

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

BIOMASS

KONECRANES[®]
Lifting Businesses[™]

CXT[®] BIOMASS CRANE



WE KNOW BIOMASS

Some of the most challenging crane applications exist in renewable energy. Konecranes has 50 years of experience in meeting the rigorous demands of this industry. We know how cranes fit in your process, and we use that knowledge to design our lifting equipment.

CRANE TECHNOLOGY

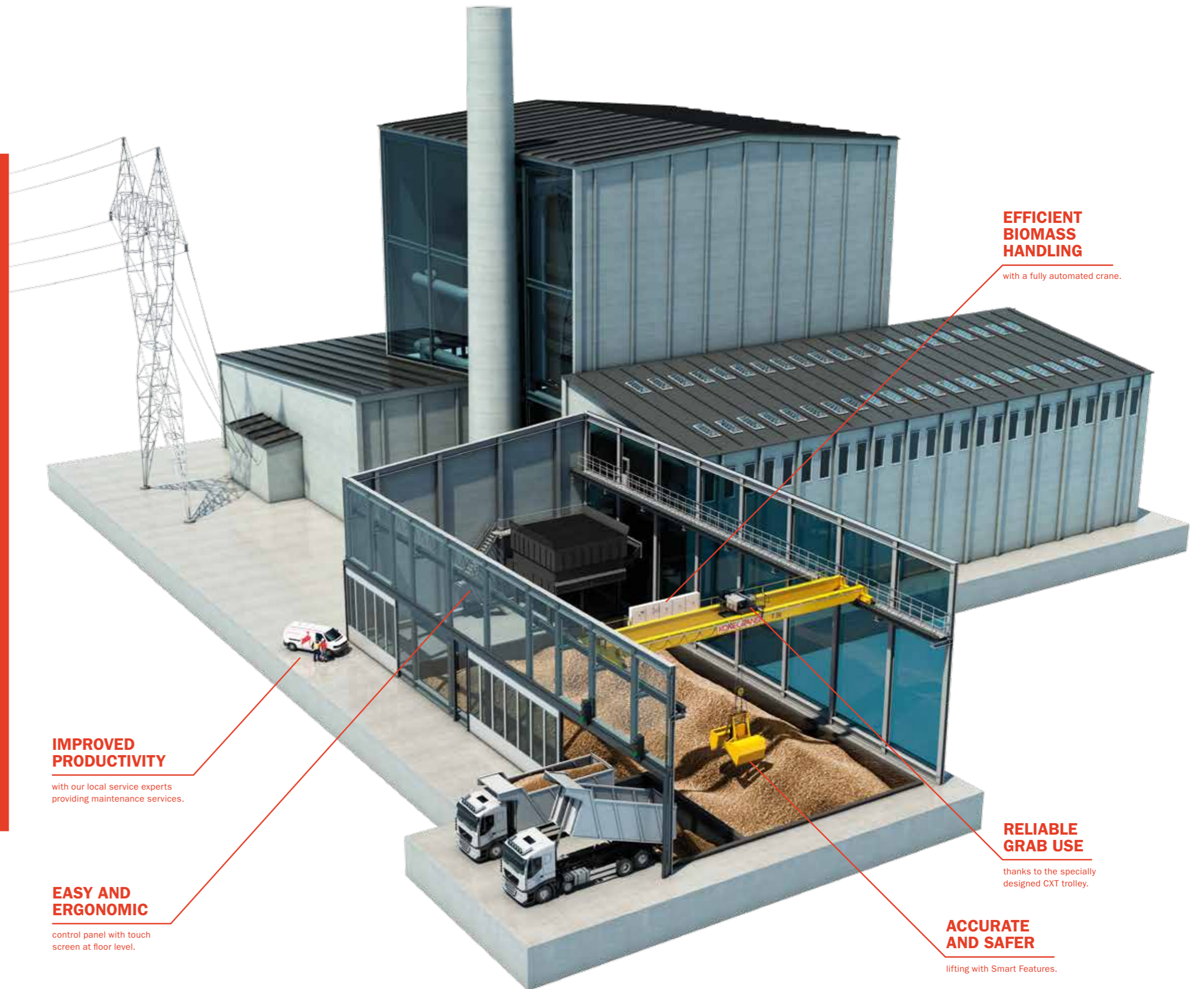
Our biomass-specific software enables fully automated crane cycling optimized to perform biomass handling efficiently and reliably. Smart Features such as Sway Control and Slack Rope Prevention allow for safer, faster load handling and more precise positioning. And TRUCONNECT® Remote Monitoring uses sensors to collect operating data, providing visibility to crane usage alongside maintenance data on the yourKONECRANES.com customer portal.

SUPPORTING THE ENTIRE PROCESS

Preventive maintenance is vital to keeping your equipment running. An effective maintenance and parts program can address potential maintenance and safety issues before they become critical.

GLOBAL EXPERIENCE AND LOCAL KNOW-HOW

When you choose Konecranes, you acquire a unique source of global experience and knowledge combined with local know-how to empower your lifting and increase your productivity. We have a unique understanding of how lifting can meet your process requirements and will deliver the right lifting equipment and service to match your needs.



EFFICIENT BIOMASS HANDLING

with a fully automated crane.

IMPROVED PRODUCTIVITY

with our local service experts providing maintenance services.

EASY AND ERGONOMIC

control panel with touch screen at floor level.

RELIABLE GRAB USE

thanks to the specially designed CXT trolley.

ACCURATE AND SAFER

lifting with Smart Features.

SAFER SMARTER SUSTAINABLE

Our knowledge of the role that cranes play in biomass processes has helped us design equipment that is suitable for most biomass handling needs: the CXT Biomass crane, a fully automated, versatile and reliable crane with a compact design. It features a hoisting inverter with Extended Speed Range (ESR) to provide smooth and fast operation and reduced cycle times.


Compared to a loader conveyor configuration, the CXT Biomass crane frees up floor space, reduces noise, dust and fuel emissions, and increases the fuel storage capacity of your plant. It helps make your process more efficient and sustainable.

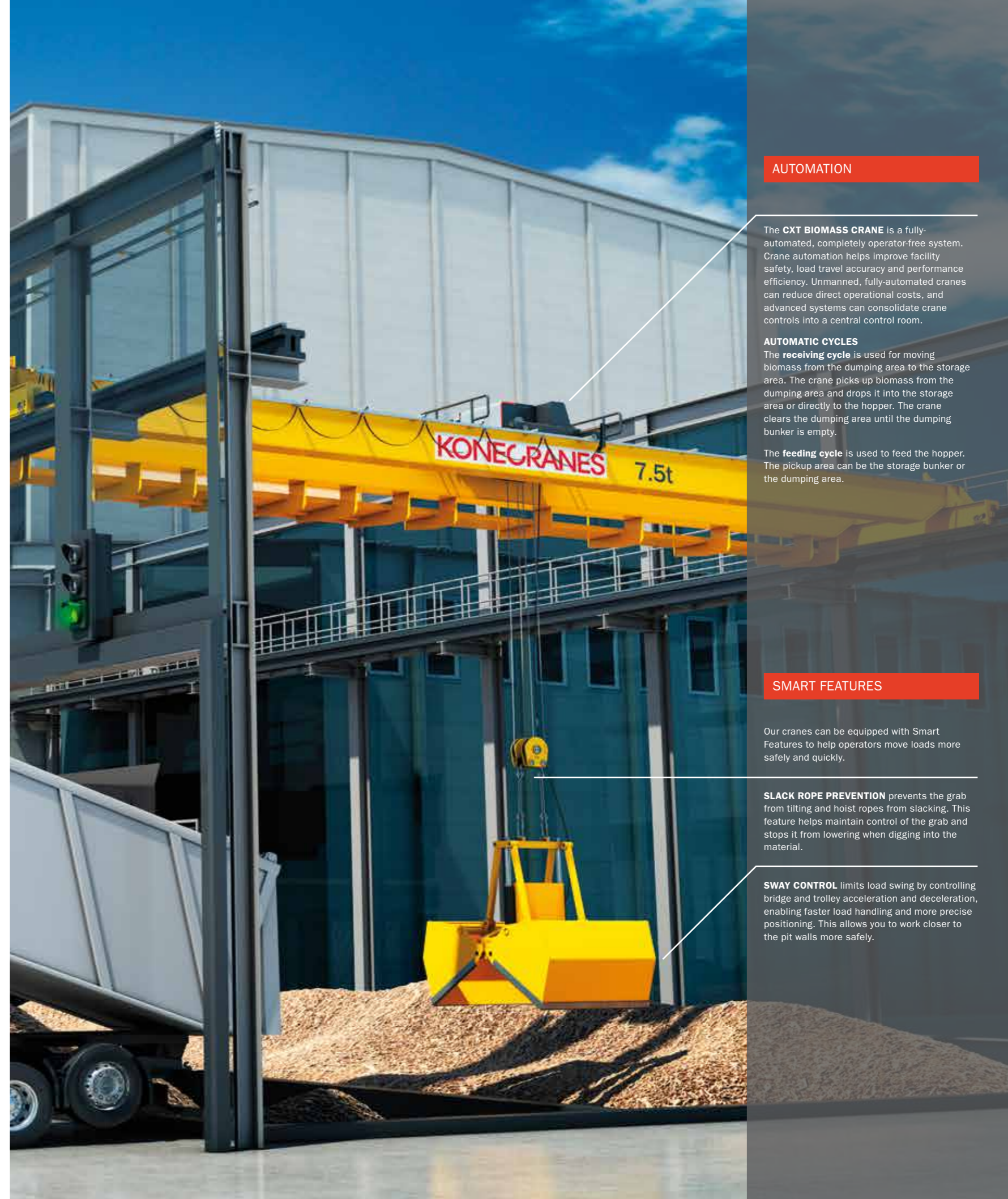
CXT BIOMASS CRANE BENEFITS

- More efficient operations with full automation
- Smart Features for safer, faster load handling and more precise positioning
- Less noise and emissions
- TRUCONNECT® Remote Monitoring provides visibility to crane usage



CXT® BIOMASS CRANE PRODUCT OFFERING

DUTY CLASS	RANGE	
M8	GL Trolley series	LV trolley
M7		
M6	CXT Biomass crane	
TONS	3 5 8 10 20	



AUTOMATION

The **CXT BIOMASS CRANE** is a fully-automated, completely operator-free system. Crane automation helps improve facility safety, load travel accuracy and performance efficiency. Unmanned, fully-automated cranes can reduce direct operational costs, and advanced systems can consolidate crane controls into a central control room.

AUTOMATIC CYCLES

The **receiving cycle** is used for moving biomass from the dumping area to the storage area. The crane picks up biomass from the dumping area and drops it into the storage area or directly to the hopper. The crane clears the dumping area until the dumping bunker is empty.

The **feeding cycle** is used to feed the hopper. The pickup area can be the storage bunker or the dumping area.

SMART FEATURES

Our cranes can be equipped with Smart Features to help operators move loads more safely and quickly.

SLACK ROPE PREVENTION prevents the grab from tilting and hoist ropes from slacking. This feature helps maintain control of the grab and stops it from lowering when digging into the material.

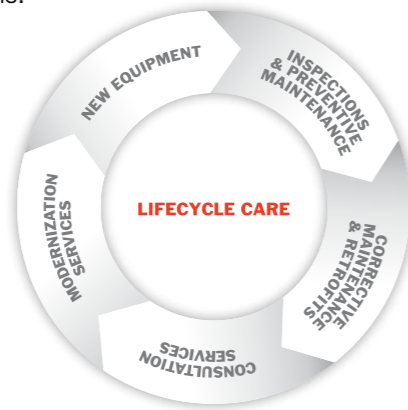
SWAY CONTROL limits load swing by controlling bridge and trolley acceleration and deceleration, enabling faster load handling and more precise positioning. This allows you to work closer to the pit walls more safely.

SERVICE TO FIT YOUR NEEDS

We provide specialized maintenance services and spare parts for all types and makes of industrial cranes, hoists, machine tools and port equipment—from a single piece of equipment to entire operations. Our objective is to improve the safety and productivity of our customers' operations.

OUR APPROACH TO CRANE MAINTENANCE

Lifecycle Care is a systematic, consistent, comprehensive and professional approach to maintenance, supported by world-class tools and processes. Highest Lifecycle Value results from maximizing the productivity of uptime in addition to minimizing the cost of downtime. We believe merely keeping your cranes running is not sufficient. We must also help you achieve the highest productivity during every shift.



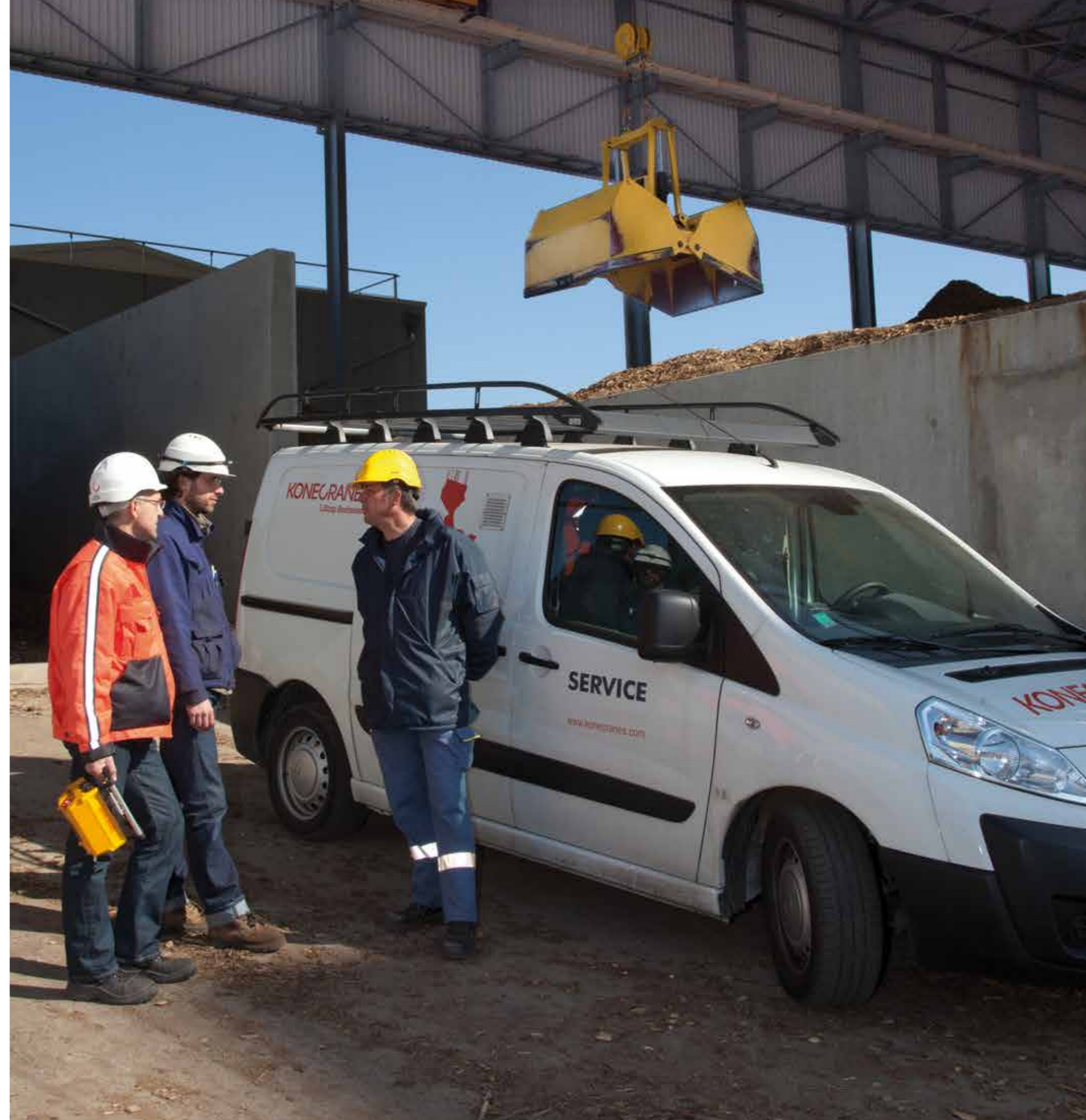
PREVENTIVE MAINTENANCE FOR IMPROVING SAFETY AND PRODUCTIVITY

An active preventive maintenance program is recommended for your lifting equipment. We can create a maintenance plan based on your equipment, application and duty cycle. The CARE Preventive Maintenance Program is our most popular service offering and includes preventive maintenance inspections and routine maintenance. If you need less, the CONDITION Inspection Program will help you comply with local statutory requirements and support your in-house maintenance.

GET INSIGHTS INTO MAINTENANCE OPERATIONS

In order to deliver Lifecycle Care in Real Time, we use the Industrial Internet, connecting data, machines and people. We bring together usage and maintenance data and combine it with our knowledge and experience, providing insights that allow our customers to optimize their maintenance operations and activities.

TRUCONNECT Remote Monitoring uses sensors to gather usage data—running time, motor starts, work cycles and brake condition. Alerts are notifications, by text or email, of events such as hoist overloads, emergency stops and over-temperatures.



SCALDIS BEINHEIM, FRANCE AUTOMATIC AND RELIABLE

Scaldis is an experienced provider in the field of biomass handling. A client of Scaldis in Beinheim wanted to diversify its steam production; their operation was traditionally based on gas, so adding steam production required a new biomass boiler. Scaldis contacted Konecranes to design equipment for the feeding cycle of the boiler.

RELIABLE CRANE NEEDED FOR 24/7 OPERATION

The crane needed to fulfill several important requirements. It needed to have sufficient capacity to provide consumption flow to the boiler and to fit within the constraints of the building's passage and headroom sizes. The crane also needed to be extremely reliable, as the plan was to install only one device to feed the boiler 24/7 with no backup available.

CUSTOMIZED CRANE FITS THE NEED

The compact design of the CXT was a perfect fit for the building, and its lifting capacity answered the needs of Beinheim. Scaldis and Konecranes customized the speed range of the crane together, and the technical features of the crane helped increase reliability.

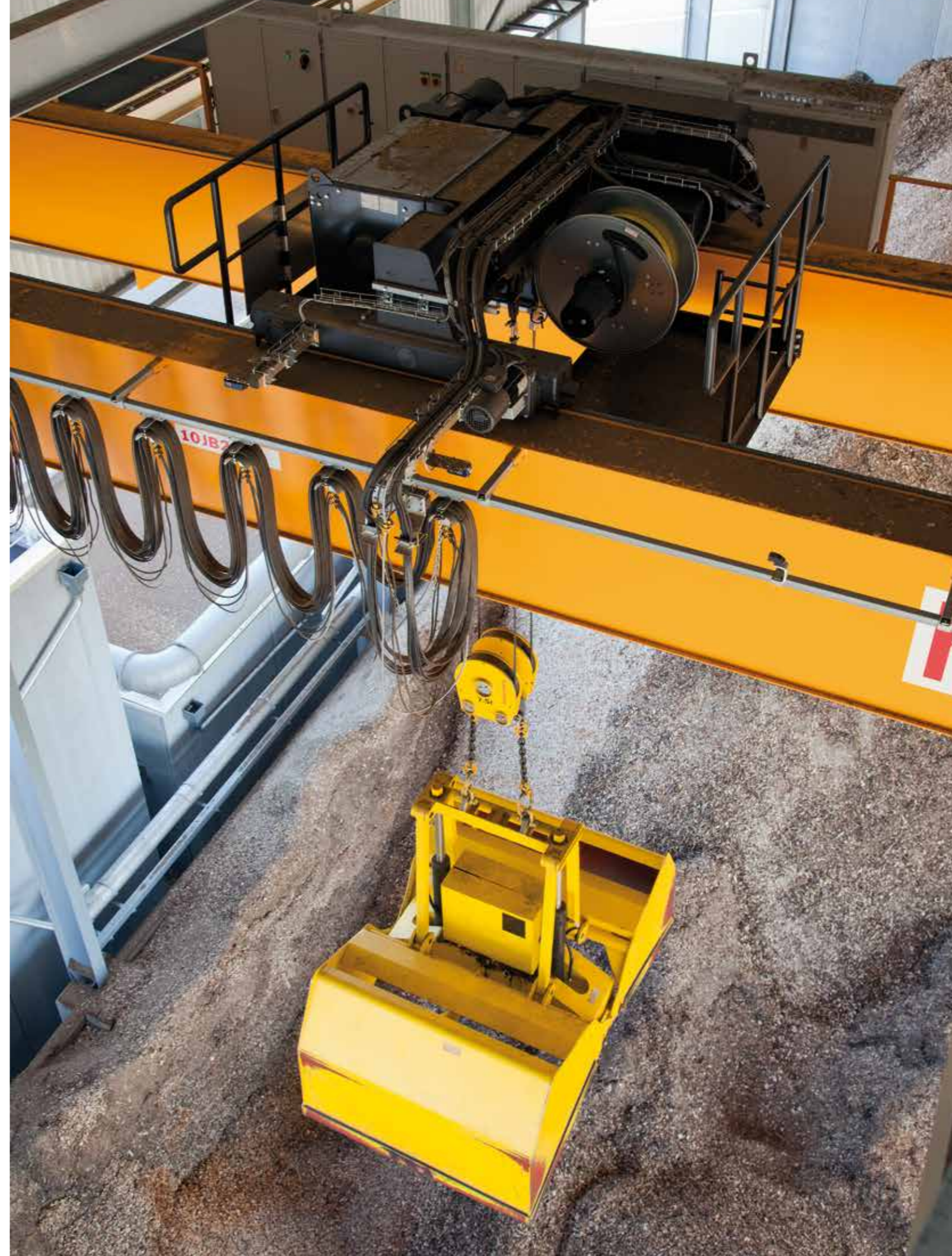
FULLY AUTOMATED CRANE KEEPS UP WITH DEMAND

The boiler in Beinheim started on its target date, and the end client is completely satisfied with the equipment Scaldis and Konecranes worked together to deliver. The CXT crane feeds the plant daily in the expected volume, and because it is a fully automated crane, there are no interruptions in the process.



“What made us decide to work with Konecranes is, above all, **their technical competence and their thorough knowledge of cranes and crane automation.**”

Fabien Gautier
Head of the Bioenergy department at Scaldis



NEW HEAT KAUNAS, LITHUANIA PROVIDING A CONTINUOUS FLOW OF FUEL

New Heat is a recognized EPC provider of boiler houses and combined heat and power (CHP) plants. They constructed a new biomass power plant for Lorizon Energy in Kaunas, Lithuania. The plant is equipped with a 10 MW boiler house, where heat is produced. The plant is capable of using three different types of biomass: straw pellets, wood chips and peat.

HIGH DEMANDS FOR AUTOMATION AND SAFETY

The biomass power plant is designed to be operated 24/7 by one person; this puts a high demand on automation, safety and usability. The biomass hall has three tipping bunkers, three storage areas, and a double hopper for different fuel types. Environmental conditions, such as dust and humidity, set special requirements for the protection of the crane equipment.

AUTOMATED CRANE EQUIPPED WITH SMART FEATURES

The end customer required a fully automated crane to be used in the biomass hall, instead of a front loader and conveyers. Cycle times were calculated to make sure that the duty class M7 (FE M 4m) hoist, with the required four-ton capacity, was suitable. A clamshell 2,5 m³ hydraulic grab was used, and the crane was equipped with the Sway Control and Slack Rope Prevention Smart Features.

SERVICE KEEPS THE CRANE RUNNING RELIABLY

The crane was delivered and erected on time, and it was equipped with the TRUCONNECT® Remote Monitoring to provide visibility to crane usage. The crane handles the expected volume of biomass daily, and the automation helps make sure that there is always enough fuel to burn. The customer also has a service contract with Konecranes to make sure the process continues with minimal disruption.



“It was very nice to work with Konecranes professionals, and in the future I will be happy to work with them again.”

Jonas Pugzlys
Project manager at New Heat





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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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