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features

- 75 ton (68 mt) capacity
- 41 ft-128 ft (12.6 m-39.0 m)
 4 section, full power boom
- 33 ft-56 ft (10.0 m-17.0 m) offsettable lattice swingaway extension
- 20 ft (6.1 m) or 40 ft (12.2 m) extension inserts
- Grove MEGAFORM[™] boom
- 18,000 lb (8 165 kg) hydraulic removable counterweight
- 275 bhp (205 kW) Tier III Cummins diesel engine

Rough Terrain Hydraulic Crane



features





 Max. tip height of 232 ft. (70.6 m) w/56 ft. (17.0 m) bi-fold and (2) 20 ft. (6.1 m) inserts.

 The Grove MEGAFORM[™] boom shape eliminates weight and increases capacity compared to conventional shapes.



• For improved operator comfort and visibility of the boom load the cab can be tilted up to 20.



Electronically controlled Cummins diesel
 engine provides plenty of power at the jobsite.

CURRAN E P a THE ITS NOT LUCK, ITS KNOW HOW

specifications

Superstructure

Boom

41 ft. - 128 ft. (12.6 m - 39.0 m) four-section, sequenced synchronized full power boom. Maximum tip height: 138 ft. (41.9 m).

Lattice Extension

33 ft.-56 ft. (10.0 m-17 m) offsettable bifold lattice swingaway extension. Offsets 0°, 20°, and 40°. Stows alongside base boom section. Maximum tip height: 192 ft. (58.6 m).

*Optional Lattice Extension Inserts

(2) x 20 ft. (6.1 m) lattice extension inserts. Installs between the boom nose and bifold extension, non-stowable. Maximum tip height: 232 ft. (70.6 m).

🔳 Boom Nose

Four nylatron 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 & 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.

🕒 ˈCab

Full-vision, all-steel fabricated with acoustical lining and tinted safety glass throughout. Cab tilts to +20 degrees. Deluxe seat incorporates armrest-mounted hydraulic single-axis controllers. Dash panel incorporates gauges for all engine functions. 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 and seat belt.

1 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.

18,000 lbs. (8 165 kg). Hydraulically installed and removed.

Hydraulic System

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

Maximum operating pressure: 4000 psi (277.7 bar). 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. 263 gallon (995 L) hyd. reservoir. Carrier mounted oil cooler with thermostatically controlled hydraulic motor driven fan/air to oil. System pressure test ports.

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 layers: 20,250 lb. (9 185 kg) 3rd layer: 17,010 lb. (7 715 kg) 5th layer: 14,660 lb. (6 650 kg)

Maximum Permissible Line Pull: 16,800 lb. (7 620 kg) with 6 x 37 class rope 16,800 lb. (7 620 kg) with 35 x 7 class rope

Maximum Single Line Speed: 514 FPM (156 m/min)

Rope Construction:

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

Rope Diameter: 3/4" (19 mm)

Rope Length:	
Main Hoist:	600 ft. (182.8 m)
Auxiliary Hoist:	600 ft. (182.8 m)

Maximum Rope Stowage: 841 ft. (256 m)

*Denotes optional equipment







specifications

Carrier

[聞] Chassis

Box section frame fabricated from high-strength, low alloy steel. Front/rear towing and tie down lugs.

L- 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, 30.5 in. (775 mm) diameter. Maximum outrigger pad load: 125,000 lb. (56 700 kg).

Utrigger Controls

Controls and crane level indicator located in cab.

Engine (Tier III)

Cummins QSB 6.7L diesel, six cylinders, 275 bhp (205 kW) (Gross) @ 2,500 rpm. Maximum torque: 728 ft. lbs. (987 Nm) @ 1,500 RPM.

Fuel Tank Capacity

72 gallons (273 L)

O Transmission

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

4 Electrical System

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

I---I Drive

4 x 4

T 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

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reduction hubs pivot-mounted to frame.
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Oscillation Lockouts

Automatic full hydraulic lockouts on rear axle permits 10 in. (25.4 cm) oscillation only with boom centered over the front.

O Brakes

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

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Std. 29.5 x 25 - 34 bias ply, General.
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🔳 Lights

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



22 MPH (35 kph).

Gradeability (Theoretical)

75% (Based on 108,158 lb. [49 060 kg] GVW) 29.5 x 25 tires, 128 ft. (39.0 m) boom, plus 56 ft. (17.0 m) swingaway, 18,000 lb. (8 165 kg) counterweight, 75T hookblock and 10T headache ball).

Miscellaneous Standard Equipment

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.

***Optional Equipment**

*Auxiliary Lighting Package (includes cab mounted amber flashing light, hoist mounted work light, and dual base boom mounted floodlights.)
*LMI light bar (in cab)
*Air Conditioning (28,500 BTU)
*360 degree NYC style mechanical swinglock
*Rear Pintle hook
*Cab controlled cross axle differential locks, (front and rear)
*PAT data logger
*Rubber mat for stowage trough

*Denotes optional equipment







dimensions







Note: Reference dimensions in mm [inches]

Weights

	GVW		Front		Rear	
	lb.	kg	lb.	kg	lb.	kg
RT875E Basic Machine						
Basic Machine including 128 ft. main boom, main and aux. hoist with 600 ft. of rope, 56' (17 m) bifold swingaway, full counterweight, 10T headache ball, and 75T hookblock:	108,158	49 060	53,888	24 444	54,270	24 617
Remove counterweight and aux. hoist. 56' (17 m) bifold.	87,917	39 879	63,520	28 813	24,397	11 066
Remove counterweight, aux. hoist, and 56' (17 m) bifold swingaway.	85,285	38 685	58,725	26 638	26,560	12 048





working range





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.



GROVE.



RT875E load chart



(no load) ; () Boom angles are in degrees. perating code. Refer to LMI manual for opera-broad upon maximum boom angle A6-829-103653 ing instructions

NOTES:

- 1. All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765.
- 2. The 33 ft. extension length may be used with single or double part line lifting service. The 56 ft. extension length may be used for single line lifting service only.
- 3. For main boom lengths less than 128 ft. with the boom extension erected, 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 set up. For boom angles not shown, use the rating of the next lower boom angle.
- 4. 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.
- 5. Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
- 6. Capacities listed are with outriggers properly extended and vertical jacks set only.
- 7. When lifting over the main boom nose with 33 ft. or 56 ft. extension erected, the outriggers must be fully extended or 50% extended (17 ft. 4 in. spread).





working range



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RT875E



working range



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.



875

RT875E load chart

	41.3-128 ft.	33-56 ft.	20 ft. inse	ert 18,0	D0 lbs	100% ft. spread	Q 360°
_	L		mat	van nen	Pounds		
10		76 ft. (56 ft.	LENGTH + 1	INSERT)	96 ft. (56 ft.	LENGTH + 2	INSERTS)
	Θ	00	20°	40°	00	20°	40°
	Feet	#0084	#0085	#0086	#0084	#0085	#0086
	50	4,850 (78)					
	55	4,850 (77.5)			3,520 (78)		
	60	4,850 (76)			3,520 (77.5)		
	65	4,850 (74,5)	*5,290 (78)		3,520 (76.5)		
	70	4,850	4,860		3,520 (75)		
	75	4,850	4,470		3,520	3,740	
	80	4,730	4,110	*4,050	3,520	3,420	
	85	4,310	3,790	3,500	3,300	3,100	*3,250
	90	3,940	3,500	3,260	2,970	2,820	2,720
	95	3,610	3,240	3,030	2,660	2,560	2,490
	100	3,310	3,000	2,830	2,390	2,320	2,270
	105	3,040 (62)	2,770 (66)	2,630	2,140	2,100	2,070
	110	2,790 (60,5)	2,570 (64.5)	2,450	1,920 (63.5)	1,900 (68)	1,890 (70.5)
	115	2,560	2,370	2,280	1,710	1,710	1,710
	120	2,350 (57)	2,200 (61)	2,120 (64)	1,520 (60.5)	1,540 (64.5)	1,550 (67.5)
	125	2,160 (55)	2,030 (59)	1,970 (62)	1,350 (59)	1,380 (63)	1,390 (66)
	130	1,990 (53)	1,880 (57)	1,830 (60)	1,190 (57.5)	1,230 (61.5)	1,250 (64)
	135	1,820 (51.5)	1,730 (55)	1,700 (58)	1,040 (56)	1,080 (60)	1,110 (62.5)
	140	1,670 (49.5)	1,590 (53)	1,570 (56)			
	145	1,530 (47)	1,470 (51)	1,450 (53.5)			
	150	1,400 (45)	1,340 (49)	1,340 (51.5)			
	155	1,270 (43)	1,230 (46.5)	1,230 (48.5)			
	160	1,160 (40.5)	1,120 (44)	1,130 (46)			
	165	1,050 (38)	1,020 (41.5)				
	Minimum boom an (°) for indicated length (no load)	igle 36	40	44	54	58	60
	Maximum boom length (ft.) at 0° bo angle (no load)	iom	70			60	
	NOTE: () Boom at #LMI operating cod	ngles are in de de. Refer to LI	grees. Al manual fo	r operating	instructions	A6-8	29-103655

RT875E - S/N 223983

NOTES:

- All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765.
- 2. The 56 ft. boom extension length may be used for single line lifting service only.
- 3. For main boom lengths less than 128 ft. with the boom extension erected, 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 set up. For boom angles not shown, use 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.
- When lifting over the main boom nose with 56 ft. extension erected and inserts, the outriggers must be fully extended and vertical jacks set.

			<u></u>	(Q	
41.3-90 ft.	18,0	000 lbs	Stationa	ry	360°	
				Pounds		
			#90	005		
G		м	ain Boom Le	ength in Feet		
Feet	41.3	50	60	*70	80	90
12	49,200 (67.5)	40,750 (72)				
15	39,150 (63)	35,700 (68.5)				
20	24,200 (54.5)	24,350 (62)	22,800 (67.5)	22,000 (71)		
25	16,200 (44.5)	16,200 (55)	15,600 (62)	15,950 (66.5)	15,850 (70)	
30	11,250 (31.5)	11,250 (47)	10,950 (56)	10,650 (62)	11,600 (66)	12,150 (69.5)
35		7,900 (37.5)	7,690 (49.5)	7,270 (57)	8,420 (62)	8,820 (66)
40		5,490 (24.5)	5,280 (42.5)	4,880 (52)	6,020 (58)	6,330 (62)
45			3,430 (34)	3,110 (46)	4,130 (53)	4,480 (58.5)
50			1,350 (22)	1,740 (39.5)	2,610 (48.5)	3,040 (54.5)
55					1,360 (43)	1,070 (50)
finimum boon idicated leng	m angle (de th (no load)	g.) for	21	38.5	42	49
laximum boo eq. boom an	om length (ft gle (no load	.) at 0)		50	D	
LMI operatin	g code. Ref	er to LMI mai	nual for instru	ctions.		
This boom le etracted.	ingth is with	inner-mid ful	y extended a	ind outer-mid	& fly fully	
	Lifting	Capacities at	Zero Degre	e Boom Angl	e	
Boom Angle	41.3	M 50	ain Boom Le	ength in Feet		
0°	8,340 (34.1)	4,400 (42.8)				
lote: () Refer	ence radii ir	n feet.			A6-829-0	0103649A

41.3-90ft.	18,0	00 lbs	Pick & Car Up to 2.5 m	ry ph	Q 360°	
				Pounds		
			#90	006		
G		м	ain Boom	Length in I	Feet	
Feet	41.3	50	60	*70	80	90
12	59,450 (67.5)	49,400 (72)				
15	49,650 (63)	49,400 (68.5)				
20	38,100 (54.5)	37,800 (62)	36,850 (67.5)	29,750 (71)		
25	30,000 (44.5)	29,700 (55)	29,200 (62)	29,700 (66.5)		
30	24,100 (31.5)	23,750 (47)	23,500 (56)	23,850 (62)	24,450 (66)	
35		18,000 (37.5)	17,900 (49.5)	18,150 (57)	19,000 (62)	19,900 (66)
40		13,650 (24.5)	13,700 (42.5)	13,750 (52)	14,700 (58)	15,500 (62)
45			9,400 (34)	9,290 (46)	11,500 (53)	12,300 (58.5)
50			7,420 (22)	7,200 (39.5)	8,220 (48.5)	8,960 (54.5)
55				5,450 (31.5)	6,510 (43)	7,220 (50)
60				3,970 (21)	5,060 (37)	5,740 (45.5)
65					3,810 (29.5)	4,460 (40.5)
70					2,720 (19)	3,350 (34.5)
75						2,380 (28)
80						1,520 (18)
Vinimum bo	om angle (deg.) for ind	icated lengt	h (no load)		0

Maximum boom length (ft.) at 0 deg. boom angle (no load) #LMI operating code. Refer to LMI manual for instructions. Note: () Boom angles are in degrees.

Lifting Capacities at Zero Degree Boom Angle						
Boom		Main Boom Length in Feet				
Angle	41.3	50	60	*70	80	90
0°	19,400 (34.1)	10,250 (42.8)	6,460 (52.8)	3,170 (63)	2,170 (72.8)	1,080 (82.8)
Note: () Re	ference rad	ii in feet.			A6-82	9-0103650

*This boom length is with inner-mid fully extended and outer-mid & fly fully retracted. strength and tipping should not be relied upon as a capacity limitation.

NOTES:

J765.

 Capacities are in pounds and do not exceed 75% of tipping loads as

determined by test in accordance with SAE

 Capacities are applicable to machines equipped with 29.6x25 (34 ply) General tires at 76 psi cold inflation pressure.
 Capacities appearing above the bold line are based on structural

- Capacities are applicable only with machine on firm level surface.
- On rubber lifting with boom extensions not permitted.
- 6. For pick and carry operation, boom must be centered over front of machine, mechanical swing lock engaged and load restrained from swinging. When handling loads in the structural range with capacities close to maximum ratings, travel should be reduced to creep speeds.
- Axle lockouts must be functioning when lifting on rubber.
- All lifting depends on proper tire inflation, capacity and condition. Capacities must be reduced for lower tire inflation pressures. See lifting capacity chart for tire used. Damaged tires are hazardous to safe operation of crane.
- Creep Not over 200 ft. of movement in any 30 minute period and not exceeding 1 mph.

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GROVE.



Weight Reductions for Load Hand	dling Devices
33 FT56 FT. FOLDING BOOM EXTENSION	
*33 ft. Extension (Erected) -	3,700 lb.
*56 ft. Extension (Erected) -	7,830 lb.
*76 ft. (1 insert Erected) -	10,350 lb.
*96 ft. (2 inserts Erected) -	13,300 lb.
*Reduction of main boom capacities (no deduct required for stowed boom extension)	

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.

Line Pulls and Reeving Information					
Hoists	Cable Specs	Permissible Line Pulls	Nominal Cable Length		
Main	3/4" (19 mm) 6x37 Class, EIPS, IWRC Special Flexible Min. Breaking Str. 58,800 lb.	16,800 lb.	600 ft.		
Main & Aux.	3/4" (19 mm) Flex-X 35 Rotation Resistant (non-rotating) Min. Breaking Strength 85,800 lb.	16,800 lb.	607 ft.		
The approximate weight of 3/4" wire rope is 1.5 lb./ft.					

Line Pulls and Reeving Information				
AUXILIARY BOOM NOSE	136 lb.			
HOOKBLOCK AND OVERHAUL BALL: 75 Ton, 4 Sheave 10 Ton, Overhaul Ball	1,275 lb.+ 568 lb. +			

+Refer to rating plate for actual weight.

Boom Section vs. Section Extension Percentages					es					
		Main Boom Length in Feet								
	41.3	50	60	70	80	90	100	110	120	128
Boom sectio	ns:			Per	cent E	xtensio	n			
Inner-mid	0	30	65	100	100	100	100	100	100	100
Outer-mid	0	0	0	0	17	34	52	69	86	100
Fly	0	0	0	0	17	34	52	69	86	100

bac	h h	ano	dlin	g
		-		

11

Hoist Performance					
Wire Rope Layer	Hoist Line Pulls Two Speed Hoist Low High		Drum Rope Capacity (ft.) 15 in. Drum		
	Available lb.*	Available lb.*	Layer	Total	
1	20,250	9,610	101	101	
2	18,490	8,770	110	211	
3	17,010	8,070	120	331	
4	15,750	7,470	129	460	
5	14,660	6,960	139	599	
*Max_lifting capacity: 6x37 or 35x7 class = 16 800 lb					

ng capacity:

Installation and Removal of Counterweight and Auxiliary Hoist				
Rated Lifting Capacities in Pounds on Outriggers Fully Extended – 360°				
Radius in Feet	LMI Code #0801 Main Boom Length 41.3 ft.*			
10	24,000			
12	24,000			
15	24,000			
20	24,000			
25	24,000			
30	24,000			
*The boon	*The boom must be fully retracted.			



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

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GROVE

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