WEBER
Technik pur

AUTOMATION.
Robotics

WEBER GMBH

...so that technology works.

Robotics

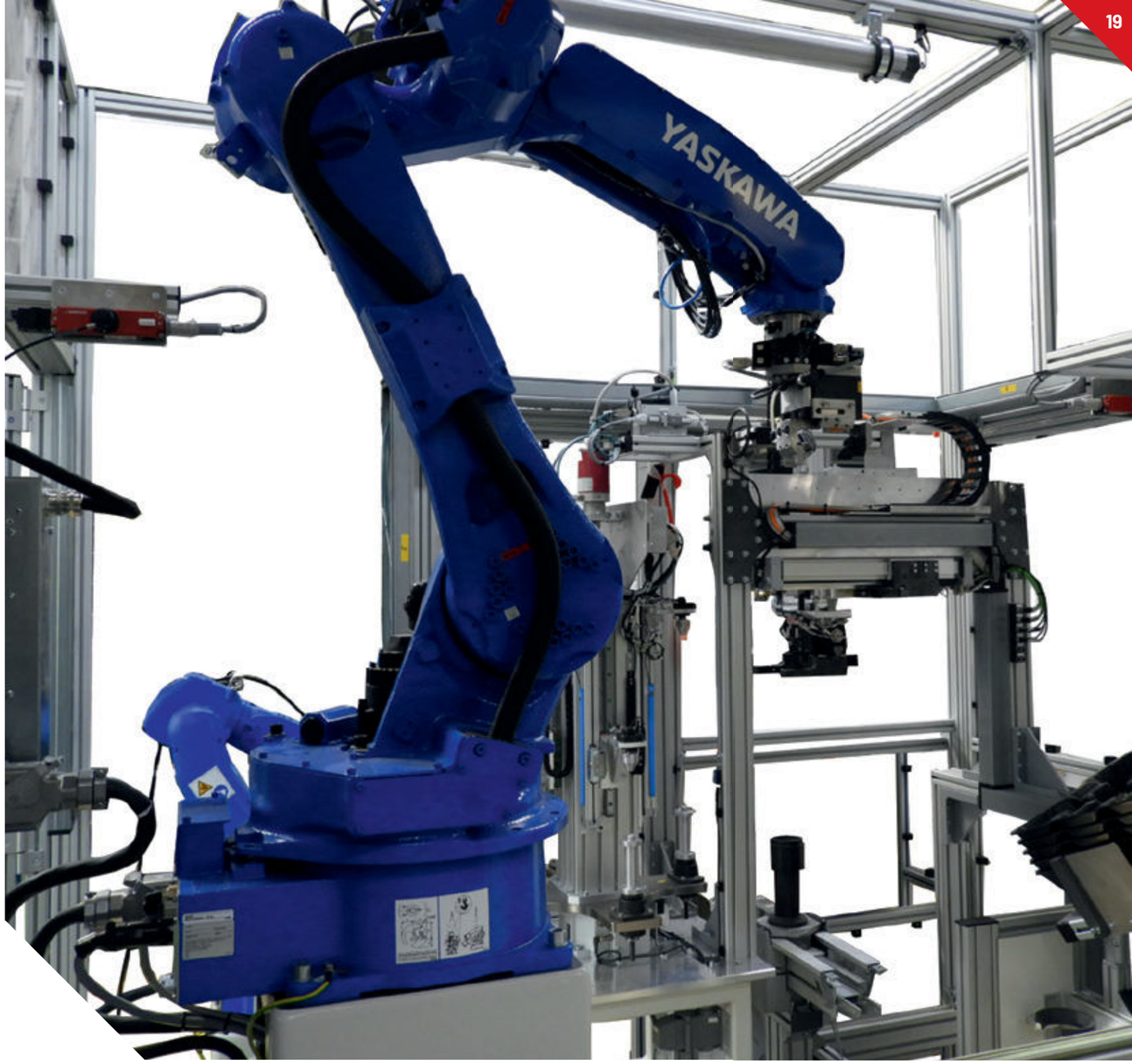
We provide simple and flexible automation solutions.

Industrial robots, also known as collaborative robots (cobots), are ideal for the automatisation of customised assembly lines and system installations.

Cobots can be easily integrated into existing assembly and test lines. They optimise workflow, expedite work processes, and guarantee a consistent product quality. Additionally, cobots are easy to retrofit and programme, so they can perform monotonous repetitive individual operations at a consistent pace. Thanks to a special proximity sensor system, cobots are perfectly suited to complement people in their work. This reduces the risk of accidents due to reduced concentration and maximises overall reliability, thereby increasing the productivity of your machinery

Where are cobots used?

Cobots can be used in a wide range of applications, such as: component assemply, screwing, tool use, painting, endurance tests, pick-and-place tasks, packaging and palletisation, machine loading, quality control, and much more.



Robot unloading and test for vl-joints

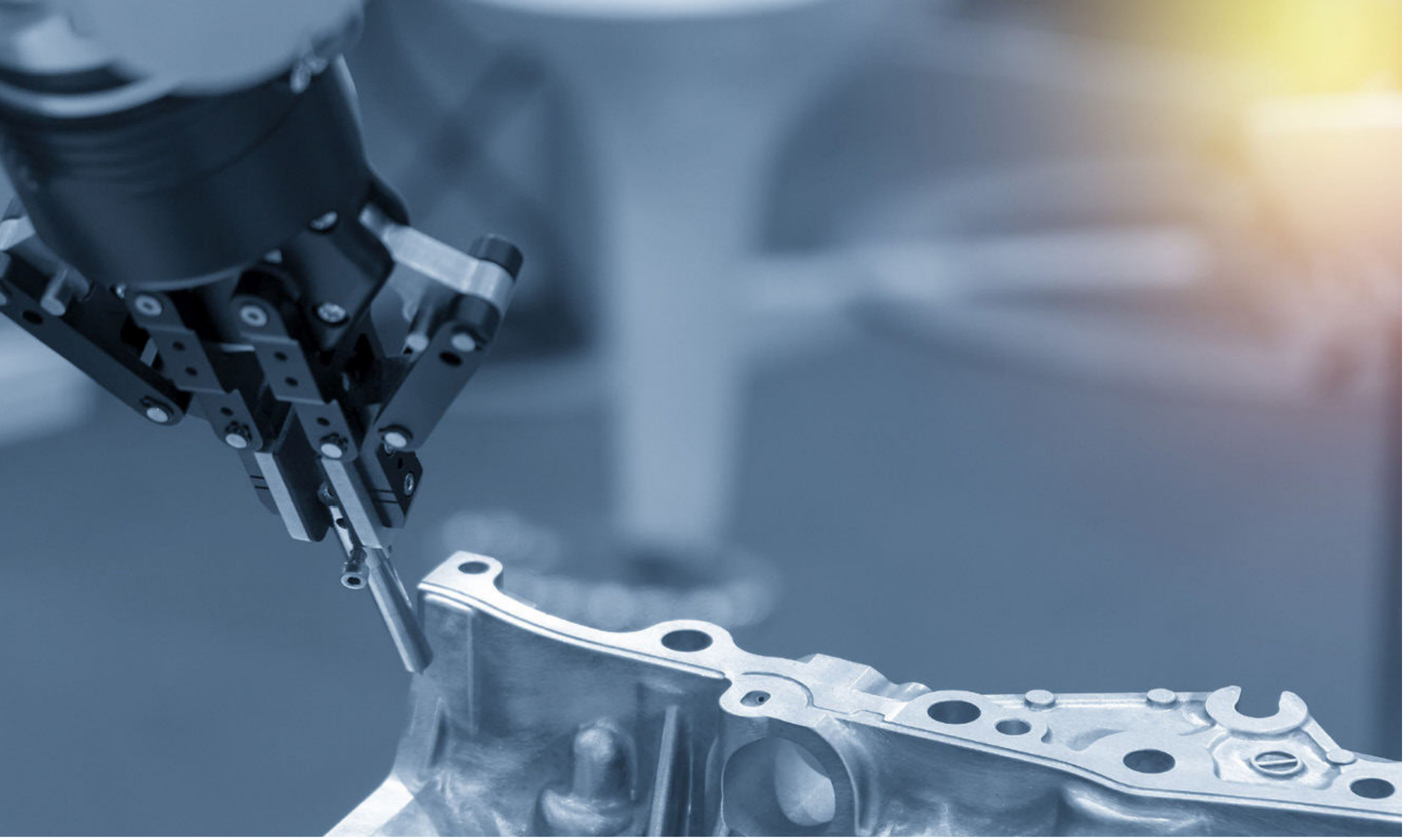
Extension of an assembly line by a test cell.

We used two 6-axis robots (Cobots) within the test cell:: The first 6-axis robot brings the camera, the lighting unit and a laser triangulation system into position to perform various control tests; the station is motor-driven rotatable and equipped with an incremental encoder. The second 6-axis robot, which is equipped with an automatic gripper changing system, removes the tested component after iO inspection and places it in a Kolox box. The robot also has the additional task of placing the intermediate shelves in the Kolox box.

Defective joints are returned to the conveyor belt by the handling system and fed to the niO station. For this purpose we retrofitted the conveyor belt and the workpiece carriers with a read-write system.

Technical description

- Pressure controlled positioning of the components between tip and cone
- Positioning of camera, lighting unit and laser triangulation system in checking position with a 6-axis robot
- Checking the painted surfaces, metal rings or plastic caps with a camera system for damage of all kinds
- Application-specific camera and camera accessories (resolution 2448 x 2048 pixels) with telecentric lens and lens filter, application-specific transmitted light illumination
- Palletisation of the checked parts in a Kolox box with a second 6-axis robot
- Automatic placement of the clipboards in the Kolox box
- Automatic gripper changing system
- Connection to host computer system
- Saving the results in CSV files
- User administration by means of the electronic key system „EKS“
- Cycle time: 15 seconds



Robot Screwing station HUD AU VW GEN 2+

Optimal screwing of parts

The screwing station is part of an assembly line for production of several variants of Head Up Displays. The system consists of a combination of assembly and testing stations. Part of this line is an automatic screwdriving machine which is able to screw together the most different models of the assembly.

Technical description

- Automatic screwing of parts
- Positioning of the screwdriver with a 6-axis robot
- Screwing process with pneumatic feeder
- Individually configurable screw sequence and screwdriving programs
- Automatic bit change
- Connection to host computer system
- Storage of screwdriving data in the host computer system

Automatic screw insertion and fastening using collaborative robot

Rationalising model maintenance.

Technical description

- Automatic insertion and fastening of parts
- Gripping and positioning of the screwdriver attachments using gripping system on UR10 cobot
- Screw insertion with force-controlled feed and fastening cobot
- Freely configurable screw sequence and individual screwdriving programmes
- Automatic exchange of screwdriver attachments and positioning of components
- Full interface to host computer system
- All data regarding screw insertion and fastening procedures stored in host computer system
- Cycle time: 30 seconds

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