SW orbital welding power sources

Intelligent welding power sources

More quality and flexibility through Industry 4.0 technology during orbital welding: This intelligent power source connects the orbital welding process with state-of-the-art information and communication technology, and makes for the best welding results, high efficiency and sustainable quality management.

The Smart Welder (here with weld head ORBIWELD 76S) – an innovative welding power supply, which sets new standards in the matter of welding result, handling and communication

Future-oriented connectivity through IoT-/Industry 4.0 technology (Connectivity IoT/4.0 Package 1 required) ✓

Longer-term welding data documentation thanks to centralized data storage ✓

100% data storage – available at any time and at any place ✓

Cost-saving through digital and precise "PERMANENT-GAS" welding gas control ✓

Intuitive and easy operation via 12,4" color touch display or rotary knob ✓

Auto programming via entry of pipe diameter, wall thickness, material and weld gas ✓

Integrated liquid cooling for constantly low weld head temperatures ✓

The SW orbital welding power supplies combines the known and successful characteristics of the predecessor models with the newest technical innovations:

Centralized access to projects and parameters
With the integrated LAN interface the SW power sources can be integrated into the network: All welding data and programs for each individual welding process can be called up and documented in full, analyzed and used and optimized for future welding processes. This way, production sequences can be planned better and are also safer and less time-consuming.

Intuitive operation and a multilingual menu interface
The SW power sources are operated using the 12.4" color touch display screen, or alternatively with the multifunctional rotary knob. The multilingual menu interface with graphic support makes operation and

parametrization of the welding power supply simple and intuitive. Soft keys provide direct access to important commands.

More quality
The SW power sources achieve more quality thanks to the digital and precise welding gas control, the "PERMANENT-GAS" function. It makes it possible to perform welding processes with the highest level of purity and a low gas requirement, reducing the costs for each welding process. The gas quantity values saved with the welding program thus make for easily reproducible welding results.

Shorter welding cycles and more productivity
In order to minimize the gas pre-flow and post-flow times, ORBITALUM has incorporated the unique Flow-Force function. It shortens the welding process considerably when using closed weld heads: The digital gas control supplies protective gas at a very high volumetric flow rate directly from the pressure

reducer to the weld head – the unwanted residual oxygen is flushed out abruptly in the process. The resultant reduced pre-flow and post-flow times make for much shorter processing times and thus a higher level of productivity and an increased duty cycle. The high volumetric flow rate in the post-flow time and the optionally activatable cooling circuit delay reduce the temperature of the weld head – ideal for a high duty cycle. The benefits include a longer service life for the welding electrode. The optionally activatable permanent gas function prevents the penetration of oxygen in the weld head, even during secondary processing times. As a result, the system achieves almost completely oxidation-free seams with simultaneously short processing times.

Elegant and practical housing (IP23) with carrier handles integrated at the side

* The integrated liquid cooling system keeps connected weld heads constantly at the right temperature

Hinged lid with display protects the control elements, the system printer and the rotary knob

Elegant housing for good handling

The SW power supplies feature an elegant as well as practical housing with carrier handles integrated at the side. The ports on the front of the device are set back for protection from mechanical damage. The hinged lid with display screen, when closed, protects the operating controls, the system printer and the control dial if the device is offline or is being transported.

*The Smart Welder operates with a wide input voltage range of 110 V to 230 V AC 50/60 Hz, and offsets mains fluctuations of 90 V to 260 V AC. At 180 A, the output welding current is suitable for most applications.

The power supply automatically detects and includes the connected system components. The integrated liquid cooling system keeps connected weld heads and heads constantly at the right temperature.

Upgradeable with "LAN/IoT/VNC connectivity UPGRADE"

The optionally available "Connectivity Package" allows saving and calling up of welding programs via a central network storage location. To increase the process security of the documentation the log files can be stored centrally.
Detailed information on "Connectivity package", see product data sheet.

TECHNICAL SPECIFICATIONS	SMART WELDER
ORBIMAT 180 SW	Code 850 000 001
LAN/IoT/VNC connectivity UPGRADE	Code 850 080 001
Supply voltage	1~ 110 - 230 V, 50/60 Hz
Control range (Supply voltage > 160 V)	5 - 180 A
Duty cycle	60 % at 180 A 100 % at 160 A
Dimensions	600 x 400 x 310 mm 23.6 x 15.7 x 12.2 in
Weight	26.0 kg 57.32 lbs

SCOPE OF DELIVERY	SMART WELDER
Orbital welding power supply ORBIMAT 180 SW	1 PIECE
Hose connection set ORBIMAT	1 PIECE
External keyboard	1 PIECE
Dummy plug for remote control socket	1 PIECE
3.5 liter OCL-30 cooling liquid	1 canister
Operating instructions with calibration certificate	1 set
Quick Start guide	1 PIECE

TECHNICAL SPECIFICATIONS	ORBIMAT 300 SW
ORBIMAT 300 SW	Code 852 000 001
Connectivity UPGRADE LAN/IOT/VNC	Code 850 080 001
Supply voltage	3~ 400 - 480 V, 50/60 Hz
Control range (Supply voltage > 160 V)	5 - 300 A
Duty cycle	40 % at 300 A 60 % at 260 A 100 % at 220 A
Dimensions	600 x 400 x 480 mm 23.6 x 15.7 x 18.9 in
Weight	35,40 kg 78.04 lbs

SCOPE OF DELIVERY	ORBIMAT 300 SW
Orbital welding power supply ORBIMAT300 SW	1 PIECE
Hose connection set ORBIMAT	1 PIECE
External keyboard	1 PIECE
Dummy plug for remote control socket	1 PIECE
Operating instructions with calibration certificate	1 set

Technical specifications are non-binding.
They do not constitute any assurance of properties.

* Only Smart Welder

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Smart Welder

Properties, application area, technical specifications and delivery scope, see from page 2.

ITEM	VERSION	CODE	MACHINE WEIGHT KG
Smart Welder*	1 ~ 110 - 230 V 50/60 Hz	**850 000 001**	26.00

* Smart Welder with functionality "External Interface" on request.

Suitable accessories (optionally available):

- ORBICAR S
- ORBICAR W cart with integrated liquid cooling
- Rugged transport case
- ORBICOOL Active compressor cooling unit
- ORBITWIN SW switching unit
- Remote control with cable
- Bar code/QR code scanner
- ORBmax residual oxygen meter
- SW manual torch
- Double pressure reducer
- USB WLAN stick

Available upgrade options:

- ⊕ Connectivity LAN/IoT/VNC
  (850 080 001)

Detailed information on our upgrade options can be found on our home page at

https://www.orbitalum.com/de/produkt/mobile-welder.html

Power Welder

Properties, application area, technical specifications and delivery scope, see from page 2.

ITEM	VERSION	CODE	MACHINE WEIGHT KG
Power Welder *	3 ~ 400 - 480 V, 50/60 Hz	**852 000 001**	35.400

* A external cooling unit is mandatory for the use of the orbital welding power source and must be ordered <u>separately</u>.

Suitable accessories (optionally available):

- ORBICAR W cart with integrated liquid cooling
- ORBICOOL Active compressor cooling unit
- ORBITWIN SW switching unit
- Remote control with cable
- Bar code/QR code scanner
- ORBmax residual oxygen meter
- SW manual torch
- Double pressure reducer

ORBITAL WELDING POWER SOURCES & ACCESSORIES