

**INDUSTRIAL CRANES**

NUCLEAR CRANES

PORT CRANES

HEAVY-DUTY LIFT TRUCKS

SERVICE

MACHINE TOOL SERVICE

**AUTOMOTIVE INDUSTRY**

**KONECRANES®**

Lifting Businesses™

## Automotive Industry

# THE RIGHT LIFTING SOLUTION FOR YOUR PROCESSES



## Konecranes for Automotive Industry

# WIDE VARIETY OF LIFTING EQUIPMENT

**The automotive industry uses many different processes from stamping, pressing and manufacturing car parts, to assembly. Customers in this demanding industry have a common need for efficient, safe and reliable lifting solutions that fit the processes they serve.**

### **Expertise and complete solution portfolio equals the right solution**

Konecranes has many decades of experience in the lifting business and many satisfied automotive customers. We offer a unique understanding of how lifting can meet your process requirements. We will deliver the right package of lifting solutions for your processes.

### **Zero tolerance for downtime**

In order to keep high-speed production lines running 24/7, your cranes must work smoothly and steadily; any problem could affect the whole production line. This is where Konecranes' global and yet local service support proves to be invaluable. Our preventive maintenance, swift on-call services and high spare part availability ensure that our cranes are up and running according to your needs. Our common goal is zero tolerance for downtime.

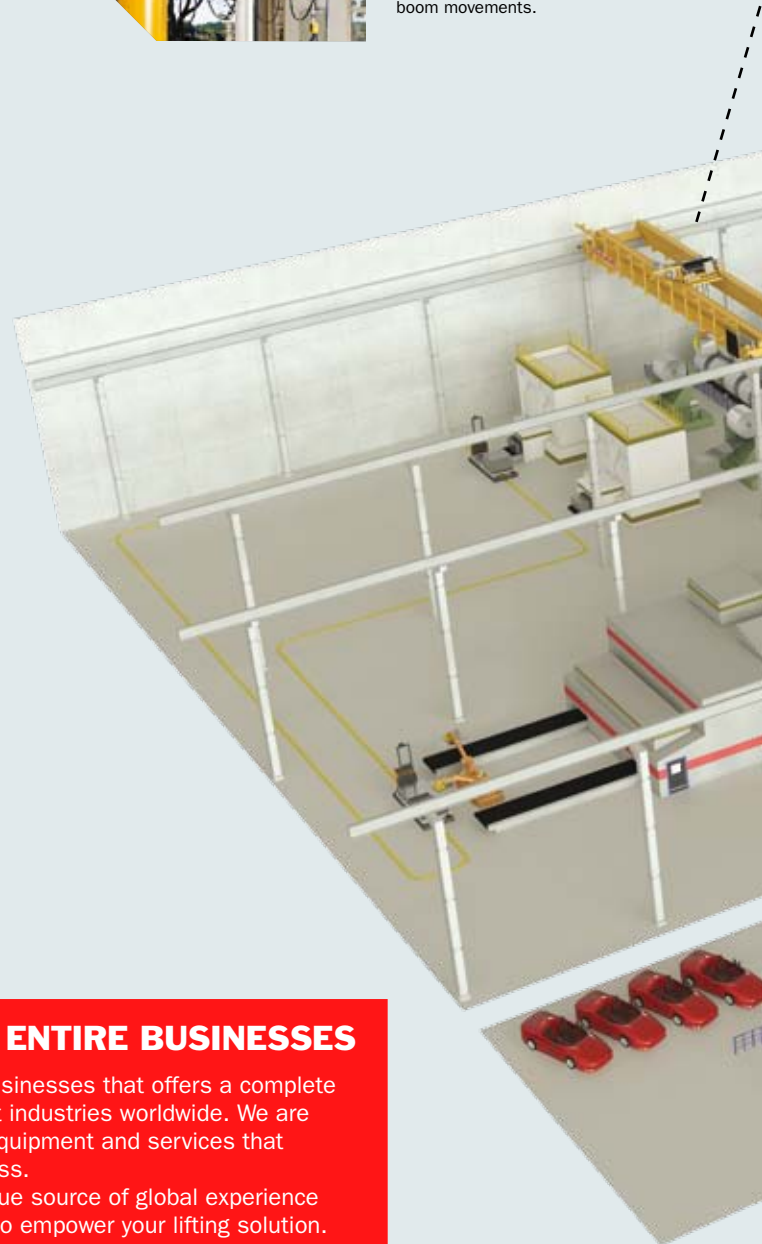
### **Mutual respect breeds trust**

We have the will to serve our customers to the highest standard, listen to the customer's needs from the very beginning and build a relationship that is beneficial and long-lasting.



### **Jib cranes**

Konecranes jib cranes with global technology and local supply and service. A unique feature in Konecranes' jib cranes is adjustable control bearing, which enables load beam accurate horizontal alignment and prevents uncontrolled trolley and jib boom movements.



## NOT JUST LIFTING THINGS, BUT ENTIRE BUSINESSES

Konecranes is an industry-leading group of lifting businesses that offers a complete range of advanced lifting solutions to many different industries worldwide. We are committed to providing you with specialized lifting equipment and services that increase the value and effectiveness of your business.

When you choose Konecranes, you acquire a unique source of global experience and knowledge combined with local know-how to empower your lifting solution.





**EOT cranes**

CXT cranes can be equipped with Smart Solutions, for example positioning and sway control, and many other intelligent crane functions.

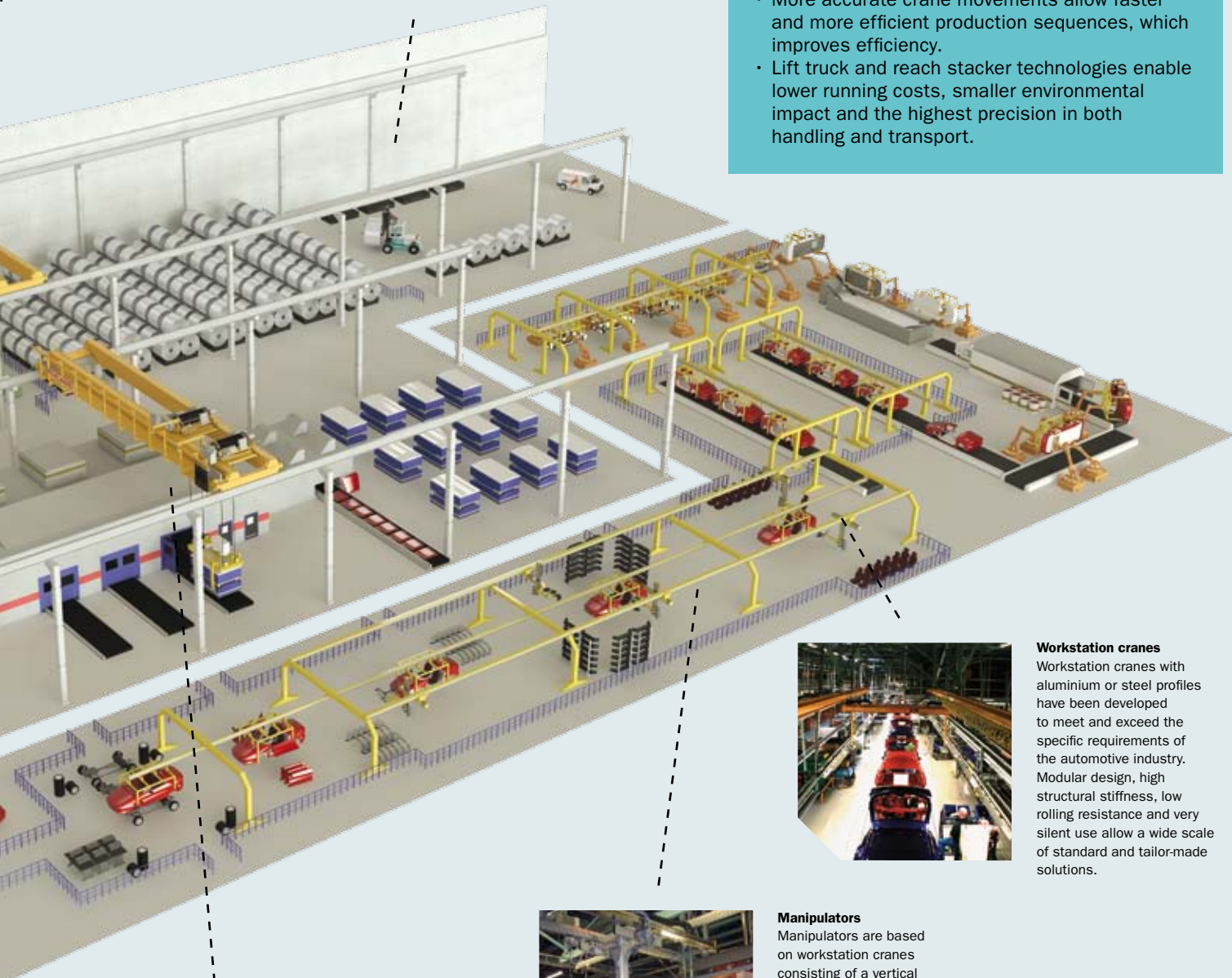


**Lift trucks**

Advanced low-emission fork lift trucks and reach stackers handle steel plates, coils and stamping tools as part of the production process. Goods in containers, swap bodies and trailers can also be handled.

**Flexible solutions with steady benefits**

- Drawing from our vast experience, we are able to tailor a solution according to your actual needs.
- Our solutions saves on costs: building and maintenance costs can be lowered by our space saving crane design and energy consumption reduced by feeding the braking energy back into the grid.
- We build long-lasting partnerships and work together with our customers to achieve the highest level of safety and reliability.
- Local service support with fast response times and spare parts availability help minimize downtime.
- More accurate crane movements allow faster and more efficient production sequences, which improves efficiency.
- Lift truck and reach stacker technologies enable lower running costs, smaller environmental impact and the highest precision in both handling and transport.



**Workstation cranes**

Workstation cranes with aluminium or steel profiles have been developed to meet and exceed the specific requirements of the automotive industry. Modular design, high structural stiffness, low rolling resistance and very silent use allow a wide scale of standard and tailor-made solutions.



**Manipulators**

Manipulators are based on workstation cranes consisting of a vertical lifting device combined with a customized gripping unit. Their modular system design ensures extreme flexibility and adaptability for individual use in customers' businesses.



**EOT cranes**

Stamping plant crane picks up the dies to supply the stamping line. Single lift and tandem hoisting are part of Smart Solutions.



# MEETING YOUR PROCESS NEEDS

## Shorter cycle times and a new kind of safety for stamping plant

Konecranes solutions enable safe operation manners and ease the everyday life. Sway controlling makes manual operations easier and semi-auto functions more secure; no load sway caused by the crane. The crane cycle times are cut smaller by using PLC controlling, correct sensoring, helpful semi-auto functions, radio controlling via Profibus and safety increasing sway control system.

## Proven solutions

Konecranes solutions are based on proven, well-engineered technologies. They are a result of our responsive service and leading automotive industry knowledge of Konecranes professionals worldwide.

We offer a wide range of world-leading lifting solutions for the automotive industry – everything from industrial and jib cranes, monorail systems, hoists and work station lifting systems to lift trucks. Our equipment is backed by comprehensive service and modernization solutions to maximize the reliability of your production.

Our proven crane technology delivers big savings in construction costs. It is built of modular components that are designed to work together to meet your changing needs.

## Smart Solutions for the automotive industry

Our cranes can be equipped with Smart Solutions, which make them even more user-friendly, logical and cost saving. Smart Solutions include for instance:

**Sway Control** prevents the load from swaying saving time and making your work easier and safer.

**Target Positioning** reduces cycle times and results in accurate positioning.

**Protected Areas** eliminates human error and protects your employees and equipment.

**Synchronization of Hoisting** makes balancing of hooks obsolete, providing a simpler and secure method.

**HIM Human Interface to Machine** is an informative remote radio control system.

**Regenerative Drive** saves energy by feeding it back to grid.

**Micro Speed** provides precise positioning for difficult places.







# STAMPING PLANT CRANE

## VOLVO SHORTENED CYCLE TIMES AND IMPROVED SAFETY

### A quest for production increase

VOLVO TRUCKS CORPORATION in northern Sweden, Umeå planned to increase its production capacity and invested in a completely new stamping plant.

Besides increasing its production, by having shorter crane cycle times for changing the dies in the stamping machine, Volvo needed to secure a safe working environment. As in many places, die change had previously been done by using chains to lift the dies in combination with the crane, which had meant slow cycle times and which may involve the risk of crushing.

### Pulling together to achieve the best result

To meet the challenge Konecranes offered a semi-auto crane that can pick the dies up and increase overall safety, minimize cycle times and be suitable for the use of the special lifting device that the Umeå factory procured.

Konecranes was able to offer a good overall solution that took into account the available support from the local service organization.

The Volvo Process team developed and designed the unique lifting device by themselves. It can grip and release both small and heavy stamping tools in a fully automatic sequence. Volvo chose Konecranes due to their outstanding competence and knowledge in crane technology.

To achieve the best results a collaborative project team containing Volvo and Konecranes personnel was formed after the contract was signed. The team's target was to ensure that the functions of the crane are defined and suitable for production needs and to work on the details of the crane and the interface between the crane and the lifting device.

As Konecranes had earlier attained good results with a lifting device hanging from two trolleys for basic stability, the crane was designed the same way. The crane design includes also a Siemens S7 PLC and Profibus absolute encoders for positioning in order to achieve the best accuracy for semi-automatic functions. Konecranes anti-sway system helps to avoid damage to dies or other equipment. The crane can also be controlled with a Profibus radio controller, which makes the manual and semi-automatic operations easier to use. As a safety feature, some operating areas were restricted to ensure operator and equipment protection.

### Shorter cycle times and a new kind of safety

Safe operating methods have been achieved and the semi-automatic functions have eased the workload. The sway control has made the manual operations easier and secured the semi-automatic functions; no load sway is caused by the crane. The crane cycle times have been cut when PLC controlling, correct sensing, the helpful semi-automatic functions and the safety increasing sway control system have been used.

“ We chose Konecranes for a good overall package with solutions and punctuality. Mutual cooperation secured the original goals for safety and ease of operation. ”

Volvo Car Corporation,  
Olofström, Sweden  
Anders Bokning, Manager  
Production Planning



# MATERIAL HANDLING FOR A WIDE RANGE OF NEEDS

## FOR EFFICIENCY IN THE YARD

Konecranes has supplied lift trucks for over 50 years to a wide range of industries including the automotive industry where our fork lift trucks and reach stackers provide heavy, reliable handling of steel, tools and machinery in the yard.

### Move heavy goods cost-effectively

Our fork lift trucks lift from 10 to 60 tons and can be supplied with special lifting devices for your processes. Our reach stackers lift from 10 to 80 tons and can also be supplied with special lifting devices. All of our lift trucks are backed by services and spare parts supply that keep them running reliably and efficiently.

### Why choose a Konecranes lift truck?

Konecranes fork lift trucks, including RoRo models, have many innovative features including:

- Strong box-type chassis
- Load-sensing hydraulics for power-on-demand
- Electronically-controlled, eco-efficient engines
- Cabin with advanced ergonomics and excellent visibility

## WORKSTATION LIFTING SYSTEMS FOR SMOOTH HANDLING OPERATIONS

One of the leading manufacturers of cranes and lifting equipment introduces a new business area, Konecranes Workstation Lifting Systems. Wherever the typical lifting equipment featuring simple hooks or slings is not sufficient to do the job while a robot is too costly and inflexible, our workstation lifting systems are the ideal choice.

We deliver complete solutions and our success is the operator's satisfaction.

### Manipulators to your assembly line

Konecranes manipulators meet your requirements with flexible design. We provide manipulators for your assembly and final assembly lines, handling:

- Cockpit, front-end module, seats
- Roofs, doors, bumpers, windows
- Gearboxes, suspension, fuel tanks, batteries, wheels, brake discs, etc.

A Konecranes manipulator with a nutrunner for wheel assembly at Magna in Austria.



Konecranes reach stackers lift from 10 to 80 tons with top and bottom-lift. They can be fitted with special attachments for automotive processes.

A Konecranes manipulator based on a Vertical Lifter for front-end module at BMW in Germany.





## SERVICE SOLUTIONS FOR YOUR INDIVIDUAL NEEDS

Konecranes service solutions are predefined sets of services that you can customize for your own needs. For the automotive industry we recommend CARE, COMMITMENT and COMPLETE solutions.

### Care

When you prefer a service provider for maintaining and improving the condition of your equipment.

### Commitment

When you need a partner who takes responsibility for improving the productivity and availability of equipment as part of your process.

### Complete

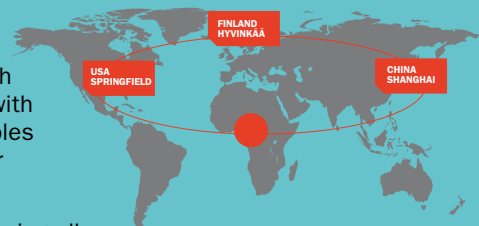
When you are ready for a partner who can maintain and operate your equipment in an optimized way.



## ALWAYS THERE FOR YOU – OUR REMOTE SERVICES

**TRUVIEW** remote service is available as part of your service solution. Through continuous monitoring we provide you with real usage data of your crane that enables you to improve safety and optimize your maintenance activities.

**TRUCARE** is a full service package covering all the basic maintenance activities and spare parts you need – all included in a fixed monthly fee.





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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 10,000 employees at more than 570 locations in almost 50 countries we have the resources, technology and determination to deliver on the promise of Lifting Businesses™.

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