

GROVE[®]
by **Manitowoc**

All-terrain cranes
MORE LIFTING VERSATILITY FOR MORE JOBS



**REACHING A
HIGHER STANDARD.**



More mobile cranes for more jobsites

Grove all-terrain cranes are manufactured using the industry's most stringent lean manufacturing techniques. This results in a class-leading lineup that achieves lifting capacities from 60 t to 450 t (65 USt to 550 USt). You'll find a Grove all-terrain solution for almost any application.

Grove all-terrain cranes deliver powerful lifting performance, superior off-road mobility and fast highway speeds. Combine these benefits with industry-leading reliability, service and support, and you'll agree that Grove all-terrain cranes are a smart choice for your business.



PERFORMANCE, PRODUCTIVITY AND COMFORT

Grove all-terrain cranes feature state-of-the-art technology and industry-leading innovations designed to increase your crew's performance, productivity and profitability.

Advanced carrier cab

Crane operators will be more comfortable and more productive in the ergonomic Grove all-terrain carrier cabs. With no panel dividing the driver and passenger seats, there is ample room for the crane operator. The cabs include air-suspension and reclining seats, electric windows, heated and electric adjustable mirrors, a glare-free instrument cluster and a panoramic windshield for excellent visibility. The carrier cab also features the Manitowoc Crane Control System (CCS), standard in Grove all-terrain and rough-terrain cranes. With its intuitive, user-friendly interface, CCS enables operators to set up their cranes more quickly and get to work.

High-performance superstructure cabs

The superstructure cab on Grove all-terrain cranes features a panoramic windshield, for a clear view of the load — free of blind spots. The windshield can also be opened, adding to the overall level of operator convenience and comfort. The operator-friendly interior features an intuitive dashboard, adjustable seating, improved soundproofing, heat and optional air conditioning. These cabs also tilt up to 20 degrees, significantly improving operator comfort and overall visibility of the lift — even when the boom is fully extended and equipped with a jib.



MAXbase – Variable outrigger base

The industry's most versatile all-terrain crane just got even more so with the introduction of an innovative new outrigger platform that can be retrofitted on all models featuring the Manitowoc Crane Control System (CCS). MAXbase is an asymmetric outrigger setting that maximizes your crane's potential on constricted jobsites where obstacles can prevent outriggers from being extended. In these cases, crane operators previously had to accept reduced lift capacities. MAXbase provides calculated charts for these instances, allowing the crane to still use its full potential in some sectors. MAXbase also takes into account rear stability to improve load charts.

Discover more lifting opportunities on the tightest jobsites

MAXbase delivers multiple advantages:

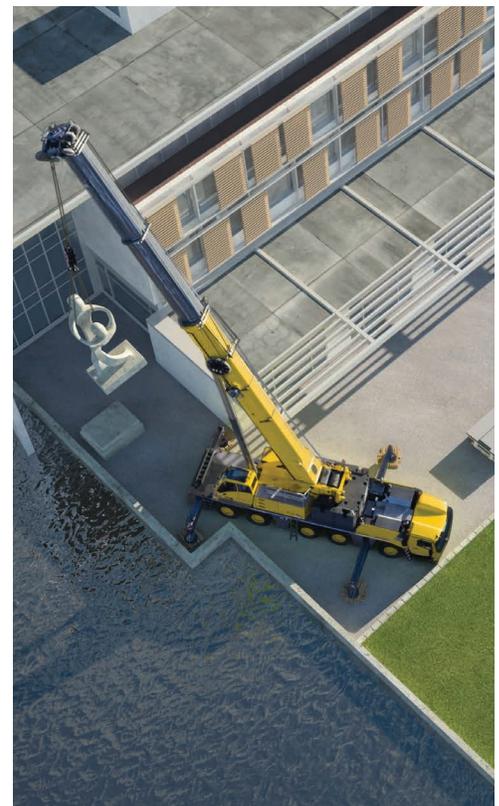
- > Gets you closer to your lift to reduce radius and provide better lifting capacities
- > Provides better access to tighter jobsites and closer positioning to lifts because of the ability to control outriggers symmetrically, right and left or front and rear
- > Enlarges your working area with sector-defined load curves to complete jobs easier
- > Requires fewer accessories at the jobsite and lowers your transport expenses
- > Is fully compatible with CraniMax lift-planning tool
- > Has variable outrigger bases to provide greater flexibility

CCS works with MAXbase for ultimate lift productivity:

- > The Crane Control System (CCS) displays the limits of the MAXbase's lifting capacity and offers calculated load charts for each configuration
- > CCS makes it easy to select the right configuration and offers intuitive menu navigation

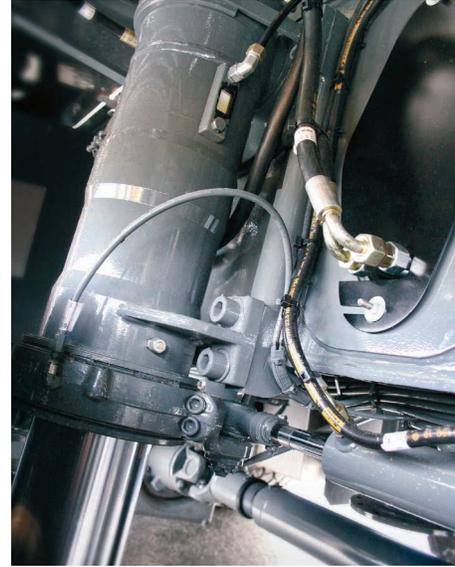
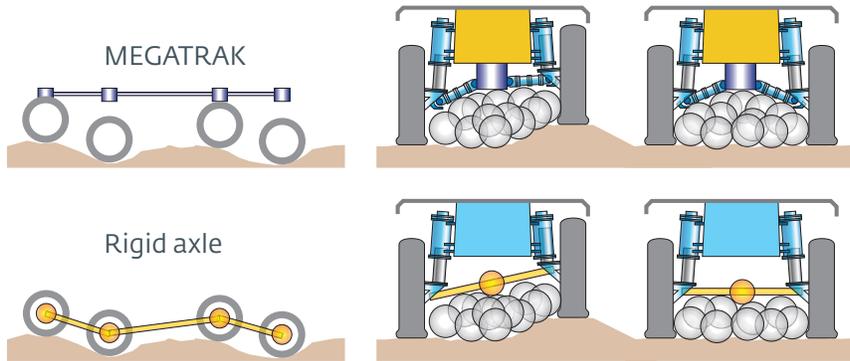
MAXbase calculations:

- > Even symmetrical outrigger positioning is improved using MAXbase calculations
- > The four-sector calculation formula allows an increase to 360° charts by more specifically defining your stability limitations and taking advantage of them



SUPERIOR MANEUVERABILITY

MEGATRAK®, the patented independent suspension and all-wheel steer system used on Grove all-terrain cranes, provides a level of operator comfort and maneuverability that cannot be matched. MEGATRAK allows for each wheel to remain on the ground at all times — keeping stresses and weight evenly distributed. Traditional suspension systems raise the body of the crane without increasing ground clearance. But with MEGATRAK, the differential is attached to the base of the carrier, offering a ground clearance up to 600 mm (2 ft) — increasing off-road maneuverability.



▼ Crab mode



▼ Coordinated mode



▼ Highway mode



> All-wheel steering

The all-wheel steering offered by GMK all-terrain cranes provides superior maneuverability and lowers maintenance costs by allowing a fully laden crane to distribute weight evenly across all axles. This feature allows operators to get closer to the lift and reduces tire wear.

> MegaDrive

MegaDrive is a hybrid drive system ideal for travel at lower speeds. This technology, exclusive to the GMK6400, allows for better traction, longer part lifecycles and exceptionally smooth acceleration from a standstill. When combined with MEGATRAK, it provides operators with precise on-site maneuverability.

> Viab

The Viab turbo retarder clutch features an all-in-one turbo coupling and integrated retarder to deliver wear-free starting and braking with no clutch over-heating. This advanced technology delivers efficient driving with automated manual transmission, exceptional maneuverability and smooth creeping on the jobsite.

> Steer-by-wire

While many all-terrain cranes use conventional mechanical steering, Grove all-terrain cranes employ steer-by-wire technology. Steer-by-wire increases performance by providing operators superior control and maneuverability — both on-road and off. You will also notice a reduction in tire wear because this technology allows for optimized steering angles based on the transport speed.

> Set up with confidence

Several GMK models include control panels with latest generation human-machine interface, allowing superior control of the suspension system. This technology helps to simplify the rigging process, saves time and allows the operator to adjust the suspension even under fully loaded conditions.

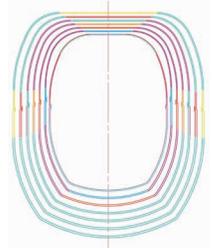


INNOVATIONS YOU EXPECT

Grove all-terrain cranes feature innovations that set them apart in productivity, maneuverability and jobsite safety. Maximize your crane investment with lifting capabilities that open up more job opportunities for greater profits.

> Superior boom design

The MEGAFORM™ boom design incorporates an egg-shaped cross-section that provides an exceptional strength-to-weight ratio. Large wear pads offer superior boom alignment when telescoping, providing an excellent transition of weight between sections allowing you greater lifting capacities at any radius.



> Laser-Hybrid Welding

New welding technology produces a longer, lighter and stronger boom system. Laser robotics creates a welding seam with just one layer where the traditional method required three layers. This improved welding technology reduces the demand for filler material by up to 200 kg (441 lb) on a 60 m (197 ft) boom.



> TWIN-LOCK™ boom pinning system

TWIN-LOCK is a fully hydraulic system with electronic controls. It features a single telescopic cylinder that uses two horizontally mounted pins to move a boom section into position. The use of a single telescope cylinder reduces weight used elsewhere to strengthen the crane and increases lifting capacity.



✓ Cameras

Grove all-terrain cranes feature optional boom head, hoist, rear-view and bird-view cameras — giving operators the advantage of additional tools to be aware of their surroundings. These cameras are strategically positioned on the crane with LCD monitors that display in both the superstructure and carrier cabs. The hoist camera monitor allows operators to monitor the hoist without turning their head and can replace a traditional mirror system. The boom head camera including the zoom feature provides the operator with a direct view of the load even when obstacles are present on the jobsite and allows operators to rely on more than just a signal person. The rear-view camera monitor provides operators with the ability to see behind the crane without relying on spotters. The bird-view camera system utilizes 4 cameras for a 270° view around the crane.



^ LCD monitor



^ Hoist camera



^ Rear-view camera



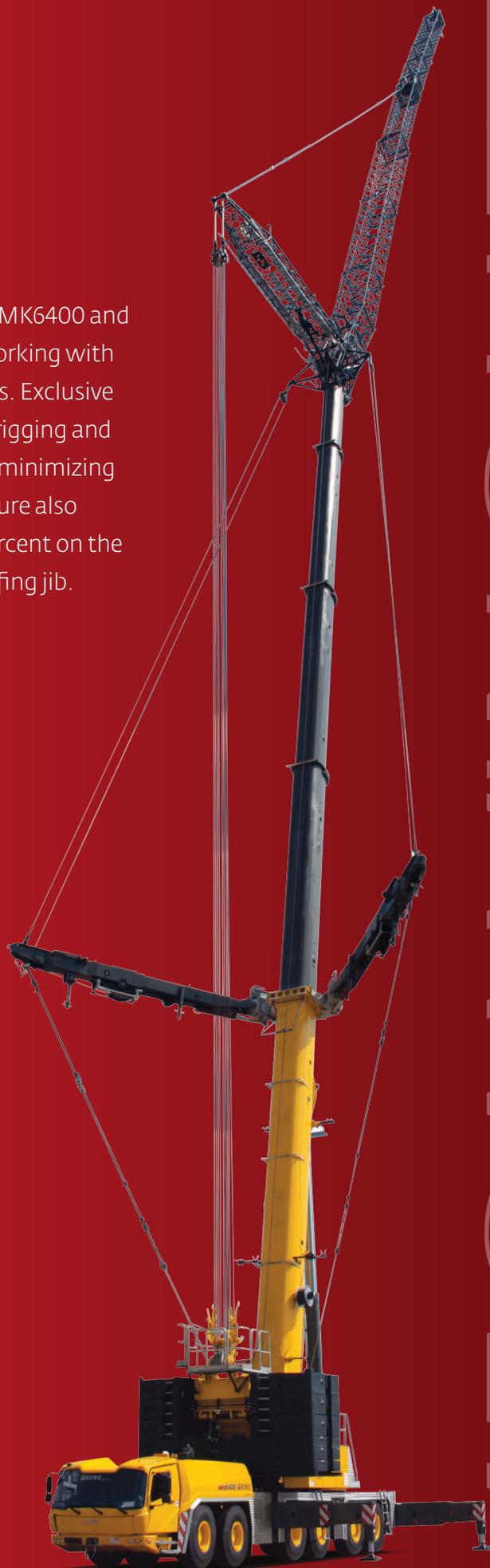
^ Bird-view camera



MegaWingLift™

The patented MegaWingLift, available on GMK6400 and GMK7550 models, provides rigidity when working with long boom/jib/counterweight combinations. Exclusive on the GMK6400, the MegaWingLift is self-rigging and can be installed without an auxiliary crane, minimizing transportation and erection costs. This feature also increases the load chart by more than 70 percent on the main boom and over 400 percent on the luffing jib.

- ▼ The MegaWingLift is self-rigging and can be installed within 20 minutes.



MEGAWINGLIFT



MORE LIFTING OPTIONS CREATE GREATER JOB VERSATILITY

Grove all-terrain cranes offer a variety of ways to expand your lifting capabilities. Whether you need to reach higher, or reach up and over complex obstacles, our cranes can be easily configured to get the job done.

> Hydraulic swingaway

Grove hydraulic jibs can be offset to luff under load from 0° – 50°. The hydraulic swingaway jib is controlled from the operator's cab and can be used with any boom and jib configuration. Their movement is continually monitored by the CCS control system — and they can be conveniently stowed alongside the boom for secure road travel. The hydraulic cylinder also serves as a rigging help for the jib and can be controlled with the cable connected handset, which is standard on all Grove all-terrain cranes.

> Integrated heavy-duty jib

The integrated heavy-duty jibs are designed as part of the hydraulic swingaway jib and combine a bi-fold swingaway and heavy-duty jib into one. This innovative design provides more power, flexibility and reach — allowing for hydraulic luffing of the heavy-duty jib under load between 0° – 50°.

> Jib and boom extensions

Hydraulic swingaway jib installs easily and enables 0° – 50° offsets for the ability to reach over obstacles during lifting. Jib and boom extensions increase reach for higher job utilization.

> Luffing jibs

The largest Grove all-terrain cranes, the GMK6400 and GMK7550, provide luffing jibs up to a 79 m (259 ft) length. These jibs are easy and fast to rig and transport: the inserts can be stowed within each other, one backmast simplifies rigging and the full luffing jib can be lifted up without rolling above the ground.



THE POWER TO PERFORM IS AT YOUR FINGERTIPS

Powerful, efficient engine design and drive systems deliver industry-leading mobility. And human-machine interfaces provide the ultimate in ergonomic operator control, comfort and productivity.

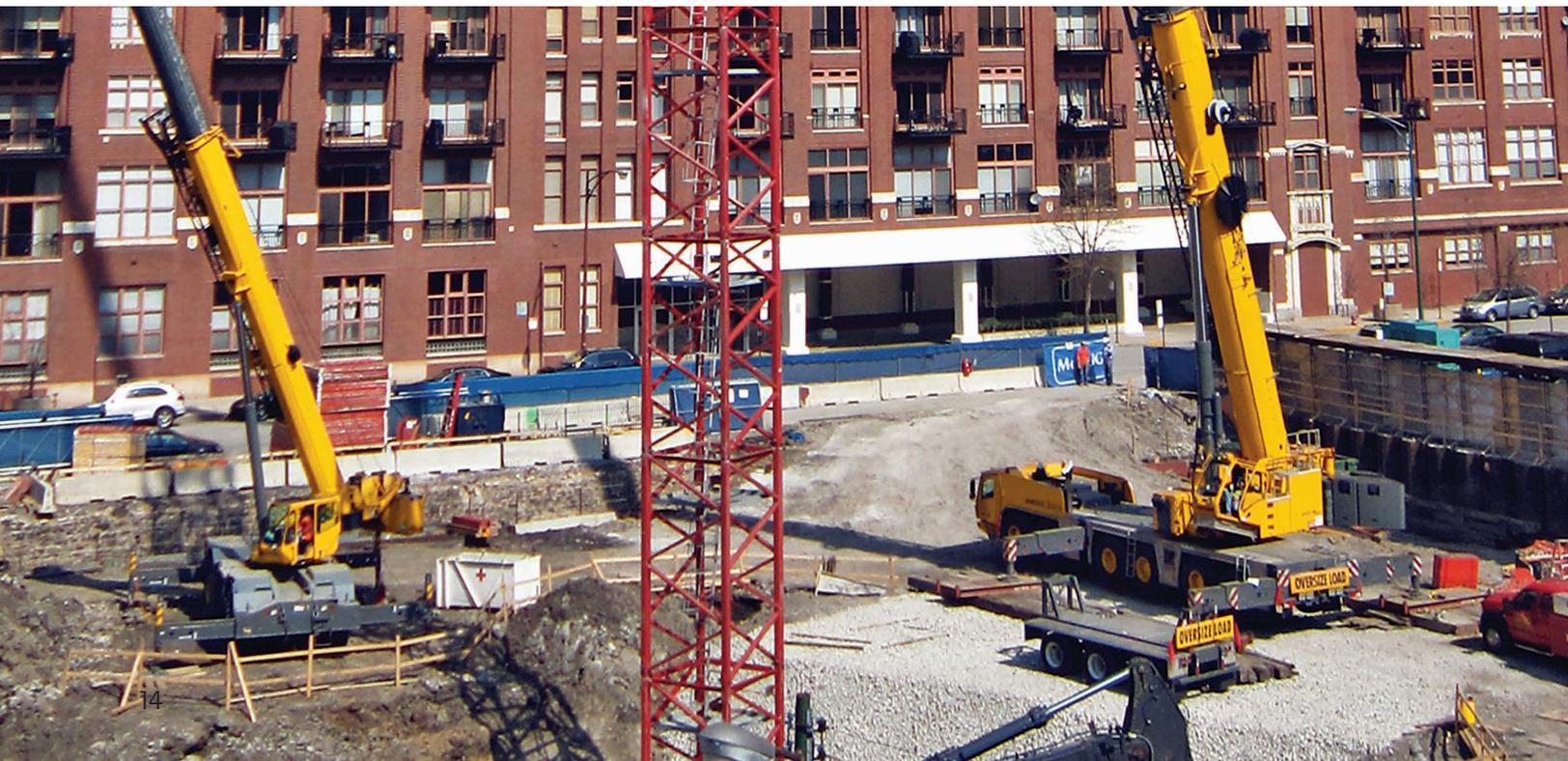
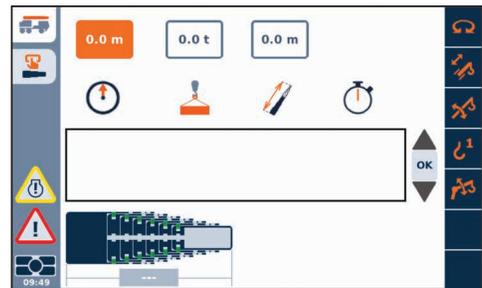
> Crane Control System (CCS)

The Crane Control System utilizes redundant sensors to monitor all crane movements and structural stresses in real time for ultimate human-machine feedback and communication. The user-friendly interface is visible to the operator on two full-graphic displays.



✓ Boom Configurator

The Boom Configurator mode ensures the precise boom setup based on radius, load and height to be moved. The operator simply inputs this criteria, and the boom automatically extends to the optimal configuration.



> Operating system — ECOS

The ECOS (Electronic Crane Operating System) allows for control of the crane’s principal operations, for both carrier and superstructure functions. A supply of essential operating data — such as engine and transmission functions, diagnostics, warnings and error codes — and simple programming make lift planning easy. Plus, it reports data on all crane functions and power units, and adjusts speeds automatically when jib extensions are fitted. Individual speed and reaction adjustments of the crane movements ensure maximum operator comfort and allow smooth operation.



> Operating system — EKS 5 and EKS 5 Light

Monitoring the lifting condition of the crane at all times, EKS works together with the ECOS as a complete command and control system — or separately as load moment indicator. The system continually runs fault analysis, allowing fast accurate service recommendations. Whereas the EKS 5 Light features a semi graphic display, the EKS 5 offers a full graphic display needed for larger cranes to display the various jib combinations and allow the operator to view the load charts.



> Engines

Grove all-terrain cranes utilize an environmentally-friendly engine that meets current E.P.A. and E.U. emission standards. This engine package is optimized to deliver plenty of power while minimizing fuel consumption and operating costs.

> Fuel saving technology

Reducing engine rpms and disconnecting the hydraulic pumps lowers fuel consumption while idling. An optional external electrical supply utilizes jobsite power or auxiliary power unit to lower fuel consumption even more.



LOGISTICAL BENEFITS AND CONVENIENCE

Get to the jobsite, get set up, and get working. Grove all-terrain cranes are designed with your productivity and profitability in mind.

> craniMAX and 3-D Lift Plan

Simplify jobsite planning with free craniMAX lift planning software. Intuitive and easy to use, it delivers quick and accurate load charts, degrees of freedom and calculations for outrigger loadings. All results are calculated based on crane set-up and can be printed out and used when bidding jobs. Use free 3D Lift Plan to search the load charts of all your cranes for the most economical crane configuration for the lift based on the weight and dimensions of the load, as well as the location and size of any obstructions on the jobsite.



> Transportability

Removable front outriggers and rear outrigger boxes (available on some models) and the self install/removable counterweight offer convenient transportability. Outrigger boxes can be quickly installed and removed without an assist crane, and the counterweight is designed for quick and easy installation. Both of these features result in less setup time and, when necessary, reduced axle weight. Additional features include boom dolly, dolly lugs, tag axles and self-rigging auxiliary hoists. Boom float, boost and removal options are also available.



> Standardized counterweight

The counterweight on several crane models have been standardized and can be interchanged between models. This provides transport and logistic advantages, which saves you time and money.



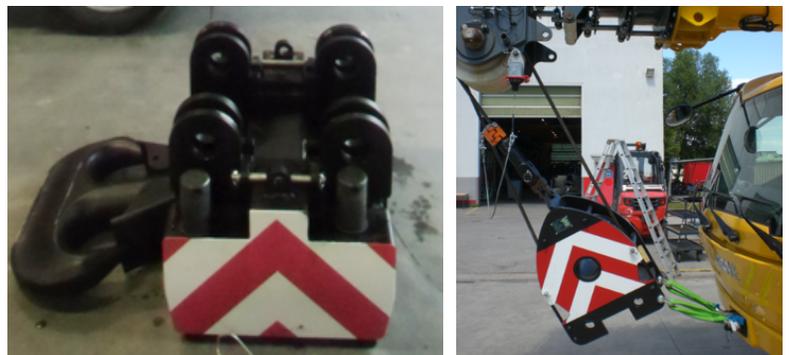


^ Interchangeable auxiliary hoists

An optional self-rigging auxiliary hoist eliminates the need for an assist crane while rigging on the jobsite. Plus, the hoist can be used interchangeably on several models.

> Split hook blocks

An available split hook block allows the hook block to be taken off while allowing the sheaves to remain on the crane. This enables faster rigging and reduces the weight on the crane to help comply with roading requirements.



RELIABILITY AND EASY MAINTENANCE

Grove all-terrain cranes offer long-lasting reliability, with convenient features designed to minimize maintenance and maximize your productivity.

Easy access for routine maintenance

Grove all-terrain cranes provide easy access for the routine maintenance that keeps you running and keeps you profitable. With easy-access service ports, hoist platform, and convenient storage locations, the all-terrain series helps you keep your machine in top condition.



✓ The convenient hoist access platform provides greater accessibility to service areas.



^ Easy to reach components located behind side panels.



^ Built-in compartments offer room for additional storage.

Full CAN-Bus wiring

This state-of-the-art, software-based system provides laptop computer troubleshooting and customizable functions that result in easier diagnostics and reduced downtime.



Maximizing uptime

CraneSTAR®

CraneSTAR is the most extensive OEM-produced crane asset management system available today. CraneSTAR leads in a new era of data management and planning for crane owners. It was developed to monitor cranes and jobsites, increase fleet productivity, and decrease operational costs. Additional benefits include:

- > Notifies you to schedule preventive maintenance
- > Increases security, which may lead to reduced insurance costs
- > Records crane use resulting in higher resale values

QUALITY

All Grove high-performing cranes are built using strict procedures and the highest quality components. We work hard to design, manufacture and test our products, ensuring every all-terrain crane gives you the best opportunity to maximize your profits. Top-of-the-line service and support also give you peace of mind to help ensure your investments will be hard at work, day in and day out.



All Grove all-terrain cranes come equipped with a 1-year or 2400 hour guarantee.



Comprehensive support

Manitowoc Crane Care is the lifting industry's most comprehensive and advanced service and support network.



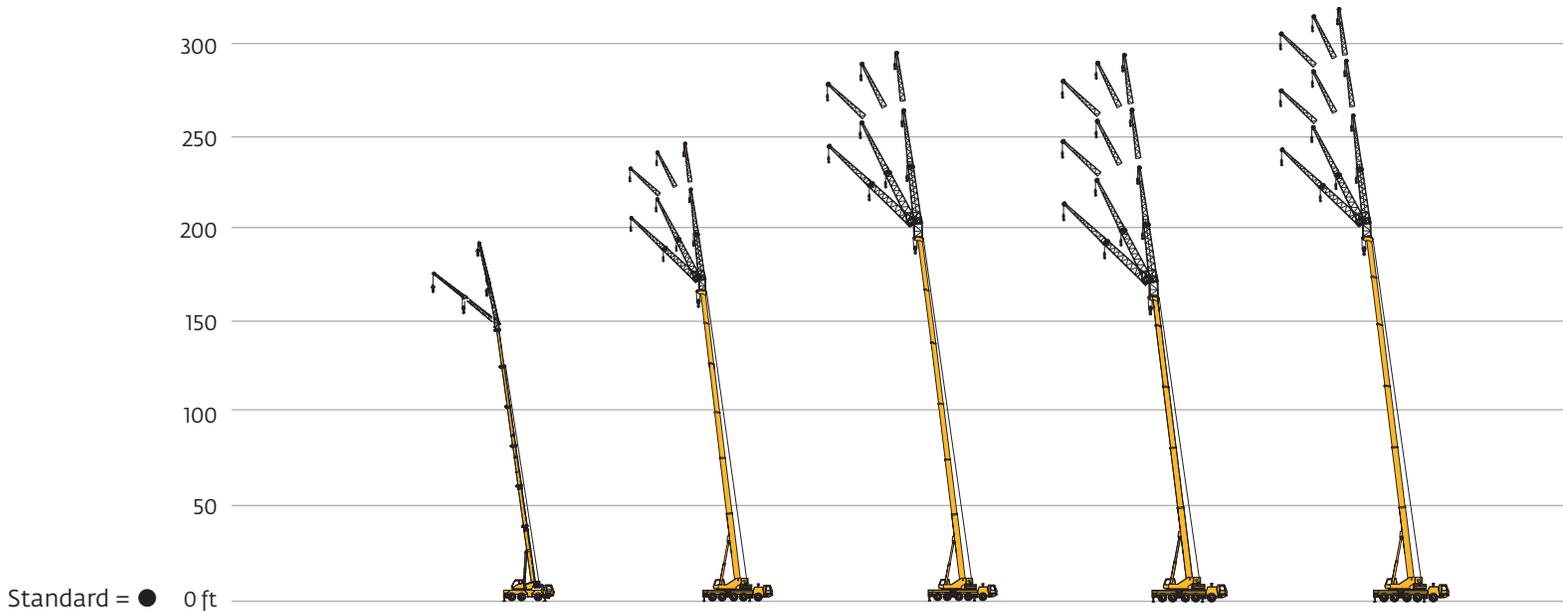
Manitowoc Crane Care provides:

- > Contact centers, available 24/7
- > Comprehensive training
- > Global access to parts and service
- > The EnCORE rebuild, repair, remanufacture and exchange program
- > Technical publications and support



Model features

Grove has made many optional features standard, which means you'll experience more uptime, higher profits and better resale value with our all-terrain cranes.



	GMK3060	GMK4100B	GMK4100L-1	GMK5150	GMK5150L
Maximum capacity	60 t (65 USt)	80 t (100 USt)	100 t (115 USt)	150 t (175 USt)	150 t (175 USt)
Boom length	43 m (141 ft)	51 m (167 ft)	60 m (197 ft)	50,8 m (166 ft)	60 m (197 ft)
Maximum tip height	60 m (197 ft)	75 m (246 ft)	89 m (292 ft)	88 m (289 ft)	97 m (318 ft)
Gross vehicle weight	36 t (39 USt)	48 t (53 USt)	48 t (53 USt)	60 t (66 USt)	60 t (66 USt)
MEGAFORM	●	●	●	●	●
TWIN-LOCK	●	●	●	●	●
Hydraulic swingaway jib	optional	optional	optional	optional	optional
Integrated heavy-duty jib				optional	optional
Luffing jib					
MegaWingLift™					
MEGATRAK	●	●	●	●	●
New HMI with MEGATRAK functions			●	●	●
Steer-by-wire			●	●	●
All-wheel steered	●	●	●	●	●
MEGADRIVE					
New carrier cab design			●	●	●
Tilt superstructure cab	●	●	●	●	●
Crane control system (CCS)	●		●	●	●
ECOS		●			
Carrier ECOS		●			
EKS 5 light		●			
EKS 5		optional			
CraneSTAR	optional	optional	optional	optional	optional
VIAB					
MAXbase	coming soon		coming soon	coming soon	coming soon
Interchangeable counterweight					

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