



TMS865

88 ft. (26.8 m)

JIB CAPACITIES

(FULL POWER AND POWER PINNED BOOMS)

RATED LIFTING CAPACITIES ON OUTRIGGERS - 360° POUNDS

Loaded Main Boom Angle	46 ft. JIB CAPACITIES						60 ft. JIB CAPACITIES						74 ft. JIB CAP.			
	5° OFFSET		17° OFFSET		30° OFFSET		5° OFFSET		17° OFFSET		30° OFFSET		5° OFFSET		17° OFF	
	Ref.* Rad.	Load lbs.**	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	L
80°	32.0	14,000	41.0	11,950	49.0	8,480	36.3	10,600	48.2	8,160	58.0	5,680	39.8	8,160	53.7	5
77.5	38.4	13,350	47.2	11,550	55.2	8,080	43.3	9,970	54.5	7,790	64.7	5,320	47.5	7,620	60.8	5
75	44.9	12,800	53.2	11,150	61.2	7,690	50.3	9,490	60.9	7,450	71.3	5,020	55.1	7,090	67.8	5
72.5	51.2	12,250	59.6	10,300	67.2	7,350	57.2	8,930	67.5	7,130	77.8	4,760	62.6	6,620	75.6	4
70	57.5	9,930	65.4	8,390	72.9	7,020	63.9	8,380	74.1	6,830	84.2	4,540	69.9	6,200	82.5	4
67.5	63.7	7,970	71.4	6,870	78.6	6,100	70.6	6,710	80.6	5,610	90.3	4,340	77.2	5,670	89.5	4
65	69.7	6,450	77.2	5,640	84.1	5,080	77.1	5,380	86.8	4,580	96.3	4,030	84.2	4,500	95.8	3
62.5	75.6	5,240	82.8	4,640	89.5	4,220	83.4	4,320	92.7	3,730	102.1	3,310	91.2	3,560	102.5	2
60	81.3	4,250	88.2	3,800	94.7	3,490	89.6	3,460	98.6	3,010	107.8	2,700	97.9	2,790	109.2	2
55	92.4	2,750	99.0	2,490	104.4	2,320	101.4	2,130	110.0	1,870	118.3	1,700	110.9	1,590	121.3	1
50	102.7	1,660	108.2	1,520	113.4	1,420	112.5	1,160	121.9	1,010	128.1	920				

*Reference Radius (feet) refers to fully extended boom and appropriate jib length.
**Capacities at loaded main boom angle.

KILOGRAMS

Loaded Main Boom Angle	14.0 m JIB CAPACITIES						18.3 m JIB CAPACITIES						22.6 m JIB CAP.			
	5° OFFSET		17° OFFSET		30° OFFSET		5° OFFSET		17° OFFSET		30° OFFSET		5° OFFSET		17° OFF	
	Ref.* Rad.	Load kg**	Ref. Rad.	Load kg	Ref. Rad.	Load kg	Ref. Rad.	Load kg	Ref. Rad.	Load kg	Ref. Rad.	Load kg	Ref. Rad.	Load kg	Ref. Rad.	L
80°	9.8	6,350	12.5	5,420	14.9	3,845	11.1	4,805	14.7	3,700	17.7	2,575	12.1	3,700	16.4	2
77.5	11.7	6,055	14.4	5,235	16.8	3,665	13.2	4,520	16.6	3,530	19.7	2,410	14.5	3,455	18.5	2
75	13.7	5,805	16.2	5,055	18.6	3,485	15.3	4,300	18.6	3,375	21.7	2,275	16.8	3,215	20.7	2
72.5	15.6	5,555	18.2	4,670	20.5	3,330	17.4	4,050	20.6	3,230	23.7	2,155	19.1	3,000	23.0	2
70	17.5	4,500	19.9	3,805	22.2	3,180	19.5	3,800	22.6	3,095	25.7	2,055	21.3	2,810	25.1	2
67.5	19.4	3,615	21.8	3,115	24.0	2,765	21.5	3,040	24.6	2,540	27.5	1,965	23.5	2,570	27.3	1
65	21.2	2,925	23.5	2,555	25.6	2,300	23.5	2,440	26.5	2,075	29.4	1,825	25.7	2,040	29.2	1
62.5	23.0	2,375	25.2	2,100	27.3	1,910	25.4	1,955	28.2	1,690	31.1	1,500	27.8	1,610	31.2	1
60	24.8	1,925	26.9	1,720	28.9	1,580	27.3	1,565	30.0	1,365	32.8	1,220	29.8	1,265	33.3	1
55	28.2	1,245	30.2	1,125	31.8	1,050	30.9	965	33.5	845	36.1	770	33.8	720	37.0	
50	31.3	750	33.0	685	34.6	640	34.3	525	37.2	455	39.0	415				

*Reference Radius (meters) refers to fully extended boom and appropriate jib length.
**Capacities at loaded main boom angle.
Capacities listed apply to jibs of round tube construction only.

JIB CAPACITY NOTES

- All capacities above the bold line are based on structural strength of jib and do not exceed 66 2/3% of tipping load, in accordance with SAE J-765.
- With Krueger LMI supplied two part lifting service is required; at any other time single line or 2-part line lifting service may be used.
- Rated load is based on loaded main boom angle with reference to ground, regardless of main boom length. (Ref. radius in feet is for fully extended boom 114 ft. (34.6m). The Krueger LMI 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 occurs rapidly and without advance warning.
- 46 ft. (14.0m) JIB WARNING: With 46 ft. (14.0m) jib and main boom fully extended, the boom angle must not be less than 50° since loss of stability will occur causing a tipping condition.
60 ft. (18.3m) JIB WARNING: With 60 ft. (18.3m) jib and main boom fully extended, the boom angle must not be less than 50°

- since loss of stability will occur causing a tipping condition.
74 ft. (22.6m) JIB WARNING: With 74 ft. (22.6m) jib and main boom fully extended, the boom angle must not be less than 55° since loss of stability will occur causing a tipping condition.
88 ft. (26.8m) JIB WARNING: With 88 ft. (26.8m) jib and main boom fully extended, the boom angle must not be less than 55° since loss of stability will occur causing a tipping condition.
- JIB ERECTION NOTES:
 - Maximum length of main boom including extended fly for purpose of erecting jib below 30° main boom angle is:
46 ft. (14.0m) JIB - 95 ft. (28.9m)
60 ft. (18.3m) JIB - 86 ft. (26.2m)
74 ft. (22.6m) JIB - 77 ft. (23.5m)
88 ft. (26.8m) JIB - 68 ft. (20.7m)
 - WARNING: Do not attempt to erect jib over front of machine, unless boom is fully retracted (fly extended).
 - Capacities listed are with fully extended outriggers only.

46 ft. JIB
†46 ft.
†60 ft.
†74 ft.
†88 ft.

† Redu

TMS865

88 ft. (26.8 m)

JIB CAPACITIES

(ALL POWER AND POWER PINNED BOOMS)

GROVE®

FULL HYDRAULIC

CARRIER-MOUNTED CRANE

RATED LIFTING CAPACITIES ON OUTRIGGERS - 360°

POUNDS

60 ft. JIB CAPACITIES					74 ft. JIB CAPACITIES					88 ft. JIB CAPACITIES						
OFFSET	17° OFFSET	30° OFFSET	5° OFFSET	17° OFFSET	30° OFFSET	5° OFFSET	17° OFFSET	30° OFFSET	5° OFFSET	17° OFFSET	30° OFFSET	5° OFFSET	17° OFFSET	30° OFFSET		
Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	Load lbs.	Ref. Rad.	
10,600	48.2	8,160	58.0	5,680	39.8	8,160	53.7	5,840	67.2	4,140	44.2	6,310	59.4	4,050	76.7	2,510
9,970	54.5	7,790	64.7	5,320	47.5	7,620	60.8	5,480	74.2	3,860	52.2	5,750	67.2	3,690	83.9	2,290
9,490	60.9	7,450	71.3	5,020	55.1	7,090	67.8	5,150	81.2	3,600	60.2	5,250	75.2	3,380	91.1	2,090
8,930	67.5	7,130	77.8	4,760	62.6	6,620	75.6	4,850	87.9	3,390	68.1	4,790	83.5	3,100	98.0	1,920
8,380	74.1	6,830	84.2	4,540	69.9	6,200	82.5	4,570	94.5	3,190	75.8	4,370	90.6	2,820	104.8	1,750
6,710	80.6	5,610	90.3	4,340	77.2	5,670	89.5	4,320	100.8	3,020	83.4	3,990	97.7	2,570	114.3	1,610
5,380	86.8	4,580	96.3	4,030	84.2	4,500	95.8	3,730	107.1	2,870	90.9	3,660	105.0	2,340	117.7	1,480
4,320	92.7	3,730	102.1	3,310	91.2	3,560	102.5	2,970	113.0	2,590	98.2	2,970	111.4	2,100	123.8	1,360
3,460	98.6	3,010	107.8	2,700	97.9	2,790	109.2	2,340	118.8	2,050	105.2	2,260	118.2	1,840		
2,130	110.0	1,870	118.3	1,700	110.9	1,590	121.3	1,340	129.7	1,170	118.8	1,170	131.0	940		
1,160	121.9	1,010	128.1	920												

Appropriate jib length.

A6-829-004679

KILOGRAMS

18.3 m JIB CAPACITIES					22.6 m JIB CAPACITIES					26.8 m JIB CAPACITIES						
OFFSET	17° OFFSET	30° OFFSET	5° OFFSET	17° OFFSET	30° OFFSET	5° OFFSET	17° OFFSET	30° OFFSET	5° OFFSET	17° OFFSET	30° OFFSET	5° OFFSET	17° OFFSET	30° OFFSET		
Load kg	Ref. Rad.	Load kg	Ref. Rad.	Load kg	Ref. Rad.	Load kg	Ref. Rad.	Load kg	Ref. Rad.	Load kg	Ref. Rad.	Load kg	Ref. Rad.	Load kg	Ref. Rad.	
4,805	14.7	3,700	17.7	2,575	12.1	3,700	16.4	2,645	20.5	1,875	13.5	2,860	18.1	1,835	23.4	1,135
4,520	16.6	3,530	19.7	2,410	14.5	3,455	18.5	2,485	22.6	1,750	15.9	2,605	20.5	1,670	25.6	1,035
4,300	18.6	3,375	21.7	2,275	16.8	3,215	20.7	2,335	24.7	1,630	18.4	2,380	22.9	1,530	27.8	945
4,050	20.6	3,230	23.7	2,155	19.1	3,000	23.0	2,195	26.8	1,535	20.8	2,170	25.5	1,405	29.9	870
3,800	22.6	3,095	25.7	2,055	21.3	2,810	25.1	2,070	28.8	1,445	23.1	1,980	27.6	1,275	31.9	790
3,040	24.6	2,540	27.5	1,965	23.5	2,570	27.3	1,955	30.7	1,365	25.4	1,805	29.8	1,165	33.9	730
2,440	26.5	2,075	29.4	1,825	25.7	2,040	29.2	1,590	32.6	1,300	27.7	1,660	32.0	1,060	35.9	670
1,955	28.2	1,690	31.1	1,500	27.8	1,610	31.2	1,345	34.4	1,170	29.9	1,345	34.0	950	37.7	615
1,565	30.0	1,365	32.8	1,220	29.8	1,265	33.3	1,060	36.2	925	32.1	1,025	36.0	830		
965	33.5	845	36.1	770	33.8	720	37.0	605	39.5	530	36.2	530	39.9	425		
525	37.2	455	39.0	415												

Appropriate jib length.

A6-829-004680

WEIGHT REDUCTION FOR LOAD HANDLING DEVICES

46 ft. - 146 ft. Boom with	lbs.	kg
146 ft. Erected	12,059	5,470
160 ft. Erected	18,014	8,171
174 ft. Erected	25,077	11,375
188 ft. Erected	33,236	15,076

†Reduction of main boom capacities.

HOOK BLOCK	lbs.	kg
15 Ton, 1 Sheave	580	263
10 Ton Headache Ball	500	227
7½ Ton Headache Ball	300	136
Auxiliary Boom Head	220	100

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.

Loss of stability will occur causing a tipping condition.
 (22.6m) JIB WARNING: With 74 ft. (22.6m) jib and main boom fully extended, the boom angle must not be less than 55°.
 Loss of stability will occur causing a tipping condition.
 (26.8m) JIB WARNING: With 88 ft. (26.8m) jib and main boom fully extended, the boom angle must not be less than 55°.
 Loss of stability will occur causing a tipping condition.
ACTION NOTES:
 Maximum length of main boom including extended fly for angle of erecting jib below 30° main boom angle is:
 14.0m) JIB - 95 ft. (28.9m)
 18.3m) JIB - 86 ft. (26.2m)
 22.6m) JIB - 77 ft. (23.5m)
 26.8m) JIB - 68 ft. (20.7m)
WARNING: Do not attempt to erect jib over front of machine, boom is fully retracted (fly extended).
 Capacities listed are with fully extended outriggers only.

TMS865

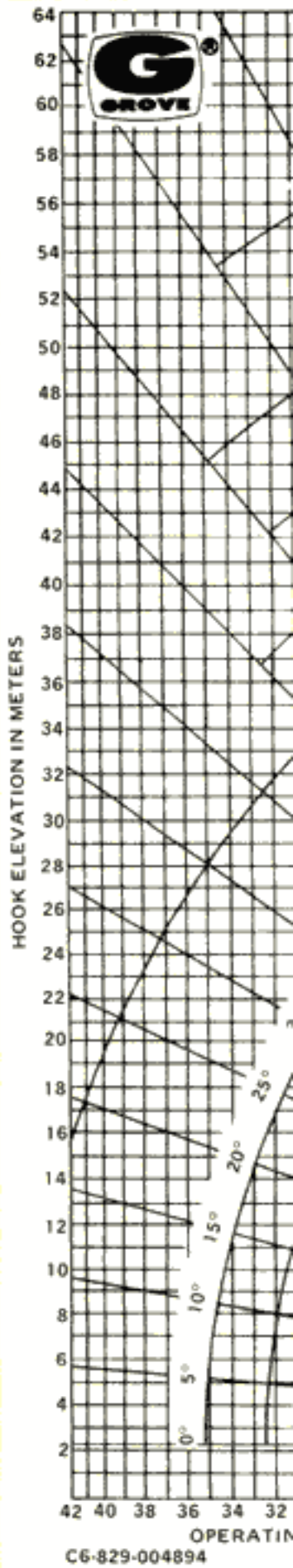
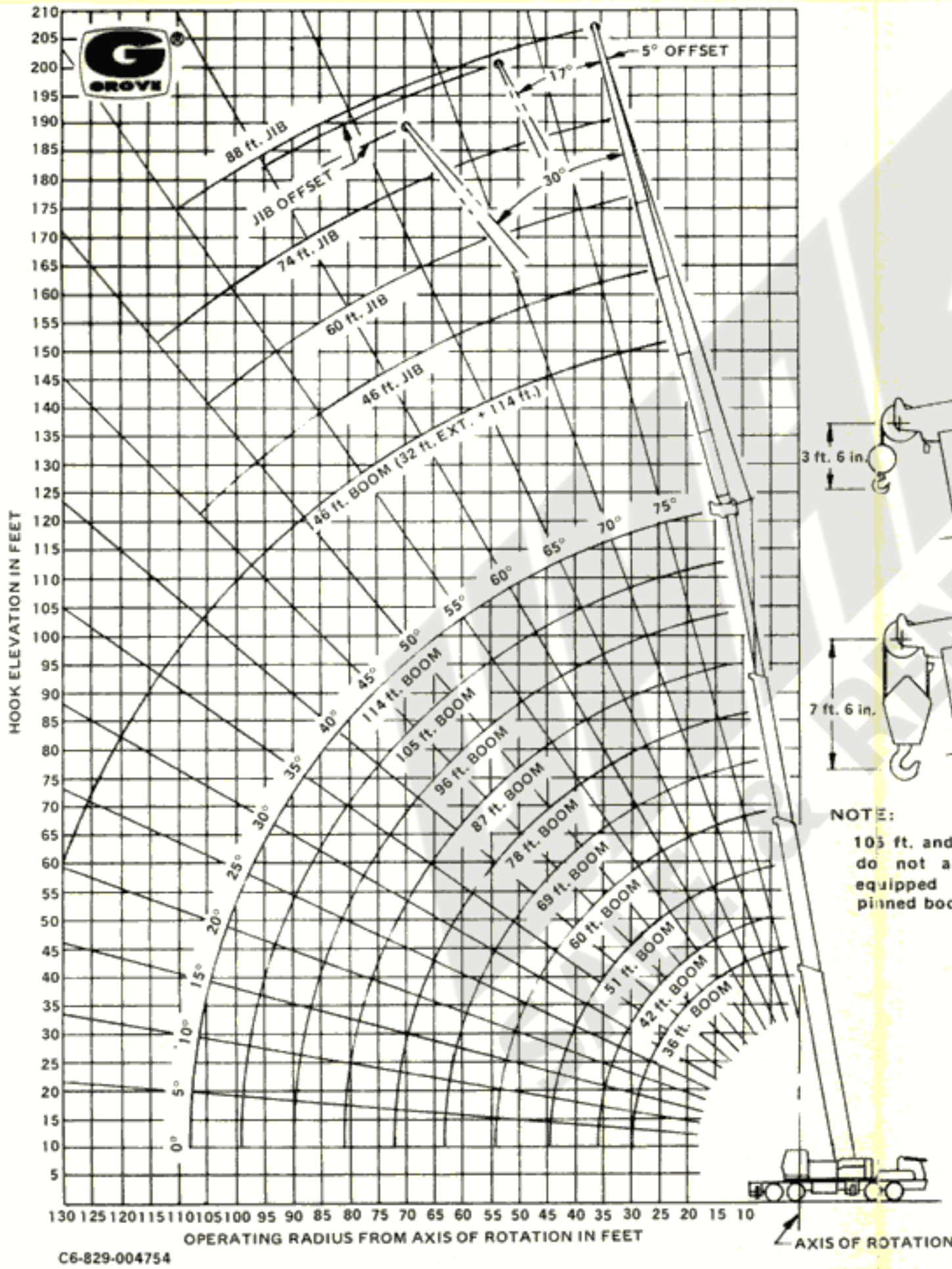
88 ft. (26.8 m)
JIB CAPACITIES

GROVE

RANGE DIAGRAMS

88 ft. (26.8 m) JIB

ENGLISH



C6-829-004754

C6-829-004894



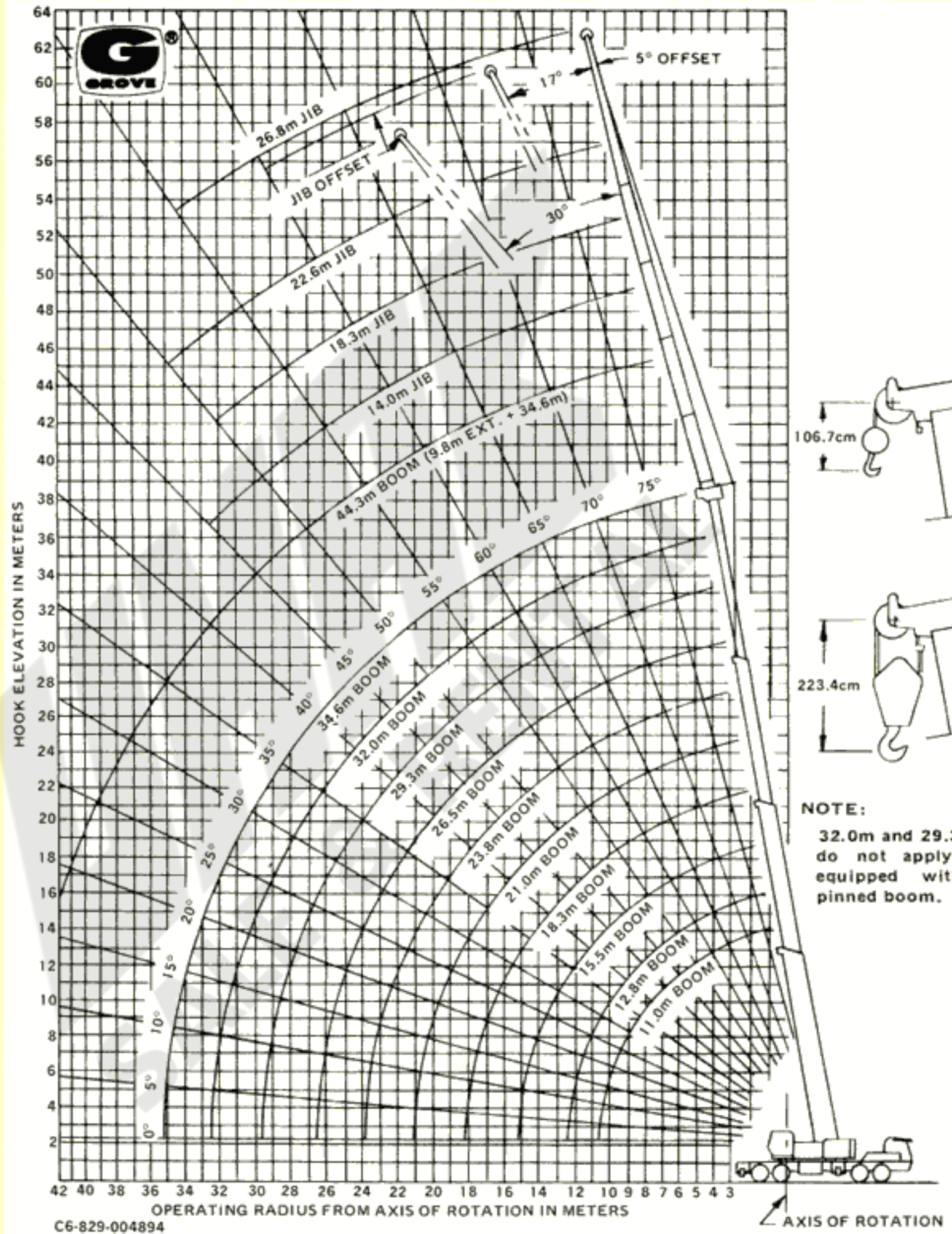
GROVE MANUFACTURING
Division of Walter Kidde & Company Inc
KIDDE

Box 21, Shady Grove, Pennsylvania

RANGE DIAGRAMS

88 ft. (26.8 m) JIB

METRIC



NOTE:
5 ft. and 96 ft. lengths
not apply to units
equipped with power-
pinned boom.



ROTATION

C6-829-004894



GROVE MANUFACTURING COMPANY
Division of Walter Kidde & Company, Inc.
KIDDE

Box 21, Shady Grove, Pennsylvania 17256

Distributed by:



TMS865 65 TON CAPACITY 36 ft. - 146 ft. BOOM (POWER PINNED FLY)

PCSA CLASS 10-252

RATED LIFTING CAPACITIES

ON OUTRIGGERS FULLY EXTENDED - 360°

Radius in Feet	Main Boom Length in Feet (Power Pinned Fly Retracted)								87 ft. Pow. Pin. Fly Ext'd.	87 ft. + 32 ft. Ext. (2° Offset)	114 ft. + 32 ft. Ext. (2° Offset)	
	36	44	52	60	68	76	82	87	114	119	146	
10	130,000 (67)	106,700 (71.5)	101,600 (74.5)	100,000 (77)	96,700 (79)				See Warning Note 18	See Warning Note 19	See Warning Note 19	
12	123,500 (63)	106,700 (68.5)	101,600 (72)	96,500 (75)	87,850 (77)	84,700 (78.5)						
15	105,000 (57.5)	105,000 (64)	95,300 (68.5)	84,900 (72)	79,180 (74.5)	77,550 (76)	70,250 (77.5)	64,500 (79)				
20	78,850 (47)	78,850 (56.5)	78,850 (62.5)	70,550 (66.5)	64,310 (70)	63,800 (72)	59,400 (74)	55,000 (75.5)	38,750 (80)	23,600 (79.5)		
25	60,000 (34)	60,000 (48)	60,000 (55.5)	60,000 (61)	54,000 (65.5)	49,700 (67.5)	47,150 (70.5)	45,600 (72)	34,000 (77)	21,300 (77)	22,500 (80)	
30		46,570 (38)	46,570 (48.5)	46,570 (55.5)	46,570 (60.5)	42,750 (63.5)	40,450 (66.5)	39,150 (68.5)	30,300 (74.5)	19,500 (74.5)	21,200 (78.5)	
35		33,840 (24.5)	33,840 (40.5)	33,840 (49.5)	33,840 (55.5)	33,840 (58.5)	33,840 (62.5)	33,840 (65)	27,250 (71.5)	17,950 (72)	18,300 (76.5)	
40			25,210 (30.5)	25,210 (42.5)	25,210 (50)	25,210 (54)	25,210 (58.5)	25,210 (61.5)	24,750 (69)	16,600 (69.5)	16,000 (74.5)	
45	See Warning Note 16		20,340 (14.5)	20,340 (34.5)	20,340 (44)	20,340 (49)	20,340 (54)	20,340 (57.5)	22,650 (66)	15,500 (66.5)	14,620 (72.5)	
50				16,250 (24)	16,250 (37.5)	16,250 (43.5)	16,250 (49.5)	16,250 (53.5)	18,580 (63)	14,500 (64)	13,730 (70)	
60					10,370 (17.5)	10,370 (30.5)	10,370 (39)	10,370 (44)	13,120 (57)	12,850 (58.5)	11,450 (66)	
70							6,250 (24.5)	6,250 (33)	9,200 (50.5)	9,980 (52.5)	9,540 (61.5)	
80								3,430 (14)	6,400 (43)	6,630 (46)	7,840 (56.5)	
90									4,240 (34.5)	4,480 (38.5)	5,650 (51.5)	
100									2,450 (23)	2,820 (29.5)	3,910 (46)	
110										1,390 (15.5)	2,400 (40)	
120											1,220 (33)	
Min. boom angle (deg.) for indicated length (no load)									0	0	0	
Max. boom length (ft.) at 0 degree boom angle (no load)									87	114	119	146

NOTE: Boom angles are in degrees.

A6-829-004499A & 004502

NOTES FOR LIFTING CAPACITIES

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 tipping load as determined by SAE Crane Stability Test Code J-765a.
- Rated loads include the weight of hook block, slings and auxiliary lifting devices and their weights shall be subtracted from the listed ratings to obtain the net load to be lifted.
- Load ratings are based on freely suspended loads. No attempt shall be made to move a load horizontally on the ground in any direction.
- Rated loads do not account for wind on lifted load or boom. It is recommended when wind velocity is above 20 mph (32 km/h), rated loads and boom lengths shall be appropriately reduced.
- Rated loads are for lift crane service only.
- Do not operate at a radius or boom length where capacities are not listed. At these positions, the machine may overturn without any load on the hook.
- The maximum load which can be telescoped is not definable because of variations in loadings and crane maintenance, but it is safe to attempt retraction and extension within the limits of the capacity chart.

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ACITY
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LY)

GROVE®

FULL HYDRAULIC

CARRIER-MOUNTED CRANE

ACITIES IN POUNDS

ON OUTRIGGERS FULLY EXTENDED - OVER REAR

Radius in Feet	Main Boom Length in Feet (Power Pinned Fly Retracted)								87 ft. Pow.Pin. FlyExt'd.	87 ft. + 32 ft.Ext. (2°Offset)	114 ft. + 32 ft.Ext. (2°Offset)	
	36	44	52	60	68	76	82	87	114	119	146	
10	130,000 (67)	106,700 (71.5)	101,600 (74.5)	100,000 (77)	96,700 (79)							
12	123,500 (63)	106,700 (68.5)	101,600 (72)	96,500 (75)	87,850 (77)	84,700 (78.5)			See Warning Note 18	See Warning Note 19	See Warning Note 19	
15	105,000 (57.5)	105,000 (64)	95,300 (68.5)	84,900 (72)	79,180 (74.5)	77,550 (76)	70,250 (77.5)	64,500 (79)				
20	78,850 (47)	78,850 (56.5)	78,850 (62.5)	70,550 (66.5)	64,310 (70)	63,800 (72)	59,400 (74)	55,000 (75.5)	38,750 (80)	23,600 (79.5)		
25	60,000 (34)	60,000 (48)	60,000 (55.5)	60,000 (61)	54,000 (65.5)	49,700 (67.5)	47,150 (70.5)	45,600 (72)	34,000 (77)	21,300 (77)	22,500 (80)	
30		47,900 (38)	47,900 (48.5)	47,900 (55.5)	46,650 (60.5)	42,750 (63.5)	40,450 (66.5)	39,150 (68.5)	30,300 (74.5)	19,500 (74.5)	21,200 (78.5)	
35		38,800 (24.5)	38,800 (40.5)	38,800 (49.5)	38,800 (55.5)	37,300 (58.5)	35,200 (62.5)	34,050 (65)	27,250 (71.5)	17,950 (72)	18,300 (76.5)	
40			30,080 (30.5)	30,080 (42.5)	30,080 (50)	30,080 (54)	30,080 (58.5)	29,550 (61.5)	24,750 (69)	16,600 (69.5)	16,000 (74.5)	
45	See Warning Note 16		23,970 (14.5)	23,970 (34.5)	23,970 (44)	23,970 (49)	23,970 (54)	23,970 (57.5)	22,650 (66)	15,500 (66.5)	14,620 (72.5)	
50				19,470 (24)	19,470 (37.5)	19,470 (43.5)	19,470 (49.5)	19,470 (53.5)	20,800 (63)	14,500 (64)	13,730 (70)	
60					13,200 (17.5)	13,200 (30.5)	13,200 (39)	13,200 (44)	15,650 (57)	12,850 (58.5)	11,450 (66)	
70							9,110 (24.5)	9,110 (33)	11,590 (50.5)	11,550 (52.5)	9,540 (61.5)	
80								6,220 (14)	8,430 (43)	9,030 (46)	8,090 (56.5)	
90									6,000 (34.5)	6,470 (38.5)	7,080 (51.5)	
100									4,050 (23)	4,520 (29.5)	5,660 (46)	
110										2,870 (15.5)	4,080 (40)	
120											2,820 (33)	
130											1,720 (24)	
Min. boom angle (deg.) for indicated length (no load)									0	0	0	
Max. boom length (ft.) at 0 degree boom angle (no load)									87	114	119	146

NOTE: Boom angles are in degrees.

A6-829-004498A & -0044502

ING CAPACITIES

- 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.
- For safe operation, the user shall make due allowances for his particular job conditions, such as: soft or uneven ground, out of level conditions, high winds, side loads, pendulum action, jerking or sudden stopping of loads, hazardous conditions, experience of personnel, two machine lifts, traveling with loads, electric wires, etc. Side pull on boom or jib is extremely dangerous.
- Power telescoping boom sections must be extended equally at all times.
- Handling of personnel from the boom is not authorized except with equipment furnished and installed by Grove Manufacturing Company.
- Keep load handling devices a minimum of 12 inches (30 cm) below boom head when lowering or extending boom.
- Loaded boom angles give 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 the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
- Capacities for the 36 ft. (11.0 m) boom length shall be lifted with boom fully retracted. If boom is not fully retracted, capacities shall not exceed those shown for the 44 ft. (13.4 m) boom length.
- Radii less than 35 ft. or 12 m not recommended when lifting over front of machine.
- For boom lengths less than 114 ft. (34.6 m) with power pinned fly extended, the rated loads are determined by boom angle in the column headed by 114 ft. (34.6 m) boom (power pinned fly extended). For boom angles not shown, use rating of next lower boom angle. For this load column, the extended power pinned operational mode is to be selected on the Krueger LMI (opt.). **WARNING: The Krueger LMI (opt.) rating will apply for full boom extension only.**
- For boom lengths less than 146 ft. (44.3 m) and 119 ft. (36.3 m) with power pinned fly extended or retracted and 32 ft. (9.8 m) boom extension erected, the rated loads are determined by boom angle only, in the columns headed by 146 ft. (44.3 m) and 119 ft. (36.3 m) respectively. For boom angles not shown, use rating of next lower boom angle. For each of these load columns, the 32 ft. (9.8 m) boom extension operational mode is to be selected on the Krueger LMI (opt.) (power pinned fly extended or retracted). **WARNING: The Krueger LMI (opt.) rating will apply for full boom with extension for power pinned fly (extended or retracted).**

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.

TMS865

65 TON CAPACITY
36 ft. - 146 ft. BOOM
(POWER PINNED FLY)

JIB CAPACITIES IN POUNDS
28 ft. A-frame and 32 ft. Ext. combination
ON OUTRIGGERS - 360°

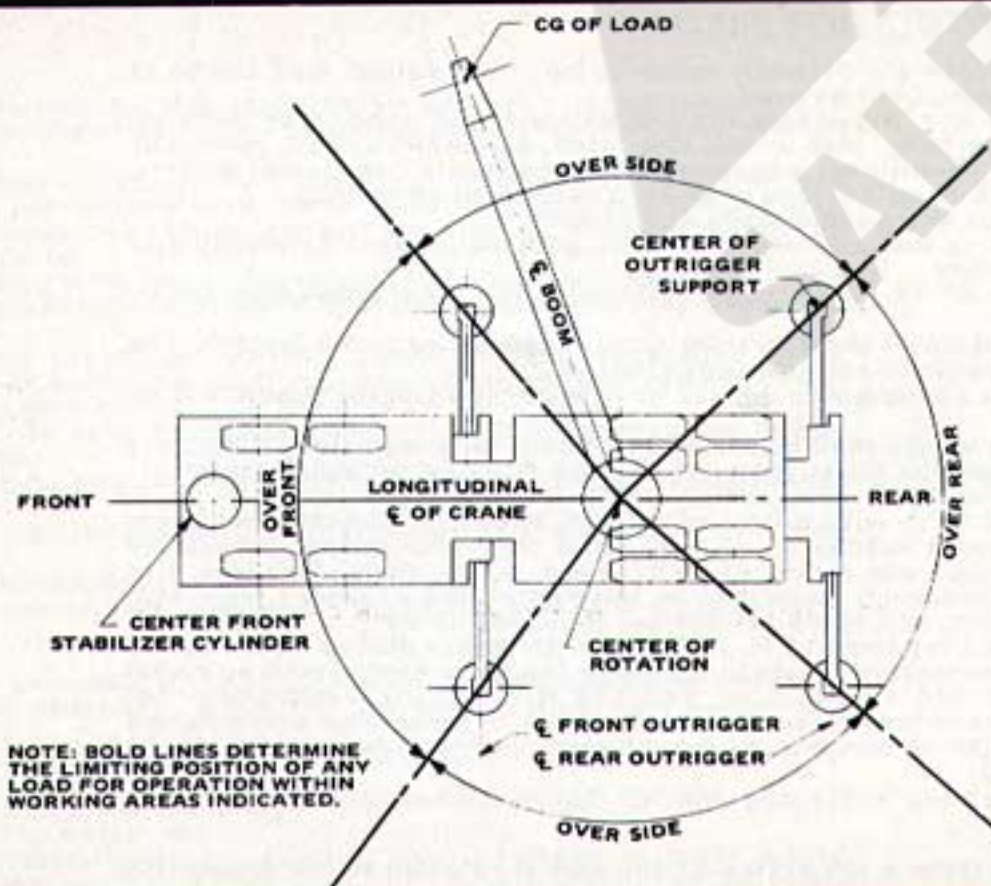
Boom Angle	5° OFFSET		17° OFFSET		30° OFFSET	
	Radius (Ref) ft.	Cap. lbs.	Radius (Ref) ft.	Cap. lbs.	Radius (Ref) ft.	Cap. lbs.
80°	32.6	10,000	38.1	8,450	42.3	6,430
75	47.1	8,720	52.2	7,430	56.4	5,870
70	61.2	7,430	65.8	6,520	70.1	5,510
65	74.8	5,650	78.9	5,040	82.8	4,250
60	87.8	4,510	91.4	4,210	94.9	3,700
55	100.2	2,900	103.2	2,730	106.2	2,730
50	111.8	1,930	114.2	1,830	116.8	1,670
45	122.3	860	124.4	860	126.4	810

A6-829-004611

NOTES:

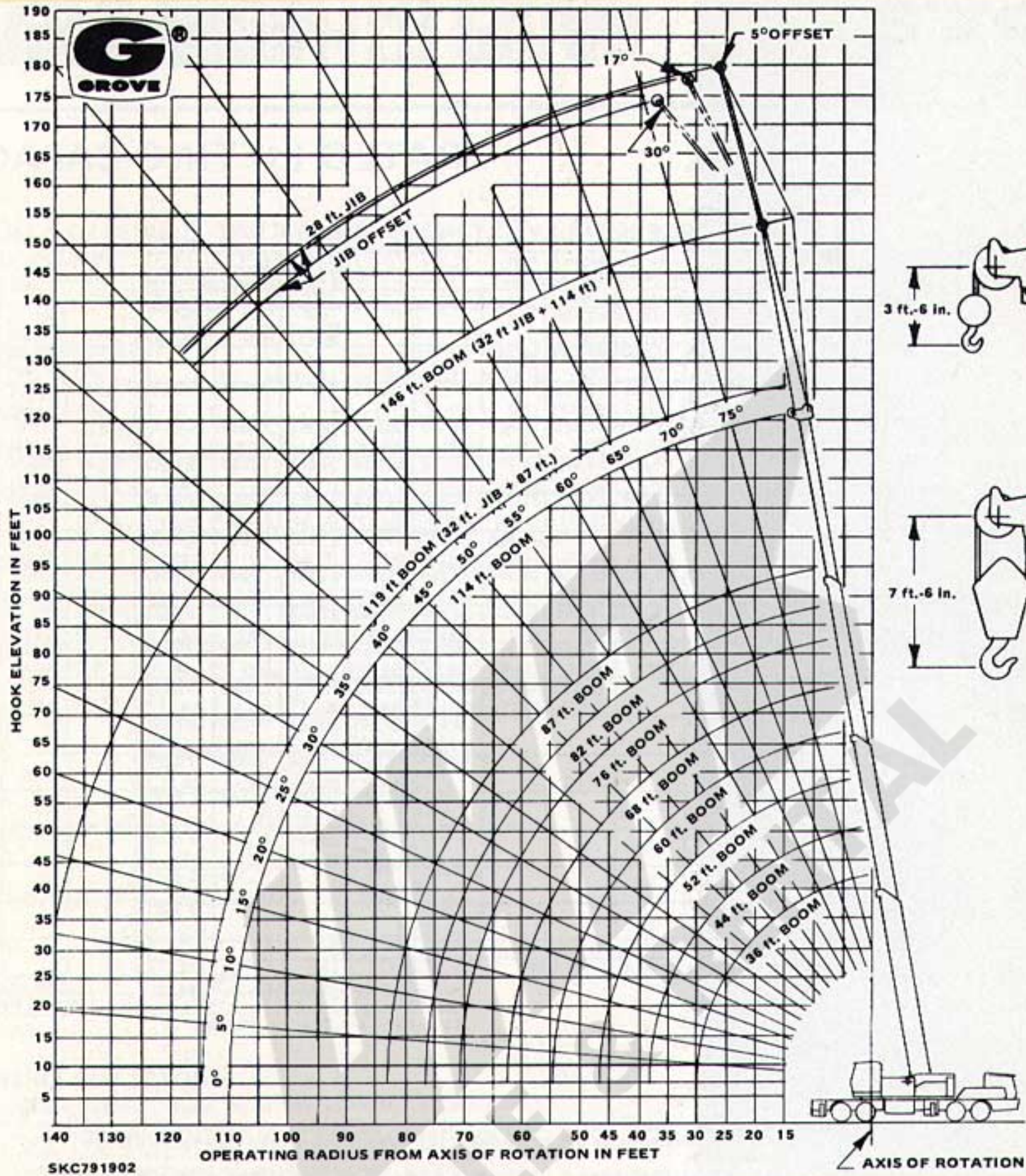
1. All capacities are in pounds. Capacities are based on structural strength of 28 ft. and 32 ft. boom extension combination at given main boom angle regardless of main boom length. (Two part lifting service is required with Krueger LMI; at any other time, single or two part line may be used.)
2. **WARNING:** Operation of machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with jib occurs rapidly and without advance warning.
3. **28 ft. JIB WARNING:** For main boom length (Boom length with Power Pinned fly extended) greater than 69 ft. with 32 ft. boom extension and 28 ft. jib in working position, the boom angle must not be less than 40° since loss of stability will occur causing a tipping condition. The boom angle is not restricted for main boom length (Boom length with Power Pinned fly extended.) equal to or less than 69 ft. This warning applies for jib erection purposes also.
4. **WARNING:** Lifting on rubber with 32 ft. boom extension or 28 ft. jib and 32 ft. boom extension combination is prohibited.
5. Reference radii listed are for fully extended main boom only.

LIFTING AREA DIAGRAM



CG-329-004714

RANGE DIAGRAM



WEIGHT REDUCTION FOR LOAD HANDLING DEVICES

32 ft. BOOM EXTENSION	
†Stowed	386 lbs.
†Erected	3,312 lbs.
28 ft. Jib & 32 ft. Boom Ext. Combination	
†Stowed	649 lbs.
†Erected	9,396 lbs.
††Erected	2,111 lbs.

HOOK BLOCK	
65 Ton, 5 Sheave	1,900 lbs.
15 Ton, 1 Sheave	580 lbs.
10 Ton Headache Ball	500 lbs.
7½ Ton Headache Ball	300 lbs.
Auxiliary Boom Head	220 lbs.

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.
 †† Reduction of 32 ft. Ext. capacities.

Distributed by:



GROVE MANUFACTURING COMPANY
 Division of Walter Kidde & Company Inc
KIDDE

Box 21, Shady Grove, Pennsylvania 17256



TMS865 65 TON CAPACITY 36 ft. - 146 ft. BOOM (FULL POWER)

PCSA CLASS 10-258

RATED LIFTING CAP

ON OUTRIGGERS FULLY EXTENDED - 360°

Radius in Feet	Main Boom Length in Feet										114 ft. + 32ft. Ext. (2° Offset)	
	36	42	51	60	69	78	87	96	105	114	146	
10	130,000 (67)	106,700 (70.5)	101,600 (74)	100,000 (77)	96,700 (79)							See Warning Note 18
12	123,500 (63)	106,700 (67.5)	101,600 (71.5)	96,500 (75)	87,850 (77)	84,700 (79)						
15	105,000 (57.5)	105,000 (63)	95,300 (68)	84,900 (72)	79,180 (74.5)	77,550 (77)	64,500 (79)					
20	78,850 (47)	78,850 (54.5)	78,850 (61.5)	70,550 (66.5)	64,310 (70)	63,800 (73)	55,000 (75.5)	51,900 (77)	48,450 (78.5)	38,750 (80)		
25	60,000 (34)	60,000 (45.5)	60,000 (55)	60,000 (61)	54,000 (65.5)	49,700 (69)	45,600 (72)	43,600 (74)	41,300 (76)	34,000 (77)	22,500 (80)	
30		45,340 (34)	45,340 (47.5)	45,340 (55.5)	45,340 (61)	42,750 (65)	39,150 (68.5)	38,400 (71)	35,350 (73)	30,300 (74.5)	21,200 (78)	
35		33,510 (16.5)	33,510 (39)	33,510 (49.5)	33,510 (56)	33,510 (61)	33,510 (64.5)	32,700 (67.5)	30,700 (70)	27,250 (72)	18,300 (76)	
40			25,830 (28.5)	25,830 (42.5)	25,830 (50.5)	25,830 (56.5)	25,830 (61)	25,830 (64.5)	25,830 (67)	24,750 (69)	16,000 (74)	
45	See Warning Note 16			21,170 (34.5)	21,170 (45)	21,170 (51.5)	21,170 (57)	21,170 (61)	21,170 (64)	21,170 (66.5)	14,620 (72)	
50				16,450 (24)	16,450 (38.5)	16,450 (46.5)	16,450 (52.5)	16,450 (57.5)	16,450 (61)	16,450 (63.5)	13,730 (69.5)	
60					11,010 (20)	11,010 (35)	11,010 (43.5)	11,010 (49.5)	11,010 (54)	11,010 (57.5)	11,450 (65)	
70							6,710 (32)	6,710 (40.5)	6,710 (46.5)	6,710 (51)	9,500 (60.5)	
80							3,980 (12.5)	3,980 (29.5)	3,980 (38)	3,980 (44)	6,900 (56)	
90								2,270 (7)	2,270 (27)	2,270 (35.5)	4,710 (50.5)	
100											2,950 (45)	
110											1,640 (39)	
Min. boom angle (deg.) for indicated length (no load)										0	34	
Max. boom length (ft.) at 0 degree boom angle (no load)										114	87	

NOTE: Boom angles are in degrees.

A6-829-004643 & -004659

NOTES FOR I

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 tipping load as determined by SAE Crane Stability Test Code J-765a.
- Rated loads include the weight of hook block, slings and auxiliary lifting devices and their weights shall be subtracted from the listed ratings to obtain the net load to be lifted.
- Load ratings are based on freely suspended loads. No attempt shall be made to move a load horizontally on the ground in any direction.
- Rated loads do not account for wind on lifted load or boom. It is recommended when wind velocity is above 20 mph (32 km/h), rated loads and boom lengths shall be appropriately reduced.
- Rated loads are for lift crane service only.
- Do not operate at a radius or boom length where capacities are not listed. At these positions, the machine may overturn without any load on the hook.

CITY
M

GROVE®

FULL HYDRAULIC CARRIER-MOUNTED CRANE

ITIES IN POUNDS

ON OUTRIGGERS FULLY EXTENDED - OVER REAR

Radius in Feet	Main Boom Length in Feet										114 ft. + 32ft. Ext. (2° Offset)	
	36	42	51	60	69	78	87	96	105	114	146	
10	130,000 (67)	106,700 (70.5)	101,600 (74)	100,000 (77)	96,700 (79)							See Warning Note 18
12	123,500 (63)	106,700 (67.5)	101,600 (71.5)	96,500 (75)	87,850 (77)	84,700 (79)						
15	105,000 (57.5)	105,000 (63)	95,300 (68)	84,900 (72)	79,180 (74.5)	77,550 (77)	64,500 (79)					
20	78,850 (47)	78,850 (54.5)	78,850 (61.5)	70,550 (66.5)	64,310 (70)	63,800 (73)	55,000 (75.5)	51,900 (77)	48,450 (78.5)	38,750 (80)		
25	60,000 (34)	60,000 (45.5)	60,000 (55)	60,000 (61)	54,000 (65.5)	49,700 (69)	45,600 (72)	43,600 (74)	41,300 (76)	34,000 (77)	22,500 (80)	
30		47,900 (34)	47,900 (47.5)	47,900 (55.5)	46,650 (61)	42,750 (65)	39,150 (68.5)	38,400 (71)	35,350 (73)	30,300 (74.5)	21,200 (78)	
35		38,100 (16.5)	38,100 (39)	38,100 (49.5)	38,100 (56)	37,300 (61)	34,050 (64.5)	32,700 (67.5)	30,700 (70)	27,250 (72)	18,300 (76)	
40			31,870 (28.5)	31,870 (42.5)	31,870 (50.5)	31,870 (56.5)	29,550 (61)	28,850 (64.5)	27,000 (67)	24,750 (69)	16,000 (74)	
45	See Warning Note 16			25,660 (34.5)	25,660 (45)	25,660 (51.5)	25,660 (57)	25,650 (61)	23,900 (64)	22,650 (66.5)	14,620 (72)	
50				20,680 (24)	20,680 (38.5)	20,680 (46.5)	20,680 (52.5)	20,680 (57.5)	20,680 (61)	20,680 (63.5)	13,730 (69.5)	
60					14,130 (20)	14,130 (35)	14,130 (43.5)	14,130 (49.5)	14,130 (54)	14,130 (57.5)	11,450 (65)	
70							9,520 (32)	9,520 (40.5)	9,520 (46.5)	9,520 (51)	9,540 (60.5)	
80							6,730 (12.5)	6,730 (29.5)	6,730 (38)	6,730 (44)	8,090 (56)	
90								4,440 (7)	4,440 (27)	4,440 (35.5)	6,760 (50.5)	
100										2,760 (24.5)	4,700 (45)	
110											3,130 (39)	
120											1,860 (31.5)	
Min. boom angle (deg.) for indicated length (no load)										0	20	
Max. boom length (ft.) at 0 degree boom angle (no load)										114	96	

NOTE: Boom angles are in degrees.

A6-829-004651 & -004659

CAPACITIES

- The maximum load which can be telescoped is not definable because of variations in loadings and crane maintenance, but it is safe to attempt retraction and extension within the limits of the capacity chart.
 - 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.
 - For safe operation, the user shall make due allowances for his particular job conditions, such as: soft or uneven ground, out of level conditions, high winds, side loads, pendulum action, jerking or sudden stopping of loads, hazardous conditions, experience of personnel, two machine lifts, traveling with loads, electric wires, etc. Side pull on boom or jib is extremely dangerous.
 - Power telescoping boom sections must be extended equally at all times.
 - Handling of personnel from the boom is not authorized except with equipment furnished and installed by Grove Manufacturing Company.
 - Keep load handling devices a minimum of 12 inches (30 cm) below boom head when lowering or extending boom.
 - Loaded boom angles give 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 the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
 - Capacities for the 36 ft. (11.0m) boom length shall be lifted with boom fully retracted. If boom is not fully retracted, capacities shall not exceed those shown for the 42 ft. (12.8m) boom length.
 - Radii less than 35 ft. or 12m not recommended when lifting over front of machine.
 - For boom lengths less than 146 ft. (44.3m) with 32 ft. (9.8m) boom extension erected, the rated loads are determined by boom angle only. In the column headed by 146 ft. (44.3m). For boom angles not shown, use rating of next lower boom angle. For this load column, the 32 ft. (9.8m) boom extension operational mode is to be selected on the Krueger L.M.I. (opt.).
- WARNING: The Krueger L.M.I. (opt.) 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.

TMS865

65 TON CAPACITY
36 ft. - 146 ft. BOOM
(FULL POWER)

JIB CAPACITIES IN POUNDS
28 ft. A-frame and 32 ft. Ext. combination
ON OUTRIGGERS - 360°

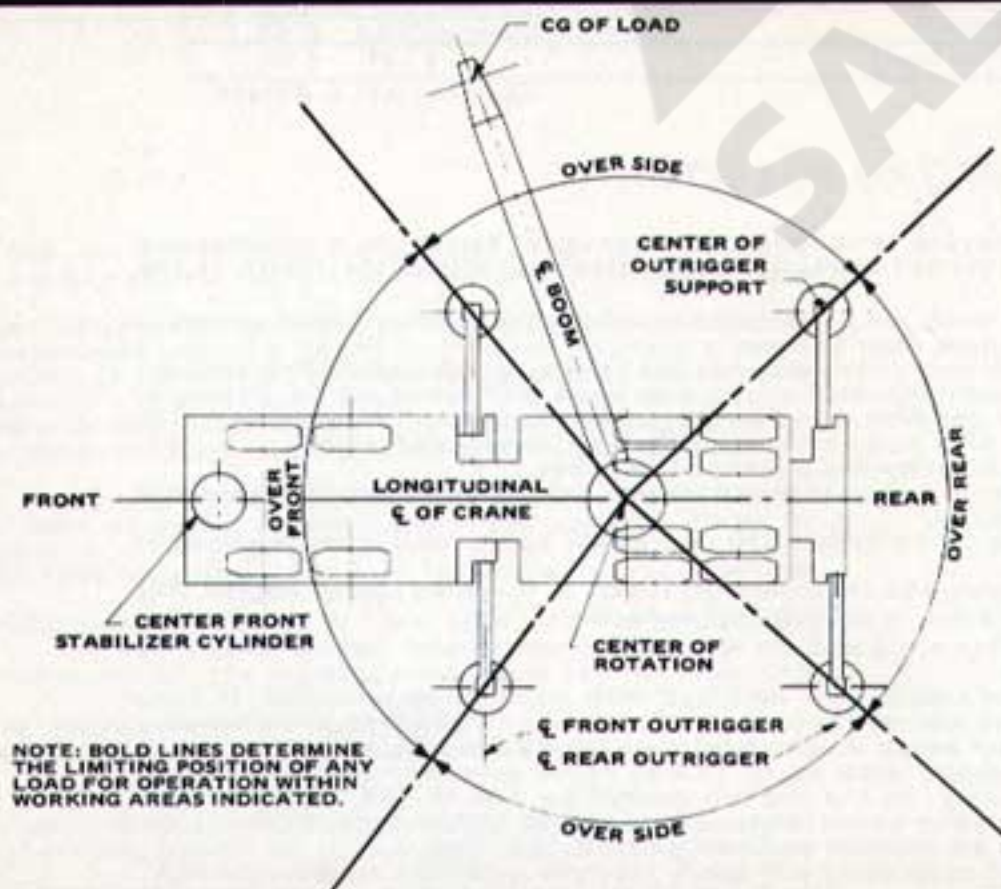
Boom Angle	5° OFFSET		17° OFFSET		30° OFFSET	
	Radius (Ref) ft.	Cap. lbs.	Radius (Ref) ft.	Cap. lbs.	Radius (Ref) ft.	Cap. lbs.
80°	32.6	10,000	38.1	8,450	42.3	6,430
75	47.1	8,720	52.2	7,430	56.4	5,870
70	61.2	7,430	65.8	6,520	70.1	5,510
65	74.8	5,650	78.9	5,040	82.8	4,250
60	87.8	4,510	91.4	4,210	94.9	3,700
55	100.2	2,900	103.2	2,730	106.2	2,730
50	111.8	1,930	114.2	1,830	116.8	1,670
45	122.3	860	124.4	860	126.4	810

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NOTES:

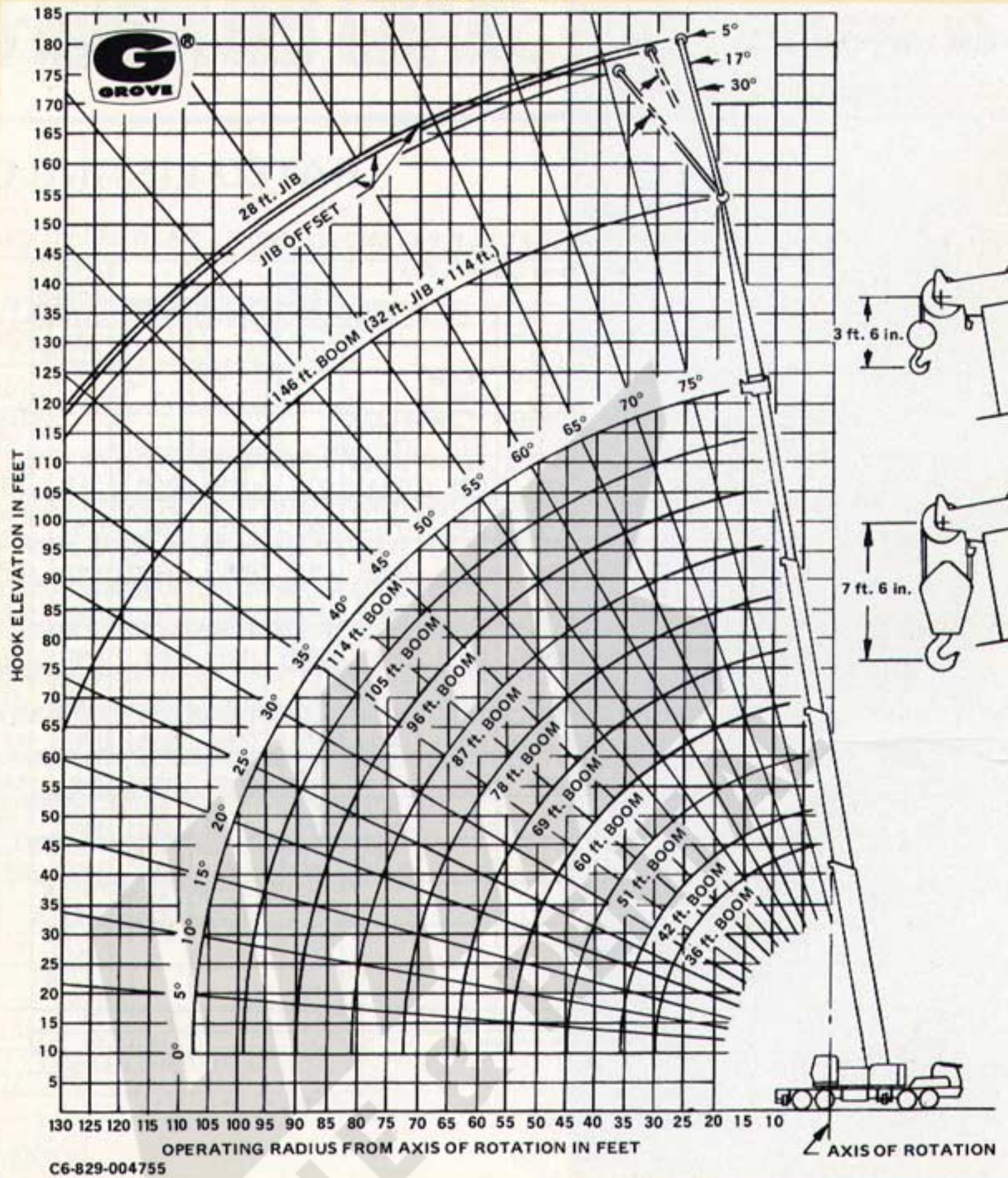
1. All capacities are in pounds. Capacities are based on structural strength of 28 ft. and 32 ft. boom extension combination at given main boom angle regardless of main boom length. (Two part lifting service is required with Krueger LMI; at any other time, single or two part line may be used.)
2. **WARNING:** Operation of machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with jib occurs rapidly and without advance warning.
3. **28 ft. JIB WARNING:** For main boom length greater than 69 ft. with 32 ft. boom extension and 28 ft. jib in working position, the boom angle must not be less than 40° since loss of stability will occur causing a tipping condition. The boom angle is not restricted for main boom length equal to or less than 69 ft. This warning applies for jib erection purposes also.
4. **WARNING:** Lifting on rubber with 32 ft. boom extension or 28 ft. jib and 32 ft. boom extension combination is prohibited.
5. Reference radii listed are for fully extended main boom only.

LIFTING AREA DIAGRAM



CG-329-004714

RANGE DIAGRAM



WEIGHT REDUCTION FOR LOAD HANDLING DEVICES

32 ft. BOOM EXTENSION	
†Stowed	386 lbs.
†Erected	3,312 lbs.
28 ft. Jib & 32 ft. Boom Ext. Combination	
†Stowed	649 lbs.
†Erected	9,396 lbs.
††Erected	2,111 lbs.

HOOK BLOCK	
65 Ton, 5 Sheave	1,900 lbs.
15 Ton, 1 Sheave	580 lbs.
10 Ton Headache Ball	500 lbs.
7 1/2 Ton Headache Ball	300 lbs.
Auxiliary Boom Head	220 lbs.

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.
 †† Reduction of 32 ft. Ext. capacities.



GROVE MANUFACTURING COMPANY
 Division of Walter Kidde & Company, Inc.
KIDDE

Box 21, Shady Grove, Pennsylvania 17256

Distributed by:

GROVE

TMS365



**HYDRAULIC
CRANES**

Patented Grove feature

65

TON CAPACITY

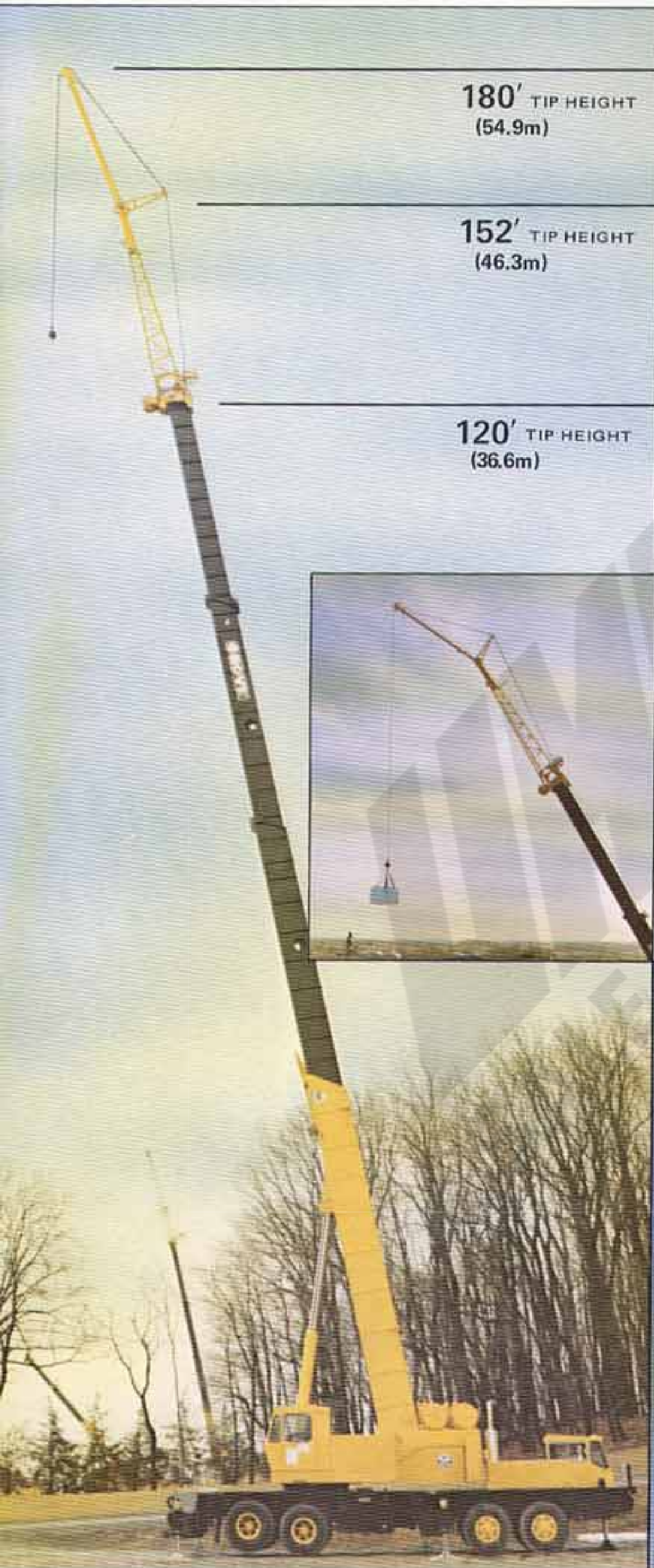
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TONS METRIC

**HYDRAULIC
CRANE with
TRAPEZOIDAL[†]
BOOM**

CONSTANT IMPROVEMENT AND ENGINEERING PROGRESS MAKE IT NECESSARY THAT WE RESERVE THE RIGHT TO MAKE SPECIFICATION, EQUIPMENT AND PRICE CHANGES WITHOUT NOTICE. ILLUSTRATIONS SHOWN MAY INCLUDE OPTIONAL EQUIPMENT AND ACCESSORIES AND MAY NOT INCLUDE ALL STANDARDS AND EQUIPMENT. OPTIONAL EQUIPMENT IS DESIGNATED BY * IN SPECIFICATIONS FOLDER.

180' OF ON-BOARD TIP HEIGHT



180' TIP HEIGHT
(54.9m)

152' TIP HEIGHT
(46.3m)

120' TIP HEIGHT
(36.6m)

QUICKLY AVAILABLE... SUPERIOR CAPACITY

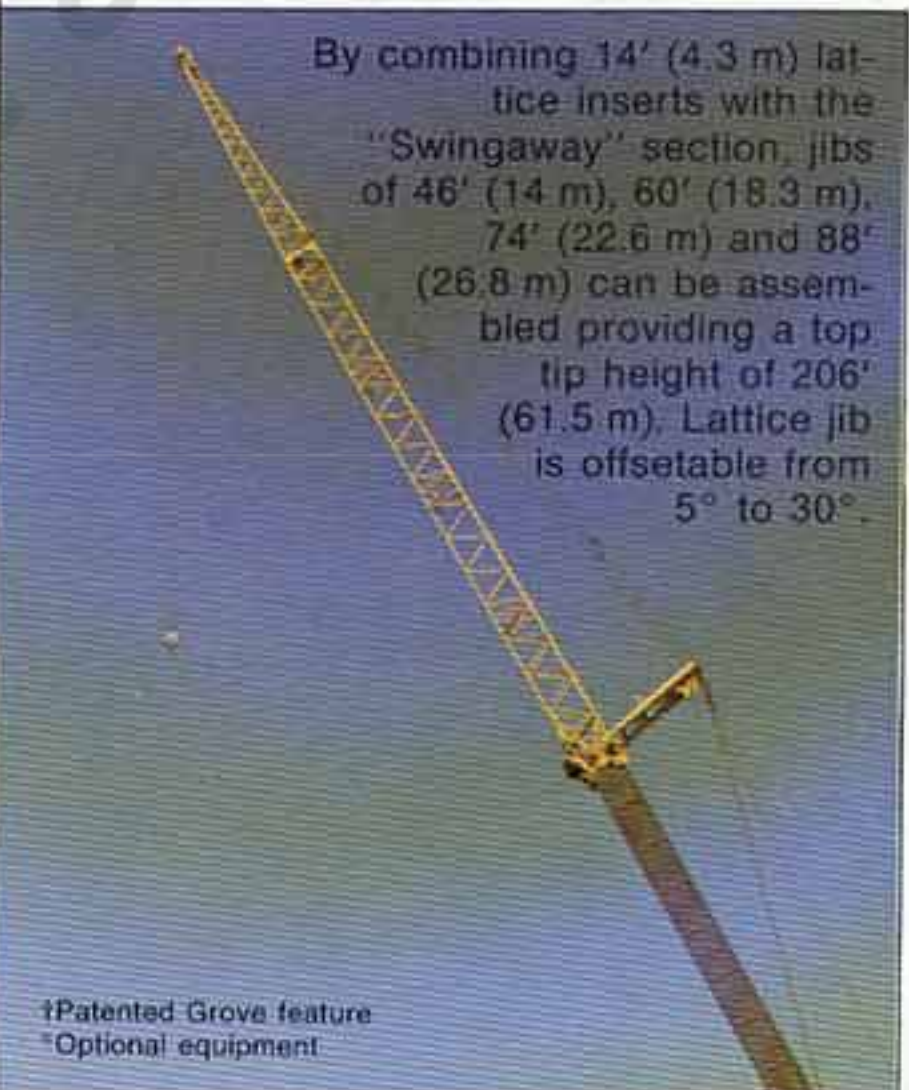
THE GROVE TRAPEZOIDAL† BOOM is the proven performer among high capacity long reach booms. It is a major engineering accomplishment in telescoping boom design and provides the optimum strength-to-weight ratio for hydraulic crane operation. The superior strength and rigidity are directly attributable to the Trapezoidal design and the use of very high strength steels. This permits a deeper, wider and lighter boom with greater resistance to lateral and vertical deflection.

FULL POWER 4-SECTION BOOM* optional boom provides quick set-up. The standard 4-section boom is power-pinned.

UP TO 30° OFFSET

The standard 32' (9.7 m) "Swingaway" plus the optional "A" frame jib provide a total "on-board" tip height of 180' (54.9 m). Both the "Swingaway" and the "A" frame jib are independently stowable alongside the boom base section. The jib is offset 5°, 17° or 30° to give you maximum up-and-over reach.

206'(61.5 m) TIP HEIGHT



By combining 14' (4.3 m) lattice inserts with the "Swingaway" section, jibs of 46' (14 m), 60' (18.3 m), 74' (22.6 m) and 88' (26.8 m) can be assembled providing a top tip height of 206' (61.5 m). Lattice jib is offsettable from 5° to 30°.

†Patented Grove feature
*Optional equipment

TMS805

SPECIFICATIONS



GROVE MANUFACTURING COMPANY

Distributor: Walter Kidde & Company, Inc.

KIDDE

SHADY GROVE, PA. 17215

CARRIER ENGINE SPECIFICATIONS

MAKE & MODEL	Cummins NTC290	*GM 6-71T	*Caterpillar 3306TA
TYPE	6 Cylinder	6 Cylinder	6 Cylinder
BORE & STROKE	5.5 in. x 6 in. (140mm x 152mm)	4.25 in. x 5 in. (108mm x 127mm)	4.75 in. x 6 in. (121mm x 152mm)
DISPLACEMENT	855 cu. in. (14 013cm ³)	426 cu. in. (6982cm ³)	638 cu. in. (10 454cm ³)
HORSEPOWER (NET)	268 at 2100 RPM	251 at 2100 RPM	249 at 2200 RPM
GOVERNED RPM	2100	2100	2200
TORQUE (NET)	885 lbs. ft. (118kg.m) @ 1300 RPM	758 lbs. ft. (104kg.m) @ 1400 RPM	739 lbs. ft. (102kg.m) @ 1400 RPM
ELECTRICAL SYSTEM	12 volts	12 volts	12 volts
STARTING SYSTEM	24 volts	24 volts	24 volts
COMBUSTION SYSTEM	4 cycle turbocharged	2 cycle turbocharged	4 cycle turbocharged
COOLING SYSTEM	Liquid	Liquid	Liquid
ALTERNATOR	12 Volt 90 Amp	12 Volt 90 Amp	12 Volt 90 Amp
BATTERY	•(4) 12 volt 475 CCA @ 0° F	•(4) 12 volt 475 CCA @ 0° F	•(4) 12 volt 475 CCA @ 0° F
AIR CLEANER	2 stage dry type	2 stage dry type	2 stage dry type
AIR COMPRESSOR	13.2 CFM	12 CFM	12 CFM

•CCA – Cold cranking amperage per battery.

*Denotes optional equipment

NOTES: (1) Jacobs engine brake (GM & Cummins engines only) is optional.

(2) Engine performance ratings are to SAE J816B. Performance will be reduced when operating at higher elevations.

Following are approximate reductions for operation at 10,000 ft. (3048m) above sea level: Cummins – 0%; GM – 3.5%; Cat. – 14.5%.

SPEED AND GRADEABILITY WITH FULLER RT9509A TRANSMISSION

ENGINE	Speed Ranges @ Max. Governed RPM		% of Gradeability @ Max. Torque	
	Aux. Low	Aux. Direct	Aux. Low	Aux. Direct
Cummins NTC290	2.0 to 23.6 MPH (3 to 38 km/h)	4.1 to 48.1 MPH (6 to 77 km/h)	56.95 to 3.44	27.15 to .92
*Caterpillar 3306TA	2.1 to 24.8 MPH (3 to 40 km/h)	4.3 to 50.4 MPH (7 to 81 km/h)	47.21 to 2.62	22.38 to .52
*GM6-71T	2.0 to 23.6 MPH (3 to 38 km/h)	4.1 to 48.1 MPH (6 to 77 km/h)	49.22 to 2.79	23.36 to .6

SPEED AND GRADEABILITY WITH *ALLISON HT750CRD AUTOMATIC TRANSMISSION

ENGINE	Speed Ranges @ Max. Governed RPM		% of Gradeability @ Stall	
	Aux. Low	Aux. Direct	Aux. Low	Aux. Direct
Cummins NTC290	6.4 to 23.6 MPH (10 to 38 km/h)	13.0 to 48.1 MPH (21 to 77 km/h)	35.8	17.1
*Caterpillar 3306TA	6.7 to 24.8 MPH (11 to 40 km/h)	13.7 to 50.4 MPH (22 to 81 km/h)	32.6	15.5
*GM6-71T	6.4 to 23.6 MPH (10 to 38 km/h)	13.0 to 48.1 MPH (21 to 77 km/h)	31.2	14.8

NOTE: Performance based on 98,500 lbs. GVW (44 680kg) 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.

Machines should be operated within the limits of crankcase design (Cummins – 15°, GM and Caterpillar – 20°).

Gradeability values above 45% are theoretical.

*Denotes optional equipment



CARRIER SPECIFICATIONS

OUTRIGGERS – Hydraulic, double-box, telescoping beam outriggers, integral welded boxes, removable beams, vertical 6 in. (152mm) bore x 17 in. (432mm) stroke jack cylinders with integral holding valves and 30½ in. (775mm) diameter removable stowable steel floats. Beams extend to 23 ft. (7.0m) centerline to centerline and retract to within 11 ft. (3.4m) overall width by 3 in. (76mm) bore double-acting cylinders. Controls and sight leveling bubble located in superstructure cab and each side of carrier. Powered by carrier engine. In addition to the standard integral holding valve and for added security, the exclusive Grove *spin-lock is offered, which permits the outrigger vertical jack to be mechanically locked in any position throughout its stroke.

FRONT END STABILIZER – A fifth hydraulic vertical jack cylinder with integral holding valve is mounted to the front frame section of the chassis to permit 360° lifting capabilities. The 24 in. (610mm) diameter steel float is easily removed for highway travel. Individual controls for fifth outrigger cylinder conveniently located in superstructure cab and each side of carrier frame.

FRAME – High strength steel, all-welded construction with triple-box type design and integral welded outrigger boxes.

STEERING GEAR – Ross cam and lever type with Garrison hydraulic power assist.

CLUTCH – Lipe Rollway 14 in. (356mm), two plate, dry disc (with Roadranger transmission only).

TRANSMISSION – Fuller Roadranger RT9509A – 9 speeds forward, 2 reverse with Fuller AT1202, 2-speed auxiliary.
*Allison HT750CRD – 5 speeds forward, 1 reverse fully automatic transmission with Fuller AT1202 2-speed auxiliary.

UNIVERSAL JOINTS – Needle bearing type.

AXLES – Front: (2) Rockwell tubular steering FL-951, 100 in. (254mm) track, 44,000 lbs. (19 958kg) capacity.
Rear: Rockwell SW 170 tandem, 100 in. (254mm) track, 70,000 lbs. (31 752kg) capacity with interaxle differential.

SUSPENSION – Front: Reyco 21-B spring-mounted tandem, 44,000 lbs. (19 958kg) capacity.
Rear: Hendrickson T-900 tandem – axle equalizing beam with solid steel saddles, 70,000 lbs. (31 752kg) capacity.

FUEL TANK – Single 100 gallons (379 liters) mounted on left side of frame.

TIRES – Front: 18:00 x 22.5-18PR highway tread tubeless.
Rear: 12:00 x 24-16PR highway tread tube-type. Optional are Michelin 14:00R20-22PR (G-20X) radial tube-type front or rear, Michelin 12:00R20-18PR rear, 14:00 x 20-20PR bias front or rear.

RIMS – Front: demountable 22.5 x 13 (572mm x 330mm).
Rear: demountable 24 x 8.5 (610mm x 216mm). Optional 10 x 20 (254mm x 508mm) with 14:00 x 20 size tires.

WHEELS – Steel spoke (6 spokes) front and rear.

***TIRE INFLATION KIT** – Quick connect air outlet located at midpoint on either side of carrier. Includes dual foot air chuck and 25 ft. (7.6m) cooled nylon tubing.

BRAKES – Full air on all wheels.
Front: 15 in. x 6 in. (381mm x 152mm)
Rear: 16½ in. x 7 in. (419mm x 178mm)
Total lining area: 1,672 in.² (10 788cm²)
Air dryer provided to preclude system-damaging moisture accumulation.

PARKING BRAKES – Spring-set, air-released chambers on both rear axles with manual emergency feature.

ELECTRICAL SYSTEM – 12-volt lighting, 24-volt starting. Federal safety standard lights and reflectors.

CAB – One-man, left hand drive, all-steel construction, with acoustical treatment, tinted safety glass throughout, electric wiper and washer, door and window locks, Bostrom "T" bar seat with seat belt, hot water heater, defroster fan, dual West Coast mirrors, domelight, instrument lights, electric horn, traffic hazard warning switch (4-way flashers), complete instrumentation and driving controls, 2¾ lb. (1.25kg), dry type fire extinguisher.

CAB INSTRUMENTATION – (International Type) – Engine oil-pressure gauge, speedometer, dual air-pressure gauge, fuel-level gauge, engine water-temperature gauge, voltmeter, tachometer, low air-pressure audio-visual warning device, high-beam indicator, hourmeter (10,000 HR.).

MISCELLANEOUS STANDARD EQUIPMENT – Wheel nut wrench and handle, channel-type front bumper, two front and rear towing loops, front and rear fenders, full width decking, ether injection starting aid (less canister), mud flaps, hookblock storage trough, maintenance-free batteries, backup light, air cleaner service indicator.

MISCELLANEOUS OPTIONAL EQUIPMENT – Sling box on left side of frame, lifting lugs and tie down attachments, trailer air and electrical disconnect, rear mounted pintle hook, engine block heater, spare tire and wheel mounting bracket, electronic back-up alarm.

DIMENSIONS

45' (13.7m)

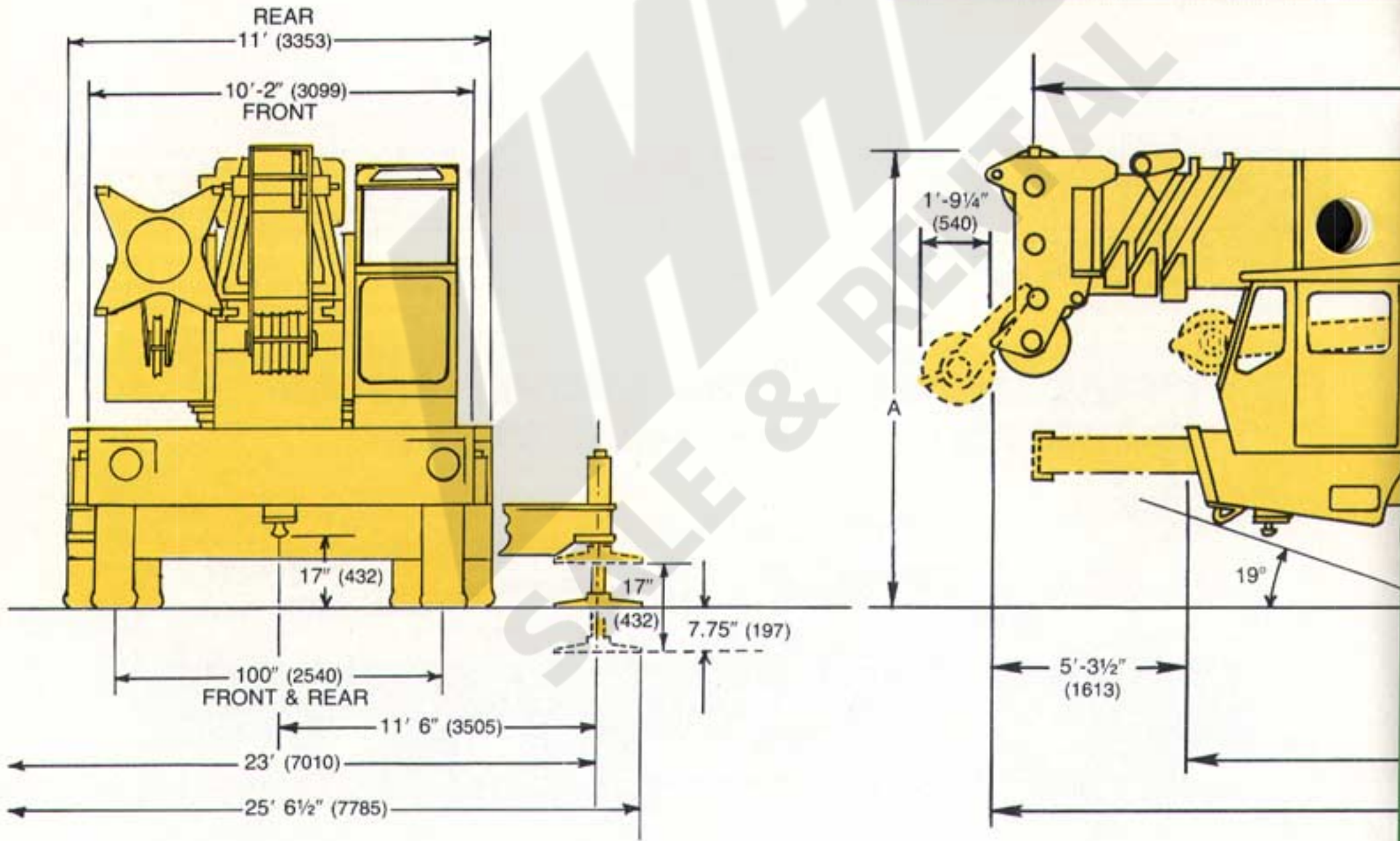
TURNING RADIUS ~~39' 11" (12166)~~

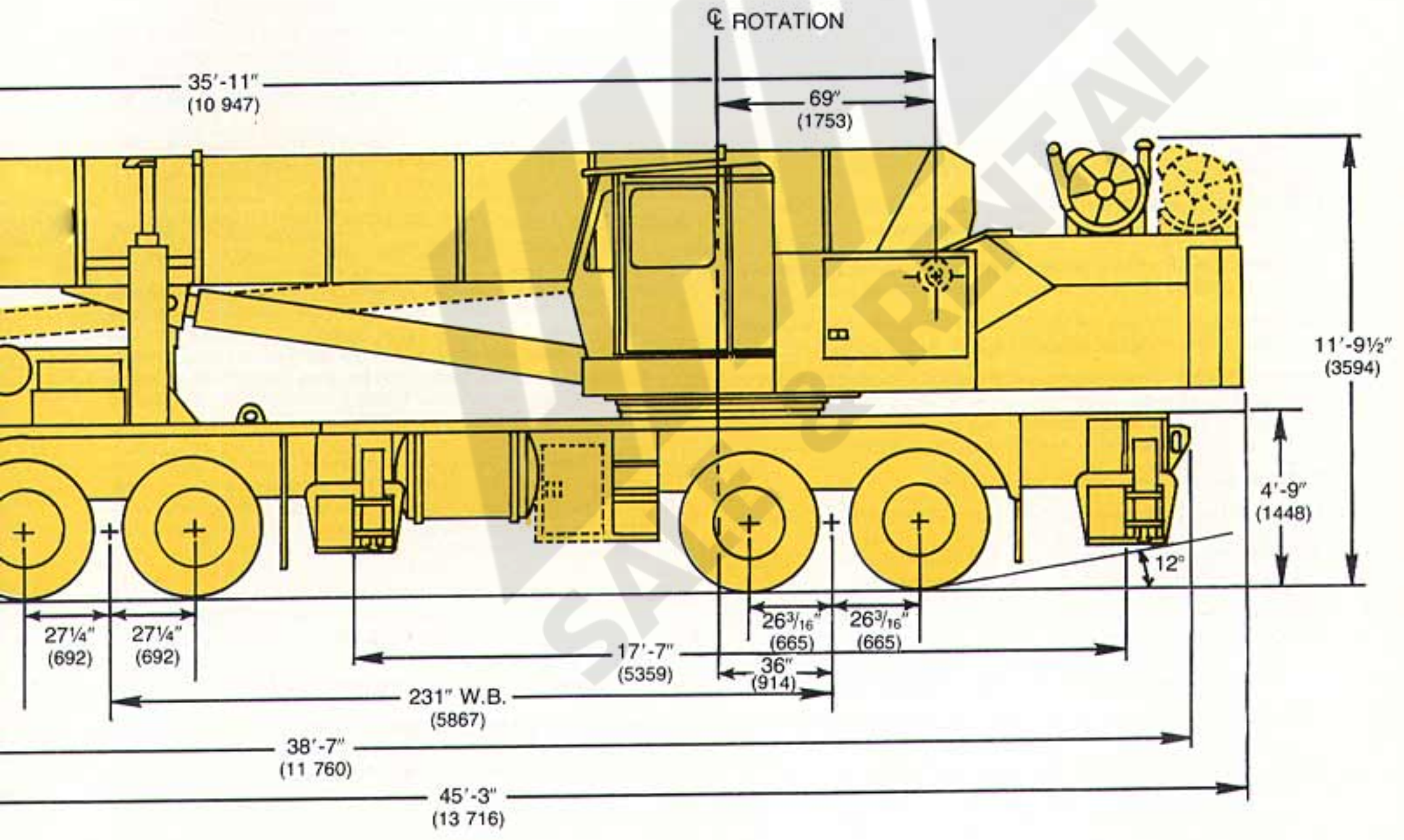
GROUND CLEARANCE 11 5/8" (3359)

TAIL SWING 14' 2" (4267)

Note: Dimensions in parenthesis () are millimeters (mm)

Meets requirements of P.C.S.A. Standard No. 2





A - Overall height without "A" frame jib - 11' 9½" (3594)
 Overall height with "A" frame jib - 13' (3962)



SUPERSTRUCTURE SPECIFICATIONS

BOOM – 36 ft. – 146 ft. (11m – 44.5m) total length; 4-section Trapezoidal main boom consisting of base section, 2 full power sections to 88 ft. (26.8m), a power pinned section to 114 ft. (34.8m) and a 32 ft. (9.7m) "Swingaway" lattice boom extension (2° offset).

***FULL-POWER BOOM** – 36 ft. – 146 ft. (11m – 44.5m) total length; 4-section Trapezoidal main boom consisting of base section, 3 full power sections to 114 ft. (34.8m) and a 32 ft. (9.7m) "Swingaway" lattice boom extension (2° offset).

Each boom has individually controlled telescope sections supported on graphite impregnated nylatron wear pads. Side adjustable wear pads prevent metal-to-metal contact of inner boom sections and permit ease of boom side alignment. Integral holding valves on each telescoping cylinder [6½ in. (165mm) bore x 26 ft. 1 in. stroke (7950mm)].

BOOM NOSE – Five 19.5 in. (495mm) tread diameter sheaves mounted on heavy-duty tapered roller bearings. Removable pin-type rope guards allow easy reeving. Rope dead-ends on each side of boom nose. Six sheaves available for certain international requirements.

Note: 32 ft. (9.7m) "Swingaway" extension has single 19.5 in. (495mm) tread diameter point sheave.

***AUXILIARY BOOM NOSE** – Single 19.5 in. (495mm) tread diameter sheave mounted to the main boom nose (removable) for single line work. Removable pin-type rope guards.

BOOM ELEVATION – Double-acting 10 in. (254mm) bore x 122 in. (3099mm) stroke hydraulic cylinders with integral holding valves. Elevation from –4 to 80°. Combination controls for hand or foot operation.

***LOAD MOMENT AND ANTI-TWO BLOCK SYSTEM (KRUGER)** – Audio-visual warning in combination with Grove control lever lockout of; hoist-up, telescope-out and boom-down crane functions. Kruger LMI control console provides operator with selective display of boom length, radius and angle.

***ANTI-TWO BLOCK SYSTEM (KRUGER)** – A separate Kruger anti-two block system can be obtained independent of the complete Kruger LMI system and is available with audio-visual warning only or audio-visual warning in combination with Grove control lever lockout of; hoist-up, telescope-out and boom-down crane functions. The basic system incorporates electronic boom angle indication with high and low angle presets and audio-visual warning. Also available for the system is an electronic boom length indicator. Operator can select between boom length or boom angle display.

***JIB** – 28 ft. (8.5m) A-frame jib attaches to the sheave shaft of the 32 ft. (9.7m) lattice "Swingaway" boom extension. Jib stows beneath "Swingaway" extension alongside base boom section or can be detached from "Swingaway" and held firmly in place on base section when extension is used independently. Jib can be offset at 5°, 17° and 30°. Includes jib backstops, single rope self-equalizing suspension, removable pin-type rope guard and 19.5 in. (495mm) tread diameter point sheave.

***JIBS** – 14 ft. (4.3m) lattice base section combines with the standard 32 ft. (9.7m) "Swingaway" boom extension to make the basic 46 ft. (14m) jib. Additional 14 ft. (4.3m) pinned inserts available to make 60 ft. (18.3m), 74 ft. (22.6m) and 88 ft. (26.8m) jib lengths. 19.5 in. (495mm) tread diameter jib point sheave mounted on tapered roller bearings. The jib is cable suspended and offset from a minimum of 5° to a maximum of 30°. Jib inserts are not stowable on unit for travel.

CAB – Full vision, all-steel, fully enclosed with acoustical treatment, tinted safety glass throughout; windshield, hinged tinted skylight, sliding left side door, sliding right side glass, door and window locks, full adjustable operator's seat with head rest, 20,000 btu diesel fuel heater, electric windshield wiper and defroster fan, swing horn, domelight, dashlight, complete engine instrumentation and crane operating controls, outrigger control panel, adjustable full length control levers, combination hand/foot controls for swing, boom elevation and engine throttle, sight leveling bubble, electronic boom-angle indicator with high/low angle presets and audio-visual warning, 2¼ lb. (1.25kg) dry-type fire extinguisher.

CAB INSTRUMENTATION – Engine oil-temperature gauge, engine water-temperature gauge, voltmeter, tachometer, fuel-level gauge.

SWING – Roller bearing swing circle, 360° continuous rotation. Grove planetary "glide swing" with foot actuated disc swing brake, spring-set hydraulically released park brake and 360° position positive turntable lock. Combination controls provided for hand or foot operation. Swing speed 1.8 RPM.

OUTRIGGER CONTROLS – Independently controlled in-out-up and down, from superstructure cab and either side of carrier frame. Required sequence control arrangement eliminates unintentional outrigger actuation. To insure proper outrigger retraction sequence, front jack cylinder retracts first when master switch is activated from any control station.

COUNTERWEIGHT – Fixed position pinned to turntable. *Power installation and removal system is available. Weight varies depending on hoist configuration. (Refer to axle weight distribution chart.)

HYDRAULIC SYSTEM:

RESERVOIR – 225 gallons (852 liters) all-steel welded construction with internal baffles, cleanout access, exterior oil sight level and temperature gauge.

FILTER – Return line type, full flow with bypass protection and filter-bypass indicator, replaceable cartridge. 25 micron rating.

PUMPS – Two-tandem main gear pumps driven by carrier engine through PTO with manual declutchable pump drive. Combined capacity 178 GPM (674 lpm) at 2400 RPM.

CONTROL VALVES – Precision four-way, double-acting with integral load check, main and circuit relief valves. Four individual valve banks permit simultaneous independent control of four crane functions. Maximum system operating pressure 2500 PSI (175kg/cm²).

OIL COOLER – Turntable-mounted, full flow, oil to air with thermally controlled hydraulic motor driven fan.

POWER DISTRIBUTION – Main hoist, auxiliary hoist boost, *fly telescope, 51 GPM (193 liters) at 2500 PSI (175.8kg/cm²). Main hoist boost, auxiliary hoist, lift boost, inner mid-telescope 51 GPM (193 liters) at 2500 PSI (175.8kg/cm²). Lift, outer mid-telescope, 51 GPM (193 liters) at 2500 PSI (175.8kg/cm²). Swing, outriggers, 25 GPM (95 liters) at 1500 PSI (105.5kg/cm²).

*Denotes optional equipment

HOIST SPECIFICATIONS

DESCRIPTION: Series parallel circuitry and two motors provide both, high line pull and speed ranges. Power up and down, equal speed, planetary reduction with integral automatic brake and electronic hoist drum rotation indicator.		DESCRIPTION: Power up and down, equal speed, planetary reduction with integral automatic brake and electronic hoist drum rotation indicator.																										
HOIST DATA	MAIN HOIST Grove Model 32S-1726B	*AUXILIARY HOIST Grove Model 32S-1716B	*AUXILIARY HOIST Grove Model 15H-16B	*AUXILIARY HOIST (CONTROLLED FREE FALL) Gearmatic Model 23 MGEGR																								
Drum Dimensions	16 in. dia. (406mm) 26 in. length (660mm) 24 in. dia. flange (610mm)	16 in. dia. (406mm) 16 in. length (406mm) 24 in. dia. flange (610mm)	12 in. dia. (305mm) 16 in. length (406mm) 17.5 in. dia. flange (445mm)	14.5 in. dia. (368mm) 16 in. length (406mm) 22.3 in. dia. flange (566mm)																								
Performance Max. Single Line Speed Max. Single Line Pull	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Hi-Speed Range</td> <td style="width: 50%;">Lo-Speed Range</td> </tr> <tr> <td>575 FPM (175.3m/min)</td> <td>290 FPM (88.4m/min)</td> </tr> <tr> <td>8,400 lbs. (3810kg)</td> <td>16,800 lbs. (7620kg)</td> </tr> </table>	Hi-Speed Range	Lo-Speed Range	575 FPM (175.3m/min)	290 FPM (88.4m/min)	8,400 lbs. (3810kg)	16,800 lbs. (7620kg)	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Hi-Speed Range</td> <td style="width: 50%;">Lo-Speed Range</td> </tr> <tr> <td>575 FPM (175.3m/min)</td> <td>290 FPM (88.4m/min)</td> </tr> <tr> <td>8,400 lbs. (3810kg)</td> <td>16,800 lbs. (7620kg)</td> </tr> </table>	Hi-Speed Range	Lo-Speed Range	575 FPM (175.3m/min)	290 FPM (88.4m/min)	8,400 lbs. (3810kg)	16,800 lbs. (7620kg)	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Hi-Speed Range</td> <td style="width: 50%;">Lo-Speed Range</td> </tr> <tr> <td>383 FPM (116.7m/min)</td> <td>290 FPM (88.4m/min)</td> </tr> <tr> <td>9,165 lbs. (4157kg)</td> <td>16,800 lbs. (7620kg)</td> </tr> </table>	Hi-Speed Range	Lo-Speed Range	383 FPM (116.7m/min)	290 FPM (88.4m/min)	9,165 lbs. (4157kg)	16,800 lbs. (7620kg)	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Hi-Speed Range</td> <td style="width: 50%;">Lo-Speed Range</td> </tr> <tr> <td>422 FPM (129m/min)</td> <td>290 FPM (88.4m/min)</td> </tr> <tr> <td>11,700 lbs. (5307kg)</td> <td>16,800 lbs. (7620kg)</td> </tr> </table>	Hi-Speed Range	Lo-Speed Range	422 FPM (129m/min)	290 FPM (88.4m/min)	11,700 lbs. (5307kg)	16,800 lbs. (7620kg)
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Drum Rope Storage Capacity	†1060 ft. of ¾ in. dia. rope max. (323m of 19mm)	†650 ft. of ¾ in. dia. rope max. (198m of 19mm)	†720 ft. of ½ in. dia. rope max. (219.5m of 13mm)	†700 ft. of ¾ in. dia. rope max. (213.4m of 16mm)																								
Permissible Single Line Rope Pull (3.5:1 Safety Factor)	¾ in. (19mm) 18x19 class - 14,605 lbs. (6625kg)	¾ in. (19mm) 18x19 class - 14,605 lbs. (6625kg)	½ in. (13mm) 6x37 class - 7,600 lbs. (3447kg) ½ in. (13mm) 19x7 class - 6,150 lbs. (2790kg)	¾ in. (16mm) 6x37 class - 10,200 lbs. (4627kg) ¾ in. (16mm) 19x7 class - 9,600 lbs. (4355kg)																								

*Denotes optional equipment. Auxiliary hoist control valve is standard equipment.
†Sixth layer of rope not recommended for hoisting operations.

THREE MODES OF THE GROVE TMS865 "SWINGAWAY"/JIB COMBINATION –



The 32 ft. (9.7m) "Swingaway" and optional 28 ft. (8.5m) A-frame jib can provide the TMS865 with an additional 60 ft. (18.3m) of reach capability, conveniently stowed on the crane. The three different modes of this combination are:

1. Lifting from the main boom with the "Swingaway" extension and jib stowed alongside the base boom section.

2. Lifting from the main boom or "Swingaway" with the "Swingaway" erected and the jib stowed alongside the base boom section.
3. Lifting from the main boom, "Swingaway", or jib with both "Swingaway" and jib erected.

AXLE WEIGHT DISTRIBUTION CHART

ITEM	POUNDS			KILOGRAMS		
	GROSS	FRONT	REAR	GROSS	FRONT	REAR
Basic standard machine to include 36 ft. – 114 ft. (10.9m – 34.8m) Trapezoidal boom (power-pinned fly) plus a 32 ft. (9.7m) "Swingaway" extension, Grove model 32S-1726B main hoist with 650 ft. of ¾ in. (19mm) rope, 9,000 lbs. (4082kg) counterweight, Grove model 8x4 – 65 carrier, Cummins NTC290 engine with Fuller 9509A transmission, fifth front outrigger jack.	98,464	37,661	60,803	44 664	17 083	27 581
REMOVE:						
•Standard 9,000 lbs. (4082kg) counterweight	-9,000	+4,714	-13,714	-4082	+2138	-6221
Standard 32 ft. "Swingaway" extension	-2,465	-2,286	-179	-1118	-1037	-81
Standard main hoist with rope	-2,832	+1,073	-3,905	-1285	+487	-1771
(2) front outrigger beams and jacks	-3,220	-2,133	-1,087	-1461	-968	-493
(2) rear outrigger beams and jacks	-3,220	+1,310	-4,530	-1461	+594	-2055
ADD:						
65-ton (60 mt) hookblock (stowed)	+1,610	+2,091	-481	+730	+948	-218
28 ft. (8.5m) "A" frame jib (stowed)	+1,582	+1,078	+504	+718	+489	+229
Auxiliary boom head	+230	+409	-179	+104	+186	-81
••Model 15S-16B aux. hoist with 650 ft. (198m) of ½ in. (13mm) dia. rope	+1,055	-531	+1,586	+479	-241	+719
•••Model 23 aux. hoist with 650 ft. (198m) of ¾ in. (16mm) dia. rope	+1,869	-941	+2,810	+848	-427	+1275
••••Model 32S-1716B aux. hoist with 650 ft. (198m) of ¾ in. (19mm) dia. rope and idler	+2,530	-1,274	+3,804	+1148	-578	+1725
Kruger load moment indicator	+376	+136	+240	+171	+62	+109
SUBSTITUTE:						
36 ft. – 114 ft. (10.9m – 34.7m) full power boom	+2,204	+1,002	+1,202	+999	+454	+545
••8,200 lbs. (3720kg) counterweight	-800	+419	-1,219	-363	+190	-553
•••7,730 lbs. (3506kg) counterweight	-1,270	+665	-1,935	-576	+302	-878
••••7,300 lbs. (3311kg) counterweight	-1,700	+870	-2,570	-771	+395	-1166
GM6-71T engine	-500	-517	+17	-227	-235	+8
Cat 3306TA engine	-450	-465	+15	-204	-211	+7

NOTE: Appropriate counterweight substitutions must be made depending on main and auxiliary hoist configuration specified.

- Use 9,000 lbs. (4082kg) counterweight without auxiliary hoist.
- Use 8,200 lbs. (3720kg) counterweight with Grove 15S-16B auxiliary hoist.
- Use 7,730 lbs. (3506kg) counterweight with Gearmatic Model 23 auxiliary hoist.
- Use 7,300 lbs. (3311kg) counterweight with Grove Model 32S-1716B auxiliary hoist.

PROFIT-PRODUCING CYCLE TIMES begin in the acoustically treated cab where a control arrangement, standardized by Grove, permits maximum efficiency in simultaneous, multi-function operation. With precision and smoothness, the operator commands a high-performance, 4-pump hydraulic system providing all the power necessary for craning operations. The Grove two-speed hoist provides the most productive combination of line speed and line pull for high-cycle work. The speed range is selected by a simple flip of a switch on the cab control panel.

Swing is smooth and precise, powered by a high-torque, low rpm hydraulic motor, with planetary drive and "glideswing."

The Grove TMS865 gives you all of the elements you need for profitable cycle-time production.

ROADABLE PROFIT-MAKER

STANDARD

360° OPERATION WITH

FRONT MOUNTED STABILIZER

AUTOMATIC TRANSMISSION*

Getting there and back is half the fun when you drive this Allison fully automatic transmission. Standard is the Roadranger RT9509A. Both drive through a Fuller two-speed auxiliary.

*Denotes optional equipment

CHOICE OF 3 ENGINES

Pick the power plant that best serves your needs. Only Grove gives you this choice.

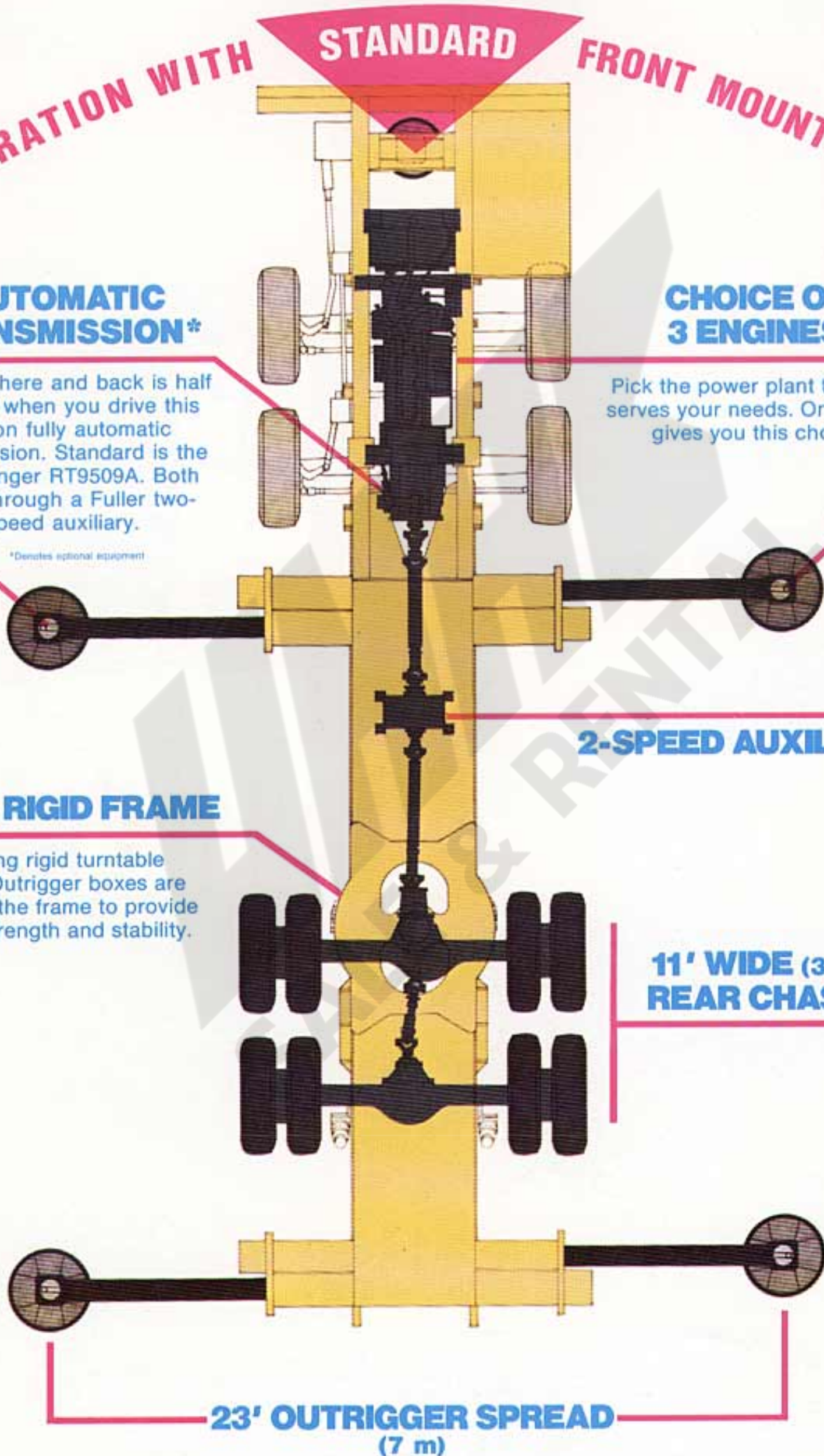
2-SPEED AUXILIARY

STRONG, RIGID FRAME

for a strong rigid turntable mounting. Outrigger boxes are integral with the frame to provide additional strength and stability.

**11' WIDE (3.4 m)
REAR CHASSIS**

**23' OUTRIGGER SPREAD
(7 m)**



TMS865

AM



GRADEABILITY

On or off the highway, the balanced power-to-weight ratio of the TMS865 will provide the mobility and grade-pulling power that will enable you to move from job to job at highway speeds and around the jobsite with ease.



HIGHWAY SPEEDS



TIGHT TURNING RADIUS

In city traffic or tight quarter jobsite locations, the 39' 11" (12.2 m) turning radius will make your job easier.

UNDER

40'

PRODUCTIVE CYCLE TIMES

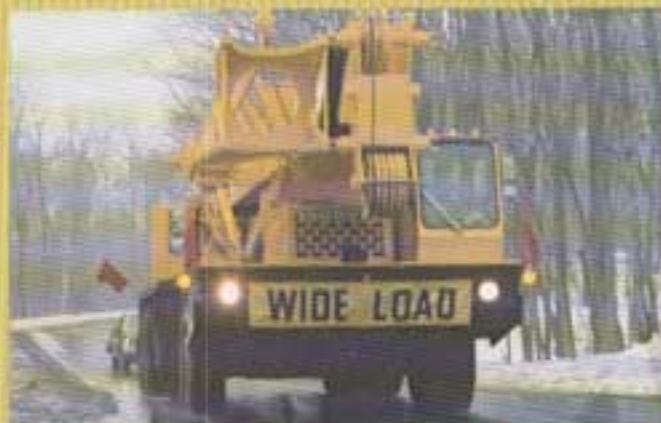
- LINE SPEEDS UP TO 575 fpm (175.3 m/min)
- SMOOTH, PRECISE SWING
- 4-PUMP RESPONSIVE HYDRAULIC SYSTEM
- EFFICIENT CONTROL ARRANGEMENT FOR MULTI-FUNCTION OPERATION
- UNOBSTRUCTED VISIBILITY



TMS865

The 65-Tonner you've been looking for!

ROADABILITY • CAPACITY • REACH • RELIABILITY • PROFITABILITY



**THE MOST COMPLETE LINE OF
HYDRAULIC CRANES FOR
CONSTRUCTION & INDUSTRY**



CARRIER MOUNTED CRANES
18 through 140 U.S. tons
(18 through 130-tons metric)



**ROUGH
TERRAIN
CRANES**
8 through 80 U.S. tons
(7.3 through 73-tons metric)



**INDUSTRIAL
CRANES**
2 through 35 U.S. tons
(1.8 through 31.8-tons metric)

100302



GROVE MANUFACTURING COMPANY

Division of Walter Kidde & Company, Inc.

KIDDE

SHADY GROVE, PA. 17256 U.S.A.

Telex: 842308/Cable: GROVEMFG

**WORLD
LEADER
IN**

HYDRAULIC CRANES