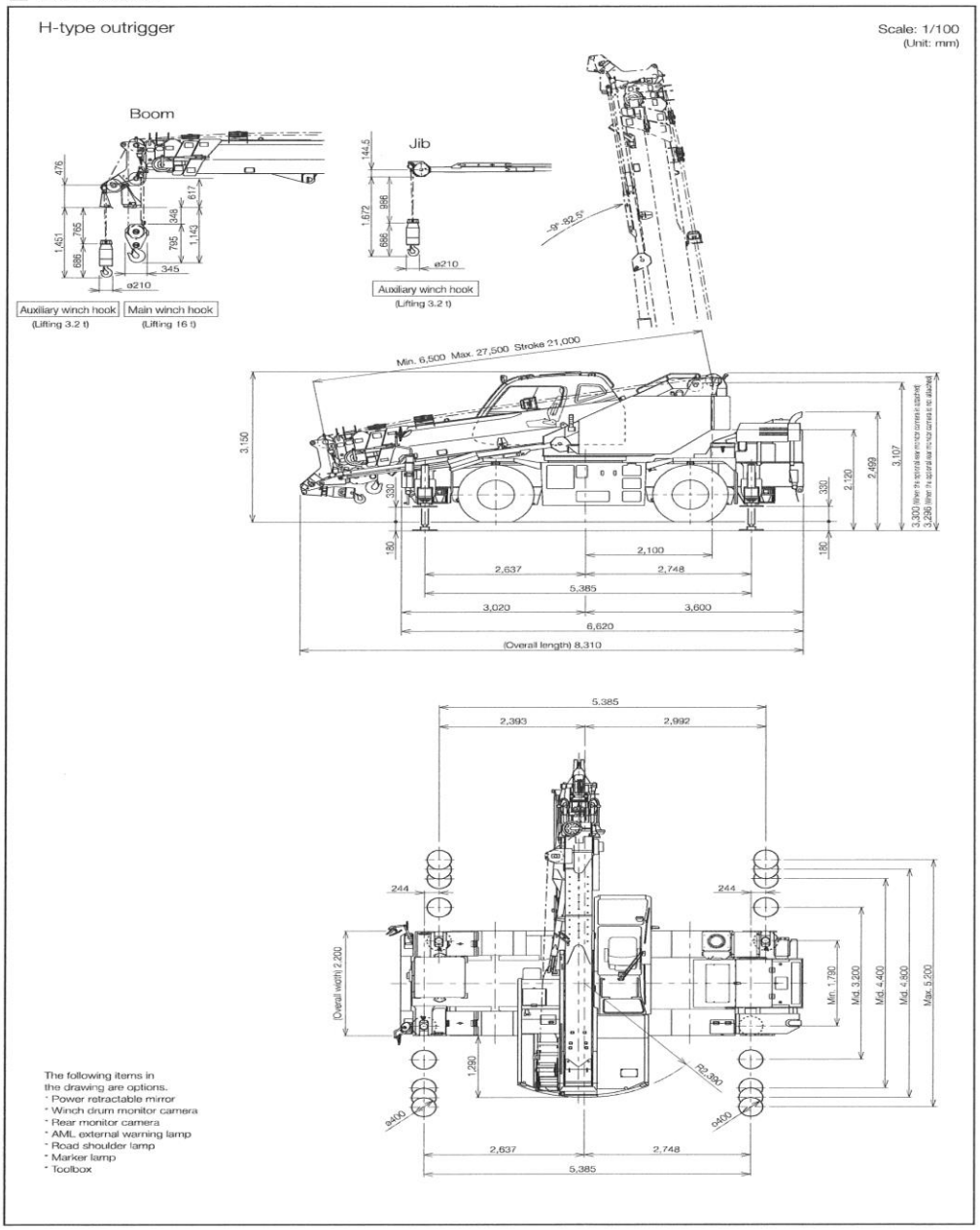
MARSH PLANT HIRE LTD

# CREVO GR 160N-III


## DIMENSIONS



## ■ RATED LIFTING CAPACITIES

### ❶ Using outriggers

[BOOM] Unit: (t)

| OUTRIGGER MAXIMUM EXTENSION (5.2 m) - 360° - | | | | | | |
|---|---|---|---|---|---|---|
| Boom length / Load radius | 6.5 m | 10.7 m | 14.9 m | 19.1 m | 23.3 m | 27.5 m |
| 2.5 m | 16.0 | 12.0 | 9.0 | 7.0 | | |
| 3.0 m | 16.0 | 12.0 | 9.0 | 7.0 | | |
| 3.5 m | 14.0 | 12.0 | 9.0 | 7.0 | 5.0 | 3.5 |
| 4.0 m | 12.5 | 12.0 | 9.0 | 7.0 | 5.0 | 3.5 |
| 4.5 m | 11.7 (4.4 m) | 11.1 | 9.0 | 7.0 | 5.0 | 3.5 |
| 5.0 m | | 10.25 | 8.9 | 7.0 | 5.0 | 3.5 |
| 5.5 m | | 9.4 | 8.2 | 7.0 | 5.0 | 3.5 |
| 6.0 m | | 8.8 | 7.6 | 6.6 | 5.0 | 3.5 |
| 7.0 m | | 6.75 | 6.4 | 5.8 | 4.7 | 3.5 |
| 8.0 m | | 5.3 | 5.0 | 5.2 | 4.15 | 3.4 |
| 9.0 m | | 4.5 (8.6 m) | 4.0 | 4.3 | 3.7 | 3.1 |
| 10.0 m | | | 3.25 | 3.5 | 3.3 | 2.8 |
| 11.0 m | | | 2.65 | 2.95 | 3.0 | 2.55 |
| 12.0 m | | | 2.15 | 2.45 | 2.65 | 2.35 |
| 13.0 m | | | 1.8 (12.8 m) | 2.05 | 2.25 | 2.15 |
| 14.0 m | | | | 1.75 | 1.95 | 2.0 |
| 15.0 m | | | | 1.45 | 1.7 | 1.75 |
| 16.0 m | | | | 1.25 | 1.45 | 1.5 |
| 17.0 m | | | | 1.05 | 1.25 | 1.3 |
| 18.0 m | | | | | 1.05 | 1.1 |
| 19.0 m | | | | | 0.9 | 0.95 |
| 20.0 m | | | | | 0.75 | 0.8 |
| 22.0 m | | | | | 0.6 (21.2 m) | 0.6 |
| 24.0 m | | | | | | 0.45 |
| A (°) | 0-82.5 | | | | | |

A: boom angle range (with no load)

[BOOM] Unit: (t)

| OUTRIGGER MIDDLE EXTENSION (4.8 m) - Over side - | | | | | | |
|---|---|---|---|---|---|---|
| Boom length / Load radius | 6.5 m | 10.7 m | 14.9 m | 19.1 m | 23.3 m | 27.5 m |
| 2.5 m | 16.0 | 12.0 | 9.0 | 7.0 | | |
| 3.0 m | 16.0 | 12.0 | 9.0 | 7.0 | | |
| 3.5 m | 14.0 | 12.0 | 9.0 | 7.0 | 5.0 | 3.5 |
| 4.0 m | 12.5 | 12.0 | 9.0 | 7.0 | 5.0 | 3.5 |
| 4.5 m | 11.7 (4.4 m) | 11.1 | 9.0 | 7.0 | 5.0 | 3.5 |
| 5.0 m | | 10.25 | 8.9 | 7.0 | 5.0 | 3.5 |
| 5.5 m | | 9.2 | 8.2 | 7.0 | 5.0 | 3.5 |
| 6.0 m | | 7.9 | 7.6 | 6.6 | 5.0 | 3.5 |
| 7.0 m | | 5.85 | 5.85 | 5.8 | 4.7 | 3.5 |
| 8.0 m | | 4.55 | 4.5 | 4.85 | 4.15 | 3.4 |
| 9.0 m | | 3.9 (8.6 m) | 3.55 | 3.9 | 3.7 | 3.1 |
| 10.0 m | | | 2.8 | 3.15 | 3.3 | 2.8 |
| 11.0 m | | | 2.25 | 2.6 | 2.8 | 2.55 |
| 12.0 m | | | 1.8 | 2.15 | 2.35 | 2.35 |
| 13.0 m | | | 1.5 (12.8 m) | 1.75 | 1.95 | 2.1 |
| 14.0 m | | | | 1.45 | 1.65 | 1.75 |
| 15.0 m | | | | 1.2 | 1.4 | 1.5 |
| 16.0 m | | | | 1.0 | 1.2 | 1.3 |
| 17.0 m | | | | 0.85 | 1.0 | 1.1 |
| 18.0 m | | | | | 0.85 | 0.95 |
| 19.0 m | | | | | 0.7 | 0.8 |
| 20.0 m | | | | | 0.55 | 0.65 |
| 22.0 m | | | | | | 0.45 |
| A (°) | 0-82.5 | | | | | 24-82.5 |

A: boom angle range (with no load)

[BOOM] Unit: (t)

| OUTRIGGER MIDDLE EXTENSION (4.4 m) - Over side - | | | | | | |
|---|---|---|---|---|---|---|
| Boom length / Load radius | 6.5 m | 10.7 m | 14.9 m | 19.1 m | 23.3 m | 27.5 m |
| 2.5 m | 16.0 | 12.0 | 9.0 | 7.0 | | |
| 3.0 m | 16.0 | 12.0 | 9.0 | 7.0 | | |
| 3.5 m | 14.0 | 12.0 | 9.0 | 7.0 | 5.0 | 3.5 |
| 4.0 m | 12.5 | 12.0 | 9.0 | 7.0 | 5.0 | 3.5 |
| 4.5 m | 11.7 (4.4 m) | 11.1 | 9.0 | 7.0 | 5.0 | 3.5 |
| 5.0 m | | 9.5 | 8.9 | 7.0 | 5.0 | 3.5 |
| 5.5 m | | 8.0 | 7.9 | 7.0 | 5.0 | 3.5 |
| 6.0 m | | 6.8 | 6.7 | 6.6 | 5.0 | 3.5 |
| 7.0 m | | 5.05 | 5.0 | 5.35 | 4.7 | 3.5 |
| 8.0 m | | 3.85 | 3.85 | 4.15 | 4.15 | 3.4 |
| 9.0 m | | 3.3 (8.6 m) | 3.0 | 3.3 | 3.55 | 3.1 |
| 10.0 m | | | 2.35 | 2.65 | 2.9 | 2.8 |
| 11.0 m | | | 1.85 | 2.15 | 2.4 | 2.5 |
| 12.0 m | | | 1.45 | 1.75 | 2.0 | 2.1 |
| 13.0 m | | | 1.15 (12.8 m) | 1.45 | 1.65 | 1.8 |
| 14.0 m | | | | 1.15 | 1.4 | 1.55 |
| 15.0 m | | | | 0.95 | 1.15 | 1.3 |
| 16.0 m | | | | 0.75 | 0.95 | 1.1 |
| 17.0 m | | | | 0.6 | 0.8 | 0.9 |
| 18.0 m | | | | | 0.65 | 0.75 |
| 19.0 m | | | | | 0.5 | 0.6 |
| 20.0 m | | | | | | 0.5 |
| A (°) | 0-82.5 | | | | | 32-82.5 |

A: boom angle range (with no load)

[BOOM] Unit: (t)

| OUTRIGGER MIDDLE EXTENSION (3.2 m) - Over side - | | | | | | |
|---|---|---|---|---|---|---|
| Boom length / Load radius | 6.5 m | 10.7 m | 14.9 m | 19.1 m | 23.3 m | 27.5 m |
| 2.5 m | 16.0 | 12.0 | 9.0 | 7.0 | | |
| 3.0 m | 14.5 | 12.0 | 9.0 | 7.0 | | |
| 3.5 m | 10.5 | 10.4 | 9.0 | 7.0 | 5.0 | 3.5 |
| 4.0 m | 8.0 | 8.25 | 7.9 | 7.0 | 5.0 | 3.5 |
| 4.5 m | 6.8 (4.4 m) | 6.6 | 6.5 | 7.0 | 5.0 | 3.5 |
| 5.0 m | | 5.45 | 5.4 | 5.8 | 5.0 | 3.5 |
| 5.5 m | | 4.6 | 4.5 | 4.9 | 5.0 | 3.5 |
| 6.0 m | | 3.9 | 3.9 | 4.2 | 4.4 | 3.5 |
| 7.0 m | | 2.9 | 2.85 | 3.15 | 3.3 | 3.4 |
| 8.0 m | | 2.15 | 2.1 | 2.4 | 2.6 | 2.75 |
| 9.0 m | | 1.8 (8.6 m) | 1.55 | 1.85 | 2.05 | 2.2 |
| 10.0 m | | | 1.1 | 1.45 | 1.65 | 1.8 |
| 11.0 m | | | 0.75 | 1.1 | 1.3 | 1.45 |
| 12.0 m | | | 0.5 | 0.8 | 1.0 | 1.15 |
| 13.0 m | | | | 0.55 | 0.8 | 0.9 |
| 14.0 m | | | | 0.4 | 0.6 | 0.7 |
| 15.0 m | | | | | 0.4 | 0.55 |
| A (°) | 0-82.5 | | | 35-82.5 | 45-82.5 | 54-82.5 |

A: boom angle range (with no load)

## [BOOM] (X-type)

Unit: (t)

| OUTRIGGER MINIMUM EXTENSION (2.7 m) - Over side - | | | | | | |
|---|---|---|---|---|---|---|
| Boom length / Load radius | 6.5 m | 10.7 m | 14.9 m | 19.1 m | 23.3 m | 27.5 m |
| 2.5 m | 13.5 | 12.0 | 9.0 | 7.0 | | |
| 3.0 m | 10.6 | 10.0 | 9.0 | 7.0 | | |
| 3.5 m | 8.0 | 7.8 | 7.7 | 7.0 | 5.0 | 3.5 |
| 4.0 m | 6.2 | 6.2 | 6.1 | 6.4 | 5.0 | 3.5 |
| 4.5 m | 5.3(4.4 m) | 5.0 | 4.9 | 5.3 | 5.0 | 3.5 |
| 5.0 m | | 4.1 | 4.0 | 4.4 | 4.5 | 3.5 |
| 5.5 m | | 3.4 | 3.3 | 3.7 | 3.85 | 3.5 |
| 6.0 m | | 2.85 | 2.8 | 3.1 | 3.35 | 3.4 |
| 7.0 m | | 2.05 | 1.95 | 2.3 | 2.5 | 2.6 |
| 8.0 m | | 1.45 | 1.35 | 1.7 | 1.9 | 2.05 |
| 9.0 m | | 1.15(8.6 m) | 0.9 | 1.25 | 1.45 | 1.6 |
| 10.0 m | | | 0.55 | 0.9 | 1.1 | 1.25 |
| 11.0 m | | | | 0.6 | 0.8 | 0.95 |
| 12.0 m | | | | 0.4 | 0.6 | 0.7 |
| A (°) | 0-82.5 | | 39-82.5 | 45-82.5 | 55-82.5 | 61-82.5 |

A: boom angle range (with no load)

## [BOOM] (H-type)

Unit: (t)

| OUTRIGGER MINIMUM EXTENSION (1.79 m) - Over side - | | | | | | |
|---|---|---|---|---|---|---|
| Boom length / Load radius | 6.5 m | 10.7 m | 14.9 m | 19.1 m | 23.3 m | 27.5 m |
| 2.5 m | 7.0 | 7.0 | 7.0 | 7.0 | | |
| 3.0 m | 5.9 | 5.6 | 5.6 | 5.75 | | |
| 3.5 m | 4.5 | 4.3 | 4.25 | 4.6 | 4.6 | 3.5 |
| 4.0 m | 3.5 | 3.4 | 3.3 | 3.65 | 3.8 | 3.5 |
| 4.5 m | 2.9(4.4 m) | 2.7 | 2.65 | 3.0 | 3.15 | 3.2 |
| 5.0 m | | 2.2 | 2.1 | 2.45 | 2.65 | 2.75 |
| 5.5 m | | 1.8 | 1.65 | 2.0 | 2.2 | 2.3 |
| 6.0 m | | 1.4 | 1.3 | 1.65 | 1.85 | 1.95 |
| 7.0 m | | 0.85 | 0.75 | 1.1 | 1.3 | 1.45 |
| A (°) | 0-82.5 | 36-82.5 | 55-82.5 | 64-82.5 | 69-82.5 | 72-82.5 |

A: boom angle range (with no load)

## [JIB] (27.5-m boom)

| OUTRIGGER MAXIMUM EXTENSION (5.2 m) - 360° - | | | | | | |
|---|---|---|---|---|---|---|
| Jib length | 27.5-m boom + 3.8-m jib | | | | | |
| Offset | 5° | | 25° | | 45° | |
| Boom angle | Load radius (m) | Rated lifting capacity (t) | Load radius (m) | Rated lifting capacity (t) | Load radius (m) | Rated lifting capacity (t) |
| 82.5° | 3.6 | 2.0 | 4.7 | 1.5 | 5.7 | 1.25 |
| 75° | 8.0 | 2.0 | 8.9 | 1.5 | 9.6 | 1.25 |
| 70° | 10.8 | 2.0 | 11.6 | 1.5 | 12.1 | 1.25 |
| 65° | 13.2 | 1.6 | 14.0 | 1.35 | 14.5 | 1.25 |
| 60° | 15.5 | 1.35 | 16.3 | 1.2 | 16.7 | 1.15 |
| 55° | 17.7 | 1.1 | 18.4 | 1.1 | 18.8 | 1.05 |
| 50° | 19.7 | 0.95 | 20.4 | 0.9 | 20.7 | 0.9 |
| 45° | 21.6 | 0.75 | 22.2 | 0.7 | 22.4 | 0.7 |
| 40° | 23.3 | 0.6 | 23.8 | 0.55 | | |
| 35° | 24.8 | 0.45 | 25.2 | 0.4 | | |
| 30° | 26.1 | 0.35 | 26.4 | 0.3 | | |
| 25° | 27.2 | 0.25 | | | | |
| A (°) | 24-82.5 | | 29-82.5 | | 44-82.5 | |

A: boom angle range (with no load)

## [JIB] (27.5-m boom)

| OUTRIGGER MIDDLE EXTENSION (4.8 m) - Over side - | | | | | | |
|---|---|---|---|---|---|---|
| Jib length | 27.5-m boom + 3.8-m jib | | | | | |
| Offset | 5° | | 25° | | 45° | |
| Boom angle | Load radius (m) | Rated lifting capacity (t) | Load radius (m) | Rated lifting capacity (t) | Load radius (m) | Rated lifting capacity (t) |
| 82.5° | 3.6 | 2.0 | 4.7 | 1.5 | 5.7 | 1.25 |
| 75° | 8.0 | 2.0 | 8.9 | 1.5 | 9.6 | 1.25 |
| 70° | 10.8 | 2.0 | 11.6 | 1.5 | 12.1 | 1.25 |
| 65° | 13.2 | 1.6 | 14.0 | 1.35 | 14.5 | 1.25 |
| 60° | 15.5 | 1.35 | 16.3 | 1.2 | 16.7 | 1.15 |
| 55° | 17.7 | 1.05 | 18.4 | 1.0 | 18.8 | 0.95 |
| 50° | 19.7 | 0.8 | 20.3 | 0.75 | 20.6 | 0.7 |
| 45° | 21.5 | 0.55 | 22.1 | 0.55 | 22.3 | 0.5 |
| 40° | 23.2 | 0.4 | 23.7 | 0.4 | | |
| 35° | 24.7 | 0.3 | 25.1 | 0.3 | | |
| A (°) | 34-82.5 | | | | 44-82.5 | |

A: boom angle range (with no load)

## [JIB] (27.5-m boom)

| OUTRIGGER MIDDLE EXTENSION (4.4 m) - Over side - | | | | | | |
|---|---|---|---|---|---|---|
| Jib length | 27.5-m boom + 3.8-m jib | | | | | |
| Offset | 5° | | 25° | | 45° | |
| Boom angle | Load radius (m) | Rated lifting capacity (t) | Load radius (m) | Rated lifting capacity (t) | Load radius (m) | Rated lifting capacity (t) |
| 82.5° | 3.6 | 2.0 | 4.7 | 1.5 | 5.7 | 1.25 |
| 75° | 8.0 | 2.0 | 8.9 | 1.5 | 9.6 | 1.25 |
| 70° | 10.8 | 2.0 | 11.6 | 1.5 | 12.1 | 1.25 |
| 65° | 13.2 | 1.6 | 14.0 | 1.35 | 14.5 | 1.25 |
| 60° | 15.4 | 1.15 | 16.3 | 1.1 | 16.7 | 1.05 |
| 55° | 17.6 | 0.85 | 18.4 | 0.85 | 18.7 | 0.8 |
| 50° | 19.6 | 0.6 | 20.3 | 0.6 | 20.5 | 0.55 |
| 45° | 21.5 | 0.4 | 22.1 | 0.4 | 22.3 | 0.4 |
| 40° | 23.1 | 0.25 | 23.7 | 0.25 | | |
| A (°) | 39-82.5 | | | | 44-82.5 | |

A: boom angle range (with no load)

## [JIB] (27.5-m boom)

| OUTRIGGER MIDDLE EXTENSION (3.2 m) - Over side - | | | | | | |
|---|---|---|---|---|---|---|
| Jib length | 27.5-m boom + 3.8-m jib | | | | | |
| Offset | 5° | | 25° | | 45° | |
| Boom angle | Load radius (m) | Rated lifting capacity (t) | Load radius (m) | Rated lifting capacity (t) | Load radius (m) | Rated lifting capacity (t) |
| 82.5° | 3.6 | 2.0 | 4.7 | 1.5 | 5.7 | 1.25 |
| 75° | 8.0 | 2.0 | 8.9 | 1.5 | 9.6 | 1.25 |
| 72° | 9.5 | 1.65 | 10.5 | 1.45 | 11.1 | 1.25 |
| 70° | 10.5 | 1.4 | 11.5 | 1.3 | 12.1 | 1.15 |
| 65° | 12.9 | 0.9 | 13.8 | 0.85 | 14.3 | 0.75 |
| 60° | 15.2 | 0.55 | 16.0 | 0.55 | 16.4 | 0.45 |
| 55° | 17.3 | 0.3 | 18.1 | 0.3 | 18.4 | 0.25 |
| A (°) | 54-82.5 | | | | | |

A: boom angle range (with no load)

## [JIB] (23.3-m boom)

| OUTRIGGER MAXIMUM EXTENSION (5.2 m) - 360° - | | | | | | |
|---|---|---|---|---|---|---|
| Jib length | 23.3-m boom + 3.8-m jib | | | | | |
| Offset | 5° | | 25° | | 45° | |
| Boom angle | Load radius (m) | Rated lifting capacity (t) | Load radius (m) | Rated lifting capacity (t) | Load radius (m) | Rated lifting capacity (t) |
| 82.5° | 2.9 | 2.0 | 4.0 | 1.5 | 5.0 | 1.25 |
| 75° | 6.5 | 2.0 | 7.5 | 1.5 | 8.3 | 1.25 |
| 70° | 8.8 | 2.0 | 9.7 | 1.5 | 10.5 | 1.25 |
| 65° | 11.0 | 2.0 | 11.8 | 1.5 | 12.5 | 1.25 |
| 60° | 13.1 | 1.7 | 13.9 | 1.45 | 14.4 | 1.2 |
| 55° | 15.1 | 1.5 | 15.9 | 1.4 | 16.1 | 1.15 |
| 50° | 16.9 | 1.15 | 17.5 | 1.1 | 17.6 | 1.05 |
| 45° | 18.5 | 0.9 | 19.0 | 0.85 | 19.1 | 0.85 |
| 40° | 19.9 | 0.7 | 20.4 | 0.7 | | |
| 35° | 21.2 | 0.55 | 21.6 | 0.55 | | |
| 30° | 22.4 | 0.45 | 22.6 | 0.45 | | |
| 25° | 23.3 | 0.4 | 23.4 | 0.35 | | |
| 20° | 24.0 | 0.35 | | | | |
| 15° | 24.5 | 0.3 | | | | |
| 10° | 24.9 | 0.25 | | | | |
| 5° | 25.0 | 0.25 | | | | |
| A (°) | 4-82.5 | | 24-82.5 | | 44-82.5 | |

A: boom angle range (with no load)

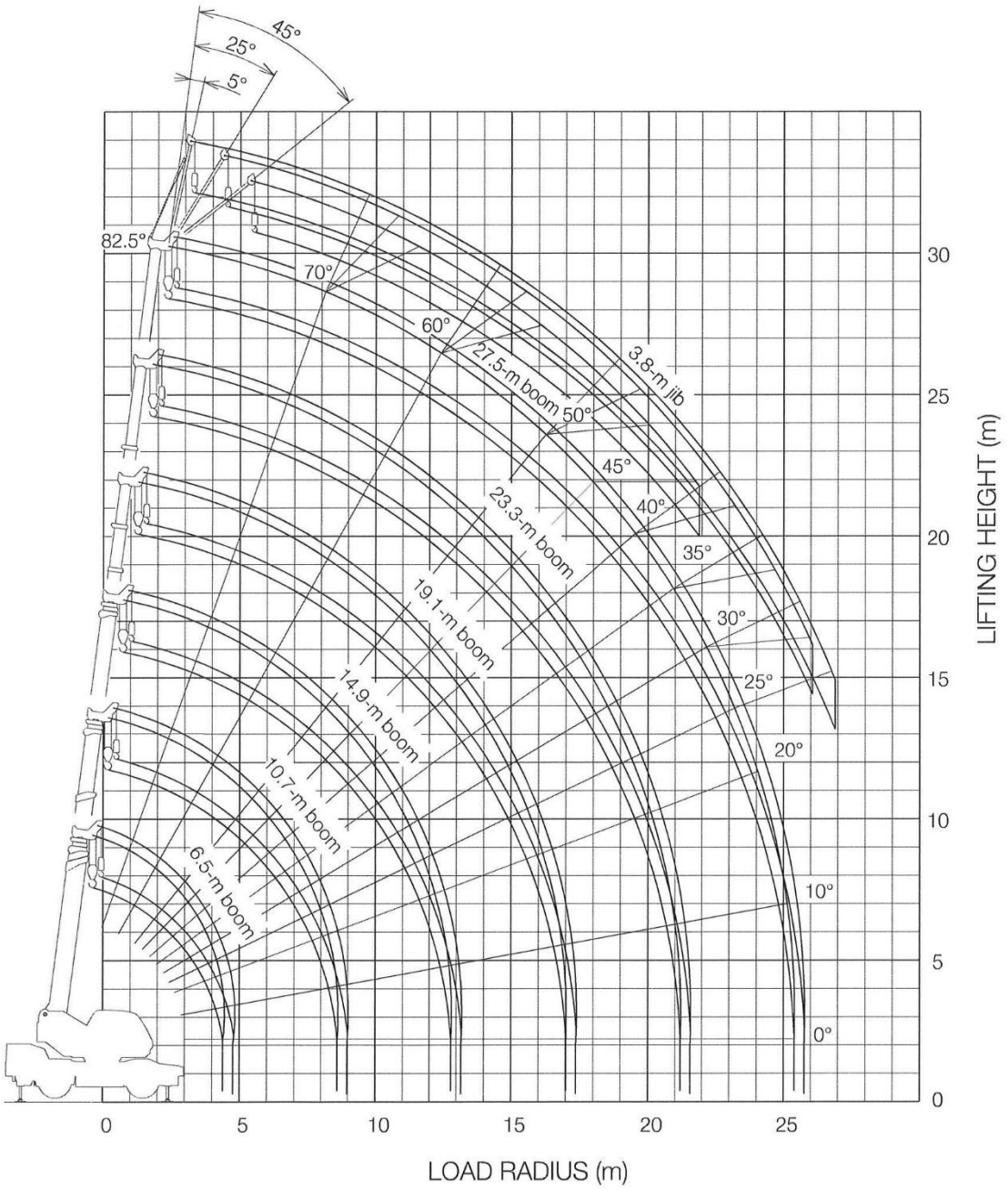
## [JIB] (23.3-m boom)

| OUTRIGGER MIDDLE EXTENSION (4.8 m) - Over side - | | | | | | |
|---|---|---|---|---|---|---|
| Jib length | 23.3 m-m boom + 3.8-m jib | | | | | |
| Offset | 5° | | 25° | | 45° | |
| Boom angle | Load radius (m) | Rated lifting capacity (t) | Load radius (m) | Rated lifting capacity (t) | Load radius (m) | Rated lifting capacity (t) |
| 82.5° | 2.9 | 2.0 | 4.0 | 1.5 | 5.0 | 1.25 |
| 75° | 6.5 | 2.0 | 7.5 | 1.5 | 8.3 | 1.25 |
| 70° | 8.8 | 2.0 | 9.7 | 1.5 | 10.5 | 1.25 |
| 65° | 11.0 | 2.0 | 11.8 | 1.5 | 12.5 | 1.25 |
| 60° | 13.1 | 1.7 | 13.9 | 1.45 | 14.4 | 1.2 |
| 55° | 14.9 | 1.25 | 15.7 | 1.15 | 16.1 | 1.15 |
| 50° | 16.7 | 0.95 | 17.4 | 0.9 | 17.6 | 0.85 |
| 45° | 18.3 | 0.7 | 18.9 | 0.7 | 19.0 | 0.65 |
| 40° | 19.8 | 0.55 | 20.3 | 0.5 | | |
| 35° | 21.1 | 0.4 | 21.5 | 0.4 | | |
| 30° | 22.2 | 0.3 | 22.5 | 0.3 | | |
| 25° | 23.2 | 0.25 | 23.4 | 0.25 | | |
| A (°) | 24-82.5 | | | | 44-82.5 | |

A: boom angle range (with no load)

## ■ WORKING RANGE

Scale: 1/250

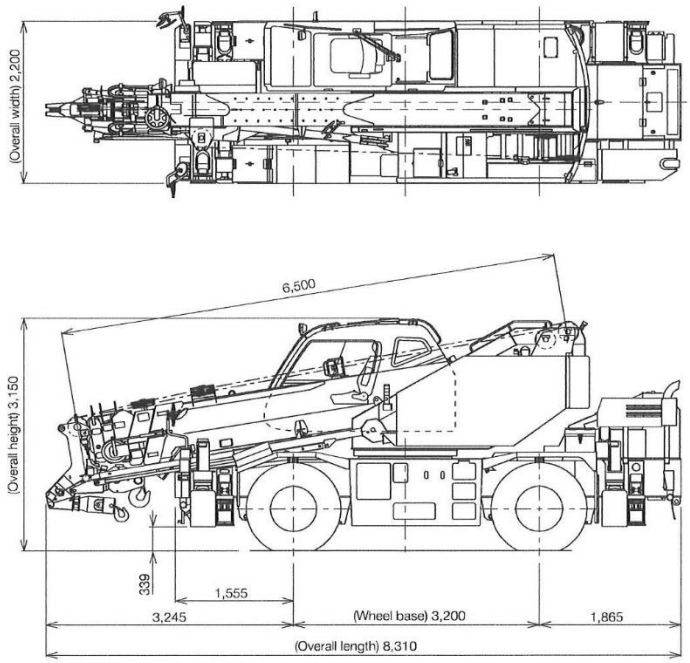



(Note) 1. The above drawing doesn't include the boom deflection.
2. The above drawing shows the outrigger maximum (5.2 m) extension.

## ■ DIMENSIONS

### X-type outrigger

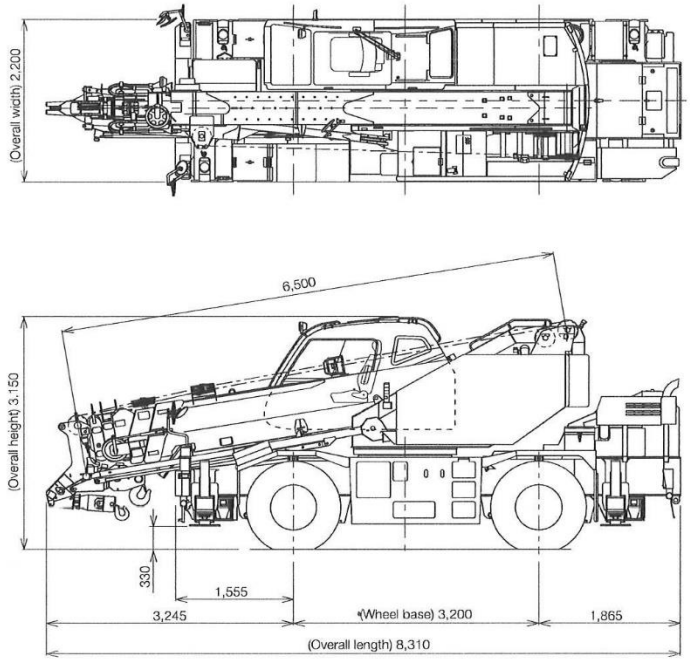
Scale: 1/100
(Unit: mm)




The power retractable mirror, winch drum monitor camera, rear monitor camera, AML external warning lamp, road shoulder lamp, marker lamp, and toolbox in this drawing are options.

### H-type outrigger

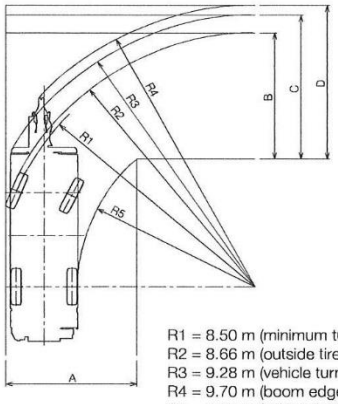
Scale: 1/100
(Unit: mm)




The power retractable mirror, winch drum monitor camera, rear monitor camera, AML external warning lamp, road shoulder lamp, marker lamp, and toolbox in this drawing are options.

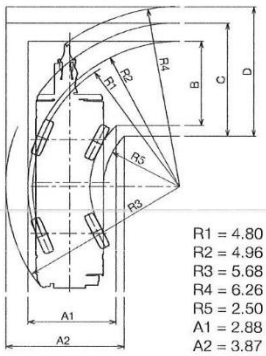
## ■ MINIMUM RIGHT-ANGLE PASSAGE WIDTH

### ● While turning right in the front two-wheel steering mode



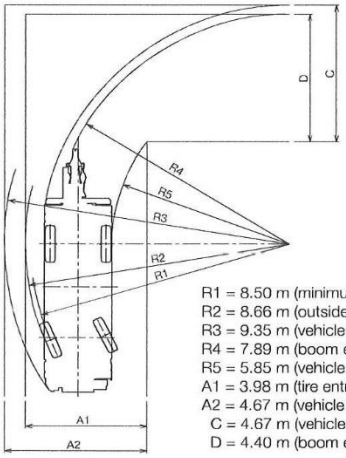

R1 = 8.50 m (minimum turning radius)
R2 = 8.66 m (outside tire edge turning radius)
R3 = 9.28 m (vehicle turning radius)
R4 = 9.70 m (boom edge turning radius)
R5 = 5.85 m (vehicle inside turning radius)
A = 4.30 m (entrance passage width)
B = 4.30 m (tire exit passage width)
C = 4.92 m (vehicle exit passage width)
D = 5.35 m (boom edge exit passage width)

### ● While turning right in the four-wheel steering mode




R1 = 4.80 m (minimum turning radius)
R2 = 4.96 m (outside tire edge turning radius)
R3 = 5.68 m (vehicle turning radius)
R4 = 6.26 m (boom edge turning radius)
R5 = 2.50 m (vehicle inside turning radius)
A1 = 2.88 m (tire entrance passage width)
A2 = 3.87 m (vehicle entrance passage width)
B = 2.88 m (tire exit passage width)
C = 3.87 m (vehicle exit passage width)
D = 4.49 m (boom edge exit passage width)

### ● While turning right in the rear two-wheel steering mode




R1 = 8.50 m (minimum turning radius)
R2 = 8.66 m (outside tire edge turning radius)
R3 = 9.35 m (vehicle turning radius)
R4 = 7.89 m (boom edge turning radius)
R5 = 5.85 m (vehicle inside turning radius)
A1 = 3.98 m (tire entrance passage width)
A2 = 4.67 m (vehicle entrance passage width)
C = 4.67 m (vehicle exit passage width)
D = 4.40 m (boom edge exit passage width)

(Note) The above numbers are the calculated values.

| Model name | Specifications | Specification no. |
|---|---|---|
| GR-160N | Lifting 16 t, 6-section boom, 1-section standard jib, X-type outrigger | GR-160N-3-00201 |
| GR-160N | Lifting 16 t, 6-section boom, 1-section standard jib, H-type outrigger | GR-160N-3-00202 |

Note: Due to improvements, the delivered product may have specifications different from these.
201309

**TADANO LTD.**

[JIB] (23.3-m boom)

| OUTRIGGER MIDDLE EXTENSION (4.4 m) - Over side - | | | | | | |
|---|---|---|---|---|---|---|
| Jib length | 23.3-m boom + 3.8-m jib | | | | | |
| Offset | 5° | | 25° | | 45° | |
| Boom angle | Load radius (m) | Rated lifting capacity (t) | Load radius (m) | Rated lifting capacity (t) | Load radius (m) | Rated lifting capacity (t) |
| 82.5° | 2.9 | 2.0 | 4.0 | 1.5 | 5.0 | 1.25 |
| 75° | 6.5 | 2.0 | 7.5 | 1.5 | 8.3 | 1.25 |
| 70° | 8.8 | 2.0 | 9.7 | 1.5 | 10.5 | 1.25 |
| 65° | 11.0 | 2.0 | 11.8 | 1.5 | 12.5 | 1.25 |
| 60° | 12.9 | 1.4 | 13.9 | 1.3 | 14.4 | 1.2 |
| 55° | 14.8 | 1.0 | 15.6 | 0.95 | 16.0 | 0.9 |
| 50° | 16.6 | 0.7 | 17.3 | 0.7 | 17.6 | 0.65 |
| 45° | 18.3 | 0.5 | 18.8 | 0.5 | 19.0 | 0.5 |
| 40° | 19.7 | 0.35 | 20.2 | 0.35 | | |
| 35° | 21.1 | 0.25 | 21.4 | 0.25 | | |
| A (°) | 34-82.5 | | | | 44-82.5 | |

A: boom angle range (with no load)

[JIB] (23.3-m boom)

| OUTRIGGER MIDDLE EXTENSION (3.2 m) - Over side - | | | | | | |
|---|---|---|---|---|---|---|
| Jib length | 23.3-m boom + 3.8-m jib | | | | | |
| Offset | 5° | | 25° | | 45° | |
| Boom angle | Load radius (m) | Rated lifting capacity (t) | Load radius (m) | Rated lifting capacity (t) | Load radius (m) | Rated lifting capacity (t) |
| 82.5° | 2.9 | 2.0 | 4.0 | 1.5 | 5.0 | 1.25 |
| 75° | 6.5 | 2.0 | 7.5 | 1.5 | 8.3 | 1.25 |
| 72° | 7.8 | 2.0 | 8.8 | 1.5 | 9.6 | 1.25 |
| 70° | 8.7 | 1.65 | 9.7 | 1.4 | 10.5 | 1.25 |
| 65° | 10.8 | 1.0 | 11.8 | 0.9 | 12.5 | 0.85 |
| 60° | 12.8 | 0.6 | 13.8 | 0.55 | 14.2 | 0.5 |
| 55° | 14.8 | 0.3 | 15.5 | 0.3 | 15.9 | 0.3 |
| A (°) | 54-82.5 | | | | | |

A: boom angle range (with no load)

## ❶ Points to remember when using the outriggers

1. The rated lifting capacities are shown for when the crane is set horizontally on firm ground, and include the weight of the slings and main winch hook (140 kg) when working with the boom, and the weight of the slings and auxiliary winch hook (60 kg) when working with the jib. The values above the bold line are based on the crane strength while those below are based on the crane stability factor.
2. The load radius is based on the actual figure including the boom deflection, so always use this as the standard when working with the boom.
3. The jib rated lifting capacity is different when the boom length is 23.3 m or less and when it exceeds 23.3 m.
4. Use the boom angle as the standard when working with the jib. The reference load radii shown are those when the jib is mounted to a 23.3-m and 27.5-m boom.
5. The rated lifting capacity for the single top is the value obtained by subtracting 80 kg from the boom rated lifting capacity, and includes the weight of the slings and auxiliary winch hook (60 kg), but must not exceed 3.2 t.
6. High-speed unwinding should only be used when only the hook is being lowered. Also, sudden lever operations should be avoided at this time.
7. The table below shows the hook wire rope standard number of parts of line for each boom length.
   However, when using other number of parts of line, the load per line should not exceed 2.9 t for the main winch or 3.2 t for the auxiliary winch.

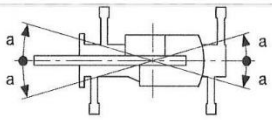
| Boom length | 6.5 m | 10.7 m | 14.9 m | 19.1 m | 23.3 m | 27.5 m | Jib, single top |
|---|---|---|---|---|---|---|---|
| Number of parts of line | 6 | 6 | 4 | 4 | 4 | 4 | 1 |

8. It should be 1 part of line for the hook wire rope on the jib.
9. The over-side lifting capability depends on the extension width of the outriggers. Perform work within the capability according to the extension width.
   The lifting capability for the front and rear areas is the rated lifting capacity of the "outrigger maximum extension", but the range (angle a) of the front and rear areas depends on the outrigger extension width.

| X-type | Extension width | Middle extension (4.8 m) | Middle extension (4.4 m) | Middle extension (3.2 m) | Minimum extension (2.7 m) |
|---|---|---|---|---|---|
| | Angle a° | 50 | 45 | 20 | 15 |

| H-type | Extension width | Middle extension (4.8 m) | Middle extension (4.4 m) | Middle extension (3.2 m) | Minimum extension (1.79 m) |
|---|---|---|---|---|---|
| | Angle a° | 45 | 40 | 20 | 5 |

(The angle a° in the table is the minimum value.)




## ❷ Not using outriggers

Unit: (t)

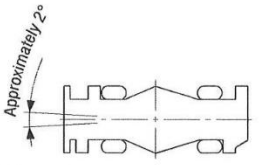
| Load radius | When vehicle is stopped | | | | | | | | When vehicle is traveling (1.6 km/h or slower) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6.5-m boom | | 10.7-m boom | | 14.9-m boom | | 19.1-m boom | | 6.5-m boom | | 10.7-m boom | | 14.9-m boom | | 19.1-m boom | |
| | Front | 360° | Front | 360° | Front | 360° | Front | 360° | Front | 360° | Front | 360° | Front | 360° | Front | 360° |
| 3.0 m | 3.8 | 2.3 | 3.8 | 2.3 | 3.8 | 2.3 | 3.8 | 2.3 | 2.6 | 1.6 | 2.6 | 1.6 | 2.6 | 1.6 | 2.6 | 1.6 |
| 3.5 m | 3.3 | 1.9 | 3.3 | 1.8 | 3.2 | 1.8 | 3.3 | 2.0 | 2.3 | 1.3 | 2.2 | 1.2 | 2.2 | 1.2 | 2.3 | 1.3 |
| 4.0 m | 2.8 | 1.6 | 2.8 | 1.4 | 2.8 | 1.4 | 2.9 | 1.6 | 1.9 | 1.0 | 1.9 | 0.9 | 1.9 | 0.9 | 2.0 | 1.1 |
| 4.5 m | 2.6 (4.4 m) | 1.3 (4.4 m) | 2.5 | 1.2 | 2.4 | 1.1 | 2.6 | 1.3 | 1.7 (4.4 m) | 0.9 (4.4 m) | 1.6 | 0.7 | 1.6 | 0.7 | 1.8 | 0.9 |
| 5.0 m | | | 2.2 | 0.9 | 2.1 | 0.9 | 2.2 | 1.1 | | | 1.4 | 0.6 | 1.4 | 0.5 | 1.6 | 0.7 |
| 5.5 m | | | 1.9 | 0.7 | 1.8 | 0.7 | 2.0 | 0.9 | | | 1.2 | 0.45 | 1.2 | 0.4 | 1.4 | 0.6 |
| 6.0 m | | | 1.7 | 0.5 | 1.6 | 0.5 | 1.8 | 0.7 | | | 1.1 | | 1.1 | | 1.2 | 0.45 |
| 7.0 m | | | 1.3 | | 1.3 | | 1.5 | 0.45 | | | 0.8 | | 0.8 | | 1.0 | |
| 8.0 m | | | 1.0 | | 1.0 | | 1.2 | | | | 0.6 | | 0.6 | | 0.8 | |
| 9.0 m | | | | | 0.8 | | 1.0 | | | | | | 0.45 | | 0.6 | |
| 10.0 m | | | | | 0.6 | | 0.8 | | | | | | 0.35 | | 0.45 | |
| 11.0 m | | | | | 0.4 | | 0.6 | | | | | | | | 0.35 | |
| 12.0 m | | | | | | | 0.45 | | | | | | | | | |
| 13.0 m | | | | | | | 0.35 | | | | | | | | | |
| A (°) | 0-82.5 | | | 37-82.5 | 0-82.5 | 56-82.5 | 35-82.5 | 64-82.5 | 0-82.5 | | | 46-82.5 | 33-82.5 | 61-82.5 | 50-82.5 | 68-82.5 |

A: boom angle range (with no load)

## ❷ Points to remember when not using the outriggers

1. The rated lifting capacities are shown for when the crane is set horizontally on firm ground, the tires are at the standard pressure (900 kPa {9.00 kgf/cm2}), the crane suspension is totally locked, and include the weight of the slings and main winch hook (140 kg) when working with the boom. The values above the bold line are based on the crane strength while those below are based on the crane stability factor.
   When performing actual work, use after considering the ground and operating conditions, etc.
2. The load radius is based on the actual figure including the boom and tire deflection, so always use this as the standard.
3. The table below shows the hook wire rope standard number of parts of line for each boom length.
   However, when using other number of parts of line, the load per line should not exceed 2.9 t for the main winch or 3.2 t for the auxiliary winch.

| Boom length | 6.5 m | 10.7 m | 14.9 m | 19.1 m | Single top |
|---|---|---|---|---|---|
| Number of parts of line | 4 | 4 | 4 | 4 | 1 |




4. Do not perform high-speed unwinding with a boom longer than 19.1 m or a jib.
5. Only perform "front" crane operations while the AML "front position symbol" is lit. The front range is when the boom is within 2° (1° to either the left or right) of the front of the carrier.
6. The rated lifting capacity for the single top is the value obtained by subtracting 80 kg from the boom rated lifting capacity, and includes the weight of the slings and auxiliary winch hook (60 kg), but must not exceed 3.2 t.
7. Perform pick and carry with the "drive select" switch set to "L/4D" and the shift lever set to first gear.
8. Perform pick and carry with the slewing brake on, the load close to the ground so it will not swing, and at a speed of 1.6 km/h or lower. In particular, abrupt steering, starting or braking must be avoided.
9. Do not perform crane operations while performing pick and carry.