

## O<sub>2</sub> Measurement in gas

### General information

In the beverage industry, CO<sub>2</sub> is used to carbonate beverages. CO<sub>2</sub> also plays a vital role in preventing high concentrations of O<sub>2</sub> in beverages, as O<sub>2</sub> has a negative influence on their quality, taste and shelf life.

The Haffmans O<sub>2</sub> Monitor, type Carbo Zirox, is especially designed to continuously measure O<sub>2</sub> concentrations in CO<sub>2</sub> and N<sub>2</sub> gas. The O<sub>2</sub> Monitor can be employed in a wide range of applications.

### Quality Control

The Carbo Zirox may serve as a quality control instrument to measure the O<sub>2</sub> concentrations:

- In your gas distribution system,
- In commercial gas for the brewing and soft drinks industry,
- In CO<sub>2</sub>, recovered and purified from fermentation,
- In front of the carbonator, to monitor the gas quantity dosed.

### Optimising CO<sub>2</sub> Recovery Plants

In a CO<sub>2</sub> Recovery Plant typical installation positions are:

- Behind the activated carbon filter/dryer,
- In the purge from the CO<sub>2</sub> liquefier, to control the blow-off quantity automatically, to prevent CO<sub>2</sub> losses as well as high concentrations of O<sub>2</sub> from dissolving in the CO<sub>2</sub>,
- Behind the CO<sub>2</sub> evaporator, to monitor O<sub>2</sub> in the CO<sub>2</sub> distribution.

The Carbo Zirox comes in a stationary and portable version.

## Beverage Quality Control



## Technical information

### Features

O<sub>2</sub> measurement in gaseous CO<sub>2</sub> and N<sub>2</sub>  
 LCD graphic display with backlight  
 High accuracy  
 No drift  
 Stationary and portable version

### Advantages

Easy operation  
 Calibration with ambient air  
 Many applications possible

### Benefits

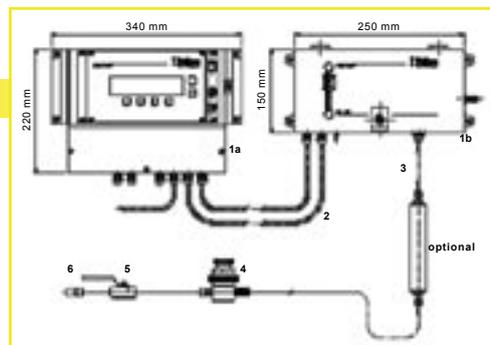
Maintenance-free  
 Continues measurement of O<sub>2</sub> in CO<sub>2</sub> and N<sub>2</sub> gas.



### Scope of Supply Stationary Model\*:

- 1a Carbo Zirox O<sub>2</sub> - Controller
- 1b Carbo Zirox O<sub>2</sub> - Sensor
- 2 Set of shielded cables, 10 m
- 3 Stainless steel tube, ø 3 mm x 0,5 mm, 3m.
- 4 Reducing valve
- 5 Sampling valve
- 6 Nipple
- Operating manual

\*Portable model O<sub>2</sub> - Monitor on request.



### Option:

- Active Carbon Filter
- Dryer

### Technical data

#### Measuring range:

O<sub>2</sub> value: 1 - 2.10<sup>5</sup> ppm O<sub>2</sub>  
 Max. CO<sub>2</sub> Inlet Temperature: 80 °C  
 Max. CO<sub>2</sub> Inlet Pressure: 1 bar(g)  
 CO<sub>2</sub> Flow: 5 - 10 l/h

#### Outputs:

Serial output: RS 232  
 Analogue output: 0/4 - 20 mA, adjustable  
 Alarm output: 3 potential free contacts

#### Measuring units:

O<sub>2</sub> value: ppm. Vol. %  
 Temperature: °C

#### General data:

Ambient temperature: 10 - 40 °C  
 Protection degree Controller: IP 56  
 Protection degree Measuring Cell: IP 56  
 Power supply: 100 - 230 V / 50 - 60 Hz  
 Power consumption: 80 VA  
 Weight: O<sub>2</sub> - Controller 5.0 kg , O<sub>2</sub> - Sensor 3.5 kg

#### Accuracy:

O<sub>2</sub> value in range 1 - 10 ppm: < 5%  
 O<sub>2</sub> value in range 10 - 2.10<sup>5</sup> ppm: < 3%

Haffmans B.V. reserves the right to make changes in the technical specifications at any time.



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# Carbo Zirox