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Digital CO₂ meter for beer and carbonated beverages in bottles and cans type ICD

Application:

The digital CO₂ meter type ICD enables the determination of CO₂ content in beer, carbonated beverages and sparkling wines in bottles, cans and PET bottles, expressed in volume percent or g/L.

Measurement Principle:

The instrument uses Henry's law. The CO₂ content is determined by measuring the temperature and the partial pressure of CO₂ in equilibrium after mechanical shaking of the beverage.



Operating procedure:

The instrument is designed for use with various types and heights of bottles and cans. The bottle is placed on the lifting mechanism platform; by moving the lever, the bottle is hermetically sealed, and the crown cap is subsequently pierced. A probe with a hand pump is then inserted into the bottle. By briefly opening and immediately closing the release valve, the pressure inside the bottle is reset to zero.

The release of bound carbon dioxide from the beverage is carried out by pulling out and pressing the pump piston located at the top of the probe three times, thereby increasing the pressure of the released CO₂ in the bottle. After this preparation, the measurement is started by pressing the CO₂ measurement button. The instrument automatically measures pressure and temperature, calculates the carbon dioxide content, and displays the measured values in g/L and volume percent on the display.

Technical data:

Parameter	Range / Value	Accuracy
CO ₂ measurement	2 to 9.99 g/L (1 to 5.15 vol)	0.05 g/L
Temperature	-3 to +30 °C	0.05 °C
Pressure	0–600 kPa (0–6 bar)	0.5 %
Display	3.5" colour touchscreen	—
Data memory	250 measurement samples	—
Dimensions (HxWxD)	530 x 240 x 300 mm	—
Weight	3 kg	—

Scope of Delivery:

CO₂ meter type ICD, AC/DC adapter, User's Guide

Accessories (optional):

Adapter pro PET bottles.

Sampling probe for taking beverage samples from a bottle or can into an O₂ meter.

Advantages & Benefits:

- High accuracy & calibration capability — suitable for ISO 9001/9002 laboratories.
- Fast & reproducible CO₂ release using pressure pulse generated by piston.
- In addition to CO₂ measurement, the device allows for independent measurement of temperature and pressure.
- 25+ years of manufacturing experience, thousands of units in operation worldwide.

- Excellent price-to-performance ratio.
- After purchasing a sampling probe, the device can also be used as a sampler for taking beverage samples from a bottle or can into any type of oximeter capable of measuring the amount of dissolved O₂ in the beverage.

FAQ:

What are the differences between the individual types of instruments for measuring CO₂ content in carbonated beverages in bottles, cans, and PET bottles?

We manufacture two types of these instruments: **ICA** and **ICD**.

The **ICA type** is analog and equipped with a nomogram, from which the operator reads the CO₂ content based on the measured pressure and temperature values.

The **digital ICD type** automatically measures pressure and temperature, calculates the CO₂ content, and displays it on the screen in units of g/L and volume percent. This eliminates any potential operator reading errors.

Both ICA and ICD types release bound CO₂ from the beverage by a pressure shock generated by pressing the pump piston, which speeds up the measurement and improves its reproducibility.

The **ICA type** is a simpler and the most cost-effective solution, which is especially appreciated by microbreweries and smaller producers.

Can the ICD-type instrument also be used to measure CO₂ in cans and PET bottles?

Yes. For cans, it can be used without any additional accessories. For measuring CO₂ in PET bottles, it is necessary to purchase a PET bottle adapter, which prevents the bottle from collapsing during piercing (it serves as a bottle support).

