

GROVE®

FULL HYDRAULIC CARRIER-MOUNTED CRANE

TMS475LP

50 TON CAP.

PCSA CLASS 10-148

RATED LIFTING CAPACITIES IN POUNDS

35 ft. - 142 ft. BOOM

ON OUTRIGGERS FULLY EXTENDED - OVER SIDE

Radius in Feet	Trapezoidal Boom Length in Feet Power Pinned Fly Retracted							Power Pin. Fly & 85 ft.	32 ft. Ext. & 110 ft.
	*35	40	45	55	65	75	85	**110	**142
10	100,000	74,000	72,000						
12	90,000	70,000	67,500	64,000					
15	72,000	63,700	61,000	55,000	44,700				
20	53,000	52,200	49,800	44,000	37,900	35,000	31,000		
25	38,630	38,630	38,630	36,300	31,900	29,200	27,500	20,000	
30	27,010	27,010	27,010	27,010	27,000	25,000	23,900	17,700	
35		19,610	19,610	19,610	19,610	19,610	19,610	15,200	9,600
40			14,790	14,790	14,790	14,790	14,790	13,200	8,340
45				11,770	11,770	11,770	11,770	11,600	7,540
50				9,220	9,220	9,220	9,220	10,300	6,830
55					7,540	7,540	7,540	9,200	6,240
60					6,010	6,010	6,010	7,910	5,710
65						4,720	4,720	6,430	5,240
70						3,680	3,680	5,150	4,800
75							2,750	4,070	4,420
80							1,920	3,250	4,070
85								2,590	3,640
90								1,960	2,960
95								1,360	2,350
100									1,760
105									1,090

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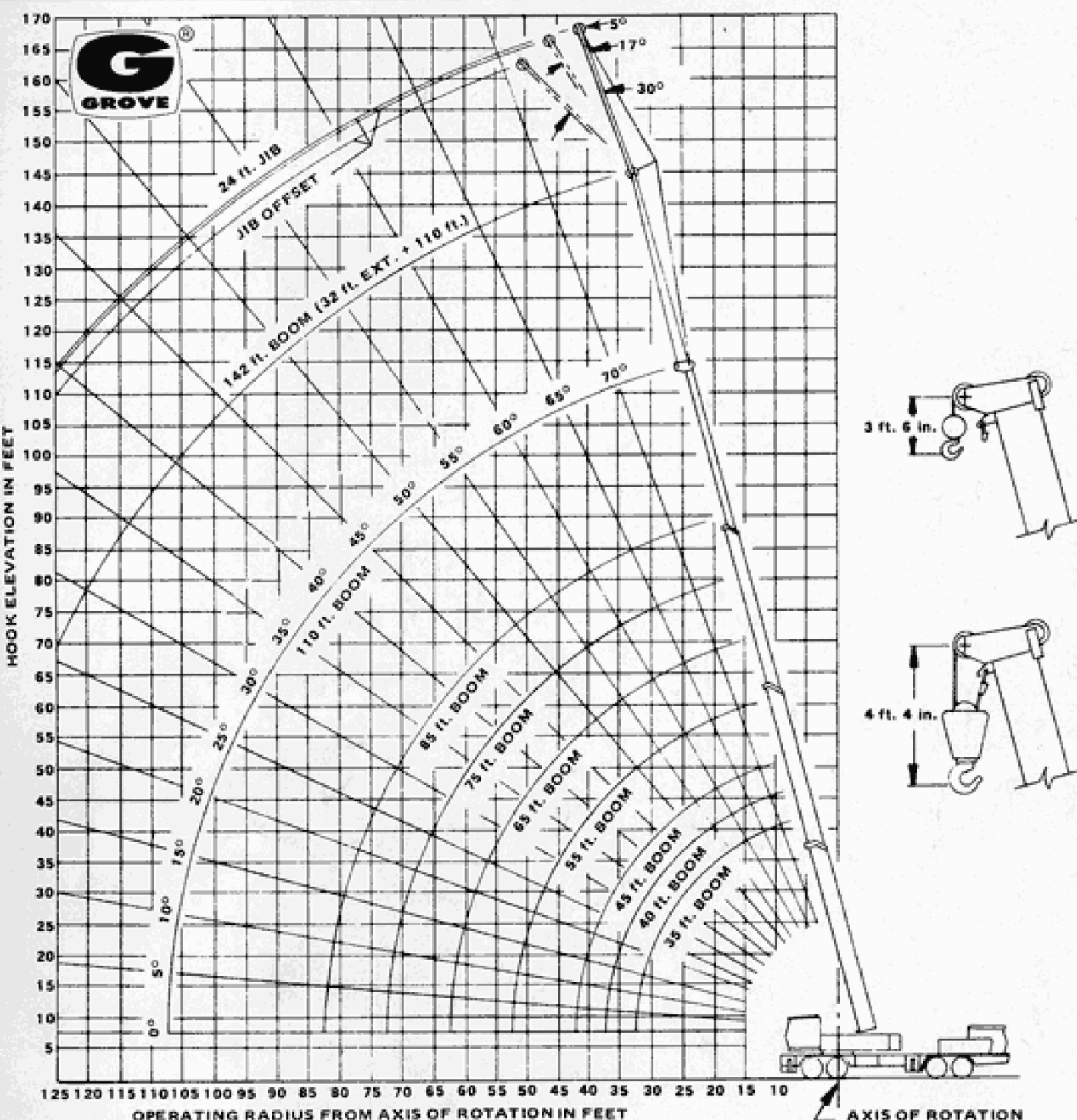
ON OUTRIGGERS FULLY EXTENDED - OVER REAR

Radius in Feet	Trapezoidal Boom Length in Feet Power Pinned Fly Retracted							Power Pin. Fly & 85 ft.	32 ft. Ext. & 110 ft.
	*35	40	45	55	65	75	85	**110	**142
10	100,000	74,000	72,000						
12	90,000	70,000	67,500	64,000					
15	72,000	63,700	61,000	55,000	44,700				
20	53,000	52,200	49,800	44,000	37,900	35,000	31,000		
25	39,150	39,150	39,150	36,300	31,900	29,200	27,500	20,000	
30	27,300	27,300	27,300	27,300	27,000	25,000	23,900	17,700	
35		20,900	20,900	20,900	20,900	20,900	20,500	15,200	9,600
40			16,850	16,850	16,850	16,850	16,850	13,200	8,340
45				13,430	13,430	13,430	13,430	11,600	7,540
50				10,920	10,920	10,920	10,920	10,300	6,830
55					8,930	8,930	8,930	9,200	6,240
60					7,330	7,330	7,330	8,250	5,710
65						5,870	5,870	7,420	5,240
70						4,530	4,530	6,360	4,800
75							3,360	5,290	4,420
80							2,260	4,350	4,070
85								3,650	3,740
90								3,020	3,440
95								2,460	3,160
100								1,900	2,620
105								1,430	2,120
110									1,730
115									1,380
120									1,040

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Capacities appearing in shaded area are based on structural strength and tipping should not be relied upon as a capacity limitation.
 *Capacities in shaded area for 35 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 extended power pinned section or with 32 ft. extension.
 Capacities do not exceed 85% of tipping loads with counterweight fully extended as determined by test in accordance with SAE J-765.
 Do not exceed any rated load when lifting regardless of whether it is based on structural strength or stability.

RANGE DIAGRAM



JIB CAPACITIES IN POUNDS

24 ft. JIB and
32 ft. Boom Extension Combination

Min. 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. When lifting with 24 ft. and 32 ft. boom extension, capacities must not exceed structural capacity of jib combination at given main boom angle or stability capacity of applicable boom length listed in boom capacity chart for actual working radius, whichever is less.
- Maximum total length of boom including 32 ft. boom extension for purpose of erecting 24 ft. jib below 10° is 92 ft.
- WARNING:** Operation of machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with jib occurs rapidly and without advance warning.
- 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

- 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 lifting crane service only. Jib capacities are based on structural strength of jib or main boom and on main boom angle regardless of boom length.
- 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 12,500 lbs. of load.
- All load handling devices and/or boom attachments are considered part of the load and suitable allowances must be made.



GROVE MANUFACTURING COMPANY

A DIVISION OF WALTER KIDDE & COMPANY, INC.

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MEMBER: POWER CRANE & SHOVEL ASSOCIATION

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