



WORLDWIDE SUPPORT NETWORK

Manitowoc cranes are sold and serviced at locations covering five continents. No matter where the job takes you, you have a business partner nearby.

Comprehensive Support

With over 90 years of experience manufacturing cranes, Manitowoc has developed resources that are critical in helping to maximize the life of your cranes.

- Parts are readily available through our online ordering center and call centers around the world
- Excellent service and technical support enable your cranes to be maintained and repaired quickly and correctly
- Our training programs for technician certification are provided in dedicated facilities with hands-on interaction

• The EnCORE program helps extend the life of your crane and give it a second life by restoring parts and components

Worldwide

With manufacturing facilities in 6 countries and dozens of regional sales and support offices around the world, Manitowoc and our dealer and customer partners have more than 5000 dedicated aftermarket employees committed to helping you keep your cranes at work.

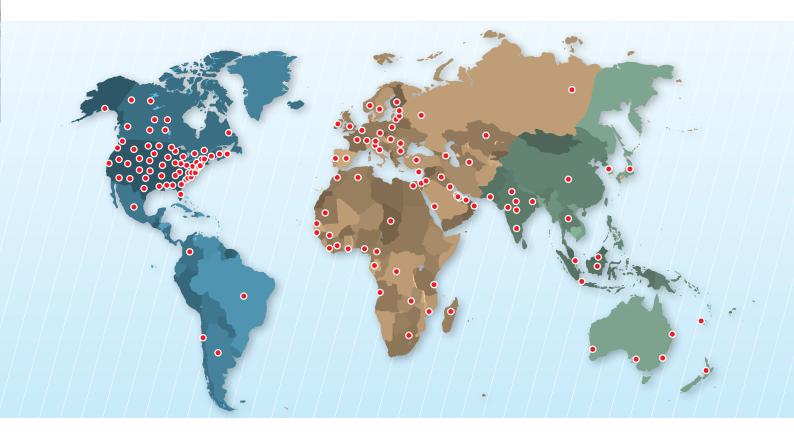
Preventive Maintenance

We recommend a preventive maintenance program for each model that will ensure your cranes are functioning at their best all day, every day.



WHEREVER you are in the world,

WHENEVER you need us, WHATEVER ... we are there.



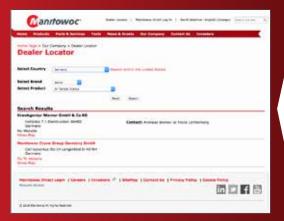
Manitowoc Crane Care is the premier aftermarket network in the industry, with dedicated <u>local</u> company and dealer personnel in nearly every country in the world.

Completely Dedicated

Manitowoc Crane Care is proud to support you where you are. With hundreds of dealer and company aftermarket support centers around the world, we are committed to supporting your investment with the most comprehensive on-site support, training and parts availability in the industry.

To locate your local Manitowoc office or authorized business partner, visit:

www.manitowoc.com









PARTS

Wherever you are in the world, locating the correct part quickly is vital to managing your operations. With Manitowoc Crane Care, the parts you need are just a phone call or click away.



- > The parts services we provide to assure your maximum uptime include:
 - Extensive inventory
- Customer Accessible Online Parts catalogues
- Fast turnaround on orders
- Global Parts Express (GPX) online ordering system

Whenever you need a part, we are ready to support you. Manitowoc Crane Care operates major logistics distribution centers throughout the world. Our primary parts warehouses in Jeffersonville, IN and St. Pierre de Chandieu, France stock an extensive inventory of genuine replacement parts. Asia Pacific is served by our facilities in Zhangjiagang, China, Singapore and Sydney, Australia. Our trained customer service representatives will help you locate your parts requirements for any of our products.

Online Ordering and Identification

Manitowoc Direct is the home of our online parts ordering systems. With 24/7 access, you can locate the correct part for any machine, any time. If you're not sure which part you need, our electronic parts catalogues are also available online through Manitowoc Direct.

Recommended Parts Lists

Knowing what parts to keep on hand is vital to balancing availability and reducing downtime while keeping inventory optimized. Manitowoc Crane Care will provide recommended parts lists to customers and dealers that reflect their machine populations.



















TRAINING

Maintenance, Troubleshooting, Operation



Manitowoc Training Centers offer courses for operators and technicians across the globe to provide in depth instruction on crane operation, maintenance and troubleshooting procedures.

Dealer Technician Certification

To earn the title "Certified Technician" each candidate must complete all assigned courses within the product-related certification process successfully. What this means is that a technician is expertly equipped to tackle any issue that may arise on your crane.

Training classes consist of classroom exercises and in many cases using advanced crane simulators which are custombuilt to be as hands on as possible. Our trainers have decades of product knowledge and field experience. The curriculum spans the complete range of knowledge, from basic technology to technician certification.

Operator Training

Operation and crane assembly instruction is available for all our product lines. This training is a small investment that pays off in the long run through more efficient operation of cranes.

Global Training Centers

Manitowoc Crane Care trainers provide instruction to thousands of crane technicians and operators each year in our training centers located throughout the world. Each facility includes interactive training tools, fully furnished classrooms, crane operation simulators, test cranes and lab workstations with equipment appropriate for the specific cranes and curriculum levels. The length of the courses ranges from two days to seven weeks, and over 50 options are offered.

Onsite Training and Introductory Courses

Training formulated to your specific requirements can be arranged at your location.

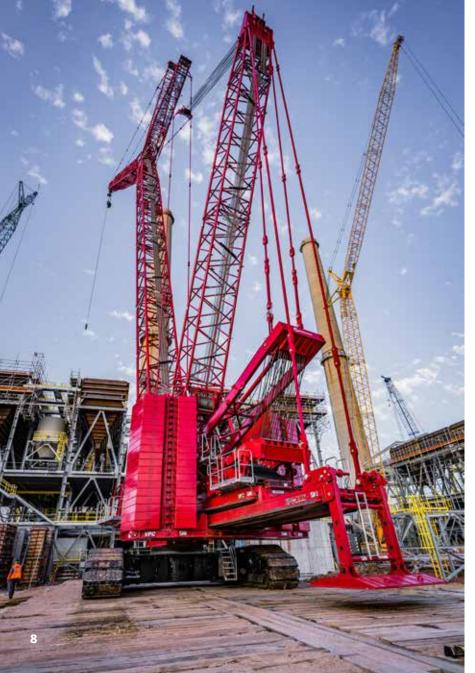
Online Training

Web-based courses are also available to build fundamental knowledge and assess new employee knowledge prior to participating in hands-on learning at one of our training centers.

TO LEARN MORE, PLEASE VISIT US ONLINE:













TECHNICAL SUPPORT

Our support for your cranes extends beyond any borders. Wherever you are, whenever you need us, we are there to help.

Contact Centers

Manitowoc Crane Care has developed a superior network of contact centers throughout the world, ready to answer your technical questions. Our locations span the globe, with representation on five continents.

Our technical support staff consists of experts who understand our cranes, are able to speak the local langauges and are committed to help you get your equipment back to work and keep it that way.

Service information is also available online at Manitowoc Direct.



"Flying Doctors"

For on-site assistance, technicians can reach you in the most remote location through our "flying doctors" program. Product Service Engineers can be dispatched to evaluate your crane on-site, including repairs. They have completed certification programs on our products, providing you the best options to increase operating time and efficiency.

Tools and Bulletins

Manitowoc's regional facilities and dealers are equipped with diagnostic tools that provide accurate evaluations to pinpoint problems with anything from engines, drive trains and hydraulic systems to structural repairs that require welding expertise.

Whatever machine you own, Manitowoc Crane Care bulletins will keep you informed about parts, service, and training. Search by brand, model, keyword, and type of bulletin for a comprehensive selection of our literature at www.manitowoc.com.





Rebuild. Repair. Remanufacture. Exchange.

Manitowoc's EnCORE programs maximize your investment by rebuilding or repairing your crane to extend its life significantly. EnCORE also includes remanufactured parts.

MOBILE CRANE PROGRAMS



Rebuilds

EnCORE means your crane is rebuilt by factory trained technicians to meet OEM standards. The process includes everything from rebuilding cabs or boom cylinders to updating all systems and renewing electrical harnesses, instruments, drivelines, hydraulic components and hoses.

Whether your crane requires a repair due to damage caused by an accident, or needs an end of service life rebuild, choosing EnCORE gives you a viable option over a new crane purchase.

Remanufactured Parts

Manitowoc offers an extensive selection of remanufactured parts through the EnCORE program, which include: engines, transmissions, hydraulic cylinders, and more. Each remanufactured part comes with a one-year warranty.

Worldwide

There are EnCORE Certified Partners located throughout the world. To qualify for the EnCORE Partners program, each location has invested extensive resources in training for its technical staff, including a structural engineer and certifications for welders.

Contact Manitowoc Crane Care for further information on our EnCORE program, details of our EnCORE facilities and Partners or for a rebuild quotation.





TOWER CRANE PROGRAMS

You Benefit From Our Manufacturing Expertise

- MADE IN FRANCE: EnCORE refurbishment services are located in the Charlieu, France Potain tower crane manufacturing facility
- Each refurbished crane is rebuilt with genuine Potain tower crane parts
- Refurbished parts are painted using the same advanced paint technologies applied to new production Potain parts
- Components are refurbished and assembled by our expert production and assembly teams on dedicated EnCORE production lines

- All refurbished cranes and parts are covered through Potain's warranty programs and supported by the global Potain network
- Manitowoc's global logistics experts ensure on-time deliveries to your door
- All technical documentation is provided in your preferred langauge
- Country specific regulations are followed (transport, certificates, etc.)

Three Exclusive Refurbishment Programs

WORKING PROGRAM

- New hoist and trolley and wire rope
- Slewing ring bolt check
- Mechanism and safety device inspection
- THREE MONTH warranty

STANDARD PROGRAM

- New hoist and trolley wire ropes
- Slewing ring bolt change and slewing ring review
- Finish painting
- Mechanisms and safety device overhaul
- SIX MONTH warranty

PREMIUM PROGRAM

- All new wires ropes
- New slewing ring and new slewing ring bolts
- Dismantle and inspection of all components
- Shotblasting, 50μm zinc primer coat with 50μm inish coat
- Mechanisms and safety device refurbishment
- New pulleys/bearings/seals
- 12 MONTH warranty

FOR SALE

A stock of **QUALITY** pre-owned cranes are always available for purchase.

Pre-owned cranes:

- Can be shipped WORLD-WIDE
- Available for purchase through MANITOWOC FINANCE offering payment flexibility and competitive rates

For additional information please contact: EnCORE@manitowoc.com or www.manitowoc-used.biz.



CONVENIENT DIAGNOSTICS

Innovative technology to help you work smarter, not harder.

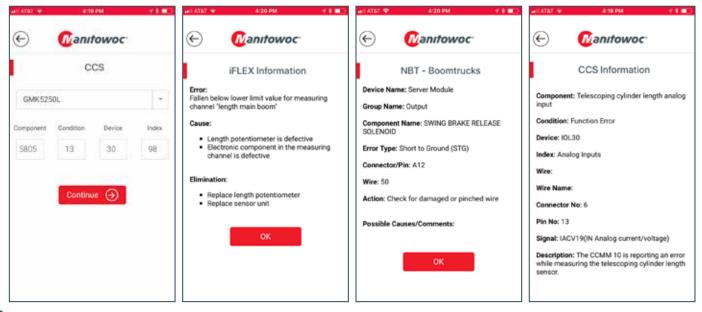
Manitowoc's Diagnostic Code App: The first of its kind in the crane industry.

Leading the way

The first of its kind available in the industry, the Diagnosic code app allows end users to quickly and easily translate crane error codes generated by on-board control systems for Grove, National Crane and CCS-equipped Manitowoc crawler products.

- Quickly and easily translate service codes using your smartphone without waiting for special equipment or technicians.
- Works for all modern Grove, Manitowoc crawler and National Crane control systems
- Available FREE for both Apple and Android based devices







> Integrated remote crane maintenance tool for all Potain CCS tower cranes.

Real-time connection - Remote data consultation and diagnostics

CraneSTAR Diag gives the opportunity to analyze situations on cranes in real time by allowing authorized technicians to connect remotely to in-service cranes. If a fault happens on the crane, precise diagnostics can be performed remotely.

This solution helps avoid multiple trips to the job site that cost both time and money, since by anticipating the operation needed on the crane and the possible parts to bring, on-site operations will be optimized and down time will be reduced to a minimum.

The dialogue established with the connected crane also allows saving data relative to this crane, including its work-time counters, fault history, or even the status of its frequency converters, etc.

CraneSTAR Diag ensures consultation and interaction with the crane, including the possibility over time to push information remotely toward the crane. All of which opens up numerous other opportunities...



Telematics - Towards an interface connected to the crane fleet

Telematics are the core of Potain crane development and in constant evolution. Reduction of maintenance cost and time: optimization of trips to job site, maximum output guaranteed, availability of the crane and job site - telematics provide more and more complete solutions to these demands.

Potain telematics tools already ensure the automation, compilation, and structuring of data collected from all cranes. With an increase in data being collected and analyzed from any point around the globe, it provides key performance indicators for maintenance of all cranes and crane fleets.

Customize reports, proactive alerts, availability of information for customers directly in their company

IT systems by using dedicated APIs (application programming interface) or data hubs - every evolution is at your fingertips. Stay connected!





CRANE CARE ONLINE

Keep up with the latest information and get connected to Manitowoc on-line resources directly through the Manitowoc Parts and Service website. From service materials to online training, everything you need is in one convenient location.

Service and Product Information

Stay up to date on the most recent maintenance and repair reports for your Manitowoc crane. Search maintenance kits, find instructions on structural repairs and take advantage of inspection and lubrication guides, all backed by the expertise and support of Manitowoc Crane Care.

Technical Support

Support is just a click away. Easily accessed technical materials relevant to your Manitowoc or Grove cranes, and find the latest updates when you need them.

Parts

Access to parts tools, including on-line parts catalogues and on-line parts ordering is available on our website and with the Manitowoc Crane Care distributor network fulfilment of orders is fast, so you can have your parts available where and when you need them.

Publications

Manitowoc Crane Care technical publications are your online library for accessing vital information on your crane. No matter what machine you own, you can find operator and service manuals, load charts, inspection procedures, troubleshooting and maintenance guides wherever you are located in the world.

Online Training

Manitowoc's self-paced On-line Training is focused on delivering the most effective crane technician development curriculum in the industry. Our curriculum covers multiple generations of technology used on our cranes. On-line Training provides technicians with access to the right information – whenever they need it.

Maintenance videos

How-To videos, component-system animations and operational instruction all delivered on-line when you want it. These short, informative videos, using the most up to date animation technologies, filmed at various locations and are a great resource for any Manitowoc crane technician or operator.





Manitowoc Cranes

Manitowoc Crane Care world-wide contacts

Contact Manitowoc Crane Care at: www.manitowoc.com

Detailed information on Crane Care teams can be found on Manitowoc Direct and through the dealer locator on the public site. International and regional contact information can be accessed under the "Contact Us" tab.

Regional headquarters

Americas

Shady Grove, Pennsylvania, USA Tel: +1 717 597 8121 Fax: +1 717 597 4062

Europe and Africa Dardilly, France - TOWERS

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Wilhelmshaven, Germany - MOBILE

Tel: +49 (0) 4421 294 0 Fax: +49 (0) 4421 294 4301

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