

VitaloROV / VitaloROV+

Datasheet

Portable PFT systems with built-in PC for accurate point of care testing. The VitaloROV and VitaloROV+ give lab standard PFT capabilities in a portable format. Designed to be compliant with latest international guidelines for accuracy, repeatability and grading. Removes the need for costly add-ons and upgrades the VitaloROV and VitaloROV+ features a wide-range of tests as standard.



Technical Specifications

Product	VitaloROV VitaloROV+
Model	9100
Essential Performance Test Limits	Data will be transferred by USB from the device PCBs to the on-board computer. The output from the DLco Gas Analyser must stay within the predetermined limits (see below) both in normal and single fault conditions. <ul style="list-style-type: none">• Carbon Monoxide (CO) values in DLco Gas Analyser: +/- 30 counts• Methane (CH4) values in DLco Gas Analyser: +/- 75 counts
Flow detection principle	Heated Lilly type pneumotachograph
Back pressure	Less than 0.15kPa/L/second @ 14L/s, complies with ISO26782:2009)
Volume detection	Flow integration sampling @ 100Hz
Volume accuracy	Within $\pm 2.5\%$ or ± 75 mL
Voltage/Frequency	80-240V; approximately 50/60 Hz
Flow accuracy	Within $\pm 2\%$ over the range of -14 to +14 L/s
Flow measurement range	Max. flow rate ± 14 L/s Min. flow rate ± 0.2 L/s
Operating temperature range	ISO26782 limits: 17–37°C Design limits: 15–37°C
Operating humidity range	30%–75%
Ambient pressure range	850hPa–1060hPa
Gas Analyser for CO/CH4/CO2 (for DLCO test)	Nondispersive infrared (NDIR) sensor. Accuracy: CO ± 1 % of Full Scale CH4 ± 2.5 % of Full Scale CO2 ± 2.5 % of Full Scale

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Technical Specifications (contd.)

Gas Analyser for O₂/CO₂ (for SBN₂ and MBN₂ tests)	Laser diode absorption for O ₂ . Infrared sensor for CO ₂ Accuracy: O ₂ +/- 0.2% CO ₂ +/- 0.1%
Mouth Pressure	Digital pressure sensor Accuracy: 0.5%
Shutter Valve	Pneumatic spring-return cylinder
Gas required for DLco test	Mix containing 0.3% Carbon Monoxide, 0.3% Methane, Balance Air
Gases required for SBN₂ and MBN₂ tests	<ul style="list-style-type: none">• Mix containing 0.3% Carbon Monoxide, 0.3% Methane, Balance Air• 100% Oxygen• Mix containing 6% Carbon Dioxide, 15% Oxygen, Balance Nitrogen
Performance standards the Vitalograph VitaloROV and VitaloROV+ meets or exceeds	ISO 23747:2015, ISO 26782 2009, ATS/ERS 2019
Safety standards	EN 60601-1:2006 + A1:2013
EMC standards	EN 60601-1-2:2015
QA/GMP standards	EN ISO 13485, FDA 21 CFR 820, CMDR SOR/98-282 & JPAL
Size	410 mm x 380 mm x 342 mm
Weight	12.5 kg net
Storage Temperature	0–50°C
Storage Relative Humidity	10%–95%
Printer	External
Communications	5 x USB, 2 x Ethernet, 1 x Serial, 1 x DVI-D, 1 x Display, Wi-Fi (via a USB adaptor), Bluetooth (via a USB adaptor), Keyboard and Mouse interface (via a USB adaptor)
Software	Morgan Scientific CompAS2 Reference Manual-Vitalograph VitaloROV & VitaloROV+

Note:

- No modification of this equipment is allowed. Any unauthorised changes to the Vitalograph VitaloROV and VitaloROV+ may compromise product safety and/or data and as such Vitalograph cannot be held responsible and the device will no longer be supported.
- All values displayed are expressed as BTPS values.
- Take care not to block the mouthpiece with tongue or teeth. A 'spitting' action or coughing will give false readings.
- The operating and storage conditions specified apply to the device plus accessories.
- The Patient Valve is a type BF applied part. The device body or other accessories are not applied parts. An applied part is a part of the equipment that in normal use necessarily comes into physical contact with the subject for the equipment or system to perform its function.

