capnography

VM-2500-MG

Multigas/SpO_2 Monitor

High performance and versatile anaesthetic agent monitoring

- Innovative micro-optic technology.
- Direct mainstream measurement without time delay.
- Warm-up time: < 20 seconds to full specification.
- Maintenance and calibration-free technology.
- Colour OLED display.
- Application range from neonates to adults.

Picture of lady being anaesthetised if can get from Bluepoint.

VM-2500-MG

The ultra-compact, light and easy to handle design of the Capnograph Multigas Monitor is the perfect flexible and mobile monitor for identifying and quantifying the five most important anaesthetic agents as well as other gases and parameter.

- Halothane, Isoflurane, Enflurane, Sevoflurance and Desflurane.
- N2O
- etCO2, FiCO2
- Oxygen saturation
- Respiration and Pulse Rate

Carrying case also available in various colours and with embroidery*

By direct measurement in the mainstream, there is no time delay in the measuring data.

VIAMED

*Subject to quantities

VM-2500-MG Multigas/SpO_2 Monitor Technical Data

Display		
Parameters displayed	Numerical	End-tidal (et) CO_2-, N_2O- and agent concentrations, inspired (Fi) CO_2-, N_2O-, and agent concentrations, oxygen saturation (SpO_2), Respiration Rate (RR), Pulse Rate (PR).
	Graphical	Capnogram and trends of numerical data (15 min/1 hour/6 hours)
	Indicators	Signal strength and signal quality, pulse amplitude, battery status, alarm mute, pulse tone mute, stoarge status, real-time mode, neonatal mode, time.
Characteristics		Active OLED colour display, 262,000 colours, 240 x 320 pixel (42 mm x 56 mm)
Capnography and Anesthetic agent measurement specifications		
Measurement Range	$etCO_2$ and $FiCO_2$	0 - 15%
	FiN_2O	0 - 100%
	Hal, Iso, Enf	0 - 8%
	Sev	0 - 10%
	Des	0 - 22%
	Respiration Rate	0 - 150 1/min
Accuracy	$etCO_2$ and $FiCO_2$	± (0.2 Vol % + 2% of reading)
		± (0.3 Vol % + 4% of reading) including interfering gases
	N_2O	± (2 vol % + 2% of reading)
		± (2 vol % + 5% of reading) including interfering gases
	Hal/Iso/Enf/Sev/Des	± (0.15 Vol % + 5% of reading)
		± (0.2 Vol % + 10% of reading) including interfering gases
	Respiration Rate	± 1 digit
Warm-up time		< 20 seconds to full specification
Pulse Oximetry Specifications		
Measurement Range	SpO_2	0 - 100%
	Pulse Rate	20 - 300 1/min
Accuracy	SpO_2	± 2% (70 to 100%)
	Pulse Rate	± 1 digit (up to 100 1/min) or ± 1% (> 100 1/min)
Trend Information		
Long term trend		up to 150 hours
Short term trend		15 min/1 hour/6 hour
Alarms		
Limits		Adjustable limits for all numerical parameters except for MAC
Alarms		Audible and visual alarms (complies with EN 60601-1-8)
Storing Data		
Comunication Interface		USB 2.0
Data Memory Capacity		up to 150 hours
Real-time mode		Visualisation and storage of numerical parameters on a computer every 4 seconds
Computer software		Capnograph MG PC Software for data download and real-time mode
Power Supply		
Battery		Working time with full functionality approximately 4.5 hours, 4 alkaline batteries (AA/LR6/AM3/MN1500/Mignon, 1.5V
Li-Poly battery		Working time with full functionality approximately 7 hours, Li-Poly battery, Model No. CT-2500, 3.7V, 2500 mAh, charging time approx 5 hours.
AC power supply		Model No. FW 7660M/06, medical power supply, input: 90 - 260V AC/50 - 60 Hz/ 250 mA, output: 6V DC/1.4A.
Environmental conditions		
Operation		10 - 40°C, 15 - 95% RH (non-condensing), 60 - 120 kPa (excluding Li-Poly battery)
Storage		- 20 - 70°C, 10 - 95% RH (non-condensing), 60 - 120 kPa (excluding Li-Poly battery)
Classification		
Class		IIb (according to MDD 93 / 42 / EEC)
Safety		Class of protection II/Type BF - Type and degree of protection against electrical shock
Construction		IPX1 (with silicone protection cover)
Standards		EN 60601-1:1988; IEC 60601-1-2:2007; IEC 60601-1-4:2000; IEC 60601-8:2006; ISO 21647:2004; ISO 9919:2005; ISO 5356-1:2004; DIN EN 1789:2007; EN864:1996.
Dimensions and Weight		150 (L) x 75 (W) x 35 (D) mm, < 400g (complete device with batteries)
Part Numbers		
VM-2500-MG	Capnograph Multigas	4410550
	Language Package: Central European, including: English, Dutch, German, Spanish, French, Italian, Swedish and Russian	

CE 0086 Specification Subject to Change

NB. When ordering either the VM-2500-M or VM-2500-S please select from the following reusable sensor styles: Soft Sensor (Adult or Paediatric), Finger Sensor, Silicone Wrap Sensor, Ear Sensor and indicate at the time of ordering. Autoclavable sensors are available.

* Subject to quantities

Distributed by:

Viamed Limited · 15 Station Road · Cross Hills
Keighley · West Yorkshire · BD20 7DT · United Kingdom
Tel: +44 (0)1535 634 542 Fax: +44 (0)1535 635 582
Email: info@viamed.co.uk Website: www.viamed.co.uk

FS 28344 MD 78787

BS EN ISO 9001:2008
ISO 13485:2003

Part Number: 0092190
Date: 03/11

The ultra-compact, ergonomic design of the Capnograph MG combines outstanding performance and reliability in pulse oximetry and mainstream monitoring of anaesthetic agents and CO_2.

Standard Package

- Capnograph Multigas Monitor.
- IRMA™ AX+ Analyser.
- IRMA™ Airway adapter (Adult/Paediatric)
- Reusable SpO_2 sensor*
- USB data cable.
- Power supply (FW7660M/06).
- Power supply (EU and UK plug).
- 4 x AA batteries.
- 1 x Li-Poly battery (CT-2500).
- Silicone protective cover.
- PC software.
- Instruction manual on CD.

N.B. Please select from the following sensor styles:
Silicone Soft Sensor (Adult or Paediatric), Finger Sensor, Silicone Wrap Sensor or Ear Sensor, and indicate at the time of ordering.

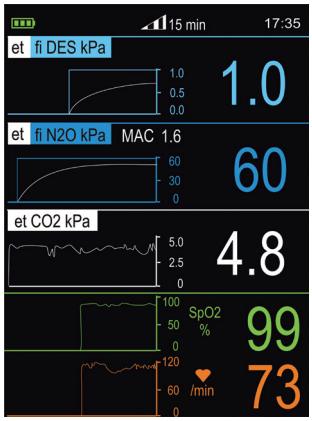
Reliable automatic agent identification and quantification

The **IRMA AX+ Analyser** is equipped with state-of-the-art NDIR technology with up to 9-channel gas type analysis in the 4 - 10 µm range and offers reliable agent identification and quantification even in gas mixtures. The **IRMA AX+ Analyser** is lightweight, small and shock-resistant. It weighs less than 25g.

Key features of the Capnograph MG

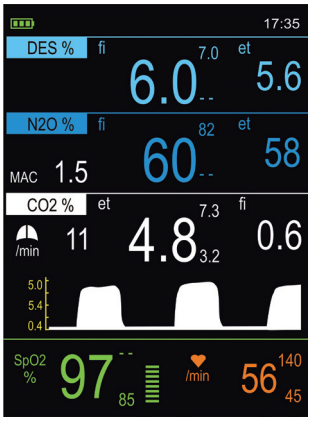
- Innovative micro-optic technology.
- Direct mainstream measurement without time delay.
- Compact, robust and ultra-light multigas analyser.
- Warm-up time: < 20 seconds to full specification.
- Maintenance and calibration-free technology.
- Self-explanatory, ergonomic operating functions facilitate intutive operation.
- The Colour OLED information display, as well as the simple information structure, support quick decisions and a rapid user reaction in critical situations.
- Lead-edge power management with standard alkaline batteries or Li-Poly batteries or medical power supply (or combined).
- Application range from neonates to adults.

Screen Display Options

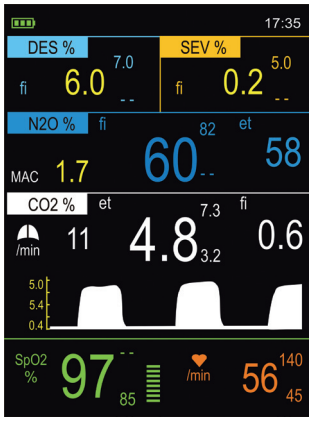


Multi Trend - 15 minutes

Numerical
1 Anaesthetic Agent



Standard
1 Anaesthetic Agent



Standard
2 Anaesthetic Agent

Key Technology Accessories

SpO_2 Sensors

The Capnograph MG provides leading technology sensors and accessories.

A wide range of flexible, robust and hygienic paediatric and adult SpO_2 sensors are available, as well as disposable sensors for use on adults through to neonates.

With the Silicone Finger Sensors, it is now possible for the first time to autoclave SpO_2 sensors at 134°C, and to significantly reduce the risk of nosocomial infections cause by pathogenic microranisms or multi-resistant germs.

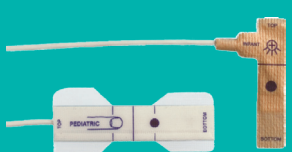
Available Sensors

Adult Soft Sensor

Paediatric Soft Sensor

Finger Sensor

Silicone Wrap Sensor



Disposable Sensors

Ear Sensor

Powerful Capnograph MG PC Software

With the convenient Capnograph MG PC Software all measuring values, selected alarm limits and alarm messages can be transferred to the computer via the USB interface. The data can be viewed on the computer and patient information added. The PC software enables basic statistical evaluation of the stored data.

The software can also be used to display and store the masurement values and alarm messages on the computer in parrallel to ongoing measurements. This function is activated by setting the real-time mode of the Capnograph MG. When this mode is activated, the device transfers the actual measurement values for the anaesthetic agents, N_2O, $etCO_2$, $FiCO_2$, SpO_2, Respiration and Pulse Rate to the computer via the USB interface.

Capnograph MG Multigas Analyser

The company **IRMA AX+ Multigas Analyser** which weights just 25g, sets new standards in mainstream anaesthetic agent monitoring and provides reliable and comprehensive monioring of CO_2, N_2O, Halothane, Isoflurane, Enflurane, Sevoflurane and Desflurane through direct measurement without time delay.

- 9-channel NDIR gas type analysis (4 - 10 µm).
- Calibration and maintenance-free.
- Compact and shock-resistant design.
- Plug-and-measure technology.

The **IRMA Airway Adapter** with low dead space volumes and supplied in two versions for adult/paediatric and infant applications.

- Adult/Paediatric version: dead space volume 6ml.
- Infant version: dead space volume 1ml.
- Innovation non-condensing light transmission XTP™ window.

Applications

Capnograph MG is well suited for monitoring CO_2, N_2O and oxygen saturations as well as the anaesthetic agents Halothane, Isoflurane, Enflurane, Sevoflurane and Desflurane during anaesthetia and mechanical ventilation.

Capnograph MG can be used from adults to infants in hosptials and mobile operating rooms, recovery rooms, intensive care units and emergency care departments