

GROVE®

FULL HYDRAULIC

CARRIER-MOUNTED CRANE

TMS475

50 TON CAP.

PCSA CLASS 10-160

RATED LIFTING CAPACITIES IN POUNDS

34 ft. - 116 ft. BOOM

ON OUTRIGGERS FULLY EXTENDED - OVER SIDE

Radius in Feet	Boom Length in Feet							84 ft. + 32 ft. Ext.
	*34	40	44	54	64	74	84	
10	100,000 (70)	74,000 (73)	72,000 (76)					**116
12	90,000 (66.5)	70,000 (70)	67,500 (73.5)	64,000 (76.5)				
15	72,000 (61)	63,700 (65.5)	61,000 (69)	55,000 (73)	44,700 (76)			
20	53,000 (50.5)	52,200 (57.5)	49,800 (62)	44,000 (67.5)	37,900 (71)	35,000 (74)	31,000 (76.5)	
25	39,800 (38.5)	39,800 (48)	39,800 (54)	36,300 (61.5)	31,900 (66)	29,200 (70)	27,500 (73.5)	17,500 (76.5)
30	27,030 (21.5)	27,030 (37.5)	27,030 (45)	27,030 (55.5)	27,000 (60.5)	25,000 (65.5)	23,900 (69.5)	16,600 (75)
35		20,280 (23)	20,280 (34.5)	20,280 (48.5)	20,280 (55)	20,280 (61)	20,280 (66)	14,500 (72.5)
40			15,950 (19)	15,950 (41)	15,950 (49)	15,950 (56.5)	15,950 (62)	12,800 (70)
45				12,840 (31.5)	12,840 (42)	12,840 (51.5)	12,840 (58)	11,400 (67)
50				10,640 (17.5)	10,640 (35)	10,640 (46)	10,640 (53.5)	10,200 (64.5)
55					8,800 (26)	8,800 (40.5)	8,800 (49)	9,190 (61.5)
60					7,480 (12.5)	7,480 (34)	7,480 (44)	8,440 (59)
65						6,320 (25.5)	6,320 (38.5)	7,670 (56)
70						5,290 (14)	5,290 (32.5)	6,570 (53)
75							4,310 (25)	5,650 (49.5)
80							3,440 (13.5)	4,810 (46)
85								4,120 (42.5)
90								3,500 (39)
95								2,960 (34.5)
100								2,480 (29.5)
105								2,080 (24)
110								1,710 (16)

A6-829-002754 & -002760

NOTE: Boom Angles (degrees) are to be used for reference only appear below the load.

ON OUTRIGGERS FULLY EXTENDED - OVER REAR

Radius in Feet	Boom Length in Feet							84 ft. + 32 ft. Ext.	
	*34	40	44	54	64	74	84		
10	100,000 (70)	74,000 (73)	72,000 (76)					**116	
12	90,000 (66.5)	70,000 (70)	67,500 (73.5)	64,000 (76.5)					
15	72,000 (61)	63,700 (65.5)	61,000 (69)	55,000 (73)	44,700 (76)				
20	53,000 (50.5)	52,200 (57.5)	49,800 (62)	44,000 (67.5)	37,900 (71)	35,000 (74)	31,000 (76.5)		
25	41,000 (38.5)	41,000 (48)	41,000 (54)	36,300 (61.5)	31,900 (66)	29,200 (70)	27,500 (73.5)	17,500 (76.5)	
30	29,690 (21.5)	29,690 (37.5)	29,690 (45)	29,690 (55.5)	27,000 (60.5)	25,000 (65.5)	23,900 (69.5)	16,600 (75)	
35		22,650 (23)	22,650 (34.5)	22,650 (48.5)	22,650 (55)	21,800 (61)	20,500 (66)	14,500 (72.5)	
40			18,090 (19)	18,090 (41)	18,090 (49)	18,090 (56.5)	17,900 (62)	12,800 (70)	
45				14,840 (31.5)	14,840 (42)	14,840 (51.5)	14,840 (58)	11,400 (67)	
50				12,330 (17.5)	12,330 (35)	12,330 (46)	12,330 (53.5)	10,200 (64.5)	
55						10,440 (26)	10,440 (40.5)	10,440 (49)	9,190 (61.5)
60						9,100 (12.5)	9,100 (34)	9,100 (44)	8,440 (59)
65							7,990 (25.5)	7,990 (38.5)	7,760 (56)
70							6,880 (14)	6,880 (32.5)	7,100 (53)
75								5,770 (25)	6,630 (49.5)
80								4,660 (13.5)	6,130 (46)
85									5,360 (42.5)
90									4,630 (39)
95									3,980 (34.5)
100									3,420 (29.5)
105									2,940 (24)
110									2,560 (16)

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NOTE: Boom Angles (degrees) are to be used for reference only appear below the load.

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

*Capacities for 34 ft. boom length shall be lifted with boom fully retracted. If boom is not fully retracted, capacities shall not exceed those shown for 40 ft. boom length.

**Boom must be fully extended when lifting with the boom extensions.

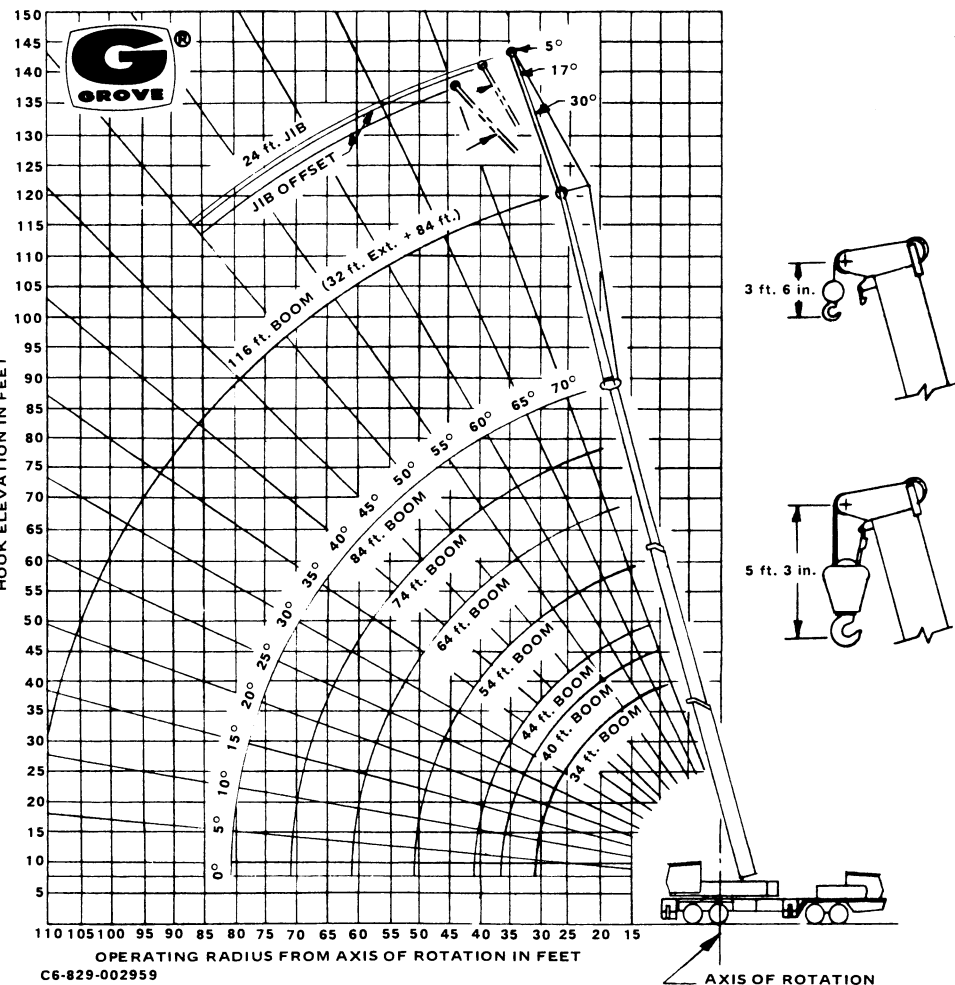
The following deductions from rated main boom capacities must be made if machine is equipped accordingly:

With 32 ft. boom extension in stowed position 290 lbs.

With 32 ft. boom extension in operating position and lifting over main boom 2,350 lbs.

With 32 ft. boom extension and 24 ft. jib in operating positions and lifting with main boom 5,825 lbs.

RANGE DIAGRAM



JIB CAPACITIES IN POUNDS 24 ft. JIB and 32 ft. EXT. Combination

Main Boom Angle	Min. 5° Offset	17° Offset	Max. 30° Offset
76°	6,000	5,200	4,600
70	4,300	3,940	3,650
65	3,430	3,200	3,010
60	2,760	2,600	2,470
55	2,220	2,110	2,020

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- 24 ft. jib and 32 ft. boom extension combination may be used for single line lifting crane service only. Capacities are based on structural strength of 24 ft. jib and 32 ft. boom extension combination at given main boom angle regardless of main boom length.
- Capacities do not exceed 85% of tipping loads as determined by test in accordance with SAE J-765.
- Lifting over front of machine with 24 ft. jib is strictly prohibited.
- WARNING:** Operation of machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with jib occurs rapidly and without advance warning.
- Maximum total length of boom including 32 ft. boom extension for purpose of erecting 24 ft. jib below 10° elevation, over rear or side, is 92 ft.
- 24 ft. JIB WARNING:** For total boom length including 32 ft. boom extension greater than 92 ft. with 24 ft. jib in working position the boom angle must not be less than 50° since loss of stability will occur causing a tipping condition.

NOTES TO LIFTING CAPACITIES

- Do not exceed any rated lifting capacity. Rated lifting capacities are based on freely suspended loads with the machine leveled and standing on a firm supporting surface. Ratings with outriggers are based on outriggers being extended to their maximum position and tires raised free of crane weight before extending the boom or lifting loads.
- Practical working loads for each particular job shall be established by the user depending on operating condition to include: the supporting surface, wind and other factors affecting stability, hazardous surroundings, experience of personnel, handling of load, etc. No attempt must be made to move a load horizontally on the ground in any direction.
- Operating radius is the horizontal distance from the axis of rotation before loading to the centerline of the vertical 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 firm and level surface under conditions specified.
- Jibs may be used for lifting crane service only. Jib capacities are based on structural strength of jib or main boom and on main boom angle.
- 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 80% 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 cable 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.
- If actual boom length and/or radius is between values listed, use lifting capacity for the next longer rated length and/or radius.
- All load handling devices and boom attachments are considered part of the load and suitable allowances must be made for their combined weights.
- Operation of this equipment in excess of rating charts or disregard of the instructions is hazardous and voids the warranty and manufacturer's liability.



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