ROBOTIC SYSTEMS

Comprehensive automation solutions developed by specialists for the refractory industry!

KÖHL

SOLUTIONS WITH POWER

Special tasks require special systems.
KÖHL automation systems optimize the production process!

The refractory industry places specific demands on the automation of the production process. In demand are economically and technically optimized concepts that dramatically enhance productivity, product quality and occupational safety.

KÖHL, the automation specialist for the refractory industry, designs and realizes intelligently networked handling and automation systems. Based on decades of experience and special know-how, KÖHL is the leading and competent partner when it comes to your present and future production tasks. Whether this concerns part of a solution that is installed „in-line", or a „Turn-Key"-System: the KÖHL concepts are modular in structure, can be combined flexibly, and are expandable.

Highly developed industrial robots, gripper systems, periphery devices and innovative controls round off the KÖHL service portfolio.
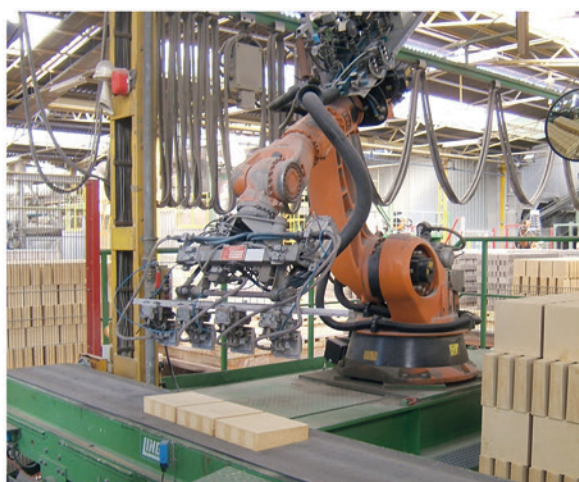

KÖHL AUTOMATION PORTFOLIO

- Development and realization of custom-designed handling and automation systems
- Highly developed industrial robots
- Intelligent gripper systems
- Custom-designed periphery devices
- Ergonomic Software-Tools
- Innovative controls

For your benefits:
Reduction in production costs, increase in production rates, and optimization of product quality.

The KÖHL focus of the handling and automation systems for the refractory industry lies on completely automated systems for kiln car loading and removal of the formed products from the press. Industrial robots from the leading manufacturers, such as e.g. ABB, FANUC and KUKA or, if needed, also portals will be used, depending on the requirement and customer wishes.

Automated systems for loading.

The KÖHL components are combined into existing or planned production concepts to form a process optimized system. The loading of different pallet sizes, the kiln car or the Temper-rack car is done fully automatic. The gripper systems designed specifically for the requirements of the refractory industry can be configured variably for all common brick formats. A special servo clamp gripper is used in specific cases.

The custom-designed KÖHL automation guarantees a smooth and cost-effective production process.
The user-friendly operation via HMI-control with touch-screen completes the overall system.

Automated systems for unloading and palletizing.

After the furnace treatment, the fully-automatic systems for unloading are integrated into the production logistics. The KÖHL conveyor systems are used here which are linked together or networked with the palletizing system. These systems may be customized in a variety of ways, just like the loading systems, and can be integrated into existing production structures without any problems.

Different additional systems, such as e.g. quality inspection or marking systems can be adapted in connection with the conveyor logistics to round out the production. Intermediate layer handling and final packaging machines round out the complete solution from KÖHL.

Periphery solutions for the refractory industry.
Intelligently networked conveyor and transport systems.

The optimization of information and material flows, in addition to the automation of the production processes are among the core competencies of KÖHL. The range of services includes the complete conveyor logistics to streamline production automation in the refractory industry. These include roller conveyor, belt or synchronous belt systems, up to kiln car shifting devices. The conveyor systems are equipped, among others, with pallet magazine technology, aligning/fixing stations, intermediate layer racks, hydraulic kiln car locking mechanisms, and kiln car contour identification.

The operation of the system is programmed by means of a control panel with touch screen. After a short instruction the operator is able to control and manage the system functions with the simple graphic-supported user interface, and to create new product variations.
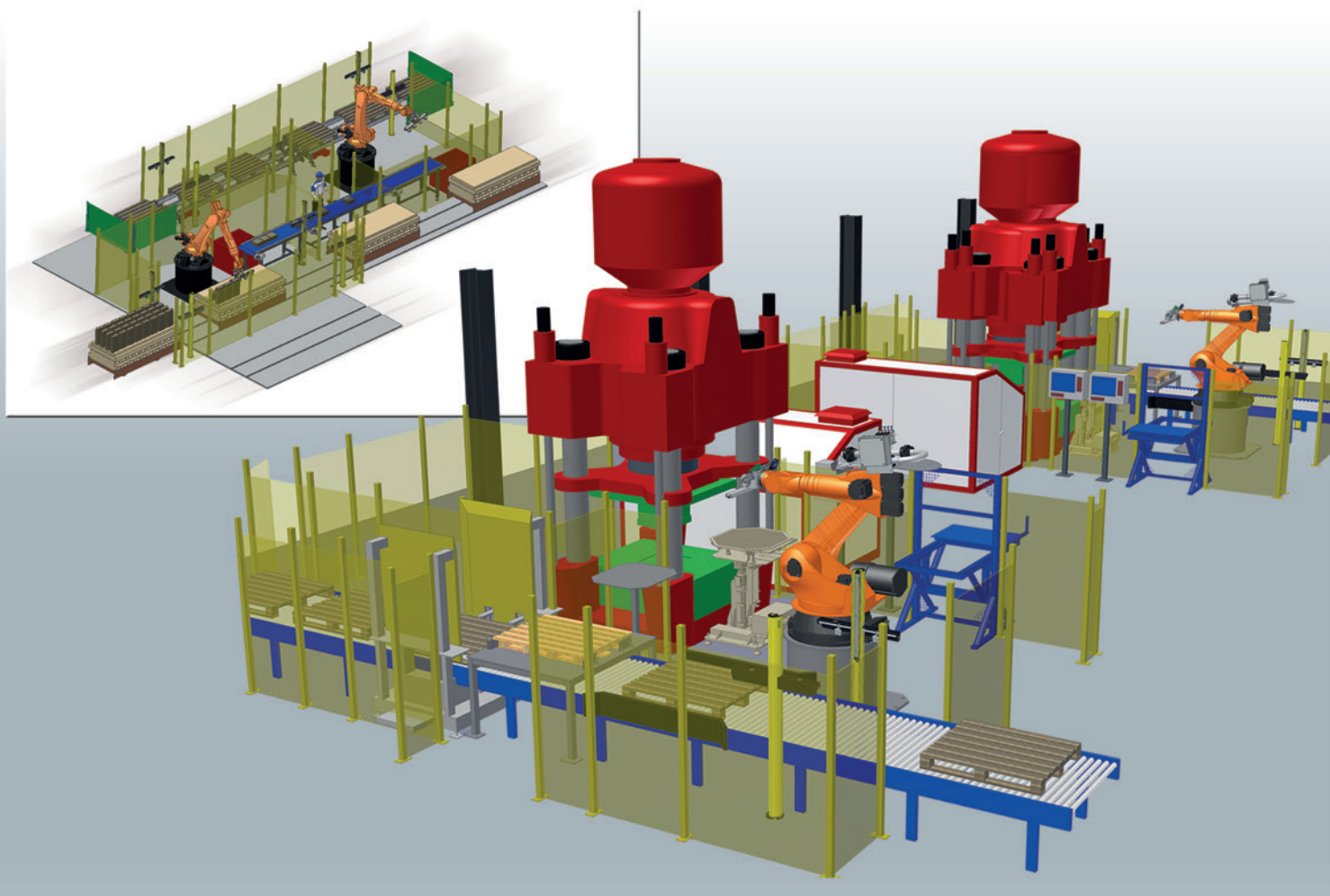
KÖHL SECURITY TECHNOLOGY
The KÖHL safety fence system offers multiple possibilities to secure the systems and associated periphery according to safety-related standards.
Safety barriers with muting option are often used to ensure the in and out movement of the product carriers without system interruption.

KÖHL PERIPHERY SYSTEMS

- ▶ Brushing unit in the discharge section
- ▶ Inspection table for human visual inspection (optionally with weighing device)
- ▶ Color marker and color signer
- ▶ Place spacers
- ▶ Labeling device
- ▶ Measuring units (Position identification, weight measurement and size determination)
- ▶ BDE-connection
- ▶ Packaging systems

Productivity can be controlled!

With its handling and automation systems, KÖHL pays special attention to the projection with simulation tools, to the development of new task-related gripper systems, and to innovative automation controls.
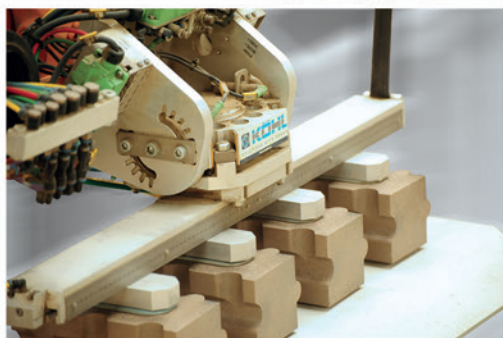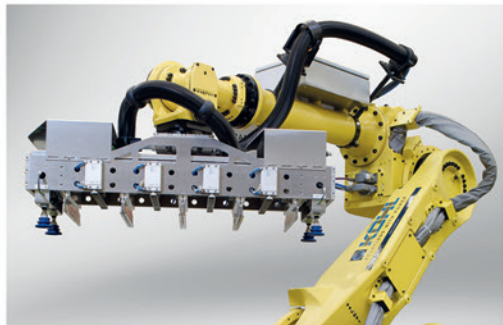
PROCESS SAFETY THROUGH SIMULATION
The development of the automation is effected reliably with every minute detail using the most modern simulation programs. All possible influencing factors are thus taken into consideration and tested before the hardware components are installed.

SPECIFIC GRIPPER SYSTEMS
KÖHL uses industrial robots with freely programmable control and flexible gripper systems. The design of new grippers that are specifically adapted to the task is a focal point of the KÖHL automation concept.

CONTROLS
The KÖHL control technology is based on a modularly designed hardware and an open software architecture so that individual requirements can be programmed precisely as needed. Expansion options make it possible to easily adapt controls to changing production requirements or entirely new production tasks. This guarantees flexibility and the production continues to remain competitive.

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