

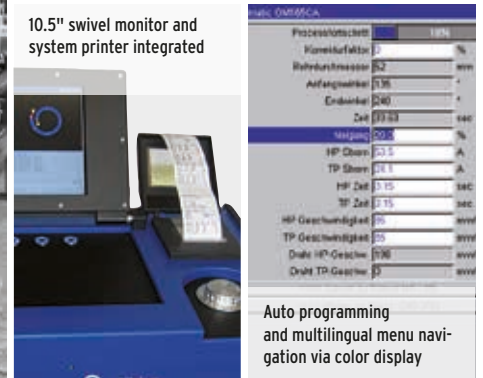
ORBIMAT CA AVC/OSC

Orbital welding power supply

Compact power source for mechanized TIG orbital welding with unique operating concept (human machine interface HMI) and a series of further technical features such as electronic **arc gap control (AVC)** and **oscillation (OSC)**. In connection with an orbital weld head from ORBITALUM TOOLS the user receives an especially innovative as well economical welding system.



Simple and convenient operation by multifunctional rotary knob



10.5" swivel monitor and system printer integrated

Auto programming and multilingual menu navigation via color display

In addition to tried-and-tested Orbitalum auto-programming via entry of the tube diameter, wall thickness, material and welding gas using a programming aid, it disposes of a "Flow Force" function for reducing the gas pre-purge time with closed weld heads.

The operating concept of the power sources differs significantly from common operation variants: The operator guidance with display and single-knob operation (rotary knob) stems from car manufacturing and has proven itself worldwide in infotainment systems of modern luxury vehicles. The main advantage is that the operator's view remains focused on the screen.

Further technical refinements of the ORBIMAT CA AVC/OSC are soft keys for significant, quick-to-activate superordinate commands, for example "Start/Stop". The operating system RTOS (Real Time Operating System) used has the advantage in contrast to Windows-based systems that a direct, abrupt switch-

off of the systems does not lead to any problems. This is particularly important for the operation at vulnerable power supplies, such as on construction sites. In contrast to Windows, RTOS always focuses on the control and regulation of the welding process, which is ultimately decisive for the quality of the welding result.

Also unique on the market is the Flow Force function which significantly reduces the processing procedure when using closed weld heads. Through a second channel for protective gas, the protective gas flows directly from the pressure reducer to the chamber of the weld head before the start of the weld process - the unwanted residual oxygen is flushed out abruptly in the process. The ORBIMAT power source automatically detects and includes the system components connected for the course of the process, from closed or opened weld head with automatic control of the arc gap* (AVC = Arc Voltage Control) and/or integrated oscillation of the torch* (OSC = Oscillation) up to the oxygen analysis device.

In contrast to conventional orbital welding control systems setting and controlling the torch distances to the weld seam are done directly via the arc gap.

* only for ORBIMAT 300 AVC/OSC

PROPERTIES ORBITAL ORBITAL WELDING POWER SOURCES:		300 CA AVC/OSC
Easy and convenient operation using a multi-functional rotary knob		●
DC current welding source		●
AC power source for aluminum materials		○
"Flow Force" function to reduce the gas pre-flow and post-flow time		●
"Permanent gas" function		●
Monitoring of cooling water and weld gas		●
Control option for cold wire feed		●
Possibility of connecting an external remote control		●
Constant or pulsed wire feed motion and rotation		●
Optimal visual and operating conditions thanks to clearly laid-out 10.5" swivel monitor		●
Graphically-supported operating interface and multilingual menu navigation via color display		●
Metric and imperial measuring units		●
Process-oriented, stable and real-time operating system without power-down sequence		●
Automatic weld head recognition and resulting parameter modification		●
Capacity to store over 5,000 welding procedures, providing systematic and clear procedure management thanks to the creation of folder structures		●
Welding data logging and printout of actual values		●
Integrated system printer		●
Possibility of connecting a monitor or printer (via VGA/LPT)		●
Integrated multi card reader for transfer of log files and welding programs via CompactFlash Card (CF), SD, MMC, SM, Sony Memory Stick		●
Optional PC software (OrbiProg CA) for welding procedure management and logging		●
Integrated, folding carrying grips		●
PSS (Pro Service System) for external performance check of the system as well as easy maintenance and fast replacement of parts thanks to system component design		●
Option to program up to 99 sectors		●
Power and motor slope adjustment between the individual sectors		●
Can only be used in combination with a separately available liquid cooling system		●
AC setting option of positive and negative half-cycle with a 20 - 80% ratio		○
AC frequency setting 50 - 200 Hz		○
AVC electronic arc gap control: Arc gap programmable in "mm" or via the arc voltage in "V", OSC oscillation with sampling function for automated determination of the tube joint between the sides of the tube		●
SCOPE OF DELIVERY		300 CA AVC/OSC
Orbital welding power source of the ORBITAL CA series	PCS.	1
Hose connection set ORBITAL (Code 875 030 018)	PCS.	1
Dummy plug for remote control socket (Code 875 050 006)	PCS.	1
Welding current connection adapter	PCS.	1
External operating keyboard (Code 875 012 057)	PCS.	1
External remote control (Code 875 050 001)	PCS.	1
Key for key switch (for re-ordering of 1 key; Code 875 012 058)	PCS.	2
Operating instructions with calibration certificate	set	1
QuickStart guide	PCS.	1

● = Function included ○ = Function not included ◐ = Function only conditionally included * = Only DC welding

SUITABLE ACCESSORIES (optionally available):	TECHNICAL SPECIFICATIONS	300 CA AVC/OSC
<ul style="list-style-type: none"> • ORBICAR W trolley with integrated liquidcooling • ORBICOOL Active compressor cooling unit • ORBICAR S carriage • Rugged transport case • ORBITWIN SW Switching Unit • Remote control with cable • Software/Hardware Package "CA" • ORBmax residual oxygen meter • Double pressure reducer • TIG manual torch for ORBITAL 	Code Supply voltage Control range (Supply voltage > 160 V) Duty cycle Dimensions (LxDxH) Weight	872 000 020 400 - 480 V +/- 10 %, 50/60 Hz, 3-phase 5 - 300 A 40 % at 300 A 60 % at 260 A 100 % at 220 A 540 x 420 x 440 mm 21.3 x 16.5 x 17.3 in 37.5 kg 82.67 lbs



Technical specifications are non-binding. They do not constitute any assurance of properties. We reserve the right to make changes.



ORBIMAT 300 CA AVC/OSC

Orbital welding power sources

ORBIMAT CA AVC/OSC

Properties, application area, technical specifications and delivery scope, see from page 16.

ITEM	VERSION	CODE	MACHINE WEIGHT KG
ORBIMAT 300 CA AVC/OSC	3 - 400 - 480 V +/- 10%, 50/60 Hz	872 000 020	37.5

Suitable accessories (optionally available):

- ORBICAR W cart with integrated liquid cooling, see page 19
- ORBICOOL Active compressor cooling unit, see page 19
- Rugged transport case, see page 20
- Remote control with cable, see page 21
- Software/hardware package "CA", see page 21
- ORBmax residual oxygen meter, see page 90
- TIG manual torch, see page 96
- Double pressure reducer, see page 94
- Welding current connection adapter set, see page 95