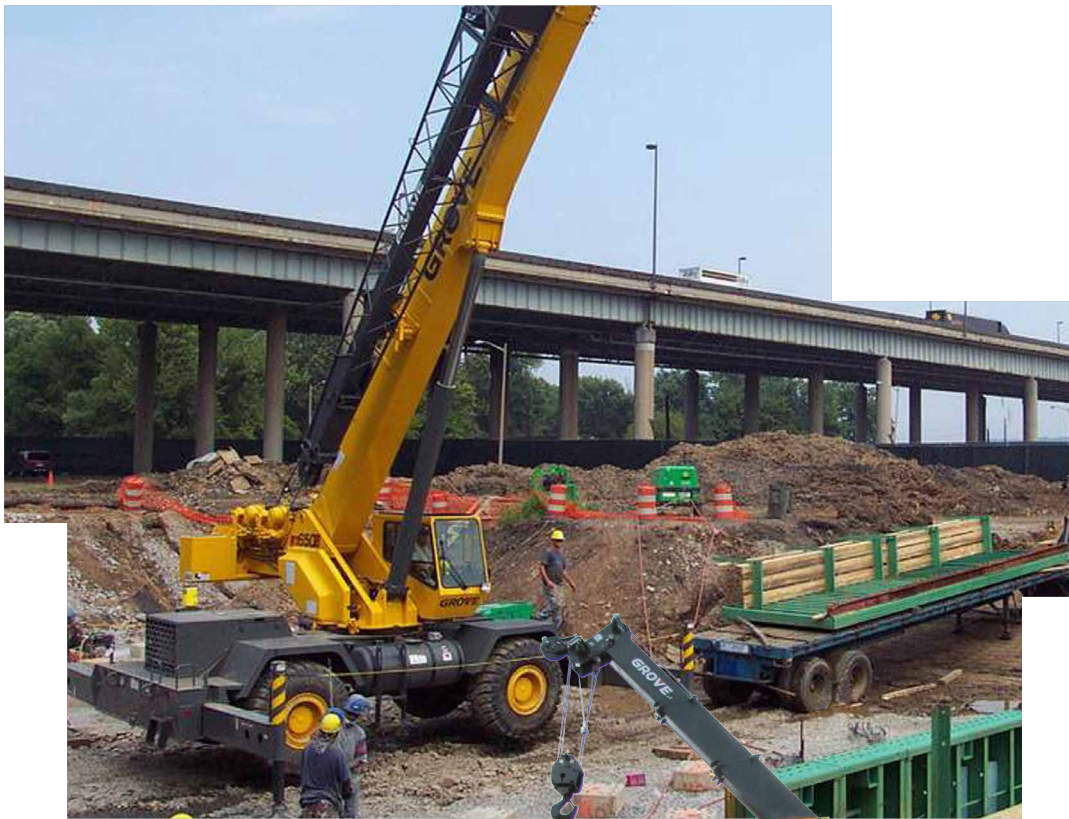


Grove RT600E

Product Guide

ASME B30.5
Imperial 85%



Features

- 10 m - 32 m (33 ft - 105 ft) four-section full-power boom
- 8,8 m – 15,5 m (29 ft – 51 ft) telescopic swingaway extension
- Maximum main boom tip height of 34 m (112 ft)
- Maximum overall tip height of 49,3 m (162 ft)
- 40 t/45 t (40 USt/50 USt) capacity
- Cummins QSB 6.7 L Tier IV, turbocharged diesel engine



Features



Cab

The RT600E cab includes:

- hot water heater/defroster
- single axis joystick controllers
- sliding skylight and adjustable sunscreen
- engine instrumentation
- full accoustical lining
- air-conditioning

The graphic display LMI includes a work area definition system which allows the operator to define a preferred working area.

Stowage

Large open stowage compartment for tools and rigging accessories.



Lattice extension

A telescopic swingaway lattice extension easily stows on the side of the base boom for easy transport. With a range of 29 ft - 51 ft the max tip height reaches 162 ft with a capacity of 6000 lb. An optional fixed lattice is also available, reaching a max height of 141 ft.

CraneSTAR

CraneSTAR is an exclusive and innovative crane asset management system that helps improve your profitability and reduce costs by remotely monitoring critical crane data. Visit www.cranestar.com for more information.



Superstructure

The superstructure features a full power four section boom with a four plate rectangular design that can reach to a max tip height of 112 ft. The synchronized extension feature telescopes boom sections at the touch of the hand from an easy to use single lever joystick controller.

Contents

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| Specifications | 4 |
| Dimensions and weights | 7 |
| Working range | 9 |
| Load charts | 10 |
| Load handling | 14 |

Specifications

Superstructure

Boom

10,1 m - 32 m (33 ft - 105 ft) four-section, full-power synchronized boom.
Maximum tip height: 34,1 m (112 ft).



*Optional fixed swingaway extension

8,8 m (29 ft) offsettable lattice swingaway extension. Offsettable at 0°, 25° and 45°. Stows alongside base boom section.

Maximum tip height: 43,1 m (141.5 ft).



*Optional telescopic swingaway extension

8,8 m - 15,5 m (29 ft - 51 ft) telescoping lattice swingaway extension. Offsettable at 0°, 25° and 45°. Stows alongside base boom section.

Maximum tip height: 49,3 m (162 ft).



Boom nose

Three nylatron sheaves mounted on heavy-duty tapered roller bearings with removable pin-type rope guards. Quick-reeve type boom nose.

*Optional removable auxiliary boom nose with removable pin type rope guard.



Boom elevation

One double-acting hydraulic cylinder with integral holding valve provides elevation from -2° to 78°.



Load moment and anti-two block system

Standard "Graphic Display" load moment and anti-two block system with audio-visual warning and control lever lockout. These systems provide electronic display of boom angle, length, radius, tip height, relative load moment, maximum permissible load, load indication and warning of impending two-block condition. The standard Work Area Definition System allows the operator to pre-select and define working areas. If the crane approaches the pre-set limits, audio-visual warnings aid the operator in avoiding job-site obstructions.



Counterweight

5265 kg (11,608 lb) pinned to superstructure.



Cab

Full-vision, all-steel fabricated with acoustical lining and tinted safety glass throughout. Deluxe seat incorporates armrest-mounted hydraulic single-axis controllers. Tilt/telescoping steering wheel with various controls incorporated into the steering column. Other standard features include: hot water heater, cab circulating air fan, sliding side and rear windows, sliding skylight with electric wiper and sunscreen, electric windshield wash/wipe, fire extinguisher, seat belt, air conditioning, and dual cab mounted work light.



Swing

Planetary swing with foot-applied multi-disc brake. Spring applied, hydraulically-released swing brake and plunger-type, one position, mechanical house lock operated from cab.

*Optional 360° mechanical swing lock. Maximum speed: 2.5 rpm.



Hydraulic system

Three main gear pumps with combined capacity of 441,3 L/min (116.6 GPM).

Maximum operating pressure: 26.2 MPa (3500 psi)

Return line type filter with full flow by-pass protection and service indicator. Replaceable cartridge with micron filtration rating of 5/12/16. 573,4 L (151.5 gal) reservoir. Hydraulic oil cooler. System pressure test ports. Manual hydraulic pump disconnect.



Hoist Specifications (GHP30A) main and auxiliary hoist

Planetary reduction with automatic spring applied multi-disc brake. Grooved drum. Electronic hoist drum rotation indicator and hoist drum cable followers.

Maximum single line pull: 8363 kg (18,436 lb)

Maximum single line speed: 153 m/min (502 FPM)

Maximum permissible line pull:
7620 kg (16,800 lb) with 35 x 7 class rope

Rope diameter: 19 mm (3/4 in)

Rope length: 137 m (450 ft)

Rope type: 35 x 7 class rotation resistant

Specifications

Carrier



Chassis

Box section frame fabricated from high-strength, low alloy steel. Integral outrigger housings and front/rear lifting, towing, and tie down lugs.



Outrigger system

Four hydraulic telescoping single-stage double box beam outriggers with inverted jacks and integral holding valves. Three position setting. All steel fabricated, quick-release type round outrigger floats, 610 mm (24 in) diameter. Maximum outrigger pad load: 31 344 kg (69,100 lb). Outrigger monitoring system.



Outrigger controls

Controls and crane level indicator located in cab.



Engine (Tier IV)

Cummins QSB 6.7 L diesel, six-cylinder, turbo-charged with Cummins diesel oxidation catalyst filter/muffler. Meets emissions per U.S. and E.P.A. Tier IV and E.U. Stage III B.

129 Kw (173 bHP) at 2300 rpm. Maximum torque: 800 Nm (590 ft lb) at 1500 rpm.

Fuel requirements: Maximum of 15 PPM sulphur content.

Note: Tier IV engine required for sale in North America and European Union countries.



Engine (Tier III)

Cummins QSB 6.7 L diesel, six cylinders, turbocharged, 129 kW (173 bhp) (Gross) at 2500 rpm. Maximum torque: 800 Nm (590 ft lb) at 1500 rpm.



Fuel tank capacity

220 L (58 gal)



Transmission

Full powershift with six forward and three reverse speeds. Front axle disconnect for 4 x 2 travel.



Electrical system

Three 12-volt maintenance free batteries. 12-volt starting and lighting, battery disconnect switch.



Drive

4 x 4



Steering

Fully independent power steering:

Front: Full hydraulic, steering wheel controlled.
Rear: Full hydraulic, switch controlled.

Provides infinite variations of 4 main steering modes: front only, rear only, crab, and coordinated. "Rear steer centered" indicating light. 4-wheel outside turning radius - 6,1 m (19.9 ft)



Axles

Front: Drive/steer with differential and planetary reduction hubs rigid-mounted to frame.

Rear: Drive/steer with differential and planetary reduction hubs pivot-mounted to frame. Automatic full hydraulic lockouts on rear axle permit oscillation only with boom centered over the front.



Brakes

Full hydraulic split circuit disc-type brakes operating on all wheels. Spring-applied, hydraulically released transmission-mounted parking brake.



Tires

23.5 x 25 - 20PR bias earthmover type



Lights

Full lighting package including turn indicators, head, tail, brake and hazard warning lights.

Specifications

Carrier continued



Maximum speed

39 km/h (24 mph)



Gradeability (theoretical)

78% (Based on 34 020 kg [76,558 lb] GVW) 23.5 x 25 tires, pumps engaged, 32 m (105 ft) boom, and tele-swingaway.

Miscellaneous standard equipment

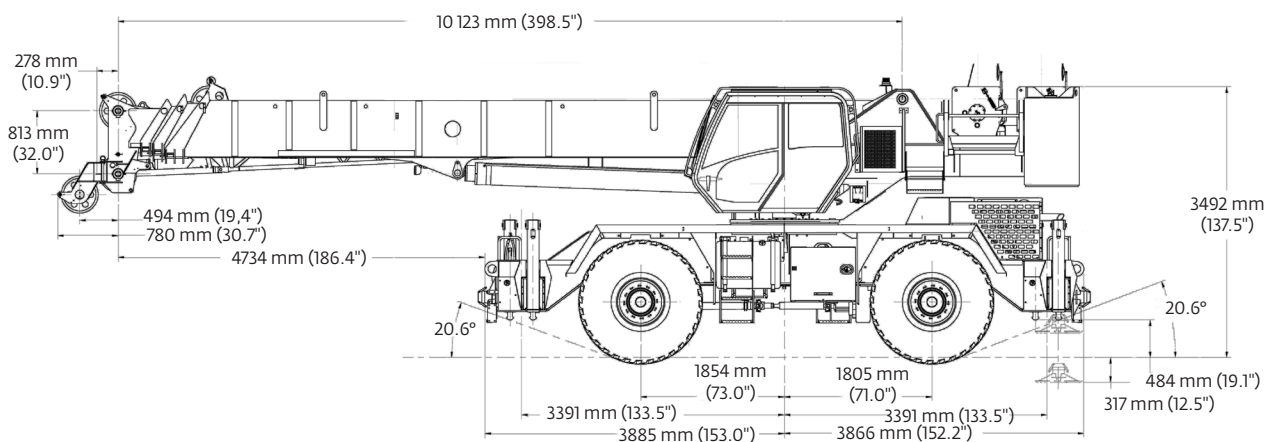
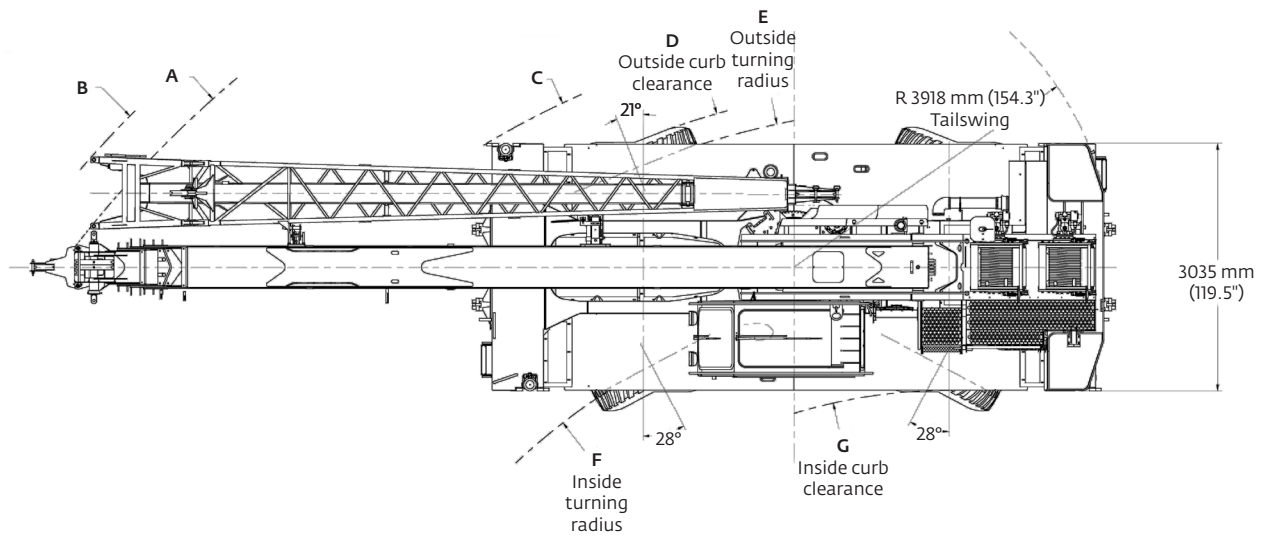
Full width steel fenders, full length aluminum decking, dual rear view mirrors, hook block tiedown, electronic back-up alarm, light package, front stowage well, tachometer, rear wheel position indicator, 36,000 BTU hot water heater, air conditioning package with 28,500 BTU hydraulic driven air conditioning, hoist mirrors, engine distress A/V warning system. Auxiliary hoist control valve arrangement (less hoist). Cold start aid and immersion type engine block heater, 120V 750 watt. Hoist access platform, CraneSTAR asset management system, Outrigger position monitoring system.

*Optional equipment

- ▶ **VALUE PACKAGE:** includes 8,8 m -15,5 m (29 ft - 51 ft) offsettable telescoping swingaway, 360° NYC style swing lock, and auxiliary hoist package.
- ▶ **AUXILIARY HOIST PACKAGE** (includes Model GHP30A auxiliary hoist with electronic hoist drum rotation indicator, hoist drum cable follower, 137 m (450 ft) of 19 mm (3/4 in) 35 X 7 class non-rotational wire rope, auxiliary single sheave boom nose.)
- ▶ **AUXILIARY LIGHTING PACKAGE:** Superstructure mounted amber flashing light, and dual base boom mounted floodlights, in-cab LMI Light bar, and rubber mat for stowage trough
- ▶ Pintle hook - rear
- ▶ 360° positive swing lock
- ▶ Cab-controlled cross axle differential lock (front and rear)
- ▶ PAT Event Recorder download kit
- ▶ Third wrap indicator (with hoist lockout for main hoist or main and auxiliary hoist)
- ▶ “CE” Mark Conformance (sound abatement foam kits, 3rd wrap indicator, emergency auxiliary steering, dual axis joystick controllers)

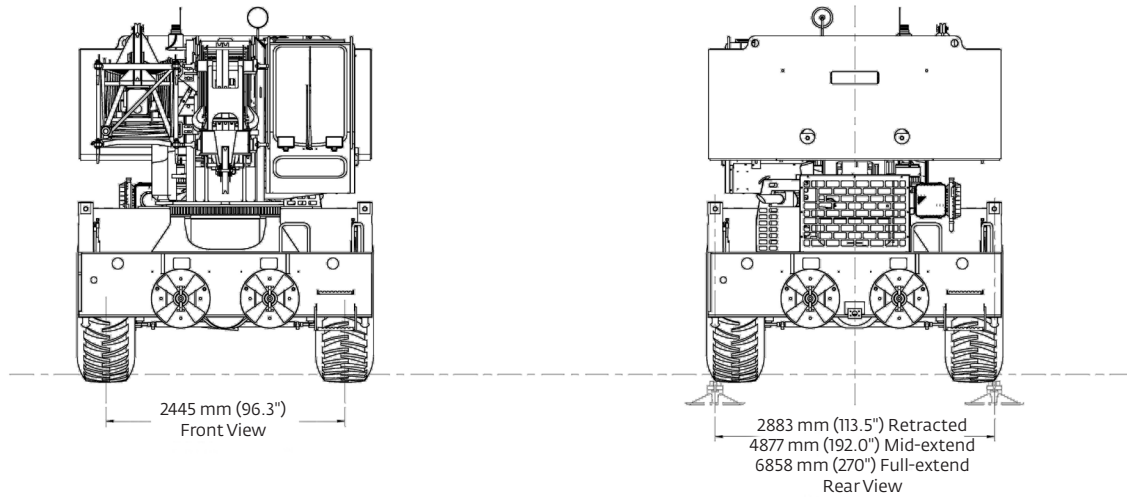
Dimensions and weights

| Dimensions | | | | | | | | | | | | | | |
|-----------------|------|------|------|------|------|------|------------------|------|------|------|------|------|------|--------|
| A | B | C | D | E | F | G | A | B | C | D | E | F | G | Units |
| 13,6 | 14,1 | 11,1 | 10,4 | 10,1 | 7,8 | 6,6 | 10,1 | 10,5 | 7,2 | 6,4 | 6,1 | 3,8 | 3,5 | Meters |
| 44.6 | 46.4 | 36.6 | 34.0 | 33.2 | 25.5 | 21.5 | 33.0 | 34.3 | 23.5 | 21.1 | 19.9 | 12.4 | 11.4 | Feet |
| Two-wheel steer | | | | | | | Four-wheel steer | | | | | | | |



Dimensions and weights

Dimensions and weights



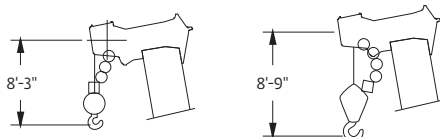
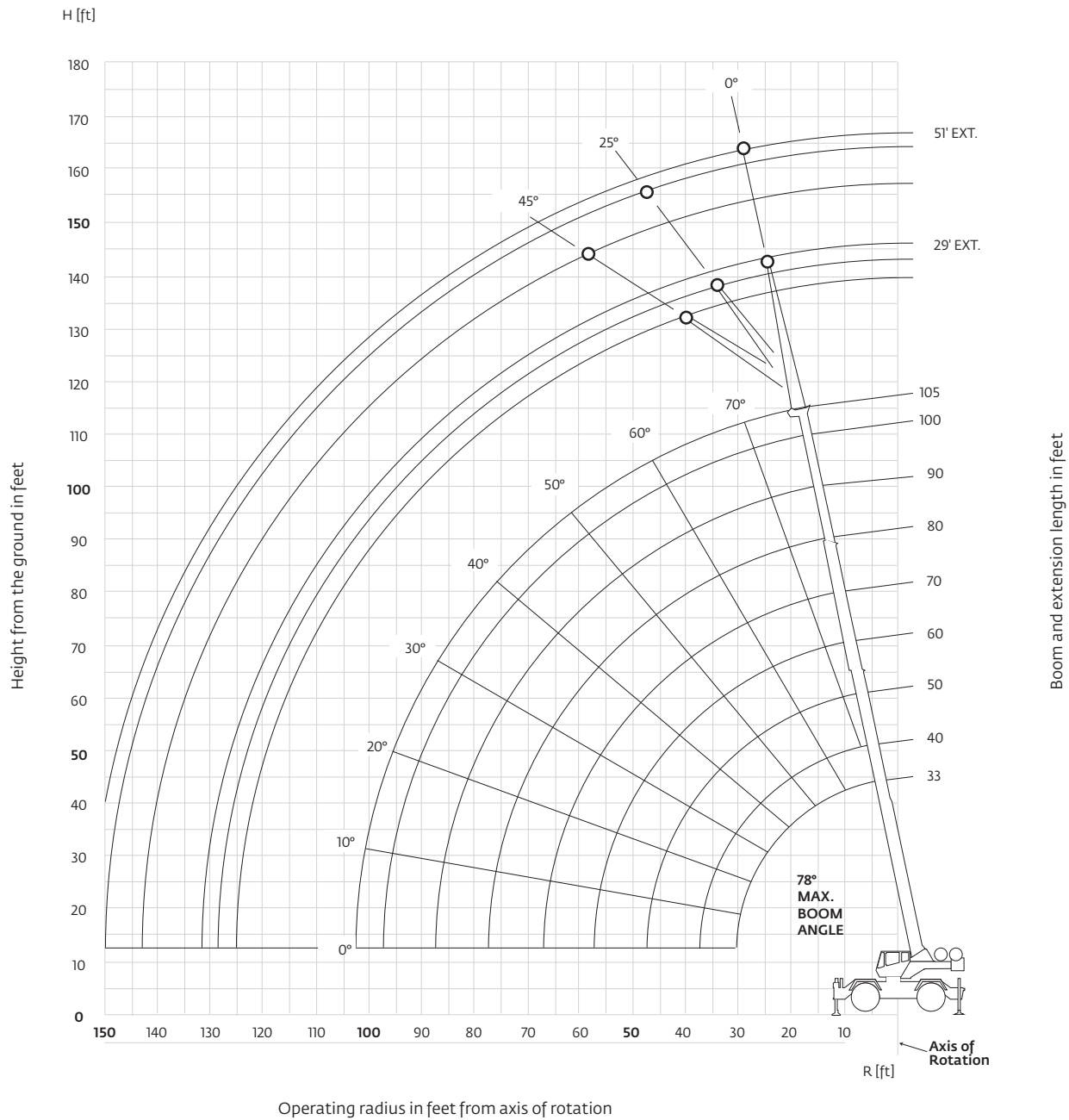
| Weights | | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|
| | GVW | | Front | | Rear | |
| | kg | lb | kg | lb | kg | lb |
| Basic Machine: including 32 m (105 ft) main boom, main hoist with 137 m (450 ft) of wire rope, IPO, full pinned counterweight, air conditioner, full aluminum decking, and hoist access platform. | 32 947 | 72,635 | 15 126 | 33,346 | 17 821 | 39,289 |
| ADD: 45 t (50 USt) 3-sheave hookblock stowed in trough | 458 | 1010 | 470 | 1037 | -12 | -27 |
| Crane weight | 33 405 | 73,645 | 15 596 | 34,383 | 17 809 | 39,262 |
| ADD: 8,8 m - 15,5 m (29 ft -51 ft) telescopic swingaway + carrier brackets + aux. nose | 1142 | 2517 | 1921 | 4236 | -780 | 1719 |
| Crane weight | 34 089 | 75,152 | 17 047 | 37,582 | 17 042 | 37,570 |
| ADD: Auxiliary Hoist + 137 m (450 ft) of wire rope | 236 | 520 | -83 | -183 | 319 | 703 |
| Crane weight | 34 325 | 75,672 | 16 964 | 37,399 | 17 361 | 38,273 |
| ADD: 7,5 t (8.3USt) headache ball | 161 | 355 | 279 | 616 | -118 | -261 |
| Crane weight | 34 486 | 76,027 | 17 244 | 38,015 | 17 242 | 38,012 |

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

Working range

32 m (105 ft) main boom



Dimensions are for largest Grove furnished Hook Block and Headache Ball, with Anti-Two Block activated.

Load chart RT650E

33 ft-105 ft
 11,608 lb
 100%
 360°
 22 ft 6 in spread

Pounds

| Feet | 33 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 105 |
|------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 10 | 100,000 (69.5) | 80,550 (73.5) | 67,250 (77) | | | | | | |
| 12 | 87,100 (65.5) | 79,150 (70.5) | 64,200 (75) | *56,100 (78) | | | | | |
| 15 | 69,050 (59.5) | 69,550 (65.5) | 59,950 (71) | 51,800 (75) | 45,200 (77.5) | | | | |
| 20 | 50,500 (47.5) | 50,950 (57) | 51,400 (64.5) | 44,500 (69.5) | 38,550 (73) | 34,450 (75.5) | *31,400 (78) | | |
| 25 | 38,300 (32) | 38,850 (47) | 39,350 (58) | 39,650 (64.5) | 37,100 (68.5) | 29,850 (72) | 27,250 (74.5) | 21,000 (76.5) | 18,350 (77.5) |
| 30 | | 30,700 (34.5) | 31,200 (50.5) | 31,500 (58.5) | 31,700 (64) | 26,350 (68) | 24,100 (71) | 21,000 (73.5) | 18,350 (74.5) |
| 35 | | | 25,450 (41.5) | 25,750 (52.5) | 26,000 (59) | 23,650 (64) | 21,500 (67.5) | 19,150 (70) | 18,350 (71.5) |
| 40 | See Note 16 | | 20,850 (30.5) | 21,200 (46) | 21,600 (54) | 21,350 (59.5) | 19,400 (64) | 16,650 (67) | 17,300 (68.5) |
| 45 | | | | 17,100 (38) | 17,350 (48.5) | 17,300 (55) | 17,300 (60) | 14,650 (64) | 15,750 (65.5) |
| 50 | | | | 13,950 (28) | 14,150 (42.5) | 14,200 (50.5) | 14,200 (56) | 13,000 (60.5) | 14,300 (62.5) |
| 55 | | | | | 11,700 (35) | 11,750 (45.5) | 11,850 (52) | 11,900 (57) | 12,000 (59) |
| 60 | | | | | 9730 (26) | 9870 (39.5) | 9980 (47.5) | 10,100 (53.5) | 10,150 (55.5) |
| 65 | | | | | | 8300 (33) | 8440 (42.5) | 8600 (49.5) | 8680 (52) |
| 70 | | | | | | 6960 (24.5) | 7170 (37.5) | 7340 (45.5) | 7430 (48.5) |
| 75 | | | | | | | 6080 (31) | 6290 (40.5) | 6390 (44.5) |
| 80 | | | | | | | 5130 (23) | 5380 (35.5) | 5490 (40) |
| 85 | | | | | | | | 4580 (29.5) | 4720 (35) |
| 90 | | | | | | | | 3880 (22) | 4020 (29) |
| 95 | | | | | | | | | 3400 (21.5) |

Minimum boom angle (°) for indicated length (no load) 0
 Maximum boom length (ft) at 0° boom angle (no load) 105

NOTE: () Boom angles are in degrees.
 #LMI operating code. Refer to LMI manual for operating instructions.
 *This capacity is based on maximum boom angle.

| Lifting capacities at zero degree boom angle on outriggers fully extended - 360° | | | | | | | | |
|-------------------------------------------------------------------------------------|--------------------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Boom angle | Main boom length in feet | | | | | | | |
| | 33 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| 0° | 16,250 (28.2) | 12,500 (35) | 8780 (45) | 6290 (55) | 4510 (65) | 3160 (75) | 2110 (85) | 1260 (95) |

NOTE: () Reference radii in feet.

AG-829-100936

Load chart RT640E

33 ft-105 ft 11,608 lb 22 ft 6 in spread 100% 360°

Pounds

| Feet | 33 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 105 |
|-------------------------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 10 | 80,000 (69.5) | 73,500 (73.5) | 67,200 (77) | | | | | | |
| 12 | 77,750 (65.5) | 69,500 (70.5) | 62,300 (75) | *56,100 (78) | | | | | |
| 15 | 69,050 (59.5) | 65,550 (65.5) | 57,300 (71) | 51,800 (75) | 45,200 (77.5) | | | | |
| 20 | 50,500 (47.5) | 50,950 (57) | 51,400 (64.5) | 44,500 (69.5) | 38,550 (73) | 34,450 (75.5) | *31,400 (78) | | |
| 25 | 38,300 (32) | 38,850 (47) | 39,350 (58) | 39,650 (64.5) | 37,100 (68.5) | 29,850 (72) | 27,250 (74.5) | 21,000 (76.5) | 18,350 (77.5) |
| 30 | | 30,700 (34.5) | 31,200 (50.5) | 31,500 (58.5) | 31,700 (64) | 26,350 (68) | 24,100 (71) | 21,000 (73.5) | 18,350 (74.5) |
| 35 | | | 25,450 (41.5) | 25,750 (52.5) | 26,000 (59) | 23,650 (64) | 21,500 (67.5) | 19,150 (70) | 18,350 (71.5) |
| 40 | See Note 16 | | 20,850 (30.5) | 21,200 (46) | 21,600 (54) | 21,350 (59.5) | 19,400 (64) | 16,650 (67) | 17,300 (68.5) |
| 45 | | | | 17,100 (38) | 17,350 (48.5) | 17,300 (55) | 17,300 (60) | 14,650 (64) | 15,750 (65.5) |
| 50 | | | | 13,950 (28) | 14,150 (42.5) | 14,200 (50.5) | 14,200 (56) | 13,000 (60.5) | 14,300 (62.5) |
| 55 | | | | | 11,700 (35) | 11,750 (45.5) | 11,850 (52) | 11,900 (57) | 12,000 (59) |
| 60 | | | | | 9730 (26) | 9870 (39.5) | 9980 (47.5) | 10,100 (53.5) | 10,150 (55.5) |
| 65 | | | | | | 8300 (33) | 8440 (42.5) | 8600 (49.5) | 8680 (52) |
| 70 | | | | | | 6960 (24.5) | 7170 (37.5) | 7340 (45.5) | 7430 (48.5) |
| 75 | | | | | | | 6080 (31) | 6290 (40.5) | 6390 (44.5) |
| 80 | | | | | | | 5130 (23) | 5380 (35.5) | 5490 (40) |
| 85 | | | | | | | | 4580 (29.5) | 4720 (35) |
| 90 | | | | | | | | 3880 (22) | 4020 (29) |
| 95 | | | | | | | | | 3400 (21.5) |
| Minimum boom angle (°) for indicated length (no load) | | | | | | | | | 0 |
| Maximum boom length (ft) at 0° boom angle (no load) | | | | | | | | | 105 |

NOTE: () Boom angles are in degrees.
 #LMI operating code. Refer to LMI manual for operating instructions.
 *This capacity is based on maximum boom angle.

| Lifting capacities at zero degree boom angle on outriggers fully extended - 360° | | | | | | | | | | |
|----------------------------------------------------------------------------------|--------------------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|-----|--|
| Boom angle | Main boom length in feet | | | | | | | | | |
| | 33 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 105 | |
| 0° | 16,250 (28.2) | 12,500 (35) | 8780 (45) | 6290 (55) | 4510 (65) | 3160 (75) | 2110 (85) | 1260 (95) | | |

NOTE: () Reference radii in feet.

A6-829-100832A

Load charts RT600E



| Pounds | | | | | | |
|--------|-------------------------|------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Feet | **29 ft LENGTH | | | 51 ft LENGTH | | |
| | #0021 0° OFFSET | #0022 25° OFFSET | #0023 45° OFFSET | #0041 0° OFFSET | #0042 25° OFFSET | #0043 45° OFFSET |
| 30 | ⁹⁰⁰⁰ (78) | | | | | |
| 35 | 9000 (77) | | | ⁶⁰⁰⁰ (78) | | |
| 40 | 9000 (74.5) | 8000 (77.5) | | 6000 (77) | | |
| 45 | 9000 (72.5) | 7560 (76) | ⁵⁶⁶⁰ (78) | 6000 (76) | | |
| 50 | 8760 (70) | 7170 (74) | 5600 (76) | 6000 (74) | | |
| 55 | 8030 (67.5) | 6820 (71.5) | 5500 (73.5) | 6000 (72) | ⁴¹²⁰ (78) | |
| 60 | 7380 (65) | 6500 (69) | 5300 (71) | 6000 (70) | 3900 (77) | |
| 65 | 6770 (62.5) | 6210 (66.5) | 5180 (68.5) | 6000 (68) | 3710 (75) | ²⁷⁴⁰ (78) |
| 70 | 6210 (60) | 5950 (64) | 4890 (66) | 5620 (66) | 3530 (72.5) | 2660 (76.5) |
| 75 | 5710 (57.5) | 5710 (61.5) | 4620 (63) | 5210 (64) | 3370 (70.5) | 2580 (74) |
| 80 | 5250 (55) | 5500 (58.5) | 4370 (60.5) | 4860 (61.5) | 3220 (68.5) | 2520 (72) |
| 85 | 4790 (52) | 5300 (56) | 4100 (57.5) | 4540 (59.5) | 3080 (66) | 2460 (69.5) |
| 90 | 4090 (49) | 4650 (53) | 3820 (54) | 4260 (57) | 2960 (63.5) | 2410 (67) |
| 95 | 3480 (46) | 3960 (49.5) | | 4000 (55) | 2850 (61.5) | 2360 (64.5) |
| 100 | 2930 (42.5) | 3350 (46) | | 3770 (52.5) | 2750 (59) | 2330 (62) |
| 105 | 2440 (39) | 2810 (42.5) | | 3360 (50) | 2660 (56) | 2300 (59) |
| 110 | 2000 (35) | 2320 (38.5) | | 2910 (47.5) | 2570 (53.5) | 2280 (56) |
| 115 | 1610 (30.5) | | | 2500 (44.5) | 2500 (50.5) | |
| 120 | 1250 (25.5) | | | 2120 (41.5) | 2430 (47.5) | |
| 125 | | | | 1780 (38.5) | 2250 (44.5) | |
| 130 | | | | 1470 (35) | 1820 (40.5) | |
| 135 | | | | 1180 (31) | 1420 (36.5) | |

Min. boom angle for indicated length (no load) 24° 32° 45° 25° 35° 45°

Max. boom length at 0° boom angle (no load) 90 ft 90 ft

NOTE: () Boom angles are in degrees. A6-829-100845A
 #LMI operating code. Refer to LMI manual for instructions.
 **This capacity based on maximum boom angle.
 ***29 ft capacities are also applicable to fixed offsettable ext. However, the LMI codes will change to #0051, #0052 and #0053 for 0°, 25° and 45° offset, respectively.



| Pounds | | | | | |
|--------|--------------------------|------------------|------------------|------------------|----------------|
| Feet | #9005 | | | | |
| | Main boom length in feet | | | | |
| | 33 | 40 | 50 | 60 | 70 |
| 10 | 38,550 (69.5) | 38,550 (73.5) | | | |
| 12 | 32,550 (65.5) | 32,550 (70.5) | 32,550 (75) | | |
| 15 | 23,700 (59.5) | 23,700 (65.5) | 23,700 (71) | 23,700 (75) | |
| 20 | 14,450 (47.5) | 14,450 (57) | 14,450 (64.5) | 14,450 (69.5) | 14,450 (73) |
| 25 | 9640 (32) | 9640 (47) | 9640 (58) | 9640 (64.5) | 9640 (68.5) |
| 30 | | 6840 (34.5) | 6840 (50.5) | 6840 (58.5) | 6840 (64) |
| 35 | | | 4850 (41.5) | 4850 (52.5) | 4850 (59) |
| 40 | | | 3450 (30.5) | 3450 (46) | 3450 (54) |
| 45 | | | | 2410 (38) | 2410 (48.5) |
| 50 | | | | 1610 (28) | 1610 (42.5) |

Min. boom angle (°) for indicated length (no load) 30
 Max. boom length (ft) at 0° boom angle (no load) 60
 NOTE: () Boom angles are in degrees.
 #LMI operating code. Refer to LMI manual for operating instructions.

| Lifting capacities at zero degree boom angle on rubber - 360° | | | |
|---------------------------------------------------------------|--------------------------|--------------|--------------|
| Boom angle | Main boom length in feet | | |
| | 33 | 40 | 50 |
| 0° | 7580 (28.2) | 4850 (35) | 2410 (45) |

NOTE: () Reference radii in feet. A6-829-100836B


NOTES:

- All capacities above the bold line are based on structural strength of boom extension.
 - 29 ft and 51 ft boom extension lengths may be used for single line lifting service.
 - Radii listed are for a fully extended boom with the boom extension erected. For main boom lengths less than fully extended, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is configured. For boom angles not shown, use the rating of the next lower boom angle.
- WARNING:** Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
- Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
 - Capacities listed are with outriggers fully extended and vertical jacks set.

Load charts






 **Pounds**

#9005

| Feet | Main boom length in feet | | | | |
|------|--------------------------|------------------|------------------|------------------|------------------|
| | 33 | 40 | 50 | 60 | 70 |
| 10 | 46,600 (69.5) | 40,800 (73.5) | 34,600 (77) | | |
| 12 | 40,800 (65.5) | 40,800 (70.5) | 34,600 (75) | | |
| 15 | 34,000 (59.5) | 34,000 (65.5) | 34,000 (71) | 26,650 (75) | 21,500 (77.5) |
| 20 | 26,050 (47.5) | 26,050 (57) | 26,050 (64.5) | 26,050 (69.5) | 21,500 (73) |
| 25 | 18,200 (32) | 18,200 (47) | 18,200 (58) | 18,200 (64.5) | 18,200 (68.5) |
| 30 | | 13,100 (34.5) | 13,100 (50.5) | 13,100 (58.5) | 13,100 (64) |
| 35 | | | 10,050 (41.5) | 10,050 (52.5) | 10,050 (59) |
| 40 | | | 7900 (30.5) | 7900 (46) | 7900 (54) |
| 45 | | | | 6290 (38) | 6290 (48.5) |
| 50 | | | | 5050 (28) | 5050 (42.5) |
| 55 | | | | | 4060 (35) |
| 60 | | | | | 3260 (26) |

Min. boom angle (°) for indicated length (no load) 0
 Max. boom length (ft) at 0° boom angle (no load) 70
 NOTE: () Boom angles are in degrees.
 #LMI operating code. Refer to LMI manual for operating instructions.


Lifting capacities at zero degree boom angle
on rubber - Defined arc over front

| Boom angle | Main boom length in feet | | | | |
|------------|--------------------------|----------------|--------------|--------------|--------------|
| | 33 | 40 | 50 | 60 | 70 |
| 0° | 14,550 (28.2) | 10,050 (35) | 6290 (45) | 4060 (55) | 2590 (65) |

NOTE: () Reference radii in feet. A6-829-100835B






 **Pounds**

#9006

| Feet | Main boom length in feet | | | | |
|------|--------------------------|------------------|------------------|------------------|------------------|
| | 33 | 40 | 50 | 60 | 70 |
| 10 | 30,150 (69.5) | 30,150 (73.5) | 17,850 (77) | | |
| 12 | 30,150 (65.5) | 30,150 (70.5) | 17,850 (75) | | |
| 15 | 29,650 (59.5) | 29,650 (65.5) | 17,850 (71) | 17,850 (75) | 14,750 (77.5) |
| 20 | 22,650 (47.5) | 22,650 (57) | 17,850 (64.5) | 17,850 (69.5) | 14,750 (73) |
| 25 | 17,850 (32) | 17,850 (47) | 17,850 (58) | 17,850 (64.5) | 14,750 (68.5) |
| 30 | | 13,100 (34.5) | 13,100 (50.5) | 13,100 (58.5) | 13,100 (64) |
| 35 | | | 10,050 (41.5) | 10,050 (52.5) | 10,050 (59) |
| 40 | | | | 7340 (30.5) | 7340 (46) |
| 45 | | | | 6020 (38) | 6020 (48.5) |
| 50 | | | | 4940 (28) | 4940 (42.5) |
| 55 | | | | | 4030 (35) |
| 60 | | | | | 3260 (26) |

Min. boom angle (°) for indicated length (no load) 0
 Max. boom length (ft) at 0° boom angle (no load) 70
 NOTE: () Boom angles are in degrees.
 #LMI operating code. Refer to LMI manual for operating instructions.

Lifting capacities at zero degree boom angle
on rubber - Pick & carry

| Boom angle | Main boom length in feet | | | | |
|------------|--------------------------|----------------|--------------|--------------|--------------|
| | 33 | 40 | 50 | 60 | 70 |
| 0° | 14,550 (28.2) | 10,050 (35) | 6020 (45) | 4030 (55) | 2590 (65) |

NOTE: () Reference radii in feet. A6-829-100837B

Load handling

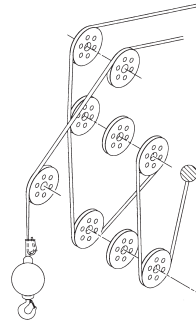
| Weight reductions for load handling devices | |
|---------------------------------------------|---------|
| 29 ft offsettable boom extension | |
| *Erected – | 4412 lb |
| 29 ft 51 ft tele. boom extension | |
| *Erected (retracted) – | 6611 lb |
| *Erected (extended) – | 9332 lb |
| *Reduction of main boom capacities | |
| Auxiliary boom nose | |
| | 137 lb |
| Hookblocks and headache balls | |
| 50 USt, 4-sheave | 1075 lb |
| 50 USt, 3-sheave | 1000 lb |
| 40 USt, 3-sheave | 800 lb |
| 8.3 USt headache ball (non-swivel) | 350 lb |
| 8.3 USt headache ball (swivel)* | 370 lb |
| +Refer to rating plate for actual weight. | |

When lifting over swingaway and/or jib combinations, deduct total weight of all load handling devices reeved over main boom nose directly from swingaway or jib capacity.

NOTE: All load handling devices and boom attachments are considered part of the load and suitable allowances **MUST BE MADE** for their combined weights. Weights are for Grove furnished equipment.

* Max lifting capacity:
6 x 37 class or 35 x 7 class = 16,800 lb

Reeving diagram



Line pulls and reeving information

| Hoists | Cable specs | Permissible line pulls | Nominal cable length |
|--------------------|-----------------------------------------------------------------------------------------|------------------------|----------------------|
| Main | 19 mm (3/4 in) 6 x 37 class, EIPS, IWRC Special Flexible Min. Breaking Str. 58,800 lb | 16,800 lb | 450 ft |
| Main and auxiliary | 19 mm (3/4 in) Flex-X 35 Rotation resistant (non-rotating) Min. breaking Str. 85,800 lb | 16,800 lb | 450 ft |

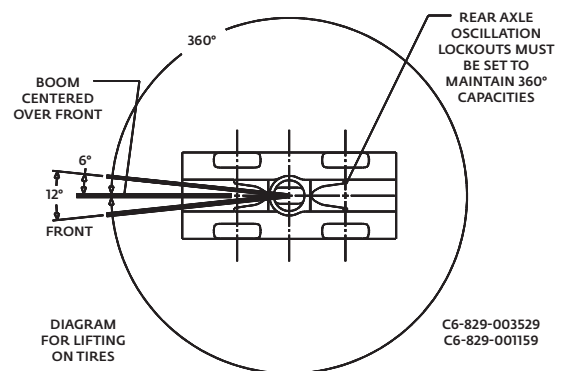
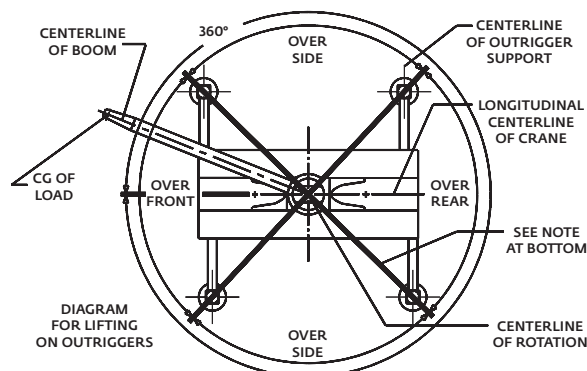
The approximate weight of 3/4 in wire rope is 1.5 lb/ft

Hoist performance

| Wire rope layer | Hoist line pulls two-speed hoist | | Drum rope capacity (ft) | |
|-----------------|----------------------------------|--------------------|-------------------------|-------|
| | Low available lb* | High available lb* | Layer | Total |
| 1 | 18,134 | 9067 | 101 | 101 |
| 2 | 16,668 | 8334 | 110 | 211 |
| 3 | 15,420 | 7710 | 120 | 331 |
| 4 | 14,347 | 7174 | 129 | 460 |
| 5 | 13,413 | 6707 | 139 | 599 |
| 6 | 12,594 | 6297 | 149 | 748 |

* Max lifting capacity: 6 x 37 class or 35 x 7 class = 16,800 lb

Working area diagram



Bold lines determine the limiting position of any load for operation within working areas indicated.

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