



Flexible automation of manufacturing processes with KUKA

Ready2_rivet: the ideal self-pierce riveting solution for body-in-white applications

Augsburg, April 2018 – KUKA has expanded its product portfolio: the new member of the ready2_use team is called ready2_rivet. The self-pierce riveting solution for body-in-white (BiW) applications has been developed jointly with Böllhoff, one of the world's leading manufacturers and suppliers of fasteners and assembly systems. "The combination is the key," says Burkhard Stimmel from KUKA. "Using the KUKA robot and controller paired with the expertise in mechanical joining technology of our partner Böllhoff, we were able to develop an automated, flexible and turnkey solution for BiW applications." Customers benefit from the low effort required to integrate the self-pierce riveting application and from its versatility.

Addition to the range of ready2_use packages

The different ready2_use packages are sector-specific, industry-proven and ready for immediate use – as the name suggests. "Application-oriented solutions that provide our customers with an advantage in global competition are best developed in cooperation with a system partner," explains Burkhard Stimmel. "This enables us to provide our customers with products that offer real added value." Ready2_rivet was developed together with Böllhoff. The Quantec series robot is from KUKA, as is the robot controller. Böllhoff provides the self-pierce riveting technology. The KUKA KR C4 robot controller convinces with its worldwide compatibility: it works reliably with different mains voltages and types, even in extreme cold, heat or humidity. It speaks 25 languages – including the major Asian ones – and meets all globally relevant ISO and US standards. The KUKA smartPAD makes operator control easy and

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intuitive, even for inexperienced users. In this case, the KUKA smartPAD also serves to simplify operator control and supports the process control of the overall system. Böllhoff provides the application components. The expert for mechanical joining technology uses its tried-and-tested self-pierce riveting process for joints that are accessible from both sides. “Lightweight construction in the automotive industry demands modern joining technologies,” says Horst Wittop from Böllhoff. “With our process, we set the rivets in a single operation without drilling pilot holes. Together with KUKA, we were able to implement perfectly coordinated components.” Both companies contributed their industry know-how in the automotive sector and their respective expertise in robotic and joining technology to bring a competitive product – the ready2_rivet package – to market.

Ready2_rivet: setting rivets in the age of Industrie 4.0

Manufacturing in production shops is undergoing a transformation. The reason for this is the increasing international competition and changing market demand. Product life cycles are becoming shorter. This naturally also applies to the automotive sector. Changing model series require solutions that are flexible and quick to put into operation. Lightweight construction, the technology of the future for saving materials and energy, calls for specialist expertise. If, for example, aluminum and steel are to be joined, factors such as the respective strengths of the materials and their deformation characteristics play an important role. Ready2_rivet is the answer to these challenges. The self-pierce riveting application can be seamlessly integrated into the existing production environment and boosts productivity and efficiency. It remains versatile at all times and can be adapted to new requirements – in keeping with the philosophy of Industrie 4.0.

KUKA

KUKA is a global automation corporation with sales of around 3.5 billion euro and roughly 14,200 employees. As one of the world’s leading suppliers of intelligent automation solutions, KUKA offers customers everything they need from a single source: from components and cells to fully automated systems for the automotive, electronics, consumer goods, metalworking, logistics/e-commerce, healthcare and service robotics industries. The Group is headquartered in Augsburg.