

Series **1500**

product guide

features

- 127 ft (38.70 m)
Five-Section
Boom
- 36 USt (32.66 t)
Rating
- Easy Glide Wear
Pads



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features

Why Buy a National Crane Series 1500?

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*Product may be shown with optional equipment.

- **36 USt (32.66 t) Rating** – The 1500 provides a 36 USt (32.66t) capacity at a 6 ft (1.82 m) radius, a 9% increase over the Series 1400.
- **127 ft (38.71 m) Five-section Boom** – The long boom allows the operator to perform more lifts without the use of a jib, reducing setup time and improving efficiency.
- **Overload Protection** – All National Crane boom trucks are equipped with overload protection:
 - Load Moment Indicator (LMI) standard on all Series 1500 machines.
 - LMI display and CPU are weatherproof.
 - LCD display is visible in full or low light.
 - All crane load lifting values are displayed simultaneously.
- **Stronger Torsion Box** – The stronger standard torsion box improves rigidity, reduces truck frame flex and reduces the need for counterweight.
- **Speedy-reeve Boom Tip and Sheave Blocks** – These standard features simplify rigging changes by decreasing the time needed to change line reeving.
- **Pre-painted Components** – Painting crane components before assembly reduces the possibility of rust, improves serviceability and enhances the appearance of the machine.
- **Easy Glide Boom Wear Pads** – Reduce the conditions that cause boom chatter and vibration. The net result is smoother crane operation.
- **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, wipers. Optional air-conditioning is available.
- **Outrigger** – Outrigger span of 24.7 ft (7.53 m) when fully extended; 17.5 ft (5.33 m) at mid-span.
 - Ground-level outrigger controls on both sides.
 - In-cab outrigger controls for all functions.
 - Front bumper stabilizer for stable base over front.
- **Improved Serviceability** –
 - Boom sections are supported by one hydraulic extend cylinder, minimizing maintenance.
 - Bearings on the boom extend and retract cables can be greased through access holes in the boom side plates.
 - Pre-paint reduces rust.
- **Electronic versions of manuals available through Manitowoc Crane Care.**
- **New State-of-the-art Control Valve** – Provides smoother operation. The new load-sensing, pressure-compensated design greatly enhances function meterability, eliminates parts, reduces repair costs and improves the machine's serviceability.
- **National Crane Is the Market Leader** – National Crane is number one in the production of commercial truck-mounted boom trucks, with more than 35,000 units sold. National Crane has many programs and people directly and indirectly involved to provide our customers with reliable products.
- **National Crane has the boom truck industry's leading test program.** Every structural part of the crane is cycle tested, some up to 60,000 cycles at full capacity. In addition to cycle testing, each model is subjected to state-of-the-art strain gauge testing that measures metal deformation as small as one one-millionth of an inch. The net result is that weak areas are caught in test, not on job sites where costly downtime occurs.
- Parts are available for all National Crane machines for the life of the crane.
- National Crane has a formalized quality program and is ISO 9001 approved.

- 36 USt (32.66 t) maximum capacity
- 166 ft (50.60 m) maximum vertical reach*
- 135 ft (41.15 m) maximum vertical hydraulic reach*
- Load Moment Indicator system (LMI)
- Proportional boom extension
- High performance planetary winch
- Vickers PVH 131 pressure compensated, load sensing, axial piston, variable volume pump direct mounts to PTO

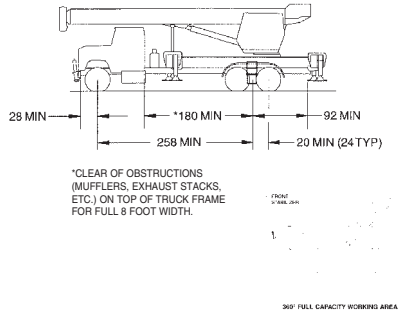
* Maximum vertical reach is ground-level to boom tip height at maximum extension and angle with outriggers/stabilizers fully extended.

1500

mounting configurations

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The configurations are based on the Series 1500 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.



Configuration 1 – 1500

| | |
|---|---|
| Working area..... | 360° |
| Gross Axle Weight Rating Front..... | 20,000 lb (9072 kg)* |
| Gross Axle Weight Rating Rear..... | 34,000 lb (15 422 kg)* |
| Gross Vehicle Weight Rating..... | 54,000 lb (24 494 kg)* |
| Wheelbase..... | 258 in (655 cm) |
| Cab to Axle/trunnion (CA/CT)..... | 180 in (457 cm) |
| After Frame (AF)..... | 92 in (2.44 m) minimum |
| Frame Section Modulus (SM), front axle to end of afterframe, w/110,000 PSI (758 MPa)..... | 30 in ³ (492 cm ³) |
| Stability Weight, Front..... | 9,700 lb (4410 kg) minimum** |
| Stability Weight, Rear..... | 8,500 lb (3865 kg) minimum** |
| Estimated Average Final Weight..... | 51,880 lb (23 587 kg)*** |

The diagram shows the 360° working area achieved with the front stabilizer (standard on the Series 1500). The front stabilizer is required when extending the boom and lifting loads over the front of the truck. A minimum of 10-in³ (104 cm³) section modulus at 110,000 psi (758 MPa) is required from the rear of the front spring hanger forward to the front stabilizer. Integral front frame extension requested.

*Required to mount basic crane with 30 ft (9.45 m) jib option. Additional options or heavier base chassis weights will require additional axles or a GVWR in excess of 54,000 lb (24 494 kg); in some states, special permits for overload are required.

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

***Includes basic crane without jib, 100 gal (379 L) fuel tank and two workers in cab.

Note: Chassis will require extended front frame rails for SFO addition.

MINIMUM TRUCK REQUIREMENTS

Many factors must be considered in the selection of proper truck for a 1500 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 1500 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 (S.M.) 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" information above for the necessary section modulus and resistance to bending moment values.

- 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. 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 Crane Series 1500 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.

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specifications

Boom and Jib Combinations Data

Available in three basic models: 1579 four-section, 15103 four-section and 15127 five-section.


4 Model 1579 – Equipped with a 31-79 ft (9.45-24.08 m) four-section boom. Maximum tip height is 87 ft (25.52 m).

31 - 79 ft (9.45-24.08 m) four-section boom




Model 15103 – Equipped with a 31-103 ft (9.45-31.40 m) four-section boom. This model can be equipped with a 31 ft (9.45 m) single section side-stowing jib providing a maximum tip height of 142 ft (43.29 m), or a 31-55 ft (9.45-16.76 m) side-stowing folding jib, providing a vertical reach of 166 ft (50.60 m). Contact factory for information on angling jib.

31 - 103 ft (9.45-31.40 m) four-section hydraulic boom



31 - 103 ft (9.45-31.40 m) four-section hydraulic boom **15FJ31** 31 ft (9.45 m) single-section jib




31 - 103 ft (9.45-31.40 m) four-section hydraulic boom **15FJ55M** 31-55 ft (9.45-16.76 m) single-section jib



Model 15127 – Equipped with a 31-127 ft (9.45-38.72 m) five-section hydraulic boom. This model can be equipped with a 31 ft (9.45 m) single-section side-stowing jib. Maximum tip height w/31 ft (9.45 m) jib is 166 ft (50.60 m).

31 - 127 ft (9.45-38.72 m) five-section hydraulic boom



31 - 127 ft (9.45-38.72 m) five-section hydraulic boom **15FJ31** 31 ft (9.45 m) single-section manual jib



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

1500 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.

| Winch | Cable Supplied | Average Breaking Strength | 1 Part Line | 2 Part Line | 3 Part Line | 4 Part Line | 5 Part Line | 6 Part Line | 7 Part Line | 8 Part Line |
|-------------------------------------|---|---------------------------|---|---|---|---|---|---|---|---|
| | | | Lift and Speed | Lift and Speed | Lift and Speed | Lift and Speed | Lift and Speed | Lift and Speed | Lift and Speed | Lift and Speed |
| Standard Planetary Winch Low Speed | 5/8 in diameter rotation resistant 18 x 19 IWRC | 45,400 lb (20593 kg) | 9,000 lb (4082 kg) 205 fpm (62 m/m) | 18,000 lb (8165 kg) 103 fpm (31 m/m) | 27,000 lb (12247 kg) 68 fpm (21 m/m) | 36,000 lb (16329 kg) 51 fpm (16 m/m) | 45,000 lb (20412 kg) 41 fpm (12 m/m) | 54,000 lb (24494 kg) 34 fpm (10 m/m) | 63,000 lb (28577 kg) 29 fpm (8 m/m) | 72,000 lb (32659 kg) 26 fpm (7 m/m) |
| Standard Planetary Winch High Speed | Same as corresponding cable data shown above | | 4,500 lb (2041 kg) 410 fpm (124 m/m) | 9,000 lb (4082 kg) 205 fpm (62 m/m) | 13,500 lb (6123 kg) 137 fpm (42 m/m) | 18,000 lb (8165 kg) 103 fpm (31 m/m) | 22,500 lb (10206 kg) 82 fpm (25 m/m) | 27,000 lb (12247 kg) 68 fpm (21 m/m) | 31,500 lb (14288 kg) 59 fpm (18 m/m) | 36,000 lb (16329 kg) 51 fpm (16 m/m) |

Winch
Standard planetary
& Auxiliary planetary

Full Drum Pull
4,500 lb (high speed)
9,000 lb (low speed)

Allowable Cable Pull
9,080 lb

| | |
|-----------------------|-----------------|
| Aux Boom Head | 100 lb (45 kg) |
| 5 USt Downhaul Weight | 180 lb (82 kg) |
| 15 USt 1 Sheave Block | 375 lb (170 kg) |
| 25 USt 2 Sheave Block | 640 lb (290 kg) |
| 35 USt 3 Sheave Block | 870 lb (395 kg) |
| 36 USt 4 Sheave Block | 970 lb (440 kg) |

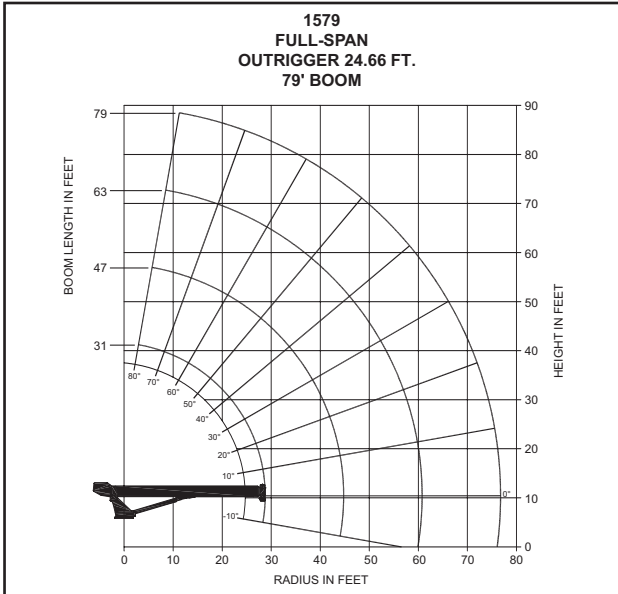
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capacities

Load Rating Chart: Series 1579 (24.08 m) Boom/Fullspan Outrigger 24.66 ft (7.51m)

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

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CAUTION:

- Do not operate crane booms, jib extensions, any accessories or loads within 10 ft (3m) 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 Rating Chart: Series 1579 (24.08 m) Boom/Fullspan Outrigger 24.66 ft (7.51m)

**SERIES 1579 (24.08 M)
BOOM/MIDSPAN
OUTRIGGER 24.66 FT
(7.51 M)**

| 31 TO 79 FOOT BOOM RATED LOADS | | | | | | | | |
|--------------------------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|
| LOAD RADIUS (FEET) | 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) |
| 6 | 75 | 72,000 | | | | | | |
| 8 | 71.5 | 64,000 | 77.5 | 45,000 | | | | |
| 10 | 67 | 55,000 | 75.5 | 44,100 | | | | |
| 12 | 62.5 | 48,000 | 72.5 | 39,700 | 77.5 | 35,200 | | |
| 15 | 56 | 39,500 | 69.5 | 34,300 | 75 | 30,800 | 78.5 | 26,000 |
| 20 | 43.5 | 30,800 | 62.5 | 27,900 | 70 | 25,400 | 75 | 22,300 |
| 25 | 27 | 23,700 | 55.5 | 23,800 | 65 | 21,400 | 71 | 19,100 |
| 30 | | | 47 | 18,000 | 60 | 18,300 | 67 | 16,500 |
| 35 | | | 38.5 | 14,100 | 54.5 | 14,300 | 63 | 14,500 |
| 40 | | | 26.5 | 11,400 | 48.5 | 11,600 | 59 | 11,700 |
| 45 | | | | | 41.5 | 9,600 | 54.5 | 9,750 |
| 50 | | | | | 34.5 | 8,100 | 50 | 8,200 |
| 55 | | | | | 25 | 6,800 | 45 | 6,950 |
| 60 | | | | | 9 | 5,700 | 39 | 5,800 |
| 65 | | | | | | | 33 | 4,900 |
| 70 | | | | | | | 25 | 4,150 |
| 75 | | | | | | | 13 | 3,500 |
| | 0 | 17,500 | 0 | 9,550 | 0 | 5,500 | 0 | 3,300 |

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.

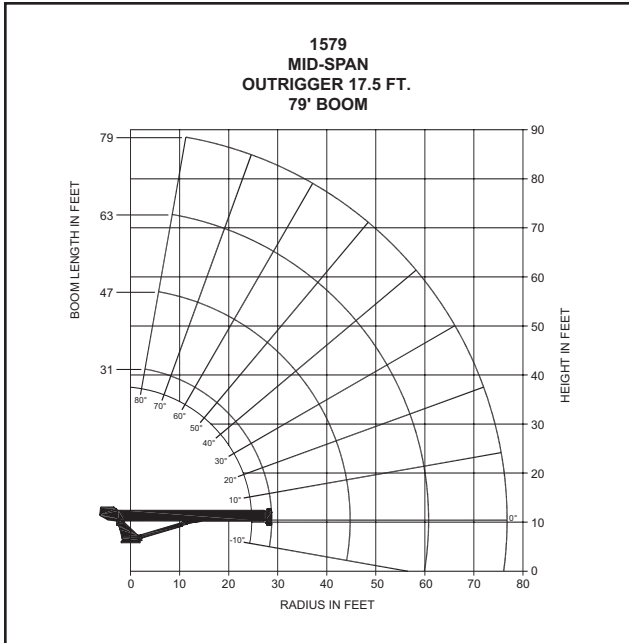
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capacities

Load Rating Chart: Series 1579 (24.08 m) Boom/Midspan Outrigger 17.5 ft (5.33 m)

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

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CAUTION:

- Do not operate crane booms, jib extensions, any accessories or loads within 10 ft (3m) 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 Rating Chart: Series 1579 (24.08 m) Boom/Midspan Outrigger 17.5 ft (5.33 m)

**SERIES 1579
(24.08 M) BOOM/MID-
SPAN OUTRIGGER
17.5 FT (5.33 M)**

| LOAD RADIUS (FEET) | 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) |
|--------------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|
| 6 | 75 | 72,000 | | | | | | |
| 8 | 71.5 | 64,000 | 77.5 | 45,000 | | | | |
| 10 | 67 | 55,000 | 75.5 | 44,100 | | | | |
| 12 | 62.5 | 48,000 | 72.5 | 39,700 | 77.5 | 35,200 | | |
| 15 | 56 | 39,500 | 69.5 | 34,300 | 75 | 30,800 | 78.5 | 26,000 |
| 20 | 43.5 | 22,100 | 62.5 | 22,700 | 70 | 23,200 | 75 | 22,300 |
| 25 | 27 | 14,100 | 55 | 14,500 | 64.5 | 14,800 | 71 | 15,000 |
| 30 | | | 47 | 10,200 | 59.5 | 10,400 | 66.5 | 10,600 |
| 35 | | | 38 | 7,500 | 54 | 7,700 | 63 | 7,850 |
| 40 | | | 25.5 | 5,700 | 48 | 5,900 | 58.5 | 6,000 |
| 45 | | | | | 41.5 | 4,550 | 54 | 4,650 |
| 50 | | | | | 34 | 3,550 | 49.5 | 3,650 |
| 55 | | | | | 24.5 | 2,750 | 44 | 2,850 |
| 60 | | | | | 8.5 | 2,100 | 38.5 | 2,200 |
| 65 | | | | | | | 32 | 1,650 |
| 70 | | | | | | | 24.5 | 1,200 |
| 75 | | | | | | | 12 | 800 |
| | 0 | 10,700 | 0 | 4,450 | 0 | 2,000 | 0 | 700 |

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.

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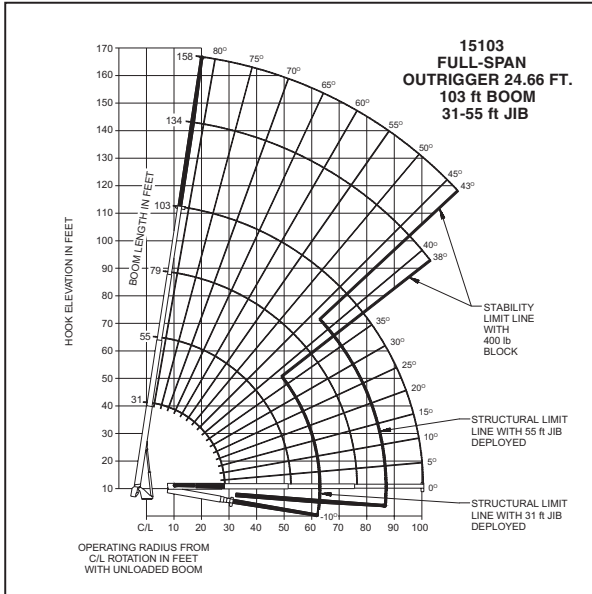
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capacities

Load Rating Chart: Series 15103 (16.76 m) Boom with 31-55 ft (9.45-16.76 m) Jib/Fullspan Outrigger 24.66 ft (7.51 m)

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

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CAUTION:

- Do not operate crane booms, jib extensions, any accessories or loads within 10 ft (3m) 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 Rating Chart: Series 15103 (16.76 m) Boom with 31-55 ft (9.45-16.76 m) Jib/Fullspan Outrigger 24.66 ft (7.51 m)

**SERIES 15103 (24.08 M)
BOOM WITH 31-55 FT
(9.45-16.76 M)
JIB/FULLSPAN OUTRIGGER
24.66 FT (7.51 M)**

| 31 TO 103 ft BOOM RATED LOADS WITHOUT JIB | | | | | | | | 31 ft JIB RATED LOADS | | | | |
|---|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------------|-----------------------|-------------------|------------------------------|-------|
| 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) | RADIUS FULLY EXTENDED | LOADED BOOM ANGLE | RATED LOADS ALL BOOM LENGTHS | |
| 6 | 75.7 | 72,000 | | | | | | | 24 | 80 | 8,500 | |
| 8 | 71.6 | 64,000 | | | | | | | 37 | 75 | 7,500 | |
| 10 | 67.5 | 55,000 | 78.6 | 42,000 | | | | | 48 | 70 | 6,400 | |
| 12 | 63.3 | 48,000 | 76.4 | 37,000 | | | | | 59 | 65 | 5,100 | |
| 15 | 56.6 | 39,500 | 73.1 | 32,000 | 79.2 | 26,000 | | | 69 | 60 | 3,900 | |
| 20 | 44 | 30,500 | 67.5 | 25,500 | 75.4 | 21,000 | 79.6 | 15,000 | 78 | 55 | 2,800 | |
| 25 | 27.3 | 23,000 | 61.5 | 21,000 | 71.6 | 17,500 | 76.8 | 13,500 | 87 | 50 | 1,900 | |
| 30 | | | 55.2 | 18,000 | 67.7 | 15,200 | 74 | 12,000 | 95 | 45 | 1,250 | |
| 35 | | | 48.3 | 14,300 | 63.7 | 13,400 | 71.1 | 11,000 | 102 | 40 | 750 | |
| 40 | | | 40.5 | 11,400 | 59.5 | 11,600 | 68.1 | 10,000 | | | | |
| 45 | | | 31.1 | 9,300 | 54.9 | 9,500 | 65.2 | 9,000 | | | | |
| 50 | | | 18.7 | 7,700 | 50.3 | 8,000 | 62 | 8,000 | | | | |
| 55 | | | | | 45.2 | 6,500 | 58.6 | 6,700 | | | | |
| 60 | | | | | | 39.5 | 5,300 | 55 | 5,500 | | | |
| 65 | | | | | | 33 | 4,400 | 51.3 | 4,550 | | | |
| 70 | | | | | | 25 | 3,600 | 47.4 | 3,750 | 29 | 80 | 4,000 |
| 75 | | | | | | 12.7 | 3,000 | 43.2 | 3,050 | 45 | 75 | 3,700 |
| 80 | | | | | | | | 38.7 | 2,500 | 59 | 70 | 3,200 |
| 85 | | | | | | | | 33.7 | 2,050 | 71 | 65 | 2,700 |
| 90 | | | | | | | | 27.9 | 1,600 | 83 | 60 | 2,250 |
| 95 | | | | | | | | 20.5 | 1,250 | 94 | 55 | 1,800 |
| 100 | | | | | | | | 7.2 | 900 | 104 | 50 | 1,300 |
| | 0 | 16,500 | 0 | 6,800 | 0 | 2,700 | 0 | 850 | 113 | 45 | 800 | |

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.

| RATED LOAD REDUCTIONS WITH JIB | | |
|--------------------------------|---------------------|---------------------------------------|
| BOOM LENGTH | 31-55 ft JIB STOWED | 31-55 ft JIB ERRECTED AT 31 ft LENGTH |
| 31 ft | Reduce load 800 lb | Reduce load 2,300 lb |
| 55 ft | Reduce load 450 lb | Reduce load 2,000 lb |
| 79 ft | Reduce load 350 lb | Reduce load 1,900 lb |
| 103 ft | Reduce load 250 lb | Reduce load 1,800 lb |

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.

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.

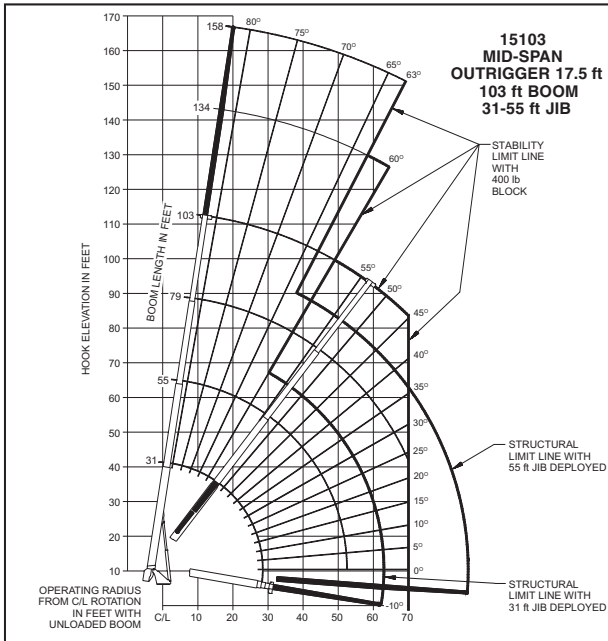
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capacities

Load Rating Chart: Series 15103 (16.76 m) Boom with 31-55 ft (9.45-16.76 m) Jib/Midspan Outrigger 17.5 ft (5.33 m)

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

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CAUTION:

- Do not operate crane booms, jib extensions, any accessories or loads within 10 ft (3m) 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 Rating Chart: Series 15103 (16.76 m) Boom with 31-55 ft (9.45-16.76 m) Jib/Midspan Outrigger 17.5 ft (5.33 m)

**SERIES 15103 (24.08 M)
BOOM WITH 31-55 FT
(9.45-16.76 M) JIB/MID-
SPAN OUTRIGGER
17.5 FT (5.33 M)**

| 31 TO 103 ft BOOM RATED LOADS WITHOUT JIB | | | | | | | | | 31 ft JIB RATED LOADS | | |
|---|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|------------------|-----------------------|-------------------|------------------------------|
| 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) | RADIUS FULLY EXTENDED | LOADED BOOM ANGLE | RATED LOADS ALL BOOM LENGTHS |
| 6 | 75.7 | 72,000 | | | | | | | 24 | 80 | 8,500 |
| 8 | 71.6 | 64,000 | | | | | | | 36 | 75 | 6,900 |
| 10 | 67.5 | 55,000 | 78.6 | 42,000 | | | | | 46 | 70 | 3,750 |
| 12 | 63.3 | 48,000 | 76.4 | 37,000 | | | | | 56 | 65 | 2,000 |
| 15 | 56.6 | 39,500 | 73.1 | 32,000 | 79.2 | 26,000 | | | 66 | 60 | 850 |
| 20 | 44 | 21,300 | 67.3 | 22,000 | 75.4 | 21,000 | 79.6 | 15,000 | | | |
| 25 | 27.4 | 13,300 | 61.1 | 14,000 | 71.3 | 14,100 | 76.8 | 13,500 | | | |
| 30 | | | 54.7 | 9,700 | 67.2 | 9,800 | 73.6 | 9,800 | | | |
| 35 | | | 48.2 | 7,100 | 63.2 | 7,200 | 70.6 | 7,200 | | | |
| 40 | | | 40.5 | 5,150 | 58.9 | 5,350 | 67.4 | 5,400 | | | |
| 45 | | | 31.3 | 3,800 | 54.4 | 4,000 | 64.2 | 4,000 | | | |
| 50 | | | 18.1 | 2,750 | 49.6 | 2,950 | 60.9 | 3,000 | | | |
| 55 | | | | | 44.5 | 2,150 | 57.5 | 2,150 | | | |
| 60 | | | | | 38.8 | 1,450 | 54 | 1,500 | | | |
| 65 | | | | | 32.3 | 950 | 50.4 | 1,000 | | | |
| 70 | | | | | 24.2 | 475 | 46.5 | 550 | | | |
| | 0 | 10,100 | 0 | 2,300 | | | | | | | |

| 55 ft JIB RATED LOADS | | |
|-----------------------|-------------------|------------------------------|
| RADIUS FULLY EXTENDED | LOADED BOOM ANGLE | RATED LOADS ALL BOOM LENGTHS |
| 31 | 80 | 4,000 |
| 46 | 75 | 3,700 |
| 58 | 70 | 2,400 |
| 69 | 65 | 1,250 |

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.

| RATED LOAD REDUCTIONS WITH JIB | | |
|--------------------------------|---------------------|---------------------------------------|
| BOOM LENGTH | 31-55 ft JIB STOWED | 31-55 ft JIB ERRECTED AT 31 ft LENGTH |
| 31 ft | Reduce load 800 lb | Reduce load 2,300 lb |
| 55 ft | Reduce load 450 lb | Reduce load 2,000 lb |
| 79 ft | Reduce load 350 lb | Reduce load 1,900 lb |
| 103 ft | Reduce load 250 lb | Reduce load 1,800 lb |

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.

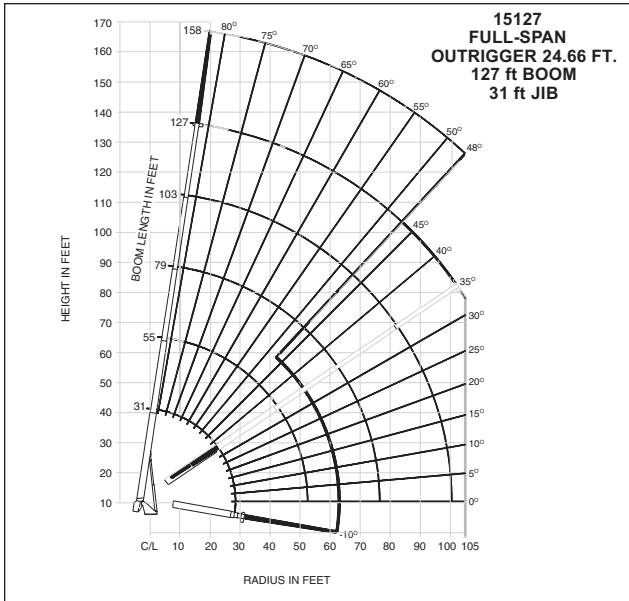
1500

capacities

Load Rating Chart: Series 15127 (38.71 m) Boom with 31 ft (9.45 m) Jib/Fullspan Outrigger 24.66 ft (7.51 m)

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

9



CAUTION:

- Do not operate crane booms, jib extensions, any accessories or loads within 10 ft (3m) 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 Rating Chart: Series 15127 (38.71 m) Boom with 31 ft (9.45 m) Jib/Fullspan Outrigger 24.66 ft (7.51 m)

**SERIES 15127 (38.71 M)
BOOM WITH 31 FT
(9.45 M) JIB/FULL-SPAN
OUTRIGGER 24.66 FT
(7.51 M)**

| 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) | |
|------------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|------------------|-------------------|------------------|-------|
| 6 | 76.4 | 72,000 | | | | | | | | | |
| 8 | 72.2 | 63,000 | | | | | | | | | |
| 10 | 68 | 54,000 | | | | | | | | | |
| 12 | 63.7 | 47,000 | 76.8 | 36,000 | | | | | | | |
| 15 | 57 | 38,500 | 73.5 | 31,000 | 79.5 | 25,000 | | | | | |
| 20 | 44.3 | 29,500 | 67.8 | 24,600 | 75.8 | 20,500 | 79.6 | 14,000 | | | |
| 25 | 27.1 | 22,000 | 61.8 | 20,500 | 71.9 | 17,000 | 77 | 13,000 | 79.5 | 8,700 | |
| 30 | | | 55.5 | 17,400 | 68 | 14,700 | 74.2 | 11,700 | 77.5 | 8,200 | |
| 35 | | | 48.6 | 14,000 | 63.9 | 12,900 | 71.3 | 10,600 | 75.3 | 7,700 | |
| 40 | | | 40.7 | 11,000 | 59.7 | 11,300 | 68.4 | 9,500 | 73.1 | 7,200 | |
| 45 | | | 31.3 | 9,000 | 55.2 | 9,400 | 65.4 | 8,400 | 70.8 | 6,700 | |
| 50 | | | 18.9 | 7,400 | 50.6 | 7,800 | 62.2 | 7,600 | 68.5 | 6,200 | |
| 55 | | | | | 45.4 | 6,500 | 58.9 | 6,600 | 65.9 | 5,400 | |
| 60 | | | | | 39.6 | 5,300 | 55.3 | 5,500 | 63.3 | 4,800 | |
| 65 | | | | | 33.1 | 4,300 | 51.5 | 4,500 | 60.6 | 4,200 | |
| 70 | | | | | 25.1 | 3,500 | 47.6 | 3,700 | 57.8 | 3,700 | |
| 75 | | | | | | 12.7 | 2,850 | 43.4 | 3,050 | 55 | 3,100 |
| 80 | | | | | | | | 38.8 | 2,400 | 51.9 | 2,550 |
| 85 | | | | | | | | 33.8 | 1,900 | 48.7 | 2,050 |
| 90 | | | | | | | | 27.9 | 1,500 | 45.4 | 1,600 |
| 95 | | | | | | | | 20.5 | 1,100 | 41.9 | 1,200 |
| 100 | | | | | | | | 7.3 | 800 | 38.1 | 850 |
| 105 | | | | | | | | | | 34 | 550 |
| 0 | | 15,500 | 0 | 6,300 | 0 | 2,600 | 0 | 750 | | | |

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.

| 31 ft JIB RATED LOADS | | |
|-----------------------|-------------------|------------------------------|
| RADIUS FULLY EXTENDED | LOADED BOOM ANGLE | RATED LOADS ALL BOOM LENGTHS |
| 29 | 80 | 3,800 |
| 44 | 75 | 3,300 |
| 58 | 70 | 2,900 |
| 72 | 65 | 2,500 |
| 84 | 60 | 2,150 |
| 94 | 55 | 1,600 |
| 104 | 50 | 1,000 |

RATED LOAD REDUCTIONS WITH JIB

| BOOM LENGTH | 31 ft JIB STOWED | | 31 ft JIB ERECTED | |
|-------------|------------------|--------------------|-------------------|----------------------|
| | Diagram | Reduce load | Diagram | Reduce load |
| 31ft | | Reduce load 500 lb | | Reduce load 1,600 lb |
| 55ft | | Reduce load 300 lb | | Reduce load 1,400 lb |
| 79ft | | Reduce load 200 lb | | Reduce load 1,300 lb |
| 103ft | | Reduce load 150 lb | | Reduce load 1,250 lb |
| 127ft | | Reduce load 100 lb | | Reduce load 1,200 lb |

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.

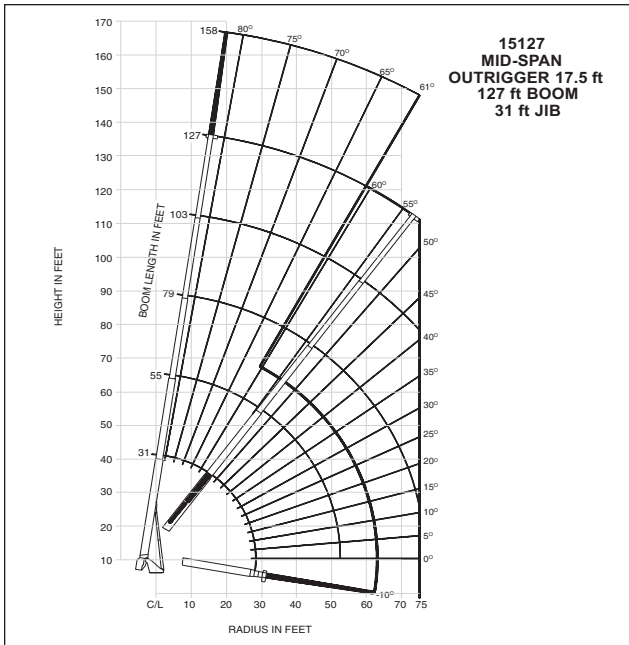
1500

capacities

Load Rating Chart: Series 15127 (38.71 m) Boom with 31 ft (9.45 m) Jib/Midspan Outrigger 17.5 ft (5.33 m)

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

10



CAUTION:

- Do not operate crane booms, jib extensions, any accessories or loads within 10 ft (3m) 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 Rating Chart: Series 15127 (38.71 m) Boom with 31 ft (9.45 m) Jib/Midspan Outrigger 17.5 ft (5.33 m)

**SERIES 15127
(38.71 M) BOOM
WITH 31 FT (9.45 M)
JIB/MID-SPAN
OUTRIGGER
17.5 FT (5.33 M)**

| 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) |
|------------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|------------------|-------------------|------------------|
| 6 | 76.4 | 72,000 | | | | | | | | |
| 8 | 72.2 | 63,000 | | | | | | | | |
| 10 | 68 | 54,000 | | | | | | | | |
| 12 | 63.7 | 47,000 | 76.8 | 36,000 | | | | | | |
| 15 | 57 | 38,500 | 73.5 | 31,000 | 79.5 | 25,000 | | | | |
| 20 | 44.1 | 22,100 | 67.7 | 23,500 | 75.8 | 20,500 | 79.6 | 14,000 | | |
| 25 | 27.4 | 13,400 | 61.4 | 18,400 | 71.7 | 15,300 | 77 | 13,000 | 79.5 | 8,700 |
| 30 | | | 54.9 | 10,100 | 67.4 | 10,600 | 74 | 10,700 | 77.5 | 8,200 |
| 35 | | | 48.4 | 7,300 | 63.4 | 7,700 | 70.9 | 7,900 | 75.3 | 7,700 |
| 40 | | | 40.6 | 5,200 | 59.1 | 5,700 | 67.6 | 5,900 | 72.7 | 6,000 |
| 45 | | | 31.3 | 3,800 | 54.5 | 4,200 | 64.3 | 4,400 | 70.1 | 4,600 |
| 50 | | | 18.2 | 2,700 | 49.7 | 3,100 | 61 | 3,300 | 67.4 | 3,400 |
| 55 | | | | | 44.5 | 2,200 | 57.6 | 2,400 | 64.7 | 2,500 |
| 60 | | | | | 38.8 | 1,500 | 54 | 1,650 | 62 | 1,800 |
| 65 | | | | | 32.2 | 850 | 50.3 | 1,050 | 59.3 | 1,200 |
| 70 | | | | | 24.2 | 400 | 46.4 | 550 | 56.4 | 650 |
| 0 | | 9,400 | 0 | 2,200 | | | | | | |

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.

| 31 ft JIB RATED LOADS | | |
|-----------------------|-------------------|------------------------------|
| RADIUS FULLY EXTENDED | LOADED BOOM ANGLE | RATED LOADS ALL BOOM LENGTHS |
| | | |
| | | |
| | | |
| | | |
| | | |

| RATED LOAD REDUCTIONS WITH JIB | | |
|--------------------------------|--------------------|----------------------|
| BOOM LENGTH | 31 ft JIB STOWED | 31 ft JIB ERECTED |
| | ' | Reduce load 500 lb |
| ' | Reduce load 300 lb | Reduce load 1,400 lb |
| ' | Reduce load 200 lb | Reduce load 1,300 lb |
| ' | Reduce load 150 lb | Reduce load 1,250 lb |
| ' | Reduce load 100 lb | Reduce load 1,200 lb |

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.

1500

Radio Remote Controls –

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

- **NB4R** (R4 functions)

One-Person Basket –

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

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

Heavy-duty Personnel Basket –

1,200 lb (544 kg) capacity steel basket with safety loops for four passengers. Gravity leveling 72 x 42 in (183 x 107 cm) 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 9,000 lb Line Pull –

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

- **15AW**

Winch Drum Rotation Indicator –

Winch drum rotation indicator on winch control lever or in cab (for use with standard and auxiliary winches).

- **WDRI**
- **WDRI-2**

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**

dimension specifications

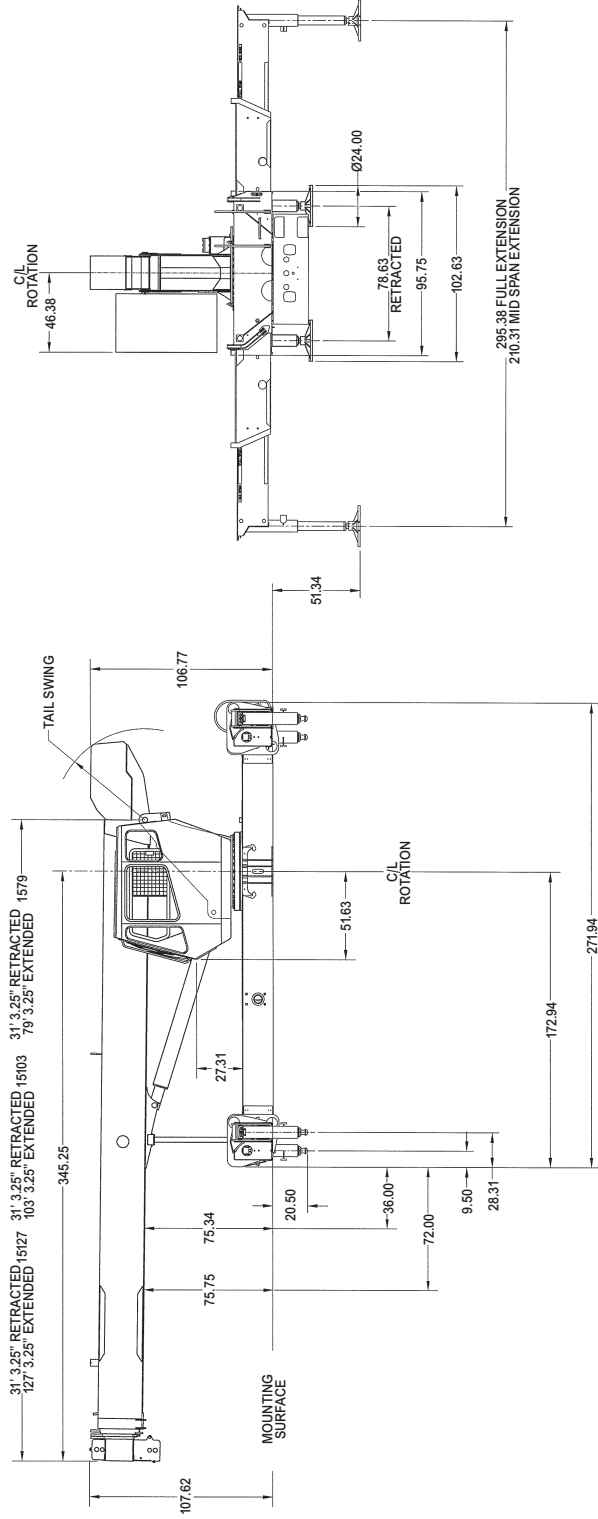
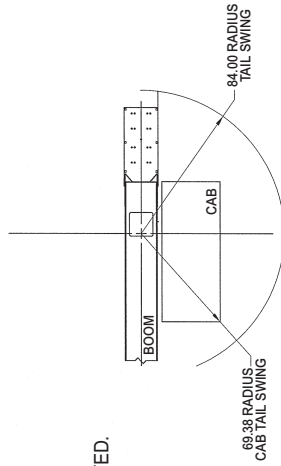
Dimensions Specifications

12

| MODEL | RETRACTED LENGTH | EXTENDED LENGTH | CENTER OF GRAVITY | WITH OIL/WT. |
|-------|------------------|------------------|-------------------|-----------------------|
| 15103 | 31 ft (9.45 m) | 103 ft (31.40 m) | 85 in (2.16 m) | 30,776 lb (13 960 kg) |
| 15127 | 32 ft (9.45 m) | 127 ft (38.72 m) | 89 in (2.26 m) | 32,201 lb (14 606 kg) |

*WEIGHT INCLUDES ALL ITEMS INCLUDING COMPLETE HO OUTRIGGERS, 180 lb (82 kg) DOWNHAUL WEIGHT, RESERVOIR, DECKS, LADDERS, AND SFO. BOOMS FULLY RETRACTED.

ALL DIMENSIONS IN INCHES (MM) UNLESS OTHERWISE SPECIFIED



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Germany

Wilhelmshaven

India

Calcutta

Pune

Italy

Niella Tanaro

Portugal

Baltar

Fânzeres

Slovakia

Saris

U.S.A.

Manitowoc

Port Washington

Shady Grove



Constant improvement and engineering progress make it necessary that we reserve the right to make specification, equipment and price changes without notice. Illustrations shown may include optional equipment and accessories, and may not include all standard equipment.