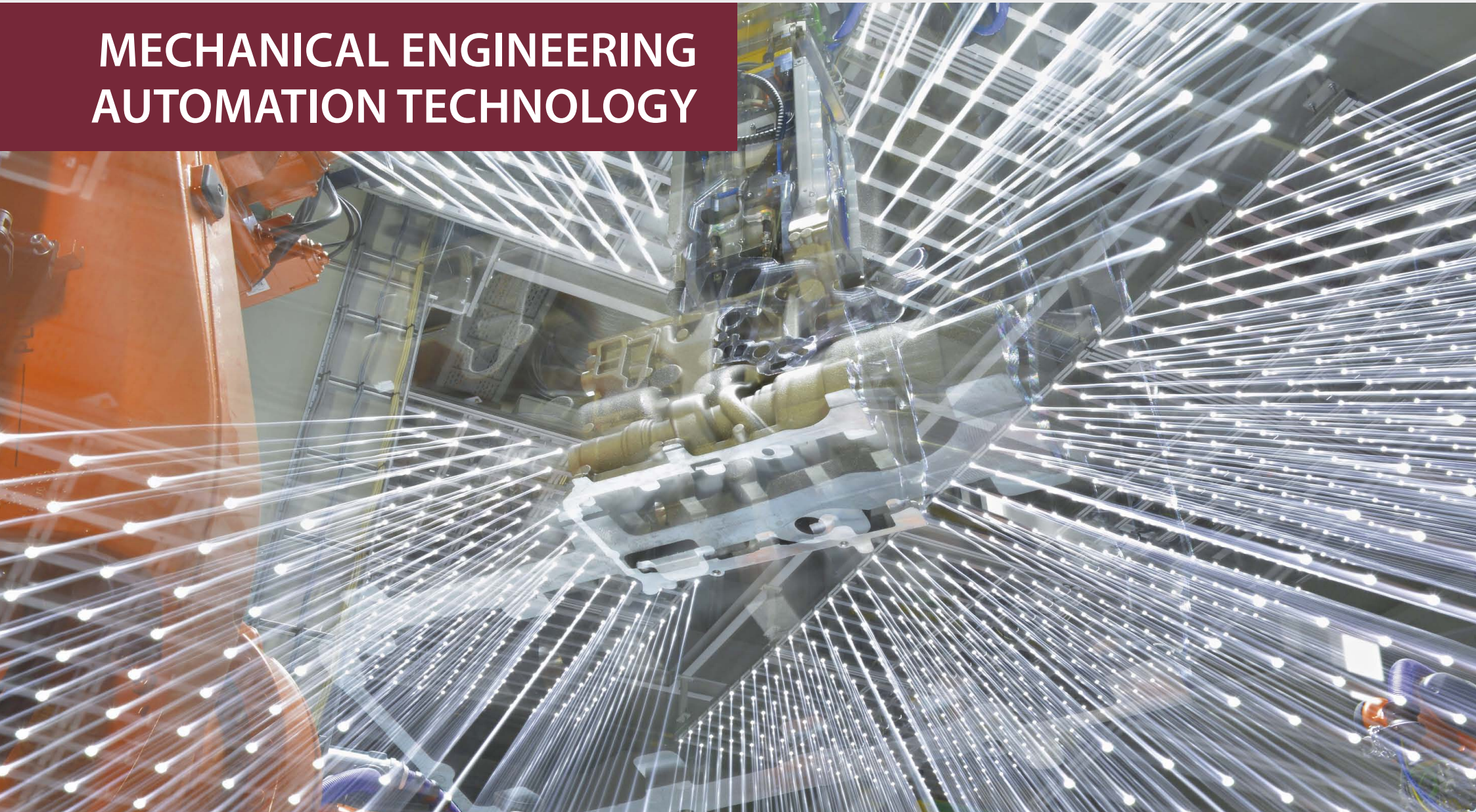


*-innovation
with automation.*

ERTL

**MECHANICAL ENGINEERING
AUTOMATION TECHNOLOGY**



All about ERTL

■ Innovation with automation

ERTL has become a specialist

- in **mechanical engineering**
- in **automation technology**

We realise highly complex systems for many different industries and manufacturing requirements. But the modernisation of existing systems, automation with state-of-the-art robot technology and development of new technologies are also amongst our strengths.

■ Made by ERTL

- **Partner in different industry segments**
- **Highly flexible procedures**
- **Experienced design teams**
- **High vertical range of own manufacture**
- **Complete system commissioning on the premises**
- **High degree of reliability and efficiency**

■ Personal service

People are the driving force: You as our customer with your own new requirements, us with our ERTL team, which is constantly developing and realising new ideas for you.

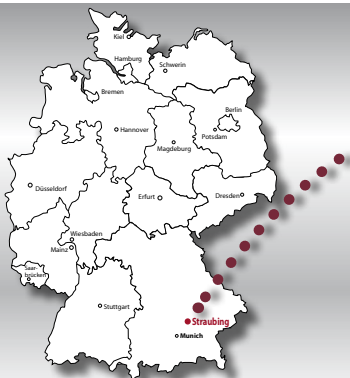
■ References

Audi, BMW, Clariant, Creaton, Erlus, Eternit, Koramik, Leipfinger & Bader, Volvo, VW, ...

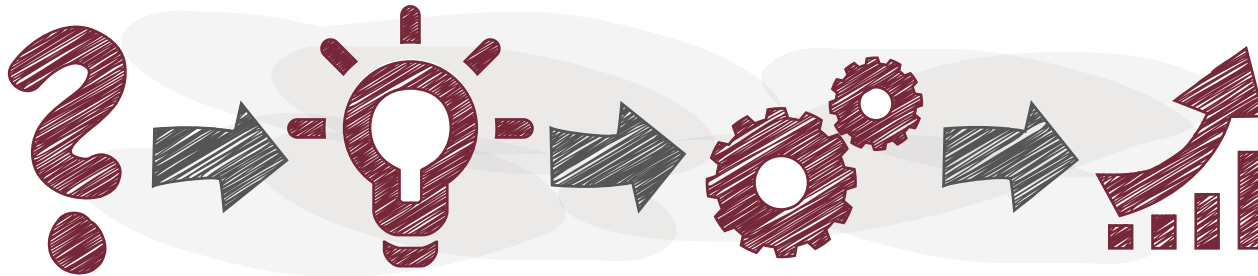
■ Company history

- 1994 company ERTL is established
- 2004 building of a new office and production hall in the industrial estate Straubing-Sand
- 2009 new building of a second hall
- Since 2012 part of the R. Weiss Group
- 2016 around 60 employees
- Certified in accordance with DIN ISO 9001:2008

Partner of the automotive industry
Technologies for production industries
Mechanical and plant engineering
Automation technology
Casting technique



What do you get at ERTL?



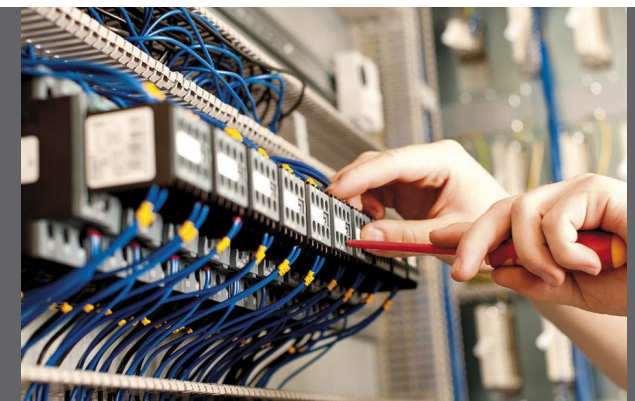
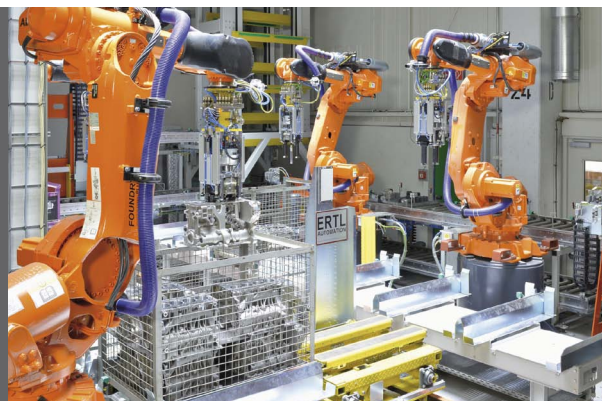
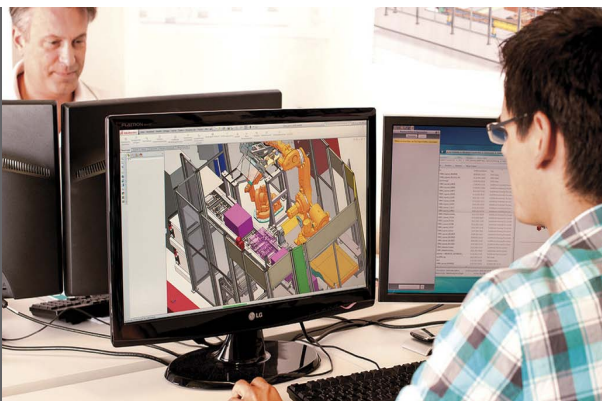
COMPLETE SOLUTIONS

We are your automation specialist
for mechanical and electronic engineering

- We provide everything from one source
 - Mechanical design
 - Electrical design
 - Software development
 - PLC and robot programming
 - Mechanical engineering
 - Project management + implementation
 - Production
 - Control cabinet construction
 - Assembly + service on site
 - Quality assurance

■ Your benefit

Name your task and we will provide a **complete solution**. You will have a single, competent contact partner for all technical and electronic challenges. Innovative and committed!



ERTL AUTOMATION TECHNOLOGY

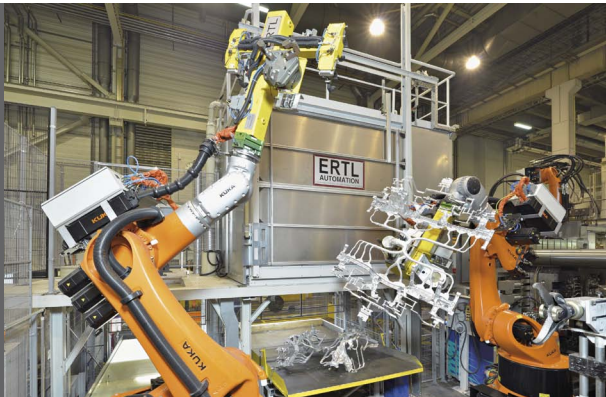
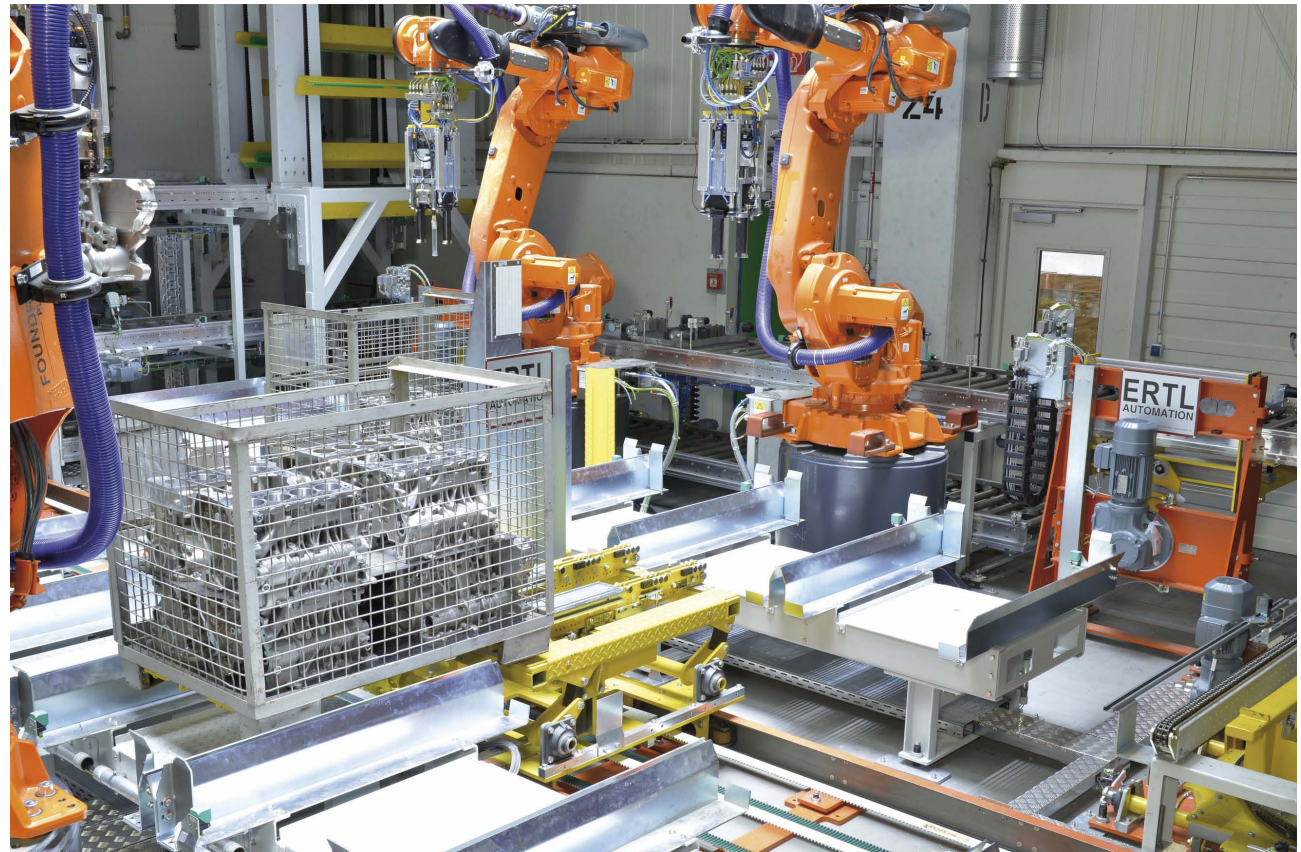
■ From A to Z to suit your needs

Leading manufacturers inland and abroad rely on the expertise and experience of ERTL. Our scope of delivery ranges from individual components to the delivery of all subsections from one source.

The development process of our highly complex systems occurs in our own engineering, planning and construction, switch cabinet and control technology departments.

With our high vertical range of own manufacture, we can respond flexibly to the requirements of our customers. Our highly qualified team ensures trouble-free assembly, installation and commissioning at our customer's premises.

The ERTL Service will also be available to our customers once the system has been handed over.



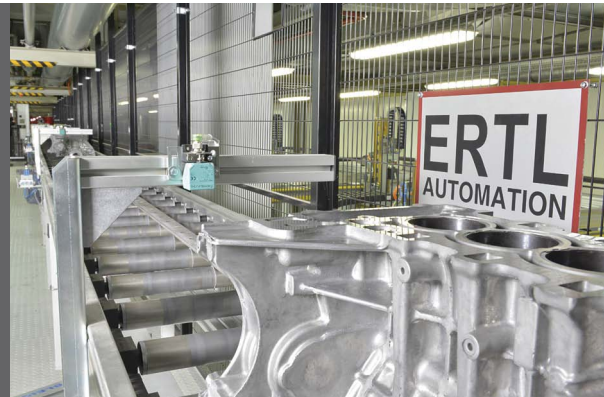
- Complete assembly lines
- Materials handling technology
- Robot technology
- Fully automatic handling systems
- Testing facilities

ERTL MATERIALS HANDLING TECHNOLOGY



- Electric monorail systems
- Belt conveyor technology
- Lifting systems
- Chain conveyor systems
- Belt conveyor systems
- Roller conveyor systems
- Skillet conveyor systems
- Skid conveying technology

- Modular design
- Different drive systems
- Sturdy design
- Usage of proven technology
- Weight category from 20 kg – 5,000 kg
- Speeds from 0.1 m/s to 1.5 m/s



ERTL CASTING TECHNIQUE

■ Light metal die cast pouring station

- Automation of individual process steps with high product flexibility in a very confined space via central control
- Sturdy handling units with flexible gripper systems and vacuum technology
- Laser cabin
- Flexible data matrix laser marking of components with robot technology
- Cooling cabin with mist cooling technology
- Control station as central connection to all process partners
- Connection to existing product tracking systems



- Central solution
- Everything from one source
- Highly flexible
- Great variety of products
- Space-saving arrangement
- Higher-level safety system with emergency switch off

ERTL CAMERA + TEST SYSTEMS

■ Monitoring and testing systems

- 2D/3D measurements of components
- Highly accurate measurement of components in industrial environments
- Testing of components

■ Positioning and robot control

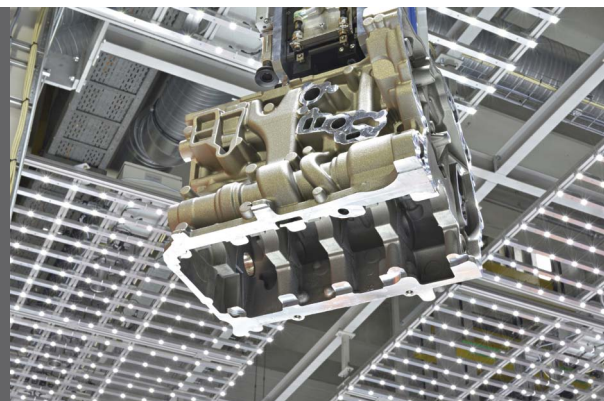
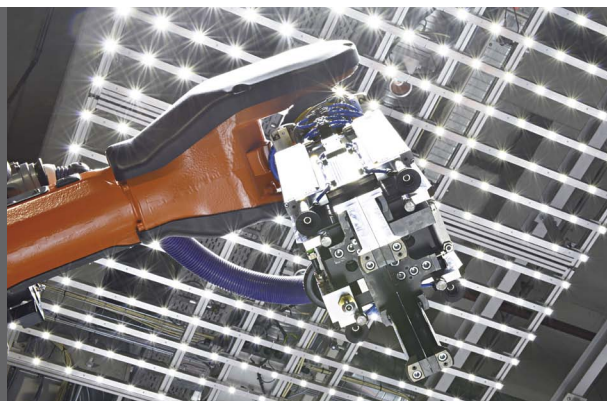
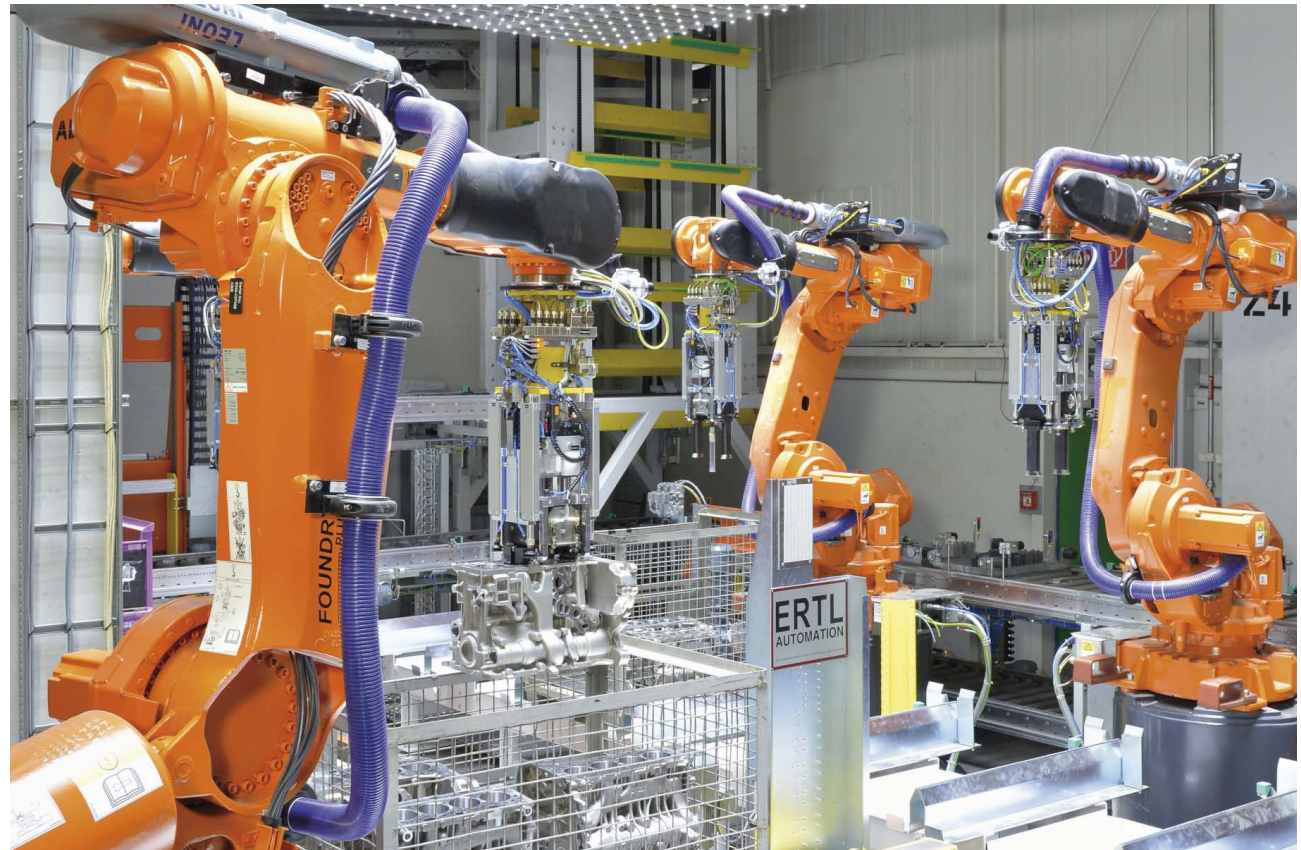
- 2D/3D position detection for robot positioning
- High resolution
- High process reliability

■ Lighting systems

- Usage of special LED lighting, high contrast to the workpiece

■ Surface test

- Industrial inspection of the quality of surfaces
- Complete development of the operational system
- Large benefit to customers due to high process reliability



- Fast and process-reliable detection of component positions
- Interface to the robot
- High availability in the complete system

ERTL PALLETISING TECHNOLOGY



■ Our system and plant solutions

- Palletising and depalletising
- Robot technology
- Area gantry
- Palletising on transport rack
- Fully automatic change of pallet cages or load carriers
- Link to buffer systems
- Fully automatic control of transport units

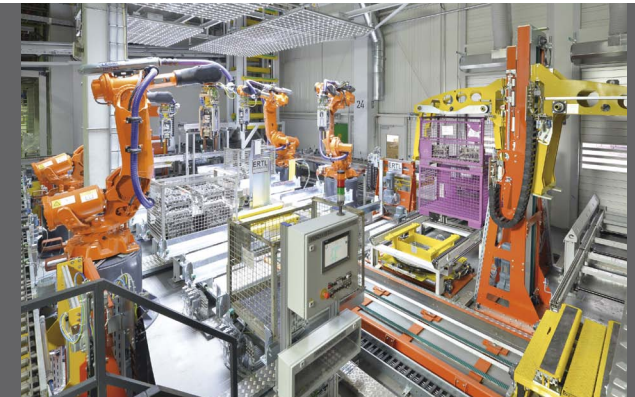
■ Component detection

- Component detection via camera systems

■ Central control

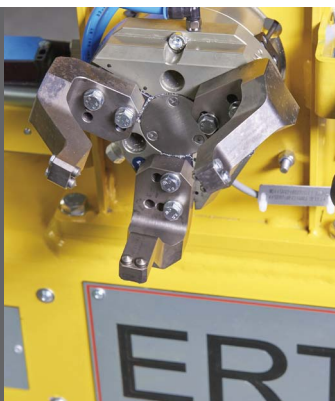
- Higher-level central control with link to logistics

- Cycle times <7 sec possible
- High process reliability
- Flexible solutions with high variety of products
- Total concept de-/palletising including materials handling technology with product and empties feed and discharge

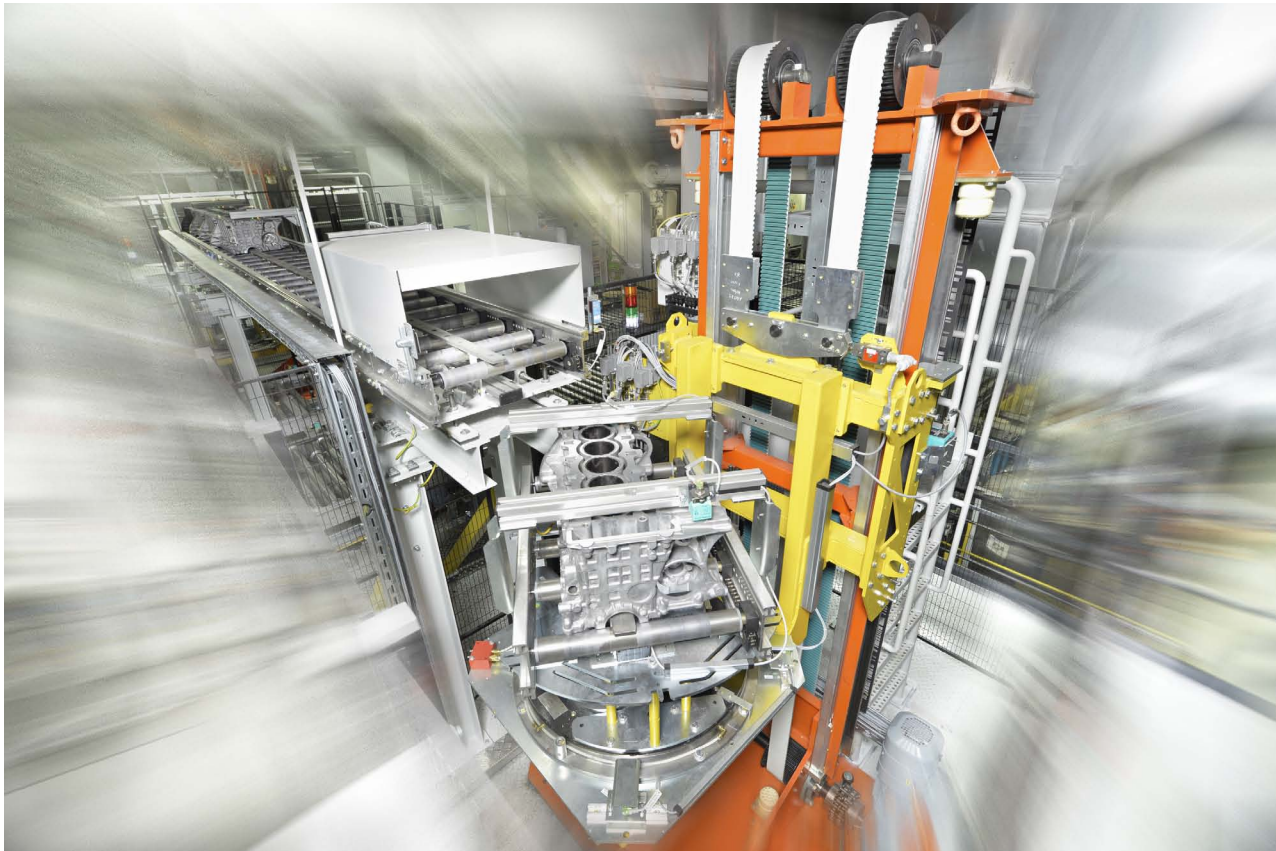


ERTL GRIPPER SYSTEMS

- **Our innovative robot grippers**
 - Especially projected grippers for many different applications
 - Highest demands on reliability and safety are met
 - Excellent maintenance properties with easily accessible openings that are closed during operation
 - Energy and media supply occurs inside the gripper
 - Firm hold in case there is no energy
- **Clamping gripper**
- **Form fit gripper**
- **Suction gripper**
- **Rotary gripper**



ERTL LIFTING SYSTEMS



- Skid lifter
- Pallet elevator
- Multi-position elevator
- Elevator for pallets
- Stacking of pallet cages
- Destacking of pallet cages
- Toothed belt lift
- Flat belt lift
- Wrap belt lift

- High availability
- Use of redundant components possible
- Weight category from 50 kg to 5,000 kg
- Lifting speed of up to 2.5 m/s
- Usage of proven technology



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