ResOx Residual Oxygen Measuring System

Attractive price-performance ratio
Quick measurement readings (approx. 20 s)
Slim sensor housing enables easy handling, hose length allows freedom of movement
With data logger: Measured values can be analysed on the PC with USB adapter and software (accessories)
Watertight (IP 65 / IP 67)
Pressure compensation

Available in two versions:

ResOx 5695-H
Residual oxygen measuring system
(for gases with elevated CO₂ percentage, sensor GOEL 370)

ResOx 5695-L
Residual oxygen measuring system
(for precise measuring in gases with more than 35 % vol. or less than 0.3 % vol. O₂, sensor GOEL 381)

General information

New measuring system with new gas pump for greater measuring convenience – can now also be used in rigid packages and packages with low quantities of gas.
The filter membrane protects the sensor from suctioning in particles or fluid unintentionally.

Use

For quality control of MAP food product packages and comparable applications

Scope of delivery

Ready-to-operate system: Measuring device GMH 5695, incl. battery, sensor housing with pressure connection, incl. sensor element GOEL 370 or 381, gas pump GS 150, incl. battery, operating manual, as well as brief application instructions, hoses/T-piece, 2 membrane filters, 2 GOG-N puncture needles Ø 0.9 mm, 1 GOG-B set (45 pcs. adhesive seal) for rigid as well as soft packaging. Delivery in the practical GKK 3700 case.

Technical data

Measuring channels: Oxygen, temperature, air pressure
Measurement ranges O₂: 0.0 … 100.0 % vol. O₂ or display in hPa O₂/mmHg O₂
Temperature: 0.0 … 50.0 °C
Air pressure: 300 … 5000 hPa (sensor: 500 … 2000 hPa)
Additional functions: Min/Max function – for convenient measuring of the final value
Pressure compensation in the gas path – negative pressure in the package/on the sensor is compensated
Applicable sensors: GOEL 370, 381
Connections on the device
Sensor: 7-pin bayonet
Pressure port for hoses with inside Ø 4 mm
Output/ext. supply: OUT socket:
– Interface 38400 baud
– Analogue output 0–1 V, adjustable
– Ext. supply 5 V
Calibration: Quick calibration on air at the push of a button or 2-point/3-point calibration (air +0 % and 100 %)
GLP: Calibrating interval, calibration history
Data logger: Automatic: 10,000 data records, selectable cycle: 1 s … 60 min
Manual: 1000 data records with measuring point input
Pump: Battery operated membrane pump with input/output port
Max. negative pressure: Approx. –360 mbar
Delivery rate: With membrane filter: approx. 80 ml/min
Connection: Pressure port for hoses with inside Ø 4 mm
Additional features: Device and sensor are watertight (IP 65, IP 67), protective armouring, backlighting
### Data sheet

#### Ordering code

**ResOX 5695**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Device</td>
</tr>
<tr>
<td><strong>H</strong></td>
<td>ResOX 5695-H residual oxygen measuring system for gases with elevated CO₂ percentage, sensor GOEL 370</td>
</tr>
<tr>
<td><strong>L</strong></td>
<td>ResOX 5695-L residual oxygen measuring system for precise measuring in gases with more than 35 % vol. or less than 0.3 % vol. O₂, sensor GOEL 381</td>
</tr>
</tbody>
</table>

#### Accessories and consumable items

1. **GOG-A**, Art. no. 603043
   - Adhesive cellular foam seals for soft packages (40 pcs.)
2. **GOG-B**, Art. no. 601013
   - Adhesive seals for rigid as well as soft packages (45 pcs.)
3. **GOG-N**, Art. no. 603047
   - Puncture needle, Ø 0.9 mm (5 pcs.)
4. **Membrane filter**, Art. no. 601599
   - Membrane filter prevents unintentional suctioning in of particles or fluid
5. **GS 150**, Art. no.: 610005
   - Gas pump for gas sampling
6. **GOEL 370**, Art. no.: 601490
   - Spare sensor element, long-life, for gases with elevated CO₂ percentage
7. **GOEL 381**, Art. no.: 6010035
   - Spare sensor element, precise also for gases with more than 35 % or less than 0.3 % vol. O₂
8. **GAK 5100**, Art. no.: 601095
   - Interface adapter
9. **GSOFT 3050**, Art. no.: 601336
   - Read-out software

#### Calibration service with calibration certificate ISO-WPO3

#### Quick measurement

- Apply adhesive seal
- Puncture with needle
- Switch on the pump
- Read the minimum value after approx. 20 s

### Components

<table>
<thead>
<tr>
<th>No.</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Measuring device GMH 5695 incl. battery</td>
</tr>
<tr>
<td>2.</td>
<td>Sensor housing with pressure connection, incl. GOEL sensor</td>
</tr>
<tr>
<td>3.</td>
<td>Gas pump GS 150 incl. battery</td>
</tr>
<tr>
<td>4.</td>
<td>Hose set</td>
</tr>
<tr>
<td>5.</td>
<td>Membrane filter</td>
</tr>
<tr>
<td>6.</td>
<td>GOG-N puncture needles, diameter 0.9 mm</td>
</tr>
<tr>
<td>7.</td>
<td>GOG-B: 45 pcs. adhesive seals</td>
</tr>
</tbody>
</table>

### Sensor element

<table>
<thead>
<tr>
<th>Sensor element</th>
<th>GOEL 381 (Standard for ResOx 5695-L)</th>
<th>GOEL 370 (rev 2) (Standard for ResOx 5695-H)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range of application</td>
<td>Protective gases in general, precise measurements with extremely low measuring value (e.g. &lt;0.5 % vol. O₂) and over 35 % vol. O₂</td>
<td>Protective gases with high CO₂ concentration and oxygen content &lt;35 % vol. O₂</td>
</tr>
<tr>
<td>Continuous use at high CO₂ values</td>
<td>–</td>
<td>+++</td>
</tr>
<tr>
<td>Brief use in CO₂</td>
<td>+</td>
<td>+++</td>
</tr>
<tr>
<td>Use up to 100 % vol. O₂</td>
<td>+++</td>
<td>–</td>
</tr>
<tr>
<td>Suitability for measuring under 0.5 vol.% O₂</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>Speed/T90</td>
<td>++/&lt;10 s</td>
<td>++/&lt;10 s</td>
</tr>
<tr>
<td>Service life/hours per vol.% O₂/on air</td>
<td>+/-500,000 % h/&gt;2 years</td>
<td>++/1,200,000 % h/max. 6 years</td>
</tr>
<tr>
<td>Measuring range</td>
<td>O₂ partial pressure 0 ... 1100 hPa</td>
<td>O₂ partial pressure 0 ... 350 hPa</td>
</tr>
<tr>
<td>O₂ concentration</td>
<td>0.0 ... 100.0 % vol. O₂ (reduced accuracy above this concentration)</td>
<td>0.0 ... 35.0 % vol. O₂</td>
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</tbody>
</table>