

# CONTROS HydroC CO<sub>2</sub> FT



KONGSBERG



## ACCURATE, FAST AND VERSATILE $p\text{CO}_2$ FLOW-THROUGH SENSOR

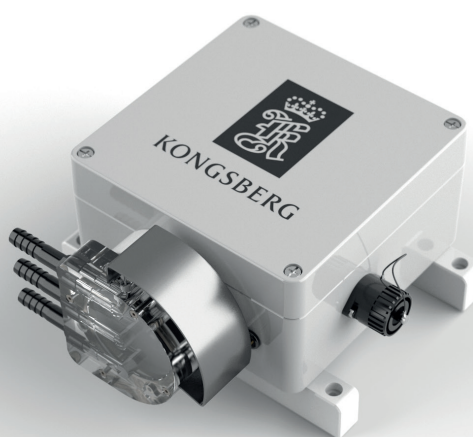
The new compact CONTROS HydroC® CO<sub>2</sub> FT is a unique surface water carbon dioxide partial pressure sensor designed for underway (FerryBox) and lab applications. Fields of application include: ocean acidification research, climate studies, air-sea gas exchange, limnology, fresh water control, aquaculture/fish farming, carbon capture and storage - monitoring, measurement and verification (CCS-MMV).

### Individual 'in-situ' calibration

All sensors are individually calibrated with water from a tank that is stabilized at the average deployment temperature. A proven reference flow-through system is used to verify the CO<sub>2</sub> partial pressures in the calibration tank. High quality standard gases are used to calibrate the reference system before and after every sensor calibration. This process ensures that the CONTROS HydroC® CO<sub>2</sub> sensors achieve excellent short and long-term accuracy.

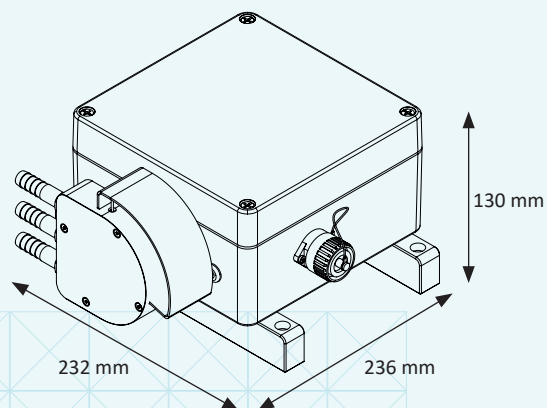
### Operating principle

Water is pumped through the flow head of the CONTROS HydroC® CO<sub>2</sub> FT sensor that now includes a new water temperature sensor. Dissolved gases diffuse through a new and robust custom made thin film TOUGH membrane into the internal gas circuit leading to a detector chamber, where the partial pressure of CO<sub>2</sub> is determined by means of NDIR absorption spectrometry. Concentration dependent IR light intensities are converted into the output signal from calibration coefficients stored in firmware and data from additional sensors within the gas circuit.



## FEATURES

- New compact design
- Integrated water temperature sensor in the flow head
- New TOUGH membrane increasing robustness of the sensor for reliable long-term deployments
- High accuracy
- Fast response time
- User-friendly
- Long-term maintenance interval of 12 months
- 'Plug & Play' principle; all required cables, connectors and software are included
- The CONTROS HydroC® technology has a track record in peer-reviewed scientific publications



## TECHNICAL SPECIFICATIONS

### CONTROS HydroC CO<sub>2</sub> FT

Detector	High-precision optical analyzing NDIR system
Measuring range <sup>[1]</sup>	200 - 1,000 µatm
Weight	3 kg
Flow rate <sup>[2]</sup>	2 to 15 l/min
Dimensions	232 x 236 x 130 mm
Temperature range	1°C to 30°C
Resolution	< 1 µatm ± 0.5 % of reading
Initial accuracy	Hirschmann-plug CA6LD
Connector <sup>[3]</sup>	
Supply voltage	11 V - 24 V
Power consumption	Approx. 350 mA @ 12 V
Data interface	RS-232C
Data format	ASCII

#### SOFTWARE

- CONTROS DETECT® incl. real-time data visualization, setting of sensor parameters, download data from internal data logger and sleep mode function

#### HARDWARE REQUIREMENTS

- Win 7 32 Bit or higher, 200 MB free disk space, Dual Core CPU with 2GB RAM

#### OPTIONS

- Measuring range 100-6,000 µatm
- Data logger
- Easy integration into FerryBox applications

Front page images: CONTROS HydroC® CO<sub>2</sub> FT product shot.

1) other ranges available, 2) recommended 5 l/min, 3) other connectors on request

Specifications subject to change without any further notice.

CONTROS HydroC® is a registered trademark of Kongsberg Maritime AS in Norway and other countries.

#### KONGSBERG MARITIME

Switchboard: +47 815 73 700

Global support 24/7: +47 33 03 24 07

E-mail sales: km.sales@km.kongsberg.com

E-mail support: km.support@kongsberg.com

km.kongsberg.com



KONGSBERG