Comprehensive solutions for complex automation systems.

KÖHL
SOLUTIONS WITH POWER

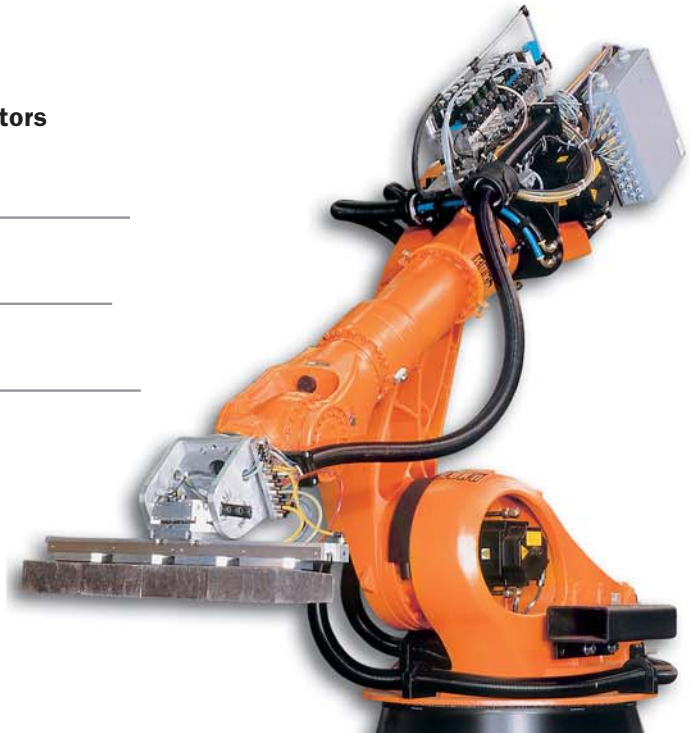
Spezialist in Automated Systems Conception

KÖHL offers comprehensive solutions for complex automation systems - from projection and implementation through to the provision of comprehensive service. With our experience and know-how, especially in areas prone to problematic emissions, we develop product and process-specific application concepts for the widest range of sectors.

Within the KÖHL Group of companies there are synergy effects created, such as those between the manufacture of special machinery for the tobacco and cigarette industry, in-house materials-handling technology and systems technology with highly-developed PLCs and visualisation concepts, making in possible to fulfil our customers' most complex requirements.

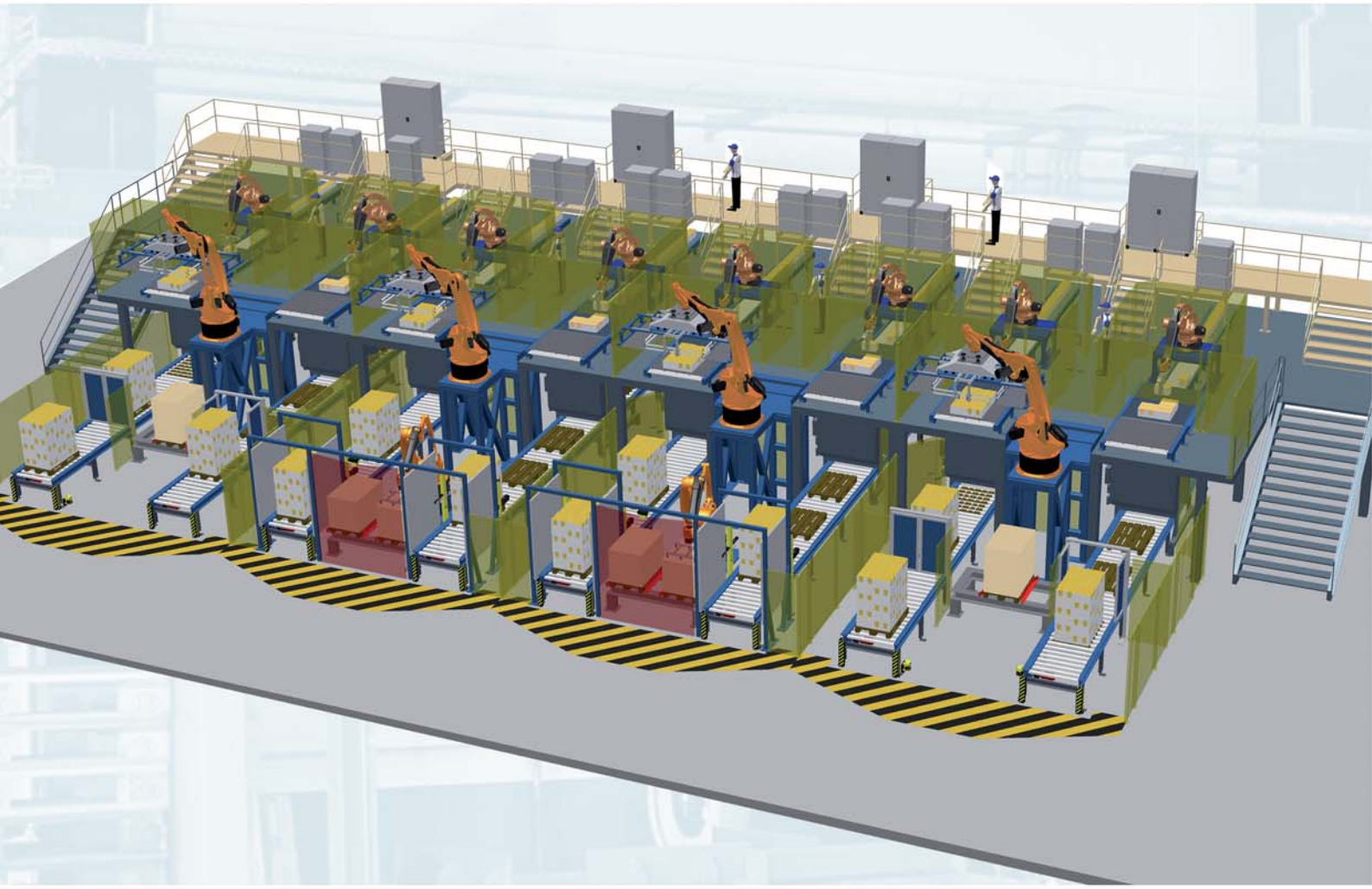
Applications know-how for the widest range of sectors

- Fine and coarse ceramics industry
- Construction materials industry
- Tobacco & cigarettes industry
- Automotive supply industry
- Consumer goods industry



Ever-increasing product differentiation results in ever-shorter production and retooling times, and reduced use of the capacity available. This results in high stock levels tying up large amounts of capital. The situation is further exacerbated where orders are not forthcoming on a regular basis and the requirements in terms of product quality become ever more stringent. Our automation concepts offer flexible solutions for all of these problems.

Projection and planning

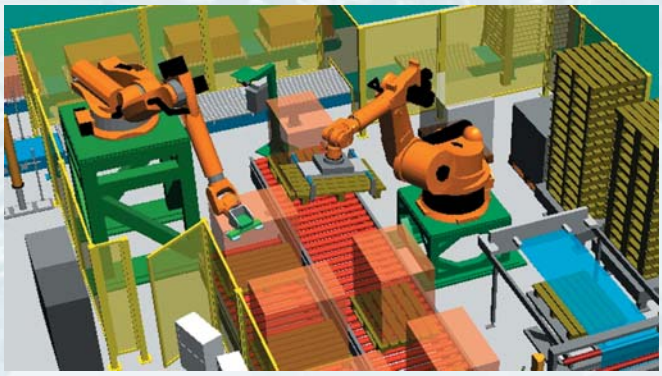
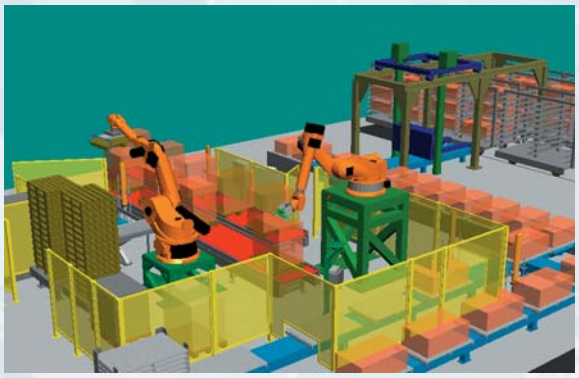
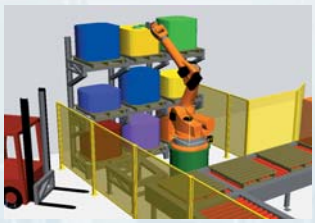
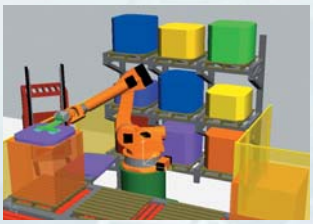


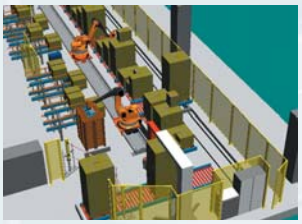
Optimal use of system capacity combined with maximum process security

KÖHL develops logical and reliable automation systems engineered for specific requirement profiles. Concepts are designed to make it possible to react flexibly to changing conditions. To guarantee the highest performance levels in our systems, we make use of the most modern grab systems, individually-tailored peripheral equipment, ergonomic software tools and innovative control tools. This results in optimal use of the available system combined with maximum process security.

For our automation concepts, we prefer industrial robots with multifunctional gripper systems. Their reduced space requirement, minimal maintenance costs and high reliability levels are clear arguments in favour of robotic technology of this kind.

State-of-the-art simulation programs



Pallet filling, emptying and handling tasks

In the industrial context, the requirements on an automation system are determined by individual requirements profiles. Based on the competence in the field of engineering and project planning it is possible to fulfil ever more complex tasks in both technical and commercial terms.
State-of-the-art simulation programs make it possible to carry out the work of system projection reliably and in exact detail. This means that all influencing factors can be taken into account and checked out prior to installation of the hardware components.

Optimal und efficient System-Component-Matching

An automation system designed for economy is the result of system components such as robots, grippers and peripheral equipment being properly matched, and a procedural schedule optimised in terms of time. The objective is to achieve optimal integration taking account of logistical aspects and aiming at an optimal price-performance ratio.

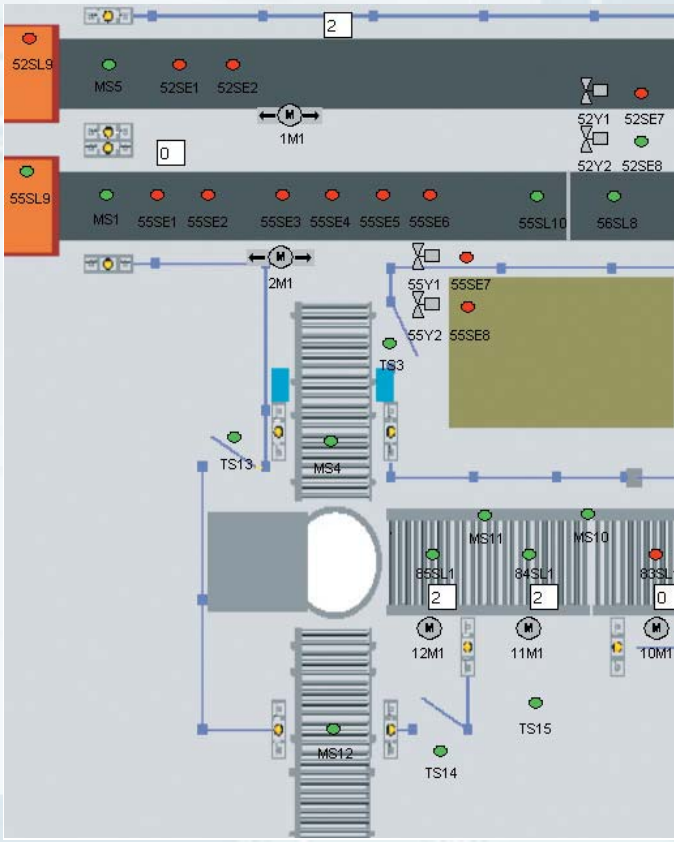
Gripper system for CU: G=650 kg, T=700° C

Peripheral equipment

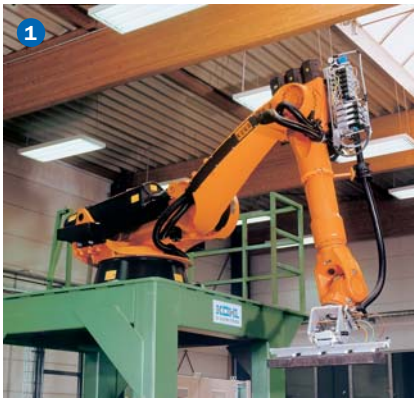
Peripheral equipment such as materials-handling technology, for example, can be produced in-house at KÖHL. This means short adaptation routes and coordination advantages - all to the benefit of our customers.

Example of a comprehensive installed system

Any completely integrated system can only be as flexible as the individual sub-systems of which it is made up. To make it possible to plan for the application of automation components in response to individual applications and in line with the relevant processes, both the production process and the peripheral conditions must be analysed and optimised prior to implementation. The significant factor here is the customer's requirement profile with reference to which all aspects of the system are planned from both the economic and logistical points of view, before being finally realised.



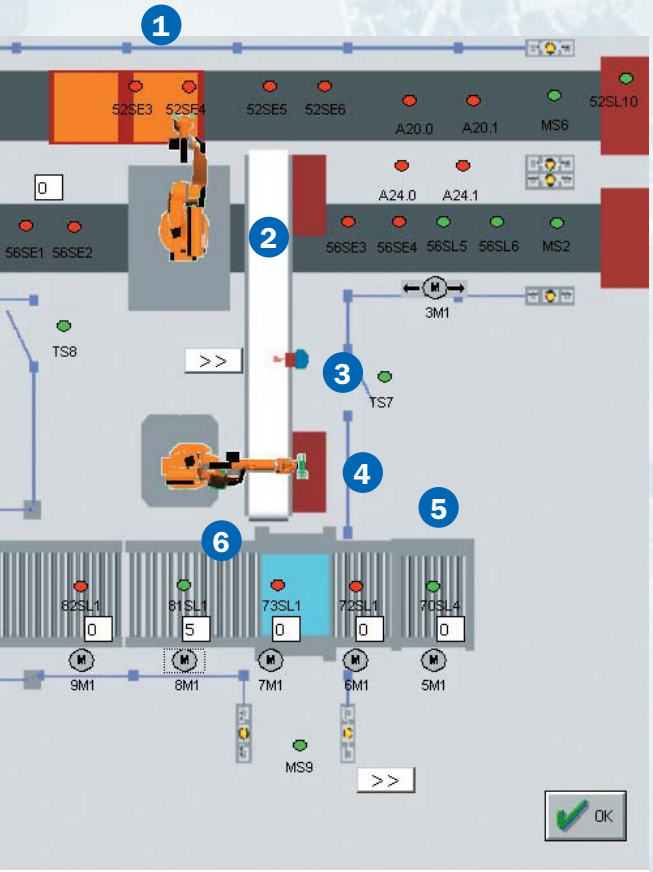
Process flow-chart of complete system. Overview of main initiators, motors and valves.

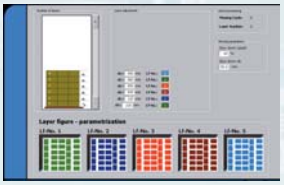


Removing products from the kiln car

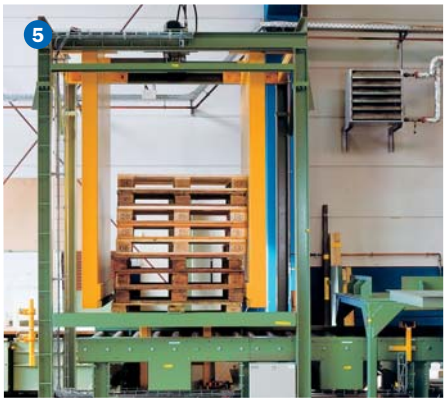
Materials transfer system

Transporting to pallet-loading robot





Brick pick-up with pallet-loading robot



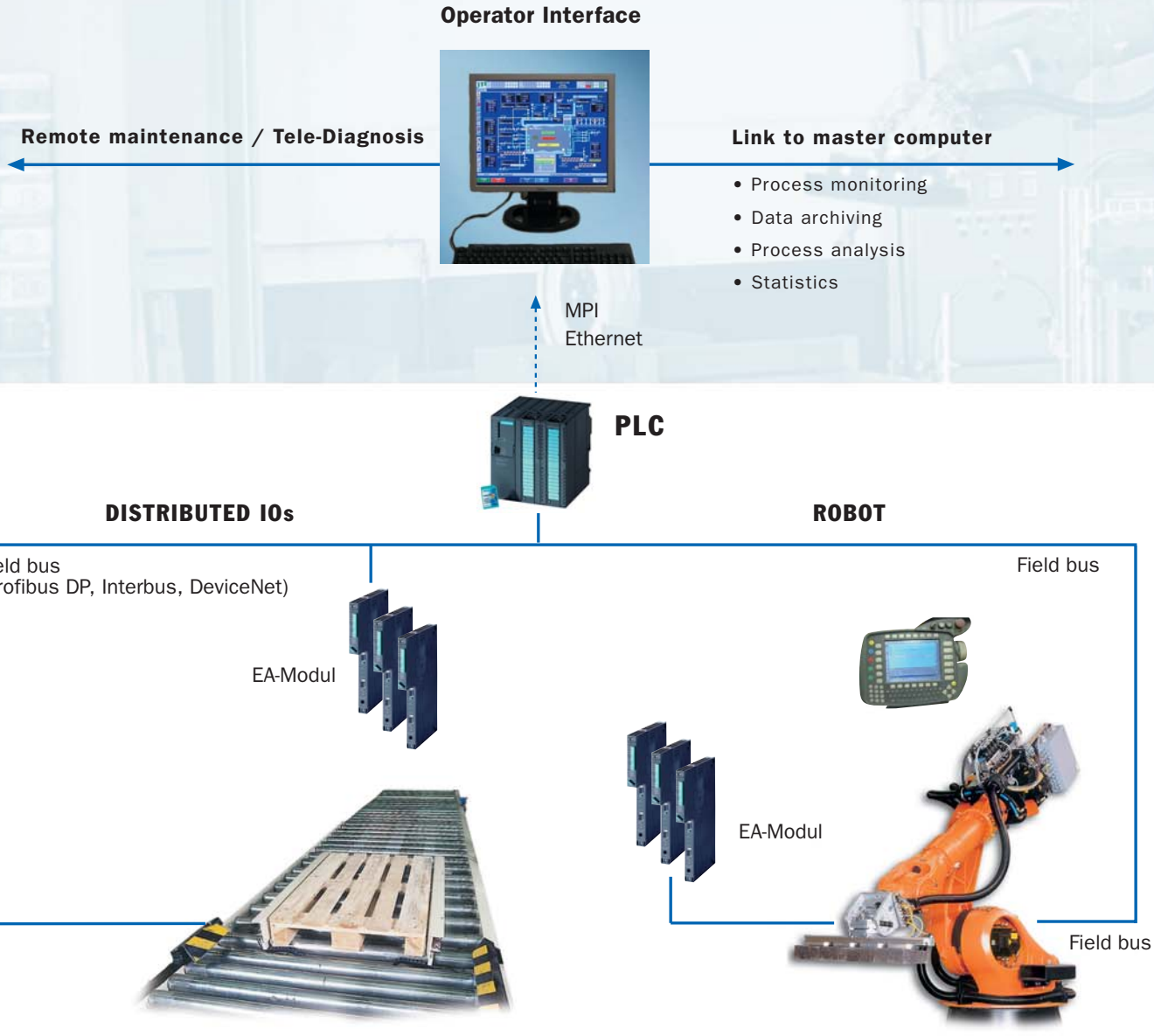
Pallet magazine

Conveyor technology

Integrated control and programming

Convenient and ergonomic control
Our automation systems are notable for the high level of operating convenience they offer our customers. The robot controller is integrated within the system control unit, meaning that all system components and robots are under control and can have parameters set for them. When it comes to modifying or optimising the programmes, only a few specific parameters must be entered and no special robot-programming knowledge is necessary.

Software projection and programming
Once configured, the robot software operates as a user PC. For each product format we produce an associated set of specific parameters. Of course, additional parameters set can then be defined by the customer and saved, independently of other programmes.



Arguments in support of our automation concepts

Advice and service

For any desired area of application we offer you innovative and flexible solutions.
Below are listed some of the types of advice and service we offer:

- active customer advice
- concept development
- project planning and accompaniment
- commissioning of complete automation systems
- maintenance service support

Products

Automation calls for a wide range of reliable components. We supply and commission:

- industrial robots with freely-programmable control and flexible grab systems
- automation control units including visualisation systems
- materials-handling and transport technology, packaging installations
- identification marking systems, system networking, data managment & transfer
- VISION - Systems

Engineering

Throughout the entire projection phase and right through to commissioning, we make use of modern, modular off-line programming and simulation tools. Even in the early stages of projection, it is possible to carry out collision and cycle-time analysis to save time in the subsequent development and design of the system.

- selection of the industrial robotic and grab system best suited to your individual system
- construction of new grab systems specially adapted for the task in hand
- selection and design of appropriate transport systems
- control of product quality throughout the entire production process through to pallet-loading and packaging
- structure of the entire system

Teleservice / Remote maintenance

- Online system monitoring on modem access to system PC

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Additional information

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