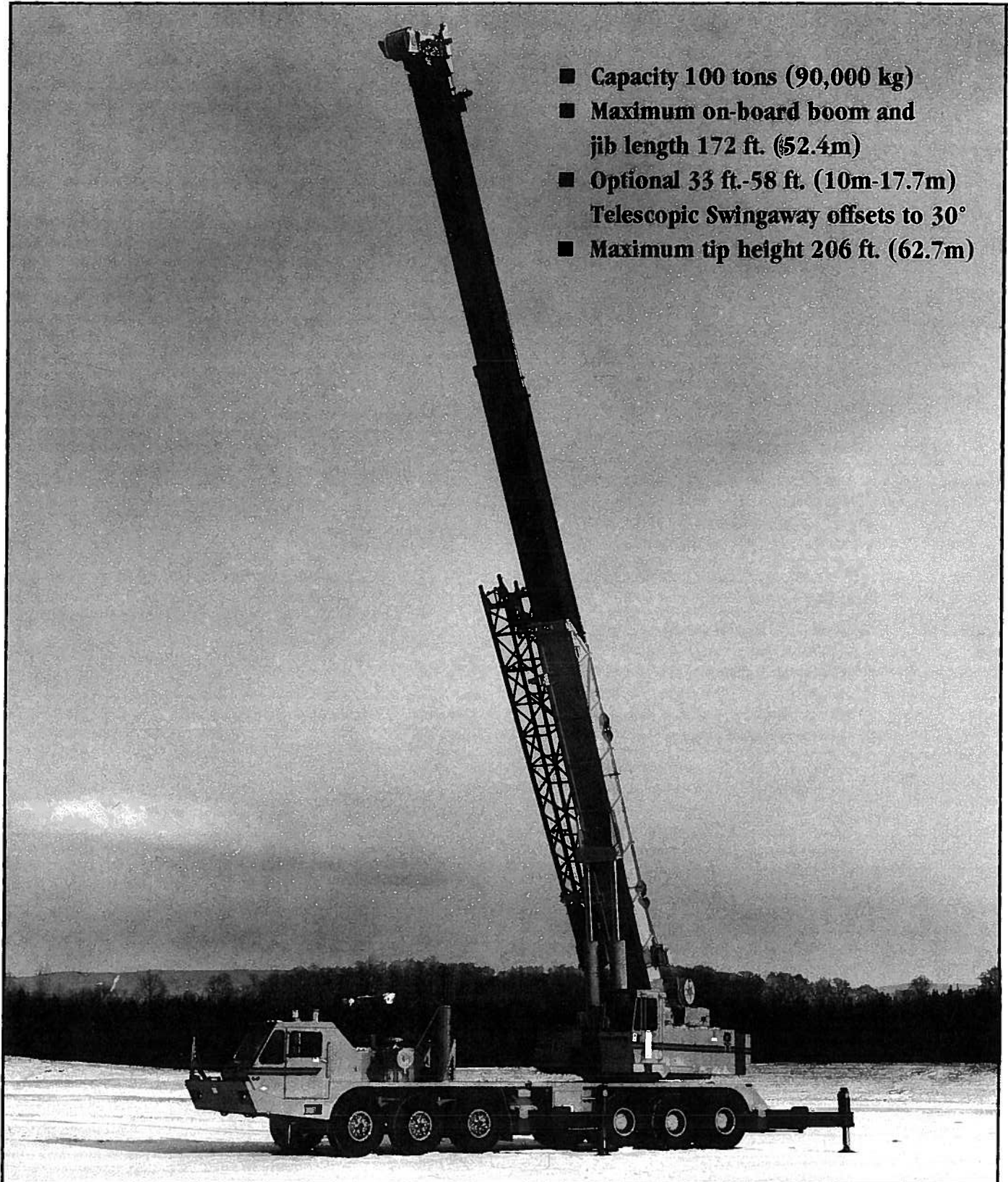


**GROVE**<sup>®</sup>  
worldwide

# TM8100

Truck mounted hydraulic crane/12x6 Carrier



- Capacity 100 tons (90,000 kg)
- Maximum on-board boom and jib length 172 ft. (52.4m)
- Optional 33 ft.-58 ft. (10m-17.7m)  
Telescopic Swingaway offsets to 30°
- Maximum tip height 206 ft. (62.7m)

# Carrier specifications (12x6)

## \*Auxiliary Hoist HO30B-26

		High Range	Low Range
<b>Maximum single line speed</b>	Bottom layer	393 FPM (120m/min)	197 FPM (60m/min)
	Intermediate layer	456 FPM (139m/min)	228 FPM (69m/min)
	Top layer	520 FPM (158m/min)	260 FPM (79m/min)
<b>Maximum single line pull</b>	Bottom layer	7,345 lbs. (3332 kg)	14,690 lbs. (6663 kg)
	Intermediate layer	6,325 lbs. (2869 kg)	12,650 lbs. (5738 kg)
	Top layer	5,555 lbs. (2520 kg)	11,110 lbs. (5039 kg)
<b>Maximum permissible line pull</b>	12,920 lbs. (5861 kg)		
<b>w/5:1 Strength Factor</b>	w/18x19 or 35x7 class construction		
<b>Maximum rope stowage</b>	832 ft. (254m) 3/4" (19mm)		
	Note: 700 ft. (213.3m) of wire rope supplied with standard unit.		

†Patented Grove feature or patent pending.  
\*Denotes optional equipment.

# Carrier specifications (12x6)

<b>Frame</b>	High strength alloy steel all welded box-type construction with integral outrigger housings and front/rear lifting, towing and tie down lugs.
<b>Outrigger System</b>	Hydraulic double stage, double box telescopic beam and jack outriggers with integral holding valves. All steel fabricated quick release type outrigger floats 30 1/2" (775mm) diameter. Standard fifth front stabilizer for 360° duties.
<b>Outrigger Controls</b>	Located in superstructure cab and on both sides of the carrier frame. Push button controls requiring two-handed operation. Crane level indicator (sight bubble) adjacent to each set of controls.
<b>Engine</b>	GM8V-71TA eight cylinder, turbo-charged water cooled diesel with Jacobs engine brake. 568 cu. in. (9.3 l) 370 bhp (276 kw) (Gross) @ 2100 RPM. Maximum net torque 983 ft. lbs. (136 kg/m) @ 1200 RPM.
<b>Optional Engine</b>	Cummins NTC350 six cylinder turbo-charged and after-cooled diesel with Jacobs engine brake. 855 cu. in. (14.0 l) 350 bhp (261 kw) (Gross) @ 2100 RPM. Maximum net torque 1120 ft. lbs. (155 kg/m) @ 1300 RPM.

<b>Fuel Tank Capacity</b>	(1) 100 gallon (379 l)
<b>Electrical System</b>	Four 12 volt - maintenance free batteries. 24 volt starting.
<b>Drive</b>	12 x 6.
<b>Steering</b>	Front axle steering, cam and lever type with hydraulic assist.
<b>Transmission</b>	Manual Fuller Roadranger, with 13 speeds forward, 3 speeds reverse.
<b>Axes</b>	Front: (3) Tube steer type, 100 in. (2540mm) track. Rear: (3) Planetary drive type, 85 in. (2159) track with dash mounted inter-axle differential control.
<b>Suspension</b>	Front axles (3) spring mounted. Rear axles (3) solid mounted with equalizing beam and solid steel saddles.
<b>Tires</b>	14.00Rx20 (G-20X) Michelin radial tube type, highway tread front and rear.
<b>Brakes</b>	Full air on all wheels. Air dryer provided to preclude moisture accumulation. Spring set emergency/parking brake on both rear axles with manual release.
<b>Lights</b>	Full lighting including head, tail, braking, reversing, fog, directional and hazard warning lights.
<b>Cab</b>	All steel fabricated with acoustical lining and tinted safety glass throughout. Deluxe fabric covered fully adjustable seat. Complete driving controls and engine instrumentation including tachometer, speedometer, voltmeter, water temp. oil pressure, fuel level, air pressure gauge with A/V warning. Other standard items include hot water heater/defroster, electric windshield wash/wipe, fire extinguisher, seat belt and door and window locks.
<b>Maximum Speed</b>	45 mph (72.4 km/hr).
	BASIC STANDARD MACHINE
<b>Gross Vehicle Weight &amp; Axle Loads</b>	Front Tridem: 38,750 lbs. (17,577 kgs) Rear Tridem: 96,120 lbs. (43,600 kgs) G.V.W.: 134,870 lbs. (61,177 kgs)
<b>Miscellaneous Standard Equipment</b>	Dual rear view mirrors, hookblock tiedown sling, electronic back-up alarm, light package, hourmeter and ether injection starting aid (less canister).
<b>*Optional Equipment</b>	Immersion engine block heater, engine low oil pressure/high water temperature, audio visual warning and tire inflation kit.

†Patented Grove feature or patent pending.  
\*Denotes optional equipment.

# Superstructure specifications

<b>Boom</b>	36 ft. to 114 ft. (11.0m - 34.7m) four section Trapezoidal† power pin or optional full power boom. Each full power boom section has individually controlled telescope sections supported on graphite impregnated nylatron wear pads. Maximum tip height: 124 ft. (37.8m).
<b>Swingaway Extension</b>	33 ft. (10.1m) lattice swingaway boom extension stows alongside base boom section when not in use, offsettable at 2°, 15° or 30°. Maximum tip height: 157 ft. (47.9m).
<b>Optional Telescopic Swingaway</b>	33 ft. to 48 ft. to 58 ft. (10.1m-14.6m-17.7m) telescopic lattice swingaway extension with offset links offsettable at 2°, 15° or 30°. Stows alongside base boom when not in use. Maximum tip height: 178 ft. (54.3m).
<b>Optional Jib Extension</b>	14 ft. (4.3m) lattice sections combine with a 32 ft. (9.8m) tip section to make jib lengths of 46 ft. (14.0m), 60 ft. (18.3m), 74 ft. (22.6m) or 88 ft. (26.8m). Maximum tip height: 206 ft. (62.8m).
<b>Boom Nose</b>	Seven sheaves mounted on heavy duty tapered roller bearings with removable pin-type rope guards. *Optional removable auxiliary boom nose with removable pin type rope guard.
<b>Boom Elevation</b>	Two double acting hydraulic cylinders with integral holding valve provides elevation from -4° to 80°.
<b>Load Moment &amp; Anti-Two Block System</b>	Standard load moment and anti-two block system with audio-visual warning and control lever lockout. These systems provide electronic display of boom angle, length, radius, tip height, relative load moment, maximum permissible load, load indication and warning of impending two-block condition.
<b>Cab</b>	Full vision, all steel fabricated with accoustical lining and tinted safety glass throughout. Dash panel incorporates gauges for all engine functions. Other standard features include: hinged skylight, sliding left side door and sliding right side window, electric windshield washer, wiper, circulating air fan, heater, swing horn, fire extinguisher, seat belt. *Optional item: electric skylight wiper.
<b>Swing</b>	Ball bearing swing circle with 360° continuous rotation. Grove planetary "glide swing" with foot actuated disc brake, spring applied hydraulically released park brake and 360° position positive turntable lock. Combination controls provided for hand or foot operation. Swing speed 1.8 RPM.
<b>Counterweight</b>	Hydraulically extendable counterweight. Power installation and removal system. Weight varies depending on hoist configuration.

**Engine** Detroit 8.2L eight cylinder turbo-charged water cooled diesel, 200 bhp (149 kw) (Gross) @ 2800 RPM. Maximum net torque: 408 ft. lbs. (56.4 kg/m) @ 1700 RPM.

**Optional Engine** Cummins 6BTA5.9 six cylinder turbo-charged and after cooled diesel. 359 cu. in. (5.9 l) 200 hp (149 kw) @ 2500 RPM. Maximum torque: 504 ft. lbs. (683 kg/m) @ 1700 RPM.

## HYDRAULIC SYSTEM

**Pumps** Five main gear pumps powered by superstructure engine. Manual pump disconnect. Combined capacity 289 GPM (1094 LPM).

**Valves** Precision four way double acting control valves, five individual valve banks permit simultaneous control of multiple crane functions.

**Filter** Return line type, full flow with bypass protection and service indicator, replaceable cartridge, 7/17/22 filtration Beta rating.

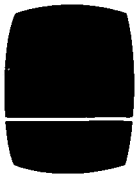
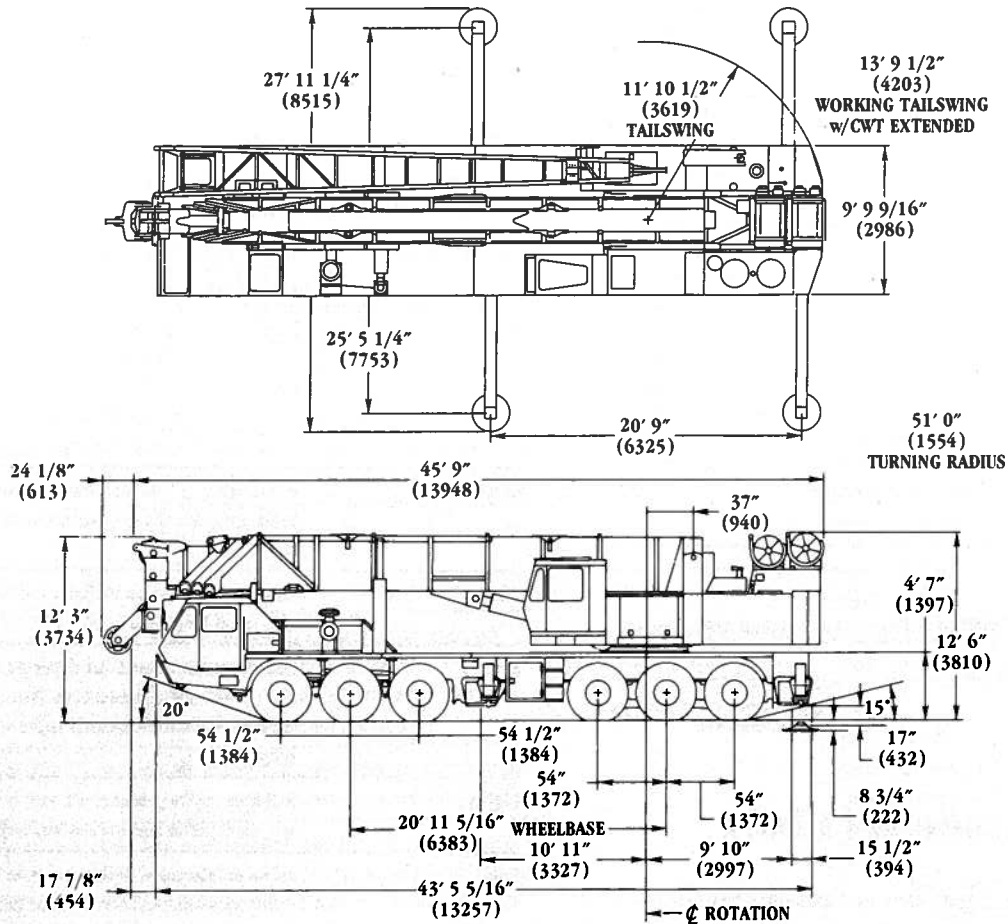
**Reservoir** 305 gallons (1155 l) with spin-on breather filter, external sight gauge, clean out access.

**Oil Cooler** Full flow, fin and tube, oil to air.

## HOIST SPECIFICATIONS

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.

		<b>Main Hoist HO30B-26</b>	
		<b>High Range</b>	<b>Low Range</b>
<b>Maximum single line speed</b>	Bottom layer	437 FPM (133m/min)	219 FPM (67m/min)
	Intermediate layer	508 FPM (155m/min)	254 FPM (77m/min)
	Top layer	579 FPM (176m/min)	290 FPM (88m/min)
<b>Maximum single line pull</b>	Bottom layer	8,161 lbs. (3702 kg)	16,322 lbs. (7404 kg)
	Intermediate layer	7,028 lbs. (3188 kg)	14,056 lbs. (6376 kg)
	Top layer	6,172 lbs. (2800 kg)	12,344 lbs. (5599 kg)
<b>Maximum permissible line pull w/5:1 Strength Factor</b>		15,000 lbs. (6804 kg) w/40x7 class construction	
<b>Maximum rope stowage</b>		832 ft. (254m) 3/4" (19mm)	
		Note: 700 ft. (213.3m) of wire rope supplied with standard unit.	



**GROVE**  
worldwide

**Grove Worldwide - World Headquarters**  
1565 Buchanan Trail East  
Shady Grove, Pennsylvania 17256  
Phone: (717) 597-8121  
Telex: 1842308 Fax: (717) 597-4062

**Grove North America**  
P.O. Box 21, Shady Grove, Pennsylvania 17256  
Western Hemisphere, Asia/Pacific  
Phone: (717) 597-8121  
Telex: 1842308 Fax: (717) 597-4062

**Grove Europe\***  
Sunderland, England SR4 6TT  
Europe, Africa, Middle East, Near East  
Phone: (091) 565-6281  
Telex: 53484 CRANES G Fax: (091) 564-0442

\* Grove Coles Limited, Registered in England, Number 1845128, Registered office, Crown Works, Pallion, Sunderland, Tyne & Wear, England SR4 6TT.

FORM NO.: SB-TM8100 (12x6) 690-5M PRINTED IN U.S.A.

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 standard equipment.

Distributed By:

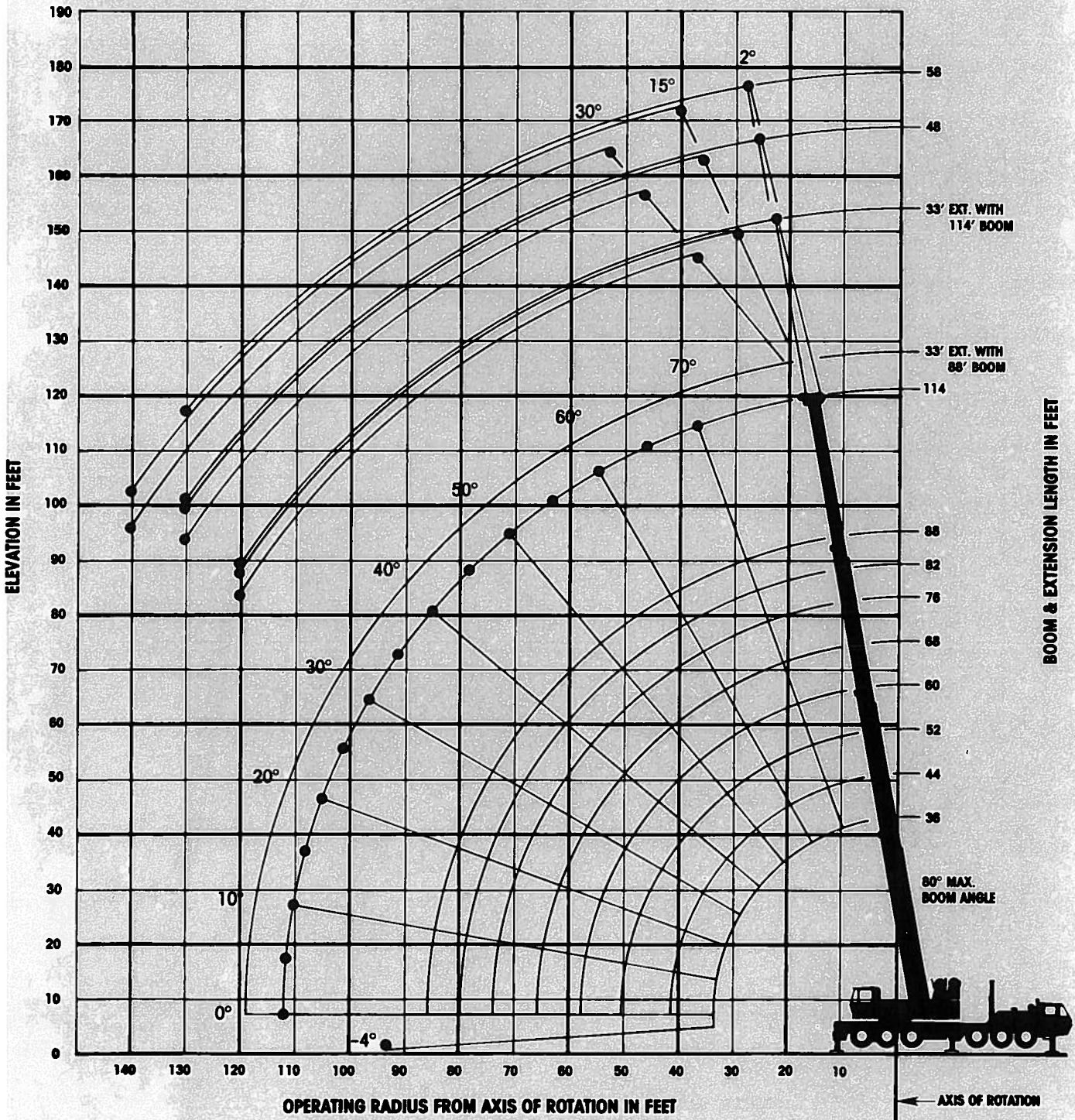


**GROVE**<sup>®</sup>  
worldwide

# TM8100

85% Domestic/36 ft.-114 ft. Power Pinned Boom

RANGE DIAGRAM (UNLADEN BOOM)



Rad in Ft
9
10
12
15
20
25
30
35
40
45
50
60
70
80
90
10
11

Note: B

3

7

# DOMESTIC 85% LIFTING CAPACITIES (POUNDS) POWER PINNED BOOM ON OUTRIGGERS FULLY EXTENDED

## MAIN BOOM - 360°

**33 FT. - 58 FT. TELE.**

Radius in Feet	Main Boom Length in Feet (Power Pinned Fly Retracted)								Power Pin. Fly Ext. 88 ft.
	36	44	52	60	68	76	82	88	114
9	200,000 (71)								
10	180,000 (69)								
12	160,000 (65.5)	125,000 (70)	110,000 (73.5)	99,000 (75.5)	92,000 (77.5)	87,000 (79)			
15	125,000 (60)	113,000 (66)	103,500 (70)	95,700 (72.5)	89,250 (75)	83,800 (77)	74,150 (78)	63,000 (79)	
20	93,500 (50.5)	91,550 (58.5)	89,100 (64)	86,000 (67.5)	81,750 (70.5)	75,750 (73)	67,000 (74.5)	59,850 (75.5)	50,000 (80)
25	72,500 (39)	72,000 (50.5)	71,250 (57.5)	70,150 (62.5)	68,100 (66)	63,500 (69)	58,000 (70.5)	54,000 (72.5)	45,000 (77.5)
30	58,000 (23.5)	57,900 (41.5)	57,800 (50.5)	57,550 (57)	57,000 (61)	52,950 (64.5)	48,850 (67)	44,700 (69)	39,250 (75)
35		48,100 (30.5)	48,050 (43)	48,000 (51)	47,900 (56.5)	45,200 (60.5)	41,700 (63)	37,850 (65.5)	33,900 (72.5)
40			39,915 (34.5)	39,915 (44.5)	39,915 (51)	39,150 (56)	35,950 (59)	32,500 (61.5)	29,650 (69.5)
45			32,510 (22.5)	32,510 (37)	32,510 (45.5)	32,510 (51.5)	31,250 (55)	28,250 (58)	26,150 (67)
50				26,500 (28)	26,500 (39)	26,500 (46)	26,500 (50.5)	24,750 (54)	23,300 (64)
60					18,600 (22)	18,600 (34.5)	18,600 (40.5)	18,600 (45)	18,800 (58.5)
70						12,800 (16.5)	12,800 (27.5)	12,800 (35)	14,785 (52)
80								9,000 (20)	11,060 (45)
90									8,415 (37)
100									5,925 (27)
110									3,590 (9.5)
Min. boom angle (deg.) for indicated length (no load)									0
Max. boom length (ft.) at 0 deg. boom angle (no load)									88
									114

Note: Boom angles are in degrees.

A6-829-009945

Radius in Feet	33 ft. EXTENSION						48 ft. TELE.		
	2° OFFSET		15° OFFSET		30° OFFSET		2° OFFSET		15°
	Boom Angle Ref.	Cap. lbs.	Boom Angle Ref.	Cap. lbs.	Boom Angle Ref.	Cap. lbs.	Boom Angle Ref.	Cap. lbs.	Boom Angle Ref.
<b>POWER PINNED FLY</b>									
20	80.0	30,000							
25	77.5	27,750	80.0	20,000			80.0	20,000	
30	75.5	25,650	78.0	19,200			77.5	18,050	
35	72.5	23,500	75.5	18,200	80.0	15,000	75.5	16,600	80.0
40	70.0	21,500	73.0	17,150	76.5	13,750	73.0	15,400	77.0
45	67.5	19,500	70.5	16,100	74.0	12,900	71.0	14,350	75.0
50	65.0	17,750	68.0	15,000	71.0	12,200	68.5	13,300	72.5
60	59.5	14,150	62.5	12,800	65.5	11,250	64.0	11,350	68.0
70	53.5	11,400	56.5	11,100	59.5	10,400	59.0	10,000	63.0
80	47.5	9,240	50.0	9,240	53.0	9,240	54.0	8,730	57.5
90	40.5	6,640	43.0	6,640	45.5	6,640	48.5	7,710	52.0
100	32.0	4,610	34.5	4,610	36.5	4,610	42.5	5,980	46.0
110	21.0	3,000	23.0	3,000			35.5	4,200	38.5
120							27.0	2,750	30.0
130							13.5	1,540	
140									
<b>POWER PINNED FLY</b>									
30	80.0	29,600							
35	77.0	25,600	80.0	19,200			80.0	14,400	
40	75.0	23,250	77.5	16,800	80.0	13,800	77.0	13,700	80.0
45	73.0	21,150	75.5	15,150	78.0	12,900	75.0	13,200	78.5
50	71.0	19,200	73.0	13,650	76.0	12,050	73.0	12,450	77.0
60	66.5	15,650	69.0	11,150	71.5	10,100	69.5	10,600	73.0
70	62.0	12,550	64.5	9,250	67.0	8,570	65.5	8,680	69.0
80	57.5	9,940	59.5	7,730	62.0	7,160	61.5	7,140	64.5
90	52.5	7,140	54.5	6,420	57.0	6,040	57.0	5,940	60.5
100	47.0	4,970	49.5	4,970	51.5	4,970	52.5	4,980	56.0
110	41.0	3,240	43.5	3,240	45.0	3,240	48.0	3,930	51.0
120	34.5	1,830	36.5	1,830	38.0	1,830	42.5	3,090	45.5
130							37.0	1,960	39.5
140									

\*This capacity is based upon the maximum boom angle.

## 33 FT. FIXED LENGT

### POWER PINNED FLY RETRACTED

Radius in Feet	2° OFFSET		15° OFFSET		30° OFFSET	
	Boom Ang. (Deg.)	Cap. lbs.	Boom Ang. (Deg.)	Cap. lbs.	Boom Ang. (Deg.)	Cap. lbs.
<b>POWER PINNED FLY RETRACTED</b>						
20	80	30,000				
25	77.5	28,250	80	20,500		
30	75.5	26,150	78	19,700		
35	72.5	24,000	75.5	18,700	80	15,500
40	70	22,000	73	17,650	76.5	14,250
45	67.5	20,000	70.5	16,600	74	13,400
50	65	18,050	68	15,500	71	12,700
60	59.5	14,650	62.5	13,300	65.5	11,750
70	53.5	11,900	56.5	11,600	59.5	10,900
80	47.5	9,990	50	9,990	53	9,990
90	40.5	7,390	43	7,390	45.5	7,390
100	32	5,370	34.5	5,370	36.5	5,370
110	21	3,760	23	3,760		

\*This capacity is based upon the maximum boom angle.

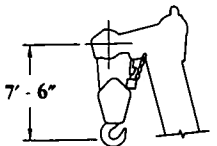
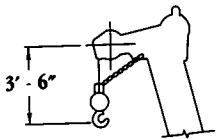
A6-829-008797

### WEIGHT REDUCTIONS FOR LOAD HANDLING DEVICES

33 FT. FIXED EXTENSION	
†Stowed -	677 lbs.
†Erected -	6,115 lbs.
33-58 FT. TELE. BOOM EXTENSION	
†Stowed -	933 lbs.
†Erected (ret.) -	9,105 lbs.
†Erected (ext.) -	12,528 lbs.

†Reduction of main boom capacities.

HOOKBLOCKS:	
90 Ton, 6 Sheave	2,030 lbs.
15 Ton, 1 Sheave	650 lbs.
Auxiliary Boom Head	320 lbs.
5 Ton Headache Ball	172 lbs.
7 1/2 Ton Headache Ball	338 lbs.
10 Ton Headache Ball	560 lbs.



DIMENSIONS ARE FOR LARGEST GROVE FURNISHED HOOK BLOCK AND HEADACHE BALL, WITH ANTI-TWO BLOCK ACTIVATED.

58 FT. TELE. SWINGAWAY - 360°

48 ft. EXTENSION						58 ft. EXTENSION					
2° OFFSET		15° OFFSET		30° OFFSET		2° OFFSET		15° OFFSET		30° OFFSET	
Boom Angle Ref.	Cap. lbs.	Boom Angle Ref.	Cap. lbs.	Boom Angle Ref.	Cap. lbs.	Boom Angle Ref.	Cap. lbs.	Boom Angle Ref.	Cap. lbs.	Boom Angle Ref.	Cap. lbs.
<b>POWER PINNED FLY RETRACTED</b>											
80.0	20,000										
77.5	18,050					80.0	16,000				
75.5	16,600	80.0	12,000			76.5	13,850				
73.0	15,400	77.0	10,700			74.5	12,800	80.0	10,000		
71.0	14,350	75.0	9,930	80.0	10,000	72.5	11,850	77.5	9,460		
68.5	13,300	72.5	9,330	77.5	8,830	70.5	11,000	75.5	9,020	80.0	7,800
64.0	11,350	68.0	8,310	72.5	7,370	66.0	9,660	71.0	8,140	76.0	6,790
59.0	10,000	63.0	7,460	67.0	6,720	61.5	8,770	66.5	7,400	71.5	6,120
54.0	8,730	57.5	6,790	61.5	6,320	57.0	8,170	61.5	6,610	66.5	5,620
48.5	7,710	52.0	6,170	56.0	5,840	52.0	7,640	56.5	6,090	61.5	5,250
42.5	5,980	46.0	5,650	49.5	5,330	46.5	6,970	51.5	5,690	55.5	5,020
35.5	4,200	38.5	4,200	41.5	4,200	40.5	5,370	45.5	5,110	49.5	4,650
27.0	2,750	30.0	2,750	31.5	2,750	34.0	4,050	38.5	4,050	42.0	4,050
13.5	1,540					25.5	2,960	30.0	2,960	32.0	2,960
						12.5	2,040				
<b>POWER PINNED FLY EXTENDED</b>											
80.0	14,400					80.0	9,200				
77.0	13,700	80.0	12,300			77.5	8,940				
75.0	13,200	78.5	11,750			76.0	8,770				
73.0	12,450	77.0	11,050	80.0	8,600	74.0	8,590	80.0	7,900		
69.5	10,600	73.0	9,590	76.5	8,200	70.5	8,170	75.0	7,590	80.0	6,600
65.5	8,680	69.0	7,980	72.5	7,280	67.0	7,490	71.5	7,060	75.5	6,020
61.5	7,140	64.5	6,550	68.0	6,130	63.5	6,480	67.5	6,070	71.5	5,590
57.0	5,940	60.5	5,540	63.5	5,150	59.5	5,350	63.5	5,020	67.5	4,840
52.5	4,980	56.0	4,690	59.0	4,410	55.5	4,560	59.5	4,260	63.0	4,050
48.0	3,930	51.0	3,910	53.5	3,830	51.5	3,820	55.0	3,570	58.5	3,470
42.5	3,090	45.5	2,970	48.0	3,080	47.0	2,940	50.5	3,010	53.5	2,920
37.0	1,960	39.5	1,960	41.5	1,960	42.0	1,860	45.0	2,300	48.0	2,360
								39.5	1,300	42.0	1,520

A6-829-008691 & -008687

# NOTES FOR LIFTING CAPACITIES

**“WARNING: THIS CHART IS ONLY A GUIDE. The Notes below are for illustration only and should not be relied upon to operate the crane. The individual crane’s load chart, operating instructions and other instruction plates must be read and understood prior to operating the crane.”**

- All rated loads have been tested to and meet minimum requirements of SAE J1063 OCT80 - Cantilevered Boom Crane Structures - Method of Test, and do not exceed 85% of the tipping load on outriggers as determined by SAE J765 OCT80 Crane Stability Test Code.
- Capacities given do not include the weight of hookblocks, slings, auxiliary lifting equipment and load handling devices. Their weights MUST be added to the load to be lifted. When more than minimum required reeving is used, the additional rope weight shall be considered part of the load.
- Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
- All capacities are for crane on firm, level surface. It may be necessary to have structural supports under the outrigger floats or tires to spread the load to a larger bearing surface.
- 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 outrigger operation, ALL outriggers shall be fully extended with tires raised free of ground before raising the boom or lifting loads.
- With boom extension in working position and main boom length greater than 88 ft., boom angle must not be less than 32°, since loss of stability will occur causing a tipping condition.
- Capacities for swingaway with less than fully extended main boom must be based on boom angle.

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 standard equipment.



**Grove Worldwide - World Headquarters**  
 1565 Buchanan Trail East  
 Shady Grove, Pennsylvania 17256  
 Phone: (717) 597-8121  
 Telex: 1842308 Fax: (717) 597-4062

**Grove North America**  
 P.O. Box 21, Shady Grove, Pennsylvania 17256  
 Western Hemisphere, Asia/Pacific  
 Phone: (717) 597-8121  
 Telex: 1842308 Fax: (717) 597-4062

**Grove Europe\***  
 Sunderland, England SR4 6TT  
 Europe, Africa, Middle East, Near East  
 Phone: (091) 565-6281  
 Telex: 53484 CRANES G Fax: (091) 564-0442

\* Grove Coles Limited, Registered in England, Number 1845128, Registered office, Crown Works, Pallion, Sunderland, Tyne & Wear, England SR4 6TT.

FIXED LENGTH SWINGAWAY - 360°

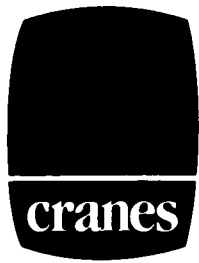
CTED

POWER PINNED FLY EXTENDED

30° OFFSET		Radius in Feet	2° OFFSET		15° OFFSET		30° OFFSET	
Boom Ang. (Deg.)	Cap. lbs.		Boom Ang. (Deg.)	Cap. lbs.	Boom Ang. (Deg.)	Cap. lbs.	Boom Ang. (Deg.)	Cap. lbs.
<b>POWER PINNED FLY EXTENDED</b>								
		30	80	29,600				
		35	77	26,100	80	19,700		
		40	75	23,750	77.5	17,300	80	14,300
		45	73	21,650	75.5	15,650	78	13,400
80	15,500	50	71	19,700	73	14,150	76	12,550
76.5	14,250	60	66.5	16,150	69	11,650	71.5	10,600
74	13,400	70	62	13,050	64.5	9,790	67	9,110
71	12,700	80	57.5	10,700	59.5	8,270	62	7,700
65.5	11,750	90	52.5	7,920	54.5	6,960	57	6,580
59.5	10,900	100	47	5,750	49.5	5,410	51.5	5,745
53	9,990	110	41	4,020	43.5	4,020	45	4,020
45.5	7,390	120	34.5	2,610	36.5	2,610	38	2,610
36.5	5,370							

\*This capacity is based upon the maximum boom angle.

A6-829-008947

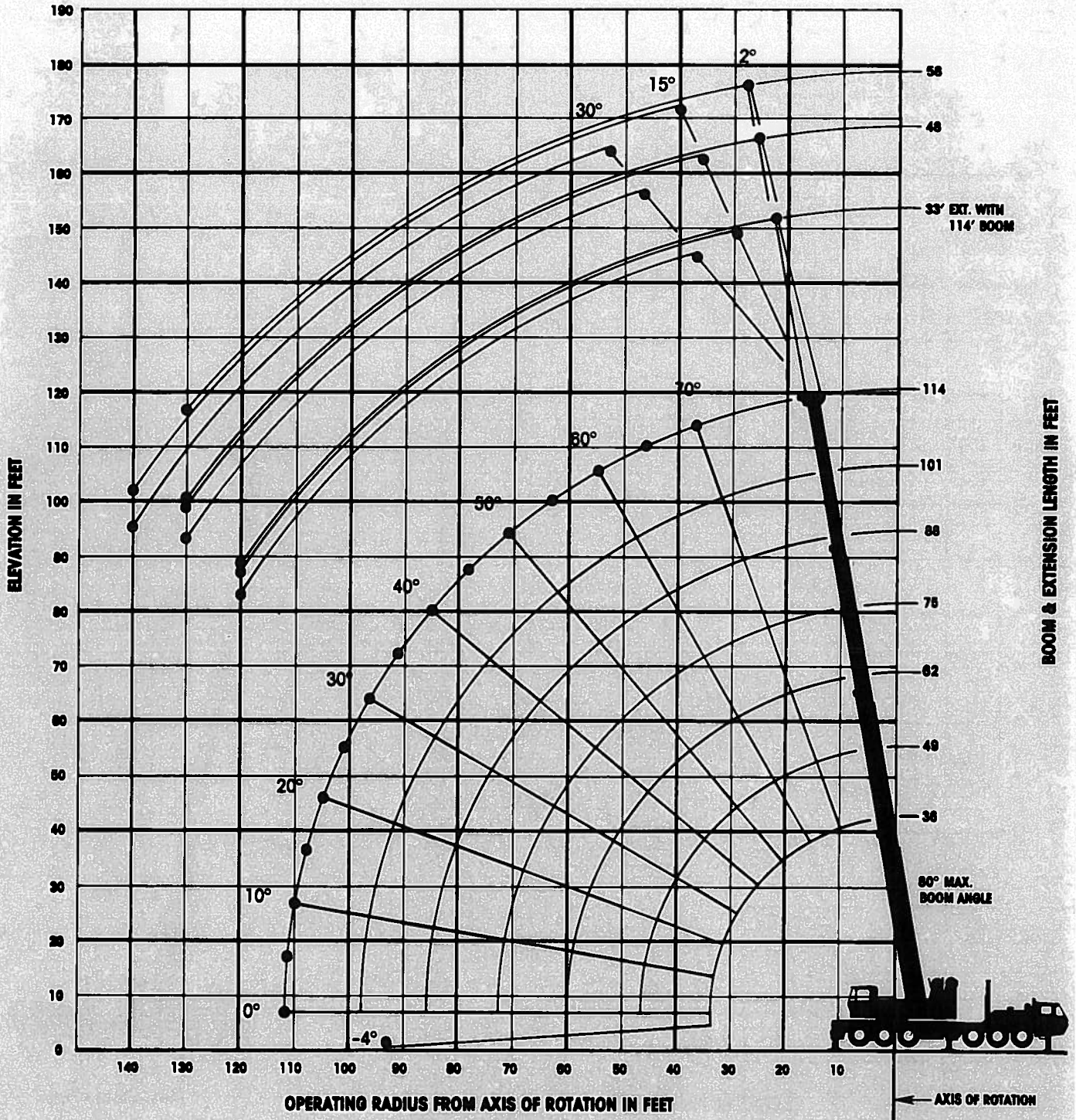


**GROVE**<sup>®</sup>  
worldwide

# TM8100

85% Domestic/36 ft.-114 ft. Full Power Boom

RANGE DIAGRAM (UNLADEN BOOM)





# DOMESTIC 85% LIFTING CAPACITIES (POUNDS)

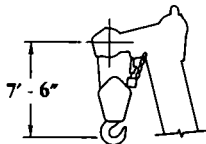
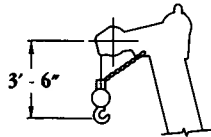
## FULL POWER BOOM

### ON OUTRIGGERS FULLY EXTENDED

#### WINGAWAY - 360°

OFFSET	30° OFFSET	
Cap. lbs.	Boom Angle (deg.)	Cap. lbs.
*19,700		
17,300	80	*14,300
15,650	78	13,400
14,150	76	12,550
11,650	71.5	10,600
9,790	67	9,110
8,270	62	7,700
6,960	57	6,580
5,410	51.5	5,745
4,020	45	4,020
2,610	38	2,610

A6-829-008796



DIMENSIONS ARE FOR LARGEST GROVE FURNISHED HOOK BLOCK AND HEADACHE BALL, WITH ANTI-TWO BLOCK ACTIVATED.

#### MAIN BOOM - 360°

Radius in Feet	Main Boom Length in Feet							
	36	49	62	75	88	101	114	
9	200,000 (71)							
10	180,000 (69)							
12	160,000 (65.5)	103,000 (72.5)	83,000 (76)	78,000 (78.5)				
15	120,000 (60)	100,000 (68.5)	81,000 (73.5)	76,500 (76.5)	63,000 (79)			
20	93,000 (50.5)	90,000 (62)	79,000 (68.5)	68,000 (72.5)	59,400 (76)	54,000 (77.5)	50,000 (80)	
25	72,500 (39)	72,500 (55.5)	70,700 (63.5)	64,000 (68)	54,000 (72.5)	52,200 (74.5)	43,200 (78)	
30	58,000 (23.5)	58,000 (48)	58,000 (58)	50,000 (64)	44,100 (69)	43,200 (71.5)	36,000 (75)	
35		46,240 (39)	44,100 (52.5)	40,700 (59.5)	36,000 (65)	34,000 (68.5)	32,400 (72.5)	
40		36,530 (28.5)	36,530 (46)	35,000 (55)	30,000 (61.5)	29,000 (65.5)	27,000 (69.5)	
45		28,870 (11.5)	28,870 (39.5)	28,870 (50.5)	28,500 (57.5)	27,100 (62.5)	25,000 (67)	
50			23,380 (31.5)	23,380 (45)	23,380 (53.5)	23,380 (59)	21,000 (64)	
60				16,330 (33)	16,330 (44.5)	16,330 (52.5)	16,330 (58)	
70				11,980 (13)	11,980 (34.5)	11,980 (45)	11,980 (51.5)	
80					8,870 (19.5)	8,870 (36)	8,870 (44.5)	
90						6,640 (24)	6,640 (36)	
100							4,880 (26)	
110							3,660 (8)	
Min. boom angle (deg.) for indicated length (no load)							0	
Max. boom length (ft.) at 0 deg. boom angle (no load)							114	

Note: Boom angles are in degrees.

A6-829-009949

#### 33 FT. - 58 FT. TELE. SWINGAWAY - 360°

Radius in Feet	33 ft. EXTENSION						48 ft. EXTENSION						58 ft. EXTENSION					
	2° OFFSET		15° OFFSET		30° OFFSET		2° OFFSET		15° OFFSET		30° OFFSET		2° OFFSET		15° OFFSET		30° OFFSET	
	Boom Angle Ref.	Cap. lbs.	Boom Angle Ref.	Cap. lbs.	Boom Angle Ref.	Cap. lbs.	Boom Angle Ref.	Cap. lbs.	Boom Angle Ref.	Cap. lbs.	Boom Angle Ref.	Cap. lbs.	Boom Angle Ref.	Cap. lbs.	Boom Angle Ref.	Cap. lbs.	Boom Angle Ref.	Cap. lbs.
30	80.0	*29,600																
35	77.0	25,600	80.0	*19,200			80.0	*14,400					80.0	*9,200				
40	75.0	23,250	77.5	16,800	80.0	*13,800	77.0	13,700	80.0	*12,300			77.5	8,940				
45	73.0	21,150	75.5	15,150	78.0	12,900	75.0	13,200	78.5	11,750			76.0	8,770				
50	71.0	19,200	73.0	13,650	76.0	12,050	73.0	12,450	77.0	11,050	80.0	*8,600	74.0	8,590	80.0	*7,900		
60	66.5	15,650	69.0	11,150	71.5	10,100	69.5	10,600	73.0	9,590	76.5	8,200	70.5	8,170	75.0	7,590	80.0	*6,600
70	62.0	12,550	64.5	9,250	67.0	8,570	65.5	8,680	69.0	7,980	72.5	7,280	67.0	7,490	71.5	7,060	75.5	6,020
80	57.5	9,940	59.5	7,730	62.0	7,160	61.5	7,140	64.5	6,550	68.0	6,130	63.5	6,480	67.5	6,070	71.5	5,590
90	52.5	7,140	54.5	6,420	57.0	6,040	57.0	5,940	60.5	5,540	63.5	5,150	59.5	5,350	63.5	5,020	67.5	4,840
100	47.0	4,970	49.5	4,970	51.5	4,970	52.5	4,980	56.0	4,690	59.0	4,410	55.5	4,560	59.5	4,260	63.0	4,050
110	41.0	3,240	43.5	3,240	45.0	3,240	48.0	3,930	51.0	3,910	53.5	3,830	51.5	3,820	55.0	3,570	58.5	3,470
120	34.5	1,830	36.5	1,830	38.0	1,830	42.5	3,090	45.5	2,970	48.0	3,080	47.0	2,940	50.5	3,010	53.5	2,920
130							37.0	1,960	39.5	1,960	41.5	1,960	42.0	1,860	45.0	2,300	48.0	2,360
140															39.5	1,300	42.0	1,520

\*This capacity is based upon the maximum boom angle.

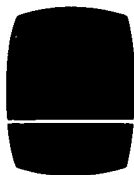
A6-829-008687

# NOTES FOR LIFTING CAPACITIES

**"WARNING: THIS CHART IS ONLY A GUIDE. The Notes below are for illustration only and should not be relied upon to operate the crane. The individual crane's load chart, operating instructions and other instruction plates must be read and understood prior to operating the crane."**

1. All rated loads have been tested to and meet minimum requirements of SAE J1063 OCT80 - Cantilevered Boom Crane Structures - Method of Test, and do not exceed 85% of the tipping load on outriggers as determined by SAE J765 OCT80 Crane Stability Test Code.
2. Capacities given do not include the weight of hookblocks, slings, auxiliary lifting equipment and load handling devices. Their weights **MUST** be added to the load to be lifted. When more than minimum required reeving is used, the additional rope weight shall be considered part of the load.
3. Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
4. All capacities are for crane on firm, level surface. It may be necessary to have structural supports under the outrigger floats or tires to spread the load to a larger bearing surface.
5. 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.
6. For outrigger operation, **ALL** outriggers shall be fully extended with tires raised free of ground before raising the boom or lifting loads.
7. With boom extension in working position and main boom length greater than 88 ft., boom angle must not be less than 32°, since loss of stability will occur causing a tipping condition.
8. Capacities for swingaway with less than fully extended main boom must be based on boom angle.

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 standard equipment.



**GROVE**<sup>®</sup>  
worldwide

**Grove Worldwide - World Headquarters**  
1565 Buchanan Trail East  
Shady Grove, Pennsylvania 17256  
Phone: (717) 597-8121  
Telex: 1842308 Fax: (717) 597-4062

**Grove North America**  
P.O. Box 21, Shady Grove, Pennsylvania 17256  
Western Hemisphere, Asia/Pacific  
Phone: (717) 597-8121  
Telex: 1842308 Fax: (717) 597-4062

**Grove Europe\***  
Sunderland, England SR4 6TT  
Europe, Africa, Middle East, Near East  
Phone: (091) 565-6281  
Telex: 53484 CRANES G Fax: (091) 564-0442

\* Grove Coles Limited, Registered in England, Number 1845128, Registered office, Crown Works, Pallion, Sunderland, Tyne & Wear, England SR4 6TT.

FORM NO.: LC-TM8100-85% DOMESTIC 690-10M PRINTED IN U.S.A.

## 33 FT. FIXED LENGTH SWINGAW

Radius in Feet	2° OFFSET		15° OFFSET	
	Boom Angle (deg.)	Cap. lbs.	Boom Angle (deg.)	Cap. lbs.
30	80	<b>*29,600</b>		
35	77	26,100	80	<b>*19,700</b>
40	75	23,750	77.5	17,300
45	73	21,650	75.5	15,650
50	71	19,700	73	14,150
60	66.5	16,150	69	11,650
70	62	13,050	64.5	9,790
80	57.5	10,700	59.5	8,270
90	52.5	7,920	54.5	6,960
100	47	5,750	49.5	5,410
110	41	4,020	43.5	4,020
120	34.5	2,610	36.5	2,610

## WEIGHT REDUCTIONS FOR LOAD HANDLING DEVICES

33 FT. FIXED EXTENSION	
†Stowed -	677 lbs.
†Erected -	6,115 lbs.
33-58 FT. TELE. BOOM EXTENSION	
†Stowed -	933 lbs.
†Erected (ret.) -	9,105 lbs.
†Erected (ext.) -	12,528 lbs.

†Reduction of main boom capacities.

HOOKBLOCKS:	
90 Ton, 6 Sheave	2,030 lbs.
15 Ton, 1 Sheave	650 lbs.
Auxiliary Boom Head	320 lbs.
5 Ton Headache Ball	172 lbs.
7 1/2 Ton Headache Ball	338 lbs.
10 Ton Headache Ball	560 lbs.