

# Grove GMK5225

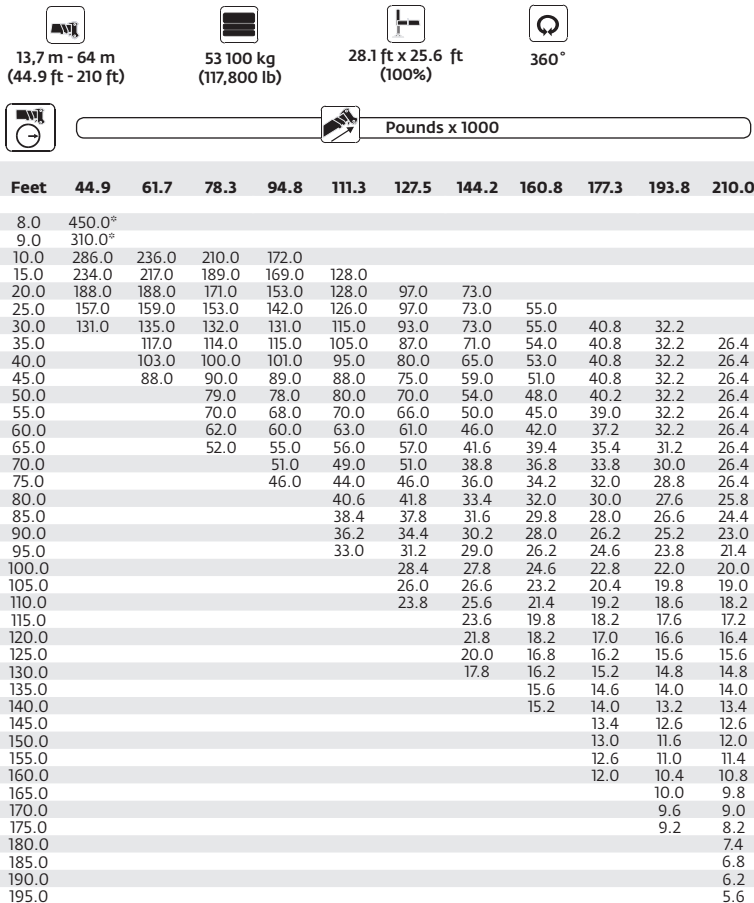
## Quick Reference

**Capacity:** 170 t (225 USt)  
**Boom:** 13,7 m - 64 m (45 ft - 210 ft) main boom  
**Max jib:** 34 m (112 ft)  
**Max tip height:** 98 m (320 ft)

## FEATURES

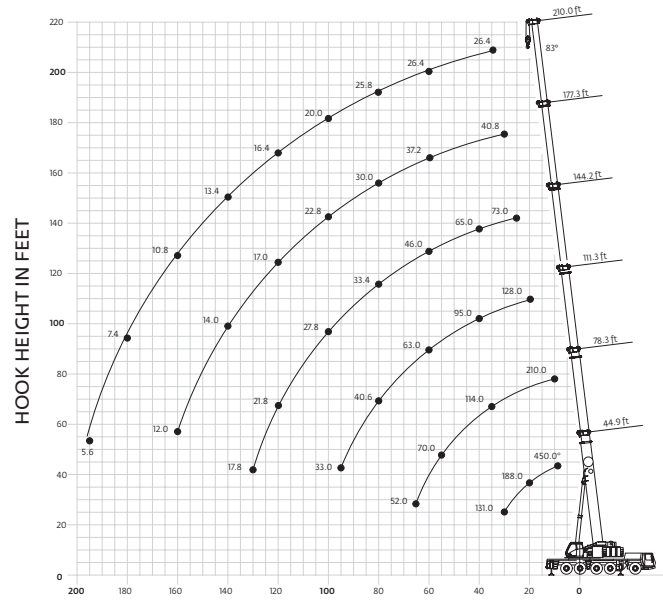
- 11 m - 18 m (36 ft - 59 ft) hydraulic luffing swingaway with 3,6 m (12 ft) three-sheave integrated heavy duty jib
- Chassis engine: Cummins QSX15, six-cylinder, 399 kW (535 hp), torque 1873 ft/lb (1400 rpm)
- Superstructure engine: Cummins QSB 6.7, six-cylinder 164 kW (220 hp), torque 700 ft/lb (1500 rpm)
- MEGATRAK™ independent suspension and all-wheel steering system
- MEGAFORM™ boom design with TWIN-LOCK™ pinning system

### Main boom load chart



\*Over rear with special equipment

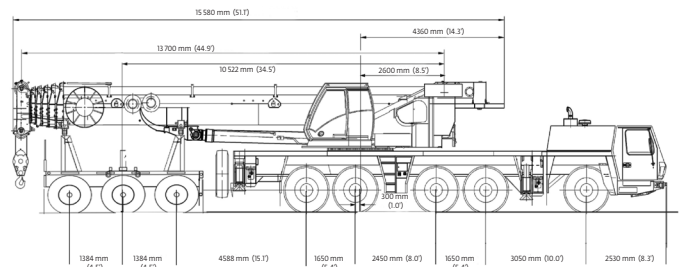
### Main boom 13,7 m - 64 m (45 ft - 210 ft)



OPERATING RADIUS IN FEET FROM AXIS OF ROTATION

\*Boom length in feet and lifting capacities in pounds (per 1000)

### Weights



Basic weights - kg (lb)	Axles 1 - 3	Axles 4 and 5	3 Dolly axles	Total
GMK 5225 Cummins power with: 20 50R25 tires, 10x8x10 drive/steer, 36 ft - 59 ft hydraulic luffing swingaway, 2nd oil cooler, outrigger pads, auxiliary hoist, driver and tanks filled, 3 axle boom dolly (9100 lb / 4128 kg)*	30 787 (67,874)	17 521 (38,627)	17 554 (38,700)	65 862 (145,201)
<b>Additions:</b>				
5000 kg (11,000 lb) section pinned to superstructure (special counterweight version)	4845 (10,681)	155 (342)	0 (0)	5000 (11,023)
11 000 kg (24,250 lb) base section stowed on carrier	10 659 (23,499)	341 (752)	0 (0)	11 000 (24,251)
<b>Removals:</b>				
Brackets for hydraulic swingaway	-15 (-33)	-7 (-15)	-64 (-141)	-86 (-190)
Hose reel + parts for hydraulic swingaway	-56 (-123)	-25 (-55)	-129 (-284)	-210 (-463)
11 m - 18 m (36 ft - 59 ft) hydraulic swingaway	-206 (-454)	-92 (-203)	-1185 (-2612)	-1483 (-3269)
Front outriggers	-2016 (-4445)	256 (564)	0 (0)	-1760 (-3880)
Rear outriggers	926 (2041)	-3029 (-6678)	0 (0)	-2103 (-4636)
Front and rear outrigger floats	-70 (-154)	-130 (-287)	0 (0)	-200 (-441)
<b>Substitutions:</b>				
10x6x10 drive/steer	-337 (-743)	-38 (-84)	0 (0)	-375 (-827)
14.00R25 tires	-730 (-1609)	-300 (-661)	0 (0)	-1030 (-2271)
16.00R25 tires	-305 (-672)	-125 (-276)	0 (0)	-430 (-948)

## SUPERSTRUCTURE

### Boom

13,7 m - 64 m (45 ft - 210 ft)  
6-section, full power MEGAFORM™ boom with patented TWIN-LOCK™ boom pinning system. Maximum tip height: 67 m (220 ft).

### Boom nose

Seven nylon sheaves, mounted on heavy duty tapered roller bearings with removable pin-type rope guards. Quick reeve boom nose. Removable auxiliary boom nose with removable pin type rope guard.

### Boom elevation

Single lift cylinder with safety valve provides boom angle from -1.5° to +83°.

### Hydraulically offsettable lattice extension

11 m - 18 m (36 ft - 59 ft)  
bi-fold lattice swingaway extension hydraulically offsettable and luffing under load: 0° - 40°. Controlled from the crane cab.  
Maximum tip height: 85 m (279 ft)

### Manual offsettable lattice extension

11 m - 18 m (36 ft - 59 ft) bi-fold lattice swingaway extension manually offsettable 0°, 20° or 40°. Maximum tip height: 85 m (279 ft)

### Lattice inserts

2 x 8 m (26 ft) inserts for use with lattice swingaway extension to increase length to 26 m (85 ft) or 34 m (112 ft).  
Maximum tip height: 101 m (331 ft)

### Load moment and Anti-Two block system

Load moment and anti-two block system with audio/visual warning and control lever lockout provides electronic display of boom angle, length, radius, tip height, relative load moment, maximum permissible load, load indication and warning of impending two-block condition.

### Cab

All aluminum constructed cab with acoustical lining, hydraulic tilted to 20°. Includes tinted safety glass, adjustable operator's seat, opening windows at side and rear, hinged windshield with wiper, sun visor and window shade. Other features include, engine-dependent hot water heater/defroster, armrest integrated crane controls, and ergonomically arranged instrumentation.

### Swing

3 planetary gear boxes with fixed displacement axial piston motors. Infinitely variable to 1.3 rpm. Free swing or hydrostatically engaged brake controlled by swing lever. Swing brake selected by foot operated switch.

### Counterweight

53 t (116,800 lb) consisting of various sections with hydraulic installation/removal system. Controlled from the superstructure cab.

### Engine North America

Cummins QSB 6.7, 6-cylinder  
Horsepower: 164 KW (220 bph) at 2200 rpm  
Torque: 949 Nm (700 ft/lb) at 1500 rpm  
Engine emissions: EPA/CARB/ EUROMOT (off road)

### Fuel tank capacity

240 L (63 gal)

### Electrical system

3 phase alternator: 28V/80A  
2 batteries: 12V/170Ah

### Hydraulic system

2 separate circuits, 1 axial piston variable displacement pump (load sensing) with electronic power limiting control and 1 double gear pump for slewing. Thermostatically controlled oil coolers keep oil at optimum operating temperature. Hydraulic tank capacity: 915 L (242 gal)

### Hoist

Main and auxiliary hoists are powered by axial piston motor with planetary gear and brake. "Thumb-thumper" hoist drum rotation indicator alerts operator of hoist movement.

	Main	Auxiliary
<b>Line length</b>	290 m (951 ft)	290 m (951 ft)
<b>Rope diameter</b>	22 mm	22 mm
<b>Line speed</b>	125 m/min (410 fpm)	125 m/min (410 fpm)
<b>Line pull</b>	93,0 kN (20,907 lb)	93,0 kN (20,907 lb)

## CARRIER

### Chassis

Box type, torsion resistant frame is fabricated from high strength steel.

### Outrigger system

Four hydraulic two-stage outrigger beams with vertical cylinders and outrigger pads, 23.6" (600 mm) square. Outriggers can be set in 4 positions:

Full	7,8 m (25.6 ft)
Partial	6,0 m (19.6 ft)
	4,4 m (14.3 ft)
Retracted	2,8 m (9.1 ft)

Independent horizontal and vertical movement controlled from each side of carrier and from the operator's cab. Electronic crane level indicator with automatic leveling system.

### Transmission

Allison 4000 SP. 6 speeds forward, 1 reverse  
2 speed transfer case

### Drive/steer

10x6x10

### Axles

1st axle line - steer

2nd axle line - steer (optional drive)

3rd axle line - drive/steer (permanent drive with 10x6, disconnects for highway with 10x8))

4th axle line - drive/steer (connects for all wheel steer)

5th axle line - drive/steer

Drive axles with planetary hub reduction and center mounted differential-gearing. Inter-axle and cross axle differential locks.

### Suspension

Grove exclusive MEGATRAK™ suspension. Independent hydro-pneumatic system acting on all wheels with hydraulic lockout. Suspension can be raised 160 mm (6.3 in) or lowered 120 mm (4.7 in) both longitudinally and transversely. Features an automatic leveling system for highway travel.

### Tires

10 tires, 16.00R25 (445/95 R25) (Vehicle width - 3,0 m [9.8 ft])

### Steering

Dual circuit, hydraulic power assisted steering system. Transfer case mounted, ground driven emergency steering pump. Axles 1, 2, 3 and 5 steer on highway (steer by wire). Separate steering of the 4th and 5th axles for all wheel and crab steering, controlled by an electronic rocker switch.

### Engine North America

Cummins QSX15, 6-cylinder  
Horsepower: 399 KW (535 bph) at 2100 rpm  
Torque: 2539 Nm (1873 ft/lb) at 1400 rpm  
Engine emissions: EPA/CARB/ EUROMOT (off road)

### Fuel tank capacity

360 L (95 gal)

### Brakes

Service brakes: pneumatic dual circuit acting on all wheels air dryer. Parking brake: pneumatically operated spring loaded brake acting on axle lines 2,3,4 and 5.

### Cab

Two-man aluminum construction with the following features: safety glass, driver seat with pneumatic suspension, engine-dependent hot water heater, heated rear view mirrors, complete instrumentation and driving controls.

### Electrical system

24V system with three phase alternator, 28V/100A  
2 batteries, 12V/170 Ah

### Maximum speed

85 km/h (53 mph)

### Gradeability (theoretical)

50% - 14.00 tires  
45% - 16.00/20.5 tires

### Miscellaneous standard equipment

Work light; tool kit; fire extinguishers; auxiliary boom nose; radio/CD player in carrier cab, heated rear view mirrors, wind speed indicator, working light for each outrigger beam.