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Analog CO₂ meter for beer and carbonated beverages in bottles and cans type ICA

Application:

The analog CO₂ meter type ICA enables the determination of CO₂ content in carbonated beverages (beer, wine, soda, kombucha, kefir, ...) in bottles, cans and PET bottles, expressed in volumes and 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 pressure value is read from the pressure gauge, the bottle is removed from the device, a digital thermometer is inserted into the bottle to measure the beverage temperature, and the CO₂ content is then determined from the nomogram based on the measured pressure and temperature values, expressed in g/L and in volumes.

Technical data:

Parameter	Range / Value	Accuracy
CO ₂ measurement	2 to 7.8 g/l (1 to 4 vol)	0.15 g/l
Temperature	-3 to +50 °C	0.5 °C
Pressure	0–400 kPa (0 – 4 bar)	1.6 %
Dimensions (HxWxD)	530 x 240 x 300 mm	—
Weight	3 kg	—

Scope of Delivery:

Analog CO₂ meter ICA, digital thermometer, nomogram, tubes, 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:

- 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 O₂ meter 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 both g/L and volumes units.

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 ICA-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).