GROVE

RT9130E

product guide

features

- 130 ton (120 mt) capacity
- 42-160 ft. (12.8-48.8 m) 5-section, full power boom
- 36-59 ft (11-18 m) offsettable bi-fold swingaway extension
- 26 ft. (8 m) extension inserts
- Grove MEGAFORM™ boom
- 300HP (224 kW) Tier III Cummins diesel engine
- Grove "E" series cab

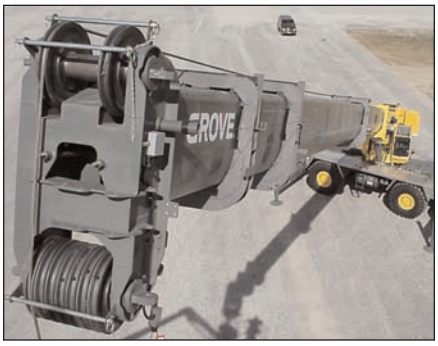
contents

Rough Terrain Hydraulic Crane

Manitowoc Crane Group

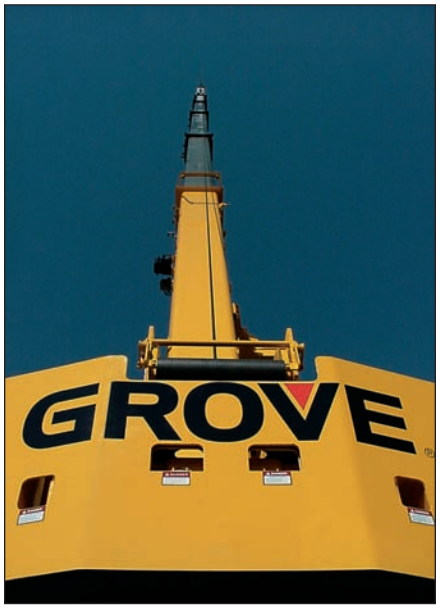
features and benefits

Removable front and rear outrigger boxes provide up to 19,374 lbs. (8 788 kg) of weight reduction for easier transport. Include the removable 40,000 lbs. (18 100 kg) of counterweight, auxiliary hoist and rope, and the RT9130E can easily self-remove close to 64,000 lbs. (29 000 kg).



The 160 ft. (48.8 m) 5 section Full Power boom incorporates the “U” shaped MEGAFORM™ design, which eliminates stiffeners, thus reducing weight and increasing capacity.

The “E” Series cab on the RT9130E tilts up to 20° providing the operator additional comfort when working at long boom and extension lengths.



In addition to the 130 ton capacity, the RT9130E is different from any other rough terrain crane in the industry because of its enormous reach.

A 59 ft. (18 m) offsettable bi-fold lattice swingaway extension and two-26 ft. (8 m) inserts give the RT9130E a maximum tip height of 279 ft. (85 m). A hydraulically offsettable bi-fold lattice swingaway is also available, and conveniently offsets from 0° to 40° from the operator’s cab.

Only on all-terrain cranes could this kind of main boom and extension height be achieved … until now.

superstructure specifications

Superstructure

Boom
42 ft. - 160 ft. (12.8 m - 48.8 m) five-section, sequenced synchronized full power boom.
Maximum tip height: 169 ft. (51.5 m)

Lattice Extension
36 ft. - 59 ft. (11 m - 18 m) offsettable bifold lattice swingaway extension. Offsets 0°, 20° and 40°. Stows alongside base boom section.
Maximum tip height: 227 ft. (69.2 m)

*Optional Lattice Extension
36 ft. - 59 ft. (11 m - 18 m) hydraulically offsettable bifold lattice swingaway extension. Offsets from 0° to 40°. Stows alongside base boom section.
Maximum tip height: 227 ft. (69.2 m)

*Optional Lattice Extension Inserts
(2) x 26 ft (8 m) lattice extension inserts. Installs between the boom nose and bifold extension, nonstowable. Maximum tip height: 279 ft. (85 m)

Boom Nose
Seven 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.

Cab
20° tilt, 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, 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
Two speed, (2) planetary swing drives with foot applied multi-disc wet brakes. Spring applied, hydraulically released swing brakes. 360° positive swing lock and 2 position mechanical house lock, both operated from cab. Maximum speed: 2.5 RPM

Counterweight
40,000 lb. (18 144 kg) of total counterweight. Hydraulically installed and removed.

Hydraulic System
Six main pumps with a combined capacity of 205 GPM (776 LPM).
Maximum operating pressure: 4800 psi (331 bar).
Two individual post pressure compensated valve banks. Return line type filter with full flow by-pass protection and service indicator. Replaceable cartridge with micron filtration rating of 5/12/16.
325 gallons (1230 L) reservoir. Remote mounted oil cooler with thermostatically controlled hydraulic driven motor, fan/air to oil. System pressure test ports.

Hoist Specifications 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:	1st layer - 19,267 lb. (8 740 kg)
	3rd layer - 16,384 lb. (7 432 kg)
	5th layer - 14,251 lb. (6 464 kg)

Maximum Permissible Line Pull:
16,800 lb. (7 620 kg) with 6x37 class rope
16,800 lb. (7,620 kg) with 35x7 class rope

Maximum Single Line Speed: 562 FPM (171 m/min)

Rope Class:
6x37 EIPS IWRC, Special Flexible
35x7 EIPS WSC, Rotation Resistant

Rope Diameter: 3/4" (19 mm)

Rope Length:
Main Hoist - 950 ft. (290 m)
Auxiliary Hoist - 700 ft. (213 m)

Maximum Rope Stowage: 1,206 ft. (368 m)

carrier specifications

Carrier

Chassis
Box section frame fabricated from high-strength, low alloy steel. Removable outrigger housings, 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 settings, 0%, 50% and fully extended. Outrigger boxes removable for ease of transportation. All steel fabricated, quick release type outrigger floats, 30.5" (775 m) diameter.
Maximum outrigger pad load - 166,000 lb. (75 298 kg)

Outrigger Controls
Controls and crane level indicator located in cab.

Engine (Tier III)
Cummins QSC8.3L diesel, six cylinders, 300 bhp (224 kW) (Gross) @ 2,200 RPM
Maximum torque: 1000 ft. lb. (1356 Nm) @ 1,600 RPM

Fuel Tank Capacity
100 gallons (379 L)

Transmission
Full powershift with 6 forward and 3 reverse speeds. Front axle disconnect for 4 x 2 travel.

Electrical System
Two 12 V - maintenance free batteries.
12 V starting and lighting, circuit breakers.

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 indicator light.

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 10 in. (254 mm) oscillation with boom centered over the front.

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

Tires
Std. 33.25 x 29 - 38 bias ply, General SL-100

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

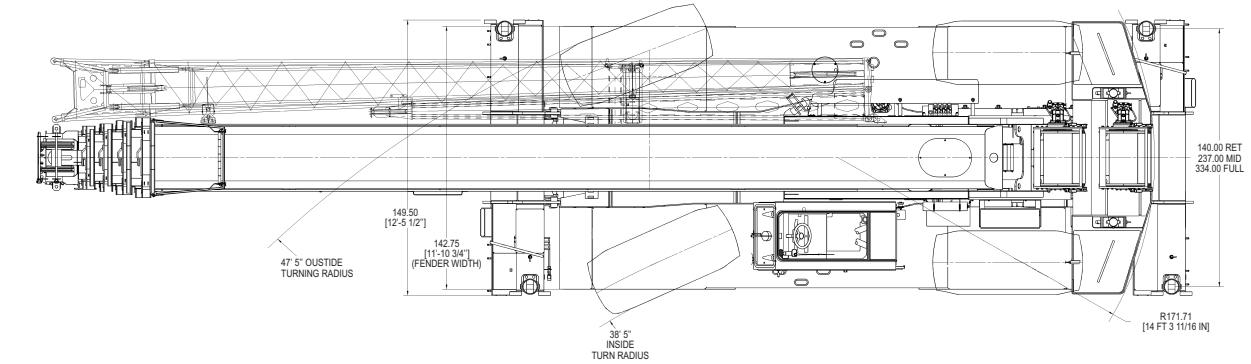
Maximum Speed
15 MPH (24 km/h)

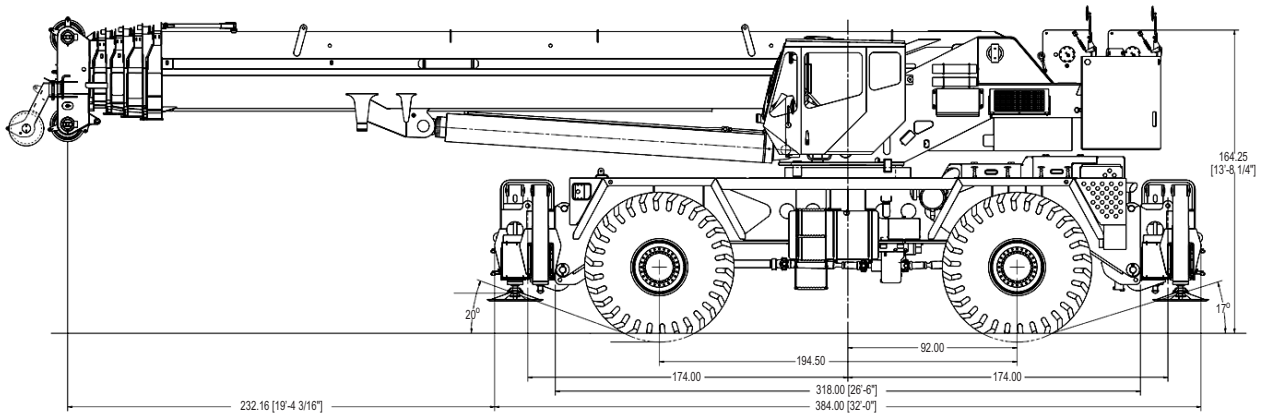
Gradeability (Theoretical)
73% (Based on 180,000 lb. [81 647 kg] GVW) 33.25 x 29 tires, pumps engaged, 160 ft. (48.8 m) boom, plus 59 ft. (18 m) swingaway, 40,000 lb. (18 144 kg) counterweight, hookblock and headache ball.

Miscellaneous Standard Equipment
Full width aluminum fenders, full length aluminum decking, dual rear view mirrors, hook-block tie down, electronic back-up alarm, light package, front stowage well, tachometer/hourmeter, immersion type block heater, rear wheel position indicator, 36,000 BTU hot water cab heater, hoist mirrors, engine distress A/V warning system, front/rear tie down and tow lugs, coolant sight level indicator, hydraulic pump disconnect, LMI light bar. Hydraulically activated boom removal pins, lift cylinder travel support, 80T hookblock, 10T top swivel ball.

*Optional Equipment
*AUXILIARY LIGHTING PACKAGE (includes cab mounted amber flashing light, 360° rotation spotlight and dual base boom mounted floodlights)
*Air conditioning
*130 ton hookblock
*Rear pintle hook
*Cab controlled cross axle differential locks, (front and rear)
*PAT datalogger down load kit
*Rubber mat for stowage trough
*Tire removal tool

*Denotes optional equipment





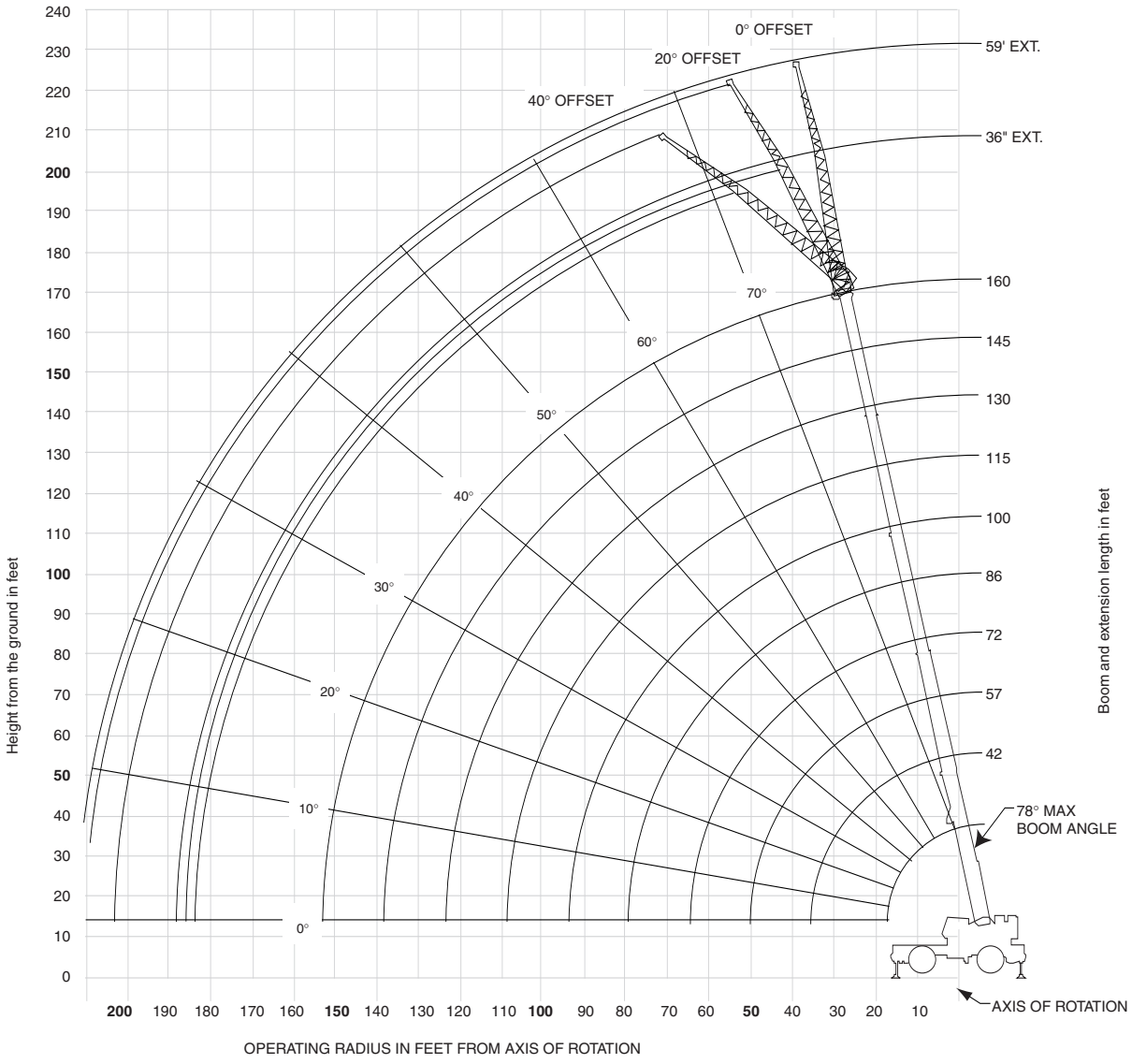
Weight Configurations

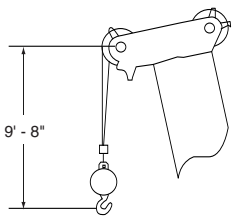
RT9130E Basic Machine

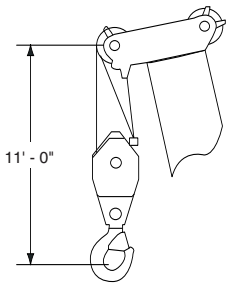
Configuration	RT9130E Largest (lbs.)	Items Removed (lbs.)							Weight of Items Removed (lbs.)
		Boxes	STD Cwt	Aux Hoist	Boom	Bifold	Block &/or Ball	33.25 Tires	
Complete Machine: 2 Hoists w/Rope, MAFX Counterweight, Bifold Extension, Block, Ball, 33.25 x 25 Tires	174,034								
Remove 40K Cwt, Aux Hoist w/Mt & Rope	129,075		40,000	4,084					44,084
Remove 40K Cwt, Aux Hoist w/Mt & Rope, Tires	119,555		40,000	4,084				9,520	53,604
Remove 40K Cwt, Aux Hoist w/Mt & Rope, Bifold, Tires	116,445		40,000	4,084		3,100		9,520	56,714
Remove 40K Cwt, Aux Hoist w/Mt & Rope, O/R Boxes	111,103	18,842	40,000	4,084					62,926
Remove 40K Cwt, Aux Hoist w/Mt & Rope, Bifold, Block, O/R Boxes	106,398	18,842	40,000	4,084		3,100	1,600		67,636
Remove Boom, Bifold, Block, Ball, 40K Cwt, Aux Hoist w/Mt & Rope	91,060		40,000	4,084	33,500	3,100	2,280		82,974
Remove Boom, Bifold, Block, Ball, 40K Cwt, Aux Hoist w/Mt & Rope, Tires	81,540		40,000	4,084	33,500	3,100	2,280	9,520	92,494
Remove Boom, Bifold, Block, Ball, 40K Cwt, Aux Hoist w/Mt & Rope, O/R Boxes	72,218	18,842	40,000	4,084	33,500	3,100	2,280		101,816

working range

Working range – 160 ft. Main Boom + 36-59 ft. Fixed Offset Extension







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.

RT9130E load chart

42 - 160ft. | 40,000 lbs | 100% 27' 10" spread | 360°

Feet | Pounds | #0001

Feet	Main Boom Length in Feet								
	42	57	72	86	100	115	130	145	160
10	+260,000 (71.5)	147,000 (76.5)							
12	224,000 (68.5)	147,000 (74.5)	* 127,000 (78)						
15	176,000 (63.5)	147,000 (71.5)	127,000 (76)	*92,600 (78)					
20	127,500 (55.5)	125,500 (65.5)	115,500 (71.5)	86,550 (75.5)	*65,000 (78)				
25	97,300 (46)	95,550 (60)	95,300 (67)	78,900 (72)	62,650 (75)	44,600 (78)			
30	76,900 (34)	75,250 (53.5)	75,050 (62.5)	68,500 (68.5)	56,800 (72)	44,600 (75.5)	43,150 (78)		
35		60,950 (46.5)	60,750 (58)	60,100 (64.5)	50,050 (69)	44,600 (73)	42,200 (76)	32,550 (78)	
40		50,300 (38.5)	50,150 (52.5)	50,550 (60.5)	44,050 (66)	41,400 (70)	38,000 (73.5)	32,550 (76)	25,100 (78)
45		42,050 (28)	41,950 (47)	42,350 (56.5)	38,950 (62.5)	37,450 (67.5)	34,150 (71)	32,550 (74)	24,800 (76.5)
50			35,400 (41)	35,850 (52.5)	34,650 (59)	33,450 (64.5)	31,350 (68.5)	29,550 (71.5)	24,500 (74.5)
55			30,050 (34)	30,550 (47.5)	30,050 (55.5)	30,000 (61.5)	29,200 (66)	26,850 (69.5)	24,000 (72.5)
60			25,600 (24.5)	26,100 (42.5)	25,850 (52)	26,950 (58.5)	26,350 (63.5)	24,700 (67.5)	23,200 (70.5)
65				22,400 (37)	22,150 (48)	23,800 (55.5)	23,850 (61)	22,950 (65)	21,100 (68.5)
70				19,200 (30.5)	18,950 (44)	20,800 (52.5)	21,600 (58.5)	20,850 (62.5)	19,200 (66.5)
75				16,400 (22)	16,200 (39)	18,100 (49)	19,250 (55.5)	19,000 (60.5)	17,500 (64.5)
80					13,800 (34)	15,700 (45.5)	16,900 (52.5)	17,100 (58)	15,750 (62.5)
85					11,650 (28)	13,550 (41.5)	15,000 (49.5)	15,500 (55.5)	14,300 (60)
90					9,770 (19.5)	11,700 (37)	13,100 (46.5)	13,900 (53)	13,100 (58)
95						10,000 (32)	11,450 (43)	12,250 (50)	12,150 (55.5)
100						8,490 (26.5)	9,940 (39.5)	11,000 (47)	11,400 (53)
105						5,690 (18.5)	8,630 (35.5)	9,730 (44)	10,200 (50.5)
110							7,320 (30.5)	8,460 (41)	9,020 (48)
115							6,220 (25)	7,370 (37.5)	8,100 (45.5)
120							5,120 (17.5)	6,280 (33.5)	7,190 (42.5)
125								5,350 (29.5)	6,270 (39.5)
130								4,430 (24)	5,350 (36)
135								2,560 (16.5)	4,560 (32.5)
140									3,770 (28)
Minimum boom angle (deg.) for indicated length (no load)									23
Maximum boom length (ft.) at 0 deg. boom angle (no load)									145

#LMI operating code. Refer to LMI manual for instructions.
*This capacity is based upon maximum obtainable boom angle.
+16 parts line required to lift this capacity (using aux. boom nose). Refer to Operator's and Safety Handbook for reeving diagram.
Note: ( ) Boom angles are in degrees.

Lifting Capacities at Zero Degree Boom Angle

Boom Angle	Main Boom Length in Feet								
	42	57	72	86	100	115	130	145	160
0°	41,400 (35.3)	24,650 (50)	15,350 (64.6)	9,700 (79.3)	5,250 (94)	3,650 (108.6)	2,450 (123.3)	1,450 (138)	

Note: ( ) Reference radii in feet

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RT9130E load chart


100 ft.


36 - 59 ft.


40,000 lbs


100%
27' 10" spread


360°

Feet	Pounds					
	36 ft. LENGTH			59 ft. LENGTH		
	0° OFFSET #0021	20° OFFSET #0022	40° OFFSET #0023	0° OFFSET #0041	20° OFFSET #0042	40° OFFSET #0043
25	*33,600 (78)					
30	33,600 (76.5)			*14,950 (78)		
35	32,950 (74.5)	*23,150 (78)		14,950 (77.5)		
40	31,050 (72)	22,150 (76.5)		14,950 (76)		
45	29,250 (70)	21,250 (74)	17,250 (78)	14,950 (74)		
50	27,600 (67.5)	20,450 (72)	16,850 (75.5)	14,950 (72)	12,350 (78)	
55	26,150 (65)	19,700 (69.5)	16,500 (73)	14,950 (70)	11,900 (77)	
60	24,750 (63)	19,050 (67)	16,150 (70.5)	14,800 (68)	11,500 (75)	
65	23,550 (60.5)	18,450 (65)	15,900 (68)	14,300 (66)	11,100 (73)	9,210 (78)
70	22,050 (58)	17,850 (62)	15,650 (65.5)	13,650 (64)	10,700 (71)	9,000 (76)
75	20,100 (55.5)	17,350 (59.5)	15,450 (63)	13,100 (62)	10,400 (69)	8,820 (73.5)
80	18,100 (52.5)	16,900 (57)	15,250 (60)	12,550 (60)	10,050 (66.5)	8,650 (71.5)
85	16,000 (50)	16,500 (54)	15,150 (57)	12,000 (58)	9,780 (64.5)	8,490 (69)
90	14,150 (47)	15,500 (51.5)	15,050 (54)	11,550 (55.5)	9,510 (62.5)	8,360 (66.5)
95	12,500 (44)	13,700 (48)	14,000 (50.5)	11,100 (53)	9,260 (60)	8,240 (64)
100	11,050 (40.5)	12,100 (45)	12,750 (47)	10,650 (51)	9,030 (57.5)	8,130 (61.5)
105	9,770 (37)	10,650 (41.5)		10,250 (48.5)	8,820 (55)	8,050 (59)
110	8,490 (33.5)	9,270 (37.5)		9,930 (46)	8,620 (52.5)	7,980 (56)
115	7,430 (29)	8,060 (33)		9,040 (43)	8,450 (49.5)	7,950 (53)
120	6,370 (24)	6,850 (28)		8,150 (40.5)	8,280 (47)	7,920 (50)
125				7,240 (37)	7,830 (43.5)	7,900 (46.5)
130				6,340 (34)	7,380 (40.5)	7,890 (42.5)
135				5,570 (30.5)	6,440 (36.5)	
140				4,800 (26)	5,510 (32)	
145				4,140 (21)		
150				3,480 (14)		
Min. boom angle for indicated length (no load)	0°	20°	40°	0°	20°	40°
Max. boom length at 0° boom angle (no load)		100 ft.			100 ft.	

NOTE: ( ) Boom angles are in degrees.
#LMI operating code. Refer to LMI manual for operating instructions.
*This capacity is based on maximum obtainable boom angle.

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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. 36 ft. boom extension may be used for single or double line lifting service. 59 ft. boom extension may be used for single line lifting service only.
   WARNING: Lifting with the 36 ft. extension base, with the 23 ft. extension fly either erected or folded along side of extension base, is strictly prohibited.
3. 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.
4. Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
5. Capacities listed are with outriggers properly extended and vertical jacks set only.

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RT9130E load chart

130 ft.	36 - 59 ft.	40,000 lbs	100% 27' 10" spread	360°

	Pounds					
	36 ft. LENGTH			59 ft. LENGTH		
Feet	0° OFFSET #0021	20° OFFSET #0022	40° OFFSET #0023	0° OFFSET #0041	20° OFFSET #0042	40° OFFSET #0043
35	23,350 (78)					
40	23,350 (77)			12,300 (78)		
45	23,350 (75)	*21,300 (78)		12,300 (77.5)		
50	23,350 (73.5)	20,700 (76.5)		12,300 (76)		
55	23,350 (71.5)	20,100 (75)	16,600 (78)	12,300 (74.5)		
60	23,350 (69.5)	19,500 (73)	16,350 (76)	12,300 (73)	11,600 (78)	
65	22,300 (67.5)	19,000 (71)	16,100 (74)	12,300 (71.5)	11,300 (77)	
70	20,350 (66)	18,500 (69)	15,850 (72)	12,300 (69.5)	10,950 (75)	
75	18,350 (64)	18,050 (67)	15,650 (70)	12,300 (68)	10,700 (73.5)	8,940 (78)
80	16,600 (62)	17,100 (65)	15,500 (68)	12,300 (66.5)	10,400 (72)	8,790 (76)
85	15,050 (60)	15,550 (63)	15,300 (66)	12,300 (64.5)	10,150 (70)	8,650 (74.5)
90	13,700 (57.5)	14,150 (61)	14,500 (63.5)	12,300 (63)	9,910 (68.5)	8,520 (72.5)
95	12,450 (55.5)	12,900 (58.5)	13,250 (61.5)	11,900 (61)	9,680 (66.5)	8,410 (70.5)
100	11,300 (53.5)	11,750 (56.5)	12,100 (59)	11,450 (59)	9,460 (64.5)	8,300 (68.5)
105	10,300 (51)	10,750 (54)	11,050 (56.5)	10,500 (57.5)	9,260 (63)	8,210 (66.5)
110	9,390 (48.5)	9,810 (52)	10,050 (54)	9,580 (55.5)	9,060 (61)	8,120 (64.5)
115	8,570 (46)	8,970 (49.5)	9,200 (51.5)	8,790 (53.5)	8,860 (59)	8,050 (62.5)
120	7,750 (43.5)	8,140 (46.5)	8,350 (48.5)	8,010 (51.5)	8,660 (57)	7,990 (60.5)
125	6,840 (41)	7,360 (44)	7,600 (45.5)	7,340 (49.5)	7,960 (54.5)	7,820 (58)
130	5,940 (38)	6,590 (41)	6,850 (42.5)	6,680 (47.5)	7,270 (52.5)	7,660 (55.5)
135	5,170 (34.5)	5,730 (37.5)		6,100 (45)	6,660 (50.5)	7,010 (53.5)
140	4,400 (31)	4,880 (34)		5,530 (42.5)	6,050 (48)	6,360 (50.5)
145	3,730 (27.5)	4,120 (30)		4,890 (40)	5,510 (45.5)	5,770 (48)
150	3,070 (22.5)	3,360 (25.5)		4,260 (37.5)	4,970 (42.5)	5,190 (45)
155				3,670 (35)	4,360 (40)	
160				3,090 (31.5)	3,750 (36.5)	
165				2,570 (28.5)	3,120 (33)	
170				2,060 (24.5)	2,490 (29)	
Min. boom angle for indicated length (no load)	20°	20°	40°	20°	20°	40°
Max. boom length at 0° boom angle (no load)		100 ft.			100 ft.	

NOTE: ( ) Boom angles are in degrees.
#LMI operating code. Refer to LMI manual for operating instructions
*This capacity is based on maximum obtainable boom angle.

A6-829-102127

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. 36 ft. boom extension may be used for single or double line lifting service. 59 ft. boom extension may be used for single line lifting service only.
   WARNING: Lifting with the 36 ft. extension base, with the 23 ft. extension fly either erected or folded along side of extension base, is strictly prohibited.
3. 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.
4. Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
5. Capacities listed are with outriggers properly extended and vertical jacks set only.

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.

RT9130E load chart

160 ft.	36 - 59 ft.	40,000 lbs	100% 27' 10" spread	360°

Feet	Pounds					
	36ft. LENGTH			59ft. LENGTH		
	0° OFFSET #0021	20° OFFSET #0022	40° OFFSET #0023	0° OFFSET #0041	20° OFFSET #0042	40° OFFSET #0043
45	16,000 (78)					
50	16,000 (77.5)					
55	15,900 (76)			10,100 (78)		
60	15,850 (74)	15,700 (77.5)		10,100 (77)		
65	15,800 (72.5)	15,700 (76)	*15,200 (78)	10,100 (75.5)		
70	15,750 (71)	15,000 (74.5)	14,750 (77)	10,100 (74)	10,050 (78)	
75	14,950 (69.5)	14,300 (73)	14,100 (75.5)	10,100 (73)	10,050 (77.5)	
80	14,200 (68)	13,600 (71)	13,450 (74)	10,100 (71.5)	10,050 (76)	
85	13,450 (66)	12,950 (69.5)	12,850 (72)	10,100 (70)	10,050 (74.5)	8,600 (78)
90	12,800 (64.5)	12,350 (68)	12,250 (70.5)	10,100 (68.5)	9,870 (73)	8,500 (77.5)
95	11,700 (63)	11,750 (66)	11,700 (68.5)	10,100 (67)	9,680 (72)	8,400 (75.5)
100	10,650 (61)	11,200 (64.5)	11,200 (67)	9,710 (65.5)	9,450 (70)	8,310 (74)
105	9,710 (59.5)	10,250 (62.5)	10,400 (65)	9,280 (64)	9,050 (68.5)	8,220 (72.5)
110	8,780 (57.5)	9,310 (61)	9,680 (63)	8,850 (62.5)	8,650 (67)	8,140 (71)
115	7,990 (55.5)	8,500 (59)	8,840 (61)	8,110 (61)	8,280 (65.5)	7,920 (69.5)
120	7,210 (53.5)	7,690 (57)	8,010 (59)	7,370 (59.5)	7,920 (64)	7,700 (67.5)
125	6,540 (52)	7,000 (55)	7,290 (57)	6,720 (57.5)	7,360 (62.5)	7,440 (66)
130	5,880 (49.5)	6,310 (53)	6,580 (55)	6,070 (56)	6,810 (60.5)	7,190 (64)
135	5,300 (47.5)	5,710 (51)	5,950 (53)	5,510 (54.5)	6,210 (59)	6,630 (62.5)
140	4,730 (45.5)	5,110 (49)	5,330 (50.5)	4,950 (52.5)	5,620 (57)	6,080 (60.5)
145	4,190 (43)	4,580 (46.5)	4,770 (48)	4,460 (50.5)	5,100 (55.5)	5,520 (58.5)
150	3,650 (41)	4,060 (44)	4,220 (45.5)	3,980 (49)	4,580 (53.5)	4,970 (56.5)
155	3,070 (38.5)	3,500 (41.5)	3,660 (43)	3,550 (47)	4,120 (51.5)	4,470 (54.5)
160	2,490 (35.5)	2,940 (38.5)		3,130 (45)	3,660 (49.5)	3,970 (52)
165	1,970 (32.5)	2,370 (36)		2,710 (43)	3,240 (47.5)	3,510 (50)
170	1,460 (29.5)	1,800 (32.5)		2,300 (40.5)	2,830 (45)	3,060 (47.5)
175				1,840 (38.5)	2,420 (43)	2,640 (45)
180				1,390 (36)	2,010 (40)	2,220 (42)
185					1,530 (37.5)	
Min. boom angle (°) for indicated length (no load)	26	28	40	34	35	40
Max. boom length (ft.) at 0° boom angle (no load)	100			100		

NOTE: ( ) Boom angles are in degrees.
#LMI operating code. Refer to LMI manual for operating instructions.
*This capacity is based on maximum obtainable boom angle.

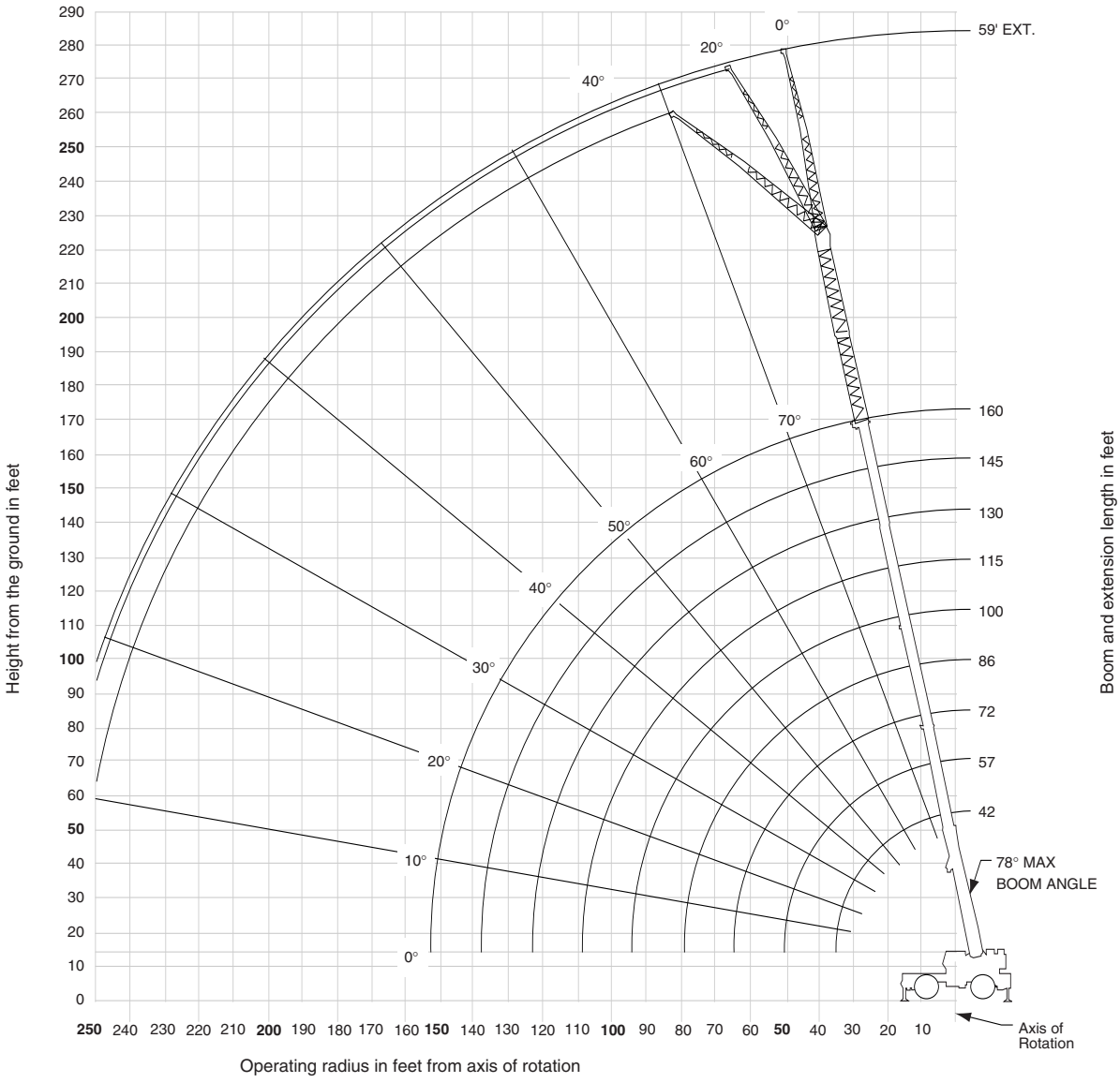
A6-829-101980A

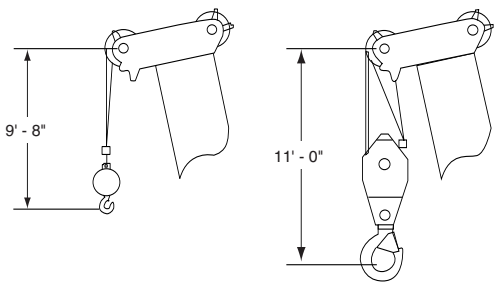
NOTES:

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. 36 ft. boom extension may be used for single or double line lifting service. 59 ft. boom extension may be used for single line lifting service only. **WARNING:** Lifting with the 36 ft. extension base, with the 23 ft. extension fly either erected or folded along side of extension base, is strictly prohibited.
3. 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.
4. Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
5. Capacities listed are with outriggers properly extended and vertical jacks set only.

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.

Working range – 160 ft. Main Boom + (2) Inserts + 36-59 ft. Fixed Offset Extension





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.

RT9130E load chart

160 ft.	59 ft.	26 or 52 ft. Insert	40,000 lbs	100% 27' 10" spread	360°

	Pounds					
	59 ft. LENGTH WITH 26 ft. INSERT			59 ft. LENGTH WITH 52 ft. INSERT		
Feet	0° OFFSET #0084	20° OFFSET #0085	40° OFFSET #0086	0° OFFSET #0084	20° OFFSET #0085	40° OFFSET #0086
60	7,070 (78)					
65	7,070 (77.5)					
70	7,070 (76.5)			4,400 (78)		
75	7,070 (75)			4,400 (77.5)		
80	7,070 (74)	6,610 (78)		4,400 (76.5)		
85	7,070 (72.5)	6,610 (77.5)		4,400 (75.5)		
90	7,070 (71.5)	6,610 (76)		4,400 (74.5)	4,230 (78)	
95	7,070 (70)	6,610 (75)	6,400 (78)	4,400 (73)	4,230 (77.5)	
100	7,070 (69)	6,610 (73.5)	6,400 (77)	4,400 (72)	4,230 (76.5)	
105	7,070 (67.5)	6,610 (72.5)	6,400 (76)	4,400 (71)	4,230 (75.5)	4,000 (78)
110	7,070 (66)	6,610 (71)	6,400 (74.5)	4,400 (69.5)	4,230 (74)	4,000 (77)
115	6,735 (65)	6,545 (69.5)	6,315 (73)	4,400 (68.5)	4,230 (73)	4,000 (75.5)
120	6,400 (63.5)	6,480 (68)	6,230 (71.5)	4,400 (67.5)	4,230 (72)	4,000 (74.5)
125	5,940 (62)	6,170 (67)	5,955 (70)	4,400 (66)	4,230 (70.5)	4,000 (73)
130	5,480 (60.5)	5,860 (65.5)	5,680 (68.5)	4,400 (65)	4,230 (69.5)	4,000 (72)
135	4,930 (59.5)	5,510 (64)	5,440 (67)	4,110 (63.5)	4,195 (68)	4,000 (70.5)
140	4,380 (58)	5,160 (62.5)	5,200 (65.5)	3,820 (62.5)	4,160 (67)	4,000 (69)
145	3,900 (56.5)	4,645 (61)	4,910 (64)	3,350 (61)	3,885 (65.5)	3,785 (68)
150	3,420 (55)	4,130 (59.5)	4,620 (62.5)	2,880 (60)	3,610 (64)	3,570 (66.5)
155	3,000 (53.5)	3,680 (58)	4,140 (60.5)	2,470 (58.5)	3,205 (63)	3,365 (65)
160	2,580 (51.5)	3,230 (56.5)	3,660 (59)	2,060 (57)	2,800 (61.5)	3,160 (63.5)
165	2,210 (50)	2,825 (54.5)	3,220 (57.5)	1,690 (56)	2,405 (60)	2,810 (62.5)
170	1,840 (48.5)	2,420 (53)	2,780 (55.5)		2,010 (59)	2,460 (61)
175	1,515 (46.5)	2,060 (51)	2,385 (53.5)		1,655 (57.5)	2,075 (59.5)
180		1,700 (49.5)	1,990 (51.5)			1,690 (58)
185		1,370 (47.5)	1,625 (49.5)			
Min. boom angle (°) for indicated length (no load)	45	46	48	54	56	56
Max. boom length (ft.) at 0° boom angle (no load)		57			57	

NOTE: ( ) Boom angles are in degrees.
#LMI operating code. Refer to LMI manual for operating instructions.

A6-829-101983A

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. 59 ft. folding boom extension length may be used for single line lifting service only.
   NOTE: Lifting with the 36 ft. extension base with either one or two 26 ft. insert sections installed is not permitted.
3. For main boom lengths less than 160 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.

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.

RT9130E load chart

42 - 86 ft. | 40,000 lbs | Pick & Carry up to 2.5 mph | Boom Centered over Front

Pounds

#9006

Feet	Main Boom Length in Feet 42	57	72	86
10	61,750 (71.5)			
12	61,750 (68.5)			
15	49,000 (63.5)	34,600 (71.5)		
20	34,750 (55.5)	34,600 (65.5)		
25	34,750 (46)	34,600 (60)		
30	29,250 (34)	28,150 (53.5)	28,300 (62.5)	
35	23,400 (13)	22,350 (46.5)	22,500 (58)	24,100 (64.5)
40		17,750 (38.5)	17,800 (52.5)	19,250 (60.5)
45		14,000 (28)	13,950 (47)	15,200 (56.5)
50		10,950 (7.5)	10,800 (41)	11,850 (52.5)
55			8,150 (34)	9,020 (47.5)
60			5,880 (24.5)	6,600 (42.5)
65				4,520 (37)
70				2,700 (30.5)
75				1,110 (22)
Min. boom angle (°) for indicated length (no load)			0	20
Max. boom length (ft.) at 0° boom angle (no load)			72	

#LMI operating code. Refer to LMI manual for operating instructions.
NOTE: ( ) Boom angles are in degrees.

Lifting Capacities at Zero Degree Boom Angle

Boom Angle	42	57
0°	23,000 (35.3)	10,900 (50)

A6-829-102108A

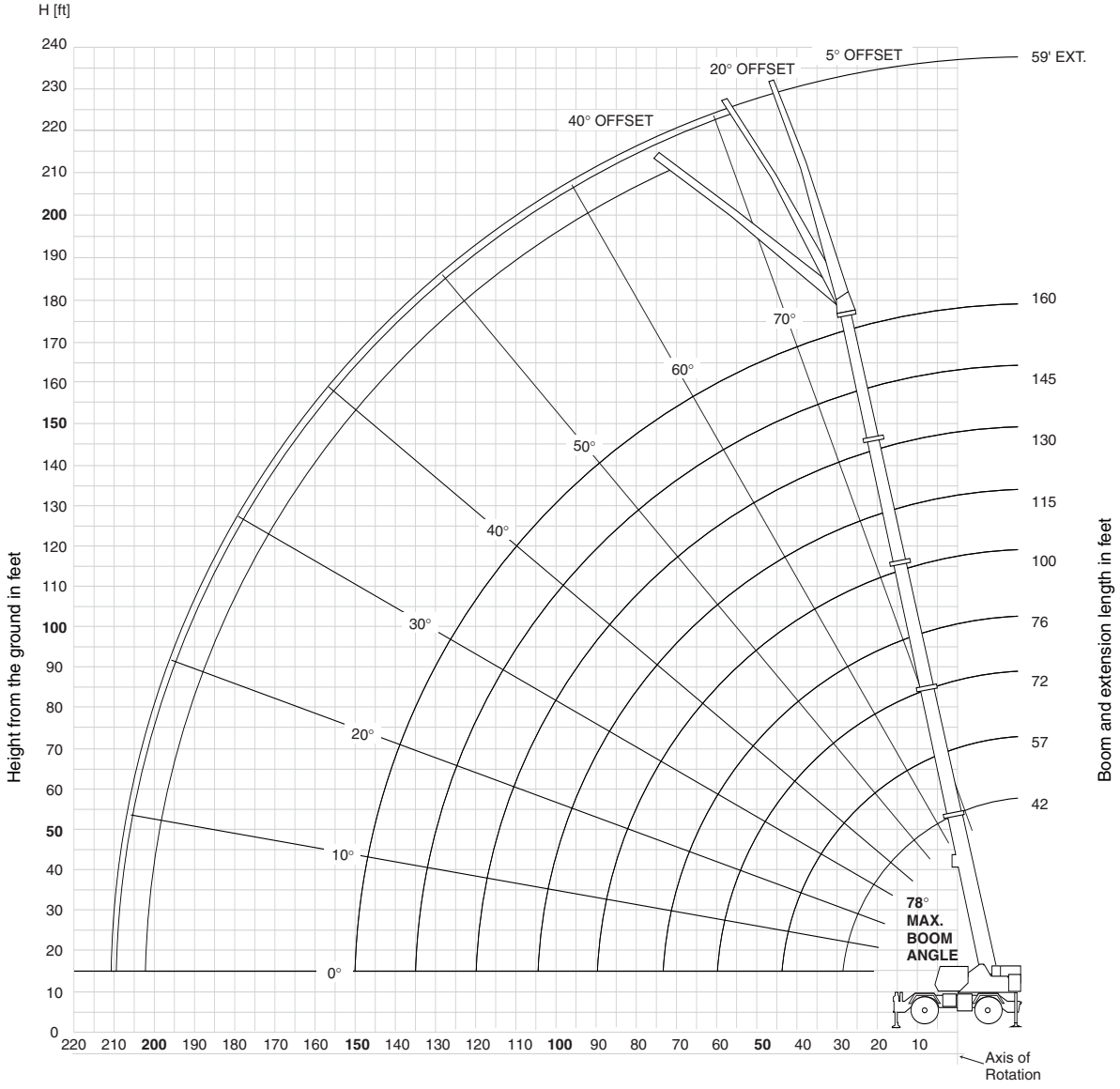
NOTES:

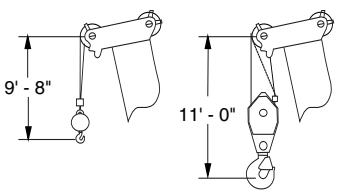
1. Capacities are in pounds and do not exceed 75% of tipping loads as determined by test in accordance with SAE J-765.
2. Capacities are applicable to machines equipped with 33.25x29 (38 ply) bias ply tires, at 85 psi cold inflation pressure.
3. Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
4. Capacities are applicable only with machine on firm level surface.
5. On rubber lifting with boom extension not permitted.
6. Axle lockouts must be functioning when lifting on rubber.
7. 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.
8. 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.
9. Creep – not over 200 ft. of movement in any 30 minute period and not exceeding 1 mph.

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.

working range

Working range – 160 ft. Main Boom + 36-59 ft. Luffing Extension

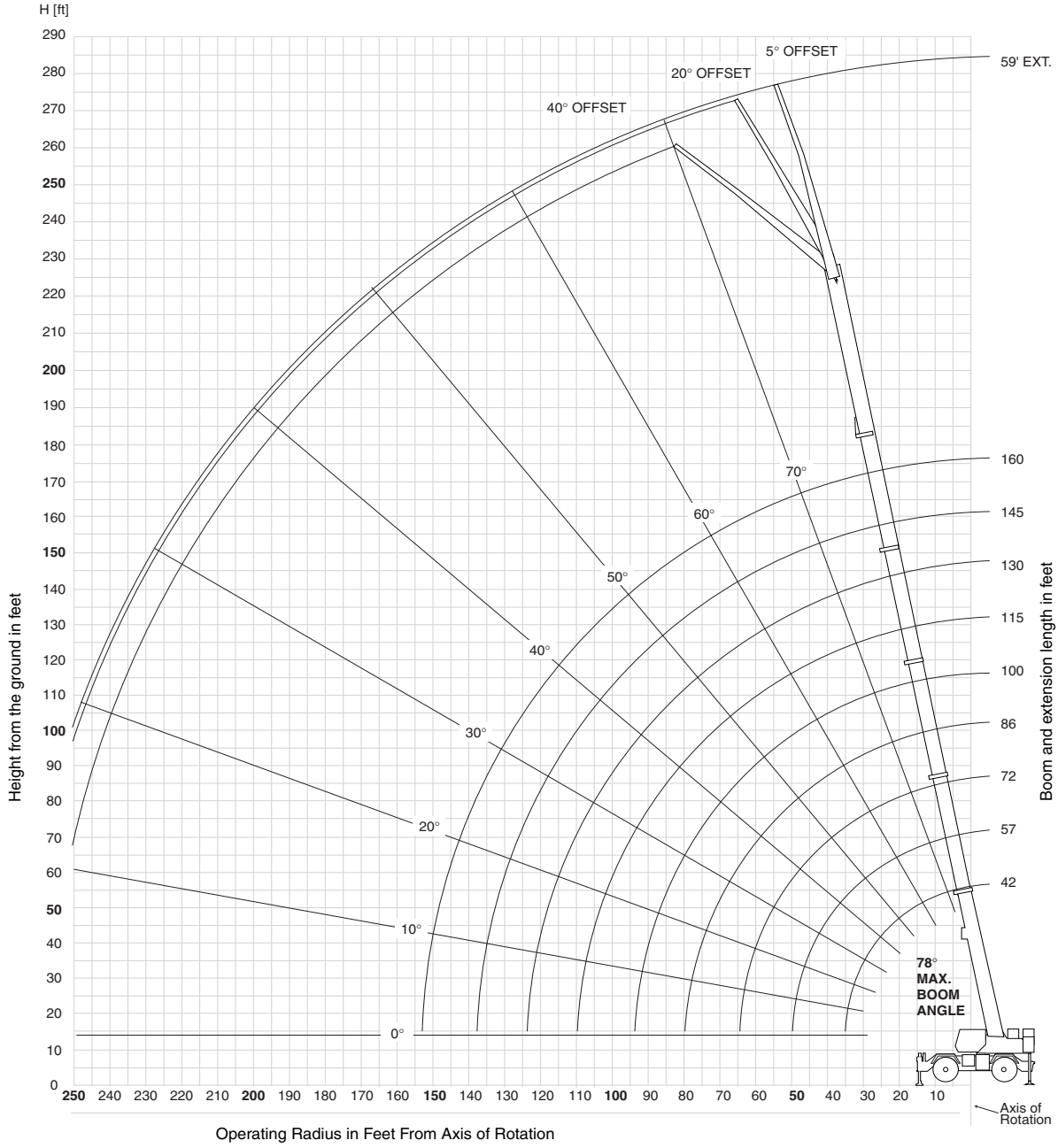


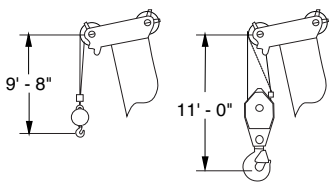


Dimensions are for Largest Grove furnished Hook Block and Headache Ball, with Anti-Two Block Activated.

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.

Working range – 160 ft. Main Boom + (2) Inserts + 36-59 ft. Luffing Extension





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.

36-59 ft. luffing folding boom extension (fixed angle) 100 ft. main boom

100 ft.	36 - 59 ft.	40,000 lbs	100% 27' 10" spread	360°

Pounds

Feet	36 ft. LENGTH 5° OFFSET	36 ft. LENGTH 20° OFFSET #0091	36 ft. LENGTH 40° OFFSET	59 ft. LENGTH 5° OFFSET	59 ft. LENGTH 20° OFFSET #0092	59 ft. LENGTH 40° OFFSET
30	32,600 (78)					
35	30,700 (76)	*23,150 (78)				
40	28,950 (74)	22,150 (76.5)		14,950 (77.5)		
45	27,350 (71.5)	21,250 (74)	15,250 (78)	14,950 (75.5)		
50	25,900 (69.5)	20,450 (72)	14,850 (75.5)	14,950 (73.5)	12,350 (78)	
55	24,600 (67)	19,700 (69.5)	14,500 (73)	14,550 (72)	11,900 (77)	
60	23,400 (64.5)	19,050 (67)	14,200 (70.5)	14,150 (70)	11,500 (75)	
65	22,300 (62)	18,450 (65)	13,900 (68)	13,750 (68)	11,100 (73)	8,050 (78)
70	21,300 (59.5)	17,850 (62)	13,650 (65.5)	13,350 (66)	10,700 (71)	7,850 (76)
75	20,100 (57)	17,350 (59.5)	13,450 (63)	13,000 (64)	10,400 (69)	7,660 (73.5)
80	18,100 (54.5)	16,900 (57)	13,300 (60)	12,550 (61.5)	10,050 (66.5)	7,490 (71.5)
85	16,000 (51.5)	16,500 (54)	13,150 (57)	12,000 (59.5)	9,780 (64.5)	7,340 (69)
90	14,150 (49)	15,400 (51.5)	13,050 (54)	11,550 (57.5)	9,510 (62.5)	7,210 (66.5)
95	12,500 (46)	13,700 (48)	13,000 (50.5)	11,100 (55)	9,260 (60)	7,090 (64)
100	11,050 (42.5)	12,100 (45)	12,750 (47)	10,650 (52.5)	9,030 (57.5)	6,980 (61.5)
105	9,770 (39)	10,650 (41.5)		10,250 (50)	8,820 (55)	6,900 (59)
110	8,490 (35.5)	9,270 (37.5)		9,930 (47.5)	8,620 (52.5)	6,830 (56)
115	7,400 (31)	8,060 (33)		9,040 (45)	8,440 (49.5)	6,790 (53)
120	6,320 (26)	6,850 (28)		8,150 (42)	8,260 (47)	6,750 (50)
125				7,240 (39)	7,820 (43.5)	
130				6,340 (35.5)	7,380 (40.5)	
135				5,570 (32)	6,440 (36.5)	
140				4,800 (28)	5,510 (32)	
145				4,100 (23)		
150				3,410 (16)		
Min. boom angle for indicated length (no load)	5°	20°	40°	5°	20°	40°
Max. boom length at 5° boom angle (no load)		100 ft.			100 ft.	

NOTE: ( ) Boom angles are in degrees.
#LMI operating code. Refer to LMI manual for operating instructions.
*This capacity is based on maximum obtainable boom angle.

A6-829-102550

NOTES:

1. All capacities above the bold line are based on structural strength of boom extension.
2. 36 ft. boom extension may be used for single or double line lifting service. 59 ft. boom extension may be used for single line lifting service only.
   WARNING: Lifting with the 36 ft. extension base, with the 23 ft. extension fly either erected or folded along side of extension base, is strictly prohibited.
3. Radii listed are for a 100 ft. boom with the boom extension erected. For main boom lengths less than 100 ft., 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.
4. Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
5. Capacities listed are with outriggers properly extended and vertical jacks set only.

36-59 ft. luffing folding boom extension (fixed angle) 130 ft. main boom

130 ft. | 36 - 59 ft. | 40,000 lbs | 100% 27' 10" spread | 360°

Pounds

Feet	36 ft. LENGTH 5° OFFSET	36 ft. LENGTH 20° OFFSET #0091	36 ft. LENGTH 40° OFFSET	59 ft. LENGTH 5° OFFSET	59 ft. LENGTH 20° OFFSET #0092	59 ft. LENGTH 40° OFFSET
40	*23,350 (78)					
45	23,350 (76)	*21,300 (78)		*12,300 (78)		
50	23,350 (74)	20,700 (76.5)		12,300 (77.5)		
55	23,350 (72.5)	20,100 (75)	14,850 (78)	12,300 (76)		
60	23,350 (70.5)	19,500 (73)	14,550 (76)	12,300 (74.5)	11,600 (78)	
65	22,300 (68.5)	19,000 (71)	14,300 (74)	12,300 (73)	11,300 (77)	
70	20,350 (66.5)	18,500 (69)	14,050 (72)	12,300 (71)	10,950 (75)	
75	18,350 (64.5)	18,050 (67)	13,850 (70)	12,300 (69.5)	10,700 (73.5)	7,850 (78)
80	16,600 (62.5)	17,000 (65)	13,650 (68)	12,300 (68)	10,400 (72)	7,690 (76)
85	15,050 (60.5)	15,450 (63)	13,450 (66)	12,300 (66)	10,150 (70)	7,550 (74.5)
90	13,650 (58.5)	14,050 (61)	13,300 (63.5)	12,250 (64.5)	9,910 (68.5)	7,420 (72.5)
95	12,400 (56.5)	12,800 (58.5)	13,150 (61.5)	11,900 (62.5)	9,680 (66.5)	7,300 (70.5)
100	11,300 (54)	11,650 (56.5)	11,950 (59)	11,450 (61)	9,460 (64.5)	7,190 (68.5)
105	10,300 (52)	10,650 (54)	10,950 (56.5)	10,500 (59)	9,260 (63)	7,090 (66.5)
110	9,340 (49.5)	9,660 (52)	9,950 (54)	9,580 (57)	9,060 (61)	7,000 (64.5)
115	8,480 (47)	8,810 (49.5)	9,070 (51.5)	8,790 (55)	8,800 (59)	6,930 (62.5)
120	7,630 (44.5)	7,970 (46.5)	8,200 (48.5)	8,010 (53)	8,550 (57)	6,860 (60.5)
125	6,700 (41.5)	7,240 (44)	7,430 (45.5)	7,340 (51)	7,840 (54.5)	6,810 (58)
130	5,780 (39)	6,510 (41)	6,670 (42.5)	6,680 (49)	7,140 (52.5)	6,770 (55.5)
135	4,980 (35.5)	5,690 (37.5)		6,100 (46.5)	6,520 (50.5)	6,500 (53.5)
140	4,190 (32)	4,880 (34)		5,520 (44)	5,910 (48)	6,240 (50.5)
145	3,500 (28)	4,120 (30)		4,860 (42)	5,360 (45.5)	5,640 (48)
150	2,820 (23.5)	3,360 (25.5)		4,200 (39)	4,820 (42.5)	5,050 (45)
155				3,580 (36.5)	4,280 (40)	
160				2,970 (33.5)	3,750 (36.5)	
165				2,430 (30)	3,120 (33)	
170				1,890 (26)	2,490 (29)	
Min. boom angle for indicated length (no load)	20°	20°	40°	20°	20°	40°
Max. boom length at 5° boom angle (no load)		100 ft.			100 ft.	

NOTE: ( ) Boom angles are in degrees.
#LMI operating code. Refer to LMI manual for operating instructions.
*This capacity is based on maximum obtainable boom angle.

A6-829-102554

NOTES:

1. All capacities above the bold line are based on structural strength of boom extension.
2. 36 ft. boom extension may be used for single or double line lifting service. 59 ft. boom extension may be used for single line lifting service only.
   WARNING: Lifting with the 36 ft. extension base, with the 23 ft. extension fly either erected or folded along side of extension base, is strictly prohibited.
3. Radii listed are for a 130 ft. boom with the boom extension erected. For main boom lengths less than 130 ft., 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.
4. Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
5. Capacities listed are with outriggers properly extended and vertical jacks set only.

36-59 ft. luffing folding boom extension (fixed angle) 160 ft. main boom

Feet	Pounds					
	36 ft. LENGTH			59 ft. LENGTH		
	5° OFFSET	20° OFFSET #0091	40° OFFSET	5° OFFSET	20° OFFSET #0092	40° OFFSET
50	15,550 (77.5)					
55	15,550 (76)					
60	15,550 (74.5)	14,950 (77.5)		9,650 (78)		
65	15,550 (73)	14,950 (76)	*14,400 (78)	9,650 (77)		
70	15,550 (71.5)	14,950 (74.5)	14,150 (77)	9,650 (75.5)	9,650 (78)	
75	14,900 (70)	14,250 (73)	13,950 (75.5)	9,650 (74)	9,650 (77.5)	
80	14,100 (68)	13,550 (71)	13,400 (74)	9,650 (72.5)	9,650 (76)	
85	13,400 (66.5)	12,900 (69.5)	12,800 (72)	9,650 (71)	9,650 (74.5)	7,630 (78)
90	12,700 (65)	12,250 (68)	12,200 (70.5)	9,650 (69.5)	9,650 (73)	7,510 (77.5)
95	11,500 (63)	11,700 (66)	11,650 (68.5)	9,650 (68.5)	9,650 (72)	7,390 (75.5)
100	10,400 (61.5)	10,850 (64.5)	11,100 (67)	9,570 (67)	9,420 (70)	7,290 (74)
105	9,480 (59.5)	9,910 (62.5)	10,200 (65)	9,150 (65)	9,010 (68.5)	7,200 (72.5)
110	8,570 (58)	8,970 (61)	9,360 (63)	8,730 (63.5)	8,610 (67)	7,110 (71)
115	7,780 (56)	8,160 (59)	8,530 (61)	8,000 (62)	8,220 (65.5)	7,030 (69.5)
120	6,990 (54)	7,360 (57)	7,700 (59)	7,280 (60.5)	7,840 (64)	6,950 (67.5)
125	6,320 (52)	6,670 (55)	6,980 (57)	6,620 (59)	7,180 (62.5)	6,890 (66)
130	5,650 (50)	5,980 (53)	6,260 (55)	5,970 (57.5)	6,530 (60.5)	6,830 (64)
135	5,070 (48)	5,380 (51)	5,630 (53)	5,400 (55.5)	5,930 (59)	6,320 (62.5)
140	4,500 (46)	4,780 (49)	5,010 (50.5)	4,830 (54)	5,340 (57)	5,820 (60.5)
145	3,990 (43.5)	4,250 (46.5)	4,450 (48)	4,340 (52)	4,820 (55.5)	5,260 (58.5)
150	3,490 (41.5)	3,730 (44)	3,900 (45.5)	3,850 (50)	4,300 (53.5)	4,710 (56.5)
155	2,990 (38.5)	3,260 (41.5)		3,410 (48)	3,840 (51.5)	4,210 (54.5)
160	2,490 (36)	2,800 (38.5)		2,980 (46)	3,380 (49.5)	3,710 (52)
165	1,970 (33)	2,300 (36)		2,590 (44)	2,960 (47.5)	3,250 (50)
170	1,450 (30)	1,800 (32.5)		2,210 (42)	2,550 (45)	2,790 (47.5)
175				1,800 (39.5)	2,170 (43)	
180				1,390 (37.5)	1,800 (40)	
185					1,420 (37.5)	
Min. boom angle for indicated length (no load)	26°	29°	40°	34°	36°	40°
Max. boom length at 5° boom angle (no load)		100 ft.			100 ft.	

NOTE: ( ) Boom angles are in degrees.
#LMI operating code. Refer to LMI manual for operating instructions.
*This capacity is based on maximum obtainable boom angle.

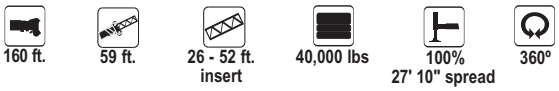
A6-829-102558

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 J765.
2. 36 ft. boom extension may be used for single or double line lifting service. 59 ft. boom extension may be used for single line lifting service only. **WARNING:** Lifting with the 36 ft. extension base, with the 23 ft. extension fly either erected or folded along side of extension base, is strictly prohibited.
3. Radii listed are for a 160 ft. boom with the boom extension erected. For main boom lengths less than 160 ft., 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.
4. Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
5. Capacities listed are with outriggers properly extended and vertical jacks set only.

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.

59 ft. luffing folding boom extension w/ (1) or (2) inserts (fixed angle) 160 ft. main boom



Feet	59 ft. LENGTH WITH 26 ft. INSERT			59 ft. LENGTH WITH 52 ft. INSERT		
	5° OFFSET	20° OFFSET	40° OFFSET	5° OFFSET	20° OFFSET	40° OFFSET
		#0095			#1095	
	Pounds					
70	6,830 (78)					
75	6,830 (77)			4,400 (78)		
80	6,830 (75.5)	6,610 (78)		4,400 (77.5)		
85	6,830 (74.5)	6,610 (77.5)		4,400 (76.5)		
90	6,830 (73)	6,610 (76)		4,400 (75.5)	4,230 (78)	
95	6,830 (72)	6,610 (75)	6,400 (78)	4,400 (74.5)	4,230 (77.5)	
100	6,830 (70.5)	6,610 (73.5)	6,400 (77)	4,400 (73)	4,230 (76.5)	
105	6,830 (69.5)	6,610 (72.5)	6,400 (76)	4,400 (72)	4,230 (75.5)	4,000 (78)
110	6,830 (68)	6,610 (71)	6,400 (74.5)	4,400 (71)	4,230 (74)	4,000 (77)
115	6,590 (66.5)	6,520 (69.5)	6,310 (73)	4,400 (69.5)	4,230 (73)	4,000 (75.5)
120	6,350 (65)	6,430 (68)	6,230 (71.5)	4,400 (68.5)	4,230 (72)	4,000 (74.5)
125	5,910 (64)	6,120 (67)	5,950 (70)	4,400 (67.5)	4,230 (70.5)	4,000 (73)
130	5,480 (62.5)	5,810 (65.5)	5,680 (68.5)	4,400 (66)	4,230 (69.5)	4,000 (72)
135	4,930 (61)	5,480 (64)	5,430 (67)	4,110 (65)	4,170 (68)	4,000 (70.5)
140	4,380 (59.5)	5,160 (62.5)	5,190 (65.5)	3,820 (63.5)	4,120 (67)	4,000 (69)
145	3,900 (58)	4,640 (61)	4,900 (64)	3,350 (62.5)	3,860 (65.5)	3,780 (68)
150	3,420 (56.5)	4,130 (59.5)	4,620 (62.5)	2,880 (61)	3,610 (64)	3,570 (66.5)
155	3,000 (55)	3,680 (58)	4,140 (60.5)	2,470 (59.5)	3,200 (63)	3,360 (65)
160	2,580 (53.5)	3,230 (56.5)	3,660 (59)	2,060 (58.5)	2,800 (61.5)	3,160 (63.5)
165	2,210 (52)	2,820 (54.5)	3,220 (57.5)	1,690 (57)	2,400 (60)	2,810 (62.5)
170	1,840 (50)	2,420 (53)	2,780 (55.5)		2,010 (59)	2,460 (61)
175	1,510 (48.5)	2,060 (51)	2,380 (53.5)		1,650 (57.5)	2,070 (59.5)
180		1,700 (49.5)	1,990 (51.5)			1,690 (58)
Min. boom angle (°) for indicated length (no load)	46°	46°	48°	55°	56°	56°
Max. boom length at 5° boom angle (no load)		57 ft.			57 ft.	

NOTE: ( ) Boom angles are in degrees.
#LMI operating code. Refer to LMI manual for operating instructions.

A6-829-102562

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. 59 ft. folding boom extension length may be used for single line lifting service only.
   NOTE: Lifting with the 36 ft. extension base with either one or two 26 ft. insert sections installed is not permitted.
3. For main boom lengths less than 160 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.

36-59 ft. luffing folding boom extension 160 ft. main boom (Load Luffing)

160 ft.	36 - 59 ft.	40,000 lbs	100% 27' 10" spread	360°

Feet	Pounds			
	36 ft. LENGTH		59 ft. LENGTH	
	5° - 20° OFFSET	20° - 40° OFFSET	5° - 20° OFFSET	20° - 40° OFFSET
	#0091		#0092	
60	14,950			
65	14,950	10,250		
70	14,950	10,050	9,650	
75	14,250	9,840	9,320	
80	13,550	9,640	8,950	
85	12,900	9,460	8,600	5,100
90	12,250	9,280	8,290	4,980
95	11,500	9,130	7,990	4,880
100	10,400	8,980	7,720	4,780
105	9,480	8,850	7,470	4,690
110	8,570	8,720	7,220	4,600
115	7,780	8,160	7,010	4,520
120	6,990	7,360	6,790	4,440
125	6,320	6,670	6,600	4,370
130	5,650	5,980	5,970	4,310
135	5,070	5,380	5,400	4,250
140	4,500	4,780	4,830	4,200
145	3,990	4,250	4,340	4,160
150	3,490	3,730	3,850	4,120
155	2,990		3,410	3,840
160	2,490		2,980	3,380
165	1,970		2,590	2,960
170	1,450		2,210	2,550
175			1,800	
180			1,390	
Min. boom angle for indicated length (no load)	29°	40°	36°	40°
Max. boom length at 5° boom angle (no load)	100 ft.		100 ft.	

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

A6-829-102575

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. 36 ft. boom extension length may be used for single or double line lifting service. 59 ft. boom extension may be used for single line lifting service only.
   WARNING: Lifting with the 36 ft. extension base, with the 23 ft. extension fly either erected or folded along side of extension base, is strictly prohibited.
3. Capacities are applicable for a 160 ft. main boom length only.
   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.
4. The loads for luffing depend on the angle of the main boom, angle of the boom extension and dynamic working pressure of the luffing cylinder for the boom extension.
5. Capacities listed are with outriggers properly extended and vertical jacks set only.

59 ft. luffing folding boom extension w/ (1) or (2) inserts 160 ft. main boom (Load Luffing)

160 ft.	59 ft.	26 - 52 ft. Insert	40,000 lbs	100% 27' 10" spread	360°

Pounds

Feet	59 ft. LENGTH with 26 ft. INSERT		59 ft. LENGTH with 52 ft. INSERT	
	5° - 20° OFFSET	20° - 40° OFFSET	5° - 20° OFFSET	20° - 40° OFFSET
	#0095		#1095	
80	6,610			
85	6,610			
90	6,610		4,230	
95	6,610	4,420	4,230	
100	6,610	4,330	4,230	
105	6,610	4,250	4,230	4,000
110	6,430	4,180	4,230	4,000
115	6,250	4,100	4,230	4,000
120	6,070	4,020	4,230	4,000
125	5,900	3,970	4,230	4,000
130	5,480	3,920	4,230	4,000
135	4,930	3,870	4,110	4,000
140	4,380	3,810	3,820	3,960
145	3,900	3,770	3,350	3,780
150	3,420	3,730	2,880	3,570
155	3,000	3,680	2,470	3,200
160	2,580	3,230	2,060	2,800
165	2,210	2,820	1,690	2,400
170	1,840	2,420		2,010
175	1,510	2,060		1,650
180		1,700		
Min. boom angle for indicated length (no load)	46°	48°	56°	56°
Max. boom length at 5° boom angle (no load)	57 ft.		57 ft.	

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

A6-829-102579

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. 59 ft. boom extension may be used for single line lifting service only.
   WARNING: Lifting with the 36 ft. extension base, with either one or two 26 ft. insert sections installed is not permitted.
3. Capacities are applicable for a 160 ft. main boom length only.
   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.
4. The loads for luffing depend on the angle of the main boom, angle of the boom extension and dynamic working pressure of the luffing cylinder for the boom extension.
5. Capacities listed are with outriggers properly extended and vertical jacks set only.

Installation and Removal of Counterweight and Auxiliary Hoist Rated Lifting Capacities in Pounds

On Outriggers Fully Extended – 360˚	
Radius in Feet	#0801 Main Boom Length 42 ft*
10	48,000
12	48,000
15	48,000
20	48,000
25	48,000
30	48,000

Installation and Removal of Front and Rear Outrigger Boxes Rated Lifting Capacities in Pounds without Counterweight

On Rubber (Stationary) – 360˚	
Radius in Feet	#9810 Main Boom Length 42 ft*
10	11,600
12	11,600
15	11,600
20	11,600

**The boom must be fully retracted.*

Notes for On Rubber

- Capacities are applicable to machines equipped with General 33.25 x 29 (38 ply) tires at 85 psi cold inflation pressure or Michelin 29.5R29 tires at 90 psi cold inflation pressure. Capacities do not exceed 75% of tipping loads as determined by test in accordance with SAE J765.
- With no load, the boom angle must not be less than 35˚ when over sides of machine since loss of stability will occur causing a tipping condition. To lower boom below 35˚ boom angle, boom must be swung over front or rear and LMI bypass activated.
- Once one outrigger box is installed, do not swing over that end of the machine while installing the other outrigger box.
- Each outrigger box assembly weighs 9373 lb. including the outrigger beams and pads.
- May be used for single or double line lifting service.

Weight Reductions for Load Handling Devices

36-59 Ft. Luffing Folding Boom Extension	Pounds
*36 ft. Extension (Erected)	5,260
·59 ft. Extension (Erected)	9,860

Luffing Extension with 26 ft. Insert	Pounds
*59 ft. Extension (Erected)	14,100

Luffing Extension with 52 ft. Insert	Pounds
*59 ft. Extension (Erected)	19,400

*Reduction of main boom capacities
(No deduct required for stowed boom extension)

When lifting over main boom nose with 36 ft. or 59 ft. extension erected, the outriggers must be fully extended or 50% extended (19' 9" spread).

When lifting over main boom nose with 26 ft. or 52 ft. insert erected, the outriggers must be fully extended.

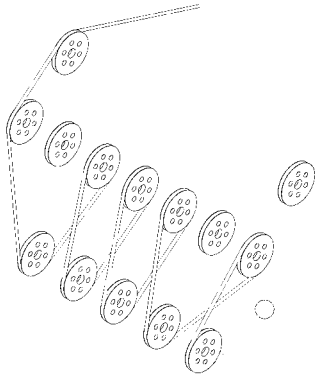
Auxiliary Boom Nose	Pounds
	120

Hookblocks and Headache Balls	Pounds
80 Ton, 5 Sheave	1,600+
130 Ton, 8 Sheave	2,400+
10 Ton Overhaul Ball	690+

+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.



Line Pulls and Reeving Information

Hoists	Cable Specs	Permissible Line Pulls	Nominal Cable Length
Main Model 35	3/4" (19 mm) 6x37 Class EIPS, IWRC Special Flexible Min. Breaking Str. 58,800 lb.	16,800 lb.	950 ft.
Main Model 35	3/4" (19 mm) Flex - X 35 Rotation Resistance (non-rotating) Min. Breaking Strength 85,500 lb.	16,800 lb.	950 ft.
Auxiliary Model 35	3/4" (19 mm) Flex - X 35 Rotation Resistance (non-rotating) Min. Breaking Strength 85,500 lb.	16,800 lb.	700 ft.

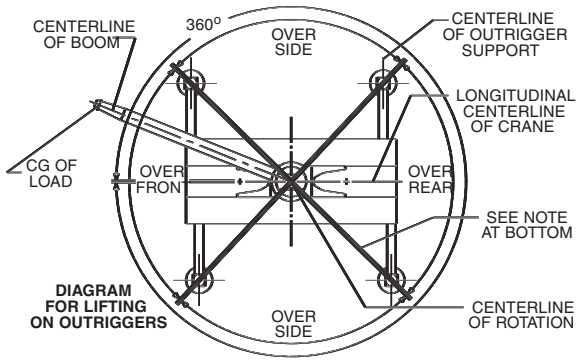
The approximate weight of 3/4" wire rope is 1.5 lb./ft.

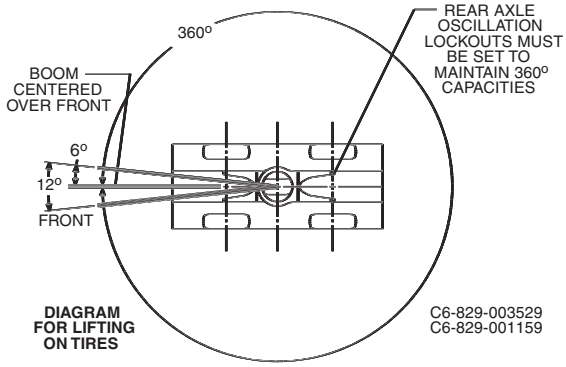
Hoist Performance

Wire Rope Layer	Hoist Line Pulls Two Speed Hoist Low Available lb.*	High Available lb.*	Drum Rope Capacity (ft.) Layer	Total
1	19,267	11,094	136	136
2	17,709	10,197	148	284
3	16,384	9,434	160	445
4	15,243	8,777	172	618
5	14,251	8,206	184	802
6	13,380	7,705	196	998

*Max. lifting capacity: 6x37 or 35x7 class = 16,800 lb.

Working Area Diagram





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

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.

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