

INDUSTRIAL CRANES  
NUCLEAR CRANES  
PORT CRANES  
HEAVY-DUTY LIFT TRUCKS  
**SERVICE**

**RETROFITS**

**KONECRANES**<sup>®</sup>  
Lifting Businesses<sup>™</sup>

# ADD CURRENT FEATURES AND TECHNOLOGIES TO YOUR CRANE



# RETROFITS MADE EASY

Retrofits are a relatively easy and economical way to add current features and technologies to your existing overhead crane. Common retrofits are hoist replacements, the addition of radio pendants, LED lighting and traveling drives with inverters. Compared to modernizations, retrofits typically require much less pre-planning and downtime.

## LIFECYCLE CARE IN REAL TIME

Lifecycle Care is our comprehensive and systematic approach to maintenance, supported by world-class tools and processes. In order to deliver Lifecycle Care in Real Time, we use the Industrial Internet, connecting data, machines and people. We bring together usage and maintenance data and combine it with our knowledge and experience, providing insights that allow our customers to optimize their maintenance operations and activities.

Properly timed retrofits can help your cranes maintain the highest Lifecycle Value, maximizing the productivity of uptime and minimizing the cost of downtime.

## A CONSULTATIVE APPROACH TO HELP GUIDE DECISION MAKING

Our consultative approach can help guide your decision making. We don't just drop off a report on the way out. We take time to meet with you one-on-one and share our findings, provide recommendations based on our industry-leading expertise and discuss how each action impacts your operations and the entire health of your business.

Our proprietary Risk and Recommendation Method is the basis of our inspection and preventive maintenance processes. No matter what service is being performed, Konecranes Risk and Recommendation Method drives our evaluations and consultative approach, giving you a safety and production advantage.



# UP TO 60% OF ENERGY SAVINGS WITH LED LIGHTING

An LED Lighting Upgrade can help you save money, provide good lighting and give your crane a modern look.

## LED LIGHTS LAST LONGER

Replacing crane lights can be expensive. Traditional metal-halide or halogen lights have a shorter service life and can suffer from damage due to vibrations. This results in increased costs and less efficient operations. With an LED Lighting Upgrade you get lights that have a much longer service life, and will be far less prone to damage from vibration.

## LIGHTING CONSUMES THE MOST POWER

Traditional lighting accounts for 50 to 90 percent of electricity used by a crane. An LED Lighting Upgrade can therefore result in a major cost savings in any crane operation.

LED lights provide the same degree of lighting to the working area than standard lights, yet consume little more than one third of the energy. This means that with LED lighting you are able to cut your energy consumption by up to 60% per crane.

## SAFER AND USER-FRIENDLY LIGHTS

Because light distribution in LED lights is more focused, the crane operator is less likely to get blinded by the light when looking at the load. Furthermore, with LED lighting the light is not dispersed laterally but directed where it is needed: on the load and on the workstation or facility.



## POWER CONSUMPTION OVER ONE YEAR

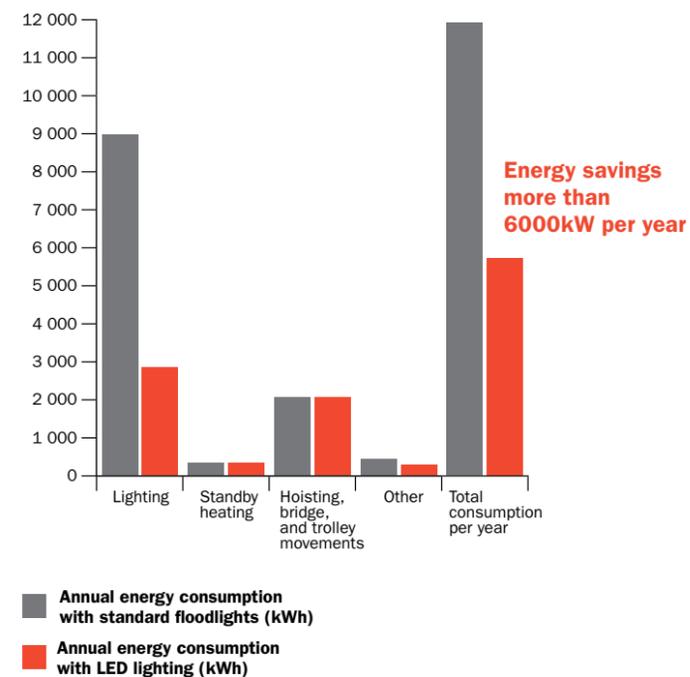


Table represents a 40-ton CXT crane with four lights and usage time of two shifts per day, five days per week.



## BENEFITS

- Can cut energy consumption by up to 60% per crane
- Improves task illumination and operators are less likely to be blinded by the light when looking at the load
- Can be switched on and off instantly and do not require time for warming up or cooling down
- Less prone to damage from vibration than traditional metal-halide or halogen lights



## TRUCONNECT REMOTE MONITORING

TRUCONNECT Remote Monitoring uses sensors to collect data – such as running time, motor starts, work cycles and emergency stops. Brake and inverter monitoring is also available. This data and other crane usage information is visible on yourKONECRANES.com.

### BENEFITS

- Provides asset usage and operating information that is used to assess crane condition
- Notifies you of hoist overloads, emergency-stops and over-temperature occurrences through text or email alerts, allowing for prompt response
- Gives you an estimation of the remaining design working period (DWP) of selected components, such as hoist brakes and structures

# INCREASED SAFETY WITH REMOTE MONITORING

### CONTROLPRO RETROFIT

The ControlPro Retrofit has been designed to record crane usage data and allows for the addition of features such as overload protection and TRUCONNECT Remote Monitoring. ControlPro is available as a retrofit package for all cranes, regardless of type, brand or age.

Thousands of ControlPro units have already been installed on different types of cranes to improve the safe and efficient use of the crane. In addition to overloads, ControlPro is also able to capture other usage data from the hoist such as emergency stops, hoist motor starts and work cycles. ControlPro can also provide over-temperature protection when applicable sensors are in place.

### TRUCONNECT MODEM UPGRADE

A TRUCONNECT modem can be installed on all cranes with ControlPro units to provide connection capability for TRUCONNECT Remote Monitoring.

### TRUCONNECT RETROFIT KIT FOR CRANES NOT MANUFACTURED BY KONECRANES

The TRUCONNECT Retrofit Kit has been designed to equip a crane not manufactured by Konecranes with the hardware required for TRUCONNECT Remote Monitoring.

ControlPro Retrofit – primarily used for CU1 monitoring unit replacements.



ControlPro Retrofit in enclosure and with modem connection.



Clamp sensor – used for load measuring.



# INVERTER UPGRADES

**A Konecranes Inverter Upgrade is an optimal choice to update the traveling inverter of your crane to a new generation version. Konecranes provides pre-engineered inverters specifically designed for crane use.**

## **ONE-TO-ONE TRAVEL INVERTER RETROFIT**

Our one-to-one Inverter Retrofit kit allows for an efficient replacement of your existing unit. The compact size inverter replacements are available to you as a complete turn-key service by Konecranes specialists.

Complete instructions and all needed parts are included for smooth installation.

## **FROM CONTACTOR TO INVERTER CONTROL**

Switching to inverter control offers smoother travelling motion which means better load control compared to one or two-speed contactor control.

## **NEWEST GENERATION OF INVERTERS**

The upgradable design makes it easy to add new features for trolley travel. A new inverter can improve the reliability of your crane and make it easier to obtain spare inverter parts.



Trolley and bridge Inverter Retrofit kit.



Trolley traveling Inverter Retrofit for wire rope and chain hoist products.



## BENEFITS

- Pre-engineered inverter is designed specifically for crane use
- Upgradable design makes it easy to add new features such as stepless control for travelling motions and thermal protection for the motor
- Can improve the reliability of a crane and make it easier to obtain spare inverter parts
- Supported by Konecranes network of spare parts distribution centers
- Better load control when compared to one or two-speed contactor control

# HOIST REPLACEMENT

**Has your hoist reached the end of its productive design life? Because even the most well maintained hoists won't last forever.**

Konecranes CXT hoist can be retrofitted onto most cranes. Our pre-engineered hoist retrofits are designed for easy installation, causing minimal disturbance to your production.

## CXT HOISTS IMPROVE LOAD HANDLING AND SIMPLIFY MAINTENANCE

The CXT hoist has many features that ease load handling and maintenance. With Adaptive Speed Range (ASR), the motor speed varies according to the load. This allows for optimal speed and enhanced safety when handling heavier loads. Its service-friendly reeving design provides improved access to the upper rope sheaves and overload device, making rope changes, rope length adjustments and sheave replacements fast and easy.

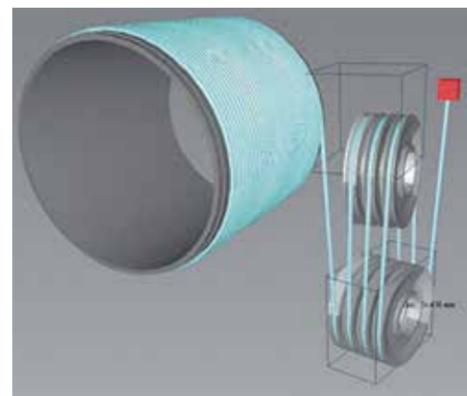
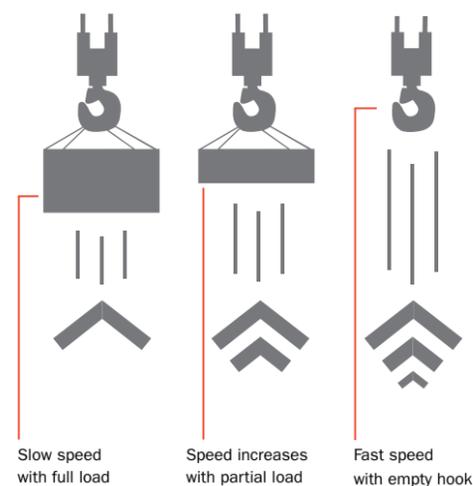
## LOW-MAINTENANCE BRAKES DESIGNED TO LAST

The hoist motor brakes are sealed and dust-proof. Built for low maintenance and trouble-free operation, CXT brakes are designed to require minimal adjustment and built to handle the rigors of industrial lifting.

## MOTOR DESIGN FOR QUICK MAINTENANCE

The unique placement of the motor inside the drum protects the motor from contaminants, while increasing the cooling ability. The design makes the motor and brake easily accessible for maintenance.

**ASR and other smart features are available**  
When ASR is enabled the hoisting speed varies with the load.



**Rope drum and reeving design allows for long rope life.**  
The patented design of the CXT hoist, with its large drum diameter and small fleet angles, minimizes rope wear.



## DOUBLE GIRDER CXT TROLLEY

- For higher loads – capacity up to 80 tons
- Short track gauge and short end carriage means compact outer dimensions
- Versatile design for optimum crane and hook headroom requirements
- Space-saving structure



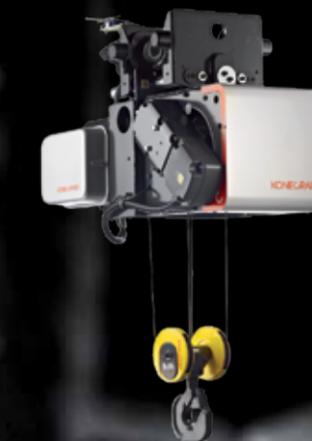
## LOW HEADROOM CXT TROLLEY

- Capacity up to 12.5 tons
- Space-saving outer dimensions to maximize hook approach
- Minimal hook headroom dimension



## FIXED HOIST

- Capacity up to 80 tons
- All CXT options available
- Load beam can be provided as an option



## NORMAL HEADROOM CXT TROLLEYS

- Capacity up to 40 tons
- Compact outer dimensions, very good hook approach
- Option for curved track and other special applications
- High capacity normal headroom trolley



## MACHINERY HOIST

- Capacity up to 10 tons
- Versatile option for hoist and winch modernizations
- Can also be used in non-crane applications

## BENEFITS

- Can extend the lifetime of an existing crane
- Supports compliance with current safety regulations and standards
- Allows for optimal speed and enhanced safety when handling heavier loads
- Can improve spare part availability
- Can increase capacity to accommodate changes in process



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SERVICE



Konecranes is a world-leading group of Lifting Businesses™, serving a broad range of customers, including manufacturing and process industries, shipyards, ports and terminals. Konecranes provides productivity enhancing lifting solutions as well as services for lifting equipment of all makes. The Group has 18,000 employees at 600 locations in 50 countries. Konecranes class A shares are listed on the Nasdaq Helsinki (symbol: KCR).

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