EWR. The electronic welding regulator

This system saves shielding gas at the same time as providing better gas coverage! Reliable, defined and verifiable.

**Advantages that speak for themselves:**
- High gas saving
- Increased process stability
- Reduced handling costs
- Standardised processes

**Gas savings up to 60%**

Weld more efficiently – optimise shielding gas consumption ...

Optimal use of all resources is essential for an economical and efficient welding process. However, options for optimisation of shielding gas consumption are often given too little consideration – primarily because of the difficulty of attributing and measuring them, as gases are not visible and tangible in the process.

ABICOR BINZEL offers the electronic shielding gas regulator EWR (Electronic Welding Regulator).
**Electronic Welding Regulator “EWR”**

*System Overview & Technical Data*

"Plug & Play"

The installation of the EWR is done within minutes.

Save gas – quick and easy!

**Installation of the EWR:**

- Connection of the EWR between the gas supply and the power source
- Connection of the measuring shunt on the negative pole cable (or positive pole of the cable assembly)
- Ensure power supply connection
Technical data:

**EWR BASIC/PRO MIG/MAG**

- **Weight:** approx. 1.3 kg
- **Measurements LxWxH:** 118x148x58 mm
- **Electrical connection:** 24 V DC, 450 mA – 750 mA
- **Outgoing idle flow:** 0.2–2.0 bar: 5.0–23.0 l/min
- **Flow rate:** 5.0–30.0 l/min
- **In-/Outgoing pressure:** 10.6–63.6 cfh

**In-/Outgoing pressure:**

The outgoing dynamic pressure can be set in a area of 0.2 to 2.0 bar in 0.2 bar steps.

The max. adjustable output dynamic pressure is corresponding to the input pressure minus 1.5 bar.

If pressure is below 2 bar the EWR shuts off.

**Working range of measuring shunts:**

- Shunt ↔ Working range
  - 150 A ↔ 45–150 A
  - 300 A ↔ 90–300 A
  - 500 A ↔ 150–500 A

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*Pen for touchscreen, USB memory stick, power supply unit and three measuring shunts (300 A & 500 A) are included in the scope of supply.*
Four methods = save four times!
The EWR electronic shielding gas regulator combines four innovative methods of gas regulation. By combining all four methods, your gas consumption during the welding process can be regulated and reduced by an average of 40% – ideally even by up to 60%. Alongside the gas saving, there are other positive effects, for example the safer gas coverage at the start of the welding process.

1st method:
Avoiding demand peaks on arc start
The EWR constantly regulates the gas flow, so no demand peaks occur even at the start of the welding process.

2nd method:
Adjustment of the shielding gas quantity in relation to power consumption
With the aid of a measuring shunt, the EWR records the current welding current and regulates the gas supply accordingly.
3rd method: 

**Extremely quick frequency valves**

Due to frequency valves, which react extremely quickly, there is no loss of gas between opening and closing of the valve.

4th method: 

**Pulsing of the shielding gas at 60 Hz**

The 60 Hz pulsing provides better gas coverage at the same gas flow rate.

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**Legend:**

- Gas consumption without EWR
- Gas consumption with EWR
- No loss of gas in between single starts

Comparison of the gas consumption with and without the EWR system.
Electronic Welding Regulator “EWR”
Order Options & Accessories

Scope of supply
EWR BASIC and EWR PRO

Complete package

<table>
<thead>
<tr>
<th>Type</th>
<th>Part-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EWR BASIC MIG/MAG complete package</td>
<td>514.0107.1</td>
</tr>
<tr>
<td>incl. power supply without key lock (230 V)*, measuring shunt (300 A/5 m)</td>
<td></td>
</tr>
<tr>
<td>EWR PRO MIG/MAG complete package</td>
<td>514.1036.1</td>
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<tr>
<td>incl. power supply without key lock (230 V)*, measuring shunt (300 A/5 m)</td>
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<tr>
<td>EWR BASIC MIG/MAG complete package</td>
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<tr>
<td>incl. power supply without key lock (230 V)*, measuring shunt (500 A/5 m)</td>
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<tr>
<td>EWR PRO MIG/MAG complete package</td>
<td>514.1020.1</td>
</tr>
<tr>
<td>incl. power supply without key lock (230 V)*, measuring shunt (500 A/5 m)</td>
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</tr>
<tr>
<td>EWR PRO TIG complete package</td>
<td>514.1021.1</td>
</tr>
<tr>
<td>incl. power supply without key lock (230 V)*, measuring shunt (150 A/3 m)</td>
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</tr>
</tbody>
</table>
| *An alternative power supply with key lock is also available with all complete packages instead of the standard power supply without key lock.

Accessories

<table>
<thead>
<tr>
<th>Type</th>
<th>for version</th>
<th>Part-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring shunt 150 A/5 m</td>
<td>BASIC, PRO</td>
<td>514.0192.1</td>
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<tr>
<td>Measuring shunt 300 A/5 m</td>
<td>BASIC, PRO</td>
<td>514.1035.1</td>
</tr>
<tr>
<td>Measuring shunt 500 A/5 m</td>
<td>BASIC, PRO</td>
<td>514.1007.1</td>
</tr>
<tr>
<td>EWR holder</td>
<td>BASIC, PRO</td>
<td>514.1008.1</td>
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<tr>
<td>Power supply standard</td>
<td>BASIC, PRO</td>
<td>514.1023.1</td>
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<tr>
<td>Power supply with key lock¹</td>
<td>BASIC, PRO</td>
<td>514.1014.1</td>
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<tr>
<td>Protective cap EWR</td>
<td>BASIC, PRO</td>
<td>514.1029.1</td>
</tr>
</tbody>
</table>

Options for EWR PRO MIG/MAG

<table>
<thead>
<tr>
<th>Option</th>
<th>for version</th>
<th>Part-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EWR gas controller (gas flow control unit)²</td>
<td>PRO</td>
<td>514.1004.1</td>
</tr>
<tr>
<td>EWR display³</td>
<td>PRO</td>
<td>514.1013.1</td>
</tr>
<tr>
<td>Signal light⁴</td>
<td>PRO</td>
<td>514.0126.1</td>
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<tr>
<td>Splitter⁵</td>
<td>PRO</td>
<td>514.0143.1</td>
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</tbody>
</table>

¹ Prevents unwanted changing of the default settings
² Signal output to the robot at a disturbance
³ Visualizes the current gas consumption (l / min) during the welding process and shows error messages
⁴ Optical signal output at a disturbance
⁵ Enables the use of two options with EWR PRO MIG/MAG
**Electronic Welding Regulator “EWR”**

**Welding Monitor**

The welding monitor serves to measure the gas flow and current strength. The industrial computer based on Windows® XP works stand-alone, i.e. completely independently of the EWR. It is installed between the gas supply and the power source/EWR.

The measuring results transmitted by the measuring shunt are displayed in the form of diagrams and can be saved for the purposes of documentation. The data can be easily transferred via the integrated USB interface.

**Complete package**

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<th>Type</th>
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<tbody>
<tr>
<td>Welding Monitor incl. touch-stick, measuring shunt 150 A/5 m, 300 A/5 m and 500 A/5 m, power supply, USB memory stick and transport case</td>
<td>514.1001.1</td>
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