

HAFFMANS c-TPO SELECTIVE INPACK TPO/CO₂ METER

PRODUCT LEAFLET



GENERAL PRODUCT INFORMATION

In the beer and beverage industries it is important to control the levels of carbon dioxide and (CO₂) and oxygen (O₂) in the packaged product. Oxygen pickup needs to be minimized to prevent a negative influence on shelf life and flavor stability. Carbon dioxide is a key parameter of beer and carbonated beverages and plays an important role in the product's freshness and flavor enhancement.

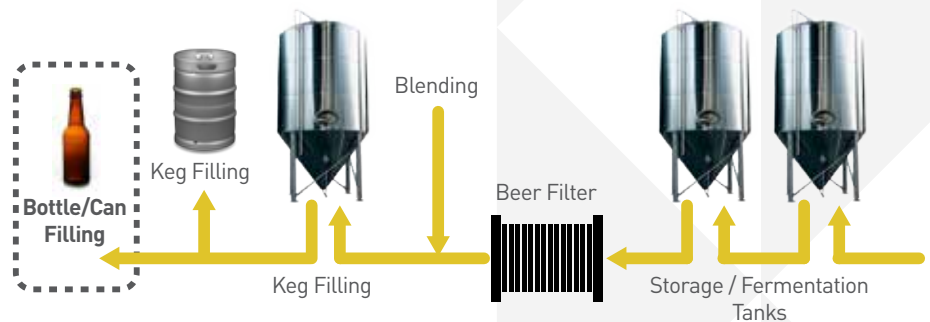
When breweries use nitrogen assisted filling instead of CO₂, the existing methods for measuring the CO₂ content are unreliable. Nitrogen gas in the (filled) package interferes with the dissolved CO₂ content measurement. This can result in a product that is not compliant with required CO₂ levels.

To overcome this, the automatic Inpack TPO/CO₂ Meter, type c-TPO Selective offers Selective CO₂ Measurement using Henry's Law in combination with optical technology. It is suited for the most common sizes of bottles and cans.

Furthermore, the c-TPO Selective provides differentiated measurement of Headspace Oxygen (HSO) and Dissolved Oxygen (DO), which provides immediate insight on the performance of the filling operation. Beyond traditional TPO measurement (DOxZ) also HSO+DO is used to measure the O₂ content in the liquid and gas phase. This results in a more specific identification of the oxygen source, which can be in the production (DO) or filling process (HSO).

APPLICATION

- When N₂ is used in the filling process to pre-rinse the packages
- When N₂ is used in the production process as ingredient



BENEFITS

FEATURE	ADVANTAGE	BENEFIT
Differentiated TPO measurement (HSO+DO)	O ₂ source known	Process control - fast problem solving
Optical O ₂ measurement technology	Sensor is easily replaced	Low maintenance cost
Optical O ₂ measurement technology	Sensitivity remains constant	High reliability
Optical Selective CO ₂ measurement technology	CO ₂ fraction known	Accurate insight in real CO ₂ values when using other cases
Measurement inside the package	Less external influence	Increased accuracy
Automated measurement	Easy to use	Operator independant measurement

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TECHNICAL DATA

Measuring range

TPO	∞
HSO	0.00 – 4.18 % (V/V)
DO	0.000 – 2.000 ppm (w/w)
CO ₂	2.0 – 15.0 g/l

TPO calculation

HSO + DO or DO x Z

Accuracy

O ₂ HS	± (0.002% (V/V) + 2% of m.v.)
DO	± (1 ppb (w/w) + 2% of m.v.)
CO ₂	± 0.1 g/l

Memory capacity

Up to 250 measurements

Bottle dimensions

Height min.	90 mm - max. 440 mm
Diameter min.	55 mm - max. 200 mm

Can dimensions

Height min.	80 mm - max. 195 mm
Diameter min.	50 mm - max. 73 mm

Power Supply

80-240 V / AC 50-60 Hz

Interface

USB, barcode reader

Dimensions

max. 550 x 330 x 1120 (LxWxH mm)
min. 550 x 330 x 680 (LxWxH mm)

Weight

40 kg

SCOPE OF SUPPLY

- Inpack TPO/CO₂ Meter, type c-TPO Selective
- Main cable
- Service set with piercers and sealing rubbers
- Software set (CD + Interface cable)
- Instruction manual

OPTIONS

- Certificate of measurement
- PET bottle holder
- Barcode reader



HAFFMANS BV

P.O. BOX 3150 NL-5902 RD VENLO, NETHERLANDS INFO@HAFFMANS.NL WWW.HAFFMANS.NL

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