

# FlowAnalyser set VA

Biomedical test set

analyser  
the art of measuring

Check and calibrate all types of gas flow and pressure-producing devices in a very short time. Create your individual report for each test.

The biomedical test set FlowAnalyser set VA is a certified, high precise measuring system delivered with all needed component parts.

Biomedical test set FlowAnalyser set VA to test and verify:

- Ventilators CPAP/Bilevel
- Ventilators ICU
- Ventilators Infant
- Ventilators High Frequency
- Anesthesia machines
- Anaesthetic vaporizer
- Blood pressure analysers
- Oxygen concentrators
- Vaccum pumps
- Spirometers
- Pipe gases

## FlowAnalyser PF-300

The FlowAnalyser measures flow, pressure, temperature, humidity and O<sub>2</sub> concentrations bi-directionally. The device for measurements and calibration combines a simple, intuitive multilingual user interface with the highest precision.

## FlowLab Software

FlowLab is the ideal software solution which has an impressive simple menu navigation.

## Biomedical test set FlowAnalyser set VA includes:

FlowAnalyser PF-300/PF-301/PF-302, MultiGasAnalyser OR-703, SmartLung Adult, FlowLab Software, adapterset, bacterial filter, USB cable, power supply unit, carrying case, user manual

Order number: 300.116.004



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# Technical Specifications

## FlowAnalyser, PF-300, PF-301, PF-302

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Flow and Pressure Measurements		Range	Accuracy
<b>Flow</b>	Measuring direction	bidirectional	
	Temperature compensated	yes	
	Pressure compensated	yes	
	Humidity compensated	yes	
	O <sub>2</sub> compensated	yes	
		High	± 300 L/min
	Low	± 20 L/min	± 1.75%* or ± 0.04 L/min**
<b>Pressure</b>	High Pressure	0–10 bar	± 1%* or ± 10 mbar**
	Differential Pressure (PF-300 only)	± 150 mbar	± 0.75%* or ± 0.1 mbar**
	Relative Pressure (PF-301 and PF-302)	± 150 mbar	± 0.75%* or ± 0.1 mbar**
	Low (for PF-302 only)	0–5 mbar	± 1%* or ± 0.01 mbar**
	In High Flow Channel	0–150 mbar	± 0.75%* or ± 0.1 mbar**
	Barometer	0–1150 mbar (abs)	± 1%* or ± 5 mbar**
	Vacuum pressure (for PF-301 only)	± 1000 mbar	± 0.5%* or ± 2 mbar**
<b>Measuring Unit</b>	Flow	L/min, L/s, cfm, mL/min, mL/s	
	Pressure	bar, mbar, cmH <sub>2</sub> O, inH <sub>2</sub> O, Torr, inHg, hPa, kPa, mmHg, PSI	
Other Measurements		Range	Accuracy
Oxygen	Concentration	0–100%	± 1% O <sub>2</sub> **
	Pressure compensated	yes	
Temperature	In High Flow Channel	0–50°C	± 1.75%* or ± 0.5°C**
Dew point	In High Flow Channel	-10–50°C	± 2%* or ± 1°C**
Humidity	In High Flow Channel	0–100%	± 3%**
CO <sub>2</sub>	Concentration (with OR-703)	0–10%	± (0.2% ABS + 2% REL)
		10–20%	± (0.3% ABS + 4% REL)
N <sub>2</sub> O	Concentration (with OR-703)	0–100%	± (2% ABS + 2% REL)
HAL, ISO, ENF	Concentration (with OR-703)	0–8%	± (0.15% ABS + 5% REL)
		8–12%	± (0.2% ABS + 10% REL)
SEV	Concentration (with OR-703)	0–10%	± (0.15% ABS + 5% REL)
		10–15%	± (0.2% ABS + 10% REL)
DES	Concentration (with OR-703)	0–22%	± (0.15% ABS + 5% REL)
		22–25%	± (0.2% ABS + 10% REL)
Gas types	Air, Air/O <sub>2</sub> , N <sub>2</sub> O/O <sub>2</sub> , Heliox (21% O <sub>2</sub> ), He/O <sub>2</sub> , N <sub>2</sub> , CO <sub>2</sub> , customised gas types		
Gas standards	ATP, ATPD, ATPS, AP21, STP, STPH, BTPS, BTPS-A, BTPD, BTPD-A, 0/1013, 20/981, 15/1013, 25/991, 20/1013, NTPD, NTPS		
Ventilation Parameters <sup>†</sup>		Range	Accuracy
Breath rate		1–1000 bpm	± 1 bpm or ± 2.5%**
Time	Ti, Te	0.05–60 s	± 0.02 s
I:E ratio		1:300–300:1	± 2.5%*
Ti/Ttotal		0–100%	± 5%*
Breath volumes	Vti, Vte (@Low Flow)	± 10 L	± 1.75% or ± 0.10 mL (> 2.4 L/min)
	Vti, Vte (@High Flow)	± 10 L	± 1.75% or ± 0.20 mL (> 6.0 L/min)
Minute volume	Vi, Ve	0–300 L/min	± 2.5%*
Pressure	Ppeak, Pmean, PEEP, Pplateau	0–150 mbar	± 0.75%* or ± 0.1 mbar**
Peakflow	Peakflow Insp./Exp.	± 300 L/min	± 1.75%* or ± 0.1 L/min**
Compliance	Cstat	0–1000 mL/mbar	± 3%* or ± 1 mL/mbar**
Trigger	Adult, Pediatric, HFO	Adult, Pediatric, HFO; Adjustable on flow or pressure curves with user-defined limits.	
General Information			
AC input	100–260 VAC, 50/60 Hz		
Battery (lead rechargeable battery)	3 hrs (with OR-703 2 hrs)		
Power consumption	25 VA		
Weight	3.7 kg		
Dimensions (w × d × h)	22 × 25 × 12 cm		
Data Storage	all parameters (measured as well as respiratory values)		
Display	Intuitive user interface with numerical measuring values, statistics, volume trigger configuration, gas type selection and calibration menus.		
Communication Interfaces	USB for Windows Software FlowLab, RS-232 for individual communication, TTL for external trigger and TSI4000 Protocol.		
Calibration	annually		
Conditions Ambient temperature	10–40°C (50–104°F)		
Conditions Humidity	10–95% R.H.***		
Approvals	CE, CSA		

**Legend** The greater tolerance is valid: \*Tolerance related to the measured value, \*\* Absolute tolerance, \*\*\* Non-condensing  
<sup>†</sup> Tolerance related to the optimal calibration of the trigger.

Subject to technical changes.