



Innovative orbital welding systems

## **ORBITAL CONTROLLERS AND INVERTERS**



The EVO Industry 4.0 series is new to the market. Several systems, initially compact as the 200 A Autorange and now also modular in connection with the Tetrax inverters.

The systems are small, lightweight and handy and offer a high-resolution colour display, multilingual intuitive user guidance due to a colour touch interface, or alternatively operation using a membrane keyboard, a stable operating system (without data loss during power outages and quickly ready for use again), full access through tablet with QR-code scanner, data transfer via USB, LAN and WLAN, fault analysis program, manufacturer support via remote maintenance, a mountable cooling unit as an option, and many other functions. Depending on the model, the systems are equipped with different features. Individual features can be added for a surcharge.

The EVO 200 WP, for example, has an analogue Turbo Purge function as standard. When the Turbo Purge function is activated, before and after the welding process the cassette weld head is purged with an increased amount of gas (setting using the analogue knob on the controller and digital display). Shortly before the welding process, the amount of gas is reduced to the amount required for the cassette weld head. This substantially shortens the welding process and achieves better welding results by precisely controlling the amount of gas.

In the case of the optional digital Turbo Purge function available for the EVO WP series, the gas flow is continuously measured and regulated by a gas flow controller. The amount of gas is set digitally on the display and saved in the program for future welding processes.

With the optional available Gas Controller Box, the Turbo Purge function can also be used with the EVO Modular WP.

During periods of high productivity, the cassette weld head can be preserved by activating the permanent gas function to extend the service life of the tungsten electrodes.

FEATURES	EVO 200 LITE	EVO 200 WP	EVO MODULAR LITE	EVO MODULAR WP
High-resolution 10.1" colour touch display	•	•	•	•
Robust display transport protection	•	•	•	•
Separate control panel for alternative operation	•	•	•	•
Extremely simple, intuitive user guidance with autoprogramming	•	•	•	•
Graphics-supported multilingual user interface	•	•	•	•
Metric and imperial units	•	•	•	•
Orbital tacking mode activatable		•		•
Integrated wire card		•		•
Analogue Turbo Purge		•		•
Permanent gas function	•	•	•	•
Real-time monitoring of the welding parameters	•	•	•	•
Continuous monitoring of all parameters such as welding speed, arc voltage, welding current, welding time, angle degrees, gas, water, residual oxygen, pressure	•	•	•	•
Rotor stop function for increased safety	•	•	•	•
4 GB flash memory for programs and documentation	•	•	•	•
Integrated thermal printer (longlife paper) with multilingual printing of actual / target parameters		•		•
Data transfer via USB	•	•	•	•
Data transfer via LAN / WLAN		•		•
Integrated help menu in the device	•	•	•	•
Fault analysis program	•	•	•	•
Remote maintenance	•	•	•	•

OPTIONAL	EVO 200 LITE	EVO 200 WP	EVO MODULAR LITE	EVO MODULAR WP
EXTERNAL PC SOFTWARE, ALSO WITH OFFLINE EDITING AND PROGRAMMING, DATA TRANSFER, EXTERNAL QUALITY CONTROL		.		.
QR CODE SCANNER INCL. SOFTWARE AND QR CODE GENERATOR FOR PC FOR USER LOGIN AND ACCESSING THE WELDING PROGRAMS		.		.
OPTION OF CONNECTING COMPETITOR WELD HEADS		.		.
DIGITAL TURBO PURGE		.		
AVC CARD FOR DC MOTORS (TURN)	.	.	.	.
AVC CARD FOR STEP MOTORS (RBK S) INCL. Y-CABLE	.	.	.	.
WIRE CARD	.	▲	.	▲
COOLING UNIT THAT CAN BE MOUNTED AS AN OPTION	.	.	.	.

Item number

1.3.7008

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▲ = EVO 200 WP STANDARD EQUIPMENT



## EVO 200 WP ORBITAL WELDING SYSTEM (Autorange)

### Technical data:

Type of current	DC
Mains voltage	AC 1 x 230 V +/- 15% AC 1 x 115 V +/- 15%
Mains frequency	50 / 60 Hz
Max. primary reserve power	6 kVA
Rec. generator output	9 kVA
Control range	5 – 200 A
Welding current	25% ED TIG 200 A 60% ED TIG 150 A 100% ED TIG 120 A

Weight:	16.8 kg
Dimensions (L x W x H):	500 x 340 x 360 mm



EVO with mounted EVO COOL cooling unit

EVO with mounted transport protection



Transport protection on the rear

### Package includes:

- Orbital welding system
- Display transport protection
- Calibration certificate
- USB stick

### Optional:

#### DISPLAY PROTECTION TRANSPARENT

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#### EVO 200 WP ORBITAL WELDING SYSTEM (Autorange) EVO 200 LITE ORBITAL WELDING SYSTEM (Autorange)

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#### EVO MODULAR WP ORBITAL WELDING SYSTEM (Autorange) EVO MODULAR LITE ORBITAL WELDING SYSTEM (Autorange)

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Connection to TETRIX 200 or TETRIX 351

Compact and light with the external dimensions  
(L x W x H) 405 x 325 x 170 mm and weighing only 9.7 kg.

### Optional:

- Water Cooling Unit COOL 50 or EVO COOL



### QR CODE SCANNER

incl. software and QR code generator for PC for user login and accessing the welding programs

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### EVO REMOTE CONTROL VIA 10" INDUSTRIAL TABLET WITH BARCODE SCANNER, DOCKING STATION AND BACKSTRAP

Robust 10" tablet as wireless remote control for all EVO orbital welding systems.

The user interface of the EVO controller is mirrored 1:1, providing full access with all functions. As the data is sent over WLAN/LAN, there is no delay to the controls or display. The range complies with common WLAN/LAN standards and can therefore be easily amplified or extended.

The tablet has an integrated 2D barcode or QR code scanner for user login and to access the welding programs.

The tablet can be used as a mobile device and in the stationary docking station.

#### Technical Data:

Display:	10.1" (25.65 cm) capacitive touch display
CPU:	Intel® Atom™ with Intel® Burst Frequency technology
Graphics card:	GPU Intel® HD 400 Graphics
Memory:	4 GB RAM, 64 GB eMMC
Connections:	WLAN, Bluetooth
Scanner:	QR-code scanner
Ports:	1x USB 2.0, 1x micro USB 2.0, HDMI, audio, docking port
Military standard:	MIL-STD 810G
Protection rating:	IP65
Battery life:	Up to 8 hours
Dimensions (LxWxH):	22 x 275.5 x 187.5 x mm
Weight:	1 kg

#### Package includes:

- Tablet
- Docking station
- Backstrap
- Power supply unit







### GAS CONTROLLER BOX

The Gas Controller Box enables to control up to three gases during welding and regulate them through the EVO WP controllers. The welding, the purging, and an additional gas (e.g., for a trailing nozzle, for flooding a gas cover or a housing) can be monitored, regulated, completely documented, and stored in the EVO controllers. All welding and purging gases that are used for TIG welding are memorized in the controller menu.

### TECHNICAL DATA:

Control range	1 – 54 l/min.
Gases	Ar, He, N <sub>2</sub> , H <sub>2</sub> (and mixed gases)
Gas connection	6 mm Push-In-Fitting in and out
Weight	0.9 kg
Dimensions (L x W x H)	180 x 220 x 100 mm

### PACKAGE INCLUDES:

- Water- and dustproof Peli case.
- 1, 2 or 3 assembled mass flow controllers
- Connection cable Gas Controller Box / EVO WP controller

### GAS CONTROLLER BOX (1 GAS)

### GAS CONTROLLER BOX (2 GASES)

### GAS CONTROLLER BOX (3 GASES)

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### SWITCHBOX

Switchbox for welding with two welding heads.

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To increase productivity, the switch box can be used to weld alternately in conjunction with a controller from the EVO series with two weld heads. All welding tools can be used, i.e., enclosed weld and open frame weld heads, turn tables or tube-to-tube sheet weld heads, gas or water cooled, with or without wire feed or AVC.

By pressing the start button on the weld head, the welding program suitable for the respective weld head will get loaded.

The weld head that is not being used is locked and can get prepared for the next welding.

### PACKAGE INCLUDES:

- Switchbox
- Control cables, gas hose, welding cables from EVO series to Switchbox

### Technical data:

Mains voltage	100-240V (0,6-0,3A)
Mains frequency	50 / 60 Hz
Switching capacity:	24V 200A (100% ED)
Protection class:	IP 23
Dimensions (L x W x H)	500 x 340 x 160 mm
Weight	7.8 kg



EVO 200 WP  
mit montierter Switchbox

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to benefit from free software updates and to receive information  
about new products, etc.

**ONLINE  
REGISTRATION**

### TIGTRONIC ORBITAL



#### ORBITAL 5.2

- OSK
- OSW
- TURN
- RBK
- (AVC)

#### TIGTRONIC ORBITAL 5.2 CONTROLLER (Autorange)

The 5<sup>th</sup> generation of our reliable, tried-and-tested standard controller.  
Can be connected to TETRIX 200 or TETRIX 351.

- 5.7" display
- Extremely simple multilingual user guidance thanks to programming support (entry of tube outer diameter, wall thickness and weld head indicator)
- Monitoring of gas and water cooling
- Option of welding in up to SIX sectors, in continuous or step travel mode
- Individual modification of the calculated program parameters, also using current percentage button
- Graphic display of the welding progress
- Real-time monitoring of the welding parameters
- Integrated day counter (assignment to isometries and weld joint numbers)
- Storage of up to 99 welding programs
- Storage of up to 400 actual parameters
- Data transfer of welding parameters and programs via USB interface
- Software updates via USB possible
- Error tracking program
- Option of connecting a remote control (the controller can also be operated from the display without a remote control)
- Connection for oxygen and purge pressure analysers
- Compact and lightweight with outer dimensions of (L x W x H) 405 x 325 x 170 mm and a weight of only 8.3 kg
- Autorange 100 – 240 V

#### Optional:

- COOL 50 or EVO COOL cooling unit
- AVC upgrade kit

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### TIGTRONIC ORBITAL



#### ORBITAL 5.3

- OSK
- OSW
- TURN
- ORBIFEED
- RBK
- (AVC)

#### TIGTRONIC ORBITAL 5.3 CONTROLLER (Autorange)

As for Orbital 5.2

- With special software only for RBK tube-to-tubesheet weld heads

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### TIGTRONIC ORBITAL



#### ORBITAL 5.4

- OSK
- OSW
- TURN
- ORBIFEED
- RBK
- (AVC)

#### TIGTRONIC ORBITAL 5.4 CONTROLLER (AUTORANGE)

The 5<sup>th</sup> generation of our reliable, tried-and-tested standard controller.  
Can be connected to TETRIX 200 or TETRIX 351.

- 5.7" display
- Extremely simple multilingual user guidance thanks to programming support (entry of tube outer diameter, wall thickness and weld head indicator)
- Monitoring of gas and water cooling
- Orbital tacking mode can be activated
- Option of welding in up to SIX sectors, in continuous or step travel mode
- Individual modification of the calculated program parameters, also using current percentage button
- The current and wire feed parameters can also be changed during welding
- Graphic display of the welding progress
- Real-time monitoring of the welding parameters
- Integrated day counter (assignment to isometries and weld joint numbers)
- Storage of up to 99 welding programs
- Storage of up to 400 actual parameters
- Data transfer of welding parameters and programs via USB interface
- Software updates via USB possible
- Error tracking program
- Option of connecting a remote control (the controller can also be operated from the display without a remote control)
- Connection for oxygen and purge pressure analysers
- Integrated wire card
- Integrated thermo printer (longlife paper) with multilingual printout of actual / target parameters
- Compact and lightweight with outer dimensions of (L x W x H) 405 x 325 x 170 mm and a weight of only 8.3 kg
- Autorange 100 – 240 V

#### Optional:

- COOL 50 or EVO COOL cooling unit
- AVC upgrade kit

#### Package includes:

- Controller
- Power cable
- Controller / power source interface cable
- USB stick
- 2 pieces tungsten boxes
- Pen with touch screen function and LED light

#### AVC UPGRADE KIT FOR TIGTRONIC CONTROLLERS

**AVC CARD FOR DC MOTORS UPGRADE KIT (Turn)**  
for Tigtronic controllers

#### AVC CARD FOR STEP MOTORS UPGRADE KIT (RBK S)

for Tigtronic controllers

Item number

1.3.0054

Orbital  
welding systems

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preparation

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Measuring  
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general

1.3.0031

1.3.0036





### DOCUTRONIC 2.2 SOFTWARE FOR DOCUMENTATION

For all Tigtronic controllers for backing up, managing and editing the weld joint documentation (actual / target parameters) at the PC in German and English



**TETRIX 200 INVERTER**, control range 5 – 200 A / 230 V

Lightweight and compact inverter power source for TIG manual or orbital welding (automatic detection) in conjunction with all Orbitec controllers.

**Optional:** COOL 50 water cooling unit.

**Technical data:**

Type of current	DC
Mains voltage	AC 1 x 230 V
Mains frequency	50 / 60 Hz
Max. primary reserve power	4.4 kVA
Rec. generator output	7.5 kVA
Control range	5 A – 200 A
Welding current	
• 25% ED TIG	200 A
• 60% ED TIG	150 A
• 100% ED TIG	120 A
Weight	8.9 kg
Dimensions (L x W x H)	475 x 180 x 295 mm

**Package includes:**

- Inverter
- Primary cable

**TETRIX 200 INVERTER (Autorange)**, Control range 5 – 200 A / 110 / 230 V

As TETRIX 200 inverter, but it recognises the 115 V AC or 230 V AC input voltage and adjusts automatically.

(Note: With 115 V AC input voltage, the maximum current is 150 A)



**TETRIX 351 INVERTER**, control range 5 – 350 A / 400 V

Mobile inverter power source for TIG manual or orbital welding with integrated cooling unit and gas level monitor. Can be used in conjunction with all Orbitec controllers, particularly with higher welding current and ED demands during tube-in-tubesheet applications.

**Technical data:**

Type of current	DC
Mains voltage	3 x 400 V (-25% – +20%)
Mains frequency	50 / 60 Hz
Max. primary reserve power	15 kVA
Rec. generator output	20.3 kVA
Control range	5 A – 350 A
Welding current	
• 60% ED TIG	350 A
• 100% ED TIG	300 A
Cooling efficiency	1.500 W
Water column	35 m / 5 l / min.
Tank capacity	12 l
Weight	131 kg
Dimensions (L x W x H)	1.100 x 455 x 1.000 mm

**Package includes:**

- Inverter
- Cooling unit
- Primary cable
- 10 l coolant

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1.2.0117

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## COOL 50 WATER COOLING UNIT, 230 V

Water cooling unit for use with the TETRIX 200 inverter and TIGTRONIC in conjunction with water-cooled welding tools.

### Technical data:

Supply voltage	230 V AC
Cooling system	F / IP 23
Weight	16.5 kg
Dimensions (L x W x H)	610 x 298 x 330 mm
Cooling capacity	1.000 W (1 l/min.)
Max. tank capacity	approx. 4 l
Water column	35 m / 5 l / min.

### Package includes:

- Water cooling unit
- Inverter / cooling unit connection cable
- 5 l coolant

## COOL 50 WATER COOLING UNIT, 115 V

As for COOL 50 water cooling unit, but for 115 V input voltage.



## EVO COOL WATER COOLING UNIT (AUTORANGE)

Water cooling unit for use with the EVO 200 WP or LITE controller in conjunction with water-cooled welding tools.

### Technical data:

Supply voltage	110 – 240 V (1.4 – 0.6A)
Cooling system	F / IP 23
Weight (without coolant)	10.5 kg
Dimensions (L x W x H)	500 x 340 x 190 mm
Cooling efficiency	1.000 W (1 l/min)
Max. tank capacity	approx. 4 l
Max. flow rate	4 l/min
Max. outlet pressure	3.5 bar
Mains frequency	50 / 60 Hz



EVO Cool mounted on  
EVO 200 WP

- Standalone or continuous operation possible
- Temperature-regulated fan control
- Water flow feedback through in-built flowmeter

### Package includes:

- Water cooling unit
- Inverter / cooling unit (permanently mounted) connection cable
- Fasteners for EVO series
- 4 l blueCool 10i-5 coolant



## blueCool 10i-5 COOLANT

Frost protection down to -10 °C (PU = 5 l canister)

# ACCESSORIES

PRESSURE REGULATORS, GAS HOSE, GROUND CABLES



Item number



Purging

TIG (orbital)

The cylinder pressure regulator with manual connection reduces the cylinder pressure of compressed gases and gases dissolved under pressure of max. 200 bar (300 bar on request) to a pressure corresponding to the flowmeter. The desired flow rate in l/min can be constantly set on the flowmeter.

**Important:** This pressure regulator has a constant working pressure of 2.5 bar to protect the orbital system's gas flow sensor.

Control range:

Twin flow 1 – 15 l/min, 3 – 25 l/min

Triple flow 1 – 15 l/min, 3 – 25 l/min, 5 – 50 l/min



Purging

TIG (manual)

TIG (orbital)

**SPECIAL ARGON PRESSURE REGULATOR** with twin flowmeter, brass  
200 BAR  
H<sub>2</sub>-GASES, 200 BAR  
300 BAR

**SPECIAL ARGON PRESSURE REGULATOR** with triple flowmeter, brass  
200 BAR  
300 BAR



**FOR RBK APPLICATIONS:**

**SPECIAL ARGON PRESSURE REGULATOR** with single flow meter 15l/min, brass, 200 bar, with pneumatic connection option RBK 60 S (intermediate pressure 0-6.5 bar)



**200 / 10 BAR ARGON PRESSURE REGULATOR**  
(for RBK 60 S pneumatic connection)



**0.5 - 10 BAR COMPRESSED AIR PRESSURE REGULATOR**  
incl. mounting bracket and inlet and outlet coupling  
(for RBK 60 S pneumatic connection)

Pressure regulators with different connections and for other gas types or nickel-plated version available on request.



**GAS HOSE**, 3 m



**GROUND CABLE**, 5 m, 35 mm<sup>2</sup>, up to 300 A



**GROUND CABLE**, 5 m, 50 mm<sup>2</sup>, up to 500 A

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