

# MULTI-FUNCTIONAL ANALYZER MAPY 4.0

## for O<sub>2</sub>, CO<sub>2</sub> or O<sub>2</sub>/CO<sub>2</sub>



reddot design award  
winner 2009

**Analyzing System for the monitoring of protective atmospheres in food packaging (MAP). For continuous analysis (inline) and also intermittent sampling via a needle e.g. from food packs. A flexible analyzer to guarantee quality and productivity of production processes. Available as a single or double analyzer for carbon dioxide and oxygen.**

### Benefits

- minimum sample gas required for analysis of smallest volumes (e.g. food packaging) fast response time
- fast measuring results of sampling
- simple to operate via touch-screen
- reliable steady measuring results and high accuracy through pressure compensation
- simple calibration of sensor
- permanent monitoring of set limit values
- alarm signals are given if the set limits are exceeded and a potential free contact operates to e.g. auto-stop your machine to avoid quality problems
- easy to clean stainless steel housing for maximum hygiene, splash-proof
- USB connection for file transfer by USB memory stick
- Ethernet connection for network integration
- internal audible alarm
- measured data storage
- administration of product names
- user management for measurement personalization

### Options

- fully automatic calibration
- software GASCONTROL CENTER for recording of results (see separate data sheet)
- plug set for external connection of signals
- model for higher inlet pressures
- bar code scanner for product names or user selection

### Equipment selection

| Applications | Analysis            | Gases          |                 |                                 | Type of equipment             |
|--------------|---------------------|----------------|-----------------|---------------------------------|-------------------------------|
|              |                     | O <sub>2</sub> | CO <sub>2</sub> | O <sub>2</sub> /CO <sub>2</sub> |                               |
| Food         | Sampling            |                |                 |                                 |                               |
|              | Continuous Analysis |                |                 |                                 |                               |
| •            | •                   | •              | •               | •                               | MAPY 4.0 S <sup>3)</sup>      |
| •            | •                   | •              | •               | •                               | MAPY 4.0 L <sup>3)</sup>      |
| •            | •                   | •              | •               | •                               | MAPY 4.0 S+L <sup>2) 3)</sup> |
| •            | •                   | •              | •               | •                               | MAPY 4.0 P <sup>1) 3)</sup>   |

<sup>1)</sup> without pump, with inlet pressure regulation

<sup>2)</sup> with 2 chemical sensors for oxygen

<sup>3)</sup> gases to be specified

All versions also available with zirconia measuring cell for O<sub>2</sub>. Please add Zr to the model type.

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## Measuring systems

| Gases    |   | Measuring system            | Measuring range                    | Repeatability                | Response time | Service life           |
|----------|---|-----------------------------|------------------------------------|------------------------------|---------------|------------------------|
|          | O <sub>2</sub> for sampling                             | chemical measuring cell     | 0-100%                             | ± 0.2%                       | 6 sec.        | approx. 2 years in air |
|          | O <sub>2</sub> for continuous analysis                  | chemical measuring cell     | 0-100%                             | ± 0.2%                       | 10 sec.       | approx. 3 years in air |
| optional | O <sub>2</sub> for sampling and for continuous analysis | zirconia measuring cell     | 0-100%                             | ± 0.1%                       | 4 sec.        | long lifetime          |
|          | O <sub>2</sub> for sampling and for continuous analysis | paramagnetic measuring cell | adaptable please indicate          | dependent on measuring range | 5 sec.        | long lifetime          |
|          | CO <sub>2</sub>   | infrared measuring cell     | 0-30%<br>0-100%<br>please indicate | ± 0.5%                       | 6 sec.        | long lifetime          |

|  |  |
|--|--|
| <b>Type</b>                                | MAPY 4.0   |
| <b>Gases</b>                               | O <sub>2</sub> , CO <sub>2</sub> or O <sub>2</sub> /CO <sub>2</sub> not for flammable, corrosive or toxic gases!   |
| <b>Temperature range (gas/environment)</b> | +32°F to +104°F  |
| <b>Gas connections</b>                     |  |
| <b>Permanent measuring</b>                 | lance, hose connection for PK 6/4 (exhaust)<br>integrated measuring gas pump   |
| <b>Sample measuring</b>                    | needle (exhaust) integrated measuring gas pump   |
| <b>Calibration (full automatic)</b>        | hose connection for PK 6/4   |
| <b>Inlet pressure</b>                      |  |
| <b>S-version</b>                           | max. 4.35 PSIG   |
| <b>P-version</b>                           | 21.76 PSIG – 145 PSIG  |
| <b>Calibration</b>                         |  |
| <b>Gas consumption</b>                     | approx. 2.12 SCFH  |
| <b>Calibration time</b>                    | the real gas consumption for calibration<br>is depending on installation.<br>optimal: 240 sec/calibration  |
| <b>Alarm signals</b>                       | 2 potential free contacts for min. and max. settings<br>(adjustable for each gas)  |
| <b>Interfaces</b>                          | RS 232 with ASCII-output of date, time, measured value<br>USB by memory stick for profiles, product and user data<br>RJ45 Ethernet FTP-Server for profiles, product and user data, software Update<br>analog output 4-20 mA or 0-10 V  |
| <b>Housing</b>                             | stainless steel, splash-proof  |
| <b>Weight</b>                              | approx. 15.87 lb   |
| <b>Dimensions (HxWxD)</b>                  | approx. 4.33 x 11.81 x 10.24 inches  |
| <b>Voltage</b>                             | 230 V AC 50 / 60 Hz<br>110 V AC 50 / 60 Hz   |
| <b>Power consumption</b>                   | 230 V AC / 0.12 A  |
| <b>Approvals</b>                           | Company certified according to ISO 9001 and ISO 22000<br>CE-marked according to:<br>- EMC 2014/30/EU<br>- Low Voltage Directive 2014/35/EU<br><br>for food-grade gases according to:<br>- Regulation (EC) No 1935/2004<br><br>Cleaned for Oxygen Service according to:<br>- EIGA IGC Doc 13/12/E: Oxygen Pipeline and Piping Systems |