3      | 6.3  | 6.3  | 6.6        | 6.6  | -   | -  | 118.1 |
| 124.7      | -     | -                 | -    | -    | -       | -    | 7.2  | 7.2      | -    | 5.0  | 5.2      | 5.2  | 5.2  | 5.5        | 5.5  | -   | -  | 124.7 |
| 131.2      | -     | -                 | -    | -    | -       | -    | 6.3  | 6.3      | -    | 4.1  | 4.1      | -    | 4.4  | 4.4        | 4.6  | -   | -  | 131.2 |
| 137.8      | -     | -                 | -    | -    | -       | -    | 5.5  | 5.5      | -    | 3.3  | 3.5      | -    | 3.5  | 3.5        | -    | -   | -  | 137.8 |
| 144.4      | -     | -                 | -    | -    | -       | -    | 4.6  | -        | -    | 2.4  | 2.6      | -    | 2.6  | 2.8        | -    | -   | -  | 144.4 |
| 150.9      | -     | -                 | -    | -    | -       | -    | -    | -        | -    | 1.7  | 1.9      | -    | 1.9  | 1.9        | -    | -   | -  | 150.9 |
| 157.5      | -     | -                 | -    | -    | -       | -    | -    | -        | -    | 1.3  | 1.3      | -    | 1.3  | 1.5        | -    | -   | -  | 157.5 |

# Operation

MS

| 29,200 lbs |       |         | 24.6 ft x 26.3 ft |      |          | 12.1 ft |      |          | 360° |      |          | ASME B30.5 |      |       |
|------------|-------|---------|-------------------|------|----------|---------|------|----------|------|------|----------|------------|------|-------|
| 37.4 ft    |       | 98.4 ft |                   |      | 147.2 ft |         |      | 183.9 ft |      |      | 196.9 ft |            |      |       |
| 0°         | 22°   | 45°     | 0°                | 22°  | 45°      | 0°      | 22°  | 45°      | 0°   | 22°  | 45°      | 0°         | 22°  | 45°   |
| 1,000 lbs  |       |         |                   |      |          |         |      |          |      |      |          |            |      |       |
| ft         |       |         |                   |      |          |         |      |          |      |      |          |            |      | ft    |
| 9.8        | 110.8 | 78.0    | 56.6              | -    | -        | -       | -    | -        | -    | -    | -        | -          | -    | 9.8   |
| 11.5       | 103.3 | 75.1    | 55.7              | -    | -        | -       | -    | -        | -    | -    | -        | -          | -    | 11.5  |
| 13.1       | 96.7  | 72.5    | 54.6              | -    | 82.2     | -       | -    | -        | -    | -    | -        | -          | -    | 13.1  |
| 14.8       | 90.8  | 70.3    | 53.7              | -    | 80.0     | 58.6    | -    | -        | -    | -    | -        | -          | -    | 14.8  |
| 16.4       | 85.7  | 68.3    | 53.1              | -    | 78.2     | 57.9    | -    | -        | -    | -    | -        | -          | -    | 16.4  |
| 19.7       | 77.3  | 64.5    | 52.0              | 77.8 | 73.4     | 56.6    | -    | -        | -    | -    | -        | -          | -    | 19.7  |
| 23.0       | 70.5  | 61.7    | 51.1              | 77.8 | 68.5     | 55.5    | -    | 33.7     | -    | -    | -        | -          | -    | 23.0  |
| 26.2       | 64.8  | 59.3    | 50.7              | 67.6 | 66.1     | 54.4    | -    | 33.7     | 33.7 | -    | -        | -          | -    | 26.2  |
| 29.5       | 60.4  | 56.4    | 50.7              | 57.3 | 58.8     | 53.5    | -    | 33.7     | 33.7 | -    | -        | -          | -    | 29.5  |
| 32.8       | 56.4  | 54.2    | -                 | 49.8 | 51.1     | 51.5    | -    | 33.7     | 33.7 | -    | -        | -          | -    | 32.8  |
| 36.1       | 52.6  | 52.6    | -                 | 43.4 | 44.5     | 45.4    | 33.7 | 33.7     | 33.7 | -    | 19.4     | 19.4       | 16.9 | 36.1  |
| 39.4       | 44.7  | 44.9    | -                 | 38.1 | 39.0     | 39.9    | 32.4 | 32.4     | 33.5 | -    | 19.4     | 19.4       | 16.9 | 39.4  |
| 45.9       | -     | -       | -                 | 32.6 | 30.8     | 31.5    | 28.4 | 27.9     | 28.6 | 19.4 | 19.4     | 19.4       | 16.9 | 45.9  |
| 52.5       | -     | -       | -                 | 27.5 | 27.3     | 27.1    | 23.3 | 24.0     | 23.1 | 19.4 | 19.4     | 19.4       | 16.3 | 52.5  |
| 59.1       | -     | -       | -                 | 22.4 | 22.9     | 23.1    | 19.6 | 19.8     | 20.2 | 16.7 | 17.4     | 17.8       | 15.2 | 59.1  |
| 65.6       | -     | -       | -                 | 18.5 | 18.7     | 18.9    | 17.6 | 17.4     | 16.9 | 13.8 | 14.3     | 14.7       | 13.6 | 65.6  |
| 72.2       | -     | -       | -                 | 15.6 | 15.6     | 15.6    | 14.9 | 15.4     | 15.6 | 11.4 | 11.9     | 12.3       | 11.2 | 72.2  |
| 78.7       | -     | -       | -                 | 13.2 | 13.4     | -       | 12.7 | 13.2     | 13.4 | 9.4  | 9.9      | 10.1       | 9.2  | 78.7  |
| 85.3       | -     | -       | -                 | 11.2 | 11.2     | -       | 10.8 | 11.0     | 11.2 | 7.7  | 8.1      | 8.3        | 7.7  | 85.3  |
| 91.9       | -     | -       | -                 | 9.9  | 9.9      | -       | 9.0  | 9.2      | 9.4  | 6.3  | 6.6      | 6.8        | 6.1  | 91.9  |
| 98.4       | -     | -       | -                 | 9.0  | -        | -       | 7.4  | 7.7      | 7.9  | 5.0  | 5.2      | 5.5        | 4.8  | 98.4  |
| 105.0      | -     | -       | -                 | -    | -        | -       | 6.3  | 6.3      | 6.6  | 3.9  | 4.1      | 4.4        | 3.7  | 105.0 |
| 111.5      | -     | -       | -                 | -    | -        | -       | 5.2  | 5.2      | -    | 2.8  | 3.0      | 3.3        | 2.8  | 111.5 |
| 118.1      | -     | -       | -                 | -    | -        | -       | 4.1  | 4.4      | -    | 1.9  | 2.2      | 2.4        | 1.9  | 118.1 |
| 124.7      | -     | -       | -                 | -    | -        | -       | 3.5  | 3.5      | -    | 1.3  | 1.5      | 1.5        | 1.1  | 124.7 |
| 131.2      | -     | -       | -                 | -    | -        | -       | 2.6  | 2.6      | -    | -    | -        | -          | -    | 131.2 |
| 137.8      | -     | -       | -                 | -    | -        | -       | 1.9  | 1.9      | -    | -    | -        | -          | -    | 137.8 |
| 144.4      | -     | -       | -                 | -    | -        | -       | 1.5  | -        | -    | -    | -        | -          | -    | 144.4 |

# Operation

MS

| 20,400 lbs |       |         | 24.6 ft x 26.3 ft |      |          | 12.1 ft |      |          | 360° |      |          | ASME B30.5 |      |      |      |       |
|------------|-------|---------|-------------------|------|----------|---------|------|----------|------|------|----------|------------|------|------|------|-------|
| 37.4 ft    |       | 98.4 ft |                   |      | 147.2 ft |         |      | 183.9 ft |      |      | 196.9 ft |            |      |      |      |       |
| 0°         | 22°   | 45°     | 0°                | 22°  | 45°      | 0°      | 22°  | 45°      | 0°   | 22°  | 45°      | 0°         | 22°  | 45°  |      |       |
| 1,000 lbs  |       |         |                   |      |          |         |      |          |      |      |          |            |      |      |      |       |
| ft         |       |         |                   |      |          |         |      |          |      |      |          |            |      | ft   |      |       |
| 9.8        | 110.8 | 78.0    | 56.6              | -    | -        | -       | -    | -        | -    | -    | -        | -          | -    | 9.8  |      |       |
| 11.5       | 103.3 | 75.1    | 55.7              | -    | -        | -       | -    | -        | -    | -    | -        | -          | -    | 11.5 |      |       |
| 13.1       | 96.7  | 72.5    | 54.6              | -    | 82.2     | -       | -    | -        | -    | -    | -        | -          | -    | 13.1 |      |       |
| 14.8       | 90.8  | 70.3    | 53.7              | -    | 80.0     | 58.6    | -    | -        | -    | -    | -        | -          | -    | 14.8 |      |       |
| 16.4       | 85.7  | 68.3    | 53.1              | -    | 78.2     | 57.9    | -    | -        | -    | -    | -        | -          | -    | 16.4 |      |       |
| 19.7       | 77.3  | 64.5    | 52.0              | 77.8 | 73.4     | 56.6    | -    | -        | -    | -    | -        | -          | -    | 19.7 |      |       |
| 23.0       | 70.5  | 61.7    | 51.1              | 71.6 | 68.5     | 55.5    | -    | 33.7     | -    | -    | -        | -          | -    | 23.0 |      |       |
| 26.2       | 64.8  | 59.3    | 50.7              | 59.5 | 60.8     | 54.4    | -    | 33.7     | 33.7 | -    | -        | -          | -    | 26.2 |      |       |
| 29.5       | 60.4  | 56.4    | 50.7              | 50.2 | 51.8     | 53.1    | -    | 33.7     | 33.7 | -    | -        | -          | -    | 29.5 |      |       |
| 32.8       | 55.1  | 54.2    | -                 | 42.9 | 44.3     | 45.6    | -    | 33.7     | 33.7 | -    | -        | -          | -    | 32.8 |      |       |
| 36.1       | 45.8  | 46.2    | -                 | 39.9 | 38.3     | 39.4    | 32.8 | 33.7     | 33.5 | -    | 19.4     | 19.4       | 16.9 | -    | 36.1 |       |
| 39.4       | 39.0  | 39.2    | -                 | 35.4 | 33.7     | 34.3    | 29.7 | 29.9     | 30.8 | -    | 19.4     | 19.4       | 16.9 | 16.9 | -    | 39.4  |
| 45.9       | -     | -       | -                 | 29.1 | 29.7     | 28.8    | 24.2 | 24.9     | 25.1 | 19.4 | 19.4     | 19.4       | 16.9 | 16.9 | 16.7 | 45.9  |
| 52.5       | -     | -       | -                 | 23.5 | 24.2     | 24.4    | 21.1 | 20.5     | 20.7 | 16.9 | 17.6     | 18.0       | 16.3 | 16.0 | 15.8 | 52.5  |
| 59.1       | -     | -       | -                 | 19.1 | 19.6     | 19.8    | 17.6 | 18.0     | 18.2 | 13.6 | 14.3     | 14.7       | 13.4 | 13.8 | 14.3 | 59.1  |
| 65.6       | -     | -       | -                 | 15.8 | 16.3     | 16.5    | 14.7 | 14.9     | 15.4 | 11.0 | 11.4     | 11.9       | 10.8 | 11.2 | 11.6 | 65.6  |
| 72.2       | -     | -       | -                 | 13.0 | 13.4     | 13.4    | 12.3 | 12.7     | 13.0 | 8.8  | 9.2      | 9.7        | 8.8  | 9.2  | 9.4  | 72.2  |
| 78.7       | -     | -       | -                 | 11.6 | 11.4     | -       | 10.3 | 10.5     | 10.8 | 7.0  | 7.4      | 7.7        | 7.0  | 7.2  | 7.7  | 78.7  |
| 85.3       | -     | -       | -                 | 10.1 | 10.1     | -       | 8.5  | 8.8      | 9.0  | 5.5  | 5.9      | 6.1        | 5.5  | 5.7  | 5.9  | 85.3  |
| 91.9       | -     | -       | -                 | 8.5  | 8.5      | -       | 7.0  | 7.2      | 7.4  | 4.1  | 4.6      | 4.8        | 4.1  | 4.4  | 4.6  | 91.9  |
| 98.4       | -     | -       | -                 | 7.2  | -        | -       | 5.7  | 5.9      | 5.9  | 3.0  | 3.3      | 3.5        | 3.0  | 3.3  | 3.5  | 98.4  |
| 105.0      | -     | -       | -                 | -    | -        | -       | 4.6  | 4.8      | 4.8  | 2.2  | 2.4      | 2.4        | 1.9  | 2.2  | 2.4  | 105.0 |
| 111.5      | -     | -       | -                 | -    | -        | -       | 3.5  | 3.7      | -    | 1.3  | 1.5      | 1.5        | 1.1  | 1.3  | 1.5  | 111.5 |
| 118.1      | -     | -       | -                 | -    | -        | -       | 2.8  | 2.8      | -    | -    | -        | -          | -    | -    | -    | 118.1 |
| 124.7      | -     | -       | -                 | -    | -        | -       | 1.9  | 2.2      | -    | -    | -        | -          | -    | -    | -    | 124.7 |
| 131.2      | -     | -       | -                 | -    | -        | -       | 1.3  | 1.3      | -    | -    | -        | -          | -    | -    | -    | 131.2 |





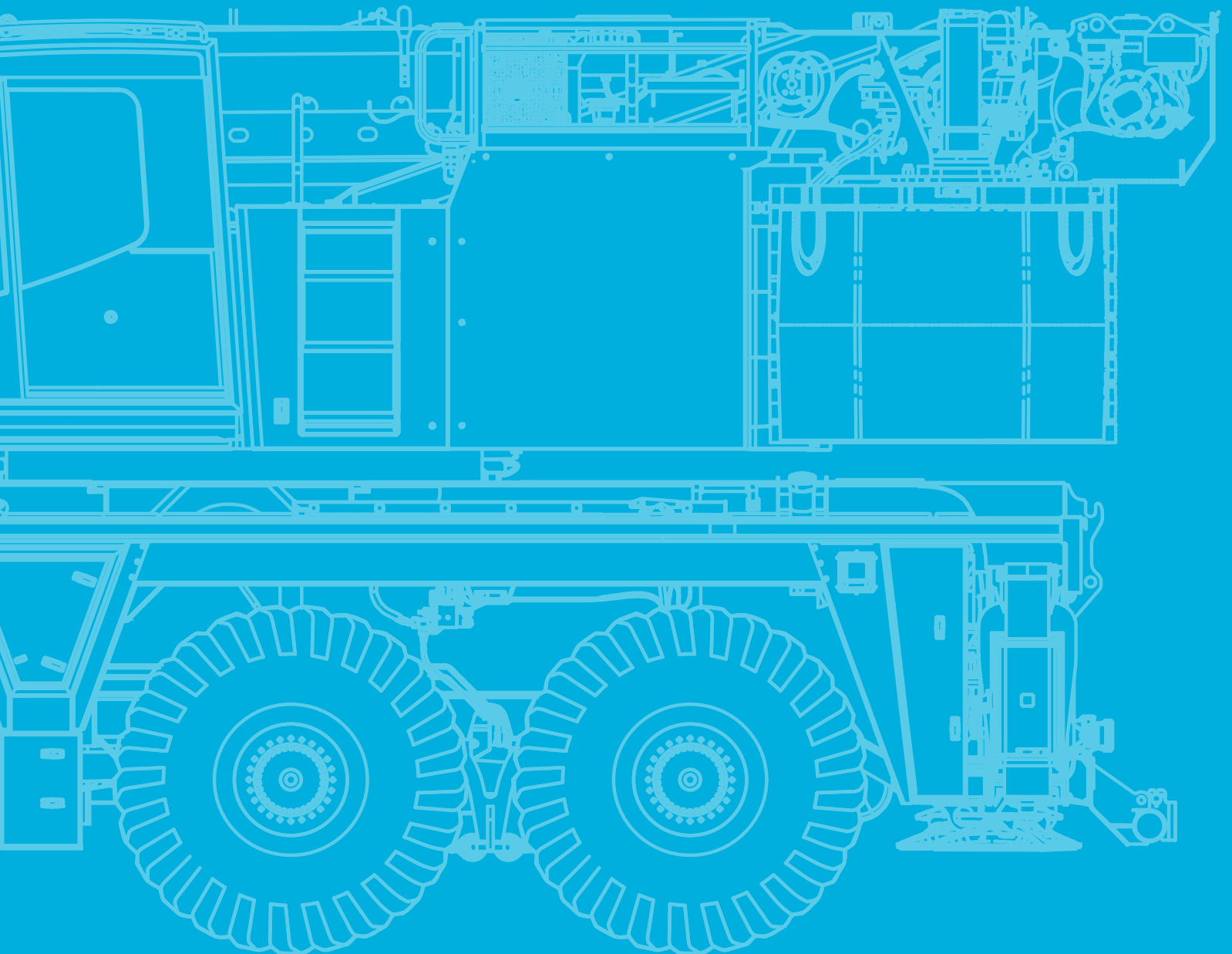
# Notes to Lifting Capacity

Ratings are in compliance with ASME B30.5.  
Lifting capacities do not exceed 85 % of tipping load.

Weight of hook blocks and slings is part of the load, and is to be deducted from the capacity ratings.  
Consult operation manual for further details.

**Note:** Data published herein is intended as a guide only and shall not be construed to warrant applicability for lifting purposes.  
Crane operation is subject to the computer charts and operation manual both supplied with the crane.

# TECHNICAL DESCRIPTION



# Technical Description

## Basic machine

### Equipment carrier

|                                      |   |
|--------------------------------------|---|
| <b>Engine 390-5</b>                  | Mercedes-Benz OM471LA; Diesel engine; Output 390 kW / 1600 1/min (530 HP), torque 2600 Nm / 1300 1/min; The engine complies with EU Stage V/Tier 4F; Exhaust system complete stainless steel with SCR catalyzer.  |
| <b>Fuel tank</b>                     | 159 gallons Diesel (no RME / biodiesel); 11 gallons Ad-Blue tank.   |
| <b>Transmission ZF TraXon</b>        | Automated gearbox with 12 forward speeds and 2 reverse; 2-stage transfer case with switchable longitudinal lock.  |
| <b>Axles 10 x 6 x 10</b>             | All 5 axles steered, axles 2, 4, 5 driven and equipped with selectable transverse lock.   |
| <b>Suspension</b>                    | Hydropneumatic suspension with axle load compensation; Hydraulically lockable; Manual or automatic levelling alternatively.   |
| <b>Steering</b>                      | Dual circuit hydro servocom steering with emergency steering pump; Active rear axle steering.   |
| <b>Brakes</b>                        | Pneumatic dual circuit service brake with antilock system, acting on all wheels; Disc brakes; Additional, double-speed decompression brake; Spring-loaded parking brake.  |
| <b>Tires</b>                         | Tires size 385/95 R25 (14.00R25); Steel rim 9,5-25/1,7"   |
| <b>Cab 2690</b>                      | Type 8.8 ft; Adjustable driver seat, armrests and pneumatic suspension; Height and tilt-adjustable steering wheel; Auxiliary/passenger seat; Powered door windows; Tinted glass; Radio; Seat heating; Heating engine-dependent; Aircondition.               |
| <b>Rear view camera</b>              | Display in carrier cab; Cameras installed on rear of vehicle.   |
| <b>Drive lights</b>                  | Including low beam, upper beam, daytime running lights, fog lights and cornering lights.  |
| <b>Central lubrication</b>           | Automatic central lubrication system for the lubricating points at the carrier.   |
| <b>Outriggers</b>                    | H-4-Point design; Vertical and horizontal movement fully hydraulic; Manual or automatic levelling alternatively; 5 outrigger bases: 8.2 ft, 13.5 ft, 16.4 ft, 20.3 ft and 24.6 ft.<br>4 square outrigger pads with transport position at vertical cylinder. |
| <b>Outrigger basis monitoring</b>    | Individual monitoring of horizontal stroke; Deviation warning in crane cab.   |
| <b>Outrigger load indicator</b>      | The outrigger load is indicated in the operator cab and the outrigger control box.  |
| <b>Electronic immobiliser system</b> | Prevents uncontrolled carrier mobilisation; Incl. 4 ignition keys.  |
| <b>Pneumatic tire filling plug</b>   | For self-filling of the wheels.   |

### Equipment superstructure

|                                 |  |
|---------------------------------|--|
| <b>Engine 129-5</b>             | Mercedes-Benz OM934LA; Diesel engine; Output 129 kW / 2200 1/min (175 HP), torque 750 Nm / 1200-1600 1/min; The engine complies with EU Stage V/Tier 4F; Exhaust system complete stainless steel with SCR catalyzer.   |
| <b>Telescopic boom HA60</b>     | 37.4 ft - 196.9 ft; Single cylinder telescoping system, automatic telescoping; Attachments for all equipment and extensions; 6 sheaves integrated in boom head for max. capacity of 209,000 lbs.   |
| <b>Boom luffing</b>             | 1 luffing cylinder with automatic lowering brake valve.  |
| <b>Rotary drive</b>             | Single slewing gear unit with spring-loaded multi-disc brake.  |
| <b>H1</b>                       | Hoist with spring-loaded multi-disc brake; Resolver (hoist rotation indicator).  |
| <b>Counterweight 53,000 lbs</b> | 9 pieces (①, 3 x ②, ③, ④, ⑤, ⑥, ⑧).  |
| <b>Control system</b>           | Enabling 4 simultaneous working movements; Electric pilot controls via 2 two-axis joysticks; Different control modes selectable for hydraulic circuits.  |
| <b>Operator aids</b>            | AML-F, with integrated electronic load moment indicator in accordance with EN13000; Color display; Displaying of current operating conditions, load charts, fault indicator; Signal lights indicating LMI-load; Crane data logger.   |
| <b>SmartChart</b>               | Smart crane control system for main boom and rooster sheave operation enabling higher lifting capacities especially over outriggers. Enables safe use of the full capacity of the crane even in asymmetric outrigger configurations. Visualization of full working area in operator cabin. In-cab lift simulation. |
| <b>Hello-Net</b>                | Tadano telematic system.   |
| <b>Working range limiter</b>    | Displaying and programmability of the work range limits by AML-F.  |
| <b>Lift adjuster</b>            | Safety device which prevents the load from swinging out when the load is picked up and the released hook block from swinging when the load is set down; Activated by switch in operator cabin.   |
| <b>Cab 872</b>                  | Type 2.86 ft; 12° tiltable seat incl. control panel; Fold-out front window; Extendable side pedestal, front pedestal; Handrails; Tinted safety glass; Pull-down sun visor; Radio; Seat heating; Heating engine-dependent and engine-independent; Aircondition.   |
| <b>Central lubrication</b>      | Automatic central lubrication system for the lubricating points at the superstructure.   |

# Technical Description

## Additional equipment

### Carrier

|                          |  |
|--------------------------|--|
| <b>Axles 10 x 8 x 10</b> | All 5 axles steered, axles 1, 2, 4, 5 driven and equipped with selectable transverse lock. |
| <b>Tires</b>             | 10 tires; Tire size 445/95R25 (16.00R25) or 525/80 (20.5R25).                              |

### Superstructure

|  |  |
|--|--|
| <b>2. hoist (H2)</b>                       | Spring-loaded multi-disc brake; Integrated resolver (hoist rotation indicator); Quick couplings; Incl. hoist monitoring. |
| <b>Additional counterweight 25,500 lbs</b> | 2 pieces (2 x ⑦); for total 78,200 lbs, 11 pieces.   |
| <b>Load supervision camera</b>             | Camera mounted on main boom head to supervise the hook block and load from above; Incl. boom head light on boom head.    |

### Handling

|                       |  |
|-----------------------|--|
| <b>Remote control</b> | Control of superstructure movements via wireless remote control. |
|-----------------------|--|

### Extensions

|                        |  |
|------------------------|--|
| <b>HAV 58.7 ft</b>     | Double folding swing-away jib, manual offset 22°/45°; 1-sheave head; Incl. transport storage.  |
| <b>HAV-VA 104.7 ft</b> | Variable extension; 2 x 23 ft lattice boom extension and double folding swing-away jib, manual offset 22°/45°; 1-sheaved head; Incl. transport storage for double folding swing-away jib; Includes HAV 58.7 ft and HAV-VA 81.7 ft. |
| <b>HAV-HY</b>          | Hydraulic, stepless offset 0°-40°, instead of the manual offset; Available for HAV and HAV-VA.   |
| <b>HTLJ 62.3 ft</b>    | Hydraulically telescopable and offsetable main boom extension; Length 29.5 ft - 62.3 ft; Hydraulic offset 5°-60°.  |
| <b>MS (runner)</b>     | 12.1 ft; Variable assembly jib with manual offset; 3-sheaves, for max. 110,800 lbs lifting capacity.   |

### Hook Blocks

|  |   |
|--|---|
| <b>Hook block 352,800 lbs 7-sheaves</b>  | Max. capacity 264,600 lbs; 2,870 lbs; Double hook, red with white signal stripes. |
| <b>Hook block 220,500 lbs, 5-sheaves</b> | Max. capacity 202,200 lbs 1,760 lbs; Double hook, red with white signal stripes.  |
| <b>Hook block 138,900 lbs 3-sheaves</b>  | Max. capacity 130,100 lbs; 1,320 lbs; Double hook, red with white signal stripes. |
| <b>Hook block 70,600 lbs 1-sheave</b>    | Max. capacity 56,450 lbs; 990 lbs; Single hook, red with white signal stripes.    |
| <b>Hook 22,050 lbs</b>                   | Max. capacity 19,100 lbs; 660 lbs; Single hook, red.                              |

Further additional equipment on request!

Weight data may deviate from posted values based on road/travel configuration, equipment configuration, and component weight tolerances.





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