The Centec Group

Centec is a privately owned group of companies. With a focus on the processing industries, we are rapidly growing in the major world markets. We have a global sales and service structure, with our own subsidiaries and a network of qualified distributors. Our international operations include mechanical, electrical and process automation engineering, with skid manufacture and pipework fabrication; as well as our own switch cabinet production. This infrastructure allows efficient logistics, short lead times and strict adherence to delivery deadlines. The quality of our products is excellent, so is the price-performance ratio.


CO₂ Measurement in Food and Beverage Manufacturing

Application Report

CARBOTEC

Automated process skids and high precision sensors from a single source. Centec.

More information at www.centec.de
Application and Measurement Principle

The content of carbon dioxide (CO₂) has a strong influence on the quality and taste of beer, sparkling wine, soft drinks, mineral water and various other carbonated products. Therefore, breweries and other beverage and food companies continuously measure and control CO₂ concentrations with highest precision throughout the entire manufacturing process.

CARBOTEC TR-PT: The carbonated liquid flows through a measurement chamber. By increasing the volume of the chamber, a gas phase is generated. The partial pressure difference of CO₂ forces the CO₂ out of the liquid into the gas. This changes the pressure inside the chamber. By pressure measurement, the CO₂ content is calculated. CARBOTEC NIR: While transmitting a sapphire crystal, infrared light is reflected at the crystal surface which is in contact to the carbonated liquid. The CO₂ molecules absorb the light and decrease the intensity. By intensity measurement, “true” CO₂ content is determined. CARBOTEC NIR can be used to detect carbon dioxide even when CO₂ is not the only gas in the liquid. Without any moving parts in the sensor head, the new generation of CO₂ sensors is virtually maintenance free.

- Available as Transmitter Version with Local Display
- Highly Precise and Fast Measurement of Dissolved CO₂
- Proven Pressure-Temperature-Measurement (CARBOTEC TR-PT)
- Optical Measurement for “True” CO₂ Content (CARBOTEC NIR)
- Short Response Time and Excellent Long-Term Stability
- Hygienic Execution, Full CIP Capability, Almost Maintenance Free
- Outstanding Price-Performance-Ratio

The Centec production is certified according to ISO 9001.