

# Grove RT600E

## Product Guide



### 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 III, 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

The PAT iFlex 5 graphic display LMI includes a work area definition system which allows the operator to define a preferred working area.



## 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.



## Stowage

Large open stowage compartment for tools and rigging accessories.

## Smooth operation

The RT600E uses a 12,250 lb pinned-on counterweight. Cable power is provided through model HP30A grooved drum hoists with 16,800 lb permissible line pull. Maximum line speed is 588 fpm. Both the main and optional auxiliary hoists have cable capacity up to 694 ft.



## 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.

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# 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 system defaults to 360° on rubber chart. 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

5556 kg (12,250 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. Dash panel incorporates gauges for all engine functions. Other standard features include: hot water heater/defroster, air conditioning, cab circulating air fan, sliding side and rear windows, sliding skylight with electric wiper and sunscreen, electric windshield wash/wipe, fire extinguisher, seat belt and circuit breakers.



### 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 391 L/min (103 GPM), 511 L/min (135 GPM) with optional air conditioning. 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. 509 L (134 gal) reservoir. Hydraulic oil cooler. System pressure test ports. Manual hydraulic pump disconnect.



### Hoist Specifications (HP30G) 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: 8246 kg (18,180 lb)

Maximum single line speed: 179 m/min (588 FPM)

Maximum permissible line pull:  
7620 kg (16,800 lb) with standard 6 x 37 class rope  
7620 kg (16,800 lb) with optional 35 x 7 class rope

Rope diameter: 19 mm (3/4 in)

Rope length: 137 m (450 ft)

Rope type: 6 x 37 Class EIPS IWRC  
Optional rope type: 35 x 7 class rotation resistant

Maximum usable rope stowage: 211 m (694 ft)

# 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 controls

Controls and crane level indicator located in cab.



### Engine (Tier III)

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

Two 12-volt maintenance free batteries. 12-volt starting and lighting, circuit breakers, 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 turning radius - 6,4 m (21 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

Titan 23.5 x 25 - 20PR bias earthmover type



### Lights

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



### Maximum speed

39 km/h (24 mph)



### Gradeability (theoretical)

78% (Based on 34 020 kg [75,000 lb] GVW) 23.5 x 25 tires, pumps engaged, 32 m (105 ft) boom, and tele-swingaway.

# Specifications

## Carrier continued

### Miscellaneous standard equipment

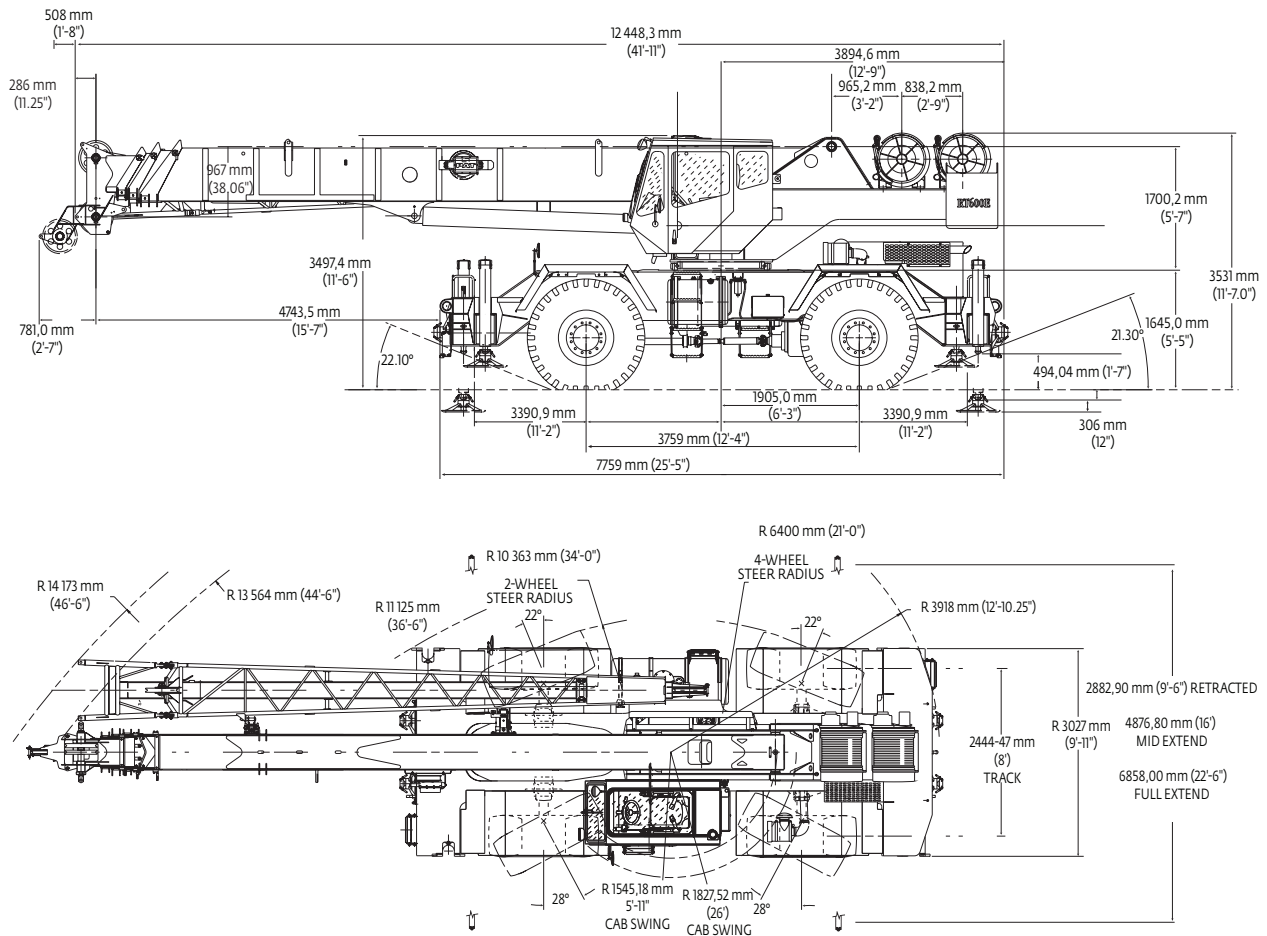
Full width steel fenders, dual rear view mirrors, hookblock tiedown, electronic back-up alarm, light package, front stowage well, tachometer, rear wheel position indicator, 36,000 BTU hot water heater, air conditioning, hoist mirrors, engine distress A/V warning system. Auxiliary hoist control valve arrangement (less hoist). Immersion type engine block heater.

### \* 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 HP30G 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 wire rope, auxiliary single sheave boom nose.)
  
- ▶ AUXILIARY LIGHTING PACKAGE: includes cab mounted, 360° rotation spotlight, cab mounted amber flashing light, and dual base boom mounted floodlights, in-cab LMI Light bar, and rubber mat for stowage trough
  
- ▶ Full-length aluminum decking
  
- ▶ Pintle hook - rear
  
- ▶ 360° positive swing lock
  
- ▶ Cab-controlled cross axle differential lock (front and rear)
  
- ▶ PAT Event Recorder
  
- ▶ Third wrap indicator (hoist)
  
- ▶ Mounting hardware for gooseneck/trailer attachment

# Dimensions and weights

## Dimensions

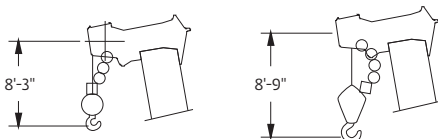
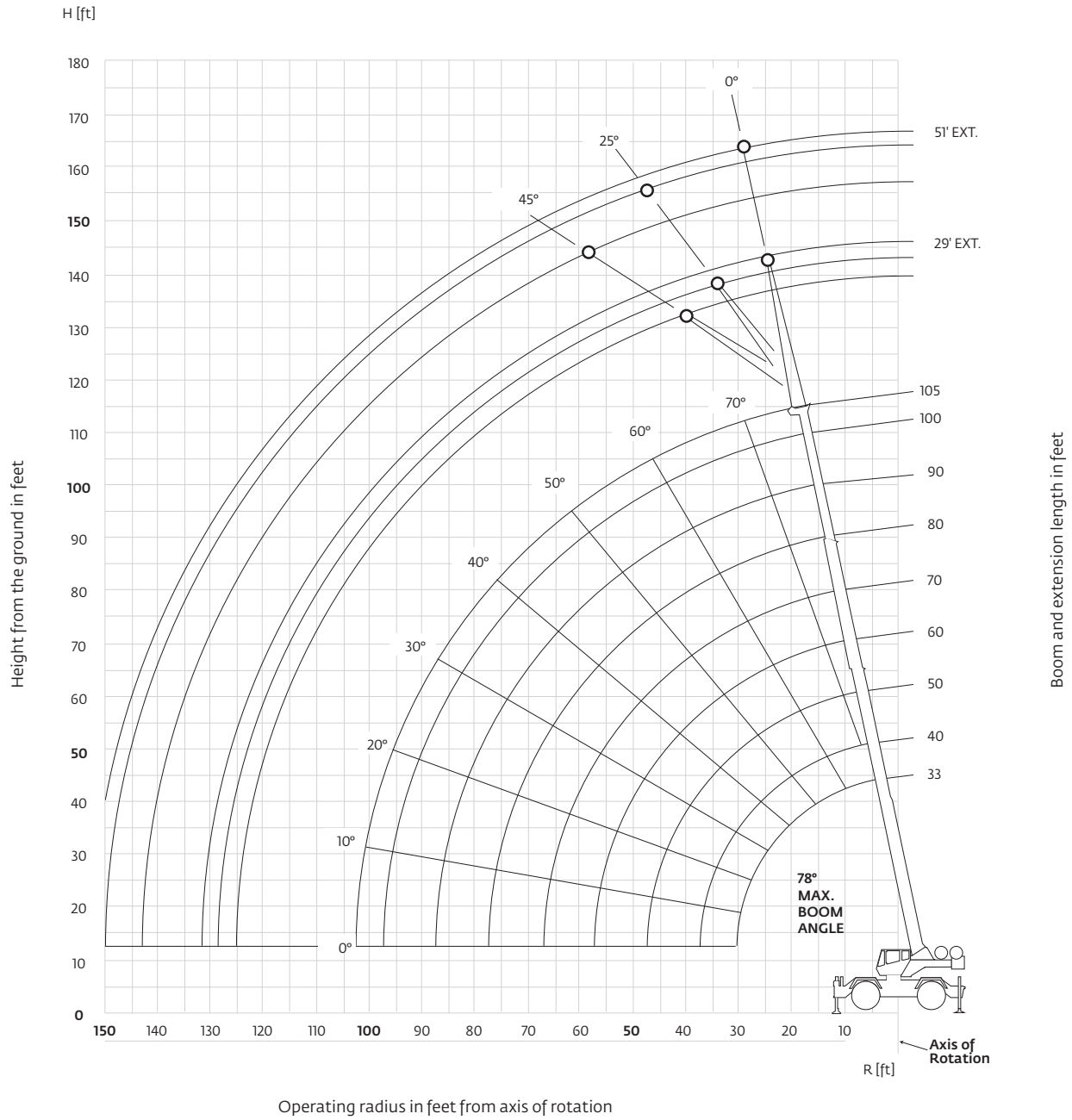


## Weights

|   | GVW     |           | Front  |          | Rear   |           |
|---|---------|-----------|--------|----------|--------|-----------|
|   | kg      | (lb)      | kg     | (lb)     | kg     | (lb)      |
| <b>RT600E Basic Machine:</b> Including 105 ft main boom, main hoist with 450 ft of wire rope, IPO, full pinned counterweight, and air conditioner | 32 841  | (72,402)  | 14 760 | (32,539) | 18 082 | (39,864)  |
| <b>Add:</b> 29 ft - 51 ft telescopic swingaway + carrier brackets   | -957.00 | (2109)    | 1432   | (3456)   | -611   | (-1347)   |
| <b>Add:</b> 450 ft of wire rope on Auxiliary Hoist  | -255    | (563)     | -96    | (-213)   | -342   | (755)     |
| <b>Add:</b> Auxiliary boom nose   | 59      | (131)     | 162    | (358)    | -102   | (-227)    |
| <b>Add:</b> 35 t (40 USt) 3-sheave hookblock (stowed in trough)   | 373     | (823)     | 383    | (845)    | -9.9   | (-22)     |
| <b>Add:</b> 45 t (50 USt) 3-sheave hookblock (stowed in trough)   | 458     | (1010)    | 470    | (1037)   | -12    | (-27)     |
| <b>Add:</b> 7,5 t (8.3 USt) headache ball   | 161     | (355)     | 279    | (616)    | -118   | (-261)    |
| <b>Add:</b> Full aluminum decking   | 113     | (250)     | 58     | (128)    | 55     | (122)     |
| <b>Remove:</b> Counterweight  | -5556   | (-12,250) | 2257   | (4976)   | -7814  | (-17,226) |

# Working range

## 105 ft main boom



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

*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*



# Load chart RT650E

 33 ft-105 ft  
 12,250 lb  
 22 ft 6 in spread  
 360°

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

| Boom angle | Lifting capacities at zero degree boom angle on outriggers fully extended - 360° |                |              |              |              |              |              |              |
|------------|--|----------------|--------------|--------------|--------------|--------------|--------------|--------------|
|            | Main boom length in feet   |                |              |              |              |              |              |              |
| 0°         | 16,250<br>(28.2)   | 12,500<br>(35) | 8780<br>(45) | 6290<br>(55) | 4510<br>(65) | 3160<br>(75) | 2110<br>(85) | 1260<br>(95) |

NOTE: ( ) Reference radii in feet.

A6-829-100936

# Load chart RT640E

 33 ft-105 ft    
  12,250 lb    
  100%    
  360°  
 22 ft 6 in spread

| Feet  | 33               | 40               | 50               | 60               | 70               | 80               | 90               | 100              | 105              |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 10  | 80,000<br>(69.5) | 73,500<br>(73.5) | 67,200<br>(77)   |                  |                  |                  |                  |                  |                  |
| 12  | 77,750<br>(65.5) | 69,500<br>(70.5) | 62,300<br>(75)   | *56,100<br>(78)  |                  |                  |                  |                  |                  |
| 15  | 69,050<br>(59.5) | 65,550<br>(65.5) | 57,300<br>(71)   | 51,800<br>(75)   | 45,200<br>(77.5) |                  |                  |                  |                  |
| 20  | 50,500<br>(47.5) | 50,950<br>(57)   | 51,400<br>(64.5) | 44,500<br>(69.5) | 38,550<br>(73)   | 34,450<br>(75.5) | *31,400<br>(78)  |                  |                  |
| 25  | 38,300<br>(32)   | 38,850<br>(47)   | 39,350<br>(58)   | 39,650<br>(64.5) | 37,100<br>(68.5) | 29,850<br>(72)   | 27,250<br>(74.5) | 21,000<br>(76.5) | 18,350<br>(77.5) |
| 30  |                  | 30,700<br>(34.5) | 31,200<br>(50.5) | 31,500<br>(58.5) | 31,700<br>(64)   | 26,350<br>(68)   | 24,100<br>(71)   | 21,000<br>(73.5) | 18,350<br>(74.5) |
| 35  |                  |                  | 25,450<br>(41.5) | 25,750<br>(52.5) | 26,000<br>(59)   | 23,650<br>(64)   | 21,500<br>(67.5) | 19,150<br>(70)   | 18,350<br>(71.5) |
| 40  | See<br>Note 16   |                  | 20,850<br>(30.5) | 21,200<br>(46)   | 21,600<br>(54)   | 21,350<br>(59.5) | 19,400<br>(64)   | 16,650<br>(67)   | 17,300<br>(68.5) |
| 45  |                  |                  |                  | 17,100<br>(38)   | 17,350<br>(48.5) | 17,300<br>(55)   | 17,300<br>(60)   | 14,650<br>(64)   | 15,750<br>(65.5) |
| 50  |                  |                  |                  | 13,950<br>(28)   | 14,150<br>(42.5) | 14,200<br>(50.5) | 14,200<br>(56)   | 13,000<br>(60.5) | 14,300<br>(62.5) |
| 55  |                  |                  |                  |                  | 11,700<br>(35)   | 11,750<br>(45.5) | 11,850<br>(52)   | 11,900<br>(57)   | 12,000<br>(59)   |
| 60  |                  |                  |                  |                  | 9730<br>(26)     | 9870<br>(39.5)   | 9980<br>(47.5)   | 10,100<br>(53.5) | 10,150<br>(55.5) |
| 65  |                  |                  |                  |                  |                  | 8300<br>(33)     | 8440<br>(42.5)   | 8600<br>(49.5)   | 8680<br>(52)     |
| 70  |                  |                  |                  |                  |                  | 6960<br>(24.5)   | 7170<br>(37.5)   | 7340<br>(45.5)   | 7430<br>(48.5)   |
| 75  |                  |                  |                  |                  |                  |                  | 6080<br>(31)     | 6290<br>(40.5)   | 6390<br>(44.5)   |
| 80  |                  |                  |                  |                  |                  |                  | 5130<br>(23)     | 5380<br>(35.5)   | 5490<br>(40)     |
| 85  |                  |                  |                  |                  |                  |                  |                  | 4580<br>(29.5)   | 4720<br>(35)     |
| 90  |                  |                  |                  |                  |                  |                  |                  | 3880<br>(22)     | 4020<br>(29)     |
| 95  |                  |                  |                  |                  |                  |                  |                  |                  | 3400<br>(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<br>on outriggers fully extended - 360° |                          |                |              |              |              |              |              |              |     |  |
|---|--------------------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|-----|--|
| Boom<br>angle   | Main boom length in feet |                |              |              |              |              |              |              |     |  |
|   | 33                       | 40             | 50           | 60           | 70           | 80           | 90           | 100          | 105 |  |
| 0°  | 16,250<br>(28.2)         | 12,500<br>(35) | 8780<br>(45) | 6290<br>(55) | 4510<br>(65) | 3160<br>(75) | 2110<br>(85) | 1260<br>(95) |     |  |

NOTE: ( ) Reference radii in feet.

A6-829-100832A

# Load chart RT600E

33 ft-105 ft   
 29 ft - 51 ft   
 12,250 lb   
 100% spread   
 360°

| Feet | Pounds                    |                        |                           |                           |                           |                           |
|------|---------------------------|------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
|      | 29 ft LENGTH              |                        |                           | 51 ft LENGTH              |                           |                           |
|      | #0021<br>0°<br>OFFSET     | #0022<br>25°<br>OFFSET | #0023<br>45°<br>OFFSET    | #0041<br>0°<br>OFFSET     | #0042<br>25°<br>OFFSET    | #0043<br>45°<br>OFFSET    |
| 30   | <sup>9</sup> 9000<br>(78) |                        |                           | <sup>6</sup> 6000<br>(78) |                           |                           |
| 35   | 9000<br>(77)              |                        |                           | 6000<br>(77)              |                           |                           |
| 40   | 9000<br>(74.5)            | 8000<br>(77.5)         |                           | 6000<br>(77)              |                           |                           |
| 45   | 9000<br>(72.5)            | 7560<br>(76)           | <sup>5</sup> 5660<br>(78) | 6000<br>(76)              |                           |                           |
| 50   | 8760<br>(70)              | 7170<br>(74)           | 5600<br>(76)              | 6000<br>(74)              |                           |                           |
| 55   | 8030<br>(67.5)            | 6820<br>(71.5)         | 5500<br>(73.5)            | 6000<br>(72)              | <sup>4</sup> 4120<br>(78) |                           |
| 60   | 7380<br>(65)              | 6500<br>(69)           | 5300<br>(71)              | 6000<br>(70)              | 3900<br>(77)              |                           |
| 65   | 6770<br>(62.5)            | 6210<br>(66.5)         | 5180<br>(68.5)            | 6000<br>(68)              | 3710<br>(75)              | <sup>3</sup> 2740<br>(78) |
| 70   | 6210<br>(60)              | 5950<br>(64)           | 4890<br>(66)              | 5620<br>(66)              | 3530<br>(72.5)            | 2660<br>(76.5)            |
| 75   | 5710<br>(57.5)            | 5710<br>(61.5)         | 4620<br>(63)              | 5210<br>(64)              | 3370<br>(70.5)            | 2580<br>(74)              |
| 80   | 5250<br>(55)              | 5500<br>(58.5)         | 4370<br>(60.5)            | 4860<br>(61.5)            | 3220<br>(68.5)            | 2520<br>(72)              |
| 85   | 4790<br>(52)              | 5300<br>(56)           | 4100<br>(57.5)            | 4540<br>(59.5)            | 3080<br>(66)              | 2460<br>(69.5)            |
| 90   | 4090<br>(49)              | 4650<br>(53)           | 3820<br>(54)              | 4260<br>(57)              | 2960<br>(63.5)            | 2410<br>(67)              |
| 95   | 3480<br>(46)              | 3960<br>(49.5)         |                           | 4000<br>(55)              | 2850<br>(61.5)            | 2360<br>(64.5)            |
| 100  | 2930<br>(42.5)            | 3350<br>(46)           |                           | 3770<br>(52.5)            | 2750<br>(59)              | 2330<br>(62)              |
| 105  | 2440<br>(39)              | 2810<br>(42.5)         |                           | 3360<br>(50)              | 2660<br>(56)              | 2300<br>(59)              |
| 110  | 2000<br>(35)              | 2320<br>(38.5)         |                           | 2910<br>(47.5)            | 2570<br>(53.5)            | 2280<br>(56)              |
| 115  | 1610<br>(30.5)            |                        |                           | 2500<br>(44.5)            | 2500<br>(50.5)            |                           |
| 120  | 1250<br>(25.5)            |                        |                           | 2120<br>(41.5)            | 2430<br>(47.5)            |                           |
| 125  |                           |                        |                           | 1780<br>(38.5)            | 2250<br>(44.5)            |                           |
| 130  |                           |                        |                           | 1470<br>(35)              | 1820<br>(40.5)            |                           |
| 135  |                           |                        |                           | 1180<br>(31)              | 1420<br>(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.

33 ft-105 ft   
 12,250 lb   
 Stationary   
 360°

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

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

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

# Load charts






**Pounds**

**#9005**

| Feet | Main boom length in feet |                  |                  |                  |                  |
|------|--------------------------|------------------|------------------|------------------|------------------|
|      | 33                       | 40               | 50               | 60               | 70               |
| 10   | 46,600<br>(69.5)         | 40,800<br>(73.5) | 34,600<br>(77)   |                  |                  |
| 12   | 40,800<br>(65.5)         | 40,800<br>(70.5) | 34,600<br>(75)   |                  |                  |
| 15   | 34,000<br>(59.5)         | 34,000<br>(71)   | 34,000<br>(71)   | 26,650<br>(75)   | 21,500<br>(77.5) |
| 20   | 26,050<br>(47.5)         | 26,050<br>(57)   | 26,050<br>(64.5) | 26,050<br>(69.5) | 21,500<br>(73)   |
| 25   | 18,200<br>(32)           | 18,200<br>(47)   | 18,200<br>(58)   | 18,200<br>(64.5) | 18,200<br>(68.5) |
| 30   |                          | 13,100<br>(34.5) | 13,100<br>(50.5) | 13,100<br>(58.5) | 13,100<br>(64)   |
| 35   |                          |                  | 10,050<br>(41.5) | 10,050<br>(52.5) | 10,050<br>(59)   |
| 40   |                          |                  | 7900<br>(30.5)   | 7900<br>(46)     | 7900<br>(54)     |
| 45   |                          |                  |                  | 6290<br>(38)     | 6290<br>(48.5)   |
| 50   |                          |                  |                  | 5050<br>(28)     | 5050<br>(42.5)   |
| 55   |                          |                  |                  |                  | 4060<br>(35)     |
| 60   |                          |                  |                  |                  | 3260<br>(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<br>(28.2)         | 10,050<br>(35) | 6290<br>(45) | 4060<br>(55) | 2590<br>(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<br>(69.5)         | 30,150<br>(73.5) | 17,850<br>(77)   |                  |                  |
| 12   | 30,150<br>(65.5)         | 30,150<br>(70.5) | 17,850<br>(75)   |                  |                  |
| 15   | 29,650<br>(59.5)         | 29,650<br>(65.5) | 17,850<br>(71)   | 17,850<br>(75)   | 14,750<br>(77.5) |
| 20   | 22,650<br>(47.5)         | 22,650<br>(57)   | 17,850<br>(64.5) | 17,850<br>(69.5) | 14,750<br>(73)   |
| 25   | 17,850<br>(32)           | 17,850<br>(47)   | 17,850<br>(58)   | 17,850<br>(64.5) | 14,750<br>(68.5) |
| 30   |                          | 13,100<br>(34.5) | 13,100<br>(50.5) | 13,100<br>(58.5) | 13,100<br>(64)   |
| 35   |                          |                  | 10,050<br>(41.5) | 10,050<br>(52.5) | 10,050<br>(59)   |
| 40   |                          |                  | 7340<br>(30.5)   | 7340<br>(46)     | 7340<br>(54)     |
| 45   |                          |                  |                  | 6020<br>(38)     | 6020<br>(48.5)   |
| 50   |                          |                  |                  | 4940<br>(28)     | 4940<br>(42.5)   |
| 55   |                          |                  |                  |                  | 4030<br>(35)     |
| 60   |                          |                  |                  |                  | 3260<br>(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<br>(28.2)         | 10,050<br>(35) | 6020<br>(45) | 4030<br>(55) | 2590<br>(65) |

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

# Load handling

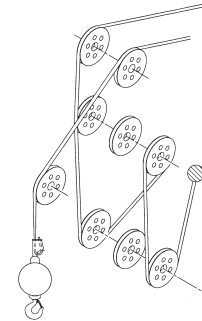
## Weight reductions for load handling devices

| 29 ft offsettable boom extension          | Pounds |
|---|--------|
| *Erected –                                | 4412   |
|   |        |
| 29 ft 51 ft tele. boom extension          | Pounds |
| *Erected (retracted) –                    | 6611   |
| *Erected (extended) –                     | 9332   |
| *Reduction of main boom capacities        |        |
| Auxiliary boom nose                       | Pounds |
|   | 137    |
| Hookblocks and headache balls             | Pounds |
| 50 USt, 4-sheave                          | 1075   |
| 50 USt, 3-sheave                          | 1000   |
| 40 USt, 3-sheave                          | 800    |
| 8.3 USt headache ball (non-swivel)        | 350    |
| 8.3 USt headache ball (swivel)*           | 370    |
| +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.

## 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

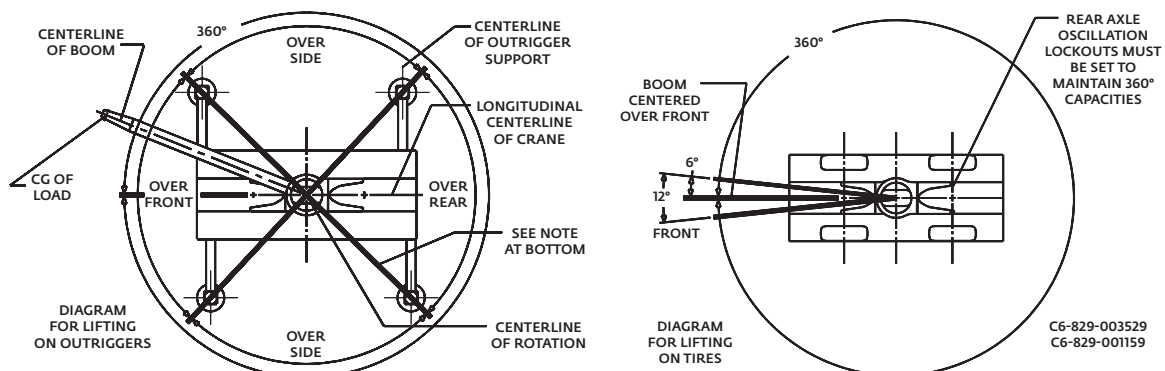
## Hoist performance

| Wire rope layer | Hoist line pulls two-speed hoist |                                | Drum rope capacity (ft) |       |
|-----------------|----------------------------------|--------------------------------|-------------------------|-------|
|                 | Low available lb <sup>o</sup>    | High available lb <sup>o</sup> | 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   |

<sup>o</sup> 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.

# Notes

# Notes

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#### Mexico

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#### Chile

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#### Algeria

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Netvorice

#### France

Baudemont

Cergy

Decines

#### Germany

Langenfeld

#### Hungary

Budapest

#### Italy

Parabiago

#### Netherlands

Breda

#### Poland

Warsaw

### Portugal

Baltar

Lisbon

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### U.A.E.

Dubai

### U.K.

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### Asia - Pacific

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Brisbane

Melbourne

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Beijing

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#### India

Hyderabad

Pune

#### Korea

Seoul

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#### Singapore

## Factories

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TaiAn

Zhangjiagang

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La Clayette

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### Portugal

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Fânzeres

### Slovakia

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