



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

High performance capnography with either mainstream or sidestream measurement for veterinary applications

- 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 and non-intubated patients



**VM-2500-M  
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<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 create extremely accurate and reliable measurement of intubated or non-intubated patients.

The mainstream unit utilises the advanced IRMA™ CO<sub>2</sub> Analyser; to precisely determine gas concentration in the mixture.

The sidestream unit utilises the advanced ISA™ CO<sub>2</sub> Analyser; with a range of sampling solutions to eliminate problems caused by water secretions affecting the reading.

These units incorporate a clear and bright colour 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.



**VM-2500-S  
Sidestream Unit**

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

## Mainstream Standard Package

- Mainstream Unit
- IRMA™ CO<sub>2</sub> analyser
- IRMA™ Airway adapter (Small and Large)
- Reusable SpO<sub>2</sub> sensor\*
- USB data cable
- 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

\* Please select either Lingual Sensor or Multi-site Y Sensor, and indicate at the time of ordering



## 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**
- **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



## 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

The **IRMA™ Airway Adapters** are supplied in two versions; small and large.

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



## Sidestream Standard Package

- Sidestream Unit
- 1 x VersaStream Large/Small Airway Adapter Sampling Line - Short Term
- 1 x VersaStream Large/Small Airway Adapter Sampling Line - Long Term
- 1 x VersaStream Sampling Line with Luer Lock Connector - Long Term
- Reusable SpO<sub>2</sub> sensor\*
- USB data cable
- Power supply (UK and EU Plug)
- 4 x AA batteries
- 1 x Li-Poly battery (CT-2500)
- Silicone protective cover
- PC software
- Instruction manual on CD

\* Please select either Lingual Sensor or Multi-site Y Sensor, and indicate at the time of ordering



## Key Features of the VM-2500-S

- Sidestream CO<sub>2</sub> measurement with the **ISA™ CO<sub>2</sub> Analyser** and VersaStream technology
- Fast warm-up time of < 10 seconds to full specification
- The **VersaStream** sampling lines use the latest material technologies to allow the **removal of moisture and vapour** from the sampled gas
- The VersaStream 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

## VM-2500-S Accessories Sidestream Measurement

The VersaStream technology incorporates a unique water separation polymer with an integrated hydrophobic bacterial filter, passing water vapour and condensed water through its surface and evaporating into the surrounding air whilst leaving the carbon dioxide concentration unaffected.

VersaStream sampling lines offer a fully disposable one-piece sampling solution for short-term (≤ 24 hours) or long-term (≤ 72 hours) use. This offers greater flexibility of choice for the end-user.

## Additional Sidestream Accessories



**Sidestream  
airway adapter  
available**



**Airway adapter  
and sampling line**



**Nasal  
sampling line**

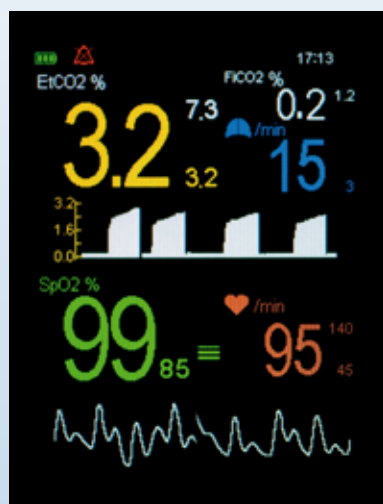


**Nasal sampling  
cannula available in  
Small and Large**



**Luer Lock  
connector**

## Screen Display Options



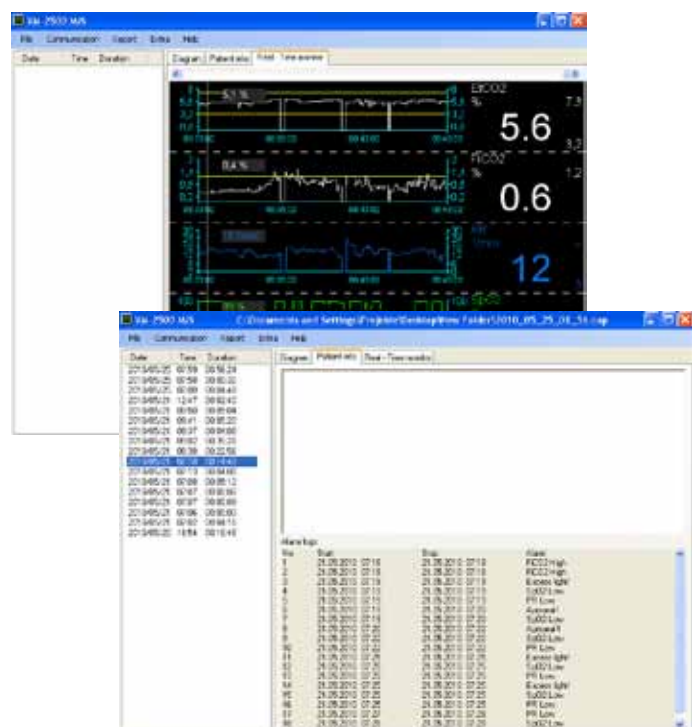
**Standard Display Format**



**Large Digit Display**



**Trending Digit Display Format**

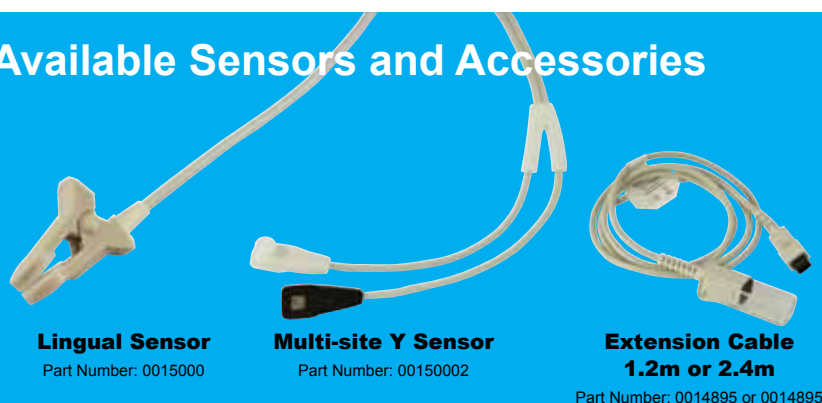


## Powerful Capnograph PC Software

With the convenient Capnograph PC Software all measured 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 measurement values and alarm messages on the computer in parallel to ongoing measurements. This function is activated by setting the real-time mode of the Capnograph. When this mode is activated, the device transfers the actual measurement values for etCO<sub>2</sub>, FiCO<sub>2</sub>, SpO<sub>2</sub>, Respiration and Pulse Rate measurement values every 4 seconds to the computer via the USB interface.

## Available Sensors and Accessories



### For use with Multi-site Y Sensor



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

|                                                                                                                                                                                  |                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Measuring Range</b>                                                                                                                                                           |                                                                                                                                                                                          |
| EtCO <sub>2</sub> and FiCO <sub>2</sub>                                                                                                                                          | 0 - 15 Vol%, or expressed as kPa or mmHg                                                                                                                                                 |
| SpO <sub>2</sub>                                                                                                                                                                 | 0 - 100%                                                                                                                                                                                 |
| Respiration Rate                                                                                                                                                                 | 0 - 150 breaths/min                                                                                                                                                                      |
| Pulse Rate                                                                                                                                                                       | 20 - 300 bpm                                                                                                                                                                             |
| <b>Accuracy</b>                                                                                                                                                                  |                                                                                                                                                                                          |
| EtCO <sub>2</sub> and FiCO <sub>2</sub>                                                                                                                                          | ± (0.2 vol% + 2% of reading)                                                                                                                                                             |
| SpO <sub>2</sub>                                                                                                                                                                 | ± (0.3% vol % + 4% of reading) inc. interfering gases                                                                                                                                    |
| Respiration Rate                                                                                                                                                                 | ± 2% (70 - 100%)                                                                                                                                                                         |
| Pulse Rate                                                                                                                                                                       | ± 1 digit at 60 breaths/min<br>± 1 digit (≤ 100/min) or ± 1% (> 100/min)                                                                                                                 |
| <b>Display</b>                                                                                                                                                                   |                                                                                                                                                                                          |
| Features                                                                                                                                                                         | Colour OLED, 262,000 colours, 240 x 320 pixels                                                                                                                                           |
| Data displayed                                                                                                                                                                   | 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                                         |
| <b>Trend Information</b>                                                                                                                                                         |                                                                                                                                                                                          |
| Short Term Trend                                                                                                                                                                 | 15 min/1 hour/6 hours (stored and displayed)                                                                                                                                             |
| Long Term Trend                                                                                                                                                                  | Approximately 400 hours (stored)                                                                                                                                                         |
| <b>Environmental Conditions</b>                                                                                                                                                  |                                                                                                                                                                                          |
| Operating temperature                                                                                                                                                            | 0 - 50°C, 15 - 95% R.H. (non-condensing), 60 - 120 kPa (excl. Li-ion battery)                                                                                                            |
| Storage temperature                                                                                                                                                              | -30 - 70°C, 10 - 95% R.H. (non-condensing), 60 - 120 kPa (excl. Li-ion battery)                                                                                                          |
| <b>Regulatory Approvals</b>                                                                                                                                                      |                                                                                                                                                                                          |
| Standards                                                                                                                                                                        | CE<br>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                                                                                                                                                                        |
| <b>Assembly</b>                                                                                                                                                                  |                                                                                                                                                                                          |
| Construction                                                                                                                                                                     | IPX1                                                                                                                                                                                     |
| Dimensions                                                                                                                                                                       | 150 mm (L) x 75 mm (W) x 35 mm (H)                                                                                                                                                       |
| Weight                                                                                                                                                                           | Approximately 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<br>Li-ion battery: with full functionality VM-2500-M > 7 hours, VM-2500-S > 5 hours                       |
| PC interface                                                                                                                                                                     | USB 2.0                                                                                                                                                                                  |
| <b>Part Numbers</b>                                                                                                                                                              |                                                                                                                                                                                          |
| VM-2500-M Mainstream Capnograph*                                                                                                                                                 | 4410530                                                                                                                                                                                  |
| VM-2500-S Sidestream Capnograph*                                                                                                                                                 | 4410540                                                                                                                                                                                  |
| * Language Package: Central European, including:<br>English, Dutch, French, German, Italian, Spanish, Swedish and Russian<br>(additional language versions available on request) |                                                                                                                                                                                          |
| <b>Additional Accessories Available</b>                                                                                                                                          |                                                                                                                                                                                          |
| Multi-site Y Sensor                                                                                                                                                              | 0015002                                                                                                                                                                                  |
| Lingual Sensor                                                                                                                                                                   | 0015000                                                                                                                                                                                  |
| Lingual Clip (Small)                                                                                                                                                             | 0025010                                                                                                                                                                                  |
| Lingual Clip (Medium)                                                                                                                                                            | 0025011                                                                                                                                                                                  |
| Lingual Clip (Large)                                                                                                                                                             | 0025012                                                                                                                                                                                  |
| Pulse Oximetry Extension Cable, 1.2m cable length (XT6500)                                                                                                                       | 0014895                                                                                                                                                                                  |
| Pulse Oximetry Extension Cable, 2.4m cable length (XT6501)                                                                                                                       | 0014896                                                                                                                                                                                  |
| Silicone Protective Cover                                                                                                                                                        | 4420611                                                                                                                                                                                  |
| Carrying Case                                                                                                                                                                    | 4420620                                                                                                                                                                                  |
| Carrying Case with clear front                                                                                                                                                   | 4420621                                                                                                                                                                                  |
| Universal Mounting Plate Rev. 1                                                                                                                                                  | 4420600                                                                                                                                                                                  |
| Universal Mounting Plate Rev. 2                                                                                                                                                  | 4420601                                                                                                                                                                                  |
| 'V' mount wall plate                                                                                                                                                             | 0121180                                                                                                                                                                                  |
| 'V' mount pole clamp (Small: 14 - 25mm span)                                                                                                                                     | 0121181                                                                                                                                                                                  |
| 'V' mount pole clamp (Large: 16 - 40mm span)                                                                                                                                     | 0121182                                                                                                                                                                                  |
| 'V' mount rail clamp                                                                                                                                                             | 0121184                                                                                                                                                                                  |
| 'V' mount pole clamp, multi-position                                                                                                                                             | 0121197                                                                                                                                                                                  |
| Universal Mounting Clamp, with vertical and horizontal adjustments                                                                                                               | 0121200                                                                                                                                                                                  |

**NB.** When ordering either the VM-2500-M or VM-2500-S please select either Lingual Sensor or Multi-site Y Sensor.



Specification Subject to Change

# Mounting Options

For use with VM-2500 range



## Carrying Case for VM-2500



- Fluid repellent
- Non rot
- U.V. stable
- Washable at 60°C
- Self healing and waterproof zips
- micAgard silver-lining inners
- Abrasion and tear resistance
- High visibility and reflective properties

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](mailto:info@viamed.co.uk) Website: [www.viamed.co.uk](http://www.viamed.co.uk)



Part Number: 0092185  
Date: 10/18