



**KRANBAU
KÖTHEN**

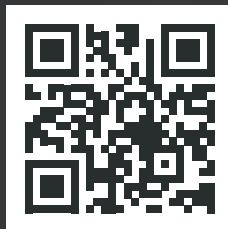
clever move & lift

Range of cranes and services



**MADE
IN GERMANY**





www.kranbau.de/en

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Kranbau Koethen - A company with a rich history from Central Germany

Kranbau Koethen GmbH is a medium-sized company that specialises in special-purpose and process cranes. We have been manufacturing modern, customised crane systems as EOT, semi-gantry or full-gantry cranes at our Koethen site in Saxony-Anhalt since we were founded in 1933.

We work as partners and in close cooperation with our customers thanks to our excellent consultation services and focus on solutions. By working with Kranbau Koethen, you are not only putting your trust in a skilled partner with international experience, you also receive all services (from planning, construction, manufacturing and assembly to servicing) from a single source.



Heavy-duty process cranes - crane systems for reliable, continuous operation

Process cranes from Kranbau Koethen are hoisting machines that are tailored to the customer's specific requirements. EOT cranes manufactured primarily for steel producing or steel processing companies (smelters and rolling mills) are exposed to high loads in production. Whether in a steelworks, domestic port or large factory hall – essentially machines that are used 24 hours a day and must never fail – they are fully integrated into the company's production process.

Our well-defined quality management structure and careful design of the components ensure excellent crane availability as well as safety and cost-effectiveness – and it is not just our customers from the steel production and handling industries that reap the rewards.

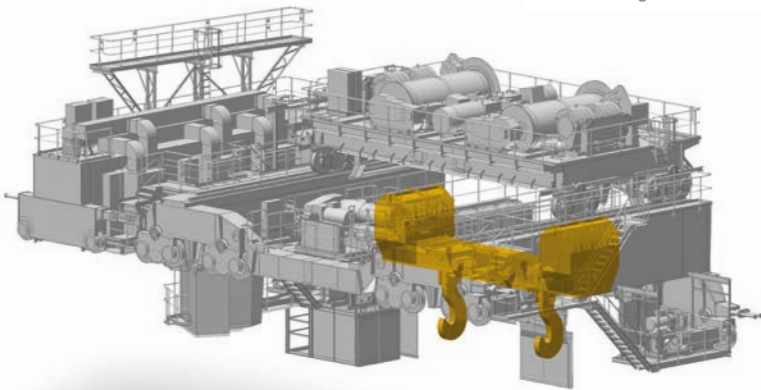
Slab handling crane 52/16t x 28,2m



Ladle Transport Crane 390/60t x 40m



Ladle handling crane 360-50t x 12,075m



Charging crane 450-150t x 24m



Our portfolio includes

- Ladle cranes
- Charging cranes
- Ladle transport cranes
- Slab transport / turning cranes
- Gripper cranes
- Forging cranes
- ...



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www.kranbau.de/en



Process cranes - special-purpose cranes and machinery as well as automatic cranes

Every technology demands special machinery and handling equipment. We provide a wealth of experience as well as excellent engineers and play a valuable role in the success of state-of-the-art technological processes. All crane systems that we deliver are customised to the customer's specific requirements.

Kranbau Koethen manufactures cranes for a wide range of applications: the cranes designed for use in hot or cold operations achieve an outstanding permanent availability in the top power range and impress with their quality and high level of safety. The cranes can be equipped for automatic operation and with warehouse management systems. The benefits of crane automation are clear to see: increased client productivity, reduced damage, less wear, lower costs, improved quality standards thanks to automated processes, time savings and reduced space requirements.



Automated coil crane 30t x 42m



Magnetic traverse crane 15/5t x 28m



Automatic crane 32t x 20m



Special-purpose crane



Automatic crane 50/28t x 32,8m

Our portfolio includes

- Coil transport cranes
- Gripper cranes
- Magnetic traverse cranes
- Special-purpose cranes
- Automatic cranes
- Automated coil storage
- ...



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Our portfolio includes

- Wide span gantry cranes in dual or single rail design
- Gantry cranes with wide gantries
- Gantry cranes with multiple travelling cranes
- Gantry cranes for heavy load areas
- Fully or semi-automated gantry cranes
- ...

Gantry cranes - The right solution for every application

Kranbau Koethen offers fully or semi-automated gantry cranes in solid girder or lattice versions. Gantry cranes in lattice girder designs (as a single or dual rail version) can be realised from low load-carrying capacities all the way up to heavy-duty cranes. The working speeds are adjusted to match the necessary transport and handling performance. To determine which crane is best for you, we analyse your requirements and then work together with you to develop the right gantry crane to suit your application.

When developing individual solutions and approaches, we draw on our decades of experience in building special-purpose cranes.

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Gantry crane 12,5t x 40,0m



Gantry crane 128(64+64)t x 38,6m

Are your crane systems fit for the future?

Modernisation

The modernisation of mechanical and electrical components on the existing crane can be a good alternative to purchasing a new crane. When combined with new crane components, the service life can be extended and the productivity of the crane system is often increased.



Ask us:

Before any of this can happen, though, a reliability study must be carried out to determine the current condition of the crane. This check includes a technical assessment regarding further operation and/or modification. It also provides information on wear and tear, corrosion, aging and fatigue for the crane system. This check produces a theoretical estimate of the remaining service life and a recommendation (in the form of a modernisation plan) for the next steps.

Service specialist for all makes

Our comprehensive service offer not only extends to working on the crane and conveying systems of renowned manufacturers, but also to older systems - even if the original builder has long since disappeared from the market.

Services for cranes and hoisting machines

We are always on hand to provide support to our customers with an extensive range of services for standard and special-purpose cranes. We carry out professional inspection and maintenance work on all crane components as well as cleaning and overhauls through to replacement. Many of our cranes work continuously around the clock in the toughest of environmental conditions – and our reliable services help keep your operational processes up and running.

We are right at home in steelworks, in the timber and concrete industry as well as in all domestic ports and seaports and cooperate closely with partner companies. Our core competencies include professional advice, preventive maintenance and servicing of cranes and loading bridges.

Our services include

- Crane service and consulting
- Inspections and maintenance
- Repairs / installation / modernisation
- Engineering services
- Training
- ...



Repair of components

Large-scale modernization

Example: ArcelorMittal Eisenhuettenstadt

In contrast to mechanical modernisations, electrical modernisations are generally needed every 10-15 years, particularly in the area of control technology. This is due to the speed at which electrical drive and control components develop. These parts tend to be outdated by this point, meaning that it will be difficult to procure the necessary spare parts. This was exactly what happened with the charging crane at the ArcelorMittal Eisenhuettenstadt converter steel mill. Originally constructed in 1999, it was time to give the crane a new lease of life in the form of an electrical retrofit. Kranbau Koethen GmbH successfully took on this demanding renovation with a very tight turnaround time in 2021. With its in-house expertise in electrotechnology, the company carried out a full refurbishment of the entire electrical system including the drives.

New electric trailer bridge on the auxiliary crane runway
©Photo: ArcelorMittal Eisenhuettenstadt GmbH



Erected auxiliary crane runway in a demountable design
©Photo: ArcelorMittal Eisenhuettenstadt GmbH



Facts, figures and dates

- Description: Renovation of a charging crane from 1999
- Parameters: 350-65 (80)/32tx 26.5m
- Client: ArcelorMittal Eisenhuettenstadt GmbH
- Country: Germany
- Implementation period: 2020-2021
- Specifications: Electrical renovation with attachment of an additional E-girder containing the switch unit for controlling the crane; with a new cab, cab shaft, current collector platform, cable drag chains, cables, sensors and load pins, as well as some new drive motors and air-conditioning technology

Components and load-carrying equipment

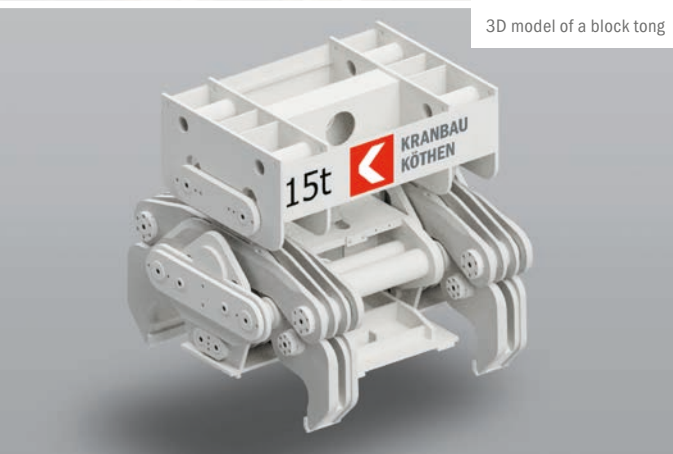
Components are manufactured at our Koethen site to meet specific customer requirements.

Our portfolio includes

- Travelling cranes in all special-purpose designs
- Complete crane bridges
- Lamelled Hook and universal joints
- Hoisting drums for all common standards
- Clamps in various special-purpose designs
- Load-carrying equipment
 - Ladle traverses with weighing technology
 - Magnetic traverses
 - Slab turning traverses (patented)
 - Hook blocks, normal / rope-tensioned / with weighing technology / rotating
 - Safety catch sensor system for retrofitting



Rivets of lamellar hooks



3D model of a block tong



Rope drums in different sizes

New to the range:

Rental service

As a company that rents out working equipment with a focus on cross-beams, we offer professional solutions designed to support you in your day-to-day project work and in the execution of your major projects.

Excerpt from the rental programme:

- Cross-beams with a load capacity of 20, 55, 100, 150 and 200 metric tonnes (produced in house, some models also suitable for use as a spreader system)
- Test weights in different tonnages
- Crane scales with load capacity of up to 100 metric tonnes
- Rotating devices with operator
- Supporting traverses on request

If required:

We also offer mobile boring mills as part of our service programme. Just get in touch!



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Perforated traverse 150t



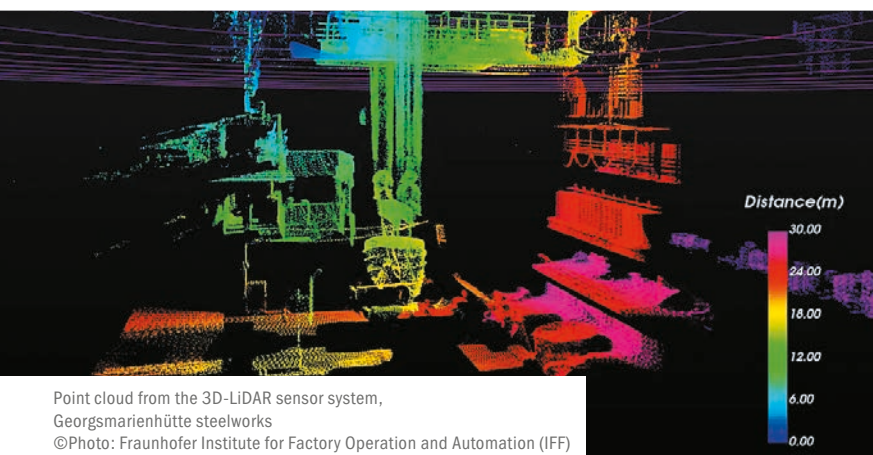
New to the range:

Pro-Kran-Assist

A system solution for process cranes to determine the safety in the hook mouth

In close collaboration with the Fraunhofer Institute IFF Magdeburg, Kranbau Koethen GmbH has developed **Pro-Kran-Assist** – an assistance system that enables the crane driver to safely pick up the load in real time, and is of particularly benefit in areas where visibility is poor.

Pro-Kran-Assist is a laser-based system that comprehensively monitors the working area of a ladle crane using special 3D-LiDAR sensors. In particular, the system analyses the load lifting system which is comprised of the traverse, the crane hook and casting ladle concerning the motion dynamics in real time.



Point cloud from the 3D-LiDAR sensor system,
Georgsmarienhütte steelworks
©Photo: Fraunhofer Institute for Factory Operation and Automation (IFF)

In partnership with the
Fraunhofer Institute for Factory
Operation and Automation (IFF)

 **Fraunhofer**
IFF

To make this possible, 4 LiDAR cameras are installed at suitable points, and their signals are processed by the **Pro-Kran-Assist** computer in the electrical control room. **Pro-Kran-Assist** records a high-precision, three-dimensional picture of the surrounding space and depicts it in a 3D point cloud. Rule-based algorithms assess the 3D point cloud and enable a safe interpretation of the specific reloading operations of a process crane when it comes to picking up and putting down the load. The results are depicted in a VR model in real time, and shown to the crane driver on a monitor.

The system works absolutely autonomously and does not interfere with the control system of the crane. The necessary hardware is individually pre-assembled and can be quickly installed.

Pro-Kran-Assist has been tested for several months under harsh ambient conditions in a casting bay and has performed brilliantly. Neither flames and heat, nor smoke, dust or vibrations affected its functioning and reliability.

Your benefits

- Tested and proven under real ambient conditions in a casting bay
- Safe interpretation of several local positions in 3D-coordinates
- Real-time depiction of reloading operations
- The system operates entirely autonomously
- **Pro-Kran-Assist** is resistant to:
 - High vibration / shock stress
 - High temperatures
 - Considerable deposits of dust, pig iron spatters, pieces of slag etc.



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Display of the point cloud in combination with image data



Electrical equipment for crane systems, e.g.:

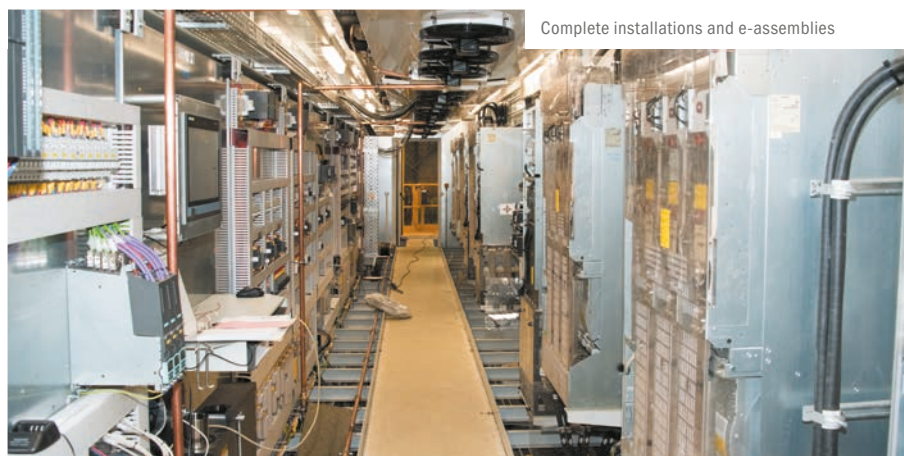
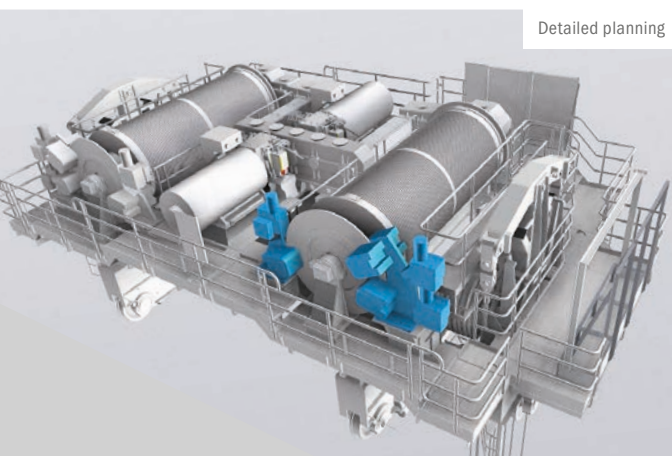
- Controls for crane systems
- Remote controls
- Collision protection systems
- Synchronisation controls
- Anti-sway systems
- Gripper controls
- Positioning controls
- Automatic systems

Control engineering and crane automation

We develop tailored and reliable crane concepts for crane controls and drives in close cooperation with our customers. Together we are facing the technological challenges to manufacture even more complex systems for production, warehousing and order picking. Therefore, we are aligning our automation solutions to increase productivity and efficiency based on legal requirements and standards.

We offer our customers know-how in the following areas

- Drive technology – e.g. Feed and energy recovery unit to supply connected motor modules
- Control technology – e.g. Communication and signal processing via modern bus systems
- Electrical equipment for crane systems
- Services – e.g. SPS programming



Solution
Partner

Automation
Drives

SIEMENS

Extract from our references

Kranbezeichnung	Spezifikation	Kunde	Jahr
Charging Crane	110/110t x 27,5m	Salzgitter AG	2023
Charging Crane	265-60/10t x 24m	VOEST-ALPINE Stahl Linz GmbH	2022
EOT Crane	400-80t x 22m	Hüttenwerke Krupp Mannesmann GmbH	2022
Scrap Crane	65+65+65t x 22m	Hüttenwerke Krupp Mannesmann GmbH	2022
Charging Crane	130/20-10t x 20,365m	LSW Lech Stahlwerke GmbH	2022
Charging Crane	110t/40-12,5t x 23m	BENTELER Steel/Tube GmbH	2021
Charging Crane	265-60/10t x 24m	VOEST-ALPINE Stahl Linz GmbH	2021
Ladle Transport Crane	390/60t x 40m	thyssenkrupp Steel Europe AG	2021
Charging Crane	125(150)-40t x 22m	ESF Elbe-Stahlwerke Feralpi GmbH	2021
Charging Crane	130(160)/50-20t x 25m	voestalpine BÖHLER Edelstahl	2020
Ladle Transport Crane	130/50-10t x 25,25m	voestalpine BÖHLER Edelstahl	2020
Ladle Transport Crane	130/50-10t x 25,25m	voestalpine BÖHLER Edelstahl	2020
Ladle Crane	320-110/40t x 20m	Tara Steel Trading GmbH	2020
Ladle Transport Crane	120/40t x 27,5m	Salzgitter AG	2020
Charging Crane	270(300)/70-30t x 20m	Salzgitter AG	2020



Graphic: Freepik.com

More information at: www.kranbau.de/en or visit our profile on LinkedIn, YouTube or Instagram.



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