



ROBOTIC SYSTEMS

Customized industrial automation

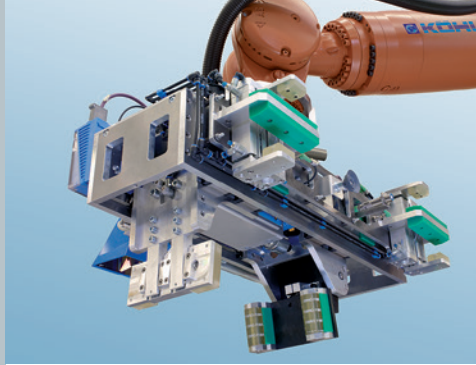
ALL FROM A SINGLE SOURCE

The components for your automation



INDUSTRIAL ROBOTS

Manufacturer-independent selection of industrial robots (e.g. KUKA, FANUC, ABB) depending on the system concept.



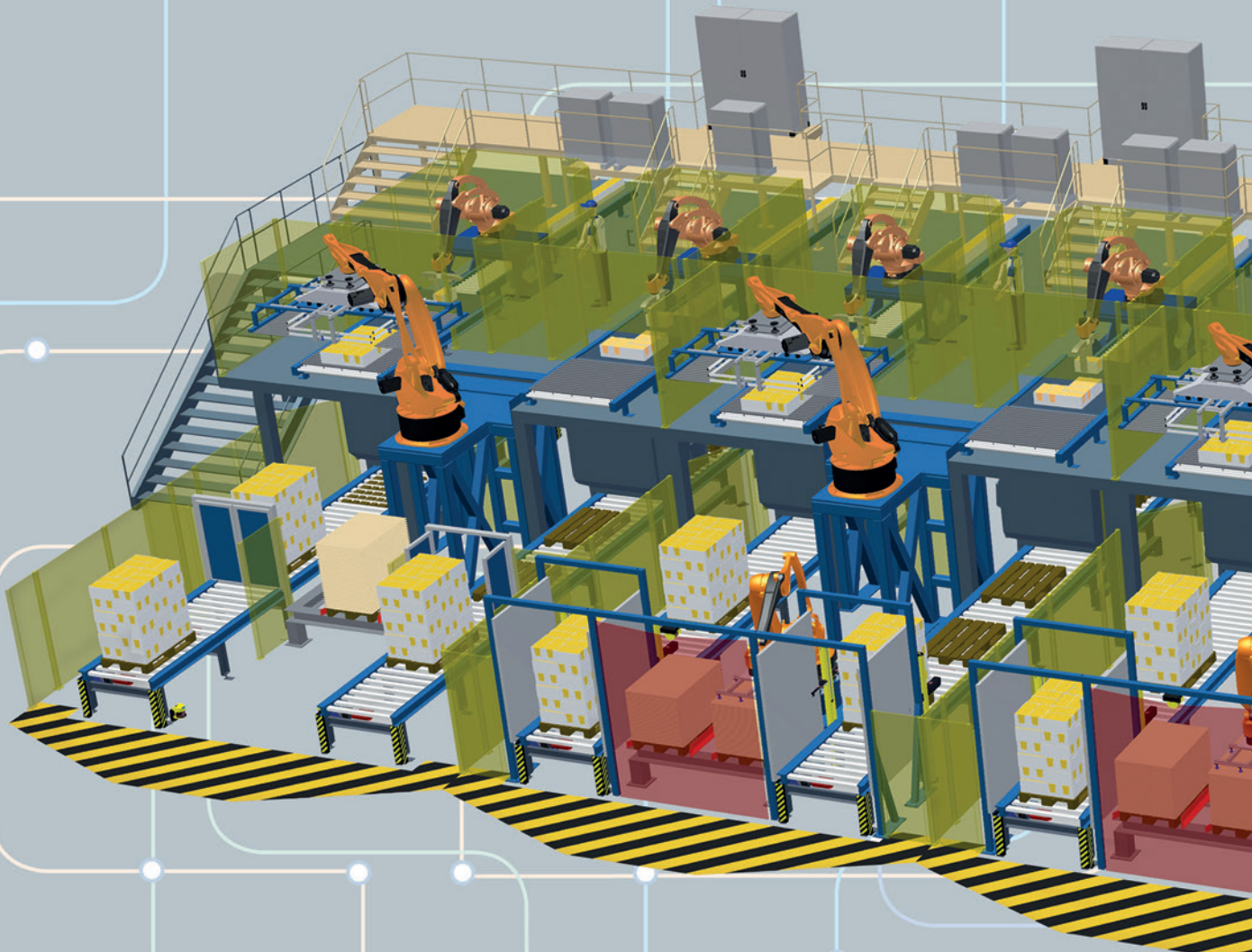
SPECIAL GRIPPER SYSTEMS

In-house development of robot applications with task-specific gripper systems.



CONTROL & VISUALIZATION

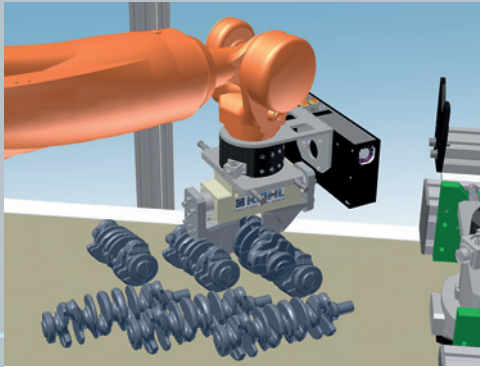
Conception and realization of user-friendly control & visualization for the complete system.





PLANT SIMULATION

Virtual testing and optimization of the plant from the quotation phase to commissioning.



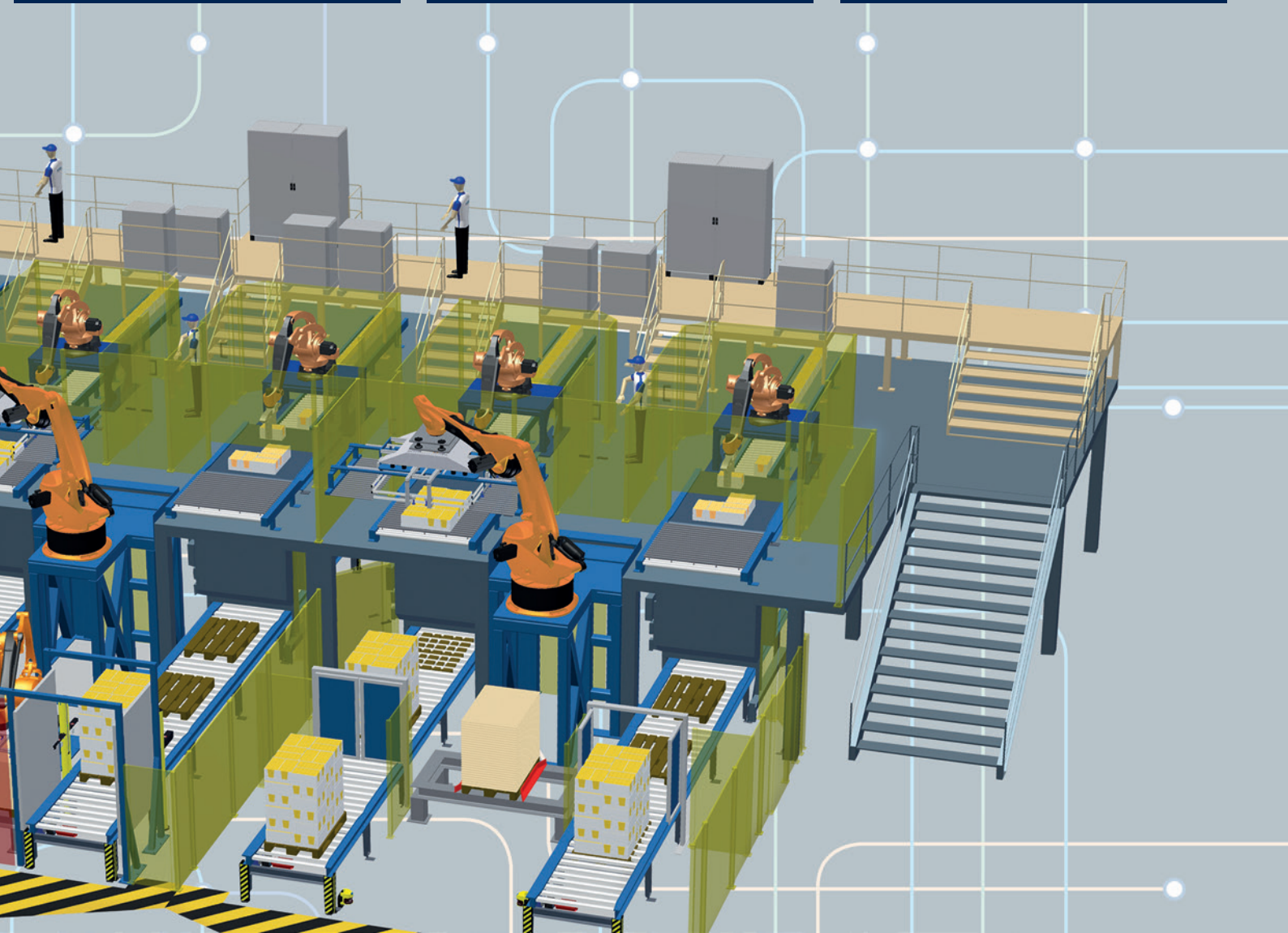
VISION SYSTEMS

Integration of modern recognition systems such as e.g. 3D laser camera or sensors.



CONVEYOR & AUTOMATION TECHNOLOGY

In-house conveyor & automation technology completes our plants.





SPECIALIST FOR TURNKEY-SOLUTIONS

From the stand-alone robot cell to the highly complex automation systems

KÖHL Robotic Systems specialized in intelligent, robot-based industrial automation that have to meet industry-specific requirements or customer-specific tasks.

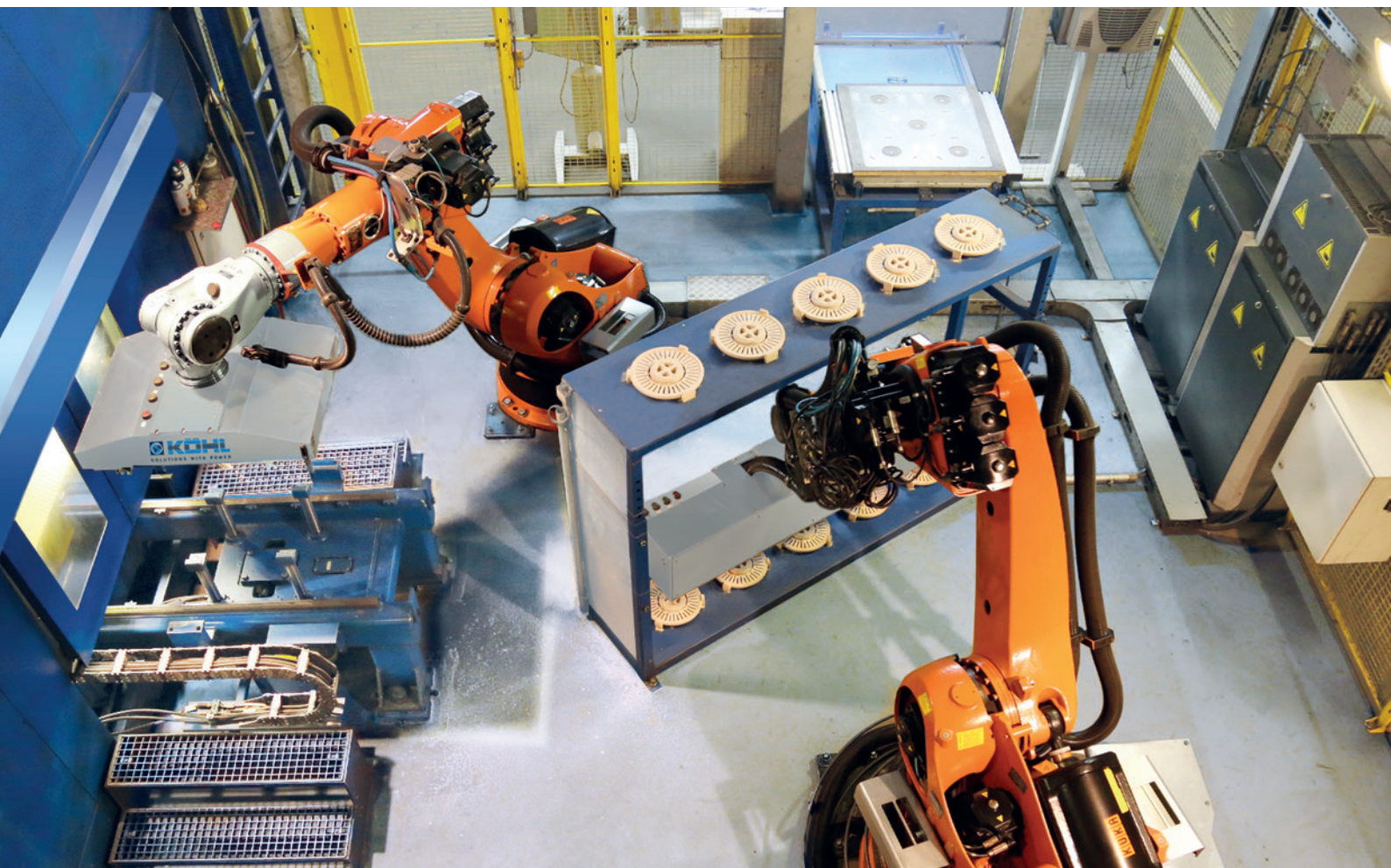
More than 45 years of experience and the know-how of 200 employees in the areas of consulting, planning, engineering, project planning, assembly and after-sales service make us a general contractor which goes beyond the standard automation of the production process for its customers.

Our core competence is the in-house development of robot applications with application-oriented gripper systems, which fulfill a wide variety of handling tasks.

In addition, we convince with needs-based control and visualization, which intelligently networks the system and makes it suitable for the future with regard to Industry 4.0.

The integration of the in-house conveyor and automation technology as well as the embedding of a production control system tailored to the customer are further benefits that speak in favor of the holistic KÖHL plants.

KÖHL Robotic Systems is the competent partner for demanding, complex automation solutions. International customers use our technology to increase the efficiency and productivity of their value chain.



Robot-based automation systems for industries with difficult environmental conditions belong to the specialties of KÖHL Robotic Systems. International customers from the foundry, refractory and steel industries optimize their productivity with our systems.

Our services - Your advantage

- Personal consulting and precise planning of holistic automation systems
- Professionalism from conception through commissioning to technical support
- Development and realization of robot applications with special gripper technology
- 3D plant simulation tests and checks the functionality and cooperability of the system components before commissioning
- User-friendly control and visualization for intelligent interoperability of machine-to-machine or human-robot collaboration
- After-sales service: online help desk, remote diagnosis, maintenance, modernization and instruction of your employees
- In-house, state-of-the-art conveyor and automation technology complete our claim to offer turnkey plants from a single source.



- Palletizing & Depalletizing
- Packaging & Loading
- Pick & Place
- Processing & Assembly
- Handling tasks
- Commissioning
- Track & Trace

ROBOT APPLICATIONS

Special gripper systems are our competence

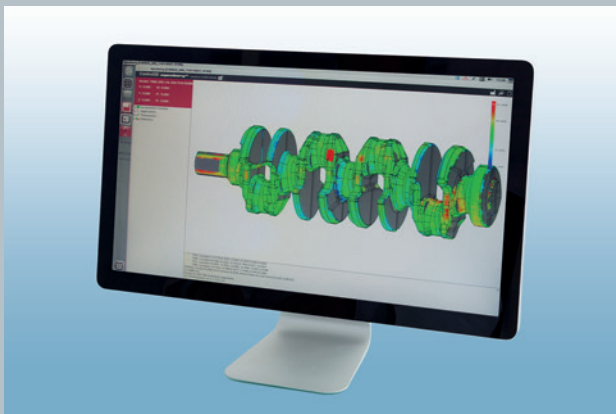
We give the robot its „hand“ tool!

Standardized grippers are not sufficient for many automation applications. It is part of KÖHL's core competence to develop gripper systems that optimally support robot automation for specific sectors or tasks.

High precision and efficiency

Our robot-based automation encompasses all process steps from the front to the end of line.

These include palletizing & depalletizing, assembly & handling, pick & place, processing & packaging.



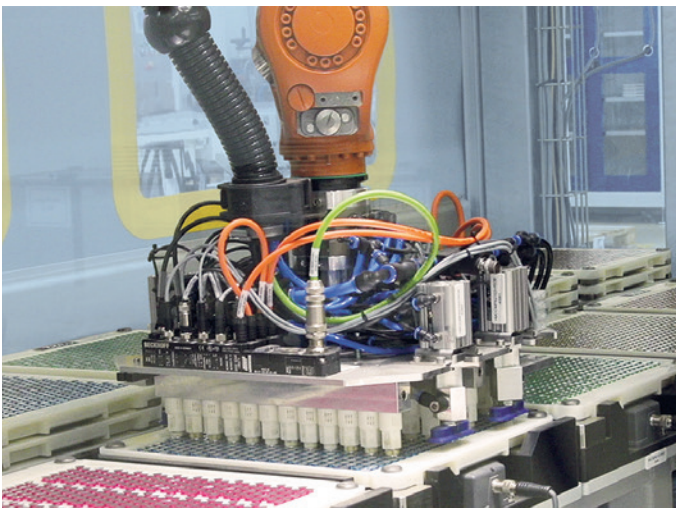
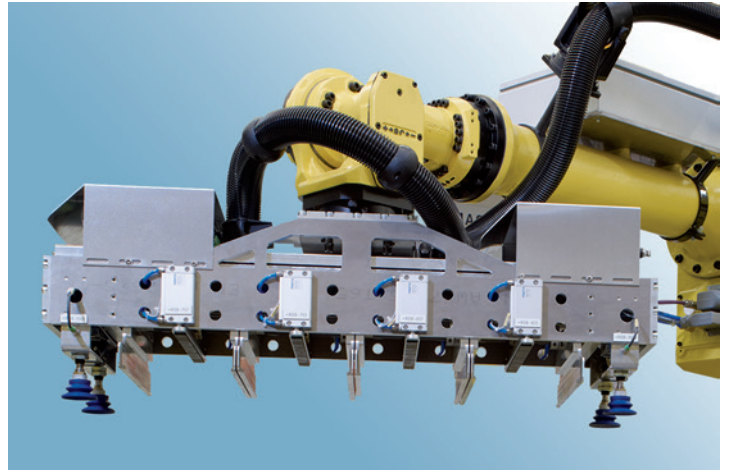
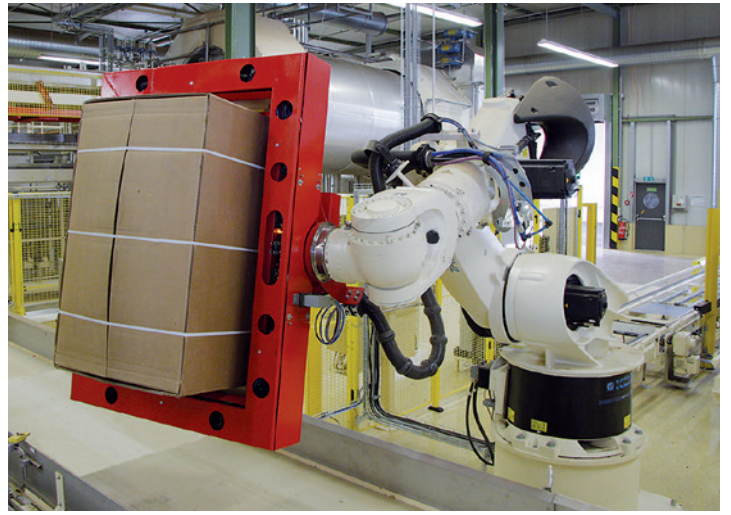
VISION SYSTEMS

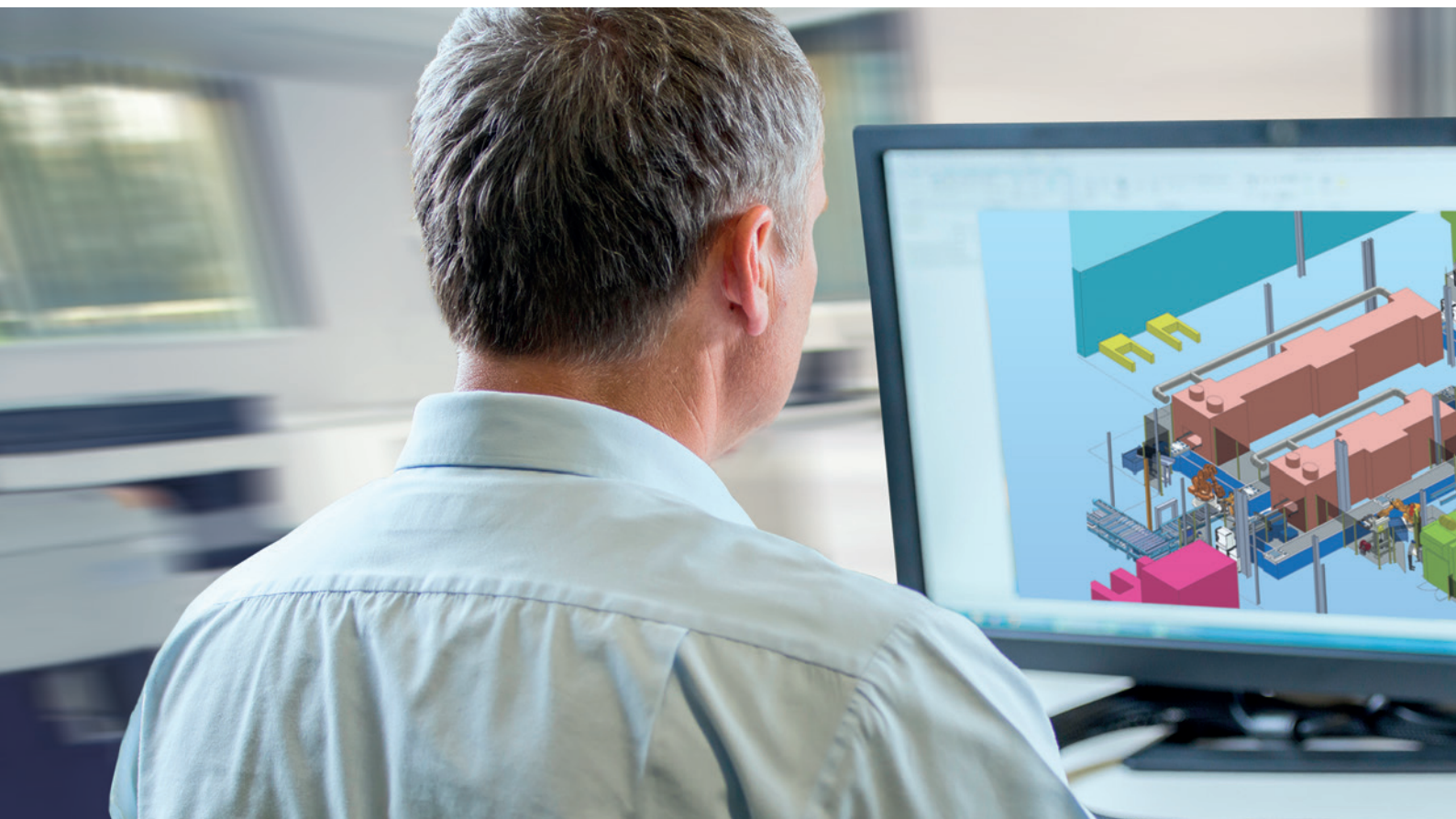
Intelligent recognition of the products

Wherever it is necessary to detect, separate and feed chaotic objects, we use state-of-the-art VISION technology for bin-picking. The recognition of the objects and the measurement of their position takes place via programmable 3D laser cameras or sensors integrated in the robot.

Advantages of the 3D laser camera

- TCP/IP interface for data transmission
- Output of images via internal HTTP & FTP Server
- Direct coordinate transformation on the camera





VIRTUAL PLANT SIMULATION

Effective plant testing and optimization from the quotation phase to commissioning

Function check before commissioning Analyze, check and evaluate in real time

With special 3D simulations programs we analyze our complete systems already during the quotation phase. The interaction between the robots and the production machines is checked, machine movements are evaluated and material flow calculations are carried out.

Among other things, the simulation package includes collision detection, accessibility checks, the visualization of robot movements, as well as the calculation of cycle times and validation.

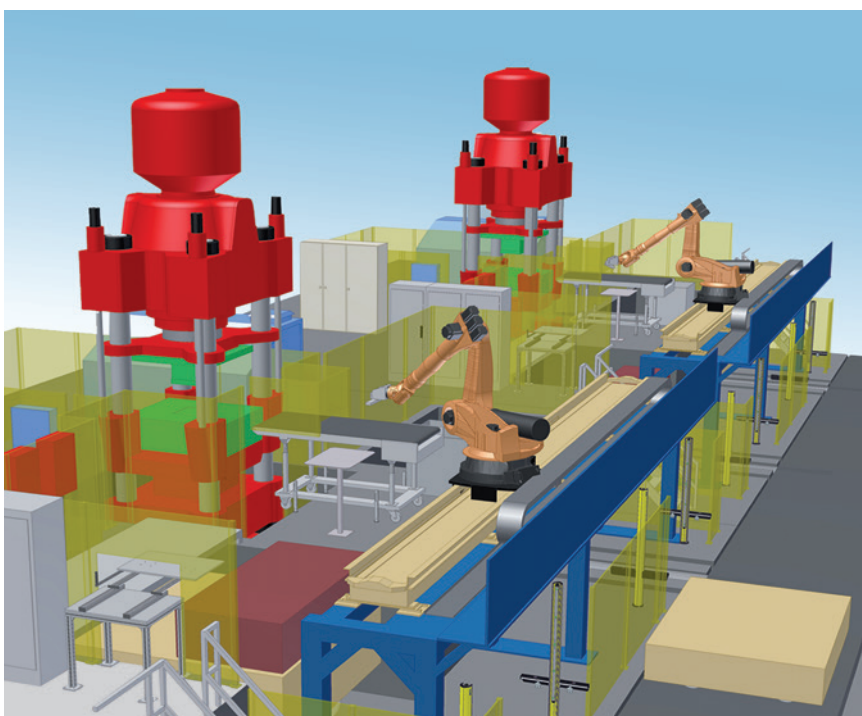
By means of the intelligent robot control, the robots can be programmed directly, without having to intervene in the process flow.

The advantage of the virtual test environment is that our programmers can test highly complex plant systems.

The communication between master computer, conveyor technology and machining centers is analyzed and continuously developed. Improvements and bug fixes can be performed during production without risk of downtime.

Your advantages

- Commissioning is shortened.
- Prevention of erroneous interactions
- Avoid downtime in production
- Optimization of production processes and logistics



The test procedure is performed with simulation tools such as coordinate input, layer settings, vacuum settings and menu monitoring of the grippers.

Designed for smart and easy operation

Designed for smart and easy operation





Operating a mobile robot cell for picking aroma capsules

User-friendly & comfortable control

In our robot-based automation solutions, the robot controller is integrated in the system control so that the complete system is easy to use for the operator. For changes or optimization measures at the programs only few parameter inputs have to be defined; Special robot program knowledge is not necessary.

Software & Programming

KÖHL Robotic Systems offers software solutions which are perfectly matched to the automation concept or can be tailor made to any system and requirement. Extensive software tools such as for setup, programming, position determination, program sequence functions or diagnostics are available.

The robot software is programmed individually according to the task requirements; Each product format receives a specific parameter set. Further parameter sets can then be independently defined by the customer and stored independently of other programs. In addition, there are numerous enhancement options in our portfolio that make it easy to change or upgrade.



Your advantages

- Only one control platform for the complete robot-based automation system
- Clear presentation of functions
- Intuitive and easy to use
- Connection to higher-level process control systems
- Maximum flexibility in adaptations

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Additional information