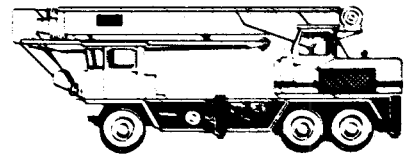


# GROVE®



FULL  
**HYDRAULIC**  
CARRIER-MOUNTED  
CRANE



MODEL  
**TM225T**  
**6X4**

## *Specifications*

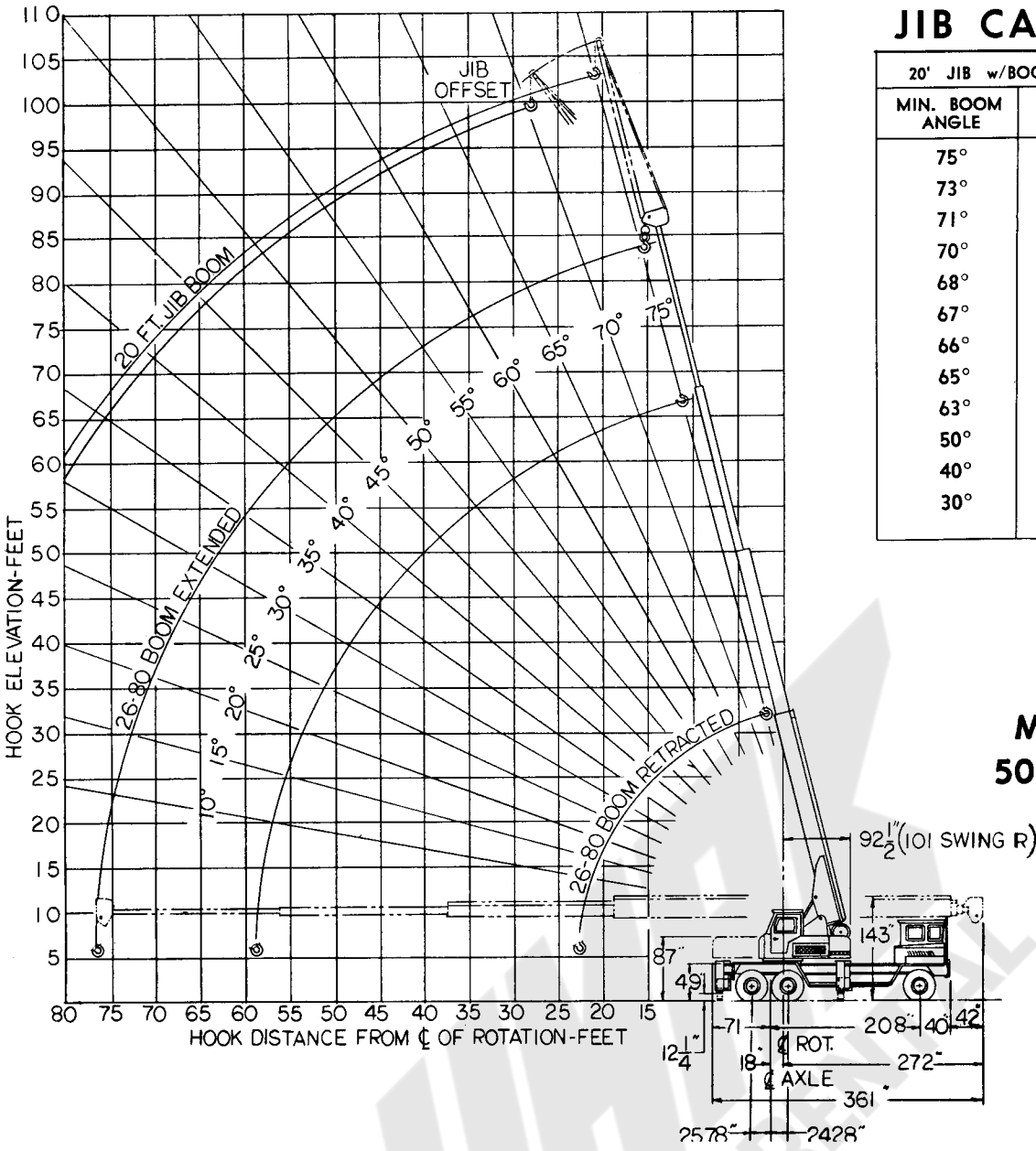
- ★ 50,000 lbs. Capacity
- ★ 4-Section Boom  
26' Retracted  
80' Extended
- ★ 20' StowAway Jib (Opt.)
- ★ 7,000-lb. Single Line Pull
- ★ Hoist Speeds to 425 FPM  
Power Up and Down
- ★ TWIN Boom Elevation  
Cylinders [0° to 75°]
- ★ 360° Continuous Rotation

# JIB CAPACITIES

20' JIB w/BOOM FULLY EXTENDED		
MIN. BOOM ANGLE	NO OFFSET	30° MAX. OFFSET
75°	8750#	6500#
73°	8000	6000
71°	6500	4875
70°	6000	4500
68°	5500	4125
67°	5000	3750
66°	4750	3560
65°	4500	3375
63°	4000	3000
50°	2200	1650
40°	1500	1250
30°	1100	825

**GROVE**  
Truck Crane  
Model TM225T  
50,000# Capacity

**6 X 4**



## RATED LIFTING CAPACITIES - OVER REAR - (With Outriggers) BOOM LENGTH

RADIUS	26'	32'	38'	44'	50'	56'	62'	*80'
10'	50,000	50,000	44,800	44,000	38,500			<b>MINIMUM BOOM ANGLE</b> 15,000 @ 75° 12,500 @ 71° 10,000 @ 67° 9,000 @ 64° 8,000 @ 60° 6,000 @ 55° 4,000 @ 45° 2,700 @ 35° 2,350 @ 20° 2,000 @ 0°
12'	42,000	42,000	41,600	35,750	33,200	31,000		
15'	38,500	38,500	35,750	30,000	27,800	26,700	20,000	
20'	28,000	28,000	28,000	24,100	22,700	20,400	19,100	
25'	21,750	21,750	21,750	19,600	18,700	17,700	16,200	
30'		14,900	14,900	14,900	14,900	14,700	14,100	
35'			11,000	11,000	11,000	11,000	11,000	
40'				8,000	8,000	8,000	8,000	
50'					5,100	5,100	5,100	
60'							3,740	

\* ALSO INDICATES MAXIMUM CAPACITY OF EXTENDED FLY SECTION, REGARDLESS OF BOOM LENGTH.

CAPACITIES APPEARING IN SHADED AREA ABOVE ARE BASED ON MACHINERY STRENGTH AND TIPPING SHOULD NOT BE RELIED UPON AS A CAPACITY LIMITATION.

# RATED LIFTING CAPACITIES - OVER SIDE - (With Outriggers) BOOM LENGTH

RADIUS	26'	32'	38'	44'	50'	56'	62'	*80'
10'	50,000	50,000	44,800	44,000	38,500	31,000	20,000	15,000 @ 75°
12'	42,000	42,000	41,600	35,750	33,200	26,700	19,100	12,500 @ 71°
15'	38,500	38,500	35,750	30,000	27,800	20,400	16,200	10,000 @ 67°
20'	26,750	26,750	26,750	24,100	22,700	20,400	19,100	15,000 @ 75°
25'	20,000	20,000	20,000	19,600	18,700	17,700	16,200	12,500 @ 71°
30'		13,600	13,600	13,600	13,600	13,600	13,600	10,000 @ 67°
35'			10,000	10,000	10,000	10,000	10,000	9,000 @ 64°
40'				7,150	7,150	7,150	7,150	8,000 @ 60°
50'					4,675	4,675	4,675	6,000 @ 55°
60'							3,500	4,000 @ 45°
70'								2,700 @ 35°
75'								2,350 @ 20°
								2,000 @ 0°

\* ALSO INDICATES MAXIMUM CAPACITY OF EXTENDED FLY SECTION, REGARDLESS OF BOOM LENGTH.

CAPACITIES APPEARING IN SHADED AREA ABOVE ARE BASED ON MACHINERY STRENGTH AND TIPPING SHOULD NOT BE RELIED UPON AS A CAPACITY LIMITATION.

## NOTES

1. Rated lifting capacities 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.
2. For certain conditions, capacities are controlled by machinery strength [SHADED AREA]. In these cases, machine tipping must not be relied upon as the capacity limitation.
3. For clamshell and concrete bucket operation, weight of bucket and load should not exceed 90% of lifting capacities.
4. The weights of all load-handling devices are considered part of the load lifted and suitable allowances for them should be made.
5. Boom jib extensions may be used as straight or gooseneck extensions, and for lifting crane service only.
6. With jib installed, lifting capacities over main boom-head must be reduced as follows:  

JIB LENGTH	REDUCED CAPACITY
20 ft.	800 lbs.
7. The maximum boom length, including jib extension, may be raised from horizontal, over rear, with outriggers set.
8. Long cantilever booms can create a tipping condition when in extended and lowered positions over the side. Boom should be retracted proportionate to the capacity of the load chart.
9. Single line capacity 7000#. For larger capacities, as a safety factor, one additional line should be used for each 6250# of load to be lifted.
10. Each power-telescoping boom section should be extended equally at all times. Do not operate one fully extended and another fully retracted.

## Superstructure Specifications

BOOM                      BOOM HEAD - 3 sheave                      \*4 sheave

BOOM LENGTH		NUMBER OF BOOM SECTIONS	TOTAL LENGTH OF TELESCOPE	HOOK HEIGHT	
Retracted	Extended			Retracted	Extended
26'	80'	4	54'	32'	84'
*26'	62'	3	36'	32'	66'

\*JIB EXTENSION — 20' Stow-Away type.

ELEVATION — Twin double-acting hydraulic cylinders with pilot check valve, 0° to 75°.

HOIST (Main) — Boom mounted.

MODEL — 4065 HECR, "Equal Speed" power up and down, self-contained power pack including hydraulic motor, planetary gear reduction, with automatic "Fail Safe" brake.

DRUM — 15" diameter — with 300' (5/8") cable. [\*With 19" Removable Lagging—265' (5/8") cable.]

DRUM CAPACITY — 700' Maximum (5/8") cable.

SINGLE LINE PULL — 7000 Pounds Maximum.

SINGLE LINE SPEED — No load — 350 FPM maximum; \*With 19" Removable Lagging, 425 FPM maximum.

\*HOIST (Auxiliary) (Less cable) Turntable mounted.

MODEL — 40 SECR, "Equal Speed" power up and down, self-contained power pack including hydraulic motor, planetary gear reduction, with automatic "Fail Safe" brake.

DRUM — 9" diameter. DRUM CAPACITY — 400' (1/2" cable).

SINGLE LINE PULL — 7000 pounds maximum. SINGLE LINE SPEED — No load — 200 FPM maximum.

\*MODEL — 40 SCR, power up and down, self-contained power pack including hydraulic motor, planetary gear reduction, with automatic "Fail Safe" brake.

DRUM — 9" diameter. DRUM CAPACITY — 400' (1/2" cable).

SINGLE LINE PULL — 7000 Pounds maximum.

SINGLE LINE SPEED — No load — UP-200 FPM Maximum — DOWN-700 FPM (Approximate).

# GROVE *Hydraulic* CRANES

**SWING** — 360° continuous rotation, ball bearing swing circle.

**DRIVE** — Gear reducer driven by hydraulic motor. **GEAR** — External. **SPEED** — 2.5 RPM.

**HYDRAULIC PUMPS** — Triple pump system totals 102 GPM. Hydraulic power distribution of 3 pumps: (Swing, Outriggers, Telescope) (Telescope, Boom Lift, \*Accessory, Winch Booster) (Winch, \*Auxiliary Winch).

**CONTROLS** — Hydraulic valves, 4-way double acting. **OIL COOLER** — Oil to air.

ENGINE	GAS	*GAS	*DIESEL
MAKE	Ford 300	Ford 361	GM4-53
TYPE	6 Cyl. O. H. V.	8 Cyl. O. H. V.	4 Cyl. O. H. V.
BORE AND STROKE	4.00" x 3.98"	4.05" x 3.50"	3.875" x 4.50"
GROSS B. H. P.	149 @ 2800 RPM	168 @ 2800 RPM	130 @ 2800 RPM
GROSS TORQUE (lbs. ft.)	284 @ 2000 RPM	330 @ 2000 RPM	271 @ 1500 RPM
GOVERNOR (Mechanical)	2800 RPM	2800 RPM	2800 RPM
ELECTRICAL SYSTEM	12 Volt	12 Volt	12 Volt HD Battery

## Carrier Specifications 6 X 4 MODEL 64-25-GF

**WHEELBASE**—208".

**OUTRIGGERS**—Hydraulic double box type, with box type totally-enclosed vertical jacks, floats; beams extended to 15' wide center to center, retracted to 8' overall width, full hydraulic in, out, up and down; outriggers controlled from crane operator's position on superstructure; pilot check valves & mechanical pinlock for vertical jack cylinders.

\*Outrigger controls on carrier for operation from ground.

**STEERING GEAR**—Power Steer—Ross TE-71 cam and lever, roller mounted.

**ENGINE** — Gasoline — IHC RD501.

Cylinders — Six; valve-in-head. Displacement — 501 cu. in.  
Horsepower — 215 BHP @ 3000 RPM. Governed @ 2600 RPM full load.  
Torque — 451 lbs. ft. @ 1600 RPM. Radiator — Fin and tube type.

**FUEL CAPACITY**—60 gallons.

**CLUTCH**—14" Ferramic single plate, dry-disc type.

**TRANSMISSION**—Main — Speeds — 5 forward, 1 reverse.

Auxiliary: 3 speed.

**OVERALL GEAR RATIO AND SPEEDS**—Using standard tires, transmission, axles, and engine at governed speed.

GEAR	HIGH RANGE		INTERMEDIATE		LOW RANGE	
	SPEED	% GRADEABILITY	SPEED	% GRADEABILITY	SPEED	% GRADEABILITY
5th	49.1	.50	40.4	1.15	15.3	3.7
4th	34.9	1.0	29.3	1.9	11.1	5.2
3rd	21.9	2.9	18.4	4.4	6.9	10.1
2nd	11.2	7.1	9.4	10.0	3.5	21.2
1st	6.4	14.6	5.0	20.0	1.9	41.1
Rev.	6.4	14.7	5.0	20.1	1.9	41.5

**UNIVERSAL JOINTS**—Needle bearing type.

**AXLES AND SUSPENSION**—

**FRONT** — One (1) non driving "I" beam type.

**REAR** — Hypoid single reduction gears, full floating shafts.

**SUSPENSION** — Front, spring mounted; Rear, tandem walking beams.

**BRAKES**—(Service) Full air, 6 wheels, 12 cu. ft. compressor. Front, 17 1/4" X 4"; Rear 16 1/2" X 7"; Total lining area: 1172 sq. in.

(Parking, Mechanical) Drive line type Acco 14" 2-shoe.

**TIRES**: 11.00 x 20, 12 ply rating; Highway Treads singles front, non-directional M&S duals rear.

**CAB**—All steel one-man beside the engine type; safety glass windshield and windows, adjustable side windows, utility compartment, ventilators, rear view mirror, heater & defroster, Bostrum type seat; instruments: heat indicator, fuel gauge, ammeter, oil pressure gauge, speedometer, air gauge and low pressure warning buzzer.

**ELECTRICAL SYSTEM**—12 Volt starting and lighting system, instrument panel light, sealed beam tilt-ray headlights, tail and stop lights, clearance lights, windshield wiper, horn, turn signals, and reflectors.

**MISCELLANEOUS EQUIPMENT**—Rim lug wrench, channel type front bumper, two front towing loops and rear fenders.

**TURNING RADIUS** — 39 feet.

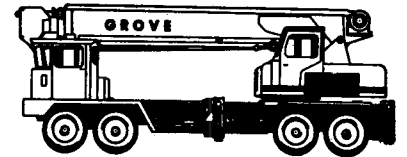
**WEIGHT** — Standard carrier and crane with 26'-80' Boom — Approx. 56,300 lbs.

\*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.

# GROVE®

## FULL HYDRAULIC CARRIER-MOUNTED CRANE



## MODEL TM225T 8X4

# Specifications

- ★ 50,000 lbs. Capacity
- ★ 4-Section Boom  
26' Retracted  
80' Extended
- ★ 20' StowAway Jib (Opt.)
- ★ 7,000-lb. Single Line Pull
- ★ Hoist Speeds to 425 FPM  
Power Up and Down
- ★ TWIN Boom Elevation  
Cylinders [0° to 75°]
- ★ 360° Continuous Rotation

**GROVE MANUFACTURING COMPANY**

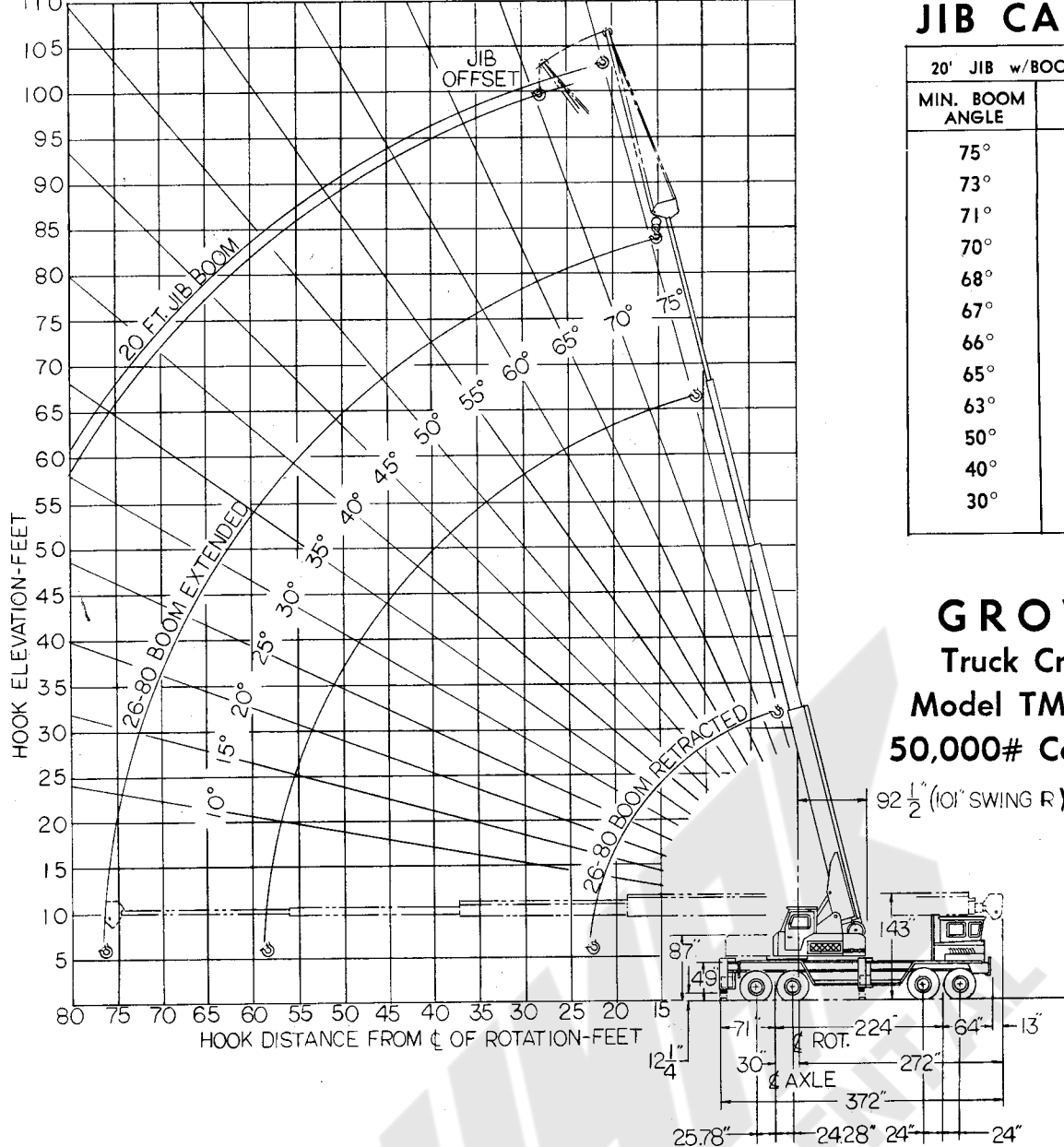
A DIVISION OF WALTER KIDDE & CO., INC.

SHADY GROVE

PENNSYLVANIA

# JIB CAPACITIES

20' JIB w/BOOM FULLY EXTENDED		
MIN. BOOM ANGLE	NO OFFSET	30° MAX. OFFSET
75°	8750#	6500#
73°	8000	6000
71°	6500	4875
70°	6000	4500
68°	5500	4125
67°	5000	3750
66°	4750	3560
65°	4500	3375
63°	4000	3000
50°	2200	1650
40°	1500	1250
30°	1100	825



**GROVE**  
 Truck Crane  
 Model TM225T  
 50,000# Capacity

**8 X 4**

## RATED LIFTING CAPACITIES - OVER REAR - (With Outriggers) BOOM LENGTH

RADIUS FEET	26	32	38	44	50	56	62	*80
10'	50,000	50,000	44,800	44,000	38,500			MINIMUM BOOM ANGLE 17,000 @ 75° 14,000 @ 71° 11,400 @ 67° 9,900 @ 64° 8,500 @ 60° 7,200 @ 55° 5,600 @ 45° 4,600 @ 35° 3,100 @ 20° 2,500 @ 0°
12'	46,000	43,000	41,600	35,750	33,200	31,000		
15'	40,000	38,500	35,750	30,000	27,800	26,700	20,000	
20'	31,600	31,800	32,000	24,100	22,700	20,400	19,100	
25'	22,000	22,200	22,400	19,600	18,700	17,700	16,200	
30'		15,000	15,200	15,400	15,600	14,700	14,100	
35'			11,000	12,400	12,600	12,800	13,000	
40'				8,900	9,100	9,300	9,500	
50'					6,100	6,300	6,500	
60'							4,800	
70'								3,100 @ 20°
75'								2,500 @ 0°

\* ALSO INDICATES MAXIMUM CAPACITY OF EXTENDED FLY SECTION, REGARDLESS OF BOOM LENGTH.

CAPACITIES APPEARING IN SHADED AREA ABOVE ARE BASED ON MACHINERY STRENGTH AND TIPPING SHOULD NOT BE RELIED UPON AS A CAPACITY LIMITATION.

# RATED LIFTING CAPACITIES - OVER SIDE - (With Outriggers) BOOM LENGTH

RADIUS FEET	26	32	38	44	50	56	62	*80
10'	50,000	50,000	44,800	44,000	38,500			<b>MINIMUM BOOM ANGLE</b> 16,200 @ 75° 13,200 @ 71° 11,200 @ 67° 9,800 @ 64° 8,400 @ 60° 7,000 @ 55° 5,400 @ 45° 4,000 @ 35° 2,400 @ 20° 2,000 @ 0°
12'	46,000	43,000	41,600	35,750	33,200	31,000		
15'	40,000	38,500	35,750	30,000	27,800	26,700	20,000	
20'	27,000	27,000	27,000	24,100	22,700	20,400	19,100	
25'	21,000	21,000	21,000	19,600	18,700	17,700	16,200	
30'		14,400	14,600	14,800	15,000	14,700	14,100	
35'			10,600	10,800	11,100	11,300	11,500	
40'				8,100	8,300	8,500	8,700	
50'					5,400	5,600	5,800	
60'							3,500	

\* ALSO INDICATES MAXIMUM CAPACITY OF EXTENDED FLY SECTION, REGARDLESS OF BOOM LENGTH.

CAPACITIES APPEARING IN SHADED AREA ABOVE ARE BASED ON MACHINERY STRENGTH AND TIPPING SHOULD NOT BE RELIED UPON AS A CAPACITY LIMITATION.

## NOTES

1. Rated lifting capacities 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.
2. For certain conditions, capacities are controlled by machinery strength [SHADED AREA]. In these cases, machine tipping must not be relied upon as the capacity limitation.
3. For clamshell and concrete bucket operation, weight of bucket and load should not exceed 90% of lifting capacities.
4. The weights of all load-handling devices are considered part of the load lifted and suitable allowances for them should be made.
5. Boom jib extensions may be used as straight or gooseneck extensions, and for lifting crane service only.
6. With jib installed, lifting capacities over main boom-head must be reduced as follows:  

JIB LENGTH	REDUCED CAPACITY
20 ft.	800 lbs.
7. The maximum boom length, including jib extension, may be raised from horizontal, over rear, with outriggers set.
8. Long cantilever booms can create a tipping condition when in extended and lowered positions over the side. Boom should be retracted proportionate to the capacity of the load chart.
9. Single line capacity 7000#. For larger capacities, as a safety factor, one additional line should be used for each 6250# of load to be lifted.
10. Each power-telescoping boom section should be extended equally at all times. Do not operate one fully extended and another fully retracted.

## Superstructure Specifications

**BOOM**                      **BOOM HEAD - 3 sheave**                      **\*4 sheave**

BOOM LENGTH		NUMBER OF BOOM SECTIONS	TOTAL LENGTH OF TELESCOPE	HOOK HEIGHT	
Retracted	Extended			Retracted	Extended
26'	80'	4	54'	32'	84'
*26'	62'	3	36'	32'	66'

\*JIB EXTENSION — 20' Stow-Away type.

ELEVATION — Twin double-acting hydraulic cylinders with pilot check valve, 0° to 75°.

HOIST (Main) — Boom mounted.

MODEL — 4065 HECR, "Equal Speed" power up and down, self-contained power pack including hydraulic motor, planetary gear reduction, with automatic "Fail Safe" brake.

DRUM — 15" diameter — with 300' (5/8") cable. [\*With 19" Removable Lagging—265' (5/8") cable.]

DRUM CAPACITY — 700' Maximum (5/8") cable.

SINGLE LINE PULL — 7000 Pounds Maximum.

SINGLE LINE SPEED — No load — 350 FPM maximum; \*With 19" Removable Lagging, 425 FPM maximum.

\*HOIST (Auxiliary) (Less cable) Turntable mounted.

MODEL — 40 SECR, "Equal Speed" power up and down, self-contained power pack including hydraulic motor, planetary gear reduction, with automatic "Fail Safe" brake.

DRUM — 9" diameter. DRUM CAPACITY — 400' (1/2" cable).

SINGLE LINE PULL — 7000 pounds maximum. SINGLE LINE SPEED — No load — 200 FPM maximum.

\*MODEL — 40 SCR, power up and down, self-contained power pack including hydraulic motor, planetary gear reduction, with automatic "Fail Safe" brake.

DRUM — 9" diameter. DRUM CAPACITY — 400' (1/2" cable).

SINGLE LINE PULL — 7000 Pounds maximum.

SINGLE LINE SPEED — No load — UP-200 FPM Maximum — DOWN-700 FPM (Approximate).

# GROVE Hydraulic CRANES

**SWING** — 360° continuous rotation, ball-bearing swing circle; "glide" swing with foot activated swing brake.

**DRIVE** — Gear reducer driven by hydraulic motor. **GEAR** — External. **SPEED** — 2.5 RPM.

**HYDRAULIC PUMPS** — Triple pump system totals 118 GPM. Hydraulic power distribution of 3 pumps: (Swing, Out-riggers, Telescope) (Telescope, Boom Lift, \*Accessory, Winch Booster) (Winch, \*Auxiliary Winch).

**CONTROLS** — Hydraulic valves, 4-way double-acting. **OIL COOLER** — Oil to air.

## ENGINE SPECIFICATIONS:

	<b>GAS</b>	<b>*DIESEL</b>
<b>MAKE</b>	Ford 361	GM 4-53
<b>TYPE</b>	8 Cyl. O. H. V.	4 Cyl. O. H. V.
<b>BORE AND STROKE</b>	4.05" x 3.50"	3.875" x 4.50"
<b>GROSS B.H.P.</b>	168 @ 2800 RPM	130 @ 2800 RPM
<b>GROSS TORQUE (lbs. ft)</b>	330 @ 2000 RPM	271 @ 1500 RPM
<b>GOVERNOR (Mechanical)</b>	2800 RPM	2800 RPM
<b>ELECTRICAL SYSTEM</b>	12 Volt	12-Volt HD Battery

## Carrier Specifications Model 8 X 4 - 25-GF

**WHEELBASE** — 224".

**FRAME** — High strength alloy steel, reinforced top and bottom. Total depth 18.5". All welded construction.

**OUTRIGGERS** — Removable, hydraulic double-box type with totally enclosed box type vertical jacks, steel floats. Beams extend to 15' center line to center line, retract to 8' overall width. Full hydraulic in, out, up, and down. Outrigger controls from crane operators position on superstructure. Safety check valves and mechanical pin-locks for vertical jack cylinders.

**STEERING GEAR** — Ross TE-71 cam and lever, roller-mounted with hydraulic power assist.

**ENGINE** — International Harvester RD-501 (Gasoline). Cylinder Bore and Stroke 6-4/2" x 5 1/4". Displacement - 501 cu. in. Horsepower - 214.8 @ 3000 RPM. Torque (lbs./ft.) 451 @ 1600 RPM. Governed at 2600 RPM (Full Load).

**FUEL CAPACITY** — 60 gallons.

**CLUTCH** — 14" Ferramic, single plate, dry disc type. Lining area - 218 sq. in.

**TRANSMISSION** — Main - Fuller 5 speed forward, 1 reverse.  
Auxiliary - Fuller 3 speed.

**UNIVERSAL JOINTS** — Needle Bearing type.

**AXLES** — Front - (2) FWD tubular.

Rear - (2) Timken, hypoid single reduction with inter-axle differential.

**SUSPENSION** — Front - Spring loaded with tandem axle walking beams.

Rear - Tandem axle walking beams, rubber end bushings and steel saddles.

**PERFORMANCE DATA** — Using standard tires, transmission, axles, and engine at governed speed.

### HIGH RANGE

### INTERMEDIATE

### LOW RANGE

GEAR	SPEED (MPH)	% GRADEABILITY	SPEED (MPH)	% GRADEABILITY	SPEED (MPH)	% GRADEABILITY
5th	51.8	.50	39.0	1.2	19.6	3.8
4th	37.6	1.3	28.2	2.2	14.2	5.8
3rd	23.5	3.7	17.7	5.5	8.9	12.4
2nd	12.0	7.4	9.0	10.3	4.5	22.0
1st	6.4	14.7	4.8	20.0	2.4	41.3
Rev.	6.4	14.7	4.8	20.2	2.4	41.5

**BRAKES** — Service - Full air on six wheels with 12 CFM piston Compressor. Size - Front - 16" x 4". Rear - 16 1/2" x 7". Total Lining area 1156 sq. in.

**PARKING BRAKE** — Maxi spring chambers on one rear axle with cab control valve.

**WHEELS** — 20" - 10 hole steel disc.

**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 type. Safety glass windshield and windows, ventilators, two rear-view mirrors, boom seat, full engine instruments, speedometer, low air pressure warning and air gauge, heater and defroster.

**ELECTRICAL SYSTEM** — 12-Volt starting and lighting system. 37 AMP alternator, instrument panel light, sealed beam tilt-ray headlights, tail and stop lights, clearance lights, windshield wiper, horn, turn signals, cab light and reflectors.

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

**WEIGHT** — Crane with 26'-80' boom, approximately 57,000 lbs.

\* 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.

# GROVE MANUFACTURING COMPANY

A DIVISION OF WALTER KIDDE & CO., INC.