FlowAnalyser PRO

Premium Gas Flow Analyzer

analyser
the art of measuring

The FlowAnalyser PRO, with ultimate performance and configurability, enables a wide range of professionals to push the limits of what is possible.

Thanks to its extreme precision and reliability, the FlowAnalyser PRO is capable of testing a wide range of medical devices such as respiratory and anesthesia devices, oxygen flow meters, pressure gauges and suction devices.

Automatic Breath Detection

Ultra-Low Flow

Flow, Pressure, Oxygen, Temperature, Humidity

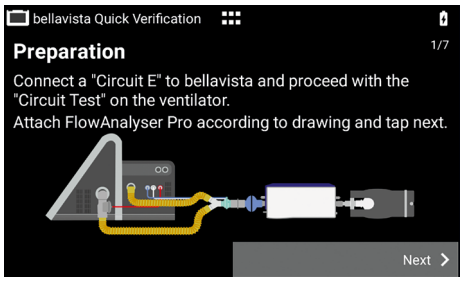
Features

- Automatic Breath Detection
- Highest Flow Accuracy
- Ultra-Low Flow Measurement
- Fast Sampling Rate of 1000 Hz
- Pressure & Vacuum Measurements
- High Resolution Multi-touch Display
- Lightweight Portability
- 16-Hour Battery Life
- Integrated Apps with Guided Test Sequences
- Premium Platform for Future Updates
- Swiss Quality and Precision
- Accredited ISO 17025 Calibration

Direct Access

Easy to Use Interface
The FlowAnalyser PRO offers a beautiful, high resolution multi-touch user interface that is completely configurable.

Apps with Test Sequences
Run tests easier and faster with our apps. The FlowAnalyser PRO ventilator tester supports you with apps for testing and calibrating many devices. The apps enable safe and fast testing. Entire test sequences are displayed with images and texts and measured automatically. The test results are recorded in a PDF report, which can be signed directly on the screen.



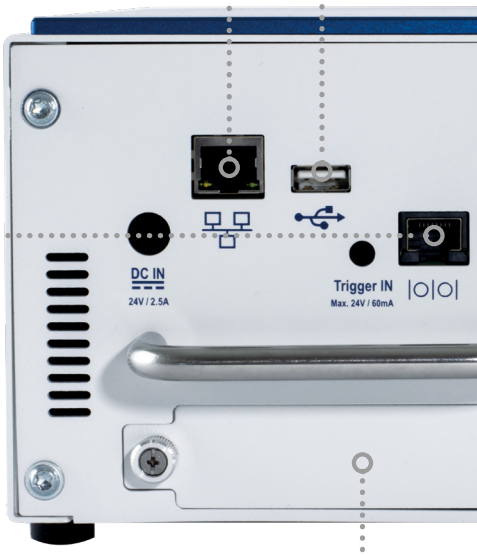
Versatility
Tests a wide range of medical devices such as respiratory and anesthesia devices, oxygen flow meters, pressure gauges, suction devices, pneumatic systems, and Capnography monitors.

- Remote Control via USB or RS232
- Pairs with our Anesthesia Gas Sensor
- Utilizes our Test lungs

USB Drive

Webserver

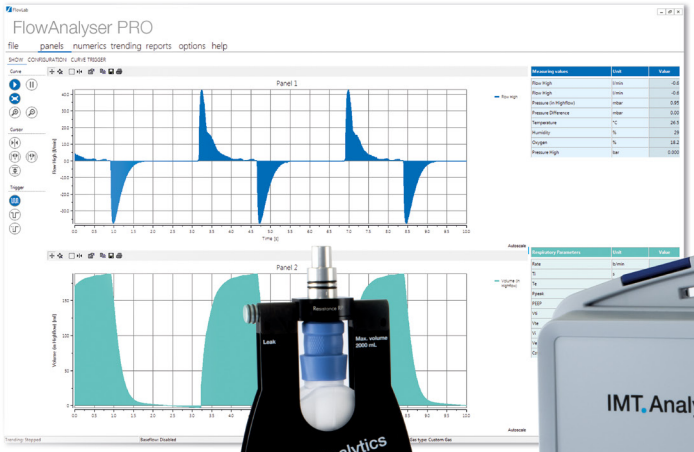
Remote Control



16 h Battery

Automatic Breath Detection
Measure breath based respiratory parameters with automatic trigger detection for conventional and high-frequency medical ventilators.

swiss made



Quality & Reporting

- Accredited ISO 17025 Calibration
- FlowLab PC Software Reporting Tool
- Test Sequence Editor
- Data Recording

Reporting Software

MultiGasAnalyser OR-703
Smallest multi-gas sensor in the world.

FlowAnalyser PRO, in combination with the MultiGasAnalyser, offers the best and easiest solution for testing anesthesia devices. The MultiGasAnalyser OR-703, paired with the FlowAnalyser PRO, can measure CO_2, N_2O, Halothane, Enflurane, Isoflurane, Sevoflurane and Desflurane.

Order information

700.300.000	FlowAnalyser PF-300 PRO
700.300.001	Biomedical Test-Set “Ventilation” FlowAnalyser PF-300 PRO
700.300.002	Biomedical Test-Set “Ventilation & Anaesthesia” FlowAnalyser PF-300 PRO

Email: sales@imtanalytics.com

Technical Specification FlowAnalyser PF-300 PRO

Flow and pressure measurements		Range	Accuracy
Flow	Measuring direction	Bidirectional	
	Temperature compensated	Automatic	
	Pressure compensated	Automatic	
	Humidity compensated	Automatic	
	O_2 compensated	Automatic	
	Flow	± 300 L/min	± 1.65 %* or ± 0.04 L/min (for 10..40°C)**
	Ultra-Low Flow	± 1 L/min	± 1.65 %* or ± 0.01 L/min (for 10..40°C)**
Pressure	High Pressure & Vacuum (P_{High})	-1 – 10 bar	± 1 %* or ± 7 mbar**
	Differential Pressure (P_{Diff})	± 250 mbar	± 0.5 %* or ± 0.1 mbar**
	Low Differential Pressure ($P_{Diff\ Low}$)	-10 – 10 mbar	± 1 %* or ± 0.01 mbar**
	Pressure in Flow Channel ($P_{Channel}$)	-50 – 160 mbar	± 0.5 %* or ± 0.1 mbar**
	Atmospheric Pressure (P_{Atmo})	500 – 1240 mbar	± 1 %* or ± 5 mbar**
Units	Flow	L/min, L/s, cfm, mL/min, mL/s	
	Pressure	bar, mbar, cmH_2O, inH_2O, Torr, inHg, hPa, kPa, mmHg, PSI	

Additional measurements		Range	Accuracy
Oxygen	Concentration	0 – 100 %	± 1 % O_2**
	Pressure compensated	≤ 150 mbar	
Temperature	In Flow Channel	0 – 50 °C	± 1.75 %* or ± 0.5 °C**
Dew point	In Flow Channel	-10 – 50 °C	± 2 %* or ± 1°C**
Humidity	In Flow Channel	0 – 100 % RH (non condensing)	± 3 % RH ** from 10 % RH to 80 % RH ± 5 % RH ** for <10 % and >80 % RH
CO_2	Concentration (with optional OR-703)	0 – 15 vol%	± (0.2 vol% + 2 % of reading)
		15 – 25 vol%	unspecified
N_2O	Concentration (with optional OR-703)	0 – 100 vol%	± (2 % vol% + 2 % of reading)
HAL, ISO, ENF	Concentration (with optional OR-703)	0 – 8 vol%	± (0.15 vol% + 5 % of reading)
		8 – 25 vol%	unspecified
SEV	Concentration (with optional OR-703)	0 – 10 vol%	± (0.15 vol% + 5 % of reading)
		10 – 25 vol%	unspecified
DES	Concentration (with optional OR-703)	0 – 22 vol%	± (0.15 vol% + 5 % of reading)
		22 – 25 vol%	unspecified
Gas types		Air, O_2, Air/O_2, N_2O/O_2, He, He/O_2, N_2, N_2O, CO_2, customised gas types	
Gas standards		ATP, ATPD, ATPS, AP21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-A, BTPD, BTPD-A, 0/1013, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS	

Respiratory parameters		Range	Accuracy
Breath rate	Rate	1 – 2000 bpm	±1 bpm or ± 1 %**
Time	Inspiratory time (T_i)	0 – 60 s	± 0.01 s
	Expiratory time (T_e)	0 – 90 s	± 0.01 s
	Inspiratory hold time	0 – 60 s	± 0.01 s
	Expiratory hold time	0 – 90 s	± 0.01 s
	Post-inspiratory pause (% T_P)	0 – 100 %	± 0.1 %
Ratio	I:E	1:300 – 300:1	± 2 %*
	T_i/T_{total}	0 – 100 %	± 5 %*
Breath volume	Vti, Vte	± 60 L	± 1.75 % or ± 0.10 mL
Minute volume	Vi, Ve	0 – 300 sL/min	± 1.75 %* or ± 5 mL
Pressure	P_{Peak}, P_{Mean}, PEEP, $P_{Plateau}$	0 – 160 mbar	± 0.75 %* or ± 0.1 mbar**
Peakflow	PF_{Insp}, PF_{Exp}	± 300 sL/min	± 1.65 %* or ± 0.04 sL/min**
Compliance	C_{Stat}	0 – 1000 mL/mbar	± 3 %* or ± 0.01 mL/mbar**
Trigger	Automatic, Adult, Pediatric, HFO, ext. Trigger	Adult, Pediatric, HFO; Adjustable on flow or pressure curves with user-defined limits.	

General information	
Power	100 – 240 VAC, 50 – 60 Hz
Battery operation	16 hours
Power consumption	Typical 5 VA, max. 25 VA (during battery charging)
Weight	3.2 kg
Dimensions (w × d × h)	24 × 26 × 13 cm
Data Storage	Internal, USB stick
Display	High resolution touch-screen display 5" (800 × 480 px)
Interfaces	USB-A for USB stick, USB-B for FlowLab Software, individual communication, TTL for external trigger, RS232
Calibration	Annually
Operating temperature	10 – 40 °C (50 – 104°F)
Operating Humidity	10 – 90 % R.H.***
Approvals	CE, CSA (North America), IEC 61010-1:2010, IEC 61326-2:2012

The greater tolerance is valid:
*Tolerance related to the measured value, ** Absolute tolerance, with steady air flow, *** Non-condensing, **** The unit sL/min is based on ambient conditions of 0 °C and 1013.25 mbar (DIN 1343).

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