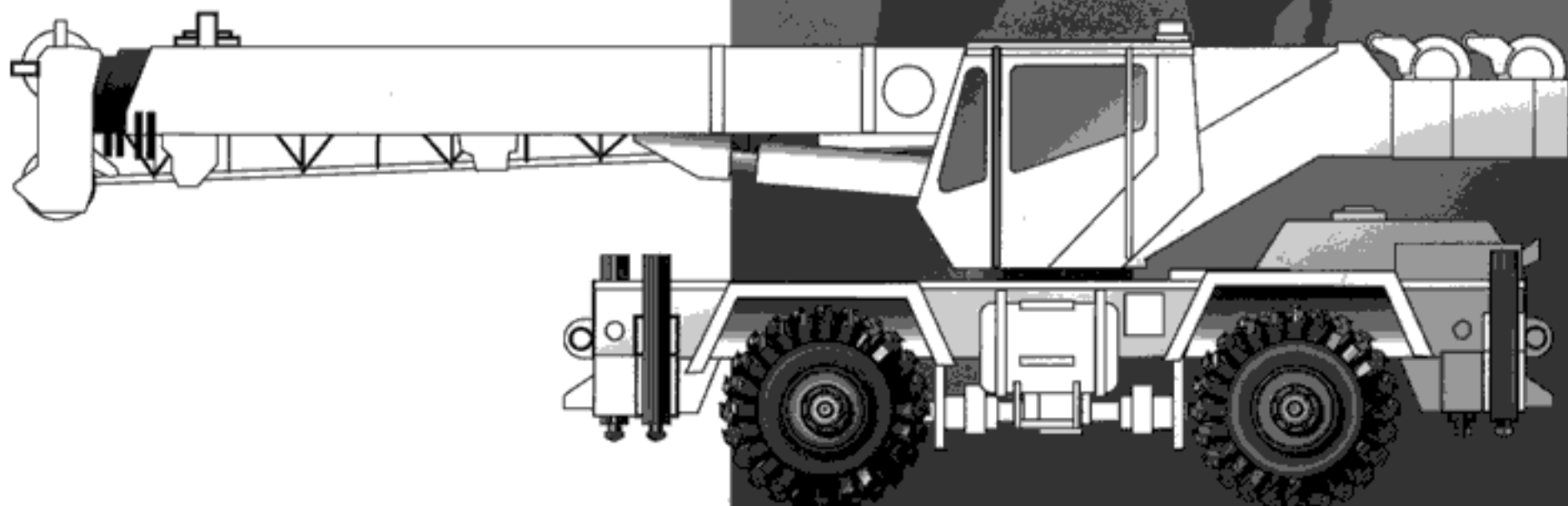




GROVE[®]
CRANE

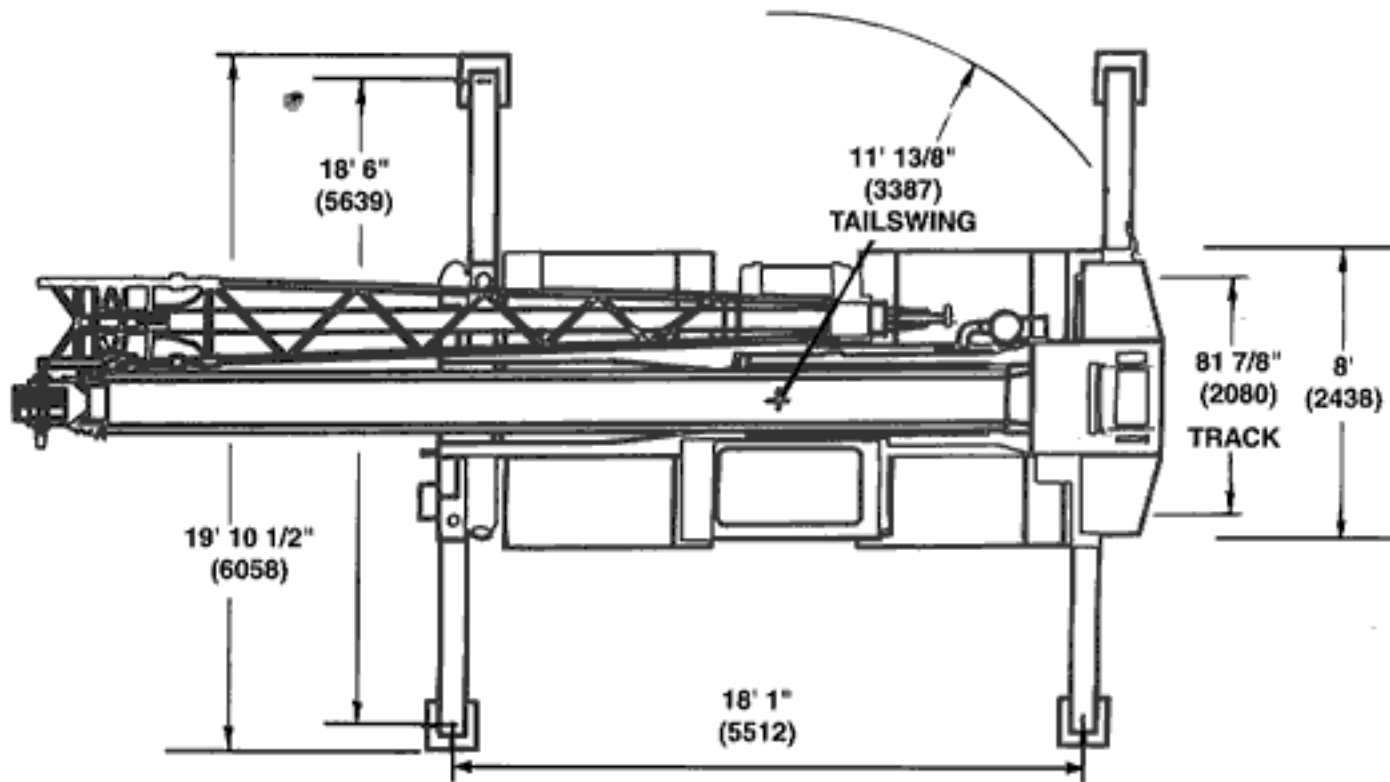
A GROVE WORLDWIDE COMPANY

RT400 Series

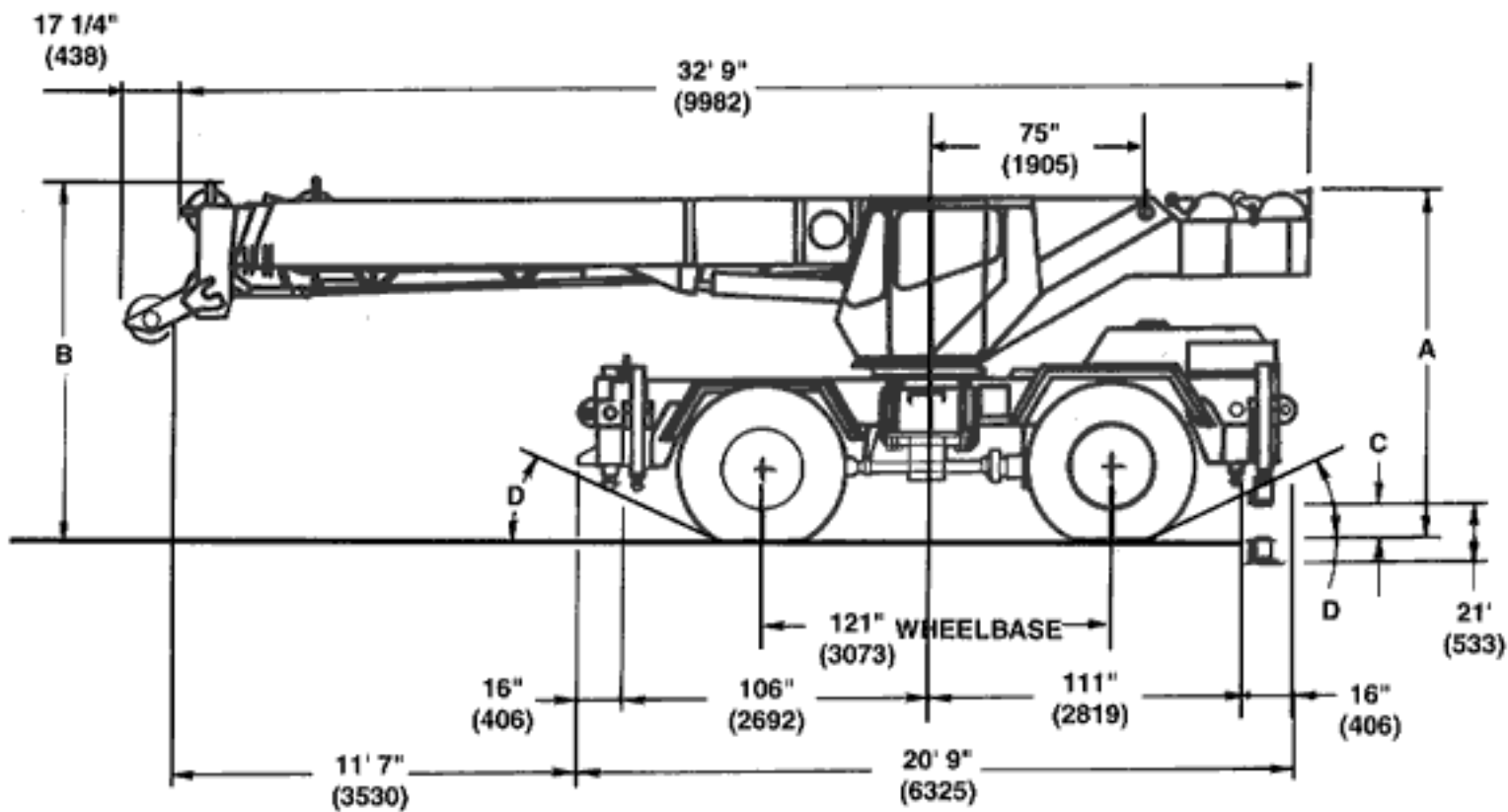


Rough Terrain Hydraulic Cranes

Dimensions



TIRE SIZE	16:00 X 25	17.5 X 25
A	10' 1 1/4" (3080)	9' 11 1/2" (3035)
B	10' 5 1/2" (3188)	9' 11 1/2" (3035)
C	11' 1/2" (292)	9' 3/4" (248)
D	25°	24°
GROUND CLEARANCE	18" (457)	16 1/2" (650)



Turning Radius 16' 2" (4928 mm)
 Front Axle Load 18,000 lbs. (8165 kg)
 Rear Axle Load 19,200 lbs. (8709 kg)
 Gross Vehicle Weight 37,200 lbs. (16 874 kg)

Working Range



27-70 ft.
(8.3-21.4 m)



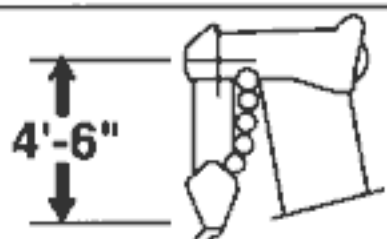
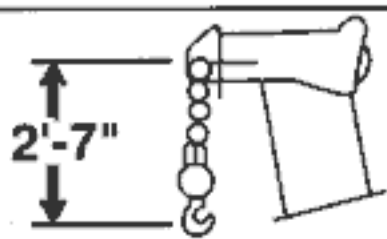
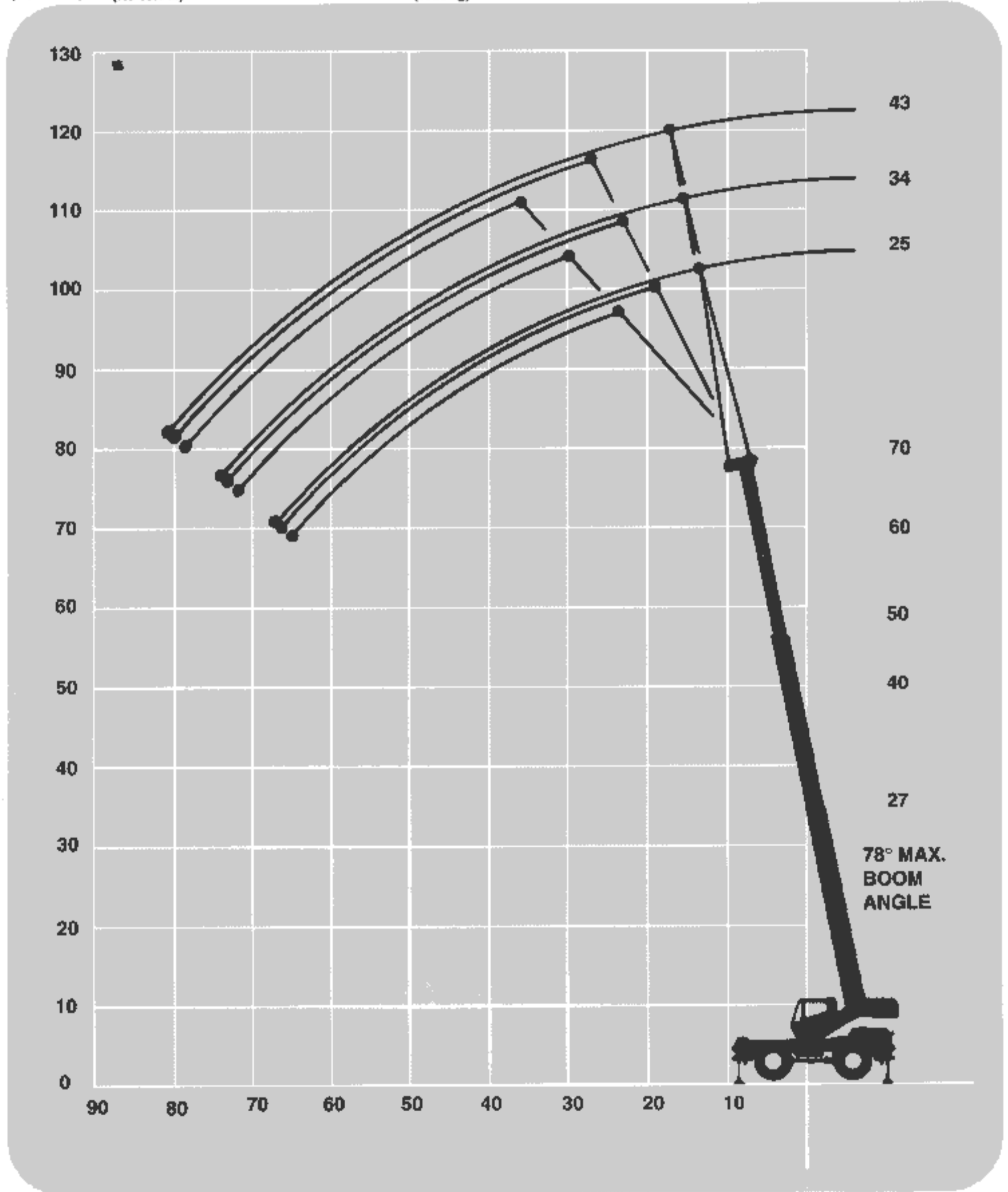
25-43 ft.
(7.6-13.1 m)



3,925 lbs.
(1780 kg)



360°



DIMENSIONS ARE FOR LARGEST GROVE FURNISHED HOOK BLOCK AND HEADACHE BALL, WITH ANTI-TWO BLOCK ACTIVATED.

Superstructure specifications

Boom

27 ft. - 70 ft. (8.3 m - 21.4 m) three-section full power boom. Maximum tip height: 78 ft. (23.8 m).

Fixed Swingaway Extension

25 ft. (7.6 m) lattice swingaway extension. Non-offsettable. Stows alongside base boom section. Maximum tip height: 103 ft. (31.4 m).

*Optional Telescopic Swingaway Extension

25 ft. - 43 ft. (7.6 m - 13.1 m) telescoping lattice swingaway extension. Offsettable at 0°, 15° or 30°. Stows alongside base boom section. Maximum tip height: 121 ft. (36.9 m).

Boom Nose

Three steel sheaves mounted on heavy duty tapered roller bearings with removable pin-type rope guards. *Optional removable auxiliary boom nose with removable pin type rope guard.

Boom Elevation

One double acting hydraulic cylinder with integral holding valve provides elevation from -3° to +78°.

Load Moment & Anti-Two Block System

Standard 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 and load indication and warning of impending two-block condition.

Cab

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: cab circulating air fan, sliding side and rear windows, electric windshield wash/wipe, manual skylight wiper, swing horn, fire extinguisher and seat belt.

Swing

Planetary swing with foot applied multi-disc brake. Spring applied, hydraulically released swing brake and plunger-type, 1 position, mechanical house lock, and a 360° positive swing lock, operated from cab. 360° continuous rotation. Maximum speed: 2.4 RPM.

Counterweight

3,925 lbs. (1780 kg) integral with superstructure. 955 lbs. (433 kg) slab in place of auxiliary hoist.

Hydraulic System

Two main gear pumps with a combined capacity of 53.5 GPM (202.5 LPM). *Optional pump disconnect with engine jogging switch. Maximum operating pressure: 3500 PSI (241 bar).

Two individual valve banks.

Return line type filter with full flow by-pass protection and service indicator. 10 micron rated replaceable cartridge.

66 gallon (250 L) reservoir.

Remote-mounted oil cooler with thermostatically controlled electric motor driven fan.

System pressure test ports with quick release type fittings for each circuit.

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:	8,074 lbs. (3662 kg)
Maximum Single Line Speed:	254 FPM (74 m/min)
Maximum Permissible Line Pull:	8,074 lbs. (3662 kg)
Rope Diameter:	5/8 in. (16 mm)
Rope Length:	360 ft. (110 m)
Maximum Rope Stowage:	360 ft. (110 m)

*Denotes optional equipment

Carrier specifications

Chassis

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

Outrigger System

Four hydraulic telescoping single-stage double box beam outriggers with inverted jacks and integral holding valves. Three position setting. All steel fabricated quick release type square outrigger floats, 16.5 in. (429 mm) square. Maximum outrigger pad load: 32,100 lbs. (14 561 kg).

Outrigger Controls

Controls and crane level indicator located in cab.

Engine

Cummins 4BT3.9 L diesel, six cylinders, turbocharged, 105 bhp (78 kW) (Gross) @ 2,800 RPM. Maximum torque 260 ft. lbs. (353 Nm) @ 1,700 RPM.

Fuel Tank Capacity

40 gallons (151 L)

Transmission

Full powershift with 6 forward and 6 reverse speeds. Rear axle disconnect for 4x2 travel.

Electrical System

12-V - maintenance free battery.

*Dual batteries optional.

Drive

4x4

Steering

Full independent power steering.

Front: Full hydraulic steering wheel controlled.

Rear: Full hydraulic hand lever controlled.

Provides infinite variations of 4 main steering modes: front only, rear only, crab and coordinated. Rear steer indicating gauge.

*Optional no-spin differential on rear axle (4x4).

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 permit oscillation only with boom centered over the front.

*Optional oscillation lockout override control.

Brakes

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

Tires

16.00x24-16PR grader type tubeless, or

*17.5x25-20PR earthmover type, tubeless.

Lights

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

Maximum Speed

25.9 MPH (41.7 kph)

Maximum Gradeability

141.2% (Theoretical based on 38,300 lbs. [17 373 kg] GVW), 16.00x24 tires, pumps disengaged, 70 ft. (21.4 m) boom and 25-43 ft. (7.6-13.1 m) swingaway.

Miscellaneous Standard Equipment

Full width steel fenders, dual rear view mirrors, hook-block tiedown, electronic back-up alarm, light package, front stowage well.

*Optional Equipment

- * Auxiliary hoist
- * Boom mounted worklights
- * 360° flashing light
- * Cab spotlight
- * Tachometer
- * Engine block heater
- * Cold start aid (less canister)
- * Hookblocks
- * Electric skylight wiper
- * Propane/diesel heater/defroster
- * Tool kit
- * Pintle hook front/rear
- * High Speed Glide system
- * Dual axis joystick controller
- * Headache ball

**Denotes optional equipment*



27 -70 ft.
(8.3-21.4 m)



3,925 lbs.
(1780 kg)



100%



360°



25 ft. Ext.
& 70 ft.

(Feet)	27	40	50	60	70	95
8	44,000	43,650	42,450			
9	41,000	41,000	39,850			
10	38,000	38,000	37,550			
12	31,450	31,450	31,450	31,450		
15	24,300	24,300	24,300	24,300	22,000	
20	<u>18,000</u>	17,650	17,650	17,650	17,650	12,500
25		13,300	13,300	13,300	13,300	10,750
30		<u>10,400</u>	<u>10,400</u>	<u>10,400</u>	<u>10,400</u>	9,810
35			8,370	8,370	8,370	<u>8,930</u>
40			6,630	6,630	6,630	7,820
45				5,370	5,370	6,210
50				4,410	4,410	5,040
55					3,660	4,140
60					3,060	3,430
65						2,860

A6-829-008252 & -008259B



27 -70 ft.
(8.3-21.4 m)



3,925 lbs.
(1780 kg)



50%



360°



85% Domestic (Pounds)

25 ft.
Ext. &
70 ft.

(Feet)	27	40	50	60	70	95
8	36,750	36,750	36,750			
9	33,900	33,900	33,900			
10	31,400	31,400	31,400			
12	27,250	27,250	27,250	27,250		
15	22,550	22,550	21,900	20,850	19,900	
20	13,350	13,350	13,350	13,350	13,300	12,500
25		9,060	9,060	9,060	9,060	9,440
30		6,590	6,590	6,590	6,590	7,260
35			4,950	4,950	4,950	5,720
40			3,860	3,860	3,860	4,580
45				3,020	3,020	3,700
50				2,380	2,380	2,990
55					1,870	2,350
60					1,460	1,800
65						1,340

A6-829-013333



27 -70 ft.
(8.3-21.4 m)



3,925 lbs.
(1780 kg)



0%



360°



85% Domestic (Pounds)

(Feet)	27	40	50	60	70
8	26,750	26,200	24,250		
9	21,200	21,200	20,900		
10	17,400	17,400	17,400		
12	12,600	12,600	12,600	12,600	
15	8,660	8,660	8,660	8,660	8,660
20	5,290	5,290	5,290	5,290	5,290
25		3,510	3,510	3,510	3,510
30		2,410	2,410	2,410	2,410
35			1,670	1,670	1,670
40			1,120	1,120	1,120

A6-829-012059



25-43 ft.
(7.6-13.1 m)



3,925 lbs.
(1780 kg)



100%



360°



85% Domestic (Pounds)

(Feet)	25 ft. LENGTH			34 ft. LENGTH			43 ft. LENGTH		
	0° OFFSET	15° OFFSET	30° OFFSET	0° OFFSET	15° OFFSET	30° OFFSET	0° OFFSET	15° OFFSET	30° OFFSET
20	*12,500			*8,500			*5,000		
25	10,750	7,500		8,030			4,750		
30	9,810	6,870	*5,500	7,170	*5,500		4,360		
35	8,930	6,330	5,110	6,390	4,910	*3,600	4,020	3,000	
40	7,200	5,880	4,770	5,680	4,540	3,290	3,710	2,800	*2,300
45	5,670	5,450	4,490	5,040	4,180	2,930	3,420	2,650	2,210
50	4,510	4,510	4,260	4,590	3,840	2,650	3,170	2,510	2,160
55	3,600	3,600	3,600	4,010	3,510	2,430	2,940	2,400	2,100
60	2,860	2,860	2,860	3,260	3,200	2,250	2,730	2,300	2,030
65	2,260	2,260	2,260	2,650	2,650	2,100	2,540	2,210	1,970
70				2,130	2,130	1,970	2,360	2,130	1,890
75							2,140	2,060	1,820
80							1,780	1,780	1,730

*This capacity is based upon maximum boom angle.

A6-829-008268A



25-43 ft.
(7.6-13.1 m)



3,925 lbs.
(1780 kg)



50%



360°



85% Domestic (Pounds)

Feet	25 ft. LENGTH			34 ft. LENGTH			43 ft. LENGTH		
	0° OFFSET	15° OFFSET	30° OFFSET	0° OFFSET	15° OFFSET	30° OFFSET	0° OFFSET	15° OFFSET	30° OFFSET
20	*12,100			*8,500			*5,000		
25	8,760	7,500		8,030			4,750		
30	6,570	6,570	*5,500	6,820	*5,500		4,360		
35	5,020	5,020	5,020	5,300	4,910	*3,600	4,020	3,000	
40	3,870	3,870	3,870	4,170	4,170	3,290	3,710	2,800	*2,300
45	2,990	2,990	2,990	3,290	3,290	2,930	3,420	2,650	2,210
50	2,280	2,280	2,280	2,590	2,590	2,590	2,840	2,510	2,160
55	1,680	1,680	1,680	2,030	2,030	2,030	2,280	2,280	2,100
60	1,170	1,170	1,170	1,540	1,540	1,540	1,810	1,810	1,810
65				1,100	1,100	1,100	1,410	1,410	1,410
70							1,070	1,070	1,070

*This capacity is based upon maximum boom angle.

A6-829-012069

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.



27 - 70 ft.
(8.3 - 21.4 m)



3,925 lbs.
(1780 kg)



Defined Arc
Over Front

16.00 x 24 - 16PR Tires



85% Domestic (Pounds)

(Feet)	27	40	50	60	70
8	36,350				
9	32,200				
10	29,100	16,600			
12	20,750	16,600	9,950	8,900	
15	13,900	13,900	9,950	8,900	6,910
20	8,520	8,520	8,520	8,520	6,500
25		5,730	5,730	5,730	5,730
30		4,120	4,120	4,120	4,120
35			3,040	3,040	3,040
40			2,270	2,270	2,270
45				1,690	1,690
50				1,230	1,230
55					860

A6-829-009107



27 - 70 ft.
(8.3 - 21.4 m)



3,925 lbs.
(1780 kg)



360°

16.00 x 24 - 16PR Tires



85% Domestic (Pounds)

(Feet)	27	40	50	60	70
8	21,850				
9	17,600				
10	14,650	14,650			
12	10,750	10,750	8,900	8,900	
15	7,420	7,420	7,310	7,290	6,910
20	4,330	4,330	4,330	4,330	4,330
25		2,790	2,790	2,790	2,790
30		1,870	1,870	1,870	1,870
35			1,240	1,240	1,240
40			780	780	780

A6-829-009108



27 - 70 ft.
(8.3 - 21.4 m)

3,925 lbs.
(1780 kg)

Pick & Carry
Up to 2.5 MPH

360°

16.00 x 24 - 16PR Tires



85% Domestic (Pounds)

(Feet)	27	40	50	60	70
8	31,750				
9	30,000				
10	28,200				
12	20,750				
15	<u>13,900</u>	<u>13,000</u>	12,950		
20	<u>8,520</u>	<u>8,520</u>	<u>8,520</u>	8,520	
25		5,730	<u>5,730</u>	5,730	5,730
30		4,120	4,120	<u>4,120</u>	4,120
35			3,040	<u>3,040</u>	3,040
40			2,270	2,270	<u>2,270</u>
45				1,690	1,690
50				1,230	1,230
55					860

A6-829-009109



27 - 70 ft.
(8.3 - 21.4 m)

3,925 lbs.
(1780 kg)

Defined Arc
Over Front

17.5 x 25 - 20PR Tires



85% Domestic (Pounds)

(Feet)	27	40	50	60	70
8	36,300	33,000	29,150		
9	31,950	28,650	25,650		
10	27,900	25,250	22,850		
12	<u>20,750</u>	<u>20,200</u>	<u>18,550</u>	17,150	
15	<u>13,900</u>	<u>13,900</u>	<u>13,900</u>	<u>13,350</u>	12,500
20	<u>8,520</u>	<u>8,520</u>	<u>8,520</u>	<u>8,520</u>	<u>8,520</u>
25		5,730	5,730	5,730	5,730
30		4,120	4,120	4,120	4,120
35			3,040	3,040	3,040
40			2,270	2,270	2,270
45				1,690	1,690
50				1,230	1,230
55					860

A6-829-008932



27 - 70 ft.
(8.3- 21.4 m)



3,925 lbs.
(1780 kg)



360°

17.5 x 25 - 20 PR Tires



85% Domestic (Pounds)

(Feet)	27	40	50	60	70
8	21,850	20,300	14,300		
9	17,600	17,600	12,800		
10	14,650	14,650	11,550		
12	10,750	10,750	9,520	9,470	
15	7,420	7,420	7,310	7,290	6,910
20	4,330	4,330	4,330	4,330	4,330
25		2,790	2,790	2,790	2,790
30		1,870	1,870	1,870	1,870
35			1,240	1,240	1,240
40			780	780	780

A6-829-008933



27 - 70 ft.
(8.3 - 21.4 m)



3,925 lbs.
(1780 kg)



Pick & Carry
Up to 2.5 MPH



360°

17.5 x 25 - 20 PR Tires



85% Domestic (Pounds)

(Feet)	27	40	50	60	70
8	28,400	22,000	21,800		
9	26,200	20,150	20,000		
10	24,250	18,600	18,450		
12	20,750	15,950	15,850	14,200	
15	13,900	13,000	12,950	11,500	11,500
20	8,520	8,520	8,520	8,520	8,500
25		5,730	5,730	5,730	5,730
30		4,120	4,120	4,120	4,120
35			3,040	3,040	3,040
40			2,270	2,270	2,270
45				1,690	1,690
50				1,230	1,230
55					860

A6-829-008934

Rated Lifting Capacities

IMPORTANT NOTES:

WARNING: THIS CHART IS ONLY A GUIDE.
 The notes below are for illustration only and should not be relied upon to operate the crane. The individual crane's load chart, operating instructions and other instruction plates must be read and understood prior to operating the crane.

1. All rated loads have been tested to and meet minimum requirements of SAE J1063 OCT90 - Cantilevered Boom Crane Structures - Method of Test, and do not exceed 85% of the tipping load on outriggers full extended and 50% extended, and 75% of the tipping load on outriggers 0% extended (fully retracted) and rubber, as determined by SAE J765 OCT90 Crane Stability Test Code.

2. Capacities given do not include the weight of hookblocks, slings, auxiliary lifting equipment and load handling devices. Their weights must be added to the load to be lifted. When more than minimum required reeving is used, the additional rope weight shall be considered part of the load.

3. Defined Arc $\pm 6^\circ$ on either side of longitudinal centerline of machine.

4. Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.

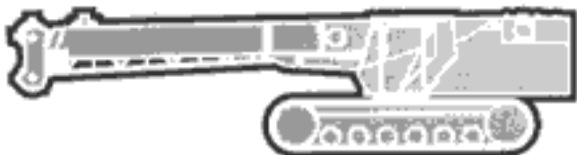
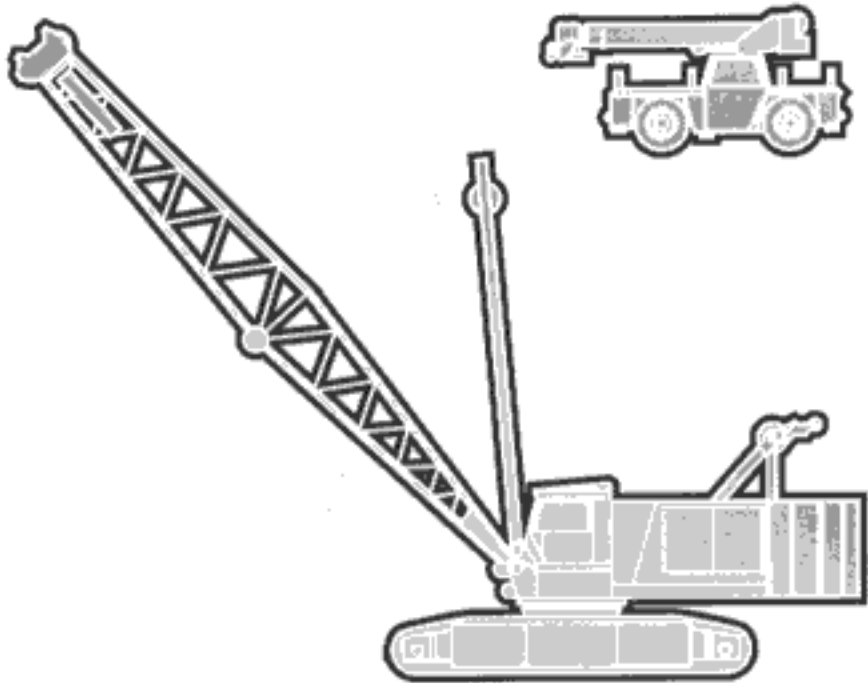
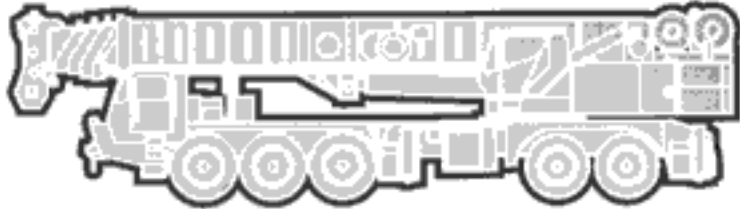
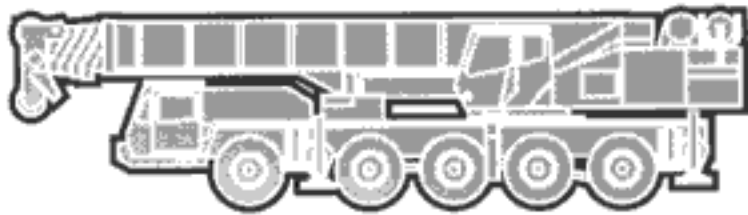
5. All capacities are for crane on firm, level surface. It may be necessary to have structural supports under the outrigger floats or tires to spread the load to a larger bearing surface.

6. When either boom length or radius or both are between values listed, the smallest load shown at either the next larger radius or boom length shall be used.

7. Tires shall be inflated to the recommended pressure before lifting on rubber.

Symbols Glossary

	Frame		Steering
	Outriggers		Transmission
	Outrigger Controls		Axles
	Engine		Brakes
	Fuel Tank Capacity		Tires
	Electrical System		Suspension
	Drive		360° Rotation
	Lights		Boom Elevation
	Cab		Swing
	Boom		Counterweight
	Fixed Swingaway		Oil
	Tele-Swingaway		Hydraulic System
	Jib		Hoist
	Boom Nose		Radius
	Boom Extension		Boom Length
	Speed		Hookblock
	Grade		Gear
	Lattice Extension		



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