

# SERVOFLEX MiniMP (5200)

**HIGH PERFORMANCE CARBON DIOXIDE AND OXYGEN MONITORING IN THE ONLY FULLY PORTABLE FORMAT CURRENTLY AVAILABLE FOR CEM TESTING AND VERIFICATION**



## SERVOFLEX MiniMP (5200)

The MiniMP is a high performance CO<sub>2</sub> and O<sub>2</sub> gas analyzer you can really depend on. With easy and intuitive operation and single or dual CO<sub>2</sub>/O<sub>2</sub> measurement functions, MiniMP is ideal for a wide range of measurement applications.

A small sized, big monitoring capability device, the MiniMP provides flexible use and full portability. In fact, it's the only truly portable unit with MCERTs approval, while Servomex's Paramagnetic oxygen sensing technology meets US and European Pharmacopeia standards for the assay of medical oxygen. With a size that belies its strength, the MiniMP delivers reliable, leading-edge performance and accuracy you can rely on in an affordable, low-maintenance and easy-to-use unit.

### FLEXIBLE

- Accurate measurement of O<sub>2</sub> and CO<sub>2</sub> levels
- A range of sampling and power options
- Ideal for laboratory, healthcare, fermentation, combustion analysis, CEMS testing, light industrial use and medical gas transfill

### EASY TO USE

- Only device in its class that offers true portability.
- Quick start up and use
- Small footprint that integrates easily into any location
- Mains or battery power option

### LOW COST OF OWNERSHIP

- Non-depleting technologies maximize availability and reduce maintenance/running costs
- Paramagnetic O<sub>2</sub> and Infrared CO<sub>2</sub> sensing technologies require minimal ongoing calibration

### UNRIVALLED PERFORMANCE

- Patented Paramagnetic and Infrared technologies for high sensitivity monitoring and reliability
- Precision single or dual measurement operation
- Ergonomic, space-saving footprint
- Manufactured by Servomex - over 60 years' experience innovating and pioneering gas analysis and thousands of units used in the field every year

### BENCHMARK COMPLIANCE

- Meets USFDA requirements for verification of medical O<sub>2</sub> USP and N<sub>2</sub> NF
- European Pharmacopeia compliant (O<sub>2</sub>)
- TÜV certified EN15267-3 (MCERTS v3.3, Annex F) for O<sub>2</sub> analysis
- Source Reference Method (O<sub>2</sub>) to EN14789, verification of AMS to EN14181.

Learn more about the SERVOFLEX MiniMP (5200)  
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# PRODUCT OVERVIEW: MiniMP (5200)

## RELIABILITY YOU CAN DEPEND ON

When you work in light industrial or laboratory applications, you need equipment you can depend on and help you get the job done as efficiently as possible.

In certain applications you'll need equipment that's certified to the highest level. No matter what your application monitoring requirement, you'll want a device that offers long battery runtime, low operational costs, simplified ongoing maintenance and ease of use. And we don't believe you should have to compromise.

## A NO COMPROMIZE SOLUTION

The MiniMP combines ease of use and simple device care with high powered CO<sub>2</sub> and O<sub>2</sub> monitoring capabilities (EN15267-3 MCERTS approved), providing the ideal solution for a wide range of applications.

With the full capability to meet the demands of sensitive, accurate testing, in an easy-to-use interface that includes a single or dual sample format, the MiniMP has long-life operation powered by a durable battery system.

## TRUE PORTABILITY

The MiniMP is the only device to offer true battery-powered portability that meets MCERTS certification. This, combined with gas-specific accuracy, ensures the MiniMP is ready for a range of monitoring needs from the verification of medical oxygen to CEMS testing.

It's always ready to work when you are. When you want sensitive, accurate detection, low maintenance requirements and the flexibility to do the job the way you want it done, the MiniMP provides a small, easy to use and cost-effective solution that delivers on all levels.

## ALTERNATIVE PRODUCTS

The SERVOFLEX portable product range features a number of options designed to meet your application needs.

### MiniHD (5200)



Designed to withstand the elements, this CO<sub>2</sub>, CO or O<sub>2</sub> single-measurement analysis unit has an IP65 rating, protective, durable overmoulding and a choice of Paramagnetic or IR sensing for completely reliable results.

### Micro i.s. (5100 i.s.)



Designed to monitor CO or O<sub>2</sub> in the harshest, most hazardous locations, the single-measurement Micro i.s. is ATEX certified, Intrinsically Safe (i.s.) and suited to all hazard rated locations, including Zone 0.

## KEY APPLICATIONS

- Laboratories and research
- Air separation and gas bottling plants
- Medical gas storage facilities
- Physiology and respiration studies
- Diving centers
- Transfilling
- Fermentation
- Combustion analysis



# PRODUCT DATA: MiniMP (5200)

| OPTIONS                | DESCRIPTION                            | SPECIFICATION                        |
|------------------------|--|--------------------------------------|
| Internal pump          | Integrated internal pump with a timer. | 700ml / min                          |
| Analog output          | 4-20mA / 0-20mA                        | 1 measurement per output             |
| Rechargeable batteries | Advanced Lithium Ion (Li-Ion)          | 8-36 hours runtime, depending on use |
| Vehicle power adapter  | Run and recharge cradle                | Powered by 12/24V DC vehicle socket  |

| ACCESSORIES               | DESCRIPTION  | SPECIFICATION   |
|---------------------------|--|---|
| Printer                   | Compact and simple to use                              | Mains powered or rechargeable, Pack of 5 additional printer paper rolls |
| QuickConnect barb fitting | Simplify connection of gases with QuickConnect         | Easy connection of zero and span gas                                    |
| 1/4" NPT adaptor          | Ideal for QuickConnect hard pipe use                   | Easy connection to hard pipe work                                       |
| 2 years spares pack       | Two years hassle-free operation                        | 5 x filters, 1 filter O-ring  |
| Sample conditioning panel | Ideal for flue gas analysis and wet and dirty sampling | Works with the internal pump and ensures accurate readings              |
| Flow meters               | Delivers flexible sampling capabilities                | 1-10l/min (unregulated). 100-1,000ml/min (with regulator)               |
| Sampling probes           | Two options for pinpoint sampling                      | 25cm with protective tip (180°C / 356°F max temp). 100cm untipped       |
| Carry case                | Robust and life-proof case                             | Pre-shaped foam sections that allow further customisations              |

| MONITORING PERFORMANCE     |                               |                               |                               |                                     |
|----------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------------|
| Sensor                     | O <sub>2</sub>                | O <sub>2</sub>                | O <sub>2</sub>                | CO <sub>2</sub>                     |
| Technology                 | Paramagnetic                  | -                             | -                             | Infrared                            |
| Variant                    | Standard (1dp)                | Industrial (1dp)              | High accuracy (2dp)           | All variants (1dp)                  |
| Full scale and Min. output | 0-100%<br>0-10% (min.)        | 0-100%<br>0-1% (min.)         | 0-100%<br>0-1% (min.)         | 0-10%, 25%,<br>50%, 100%, 0-10% FSR |
| Cell construction          | Polymer (PPS)                 | 316 Stainless Steel           | 316 Stainless Steel           | 316 Stainless Steel                 |
| Accuracy (intrinsic error) | ±0.2% O <sub>2</sub>          | ±0.1% O <sub>2</sub>          | ±0.05% O <sub>2</sub>         | ±2% FSR                             |
| Zero drift/week            | ±0.4% O <sub>2</sub>          | ±0.2% O <sub>2</sub>          | ±0.2% O <sub>2</sub>          | ±4% FSR                             |
| T <sub>90</sub> in secs.   | <10                           | <15                           | <15                           | <10                                 |
| Operating Temp.            | -10 to +50°C<br>(14 to 122°F) | -10 to +50°C<br>(14 to 122°F) | -10 to +50°C<br>(14 to 122°F) | 5 to +45°C<br>(41 to +113°F)        |

**Please note:** Allow 1 hour warm up to meet performance specification.



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## SAMPLE FOR MEASUREMENTS

|                                 |   |
|---------------------------------|---|
| <b>Sample gas</b>               | Clean, dry, non-flammable and non-toxic gases only. Though samples containing >5% CO <sub>2</sub> are toxic, they can be analyzed if the suitable precautions are taken |
| <b>Flow Control</b>             | AFCD maximizes measurement stability for unpumped units over specified inlet pressure range<br>– 1.5 - 6 ltr (0.05 – 0.2 ft <sup>3</sup> ) /min                         |
| <b>Sample inlet connection</b>  | QuickConnect barb fitting – 5mm OD stub for 6.3mm (1/4") ID tube or adaptor to 1/8" NPT fitting option  |
| <b>Sample outlet connection</b> | 5mm OD stub (sample and bypass)   |
| <b>Inlet pressure</b>           | With optional internal pump – 7kPa (1psig) to 3.5kPa (0.5psig) Without pump 7kPa (1psig) to 70kPa (10psig)  |

## DEVICE SPECIFICATION

### Size:

- 150mm (6.0") Width x 300mm (12.0") High x 260mm (10.5") Deep

### Weight:

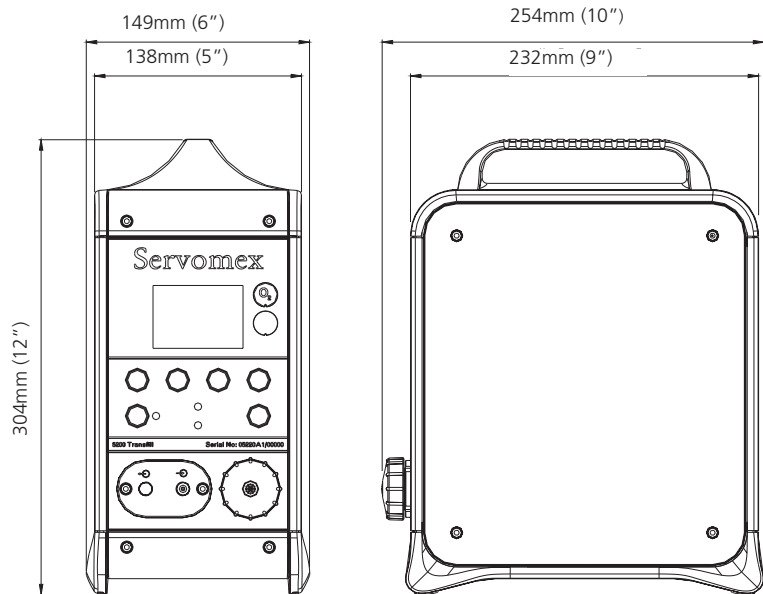
- 2.6kgs (5.7lbs) – 3.9kgs (8.6lbs) depending on config.

### Certifications:

- Meets USFDA performance requirements for verifying medical O<sub>2</sub> use
- CE in accordance with EEC EMC and WEEE Directives
- UL/CE approved 100-240V/43=70Hz AC power supply
- TÜV and MCERTs (Annex F, Transportable Systems) to EN15267-3 (Certification of Automated Measuring Systems) using Industrial or High accuracy O<sub>2</sub> variants and mA output

*These analyzers are not intended for any form of use on humans and are not medical devices as described in the Medical Devices Directive 93/42EEC.*

## DEVICE SCHEMATIC



**Please note:** This document was updated in August 2014. While every effort has been made to ensure accuracy, no responsibility can be accepted for errors or omissions. Data may change, as well as legislation, and you are strongly advised to obtain copies of the most recently issued regulations, standards and guidelines. This document is not intended to form the basis of a contract.

PBMiniMP Rev.0 Date: 08/14

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