GROVE®

FULL HYDRAULIC CARRIER-MOUNTED CRANE

TM275LP

(LOW PROFILE) 30-TON CAP.

PCSA CLASS 12-120

(with 32'–80' or 29'–92' boom)

MASTER COPY

GROVE FEATURES ON THE TM275 LOW PROFILE

* Low Profile Allows Overall Height to 10'
* Hoist Speeds to 360 F.P.M.
  Single Line Pull to 11,700 lbs.
* Highest Hook Heights - Longer Boom and Jibs
  80' Full Power Telescoping Boom Standard
  92' Boom Optional — Up to 40' Jibs
* Grove Trailing Boom Feature
* 360° Continuous Rotation Ball Bearing Swing Circle "Planetary Glide Swing"
* Twin Boom Elevation Cylinders
* Negative Boom Elevation
  (-6° to 75°) Boom Elevation
* Exclusive Long Vertical Stroke
  Grove Removable Double Box Outriggers
  Hydraulic Controls from Operator's Position

GROVE MANUFACTURING COMPANY
A DIVISION OF WALTER KIDDE & COMPANY, INC.
SHADY GROVE • PENNSYLVANIA 17256
MEMBER: POWER CRANE & SHOVEL ASSOCIATION

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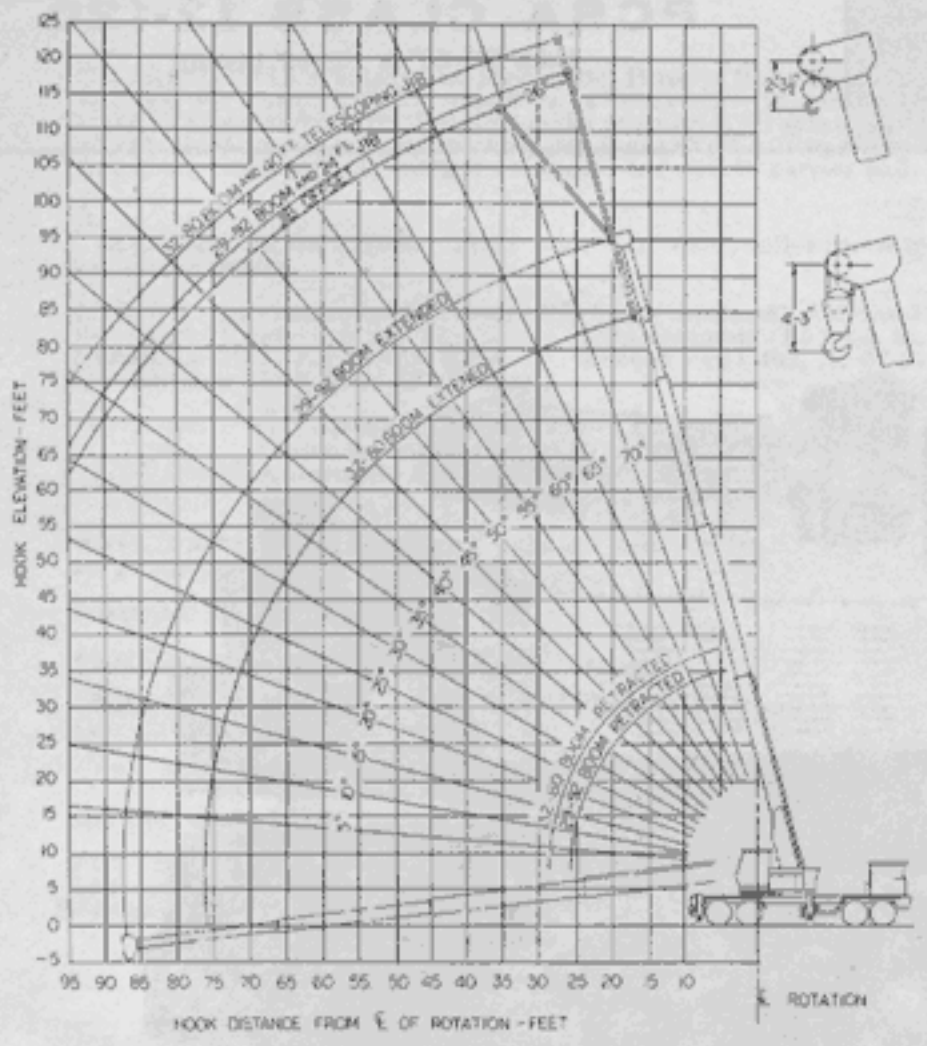
GROVE®

TM275LP

RANGE DIAGRAM
32' -80'& 29' - 92' BOOMS



RATED LIFTING CAPACITIES, 32' - 80' BOOM
OVER SIDE AND REAR
OUTRIGGERS FULLY EXTENDED

RADIUS IN FEET	BOOM LENGTH IN FEET								
	32	38	44	50	56	62	68	74	80
12	60,000	50,000	45,500	42,500	40,000				
15	46,500	42,000	40,000	37,000	34,500	28,000	26,000		
20	34,000	32,500	31,000	29,500	28,000	25,500	23,000	21,000	20,000
25	26,500	26,000	25,500	25,000	24,000	23,000	21,500	20,750	18,000
30		19,200	18,600	18,000	17,750	17,750	17,500	17,000	17,000
35			14,750	14,750	14,500	14,500	14,500	14,000	14,000
40			12,000	12,000	12,000	12,000	12,000	12,000	12,000
50					7,850	7,850	7,850	7,850	7,850
60							5,500	5,500	5,500
70								3,800	3,800
75									3,210

Capacities appearing above the bold line are based upon structural strength when lifting over the side. All capacities over the rear are based on structural strength and machine stability should not be relied upon as the capacity limitation.

A6-829-000478

29' - 92' BOOM CAPACITIES

AVAILABLE UPON REQUEST

JIB CAPACITIES
32' - 80' BOOM

24' JIB

MIN. BOOM ANGLE	NO OFFSET	26° OFFSET
75°	6400	3100
70	5150	2850
65	4350	2650
60	3700	2450
55	3300	2275
50	2950	2170
45	2650	2125
40	2550	2085
35	2475	2040
30	2400	2000
26	2300	1950

24' - 40' JIB

Min. Boom Angle	24' No Offset	24' 26° Offset	40' No Offset
75	6000	2700	3200
70	4750	2550	2700
65	4000	2375	2050
60	3500	2300	1750
55	3150	2200	1400
50	2900	2170	1000
45	2650	2125	
40	2550	2085	
35	2475	2040	
30	2400	2000	
26	2300	1950	

20' JIB

Min. Boom Angle	No Offset	Max. 25° Offset
75	9000	5200
70	6750	4450
65	5275	3450
60	4300	2775
55	3600	2325
50	3125	1975
45	2725	1725
40	2450	1525
35	2225	1375
30	2050	1275
25	1900	1175

NOTES:

1. Rated lifting capacities, with fully extended outriggers, are the maximum loads covered by the manufacturer's warranty with the machine standing on a firm, level and uniform supporting surface. Capacities do not exceed 85% of tipping load. Do not exceed rated lifting capacities.
2. For clamshell or concrete bucket operation, weight of bucket and load must not exceed 90% of rated lifting capacities.
3. Jibs may be used for single line lifting crane service only. Jib capacities are based on structural strength of jib or main boom. Actual loads lifted must not exceed net lifting capacities for the actual operating radius.
4. Long cantilever booms can create a tipping condition when in extended and lowered position.
5. Each power-telescoping boom section should be extended equally at all times and boom length should not exceed any length restrictions shown on rated lifting capacity chart.
6. The maximum load which may be telescoped is limited by hydraulic pressure, boom angle, boom lubrication, etc. It is safe to attempt to telescope any load within the limits of the rated lifting capacity chart.
7. Single line capacity 8,700 lbs. (Maximum). For multiple part reeving, use one part of line for each 7,500 lbs. of load to be lifted.

SUPERSTRUCTURE SPECIFICATIONS

TM275LP

30 TON CAPACITY
FULL HYDRAULIC, CARRIER MOUNTED

BOOM - Three Section Full Power Telescope, STANDARD — 32′ Retracted — 80′ Extended.
*Four Section Power Telescope with manually actuated power-extended fourth section, OPTIONAL — 29′ Retracted — 92′ Extended.
Integral Safety Holding valves on each Telescoping Cylinder.

BOOM HEAD - Four Sheave.

JIB EXTENSIONS - 20′ "Stowaway" Jib with self-equalizing suspension, maximum offset 26°.
24′ "Stowaway" type with self-equalizing suspension, maximum offset 26°.
24′ - 40′ Manual Telescoping Jib (not stowable)

BOOM ELEVATION - Twin double-acting hydraulic cylinders with integral safety holding valves. -6° to 75° boom elevation. Full power up and down. Combination control lever provided for hand or foot operation.

HOIST - (Main) Model 5090 MECR - Power up and down, equal speed, planetary reduction with integral automatic brake.
DRUM - 14.5″ diameter, 16″ long, 22.3″ diameter flange.
CABLE - 690′ of 5/8″ diameter cable. (6 x 37 class, IPS, IWRC recommended for multipart rigging, permissible line pull 9,700 lbs; 18 x 7 class, IPS, fiber core, non spinning, recommended for single part service, permissible line pull 8,700 lbs.)
SINGLE LINE PULL - 11,700 lbs. maximum 9,700 lbs. permissible (or less, limited by cable strength)
SINGLE LINE SPEED - to 360 FPM maximum 210 FPM (full load) on bare drum

***HOIST** - (Main) Model 5090 MGECR. Specifications and performance same as 5090 MECR hoist with Free Fall feature.

***HOIST** - (Auxiliary) (less cable) Model 40 SECR full hydraulic power up and down. Planetary gear reduction with automatic brake.
DRUM - 9″ diameter, 8″ long, 17½″ diameter flange.
CABLE - 400′ of ½″ cable.
SINGLE LINE PULL - 9,000 lbs. maximum 7,200 lbs. permissible (or less, limited by cable strength)
SINGLE LINE SPEED - to 290 FPM maximum 125 FPM (full load) on bare drum

***HOIST** - (Auxiliary) Model 40 SCR. High speed power down; line speed down - 1,000 FPM maximum.

***HOIST** - (Auxiliary) (less cable) Model 40 SGECR (Free Fall)

SWING - Ball Bearing Swing Circle, 360° continuous rotation, Grove "Planetary Glide Swing", foot operated Swing Brake and hand operated House Brake - Combination control lever for hand or foot operation. Swing Speed - 3 RPM.

HYDRAULIC SYSTEM -
PUMP - Multiple-section gear type driven from superstructure engine. 130 GPM capacity.

HYDRAULIC POWER DISTRIBUTION - (Main Hoist - Auxiliary Hoist - 2250 PSI) (Lift Boost - Fly Telescope - Outriggers - Swing - 2250 PSI) (Hoist Boost - Lift - Accessory - Mid-Telescope - 2250 PSI).

CONTROL VALVES - Four-way double-acting type with integral load check, main and circuit relief valves, three banks permitting multiple control of crane functions.

RESERVOIR - 133 gallon, all steel welded construction with integral baffles and top clean-out hole.

FILTER - Return line type; full flow with by-pass protection; replaceable cartridge.

OIL COOLER - Oil to air.

CAB - All steel, fully enclosed, removable front and rear laminated safety glass windows. Optional at no charge, hinged skylight, for additional ventilation. Full length control levers with combination hand and foot control for swing and boom elevation; fully adjustable operator's seat, full engine instruments, heater, windshield wiper.

COUNTERWEIGHT - Turntable mounted; Removable.

OUTRIGGER CONTROL - Remote operation from superstructure cab; each outrigger independently controlled; in-out-up-down.

FUEL CAPACITY - 52 Gallons.

ENGINE SPECIFICATIONS -	GAS	*GAS	*DIESEL	*DIESEL
MAKE	Ford 361	Ford 391	GM4-53N	Cummins V352-C130 (HT)
TYPE	8 Cylinder O.H.V.	V-8 Cylinder O.H.V.	4 Cylinder O.H.V.	V-6 Cylinder
BORE AND STROKE	4.05″ x 3.50″	4.05″ x 3.79″	3.875″ x 4.50″	4.625″ x 3.50″
MAXIMUM BHP	168 @ 2800 RPM	193 @ 2800 RPM	140 @ 2800 RPM	135 @ 3000 RPM
MAXIMUM TORQUE	330 lbs. ft. @ 2000 RPM	372 lbs. ft. @ 2000 RPM	295 lbs. ft. @ 1500 RPM	264 lbs. ft. @ 1800 RPM
GOVERNED RPM	2800 RPM	2800 RPM	2800 RPM	3000 RPM
ELECTRICAL SYSTEM	12 Volt	12 Volt	12 Volt HD Battery	12 Volt
COMBUSTION SYSTEM	4 cycle	4 cycle	2 cycle	4 cycle
COOLING SYSTEM	water cooled	water cooled	water cooled	water cooled

AXLE WEIGHT DISTRIBUTION CHART
Standard Machine - 32′ - 80′ Boom
Standard Counterweight

CARRIERS	GROSS	FRONT	REAR
30GF	64,945 lbs.	21,228 lbs.	43,717 lbs.
30GC	64,148 lbs.	20,148 lbs.	44,000 lbs.
30GH	63,894 lbs.	21,237 lbs.	42,657 lbs.
Remove Front Outrigger	- 3,500 lbs.	- 1,898 lbs.	- 1,602 lbs.
Remove Rear Outriggers	- 3,500 lbs.	+ 969 lbs.	- 4,469 lbs.
Add Model 11SECR Hoist	+ 550 lbs.	- 120 lbs.	+ 670 lbs.
Add 400′ of ½″ Cable Auxiliary Hoist	+ 172 lbs.	- 38 lbs.	+ 210 lbs.
Add 30 Ton Hook Block	+ 700 lbs.	+1,004 lbs.	- 304 lbs.
Substitute 29′ - 92′ Boom	+ 800 lbs.	+ 515 lbs.	+ 285 lbs.
Substitute GM4-53N (Superstructure)	+ 800 lbs.	- 20 lbs.	+ 820 lbs.
Substitute GM6-71N (Carrier)	+1,135 lbs.	+1,320 lbs.	- 185 lbs.

GROVE SPECIAL TRAILING BOOM FEATURE

***Trailing Boom Concept available as an Optional Extra, Provides Sliding Blocks on Lift Cylinders allowing the boom free movement vertically, as it is trailed on a Dolly, for highway travel.**

*DENOTES OPTIONAL EQUIPMENT

CONSTANT IMPROVEMENT AND ENGINEERING PROGRESS MAKES IT NECESSARY THAT WE RESERVE THE RIGHT TO MAKE SPECIFICATION, EQUIPMENT AND PRICE CHANGES WITHOUT NOTICE.

CARRIER SPECIFICATIONS MODELS 8 x 4

TM275LP

30GF — 30GC — 30GH

WHEELBASE -224" **OVERALL WIDTH - 96"**

FRAME - Lightweight, High Strength Steel. All welded construction. Depth - 18".

OUTRIGGERS - Removable, Hydraulic, Double Box type, integral with carrier frame; Beams extend to 16' centerline to centerline retract to 8' overall width; Vertical jacks with integral safety holding valves; steel covers and mechanical pin locks; Full hydraulic power, in-out-up-and-down; Outrigger controls - located in carrier cab.

STEERING GEAR - Ross TE71 cam and lever, roller mounted with hydraulic power.

ENGINE - International Harvester RD 501 (Gasoline), 6-Cylinder.
Bore and Stroke - 4.5 x 5.25 Displacement - 501 cu. in.
Horsepower - 214.8 @3000 RPM Torque - 451 lbs. ft. @1600 RPM
Governed at 2600 RPM (Full Load).

***ENGINE** - GM diesel Model 6-71N — (All Carriers)
Cummins diesel Model NH230 — (All Carriers)
Automatic Radiator Shutters — (All Diesel Engines)

FUEL CAPACITY - 60 gallons — 30GC and 30GF
50 gallons — 30GH

RADIATOR - Fin and Tube type.

CLUTCH - 14" single plate, dry disc type.

TRANSMISSION - (Main) 5CW65, 5 Speeds Forward and 1 Reverse.
(Auxiliary) 3K65, 3 Speed - 30GC
3H92, 3 Speed - 30GF
3A65, 3 Speed - 30GH

UNIVERSAL JOINTS - Needle bearing type.

PERFORMANCE DATA - Using standard tires, transmission, axles and standard gasoline engine governed at 2600 RPM.
*For performance data on optional engines, consult factory.

AXLES -

Front — Tandem 24,000 lbs. Capacity

Rear — Tandem 44,000 lbs. Capacity

SUSPENSIONS -

Front — Spring Loaded, Tandem Walking Beams.

Rear — Tandem Axle, Solid Mount Suspension.

BRAKES - Service - Full air on six wheels with 12 CFM piston compressor. Parking - Maxi spring chambers on one rear axle with cab control valve and release kit.

WHEELS - 20" Cast spoke, 7.5" Rim - 30GC and 30GH
20" 10 Hole steel disc, 7.5" Rim - 30GF

TIRES -
Front - (4) 11.00 x 20 - 12 ply highway tread.
Rear - (8) 11.00 x 20 - 12 ply non directional mud and snow.

CAB - All steel, one-man-beside-the-engine style. Safety glass windshield and windows, ventilators, two rear view mirrors, bostrom seat, full engine instruments, speedometer, low air pressure warning and air gage, heater and defroster.

ELECTRICAL SYSTEM - 12 volt lighting and starting, 1 - 12V, 90 AH battery, 37 Amp alternator, instrument panel light, windshield wiper, horn and traffic hazard warning switch. Federal safety standard lights and reflectors - 30GC and 30GF.

160 AH battery, 42 Amp alternator - 30GH

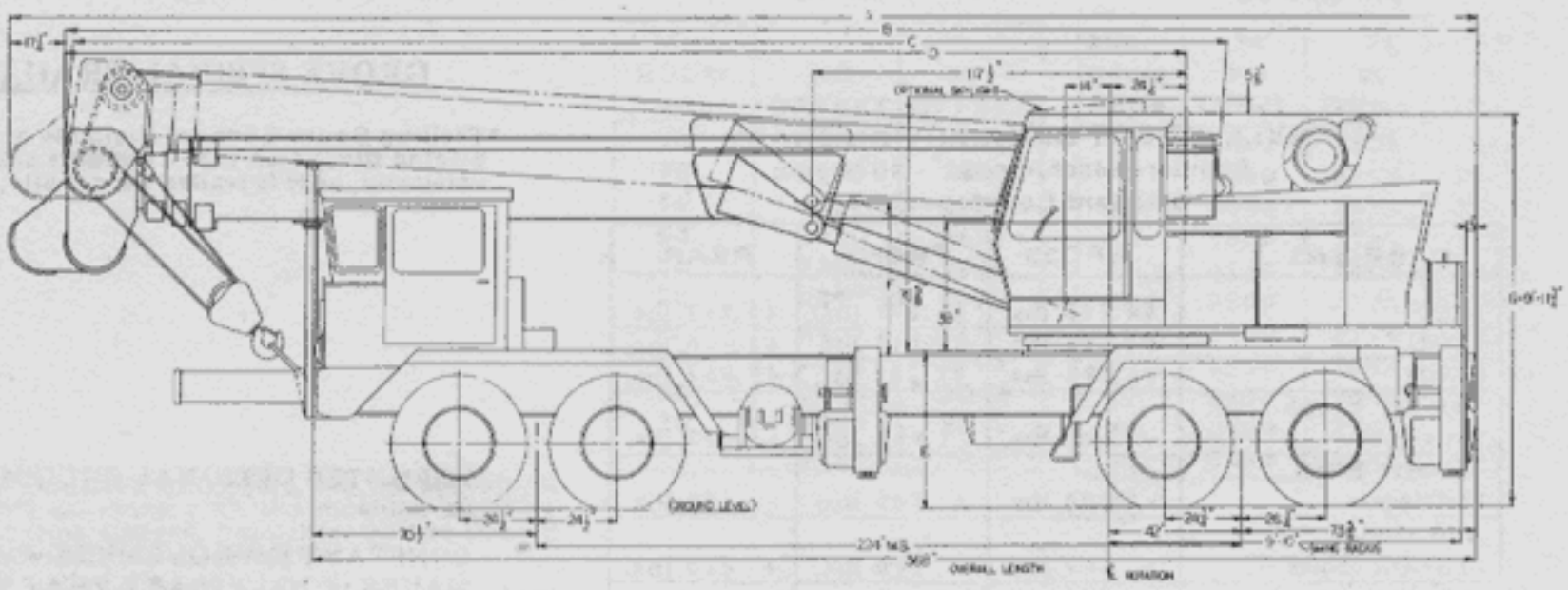
MISCELLANEOUS EQUIPMENT - Wheel nut wrench, channel type front bumper, two front towing loops, and rear fenders.

CARRIER PERFORMANCE for 30GF and 30GH		
Using standard tires, transmission, axles and standard gasoline engine.		
CONDITION® FULL LOAD	**SPEED RANGES**	**% OF GRADEABILITY**
On Highway *	6.4 to 51.8 MPH	14.7 to 0.5%
Off Highway †	2.4 to 19.6 MPH	41.3 to 3.8%

CARRIER PERFORMANCE FOR 30GC		
Using standard tires, transmission, axles and standard gasoline engine.		
CONDITION® FULL LOAD	**SPEED RANGES**	**% OF GRADEABILITY**
On Highway *	7.0 to 56.4 MPH	10.9 to -.6%
Off Highway †	2.5 to 20.2 MPH	31.8 to 3.1%

*Auxiliary Transmission in High Range
†Auxiliary Transmission in Low Range

DIMENSIONAL CHART



CARRIER BOOM	C.G.C. (STD.)					
	29.92	52'-80'				
A	35'-8"	41'-0"				
B	37'-2"	39'-7"				
C	39'-4"	50'-9"				
D	29'-7"	51'-11"				
E	4'-0"	4'-0"				
F	5'-10"	5'-10"				
G	9'-11"	9'-11"				

NOTE: BOOM ELEVATED TO HIGH REST 11'-7"

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