

# GUAY

# GROVE®

FULL HYDRAULIC  
SELF-PROPELLED CRANE

# RT620S

20 TON CAP.

## FEATURES

- \* 36,000 lbs. Capacity at 10 ft.
- \* Turntable - mounted cab swings with the boom
- \* 103 ft. Maximum tip height with jib
- \* Hydraulic outriggers provide 16 ft. 3 in. spread. Beams and jacks are independently controlled from superstructure cab
- \* Four-wheel drive . . . four-wheel steer with four steering modes . . . four-wheel brakes.





# SPECIFICATIONS

## SPEED AND GRADEABILITY

Forward Drive	Transmission Range	Gear	*Maximum Speed (MPH)	Gradeability @ 50% (ft)	Traction Effort @ 50% (lbs.)
4 Wheel Drive	Low	1st	5.1	88	33,032
4 Wheel Drive	Low	2nd	5.8	39.5	17,449
4 Wheel Drive	Low	3rd	14.7	12.3	6,392
2 Wheel Drive	High	1st	6.5	30.2	13,890
2 Wheel Drive	High	2nd	12.8	14.4	7,325
2 Wheel Drive	High	3rd	27.1	4	2,688

NOTE: Performance based on 45,000 lbs. GVW and standard SAE engine rating conditions using standard tires, transmissions and axles. Performance data may vary plus or minus 10% due to variations in engine performance and vehicle weights.

\*Maximum speed obtained with GMC4-53 engine and crane operating on positive grade.

## WORKING WEIGHTS

Standard Machine With	Axle Weight Distribution		
	Total Weight (lbs.)	Front (lbs.)	Rear (lbs.)
28-70 ft. Boom	47,980	28,820	19,440
24-60 ft. Boom	46,820	24,150	22,660
24-78 ft. Boom	48,425	27,400	21,025

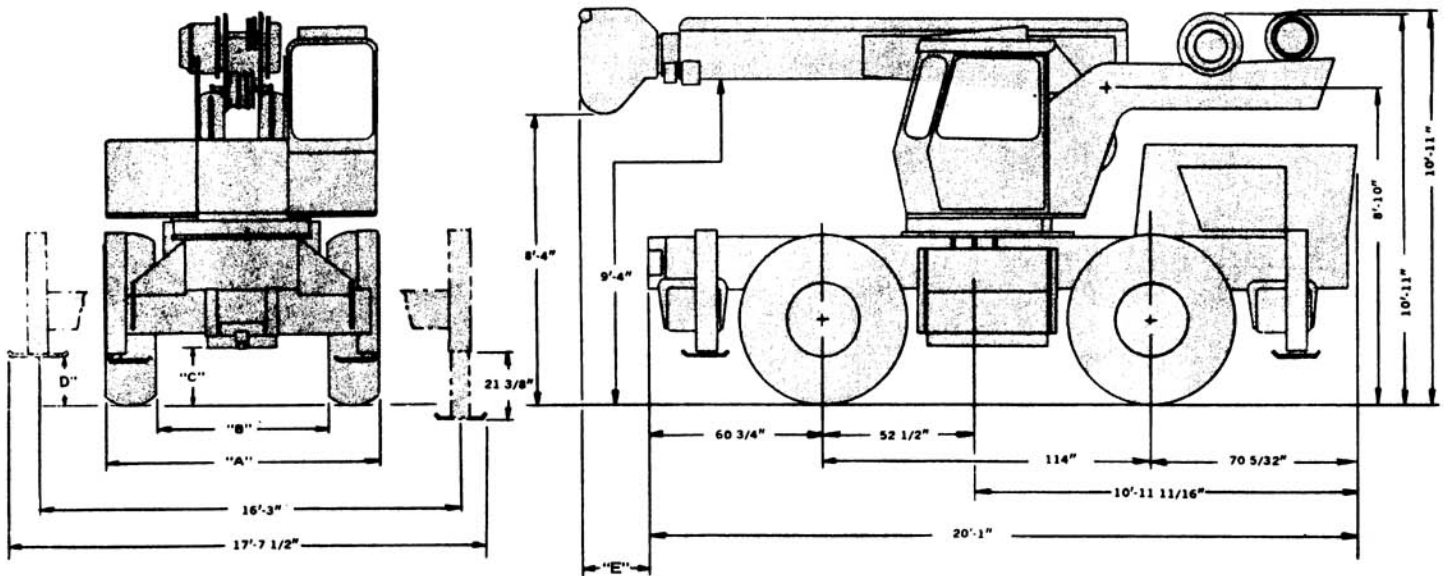
NOTE: Weights may vary plus or minus 3% due to manufacturing tolerances.

# DIMENSIONS

TAIL SWING 10'-3 3/16"  
TURNING RADIUS 18'

SIDE VIEW	"E"
24 - 60 ft. Boom	11 ft. 11 5/16 in.
28 - 70 ft. Boom	15 ft. 11 5/16 in.
24 - 78 ft. Boom	11 ft. 9 in.

FRONT VIEW TIRE SIZE	"A"	"B"	"C"	"D"
16:00 x 24	95.64 in.	59.36 in.	17 in.	13 7/16 in.
20:5 x 25	103.09 in.	59.15 in.	17 3/4 in.	14 1/4 in.



\*DENOTES OPTIONAL EQUIPMENT.

Constant improvement and engineering progress makes it necessary that we reserve the right to make specification, equipment and price changes without notice.

# GROVE®

## FULL HYDRAULIC SELF-PROPELLED CRANE

# RT620S

## 20 TON CAP.

### RATED LIFTING CAPACITIES

ON OUTRIGGERS FULLY EXTENDED - 360°

24 ft. - 60 ft. BOOM

Radius in Feet	Boom Length in Feet						
	24	30	36	42	48	54	60
10	48,000	34,300	32,700	30,800			
12	32,000	32,000	31,000	30,000	28,000		
15	28,000	28,000	28,000	26,000	24,000	22,000	20,000
20	20,000	20,000	20,000	20,000	20,000	18,000	17,500
25		15,000	15,000	15,000	15,000	15,000	15,000
30			11,800	11,800	11,800	11,800	11,800
35				9,100	9,100	9,100	9,100
40					7,100	7,100	7,100
45						5,300	5,300
50						4,100	4,100
55							3,650

PCSA CLASS  
(10-71)

ON RUBBER

Radius in Feet	Over Front	Over Side
10	*30,000	19,500
12	24,600	14,800
15	16,500	9,800
20	11,200	6,350
25	7,200	3,860
30	5,250	2,680
35	3,660	1,650
40	2,780	550
45	2,100	
50	1,420	
55	940	

All On Rubber Capacities are based on 16:00 x 2. tires and 80 PSI inflation pressure. Loads must be reduced for lower inflation pressures.

\*For 30,000 lb. lifting capacity, maximum boom length is 42 ft.

28 ft. - 70 ft. BOOM

Radius in Feet	Boom Length in Feet							
	28	34	40	46	52	58	64	70
10	48,000	34,000	31,900	29,800				
12	32,000	31,000	30,000	29,000	27,800			
15	27,500	27,500	27,500	27,500	27,000	25,750	23,700	
20	21,250	21,250	21,000	21,000	20,750	20,500	20,400	20,250
25		15,500	15,500	15,500	15,500	15,500	15,000	15,000
30		11,700	11,700	11,700	11,700	11,700	11,700	11,700
35			8,650	8,650	8,650	8,650	8,650	8,650
40				6,650	6,650	6,650	6,650	6,650
45					5,250	5,250	5,250	5,250
50						4,250	4,250	4,250
55							3,460	3,460
60							2,760	2,760
65								2,180
66.5								1,970

PCSA CLASS  
(10-67)

Radius in Feet	Over Front	Over Side
10	30,000 (a)	19,500 (b)
12	24,500 (b)	14,800 (c)
15	16,600 (c)	9,800 (d)
20	10,300 (e)	5,450 (e)
25	6,650	3,660
30	4,850	2,300
35	3,380	1,330
40	2,680	470
45	1,525	
50	950	
55	635	

Maximum Permissible  
Boom Length:  
(a) 28 ft.  
(b) 34 ft.  
(c) 46 ft.  
(d) 52 ft.  
(e) 64 ft.

24 ft. - 78 ft. BOOM

Radius in Feet	Boom Length in Feet							
	24	30	36	42	48	54	60	**78
10	48,000	34,300	32,700	30,800				
12	32,000	32,000	31,000	29,000	28,000			
15	28,000	28,000	28,000	26,000	24,000	22,000	20,000	
20	20,000	20,000	20,000	20,000	20,000	18,000	17,500	
25		13,000	13,000	13,000	13,000	13,000	13,000	12,000
30			10,800	10,800	10,800	10,800	10,800	10,800
35				8,200	8,200	8,200	8,200	8,200
40					6,100	6,100	6,100	6,400
45						4,300	4,300	4,500
50							2,800	3,200
55								2,500
60								2,200
65								1,600
70								1,300
74.8								1,175

PCSA CLASS  
(10-61)

Radius in Feet	Over Front	Over Side
10	30,000 (a)	18,000 (c)
12	24,500 (b)	13,500 (d)
15	16,500 (d)	8,000
20	9,500	4,500
25	6,400	2,900
30	4,250	1,200
35	2,675	800
40	1,500	350
45	950	
50	560	

Maximum Permissible  
Boom Length:  
(a) 24 ft.  
(b) 30 ft.  
(c) 36 ft.  
(d) 48 ft.

Use of manual fly section not recommended for on rubber lifting.

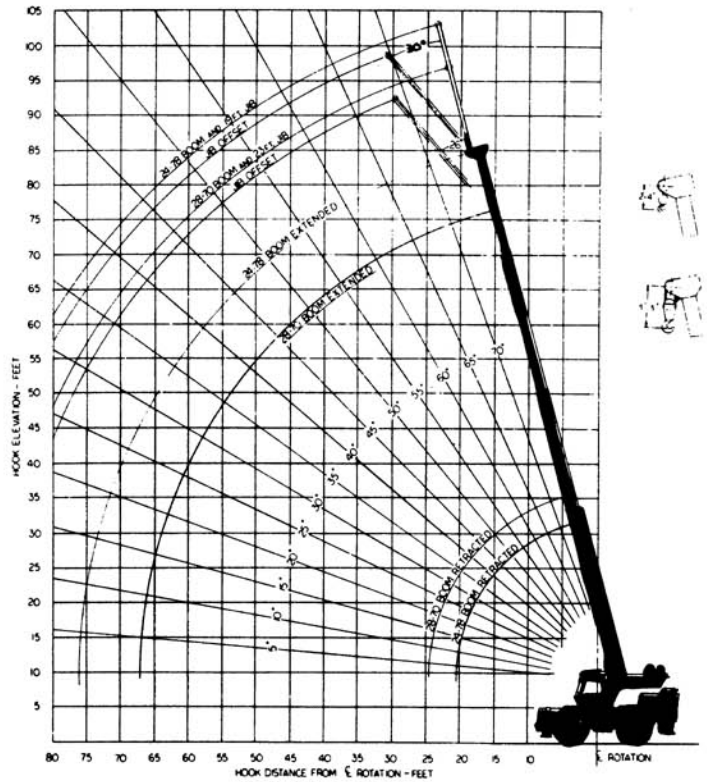
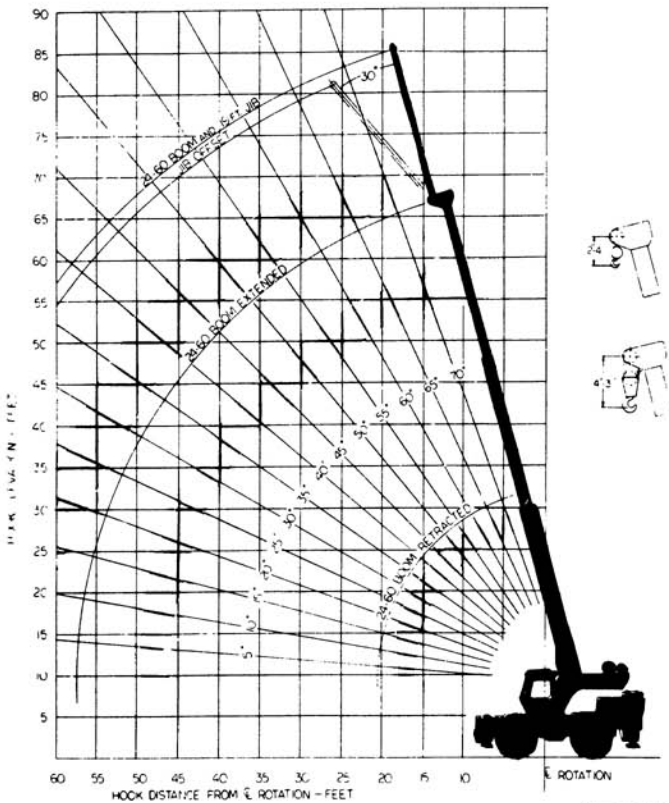
NOTE: Capacities do not exceed 85% of tipping loads as determined by test in accordance with SAE recommended practice - Crane Load Stability Test Code - SAE J-765.

Capacities appearing in shaded area are based upon structural strength and machine stability should not be relied upon as the capacity limitation.  
\*\*Indicates maximum capacity of Extended Fly Section, regardless of boom length.

NOTES TO LIFTING CAPACITIES, SEE REVERSE SIDE

**RANGE DIAGRAM**  
24 ft. - 60 ft. BOOM

**RANGE DIAGRAM**  
28 ft. - 70 ft. and 24 ft. - 78 ft. BOOMS



**JIB CAPACITIES**

**19 ft. JIR**

MIN. BOOM ANGLE	NO OFFSET	MAX. OFFSET (30°)
75	6200	2600
70	5000	2400
65	4300	2300
60	3700	2150
55	3300	2100
50	2600	1650
45	2400	1500
40	2200	1460
30	1900	1200

**23 ft. JIB**

MIN. BOOM ANGLE	NO OFFSET	MAX. OFFSET (26°)
75	6400	3100
70	5150	2850
65	4350	2650
60	3700	2450
55	3300	2275
50	2950	2170
45	2850	2125
40	2550	2085
35	2475	2040
30	2400	2000
26	2300	1950

**NOTES TO LIFTING CAPACITIES**

- Rated lifting capacities are based on freely suspended loads. They are the maximum covered by the manufacturer's warranty with the machine leveled and standing on a firm supporting surface. Ratings with outriggers are based on outriggers being extended to their maximum positions.
- Practical working loads for each particular job shall be established by the user depending on operating conditions; including the supporting surface, wind and other factors affecting stability, hazardous surroundings, experience of personnel, handling of load, etc.
- Operating radius is the horizontal distance from the axis of rotation to the centerline of the hoist line or tackle with loads applied.
- "On Rubber" lifting (if permitted) depends on proper tire inflation, capacity, and condition. "On Rubber" loads may be transported at a maximum vehicle speed of 2.5 mi/hr. (4 km./hr.) on a smooth and level surface only.
- Jibs may be used for single line lifting crane service only. Jib capacities are based on structural strength of jib or main boom. Jib loads must not exceed main boom lifting capacities for the actual operating radius.
- Operation is not intended or approved for any conditions outside of those shown hereon. Handling of personnel from the boom is not authorized except with equipment furnished and installed by Grove Manufacturing Company.
- For clamshell or concrete bucket operation, weight of bucket and load must not exceed 90% of rated lifting capacities.
- Power-telescoping boom sections must be extended equally at all times. Long cantilever booms can create a tipping condition when in extended and lowered position.
- The maximum load which may be telescoped is limited by hydraulic pressure, boom angle, boom lubrication, etc. It is safe to attempt to telescope any load within the limits of rated lifting capacity chart.
- With certain boom and hoist tackle combinations, maximum capacities may not be obtainable with standard rope lengths.
- With certain boom and load combinations, raising of load with boom lift cylinders may not be possible. Operational safety is not affected by this condition.
- Keep load handling devices a minimum of 12 inches (30 CM) below boom head when lowering or extending boom.
- For multiple part reeving, use one part of line for each 6,200 lbs. of load.
- All load handling devices and/or boom attachments are considered part of the load and suitable allowances must be made.