LIFTING EQUIPMENT AND SERVICES FOR THE MIDDLE EAST

GLOBAL EXPERTISE
WITH LOCAL PRESENCE
KONECRANES OVERVIEW

Konecranes is an industry-leading group of lifting businesses that offers a complete range of advanced lifting equipment and services to many industries worldwide. Regardless of your lifting needs, Konecranes will provide you world-leading lifting technology that increases the productivity and value of your business.

48 COUNTRIES
€2,126 MILLION IN SALES, 2015
11,900 EMPLOYEES
600 LOCATIONS WORLDWIDE

NOT JUST LIFTING THINGS, BUT ENTIRE BUSINESSES
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1.75 MILLION ANNUAL SERVICE CALLS
10,000+ REMOTE CONNECTIONS

FROM GLOBAL SALES
42% OF TOTAL SALES IS SERVICE-BASED
58% OF TOTAL SALES IS EQUIPMENT
KONECRANES IN THE MIDDLE EAST

Over 20 years’ experience in the Middle East region
Konecranes Middle East is a 100% owned subsidiary of the Konecranes Group based in Finland. With a regional head office and engineering center located in Dubai, United Arab Emirates, we serve 15 countries in the Middle East. Since 1994, we have sold our products in the Middle East and have obtained a good knowledge of the market and its requirements. We have also established long-term partnership companies all over the Middle East and a joint venture with the Kanoo Group, Crane Industrial Services Company in the U.A.E., to be in close proximity to you and to provide you with a fast and reliable service.

Service and parts network
Konecranes has the world’s largest service organization, which includes more than 1.75 million service calls each year for equipment of different makes and industries. With our own service branches in the U.A.E (Dubai and Abu Dhabi) as well as in Saudi Arabia (Jubail, Jeddah, Riyadh and Yanbu), we currently have more than 1,500 cranes covered under service agreements. To further support our customers in the region, a parts distribution center was opened in the Jebel Ali Free Zone, U.A.E to provide time effective spare parts supply for Industrial Cranes, Port Cranes and Lift Trucks of almost any brand.

Factory
In 2011 we acquired Saudi Cranes and Steel Works Factory Co. Ltd. in Jubail, Saudi Arabia. Since 1983, the factory has been committed to the sale and manufacture of overhead cranes to the highest safety and quality standards. The state of the art manufacturing facility, with close to 200 employees, is spread over 20,000 m² and is comprised of a team of highly qualified engineering professionals who take pride in providing our customers with the best possible products and services.

Benefit from our testing facilities
Upon customer request, we can test all crane motions even before the crane reaches your site. This is possible for deliveries of cranes throughout the region.

Extensive Project Management Experience
With a wealth of experience in project management, our team at Konecranes Middle East can assist you at all stages of your project. From planning, manufacturing and site operation until handing over the project to the end client, we can provide you with a single source solution. Having worked in close cooperation with major local and global EPC companies over the years, we have gained the knowledge and the experience to manage complex projects for a variety of industries, including the energy, metal, infrastructure, petrochemical, port and general manufacturing sectors. By successfully managing numerous projects, we know the importance of providing our clients with comprehensive documentation and responding quickly to customer needs, while keeping you up to date of any status change.

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For over 80 years, Konecranes has been making cranes for nearly every imaginable purpose in manufacturing. We understand your requirements for lean manufacturing, varied loads and short cycle times.

Applications:
- Chain Hoist Cranes
- CXT® Cranes
- SMARTON® Cranes

Konecranes has gained an extensive and diverse global customer base by providing lifting equipment and service excellence in a number of industries worldwide.

AUTOMOTIVE CONTAINER MANUFACTURING MINING PETROCHEMICAL

POWER WASTE TO ENERGY STEEL SHIPYARDS PULP AND PAPER

MANUFACTURING

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EXPERIENCE IN A WIDE RANGE OF INDUSTRIES

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KONECRANES PRODUCT RANGE IN GENERAL MANUFACTURING WORKSHOP
- Smart CXT, CXT compact maintenance crane/SWATON® cranes
- XA/XM light crane system with manual hoist block, CL or CLB Airbalancer
- XA/XM light crane system with manual hoist block, CL or CLB Airbalancer
- Crane for explosive atmospheres
- Large automatic warehouse system
- TRUCONNECT® remote services for cranes and MTS (Machine Tool Service)
- Lift trucks and reach stackers
- Crane service and MTS (Machine Tool Service)

AN EXAMPLE OF PROCESS FLOW AND SUPPORT OPERATIONS IN GENERAL MANUFACTURING WORKSHOP
- Raw materials production
- Part manufacturing
- Heat treatment and grinding
- Gas-welding and plating
- Production planning and quality control
- Maintenance operations

A RICH PAST

We have come a long way since our humble beginnings as an electric motor repair shop, more than a century ago. Here are some of the events that have shaped our company over the years.

1. 1906: Founding of the company
2. 1919: First electric motor repair shop
3. 1930: Expansion into the automotive industry
4. 1945: Post-war industrial growth
5. 1950: Introduction of the first CXT crane
6. 1960: Expansion into the petrochemical industry
7. 1970: Introduction of the SMARTON® crane
8. 1980: Expansion into the mining industry
9. 1990: Introduction of the Agilon automated warehouse system
10. 2000: Introduction of the TRUCONNECT® remote service system

Konecranes Lifting Equipment and Services for the Middle East

9 Konecranes Lifting Equipment and Services for the Middle East
POWER
Substations, Middle East
We provided numerous electrical overhead cranes and monorail hoists to substations spread throughout the Middle East. These cranes have lifting capacities of 3.5–5 tons and spans of up to 11 meters. The cranes were used for the initial installation of GIS equipment in the stations and then for their maintenance.

SHIPYARDS
Drydocks World, Dubai, United Arab Emirates
A Gantry crane with a lifting capacity of 300 tons, a span of 73 meters and a lifting height of 55 meters, is utilized at Drydocks World Dubai in the outfitting area. The Goliath Gantry Crane is designed to travel across the whole of the drydock, assisting in the lifting and maneuvering of ship blocks into the air to enable easier welding.

PRECAST
United Precast Concrete, Dubai & Abu Dhabi, United Arab Emirates
United Precast Concrete’s production process relies heavily on overhead cranes to lift precast elements, like Hollocore slabs with spans of up to 21 meters. Twin hoists, with synchronized movements have been installed to enable the lifting of long items without causing any rotation mid-air. Chief Production Manager Victor D’Souza states: “What sets Konecranes apart is that they proactively and consistently deliver a quality product and service.”

AUTOMOTIVE
Volvo, Umeå, Sweden
By introducing semi-automatic functions, we were able to ease workload volume and help Volvo to achieve safe operating methods. Cycle times were cut when PLC controlling, correct sensoring, semi-automatic functions and a Sway Control system were implemented.

STEEL
Legnano Teknoelectric Company Middle East, Dubai, United Arab Emirates
We installed CXT Doublegirder cranes of varying lifting capacities to assist in Legnano’s production process of magnetic cores. Twin hoists enable synchronized lifting of long and heavy parts, without causing any rotation of the lifted items, while stepless speeds and True vertical lift allow for precise lifting and positioning. All cranes support not only the production process, but also complement the customer company colors, giving an overall modern and customized appearance.

CONTAINER HANDLING
Khalifa Port, Abu Dhabi, United Arab Emirates
We have been the lead supplier of the port’s automated container handling equipment. So far, this includes 42 Konecranes Automated Rail Mounted Gantry (ARMG) cranes with a lifting capacity of 40 tons and a Terminal Operating System (TOS) for real-time planning and control of the terminal, as well as automation sub-systems. A further 10 ARMGs will be delivered at the beginning of 2017.

PULP AND PAPER
Metsä Board, Äänekoski, Finland
When the company was making a major change from sheet cutting coated paper to sheet cutting folding boxboard, and increasing their overall capacity, we were able to help them achieve their goals with the shortest possible shutdown period for rebuilding. The tasks we carried out included modernizing the docking station for the lifter and maintenance platforms on the crane trolley, and updating the crane automation interface for the new gripper.
PRODUCT OVERVIEW

Konecranes offers a complete range of products and services to fulfill your lifting needs.

PORT EQUIPMENT

Ship-to-Shore Cranes
Rubber-Tired Gantry Cranes
Shipyard Cranes
Rail-Mounted Gantry Cranes
Bulk Handling Cranes
Automated Stacking Cranes

LIFT TRUCKS
Reach Stackers
Container Lift Trucks
Fork Lift Trucks

INDUSTRIAL EQUIPMENT
Workstation Lifting Systems
Industrial Cranes
Heavy-Duty Cranes

SPARE PARTS
Spare Parts

SERVICE
Comprehensive Service
**PRODUCT OVERVIEW**

**CLX and SLX Chain Hoist**

**CLX**
- Up to 5,000 kg of lasting lifting power
- 50% ED rating (up to FEM 3 m) with 300 starts per hour
- Hoisting ambient temperature between –20°C and +40°C (–4°F and +104°F) as standard
- Thermal protection and fan ventilation as standard
- Brake and slipping clutch prevent the load from dropping or micro-slipping
- Upper and lower limit switches integrated into hoist body
- Easy serviceability and simple maintenance access minimize downtime

**SLX**
- All CLX features and more:
  - Stepless hoisting speeds with inverter, shorter cycles with Extended Speed Range
  - Programmable limit switches and slack chain control
  - Eficiency and safety with advanced technology
  - Sensitive parts handling as a customized option – excellent for precise assembly work

**Jib Crane**
- Standard load capacity up to 2,000 kg
- Slews 270° pillar-mounted and 180° wall-mounted
- Power-feeding flat cable under the profile or on a parallel c-track
- Easy installation and relocation reduces downtime
- Adjustable console bearing allows easy and accurate horizontal beam adjustment

**Several options for improved safety and usability:**
- Adjustable rotation stop with 10° increments
- 4-position lock (–90°, 0°, +90°)
- 4-fall / 2-fall with hook suspension (8 m/m)

**XA Aluminum Workstation Crane**
- Load capacity up to 2,000 kg
- Lighter than steel by approximately 50% and extremely durable
- Anodized aluminium surface is optimal for clean environments
- Profiles with bolt connections enable easy extensions
- Smooth running on high-quality joint connections, low rolling resistance

**XM Workstation Crane**
- Load capacity up to 2,000 kg
- Easy pre-wired electrics
- Weld-free modular system is easy to install, modify, and extend
- Long suspension distances minimize steel structures and reduce overall costs
- Machined wheels and high-quality bearings allow silent running

**ATB AirBalancer**
- Load capacity up to 350 kg
- Load weight compensation as standard
- Improved productivity with shorter cycle times: adjustable speeds up to 1.5 m/s
- Extremely heavy duty with 100% duty cycle
- Ergonomic 3-dimensional load movement without buttons or handles
- Precise handling with a great variety of control systems and optional features
- Highly configurable to perfectly match the task at hand

**WORKSTATION LIFTING SYSTEMS**

**Ergonomic and reliable lifting throughout your whole process**

**JIB**

<table>
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<th>Load (kg)</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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**XA CRANE**

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<td>Inertia (cm^4)</td>
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**Rated Capacity (kg)**

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<td>CLX</td>
<td>CLX &amp; SLX</td>
<td>CLX &amp; SLX</td>
<td>CLX</td>
<td>CLX</td>
</tr>
<tr>
<td>Min. speed (m/min)</td>
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<td>1.3/0.32</td>
<td>0.7/0.16</td>
<td>0.7</td>
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<tr>
<td>Max. speed (m/min)</td>
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<td>20</td>
<td>20</td>
<td>16</td>
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<tr>
<td>ESR (m/min)</td>
<td>32</td>
<td>32</td>
<td>544/647</td>
<td>581/693</td>
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<tr>
<td>C-dimension (mm)</td>
<td>373/-</td>
<td>420/-</td>
<td>567/693</td>
<td>611/761</td>
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**XM CRANE**

<table>
<thead>
<tr>
<th>UKA20</th>
<th>UKA30</th>
<th>UKA40</th>
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<tr>
<td>Capacity (kg)</td>
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<td>160</td>
</tr>
<tr>
<td>Width (mm)</td>
<td>1000</td>
<td>1000</td>
</tr>
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<td>1000</td>
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<td>6.6</td>
</tr>
<tr>
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<td>152</td>
<td>193</td>
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</table>

**AM AirBalancer**

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<tr>
<td>Stroke (mm)</td>
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<tr>
<td>Weight (kg)</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
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<tr>
<td>DSS (kg) at 1000 blows</td>
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<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>1 fall / 2 fall with hook suspension (8 m/m)</td>
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</tr>
</tbody>
</table>

**ATB AirBalancer Key Options**
- Voltages 208 to 575 in 50 Hz and 60 Hz
- Ambient temperature from +40°C (104°F) up to +50°C (122°F)
- Self-locking hook
- Stainless steel hook and hook block
- Manual brake release
- Low-headroom trolley
- Swiveling trolley
INDUSTRIAL CRANE PRODUCTS
Robust and reliable equipment

Konecranes Overhead Cranes are compact, providing superior performance in minimal space. They are equipped with your choice of a CLX electric chain hoist, CXT wire rope hoist or SMARTON open winch.

SMART FEATURES

SWAY CONTROL limits load swing by controlling the bridge and trolley acceleration and deceleration. Sway Control allows faster load handling and more precise positioning, This feature also reduces the risk of damage to the load, crane and surrounding area. ACTIVE SWAY CONTROL is designed to dampen also the existing load sway.

SNAG PREVENTION is designed to stop all crane movement if the hook, sling or load accidentally gets caught on something. This safety function reduces the risk of hazardous situations while moving loads and helps to prevent damage to the load, crane and surrounding area. ADAPTIVE SPEED RANGE (ASR) and EXTENDED SPEED RANGE (ESR) give you the opportunity to optimize the speed of your crane. An empty hook can be moved at over double the speed of a loaded hook, allowing the operator to choose the most efficient way to control the hoist. Variable hoisting speeds provide accuracy during slow speed operation and shorter load cycle times during faster operation. See page 24 for more information.

ASSISTED LOAD TURNING helps turn the load by keeping the ropes straight and eliminating side pull. This function makes one of the most challenging crane operations simpler and safer. The benefits of this feature are faster load cycle times and extended crane lifetime, and it simply makes using the crane easier.

WORKING LIMITS

Whether you need to lift 250 kg or up to 5 tons, we can offer a chain hoist crane to meet your application requirements. A single trolley crane can be supplied in configurations to fit a large variety of applications in different industries. Whether you need to lift 250 kg or up to 5 tons, we can offer a chain hoist crane to meet your application requirements. A single trolley crane can be supplied in configurations to fit a large variety of applications in different industries.

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LOAD FLOATING keeps the load in position after the hoisting movement stops, so the brake is applied less frequently and wears less. Load Floating allows a faster and smoother restart of the hoisting movement and better control of the load.

HOISTING SYNCHRONIZATION monitors and controls the position difference of the hoists and synchronizes the movement of each hoist. This function gives more accuracy when two hoists are used at the same time.

MICROSPORT and INCHING assist in very accurate and precise load handling. Microspeed turns large joystick movements on the operator interface into slow and exact load movements. Inching is designed to ensure accurate final load positioning by allowing the crane operator to move the load in small increments. Both functions reduce the risk of collision and can be used for hoisting and traveling.

SHOCK LOAD PREVENTION allows smooth load pick-up. The hoist drive monitors the load. If the load is picked up abruptly, the hoisting speed is automatically reduced until the load is lifted. This feature is designed to prevent shocks to the load and to the crane, extending the lifetime of the crane’s steel structure and mechanical parts.

SLACK ROPE PREVENTION detects when the load has reached its final position and automatically stops the lowering movement. The hoist ropes do not slacken and the lifting device does not fall over. Slack Rope Prevention helps you to control your crane better and avoid potentially dangerous situations.

TARGET POSITIONING and END POSITIONING reduce the need for manual crane operation. With only a single button, target positioning brings the load to a predefined target position. End positioning brings the load to the center of a final positioning window. These features significantly reduce work cycle times when the work cycle is familiar and repetitive, and make your processes quicker and easier.

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**CLX HOIST**
Wide capacity range of 60–5,000 kg, and customization options to fit every operation.

**HOIST LIMIT SWITCH**
- Safe cutoff without extensive wear at the slipping clutch
- Protected against environmental influences
- No building height loss
- Easily accessible

**HOIST BRAKE**
- High safety and low maintenance
- No adjustments needed

**CLX HOOK BLOCK**
- Safe, easy and ergonomic handling
- Increased headroom

**CHAIN DRIVE CONCEPT**
- Quiet
- Less wear and longer chain service life
- Sprocket designed for the life of the hoist with the correct Konecranes chain

**OVERLOAD LIMIT PROTECTION**
- Protects hoist, crane and building structure from overloads
- Increased safety at worksites
- Easy to maintain

**ERGONOMICS**
with an ergonomically designed, lightweight pendant and standard emergency stop

**RELIABILITY**
- Versatile speed offering
- No oil change required
- Low noise, smooth operation
- Long lifetime due to high accuracy of manufacturing technology

**ADAPTABLE TO A VARIETY OF FACILITIES**
due to compact dimensions

**VERSATILE CONFIGURATIONS**
serve the needs of various industries

**HIGH VALUE**
Up to 5 TONS OF LIFTING CAPACITY
with a sturdy steel structure and a robust chain hoist

---

**Standard Applications**

**CLX CHAIN HOIST CRANES**
A strong link in your process chain

---

**Load Duty Lifting Falls Hoist Type**

<table>
<thead>
<tr>
<th>Load</th>
<th>Duty</th>
<th>Lifting</th>
<th>Falls</th>
<th>Hoist Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 / 1000</td>
<td>2m</td>
<td>4 / 1.3</td>
<td>16 / 5</td>
<td>CLX10 04 1 100 5</td>
</tr>
<tr>
<td>M5</td>
<td>2m</td>
<td>8 / 1.3</td>
<td>32 / 5</td>
<td>CLX10 08 1 100 5</td>
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<tr>
<td>M5</td>
<td>1Am</td>
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<td>16 / 3</td>
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<tr>
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<td>16 / 3</td>
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<td>16 / 0.8</td>
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<tr>
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<td>8 / 1.3</td>
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<tr>
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<tr>
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<td>32 / 1.7</td>
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<tr>
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<td>6.3 / 1</td>
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<td>3m</td>
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<td>32 / 5</td>
<td>CLX25 08 1 400 6</td>
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<td>32 / 1.7</td>
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</tr>
</tbody>
</table>

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Konecranes Lifting Equipment and Services for the Middle East
CXT WIRE ROPE HOIST CRANES

Technology that is tried, tested and true

PRODUCT RANGE 10 TONS AND OVER

CXT wire rope hoist cranes are medium-heavy indoor cranes with lifting capacity up to 80 tons; cranes that are indispensable in your assembly workshop or industrial plant. CXT wire rope hoist cranes are available in single or double-girder construction, with a profile or box girder design.

SINGLE GIRDER CRANES

with low headroom trolleys (up to 12.5 tons) or normal headroom trolleys (up to 40 tons).

DOUBLE GIRDER CRANES

with double girder trolleys featuring up to 80 ton lifting capacities and up to 30 meter spans.

COMPACT DIMENSIONS

CXT Crane

Trolleys

Five frame sizes

- Low headroom trolleys up to 80 tons
- Normal headroom trolleys up to 12.5 tons
- Swivel trolleys up to 80 tons
- Double girder trolleys up to 80 tons

Standard Applications

TRUE LIFT (TL) AND TRUE VERTICAL LIFT (TVL)

With standard reeving, the hook block drifts horizontally when hoisting. With true vertical lift, however, the hook is always centered.

Benefits

- Larger drum diameter results in a small lateral hook drift, with better hook approach that helps conserve space
- Short drum configuration causes less rope and sheave wear, as the rope enters the drum and sheaves at a small angle

PRODUCT RANGE UP TO 10 TONS

Rope Reeving | Capacity [Metric tons] | Configuration | Lifting Speed [m/min @50 Hz] | Max. Lifting Height [m]
--- | --- | --- | --- | ---
**TL** | **TVL** | **N** | **L** | **M** | **Standard** | **Fixed**
CXT6
21 | M5 | ✓ ✓ ✓ ✓ | 10/1.7 | 1.9
31 | M5 | ✓ ✓ ✓ ✓ | 5/0.8 | 0.5
41 | M5 | ✓ ✓ ✓ ✓ | 10/1.7 | 1.9
51 | M5 M5 | ✓ ✓ ✓ ✓ | 5/0.8 | 0.5
CXT7
21 | M5 | ✓ ✓ ✓ ✓ | 10/1.7 | 3.0 | ✓ possible for M5 1 up to 2.4 m
31 | M5 | ✓ ✓ ✓ ✓ | 5/0.8 | 1.5 | ✓ possible for M5 1 up to 1.2 m
41 | M5 M5 | ✓ ✓ ✓ ✓ | 10/1.7 | 4.0 | ✓ possible for M5 1 up to 3.2 m
51 | M5 M5 | ✓ ✓ ✓ ✓ | 5/0.8 | 2.0 | ✓ possible for M5 1 up to 4.0 m

Rope Reeving | Capacity [Metric tons] | Configuration | Lifting Speed [m/min @50 Hz] | Max. Lifting Height [m]
--- | --- | --- | --- | ---
**TL** | **TVL** | **N** | **L** | **M** | **Standard** | **Fixed**
CXT6
41 | M2 | ✓ ✓ ✓ ✓ | 5/0.82 | 0.2 | 3
61 | M6 | ✓ ✓ ✓ ✓ | 3.2/0.5 | 31 | 5
81 | M4 | ✓ ✓ ✓ ✓ | 2.5/0.41 | 01 | 1.5
CXT7
21 | M4 | ✓ ✓ ✓ ✓ | 8/1.37 | 1
41 | M5 M4 | ✓ ✓ ✓ ✓ | 4/0.7 | 23.5
51 | M5 M5 | ✓ ✓ ✓ ✓ | 2.0/0.4 | 17.5
61 | M6 M5 | ✓ ✓ ✓ ✓ | 2.5/0.43 | 2 | 32.5
81 | M6 | ✓ ✓ ✓ ✓ | 2.0/0.32 | 4 | 24.5

CXT WIRE ROPE HOIST CRANES

Technology that is tried, tested and true

PRODUCT RANGE 10 TONS AND OVER

TL: True Lift  TVL: True Vertical Lift
N: Normal Headroom  L: Low Headroom  M: Medium Connection Double Girder

TRUE LIFT (TL) AND TRUE VERTICAL LIFT (TVL)
With standard reeving, the hook block drifts horizontally when hoisting. With true vertical lift, however, the hook is always centered.

Benefits
- Larger drum diameter results in a small lateral hook drift, with better hook approach that helps conserve space
- Short drum configuration causes less rope and sheave wear, as the rope enters the drum and sheaves at a small angle

PRODUCT RANGE UP TO 10 TONS

Rope Reeving | Capacity [Metric tons] | Configuration | Lifting Speed [m/min @50 Hz] | Max. Lifting Height [m]
--- | --- | --- | --- | ---
**TL** | **TVL** | **N** | **L** | **M** | **Standard** | **Fixed**
CXT6
41 | M2 | ✓ ✓ ✓ ✓ | 5/0.82 | 0.2 | 3
61 | M6 | ✓ ✓ ✓ ✓ | 3.2/0.5 | 31 | 5
81 | M4 | ✓ ✓ ✓ ✓ | 2.5/0.41 | 01 | 1.5
CXT7
21 | M4 | ✓ ✓ ✓ ✓ | 8/1.37 | 1
41 | M5 M4 | ✓ ✓ ✓ ✓ | 4/0.7 | 23.5
51 | M5 M5 | ✓ ✓ ✓ ✓ | 2.0/0.4 | 17.5

Rope Reeving | Capacity [Metric tons] | Configuration | Lifting Speed [m/min @50 Hz] | Max. Lifting Height [m]
--- | --- | --- | --- | ---
**TL** | **TVL** | **N** | **L** | **M** | **Standard** | **Fixed**
CXT6
41 | M2 | ✓ ✓ ✓ ✓ | 5/0.82 | 0.2 | 3
61 | M6 | ✓ ✓ ✓ ✓ | 3.2/0.5 | 31 | 5
81 | M4 | ✓ ✓ ✓ ✓ | 2.5/0.41 | 01 | 1.5
CXT7
21 | M4 | ✓ ✓ ✓ ✓ | 8/1.37 | 1
41 | M5 M4 | ✓ ✓ ✓ ✓ | 4/0.7 | 23.5
51 | M5 M5 | ✓ ✓ ✓ ✓ | 2.0/0.4 | 17.5

Konecranes Lifting Equipment and Services for the Middle East
In the core of every CXT Crane is the CXT Hoist, one of the most popular hoists on the market. It has all the key features to lift efficiently, reliably and safely, regardless of operating conditions. With multiple trolley configurations, CXT electric wire rope hoists maximize lifting height and are easily fitted to many kinds of building environments.

ADAPTIVE SPEED RANGE (ASR) and EXTENDED SPEED RANGE (ESR)
give you the opportunity to optimize the speed of your crane. Variable hoisting speeds provide accuracy during slow speed operation and shorter load cycle times during faster operation.

ASR automatically varies the speed of the hoist according to the load. For full capacity loads, ASR forces a slower, more deliberate speed to enhance safe lifting. Moderate loads can be moved with additional speed, while light loads are afforded even more speed. It also has the ability to lift up to 50% faster than traditional hoisting control.

ESR uses inverter technology to allow increased hoist speed for light loads. The faster hoist speed enables operators to return empty hooks to position or move smaller loads with greater speed and efficiency.

RADIO CONTROL
A crane is typically controlled from a distance. The usual method of controlling a regular assembly workshop crane is by using a pendant controller hanging from the crane, or wirelessly via radio control.

In some special applications and full automation cranes, the control method can be a cabin, separate control room, or even a sophisticated ERP system.

REMOX radio control increases efficiency and reduces operating risks. It allows an operator to monitor the load on the hook and manually assist it, if necessary. A crane equipped with Smart Features, together with an intelligent HIM transmitter, is a serious tool for even the most demanding applications.

Konecranes MiniJoystick radio takes the ergonomics of crane control to the next level. It is lightweight and easy to use, and starts up quickly. The joystick enables the user to control the load with just one hand, letting the operator concentrate fully on the load.
When your lifting processes require a heavy-duty crane, SMARTON is for you. It has a lifting capacity of up to 250 tons with one trolley and up to 500 tons with two trolleys. SMARTON comes with many advanced features that will improve the efficiency and safety of your production process. There are also several optional features that you can add to your crane at any point in the future, as it evolves to meet your needs.

**SMARTON TECHNOLOGY HIGHLIGHTS**

1. Konecranes ‘CORE OF LIFTING’ is the electro-mechanical heart of SMARTON, consisting of motor, gearbox and control unit. It has very compact dimensions and is perfectly integrated for lifting.
2. Electrical cabinets house control functions and lifting intelligence.
3. Steel structure features a box construction that gives much better torsion resistance than open-section designs.
4. True vertical lift is provided by a twin rope configuration to minimize horizontal movement when the load is lifted or lowered.
5. Hook block has a rope reeving configuration to eliminate the reverse bending that causes rope fatigue and premature failure.
6. The traveling wheels of the crane are easily re-aligned with the runway rails if misalignment should occur.
7. Power and signal cables are attached to the crane girder as a festoon system that moves alongside the trolley.
8. Two-point drum suspension allows the gearbox to articulate when the rope drum and trolley structure bends under a load, and extends the lifetime of the gearbox.
9. Service platform and hand crank for opening and closing it. When closed, the platform protects the machinery when the crane is in use.

**USER EXPERIENCE TAKEN TO THE NEXT LEVEL**

SMARTON TABLET AND RADIO CONTROLLER make SMARTON easy to operate and maintain. A tablet interface is connected wirelessly to the crane control system, and can be mounted to the radio controller or in the operator’s cabin. The tablet and radio controller provide crane and process data to aid in troubleshooting and preventive maintenance.

SMARTON APPLICATIONS

1. Especially for assembly duty applications: Pulp & paper
2. Power plants
3. Automotive
4. General manufacturing
5. Advanced SMART features are available.

**UNITON**

The built-up crane, built just for you

An advanced built-up crane and trolley that can be tailored for your unique lifting operations. It can lift from 6.3 to 160 tons. UNITON is an excellent all-around crane, with good fundamentals and performance. It provides the duty class, hoisting speeds and trolley traversing speeds you need, with full compliance with your safety requirements.

**UNITON TECHNOLOGY HIGHLIGHTS**

1. Konecranes ‘CORE OF LIFTING’ motor, gearbox and control system
2. Extended Speed Range (ESR) optimizes hoist performance
3. Two-point drum suspension for increased reliability. Deep drum grooves are available for heavy-duty use.
4. Fully enclosed machinery and second hoist brake available for improved safety
5. Hardened steel wheels are available for heavy-duty applications
6. Several rope reeving options for each rated load/duty class combination
7. Service platform available for easy and safe maintenance access
8. Trolley rail gauge is designed for the required lifting height; minimized buffer-to-buffer dimension; maximized lifting space
9. Hook latch trigger for increased safety
10. Gear reducers custom-built for crane use. Hardened and ground gearing to meet the highest requirements in the industry.
11. Easy-to-replace 90 degree MCB-type bearing housings and wheels, both trolley and bridge end carriages

**DIFFERENT CONFIGURATIONS AVAILABLE, FOR EXAMPLE:**

- Two winches on one trolley
- Two hooks on one drum
- Drum parallel with main girders
- Four point load suspension
We offer a wide range of products for hazardous environments such as chemical and petrochemical plants, oil refineries, gas power plants, waste water treatment plants and paint shops. Wire rope hoists, chain hoists, air balancers, traveling machinery, end carriages, crane controls and other strategic components are designed and manufactured to meet the highest safety level required in hazardous environments.

**KONECRANES EXCXT CAN BE USED IN THE FOLLOWING HAZARDOUS ENVIRONMENTS:**

<table>
<thead>
<tr>
<th>Hazardous Environment</th>
<th>Product EX marking according to ATEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1 IIB T4</td>
<td>Ex II 2 G c EE x de IIB T4</td>
</tr>
<tr>
<td>Zone 1 IIC T4</td>
<td>Ex II 2 G c EE x de IIC T4</td>
</tr>
<tr>
<td>Zone 2 IIB T3</td>
<td>Ex III 3 G c EE x de IIB T3</td>
</tr>
<tr>
<td>Zone 2 IIC T3</td>
<td>Ex III 3 G c EE x de IIC T3</td>
</tr>
</tbody>
</table>

**Dust Hazardous Environment**

<table>
<thead>
<tr>
<th>Product EX marking according to ATEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 21 (dust) Ex II 2 D c IP65 T+135°C</td>
</tr>
<tr>
<td>Zone 22 (dust) Ex II 3 D c IP65 T+135°C</td>
</tr>
</tbody>
</table>

**CERTIFICATIONS**

Quality is especially important in hazardous environments, where safety and efficiency are key. Multiple certifications prove the quality of our products: IECEx for the world, ATEX for Europe, CSA US for the United States and INMETRO for Brazil. For example, the ATEX directive gives strict rules for constant production and product quality follow-up. The certificate proves that Konecranes follows these regulations.

---

**CRANES AND HOISTS FOR HAZARDOUS ENVIROMENTS**

Ex optimized and tailored applications with the highest level of safety.

We offer a wide range of products for hazardous environments such as chemical and petrochemical plants, oil refineries, gas power plants, waste water treatment plants and paint shops. Wire rope hoists, chain hoists, air balancers, traveling machinery, end carriages, crane controls and other strategic components are designed and manufactured to meet the highest safety level required in hazardous environments.

**COKER CRANES**

Konecranes Coker cranes are process-critical equipment in the petrochemical refining process. They handle coke from the point of discharge at the coke drums to intermediate storage in the pit/pad layout, and on to the crusher/hopper in preparation for conveyance off-site.

Our Coker cranes are protected against corrosion, heat, dust and moisture. They are also equipped with chemical filters for protection.

**PRODUCT EX MARKING ACCORDING TO ATEX**

<table>
<thead>
<tr>
<th>Equipment group I or II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex</td>
</tr>
<tr>
<td>II</td>
</tr>
<tr>
<td>IIB T4</td>
</tr>
<tr>
<td>IIC T4</td>
</tr>
<tr>
<td>IIB T3</td>
</tr>
<tr>
<td>IIC T3</td>
</tr>
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</table>

**Max surface temperature**

**Type of protection**

**Gas Group**

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<th>Gas Hazardous Environment Product EX marking according to ATEX</th>
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<tr>
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<tr>
<td>Zone 1 IIC T4 Ex II 2 G c EE x de IIC T4</td>
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<tr>
<td>Zone 2 IIB T3 Ex III 3 G c EE x de IIB T3</td>
</tr>
<tr>
<td>Zone 2 IIC T3 Ex III 3 G c EE x de IIC T3</td>
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**Type of protection**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Zone 21 (dust) Ex II 2 D c IP65 T+135°C</td>
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Our Coker cranes are protected against corrosion, heat, dust and moisture. They are also equipped with chemical filters for protection.

**Overhead Coker (EOT) cranes:**

- Spans up to 48 meters
- Lifting capacity 55 tons

**Semi-Gantry Coker (SLG) cranes:**

- Spans up to 48 meters
- Lifting capacity 55 tons

**Semi-Gantry Coker (SLG) cranes with cantilever:**

- Spans up to 50 meters
- Lifting capacity 55 tons

**160 ton**

- EXCM Open Winches
- Tailored Cranes
- Coker Cranes

**80 ton**

- EXCXT Wire Rope Hoists

**20 ton**

- EXMK2 Manual Products

**5 ton**

- EXA, EXXM Jib Cranes (5 ton)
- XA and XM Workstation Cranes (2 ton)

**5 ton**

- EXN Chain Hoists

**350 kg**

- EX ATB AirBalancer
Special Applications

**TAILORED CRANES**

Custom cranes for every lifting purpose

**STEEL**

Heavy-duty, engineered, tailored cranes for the steel industry are built to provide safe and productive lifting through every process in steel mills.

**AUTOMOTIVE**

Tailored cranes are used in the stamping line and die handling, especially when four point suspension is required to keep asymmetrical loads horizontal.

**POWER PLANTS**

In hydro power plants, our lifting equipment is used as intake and draft tube gantry cranes. If you need higher capacities, we can build tailored cranes for tandem use, using our standard trolleys.

**WASTE-TO-ENERGY**

Tailored cranes are used in waste-to-energy plants for stacking, mixing and feeding waste to combustion chambers.

**BUILT FOR INDIVIDUAL NEEDS**

When you need a tailored crane application, we can supply custom lifting equipment that is integrated into your processes. With regular maintenance and upgrades, we make sure the crane fits your long-term lifting requirements.

**PULP & PAPER**

Konecranes supplies tailored cranes, with either vacuum lifters or mechanical roll grippers, for automatic paper roll storage systems.
PORT CRANES
Smarter where it matters

CONTAINER HANDLING CRANES

RUBBER-TIRED GANTRY CRANES
Greater reliability, reduced downtime and lower maintenance costs with hydraulics-free engineering
- Unique ability to tolerate rough yard surfaces
- Intelligent steel structure and Active Load Control system
- Dimensions: max. 1 over 6 and max. 8+ truck lane
- Available with 8 or 16 wheels

AUTOMATED STACKING CRANES
Fast, accurate container stacking with light, intelligent structure, Active Load Control and integrated positioning
- Built to handle yard and rail configurations and work practices
- Automated RMG (ARMG) system, field-proven and reliable
- Automated RTG (ARTG) system, concept adapted from ARMG system

BOXRUNNER
Flexible link between ship-to-shore (STS) cranes and yard stacking cranes
- Two-high stacking ability for loading and unloading trucks

SHIP-TO-SHORE CRANES
Used for loading and unloading containers from ships
- Outreach of up to 70 m
- Panamax Capacity: 40–50 t, lifting height: 28–32 m
- Post Panamax Capacity: 50–65 t, lifting height: 32–36 m
- Super Post Panamax Capacity: 50–70 t, lifting height: 36–40 m

PLATE UNLOADING CRANES
Cranes that maximize unloading efficiency when you need to unload steel plates arriving by sea
- Flyweight Capacity 40 t, lifting height 14–19 m, outreach 20–25 m
- Welterweight Capacity 57 t, lifting height 20–25 m, outreach 25–30 m
- Heavyweight Capacity 75 t, lifting height up to 45 m, outreach up to 40 m

PLATE HANDLING CRANES
Tailored to your shipyard for maximum efficiency and safety
- CXT Cranes Capacity 1–16 t, lifting height up to 20 m, span up to 40 m
- Welterweight Capacity 25–80 t, lifting height up to 20 m, span up to 45 m
- Heavyweight Capacity 10–30 t (under magnet), lifting height up to 15 m, span up to 50 m

BULK HANDLING AND SHIPYARD CRANES

GOLIATH GANTRY CRANES
For heavy-duty ship hull assembly at shipyards
- Flyweight Capacity 250–700 t, lifting height up to 50 m, span up to 60 m
- Welterweight Capacity 500–1200 t, lifting height up to 50 m, span up to 90 m
- Heavyweight Capacity 1000–2200 t, lifting height up to 70 m, span up to 120 m

AGD GRAB UNLOADER CRANES
Minimum maintenance and maximum reliability, with proven Konecranes components
- Lifting capacity 16–65 t, outreach 30–45 m
- Unloading capacity 100–3000 tph

FLOATING DOCK CRANES
A special type of single-boom crane for floating dock launches and repairs
- Tailored Capacity: up to 60 t with an outreach up to 40 m. Lifting height up to 45 m above rail and up to 30 m below rail.

RAIL-MOUNTED GANTRY CRANES
High performance, reliability, easy and accurate steering, low costs and low energy consumption
- Tailored to specific operations and delivered in different sizes and configurations including zero outreach and outreach from both sides
- Designed to lift all container and trailer types
- Capacity: 50 t under spreader
- Max lifting height: 1 over 6

BLOCK-HANDLING CRANES
Block-handling cranes with bridge, semi-gantry and gantry designs that are built for reliability and accuracy
- CXT Cranes Capacity 1–16 t, lifting height up to 20 m, span 110 m
- SMARTON Capacity 16–250 t, lifting height up to 30 m, span up to 60 m
- Tailored Cranes Capacity 50–350 t, lifting height up to 40 m, span up to 80 m

SINGLE BOOM SHIPYARD CRANES
Designed for general ship outfitting; small and large shipbuilding and repair
- Flyweight Capacity 22–50 t, lifting height up to 70 m, span down to 6 m
- Welterweight Capacity 50–100 t, lifting height up to 120 m, span down to 8 m
- Heavyweight Capacity 100–350 t, lifting height up to 120 m, span down to 10 m

DOUBLE BOOM SHIPYARD CRANES
Accurate, heavy-duty load handling cranes used in shipyards worldwide
- Flyweight Capacity 22–50 t, lifting height up to 70 m, span down to 6 m
- Welterweight Capacity 50–100 t, lifting height up to 120 m, span down to 8 m
- Heavyweight Capacity 100–250 t, lifting height up to 120 m, span down to 10 m

SMARTON CRANES
For main and auxiliary loading and unloading in shipyards
- SMARTON Capacity 16–65 t, lifting height 20–30 m. Lifting height up to 45 m above rail

BOXHUNTER
The first RTG on the market which allows the operator to sit and work in an ergonomic heads-up position
- Allows the operator to work in a cabin at the truck lane, with direct line-of-sight to the main truck loading and unloading action
- Dimensions: max. 1 over 5, max. 7+ truck lane
- Available with 8 or 16 wheels

AGD GANTRY CRANES
Accurate, heavy-duty load handling cranes
- Standard Capacity 10–30 t (under magnet), lifting height up to 20 m, span up to 40 m
- Tailored Capacity: up to 60 t with an outreach up to 40 m. Lifting height up to 45 m above rail and up to 30 m below rail.

GINGER GANTRY CRANES
For general ship outfitting and repair
- Standard Capacity 10–30 t (under magnet), lifting height up to 20 m, span up to 40 m
- Tailored Capacity: up to 60 t with an outreach up to 40 m. Lifting height up to 45 m above rail and up to 30 m below rail.

MG GANTRY CRANES
For quayside-to-yard box-running role for general yard duty and two models for the quayside-to-yard box-running role
- Standard Capacity 10–30 t (under magnet), lifting height up to 20 m, span up to 40 m
- Tailored Capacity: up to 60 t with an outreach up to 40 m. Lifting height up to 45 m above rail and up to 30 m below rail.

BOXHUNTER
The first RTG on the market which allows the operator to work in a cabin at the truck lane, with direct line-of-sight to the main truck loading and unloading action
- Dimensions: max. 1 over 5, max. 7+ truck lane
- Available with 8 or 16 wheels

RAIL-MOUNTED GANTRY CRANES
High performance, reliability, easy and accurate steering, low costs and low energy consumption
- Tailored to specific operations and delivered in different sizes and configurations including zero outreach and outreach from both sides
- Designed to lift all container and trailer types
- Capacity: 50 t under spreader
- Max lifting height: 1 over 6

BLOCK-HANDLING CRANES
Block-handling cranes with bridge, semi-gantry and gantry designs that are built for reliability and accuracy
- CXT Cranes Capacity 1–16 t, lifting height up to 20 m, span 110 m
- SMARTON Capacity 16–250 t, lifting height up to 30 m, span up to 60 m
- Tailored Cranes Capacity 50–350 t, lifting height up to 40 m, span up to 80 m

SINGLE BOOM SHIPYARD CRANES
Designed for general ship outfitting; small and large shipbuilding and repair
- Flyweight Capacity 22–50 t, lifting height up to 70 m, span down to 6 m
- Welterweight Capacity 50–100 t, lifting height up to 120 m, span down to 8 m
- Heavyweight Capacity 100–350 t, lifting height up to 120 m, span down to 10 m

DOUBLE BOOM SHIPYARD CRANES
Accurate, heavy-duty load handling cranes used in shipyards worldwide
- Flyweight Capacity 22–50 t, lifting height up to 70 m, span down to 6 m
- Welterweight Capacity 50–100 t, lifting height up to 120 m, span down to 8 m
- Heavyweight Capacity 100–250 t, lifting height up to 120 m, span down to 10 m

SMARTON CRANES
For main and auxiliary loading and unloading in shipyards
- Standard Capacity 10–30 t (under magnet), lifting height up to 20 m, span up to 40 m
- Tailored Capacity: up to 60 t with an outreach up to 40 m. Lifting height up to 45 m above rail and up to 30 m below rail.

MG GANTRY CRANES
For quayside-to-yard box-running role for general yard duty and two models for the quayside-to-yard box-running role
- Standard Capacity 10–30 t (under magnet), lifting height up to 20 m, span up to 40 m
- Tailored Capacity: up to 60 t with an outreach up to 40 m. Lifting height up to 45 m above rail and up to 30 m below rail.

KA GANTRY CRANES
For shipbuilding and repair
- Standard Capacity 10–30 t (under magnet), lifting height up to 20 m, span up to 40 m
- Tailored Capacity: up to 60 t with an outreach up to 40 m. Lifting height up to 45 m above rail and up to 30 m below rail.

GANTRY CRANES
For general ship outfitting and repair
- Standard Capacity 10–30 t (under magnet), lifting height up to 20 m, span up to 40 m
- Tailored Capacity: up to 60 t with an outreach up to 40 m. Lifting height up to 45 m above rail and up to 30 m below rail.
The strength, performance and reliability of every Konecranes lift truck is based on three core advantages of our technology:

**STRONG BOX-TYPE CHASSIS**
Four welded steel plates make our box-type chassis the strongest on the market. Compared to a conventional lift truck chassis, it features double torsional stiffness as well as greater strength and lifting capacity with no reductions at high lift heights.

**EFFICIENT LOAD-SENSING HYDRAULICS**
The lift truck provides maximum power only when really needed, consuming less fuel while reducing emissions and noise. Service intervals are longer – from 4,000 hours to 12,000 hours. This contributes to reduced wear and tear on components and lower total cost of ownership.

**INTELLIGENT ELECTRONIC MACHINE CONTROL (EMC MASTER)**
EMC Master monitors the lift truck’s vital components and functions, and can be linked with Konecranes TRUCONNECT remote data monitoring and reporting system. Its settings are programmable to adjust to your needs.

**INDUSTRY APPLICATIONS**
- Container Ports & Terminals
- Wood, Pulp & Paper
- Wind Power
- Intermodal & Barge Handling
- Steel, Aluminum & Brass
- Concrete, Brick & Rock
- Automotive
- Heavy & General Industry
- Oil & Gas
- Nuclear Industry
- Waste & Energy & Biomass
- Custom/Other Solutions

**REACH STACKERS**
- **10–80 tons**

**EMPTY CONTAINER LIFT TRUCKS**
- **8–10 tons**

**LADEN CONTAINER LIFT TRUCKS**
- **33–45 tons**

**GENERATION C CABIN OPTIMA**
An OPTIMA cabin is customizable for your exact operational needs. You can select mini-wheel steering or lever steering, change the driver’s seat type, and choose precisely the instrumentation you require.

- A hydraulic sliding cabin (stroke 2900 mm), a vertically movable cabin RHS (stroke 2850 mm) and EMC remote control are also available.

**BENEFITS**
- Remarkable visibility
- Full monitoring 7” touch screen
- Left armrest mini-steering options
- Ergonomic instrumentation
- Best possible comfort
- Joystick control

**LEADERS IN LIFTING**
Our mission is to build the hardest-working, longest-lasting heavy-duty lift trucks in the world. To accomplish this, we pay close attention to quality in every phase of design, production and delivery. We continuously improve our trucks based on customer feedback – how do our customers use our trucks? What advances would improve the safety and productivity of their operations?

**LIFT TRUCKS**

**TECHNICAL DATA**

<table>
<thead>
<tr>
<th>Lifting &amp; handling</th>
<th>Empty container stackers</th>
<th>Laden container stackers</th>
<th>Railroad/large stackers</th>
<th>Industrial stackers</th>
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</thead>
<tbody>
<tr>
<td>Stack density (TEU/hectare)</td>
<td>Empty container</td>
<td>Laden container</td>
<td>Containers, railcars &amp; bulk</td>
<td>Industrial cargo</td>
</tr>
<tr>
<td>Main features</td>
<td>Versatile &amp; fast</td>
<td>Versatile &amp; fast</td>
<td>Versatile &amp; fast</td>
<td>Versatile &amp; fast</td>
</tr>
<tr>
<td>Investment &amp; running costs</td>
<td>Low/low</td>
<td>Low/low</td>
<td>Low/low</td>
<td>Low/low</td>
</tr>
<tr>
<td>Lifting capacity (metric tons)</td>
<td>10–5 tons</td>
<td>46–27–14 tons</td>
<td>46–23–9 tons</td>
<td>46–23–9 tons</td>
</tr>
<tr>
<td>Container stacking</td>
<td>3–6 containers</td>
<td>5–6 containers</td>
<td>4–5 containers</td>
<td>4–5 containers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technical data</th>
<th>Small</th>
<th>Medium</th>
<th>Large</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifting capacity</td>
<td>8 tons</td>
<td>9 tons</td>
<td>10 tons</td>
</tr>
<tr>
<td>Stacking height</td>
<td>3–6 containers</td>
<td>4–6 containers</td>
<td>4–6 containers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technical data</th>
<th>Small</th>
<th>Medium</th>
<th>Large</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifting capacity</td>
<td>33–35 tons</td>
<td>38–45 tons</td>
<td>38–45 tons</td>
</tr>
<tr>
<td>Stacking height</td>
<td>3–5 containers</td>
<td>3–5 containers</td>
<td>3–5 containers</td>
</tr>
</tbody>
</table>

**Fork Lift Trucks**

**10–65 tons**

<table>
<thead>
<tr>
<th>Technical data</th>
<th>Small</th>
<th>Medium</th>
<th>Large</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifting capacity</td>
<td>10–14 tons</td>
<td>18–33 tons</td>
<td>37–65 tons</td>
</tr>
<tr>
<td>Lifting height</td>
<td>3–12 meters</td>
<td>3–15 meters</td>
<td>4–15 meters</td>
</tr>
</tbody>
</table>
OUR APPROACH TO MAINTENANCE

Our approach to maintenance covers the entire life of your equipment. Lifecycle Care results in highest lifecycle value - maximizing the productivity of uptime and minimizing the cost of downtime.

Our crane experts apply a systematic Risk and Recommendation Method in which we assess and prioritize safety, production and equipment life.

CONSULTATIVE APPROACH

Each Service Program is further enhanced by consultation. We offer a range of reviews that are tailored to meet your needs and can help guide your decision making, providing a better customer experience and added value over time.

INSPECTIONS & PREVENTIVE MAINTENANCE

Identifies risks and improvement opportunities and support compliance.

CORRECTIVE MAINTENANCE & RETROITS

Address safety and productivity issues and capitalize on improvement opportunities.

CONSULTATION SERVICES

Guide decision making & uncover underlying defects.

MODERNIZATION SERVICES

Enhance safety, performance, and productivity while extending equipment life.

NEW EQUIPMENT

For new installations or replacing old equipment.

FULL RANGE OF SERVICE PROGRAMS

We understand that each customer has their own distinct way of running their business. Our five Service Programs are designed to respond to these differing needs. A Service Program is structured around the customer’s needs and tailored to the equipment. All of our Programs, except for CONTACT, are delivered under an Agreement.

SERVICE PRODUCTS

Each Service Program is composed of core Service Products, which can be then supplemented with additional Service Products based on your specific requirements. Each Service Product comes with a clear objective and defined scope, as well as accurately defined content.

CONSULTATIVE APPROACH

Each Service Program is further enhanced by consultation. We offer a range of reviews that are tailored to meet your needs and can help guide your decision making, providing a better customer experience and added value over time.

Full Range of Service Programs

If you aren’t ready to outsource your preventive maintenance, our CONDITION inspection program can help you to comply with your local statutory inspection requirements and support your own inhouse maintenance actions.

Safety Review

Our goal here is to check for and inform you of any safety-related faults or issues either before the technician leaves your site or before your equipment is returned to production.

Visit and Service Reviews

These consultative discussions provide you with insight into the results of any inspection and maintenance, and offer recommendations as to any further actions that may be needed.

Business Review

We will meet with you to go over your current maintenance program and discuss all crane and hoist-related expenditures. We will also provide action plans and recommendations. The goal here is to optimize your maintenance spending, and demonstrate a solid return on your investment with Konecranes.

TYPICAL COMPOSITION OF A CARE PROGRAM

Konecranes service programs are equipment specific. You may opt for a CARE program for one crane, but decide that a CONTACT program is sufficient for another. The table below shows an example of what is included in a typical CARE program. The program content and visit schedule can be customized for each crane.

<table>
<thead>
<tr>
<th>PROGRAM CONTENT</th>
<th>MONTH OF AGREEMENT PERIOD</th>
<th>CUSTOMER SITE VISIT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Konecranes Frequent Inspection</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Routine Maintenance</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>MAINMAN Planned Maintenance</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Oil Change</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
CRANE OPERATOR TRAINING
This training is designed for crane operators and supervisory personnel responsible for the daily operation and safe performance of cranes. The training provides knowledge to assist in reducing operator errors that may lead to safety risks or unnecessary downtime.

RAILQ™ CRANE RUNWAY SURVEY
Konecranes RailQ Runway Survey uses a remotely operated robot combined with a visual inspection to provide you with an in-depth view of the alignment and condition of your crane rail.

ROPEQ™ MAGNETIC ROPE INSPECTION
Konecranes RopeQ technology uses non-destructive testing methods to analyze the condition of the internal wires, strands and wire rope core that are not typically visible.

CRANEQ™ CRANE GEOMETRIC SURVEY
CraneQ is based on advanced and traditional measurement methods. Proprietary software and skilled survey technicians provide an extremely accurate geometric analysis of your crane.

CRITICAL COMPONENTS ASSESSMENT
Gear Case Inspection: This is an assessment of the internal gear case components that are not typically evaluated during routine inspections.

Coupling Inspection: The coupling is taken apart and cleaned of old grease. The surfaces are then visually inspected.

Hook/Shank Inspection: This includes various proven non-destructive testing techniques such as dye penetrant, magnetic particles and magnetic rubber.

Below-the-Hook Inspection: This is designed to inspect the removable devices attached to your crane hook during operation.

CRANE RELIABILITY STUDY
The Crane Reliability Study (CRS) is an engineering assessment that studies the current condition of your crane and provides a theoretical estimate of its remaining design life.

TRUCONNECT REMOTE SERVICE
Connects data, machines and people to provide remote monitoring, diagnostics, analytics and usage-based predictive maintenance.

REMOTE MONITORING
TRUCONNECT Remote Monitoring provides data that helps you optimize maintenance activities and helps to support compliance.

REMOTE SUPPORT
No matter where your crane is located, Konecranes Remote Support experts can communicate and provide remote support and troubleshooting in case of a breakdown or indication of a fault.
SPARE PARTS
It doesn’t matter who made your crane

We are fluent in all crane brands, not just our own. With almost a century of experience working on all types and makes of cranes, we have become the leading overhead crane maintenance supplier in the world.

CRANE PARTS FOR ALL MAKES
As the largest industrial crane supplier in the market, we make it our business to provide parts, not only for our own equipment, but for all competing makes and models of hoists and cranes. It doesn’t matter who made your crane – call us for your parts needs.

EQUIVALENT PARTS
Equivalent parts are functionally similar to the original parts yet competitively priced against the market. They may include manufactured, re-engineered or original parts, depending on the best arrangement for you and your crane.

OUT OF STOCK DOESN’T MEAN OUT OF LUCK
Even if we don’t have in stock what you need, we can design and manufacture a custom part just for your equipment. With countless OEM drawings in our parts library, we can even fabricate parts for equipment no longer being manufactured.

Engaging the reverse engineering process allows for enhancements to the material, design or manufacturing process that can improve performance and the overall life span of the part. Rebuilt parts offer an alternative that is both cost and time effective.

MIDDLE EAST PARTS DISTRIBUTION CENTRE
Konecranes Middle East has established a Parts Distribution Centre in Dubai, which services the complete Middle East Region. It provides full support to our customers with fast turnaround times for queries and orders. Our highly trained team offers assistance in identifying the right parts – not only for all models of Konecranes equipment, but also for crane parts of other makes.

We have a high availability of parts in stock and are also backed up by the Konecranes Central Global Distribution Center in Hyvinkää, Finland. The stock holding has resulted in a significant increase in optimized delivery punctuality. Our team aim to offer a turnaround time, wherever possible, of within 24 hrs, depending on the request.

MINIMIZE DOWNTIMES – LET US INSTALL YOUR SPARE PARTS
By choosing Konecranes professionals to do your installation work, you will know that installation is done properly, and your equipment is back in production without unnecessary downtime.

EXPEDITED DELIVERY FOR ALL Parts
Sometimes your situation might be so critical that you need the spare part faster than normal delivery times would allow. In such cases our VIP expedited delivery services are there to help you.

SPARE PARTS EXPERTS
Our experts are ready to research and analyze your requests quickly. Almost 90% of parts inquiries are responded to within 48 hours.

For Spare Parts Inquiries:

MIDDLE EAST
parts.me@konecranes.com
Tel.: +971 4 881 5581

KINGDOM OF SAUDI ARABIA
Tel.: +966 13 341 0030 Ext 256
service.ksa@konecranes.com

UNITED ARAB EMIRATES
Tel.: +971 4 335 4909
contact@cis.ae
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 almost 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™.