

VN202 OXYGEN ANALYSER for DIVERS



- Resolution +/- 0.1% Accuracy +/-1% full scale
- Easy Replacement of sensor
- Long life sensor (expected life 48 months in air)
- Water resistant
- Low cost instrument replacement if accidentally damaged
- Calibrate and measure in still gas at 1 Bar (1 Atm)
stable : no drift due to gas flow
- Fast measuring with minimum gas waste
- Suitable for altitude diving
- Supplied in protective carrying and storage case
- Auto switch off battery saver
- Model available with auto switch off disabled



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SPECIFICATIONS

Range:	0-100% oxygen	Battery Life:	12 months (typical)
Accuracy:	± 1% of full scale	Auto Switch Off**:	2-3 minutes
Response time:	90% in less than 10 seconds	Sensor Type:	R-17 Galvanic
Resolution:	0.1%	Sensor Life:	Expected 48 months in air 10 months in 100% Oxygen
Operating temperature range:	0-40°C	Dimensions:	60 mm x 120 mm x 25mm
Battery Type:	9 Volt Alkaline	Weight:	205gm incl. battery & sensor
Specifications subject to change without notice		Cable Length:	250mm - 759mm
** Can be supplied with auto switch off disabled on request			

PARTS LIST

VN202 Analyser	* DM22M10 Male Adaptor	* A-268 Tee Adaptor	VNR1 Large Case
R-17VAN Micro Fuel Cell	* BS111 Viton O Ring	* B-50057 Flow-Thru Divertor	
DINKIT	* DIN22F High Pressure Restrictor	* VP12 Tubing 30cm	VANYC "A" clamp (yoke) optional

* Items are included in the DINKIT

Why use a DINKIT

Flowing gas from a cylinder is very cold whilst the sensor is at ambient temperature so that the sensor begins to cool down during measurement and can cause baseline drift. If the flow is too high a back pressure builds up on the sensor and increases the reading. The DINKIT method is fast and produces reproducible accurate results every time.

How to use a DINKIT

The Pressure restrictor has a standard DIN fitting which can be used directly into a DIN pillar valve or into an A clamp (yoke) with a DIN Female fitting.

The pillar valve is opened gently until the gas can just be heard hissing through the tubing. Close after five seconds. Watch reading, it should rise and reach a stable level. If it reaches a maximum and then falls back, the cylinder has been opened too much. After the reading stabilises (about 10 seconds) open valve again for 5 seconds as above. The reading should this time peak and fall back less than 0.5%. The stable reading is the oxygen level in the gas. If in doubt this step can be repeated as many times as necessary. The stable reading is correct. The secret to accurate fast measurement is gently opening the pillar valve enough to obtain a gas flow of about 2 litres per minute (a low level hiss).

The pressure restrictor is used to achieve low flow rates of gas from the cylinder. The Flow divertor is a set of blades which divert the gas down onto the sensor face. This gas is turbulent and ensures a fast reading. The tubing is added to prevent air being drawn into the Tee outlet and reducing the reading. Any poor joints will create a venturi action and suck in air.

NB: The system should be calibrated in air 20.9% at sea level before use.

The measured gas should be within 1% of the calculated mixture. If a discrepancy of more than 1% is found, check the analyser in 100% O₂ and Air (20.9% O₂).

DO NOT ASSUME THE ANALYSER IS CORRECT

Further reading: *The Practice of Oxygen Measurement for Divers* by John S. Lamb. Best Publishing Co.
(available from Vandagraph Ltd)