

TM1400

130 METRIC TON CAPACITY
13.7m - 52.7m (45 - 172 ft.) BOOM
 (FULL POWER)
 85% OF TIPPING

LUFFING JIB CAPACITIES

26.8m (88 ft.)

Jib Angle	14.0m		18.3m		22.6m		26.8m	
	Ref. Radius		Ref. Radius		Ref. Radius		Ref. Radius	
70°	12.0	5,305	13.3	3,835	14.4	2,880	15.4	2,145
65	13.2	4,850	14.8	3,435	16.2	2,490	17.6	1,765
60	14.3	4,490	16.2	3,105	17.9	2,175	19.7	1,455
55	15.4	4,175	17.5	2,825	19.6	1,905	21.7	1,195
50	16.3	3,920	18.8	2,590	21.1	1,680	23.5	975
45	17.3	3,690	20.0	2,385	22.6	1,485	25.3	785

A6-829-003294C

JIB WARNING NOTES

- All capacities are based on structural strength of jib at given jib angle with reference to ground and do not exceed 85% of tipping loads with counterweight fully extended as determined by test in accordance with SAE J-765.
- Capacities for 46 ft., 60 ft., 74 ft., & 88 ft. (14.0, 18.3, 22.6, 26.8 meter) jibs are for two part line lifting crane service only, with Krueger Dynameter installed at dead end.
- Rated load is based on loaded jib angle with reference to ground, regardless of main boom length. (Reference radius in feet is for fully extended boom with fly extended, 140.3 ft. boom length only. The Krueger L.M.I. system will give an accurate radius indication for this condition only).
- WARNING:** Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with every jib configuration occurs rapidly and without advance warning.
- Fly must be fully extended and pinned for luffing jib operation. Boom length must be set prior to and maintained while lifting or luffing any load. Do not attempt to change boom length while lifting with luffing jib since jib angle changes with boom length. To extend boom, mechanical lockout bar in cab must be engaged. To retract boom, mechanical lockout bar in cab must be disengaged. Every time bar is reengaged, lockout system must be reset before lifting.
- Lifting with other than fully elevated main boom (80° boom angle) is strictly prohibited. (Check and maintain proper lifting configuration at all times: keep lift cylinders fully extended).
- Do not attempt to lift any load with main hoist (luffing line) that cannot be lifted with auxiliary hoist (lifting line). **WARNING:** The Krueger L.M.I. system will not provide protection against this condition.
- With 46, 60, 74 & 88 ft. (14.0, 18.3, 22.6 & 26.8 meter) jibs in working position, the jib angle with reference to ground must not be less than 45° nor greater than 70°. Exceeding these limits can cause an unsafe condition. The Krueger L.M.I. system will lockout main hoist down at 35° and main hoist up at 70°.
- Insure that all safety devices for luffing jibs are properly engaged before lifting a load.
- Main hoist must be used to luff jib.
- Capacities listed are with outriggers fully extended and front jack cylinder extended according to proper procedure.

JIB ERECTION NOTES:

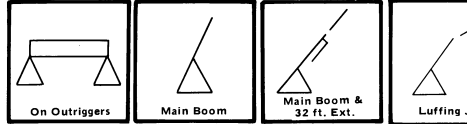
- For main boom angle less than 80° (fully elevated), the maximum total length of boom including extended fly, for the purpose of erecting or dismantling the luffing jib over side or rear is:

46 ft. Jib (14.0m) — 120 ft. (36.6m)
 60 ft. Jib (18.3m) — 116 ft. (35.3m)
 74 ft. Jib (22.6m) — 112 ft. (34.1m)
 88 ft. Jib (26.8m) — 105 ft. (32.0m)

WARNING: Extending or retracting the main boom equipped with luffing jib at boom lengths greater than the above specified lengths without fully elevating the boom (80° boom angle) is strictly prohibited. Do not attempt to erect jibs over front of machine unless main boom is fully retracted, fly extended.



TM1400
130 METRIC TON CAPACITY
13.7m - 52.7m (45 - 172 ft.) BOO
(FULL POWER)
85% OF TIPPING
KRUEGER LMI SYMBOLS



RATED LIFTING CAPACITIES IN KILO

OUTRIGGERS FULLY EXTENDED - 360°

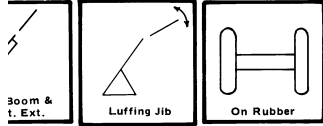
Radius in Meters	Main Boom Length in Meters										42.9m + 9.8m Ext. (2° Offset)		
	13.7 (74.5)	17.7 (76.5)	21.3 (79.0)	25.0 (80.0)	28.7 (77.5)	32.3 (79.5)	36.0 (77.5)	39.6 (80.0)	42.9 (80.0)	42.9 (80.0)			
3	130,000 (74.5)												
3.5	127,005 (72.5)	68,035 (76.5)	64,410 (79.0)										
4	122,015 (70.0)	68,035 (74.5)	64,410 (78.0)										
4.5	108,315 (67.5)	68,035 (73.0)	64,410 (76.5)	58,965 (79.0)									
5	97,160 (65.0)	68,035 (71.0)	61,685 (75.0)	56,605 (77.5)									
6	80,105 (60.0)	65,090 (67.5)	56,605 (72.0)	51,300 (75.0)	46,265 (77.5)	40,960 (79.5)							
7	67,675 (55.0)	62,365 (64.0)	52,480 (69.5)	46,990 (73.0)	42,750 (75.5)	37,690 (77.5)	33,430 (79.5)	31,430 (80.0)					
8	58,060 (49.0)	56,970 (60.0)	48,625 (66.5)	43,500 (70.5)	39,190 (73.5)	34,495 (76.0)	32,430 (77.5)	30,480 (79.5)					
9	49,170 (42.5)	49,170 (56.0)	44,925 (63.0)	40,460 (68.0)	36,150 (71.0)	31,795 (74.0)	29,890 (76.0)	28,030 (78.0)	27,215 (79.5)				
10	42,250 (35.0)	42,250 (52.0)	41,935 (60.0)	37,850 (65.0)	33,180 (69.0)	29,210 (72.0)	27,440 (74.5)	25,810 (76.5)	25,150 (78.0)	11,340 (80.0)			
12		32,750 (42.5)	32,750 (53.5)	32,750 (60.0)	28,210 (64.5)	24,835 (68.0)	23,290 (71.0)	22,200 (73.5)	21,115 (75.5)	10,350 (78.0)			
14		25,855 (30.0)	25,855 (45.5)	25,855 (54.0)	24,400 (60.0)	21,520 (64.0)	20,095 (67.5)	19,095 (70.5)	17,915 (72.5)	9,060 (75.5)			
16			20,050 (37.0)	20,050 (48.0)	20,050 (55.0)	18,390 (60.0)	17,575 (63.5)	16,395 (67.0)	15,305 (69.5)	8,050 (73.5)			
18			16,045 (24.5)	16,045 (40.5)	16,045 (49.5)	15,875 (55.5)	15,510 (60.0)	14,220 (64.0)	13,200 (66.5)	7,235 (71.0)			
20				12,750 (32.0)	12,750 (43.5)	12,750 (50.5)	12,750 (56.0)	12,335 (60.5)	11,475 (63.5)	6,575 (68.5)			
23					9,845 (33.0)	9,845 (43.0)	9,845 (49.5)	9,845 (55.0)	9,320 (58.5)	5,760 (65.0)			
26						7,270 (16.0)	7,270 (33.5)	7,270 (42.5)	7,270 (49.5)	5,125 (61.0)			
29							5,290 (20.0)	5,290 (34.0)	5,290 (43.0)	4,600 (57.5)			
32								4,015 (22.5)	4,015 (35.0)	4,195 (53.0)			
35									2,815 (25.0)	3,830 (48.5)			
38										3,030 (44.0)			
41											2,185 (38.5)		
44												1,425 (32.0)	
47													950 (24.5)
Min. Boom Angle (deg.) for indicated length (no load)										0	0		
Max. Boom Length (m) at 0 degree boom angle (no load)										42.9	52.7		

NOTE: Boom Angles are in degrees. A6-829-003369 & -003380

WARNING NOTE:

- GENERAL:**
- Rated loads as shown on lift chart pertain to this machine as originally manufactured and equipped. Modifications to the machine or use of optional equipment other than that specified can result in a reduction of capacity.
 - Construction equipment can be hazardous if improperly operated or maintained. Operation and maintenance of this machine shall be in compliance with the information in the operator's, parts, and safety manuals supplied with this machine. If these manuals are missing, order replacements from the manufacturer through the distributor.
 - The operator and other personnel associated with this machine shall fully acquaint themselves with the latest applicable American National Standards Institute (ANSI) Safety Standards for cranes.
- SETUP:**
- The machine shall be leveled on a firm supporting surface. Depending on the nature of the supporting surface, it may be necessary to have structural supports under the outrigger floats or tires to spread the load to a larger bearing surface.
 - For outrigger operation, outriggers shall be fully extended with tires raised free of crane weight before operating the boom or lifting loads.
 - If machine is equipped with front jack cylinder, the front jack cylinder shall be set in accordance with written procedure.
 - If machine is equipped with extendable counterweight, the counterweight shall be fully extended before operation.
 - Tires shall be inflated to the recommended pressure before lifting on rubber.
 - With certain boom and hoist tackle combinations, maximum capacities may not be obtainable with standard cable lengths.
- OPERATION:**
- Rated loads at rated radius shall not be exceeded. Do not tip the machine to determine allowable loads. For clamshell or concrete bucket operation, weight of bucket and load must not exceed 80% of rated lifting capacities.
 - Rated loads do not exceed 85% of the tip Crane Stability Test Code J-765a.
 - Rated loads include the weight of hook block, sl and their weights shall be subtracted from the list to be lifted.
 - Load ratings are based on freely suspended load; move a load horizontally on the ground in any direction.
 - Rated loads do not account for wind on lifted load when wind velocity is above 20 mph (32 km/h) shall be appropriately reduced.
 - Rated loads are for lift crane service only.
 - Do not operate at a radius or boom length which these positions, the machine may overturn without.
 - The maximum load which can be telescoped is not in loadings and crane maintenance, but it is s extension within the limits of the capacity chart.
 - When either boom length or radius or both are be load shown at either the next larger radius or boom length.
 - For safe operation, the user shall make due all conditions, such as: soft or uneven ground, out r side loads, pendulum action, jerking or sudden conditions, experience of personnel, two mach electric wires, etc. Side pull on boom or jib is extri
 - Power telescoping boom sections must be extende.
 - Handing of personnel from the boom is not auti furnished and installed by Grove Manufacturing Co.
 - Keep load handling devices a minimum of 12 inc when lowering or extending boom.
 - Loaded boom angles give an approximation of ti

1400
ON CAPACITY
5 - 172 ft.) BOOM
POWER)
TIPPING
MI SYMBOLS



GROVE

FULL HYDRAULIC
CARRIER-MOUNTED CRAN

3 IN KILOGRAMS ON OUTRIGGERS

OUTRIGGERS FULLY EXTENDED - OVER REAR

Radius in Meters	Main Boom Length in Meters									42.9m + 9.8m Ext. (2° Offset)	
	13.7	17.7	21.3	25.0	28.7	32.3	36.0	39.6	42.9		
3	130,000 (74.5)										
3.5	127,005 (72.5)	68,035 (76.5)	64,410 (79.0)								
4	122,015 (70.0)	68,035 (74.5)	64,410 (78.0)								
4.5	108,315 (67.5)	68,035 (73.0)	64,410 (76.5)	58,965 (79.0)							
5	97,160 (65.0)	68,035 (71.0)	61,685 (75.0)	56,605 (77.5)							
6	80,105 (60.0)	65,090 (67.5)	56,605 (72.0)	51,300 (75.0)	46,265 (77.5)	40,960 (79.5)					
7	67,675 (55.0)	62,365 (64.0)	52,480 (69.5)	46,990 (73.0)	42,750 (75.5)	37,690 (77.5)	33,430 (79.5)	31,430 (80.0)			
8	58,060 (49.0)	56,970 (60.0)	48,625 (66.5)	43,500 (70.5)	39,190 (73.5)	34,495 (76.0)	32,430 (77.5)	30,480 (79.5)			
9	49,170 (42.5)	49,170 (56.0)	44,325 (63.0)	40,460 (68.0)	36,150 (71.0)	31,795 (74.0)	29,890 (76.0)	28,030 (78.0)	27,215 (79.5)		
10	42,250 (35.0)	42,250 (52.0)	41,935 (60.0)	37,850 (65.0)	33,180 (69.0)	29,210 (72.0)	27,440 (74.5)	25,810 (76.5)	25,150 (78.0)	11,340 (80.0)	
12		32,750 (42.5)	32,750 (53.5)	32,750 (60.0)	28,210 (64.5)	24,835 (68.0)	23,290 (71.0)	22,200 (73.5)	21,115 (75.5)	10,350 (78.0)	
14		25,855 (30.0)	25,855 (43.5)	25,855 (54.0)	24,400 (60.0)	21,520 (64.0)	20,095 (67.5)	19,095 (70.5)	17,915 (72.5)	9,060 (75.5)	
16			21,980 (37.0)	21,980 (48.0)	20,865 (55.0)	18,390 (60.0)	17,575 (63.5)	16,395 (67.0)	15,305 (69.5)	8,050 (73.5)	
18			17,675 (24.5)	17,675 (40.5)	17,675 (49.5)	15,875 (55.5)	15,510 (60.0)	14,220 (64.0)	13,200 (66.5)	7,235 (71.0)	
20				14,460 (32.0)	14,460 (43.5)	13,790 (50.5)	13,560 (56.0)	12,335 (60.5)	11,475 (63.5)	6,575 (68.5)	
23					10,930 (33.0)	10,930 (43.0)	10,930 (49.5)	10,025 (55.0)	9,320 (58.5)	5,760 (65.0)	
26					8,435 (16.0)	8,435 (33.5)	8,435 (42.5)	8,210 (49.5)	7,575 (53.5)	5,125 (61.0)	
29						6,500 (20.0)	6,500 (34.0)	6,500 (43.0)	6,165 (48.0)	4,600 (57.5)	
32							4,990 (22.5)	4,990 (35.0)	4,990 (42.0)	4,195 (53.0)	
35								3,750 (25.0)	3,750 (34.5)	3,830 (48.5)	
38									2,785 (25.5)	3,525 (44.0)	
41										2,995 (38.5)	
44										2,230 (32.0)	
47										1,580 (24.5)	
50										1,030 (11.0)	
Min. Boom Angle (deg.) for indicated length (no load)										0	0
Max. Boom Length (m) at 0 degree boom angle (no load)										42.9	52.7

NOTE: Boom Angles are in degrees. A6-829-003375 & -003380

WARNING NOTES

Use only 85% of the tipping load as determined by SAE J-765a. Weight of hook block, slings and auxiliary lifting devices subtracted from the listed ratings to obtain the net load for freely suspended loads. No attempt shall be made to lift in the ground in any direction. Do not attempt to lift for wind on lifted load or boom. It is recommended not to exceed 20 mph (32 km/h), rated loads and boom lengths listed. Do not use service only. Do not use or boom length where capacities are not listed. At no time may overturn without any load on the hook. The boom can be telescoped is not definable because of variations in maintenance, but it is safe to attempt retraction and extension of the capacity chart. Do not use or radius or both are between values listed, the smallest of the two values shall be used. The user shall make due allowances for his particular job or uneven ground, out of level conditions, high winds, vibration, jerking or sudden stopping of loads, hazardous conditions, two machine lifts, traveling with loads, lifting on boom or jib is extremely dangerous. All operations must be extended equally at all times. Do not use the boom if not authorized except with equipment from Grove Manufacturing Company. The boom must be a minimum of 12 inches (30 cm) below boom head at all times. Do not use the boom as an approximation of the operating radius at specified

boom lengths. The boom angle before loading should be greater to account for deflection.

- Capacities appearing above bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
- Capacities for the 45 ft. (13.7m) boom length shall be lifted with boom fully retracted. If boom is not fully retracted, capacities shall not exceed those shown for the 58 ft. (17.7m) boom length.
- Radius less than 40 feet or 12 meters not recommended when lifting over front of machine.
- For boom lengths less than 172 ft. (52.6m) with 32 ft. (9.8m) boom extension erected, the rated loads are determined by boom angle only, in the column header by 172 ft. (52.6m). For this load column, the 32 ft. (9.8m) boom extension operation mode is to be selected on the Krueger L.M.I. WARNING: The Krueger L.M.I. calibration will apply for fully extended main boom only.

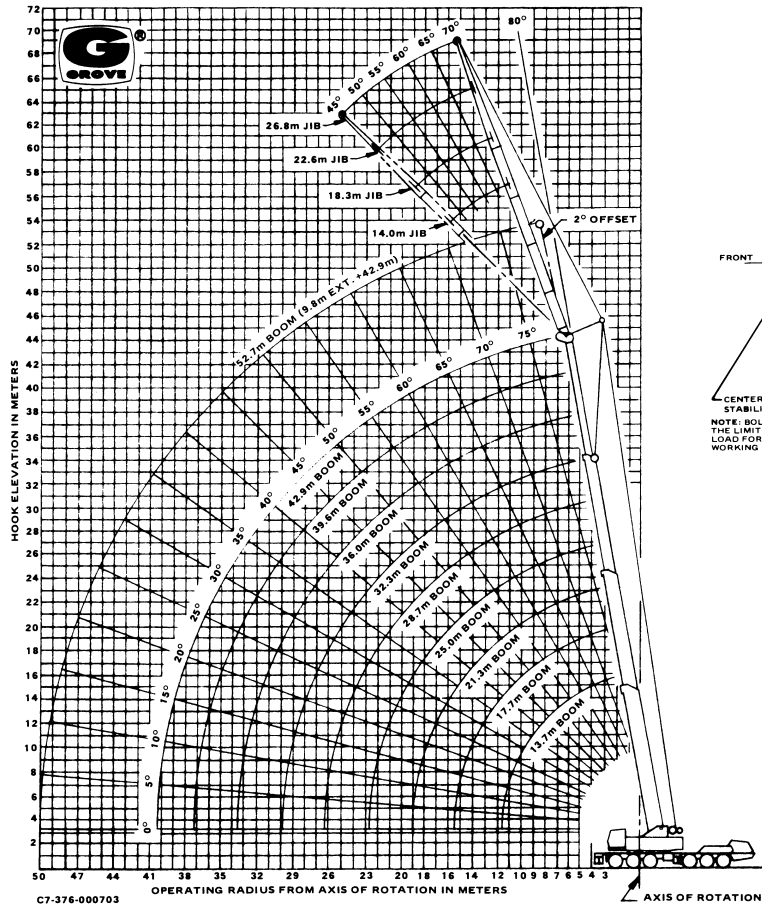
DEFINITIONS:

- Operating Radius: Horizontal distance from a projection of the axis of rotation to the supporting surface before loading to the center of the vertical hoist line or tackle with load applied.
- Loaded Boom Angle (Shown in Parenthesis on Main Boom Capacity Chart): is the angle between the boom base section and the horizontal, after lifting the rated load at the rated radius.
- Working Area: Areas measured in a circular arc about the center line of rotation as shown on the working area diagram.
- Freely Suspended Load: Load hanging free with no direct external force applied except by the lift cable.
- Side Load: Horizontal force applied to the lifted load either on the ground or in the air.

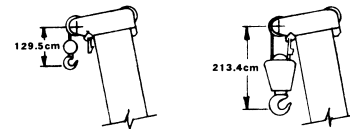
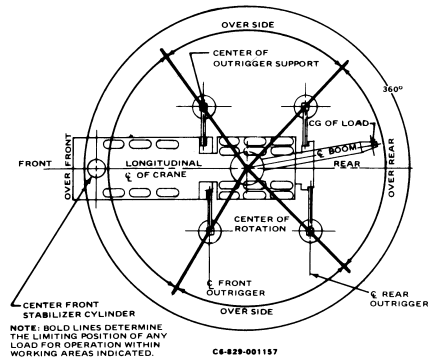
GROVE®

TM1400

HOOK ELEVATION DIAGRAM UNLADEN BOOM



LIFTING AREA DIAGRAM



WEIGHT REDUCTION FOR LOAD HANDLING DEVICES

9.8m BOOM EXTENSION with 13.7-42.9m BOOM
†Stowed - 338 kg
†Erected - 1,258 kg
Luffing Jib Accessories - 254 kg

13.7 - 42.9m BOOM with	
†114.0m Jib Erected -	4,319 kg
†118.3m Jib Erected -	6,535 kg
†22.6m Jib Erected -	9,158 kg
†26.8m Jib Erected -	11,723 kg

HOOK BLOCKS	
140 Ton, 7 Sheave . . .	1,564 kg
30 Ton, 1 Sheave . . .	464 kg
Auxiliary Boom Head . . .	115 kg
10 Ton Headache Ball . . .	227 kg
15 Ton Headache Ball . . .	340 kg

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.

†Reduction of main boom capacities.