CO_2 MEASUREMENT

CARBOTEC TR-PT

CO_2 Measurement in Liquids Using Pressure and Temperature

CARBOTEC TR-PT measures dissolved carbon dioxide in carbonated beverages such as beer, sparkling wine and soft drinks. The CO_2 content is determined from pressure and temperature measurements in the measuring chamber.



Pressure-Temperature Principle
CO_2 is determined from pressure and temperature measurements in the measuring chamber.

Rapid Determination
The measurement provides a precise CO_2 value within a short time.

Sample Without Loss
After measurement, the sample is fully returned to the product.

Measuring Principle

Carbonated liquid flows through the sensor head. The measuring chamber is closed several times per minute and its volume increases abruptly. This creates a gas phase. The equilibrium pressure is used together with the temperature to determine the CO_2 content.

Applications

- Beer
- Sparkling Wine
- Soft Drinks
- Dissolved CO_2
- Carbonated Beverages
- In-line Measurement

After each measurement, the sample is fully returned to the product without loss.

Technical Data

The following data supports technical preselection and coordination of the measurement task, medium, installation situation and automation connection.

PARAMETER	CARBOTEC TR-PT
Measuring Principle	Pressure-Temperature Measurement
Measuring Range	0 - 10 g/l
Accuracy	± 0,05 g/l
Repeatability	± 0,01 g/l
Response Time	≤ 20 s
Operating Pressure	max. 10 bar
Operating Temperature / Temperature Sensor	-10 to +100 °C / Pt100
Material	1.4404 / AISI 316L, EPDM (FDA), PTFE (FDA)
Input	1 x analog (4 - 20 mA) & 6 x digital (24 VDC)
Output / Fieldbus	2 x analog (4 - 20 mA) & 3 x digital (24 VDC) optional: PROFIBUS DP & PROFINET
Enclosure Rating / Supply	IP65 / 24 VDC

Proven Technology
Pressure-temperature measurement based on Henry's law.

Precise and Fast
Determination of dissolved CO_2 within a short time.

Hygienic Design
Various flange connections available.

Design & Integration

We support you with the project-specific selection and integration of the **CARBOTEC TR-PT** - from measuring range and installation position to process connection and interfaces.

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