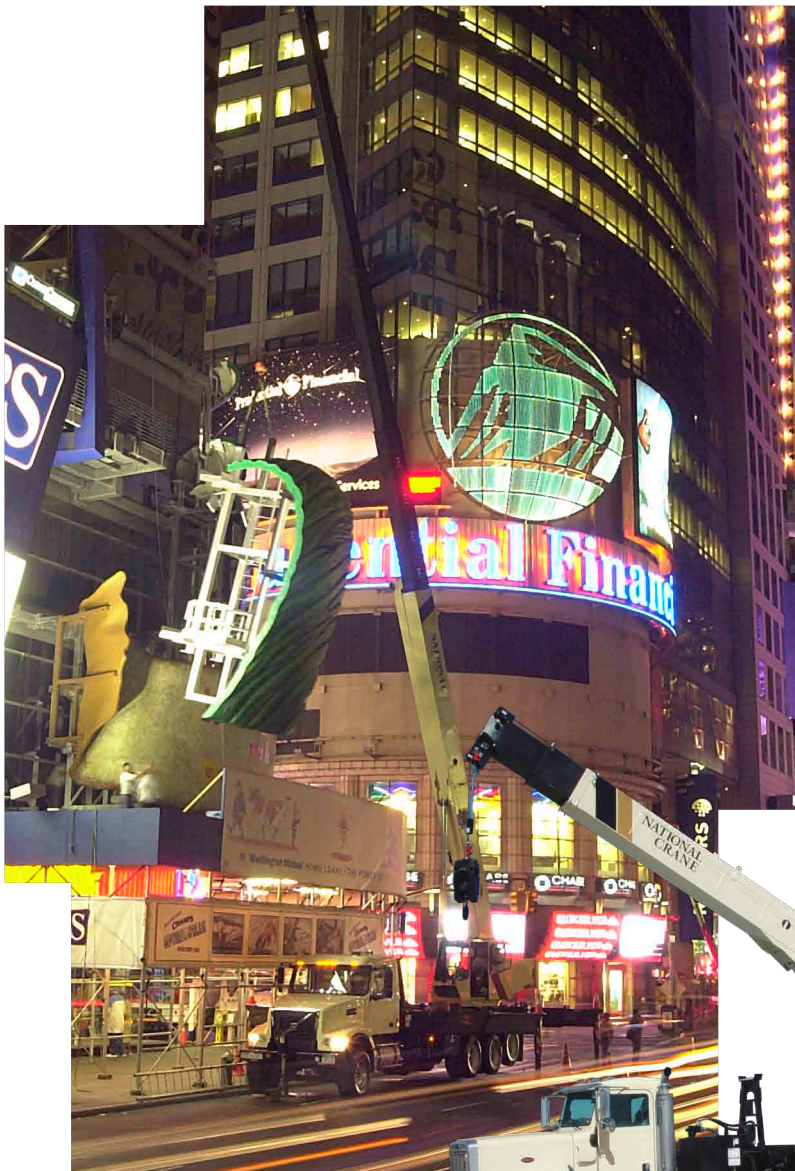


National Crane 1800 Series

Product Guide



Features

- 36,29 t (40 USt) rating
- 43,28 m (142 ft) five-section boom (80 ft)
- Self-lubricating "Easy Glide" wear pads
- Tailswing counterweight



Features



Deluxe operator's cab

Rigid galvanized steel structure, well insulated, with ample safety glass for operator visibility and comfort. Multi-position seat with arm rest controls, ventilation fans, diesel heater, and wipers. Optional air conditioning is available.



Outriggers

Outrigger span of 24.7 ft when fully extended; 17.5 ft at mid-span.

Equipped with both ground level and in-cab outrigger controls, the Series 1800 outriggers allow quick and easy crane set-up.

Overload protection

All National Crane boom trucks are equipped with overload protection. A Load Moment Indicator (LMI) is standard on all Series 1800 machines. The LCD display is visible in full or low light and displays all crane load lifting values simultaneously.



Five-section boom

At 142 ft, the Series 1800 five-section boom is the longest in its size range. The long boom allows the operator to perform more lifts without the use of a jib, reducing setup time and improving efficiency. Also available are optional boom lengths of 79 ft, 103 ft and 127 ft.

Features



Best in class performance and serviceability

- The stronger standard torsion box improves rigidity, reduces truck frame flex and reduces the need for counterweight.
- Easy Glide Boom Wear Pads reduce the conditions that cause boom chatter and vibration. The net result is smoother crane operation.
- Speedy-reeve boom tip and sheave blocks simplify rigging changes by decreasing the time needed to change line reeving.
- Crane components painted before assembly reduce the chance of rust, improve serviceability and enhance the appearance of the crane.
- A state-of-the-art control valve provides smooth operation. The new design eliminates parts, therefore reducing repair costs and improving the crane's serviceability.
- Bearings on the boom and retract cables can be greased through access holes in the boom side plates.
- Boom sections are supported by one hydraulic extend cylinder, minimizing maintenance.

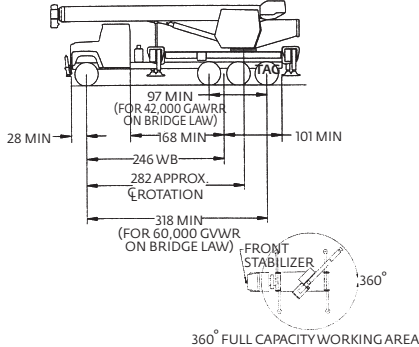
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| Capacities | 8 |
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Mounting configurations

The configurations are based on the Series 1800 with an 85% stability factor. The complete unit must be installed in accordance with factory requirements and a test performed to determine actual stability and counterweight requirements since individual truck chassis vary.

1800 w/Tag Axle 60,000 GVWR (79/103/127 ft boom)



Configuration 1: 24,08 m (79 ft), 31,39 m (103 ft) 38,71 m (127 ft) Boom with Tag Axle

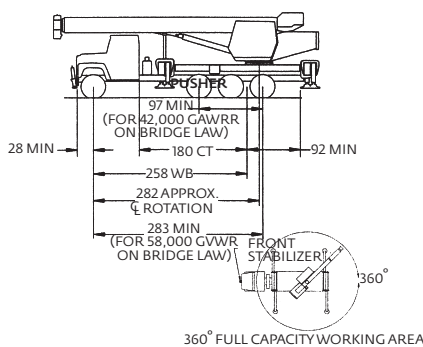
Working area: 360°
 Gross Axle Weight Rating Front: 9072 kg (20,000 lb)
 Gross Axle Weight Rating Rear: 18 144 kg (40,000 lb)
 Gross Vehicle Weight Rating: 27 216 kg (60,000 lb)
 Wheelbase: 625 cm (246 in)
 Cab to Axle/trunnion (CA/CT): 427 cm (168 in)
 Frame Section Modulus (SM), front axle to end of AF: 785 MPa (110,000 PSI): 426 cm³ (30.0 in³)
 Stability Weight, Front: 4286 kg (9450 lb) minimum*
 Stability Weight, Rear: 4899 kg (10,800 lb) minimum*
 Estimated Average Final Weight: 25 830 kg (56,945 lb)**

This configuration shows the 360° working area that is achieved with the front stabilizer (standard on the Series 1800). The front stabilizer is essential when extending the boom and lifting loads over the front of the truck.

*Estimated axle scale weights prior to installation of crane, stabilizers and subbase for 85% stability.

**Estimated final weight (wet) with 38,71 m (127 ft) boom, 182 kg (400 lb) 3-part block, steel decks, 1045 kg (2300 lb) swinging counterweight, 379 L (100 gal) fuel tank and two workers in cab.

1800 w/Pusher Axle 58,000 GVWR (79/103/127 ft boom)



Configuration 2: 24,08 m (79 ft), 31,39 m (103 ft) 38,71 m (127 ft) Boom with Pusher Axle

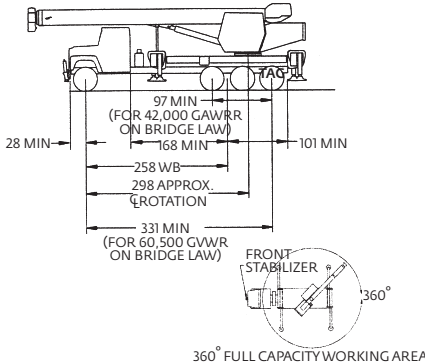
Working area: 360°
 Gross Axle Weight Rating Front: 9072 kg (20,000 lb)
 Gross Axle Weight Rating Rear: 18 144 kg (40,000 lb)
 Gross Vehicle Weight Rating: 27 216 kg (60,000 lb)
 Wheelbase: 655 cm (258 in)
 Cab to Axle/trunnion (CA/CT): 457 cm (180 in)
 Frame Section Modulus (SM), front axle to end of AF: 785 MPa (110,000 PSI): 426 cm³ (30.0 in³)
 Stability Weight, Front: 4525 kg (9975 lb) minimum*
 Stability Weight, Rear: 4661 kg (10,275 lb) minimum*
 Estimated Average Final Weight: 25 830 kg (56,945 lb)**

This configuration shows the 360° working area that is achieved with the front stabilizer (standard on the Series 1800). The front stabilizer is essential when extending the boom and lifting loads over the front of the truck.

*Estimated axle scale weights prior to installation of crane, stabilizers and subbase for 85% stability.

**Estimated final weight (wet) with 38,71 m (127 ft) boom, 182 kg (400 lb) 3-part block, steel decks, 1045 kg (2300 lb) swinging counterweight, 379 L (100 gal) fuel tank and two workers in cab.

1800 w/Tag Axle 60,000 GVWR (142 ft boom)



Configuration 3: 43,29 m (142 ft) Boom with Tag Axle

Working area: 360°
 Gross Axle Weight Rating Front: 9072 kg (20,000 lb)
 Gross Axle Weight Rating Rear: 18 144 kg (40,000 lb)
 Gross Vehicle Weight Rating: 27 216 kg (60,000 lb)
 Wheelbase: 655 cm (258 in)
 Cab to Axle/trunnion (CA/CT): 427 cm (168 in)
 Frame Section Modulus (SM), front axle to end of AF: 785 MPa (110,000 PSI): 426 cm³ (30.0 in³)
 Stability Weight, Front: 4207 kg (9275 lb) minimum*
 Stability Weight, Rear: 4797 kg (10,575 lb) minimum*
 Estimated Average Final Weight: 26 308 kg (58,000 lb)**

This configuration shows the 360° working area that is achieved with the front stabilizer (standard on the Series 1800). The front stabilizer is essential when extending the boom and lifting loads over the front of the truck.

*Estimated axle scale weights prior to installation of crane, stabilizers and subbase for 85% stability.

**Estimated final weight (wet) with 43,29 m (142 ft) boom, 182 kg (400 lb) 3-part block, steel decks, 1045 kg (2300 lb) swinging counterweight, 379 L (100 gal) fuel tank and two workers in cab.

Minimum truck requirements

Many factors must be considered in the selection of proper truck for a 1800 series crane. Items which must be considered are:

- 1. Axle Rating.** Axle ratings are determined by the axles, tires, rims, springs, brakes, steering and frame strength of the truck. If any one of these components is below the required rating, the gross axle rating is reduced to its weakest component value.
- 2. Wheelbase (WB), Cab-to-Trunnion (CT) and Bare Chassis Weight.** The wheelbase, CT and chassis weights shown are required so the basic 1800 can be legally driven in most states and meet stability requirements. The dimensions given assume the sub-base is installed properly behind the truck cab. If exhaust stacks, transmission protrusions, etc., do not allow a close installation to the cab, the WB and CT dimensions must be increased. Refer to the Mounting Configuration pages for additional information.
- 3. Truck Frame.** Try to select a truck frame that will minimize or eliminate frame reinforcement or extension of the after frame (AF). Many frames are available that have the necessary after frame (AF) section modulus (SM) and resistance to bending

moment (RBM) so that reinforcing is not required. The front hydraulic jack is used for a 360° working range around the truck. The frame under the cab through the front suspension must have the minimum S.M. and RBM because reinforcing through the front suspension is often difficult because of engine, radiator mounts and steering mechanics. See "Truck Requirements" and "Frame Strength" pages for the necessary section modulus and resistance to bending moment values. Integral extended front frame rails are required for front center stabilizer installation.

4. Additional Equipment. In addition to the axle ratings, wheelbase, cab-to-axle requirements and frame, it is recommended that the truck is equipped with electronic engine control, increased cooling and a transmission with a PTO opening available with an extra heavy duty PTO. See "PTO Selection" pages. A conventional cab truck should be used for standard crane mounts.

5. Neutral Start Switch. The chassis must be equipped with a switch that prevents operation of the engine starter when the transmission is in gear.

Notes:

- Gross Vehicle Weight Rating (GVWR) is dependent on all components of the vehicle (axles, tires, springs, frame, etc.) meeting manufacturers' recommendations; always specify GVWR when purchasing trucks
- Diesel engines require a variable speed governor and energize-to-run fuel solenoid for smooth crane operation; electronic fuel injection requires EET engine remote throttle

- All mounting data is based on a National Series 1800 with an 85% stability factor (75% stability factor for New York City).

- The complete unit must be installed in accordance with factory requirements, and a test performed to determine actual stability and counterweight requirements per SAE J765; contact the factory for details

Specifications

Boom and jib combinations data

Available in four basic models:

Model 1879 – Equipped with a 9,45 m - 24,08 m (31 ft - 79 ft) three-section boom. There are no jib options for this boom model. Maximum tip height is 26,52 m (87 ft).

9,45 m - 24,08 m (31 ft - 79 ft) three-section hydraulic boom



Model 18103 – Equipped with a 9,45 m - 31,39 m (31 ft - 103 ft) four-section boom. This model can be equipped with a 9,45 m (31 ft) jib, offering a vertical reach of 43,29 m (142 ft) and a 9,45 m - 16,76 m (31 ft - 55 ft) side-stowing foldaway jib, providing a vertical reach of 50,60 m (166 ft).

9,45 m - 31,39 m (31 ft - 103 ft) four-section hydraulic boom **18FJ31** 9,45 m (31 ft) single-section offsettable manual jib



9,45 m - 31,39 m (31 ft - 103 ft) four-section hydraulic boom **18FJ55M** 9,45 m - 16,76 m (31 ft - 55 ft) two-section manual jib



Model 18127 – Equipped with a 9,45 - 38,71 m (31 ft - 127 ft) five-section boom. This model can be equipped with a 9,45 m (31 ft) jib, offering a vertical reach of 50,60 m (166 ft) or a 9,45 m - 16,76 m (31 ft - 55 ft) jib providing a vertical reach of 57,91 m (190 ft).

9,45 m - 38,71 m (31 ft - 127 ft) five-section hydraulic boom **18FJ31** 9,45 m (31 ft) single-section manual jib



9,45 m - 38,71 m (31 ft - 127 ft) five-section hydraulic boom **18FJ55M** 9,45 m - 16,76 m (31 ft - 55 ft) two-section manual jib



Model 18142 – Equipped with a 10,36 m - 43,29 m (34 ft - 142 ft) five-section boom. This model can be equipped with a 7,92 m (26 ft) jib, offering a vertical reach of 53,64 m (176 ft).

10,36 m - 43,29 m (34 ft - 142 ft) five-section hydraulic boom **18FJ26** 7,92 m (26 ft) single-section manual jib

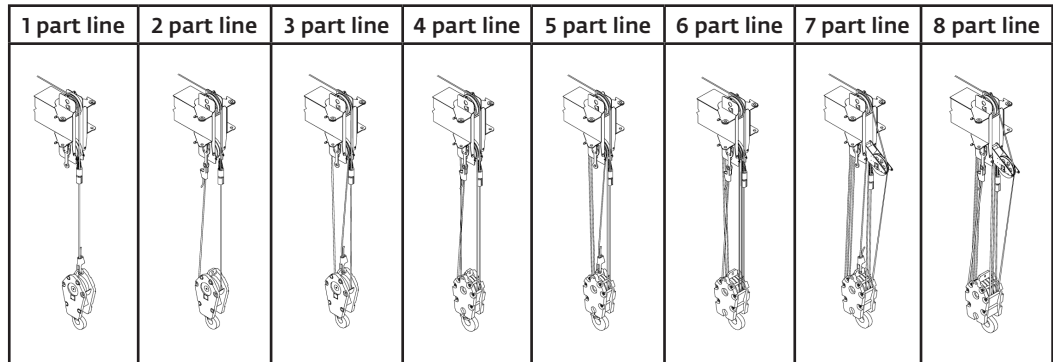


Note: Maximum tip is measured with outriggers/stabilizers fully extended.

Specifications

1800 winch data

- All winch pulls and speeds are shown on the fifth layer.
- Winch line pulls would increase on the first, second, third and fourth layers.
- Winch line speed would decrease on the first, second, third and fourth layers.
- Winch line pulls may be limited by the winch capacity or the ANSI 5 to 1 cable safety factor.



| Standard planetary winch | Cable supplied | Average breaking strength | Lift and speed | Lift and speed | Lift and speed | Lift and speed | Lift and speed | Lift and speed | Lift and speed | Lift and speed |
|--------------------------|---------------------------------------|---------------------------|---|---|--|--|--|--|--|--|
| Low speed | 5/8" diameter rotation resistant IWRC | 25 583 kg (56,400 lb) | 4536 kg (10,000 lb) 62 m/min (205 fpm) | 9072 kg (20,000 lb) 31 m/min (103 fpm) | 13 608 kg (30,000 lb) 21 m/min (68 fpm) | 18 144 kg (40,000 lb) 16 m/min (51 fpm) | 22 680 kg (50,000 lb) 13 m/min (41 fpm) | 27 216 kg (60,000 lb) 10 m/min (34 fpm) | 31 751 kg (70,000 lb) 9 m/min (29 fpm) | 36 287 kg (80,000 lb) 8 m/min (26 fpm) |
| High speed | 5/8" diameter rotation resistant IWRC | 25 583 kg (56,400 lb) | 2268 kg (5000 lb) 125 m/min (410 fpm) | 4536 kg (10,000 lb) 62 m/min (205 fpm) | 6804 kg (15,000 lb) 42 m/min (137 fpm) | 9072 kg (20,000 lb) 31 m/min (103 fpm) | 11 340 kg (25,000 lb) 25 m/min (82 fpm) | 13 608 kg (30,000 lb) 21 m/min (68 fpm) | 15 876 kg (35,000 lb) 18 m/min (59 fpm) | 18 144 kg (40,000 lb) 16 m/min (51 fpm) |

| Winch | Full drum pull | Allowable cable pull |
|--|---|--|
| Standard planetary and auxiliary planetary | 2268 kg (5000 lb) high speed 4536 kg (10,000 lb) low speed | 5117 kg (11,280 lb) 5117 kg (11,280 lb) |

| Loadline deduct | | |
|-----------------|-----------------|-----------------|
| | Aux boom head | 45 kg (100 lb) |
| 5 USt | Downhaul weight | 82 kg (180 lb) |
| 15 USt | 1-sheave block | 170 kg (375 lb) |
| 25 USt | 2-sheave block | 290 kg (640 lb) |
| 35 USt | 3-sheave block | 395 kg (870 lb) |
| 40 USt | 4-sheave block | 440 kg (970 lb) |

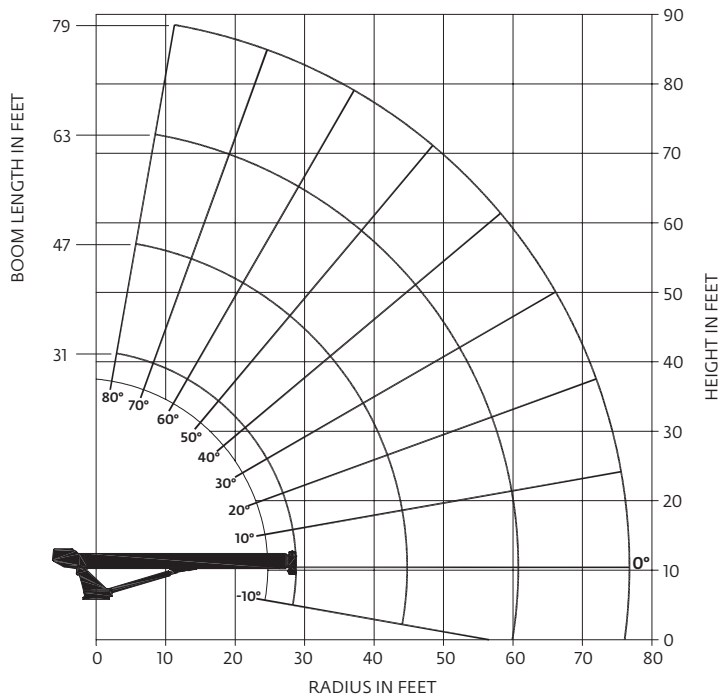
THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

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

Capacities

Series 1879: 24,08 m boom/full span outrigger 7,6 m (24.7 ft)

National Crane will send you a chart on request – or you may secure needed load rating information through your nearest National Crane dealer.



CAUTION:

- Do not operate crane booms, jib extensions, any accessories or loads within 3 m (10 ft) of live power lines or other conductors of electricity.
- Jib and boom capacities shown are maximum for each section.
- Do not exceed capacities at reduced radii.
- Load ratings shown on the load rating charts are maximum allowable loads with the outriggers properly extended on a firm, level surface and the crane leveled and mounted on a factory recommended truck.
- Always level the crane with the level indicator located on the crane.
- The operator must reduce load to allow for factors such as wind, ground conditions, operating speeds and their effects on freely suspended loads.
- Overloading this crane may cause structural collapse or instability.
- Weights on any accessories attached to the boom or loadline must be deducted from the load chart capacities.
- Do not exceed jib capacities at any reduced boom lengths.
- Do not deadhead lineblock against boom tip when extending boom or winching up.
- Keep at least three wraps of loadline on drum at all times.
- Use only specified cable with this machine.

Load chart

31 ft - 79 ft BOOM RATED LOADS

| LOAD RADIUS (ft) | LOADED BOOM ANGLE | 31 ft BOOM (lb) | LOADED BOOM ANGLE | 47 ft BOOM (lb) | LOADED BOOM ANGLE | 63 ft BOOM (lb) | LOADED BOOM ANGLE | 79 ft BOOM (lb) |
|------------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|
| 7 | 73.5 | 80,000 | | | | | | |
| 8 | 71.5 | 74,000 | 78 | 50,000 | | | | |
| 10 | 67.5 | 65,000 | 75.5 | 49,000 | | | | |
| 12 | 63 | 57,000 | 73 | 45,000 | 77.5 | 40,000 | | |
| 15 | 57 | 45,400 | 69 | 38,000 | 75 | 37,300 | 78.5 | 26,900 |
| 20 | 44.5 | 37,000 | 62.5 | 31,500 | 70.5 | 30,900 | 75 | 23,000 |
| 25 | 28 | 26,600 | 55.5 | 23,800 | 66 | 26,200 | 71 | 19,800 |
| 30 | | | 47 | 20,300 | 60.5 | 20,600 | 67.5 | 17,300 |
| 35 | | | 38.5 | 16,000 | 55 | 16,200 | 63 | 15,200 |
| 40 | | | 26.5 | 13,000 | 49 | 13,200 | 59 | 13,400 |
| 45 | | | | | 42.5 | 11,000 | 54.5 | 11,100 |
| 50 | | | | | 35 | 9300 | 50 | 9450 |
| 55 | | | | | 26 | 7950 | 45 | 8050 |
| 60 | | | | | 9.5 | 6850 | 39.5 | 6950 |
| 65 | | | | | | | 33 | 6000 |
| 70 | | | | | | | 25 | 5150 |
| 75 | | | | | | | 13 | 4050 |
| | 0 | 21,300 | 0 | 10,900 | 0 | 6700 | 0 | 3800 |

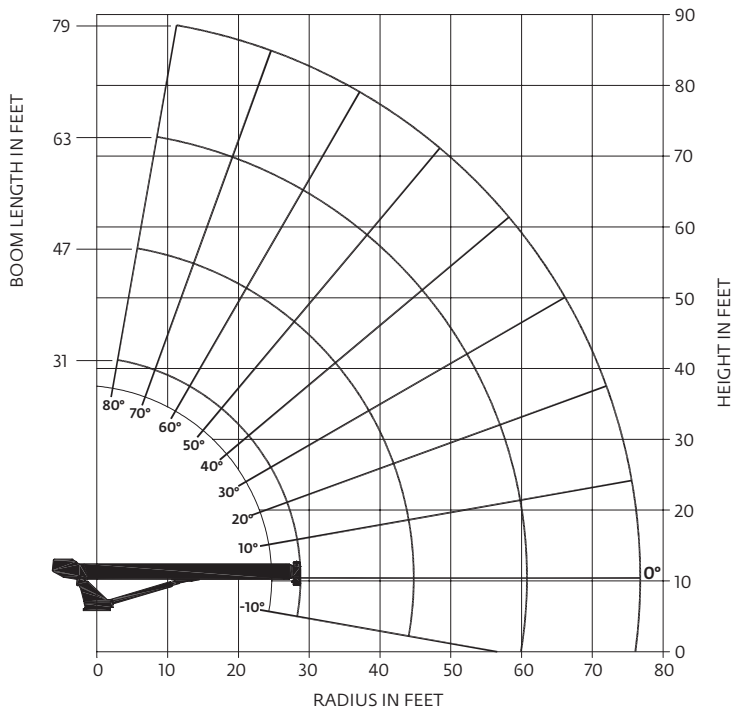
NOTE:

1. All capacities are in pounds, angles in degrees, radius in feet.
2. Loaded boom angles are given as reference only.
3. Shaded areas are structurally limited capacities.

Capacities

Series 1879: 24,08 m boom/mid span outrigger 5,4 m (17.5 ft)

National Crane will send you a chart on request – or you may secure needed load rating information through your nearest National Crane dealer.



CAUTION:

- Do not operate crane booms, jib extensions, any accessories or loads within 3 m (10 ft) of live power lines or other conductors of electricity.
- Jib and boom capacities shown are maximum for each section.
- Do not exceed capacities at reduced radii.
- Load ratings shown on the load rating charts are maximum allowable loads with the outriggers properly extended on a firm, level surface and the crane leveled and mounted on a factory recommended truck.
- Always level the crane with the level indicator located on the crane.
- The operator must reduce load to allow for factors such as wind, ground conditions, operating speeds and their effects on freely suspended loads.
- Overloading this crane may cause structural collapse or instability.
- Weights on any accessories attached to the boom or loadline must be deducted from the load chart capacities.
- Do not exceed jib capabilities at any reduced boom lengths.
- Do not deadhead lineblock against boom tip when extending boom or winching up.
- Keep at least three wraps of loadline on drum at all times.
- Use only specified cable with this machine.

Load chart

31 ft - 79 ft BOOM RATED LOADS

| LOAD RADIUS (ft) | LOADED BOOM ANGLE | 31 ft BOOM (lb) | LOADED BOOM ANGLE | 47 ft BOOM (lb) | LOADED BOOM ANGLE | 63 ft BOOM (lb) | LOADED BOOM ANGLE | 79 ft BOOM (lb) |
|------------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|
| 7 | 73.5 | 80,000 | | | | | | |
| 8 | 71.5 | 74,000 | 78 | 50,000 | | | | |
| 10 | 67.5 | 65,000 | 75.5 | 49,000 | | | | |
| 12 | 63 | 57,000 | 73 | 45,000 | 77.5 | 40,000 | | |
| 15 | 56.5 | 45,400 | 69 | 38,000 | 75 | 37,300 | 78.5 | 26,900 |
| 20 | 43.5 | 25,900 | 62.5 | 26,500 | 70 | 27,000 | 75 | 23,000 |
| 25 | 27.5 | 16,700 | 55 | 17,100 | 65.5 | 17,500 | 71 | 17,700 |
| 30 | | | 47 | 12,200 | 60 | 12,400 | 67 | 12,600 |
| 35 | | | 38 | 9100 | 54.5 | 9350 | 63 | 9500 |
| 40 | | | 25.5 | 7100 | 49 | 7300 | 59 | 7400 |
| 45 | | | | | 42 | 5750 | 54.5 | 5850 |
| 50 | | | | | 34.5 | 4600 | 49.5 | 4700 |
| 55 | | | | | 25.5 | 3650 | 44.5 | 3750 |
| 60 | | | | | 9 | 2900 | 38.5 | 3000 |
| 65 | | | | | | | 32.5 | 2400 |
| 70 | | | | | | | 24.5 | 1900 |
| 75 | | | | | | | 12.5 | 1450 |
| | 0 | 12,800 | 0 | 5600 | 0 | 2800 | 0 | 1300 |

NOTE:

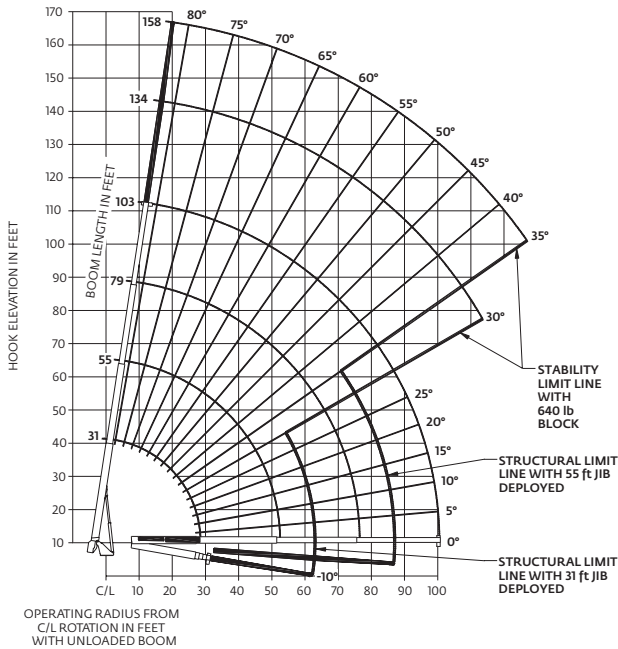
1. All capacities are in pounds, angles in degrees, radius in feet.
2. Loaded boom angles are given as reference only.
3. Shaded areas are structurally limited capacities.

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

Capacities

Series 18103: 31,39 m boom with 9,45 m-16,76 m (31 ft - 55 ft) jib/full span outrigger 7,6 m (24.7 ft)

National Crane will send you a chart on request – or you may secure needed load rating information through your nearest National Crane dealer.



CAUTION:

- Do not operate crane booms, jib extensions, any accessories or loads within 3 m (10 ft) of live power lines or other conductors of electricity.
- Jib and boom capacities shown are maximum for each section.
- Do not exceed capacities at reduced radii.
- Load ratings shown on the load rating charts are maximum allowable loads with the outriggers properly extended on a firm, level surface and the crane leveled and mounted on a factory recommended truck.
- Always level the crane with the level indicator located on the crane.
- The operator must reduce load to allow for factors such as wind, ground conditions, operating speeds and their effects on freely suspended loads.
- Overloading this crane may cause structural collapse or instability.
- Weights on any accessories attached to the boom or loadline must be deducted from the load chart capacities.
- Do not exceed jib capabilities at any reduced boom lengths.
- Do not deadhead lineblock against boom tip when extending boom or winching up.
- Keep at least three wraps of loadline on drum at all times.
- Use only specified cable with this machine.

Load chart

31 ft - 103 ft BOOM RATED LOADS WITHOUT JIB

| LOAD RADIUS (ft) | LOADED BOOM ANGLE | 31 FT BOOM (lb) | LOADED BOOM ANGLE | 55 FT BOOM (lb) | LOADED BOOM ANGLE | 79 FT BOOM (lb) | LOADED BOOM ANGLE | 103 FT BOOM (lb) |
|------------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|------------------|
| 7 | 73.9 | 80,000 | | | | | | |
| 8 | 71.9 | 74,000 | | | | | | |
| 10 | 67.7 | 65,000 | 78.9 | 50,000 | | | | |
| 12 | 63.5 | 57,000 | 76.6 | 45,000 | | | | |
| 15 | 56.7 | 44,000 | 73.3 | 38,000 | 79.6 | 30,000 | | |
| 20 | 44.1 | 30,800 | 67.7 | 31,500 | 75.9 | 26,000 | 79.5 | 17,000 |
| 25 | 27.4 | 23,200 | 61.7 | 23,800 | 72.1 | 22,000 | 76.7 | 15,200 |
| 30 | | | 55.3 | 18,800 | 68.1 | 18,500 | 73.8 | 13,500 |
| 35 | | | 48.3 | 15,200 | 64 | 15,500 | 70.9 | 12,000 |
| 40 | | | 40.5 | 12,500 | 59.6 | 12,800 | 67.8 | 10,500 |
| 45 | | | 31.2 | 10,500 | 55.1 | 10,700 | 65 | 9300 |
| 50 | | | 19.3 | 9000 | 50.7 | 9000 | 61.8 | 8300 |
| 55 | | | | | 45.5 | 7600 | 58.5 | 7400 |
| 60 | | | | | 39.9 | 6600 | 55.1 | 6500 |
| 65 | | | | | 33.4 | 5600 | 51.4 | 5600 |
| 70 | | | | | 25.5 | 4800 | 47.5 | 4800 |
| 75 | | | | | 13.4 | 4050 | 43.4 | 4100 |
| 80 | | | | | | | 38.9 | 3500 |
| 85 | | | | | | | 33.8 | 2950 |
| 90 | | | | | | | 28 | 2450 |
| 95 | | | | | | | 20.7 | 2050 |
| 100 | | | | | | | 7.9 | 1650 |
| 0 | | 19,700 | 0 | 8200 | 0 | 3800 | 0 | 1600 |

31 ft JIB RATED LOADS

| RADIUS FULLY EXTENDED | LOADED BOOM ANGLE | RATED LOADS ALL BOOM LENGTHS |
|-----------------------|-------------------|------------------------------|
| 25 | 80 | 8800 |
| 38 | 75 | 8000 |
| 49 | 70 | 6500 |
| 60 | 65 | 5100 |
| 70 | 60 | 4100 |
| 79 | 55 | 3300 |
| 88 | 50 | 2600 |
| 96 | 45 | 1900 |
| 103 | 40 | 1350 |
| 110 | 35 | 950 |
| 115 | 30 | 650 |

NOTE:

1. Operate with jib by radius when main boom is fully extended. If necessary increase boom angle to maintain loaded radius.
2. Operate with jib by boom angle when main boom is not fully extended. Do not exceed rated jib capacities at any reduced boom lengths.
3. Capacities do not exceed 85% stability.
4. Shaded areas are structurally limited capacities.

55 ft JIB RATED LOADS

| RADIUS FULLY EXTENDED | LOADED BOOM ANGLE | RATED LOADS ALL BOOM LENGTHS |
|-----------------------|-------------------|------------------------------|
| 29 | 80 | 4000 |
| 45 | 75 | 3700 |
| 59 | 70 | 3300 |
| 73 | 65 | 3000 |
| 85 | 60 | 2600 |
| 96 | 55 | 2100 |
| 106 | 50 | 1700 |
| 115 | 45 | 1300 |
| 123 | 40 | 950 |
| 130 | 35 | 650 |

NOTE:

1. All capacities are in pounds, angles in degrees, radius in feet.
2. Loaded boom angles are given as reference only.
3. Shaded areas are structurally limited capacities.

RATED LOAD REDUCTIONS WITH JIB

| BOOM LENGTH | 31 ft-55 ft JIB STOWED | | 31 ft-55 ft JIB ERECTED AT 31 ft LENGTH | |
|-------------|------------------------|--------------------|---|---------------------|
| | Diagram | Reduce load | Diagram | Reduce load |
| 31 ft | | Reduce load 800 lb | | Reduce load 2300 lb |
| 55 ft | | Reduce load 450 lb | | Reduce load 2000 lb |
| 79 ft | | Reduce load 350 lb | | Reduce load 1900 lb |
| 103 ft | | Reduce load 250 lb | | Reduce load 1800 lb |

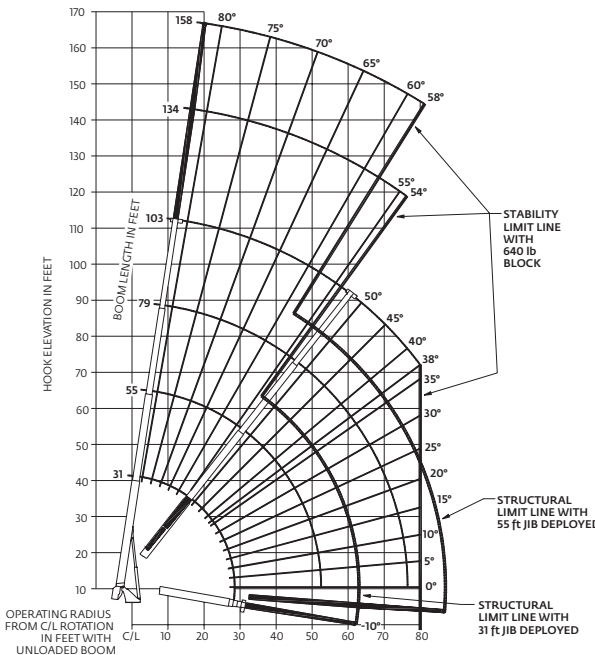
THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

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

Capacities

Series 18103: 31,39 boom with 9,45 m - 16,76 m (31 ft - 55 ft) jib/mid span outrigger 5,4 m (17.5 ft)

National Crane will send you a chart on request – or you may secure needed load rating information through your nearest National Crane dealer.



CAUTION:

- Do not operate crane booms, jib extensions, any accessories or loads within 3 m (10 ft) of live power lines or other conductors of electricity.
- Jib and boom capacities shown are maximum for each section.
- Do not exceed capacities at reduced radii.
- Load ratings shown on the load rating charts are maximum allowable loads with the outriggers properly extended on a firm, level surface and the crane leveled and mounted on a factory recommended truck.
- Always level the crane with the level indicator located on the crane.
- The operator must reduce load to allow for factors such as wind, ground conditions, operating speeds and their effects on freely suspended loads.
- Overloading this crane may cause structural collapse or instability.
- Weights on any accessories attached to the boom or loadline must be deducted from the load chart capacities.
- Do not exceed jib capabilities at any reduced boom lengths.
- Do not deadhead lineblock against boom tip when extending boom or winching up.
- Keep at least three wraps of loadline on drum at all times.
- Use only specified cable with this machine.

Load chart

31 ft - 103 ft BOOM RATED LOADS WITHOUT JIB

| LOAD RADIUS (ft) | LOADED BOOM ANGLE | 31 ft BOOM (lb) | LOADED BOOM ANGLE | 55 ft BOOM (lb) | LOADED BOOM ANGLE | 79 ft BOOM (lb) | LOADED BOOM ANGLE | 103 ft BOOM (lb) |
|------------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|------------------|
| 7 | 73.9 | 80,000 | | | | | | |
| 8 | 71.9 | 74,000 | | | | | | |
| 10 | 67.7 | 65,000 | 78.9 | 50,000 | | | | |
| 12 | 63.4 | 57,000 | 76.6 | 45,000 | | | | |
| 15 | 56.7 | 44,000 | 73.3 | 38,000 | 79.6 | 30,000 | | |
| 20 | 44 | 26,000 | 67.5 | 27,000 | 75.9 | 26,000 | 79.5 | 17,000 |
| 25 | 27.4 | 16,700 | 61.3 | 17,500 | 71.6 | 17,500 | 76.7 | 15,200 |
| 30 | | | 54.8 | 12,300 | 67.5 | 12,300 | 73.7 | 12,200 |
| 35 | | | 48.5 | 9200 | 63.6 | 9300 | 70.7 | 9400 |
| 40 | | | 40.8 | 7000 | 59.2 | 7100 | 67.5 | 7200 |
| 45 | | | 31.6 | 5400 | 54.7 | 5500 | 64.2 | 5600 |
| 50 | | | 18.6 | 4150 | 49.9 | 4300 | 60.9 | 4350 |
| 55 | | | | | 44.8 | 3300 | 57.5 | 3350 |
| 60 | | | | | 39.1 | 2550 | 54.1 | 2600 |
| 65 | | | | | 32.7 | 1900 | 50.3 | 1950 |
| 70 | | | | | 24.8 | 1350 | 46.5 | 1400 |
| 75 | | | | | 12.7 | 950 | 42.4 | 1000 |
| 80 | | | | | | | 37.9 | 650 |
| 0 | | 13,200 | 0 | 3600 | 0 | 800 | | |

31 ft JIB RATED LOADS

| RADIUS FULLY EXTENDED | LOADED BOOM ANGLE | RATED LOADS ALL BOOM LENGTHS |
|-----------------------|-------------------|------------------------------|
| 25 | 80 | 8800 |
| 38 | 75 | 8000 |
| 48 | 70 | 5000 |
| 57 | 65 | 3000 |
| 67 | 60 | 1650 |
| 76 | 55 | 750 |
| 78 | 54 | 650 |

55 ft JIB RATED LOADS

| RADIUS FULLY EXTENDED | LOADED BOOM ANGLE | RATED LOADS ALL BOOM LENGTHS |
|-----------------------|-------------------|------------------------------|
| 29 | 80 | 4000 |
| 45 | 75 | 3700 |
| 59 | 70 | 3300 |
| 70 | 65 | 2150 |
| 80 | 60 | 1150 |
| 85 | 58 | 650 |

NOTE:

- Operate with jib by radius when main boom is fully extended. If necessary increase boom angle to maintain loaded radius.
- Operate with jib by boom angle when main boom is not fully extended. Do not exceed rated jib capacities at any reduced boom lengths.
- Capacities do not exceed 85% stability.
- Shaded areas are structurally limited capacities.

NOTE:

- All capacities are in pounds, angles in degrees, radius in feet.
- Loaded boom angles are given as reference only.
- Shaded areas are structurally limited capacities.

RATED LOAD REDUCTIONS WITH JIB

| BOOM LENGTH | 31 ft - 55 ft JIB STOWED | | 31 ft - 55 ft JIB ERECTED AT 31 ft LENGTH | |
|-------------|--------------------------|--------------------|---|---------------------|
| | Diagram | Reduce load | Diagram | Reduce load |
| 31 ft | | Reduce load 800 lb | | Reduce load 2300 lb |
| 55 ft | | Reduce load 450 lb | | Reduce load 2000 lb |
| 79 ft | | Reduce load 350 lb | | Reduce load 1900 lb |
| 103 ft | | Reduce load 250 lb | | Reduce load 1800 lb |

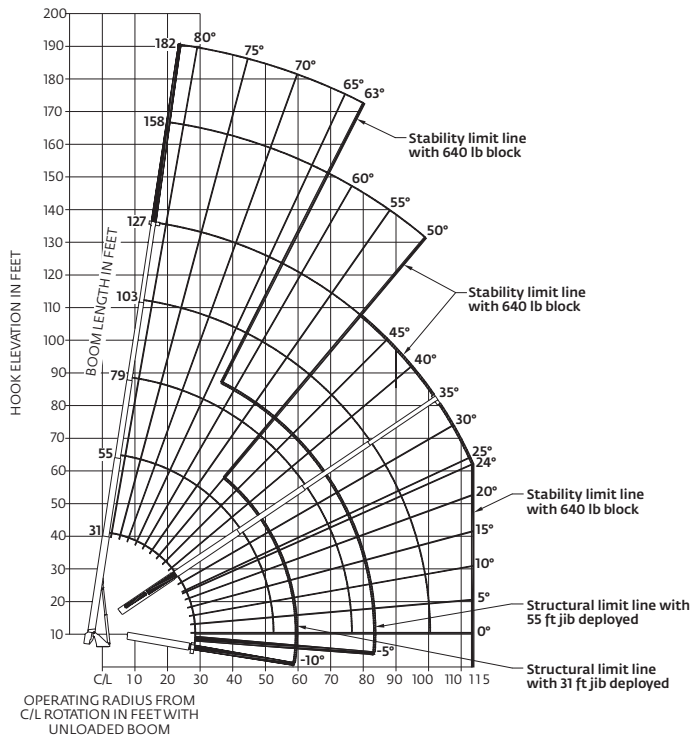
THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

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

Capacities

Series 18127: 38,71 boom with 9,45 m - 16,76 m (31 ft - 55 ft) jib/full span outrigger 7,6 m (24.7 ft)

National Crane will send you a chart on request – or you may secure needed load rating information through your nearest National Crane dealer.



CAUTION:

- Do not operate crane booms, jib extensions, any accessories or loads within 3 m (10 ft) of live power lines or other conductors of electricity.
- Jib and boom capacities shown are maximum for each section.
- Do not exceed capacities at reduced radii.
- Load ratings shown on the load rating charts are maximum allowable loads with the outriggers properly extended on a firm, level surface and the crane leveled and mounted on a factory recommended truck.
- Always level the crane with the level indicator located on the crane.
- The operator must reduce load to allow for factors such as wind, ground conditions, operating speeds and their effects on freely suspended loads.
- Overloading this crane may cause structural collapse or instability.
- Weights on any accessories attached to the boom or loadline must be deducted from the load chart capacities.
- Do not exceed jib capabilities at any reduced boom lengths.
- Do not deadhead lineblock against boom tip when extending boom or winching up.
- Keep at least three wraps of loadline on drum at all times.
- Use only specified cable with this machine.

Load chart

31 ft - 127 ft BOOM RATED LOADS WITHOUT JIB

| LOAD RADIUS (ft) | LOADED BOOM ANGLE | 31 ft BOOM (lb) | LOADED BOOM ANGLE | 55 ft BOOM (lb) | LOADED BOOM ANGLE | 79 ft BOOM (lb) | LOADED BOOM ANGLE | 103 ft BOOM (lb) | LOADED BOOM ANGLE | 127 ft BOOM (lb) |
|------------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|------------------|-------------------|------------------|
| 7 | 74.5 | 80,000 | | | | | | | | |
| 8 | 72.4 | 74,000 | | | | | | | | |
| 10 | 68.2 | 64,000 | | | | | | | | |
| 12 | 63.8 | 56,000 | 76.9 | 40,000 | | | | | | |
| 15 | 56.9 | 43,000 | 73.8 | 38,000 | 79.8 | 29,000 | | | | |
| 20 | 44.2 | 30,000 | 68.1 | 31,000 | 76.2 | 25,000 | 80 | 16,000 | | |
| 25 | 27.4 | 22,500 | 62 | 23,400 | 72.5 | 21,500 | 77.2 | 14,500 | 80 | 10,000 |
| 30 | | | 55.5 | 18,300 | 68.5 | 18,700 | 74.4 | 13,000 | 78 | 9,500 |
| 35 | | | 48.6 | 14,800 | 64.3 | 15,100 | 71.5 | 11,500 | 75.9 | 9,000 |
| 40 | | | 40.7 | 12,100 | 59.9 | 12,500 | 68.6 | 10,500 | 73.6 | 8,100 |
| 45 | | | 31.3 | 10,100 | 55.3 | 10,400 | 65.9 | 9,500 | 71.2 | 7,200 |
| 50 | | | 19.4 | 8,500 | 50.9 | 8,800 | 62.7 | 8,500 | 68.8 | 6,500 |
| 55 | | | | | 45.8 | 7,500 | 59.3 | 7,500 | 66.3 | 5,800 |
| 60 | | | | | 40.1 | 6,400 | 55.7 | 6,500 | 63.7 | 5,300 |
| 65 | | | | | 33.6 | 5,400 | 52 | 5,600 | 61.1 | 4,800 |
| 70 | | | | | 25.6 | 4,600 | 48.1 | 4,700 | 58.4 | 4,300 |
| 75 | | | | | 13.5 | 3,850 | 43.9 | 3,950 | 55.6 | 3,900 |
| 80 | | | | | | | 39.3 | 3,350 | 52.6 | 3,400 |
| 85 | | | | | | | 34.3 | 2,800 | 49.4 | 2,850 |
| 90 | | | | | | | 28.4 | 2,300 | 46 | 2,350 |
| 95 | | | | | | | 21 | 1,850 | 42.5 | 1,900 |
| 100 | | | | | | | 8.2 | 1,500 | 38.8 | 1,550 |
| 105 | | | | | | | | | 34.6 | 1,200 |
| 110 | | | | | | | | | 30 | 900 |
| 115 | | | | | | | | | 24.6 | 650 |
| | 0 | 19,000 | 0 | 7,700 | 0 | 3,600 | 0 | 1,450 | | |

NOTE:

1. Operate with jib by radius when main boom is fully extended. If necessary increase boom angle to maintain loaded radius.
2. Operate with jib by boom angle when main boom is not fully extended. Do not exceed rated jib capacities at any reduced boom lengths.
3. Capacities do not exceed 85% stability.
4. Shaded areas are structurally limited capacities.

NOTE:

1. All capacities are in pounds, angles in degrees, radius in feet.
2. Loaded boom angles are given as reference only.
3. Shaded areas are structurally limited capacities.

| 31 ft JIB RATED LOADS | | |
|-----------------------|-------------------|------------------------------|
| RADIUS FULLY EXTENDED | LOADED BOOM ANGLE | RATED LOADS ALL BOOM LENGTHS |
| 30 | 80 | 3400 |
| 46 | 75 | 3200 |
| 60 | 70 | 2700 |
| 73 | 65 | 2100 |
| 85 | 60 | 1700 |
| 96 | 55 | 1200 |
| 106 | 50 | 650 |

| 55 ft JIB RATED LOADS | | |
|-----------------------|-------------------|------------------------------|
| RADIUS FULLY EXTENDED | LOADED BOOM ANGLE | RATED LOADS ALL BOOM LENGTHS |
| 36 | 80 | 2200 |
| 54 | 75 | 2200 |
| 70 | 70 | 1600 |
| 85 | 65 | 1000 |

| RATED LOAD REDUCTIONS WITH JIB | | |
|--------------------------------|--------------------|--|
| BOOM LENGTH | 31 ft JIB STOWED | 31 ft - 55 ft JIB ERRECTED AT 31 ft LENGTH |
| | 31 ft | Reduce load 800 lb |
| 55 ft | Reduce load 450 lb | Reduce load 2000 lb |
| 79 ft | Reduce load 350 lb | Reduce load 1900 lb |
| 103 ft | Reduce load 250 lb | Reduce load 1800 lb |
| 127 ft | Reduce load 200 lb | Reduce load 1700 lb |

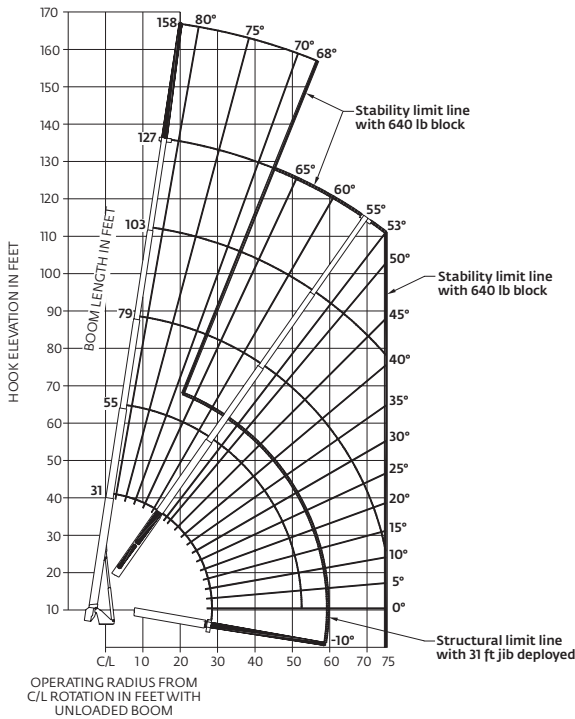
THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

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

Capacities

Series 18127: 38,71 m boom with 9,45 m (31 ft) jib/mid span outrigger 5,4 m (17.5 ft)

National Crane will send you a chart on request – or you may secure needed load rating information through your nearest National Crane dealer.



CAUTION:

- Do not operate crane booms, jib extensions, any accessories or loads within 3 m (10 ft) of live power lines or other conductors of electricity.
- Jib and boom capacities shown are maximum for each section.
- Do not exceed capacities at reduced radii.
- Load ratings shown on the load rating charts are maximum allowable loads with the outriggers properly extended on a firm, level surface and the crane leveled and mounted on a factory recommended truck.
- Always level the crane with the level indicator located on the crane.
- The operator must reduce load to allow for factors such as wind, ground conditions, operating speeds and their effects on freely suspended loads.
- Overloading this crane may cause structural collapse or instability.
- Weights on any accessories attached to the boom or loadline must be deducted from the load chart capacities.
- Do not exceed jib capabilities at any reduced boom lengths.
- Do not deadhead lineblock against boom tip when extending boom or winching up.
- Keep at least three wraps of loadline on drum at all times.
- Use only specified cable with this machine.

Load chart

31 ft - 127 ft BOOM RATED LOADS WITHOUT JIB

| LOAD RADIUS (ft) | LOADED BOOM ANGLE | 31 ft BOOM (lb) | LOADED BOOM ANGLE | 55 ft BOOM (lb) | LOADED BOOM ANGLE | 79 ft BOOM (lb) | LOADED BOOM ANGLE | 103 ft BOOM (lb) | LOADED BOOM ANGLE | 127 ft BOOM (lb) |
|------------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|------------------|-------------------|------------------|
| 7 | 74.5 | 80,000 | | | | | | | | |
| 8 | 72.4 | 74,000 | | | | | | | | |
| 10 | 68.2 | 64,000 | | | | | | | | |
| 12 | 63.9 | 56,000 | 76.9 | 40,000 | | | | | | |
| 15 | 57 | 43,000 | 73.8 | 38,000 | 79.8 | 29,000 | | | | |
| 20 | 44.2 | 27,700 | 67.8 | 27,000 | 76.2 | 25,000 | 80 | 16,000 | | |
| 25 | 27.4 | 17,500 | 61.6 | 17,200 | 71.9 | 17,600 | 77.2 | 14,500 | 80 | 10,000 |
| 30 | | | 55 | 12,000 | 67.7 | 12,300 | 74.3 | 12,400 | 78 | 9500 |
| 35 | | | 48.7 | 8700 | 63.7 | 9100 | 71.3 | 9200 | 75.9 | 9000 |
| 40 | | | 41 | 6500 | 59.4 | 6900 | 68 | 7000 | 73.2 | 7100 |
| 45 | | | 31.8 | 4900 | 54.8 | 5200 | 64.7 | 5300 | 70.5 | 5400 |
| 50 | | | 18.7 | 3700 | 50 | 4000 | 61.3 | 4100 | 67.8 | 4150 |
| 55 | | | | | 44.8 | 3050 | 57.9 | 3150 | 65.1 | 3200 |
| 60 | | | | | 39.1 | 2250 | 54.4 | 2350 | 62.4 | 2400 |
| 65 | | | | | 32.7 | 1600 | 50.7 | 1700 | 59.7 | 1750 |
| 70 | | | | | 24.6 | 1050 | 46.8 | 1150 | 56.9 | 1200 |
| | 0 | 12,400 | 0 | 3150 | | | | | | |

NOTE:

1. Operate with jib by radius when main boom is fully extended. If necessary increase boom angle to maintain loaded radius.
2. Operate with jib by boom angle when main boom is not fully extended. Do not exceed rated jib capacities at any reduced boom lengths.
3. Capacities do not exceed 85% stability.
4. Shaded areas are structurally limited capacities.

NOTE:

1. All capacities are in pounds, angles in degrees, radius in feet.
2. Loaded boom angles are given as reference only.
3. Shaded areas are structurally limited capacities.

| 31 ft JIB RATED LOADS | | |
|-----------------------|-------------------|------------------------------|
| RADIUS FULLY EXTENDED | LOADED BOOM ANGLE | RATED LOADS ALL BOOM LENGTHS |
| 30 ft | 80 | 3400 |
| 46 ft | 75 | 3200 |
| 58 ft | 70 | 900 |

| BOOM LENGTH | RATED LOAD REDUCTIONS WITH JIB | |
|-------------|--------------------------------|---------------------|
| | 31 ft JIB STOWED | 31 ft JIB ERCTED |
| 31 ft | Reduce load 800 lb | Reduce load 2300 lb |
| 55 ft | Reduce load 450 lb | Reduce load 2000 lb |
| 79 ft | Reduce load 350 lb | Reduce load 1900 lb |
| 103 ft | Reduce load 250 lb | Reduce load 1800 lb |
| 127 ft | Reduce load 200 lb | Reduce load 1700 lb |

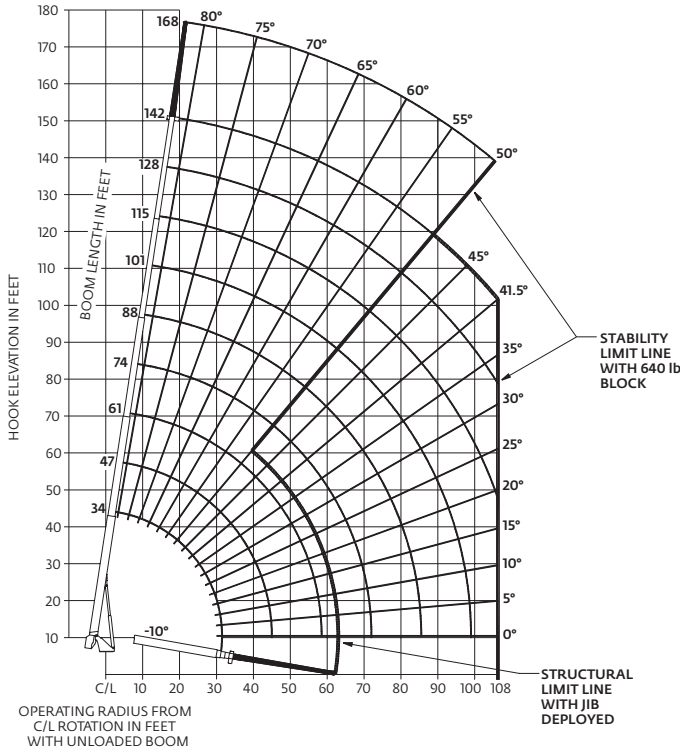
THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

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

Capacities

Series 18142: 43,29 m boom with 7,9 m (26 ft) jib/full span outrigger 7,6 m (24.7 ft)

National Crane will send you a chart on request – or you may secure needed load rating information through your nearest National Crane dealer.



CAUTION:

- Do not operate crane booms, jib extensions, any accessories or loads within 3 m (10 ft) of live power lines or other conductors of electricity.
- Jib and boom capacities shown are maximum for each section.
- Do not exceed capacities at reduced radii.
- Load ratings shown on the load rating charts are maximum allowable loads with the outriggers properly extended on a firm, level surface and the crane leveled and mounted on a factory recommended truck.
- Always level the crane with the level indicator located on the crane.
- The operator must reduce load to allow for factors such as wind, ground conditions, operating speeds and their effects on freely suspended loads.
- Overloading this crane may cause structural collapse or instability.
- Weights on any accessories attached to the boom or loadline must be deducted from the load chart capacities.
- Do not exceed jib capabilities at any reduced boom lengths.
- Do not deadhead lineblock against boom tip when extending boom or winching up.
- Keep at least three wraps of loadline on drum at all times.
- Use only specified cable with this machine.

Load chart

| 34 ft BOOM | | | 47 ft BOOM | | | 61 ft BOOM | | | 74 ft BOOM | | | | | |
|--------------------------------|--------------------|----------|---------------------|-------|-----------------------|-----------------------|------------------------------|----------|-------------|-------|----------|-------------|-------|----------|
| RADIUS | ANGLE | CAPACITY | RADIUS | ANGLE | CAPACITY | RADIUS | ANGLE | CAPACITY | RADIUS | ANGLE | CAPACITY | | | |
| 7 | 75.3 | 80,000 | | | | | | | | | | | | |
| 8 | 74.3 | 74,000 | | | | | | | | | | | | |
| 10 | 70.5 | 63,000 | 10 | 76.6 | 40,000 | | | | | | | | | |
| 12 | 66.7 | 55,000 | 12 | 74.2 | 40,000 | 12 | 78.7 | 40,000 | | | | | | |
| 15 | 60.6 | 43,000 | 15 | 70.5 | 40,000 | 15 | 75.8 | 36,000 | 15 | 79.2 | 32,000 | | | |
| 20 | 49.6 | 29,700 | 20 | 63.6 | 30,600 | 20 | 70.8 | 30,000 | 20 | 75.2 | 26,600 | | | |
| 25 | 36.4 | 22,000 | 25 | 56.2 | 22,800 | 25 | 65.4 | 23,000 | 25 | 71 | 21,500 | | | |
| 30 | 16.2 | 17,000 | 30 | 48.1 | 17,700 | 30 | 59.8 | 17,900 | 30 | 66.6 | 17,400 | | | |
| | 0 | 15,800 | 35 | 38.9 | 14,100 | 35 | 53.8 | 14,300 | 35 | 62.1 | 14,400 | | | |
| | | | 40 | 27.1 | 11,400 | 40 | 47.4 | 11,600 | 40 | 57.4 | 11,800 | | | |
| | | | | 0 | 9400 | 45 | 40.9 | 9700 | 45 | 52.9 | 9900 | | | |
| | | | | | | 50 | 32.6 | 8000 | 50 | 47.6 | 8200 | | | |
| | | | | | | 55 | 21.5 | 6800 | 55 | 41.7 | 6900 | | | |
| | | | | | | | 0 | 5900 | 60 | 35.1 | 5700 | | | |
| | | | | | | | | | 65 | 27.1 | 4850 | | | |
| | | | | | | | | | 70 | 15.4 | 4000 | | | |
| | | | | | | | | | | 0 | 3800 | | | |
| 88 ft BOOM | | | 101 ft BOOM | | | 115 ft BOOM | | | 128 ft BOOM | | | 142 ft BOOM | | |
| RADIUS | ANGLE | CAPACITY | RADIUS | ANGLE | CAPACITY | RADIUS | ANGLE | CAPACITY | RADIUS | ANGLE | CAPACITY | RADIUS | ANGLE | CAPACITY |
| 20 | 78.2 | 23,000 | 20 | 79.9 | 17,000 | | | | | | | | | |
| 25 | 74.9 | 20,000 | 25 | 77.2 | 15,800 | 25 | 79.1 | 13,000 | | | | | | |
| 30 | 71.3 | 17,000 | 30 | 74.4 | 14,200 | 30 | 76.7 | 11,900 | 30 | 78.5 | 9500 | 30 | 79.7 | 8000 |
| 35 | 67.7 | 14,600 | 35 | 71.5 | 12,700 | 35 | 74.2 | 10,900 | 35 | 76.5 | 9000 | 35 | 77.8 | 7500 |
| 40 | 63.8 | 11,900 | 40 | 68.3 | 10,800 | 40 | 71.9 | 9800 | 40 | 74.4 | 8500 | 40 | 75.9 | 7000 |
| 45 | 60.3 | 10,000 | 45 | 65.4 | 9500 | 45 | 69.3 | 9000 | 45 | 72.1 | 7800 | 45 | 73.9 | 6400 |
| 50 | 56.2 | 8300 | 50 | 62.1 | 8200 | 50 | 66.5 | 8000 | 50 | 69.6 | 7000 | 50 | 71.8 | 5800 |
| 55 | 51.9 | 7000 | 55 | 58.6 | 7000 | 55 | 63.6 | 7100 | 55 | 67.1 | 6200 | 55 | 69.5 | 5200 |
| 60 | 47.3 | 5800 | 60 | 54.9 | 5800 | 60 | 60.5 | 5900 | 60 | 64.4 | 5300 | 60 | 67.3 | 4700 |
| 65 | 42.3 | 4900 | 65 | 51.1 | 4950 | 65 | 57.3 | 5000 | 65 | 61.7 | 4600 | 65 | 65 | 4200 |
| 70 | 36.8 | 4100 | 70 | 47.1 | 4150 | 70 | 54 | 4200 | 70 | 59 | 4000 | 70 | 62.7 | 3750 |
| 75 | 30.5 | 3400 | 75 | 42.7 | 3450 | 75 | 50.5 | 3500 | 75 | 56.2 | 3400 | 75 | 60.2 | 3300 |
| 80 | 22.5 | 2800 | 80 | 38.1 | 2850 | 80 | 46.9 | 2900 | 80 | 53.2 | 2900 | 80 | 57.8 | 2950 |
| 85 | 8.6 | 2300 | 85 | 32.8 | 2300 | 85 | 43.1 | 2350 | 85 | 50 | 2350 | 85 | 55.1 | 2400 |
| | 0 | 2200 | 90 | 26.5 | 1850 | 90 | 39 | 1900 | 90 | 46.8 | 1900 | 90 | 52.3 | 1950 |
| | | | 95 | 18.3 | 1450 | 95 | 34.4 | 1500 | 95 | 43.3 | 1500 | 95 | 49.4 | 1500 |
| | | | | 0 | 1100 | 100 | 29.3 | 1100 | 100 | 39.6 | 1100 | 100 | 46.5 | 1150 |
| | | | | | | 105 | 23 | 750 | 105 | 35.7 | 800 | 105 | 43.4 | 800 |
| | | | | | | 108 | 18.3 | 650 | 108 | 33.1 | 650 | 108 | 41.5 | 650 |
| RATED LOAD REDUCTIONS WITH JIB | | | | | | 26 ft JIB RATED LOADS | | | | | | | | |
| BOOM LENGTH | 26 ft JIB STOWED | | 26 ft JIB ERECTED | | RADIUS FULLY EXTENDED | LOADED BOOM ANGLE | RATED LOADS ALL BOOM LENGTHS | | | | | | | |
| 34 ft | Reduce load 525 lb | | Reduce load 1050 lb | | 33 | 80 | 4000 | | | | | | | |
| 47 ft | Reduce load 400 lb | | Reduce load 1000 lb | | 50 | 75 | 3800 | | | | | | | |
| 61 ft | Reduce load 300 lb | | Reduce load 950 lb | | 65 | 70 | 3200 | | | | | | | |
| 74 ft | Reduce load 250 lb | | Reduce load 925 lb | | 78 | 65 | 2450 | | | | | | | |
| 88 ft | Reduce load 200 lb | | Reduce load 900 lb | | 90 | 60 | 1800 | | | | | | | |
| 101 ft | Reduce load 200 lb | | Reduce load 875 lb | | 101 | 55 | 1250 | | | | | | | |
| 115 ft | Reduce load 150 lb | | Reduce load 875 lb | | 112 | 50 | 650 | | | | | | | |
| 126 ft | Reduce load 150 lb | | Reduce load 875 lb | | | | | | | | | | | |
| 142 ft | Reduce load 125 lb | | Reduce load 850 lb | | | | | | | | | | | |

NOTE:

1. Operate with jib by radius when main boom is fully extended. If necessary increase boom angle to maintain loaded radius.
2. Operate with jib by boom angle when main boom is not fully extended. Do not exceed rated jib capacities at any reduced boom lengths.
3. Capacities do not exceed 85% stability.
4. Shaded areas are structurally limited capacities.

NOTE:

1. All capacities are in pounds, angles in degrees, radius in feet.
2. Loaded boom angles are given as reference only.
3. Shaded areas are structurally limited capacities.

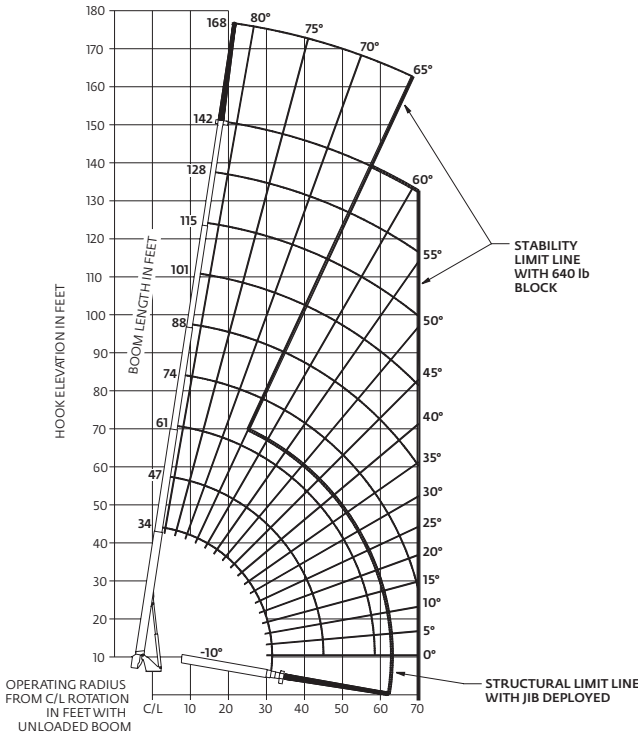
THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.

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

Capacities

Series 18142: 43,29 m boom with 7,9 m (26 ft) jib/mid span outrigger 5,4 m (17.5 ft)

National Crane will send you a chart on request – or you may secure needed load rating information through your nearest National Crane dealer.



CAUTION:

- Do not operate crane booms, jib extensions, any accessories or loads within 3 m (10 ft) of live power lines or other conductors of electricity.
- Jib and boom capacities shown are maximum for each section.
- Do not exceed capacities at reduced radii.
- Load ratings shown on the load rating charts are maximum allowable loads with the outriggers properly extended on a firm, level surface and the crane leveled and mounted on a factory recommended truck.
- Always level the crane with the level indicator located on the crane.
- The operator must reduce load to allow for factors such as wind, ground conditions, operating speeds and their effects on freely suspended loads.
- Overloading this crane may cause structural collapse or instability.
- Weights on any accessories attached to the boom or loadline must be deducted from the load chart capacities.
- Do not exceed jib capabilities at any reduced boom lengths.
- Do not deadhead lineblock against boom tip when extending boom or winching up.
- Keep at least three wraps of loadline on drum at all times.
- Use only specified cable with this machine.

Load chart

| 34 ft BOOM | | | 47 ft BOOM | | | 61 ft BOOM | | | 74 ft BOOM | | |
|------------|-------|----------|------------|-------|----------|------------|-------|----------|------------|-------|----------|
| RADIUS | ANGLE | CAPACITY | RADIUS | ANGLE | CAPACITY | RADIUS | ANGLE | CAPACITY | RADIUS | ANGLE | CAPACITY |
| 7 | 76.3 | 80,000 | | | | | | | | | |
| 8 | 74.3 | 74,000 | | | | | | | | | |
| 10 | 70.5 | 63,000 | 10 | 76.6 | 40,000 | | | | | | |
| 12 | 66.7 | 55,000 | 12 | 74.2 | 40,000 | 12 | 78.7 | 40,000 | | | |
| 15 | 60.6 | 43,000 | 15 | 70.5 | 40,000 | 15 | 75.8 | 36,000 | 15 | 79.2 | 32,000 |
| 20 | 49.5 | 25,400 | 20 | 63.6 | 28,400 | 20 | 70.6 | 26,500 | 20 | 75.2 | 26,600 |
| 25 | 36.3 | 15,900 | 25 | 55.9 | 16,700 | 25 | 65 | 17,000 | 25 | 70.5 | 17,100 |
| 30 | 16.2 | 10,700 | 30 | 47.8 | 11,500 | 30 | 59.3 | 11,800 | 30 | 65.9 | 11,900 |
| | 0 | 9500 | 35 | 39.4 | 8300 | 35 | 53.9 | 8600 | 35 | 61.8 | 8700 |
| | | | 40 | 27.9 | 6000 | 40 | 47.4 | 6300 | 40 | 57 | 6400 |
| | | | | 0 | 4300 | 45 | 40.3 | 4600 | 45 | 52 | 4800 |
| | | | | | | 50 | 31.9 | 3400 | 50 | 46.7 | 3600 |
| | | | | | | 55 | 20.7 | 2400 | 55 | 40.9 | 2600 |
| | | | | | | | 0 | 1750 | 60 | 34.3 | 1800 |
| | | | | | | | | | 65 | 26.2 | 1100 |
| | | | | | | | | | 70 | 14.5 | 650 |

| 88 ft BOOM | | | 101 ft BOOM | | | 115 ft BOOM | | | 128 ft BOOM | | | 142 ft BOOM | | |
|------------|-------|----------|-------------|-------|----------|-------------|-------|----------|-------------|-------|----------|-------------|-------|----------|
| RADIUS | ANGLE | CAPACITY | RADIUS | ANGLE | CAPACITY | RADIUS | ANGLE | CAPACITY | RADIUS | ANGLE | CAPACITY | RADIUS | ANGLE | CAPACITY |
| 20 | 78.2 | 23,000 | 20 | 79.9 | 17,000 | | | | | | | | | |
| 25 | 74.4 | 17,200 | 25 | 77.2 | 15,800 | 25 | 79.1 | 13,000 | | | | | | |
| 30 | 70.5 | 12,000 | 30 | 74 | 12,100 | 30 | 76.7 | 11,900 | 30 | 78.5 | 9500 | 30 | 79.7 | 8000 |
| 35 | 67 | 8800 | 35 | 70.9 | 8900 | 35 | 74 | 9000 | 35 | 76.5 | 9000 | 35 | 77.8 | 7500 |
| 40 | 63.1 | 6500 | 40 | 67.6 | 6600 | 40 | 71 | 6700 | 40 | 73.6 | 6700 | 40 | 75.7 | 6700 |
| 45 | 59.2 | 4950 | 45 | 64.3 | 5100 | 45 | 68 | 5200 | 45 | 71 | 5200 | 45 | 73.3 | 5200 |
| 50 | 55.1 | 3700 | 50 | 60.8 | 3800 | 50 | 65 | 3900 | 50 | 68.3 | 3900 | 50 | 70.8 | 3900 |
| 55 | 50.8 | 2700 | 55 | 57.3 | 2800 | 55 | 62 | 2900 | 55 | 65.6 | 2900 | 55 | 68.4 | 2900 |
| 60 | 46.2 | 1900 | 60 | 53.7 | 2000 | 60 | 59 | 2100 | 60 | 62.9 | 2100 | 60 | 66 | 2100 |
| 65 | 41.3 | 1200 | 65 | 49.9 | 1300 | 65 | 55.8 | 1400 | 65 | 60.2 | 1400 | 65 | 63.5 | 1400 |
| 70 | 35.8 | 700 | 70 | 45.9 | 750 | 70 | 52.6 | 800 | 70 | 57.4 | 800 | 70 | 61 | 800 |

| RATED LOAD REDUCTIONS WITH JIB | | | 26 ft JIB RATED LOADS | | | | |
|--------------------------------|--------------------|----------|-----------------------|----------|-----------------------|-------------------|------------------------------|
| BOOM LENGTH | 26 ft JIB STOWED | | 26 ft JIB ERECTED | | RADIUS FULLY EXTENDED | LOADED BOOM ANGLE | RATED LOADS ALL BOOM LENGTHS |
| | Reduce load | Capacity | Reduce load | Capacity | | | |
| 34 ft | Reduce load 525 lb | | Reduce load 1050 lb | | 33 | 80 | 4000 |
| 47 ft | Reduce load 400 lb | | Reduce load 1000 lb | | 50 | 75 | 3800 |
| 61 ft | Reduce load 300 lb | | Reduce load 950 lb | | 62 | 70 | 2100 |
| 74 ft | Reduce load 250 lb | | Reduce load 925 lb | | 74 | 65 | 750 |
| 88 ft | Reduce load 200 lb | | Reduce load 900 lb | | | | |
| 101 ft | Reduce load 200 lb | | Reduce load 900 lb | | | | |
| 115 ft | Reduce load 150 lb | | Reduce load 875 lb | | | | |
| 126 ft | Reduce load 150 lb | | Reduce load 875 lb | | | | |
| 142 ft | Reduce load 125 lb | | Reduce load 850 lb | | | | |

NOTE:

1. Operate with jib by radius when main boom is fully extended. If necessary increase boom angle to maintain loaded radius.
2. Operate with jib by boom angle when main boom is not fully extended. Do not exceed rated jib capacities at any reduced boom lengths.
3. Capacities do not exceed 85% stability.
4. Shaded areas are structurally limited capacities.

NOTE:

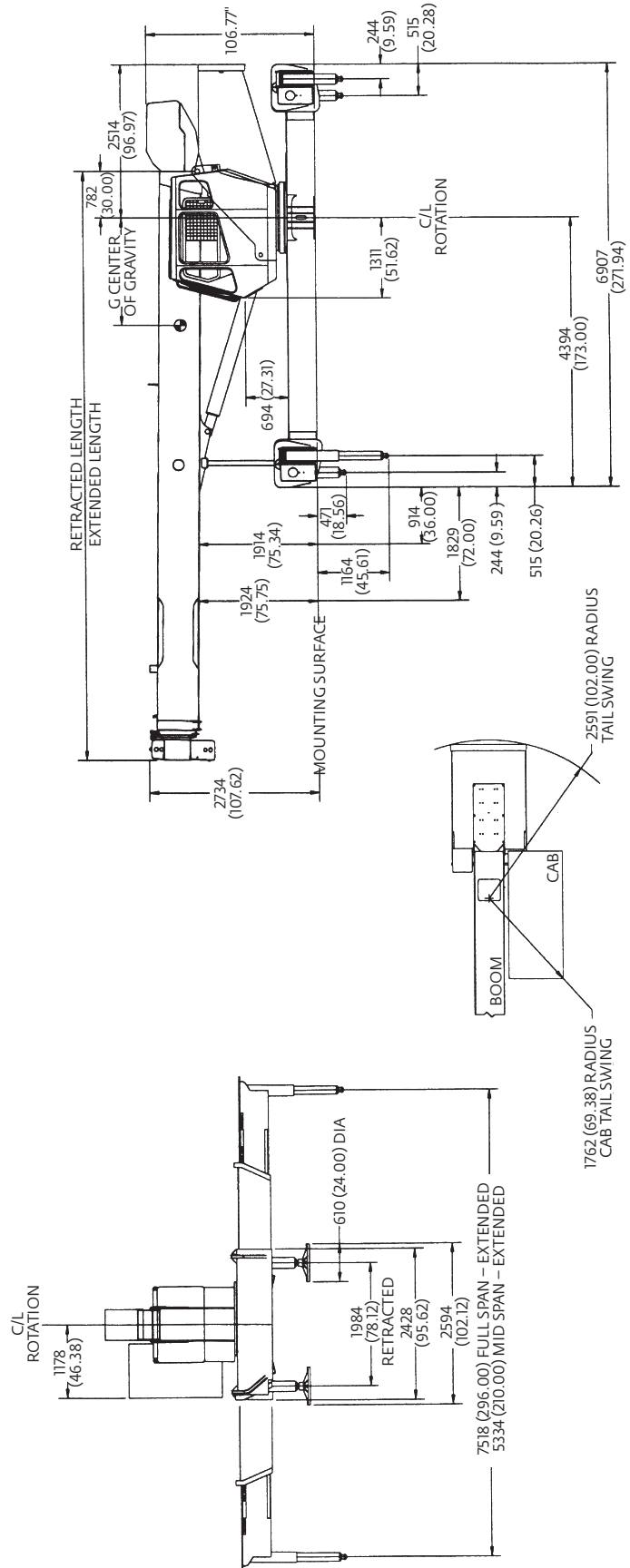
1. All capacities are in pounds, angles in degrees, radius in feet.
2. Loaded boom angles are given as reference only.
3. Shaded areas are structurally limited capacities.

Dimensions specifications

| Series | Retracted length | Extended length | G | w/oil weight* |
|--------|--------------------|---------------------|-------------------|--------------------------|
| 18103 | 9,45 m (31 ft) | 31,40 m (103 ft) | 1,75 m (69 in) | 15 354 kg (33,850 lb) |
| 18127 | 9,45 m (31 ft) | 38,72 m (127 ft) | 1,75 m (69 in) | 16 000 kg (32,275 lb) |
| 18142 | 10,36 m (34 ft) | 43,28 m (142 ft) | 2,21 m (87 in) | 16 769 kg (36,970 lb) |
| 1879 | 9,45 m (31 ft) | 24,08 m (79 ft) | 1,75 m (69 in) | 14 431 kg (31,815 lb) |

* Weight includes all items including complete HO outriggers, 2300 lb counterweight, 375 lb block, decks and SFO. booms fully retracted.

Dimensions are in mm (in)



Accessories

Radio Remote Controls – (Ground level or boom tip)

Eliminate the handling and maintenance concerns that accompany cabled remotes. Operate to a range of about 76 m (250 ft), varying with conditions.

- NB4R (R4 functions)

One-Person Basket –

Strong but lightweight steel basket with 139 kg (300 lb) capacity, gravity hung with swing lock and full body harness.

- B1-S
- 2B1-S (for dual locking baskets)

Heavy-duty Personnel Basket –

544 kg (1200 lb) capacity steel basket with safety loops for two passengers. Gravity leveling 183 cm x 107cm (72 in x 42 in) platform. Fast attachment and secure locking systems.

- BSA-1
- BSA-R1 (provides rotation)

Air Conditioning for Crane Cab –

(Requires larger truck alternator) Provides excellent crane cab cooling to overcome the radiant heat from the sun reflection.

- A/C

Auxiliary Winch 10,000 lb Line Pull –

Second winch redundant to the main, planetary winch with boom tip “rooster sheave” to allow reeving of both winch lines.

- 18AW

Work Lights –

- Amber flashing beacon mounted on crane cab
- Spotlight mounted on cab, manually adjusted from the crane cab
- Worklight on boom, switch and wiring in-cab to operate customer supplied worklight (without remote controls)
- Worklight in fixed position on crane cab with in cab power
- Worklight adjustable from crane with in-cab power

- ABR
- MSL
- WLB
- WLF
- WLR

Winch Drum Rotation Indicator and Last Layer Indicator–

Winch drum rotation indicator in cab.

Winch drum rotation indicator in cab (for use with standard and auxiliary winches).

- WDRI-LLI
- WDRI-2-LLI2

Hour Meter –

Hour meter in truck cab to record crane operation hours.

- HRM

Steel Tool Box Options

**Spanish-Language Danger Decals,
Control Knobs, and Operators' Manuals**

- SDD
- SOM

Notes

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Cergy

Decines

Germany

Langenfeld

Hungary

Budapest

Italy

Parabiago

Netherlands

Breda

Poland

Warsaw

Portugal

Baltar

Lisbon

Russia

Moscow

U.A.E.

Dubai

U.K.

Buckingham

Asia - Pacific

Australia

Brisbane

Melbourne

Sydney

China

Beijing

Singapore

Xi'an

Korea

Seoul

India

Hyderabad

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Alphaville

China

TaiAn

Zhangjiagang

France

Charlieu

La Clayette

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Portugal

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Fânzeres

Slovakia

Saris

USA

Manitowoc

Port Washington

Shady Grove

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