EloScan Compact

Universal eddy current test system in compact robot cell form

Today, many testing applications demand complex movement of the sensor over the component. Based on our „large" universal test system, EloScan, Rohmann GmbH has now designed a compact robot cell, which can easily solve the most varied test tasks. The test cell can be used in industrial production as well as in the laboratory. Using a six-axis robot, it is possible to scan the most complex geometries with superior dynamics and a high degree of accuracy. The test cell is therefore predestined for applications for which simple linear axis portals are no longer adequate.

Two distinctly different test procedures are available. One allows the sensor to be moved over the component, the other allows the component to be moved past the sensor system by means of a suitable gripper. The advantage of the second alternative is that the robot can carry out component handling tasks (e.g. sorting or palletizing) as well as testing.

If 6 robot axes are insufficient, the system can be optionally upgraded with further axes, which are fully integrated into the robot kinematics. Additional axes could include a linear axis, for example, which increases the robot's range considerably, or an additional rotary axis for the component. Additional axes, which can be asynchronously connected via EtherCat, provide a further optional extension.

In order to carry out tests which are sufficiently flexible, it is often necessary to use several sensors.
A tool change system, which can accommodate several sensors, grippers or additional measuring tools, is available for this purpose. Programme controlled, the robot can then select the most suitable sensor or the necessary tool, eliminating the need for manual retooling. If automation is unnecessary (as in a laboratory, for example) an optional manual quick-change system can also be resorted to.

The robot cell is suitable for use with all Rohmann sensors (including rotors e.g. SR1 etc.), achieving optimal test results.

An integrated reference component retainer enables the necessary automatic checking of the system on the basis of reference bodies with defined reference defects. In addition to classic sensors, multiplex sensor arrays or our electromechanical distance compensation EMDC can also be used.

Integration of the already mentioned EtherCat interface as the central, internal I/O interface, provides the system with access to the complete range of additional modules and functionalities available for this purpose. Connection to a higher level control unit can thus be easily implemented.

As you can see, our EloScan Compact provides you with a universal test cell for a wide variety of tasks. We would be pleased to work together with you to develop the optimal configuration for your purposes.

Closed robot test cell

Basic construction of the profile system

The complete robot control system, testing electronics, PC technology and pneumatics is installed in a user-friendly, swing frame underneath the work surface.
Additional space has been reserved for user-specific installations. All the assemblies used, communicate with each other via Ethernet and EtherCat.

Roboter KR 6 R700 SIXX (KR AGILUS)

(Other models on request)
The KR 6 R700 SIXX has a maximum load capacity of 6 kg and an operating range of approximately 700 mm. The KR AGILUS is consequently designed for particularly high operating speeds and a high degree of accuracy.

Loads: Load capacity 6 kg

Further data and variants:

Number of axes:	6
Repeatability:	±0,03 mm
Weight:	50 kg
Installation positions:	Floor, ceiling, wall
Control system:	KR C4 compact
Protection class:	IP 54

Controller

KR C4 COMPACT - more reliable, flexible and intelligent
KR C4 compact offers high-performance, reliable KR C4 technology in a compact form. The flexible design and resultant expandability has produced a multi-talented unit.
The number of hardware components, cables and plugs has been greatly reduced and replaced with software-based solutions. The high quality, robust controller has been designed to need little maintenance; the temperature regulated fan technology is switched on for a short time when necessary and is hardly audible.

THE FEATURES AT A GLANCE:

SPACE SAVING. The compact dimensions of the casing enable it to be installed in 19" switch cabinets as well as in small protective housings. In spite of its compactness, the KR C4 compact offers the complete performance scope of the KR C4 controller.

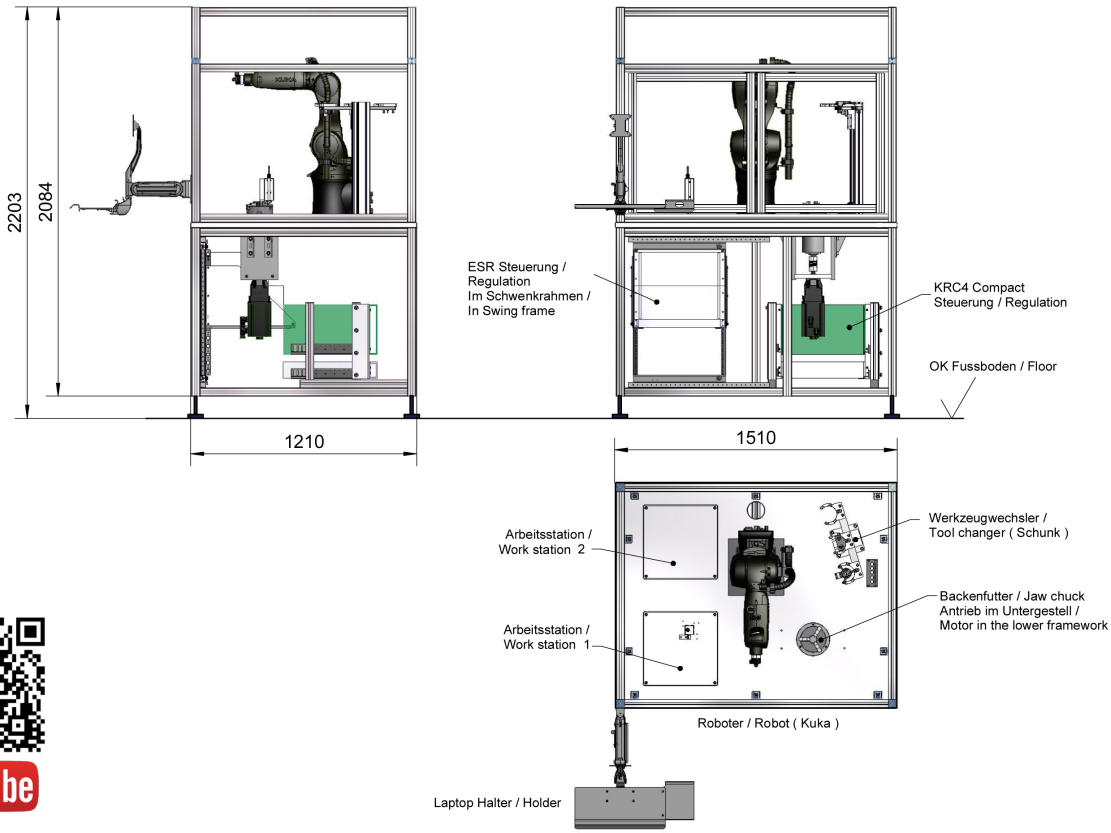
ALL-ROUNDER. Safety, robot, logic and motion control – the KR C4 unites everything in one controller. And with it, you can control the entire system effortlessly.

UNIVERSALLY APPLICABLE. In addition to KUKA robots, the KR C4 compact can, thanks to its open architecture, control additional axes - for highest flexibility, scalability, performance and openness in the smallest of spaces.

COMMUNICATION CAPABILITIES. In addition to its own robot language KRL, the KR C4 also understands the language of the CNC processing world (G-Code) as well as the language of PLC control systems and can therefore, for example, communicate with your SIEMENS® or Rockwell® controller directly.

ROBUSTNESS. The consistent selection of durable components as well as the well-conceived cabinet concept, guarantee long and reliable operation even under high operational demand.

ENERGY EFFICIENCY. Thanks to the new Energy-Management, the controller's energy consumption in Stand-by mode can be reduced by up to 95%. Added to this, the improved cooling concept, in combination with the temperature regulated fan, minimises the power loss of the controller, while at the same time ensuring low-noise operation.



Other, application-specific layouts and configurations on request.

YouTube

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