

Technical data

VT900A Gas Flow Analyzer

The Fluke Biomedical VT900A is designed to accurately and reliably test all types of medical gas flow equipment—ventilators, insufflators, oxygen meters—especially those requiring high accuracy in ultra-low flow and ultra-low pressure measurements such as anesthesia machines, flow meters and neonatal ventilators.

Accurate

The VT900A is Fluke Biomedical's high-accuracy premium gas flow analyzer. The single, full-range ±300 lpm air flow channel offers built-in oxygen, temperature and humidity measurements to streamline testing and automatically compensate for environmental conditions. The VT900A features an external trigger input and special ultra-low flow and ultra-low pressure ports. These ultra low-flow and ultra-low pressure ports allow the highest accuracy for devices requiring crucial low volume and pressure testing such as anesthesia machines and flow meters. Designed and tested to world renowned Molbloc-L calibration specifications ensures traceability to global regulatory standards with reliable measurements you can count on.



Key features

- Streamline your testing procedure, reduce errors and shorten your test time with the ability to create customized test profiles
- Avoid confusion and ensure accuracy with one-channel, full-range air flow functionality
- Reduce testing time with built-in line sensors which automatically test humidity, temperature and oxygen while compensating for atmospheric pressure and environmental conditions
- Ensure patient safety with ultra-low flow and ultra-low pressure for anesthesia machine and and flow meter testing
- Have confidence that your measurements comply to global regulatory standards and adhere to SI units of measurement with the Molbloc-L calibration system
- Easily transport and store the lightweight (3.6 lb/1.6 kg), all-in-one device—no extra modules for different tests
- Have more control over your testing by selecting your own trigger point with the external trigger input
- Streamline your testing procedure by performing a complete anesthesia machine PM with the VAPOR Anesthesia Tester







Traceable

The large on-board memory of the VT900A allows both short and long term recording and storing of test data. Transfer data via USB to a PC and upload the generated test file to your CMMS system for simple reporting. This device can be easily adapted to specific testing needs. With the ability to create custom profiles and the capacity to take remote commands for automated testing, the VT900A helps to decrease risk and increase efficiency.

Easy-to-use

The VT900A offers a large 7" (17.8 cm) touch screen display, allowing you to view multiple measurements at once, and quickly access menu options. Review results in graphical or numerical data in real-time. The global user interface makes operating this device straightforward and uncomplicated.

Portable

Weighing only 3.6 lb (1.6 kg), this compact, all-in-one device is highly portable. The snap-in carrying handle/shoulder strap and rugged design allow you to easily test on-the-go, while its small unit size and bale (kick stand) allows comfortable viewing for benchtop testing. A universal VESA mount also gives you the option of mounting the device to save space. With AC/DC power options and an 8-hour battery life, this tester is perfect for laboratory, clinical or field environments where AC power may not be available.



Portable, light (3.6 lbs/1.6 kg) and rugged design with 8 hours of battery life

Onboard memory and USB for easy data transfer and test file upload to your CMMS

7" (17.8 cm)
color touchscreen
showing real-time graphs
and test data. Allows for
customizable test profiles (by
user, test type, or model)
and data logging



High and
differential low
pressure ports. All
sensors have the best
accuracies on the market,
reliably calibrated using
Fluke Molbloc-L
system

Full-range ±300 lpm air flow channel with builtin oxygen, humidity, and temperature



Specifications

Features	
Battery life hours	8 hrs
Charge time in hours	5 hrs, typical
Memory	internal memory
Connection type	USB, Micro-B device port
Weight	3.6 lb (1.6 kg)
Display	7 in (17.8 cm)
Single full-range channel	√
Ultra-low flow ports	±750 ml/min
Ultra-low pressure port	0 to 10 mbar
Flow	
Full range flow channel	
Range	±300 slpm
Accuracy (air)	1.7 % or 0.04 slpm
Ultra-low flow channel	
Range	±750 ml/min
Accuracy (air)	±1.7 % or 0.01 slpm
Volume	
Range	±100 I
Accuracy	±1.75 % or 0.02 l
Pressure	
High pressure	
Range	-0.8 to 10 bar
Accuracy	±1 % or ±0.007 bar
Differential low pressure	
Range	±160 mbar
Accuracy	±0.5 % or ±0.1 mbar
Ultra-low pressure	0.1.40
Range	0 to 10 mbar
Accuracy Airway pressure	±1 % or ±0.01 mbar
Range	±160 mbar
Accuracy	±0.5 % or ±0.1 mbar
Barometric pressure	20.0 % of 20.1 mbd.
Range	550 to 1240 mbar
Accuracy	±1 % or ±5 mbar
Other	
Temperature	
Range	0 to 50 °C
Accuracy	±0.5 °C
Resolution	0.1 °C
Humidity	
Range	0 to 100 % RH
Accuracy	±3 % RH (20 to 80 % RH) ±5 % RH (20< or >80 % RH)
Oxygen	
Range	0 to 100 %
Accuracy	±1 %



Inspiratory tidal volume accuracy	Drooth naramatars	
Inspiratory tidal volume accuracy Expiratory tidal volume accuracy Expiratory tidal volume accuracy 11.75 % or 5 ml Oto 601 Minute volume accuracy 11.75 % or 5 ml Minute volume accuracy 12.75 % or 5 ml Minute volume accuracy 12.75 % or 6.1 ml Minute volume accuracy 12.75 % or 0.1 ml Minute volume accuracy 12.75 % or 0.1 mbar Mean airway pressure (PIP) accuracy 13.75 % or 0.1 mbar Mean airway pressure range 1160 mbar Mean airway pressure accuracy 1160 mbar Mean airway pressure (PEEP) ange 1160 mbar Mean airway pressure (PEEP) accuracy 1160 mbar Mositive end expiratory pressure (PEEP) accuracy 1160 mbar Minute end expiratory pressure (PEEP) accuracy 1160 mbar Minute end expiratory pressure (PEEP) accuracy 1170 % or 0.1 mbar Minute end expiratory pressure (PEEP) accuracy 13.75 % or 0.1 mlm Minute volume accuracy 13.75 % or 0.1 ml Minute volume accuracy 14.75 % or 0.0 ml Minute volume accuracy 15.75 % or 0.1 ml Minute volume accuracy 15.75 % or 0.0 ml Minute volume accuracy 15.75 % or 0.1 ml Minute volume accuracy 15.75 % or 0.1 ml Minute volume accuracy 15.75 % or 0.0 ml Minute volume accuracy 15.75 % or 0.0	Breath parameters	0 to 60 l
Expiratory tidal volume range Expiratory tidal volume accuracy Expiratory tidal volume accuracy Expiratory tidal volume accuracy Expiratory tidal volume accuracy Expiratory to to 100 1 Minute volume accuracy Expiratory to expiratory time ratio (I:E) range Expiratory to expiratory time ratio (I:E) range Expiratory to expiratory time ratio (I:E) accuracy Expiratory pressure (PIP) range Expiratory pressure (PIP) range Expiratory pressure (PIP) accuracy Expiratory pause pressure (PIP) accuracy Expiratory pause pressure Expiratory pressure (PIP) accuracy Expiratory pressure (PIP)		0 10 00 .
Expiratory tidal volume accuracy		
Minute volume range Minute volume accuracy Minute volume accuracy Breath rate range Breath rate accuracy Inspiratory to expiratory time ratio (I:E) range Inspiratory to expiratory time ratio (I:E) accuracy Peak inspiratory pressure (PIP) range Peak inspiratory pressure range Peak inspiratory pause pressure range Peak inspiratory pause pressure range Peak inspiratory pause pressure range Peak inspiratory pressure range Peak inspiratory pressure range Peak inspiratory pressure range Peak inspiratory pressure (PEEP) range Positive end expiratory pressure (PEEP) accuracy Positive end expiratory pressure range Positive end expiratory pressure range Positive end expiratory pressure range Positive end expiratory end expiratory Positive en		0.000.
Minute volume accuracy #1.75 % or 5 ml Breath rate range #1 to 1500 bpm Breath rate accuracy #1 % Inspiratory to expiratory time ratio (I:E) cacuracy #1 % Inspiratory to expiratory time ratio (I:E) accuracy #1 % or 0.1 Inspiratory to expiratory time ratio (I:E) accuracy #1 % or 0.1 Inspiratory pressure (PIP) range #160 mbar Peak inspiratory pressure (PIP) accuracy #160 mbar Peak inspiratory pause pressure range #160 mbar Inspiratory pause pressure range #160 mbar Inspiratory pause pressure range #160 mbar Mean airway pressure accuracy #1.75 % or 0.1 mbar Mean airway pressure (PEEP) range #160 mbar Mean airway pressure (PEEP) range #160 mbar Mean airway pressure (PEEP) range #160 mbar Mean airway pressure (PEEP) accuracy #1.75 % or 0.1 mbar Positive end expiratory pressure (PEEP) accuracy #1.75 % or 0.1 mbar Lung compliance accuracy #1.75 % or 0.1 mbar Inspiratory time range #1.75 % or 0.1 mbar Und time accuracy #1.75 % or 0.0 mb		
Breath rate range Breath rate accuracy Breath rate accuracy Inspiratory to expiratory time ratio (itE) range Inspiratory to expiratory time ratio (itE) accuracy Peak inspiratory pressure (PIP) range Peak inspiratory pressure (PIP) accuracy Peak inspiratory pressure range Inspiratory pause pressure range Inspiratory pause pressure range Inspiratory pause pressure range Peak inspiratory pressure range Peak pressure accuracy Positive end expiratory pressure (PEEP) range Positive end expiratory pressure (PEEP) accuracy Positive end expiratory filme range Pote to 60 s Positive end expiratory filme range Pote 8 prizatory filme range Pote 90 s Pote	9	
Breath rate accuracy Inspiratory to expiratory time ratio (I:E) range Inspiratory to expiratory time ratio (I:E) accuracy Peak inspiratory pressure (PIP) range ## 160 mbar Peak inspiratory pressure (PIP) range ## 160 mbar Inspiratory pause pressure range Inspiratory pause pressure range ## 160 mbar Inspiratory pause pressure range ## 160 mbar Inspiratory pause pressure range ## 160 mbar Mean airway pressure accuracy ## 160 mbar Mean airway pressure range ## 160 mbar Mean airway pressure (PEEP) range ## 160 mbar Positive end expiratory pressure (PEEP) range ## 160 mbar Positive end expiratory pressure (PEEP) accuracy ## 160 mbar ## 16	•	
Inspiratory to expiratory time ratio (I:E) range		•
Inspiratory to expiratory time ratio (I:E) accuracy Peak inspiratory pressure (PIP) range #160 mbar Peak inspiratory pressure (PIP) accuracy Inspiratory pause pressure range #160 mbar Inspiratory pause pressure range #160 mbar Mean airway pressure accuracy Positive end expiratory pressure (PEEP) range Positive end expiratory pressure (PEEP) range Lung compliance range Lung compliance accuracy Lung compliance accuracy Inspiratory time range Un to 60 s Inspiratory time range Un to 60 s Inspiratory hold time accuracy Inspiratory hold time accuracy Inspiratory time accuracy Inspiratory time range Un to 90 s Expiratory time decuracy Un time accuracy Inspiratory time accuracy Inspiratory time accuracy Inspiratory time accuracy Un time accuracy Inspiratory time accurac	· · · · · · · · · · · · · · · · · · ·	
Peak inspiratory pressure (PIP) range #160 mbar Peak inspiratory pressure (PIP) accuracy #0.75 % or 0.1 mbar Inspiratory pause pressure range #160 mbar Inspiratory pause pressure #160 mbar Inspiratory pause pressure #160 mbar Mean airway pressure range #160 mbar Mean airway pressure range #160 mbar Positive end expiratory pressure (PEEP) range #160 mbar Positive end expiratory pressure (PEEP) accuracy #1.75 % or 0.1 mbar Positive end expiratory pressure (PEEP) accuracy #1.75 % or 0.1 mbar Lung compliance range #1.60 mbar Lung compliance accuracy #1.75 % or 0.1 mbar Lung time range #1.75 % or 0.1 mbar Lung time accuracy #1.75 % or 0.1 mbar Inspiratory time accuracy #1.75 % or 0.1 mbar Inspiratory time accuracy #1.75 or 0.1 mbar Lung time accuracy #1.75 or 0.1 mbar Lung time accuracy #1.75 or 0.0 mbar Lung time accuracy #1.75 or		
Peak inspiratory pressure (PIP) accuracy		
Inspiratory pause pressure range #160 mbar Inspiratory pause pressure #160 mbar Mean airway pressure accuracy #160 mbar Mean airway pressure accuracy #160 mbar Positive end expiratory pressure (PEEP) range #160 mbar Positive end expiratory pressure (PEEP) range #160 mbar Positive end expiratory pressure (PEEP) accuracy #160 mbar Lung compliance range #160 mbar Lung compliance accuracy #170 mbar Lung compliance accuracy #170 mbar Inspiratory time range #170 mbar Inspiratory time range #170 mbar Inspiratory hold time range #170 mbar Inspiratory hold time range #170 mbar Inspiratory hold time accuracy #170 mbar Inspiratory time range #170 mbar Inspiratory hold time range #170 mbar Inspiratory flow range #170 mbar Inspiratory flow accuracy #170 mbar Inspiratory		
Inspiratory pause pressure #0.75 % or 0.1 mbar Mean airway pressure range #160 mbar Mean airway pressure cacuracy #10.75 % or 0.1 mbar Positive end expiratory pressure (PEEP) range #160 mbar Positive end expiratory pressure (PEEP) accuracy #10.75 % or 0.1 mbar Positive end expiratory pressure (PEEP) accuracy #10.75 % or 0.1 mbar Lung compliance arange 0 to 1000 ml/mbar Lung compliance accuracy #23 % or 0.1 ml/mbar Inspiratory time range 0 to 60 s Inspiratory time accuracy 0.02 s Inspiratory hold time ange 0 to 60 s Inspiratory hold time ange 0 to 60 s Inspiratory time range 0 to 60 s Inspiratory time range 0 to 90 s Expiratory time accuracy 1 % or 0.1 s Expiratory time accuracy 0.5 % or 0.01 s Expiratory time accuracy 0.5 % or 0.01 s Expiratory hold time accuracy 0.02 s Expiratory hold time accuracy 0.02 s Expiratory hold time accuracy 0.02 s Expiratory flow accuracy 0.02 s Expiratory hold time accuracy 0.02 s Expiratory hold time accuracy 0.02 s Expiratory flow accuracy 0.02 s Expiratory flow range 0 to 90 s Expiratory flow range 0 to 90 s Expiratory flow range 0 to 90 s Expiratory flow accuracy 0.02 s Expiratory flow accuracy 0.02 s Expiratory flow accuracy 0.02 s Expiratory flow accuracy 0.03 s Expiratory flow accuracy 0.04 lpm Environmental Operating temp 10 °C to 40 °C Storage temp 0 20 °C to 60 °C Operating humidity 0 to 90 % non-condensing 0		
Mean airway pressure range Mean airway pressure accuracy Positive end expiratory pressure (PEEP) range ### 160 mbar Positive end expiratory pressure (PEEP) accuracy #### 1075 % or 0.1 mbar Lung compliance range #### 0 to 1000 ml/mbar Lung compliance accuracy ### 3 % or 0.1 ml/mbar Lung compliance accuracy #### 10 to 60 s Inspiratory time range ### 0 to 60 s Inspiratory hold time range ### 0 to 60 s Inspiratory hold time accuracy ### 1 % or 0.1 s ### 2		
Mean airway pressure accuracy Positive end expiratory pressure (PEEP) range Positive end expiratory pressure (PEEP) accuracy ±0.75 % or 0.1 mbar Positive end expiratory pressure (PEEP) accuracy ±0.75 % or 0.1 mbar Lung compliance range Uo to 1000 ml/mbar Lung compliance accuracy ±3 % or 0.1 ml/mbar Inspiratory time range Uo to 60 s Inspiratory time accuracy Unspiratory hold time range Uo to 60 s Inspiratory hold time accuracy Unspiratory time accuracy Unspiratory time range Uo to 90 s Expiratory time accuracy Uo.5 % or 0.01 s Expiratory time accuracy Uo.2 s Peak expiratory hold time range Uo to 90 s Expiratory hold time range Uo to 90 s Expiratory hold time range Uo to 90 s Expiratory hold time accuracy Uo.2 s Peak expiratory flow range Uo.02 s Peak expiratory flow accuracy Uo.2 s Peak inspiratory flow accuracy Uo.4 17 % or 0.04 lpm Peak inspiratory flow accuracy Uo.5 wor 0.05 wor 0.05 lpm Peak inspiratory flow accuracy Uo.5 wor 0.04 lpm Peak expiratory flow accuracy Uo.5 wor 0.04 lpm Peak inspiratory flow accuracy Uo.5 wor 0.04 lpm Peak inspiratory flow accuracy Uo.5 wor 0.04 lpm Uo.5 wo		
Positive end expiratory pressure (PEEP) range #160 mbar Positive end expiratory pressure (PEEP) accuracy #20,75 % or 0.1 mbar Lung compliance arenge 0 to 1000 ml/mbar Lung compliance accuracy #3 % or 0.1 ml/mbar Inspiratory time range 0 to 60 s Inspiratory time accuracy 0.02 s Inspiratory hold time range 0 to 60 s Inspiratory hold time accuracy 1% or 0.1 s Expiratory time accuracy 0.5 % or 0.01 s Expiratory time accuracy 0.5 % or 0.01 s Expiratory time accuracy 0.5 % or 0.01 s Expiratory hold time accuracy 0.5 % or 0.01 s Expiratory hold time accuracy 0.02 s Expiratory hold time accuracy 0.02 s Expiratory flow accuracy 0.02 s Peak expiratory flow accuracy 41.7 % or 0.04 lpm Peak expiratory flow accuracy 41.7 % or 0.04 lpm Peak inspiratory flow accuracy 41.7 % or 0.04 lpm Peak inspiratory flow accuracy 41.7 % or 0.04 lpm Postring temp 10 °C to 40 °C Storage temp 20 °C to 60 °C Operating temp 10 to 90 % non-condensing Storage humidity 5 to 95 % non-condensing Storage humidity 5 to 95 % non-condensing TATP (ambient temp/pressure, actual humidity) Air ATPD (ambient temp/pressure, actual humidity) Air ATPD (ambient temp/pressure, saturated) Nitrous Oxide (N2O) STP20 (20 °C temp/pressure 760 mmHg, actual humidity) Oxygen (O2) STP21 (21 °C temp/pressure 760 mmHg, actual humidity) Oxygen (O2) STPD10 (0 °C temp/pressure 760 mmHg, actual humidity) Oxygen (O2) STPD0 (0 °C temp/pressure 760 mmHg, actual humidity) Oxygen/Nitrous Oxide		
Positive end expiratory pressure (PEEP) accuracy Lung compliance range Ung compliance accuracy Lung compliance accuracy L		
Lung compliance range Lung compliance accuracy Lung compliance Lung compliance accuracy Lung compliance Lung compliance accuracy Lung compliance Lung comp		
Lung compliance accuracy Inspiratory time range 0 to 60 s Inspiratory time range 0 to 60 s Inspiratory time accuracy 0.02 s Inspiratory hold time range 0 to 60 s Inspiratory hold time range 0 to 60 s Inspiratory time accuracy 1% or 0.1 s Expiratory time range 0 to 90 s Expiratory time accuracy 0.5 % or 0.01 s Expiratory time accuracy 0.5 % or 0.01 s Expiratory hold time range 0 to 90 s Expiratory hold time range 2 to 10 90 s Expiratory flow range 2 sado lpm Peak expiratory flow range 2 sado lpm Peak inspiratory flow accuracy 2 sado lpm Peak expiratory flow accuracy 2 sado lpm Peak expirat		
Inspiratory time range Inspiratory time accuracy Inspiratory hold time range Inspiratory hold time range Inspiratory hold time accuracy Inspiratory hold time accuracy Inspiratory hold time accuracy Inspiratory hold time range Inspiratory hold time range Inspiratory hold time range Inspiratory hold time accuracy Inspiratory hold time accuracy Inspiratory flow range Inspiratory flow range Inspiratory flow accuracy Inspiratory flow a		
Inspiratory time accuracy Inspiratory hold time range O to 60 s Inspiratory hold time range O to 90 s Expiratory time accuracy Expiratory time accuracy O.5 % or 0.01 s Expiratory time accuracy O.5 % or 0.01 s Expiratory hold time range O to 90 s Expiratory hold time range Expiratory hold time accuracy O.02 s Expiratory hold time accuracy Peak expiratory flow range Peak expiratory flow range Peak expiratory flow accuracy Peak inspiratory flow accuracy Peak expiratory flow 90.04 lpm Peak inspiratory flow on 0.04		
Inspiratory hold time range Inspiratory hold time accuracy Expiratory time range O to 90 s Expiratory time accuracy Expiratory time accuracy O.5 % or 0.01 s Expiratory hold time range Expiratory hold time range O to 90 s Expiratory hold time accuracy O.02 s Peak expiratory flow range Peak expiratory flow accuracy Peak inspiratory flow range Peak inspiratory flow accuracy Environmental Operating temp 10 °C to 40 °C Storage temp Operating humidity Storage humidity Storage humidity For Storage humidity AIPD (ambient temp/pressure, actual humidity) ATPS (ambient temp/pressure 760 mmHg, actual humidity) STPDO (0 °C temp/pressure 760 mmHg, dry) STP o STPDD1 (21 °C temp/pressure 760 mmHg, dry) STPOS (body temp 37 °C/ambient pressure 760 mmHg, dry) BTPS (body temp 37 °C/ambient pressure 760 mmHg, acturated) Oxygen/Nitrous Oxide Oxygen/Nitrous Oxide Oxygen/Nitrous Oxide Oxygen/Nitrous Oxide Oxygen/Nitrous Oxide Oxygen/Nitrous Oxide		
Inspiratory hold time accuracy Expiratory time range Expiratory time accuracy Expiratory time accuracy Oto 90 s Expiratory hold time range Expiratory hold time range Expiratory hold time accuracy Oto 90 s Expiratory hold time accuracy Peak expiratory flow range Expiratory flow range Peak expiratory flow accuracy Peak inspiratory flow accuracy Environmental Operating temp 10 °C to 40 °C Storage temp Possible from the following flow accuracy Expiratory flow accuracy In the following flow accuracy Environmental Operating temp In the following flow accuracy Expiratory flow accuracy Environmental Operating temp In the following flow accuracy Expiratory flow accur		
Expiratory time range Expiratory time accuracy Expiratory time accuracy Expiratory hold time range Expiratory hold time range Expiratory hold time accuracy O.02 s Peak expiratory flow range Peak expiratory flow accuracy Peak inspiratory flow accuracy Environmental Operating temp Operating humidity Storage humidity For Storage humidity AIPD (ambient temp/pressure, actual humidity) ATPS (ambient temp/pressure 760 mmHg, actual humidity) STP Or STPD21 (21 °C temp/pressure 760 mmHg, dry) EVANOR ADD IDM Expiratory time accuracy 0.05 % or 0.01 s Expiratory time accuracy 0.05 % or 0.01 s Expiratory hold time accuracy 0.05 % or 0.01 s Expiratory hold time accuracy 0.02 s 1.7 % or 0.04 lpm		
Expiratory time accuracy Expiratory hold time range Expiratory hold time range Expiratory hold time accuracy 0.02 s Peak expiratory flow range Peak expiratory flow accuracy Peak inspiratory flow accuracy Environmental Operating temp To "C to 40 "C Storage temp Operating humidity Storage humidity For Storections ATP (ambient temp/pressure, actual humidity) ATPD (ambient temp/pressure, saturated) STP20 (20 "C temp/pressure 760 mmHg, actual humidity) STPD20 (20 "C temp/pressure 760 mmHg, dry) STP or STPD21 (21 "C temp/pressure 760 mmHg, dry) BTPS (body temp 37 "C/ambient pressure 760 mmHg, dry) BTPS (body temp 37 "C/ambient pressure 760 mmHg, dry) BTPS (body temp 37 "C/ambient pressure 760 mmHg, dry) D.00 STPC0 (20 "C temp/pressure 760 mmHg, dry) STPDS (body temp 37 "C/ambient pressure 760 mmHg, dry) D.00 STPC0 (20 "C temp/pressure 760 mmHg, dry) STPDS (body temp 37 "C/ambient pressure 760 mmHg, saturated) Oxygen/Nitrous Oxide Oxygen/Nitrous Oxide Oxygen/Nitrous Oxide		1 1 1 2 1 2 1 2 1 2
Expiratory hold time range Expiratory hold time accuracy Peak expiratory flow range Peak expiratory flow accuracy Peak expiratory flow accuracy Peak inspiratory flow accuracy Peak inspiratory flow accuracy Peak inspiratory flow accuracy Environmental Operating temp Operating temp Operating humidity Storage humidity To to 40 °C Storage humidity Storage humidity To to 90 % non-condensing Gas types ATP (ambient temp/pressure, actual humidity) AIPD (ambient temp/pressure, saturated) STP20 (20 °C temp/pressure 760 mmHg, actual humidity) Argon STPD20 (20 °C temp/pressure 760 mmHg, dry) STP or STPD21 (21 °C temp/pressure 760 mmHg, dry) BTPS (body temp 37 °C/ambient pressure 760 mmHg, asturated) O to 90 s 1.0 °C to 40 °C 1.0 °C to 40 °C 1.0 °C to 40 °C 1.0 °C to 90 % non-condensing Gas types ATP Air Air ATPD (ambient temp/pressure, actual humidity) Air ATPD (ambient temp/pressure 760 mmHg, actual humidity) Carbon Dioxide (N2O) STP21 (21 °C temp/pressure 760 mmHg, dry) Argon STPD20 (20 °C temp/pressure 760 mmHg, dry) Argon STPD21 (21 °C temp/pressure 760 mmHg, dry) Oxygen/Nitrogen BTPS (body temp 37 °C/ambient pressure 760 mmHg, saturated) Oxygen/Nitrous Oxide	<u> </u>	
Expiratory hold time accuracy Peak expiratory flow range Peak expiratory flow accuracy Peak expiratory flow accuracy Peak inspiratory flow range Peak expiratory flow accuracy Peak expiratory flow range Peak expirator		
Peak expiratory flow range Peak expiratory flow accuracy Peak inspiratory flow range Peak inspiratory flow accuracy Peak inspiratory flow range Peak expiratory of 0 range flow flow Peak inspiratory flow range Peak inspiratory flow range Peak inspiratory of 0 range Peak inspiratory flow range Peak inspiratory flow range Peak inspiratory flow range Peak inspiratory or 0.04 lpm Peak inspiratory of 0 range Peak inspiratory flow range Peak inspiratory flow range Peak inspiratory flow range Peak inspiratory flow flow Peak inspiratory flow Peak inspiratory flow flow Peak inspiratory flow Peak ins		
Peak expiratory flow accuracy Peak inspiratory flow range Peak inspiratory flow accuracy Peak inspiratory flow range Peak inspiratory flow accuracy Peak inspiratory flow flow flow of 0.00 connected flow of		
Peak inspiratory flow range Peak inspiratory flow accuracy Environmental Operating temp 10 °C to 40 °C Storage temp -20 °C to 60 °C Operating humidity 10 to 90 % non-condensing Storage humidity 5 to 95 % non-condensing Gas corrections ATP (ambient temp/pressure, actual humidity) AIF ATPD (ambient temp/pressure, dry) ATPS (ambient temp/pressure, saturated) STP20 (20 °C temp/pressure 760 mmHg, actual humidity) STP21 (21 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STPD21 (21 °C temp/pressure 760 mmHg, dry) STPD21 (21 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STPD21 (21 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STPD21 (21 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STPD21 (21 °C temp/pressure 760 mmHg, dry) Oxygen/Nitrogen BTPS (body temp 37 °C/ambient pressure 760 mmHg, saturated) Oxygen/Nitrous Oxide		·
Peak inspiratory flow accuracy Environmental Operating temp 10 °C to 40 °C Storage temp -20 °C to 60 °C Operating humidity 10 to 90 % non-condensing Storage humidity 5 to 95 % non-condensing Gas corrections Gas types ATP (ambient temp/pressure, actual humidity) AIPD (ambient temp/pressure, dry) ATPS (ambient temp/pressure, saturated) STP20 (20 °C temp/pressure 760 mmHg, actual humidity) Carbon Dioxide (N2O) STP21 (21 °C temp/pressure 760 mmHg, dry) ATPO (0 °C temp/pressure 760 mmHg, dry) ATPO (20 °C temp/pressure 760 mmHg, dry) ATPO (20 °C temp/pressure 760 mmHg, dry) ATPO (20 °C temp/pressure 760 mmHg, dry) ATPD (21 °C temp/pressure 760 mmHg, dry)		
Environmental Operating temp 10 °C to 40 °C Storage temp -20 °C to 60 °C Operating humidity 10 to 90 % non-condensing Storage humidity 5 to 95 % non-condensing Gas corrections Gas types ATP (ambient temp/pressure, actual humidity) Air ATPD (ambient temp/pressure, dry) ATPS (ambient temp/pressure, saturated) STP20 (20 °C temp/pressure 760 mmHg, actual humidity) STP21 (21 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STPD21 (21 °C temp/pressure 760 mmHg, dry) Oxygen/Nitrogen BTPS (body temp 37 °C/ambient pressure 760 mmHg, saturated) Oxygen/Nitrous Oxide		
Operating temp Composition of the storage temp Composition of th		±1.7 % or 0.04 lpm
Storage temp Operating humidity 10 to 90 % non-condensing Storage humidity 5 to 95 % non-condensing Gas corrections ATP (ambient temp/pressure, actual humidity) AIR ATPD (ambient temp/pressure, dry) ATPS (ambient temp/pressure, saturated) STP20 (20 °C temp/pressure 760 mmHg, actual humidity) STP21 (21 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STPD21 (21 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STPD21 (21 °C temp/pressure 760 mmHg, dry) STPD21 (21 °C temp/pressure 760 mmHg, dry) STPD21 (21 °C temp/pressure 760 mmHg, dry) Oxygen/Nitrogen BTPS (body temp 37 °C/ambient pressure 760 mmHg, saturated) Oxygen/Nitrous Oxide		
Operating humidity Storage humidity 5 to 95 % non-condensing Gas corrections ATP (ambient temp/pressure, actual humidity) ATPD (ambient temp/pressure, dry) ATPS (ambient temp/pressure, saturated) STP20 (20 °C temp/pressure 760 mmHg, actual humidity) STP21 (21 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STPD21 (21 °C temp/pressure 760 mmHg, dry) STP or STPD21 (21 °C temp/pressure 760 mmHg, dry) Oxygen/Nitrogen BTPS (body temp 37 °C/ambient pressure 760 mmHg, saturated) Oxygen/Nitrous Oxide	Operating temp	
Storage humidity Gas corrections ATP (ambient temp/pressure, actual humidity) ATPD (ambient temp/pressure, dry) ATPS (ambient temp/pressure, saturated) STP20 (20 °C temp/pressure 760 mmHg, actual humidity) STP21 (21 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STPD21 (21 °C temp/pressure 760 mmHg, dry) STP or STPD21 (21 °C temp/pressure 760 mmHg, dry) STP or STPD21 (21 °C temp/pressure 760 mmHg, dry) Oxygen/Nitrogen BTPS (body temp 37 °C/ambient pressure 760 mmHg, saturated) Oxygen/Nitrous Oxide		
Gas types ATP (ambient temp/pressure, actual humidity) AIF ATPD (ambient temp/pressure, dry) ATPS (ambient temp/pressure, saturated) STP20 (20 °C temp/pressure 760 mmHg, actual humidity) STP21 (21 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) Argon STPD20 (20 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STP or STPD21 (21 °C temp/pressure 760 mmHg, dry) STP or STPD21 (21 °C temp/pressure 760 mmHg, dry) Oxygen/Nitrogen BTPS (body temp 37 °C/ambient pressure 760 mmHg, saturated) Oxygen/Nitrous Oxide		
ATP (ambient temp/pressure, actual humidity) ATPD (ambient temp/pressure, dry) ATPS (ambient temp/pressure, saturated) Nitrous Oxide (N2O) STP20 (20 °C temp/pressure 760 mmHg, actual humidity) STP21 (21 °C temp/pressure 760 mmHg, actual humidity) Oxygen (O2) STPD0 (0 °C temp/pressure 760 mmHg, dry) Argon STPD20 (20 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STP or STPD21 (21 °C temp/pressure 760 mmHg, dry) Oxygen/Nitrogen BTPS (body temp 37 °C/ambient pressure 760 mmHg, saturated) Oxygen/Nitrous Oxide		5 to 95 % non-condensing
ATPD (ambient temp/pressure, dry) ATPS (ambient temp/pressure, saturated) STP20 (20 °C temp/pressure 760 mmHg, actual humidity) STP21 (21 °C temp/pressure 760 mmHg, actual humidity) STPD0 (0 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STPD21 (21 °C temp/pressure 760 mmHg, dry) STPD21 (21 °C temp/pressure 760 mmHg, dry) STP or STPD21 (21 °C temp/pressure 760 mmHg, dry) STP or STPD21 (21 °C temp/pressure 760 mmHg, dry) Oxygen/Nitrogen Oxygen/Nitrous Oxide	Gas corrections	Gas types
ATPS (ambient temp/pressure, saturated) STP20 (20 °C temp/pressure 760 mmHg, actual humidity) Carbon Dioxide (CO2) STP21 (21 °C temp/pressure 760 mmHg, actual humidity) Oxygen (O2) STPD0 (0 °C temp/pressure 760 mmHg, dry) Argon STPD20 (20 °C temp/pressure 760 mmHg, dry) Heliox (21 % O2, 79% He) STP or STPD21 (21 °C temp/pressure 760 mmHg, dry) Oxygen/Nitrogen BTPS (body temp 37 °C/ambient pressure 760 mmHg, saturated) Oxygen/Nitrous Oxide	ATP (ambient temp/pressure, actual humidity)	Air
STP20 (20 °C temp/pressure 760 mmHg, actual humidity) STP21 (21 °C temp/pressure 760 mmHg, actual humidity) Oxygen (O2) STPD0 (0 °C temp/pressure 760 mmHg, dry) Argon STPD20 (20 °C temp/pressure 760 mmHg, dry) Heliox (21 % O2, 79% He) STP or STPD21 (21 °C temp/pressure 760 mmHg, dry) Oxygen/Nitrogen BTPS (body temp 37 °C/ambient pressure 760 mmHg, saturated) Oxygen/Nitrous Oxide	ATPD (ambient temp/pressure, dry)	Nitrogen (N2)
STP21 (21 °C temp/pressure 760 mmHg, actual humidity) STPD0 (0 °C temp/pressure 760 mmHg, dry) Argon STPD20 (20 °C temp/pressure 760 mmHg, dry) Heliox (21 % O2, 79% He) STP or STPD21 (21 °C temp/pressure 760 mmHg, dry) Oxygen/Nitrogen BTPS (body temp 37 °C/ambient pressure 760 mmHg, saturated) Oxygen/Nitrous Oxide	ATPS (ambient temp/pressure, saturated)	Nitrous Oxide (N2O)
STPD0 (0 °C temp/pressure 760 mmHg, dry) STPD20 (20 °C temp/pressure 760 mmHg, dry) STP or STPD21 (21 °C temp/pressure 760 mmHg, dry) BTPS (body temp 37 °C/ambient pressure 760 mmHg, saturated) Oxygen/Nitrous Oxide	STP20 (20 °C temp/pressure 760 mmHg, actual humidity)	Carbon Dioxide (CO2)
STPD20 (20 °C temp/pressure 760 mmHg, dry) STP or STPD21 (21 °C temp/pressure 760 mmHg, dry) BTPS (body temp 37 °C/ambient pressure 760 mmHg, saturated) Oxygen/Nitrous Oxide	STP21 (21 °C temp/pressure 760 mmHg, actual humidity)	Oxygen (O2)
STP or STPD21 (21 °C temp/pressure 760 mmHg, dry) BTPS (body temp 37 °C/ambient pressure 760 mmHg, saturated) Oxygen/Nitrous Oxide	STPD0 (0 °C temp/pressure 760 mmHg, dry)	Argon
STP or STPD21 (21 °C temp/pressure 760 mmHg, dry) BTPS (body temp 37 °C/ambient pressure 760 mmHg, saturated) Oxygen/Nitrous Oxide	STPD20 (20 °C temp/pressure 760 mmHg, dry)	Heliox (21 % O2, 79% He)
BTPS (body temp 37 °C/ambient pressure 760 mmHg, saturated) Oxygen/Nitrous Oxide		



Ordering information

Includes:

- Bacterial filter (1)
- 1.2 m (4 ft) silicon tubing (2)
- 22 mm ID x 22 mm ID tubing adapters (2)
- 22 mm OD x 22 mm OD tubing adapters (2)
- Tapered 15 mm OD x 33 mm OD tubing adapters (2)
- Flexible 15 mm ID x 22 mm ID tubing adapters (2)
- DISS hand tight nut/nipple to 6.4 mm (1/4 in) ID hose barb adapter (1)
- USB serial cable
- AC power adapter
- Detachable carrying handle
- Detachable shoulder strap
- Certificate of Calibration with test data

Optional accessories

- VAPOR Anesthesia Tester
- ACCU LUNG Test Lung
- ACCU LUNG II Test Lung
- VESA Mounting system/test arm





About Fluke Biomedical

Fluke Biomedical is the world's leading manufacturer of quality biomedical test and simulation products. In addition, Fluke Biomedical provides the latest medical imaging and oncology quality-assurance solutions for regulatory compliance. Highly credentialed and equipped with a NVLAP Lab Code 200566-0 accredited laboratory, Fluke Biomedical also offers the best in quality and customer service for all your equipment calibration needs.

Today, biomedical personnel must meet the increasing regulatory pressures, higher quality standards, and rapid technological growth, while performing their work faster and more efficiently than ever. Fluke Biomedical provides a diverse range of software and hardware tools to meet today's challenges.

Fluke Biomedical regulatory commitment

As a medical test device manufacturer, we recognize and follow certain quality standards and certifications when developing our products. We are ISO 9001 and ISO 13485 medical device certified and our products are:

- CE Certified, where required
- NIST Traceable and Calibrated
- UL, CSA, ETL Certified, where required
- NRC Compliant, where required

Fluke Biomedical.

Trusted for the measurements that matter.

Fluke Biomedical 28775 Aurora Road Cleveland, OH 44139 U.S.A.

For more information, contact us at:

(800) 850-4608 or Fax (440) 349-2307 Email: sales@flukebiomedical.com Web access: www.flukebiomedical.com

©2018 Fluke Biomedical. Specifications subject to change without notice. Printed in U.S.A. 12/2018 6009789a-en

Modification of this document is not permitted without written permission from Fluke Corporation.

