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

PETROCHEMICAL INDUSTRY

BUILT FOR A LIFETIME OF RELIABLE LIFTING

COKER CRANES
The coke pit is the production heart of a petrochemical plant, a harsh environment full of moisture, corrosive fumes and abrasive dust. Work is fast and continuous, and downtime is crippling to production. Konecranes can provide lifting equipment and service that can meet these challenges safely and efficiently.

LOAD CONTROL TECHNOLOGIES REDUCE STRESS ON PEOPLE AND MACHINES
Konecranes proprietary load control technologies are software programs that operate in the background of our coker cranes, making the operator’s job safer, easier, and less fatiguing. These programs also reduce stress on controls and machinery.

- DynAGrab synchronizes the hoisting machineries, sharing the bucket hold and close hoists properly between them, reducing overloads and increasing rope and mechanical component life.
- DynaTrack skew control reduces wheel and rail wear and reduces stress on wheels, bearings, rails, rail attachments and support structures.
- DynAPilot sway control reduces load sway, reducing collisions with hoppers and pit walls, reducing damage to buckets, hoppers and the pit.

In addition, Konecranes CMS Monitoring software provides equipment status and alarms and can archive that information for use in maintenance planning and trouble-shooting. And TRUCONNECT® Remote Support provides 24/7 access to a global network of crane experts and specialists, offering problem solving and troubleshooting.

Our cloud-based customer portal yourKONECRANES.com links usage data, maintenance data and asset details giving you a transparent view of events and activities over any selected time interval for one crane or your entire fleet.

SUPPORTING YOUR ENTIRE PROCESS
Petrochemical production cranes have to be especially durable to withstand the constant wear and stress of coke-handling environments. Our service experts can provide guidance on the right inspections and maintenance for your cranes.

EXPERTISE THAT MAKES A DIFFERENCE
By working closely with customers, Konecranes has developed a body of experience in petrochemical industry processes and material handling applications. By applying our expertise, advanced technology and service offerings, we can make a difference in the safety and productivity of your operation.

CRANES TAILORED TO YOUR BUSINESS
Konecranes offers a variety of crane types that can be adapted to the structure of your facility and customized to your exact specifications.
- Bridge crane
- Semi-gantry crane
- Portal semi-gantry crane
- Custom crane with fixed hopper to conveyor
SMART DESIGN FOR A TOUGH JOB

Our coker cranes include technologies that promote safe and reliable operations, improve productivity and maximize service life.

GRAB CONTROL - DYNAGrab
The efficiency of your coker operation depends on your operators’ ability to pack full buckets quickly. Our proprietary grab control feature automates the sinking and filling process and alerts the operator when it’s time to lift the load, resulting in fewer trips, shorter load cycles and less operator training.

REGENERATIVE NETWORK BRAKING - DYNAREG
Instead of dissipating heat through resistors, regenerative braking returns runoff power to the energy grid of the crane.

SWAY CONTROL - DYNAPILOT
By minimizing load sway, sway control can help reduce the risk of excessive load spillage or bucket impacts with obstacles such as the hopper or pit wall. Sway control makes new operators more confident, increasing safety and productivity and reducing training time.

AUTO-STEERING CONTROL - DYNATRACK
Inaccurate tracking (also known as skewing) can be a major problem for long span bridge-style coker cranes. Auto-steering control (DynaTrack) employs laser sensors for precise tracking along the runway, which can drastically reduce wear to wheels and rails, stresses to crane structures and wheel bearings and the possibility of structural overloads.

DATA ARCHIVING - CRANE MONITORING SYSTEM (CMS)
Monitor more than 400 data points and store up to four years of data with this optional feature. Data is routed to the operator’s cab and the control house.

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DURABLE BEARINGS AND GEARS

Our bearings are available with 50,000 hours bearing life, even longer than CMAA Class F requires. All gearing is 58 HRC, hardened and finish-ground, built to AGMA Class Q 11 minimum. We carbonate our gears for the durability needed to withstand daily, near-constant use. For easier maintenance, we group lubrication fittings together at one central point on the trolley/tail and both ends of the bridge and trucks for ease of maintenance.

ROPE STORAGE

Konecranes has designed its rope drums with space for three re-reevings of the rope in the drum of the closing line. The quantity of the rope reeled in the bucket, which is the highest-wear portion of the rope, can be cut and re-reeved three times before complete replacement of the closing ropes is required. This reduces the downtime associated with rope replacements and helps increase production.

LOAD CELLS ON EACH DRUM, WITH SUMMING

To help prevent overloaded or unbalanced loads, we use intelligent load ratios on each drum with a load-summing feature. Proprietary software is used for proper sharing of the load by the hoisting and closing machineries, and to prevent overloads, detect slack-loads, and provide data for collection of load handling history.

INVERTER DUTY MOTORS

Konecranes crane and hoist motors are designed specifically for use with our inverter drives. Our inverter software provides not only precise speed control but also numerous machinery protection and safety features. Konecranes inverter duty motors are designed specifically for high-demand applications. Konecranes inverters can be paired with optional wired-in spare inverters and regen units. These spare inverters can be switched from spare to primary mode in minutes, allowing removal and repair of a failed unit with minimal interruption to crane operation. Redundant bridge and trolley drives are also available for optimum uptime and productivity.

OPTIONAL SPARE INVERTERS, AIR CONDITIONERS, REGEN UNITS AND TRAVEL DRIVES

Designed specifically for high-demand applications, Konecranes inverters can be paired with optional wired-in spare inverters and regen units. These spare inverters can be switched from spare to primary mode in minutes, allowing removal and repair of a failed unit with minimal interruption to crane operation. Redundant bridge and trolley drives are also available for optimal uptime and productivity.

SAFER CONTROL HOUSES

The control house is weather-protected and pressurized. An air conditioning system prevents the controls from overheating, and chemical filtration provides clean air, protecting both personnel and control elements from corrosives in the environment.

EASY MAINTENANCE ACCESS

Sturdy maintenance platforms surround the machinery and control components so that all devices are maintainable from the safety of hand-railed walkways.

DESIGNED FOR SAFETY AND ERGONOMICS AND BUILT TO LAST

We understand that coke-producing facilities run around the clock in harsh environments. With short maintenance intervals and little time for major overhauls, unplanned downtime can have significant impact on productivity and revenue.

All cranes in the hazardous production area must be protected against wear and corrosion from heat, dust, moisture and constant use. That’s why our coker cranes are built to withstand your toughest conditions.

All of our cranes come with durable, high-quality components built for years of reliable coke lifting. The design features of our coker cranes are developed through dialogue with refinery users all over the world. All variations of our coker cranes are assembled with the same standardized components. Interchangeability reduces part counts and speeds up delivery of replacement spares.

SET UP FOR SAFETY

Our cabs have a safety bar across each outer window.

ERGONOMIC CHAIR AND CONTROLS DESIGN

Konecranes operator chairs and a pair of single-lever joystick control systems for the hoist, bridge and trolley are designed with safety and ergonomics in mind. Our oversized, cushioned seats adjust to the proper height and provide enough room to operate the controls with comfort and ease.

INTEGRAL EYE WASH AND SHOWER STATIONS

The integral eye wash and shower stations help commuters wash away dust, debris and other contaminants from the face.

CHEMICAL FILTRATION

The sealed environment of our air-conditioned operator’s cab and electrical rooms have a chemical filtration option to continuously remove contaminants from the atmosphere, protecting sensitive control components and employees.

FULL-VIEW OPERATING CAB

A full-view operator’s cab and optional color monitor help operators stay fully aware of their surroundings. An optional camera system helps increase the operator’s view of the pit.

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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 Helsinki Ltd (symbol: KCR1V). With approximately 12,000 employees at 600 locations in nearly 50 countries we have the resources, technology and determination to deliver on the promise of Lifting Businesses™.

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