

# OBL Sensor Specification

## Type: OOD103

### Änderungsregister / Change log

| Revision | Date       | Author       | Description                                                                                                                                                                                                                                                                      |
|----------|------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0        | 04/2016    | Maik Lingies | Create                                                                                                                                                                                                                                                                           |
| 1        | 07/2019    | Maik Lingies | Change                                                                                                                                                                                                                                                                           |
| 2        | 08.12.2020 | Maik Lingies | Start with Revisions Log<br>Add Label:<br>OOD103: E1002856 (REF 8010060 / OSGA-20)<br>remove Label:<br>OOD103: 1001570 (REF 8010015 / UDT-22)<br>OOD103: E1002736 (REF 8010018 / M3S),<br>OOD103: E1001570 (REF 8010019 / SG-22),<br>Change old article number to new SAP number |
| 3        | 17.01.2024 | Maik Lingies | Add new Label<br>OOD103: E1002931 (REF 8010029 / mCCR)                                                                                                                                                                                                                           |
| 4        | 22.01.1025 | Maik Lingies | Change Label for: OOD103: E1002736 (REF 8010018 / M3S)                                                                                                                                                                                                                           |
| 5        | 24.03.2025 | Maik Lingies | Change Label for: OOD103: E1002736 (REF 8010018 / M3S) change prefix                                                                                                                                                                                                             |
|          |            |              |                                                                                                                                                                                                                                                                                  |
|          |            |              |                                                                                                                                                                                                                                                                                  |
|          |            |              |                                                                                                                                                                                                                                                                                  |

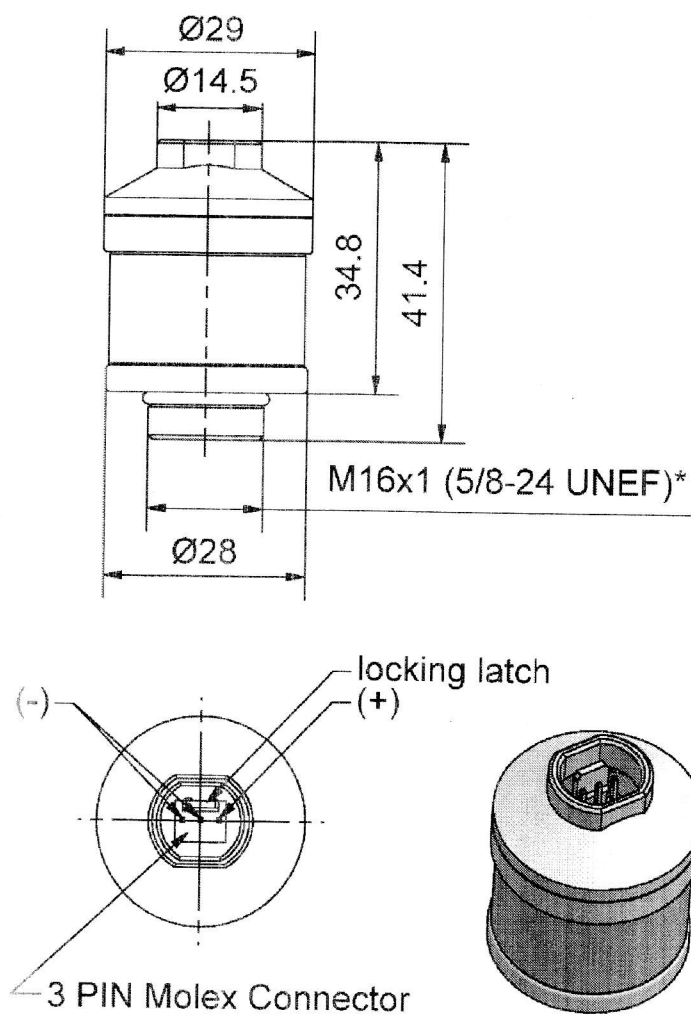
**Product Specification****Oxygen Sensor****OOD103****Confidential - For only Vandagraph****Honeywell**

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|                                                    |                                                                                                            |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Measurement Range:                                 | 0 % ... 100 % oxygen                                                                                       |
| Output in Ambient Air:                             | 9 to 13 mV                                                                                                 |
| Electrical Interface:                              | 3 pin (Molex 22-11-1031)                                                                                   |
| Repeatability:                                     | < 1% vol. O <sub>2</sub> @ constant temperature and pressure                                               |
| Linearity error:                                   | 0.1 to 1.0 bar ppO <sub>2</sub> < 3% relative                                                              |
|                                                    | 0.1 to 2.5 bar ppO <sub>2</sub> < 5% relative (at ppO <sub>2</sub> > 1.0 bar after 1 h equilibration time) |
| Response time:                                     | < 5 sec. to 90% of final value                                                                             |
| Zero Offset Voltage:                               | < 0.5% oxygen reading in 100% nitrogen @ 25°C after 36 seconds                                             |
| Cross Interference:                                | < 0.5% vol. O <sub>2</sub> response to: 5% CO <sub>2</sub> balance N <sub>2</sub>                          |
| Influence of Humidity:                             | - 0.03% rel. per % RH at 25°C                                                                              |
| Pressure Range:                                    | 600 to 2500 mbar                                                                                           |
| Influence of Mechanical Shock:                     | < 1% relative after a fall from 1m                                                                         |
| Operating Temperature:                             | 0°C to 50°C                                                                                                |
| Temperature Compensation:                          | Built-in NTC compensation                                                                                  |
| Effect of Temperature Compensation (steady state): | Between 0°C and +50°C: 5% relative error                                                                   |
| Operating Humidity:                                | 0 - 99% RH non-condensing                                                                                  |
| Long Term Output Drift:                            | < 1% vol. oxygen per month                                                                                 |
|                                                    | Typically < -15% relative over lifetime                                                                    |
| Storage Temperature:                               | -20°C to +50°C                                                                                             |
| Recommended Storage:                               | +5°C to +15°C                                                                                              |
| Recommended Load:                                  | ≥10 kOhms                                                                                                  |
| Warm-Up Time:                                      | < 30 minutes, after replacement of sensor                                                                  |
| Nominal Sensor Lifetime:                           | 500,000% vol oxygen hours                                                                                  |
| Weight:                                            | Approximately 28 grams                                                                                     |
| Warranty Period:                                   | 15 months (including 3-month shelf life)                                                                   |
| Part No.:                                          | OOD103: E1001570 (REF 8010000 / VST2200)                                                                   |
|                                                    | OOD103: E1002733 (REF 8010006 / CR22D)                                                                     |
|                                                    | OOD103: E1002734 (REF 8010008 / NaNM01)                                                                    |
|                                                    | OOD103: E1002735 (REF 8010014 / K-22D)                                                                     |
|                                                    | OOD103: E1002736 (REF 8010018 / M3S)                                                                       |
|                                                    | OOD103: E1002737 (REF 8010020 / 22D)                                                                       |
|                                                    | OOD103: E1002738 (REF 8010021 / DST-2200)                                                                  |
|                                                    | OOD103: E1002749 (REF 8010026 / MSD100)                                                                    |
|                                                    | OOD103: E1002856 (REF 8010060 / OSGA-20)                                                                   |
|                                                    | OOD103: E1002931 (REF 8010029 / mCCR)                                                                      |

All specifications are applicable at standard conditions: 1013 mbar, 25°C dry ambient air.

<sup>+</sup>  
Mechanical draft:



General tolerances ISO 2768-c

\*Intermediate thread: Metric / Unified Extra Fine

## Product Specification

### Oxygen Sensor

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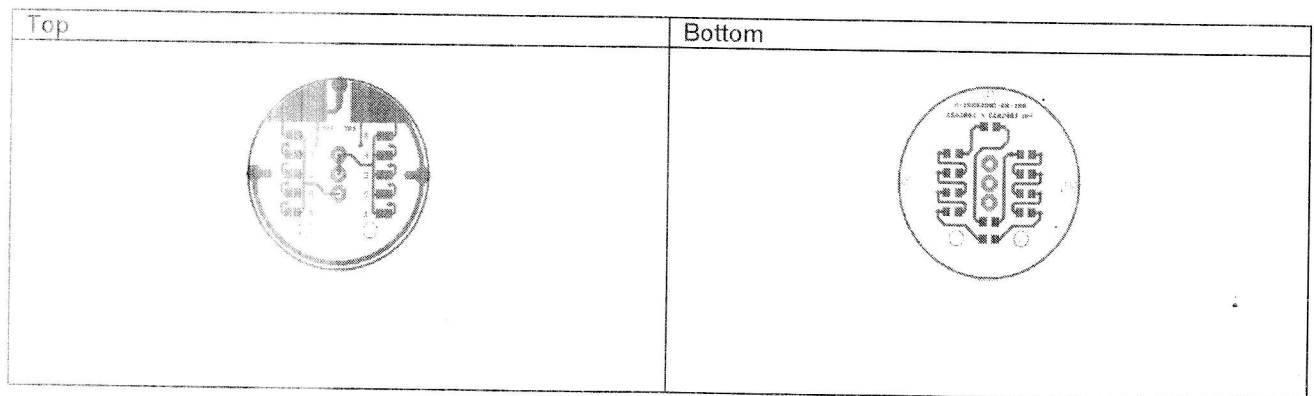
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#### Customized Design Specification:

- Integration of additional Zitex membrane in sensor gas diffusion way
- Conformal coating on the sensor PCB with PLASTIK 70
- 2 x 2mm holes drilled in the sensor PCB
- No information about EnviteC on PCB top / bottom sides, information for ordering process and traceability only.

#### PCB Layout:



#### Product Labeling

| OOD103: E1001570 (REF 8010000 / VST2200)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Label on Sensor (90x15)</b><br> <b>Vandagraph Sensor Technologies</b> <b>VST2200 Oxygen Sensor</b><br>15 Station Road, Cross Hills<br>Keighley, West Yorkshire<br>BD20 7DT, United Kingdom<br>    2025-01 S/N VS123456  | <b>Label on Blister- Card (63,5x46,6)</b><br> <b>Vandagraph Sensor Technologies</b><br>e-mail: info@vandagraphst.com<br>15 Station Road, Cross Hills<br>Keighley, West Yorkshire<br>BD20 7DT, United Kingdom<br>Tel. +44 (0)1535 634900<br><b>VST2200 Oxygen Sensor</b><br> 2025-01  <br>S/N VS123456    <br><small>This oxygen sensor contains caustic liquid, in case of leakage avoid contact with eyes and skin. Do not puncture or staple this bag. Do not remove the oxygen sensor from this bag until ready to use. Depending upon the ambient conditions the oxygen sensor may require 30 minutes to reach signal stability after installation.</small> |
| OOD103: E1002733 (REF 8010006 / CR22D)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Label on Sensor (90x15)</b><br> <b>BrEvo bvba</b><br>CR22D - rEvo OXYGEN SENSOR<br>S/N 10612345<br>Web: <a href="http://www.info@revo-rebreathers.com">www.info@revo-rebreathers.com</a><br>WARNING: CONTAINS CORROSIVE MATERIAL<br><div>INSTALL SENSOR PRIOR TO:<br/>February 2012</div> <div>Follow manufacturers<br/>recommendations for<br/>sensor replacement</div>                                                                                                                                                                                                                                                                               | <b>Label on Blister- Card (63,5x46,6)</b><br> <b>BrEvo bvba</b><br>CR22D - rEvo OXYGEN SENSOR<br>SERIAL NO.: 10612345<br><b>WARNING !</b><br><ol style="list-style-type: none"><li>1. Sensor contains corrosive electrolyte.</li><li>2. Do not puncture or remove sealed membranes.</li><li>3. Use eye and hand protection if sensor leaks.</li><li>4. Flush and wipe electrolyte from all surfaces.</li><li>5. Electrolyte can be harmful or fatal if swallowed.</li><li>6. Return sensors damaged in transit to factory.</li><li>7. Do not push on either end of sensor.</li><li>8. Store at reduced temperature to extend life.</li></ol> <div>INSTALLATION AND REPLACEMENT OF OXYGEN SENSORS:<br/>PLEASE REFER TO YOUR MANUFACTURERS MANUAL FOR<br/>RECOMMENDATIONS AND INSTALLATION INSTRUCTIONS.</div> <div>INSTALL SENSOR PRIOR TO:<br/>February 2012</div>                                                                                                                                                                                                                                                                                                                                                                                                               |

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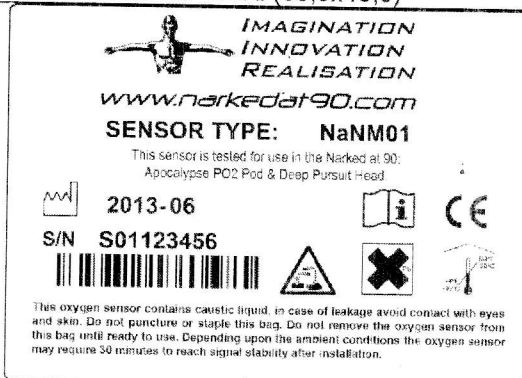
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OOD103: E1002734 (REF 8010008 / NaNM01)

Label on Sensor (90x15)

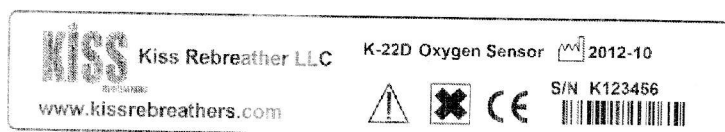


Label on Blister- Card (63,5x46,6)



OOD103: E1002735 (REF 8010014 / K-22D)

Label on Sensor (90x15)



Label on Blister- Card (63,5x46,6)

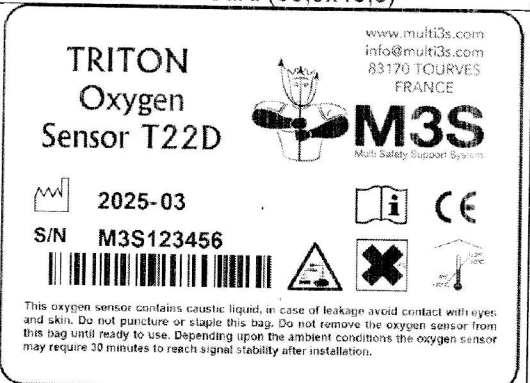


OOD103: E1002736 (REF 8010018 / M3S)

Label on Sensor (90x15)

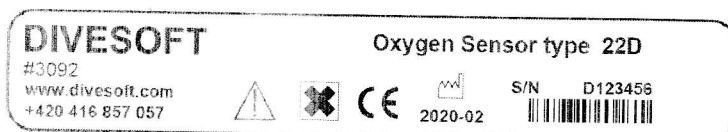


Label on Blister- Card (63,5x46,6)

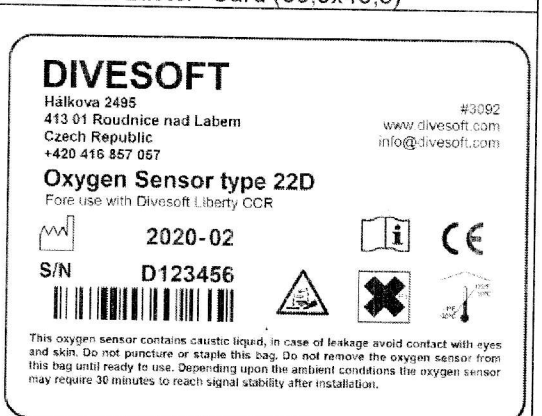


OOD103: E1002737 (REF 8010020 / 22D)

Label on Sensor (90x15)



Label on Blister- Card (63,5x46,6)



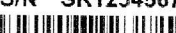
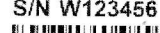
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| OOD103: E1002738 (REF 8010021 / DST-2200)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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|  <div> <div>Divex3me</div> <div>www.divex3me.com</div> </div> <div>     <div>2016-01</div> </div> <div> <div>DST-2200</div> <div>Oxygen Sensor</div> <div>S/N D123456</div>  </div>                                                        |  <div> <div>Divex3me</div> <div>Via Valvassori Peroni</div> <div>20133 Milano</div> <div>Email: contact@divex3me.com</div> <div>www.divex3me.com</div> </div> <div> <div>DST-2200 Oxygen Sensor</div> <div>  <div>2016-01</div> </div> <div> <div>S/N D123456</div>  </div> <div>    </div> </div> <p>This oxygen sensor contains caustic liquid. In case of leakage avoid contact with eyes and skin. Do not puncture or staple this bag. Do not remove the oxygen sensor from this bag until ready to use. Depending upon the ambient conditions the oxygen sensor may require 30 minutes to reach signal stability after installation.</p>                                                                                                                                                   |
| OOD103: E1002749 (REF 8010026 / MSD100)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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|  <div> <div>www.sharkrebreathers.com</div> </div> <div>     <div>2019-07</div> </div> <div> <div>MDS100 Oxygen Sensor</div> <div>S/N SR1234567</div>  </div>                                                                               |  <div> <div>Email: info@sharkrebreathers.com</div> <div>www.sharkrebreathers.com</div> </div> <div> <div>MDS100 Oxygen Sensor</div> <div>  <div>2019-07</div> </div> <div> <div>S/N SR1234567</div>  </div> <div>    </div> </div> <p>This oxygen sensor contains caustic liquid. In case of leakage avoid contact with eyes and skin. Do not puncture or staple this bag. Do not remove the oxygen sensor from this bag until ready to use. Depending upon the ambient conditions the oxygen sensor may require 30 minutes to reach signal stability after installation.</p>                                                                                                                                                                                                           |
| OOD103: E1002856 (REF 8010060 / OSGA-20)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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|  <div> <div>www.wittgas.com</div> <div>Tel +49 (0)2302 8901-0</div> </div> <div>     <div>2020-11</div> </div> <div> <div>OSGA-20 Oxygen Sensor</div> <div>S/N W123456</div>  </div>                                           |  <div> <div>www.wittgas.com</div> <div>WITT-Gasetechnik GmbH &amp; Co KG</div> <div>Salinger Feld 4-8</div> <div>58454 Witten</div> <div>Deutschland/Germany</div> <div>Tel +49 (0)2302 8901-0</div> <div>Fax +49 (0)2302 8901-3</div> <div>witt@wittgas.com</div> <div>www.wittgas.com</div> </div> <div> <div>OSGA-20 Oxygen Sensor</div> <div>  <div>2020-11</div> </div> <div> <div>S/N W123456</div>  </div> <div>    </div> </div> <p>This oxygen sensor contains caustic liquid. In case of leakage avoid contact with eyes and skin. Do not puncture or staple this bag. Do not remove the oxygen sensor from this bag until ready to use. Depending upon the ambient conditions the oxygen sensor may require 30 minutes to reach signal stability after installation.</p> |
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|  <div> <div>Salamandre mCCR Oxygen Sensor</div> <div>Air Research SARL</div> <div>15 rue des Alpes</div> <div>1211 Geneva - Switzerland</div> </div> <div>     <div>2023-11</div> </div> <div> <div>S/N AR123456</div>  </div> |  <div> <div>Salamandre mCCR Oxygen Sensor</div> <div>Air Research SARL</div> <div>15 rue des Alpes</div> <div>1211 Geneva - Switzerland</div> <div>e-mail: contact@air-research.ch</div> </div> <div> <div>Oxygen Sensor</div> <div>  <div>2023-11</div> </div> <div> <div>S/N AR123456</div>  </div> <div>    </div> </div> <p>This oxygen sensor contains caustic liquid. In case of leakage avoid contact with eyes and skin. Do not puncture or staple this bag. Do not remove the oxygen sensor from this bag until ready to use. Depending upon the ambient conditions the oxygen sensor may require 30 minutes to reach signal stability after installation.</p>                                                                                                             |

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**Honeywell**  
Healthcare Solutions GmbH

Customer Approval

Date:

4/4/25

Signature:

*J. N.*

