

PRODUCTS FOR HAZARDOUS ENVIRONMENTS

Designed for
demanding
industrial
environments



Lower your risk

You can't completely eliminate danger in explosive atmospheres, but with the right equipment and the right training, you can boost work efficiency while improving safety and minimizing the risk to your loads, your surroundings and your personnel.

In this brochure, we present the Konecranes range of fully optimizable cranes and hoists specially designed for the demanding requirements of hazardous environments. Our design quality, technical expertise and after-sales service help keep your equipment safe and fully operational throughout a long and productive lifecycle.



Watch the introduction to the EX product range video to see our cranes in action.

CUSTOMER APPLLICATIONS

- Oil refineries, rigs and processing plants
- Chemicals
- Printing industries, paper and textiles
- Aircraft refuelling and hangars
- Surface coating
- Sewerage treatment plants
- Gas pipelines and distribution centers
- Gas power plants
- LNG Natural gas plants
- Grain handling and storage
- Woodworking
- Sugar refineries
- Metal surface grinding

Certifications

Quality is especially important in hazardous environments, where safety and efficiency are key.

Multiple certifications—including IECEx for the world, Atex for Europe, CSA US for the United States, Inmetro for Brazil and CCC for China—verify the high standard of our products.



Environment definitions

Each regional certification has its own definition of hazardous environments. We present two here as examples of how our cranes can suit your particular circumstances.

According to Atex:

EX ZONES – GAS ENVIRONMENT

ZONE 1
A place in which an explosive atmosphere consisting of a mixture with air or flammable substances in the form of gas, vapor or mist is likely to occur in normal operation occasionally.

ZONE 2
A place in which an explosive atmosphere consisting of a mixture with air or flammable substances in the form of gas, vapor or mist is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

EX zones – dust environment

ZONE 21
A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is likely to occur in normal operation occasionally.

ZONE 22
A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is not likely to occur in normal operation, but if it does occur, will persist for a short period only.

According to CSA US:

CLASS I
A location made hazardous by the presence of flammable gases or vapors that may be present in the air in quantities sufficient to produce an explosive or ignitable mixture.

DIVISION 2
A location where a classified hazard does not normally exist, but might appear under abnormal conditions.

ZONE 2
An area in which an explosive gas atmosphere does not normally exist.

Konecranes experts will offer the correct equipment for your application based on the Ex-specification you have provided.



Product suitability for gas / dust environment				
	Zone 2 / Zone 22	Zone 1 / Zone 21	Zone 0 / Zone 20	Class 1 Div 2
EXCXT wire rope hoist crane	✓	✓	✗	✓
EXCXT wire rope hoist	✓	✓	✗	✓
EXN electric chain hoist crane	✓	✓	✗	✓
EXN electric chain hoist	✓	✓	✗	✓
EX C-series electric chain hoist	Zone 22 only	✗	✗	✗
EKM2 manual hoist	✓	✓	✗	✗
EX jib crane	✓	✓	✗	✗

To find the right solution for each environment, we need to know the kind of explosive atmosphere in which you will be using your lifting device.



EXCXT wire rope hoist

Very compact hoist dimensions due to large rope drum diameter.

This hoist represents the ideal in safety and quality within the lifting equipment industry. An innovative mechanical configuration prevents sparking – ideal for use around the flammable materials that may occur in hazardous environments – and its intuitive controls and high-level motor and gear technology have made it the industry benchmark.

Safety

- The EXCXT is certified according to most EX approvals, such as ATEX, IECEX, CSA and CCC
- Reliable contactor controls
- 2-step hoisting limit switch for safe load handling
- Reliable mechanical overload protection

Options

- Solo hoist or monorail
- Buy with a whole crane or install as a modernization to extend the life of your existing equipment

Performance

- Lifting capacity up to 80 tons
- Easy load handling with precise movements and ergonomic controls
- Large rope drum diameter keeps hoist compact
- IP66 hoisting and travelling motors
- Heavy-duty 50% ED hoisting motors
- 2-speed hoisting with 6:1 speed ratio enables easy and accurate load handling

Suitability for gas / dust environment			
Zone 2 / Zone 22	Zone 1 / Zone 21	Zone 0 / Zone 20	Class I / Div 2
✓	✓	✗	✓

EXCXT wire rope hoist crane

In your everyday work, you must be able to rely on your tools. This is especially true in a hazardous environment, where safety is the most important factor.

With this crane, you get all the benefits of the EXCXT hoist, as well as these additional features:

Safety

- Crane electrics located in EX enclosures, which consist of a flameproof D-type section and increased safety E-type sections
- EX-certified crane components
- Minimized hook approaches due to compact hoist

Performance

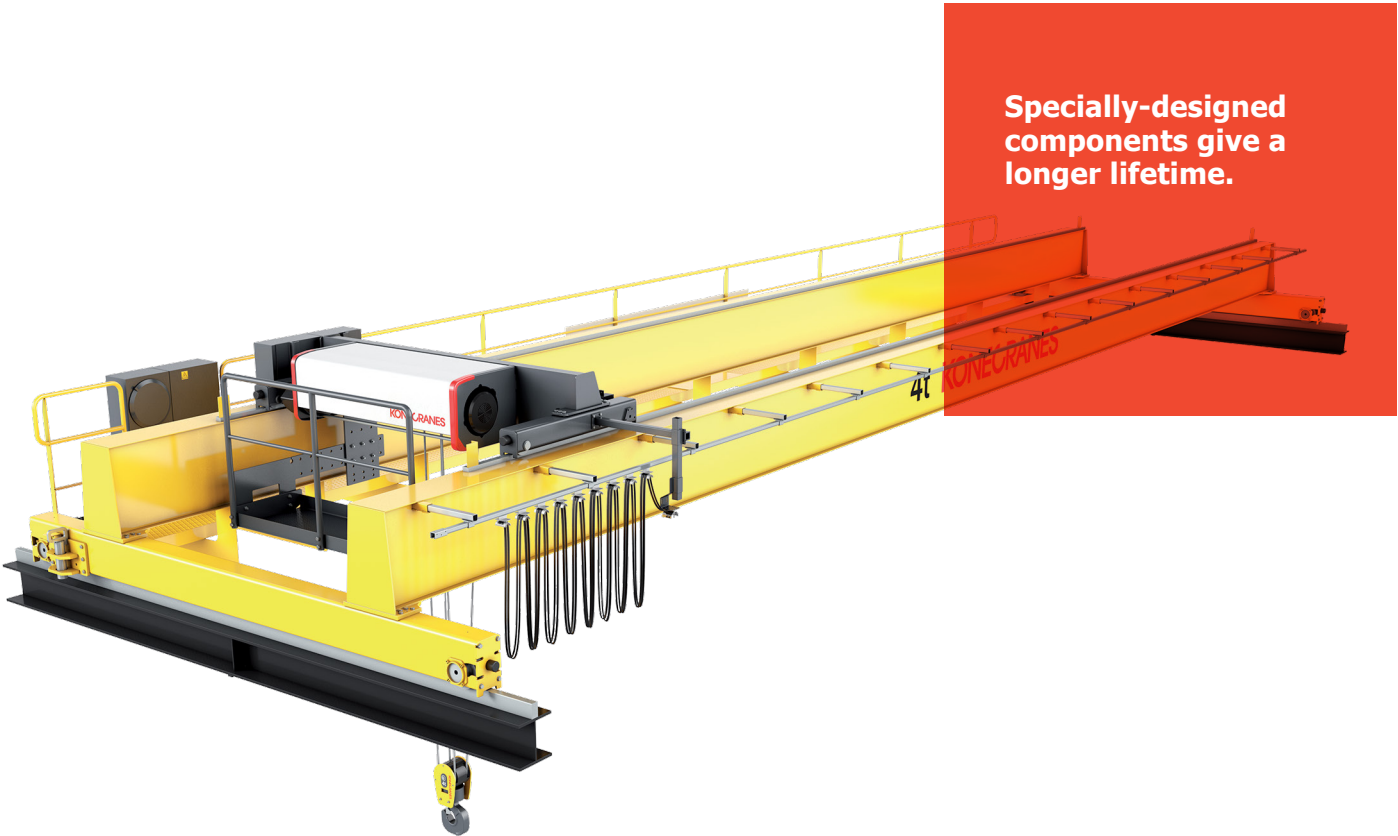
- Lifting capacity up to 80 tons
- Design allows compact dimensions
- Sturdy steel structure for strength and durability

Options

- Multiple options available such as radio controls, crane lights and stand-by heaters for humid conditions

Suitability for gas / dust environment			
Zone 2 / Zone 22	Zone 1 / Zone 21	Zone 0 / Zone 20	Class I / Div 2
✓	✓	✗	✓

Specially-designed components give a longer lifetime.





EXN electric chain hoist

This durable hoist gives you the high level of performance and reliability you need for an unpredictable hazardous environment. It has the flexibility to be configured to your particular conditions and is designed to increase the safety of your operators and the surrounding area.

Safety

- Available with various EX approvals
- Slipping clutch helps prevent overload
- Service-friendly "DE" technology electric cubicles with separate flameproof "D" section
- Contactor controls for reliable performance

Options

- Hook suspended hoist
- Manual chain travel trolley
- Low or normal headroom trolley
- Motorized or push trolley
- Buy as a single hoist, as part of a new crane, or install as a modernization hoist to extend the life of your existing equipment

Performance

- Lifting capacity up to 5 tons
- 2-speed control designed for smooth and efficient load handling
- Easy maintenance
- Accurate load positioning with 4:1 traveling speed ratio
- High-performance 60% ED, 360 starts per hour hoisting

Suitability for gas / dust environment		
Zone 2 / Zone 22	Zone 1 / Zone 21	Zone 0 / Zone 20
✓	✓	✗

Smooth and efficient load handling with 2-speed hoisting and travelling movements.

EXN electric chain hoist crane

Suitable for a wide range of hazardous environments, the flexibility of this crane is its best feature. Its high level of reliability and ease of use means more safety, more productivity, and much less downtime.

With this crane, you get all the benefits of the EXN hoist, as well as these additional features:

Safety

- EX-certified crane components
- Optimized approach dimensions due to compact hoist

Performance

- Lifting capacity up to 5 tons
- Ergonomic controls

Options

- Radio control, crane lights, and standby heaters for cold and humid conditions

Suitability for gas / dust environment		
Zone 2 / Zone 22	Zone 1 / Zone 21	Zone 0 / Zone 20
✓	✓	✗

Suitable for demanding Zone 1 and Zone 21 explosive atmospheres.





EX C-series electric chain hoist for Zone 22

Konecranes C-series electric chain hoist for Zone 22 is our most advanced electric chain hoist to date. Designed and tested to meet the dust hazardous environment Zone 22 requirements and built smart with our Core of Lifting components, the hoist is tough, safe, precise and reliable.

Designed and tested specifically to fulfil ATEX Zone 22 environment requirements.

Efficient load handling up to 1 ton.

- Safety**
- Safe, reliable and easy to operate
 - Maximum surface temperature 120°C (@40°C ambient temperature) and the most demanding IIIC dust classification provides long and safe use in Zone 22 dust hazardous environments
 - Temperature monitoring helps prevent overheating
 - Ingress protection IP66

- Performance**
- Lifting capacity up to 1 ton
 - 2-speed hoisting and trolley travelling enables smooth and accurate load handling
 - Wide ambient temperature range from -20°C to +40 °C

- Options**
- Available hoist suspensions: eye and hook
 - Available trolley models: push, chain travel and motorized
 - Multiple options available such as stainless steel chain, second hoisting brake, food safety lubricants and self locking hook

Suitability for gas / dust environment		
Zone 2 / Zone 22	Zone 1 / Zone 21	Zone 0 / Zone 20
Zone 22 only	×	×



EX Jib crane

Konecranes jib cranes are easy to install and operate. Used almost everywhere, you can find them in small workshops, big factory assembly lines and manufacturing plants. Their flexible application clearly demonstrates our technical knowledge and long experience in the design of cranes.

Safety

- Main disconnect switch as standard
- Separate emergency stop button on hoist pendant

Performance

- Lifting capacity up to 40 tons
- Designed for accurate load handling with 2-speed hoisting
- Low deadweight reduces structural stress

Options

- Flexible enough to use almost anywhere: durable, even if your needs change
- Can be equipped with EXCXT, EXN, EKM2 hoists or EX C-series hoist for Zone 22

Suitability for gas / dust environment		
Zone 2 / Zone 22	Zone 1 / Zone 21	Zone 0 / Zone 20
✓	✓	✗

EKM2 manual hoist

When you don't need to lift every day, the EKM2 manual hoist combined with the EKPT manual trolley offers an optimal, cost-effective solution. It's ideal when your facility has less frequent lifting needs, or you want a spare hoist to support your other lifting equipment during busy periods. Stainless steel chain and corrosion protection give your hoist a longer lifetime.

Safety

- Stainless steel hand chain
- Copper-coated hooks and trolley wheels prevent sparks
- Overload limiter
- Spark prevention features
 - Stainless steel hand chain
 - Copper-coated hooks and trolley wheels help prevent sparks
 - Rubber buffers help prevent collisions

Options

- Chain collectors
- Push trolley, chain travel trolley or hook suspended hoist

Suitability for gas / dust environment		
Zone 2 / Zone 22	Zone 1 / Zone 21	Zone 0 / Zone 20
✓	✓	✗

Performance

- Lifting capacity up to 20 tons
- ISO hooks with safety latch to ease load handling
- Hoists and trolleys powder painted for corrosion protection

Konecranes manual hoists are a simple and reliable solution for hazardous environments.



Keeping your equipment up and running

You can maximize the lifecycle value of your EX crane with a Konecranes service program that is tailored to your requirements. A program of regular inspections and preventive plus predictive maintenance supports compliance and helps identify risks and opportunities for improvement.

A consultative approach to help guide decision making

At Konecranes we take a comprehensive and systematic approach to managing customer assets throughout our Lifecycle Services. We don't just drop off a report on the way out, we consult with you to help guide your decision making. We share our findings, provide recommendations based on our industry-leading expertise and discuss how each action impacts your operations and the entire health of your business.

At your service

We have the largest and most extensive service network in the industry giving you the advantage of local inspectors and technicians with access to a wealth of knowledge gained from servicing hundreds of thousands of assets of all makes and models in a wide range of industries.

Spare parts for Konecranes EX equipment

Our global spare parts network offers an excellent availability of parts, including parts designed specifically for hazardous environments, wherever you are located.

EX crane modernizations

Instead of replacing your whole crane, a modernization can update it with the latest technology. Our customers with equipment for hazardous environments most often replace hoists, trolleys and traveling machinery for better capacity, speed, duty and load control. They also frequently upgrade to a higher EX classification.



Read more about our service programs



WHY KONECRANES SERVICE?

KNOWLEDGE

Our comprehensive technical training and certification programs are backed by a world-class technical support network. We're leveraging the combined data from all the equipment we service around the globe to get insights that guide maintenance recommendations and actions.

EXPERIENCE

We are an industry-leading OEM with several decades of experience. We have a vast array of acquired brands and installed base and we own the intellectual property of all the brands we have acquired. Around the world we are servicing hundreds of thousands of assets of all makes and models in a wide range of industries.

CUSTOMER STORY

Modernization with EXCXT hoist

SABIC, the Saudi Basic Industries Corporation, is one of the world’s leading manufacturers of chemicals, fertilizers, plastics and metals. At its Wilton site in Teeside, SABIC UK produces petrochemicals, including propylene and ethylene.

“EXCXT hoists were the right solution for this project.”

Heikki Kreku
Konecranes UK Engineering Manager



The modernization of its 20-ton pneumatic maintenance cranes has improved safety and reliability and extended crane life. Inspection and maintenance contracts make long-term use of Konecranes expertise and global service.

The plant’s old cranes were fully pneumatic, with air-driven motors for all movements. Modernization included removal of the trolleys, a complete stripping of existing controls, installation of new trolleys and electrical control systems, and new power supply systems for the crane, trolley, and crane controllers.

New hoists with secure futures

“EXCXT hoists were the right solution for this project,” says Heikki Kreku, a Konecranes UK engineering manager. Thanks to the refurbishment, spare parts are now readily available. The crane modernization has greatly reduced the risk that SABIC UK might run into any problems during a plant maintenance turnaround event.

SABIC was very pleased with the result of this modernization project. They also appreciated the safe working practice and professional conduct of the Konecranes site technicians involved. Inspection and maintenance contracts are now in place for both SABIC UK sites, Wilton and North Tees.



Highest lifecycle value

Our cranes deliver high-quality performance using the best technology available, and are built to last. The technical expertise that goes into Konecranes design combined with regular maintenance and service results in less risk in your hazardous work environment and a reliable, long-term investment. We call this highest lifecycle value.

From the earliest design phase, through technical optimization for your specific lifting needs, we carefully choose all components to give you the extra level of safety you require in the hazardous atmospheres of chemical and petrochemical plants, oil refineries, gas power plants, wastewater treatment plants, paint shops and other industrial sites important to your business.

We’ve been building cranes for more than 80 years. You can be sure that our technical knowledge and cumulative experience will help us to stay leaders in lifting for the next 80 years and beyond.

When a Konecranes product becomes part of your processes, its high efficiency lets you maximize the productivity of your uptime. With regular maintenance, constantly available spare parts and 24/7 customer service through our extensive global network, you minimize the cost of downtime.





Konecranes is a global leader in material handling solutions, serving a broad range of customers across multiple industries. We consistently set the industry benchmark, from everyday improvements to the breakthroughs at moments that matter most, because we know we can always find a safer, more productive and sustainable way. That's why, with around 16,600 professionals in over 50 countries, Konecranes is trusted every day to lift, handle and move what the world needs. In 2022, Group sales totalled EUR 3.4 billion. Konecranes shares are listed on the Nasdaq Helsinki (symbol: KCR).

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Learn more

Visit konecranes.com to learn more about cranes and hoists for hazardous environments.