



# VM-2500 CO<sub>2</sub>/SpO<sub>2</sub> 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<sub>2</sub> and SpO<sub>2</sub> combined.
- Displays EtCO<sub>2</sub>, FiCO<sub>2</sub>, SpO<sub>2</sub>, 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.



Carrying case  
also available  
in various  
colours and with  
embroidery\*



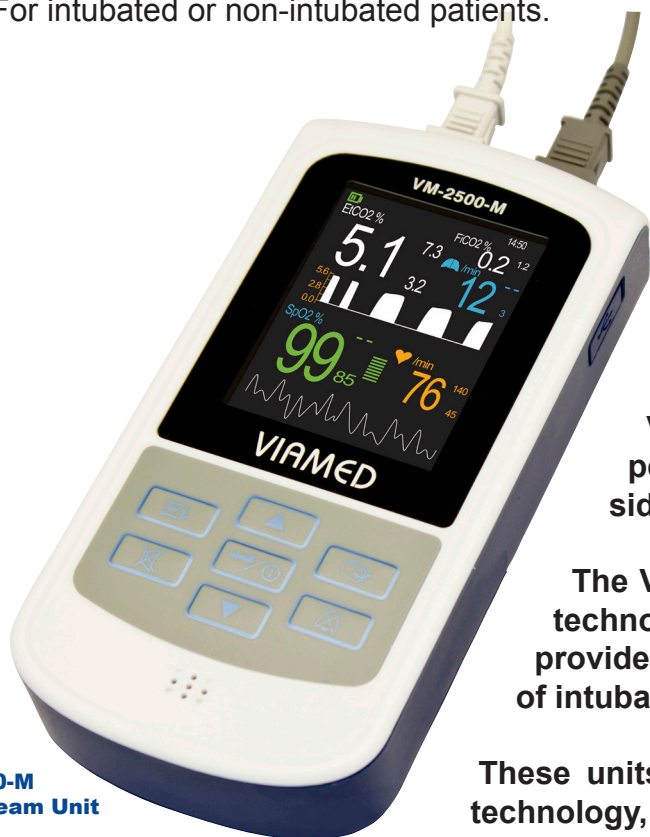
The ultra-compact, ergonomic design of the VM-2500-M and VM-2500-S combine outstanding performance and reliability in mainstream or sidestream CO<sub>2</sub> and SpO<sub>2</sub> monitoring.

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

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

Both units can be used in a variety of applications, from use in emergency rescue situations, during surgery, intensive care, resuscitation and patient transportation.

**VM-2500-M**  
Mainstream Unit



**VM-2500-S**  
Sidestream Unit



## VM-2500-M Mainstream CO<sub>2</sub> & SpO<sub>2</sub> Monitor



### Key Features of the VM-2500-M

- Mainstream CO<sub>2</sub> measurement with the **IRMA™ CO<sub>2</sub> Analyser**.
- Fast warm-up time of < 10 seconds 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<sub>2</sub> 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<sub>2</sub> sensors available.

### Standard Package

- Mainstream unit.
- IRMA™ CO<sub>2</sub> analyser.
- IRMA™ Airway adapter (Adult/Paediatric)
- Reusable SpO<sub>2</sub> 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.

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.

### SpO<sub>2</sub> Sensors

A wide range of flexible, robust and hygienic SpO<sub>2</sub> sensors are available, including the 3rd generation soft sensors; available in adult and paediatric types, Finger Sensors, Silicone Wrap Sensors and Ear Sensors, as well as Disposable Sensors for use on Neonates through to Adults.

The 3rd generation soft sensors are also available as an autoclavable version, making it possible for the first time, to autoclave SpO<sub>2</sub> sensors at 134°C, thus eliminating the risk of cross-infection.



**Adult Soft Sensor**



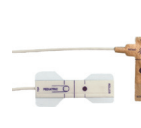
**Paediatric Soft Sensor**



**Finger Sensor**



**Silicone Wrap Sensor**



**Disposable Sensors**



**Ear Sensor**



## VM-2500-S Sidestream CO<sub>2</sub> & SpO<sub>2</sub> Monitor



### Key Features of the VM-2500-S

- Sidestream CO<sub>2</sub> measurement with the **ISA™ CO<sub>2</sub> Analyser** and Nomo technology.
- Fast warm-up time of < 10 seconds 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**.
- Specially 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<sub>2</sub> sensors available.

### Standard Package

- Sidestream unit.
- Nomo adapter.
- Sampling line.
- Sidestream airway adapter (Adult/Paediatric)
- Reusable SpO<sub>2</sub> 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.

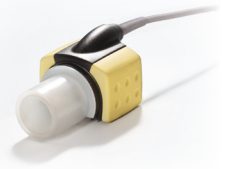
N.B. Please select from the following sensor styles: Silicone Soft Sensor (Adult or Paediatric), Finger Sensor, Silicone Wrap Sensor or Ear Sensor, and indicate at the time of ordering.



## VM-2500-M Accessories Mainstream Measurement

The **IRMA™ CO<sub>2</sub> Analyser** sets new standards in CO<sub>2</sub> mainstream monitoring and provides reliable, safe and easy CO<sub>2</sub> monitoring by direct measurement, without time delay.

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



**IRMA™ CO<sub>2</sub> 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<sub>2</sub> Analyser** delivers the highest performance in an ultra compact format.

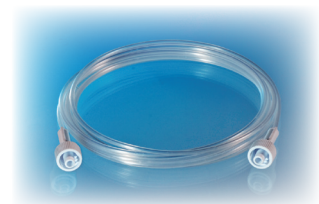
The **Nomo Adapter** incorporates a unique water separation made of a special polymer, with an integrated hydrophobic bacterial filter. The Nomo Adapter passes water vapour and condensed water through its membrane like surface and evaporates into the surrounding air, while leaving the carbon dioxide concentration unaffected.

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

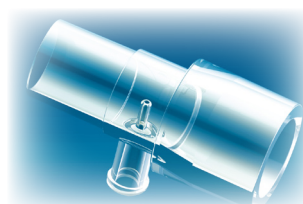
The Nomo Adapter contains a hydrophobic bacterial filter (> 99.9980%) to protect the ISA™ CO<sub>2</sub> Analyser from water intrusion and cross contamination.



**Nomo Adapter**



**Sampling Line**



**Adult/Paediatric Adapter**



**Infant Adapter**

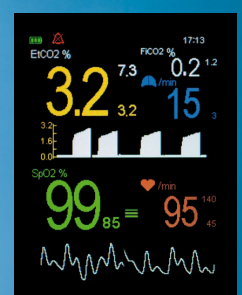
The ultra-compact, ergonomic design of the VM-2500 combines outstanding performance and reliability for either mainstream or sidestream CO<sub>2</sub> and SpO<sub>2</sub> monitoring.



**Standard Display Format**



**Large Digit Display Format**



**Trending Digit Display Format**

# VM-2500 CO<sub>2</sub>/SpO<sub>2</sub> Monitor

## Measuring Range

EtCO<sub>2</sub> and FiCO<sub>2</sub>

SpO<sub>2</sub>

Respiration Rate

Pulse Rate

0 - 15 Vol%, or expressed as kPa or mmHg

0 - 100%

0 - 150 breaths /min

20 - 300 bpm

## Accuracy

EtCO<sub>2</sub> and FiCO<sub>2</sub>

SpO<sub>2</sub>

Respiration Rate

Pulse Rate

± (0.2 vol% + 2% of reading)  
± (0.3% vol % + 4% of reading) inc. interfering gases

± 2% (70 - 100%)

± 1 digit at 60 breaths/min

± 1 digit (≤ 100/min) or ± 1% (> 100/min)

## Display

Features

Data displayed

Colour OLED, 262,000 colours, 240 x 320 pixels

End-tidal CO<sub>2</sub> and inspired CO<sub>2</sub> 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

Long Term Trend

15 min/1 hour/6 hours (stored and displayed)

Approximately 400 hours (stored)

## Environmental Conditions

Operating temperature

Storage temperature

0 - 50°C, 15 - 95% R.H. (non-condensing), 60 - 120 kPa (excl. Li-ion battery)

-30 - 70°C, 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 ISO 9919:2005

Class II, Type BF

Safety

## Assembly

Construction

Dimensions

Weight

Power Supply

Battery Life

Water ingress protection IPX1

150 mm (L) x 75 mm (W) x 35 mm (H)

Approximately 400g (including batteries)

Power supply 90 - 260 VAC/6 VDC, 50 - 60 Hz, 2.5 Ah Li-ion battery or 4 x AA alkaline batteries

AA batteries: with full functionality VM-2500-M > 6 hours, VM-2500-S > 3 hours

Li-ion battery: with full functionality VM-2500-M > 7 hours, VM-2500-S > 5 hours

USB 2.0

PC interface

## Part Numbers

VM-2500-M Mainstream Capnograph\*

EAN-13 (GTIN-13) Barcode: 5051826002711

4410500

VM-2500-S Sidestream Capnograph\*

EAN-13 (GTIN-13) Barcode: 5051826002728

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 Languages (English, Chinese and Japanese)

4410501

VM-2500-S - Asia Languages (English, Chinese and Japanese)

4410521

Carrying Case for VM-2500: Available in various colours with embroidered crest\*

4420620

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.

Specification Subject to Change

\* Subject to quantities

CE 0086

Distributed by:



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BS EN ISO 9001:2008  
ISO 13485:2003

Part Number: 0092190 V2  
Date: 11/10

