

## GAS ANALYSER M+

### for O<sub>2</sub> or O<sub>2</sub>/CO<sub>2</sub> – standard version

**Cordless hand held oxygen or combined oxygen and carbon dioxide analyzer for checking modified atmospheres in food packs. The ideal instrument for portable, faster and accurate sample tests at the packaging machine, in stores or in laboratories.**

M+ a cost effective mobile alternative to tabletop / fixed analyzers.

Ensure that the quality of packaged product is maintained (HACCP), guaranteeing continued customer satisfaction.

The ideal instrument for sample tests with a minimum sample gas requirement, allowing the smallest of modified atmosphere packages (MAP) to be tested.

Integrated data log of the last 100 measurements assigned to specific product names or line numbers.

#### Benefits

- minimum sample gas requirement for smallest packs
- cordless operation using rechargeable batteries
- simple one hand operation
- easy to clean
- large illuminated graphic display
- measurement alternatively also by hose
- multilingual menu guide: German, English, French, Italian, Dutch, Swedish, Finnish, Spanish, Polish and Russian
- integrated needle cover to protect the user
- long lifetime of O<sub>2</sub> sensor (approx. 2 years)
- low maintenance costs

#### Complete in carrying case

- charging device and mains adaptor
- CD-ROM with:
  - operating instructions
- 2 spare needles
- 2 spare filters
- set of 100 rubber seals
- case dimensions (HxWxD): approx. 325x385x115 mm (12.79x15.16x4.53 inch), case weight: approx. 1.7 kg



#### Options

Hose with Luer-Lok connection for stationary measurements

# GAS ANALYSER M+

## for O<sub>2</sub> or O<sub>2</sub>/CO<sub>2</sub> – standard version

M+ O <sub>2</sub>	M+ O <sub>2</sub> /CO <sub>2</sub>	
•	•	<b>Gases</b> O <sub>2</sub> balance gas: N <sub>2</sub> , (Ar or others on request) O <sub>2</sub> and/or CO <sub>2</sub> balance gas: N <sub>2</sub> , (Ar or others on request)
•	•	<b>Measuring principle O<sub>2</sub></b> electrochemical cell
•	•	<b>Measuring principle CO<sub>2</sub></b> IR-absorption
•	•	<b>Sensor lifetime O<sub>2</sub></b> approx. 2 years (in air at 20 °C / 68 °F)
•	•	<b>Sensor lifetime CO<sub>2</sub></b> long lifetime
•	•	<b>Measuring range</b> 0–100%
•	•	O <sub>2</sub> in 0.01%-steps CO <sub>2</sub> in 0.1%-steps
•	•	<b>Sample gas requirement</b> < 10 ml
•	•	<b>Sample time</b> max. 10 sec.
•	•	<b>Calibration</b> simple two point calibration
•	•	<b>Sampling</b> automatic via needle using integrated pump
•	•	<b>Data log</b> last 100 measurements assignment of measurements to different product names or line numbers
•	•	<b>Multilingual</b> German, English, French, Italian, Dutch, Swedish, Finnish, Spanish, Polish and Russian
•	•	<b>Temperature (gas/environment)</b> 0 – 40 °C (41 – 104 °F)
•	•	<b>Display</b> backlit
•	•	<b>Shut down</b> automatic after 2 minutes of non-use
•	•	<b>Housing</b> shock resistant plastic
•	•	<b>Weight</b> approx. 600 g (without accessories)
•	•	<b>Dimensions (HxWxD)</b> 187 x 106 x 91 mm (7.4 x 4.2 x 3.6 inches) (without needle)
•	•	<b>Power supply</b> 3 integrated rechargeable batteries (mains adaptor + charging device included)
•	•	<b>Charging device</b> 110 – 240 V AC
•	•	<b>Approvals</b> Company certified according to ISO 9001 and ISO 22000 CE-marked according to: - EMC 2014/30/EU - Low Voltage Directive 2014/35/EU for food-grade gases according to: - Regulation (EC) No 1935/2004 Cleaned for Oxygen Service according to: - EIGA IGC Doc 13/12/E: Oxygen Pipeline and Piping Systems

# GAS ANALYSER M+

## Accessories

### Table-rack

This stable and stable table-rack from stainless steel is ideal for use as table top version.

Connector tube with Luer-Lok-connection is available for connection

The table-rack is suitable for all models and has two deposits for needles. It is also usable as support.



### Integrated barcode-reader

If you mark the data by barcode it's possible to receive an integrated barcode-reader for easily and quick data logging of inspector, product and packaging line for your 6.0.

Only available for 6.0.

### Bluetooth table printer

Select Bluetooth equipment for your 6.0 and print wireless directly on-site your results of measurement via small and handy table printer.

Practical, quick and easily.



# ACCESSORIES

## FOR BOTTLES, CANS AND SMALL PACKAGES

### Can-Piercer

The Can-Piercer is essential for head space analysis of bottles and cans.

Safe interlocking and easy handling guarantees optimal quality controls also for bottles and cans with metal or plastic caps.

The Can-Piercer can be adjusted up to 390 mm maximum bottles - or cans height. The integrated needle protection and robust needles prevents needle breakage.

Material: steel

Weight: 7,5 kg no analyser

Dimensions (HxWxD): 585 x 155 x 235 mm (packed, without analyser)

Suitable for M+ and 6.0.



### Aquacheck

Aquacheck is ideal for mini packages lower 2 ml sample gas volume.

The gas volume from two or more packages is collected in the water and analysable

Material: stainless steel

The Aquacheck is available with and without water container.

Suitable for M+ and 6.0.

## Can-Piercer: Application in practice

Needle length in mm	Hight of bottles, cans	Bottle holder	Overpressure	Pressure regulator w. ball valve and gauge 0.1 - 0.7	Calibration module + flow regulator *	Gauge 0 - 6 bar	Conversion possible	Application	Device
5.5 mm	270 cm		x <1 bar(g)				x	beverage cans (without gas / without overpressure), eg. juice	
8.5 mm	270 cm	x	x >1 bar(g)				x	bottles, bevarage cans (with gas / with overpressure), eg. Cola, mineral water	
8.5 mm	390 cm	x	x >1 bar(g)				x	bottles, beverage cans (with gas / with overpressure), eg. Cola, mineral water	
18.5 mm	390 cm	x	x >1 bar(g)				x	bottles, beverage cans (with gas / with overpressure), eg. Cola, mineral water	
5.5 mm	270 cm		x >1 bar(g)	x	x		x	bottles, beverage cans (with gas / with very high overpressure, sparkling)	without pump
5.5 mm	390 cm	x	0 - 4 bar			x	x	bottles, beverage cans	no connection, only pressure measurement

\*to prevent from damage by too high overpressure, too high flow rate, the calibration module has to be connected between calibration gas / zero gas

To obtain clear results we adjust a pressure of 0.5 bar and a flow rate of approx. 100 ml/min.

### Attention:

The correct model of the required Can-Piercer type is dependent on

- the kind of liquid to be analysed, the available overpressure in the bottles / cans,
- the volume of the available headspace of the bottles / cans,
- the thickness of the caps / can walls

Case	Application	Example	Recommendations
1	for beverages containing gas	cola, mineral water, lemonades, beer, etc.	Available on request
2	for beverages, free of gas	juices, wine, water mixtures, etc.	
3	EXTREME CASE: for beverages containing gas	with very high overpressure, small volume in the head space of the cans / bottles and / or very strongly sparkling	
4	for sole pressure measurement	from a can or bottle	

### Retrofit components and spare parts:

Bottle holder

Tubular extension for CAN-Piercer

Can-Piercer holder (needle 18.5 mm)

Can-Piercer holder (needle 8.5 mm)

Can-Piercer holder (needle 5.5 mm)

Can-Piercer holder (pressure measurement)

Needle connection with filter and RV

Hose

Luer-Lock connection female