**DC POWER SUPPLY**

**POWER STATION pe5910-W**

| Output power: | max. 200kW |
| DC current: | max. 10000A / 2x 5000A (at 20V) |
| DC voltage: | max. 1000V (at 200A) |

**Typical applications:**
- Chrome plating
- Barrel plating
- Anodizing/Aluminium colouring
- Rack plating

Water cooled DC power supply in switch mode technology, designed for the direct installation at the electroplating tank with minimized floor space.

**Extendable power range**

The power range can be extended by wiring the DC outputs of several cabinets in parallel (sum current) or in serial (sum voltage).

**Characteristic values**

- **Linearity inaccuracy:**
  - for amperage < 1 %
  - for voltage < 0.5 % (depending on regulation mode)
- **Ripple** less than < 1 % RMS
- **Efficiency** typical > 90 %
- **Powerfactor** 0,95
- **Constant current and voltage control (optional: power regulation)**
- **Inrush current protection**
- **Over temperature protection**
- **Pulse operation optional**
- **Mains supply:** standard 3 x 400 V +/- 10 % / 50-60 Hz (other voltages on request)
- **Optional with integrated pole changer (max. 15V, other on request)**

**Cooling**

- Water cooled / cooling water specification: see page 2
- Ambient temperature 40°C (other on request)
- Stainless steel cooling system, over temperature protected
- Cooling water connections are located in the plinth

**Design**

- Compact Rittal TS cabinet; protection grade: IP54
- Powder coated, RAL 7035
- Mains supply below in cabinet
- Cooling water connection in the plinth, 1/2" connections (water pressure: 2-5 bar)
- DC output bus bars:
  - Low voltage outputs up to 50V on top of the cabinet
  - Voltages above 50V: touch safe design
- Mains power switch, fuses and sub distributor optional available in separate cabinet.
- Mouldes-case circuit breaker with short-circuit protection, low-voltage release and overload protection can be installed as option.
- Dimensions (W x H x D) 800 x 2200 x 600mm incl. plinth

**Cooling water specification:**

- Over temperature protected
- Water supply: 2-5 bar
- Water flow: 3.5 m³/h

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**Values Standard sizes – DC output**

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<tbody>
<tr>
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<tr>
<td>DC voltage</td>
<td>10 V</td>
</tr>
<tr>
<td>Mains supply</td>
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<td>Weight</td>
<td>approx. 450 – 550 kg</td>
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Control

Standard: peRB-interface
Optional: external control via analog signals, also with integrated isolation amplifier
Signals: 0-10V
0-1V
4-20mA
0-20mA (other on request)

Control unit pe280 for the controlling of DC power supplies of
Designed for electroplating applications
Large 3-line LCD-display, keypads for easy programming/selection
Current and voltage infinitely adjustable by UP / DOWN buttons
Current and voltage preset
Ampere-hour counter (totalizer)
Protection grade: IP54
Ambient temperature max. 40°C

Optional available functions

Preset counter, dosage counter *
Ramp function (start / stop ramp)
Timer function for ON / OFF *
Voltage / current alarm *
Operating hours counter
Chopper timer (pulse-capable rectifier type requested)
Pole changer function (mechanical / electronic) *
Programmable DC steps (14 individual steps) *
Extern ON
* Indication / alarm output

Control via: RS485, PROFIBUS, TCP/IP (other on request)

Cooling water specification

For the water cooling system, city water with the following specifications should be used:

<table>
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<th>Parameter</th>
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<tr>
<td>pH Value</td>
<td>7.0 - 8.0 und TOC &lt; 1,5 mg/l</td>
</tr>
<tr>
<td>Hardness</td>
<td>&lt;=1,3 mmol/l (&lt;=7°dH)</td>
</tr>
<tr>
<td>Chloride</td>
<td>&lt;=100 mg/l</td>
</tr>
<tr>
<td>Inlet temperature</td>
<td>18-26°C</td>
</tr>
<tr>
<td>Sulfate</td>
<td>&lt; 240 mg/l</td>
</tr>
<tr>
<td>Nitrate</td>
<td>&lt; 50 mg/l</td>
</tr>
<tr>
<td>Sodium</td>
<td>&lt; 150 mg/l</td>
</tr>
<tr>
<td>Water pressure</td>
<td>&gt; 2-5 bar</td>
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To operate this rectifier, and to keep the specified values of the cooling water, a closed cooling system is recommended.
The primary goal of these values is to eliminate internal condensation. Depending on the region and the environmental circumstances the units are operated it might become necessary to depart from above values!