veterinary

VM-2500 CO_2/SpO_2 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_2 and SpO_2 combined**
- **Displays $EtCO_2$, $FiCO_2$, SpO_2, respiration and pulse rate, capnogram and plethysmogram**
- **Maintenance and calibration-free technololgy**
- **Clear and bright, colour OLED display offers superior clarity**
- **For intubated and non-intubated patients**

**VM-2500-M
Mainstream Unit**

**VM-2500-S
Sidestream 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 of 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 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.

VIAMED

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

Mainstream Standard Package

- Mainstream Unit
- IRMA™ CO_2 analyser
- IRMA™ Airway adapter (Small and Large)
- Reusable SpO_2 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_2 measurement with the **IRMA™ CO_2 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_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 available

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

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_2 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

Airway Adapter Sampling Line

Sampling Line with Luer Lock Connector

Key Features of the VM-2500-S

- Sidestream CO_2 measurement with the **ISA™ CO_2 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_2 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

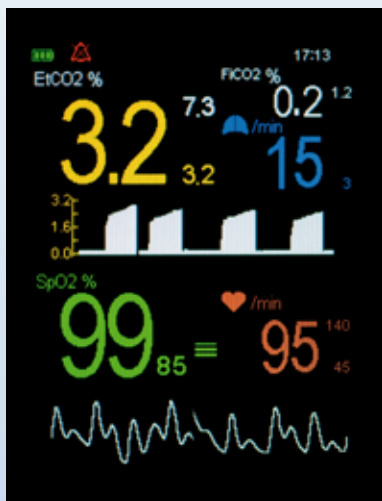Airway adapter and sampling line

Nasal sampling line

Nasal sampling cannula available in Small and Large

Luer Lock connector
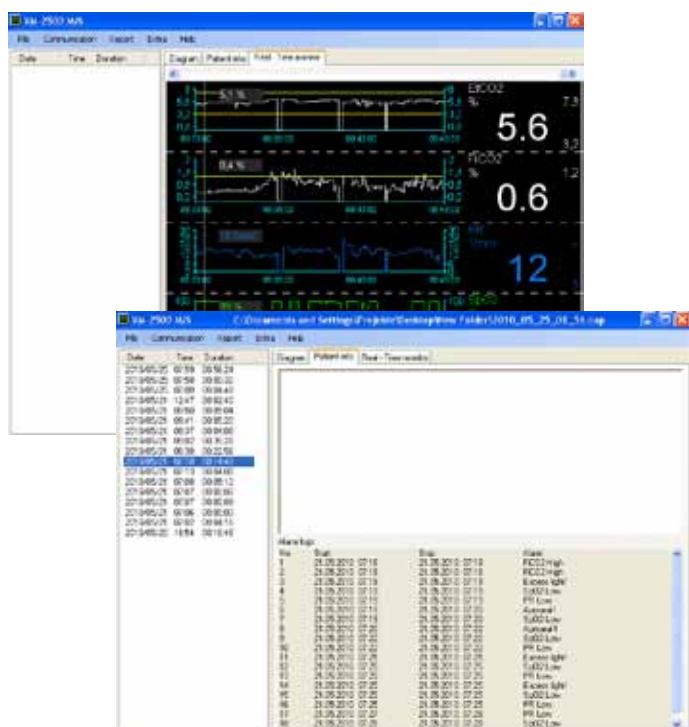
Screen Display Options

Standard Display Format

Large Digit Display
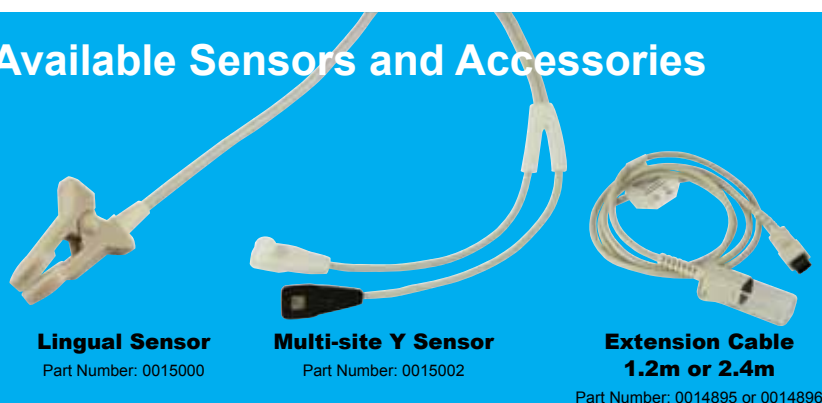

Trending Digit Display Format

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 $etCO_2$, $FiCO_2$, SpO_2, Respiration and Pulse Rate measurement values every 4 seconds to the computer via the USB interface.

Available Sensors and Accessories

Lingual Sensor
Part Number: 0015000

Multi-site Y Sensor
Part Number: 0015002

Extension Cable 1.2m or 2.4m
Part Number: 0014895 or 0014896

For use with Multi-site Y Sensor

Small Lingual Clip
Part Number: 0025010

Medium Lingual Clip
Part Number: 0025011

Large Lingual Clip
Part Number: 0025012

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

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 bpm

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 hour/6 hours (stored and displayed)
Long Term Trend	Approximately 400 hours (stored)

Environmental Conditions

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)

Regulatory Approvals

Standards	CE
	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	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
	Li-ion battery: with full functionality VM-2500-M > 7 hours, VM-2500-S > 5 hours
PC interface	USB 2.0

Part Numbers

VM-2500-M Mainstream Capnograph*	4410530
VM-2500-S Sidestream Capnograph*	4410540

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

Additional Accessories Available

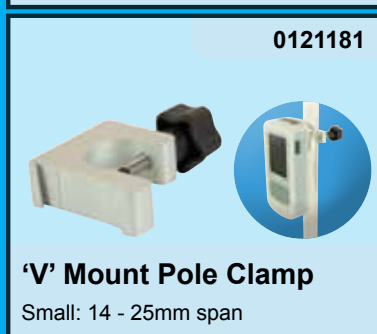|	
Multi-site Y Sensor	0015002
Lingual Sensor	0015000
Lingual Clip (Small)	0025010
Lingual Clip (Medium)	0025011
Lingual Clip (Large)	0025012
Pulse Oximetry Extension Cable, 1.2m cable length (XT6500)	0014895
Pulse Oximetry Extension Cable, 2.4m cable length (XT6501)	0014896
Silicone Protective Cover	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.

CE

Mounting Options

For use with VM-2500 range

4420615

Protective Rubber Boot
includes carrying strap

4420600 Rev. 1
4420601 Rev. 2

Universal Mounting Plate

0121200

Universal Mounting Clamp

0121180

'V' Wall Mount

0121197

'V' Mount Pole Clamp Multi-Position

0121184

'V' Mount Rail Clamp

0121181

'V' Mount Pole Clamp
Small: 14 - 25mm span

0121182

'V' Mount Pole Clamp
Large: 16 - 40mm span

Carrying Case for VM-2500

4420620

Carrying Case

4420621

Carrying Case
with clear front panel

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

Distributed by:

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