

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

BIOMASS

KONECRANES[®]
Lifting Businesses[™]

CXT[®] BIOMASS CRANE

OPTIMAL SOLUTION FOR

BIOMASS POWER PLANTS



WE KNOW BIOMASS

Some of the most challenging locations for heavy-duty crane applications exist in the renewable energy industry. Konecranes has 50 years of experience in meeting the rigorous demands of renewable energy plants. We know your process, and we have taken its requirements into account in our crane design.

Our optimized biomass software enables fully automated cranes to perform biomass handling efficiently and reliably, and by letting us take care of maintenance, you can fully concentrate on your core business.

All of this is possible with our global knowledge combined with our local service and expertise.

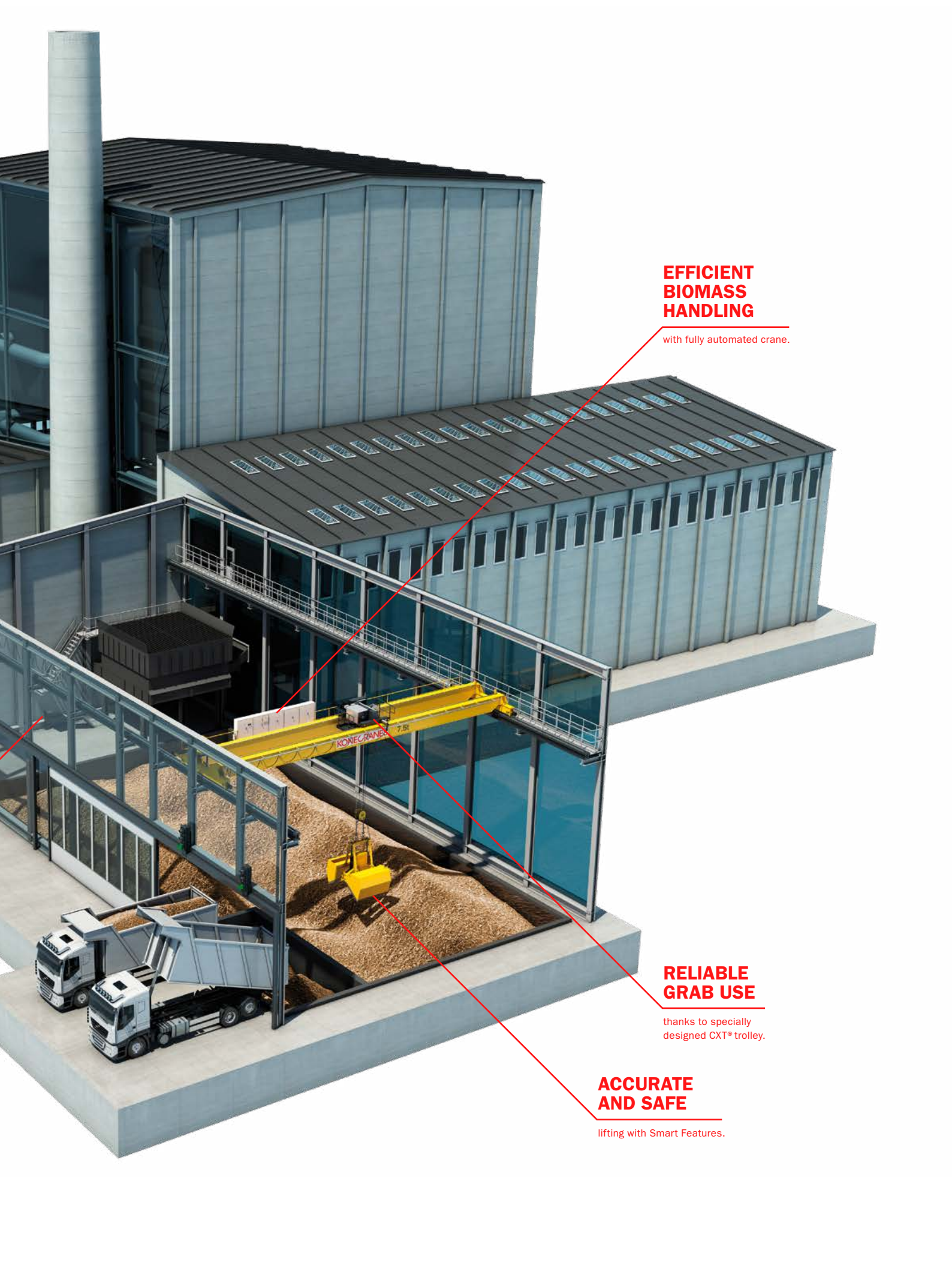


IMPROVED PRODUCTIVITY

with our local service specialists providing various maintenance and modernization services.

EASY AND ERGONOMIC

control panel with touch screen at floor level.



**EFFICIENT
BIOMASS
HANDLING**

with fully automated crane.

**RELIABLE
GRAB USE**

thanks to specially
designed CXT® trolley.

**ACCURATE
AND SAFE**

lifting with Smart Features.

SAFER, SMARTER AND AGILE

Our deep knowledge of the biomass process has helped us to design a solution that is suitable for most biomass handling needs, the CXT® Biomass – a fully automated, versatile, and reliable crane with a compact and robust design.

CXT® Biomass is packed with valuable features. A hoisting inverter with Extended Speed Range (ESR) provides smooth and fast operation and reduced cycle times. TRUCONNECT® Remote Monitoring and Reporting eases your maintenance stress with real usage information. Smart Features such as Sway control and Slack rope prevention increase the productivity and safety of your process.


Compared to a loader conveyor-based solution, CXT® Biomass frees up floor space, reduces noise, dust and fuel emissions, and increases the fuel storage capacity of your plant. It allows you to reduce your maintenance costs and make your process more efficient.

CXT® BIOMASS CRANE BENEFITS

- **More efficient operations with full automation**
- **Increased safety with Smart Features**
- **Less noise and emissions, more space for your process**
- **TRUCONNECT® Remote Monitoring and Reporting enables real usage information**



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





FULLY AUTOMATIC MOVEMENTS

CXT® BIOMASS CRANE is a fully automated, completely operator-free system. The crane takes care of the fuel material management all by itself.

AUTOMATIC CYCLES
The receiving cycle is used for moving biomass from the dumping area to the storage area. Trucks usually unload during standard working time. 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. This mission is working 7 days a week with the highest priority. The pickup area can be the storage bunker or the dumping area.

LOAD CONTROL WITH SMART FEATURES

SLACK ROPE PREVENTION prevents the grab from tilting and hoist ropes from slacking. The feature helps you to avoid the grab from falling out of control and stops the lowering of the grab when digging into the material.

SWAY CONTROL allows higher speeds and faster acceleration and gains time by stabilizing the grab. With Sway Control, you can work closer to the pit walls with increased safety.

WE MAKE SURE THAT THE PROCESS CONTINUES

Service, done properly, is not an expense. It is a business investment that provides a return. With almost 420,000 pieces of equipment under maintenance contracts, and more than 50 years behind us, our experience sets us apart.

SPECIALIZED MAINTENANCE AND MODERNIZATION SERVICES

Through our global service network, we offer specialized maintenance and modernization services for all types of industrial cranes. These services range from mandatory inspections to preventive or full-service maintenance and operations partnerships. They can be applied to a single piece of equipment or across your entire operation, boosting the productivity and safety of your industrial processes.

REMOTE MONITORING

In order to ensure the current and future availability of your cranes, TRUCONNECT® Remote Monitoring and Reporting provides you with actual usage data about your CXT® and SMARTON® cranes. With this data, you can improve safety, optimize maintenance, and plan for the future modernization of your equipment.

ADVANCED DIAGNOSTICS

In addition to inspections and preventive maintenance programs, we offer you advanced diagnostics services, such as the Crane Reliability Survey, an engineering assessment of the current condition, and future maintenance needs of your cranes; RailQ runway assessment as well as RopeQ wire rope analysis. These analyses provide you with valuable information that you can use as a guide when planning future actions.





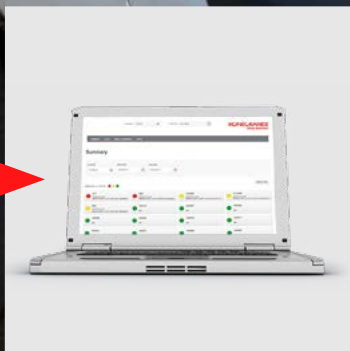
TRUCONNECT® REMOTE MONITORING AND REPORTING



Crane Condition Monitoring



Centralized Data Handling



Safety, Productivity and Service Life Reporting & Alerts

SCALDIS IN BEINHEIM, FRANCE

FULLY AUTOMATIC, FULLY RELIABLE

Scaldis is an experienced provider in the field of biomass handling. Scaldis' client in Beinheim wanted to diversify its steam production that is traditionally based on gas, and it required a new biomass boiler. Scaldis contacted Konecranes to design a solution for the boiler's feeding cycle together.

THE CHALLENGE

The crane needed to fulfill a multitude of important requirements. It needed to have sufficient capacity to provide the boiler's consumption flow and to fit to the building within the constraints of the 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.

THE SOLUTION

The CXT's compact design was a perfect fit for the building, and its lifting capacity answered to Beinheim's needs. Scaldis and Konecranes customized the speed range of the crane together. The majority of the technical solutions used in the crane were proven to increase reliability.

THE RESULT

The boiler in Beinheim started on its target date, and the end client is completely satisfied with the solution Scaldis and Konecranes came up with. CXT® is a major part of the solution – it feeds the plant daily in the expected volume, and thanks to the fully automated crane, there are no interruptions in the process.



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

Mr. Fabien Gautier

Head of the Bioenergy department at Scaldis



NEW HEAT IN KAUNAS, LITHUANIA

ASSURING A CONTINUOUS FLOW OF FUEL

New Heat, a recognized EPC provider of boiler houses and combined heat and power (CHP) plants, constructed, for Lorizon Energy, a new biomass power plant located 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.

THE CHALLENGE

The biomass power plant is designed to be operated 24/7 by only one person. This sets high demands on the automation level, safety, and usability. The biomass hall has three tipping bunkers, three storage areas, and a double hopper due to different fuel types. Environmental conditions, like dust and humidity, set special requirements for the protection of the crane equipment.

THE SOLUTION

The end customer required that a fully automated crane was used in the biomass hall instead of a front loader and conveyers. Cycle times were calculated to make sure that the duty class M7 (FEM 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 Smart Features like Sway Control and Slack Rope Prevention.

THE RESULT

The crane was delivered and erected on time. The crane is equipped with the TRUCONNECT® remote service system, which enables customer and Konecranes Service to monitor the status and performance. The crane handles the expected volume of biomass daily, and the automation ensures that there is always enough fuel to burn. To make sure that the process continues with minimal disruptions, the customer has made a service contract with Konecranes.



“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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SERVICE



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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 12,000 employees at more than 600 locations in almost 50 countries we have the resources, technology and determination to deliver on the promise of Lifting Businesses™.

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www.konecranes.com