

DIN KIT



Why use a DIN KIT

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 DIN KIT

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 tee adapter. Close after five seconds. Watch the 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 the 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 diverter is a set of blades which divert the gas down onto the sensor face. This gas is turbulent and ensures a fast reading. The tee adapter is fitted with a series of one way valves to prevent air being drawn in 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%. 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: *Oxygen Measurement for Divers, 2nd Edition 2016* by John S. Lamb (available from your local dive centre, Amazon and Vandagraph Ltd.)

The DIN KIT consists of:

DIN22F High Pressure Restrictor	117-VM Tee Adapter
B-50057 Flow-Thru Divertor	VANTC "A" clamp (yoke) optional