

Industrial crane modernization





Benefits of modernization

- Optimized crane capacity, speed or use class to better meet production needs.
- Improved safety and ergonomics with new technology.
- Supports continued usability and serviceability.
- Can increase level of automation and connectivity to other systems.
- Promotes environmental awareness and circular economy.
- Prolongs the economic service life of the equipment.

Make yesterday's crane work hard for you today and tomorrow

As your business evolves, you may find you need to increase the speed and lifting capacity of your crane, enhance ergonomics and operator comfort, apply new safety features and positioning capabilities, or simply replace high-maintenance, obsolete components with newer technology.

Modernizations can provide a complete transformation of your existing crane as an alternative to replacing it. So, whatever your need, a modernization can be a viable option to protect and extend your original investment.

Rebuilding productivity

A decision to modernize is often based on a need to achieve greater performance and throughput, and sometimes to support an entirely new process. We can rebuild your old crane to meet the demands of today's high-technology standards, typically at a substantially lower cost than for a new crane.

Common modernizations

Replacement of hoists, trolleys, operator cabins and controls to achieve increased capacity, speed, duty, ergonomics and/or load control.



Konecranes professionals are skilled and experienced in modernizations, large and small. We have the scale, expertise, technology and resources to modernize any make or model of overhead crane.

Typical modernizations include upgrading open winch trolleys, electrical and automation systems or modifying structures such as girders, lifting beams and runways. Smart Features such as Sway Control, Target Positioning and Protected Areas are a great addition for improving safety and productivity.



➔ New life for vintage cranes

"Konecranes provided us with a much safer way to run our cranes. We have gained in productivity, safety, and we've had no inspection or detection problems since we've done this work. There have also been no repairs whatsoever. In the long run, this modernization is going to save us a lot of money. **And when it comes to safety, we can't put a price on it. That's priceless.**"

Jerome Mead,
Operations and Quality Manager, AM Castle Metals

Planning for future lifting operations

If you're considering whether a modernization is a valid option, you need a tool to help you make decisions about the future use of your cranes.

A Crane Reliability Study is an engineering assessment that evaluates the current condition of your crane and provides a theoretical estimate of its remaining design life. The study looks at structures, mechanical components and electrical systems, and highlights possible maintenance and modernization needs. We've also developed processes and tools to help analyze the current condition of specific crane components, such as ropes or crane rails.

We'll evaluate the overall condition of your crane structures and components in detail with a focus on safety, productivity, reliability, usability and remaining design life. We'll also provide a detailed report and further consultation with advice on maintenance, modernizations and future investments.

Prolong the economic service life of your crane

If you have an older crane, safety regulations and production requirements may have changed since it was built. We can update your crane to help you maintain safety and productivity, even as production demands increase. A modernization will also help you stay in compliance with current safety requirements and may reduce the risk of failure, helping you avoid costly downtime, injuries or damage to facilities, materials or products.

Electrical upgrades

1. Motors

Our motors are specifically designed for crane duty and lifting motions. They can tolerate high starting currents without overheating, making them suitable for the frequent starts and stops required in crane operations.

2. Control system upgrade

Upgrade to a variable frequency drive. Air-conditioned E-room with variable frequency controls is available for severe applications.

3. Festoon system or energy chain

Festoon systems increase safety by replacing wear-prone open conductors and collectors. Energy Chain protects the power and control cables from mechanical wear and reduces the risk of external damage.

4. Limit switches

Prevent the hook block from damaging the drum. Bridge and trolley travel limit switch protection. Collision avoidance systems, zone control and automation.

5. Continuous monitoring

Brake and Rope Monitoring Units (BMU, RMU) can be added to monitor wear of specific components. Konecranes TRUCONNECT Remote Monitoring can include condition monitoring, alerts and operating data in real time.

6. Radio control

Floor-operated controls allow the operator ease of mobility and a good view of the load. The controls can be equipped with real-time load data.

7. Remote Operating Station (ROS)

Crane controls can be located away from the crane, e.g. in challenging or dangerous environments for the driver, such as waste bunkers and hot metal handling.

Mechanical upgrades

8. Open winch trolley

When processes change or components are nearing the end of their service life, a new lifting device can make lifting safer and more efficient.

9. Ergonomic cabin and chair

An enclosed insulated, air-conditioned cabin helps provide maximum visibility. An ergonomic console chair offers optimum comfort to the operator.

10. End carriages, bogies and wheel assemblies

Anti-friction bearings help meet increased productivity demands. Our high-capacity end carriages and bogies are designed to lengthen wheel life and improve crane tracking. Protect the crane and the building by installing hydraulic or rubber buffers.

11. Traveling machineries

Drives can be upgraded with heavy duty foot-mounted gearboxes. Shaft-mounted motor reducers can also be applied to eliminate cross shaft maintenance and alignment issues.

12. Hoisting machinery

Upgrading lift capacity and speed. Our cranes are built around the Core of Lifting, the package of key components—gears, motors and controls—that we design and manufacture in-house.

13. Self-adjusting, bonded non-asbestos, self-aligning brakes

These brakes reduce maintenance by automatically compensating for lining wear. Includes electric/hydraulic shoe, or electric release disc brakes.

14. Platforms

Increase safety and maintenance accessibility by adding or improving platforms.

15. Girder modifications and reinforcements

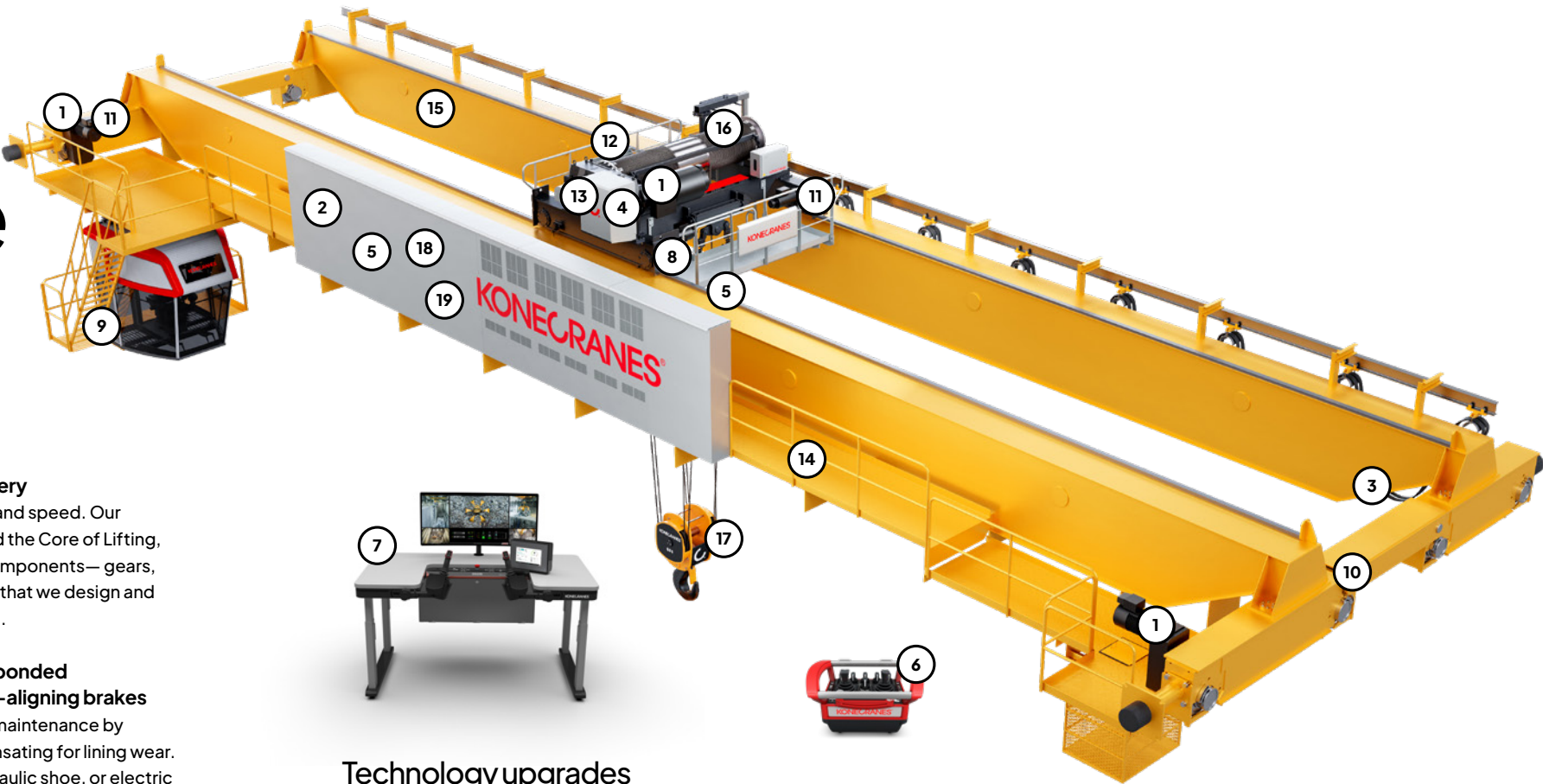
We can increase or decrease the length of the girder span, which may be required during building expansions or when fitting a used crane into an existing building. We can also provide structurally improved end ties and end carriages for severe applications to address fatigue and repair issues.

16. Hoist drums

Redesign drums for upgraded capacity and performance. Hardened drums are available for demanding applications.

17. Hook blocks

We offer hook blocks in a wide variety of sizes and configurations, including rotating blocks or specially designed blocks for severe duty applications. We also offer common wear items such as hooks, frames, pins, sheaves, bearings and safety latches.



Technology upgrades

18. TRUCONNECT Remote Monitoring

The TRUCONNECT Modem Upgrade has been designed to equip a crane with a modem for TRUCONNECT Remote Monitoring. TRUCONNECT Remote Monitoring uses sensors to collect data, such as running time, motor starts, work cycles and emergency stops, providing visibility to crane usage.

19. Smart Features

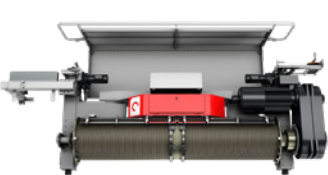
Smart Features are Konecranes designed add-ons that work together or individually to improve safety, cycle time and load positioning. They add intelligence to your crane with purpose-built software and hardware. Smart Features include Sway Control, Assisted Load Turning, End Positioning, Restricted Areas and more.

20. Safety Features

Tailored solutions are available to improve the level of safety or to comply with the latest requirements, also for the most demanding applications.

Open winch and hoisting trolley upgrades

We have solutions for all applications from light lifting equipment to heavy duty processes. Specialized solutions include GL trolley for waste to energy and biomass, CXT and DH hoist for light duty lifting, completely customized LV solutions for any need, and more.



SMARTON trolley

The SMARTON trolley is built for heavy process industries and applications. The motor, gearbox and control unit are designed and manufactured in-house for excellent lifting performance and long life. Trolley frame made of high-quality steel and hoisting machinery built on Core of Lifting components combined with a full range of software-based intelligence offer all-around exceptional performance.



Konecranes M-series trolley

The M-series trolley is ideal for heavy-duty process use. It features integrated brake, motor and gear combined into one unit for improved reliability and fewer maintenance points. Our proven Core of Lifting components return high process performance and maximized uptime, while the modular architecture offers excellent accessibility for short inspection times and safe maintenance. The M-series trolley offers several options for different applications such as twin hook trolleys and two hoists on the same trolley.



Maximize crane reliability and performance

You can depend on Konecranes well beyond installation. Upon completion of your modernization, we'll provide complete parts and maintenance manuals. We can also provide comprehensive maintenance and repair services to keep your crane performing for years to come.

Service programs tailored to your operations

Preventive maintenance conducted at regularly scheduled intervals can often be the most effective way to maintain and potentially extend the lifespan of your cranes. Konecranes experts can help you build a service program—from basic inspections to a comprehensive maintenance program—tailored to your operations.

The right parts at the right time

Keeping parts in inventory, especially in process-critical operations, can further reduce downtime when performing maintenance or repairs. Our parts experts can provide you with a comprehensive parts package specifically designed according to your application and usage requirements.

Why choose Konecranes?

We provide industry-leading lifecycle services for all types and makes of industrial cranes and hoists and sustainable lifting solutions covering a full range of industrial applications. Our objective is to improve the safety, productivity and sustainability of our customers' operations.

Our service network is the largest and most extensive in the industry, servicing hundreds of thousands of assets each year of all different makes and models.



You get the advantage of local inspectors and technicians with access to a wealth of knowledge from around the globe.

We take a comprehensive, systematic and collaborative approach to managing your assets throughout their lifecycle. We take time to share our findings with you, provide recommendations based on our industry-leading expertise and discuss how each action impacts your operations and the entire health of your business.

Sustainability at every stage of the crane's lifecycle

We are committed to providing sustainable solutions and services while preventing and minimizing emissions and waste. Lifecycle thinking combined with usability, eco-efficiency and safety guide us in the design of our products and services. Our aim is to maximize the lifecycle value of our products.

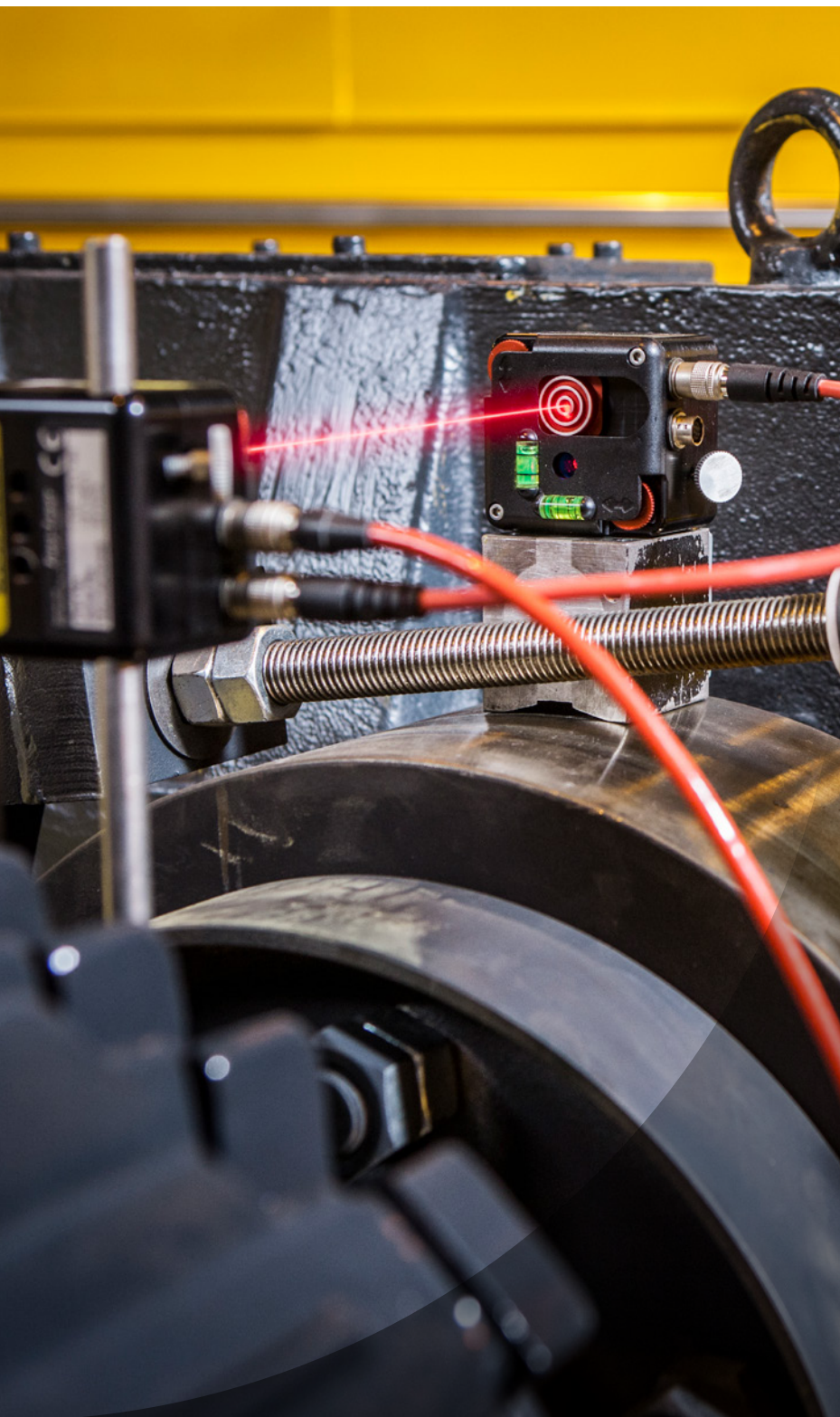
Deciding to modernize instead of replace is already

a more sustainable choice. And when carefully maintained, a modernized crane can last for many more years. A service program can help prevent breakdowns and keep equipment and components in use. You can also utilize predictive maintenance where service is based on actual condition and planned around production schedules, and repairs are more targeted and resource efficient.


Core of Lifting: Experience in action

Our cranes are built around key components that we design and manufacture in-house. Konecranes gears, motors and controls are made specifically for crane use and lifting motions and are fully integrated into the core of our crane technology. We don't just design the components, but also the interactions between them making them work seamlessly together as the Core of Lifting to give you a crane that performs better, lasts longer and is more eco-efficient.





Konecranes is a global leader in material handling solutions, serving a broad range of customers across multiple industries. We consistently set the industry benchmark, from everyday improvements to the breakthroughs at moments that matter most, because we know we can always find a safer, more productive and sustainable way. That's why, with around 16,700 professionals in over 50 countries, Konecranes is trusted every day to lift, handle and move what the world needs. In 2024, Group sales totaled EUR 4.2 billion. Konecranes shares are listed on Nasdaq Helsinki (symbol: KCR).

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