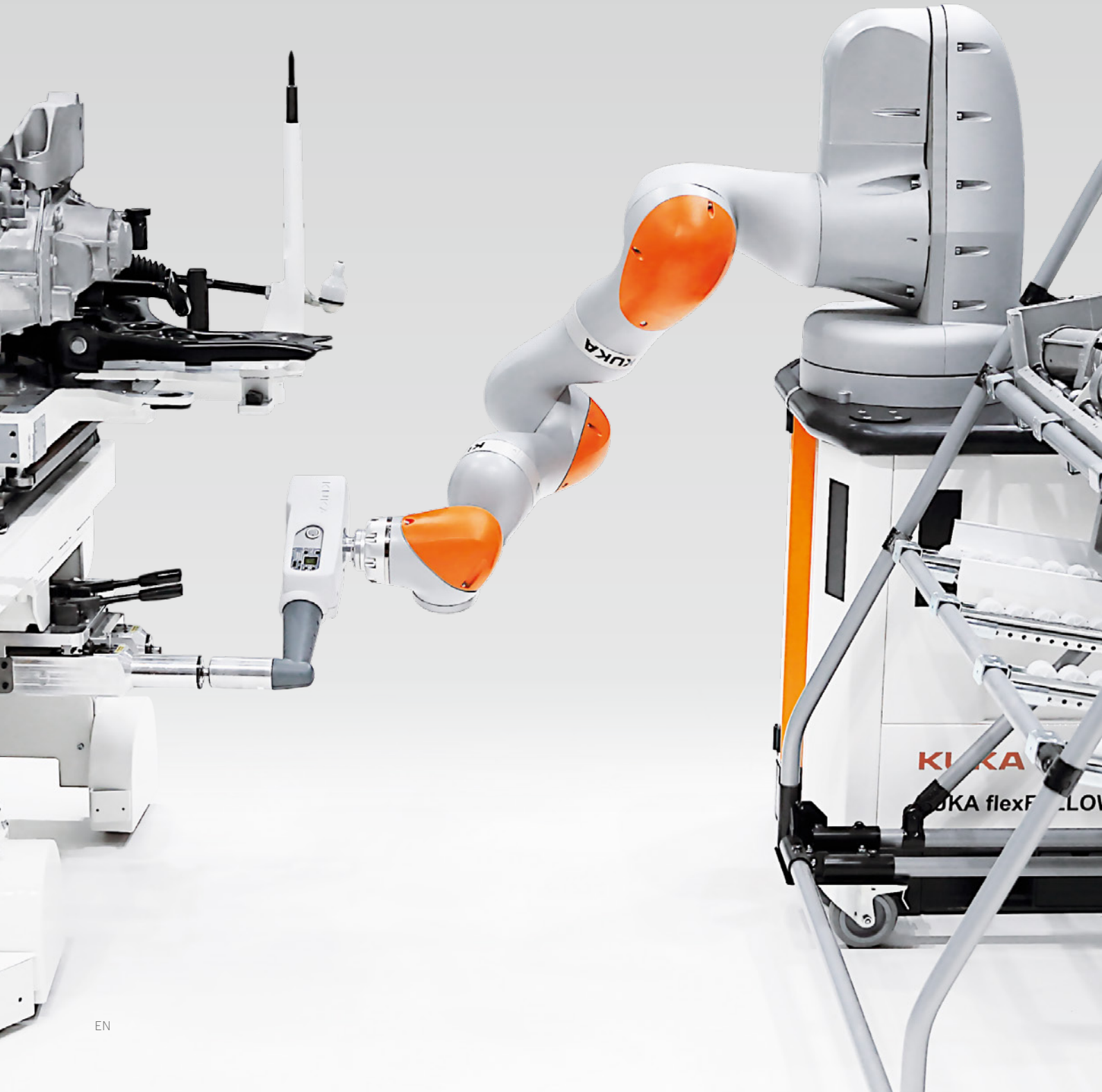
KUKA

Advanced Technology Solutions_**Flexible Screwing Solutions**



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The production systems of tomorrow will be adaptable, flexible, energy-saving, environmentally friendly, fast and efficient. In order to remain competitive in the future, companies must meet challenges such as the increase in product variety in ever-decreasing quantities. As a result, these companies need flexible and versatile solutions for industrial assembly operations. As your expert partner, KUKA Systems provides solutions for implementing both simple and complex processes while meeting the special requirements of human-robot collaboration.

The KUKA A/B-class screwdriver and the KUKA C-class screwdriver are the optimal expansions for the LBR iiwa that enable cycle time reductions and can be quickly integrated into existing production systems. The screwdrivers are an efficient out-of-the-box automation solution for manual screw-fastening processes and are suitable for safety-critical screwing connections of A-class, function-critical connections of B-class and simple C-class connections.

Advantages

- Out-of-the-box automation solution for manual screw-fastening processes thanks to…
  …suitability for common screw-fastening applications – also those involving high torques
  …automated energy coupling when installing the tool
  …easy parameterization instead of time-consuming programming (thanks to integrated screw-fastening controller)
  …capability of multi-stage screw fastening

- Optimal expansion for the KUKA LBR iiwa because…
  …of its lightweight design
  …it is easy to integrate into existing production systems
  …there are no external disruptive forces thanks to the integrated energy supply with no external lines
  …it has an HRC-compliant design
  …the mechanical system is designed for tactile calibration by the robot
  …it has a standard interface for safeguarding equipment

KUKA LBR A/B-class screwdriver

The ideal screwdriver for safety-critical screwing connections of A-class requiring documentation and for function-critical screwing connections of B-class.

Functions

- Integrated energy supply
- Rounded design for HRC
- Direction of rotation is changable
- Multi-stage screw fastening
- Safe switch-off in the event of collisions or E-STOP
- No pinching or crushing points
- Automatic energy coupling
- Integrated controller in Sunrise.OS possible
- Standard interface on the angle head (e.g. for screw tip safeguard)

Technical data

Media flange: MF Inside/MF electrical
Torque: 5 – 21 Nm; 18 – 48 Nm; 20 – 65 Nm
Rotational speed: 751 / 331 / 235 rpm
Protection class: IP40
Standard output: 3/8", 1/2" square drive
Communication: LAN
Energy transmission: Internal
Power supply: 48 VDC
Weight: approx. 3.5 / 4.6 kg
Ambient temperature: 0 °C – 40 °C

KUKA LBR C-class screwdriver

The ideal screwdriver for the KUKA LBR iiwa in order to quickly, flexibly and fully automatically fasten screwed connections for which a simple OK/NOK is sufficient.

Functions

- Integrated energy supply system
- Rounded design for HRC
- Direction of rotation is changable
- Two-stage screw fastening
- Safe Torque Off in the event of collisions or E-STOP
- No pinching or crushing points
- Automatic energy coupling
- Easily parameterizable screw-fastening control
- Standard interface on the angle head (e.g. for screw tip safeguard)

Technical data

Media flange: MF Inside
Torque: 1 – 7 Nm; 7 – 40 Nm
Rotational speed: 800 rpm (1st stage)
Protection class: IP40
Standard output: Variable holder
Communication: LAN
Energy transmission: Internal
Power supply: 60 VDC
Weight: approx. 2.5 kg
Ambient temperature: 0 °C – 40 °C

Industrie 4.0

Prepared for transformation of the worlds of production

Smart Production, Internet of Things or Industrie 4.0. Even if the names and terms used vary from one country to another, they all share the same goal: the creation of elementary competitive advantages – at both company level and in global competition.

Work on the factory of the future is thus in full swing worldwide. This involves intelligent, networked industrial production and logistics processes on the basis of cyber-physical production systems (CPPS). Or, to put it simply: factories that, by means of advanced networking, respond intelligently to changing tasks and continuously reconfigure themselves. The factory of tomorrow should be able to organize and continuously optimize its production processes, thereby counteracting the consequences of another development: demographic change. New solutions are called for because of falling birth rates and increasingly aged populations in modern industrial societies. Without the “smart factory”, it will be simply impossible to achieve a productivity increase on this scale at the same time as effectively husbanding our existing natural resources.

In order to make new working environments both highly productive and ergonomically beneficial for the labor force, KUKA is developing central key technologies: collaborative robots, mobile assistance systems, autonomously controlled vehicles and intelligently networked automation solutions that support humans in the work setting, easing the workload in a variety of ways.

In collaboration with experts from diverse sectors, KUKA is now already implementing highly flexible, digitized manufacturing processes that will open up new opportunities in a competitive environment and lastingly change the way we work and produce.

For further information, please contact us at ats@kuka.com

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