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



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

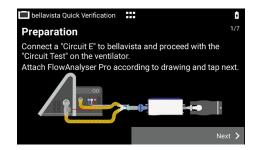
Easy to Use Interface

The FlowAnalyser PRO offers a beautiful, high resolution multitouch 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





Remote Control



16h Battery



Automatic Breath Detection

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





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 Flow-Analyser PRO, can measure CO_2 , N_2O , Halothane, Enflurane, Isoflurane, Sevoflurane and Desflurane.



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

Release EN-01, 2021-10 Subject to changes without notice.

Technical Specification FlowAnalyser PF-300 PRO

Flow and pressu		Range	Accuracy	
	Measuring direction	Bidirectional		
	Temperature compensated	Automatic		
	Pressure compensated	Automatic		
low	Humidity compensated	Automatic		
	O ₂ compensated	Automatic		
	Flow	± 300 L/min	± 1.65 %* or ± 0.04 L/min (for 1040°C)**	
	Ultra-Low Flow	± 1 L/min	± 1.65 %* or ± 0.01 L/min (for 1040°C)**	
	High Pressure & Vacuum (P _{High})	-1 – 10 bar	± 1 %* or ± 7 mbar**	
	Differential Pressure (PDiff)	± 250 mbar	± 0.5 %* or ± 0.1 mbar**	
Pressure	Low Differential Pressure (P _{Diff Low})	-10-10 mbar	± 1 %* or ± 0.01 mbar**	
ressure	Pressure in Flow Channel (Pchannel)	-50 – 160 mbar	± 0.5 %* or ± 0.1 mbar**	
	· · · · · · · · · · · · · · · · · · ·	500 – 1240 mbar	± 1%* or ± 5.111bai	
	Atmospheric Pressure (P _{Atmo})			
Jnits	Flow	L/min, L/s, cfm, mL/min, mL/s bar, mbar, cmH ₂ O, inH ₂ O, Torr, inHg, hPa, kPa, mmHg, PSI		
	Pressure			
Additional meas		Range	Accuracy	
Oxygen	Concentration	0-100%	± 1 % O ₂ **	
	Pressure compensated	≤ 150 mbar		
emperature	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	
	0 1 1 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0-15 vol%	± (0.2 vol% + 2% of reading)	
CO ₂	Concentration (with optional OR-703)	15 – 25 vol%	unspecified	
N ₂ O	Concentration (with optional OR-703)	0-100 vol%	± (2 % vol% + 2 % of reading)	
	(5	0-8 vol%	± (0.15 vol% + 5% of reading)	
HAL, ISO, ENF	Concentration (with optional OR-703)	8-25 vol%	unspecified	
		0-10 vol%	± (0.15 vol% + 5% of reading)	
SEV	Concentration (with optional OR-703)	10-25 vol%	± (0.13 vol% + 5 % of reading) unspecified	
		10-23 VOI%	unspecified	
		0 00:10/	. (0.15 vol0/ . 5.0/ -fl')	
DES	Concentration (with optional OR-703)	0-22 vol%	± (0.15 vol% + 5 % of reading)	
	Concentration (with optional OR-703)	22-25 vol%	unspecified	
	Concentration (with optional OR-703)	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂	unspecified , He, He/O ₂ , N ₂ , N ₂ O CO ₂ , customised gas types	
DES Gas types Gas standards	Concentration (with optional OR-703)	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP	unspecified , He, He/O ₂ , N ₂ , N ₂ O CO ₂ , customised gas types	
Gas types Gas standards		22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP	unspecified , He, He/O ₂ , N ₂ , N ₂ O CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-A	
Gas types Gas standards Respiratory para		22–25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-/ 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS	
Gas types Gas standards Respiratory para	imeters	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 ^o Range	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-A 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy	
Gas types Gas standards Respiratory para	meters Rate	22–25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 ² Range 1–2000 bpm	unspecified , He, He/O ₂ , N ₂ , N ₂ O CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-/ 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %**	
Gas types Gas standards Gespiratory para Breath rate	Rate Inspiratory time (Ti)	22–25 vol% Air, O ₂ Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 ¹ Range 1–2000 bpm 0–60 s	unspecified , He, He/O ₂ , N ₂ , N ₂ O CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-A 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s	
Gas types Gas standards Respiratory para Breath rate	Rate Inspiratory time (T _o)	22–25 vol% Air, O ₂ Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 ^o Range 1–2000 bpm 0–60 s 0–90 s	unspecified , He, He/O ₂ , N ₂ , N ₂ O ₂ CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-/ 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s ± 0.01 s	
Gas types	meters Rate Inspiratory time (T ₀) Expiratory time (T ₀) Inspiratory hold time	22–25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 ^o Range 1–2000 bpm 0–60 s 0–90 s 0–60 s	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-A 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s ± 0.01 s ± 0.01 s	
Gas types Gas standards Respiratory para Breath rate	Rate Inspiratory time (T _i) Expiratory time (T _e) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% T _P)	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 %	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-4 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s	
Gas types Gas standards Respiratory para Breath rate	Rate Inspiratory time (Ti) Expiratory time (T _e) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% T _P) I:E	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 % 1:300-300:1	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-4 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s	
Gas types Gas standards Respiratory para Breath rate Time	Rate Inspiratory time (Ti) Expiratory time (Te) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% Te) I:E Ti/Ttotal	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 %	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-/ 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1% ± 2 %* ± 5 %*	
Gas types Gas standards Respiratory para Breath rate Time Ratio	Rate Inspiratory time (Ti) Expiratory time (Te) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% Te) I:E Ti/Ttotal Vti, Vte	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-/ 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1% ± 2 %* ± 5 %* ± 1.75 % or ± 0.10 mL	
Gas types Gas standards Respiratory para Breath rate Time Ratio Breath volume Minute volume	Rate Inspiratory time (Ti) Expiratory time (Te) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% Te) I:E Ti/Ttotal Vti, Vte Vi, Ve	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L 0-300 sL/min	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-/ 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1% ± 2 %* ± 5 %* ± 1.75 % or ± 0.10 mL ± 1.75 %* or ± 5 mL	
Gas types Gas standards Respiratory para Breath rate Time Ratio Breath volume Alinute volume Pressure	Rate Inspiratory time (Ti) Expiratory time (Te) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% Te) I:E Ti/Ttotal Vti, Vte Vi, Ve Peak, PMean, PEEP, PPlateau	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L 0-300 sL/min 0-160 mbar	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-/ 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1% ± 2 %* ± 5 %* ± 1.75 % or ± 0.10 mL ± 1.75 %* or ± 5 mL ± 0.75 %* or ± 0.1 mbar***	
Gas types Gas standards Respiratory para Breath rate Gasaria Greath volume Greath volume Fressure Peakflow	Rate Inspiratory time (T _i) Expiratory time (T _e) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% T _P) I:E T _i /T _{total} Vti, Vte Vi, Ve P _{Peak} , P _{Mean} , PEEP, P _{Plateau} PF _{Insp} , PF _{Exp}	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L 0-300 sL/min 0-160 mbar ± 300 sL/min	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-/ 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1 % ± 2 %* ± 5 %* ± 1.75 % or ± 0.10 mL ± 1.75 %* or ± 5 mL ± 0.75 %* or ± 0.1 mbar** ± 1.65 %* or ± 0.04 sL/min**	
Gas types Gas standards Respiratory para Breath rate Greath rate Greath volume Alinute volume Pressure Peakflow Compliance	Rate Inspiratory time (T _i) Expiratory time (T _e) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% T _P) I:E T _i /T _{total} Vti, Vte Vi, Ve P _{Peak} , P _{Mean} , PEEP, P _{Plateau} PF _{Insp} , PF _{Exp} C _{Stat}	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L 0-300 sL/min 0-160 mbar ± 300 sL/min 0-1000 mL/mbar	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-/ 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1% ± 2 %* ± 5 %* ± 1.75 % or ± 0.10 mL ± 1.75 %* or ± 5 mL ± 0.75 %* or ± 0.1 mbar** ± 1.65 %* or ± 0.04 sL/min** ± 3 %* or ± 0.01 mL/mbar**	
Gas types Gas standards Respiratory para Breath rate Gatio Breath volume Minute volume Pressure Peakflow Compliance rigger	Rate Inspiratory time (Ti) Expiratory time (Te) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% Te) I:E Ti/Ttotal Vti, Vte Vi, Ve Peak, PMean, PEEP, PPlateau PFinsp, PFExp Cstat Automatic, Adult, Pediatric, HFO, ext. Trigger	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L 0-300 sL/min 0-160 mbar ± 300 sL/min 0-1000 mL/mbar	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-I 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1 % ± 2 %* ± 5 %* ± 1.75 % or ± 0.10 mL ± 1.75 %* or ± 5 mL ± 0.75 %* or ± 0.1 mbar** ± 1.65 %* or ± 0.04 sL/min**	
Gas types Gas standards Respiratory para Breath rate Greath rate Ratio Breath volume Pressure Peakflow Compliance Trigger General informa	Rate Inspiratory time (Ti) Expiratory time (Te) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% Te) I:E Ti/Ttotal Vti, Vte Vi, Ve Peak, PMean, PEEP, PPlateau PFinsp, PFExp Cstat Automatic, Adult, Pediatric, HFO, ext. Trigger	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L 0-300 sL/min 0-160 mbar ± 300 sL/min 0-1000 mL/mbar Adult, Pediatric, HFO;	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-/ 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1 % ± 2 %* ± 5 %* ± 1.75 % or ± 0.10 mL ± 1.75 %* or ± 5 mL ± 0.75 %* or ± 0.14 mbar** ± 1.65 %* or ± 0.04 sL/min** ± 3 %* or ± 0.01 mL/mbar** Adjustable on flow or pressure curves with user-defined limits.	
Gas types Gas standards Respiratory para Breath rate Greath volume Minute volume Pressure Peakflow Compliance Prigger General informa	Rate Inspiratory time (Ti) Expiratory time (Te) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% Te) I:E Ti/Ttotal Vti, Vte Vi, Ve Peak, PMean, PEEP, PPlateau PFinsp, PFExp Cstat Automatic, Adult, Pediatric, HFO, ext. Trigger	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L 0-300 sL/min 0-160 mbar ± 300 sL/min 0-1000 mL/mbar	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-/ 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1 % ± 2 %* ± 5 %* ± 1.75 % or ± 0.10 mL ± 1.75 %* or ± 5 mL ± 0.75 %* or ± 0.14 mbar** ± 1.65 %* or ± 0.04 sL/min** ± 3 %* or ± 0.01 mL/mbar** Adjustable on flow or pressure curves with user-defined limits.	
Cas stypes Cas standards Caspiratory para Caspiratory par	Rate Inspiratory time (Ti) Expiratory time (Te) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% Te) I:E Ti/Ttotal Vti, Vte Vi, Ve Peak, PMean, PEEP, PPlateau PFinsp, PFExp Cstat Automatic, Adult, Pediatric, HFO, ext. Trigger	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L 0-300 sL/min 0-160 mbar ± 300 sL/min 0-1000 mL/mbar Adult, Pediatric, HFO;	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-/ 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1 % ± 2 %* ± 5 %* ± 1.75 % or ± 0.10 mL ± 1.75 %* or ± 5 mL ± 0.75 %* or ± 0.14 mbar** ± 1.65 %* or ± 0.04 sL/min** ± 3 %* or ± 0.01 mL/mbar** Adjustable on flow or pressure curves with user-defined limits.	
Cas types Cas standards Caspiratory para	Rate Inspiratory time (T _i) Expiratory time (T _e) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% T _P) I:E Ti/Ttotal Vti, Vte Vi, Ve Peak, PMean, PEEP, PPlateau PFInsp, PFExp CStat Automatic, Adult, Pediatric, HFO, ext. Trigger	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L 0-300 sL/min 0-160 mbar ± 300 sL/min 0-1000 mL/mbar Adult, Pediatric, HFO;	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-/ 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1 % ± 2 %* ± 5 %* ± 1.75 % or ± 0.10 mL ± 1.75 %* or ± 5 mL ± 0.75 %* or ± 0.14 mbar** ± 1.65 %* or ± 0.04 sL/min** ± 3 %* or ± 0.01 mL/mbar** Adjustable on flow or pressure curves with user-defined limits.	
as stypes as standards as stand	Rate Inspiratory time (T _i) Expiratory time (T _e) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% T _P) I:E Ti/Ttotal Vti, Vte Vi, Ve Peak, PMean, PEEP, PPlateau PFInsp, PFExp CStat Automatic, Adult, Pediatric, HFO, ext. Trigger	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L 0-300 sL/min 0-160 mbar ± 300 sL/min 0-1000 mL/mbar Adult, Pediatric, HFO;	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-/ 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1% ± 2 %* ± 5 %* ± 1.75 % or ± 0.10 mL ± 1.75 %* or ± 0.1 mbar** ± 1.65 %* or ± 0.04 sL/min** ± 3 %* or ± 0.01 mL/mbar** Adjustable on flow or pressure curves with user-defined limits.	
Cas types Cas standards Caspiratory para Caseath rate Caseath rate Caseath volume	Rate Inspiratory time (T _i) Expiratory time (T _e) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% T _P) I:E T _i /T _{total} Vti, Vte Vi, Ve P _{Peak} , P _{Mean} , PEEP, P _{Plateau} PF _{Insp} , PF _{Exp} C _{Stat} Automatic, Adult, Pediatric, HFO, ext. Trigger	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10' Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L 0-300 sL/min 0-160 mbar ± 300 sL/min 0-1000 mL/mbar Adult, Pediatric, HFO; 100-240 VAC, 50-6i 16 hours Typical 5 VA, max. 25'	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-/ 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1% ± 2 %* ± 5 %* ± 1.75 % or ± 0.10 mL ± 1.75 %* or ± 0.1 mbar** ± 1.65 %* or ± 0.04 sL/min** ± 3 %* or ± 0.01 mL/mbar** Adjustable on flow or pressure curves with user-defined limits.	
Gas types Gas standards Respiratory para Breath rate Greath volume Gressure Peakflow Compliance Frigger General informate Power Battery operation Power consumptic Veight Dimensions (w × consumptic)	Rate Inspiratory time (T _i) Expiratory time (T _e) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% T _P) I:E T _i /T _{total} Vti, Vte Vi, Ve P _{Peak} , P _{Mean} , PEEP, P _{Plateau} PF _{Insp} , PF _{Exp} C _{Stat} Automatic, Adult, Pediatric, HFO, ext. Trigger	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L 0-300 sL/min 0-160 mbar ± 300 sL/min 0-1000 mL/mbar Adult, Pediatric, HFO; 100-240 VAC, 50-66 16 hours Typical 5 VA, max. 25° 3.2 kg	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-/ 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1% ± 2 %* ± 5 %* ± 1.75 % or ± 0.10 mL ± 1.75 %* or ± 0.1 mbar** ± 1.65 %* or ± 0.04 sL/min** ± 3 %* or ± 0.01 mL/mbar** Adjustable on flow or pressure curves with user-defined limits.	
Cas types Cas standards Cas standards Casepiratory para Casepiratory Casep	Rate Inspiratory time (T _i) Expiratory time (T _e) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% T _P) I:E T _i /T _{total} Vti, Vte Vi, Ve P _{Peak} , P _{Mean} , PEEP, P _{Plateau} PF _{Insp} , PF _{Exp} C _{Stat} Automatic, Adult, Pediatric, HFO, ext. Trigger	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10' Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L 0-300 sL/min 0-160 mbar ± 300 sL/min 0-1000 mL/mbar Adult, Pediatric, HFO; 100-240 VAC, 50-66 16 hours Typical 5 VA, max. 25' 3.2 kg 24 × 26 × 13 cm Internal, USB stick	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-/ 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1% ± 2 %* ± 5 %* ± 1.75 % or ± 0.10 mL ± 1.75 %* or ± 0.1 mbar** ± 1.65 %* or ± 0.04 sL/min** ± 3 %* or ± 0.01 mL/mbar** Adjustable on flow or pressure curves with user-defined limits.	
Gas types Gas standards Gespiratory para Breath rate	Rate Inspiratory time (T _i) Expiratory time (T _e) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% T _P) I:E T _i /T _{total} Vti, Vte Vi, Ve P _{Peak} , P _{Mean} , PEEP, P _{Plateau} PF _{Insp} , PF _{Exp} C _{Stat} Automatic, Adult, Pediatric, HFO, ext. Trigger	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L 0-300 sL/min 0-160 mbar ± 300 sL/min 0-100 mL/mbar Adult, Pediatric, HFO; 100-240 VAC, 50-66 16 hours Typical 5 VA, max. 25 3.2 kg 24 × 26 × 13 cm Internal, USB stick High resolution touch- USB-A for USB stick,	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-I3, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ±1%** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1% ± 2%* ± 5%* ± 1.75 % or ± 0.10 mL ± 1.75 %* or ± 5 mL ± 0.75 %* or ± 0.1 mbar** ± 3 %* or ± 0.04 sL/min** Adjustable on flow or pressure curves with user-defined limits. O Hz VA (during battery charging) USB-B for FlowLab Software, individual communication, TTL for	
Gas types Gas standards Gas standards Gas standards Gas standards Gaspiratory para Greath rate Gastio Greath volume Vinute volume Pressure Peakflow Compliance General informate Power Gattery operation Power consumption Veight Dimensions (w x co Data Storage Display Interfaces	Rate Inspiratory time (T _i) Expiratory time (T _e) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% T _P) I:E T _i /T _{total} Vti, Vte Vi, Ve P _{Peak} , P _{Mean} , PEEP, P _{Plateau} PF _{Insp} , PF _{Exp} C _{Stat} Automatic, Adult, Pediatric, HFO, ext. Trigger	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L 0-300 sL/min 0-160 mbar ± 300 sL/min 0-100 mL/mbar Adult, Pediatric, HFO; 100-240 VAC, 50-60 16 hours Typical 5 VA, max. 25' 3.2 kg 24 × 26 × 13 cm Internal, USB stick High resolution touch- USB-A for USB stick, external trigger, RS23	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-I3, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ±1%** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1% ± 2%* ± 5%* ± 1.75 % or ± 0.10 mL ± 1.75 %* or ± 5 mL ± 0.75 %* or ± 0.1 mbar** ± 3 %* or ± 0.04 sL/min** Adjustable on flow or pressure curves with user-defined limits. O Hz VA (during battery charging) USB-B for FlowLab Software, individual communication, TTL for	
Gas types Gas standards Gas standards Gas standards Gas standards Gaseath rate Gatio Greath volume Compliance Gaster operation Compliance Gattery operation Cower consumptic Weight Compliance Complia	Rate Inspiratory time (T _i) Expiratory time (T _e) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% T _P) I:E T ₁ /T _{total} Vti, Vte Vi, Ve P _{Peak} , P _{Mean} , PEEP, P _{Plateau} PF _{Insp} , PF _{Exp} C _{Stat} Automatic, Adult, Pediatric, HFO, ext. Trigger tion	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L 0-300 sL/min 0-160 mbar ± 300 sL/min 0-160 mbar Adult, Pediatric, HFO; 100-240 VAC, 50-60 16 hours Typical 5 VA, max. 25' 3.2 kg 24 × 26 × 13 cm Internal, USB stick High resolution touch- USB-A for USB stick, external trigger, RS23 Annually	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-I3, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ±1%** ±0.01 s ±0.01 s ±0.01 s ±0.11% ±2%* ±5%* ±1.75 % or ±0.10 mL ±1.75 %* or ±5 mL ±0.75 %* or ±0.1 mbar** ±1.65 %* or ±0.04 sL/min** ±3 %* or ±0.01 mL/mbar** Adjustable on flow or pressure curves with user-defined limits. O Hz VA (during battery charging) USB-B for FlowLab Software, individual communication, TTL for 2	
Gas types Gas standards Gas standards Gas standards Gas standards Gaspiratory para Greath rate Greath rate Greath volume Volume Gressure Geakflow Compliance Frigger General informat Cower Gattery operation Cower consumptic Weight Dimensions (w × co Data Storage Display Interfaces Calibration Deparating temperation	Rate Inspiratory time (T _i) Expiratory time (T _e) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% T _P) I:E T ₁ /T _{1 total} Vti, Vte Vi, Ve P _{Peak} , P _{Mean} , PEEP, P _{Plateau} PF _{Insp} , PF _{Exp} C _{Stat} Automatic, Adult, Pediatric, HFO, ext. Trigger tion	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L 0-300 sL/min 0-160 mbar ± 300 sL/min 0-160 mbar Adult, Pediatric, HFO; 100-240 VAC, 50-66 16 hours Typical 5 VA, max. 25' 3.2 kg 24 × 26 × 13 cm Internal, USB stick High resolution touch- USB-A for USB stick, external trigger, RS23 Annually 10-40 °C (50-104°F)	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-f 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %*** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1 % ± 2 %* ± 5 5%* ± 1.75 % or ± 0.10 mL ± 1.75 %* or ± 5 mL ± 0.75 %* or ± 0.1 mbar*** ± 1.65 %* or ± 0.04 sL/min** ± 3 %* or ± 0.01 mL/mbar** Adjustable on flow or pressure curves with user-defined limits. O Hz VA (during battery charging) USB-B for FlowLab Software, individual communication, TTL for 2	
Gas types Gas standards Gas standards Gas standards Gas standards Gaspiratory para Greath rate Greath rate Greath volume Volume Gressure General information Compliance Grigger Gattery operation Cower consumptic Weight Dimensions (w × co Data Storage Display Interfaces Calibration	Rate Inspiratory time (T _i) Expiratory time (T _e) Inspiratory hold time Expiratory hold time Post-inspiratory pause (% T _P) I:E T ₁ /T _{1 total} Vti, Vte Vi, Ve P _{Peak} , P _{Mean} , PEEP, P _{Plateau} PF _{Insp} , PF _{Exp} C _{Stat} Automatic, Adult, Pediatric, HFO, ext. Trigger tion	22-25 vol% Air, O ₂ , Air/O ₂ , N ₂ O/O ₂ ATP, ATPD, ATPS, AP BTPD, BTPD-A, 0/10 Range 1-2000 bpm 0-60 s 0-90 s 0-60 s 0-90 s 0-100 % 1:300-300:1 0-100 % ± 60 L 0-300 sL/min 0-160 mbar ± 300 sL/min 0-160 mbar Adult, Pediatric, HFO; 100-240 VAC, 50-60 16 hours Typical 5 VA, max. 25 s 3.2 kg 24 × 26 × 13 cm Internal, USB stick, external trigger, RS23 Annually 10-40 °C (50-104°F) 10-90 % R.H.***	unspecified , He, He/O ₂ , N ₂ , N ₂ O, CO ₂ , customised gas types 21, AP25, STP, STPD0, STPD20, STPD21, STPH, BTPS, BTPS-f 13, 20/981, 15/1013, 25/991, 20/1013, 23/1013, NTPD, NTPS Accuracy ±1 bpm or ± 1 %*** ± 0.01 s ± 0.01 s ± 0.01 s ± 0.1 % ± 2 %* ± 5 5%* ± 1.75 % or ± 0.10 mL ± 1.75 %* or ± 5 mL ± 0.75 %* or ± 0.1 mbar*** ± 1.65 %* or ± 0.04 sL/min** ± 3 %* or ± 0.01 mL/mbar** Adjustable on flow or pressure curves with user-defined limits. O Hz VA (during battery charging) USB-B for FlowLab Software, individual communication, TTL for 2	

The greater tolerance is valid:

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^{*}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).