Measuring Range

EtCO$_2$ and FiCO$_2$	0 - 15 Vol%, or expressed as kPa or mmHg
SpO$_2$	0 - 100%
Respiration rate	0 - 150 breaths/min
Pulse rate	20 - 300 beats/min

Accuracy

EtCO$_2$ and FiCO$_2$	+/- (0.2 vol % + 2% of reading)
	+/- (0.3% vol % + 4% of reading) inc. interfering gases
SpO$_2$	+/- 2% (70 - 100%)
Respiration rate	+/- 1 digit at 60 breaths/min
Pulse rate	+/- 1 digit (≤ 100/min) or +/- 1% (> 100/min)

Display

Features	Colour OLED, 262,000 colours, 240 x 320 pixels
Data displayed	End-tidal CO$_2$ and inspired CO$_2$ in volume %, kPa or mmHg, Oxygen saturation, respiration rate, pulse rate, capnogram, plethysmogram, bar graph, short term trends.
Indicators	Signal strength and signal quality, pulse amplitude, battery status, alarm silenced, volume silenced, neonatal mode, time, storage capacity full.

Trend Information

Short term trend	15 min / 1 hr / 6 hrs (stored and displayed)
Long term trend	approx. 400 hours (stored)

Environmental Conditions

Operating temperature	0 - 50 ℃, 15 - 95% R.H. (non-condensing), 60 - 120 kPa (excl. Li-ion battery)
Storage temperature	-30 - 70 ℃, 10 - 95% R.H. (non-condensing), 60 - 120 kPa (excl. Li-ion battery)

Regulatory Approvals

Standards	CE Class IIb in accordance with MDD 93/42/EEC BS EN 60601-1:2006, BS EN 60601-1-1:2001, BS EN 60601-1-2:2007 BS EN 60601-1-8:2004, EN 60529, EN ISO 21647:2004, BS EN ISO 9919:2005
Safety	Class II, Type BF

Assembly

Construction	IPX1
Dimensions	15 cm (l) x 7.5 cm (w) x 3.5 cm (h)
Weight	approx. 400g (complete device with batteries)
Power supply	Power supply 90 - 260 VAC/6 VDC, 50 - 60 Hz, 2.5 Ah Li-ion battery or 4 x AA alkaline batteries
Battery life	AA batteries: with full functionality VM-2500-M > 6 hours, VM-2500-S > 3 hours Li-ion battery: charging time with full functionality > 6 hours
PC interface	USB 2.0

Part Numbers

VM-2500-M Mainstream Capnograph*	4410500
VM-2500-S Sidestream Capnograph*	4410520

*Language Package: Central European, including:
English, Dutch, French, German, Italian, Spanish, Swedish and Russian (additional language versions available on request).

VM-2500-M - Asia Language Package, including	4410501
English, Chinese and Japanese (additional language versions available on request).	
VM-2500-S - Asia Language Package, including	4410521
English, Chinese and Japanese (additional language versions available on request)	

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.

Specifications subject to change.
CE0086

M VIAMED

BS EN ISO 9001:2000
ISO 13485:2003
ISO 13485:2003 CMDCAS Recognised

FS 28344   MD 78787

VM-2500 CO$_2$/SpO$_2$ Monitor

high performance capnography with either mainstream or sidestream measurement

- **Robust and ergonomic design**
- **Fast warm-up time**
- **Rapid response time**
- **Extremely accurate and reliable measurement**
- **CO$_2$ and SpO$_2$ combined**
- **Displays EtCO$_2$, FiCO$_2$, SpO$_2$, respiration and pulse rate, capnogram and plethysmogram**
- **Maintenance and calibration free technology**
- **Clear and bright, colour OLED display offers superior clarity**
- **For intubated or non-intubated patients**

Mainstream unit

The ultra-compact, ergonomic design of the VM-2500-M and VM-2500-S combine outstanding performance and reliability in mainstream or sidestream CO$_2$ and SpO$_2$ monitoring.

The VM-2500-M and VM-2500-S combine innovative technologies and design with the latest materials, to create extremely accurate and reliable measurement for intubated or non-intubated patients.

The mainstream unit utilises the advanced IRMA™ CO$_2$ Analyser; to precisely determine gas concentration in the mixture.

The sidestream unit utilises the advanced ISA™ CO$_2$ Analyser; with Nomo technology to eliminate problems caused by water secretions affecting the reading.

These units incorporate the latest Organic LED display technology, offering unrivalled clarity, in even the most difficult of lighting conditions.

The VM-2500-M and VM-2500-S can be used in a variety of applications, from use in emergency rescue situations, during surgery, intensive care, resuscitation and patient transportation.

Sidestream unit

M VIAMED

VM-2500-M Mainstream CO_2 & SpO_2 Monitor

Key Features of the VM-2500-M

- Mainstream CO_2 measurement with the **IRMA™ CO_2 Analyser**
- Fast warm-up time of < 10 s to full specification
- 'PLUG-IN and MEASURE...™' technology - **no integration procedures** or associated expenses required
- **No occlusion by water or mucus possible**
- **IRMA airway adapter with XTP™ non-condensing** light transmission window
- Small, lightweight and shock-resistant; the **IRMA™ CO_2 Analyser** weighs less than 30g
- Direct measurement **without time delay**
- For intubated and non-intubated patients
- Maintenance and calibration-free technology
- Wide range of accessories and SpO_2 sensors are available

Standard Package

- Mainstream unit
- IRMA™ CO_2 Analyser
- IRMA™ Airway Adapter (Adult/Paediatric)
- Reusable SpO_2 sensor*
- USB data cable
- Power supply (EU and UK plug)
- 4 x AA batteries
- 1 x Li-ion rechargeable battery
- Silicone protective cover
- PC software
- Instruction manual on CD

NB. 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.

VM-2500-S Sidestream CO_2 & SpO_2 Monitor

Key Features of the VM-2500-S

- Sidestream CO_2 measurement with the **ISA™ CO_2 Analyser** and Nomo technology
- Fast warm-up time of < 10 s to full specification
- The **Nomo Adapter** uses Nomo technology which **removes water** and **vapour** from the sampled gas
- The Nomo Adapter includes a hydrophobic bacterial filter to **protect against water intrusion and cross contamination**
- Specifically designed for **low flow applications**; 50 ml/min sampling flow rate
- For intubated and non-intubated patients
- Maintenance and calibration-free technology
- Wide range of accessories and SpO_2 sensors are available

Standard Package

- Sidestream unit
- Nomo Adapter
- Sampling line
- Sidestream airway adapter (Adult/Paediatric)
- Reusable SpO_2 sensor*
- USB data cable
- Power supply (EU and UK plug)
- 4 x AA batteries
- 1 x Li-ion rechargeable battery
- Silicone protective cover
- PC software
- Instruction manual on CD

NB. 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.

SpO_2 Sensors

A wide range of flexible, robust and hygienic SpO_2 sensors are available, including the 3rd generation soft sensors; available in Adult and Paediatric patient types, Finger Sensors, Silicone Wrap Sensors and Ear Sensors, as well as Disposable Sensors for use on Adults through to Neonates.

With the Autoclavable Soft Sensor it is possible for the first time, to autoclave SpO_2 sensors at 134°C, thus eliminating the risk of cross-infection.

Adult Soft Sensor

Paediatric Soft Sensor

Finger Sensor

Silicone Wrap Sensor

Disposable Sensors

Ear Sensor

VM-2500-M Accessories

Mainstream Measurement

The **IRMA™ CO_2 Analyser** sets new standards in CO_2 mainstream monitoring and provides reliable, safe and easy CO_2 monitoring by direct measurement, without time delay.

- Small and lightweight
- 'PLUG-IN and MEASURE...™' technology
- Shock resistant

IRMA™ CO_2 Analyser

The **IRMA™ Airway Adapters** are supplied in two versions; Adult/Paediatric and Infant.

- Non-condensing light transmission XTP™ window
- Single patient use

IRMA™ Airway Adapters

VM-2500-S Accessories

Sidestream Measurement

Together with the **Nomo technology** that removes water from the sampled gas, the **ISA™ CO_2 Analyser** delivers the highest performance in an ultra compact format.
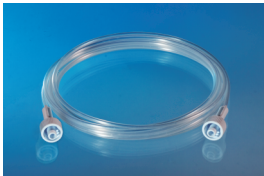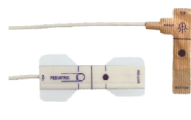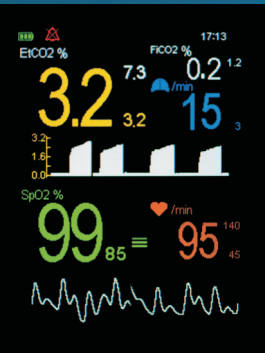
The **Nomo Adapter** incorporates a unique water separation made of a special polymer, with an integrated hydrophobic bacterial filter. The Nomo Adapter passes water vapour and condensed water through its membrane like surface and evaporates into the surrounding air, while leaving the carbon dioxide concentration unaffected.

The Nomo technology allows for up to two weeks of continuous monitoring with high moisture containing breathing gases - **a first for capnography**.

The Nomo Adapter contains a hydrophobic bacterial filter (> 99.9980%) to protect the ISA™ CO_2 Analyser from water intrusion and cross contamination.

Nomo Adapter

Sampling Line

Adult/Paediatric Adapter

Infant Adapter

The ultra-compact, ergonomic design of the VM-2500 combines outstanding performance and reliability for either mainstream or sidestream CO_2 and SpO_2 monitoring.
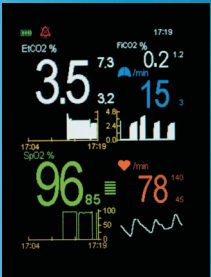

Standard Display Format

Large digit display format

Trending display format