



VT650 Gas Flow Analyzer Ventilator Tester

Designed for accuracy and portability, the VT650 Gas Flow Analyzer / Ventilator Tester is a high quality, basic needs gas flow analyzer

FLUKE® Best gas flow equipment including ventilators with the all-in-one, portable Fluke Biomedical VT650 Gas Flow Analyzer / Ventilator Tester.

Key Features

- Avoid confusion and ensure accuracy with one-channel full range air flow functionality
- Streamline your testing procedure reduce errors and quicken your test time with the ability to create customized test profiles
- Reduce testing time with built-in line sensors which automatically test humidity temperature and oxygen while compensating for atmospheric pressure and environmental conditions
- Easily transport and store the lightweight (3.64 lb/1.6 kg) all-in-one device – no extra modules for different tests
- Quickly access menu options interpret results and see measurements at a distance up to 6' (1.8 m) with the large easy-to-read 7" (17.8 cm) color touch screen
- Operate on-the-go all day with 8 hours of battery life
- The on-board memory allows you to record and save data

Accurate

The VT650 Gas Flow Analyzer offers high accuracy and reliability for gas flow and respiratory medical equipment, including neonatal, mechanical and high-frequency ventilators. The single, full range ± 300 lpm air flow channel offers built-in oxygen, temperature and humidity measurements to streamline your testing procedure. Designed and tested to world renown Molbloc-L calibration specifications ensures traceability to global regulatory standards with measurements you can rely on.

Portable

Everything you need to perform tests is included in the VT650 – no extra modules or components are required. Weighing only 3.6 lb (1.6 kg), this compact, all-in-one device is highly portable. The snap-in carrying handle/shoulder strap, small unit size, and rugged design allows you to quickly and easily test on-the-go. With AC and DC power options and an 8-hour battery life, this tester is perfect for both clinical and field environments where AC power may not be available, but high accuracy is needed.

Easy-to-use

The VT650 has a large 7" (17.8 cm) touchscreen display, allowing you to view multiple measurements at once and quickly access menu options. Review results in real-time with either color graphs or numerical data. The global user interface

making connecting this device straightforward and uncomplicated.

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Traceable

The large onboard memory allows testing of multiple medical devices back-to-back without having to transfer data off between tests. Record and store test data, save time and streamline your testing needs by creating customized test profiles. When you are finished with your testing, simply save and transfer the data via USB to a PC and upload the test file to your CMMS for easy documenting and reporting.

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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	17.8 cm (7 in)
Single full-Range channel	✓

Flow

Full Range flow channel (includes both low and high flow, flow specifications are with laminar flow input)

Range	0 to ± 200 slpm
Accuracy	$\pm 2.0\%$ of rdg or 0.04 slpm
Range	200 to 300 slpm, -200 to -300 slpm, -22 to -14 slpm, +7.5 to +9.5 slpm
Accuracy	2.5% of rdg
Volume	
Range	± 100 l
Accuracy	$\pm 2.0\%$ or 0.02 l



High pressure

Range -0.8 to 10 bar

Accuracy $\pm 1\%$ or ± 0.007 bar

Differential low pressure

Range ± 160 mbarAccuracy $\pm 0.5\%$ or ± 0.1 mbar

Airway pressure

Range ± 160 mbarAccuracy $\pm 0.5\%$ or ± 0.1 mbar

Barometric pressure

Range 550 to 1240 mbar

Accuracy $\pm 1\%$ 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 $\pm 3\%$ RH (20 to 80 % RH)
 $\pm 5\%$ RH (20 < or > 80 % RH)

Oxygen

Range 0 to 100 %

Accuracy $\pm 1\%$

Breath parameters

Inspiratory tidal volume Range 0 to 60 l

Inspiratory tidal volume Accuracy $\pm 2.0\%$ or 5 ml

Expiratory tidal volume Range 0 to 60 l

Expiratory tidal volume Accuracy $\pm 2.0\%$ or 5 ml

Minute volume Range	0 to 100 l
Minute volume Accuracy	±2.0 % or 5 ml
Breath rate Range	1 to 1500 bpm
Breath rate Accuracy	±1 %
Inspiratory to expiratory time ratio (I:E) Range	1:300 to 300:1
Inspiratory to expiratory time ratio (I:E) Accuracy	±2 % or 0.1
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	±0.75 % or 0.1 mbar
Mean airway pressure Range	±160 mbar
Mean airway pressure Accuracy	±0.75 % or 0.1 mbar
Positive end expiratory pressure (PEEP) Range	±160 mbar
Positive end expiratory pressure (PEEP) Accuracy	±0.75 % or 0.1 mbar
Lung compliance Range	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 Range	0 to 90 s
Expiratory time Accuracy	0.5 % or 0.01 s
Expiratory hold time Range	0 to 90 s
Expiratory hold time Accuracy	0.02 s
Peak expiratory flow Range	±300 lpm
Peak expiratory flow Accuracy	±2.0 % or 0.04 lpm

FLUKE Peak inspiratory flow Range	±300 lpm
Peak inspiratory flow Accuracy	±2.0 % or 0.04 lpm
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) Nitrogen (N2)	
ATPS (ambient temp/pressure, saturated)	Nitrous Oxide (N2O)
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
BTPD (body temp 37 °C/ambient pressure 760 mmHg, dry)	Oxygen/Helium