

OxyGuard CO2 Portable

Portable Dissolved CO₂ Analyser



Direct Measurement of Dissolved Carbon Dioxide

The OxyGuard CO2 Portable is a reliable and easy to use instrument that measures the free dissolved carbon dioxide concentration directly in the water. The CO₂ concentration is shown on the display, and there is an analogue output. A version with built-in data logger is available.

The OxyGuard CO2 measures the free dissolved CO2 directly and is not affected by carbonates or other dissolved substances. It is the free dissolved CO2 - in other words the CO2 gas partial pressure - that affects the fish. The OxyGuard CO2 thus gives simple, continuous and direct measurements of the amount of carbon dioxide in the water that will affect the fish.

The analyser is easy to calibrate using the front panel "slope" and "zero" adjustments - after which you just put the probe in the water and measure. Calibration intervals are long, and the OxyGuard CO2 does NOT need regular maintenance.

Technical Information

Description

The OxyGuard CO₂ Portable Dissolved CO₂ Analyser consists of a probe and a battery powered transmitter. The latter has a display and an analogue signal as output. The probe is, as standard, delivered with a 3 m cable. The transmitter has an on/off switch, "slope" and "zero" adjustments. A battery charger and calibration accessories, i.e. calibration beaker with stirrer, calibration fluid, calibration conditioner and dosing syringe are included.

Principle of Operation

The probe measures the carbon dioxide content of the water directly by detecting the carbon dioxide partial pressure in the water. It is important to note that it is NOT based on a pH measurement - it does NOT detect any change in pH that carbon dioxide causes. Neither does it withdraw a sample for analysis - it detects the free dissolved CO₂ - the carbon dioxide partial pressure - in the water.

The range of the instrument is 0-50 mg/l. Before use the system is calibrated at zero and span.

Calibration is carried out using the calibration fluid delivered with the system dissolved in distilled water that has been treated with the calibration conditioner.

The OxyGuard CO₂ Portable Dissolved CO₂ Analyser can be ordered with or without a data logger. The logger can record 15000 values and has an output for connection to a PC, permitting both recorded values and immediate measurements to be stored and observed.

Specifications

Size:	Probe: 40mm dia. x 140 mm. Cable length 3m. Meter: 300 x 215 x 83 mm (overall, with carrying handle) Calibration beaker 65mm dia. x 260 mm
Weight	Approx. 6 kg including charger, calibration fluid, calibration conditioner, calibration beaker and dosing syringe.
Supply (to charger)	230VAC (115VAC on request).
Range	0 - 50 mg/l dissolved carbon dioxide. Temperature compensated range 3-35°C.
Output:	Analogue signal 0-1VDC
Operating conditions:	Electronics -10 to +60°C, splashproof.
Accuracy	Depends on calibration. Practical accuracy up to +/- 1 mg/l.
Response time	Typically 5 minutes at 20°C depending on flow velocity past probe. In still water up to 15 minutes.
Flow requirements	The instrument does not use carbon dioxide for its measurement, but a certain flow is necessary to ensure that the sensing element of the probe is in equilibrium with the surrounding water, and to avoid "spot" measurements.
Operating time:	Approximately 50 hours on fully charged batteries.

Delivery comprises: Transmitter & probe with 3m cable, charger, analogue output lead, calibration beaker with stirrer & magnet, 75 g calibration conditioner, 100 ml calibration solution, dosing syringe, measure, screwdriver.

Ordering Information

G02C2P	OxyGuard CO ₂ Portable Dissolved CO ₂ Analyzer - probe with 3 m cable, transmitter and calibration accessories. Charger for 230 VAC, other voltage on request. Calibration accessories comprise beaker with stirrer & magnet, 80 g calibration conditioner, 100 ml calibration solution and dosing syringe.
G02C2PLOG	As above but with 15000 cell data logger built into analyzer. Permits storage of values and on-line viewing of values on PC.
G02XCS	100 ml calibration solution.
2XCT	80 g calibration conditioner.

G02P OxyGuard CO₂ portable brochure gb 0606
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