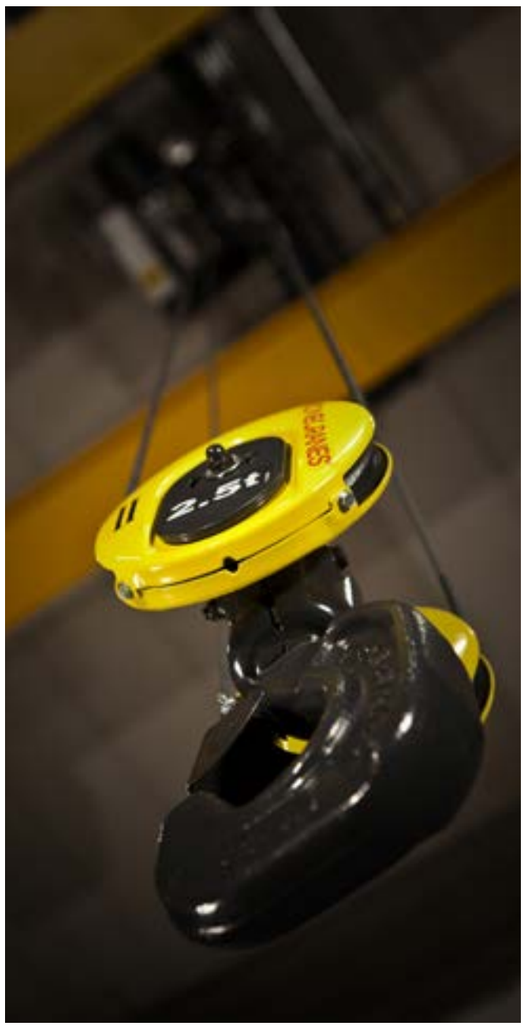
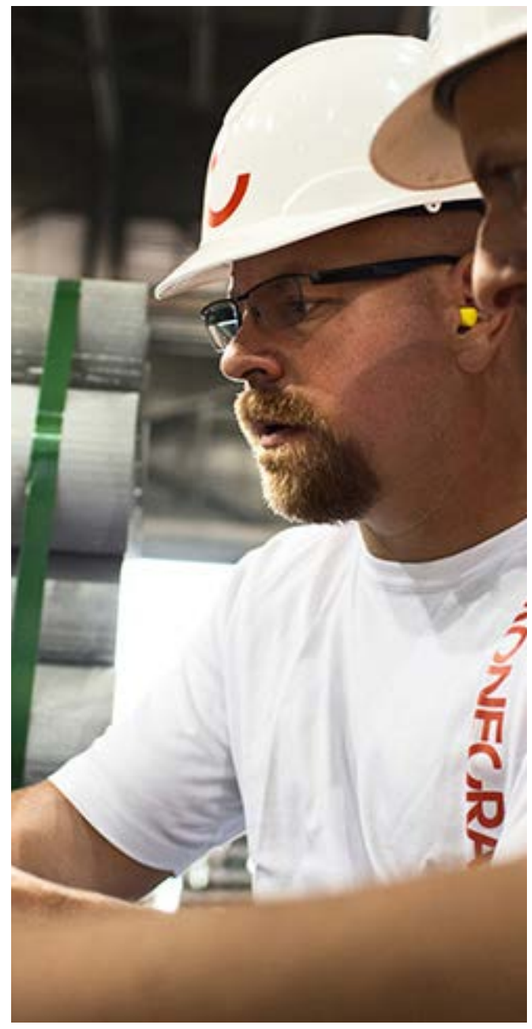
Retrofits

Retrofits are an efficient option to replace components or add current technology to your existing overhead crane. Common retrofits include replacement of hoists, components, electrics and/or controls, addition of new features, and/or technology upgrades and updates. Retrofits typically require minimal downtime, engineering and pre-planning.

	DESCRIPTION	BENEFITS	AVAILABILITY	RECOMMENDED WHEN
Side Pull Prevention	Side Pull Prevention has been designed to stop hoisting motion when side pulling is detected. A side pull occurs when the hoist lifts something that has not been placed directly beneath it. Side pull can cause hazardous load swing and in the worst case – load drops. Side pull can also cause damage to the drum, rope and rope guides and is a common cause of breakdowns.	• Reduces the risk of damage to the load, crane and surrounding area • Helps reduce wear on reeving components, including rope, rope sheaves and drum • Reduces the risk of downtime due to breakdowns caused by side pulling	The Side Pull Prevention kit is suitable for most EOT and monorail cranes.	• You have safety concerns • You have had safety and/or production issues caused by rope side pull
LED Lights	Replacing old lights or adding new LED lights can improve safety and usability and produce energy savings	• 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	LED lighting packages are designed to be retrofitted to most crane models without any engineering.	• Your facility needs more lightning and/or illumination is an important factor for safety • You need a safe operating area • You want to optimize costs and energy consumption
Safety Lights	Safety Lights have been designed to provide visual warning. Obvious blue and red LED beam warns of approaching trolley and/or crane. The light(s) reflects a line, square or circle on the ground as a warning signal for operators and other personnel to not walk underneath the crane.	• Safety is improved by the clear indication of the trolley location in the work area • Helps to fulfill local statutory regulations and/or safety standards • LED lights are duarble and energy efficient	The Safety Lights kit is compatible with all type of cranes. • Entry-level option up to 6 meters. • More advanced option up to 15 meters. • Multiple options available based on needs: just one spot, a line or a square.	• You need to improve operational safety by providing visual warning to your crane operators and personnel working in the facility
Variable Frequency Drives ((VFD)	Replacing outdated motor controls with new Konecranes Variable Frequency Drives (VFD) can give you better load control and performance with stepless speed control. It also allows you to take advantage of technology that is designed to address requirements for safety in lifting.	• Optimized usability and performance with stepless speed control • Can improve the reliability of a crane and make it easier to obtain spare parts • Smoother acceleration and deceleration can reduce wear on mechanical parts • Better load control when compared to motor controls • Updating to current Variable Speed Control systems enables further feature additions/ updates with the combination of PLC/automation and/or software control systems	Pre-designed packages are available for replacing an old inverter for an inverter-controlled bridge or trolley motor. The following can also be retrofitted - but there is not a pre-designed kit available. • Upgrading a two-speed travelling motor to inverter control • Replacing an old inverter of an inverter-controlled hoisting motor • Upgrading a two-speed hoisting motor to inverter control	• Existing inverters are at the end of their lifetime • Travel or hoisting motions of the crane are contactor-controlled
Condition/Remote Monitoring	Adding TRUCONNECT Remote Monitoring to your crane provides real-time visibility of condition, usage and operating data from control systems and sensors on the asset as well as alerts of certain anomalies. In addition to the condition monitoring unit and modem, component-specific sensors for the brake and rope can be retrofitted to provide more specific insights on the condition of these critical load-bearing components.	• Supports predictive maintenance • Maintenance actions can be planned based on estimated component condition i.e. estimated remaining life • Provides knowledge of the remaining design working period (DWP) and remaining service life of selected components such as hoist, brakes, structures and contactors • Provides asset usage and operating information that is used to assess crane condition and safety • Notifies you of brake service life, hoist overloads, emergency-stops and over-temperature occurrences through text or email alerts, allowing for prompt response • Brake or Wire Rope Monitoring gives you specific information on the condition of these components	Remote Monitoring can be retrofitted on existing Konecranes equipment, Demag hoist and cranes equipped with Safecontrol and many different non-Konecranes brand hoists. Brake Monitoring can be retrofitted on Konecranes equipment and on other existing cranes if the crane is equipped with electromagnetic disc brakes and the brake control current is under 2 amperes. Wire Rope Monitoring is available as a retrofit on certain Konecranes SMARTON cranes.	• You are interested in monitoring key assets in real time, especially in the process industry • If the crane is not easily accessible and data needs to be gathered remotely • When your want to avoid failures due to incorrect crane operation • When you want to prevent overloads and track other safety or production related alerts • You want to be notified of safety and production alerts immediately
Collisison Avoidance	Collision avoidance systems are designed to help prevent collisions between cranes or their loads. These systems either slow down or stop crane movements when the crane or its load comes within a pre-determined distance of another moving or fixed object. Collision avoidance is especially important in environments where multiple cranes/trolleys are operating in a constricted area. Multiple technologies are available and Konecranes will help determine the best option to fit your needs.	• Increases safety by protecting the crane and people working around it, loads, building structures and surrounding assets from collisions • Reduces the risk of structural and mechanical damage to cranes and trolleys from collisions • Especially useful in environments where multiple cranes/trolleys are operating in a constricted area	The Collision Avoidance kit available for Konecranes trolleys and cranes with UU, UR, ECN, ECB and EC end-carriages.	• You have safety concerns • You have had safety and/or production issues caused by collisions • You have multiple cranes/trolleys operating in a constricted area • You have cranes operating on different levels in the same bay
2-Step Limit Switch	Limit switches are electrical devices used in bridge, trolley, or hoist motion to disconnect the circuit, to establish a new circuit, or to provide a warning.	• Provides additional safety by preventing the equipment from running into the end buffers at high speed • Improves horizontal hook reach and enables operation closer to walls • Can help fulfill local statutory requirements and/or safety standards	2-step Limit Switch kit is suitable for CXT and can be installed on equipment that does not have travel limit switches yet.	• You have safety concerns
Hook Operated Limit Switch	Adding Hook Operated Limit Switch can help prevent accidents and improve safety.	• Provides additional safety for hoisting motion • Provides a safeguard if upper limit fails or is set up improperly • Prevents the hook block from hitting the drum and causing mechanical damage • Reduces wear of mechanical hoisting components by slowing the motion down before the upper limit is reached • Improves vertical hook reach	The Hook Operated Limit Switch kit is suitable for all CXT hoists.	• You have safety concerns
Load Display	A load display gives operators needed payload information and helps warn of the potential risk of overloading. Lifting loads beyond the rated capacity can cause damage to the crane or hoist components. Konecranes will help determine the best combination of load sensor and display to fit your needs based on the equipment and the need for accuracy of the load measurement.	• Gives visible load information for packing and shipping • Can aid in the prevention of overloads by showing when the operator tries to lift an abnormal load • The accurate load visualized for crane operators can help increase productivity in many applications	The Load Display kit is suitable for Konecranes equipment with ControlPro or Master Pro as well as SMARTON cranes.	• You need to visualize exactly how much the cranes are lifting • You want to prevent overloads • You want to improve productivity by load measurement and visualization
Radio Controls	Radio controls for cranes offer improved safety, greater productivity and more flexibility as well as more across a range of applications. Not only can radio controls free operators from the confines of a cab, but from crane pendant control cables as well. The flexibility that radio controls deliver can change the job site for better.	• Replaces an outdated radio with latest technology to ensure the continuity and functionality of the crane • Creates a safer environment for operators to work away from loads and get a wider view of the work area surrounding the crane • Improves crane safety and productivity on long runway systems • Provides work productivity as operators can do other work when not moving a load • Crane operation can be shared by multiple trained operators • Better spare part availability in the future	The Radio Controls kit is available for Teleradio and Remoc only.	• You have a crane equipped with Teleradio or Remoc. • Suggested replacement with new Autec retrofit kit





Cost-effective retrofits that deliver value

There is no need to invest in a new crane technology to enjoy the latest features and advancements. Simple budget-friendly upgrades can make a big difference in enhancing your safety, productivity, and cost-effectiveness of your current crane- even if it is decades old.

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