



Grove Manitowoc National Crane Potain

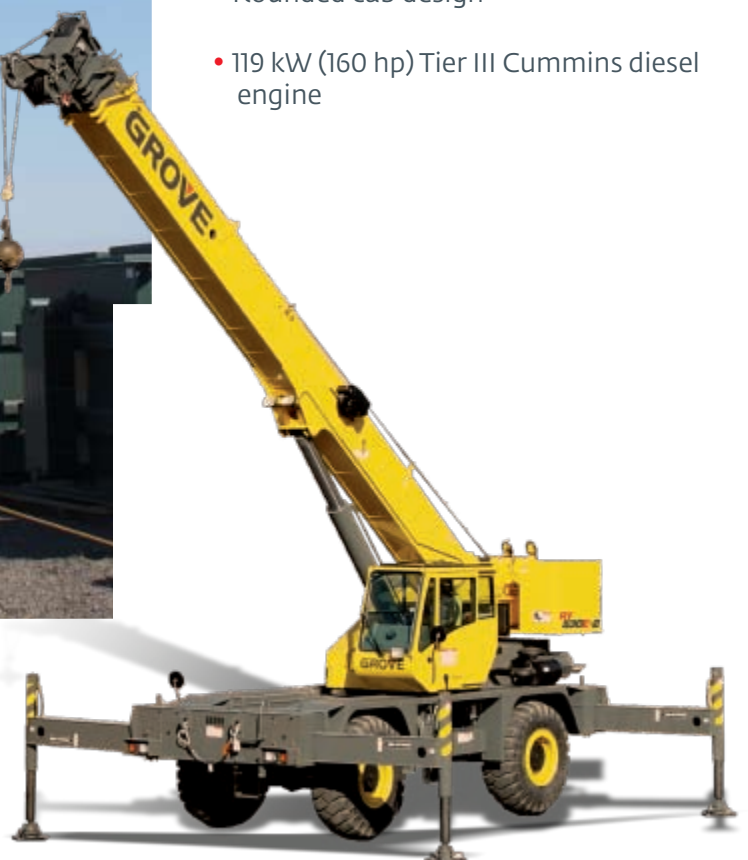


Grove RT530E-2

Product Guide

Features

- 30 t (30 USt) capacity
- 8,8 m – 29,0 m (29 ft – 95 ft) four-section full power boom
- 7,9 m – 13,7 m (26 ft – 45 ft) offsettable telescopic swingaway extension
- Dual-axis electric joystick controllers
- Full frame decking
- Rounded cab design
- 119 kW (160 hp) Tier III Cummins diesel engine



Features



Boom shape

The RT530E-2 incorporates a rectangular boom shape made from 100 k.s.i. steel which eliminates weight and maximizes structural capacities.

Engine

Cummins QSB 6.7 L diesel engine provides plenty of power at the jobsite and meets current emission standards.



Tip height

Maximum tip height of 44,5 m (146 ft) with 13,7 m (45 ft) telescopic extension.



Automotive style dash

Automotive style dash control panel designed to offer a less cluttered look while still offering full instrumentation.

Cab

Rounded steel cab design provides aesthetic appeal.





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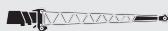
Specifications

Superstructure



Boom

8,8 m - 29,0 m (29 ft - 95 ft) four-section, synchronized full power boom.
Maximum tip height: 31,2 m (102.5 ft).



* Optional fixed swingaway extension

7,9 m (26 ft) offsettable swingaway extension. Offsets at 0° and 30°. Stows alongside base boom section.
Maximum tip height: 38,9 m (127.6 ft).



* Optional telescopic swingaway extension

7,9 m - 13,7 m (26 ft - 45 ft) offsettable telescopic lattice swingaway extension. Offsets at 0° and 30°. Stows alongside base boom section.
Maximum tip height: 44,5 m (146 ft).



Boom nose

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



Boom elevation

One double-acting hydraulic cylinder with integral holding valve provides elevation from -3° to +76°.



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

Full vision, all steel fabricated with acoustical lining and tinted safety glass throughout. Deluxe seat incorporates armrest-mounted electric dual-axis controllers.

Dash panel incorporates gauges for all engine functions.

Other standard features include: tilt steering wheel, hot water heater, air conditioner, 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.



Swing

Single 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

3817 kg (8416 lb) pinned to superstructure.



Hydraulic system

Two main pumps ([1] piston and [1] gear) with a combined capacity of 316,5 LPM (83.6 GPM).
Maximum operating pressure: 275,7 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. 396 L (104.6 gal) hydraulic reservoir. System pressure test ports.



Hoist Specifications (HP15C-17G) 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: 5280 kg (11,640 lb)
3rd layer: 4323 kg (9530 lb)
5th layer: 3656 kg (8060 lb)

Maximum permissible line pull:

5280 kg (11,640 lb) with 6 x 37 class rope
5280 kg (11,640 lb) with 35 x 7 class rope

Maximum single line speed:

136 m/min (445 fpm)

**Denotes optional equipment*

Specifications

Superstructure continued

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

Rope diameter: 16 mm (5/8 in)

Rope length:
Main hoist: 137,0 m (450 ft)
Auxillary hoist: 137,0 m (450 ft)

Maximum Rope Stowage: 181 m (596 ft)

Carrier

Chassis

Box section frame fabricated from high-strength, low alloy steel. Front/rear towing, lifting, 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 outrigger floats, 362 mm (14.25 in) square.
Maximum outrigger pad load: 24 857 kg (54,800 lb)

Outrigger controls

Controls and crane level indicator located in cab.

Engine (Tier III)

Cummins QSB 6.7 L diesel, six cylinders, 119 kW (160 bhp) (Gross) at 2500 rpm.
Maximum torque: 732 Nm (540 ft lb) at 1500 rpm.

Fuel tank capacity

219 L (58 gal)

Transmission

Range-shift 6 speed (3 speeds x 2 range, both forward and reverse).
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 four main steering modes: front only, rear only, crab, and coordinated.
Rear steer indicator.
Outside turning radius: 5,8 m (19.1 ft)
Inside turning radius: 4,0 m (13.1 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.

Oscillation lockouts

Automatic full hydraulic lockouts on rear axle permits 25,4 cm (10 in) oscillation with boom centered over the front only.

Brakes

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

Tires

Standard: 20.5 x 25 - 24 bias ply
*Option: 16.0 x 25-28 bias ply

Lights

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

Maximum speed

40 kph (25 mph) @ 2500 rpm



Specifications

Carrier continued

Gradeability (theoretical)

119% (at engine stall)
(Based on 27 006 kg [59,537 lb] GVW) 20.5 x
25 tires, 29,0 m (95 ft) main boom, plus 13,7 m
(45 ft) telescopic swingaway, 3817 kg (8416 lb)
counterweight, 27 t (30 USt) hookblock and
6,8 t (7.5 USt) headache ball.

Miscellaneous standard equipment

Full width steel fenders, full length steel decking
with anti-skid, dual rear view mirrors, hook-block
tiedown, electronic back-up alarm, light package,
front stowage well, tachometer/hourmeter, rear wheel
position indicator, 36,000 Btu hot water cab heater,
air conditioning (28,500 Btu), hoist mirrors, engine
distress A/V warning system, front/rear tie down and
tow lugs, coolant sight level indicator.

* Optional equipment

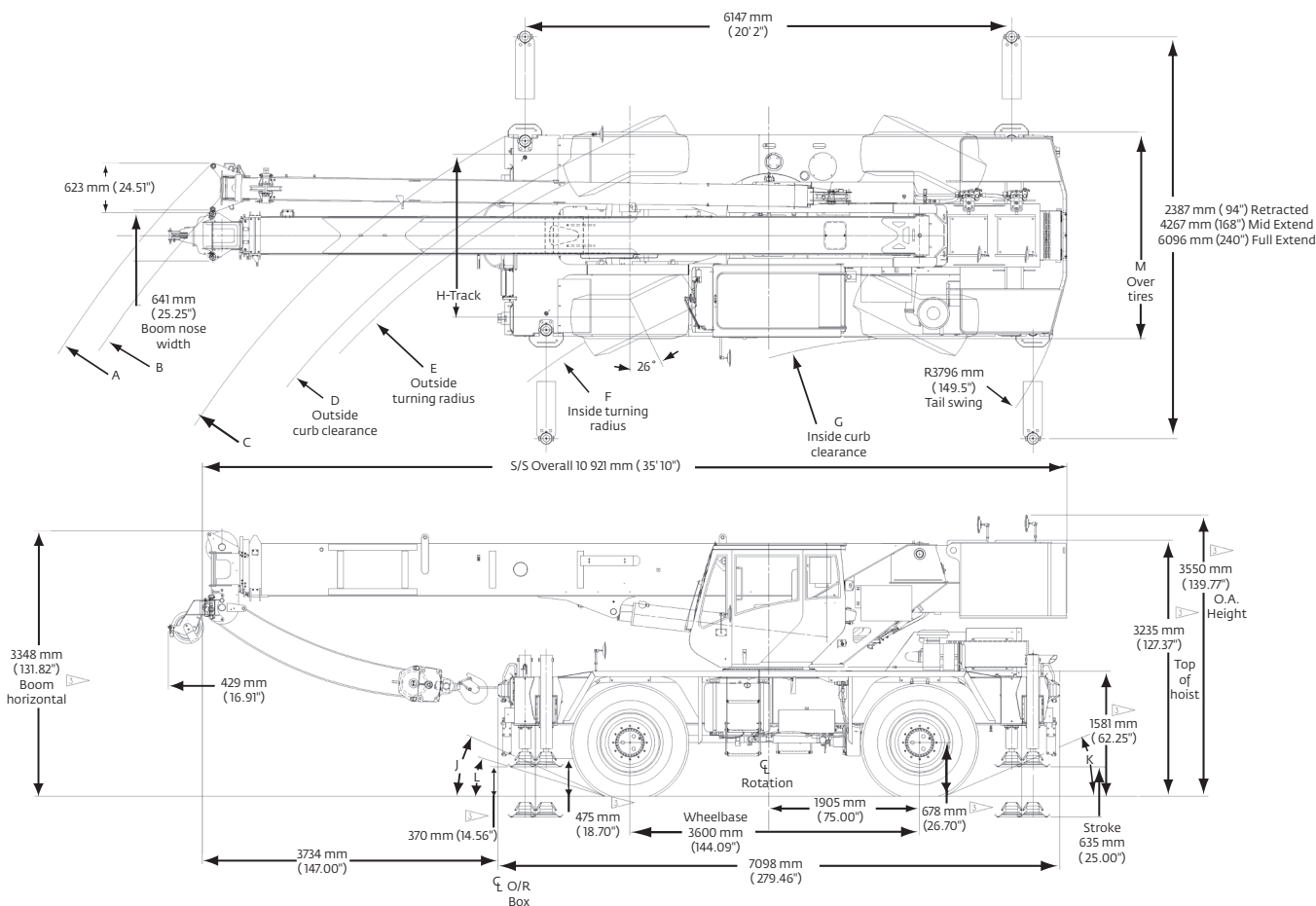
- ▶ VALUE PACKAGE: Includes 7,92 m - 13,7 m
(26 ft - 45 ft) telescoping swingaway and 360° NYC
style positive swing lock
- ▶ AUXILIARY HOIST PACKAGE: Includes Model
HP15C-17G auxiliary hoist with electronic hoist
drum rotation indicator, hoist drum cable follower,
137,0 m (450 ft) of 16 mm (5/8 in) 35 x 7 class
wire rope and auxiliary single sheave boom nose.
- ▶ AUXILIARY LIGHTING PACKAGE: Includes
S/S mounted amber flashing light and dual base
boom mounted halogen floodlights, LMI light bar
(in cab) and rubber mat for stowage trough.
- ▶ LMI light bar (in cab)
- ▶ 360° NYC style mechanical swing lock
- ▶ Rear Pintle hook
- ▶ Cab-controlled cross axle differential locks (front
and rear)
- ▶ PAT Data logger down-load kit
- ▶ Single axis electric controllers
- ▶ Third wrap indicator with hoist cut-out for main
hoist or main and auxiliary hoist

Dimensions and weights

Dimensions													
	Tire Size	A	B	C	D	E	F	G	H	J	K	L	M
2 Wheel steer	20.5 X 25	12 838	12 428	10 899	10 236	10 007	8138	7021	2055	25.0°	22.5°	17.3°	2606
	16.0 X 25	12 838	12 428	10 899	10 185	9981	8138	7021	2093	26.0°	23.5°	18.3°	2536
4 Wheel steer	20.5 X 25	8967	8630	6732	6061	5832	4000	3498	2055	25.0°	22.5°	17.3°	2606
	16.0 X 25	8967	8630	6732	6010	5806	4000	3498	2093	26.0°	23.5°	18.3°	2536

Notes: (All dimensions are in mm)

- All dimensions are for reference only
- Boom elevation is -3° to +76°
- Dimensions shown are based on 20.5 x 25 tires. Add 34,5 mm for 16.0 x 25 tires.

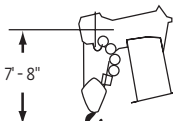
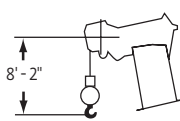
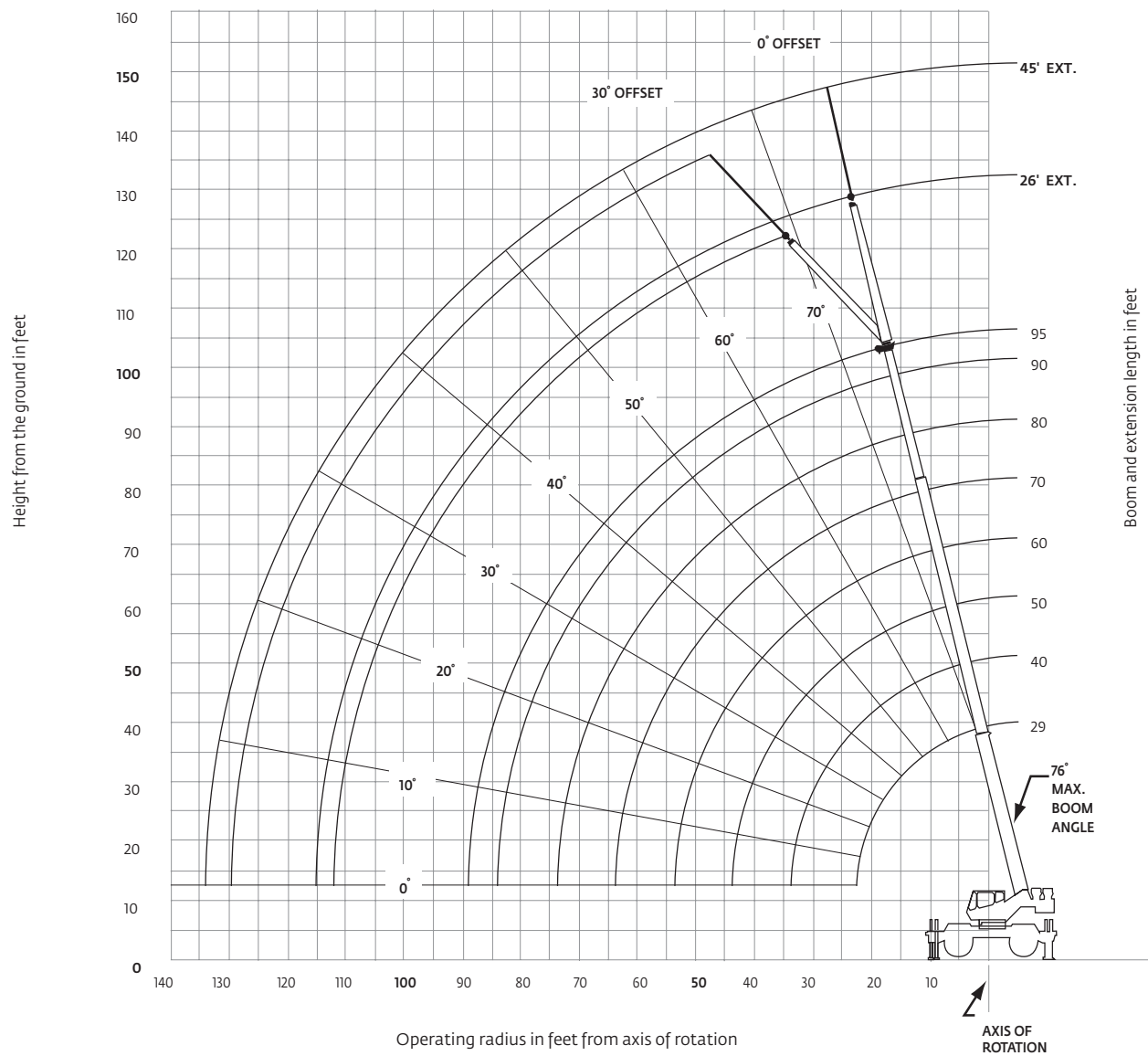


Weights						
	GVW		Front		Rear	
	kg	(lb)	kg	(lb)	kg	(lb)
RT530E-2 Basic Machine Basic Machine including 31,0 m (95 ft) main boom, main hoist with 137,0 m (450 ft) of rope, full counterweight + IPO, 6,8 t (7.5 USt) headache ball, and 27 t (30 USt) hookblock:	25 853	56,995	11 500	25,353	14 353	31,642
ADD: Auxiliary hoist + 137,0 m (450 ft) of 35x7 hoist cable and auxiliary boom nose ILO IPO C/W	26 031	57,389	11 444	25,230	14 587	32,159
ADD: Fixed 7,9 m (26 ft) offsettable boom extension + extension hangers	26 793	59,067	12 667	27,925	14 126	31,142
OR ADD: 7,9 m - 13,7 m (26 ft - 45 ft) telescopic boom extension + extension hangers	27 006	59,537	12 972	28,598	14 034	30,939



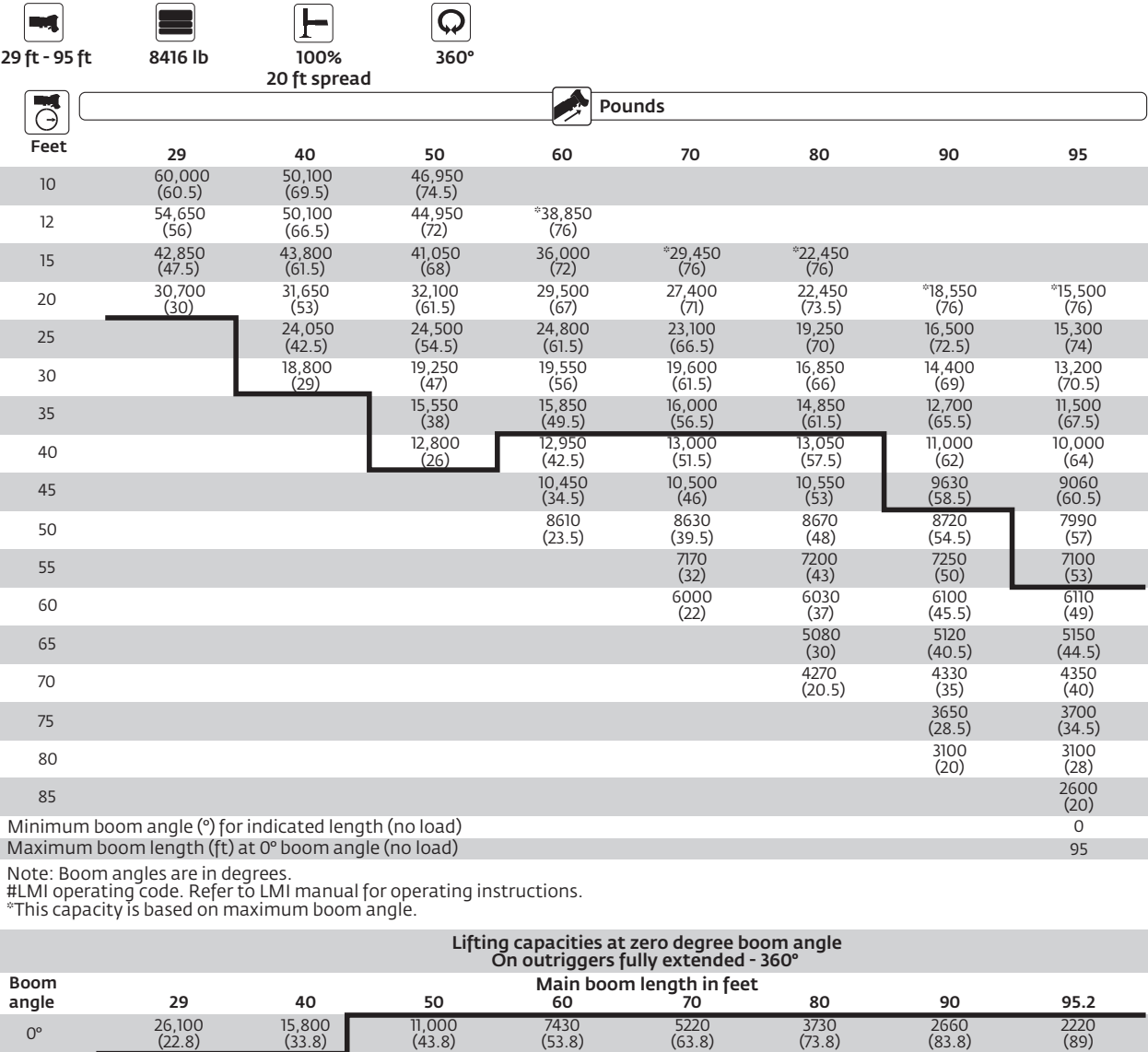
Working range

95 ft main boom + 26 ft - 45 ft extension



Dimensions are for largest Grove furnished hookblock and headache ball, with anti-two block activated.

Load chart RT530E-2



Note () Reference radii in feet.

A6-829-101755

Load chart RT530E-2


29 ft - 95 ft

26 ft - 45 ft

8416 lb

100%

360°

		Pounds			
 Feet	26 LENGTH		45 ft LENGTH		
	#0021 0° OFFSET	#0023 30° OFFSET	#0041 0° OFFSET	#0043 30° OFFSET	
30	8200 (76)				
35	8200 (73.5)		5250 (76)		
40	8200 (71)		5250 (75)		
45	8120 (68.5)		4940 (73)		
50	7350 (66)		4540 (71)		
55	6370 (63)		4150 (68.5)		
60	5670 (60.5)		3890 (66)		
65	4820 (57.5)		3740 (64)		
70	4200 (54.5)		3600 (61.5)		
75	3680 (51.5)		3470 (59)		
80	3080 (48.5)		3240 (56.5)		
85	2520 (45)		3050 (54)		
90	2050 (41)		2820 (51)		
95	1670 (37)		2480 (48.5)		
100	1370 (32.5)		2090 (45.5)		
105	1020 (27.5)		1740 (42)		
110			1430 (38.5)		
115			1150 (35)		
120			900 (30.5)		
Minimum boom angle (°) for indicated length (no load)	24°	30°	30°	30°	
Maximum boom length (ft) at 0° boom angle (no load)	80 ft		80 ft		

#LMI operating code. Refer to LMI manual for instructions. A6-829-100272A

*This capacity is based on maximum boom angle.

**26 ft capacities are also applicable to fixed offsettable ext. However, the LMI codes will change to #0051 and #0053 for 0° and 30° offset, respectively.

BOOM EXTENSION CAPACITY NOTES:

- All capacities above the bold line are based on structural strength of boom extension.
- 26 ft and 45 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 only.


29 ft - 95 ft

26 ft - 45 ft

8416 lb

50%

360°

		Pounds		
 Feet	26 LENGTH		45 ft LENGTH	
	#4021 0° OFFSET	#4023 30° OFFSET	#4041 0° OFFSET	#4043 30° OFFSET
30	8200 (76)			
35	8200 (73.5)		5250 (76)	
40	6940 (71)		5250 (75)	
45	5580 (68.5)		4940 (73)	
50	4490 (66)		4540 (71)	
55	3600 (63)		4150 (68.5)	
60	2860 (60.5)		3490 (66)	
65	2190 (57.5)		2870 (64)	
70	1610 (54.5)		2340 (61.5)	
75	1120 (51.5)		1840 (59)	
80			1400 (56.5)	
85			1020 (54)	
90			1310 (58.5)	
0.1A(lb)	570	540	500	460
Minimum boom angle (°) for indicated length (no load)	44°	46°	48°	49°

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

60 ft

60 ft

Note: () Boom angles are in degrees.

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

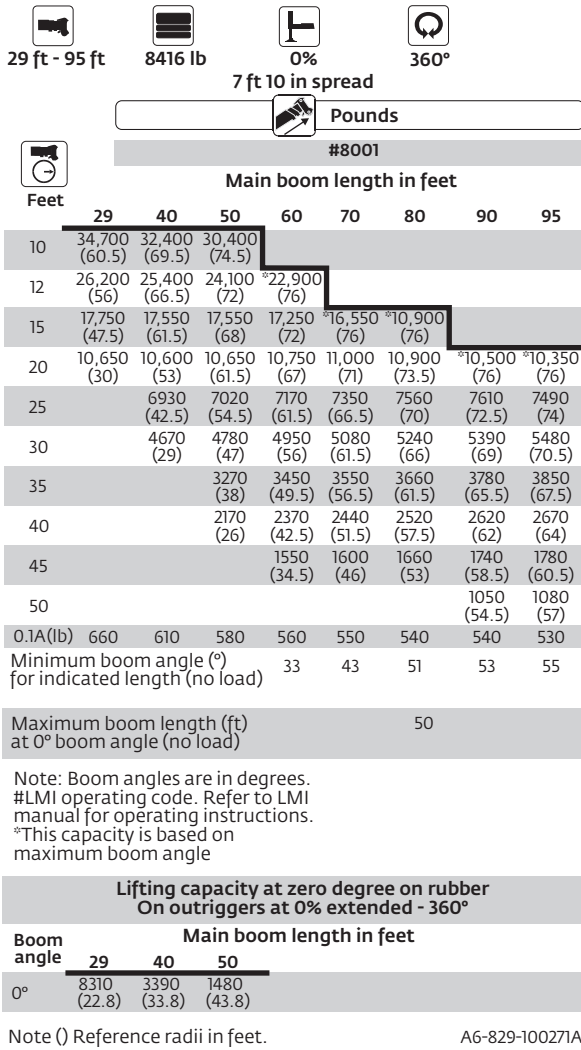
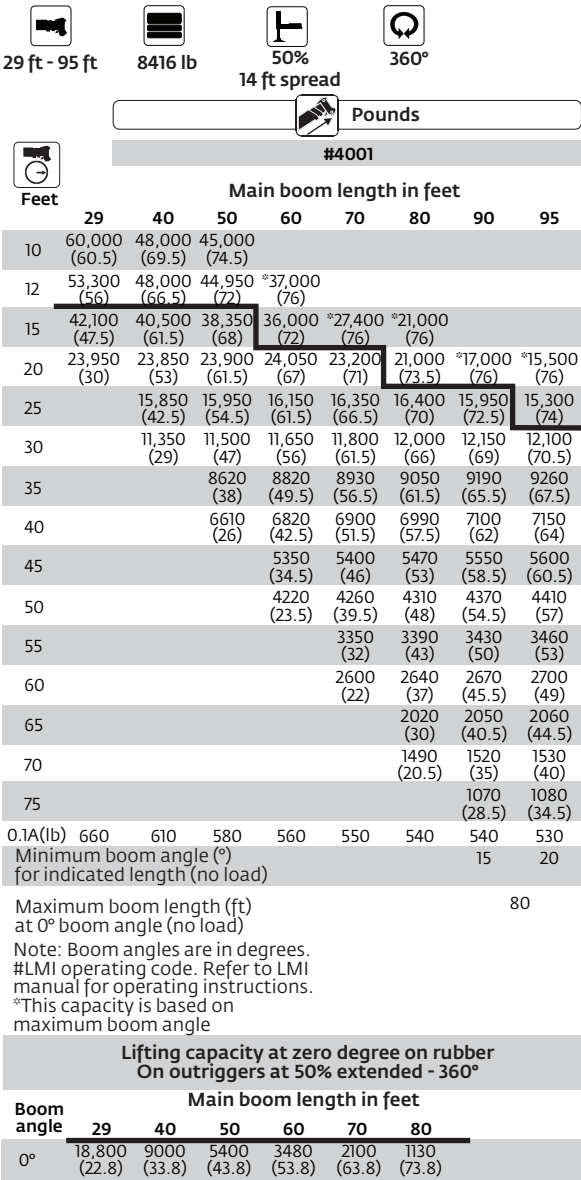
*This capacity is based on maximum boom angle.

**26 ft capacities are also applicable to fixed offsettable ext. However, the LMI codes will change to #4051 and #4053 for 0° and 30° offset, respectively.

A6-829-100273B



Load chart RT530E-2





Load chart RT530E-2

29 ft - 60 ft

8416 lb

Stationary

360°

Pounds

#9005

Feet

Main boom length in feet

29405060

10

25,550
(60.5)

25,550
(70)

16,450
(76)

12

20,600
(56)

20,600
(66.5)

16,450
(72)

15

14,350
(47.5)

14,350
(62)

14,350
(68)

14,350
(72.5)

20

8280
(30)

8280
(53)

8280
(61.5)

8280
(67)

25

5330
(42.5)

5330
(54.5)

5330
(61.5)

30

3630
(29)

3630
(47)

3630
(56)

35

2500
(38)

2500
(49.5)

40

1690
(26)

1690
(42.5)

45

1090
(34.5)

Min. boom angle for indicated length (no load)

34°

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

50 ft

NOTE: () Boom angles are in degrees.

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

*This capacity is based upon maximum boom angle.

Lifting capacity at zero degree on rubber - 360°

Boom angle

Main boom length in feet

294050

0°

6110
(22.8)

2730
(33.8)

1210
(43.8)

NOTE: Reference radii in feet.

A6-829-100274C

29 ft - 60 ft

8416 lb

Stationary

Defined arc over front

Pounds

#9005

Feet

Main boom length in feet

29405060

10

30,100
(60.5)

26,550
(70)

16,450
(74.5)

12

26,550
(56)

22,100
(66.5)

16,450
(72)

15

22,100
(47.5)

22,100
(62)

16,450
(68)

16,450
(72.5)

20

16,050
(30)

16,050
(53)

16,050
(61.5)

16,050
(67)

25

11,005
(42.5)

11,005
(54.5)

11,005
(61.5)

30

8060
(29)

8060
(47)

8060
(56)

35

6110
(38)

6110
(49.5)

40

4720
(26)

4720
(42.5)

45

3680
(34.5)

50

2870
(23.5)

Min. boom angle for indicated length (no load)

0°

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

60 ft

NOTE: () Boom angles are in degrees.

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

Lifting capacity at zero degree on rubber - stationary - defined arc boom centered over front

Boom angle

Main boom length in feet

29405060

0°

12,700
(22.8)

6500
(33.8)

3890
(43.8)

2360
(53.8)

NOTE: Reference radii in feet.

A6-829-100275B

29 ft - 60 ft

8416 lb

Pick & Carry
(max. 2.5 mph)
20.5 x 25 tires

Boom centered over front

Pounds

#9006

Feet

Main boom length in feet

29405060

10

25,900
(60.5)

25,900
(70)

18,250
(74.5)

12

22,350
(56)

22,350
(66.5)

18,250
(72)

15

18,250
(47.5)

18,250
(62)

18,250
(68)

13,350
(72.5)

20

13,350
(30)

13,350
(53)

13,350
(61.5)

13,350
(67)

25

10,350
(42.5)

10,350
(54.5)

10,350
(61.5)

30

8060
(29)

8060
(47)

8060
(56)

35

4810
(38)

4810
(49.5)

40

3770
(26)

3770
(42.5)

45

2930
(34.5)

50

2240
(23.5)

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

0°

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

60 ft

Note: Boom angles are in degrees.

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

Lifting capacity at zero degree on rubber Pick & Carry - boom centered over front

Boom angle

Main boom length in feet

29405060

0°

11,400
(22.8)

5090
(33.8)

3110
(43.8)

1800
(53.8)

Note () Reference radii in feet.

A6-829-100276B

NOTES TO ALL RUBBER CAPACITY CHARTS:

- Capacities are in pounds and do not exceed 75% of tipping loads as determined by test in accordance with SAE J765.
- Capacities are applicable to machines equipped with 20.5 x 25 (24 ply) tires at 75 psi cold inflation pressure, and 16.00 x 25 (28 ply) tires at 100 psi cold inflation pressure.
- Defined Arc - Over front includes 6° on either side of longitudinal centerline of machine (ref. drawing C6-829-003529).
- Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
- Capacities are applicable only with machine on firm level surface.
- On rubber lifting with boom extensions not permitted.
- 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.

12

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.



Notes



Notes



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