

# Grove RT600E

## Quick Reference

**Capacity:** 40 t/45 t (40 USt/50 USt)  
**Boom:** 10 m -32 m (33 ft – 105 ft) main boom  
**Max boom extension:** 8,8 m - 15,5 m (29 ft - 51 ft)  
**Max tip height:** 49,3 m (162 ft)

### FEATURES

- 8,8 m - 15,5 m (29 ft - 51 ft) telescopic swingaway extension
- 129 kW (173 bhp) Cummins diesel engine (Tier III)
- 5447 kg (12,008 lb) counterweight pinned-on superstructure

### Main boom load chart

Feet	33	40	50	60	70	80	90	100	105
10	100,000 (69.5)	80,550 (72.5)	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)	11,850 (45.5)	11,900 (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)	7100 (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)
									105

Minimum boom angle (°) for indicated length (no load)

Maximum boom length (ft) at 0° boom angle (no load)

NOTE: ( ) Boom angles are in degrees.

#LMI operating code. Refer to LMI manual for operating instructions.

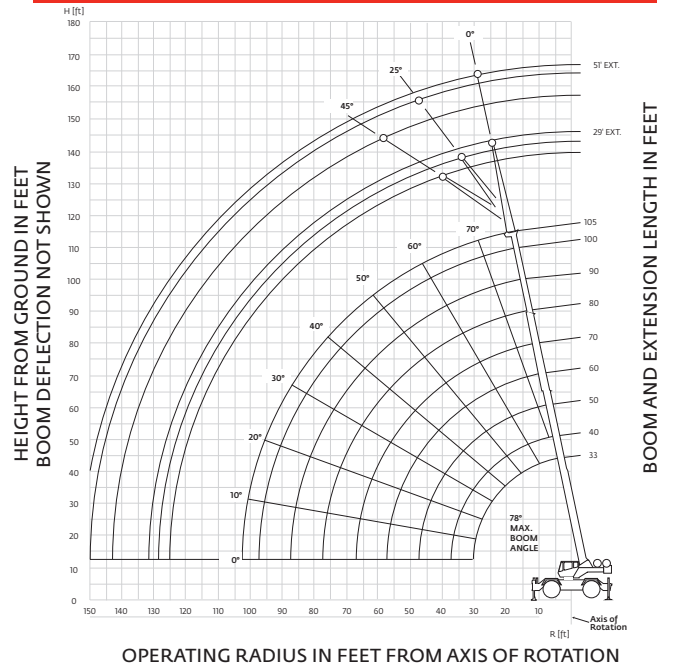
\*This capacity is based on maximum boom angle.

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

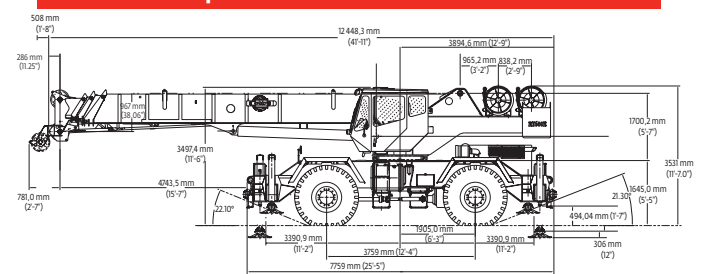
NOTE: ( ) Reference radii in feet.

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### 105 ft main boom and 29 ft - 51 ft telescopic offset swingaway



### Boom over front



	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	34,726	(76,558)	17,433	(38,434)	17,293	(38,124)
<b>Add:</b> 21 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	-5447	(-12,008)	2213	(4878)	-7659	(-16,886)

## 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

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.

### Cab

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.

### Counterweight

5447 kg (12,008 lb) pinned to superstructure.

### 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 (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: 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

## 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 [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, 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, event recorder, CraneSTAR asset management system.

*\*Denotes optional equipment.*