Maximizing efficiency
KUKA robots for the electronics industry
Perfectly adapted to market requirements
KUKA solutions for the electronics sector

Dynamic, attractive, promising: the electronics industry is a growth market with great potential – and simultaneously fulfills system-relevant functions for sustainable digitized societies. It is a pioneer and driver of digital transformation. Its innovations constitute the basis for future cloud-based value networks and are already shaping everyday life and working practices worldwide. Successful companies can develop good ideas quickly and produce them flexibly. To this end, KUKA collaboratively develops agile automation solutions together with its partners. The result is individual recipes for success that make it possible to exploit opportunities in an attractive market quickly, optimally and profitably.
Innovative technology setting the pace
Faster and more efficient with KUKA

Intelligent displays, high-performance semiconductors, wireless communication – the rapid progress in electronics is making its mark on today’s world.

Efficient automation with KUKA robots ensures that the enormous demand for new electronics products can be met quickly. And at the highest level of quality. Because powerful automation is much more than precision, speed and availability. It is the art of transforming ideas into practice.

Greater profitability
Robotic automation enables faster and more efficient production. Reject rates are sustainably reduced and the availability of 99.995% lies in a very reliable range.

Short time to market
Short production and innovation cycles demand great flexibility from electronics manufacturers. KUKA robots ensure fast reaction times – with consistently high quality and performance. This means that manufacturers remain efficient and successful.

Supreme product quality
KUKA automation solutions enable extremely precise production with high repeatability. Smart robotic solutions are integrated intelligently into the assembly process. Even the smallest parts are handled with ease in pick-and-place applications.

More competitive advantages
With KUKA robotic solutions, every company gains new room for maneuver in the face of fierce price competition. Even small batch sizes can be produced. Ultimately, numerous, valuable competitive advantages can be generated.
The KR AGILUS small robots
Masters of speed

Unparalleled performance at the highest of speeds. With the new KR AGILUS robots, KUKA presents a comprehensive small robot portfolio – perfectly tailored to the central requirements of the electronics industry.

High Speed
In handling applications, especially pick-and-place tasks, KUKA small robots demonstrate one of their greatest strengths: extreme speed. This enables convincing results with minimal cycle times and utmost quality throughout the entire production process.

Optimal work envelope
With reaches of up to 1,100 mm and the ability to reach points near to the robot base as well as in the overhead area, the KR AGILUS offers an optimal work envelope. Additional equipment can be attached to various mounting points on the arm, wrist, link arm and rotating column.

Extreme precision
Where high repeatability and exactitude are required, KUKA small robots are in their element. They enable manufacturing quality at the highest level. Thanks to their robust design, they work with constant precision throughout the work envelope.

Minimal maintenance
The KUKA small robots require no change of lubricant (lifetime lubrication). This means they are tailor-made for continuous, uninterrupted productivity.

Wide range of ambient conditions
Depending on the area of application, the KR AGILUS is available in a number of different variants: suitable for potentially explosive environments, splash-proof, cleanroom or hygienic design.

Convincing in any position
The KR AGILUS series is ideally suited for installation on the floor, ceiling, wall or at an angle and ensures optimal utilization in any installation position.

Maximizing efficiency..KUKA robots for the electronics industry
The perfect tool for short life cycles
ready2...fasten

In the form of KUKA ready2...fasten, KUKA offers manufacturers of small parts and products a solution that is easy to integrate. This is optimized particularly for the electronics industry in which products have short life cycles and manufacturers are under immense pressure to innovate.

Extremely flexible and always operational

The package offers a unique and flexible option for tightening small screws with a 6-axis robot. The process data can be displayed and evaluated directly in the cloud using KUKA Connect. The KUKA ready2...fasten package convinces through greater flexibility, quality and accuracy with a fast ROI. This enables quick delivery times, even with ever smaller electronics products.

• Greater flexibility: Various fastening angles, ceiling mounting, flexible deployment for the next product generation
• Multi-purpose kinematic system for fast ROI: Combination of various process steps possible, e.g. screw fastening, handling, visual inspection, assembly
• Standardization: The robot can be used for other quality inspections in the production line
• Powerful KUKA robot controller: Integration of additional equipment possible

Micro screws – maximum precision

The smallest screws are fastened quickly and precisely using high-tech components.

Overview at a single click

With KUKA Connect and its Condition Monitoring function, important process information can be accessed from anywhere, at any time and on any device.

• Easy to operate: Integrated solution, controller, KUKA smartPAD, peripheral equipment
• Everything from a single source: Preconfigured ready2...use solution
• Optimized screw-fastening process: Improved quality inspection, process monitoring, integrated quality assurance
• Best-in-breed robot: The custom-tailored KR 3 AGILUS for the electronics industry
• Industrie 4.0: Cloud interface with KUKA Connect

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KUKA smartPAD and KR C4
The perfect duo for optimal robot operation

Complex systems. Simple operation. The KUKA smartPAD and the KR C4 are the ideal symbiosis for users. They enable intuitive and efficient control of even challenging tasks. The KUKA smartPAD can be deployed universally and is easy to handle with its large touch display. The KR C4 unites all relevant control tasks for the efficient use of robots in a single system – with maximum energy efficiency.

The control system of the future
With their compact dimensions and the powerful technology of the service-proven KR C4, the KR C4 compact and KR C4 smallsize-2 offer top performance in minimum space. The revolutionary concept provides a firm foundation for the automation of tomorrow. That’s because only KUKA offers integrated safety functions as standard, together with open interfaces which enable really simple integration into the overall system. This significantly reduces the costs in automation for integration, maintenance and servicing. At the same time, the long-term efficiency and flexibility of the systems are increased. Benefit from the openness you need to meet tomorrow’s requirements.

KUKA smartPAD – making light work of complex tasks
Master even complex operating tasks easily – that’s what the KUKA smartPAD is designed for. The context-sensitive interface only displays the options relevant at the moment of operation. All six axes can be limited in their motion range using safe technology, monitored for operational stop or completely switched off.

Simple robot jogging with the ergonomic 6D mouse
It offers intuitive jogging and reorientation of the robot in three or six degrees of freedom.

Efficient operation with brilliant, capacitive touch display
Inputs are made quickly and easily via the 8.4” screen.

An optimally prepared, efficient software solution for every task
KUKA function and technology packages breathe life into KUKA robots. They enable them to carry out particular industry-specific functions within an automation solution: bonding, moving, machining, measuring, handling or collaboratively with other robots or humans in a synchronized manner.

KUKA function and technology packages make automation easy.
Robotics – practical and effective
Convincing in all applications

We supply cost-effective, durable, reliable and flexible solutions in the fields of semiconductors, displays, component manufacture and final assembly. With an availability of 99.995%, our automation systems shorten production times and ensure cost-effectiveness in applications such as small parts assembly, pick-and-place, loading/unloading, screw fastening, dispensing, checking, inspection and packaging.

Handling of thin glass under cleanroom conditions:
KUKA robots handle the latest generations of displays – with thicknesses ranging from 0.3 mm to 1.1 mm – fully automatically in the cleanroom.

Flexible world champion:
Comparable to linear gantries in terms of speed, but much more flexible – the 6-axis KR AGILUS small robot.

Unloading process:
KR AGILUS small robots are characterized by their fast and reliable handling of parts in cells.

DIN EN ISO certified:
All KUKA robots are DIN EN ISO-certified by the Fraunhofer Institute and meet the highest requirements in operation under cleanroom conditions.

Mechatronics in perfection:
Greater capacity, flexibility and precision as well as attractive ROI in automotive electronics production.
Maximizing efficiency – KUKA robots for the electronics industry

KUKA ready2…fasten
With ready2…fasten, KUKA is able to offer a solution for the robot-assisted fastening of micro screws, which are frequently used especially in the electronics industry. Even customers with relatively little application experience can fasten tiny screws perfectly with this solution.

KR AGILUS series
The family of small robots stands out due to its versatility and taps entirely new fields of application, irrespective of the installation position – whether on the floor, ceiling, wall or at an angle – the KR AGILUS offers utmost precision in confined spaces thanks to its integrated energy supply system and service-proven KR C4 controller.

KMR iiwa
The autonomous LBR iiwa robot is HRC-capable and mobile. It combines the strengths of the sensitive LBR iiwa lightweight robot with those of a mobile, autonomous platform. The KMR iiwa is location-independent and highly flexible – the perfect basis for meeting the requirements of Industrie 4.0.

KUKA.VisionTech
An on-board vision system is part of the package. KUKA supplies you with robots and image processing from a single source. KUKA.VisionTech provides powerful tools for 2D object recognition and quality control as well as code recognition and optical character recognition (OCR).

KR AGILUS
The KR 3 AGILUS offers top performance in the smallest of spaces. Agile and dynamic, the lightweight robot masters all tasks with maximum precision and sets new standards in the 3 kg class.

KR CYBERTECH nano series
The specialized KR CYBERTECH nano process robots are perfectly tailored to handle small components. These robots offer any company economical flexibility with minimal investment and energy costs.

KR CYBERTECH series
These powerful and compact multi-function robots are specialized in handling applications. KR CYBERTECH also convinces through greater integration density and minimal disruptive contours.

KR 30-3 and KR 60-3
These 6-axis industrial robots with jointed-arm kinematics offer precision and versatility. They also have high path accuracy and perfect positioning behavior.

KUKA Connect
KUKA Connect is a new cloud-based platform that affords customers easy access to the data of their KUKA robots and allows them to analyze the data. On any device, from anywhere and at any time.

KUKA Service – working day and night for our customers
Service quality plays a decisive role in efficient production sequences – over the entire life cycle of the product. To be able to provide our customers with this efficiency, we have made Customer Service one of our main disciplines – with global presence, a worldwide network of system partners, proven best practice concepts and 24-hour support. The main objective of our services is always the competitive advantage of our customers.
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