

VT MOBILE

ANALIZADOR PORTÁTIL DE FLUJOS DE GAS / RESPIRADOR



Descripción

El VT MOBILE es un analizador de flujos de gas de uso general portátil y compacto diseñado para cubrir las necesidades de desplazamiento de técnicos e ingenieros. Esta herramienta versátil evalúa las prestaciones de una amplia variedad de dispositivos médicos de flujo de gas/presión y mide hasta 16 parámetros de ventilación.

El panel frontal de fácil uso dispone de una pantalla gráfica, que permite a los técnicos verificar correctamente las formas de onda en la pantalla del instrumento. Los resultados de las pruebas pueden ser almacenados en el instrumento y descargados posteriormente en el PC para visualizar e imprimir utilizando el software VT para Windows PC. Este software permite, entre otras prestaciones, la presentación simultánea de hasta 16 parámetros de ventilación para aumentar la rapidez de las pruebas y otras evaluaciones. La norma EC 6.20 ahora requiere la realización del mantenimiento preventivo del 100% de dispositivos de soporte de vida. El VT MOBILE puede ayudarle a cumplir estos requerimientos.

La unidad base mide rangos bajos y altos de flujo, volumen, presión y concentración de oxígeno. Adicionalmente, puede pedirse la opción de temperatura y humedad relativa para asegurar las mediciones más precisas de los flujos de gas.

Características principales

- Mediciones de flujo bidireccional, presión, volumen y concentración de oxígeno
- Medición de hasta 16 parámetros de ventilación
- Análisis estadístico y tendencias de todos los valores medidos
- Dispone de pantalla gráfica
- Compacto y portátil
- RS232 para control de PC
- Memoria para almacenar resultados
- Software VT para Windows PC
- Conjunto de sensor para las mediciones de temperatura y humedad relativa (opcional)

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Specifications

General		
Display	64 pixels x 128 pixels, reflective LCD, blue on yellow	
Operational modes	Standalone without any PC software or with the VT for Windows PC software	
Gas types	Air, N ₂ , N ₂ O, CO ₂ , O ₂ , N ₂ O bal O ₂ , N ₂ bal O ₂	
Battery power supply	Maximum over-voltage	15 V dc
	Input voltage range	9 V dc
	Power consumption	< 70 mA
	Battery life	> 7 hours
External power supply	Maximum over-voltage	264 V ac
	Input voltage range	100 V ac to 240 V ac
	Input frequency range	50/60 Hz
	Output voltage	12 V to 15 V
	Output current	1.2 A
	Fuse rating	N/A
Dimensions (WxDxH)	10 cm x 20 cm x 3.8 cm (4 in x 8 in x 1.5 in)	
Weight	0.45 kg (1 lb)	
Technical		
Low-pressure port		
Maximum applied pressure	5 psi	
Operating pressure (differential)	-20 cmH ₂ O to 120 cmH ₂ O	
Operating pressure (common-mode)	N/A	
Span accuracy	+ 2 % of reading or 1.5 mmHg	
Frequency response	> 10 Hz	
Resolution	0.1 mmHg	
Sample rate	100 Hz	
Fittings	Flow connector with 2 tubes "T" connected to a single Luer fitting Note: No fluid may be applied to port	
High-pressure port		
Maximum applied pressure	125 psi	
Operating pressure	-2 psi to 100 psi	
Span accuracy	+ 2 % of reading or + 0.2 psig	
Frequency response	> 10 Hz	
Resolution	0.1 psi	
Sample rate	100 Hz	
Fittings	Single port, Luer lock, stainless steel Note: No fluid may be applied to port	

Airway pressure	
Maximum applied pressure	5 psi
Operating pressure	-20 cmH ₂ O to 120 cmH ₂ O
Span accuracy	+ 2 % of reading or + 0.5 cmH ₂ O
Frequency response	> 25 Hz
Resolution	0.1 cmH ₂ O
Sample rate	100 Hz
Fittings	Internally connected to flow-sensor pressure lines
High-flow port	
Maximum flow rate (absolute value)	200 lpm
Operating flow range	± 200 lpm
Accuracy	± 3 % of reading or ± 2 % of range
Floor for absolute accuracy	25 lpm
Resolution	0.01 lpm
Frequency response	> 25 Hz or t ₁₀₋₉₀ < 40 ms
Sample rate	100 Hz
Dynamic resistance	< 2 cm H ₂ O @ 60 lpm
Low-flow dropout	2.5 lpm
Breath-detect threshold	4 lpm
Volume range	> ± 60 l
Tidal volume accuracy	± 3 % of reading or ± 20 ml, whichever is greater
Fittings	15 mm OD/ID, 1:40 conical male
Low-flow port	
Maximum flow rate (absolute value)	35 lpm
Operating flow range	+ 25 lpm
Accuracy	+ 3 % of reading or + 1 % of range
Floor for absolute accuracy	3 lpm
Resolution	0.01 lpm flow > 1 lpm
Frequency response	> 25 Hz or t ₁₀₋₉₀ < 40 ms
Sample rate	100 Hz
Dynamic resistance	< 2.5 cmH ₂ O @ 5 lpm
Low-flow dropout	0.24 lpm
Breath-detect threshold	1 lpm
Volume range	+ 60 l
Volume accuracy	+ 3 % of reading or + 2 ml
Fittings	15 mm OD/ID, 1:40 conical male

Oxygen measurement	
Range	0 % to 100 %
Accuracy	± 2 % full-scale output
Resolution	0.1 % O ₂
Frequency response	> 15 s (t ₁₀₋₉₀)
Sample rate	100 Hz
Sensor technology	Galvanic fuel cell
Calibration	Allows user calibration using air and 100 % O ₂ Notes: <ul style="list-style-type: none"> • Automatic partial pressure compensation for barometric and airway pressure changes • Recommended interval for changing oxygen sensor is one year. However, sensor may last longer. During user calibration of the sensor, the VT MOBILE can detect if the sensor needs to be replaced
Barometric pressure measurement	
Range	8 psia to 18 psia (400 mmHg to 900 mmHg)
Accuracy	+ 2 % of reading
Resolution	0.1 mmHg
Frequency response	< 5 s (t ₁₀₋₉₀)
Sample rate	N/A
Calibration	Not required; however, device allows user calibration of offset
Secondary parameter-accuracy specifications	
Inspiratory and expiratory tidal volume resolution	0.1 ml
Range	> 10 l
Accuracy	± 3 % expiratory minute volume
Resolution	0.001 lpm
Range	0 l to 60 l
Accuracy	± 3 %
Breath rate	
Resolution	0.1 BPM
Range	2 BPM to 150 BPM
Accuracy	± 1 % inspiratory-to-expiratory time ratio (I:E ratio)
Resolution, 0.01 range	0.25 to 9.99
Accuracy	± 2 % or 0.1 s
Peak inspiratory pressure	
Resolution	0.1 cmH ₂ O
Range	± 120 cmH ₂ O
Accuracy	+ 3 % or 1 cmH ₂ O
Inspiratory pause pressure	
Resolution	0.1 cmH ₂ O
Range	± 120 cmH ₂ O
Accuracy	+ 3 % or 1 cmH ₂ O

Mean airway pressure	
Resolution	0.1 cmH ₂ O
Range	+ 80 cmH ₂ O
Accuracy	+ 3 % or 0.5 cmH ₂ O
Positive-end expiratory pressure (PEEP)	
Resolution	0.1 cmH ₂ O
Range	-5 cmH ₂ O to 40 cmH ₂ O
Accuracy	+ 3 % or 0.5 cmH ₂ O
Peak expiratory flow	
Resolution	0.01 lpm
Range	0 lpm to 150 lpm
Accuracy	± 3 % or 2 % of range
Peak inspiratory flow	
Resolution	0.01 lpm
Range	0 lpm to 150 lpm
Accuracy	± 3 % or 2 % of range
Temperature	
Resolution	0.1 °C
Range	0 °C to 50 °C
Accuracy	± 1 °C
Units	°C, °F, °K
Humidity	
Resolution	0.1 %
Range	0 % to 100 %
Accuracy	± 5 %
RS-232 serial communications	
4-pin modular connector located on upper-left side of panel. RS-232 compatible with the VT Plus for Windows software application (version 2.01.00 or higher)	
Environmental specifications	
Operating temperature	10 °C to 40 °C (50 °F to 104 °F)
Storage temperature	-25 °C to 50 °C (-13 °F to 122 °F)
Operating humidity	0 % to 80 % non-condensing at temperatures to 31 °C, decreasing linearly to 50 % relative humidity at 40 °C (104 °F)
Storage humidity	0 % to 95 % non-condensing
Operating barometric	7 psia to 18 psia
Storage barometric	-1000 ft to 10000 ft (787.9 mmHg to 522.7 mmHg)

Ordering information

Models

- VTMOB/ENG English Overlay
- VTMOB/FRA French Overlay
- VTMOB-8002-02 German Overlay
- VTMOB-8002-03 Italian Overlay
- VTMOB-8002-04 Spanish Overlay
- VTMOB/JPN Japanese Overlay
- VTMOB/CHI Chinese Overlay
- VTMOB/BRAZ Brazil overlay

Standard accessories

(included with each of the above models)

VTMOB-7002 Accessory Kit

VTPLUS-WIN CD, includes: Quick-Reference Card, Operators Manual, Getting Started Manual, other matter

MANUAL Getting-Started Manual (hard copy and .pdf file on CD)

QUICK REF CARD Quick-Reference Card (hard copy and .pdf file on CD)

VTMOB/HIGH SENSOR High-Flow Sensor

VTMOB/LOW SENSOR Low-Flow Sensor

VTMOB/ADPT FEMALE High-Pressure Adapter, male to female

VTMOB-4402 Low-Pressure Adapter

FITTING Oxygen-Sensor Cable, 6 ft

VTMOB-4401 T Adapter for Oxygen Sensor

2248801 Oxygen Sensor

BATTERY 9 V dc Battery (alkaline)

CABLE ASSEMBLY Serial Communications Cable (RS-232), 6 ft

CD ROM VT for Windows PC Software

VTMOB/SOFTCASE Soft Carrying Case

Optional accessories

VTMOB High-Pressure Adapter, male to male

ACCU LUNG ACCU Lung Portable Precision Test Lung

VTMOB-4405 Temperature and RH Sensor, Cable and T Adapter, 6 ft

VTMOB-PWR ADAPTER Power Adapter, Universal (USA and International)



VT MOBILE Tilt Stand in low-tilt position

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.

Better products. More choices. One company.

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