

# PRESS RELEASE

Kaiserslautern, 25 June 2013

## **"lite" increases availability and reduces costs**

**Innovative concept characterizes new generation of proven welding torch system Power Joint**

**"Power Joint lite" is the name of SKS' new generation of innovative torch systems for robot-assisted arc welding. Since the introduction of the first Power Joint torch with endless rotation in 2004, welding experts have opted for this solution more than 5,000 times. Now, its inventors are implementing the next step in innovation: an integrated buffer absorbs the deflection in case of a collision; concurrently, axial sensors switch off the robot. This feature acts so quickly that the torch is neither damaged nor is its TCP shifted. With the elimination of the switch-off device, also the failures usually occurring in a robot welding system are eliminated. In addition to an increased availability of the system, the user will also save around 20 percent on the investment for the torch system.**

"It's really adding by subtracting. We implement this principle with the Power Joint lite with respect to quality, technical complexity, possible errors and costs. Our customers benefit from this in several respects", said Thomas Klein, Managing Director of technology and engineering for SKS, Kaiserslautern, summarizing the benefits of the new torch. In contrast to conventional torches, the robot welding experts developed their system strictly robot-specific. The axial sensors of modern welding robots with internal cable dresses for electrode wires and supply media recognize changes in load immediately. Therefore, the robot controller responds very quickly to the increased mechanical resistance that occurs when the torch touches the workpiece. A simple buffer system in the Power Joint lite bridges the short period between the contact and the stop of the robot by absorbing the deflection of the dimensionally stable torch neck. Subsequently, the buffer system adjusts the torch neck back into its initial position. Because of the rigidity of the torch neck, the TCP (Tool Center Point) remains unchanged. At restart, the robot controller is therefore able to position the torch exactly at the end point of the welded seam again.

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The technical operating principle and advantages of the predecessor system are handed on to the new Power Joint generation. The rotating torch rotates without limit, i.e. also beyond 360°. It transmits power, gas, air and the wire. Programming and executing reorientation processes is not required.

The torch reaches every point on the shortest possible path. This reduces downtime and costs significantly. Process arm robots, i.e. robots with integrated torch cables and media tubes, will especially benefit: the torsional load on the feeding lines to the torch is eliminated; the service life and durability are increased. PowerJoint and PowerJoint lite are air-cooled. This eliminates all components for water cooling and the pertaining spare parts, and also the risks of leaks and damage due to moisture. In this case, less really means considerably more for users of welding systems.

(approx. 3,000 characters)

For more information, please visit [www.sks-welding.com](http://www.sks-welding.com).

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1. The rotary joint of the torch rotates endlessly – also beyond 360°.



2: For users of the Power Joint with robots with integrated torch cable and media, the torsional load of the feeders to the torch is eliminated; service life and durability are increased.

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