

Grove RT880E

Quick Reference

Capacity: 75 t (80 USt)
Boom: 12,6 m - 39,0 m (41 ft - 128 ft) main boom
Max boom extension: 10 m - 17 m (33 ft - 56 ft)
Max tip height: 70,6 m (232 ft)

FEATURES

- 10,0 m - 17,0 m (33 ft - 56 ft) offsettable lattice swingaway extension
- 6,1 m (20 ft) or 12,2 m (40 ft) extension inserts
- 8165 kg (18,000 lb) hydraulic removable counterweight
- 205 kW (275 bhp) Tier IV Cummins diesel engine
- Grove MEGAFORM™ boom

Main boom load chart

41.3 ft - 128 ft 18,000 lb 100% 360°

24 ft spread

Feet	Pounds									
	Main boom length in feet									
	41.3	50	60	**70	80	90	100	110	120	128
10	++160,000 (71)	124,000 (74.5)	105,500 (77.5)							
12	+150,000 (67.5)	124,000 (72)	105,500 (75.5)	59,500 (78)						
15	130,000 (63)	124,000 (68.5)	104,000 (72.5)	59,500 (75.5)	42,100 (78)	*42,000 (78)				
20	100,000 (54.5)	99,850 (62)	85,900 (67.5)	59,500 (71)	42,100 (74)	42,000 (76)	*39,650 (78)	*31,950 (78)		
25	80,550 (44.5)	80,250 (55)	72,550 (62)	57,050 (66.5)	42,100 (70)	42,000 (73)	39,650 (75)	31,950 (77)	*25,750 (78)	*22,000 (78)
30	59,050 (31.5)	58,150 (47)	57,850 (56)	49,300 (62)	42,100 (66)	39,050 (69.5)	36,150 (72)	31,950 (74)	25,750 (76)	22,000 (77)
35		43,250 (37.5)	43,000 (49.5)	42,600 (57)	38,150 (62)	34,100 (66)	31,350 (68.5)	29,300 (71.5)	25,750 (73.5)	22,000 (74.5)
40		33,600 (24.5)	33,400 (42.5)	32,950 (52)	33,750 (62)	30,050 (68.5)	27,500 (75)	25,650 (81.5)	23,900 (87.5)	22,000 (93.5)
45			26,600 (34)	26,200 (46)	27,400 (53)	26,750 (62)	24,400 (68.5)	22,700 (75)	21,450 (81.5)	20,650 (87.5)
50	See Note 16		21,600 (22)	21,150 (39.5)	22,450 (48.5)	22,250 (54.5)	21,850 (59)	20,250 (62.5)	19,100 (65.5)	18,350 (67.5)
55				17,250 (31.5)	18,650 (43)	19,400 (50)	19,700 (55)	18,200 (59.5)	17,100 (63)	16,400 (65)
60					14,200 (21)	15,600 (37)	16,400 (45.5)	17,050 (51.5)	16,450 (56)	14,750 (62.5)
65						13,100 (29.5)	13,850 (40.5)	14,550 (47.5)	14,950 (53)	14,000 (59.5)
70							11,050 (19)	11,800 (34.5)	12,450 (43)	12,900 (49.5)
75								10,000 (28)	10,700 (38.5)	11,600 (45.5)
80									8540 (18)	9170 (33)
85										7860 (37)
90										6710 (32)
95										6200 (25.5)
100										5210 (17)
105										5010 (25)
110										4290 (16.5)
115										4000 (21.5)
120										3410 (10.5)

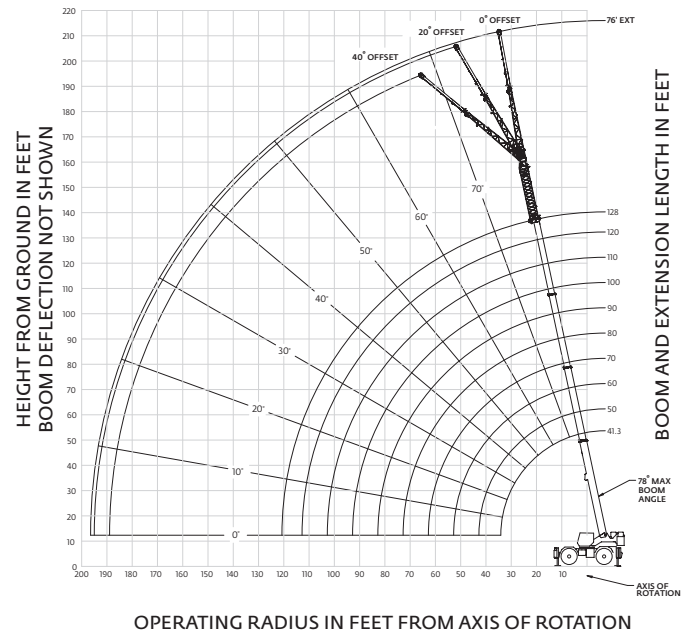
Minimum boom angle (°) for indicated length (no load) 9
 Maximum boom length (ft) at 0° boom angle (no load) 120
 LMI operating code. Refer to LMI manual for instructions.
 *This capacity is based upon maximum obtainable boom angle.
 Note: () Boom angles are in degrees.
 +9 parts line required to lift this capacity (using aux. boom nose). Refer to Operator's & Safety Handbook for reeving diagram.
 ++10 parts line required to lift this capacity (using aux. boom nose). Refer to Operator's & Safety Handbook for reeving diagram.

Lifting capacities at zero degree boom angle

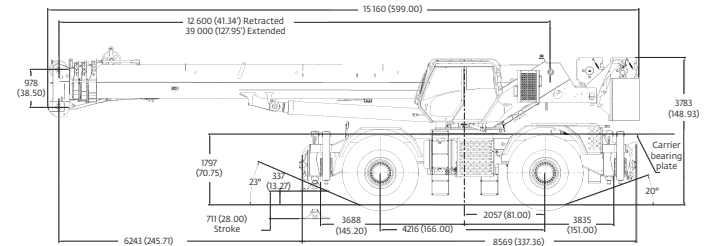
Boom angle	Main boom length in feet									
	41.3	50	60	**70	80	90	100	110	120	128
0°	20,750 (34.1)	15,150 (42.8)	10,500 (52.8)	6700 (63)	5100 (72.8)	3900 (82.8)	2900 (92.8)	2000 (102.8)	1300 (112.8)	

Note: () Reference radii in feet.
 **This boom length is with inner-mid fully extended and outer-mid & fly fully retracted.

Main boom with bi-fold extension and one insert



Boom over front



Weights

	G.V.W. kg (lb)	Front kg (lb)	Rear kg (lb)
Basic Machine: Including 39,0 m (128 ft) main boom, main and aux. hoist with 182,8 m (600 ft) of rope, manual offsettable bifold swingaway, full counterweight, 9,1 t (10 USt) headache ball, and 75 t (80 USt) hookblock, air conditioning, aux. nose:	49 588 (109,321)	24 474 (53,956)	25 114 (55,365)
Remove: Counterweight and aux. hoist (manual offsettable S/A).	40 428 (89,128)	28 850 (63,602)	11 579 (25,526)
Remove: Counterweight, aux. hoist, and manual offsettable S/A	39 229 (86,483)	26 692 (58,845)	12 537 (27,638)

SUPERSTRUCTURE

Boom

12,6 m - 39,0 m (41 ft - 128 ft) four-section, sequenced synchronized full power boom.
Maximum tip height: 41,9 m (138 ft).

Lattice extension

10,0 m - 17 m (33 ft - 56 ft) offsettable bi-fold lattice swingaway extension. Offsets 0°, 20°, and 40°. Stows alongside base boom section.
Maximum tip height: 58,6 m (192 ft).

*Optional lattice extension inserts

(2) x 6,1 m (20 ft) lattice extension inserts. Installs between the boom nose and bi-fold extension, non-stowable.
Maximum tip height: 70,6 m (232 ft).

Boom nose

Four nylon sheaves mounted on heavy-duty tapered roller bearings with removable pin-type rope guards. Quick-reeving type boom nose. Removable auxiliary boom nose with removable pin type rope guard.

Boom elevation

One double-acting hydraulic cylinder with integral holding valve provides elevation from -3° 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 safe working areas. If the crane approaches the pre-set limits, audio-visual warnings aid the operator in avoiding job-site obstructions.

Cab

20° tilt, Full-vision, all-steel fabricated with acoustical lining and tinted safety glass throughout. Deluxe seat incorporates single-axis hydraulic 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

Two speed, planetary swing drive with foot-applied multi-disc wet brake. Spring applied, hydraulically-released swing brake. Single position mechanical house lock, operated from cab.
Maximum speed: 2.0 rpm.

Counterweight

8165 kg (18,000 lb). Hydraulically installed and removed.

Hoist specifications (HP30-19G) main and auxiliary hoist

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

Maximum single line pull:

1st layer: 9185 kg (20,250 lb)
3rd layer: 7715 kg (17,010 lb)
5th layer: 6650 kg (14,660 lb)

Maximum permissible line pull:

7620 kg (16,800 lb) with 6 x 37 class rope
7620 kg (16,800 lb) with 35 x 7 class rope

Maximum single line speed: 156 m/min (514 fpm)

Rope construction:

6 x 36 EIPS IWRC, Special Flexible
35 x 7 Flex-X, Rotation Resistant

Rope diameter: 19 mm (3/4 in)

Rope length:

Main hoist: 182,8 m (600 ft)
Auxiliary hoist: 182,8 m (600 ft)

Maximum rope stowage: 256 m (841 ft)

CARRIER

Chassis

Box section frame fabricated from high-strength, low alloy steel. Front/rear 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, 0%, 50% and fully extended. All steel fabricated, quick-release type round outrigger floats, 775 mm (30.5 in) diameter. Maximum outrigger pad load: 56 700 kg (125,000 lb). Outrigger monitoring system comes standard.

Outrigger controls

Controls and crane level indicator located in cab.

Engine (Tier IV)

Cummins QSB 6.7L diesel, six-cylinder, turbo-charged. 205 kW (275 bhp) at 2500 rpm.

Meets emission requirements per U.S. E.P.A., Tier IV and E.U. Stage III B.

Maximum torque: 992 Nm (732 ft lb) at 1500 rpm.

Fuel requirement: Minimum of 15 ppm sulphur content (Ultra Low Sulphur Diesel).

Note: Tier IV engine required in North American and European Union countries

Engine (Tier III)

Cummins QSB 6.7L diesel, six cylinders, 205 kW (275 bhp) (Gross) at 2500 rpm. Maximum torque: 987 Nm (728 ft lb) at 1500 rpm.

Note: Required for sale outside of North American and European Union countries.

Fuel tank capacity

280 L (74 gal) - draw volume.

Hydraulic system

Two main pumps ([1] piston and [1] gear) with a combined capacity of 503 LPM (133 GPM).

Maximum operating pressure: 277,7 bar (4000 psi).

Three section pressure compensated valve bank. Return line type filter with full flow by-pass protection and service indicator. Replaceable cartridge with micron filtration rating of 5/12/16. 959 L (253 gal) hydraulic reservoir. Carrier mounted oil cooler with thermostatically controlled hydraulic motor driven fan/air to oil. System pressure test ports.

Transmission

Full ranges shift with 6 forward and 6 reverse speeds. Front axle disconnect for 4 x 2 travel.

Electrical system

Two 12-V maintenance free batteries. 12-V starting and lighting. Battery disconnect. CanBus Diagnostic system.

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 indicator. Turning radius - 25 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 permits 25,4 cm (10 in) oscillation only with boom centered over the front.

Brakes

Full hydraulic split circuit brakes operating on all wheels. Spring-applied, hydraulically released parking brake mounted on front axle.

Tires

Std. 29.5 x 25 - 34 bias ply, Titan

Lights

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

Maximum speed

35 km/h (22 mph).

Gradeability (theoretical)

75% (Based on 49 125 kg [108,301 lb] GVW) 29.5 x 25 tires, 39,0 m (128 ft) boom, plus 17,0 m (56 ft) swingaway, 8165 kg (18,000 lb) counterweight, 80 USt hookblock and 10 USt headache ball).

Miscellaneous standard equipment

Air conditioning, full width steel fenders, full length aluminum decking, dual rear view mirrors, hookblock tiedown, electronic back-up alarm, light package, front stowage well, tachometer/hourmeter, rear wheel position indicator, 36,000 BTU hot water cab heater, hoist mirrors, engine distress A/V warning system, front/rear tie down and two lugs, coolant sight level indicator, CraneSTAR asset management system.

**Denotes optional equipment.*