## FlowAnalyser set V

Biomedical test set

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 V is a certified, high precise measuring system delivered with all needed component parts.

Biomedical test set FlowAnalyser set V to test and verify:

- Ventilators CPAP/Bilevel
- Ventilators ICU
- Ventilators Infant
- Ventilators High Frequency
- 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 V includes:

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



## FlowAnalyser set VA

Biomedical test set

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

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# **Technical Specifications**

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



Flow and Press	ure Measurements	Range	Accuracy	
Flow	Measuring direction	bidirectional	Flow H 1/min 0.0 []co	
	Temperature compensated	yes	Control Stotleste	
	Pressure compensated	yes		
	Humidity compensated	yes		
	O <sub>2</sub> compensated	yes	2 2	
	High	± 300 L/min	± 1.75%* or ± 0.1 L/min**	
	Low	± 20 L/min	± 1.75%* or ± 0.04 L/min**	
Pressure	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**	
Measuring Unit	Flow	L/min, L/s, cfm, mL/m	nin, mL/s	
	Pressure	bar, mbar, cmH2O, inH2O, Torr, inHg, hPa, kPa, mmHg, PSI		
Other Measurer	ments	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)	
		0-10%	± (0.15% ABS + 5% REL)	
SEV	Concentration (with OR-703)	10-15%	± (0.2% ABS + 10% REL)	
		0-22%	± (0.15% ABS + 5% REL)	
DES	Concentration (with OR-703)	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, AP 15/1013, 25/991, 20/1	21, STP, STPH, BTPS, BTPS-A, BTPD, BTPD-A, 0/1013, 20/9 1013, NTPD, NTPS	
Ventilation Para	ameters <sup>1</sup>	Range	Accuracy	
Breath rate		1-1000 bpm	±1 bpm or ± 2.5 %**	
Time	Ti, Te	0.05-60s	± 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	± 300 L/min 0 –1000 mL/mbar	± 1.75% or ± 0.1 L/IIIIII  ± 3%* or ± 1 mL/mbar**	
			Adjustable on flow or pressure curves with user-defined limits.	
Trigger	Adult, Pediatric, HFO	Addit, Fediatric, HFO; /	najustable of flow of pressure curves with user-defined limits.	
General Informa	ation			
AC input		100-260 VAC, 50/60	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 $\times$ d $\times$ h)		22 × 25 × 12 cm		
Data Storage		all parameters (measured as well as respiratory values)		
Display			Intuitive user interface with numerical measuring values, statistics,	
Communication Interfaces		volume trigger configuration, gas type selection and calibration menus.  USB for Windows Software FlowLab, RS-232 for individual communication,  TIL for external trigger and TSI4000 Protocol		
Communication in	Calibration		TTL for external trigger and TSI4000 Protocol.  annually	
Calibration	ent temperature			
Calibration Conditions Ambie Conditions Humic	· · · · · · · · · · · · · · · · · · ·	10-40°C (50-104°F) 10-95% R.H.***		

The greater tolerance is valid: \*Tolerance related to the measured value, \*\* Absolute tolerance, \*\*\* Non-condensing

1) Tolerance related to the optimal calibration of the trigger.