

INDUSTRIAL CRANES
NUCLEAR CRANES
PORT CRANES
HEAVY-DUTY LIFT TRUCKS
SERVICE
MACHINE TOOL SERVICE

KONECRANES®
Lifting Businesses™

Industrial Cranes

EXPERIENCE WHERE YOU NEED IT



EXPERIENCE IN INDUSTRIAL PROCESSES LIKE YOURS

Konecranes is one of the world's leading suppliers of cranes for industries such as paper, steel and power, automotive and general manufacturing. We have delivered thousands of cranes and we have decades of experience making sure they work efficiently and reliably in mills and other production facilities.

A PERFECT FIT

We can supply a crane for your requirements. Our solutions also fit better in your factory. SMARTON and CXT cranes, for example, require considerably less headroom. So, in a new production facility, you can reduce the height of the building and you might be able to reduce your construction costs.

We provide an extensive range of cranes, for light duty applications and demanding process use. We supply bridge, gantry, and wall console cranes, for example, which can be equipped with a wide variety of lifting devices.

And, with regular maintenance and upgrades, we can make sure the crane fits the long-term requirements of our customers. Our local service contacts are backed by our global service network.

FOR YOUR SPECIAL REQUIREMENTS

Our standard offering, with a wide range of options, is quite often enough for demanding applications. But if this isn't enough we could also provide a tailor-made solution for your process.

Most industries have special requirements. For example, in the steel industry, you need cranes that are protected against harsh conditions such as radiated heat and dust. In the energy-from-waste industry, you need to integrate the crane controls with the plant automation system to guarantee overall process efficiency.

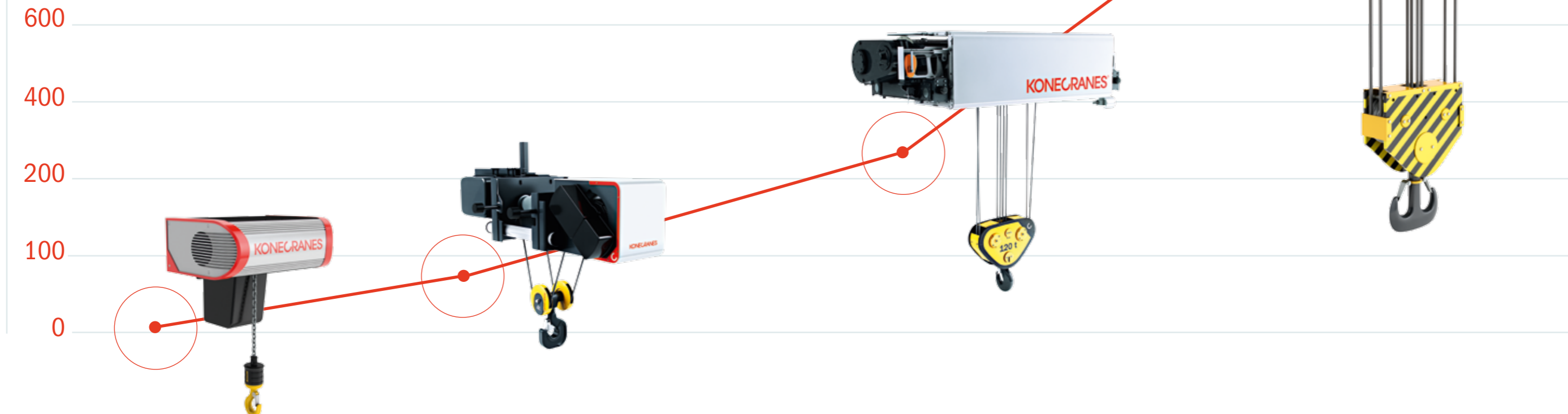
Together with you, we will design and build a crane that is ideally suited to your process, materials and conditions.

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**CRANES THAT WORK RELIABLY AND EFFICIENTLY
IN PROCESSES LIKE YOURS.**

LIFTING CAPACITY (TONS)

**CHAIN HOIST CRANES**up to **5t**

Whether you need to lift 250 kg or up to five tons, we can offer a chain hoist crane to meet your individual application requirements for a workstation crane, an overhead travelling crane, or a jib crane at workstations, in a repair shop or a warehouse.

- Long-lasting steel structure
- Stepless speed control with optional hoisting inverter
- Load control for improved safety and precision

CXT CRANESup to **80t**

When you need to lift up to 80 tons, we can provide a versatile solution. CXT Cranes are scalable not only for your lifting requirements but also for your space restrictions.

- Choose low-headroom model when overhead space is limited
- Smart Features like Sway Control and End Positioning provide precise movement
- Can be equipped with optional Smart Features to speed up load handling and improve safety

SMARTON CRANESup to **250t**

If you need a heavy-duty crane for up to 250 tons with a single trolley - or up to 500 tons with two trolleys - SMARTON is for you. If your load handling requirements are more complicated you can add Smart Features to make SMARTON fit still better into your process.

- Optional Smart Features to improve load handling and positioning control still further
- Smart Features can easily be added afterwards

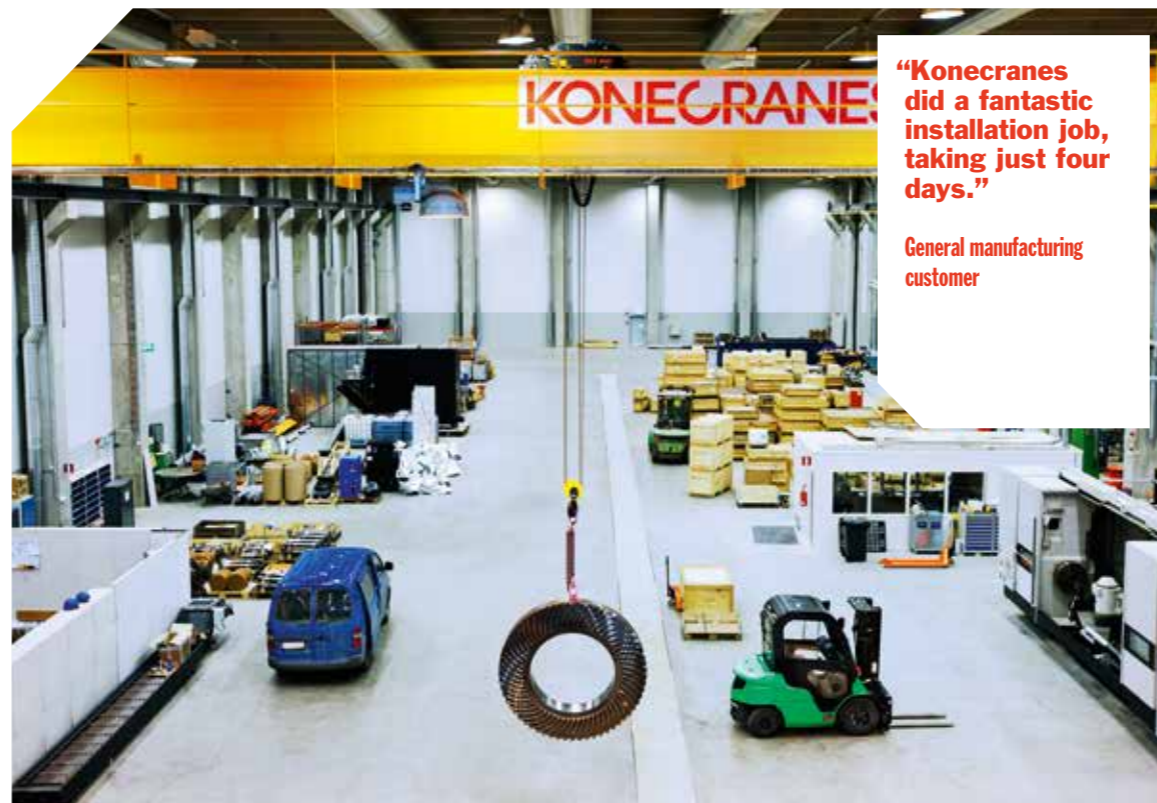
TAILORED CRANES

When you require a tailored crane application, we can supply a custom lifting solution that is integrated into your process.

- E.g. for demanding environmental conditions, we protect the crane against heat and corrosion
- Tailored to fit most environmental and process requirements

EXPERIENCE IN A WIDE RANGE OF INDUSTRIES

We have been improving performance and efficiency in these industries and many more. Here are just a few of the industries where we provide lifting solutions.



“Konecranes did a fantastic installation job, taking just four days.”

General manufacturing customer



“From tender preparation to order processing the Konecranes’ service was detailed and professional.”

Power plant customer



“We were impressed with the safety features.”

Paper mill customer



“What made us decide to work with Konecranes is their technical competence and thorough knowledge of cranes and automation.”

Energy from waste industry customer



“Sway Control is a very good safety feature that halts the load without it swinging.”

Steel mill customer



“They gave us a lot of options, which saved us money and shortened our construction period.”

Mining industry customer



“Particularly the End Positioning speeds up work processes.”

Automotive industry customer



“Since Konecranes began conducting maintenance, equipment breakdowns at the facility have decreased by over 60%.”

Oil and gas industry customer





PULP AND PAPER

For decades, Konecranes has been meeting the lifting and material handling needs of the pulp & paper industry. We understand the processes – from wood handling to recycling, and much more in between. Wherever you look in the pulp & paper industry you'll find Konecranes expertise at work.

We offer proven and innovative lifting solutions, a reliable global service network and extensive paper industry know-how. When you choose Konecranes, you are making an investment in process productivity that will serve you for many years to come.

Pulp and paper industry applications



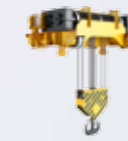
CHAIN HOIST CRANES are the workhorses in workshops, vacuum pump rooms and other process areas. Manual or electric chain hoists are used for paper machine maintenance tasks. In a single machine line there can be 50 locations for monorail hoists. In all of these applications, Konecranes chain hoist cranes equipped e.g. with new CLX chain hoists are built for reliable, long-term operation.



CXT CRANES are used in workshops and supporting functions such as handling core tubes and unloading chemicals from trucks. In the sheet cutter area they can work as roll handling cranes with Smart Features. In process applications they work as winder and dry end cranes. As wet end cranes they handle paper machine parts and in process use they handle parent rolls weighing up to 50 tons.



SMARTON CRANES are used as process duty cranes in parent roll handling, either on manual command or in a semi-automatic process, for example as dry end and winder cranes. From our long experience providing solutions for the paper industry, we have developed several of our own solutions for the paper industry.



TAILORED CRANES are built to be reliable – and 100% integrated into your process, with the Konecranes Warehouse Management System (WMS). Konecranes supplies tailored cranes, with either vacuum lifters or mechanical roll grippers, for automatic paper roll storage systems.

“I worked in the paper industry for several years before joining Konecranes. This has helped me to understand the issues facing our customers. The experience of many of the people working here has helped us develop solutions especially for the pulp and paper industry.”

Mika Vähäkuopus
Konecranes Product Engineer



STEEL

We have been working with the steel industry for more than 50 years, supplying cranes for hot metal processes, material handling in the rolling mill, and lifting in the steel warehouse.

We understand the harsh environment of the steel making process, so we have developed our lifting and control equipment to meet the challenges of flame heat and high temperatures. Konecranes solutions have been verified to withstand the tough operating conditions in hot, dusty or corrosive environments.

“If the crane stops operating, the entire production is immediately interrupted. The new LV cranes are self-monitoring. **The crane reports directly to Konecranes, so we can often take corrective action before any downtime can occur.**”

Patrik Sörebo
Konecranes Branch Manager



Steel industry applications



CHAIN HOIST CRANES are typically used as workstation cranes in workshops. These cranes together with the new CLX chain hoist are built to be reliable and long-lasting, and make working faster, safer and more precise.



CXT CRANES are used in workshops and as maintenance cranes for production equipment. CXT cranes are also ideal for end product handling, such as coils and plates, when the load and cycle requirements are low. In addition, CXT hoists are used as a 2nd auxiliary hoist in hot metal handling cranes.



SMARTON CRANES are typically used as maintenance cranes for production equipment in steel mills and for end product handling. When the load and cycle requirements are high, they are used for coil, plate, tube and pipe handling. Smart Features such as Sway Control and Protected Areas not only increase safety but also speed up cycle times and improve productivity.



TAILORED CRANES are heavy duty, engineered cranes, built to provide high availability in all process areas in a steel mill. For example, tailored LV-type cranes are used for raw material handling. In hot metal handling, Konecranes supplies charging and ladle handling cranes, slab and billet handling cranes and maintenance cranes for steel making equipment. In steel processing, tailored cranes are used for handling coils, plates, bars and wire.

AUTOMOTIVE

Many major automobile manufacturers around the world rely on Konecranes. We understand the heavy loads, short cycle times, speed and utmost safety and reliability you need to stay competitive in this industry.

Konecranes can offer cranes to lift the dies, increase overall safety, and minimize cycle times. Konecranes' Smart Features like Positioning and Sway Control help to avoid damage to dies or other equipment.

Konecranes can provide a wide range of wire rope and chain hoist cranes, as well as custom cranes for the unique lifting requirements of the automotive industry.

Automotive industry applications



CHAIN HOIST CRANES have numerous applications in the automotive industry. They are used in workshops, paintwork, at assembly lines, in welding, at different

workstations or in motor manufacturing. The new CLX chain hoists can be flexibly combined with jibs, monorails and light crane systems as well as single girder cranes.



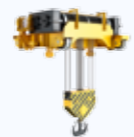
CXT CRANES are commonly used in warehousing of coils, plates and tubes. CXT cranes are also suited for the first part of the stamping area, for unreeling and blank cutting, and

even for the stamping line with die handling, if the duty class allows. The possibility to offer the CXT with Smart Features enhances its use in automobile manufacturing processes.



SMARTON CRANES are primarily used in stamping and die handling. In the automotive industry, a key issue is to shorten the cycle times when changing the dies in the

stamping machine. To meet this requirement, Konecranes can offer cranes with different levels of automation to increase overall safety while minimizing cycle times. Konecranes' Sway Control system prevents damage to dies or other equipment.



TAILORED CRANES are used in the stamping line and die handling, especially when four point suspension is required to ensure that asymmetrical loads are kept

horizontal. LV cranes can also be used for lifting hot metal when casting motor and transmission parts in automotive foundries.



“A key consideration in the automotive industry is to shorten the cycle times when changing the dies in the stamping machine. We have developed Smart Features such as Sway Control and Positioning, which shorten cycle times while preventing damage to dies and other equipment.”

Jere Röntynen
Konecranes Leading Engineer, Automation

ENERGY FROM WASTE

The renewable energy industry is one of the most challenging locations for cranes. There are often tight environmental regulations, a wide range of materials to be handled, and conditions of heat near the incinerators. Cranes are a critical part of the process.

We can provide an extensive range of cranes for the energy from waste industry, including a wide variety of automated features. Konecranes has long experience in providing lifting solutions that increase efficiency while lowering maintenance costs.

Energy from waste industry applications



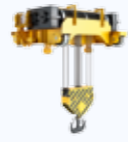
CHAIN HOIST CRANES, together with the new CLX chain hoist, provide longer chain lifetime, less wear, increased safety, and lower maintenance costs. Konecranes

chain hoist cranes are used in workshops and maintenance and as multipurpose cranes.



CXT CRANES are used as maintenance cranes in the turbine room, boiler house and flue gas treatment hall. Sometimes they are

used as an auxiliary hoist to clean the hoppers with small grabs.



TAILORED CRANES are used, for example, in stacking, mixing and feeding the waste in energy from waste plants. In small biomass

plants, they can also be used in the process duty to feed fuel to the boiler hopper. The hoisting capacity of GL trolleys is from 4 to 20 tons. If higher capacity is needed, special trolleys are used.

“This is a challenging environment for a crane, and that places special requirements on the materials used and on quality control. To ensure reliability, we check the quality of the welds with ultrasonic testing to make sure there are no cracks or holes. Because the whole process depends on the GL crane.”

Eric Chen
Konecranes General Manager



KONECRANES

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POWER

We provide lifting solutions for a wide range of power plants, from a traditional coal-burning plant, to a modern combined cycle unit or a remote wind farm.

We can supply an electric chain hoist especially designed for a wind turbine. Or we can provide tailored grab cranes for coal handling. You can choose a CXT crane for your workshop or a SMARTON Crane for maintenance use. Whether standard or tailored, our cranes are efficient and long-lasting. And this is proven every day in power plants worldwide.

Power industry applications



CHAIN HOIST CRANES equipped with new CLX hoists are used in a huge range of configurations in the power industry, for example with jibs and monorails for use in maintenance duties and in workshops. A special application for the power industry is a tXN wind turbine hoist locating inside the nacelle and used for maintenance purposes.



SMARTON CRANES are often used as turbine hall cranes. When lifting the turbine for maintenance, absolute accuracy is essential. For this reason, we have developed Smart Features such as Inching and Micro Speed that improve accuracy, reliability and safety.



CXT CRANES are used in workshops and for maintenance, for example in the boiler room and turbine hall. For gas compression buildings we can also offer equipment for an explosive environment, if required. When equipped with Smart Features such as Sway Control and Micro Speed, they improve safety and positioning accuracy.



TAILORED CRANES can be used, for example, as gantry grab cranes in coal yards. In hydro power plants they are used as intake and draft tube gantry cranes. For higher capacities we can build tailored cranes also in tandem use, using our standard trolleys.

“When your load is valuable, you don’t want to damage anything when you’re lifting it. That’s why we recommend Smart Features such as Sway Control, Inching and Micro Speed to ensure smooth lifting and precise positioning.”

Frank Canestrier
Konecranes General Manager



MANUFACTURING

There are as many lifting requirements as there are manufacturing operations.

Whether you are working in electronics, plastics, metals, or food processing, or even in hazardous environments, we want to provide your lifting solutions. Manufacturing workshops are an essential part of the supply chain - these solutions are built with the same reliability as cranes for process industries. For 80 years, Konecranes has been making cranes for nearly every imaginable purpose in manufacturing. We understand your requirements for lean manufacturing, varied loads, and short cycle times.

Manufacturing applications



CHAIN HOIST CRANES are used in dozens of applications in general manufacturing. That's

why we have designed Konecranes chain hoist cranes that can be used as workstation lifting equipment in all possible configurations. But no matter what the application, Konecranes chain hoist cranes are reliable and increasingly safe.



CXT CRANES are used in those phases of the production flow where material handling intensity is high.

These include taking in, stocking and prefabricating raw materials, in manufacturing, assembling, packaging and dispatching. The CXT is scalable for your requirements.



SMARTON CRANES are used in the same application areas as the CXT, but when loads are heavier and

higher capacities are required. This can include manufacturing of heavy steel structures and pre-assembly of the final machine line. In these applications, lifting capacity and lifting accuracy are essential. In these mission-critical operations, we offer a wide range of standard and optional Smart Features that give you precise load control. These features reduce cycle times while reducing the risk of accidents.



“We have been working with some of our customers for twenty years or more. We supply not only all of their lifting requirements, from chain hoists to heavy cranes, but also maintenance and modernization services. This long-term commitment provides the best return on investment.”

Gordon Adie
Konecranes Managing Director

SMARTER WHERE IT MATTERS

All cranes from Konecranes have certain features in common. The technology may differ, but they are all designed and built to provide more safety, functionality and reliability where it matters – in your mill or factory.

SAFETY IS THE TOP PRIORITY

Smart Features such as Sway Control and Protected Areas, available for example in the SMARTON, CXT and tailored cranes, not only increase safety but also speed up load cycle times and improve productivity.

FASTER WHERE IT MATTERS

The operating speed of the crane is adjustable for the kind of work it is doing. The crane works faster when the hook is empty, but when you need to move a delicate load in a small space, features such as Inching and Micro Speed improve accuracy and safety – and save time.

SMARTER CORE OF LIFTING

We think there are some things so important that we have to do them ourselves. That's why the design and most of the manufacturing of the motor, gearbox and control unit are done in-house. When we design and build it ourselves, we can ensure that the Smarter Core of Lifting functions as a unit. That's the only way we can be sure that it will provide the performance, safety and reliability you need.

SMARTER HUMAN INTERFACE

The best way to improve safety is to minimize human error. That's why we focus on usability in the operator interface, to make the equipment straightforward and safer to use. To reduce operator error, we provide extensive training programs and crane safety courses.

SMARTER KINEMATICS

Smarter crane kinematics is all about lifting, moving and controlling the load and the lifting equipment itself accurately, efficiently and safely.



Smarter Core of Lifting



Smarter Human Interface



Smarter Kinematics



INDUSTRY LEADING SERVICE

Service, done properly, is not an expense. It is business investment that provides a return. With more than 400,000 pieces of equipment under maintenance contracts and more than 50 years behind us, our experience sets us apart.

SPECIALIZED MAINTENANCE AND MODERNIZATION SERVICES

Through our global service network, we offer specialized maintenance and modernization services for all types of industrial cranes. These services range from mandatory inspections to preventive or full-service maintenance and operations partnerships. They can be applied to a single piece of equipment or across your entire operation, boosting the productivity and safety of your industrial processes.

REMOTE MONITORING

In order to ensure the current and future availability of your cranes, TRUCONNECT® Remote Monitoring and Reporting provides you with actual usage data about your CXT and SMARTON cranes. With this data you can improve safety, optimize maintenance, and plan for the future modernization of your equipment.

ADVANCED DIAGNOSTICS

In addition to inspections and preventive maintenance programs we offer you advanced diagnostics services such as the Crane Reliability Survey, an engineering assessment of the current condition and future maintenance needs of your cranes; RailQ runway assessment as well as RopeQ wire rope analysis. These analyses provide you with valuable information that you can use as a guide when planning future actions.





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Konecranes is a world-leading group of Lifting Businesses™ offering lifting equipment and services that improve productivity in a wide variety of industries. The company is listed on NASDAQ OMX Helsinki Ltd (symbol: KCR1V). With over 12,000 employees at more than 600 locations in almost 50 countries we have the resources, technology and determination to deliver on the promise of Lifting Businesses™.

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