The Ultrapure 2000 breathing air systems are purification units based on adsorption dryers Ultrapac 2000 to supply breathing air in excess of all relevant international standards and medical prescriptions. The purification consists of several stages: Compressed air is led through the inlet of the unit (J) and across the prefilter (2). At this stage, the air is cleaned from particles and condensate. The condensate is removed via a membrane condensate drain (5). The following desiccant dryer reduces the water vapour content of the compressed air down to a pressure dew point of –40°C (equivalent to a remaining water content of 0.11 g/m³). In the following purification stages (SP, AK, OX) (9) the content of CO₂ is adsorbed to a level far below 500 ppm the content of SO₂ below 1 ppm and the content of NOₓ below 2 ppm. In the AK stage oil vapours, hydrocarbons, taste and odours are adsorbed to a level far below 0.003 mg/m³. In the OX stage a catalyst converts CO to CO₂ and thereby reduces the carbon monoxide level down below 5 ppm.

The final particle filter (3) removes all particles which might be carried over from the adsorption and/or catalyst stages.

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Ultrapure 2000 Standard Midi / Superplus Midi

### Features Ultrapure 2000:
- Purification package including adsorption dryer, CO₂-, NOₓ- and SO₂ removal, pre-, afterfilter and automatic condensate drain
- Guaranteed and validated separation efficiency
- Adsorbent in cartridges
- Compact, space saving design
- Component exchange display
- Unique Multifunction Block

### Benefits:
- Turnkey system, no additional installation costs; all components from one hand, therefore perfect technical match
- Breathing air quality in excess of all relevant international standards, as e.g. Pharmacopée Européenne; DIN EN 12021 (DIN 3188); EN 737-3; BS4275; ANSI/CGA G.7.1; Z180, 1 M8S; AS2299-1979; NZL5813
- All moving parts and all electronic components integrated in a function block, therefore easy and efficient maintenance

### Features Ultrapure 2000 Superplus:
- Intermittent operation standard
- Load dependent control
- Self-Diagnosis-System
- Text Display
- Info-Channel
- Economizer-Function

### Benefits:
- Link between dryer and compressor possible on central applications, therefore saving of regeneration air
- Adjustment of adsorption cycles to the actual inlet water load, therefore saving of regeneration air and reduction of operating cost
- Sensor-controlled monitoring of regeneration air flow, therefore without-gap-monitoring of dryer functions and of system pressure
- Display of all operating status, of fault indication and maintenance intervals in clear text messages
- Serial interface for transmission of alarm- and maintenance messages
- Online calculation of optimum exchange point of filter elements by continuous evaluation of energy cost versus cost of replacement filter element

### Air quality related to standard inlet conditions:
- Particles: < 1 µm
- Residual oil content: < 0.01 mg/m³
- Oil vapour and hydrocarbons: < 0.003 mg/m³
- Water vapour: PDP - 40°C (= 0.11 g/m³)
- CO₂: < 500 ppm
- CO: < 5 ppm
- SO₂: < 1 ppm
- NOₓ: < 2 ppm
- Taste and odours: taste and odour free

### Declaration of conformity:
- acc. to 73/23/EC
- 97/23/EC

### Table:

<table>
<thead>
<tr>
<th>Ambient temperature</th>
<th>Vcorr = ( \frac{V_{nom}}{f} )</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>25°C</td>
<td>0.69</td>
<td>Vcorr = 50 m³/h, Inlet temperature = 30°C, Operating pressure = 10 bar (g)</td>
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<tr>
<td>30°C</td>
<td>0.69</td>
<td>( \frac{V_{nom}}{f} ) = 50 m³/h, 1.50 = 33,33 m³/h, Calculated dryer size: Ultrapure 2000, type 0035</td>
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<tr>
<td>35°C</td>
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<td>40°C</td>
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<td>45°C</td>
<td>0.38</td>
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<tr>
<td>50°C</td>
<td>0.30</td>
<td></td>
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</tbody>
</table>

### Medium:
- Compressed air

### Operation pressure:
- min. 4 bar (g), max. 16 bar (g)

### Medium temperature:
- min. 5 °C, max. 50 °C

### Ambient temperature:
- min. 4 °C, max. 50 °C

### Compressed air consumption:
- 17% of the rated flow, in average

### Power supply:
- 230 V/50 - 60 Hz AC;
- 110 V/50 - 60 Hz AC
- 24 V DC; 24 V AC on request

### Power consumption:
- approx. 4 W

### Calculated dryer size:
\( \frac{V_{nom}}{f} \) = 50 m³/h, 1.50 = 33,33 m³/h, Calculated dryer size: Ultrapure 2000, type 0035
Ultrapure 2000 Standard Midi
Ultrapure 2000 Superplus Midi

<table>
<thead>
<tr>
<th>Type</th>
<th>G &quot;</th>
<th>A mm</th>
<th>B mm</th>
<th>C mm</th>
<th>D mm</th>
<th>E mm</th>
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<td>0035</td>
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