

PRESS RELEASE

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Prerequisite for the perfect welding process

Precise close-to-process wire feeding with Frontpull

In automated welding production, highest quality heavily depends on the perfect mastery and consideration of all influencing factors. One of the key factors is the evenly precise feeding of the wire – which is especially true for soft welding wires. The Frontpull 7 welding torch with its close-to-process drive unit directly located at the torch neck fulfills this requirement. With this solution, SKS eliminates the synchronization issues of conventional push-pull drives. The virtually spatter-free ignition and welding for the applied GMAW (gas metal arc welding) processes are the main benefits.

The Frontpull 7 feeds welding wires of steel, aluminum or other alloy material and a diameter from 0.8 to 1.6 mm with highest precision in all single-wire arc-welding and soldering processes. In automated robotic welding, these wire types mostly come from the barrel, but may also come from the coil when high-alloyed or less common alloy materials are used. The high-performance 4-roll drive with an output of 90 Watt reliably feeds them at the predefined speed. As the wire is moved by only one drive, both the synchronization issues between two separate drives and the unevenness existing between push and pull operation are eliminated. The drive forms a single unit with the torch system. Its higher reliability has been ensured by the use of the same components that are used for the proven Power Feeder PF5 wire feed system. The Frontpull 7 – as other torches made by SKS – even after the tool-free changing of the torch neck or individual parts thereof keeps a TCP (Tool Center Point) with an accuracy of ± 0.2 mm. Changing is done via the well-proven standard bayonet connection.

As the control unit of the wire feeder is mounted on the upper arm (3rd axis) of the robot, the weight of the torch system is only 4.8 kg. Thanks to this low weight, the robot can perform fast acceleration and deceleration operations. Thus, the speed rates desired by welding technology can be safely implemented. To ensure the perfect interaction of the welding machine and the Frontpull 7, SKS manufactures all consumables (retaining heads, contact tips, gas nozzles) in-house using CNC machines. The threaded high-

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performance retaining head ensures a secure and precise mounting; the enhanced current transfer allows the contact tips to deliver a constant arc quality; and the wearing parts have a long life because of their outstanding material properties.

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Images



1: The Frontpull 7 feeds even "difficult" welding wires for automated arc welding and soldering with highest precision.



2: The 90 W high-performance 4-roll drive of the Frontpull 7 offers higher reliability than conventional push-pull drives.

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