capnography products

VIAMED

High performance capnography solutions for a wide range of applications

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VIAMED

VM-2500
CO_2 / SpO_2 Monitor

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VM-2500-MG
Multigas / SpO_2 Monitor

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Capnograph Accessories

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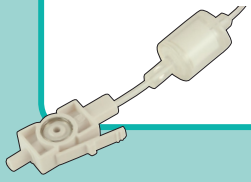
VersaStream VM-2500 Series CO_2 Sampling Lines

see page 15...

VersaStream Respironics CO_2 Sampling Lines



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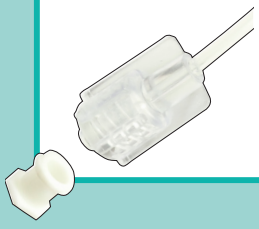
VersaStream Luer Lock Gas Sampling Lines



see page 21...

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 technololgy
- Clear and bright, colour display offers superior clarity
- For intubated and non-intubated patients

VM-2500-S
Sidestream Unit

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_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.

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 (Adult and Paediatric)
- 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 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.

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

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; Adult/Paediatric and Infant.

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

Applications

The VM-2500 with Silicone Finger Sensor is suitable for the following applications:

- Patient transport within and between hospitals
- Rescue services and emergency medicine
- Resuscitation
- General and Paediatric ICU
- Ventilator management and weaning


Nomo Adapter


Sampling Line


Airway Adapter (15 mm)

Sidestream Standard Package

- Sidestream Unit
- Nomo adapter
- Sampling Line
- Sidestream airway adapter (Adult/Paediatric)
- 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 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.

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 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_2 sensors available

Sidestream Measurement

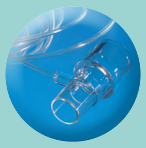
The VM-2500-S offers two sampling solutions; a reusable Nomo adapter used in conjunction with single patient use sampling lines, or VersaStream; a complete one-piece single patient use solution.

Both Nomo adapter and VersaStream technologies incorporate 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.

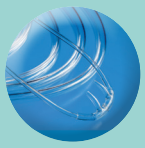
The Nomo adapter allows for up to two weeks of continuous monitoring with high moisture content breathing gases when used with single patient use sampling lines; VersaStream sampling lines offer a fully disposable one-piece sampling solution for short-term (≤ 24 hours) or long-term (≤ 72 hours) use. This offers greater flexibility of choice for the end-user.

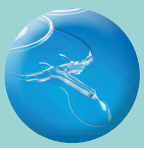
Additional Sidestream Accessories See page 15 for single piece VersaStream lines


Sidestream airway adapter available in Adult/Paediatric


Airway adapter and sampling line

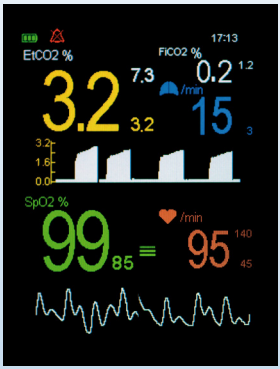

Nasal sampling line


Nasal sampling cannula available in Adult and Paediatric

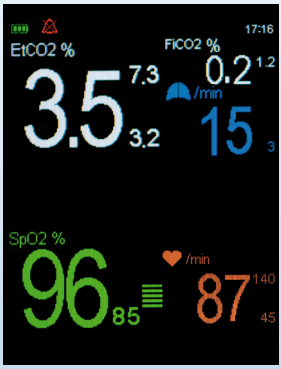

Nasal/oral sampling cannula


15mm airway adapters range available, I.D 2.0mm to 10.0mm

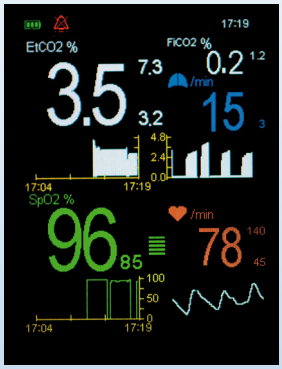
Screen Display Options



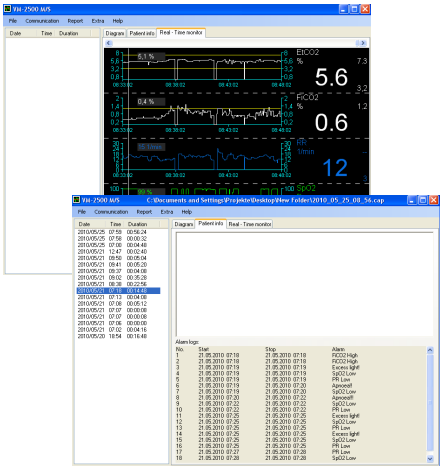
Standard Display Format



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 second to the computer via the USB interface.greater flexibility of choice for the end-user.

Available Sensors See page 13

(A) **Also available in Autoclavable version**

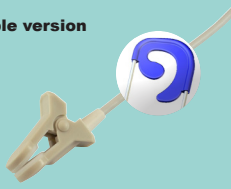
(A) Adult Soft Sensor

(A) Paediatric Soft Sensor

Finger Sensor

(A) Silicone Wrap Sensor

Disposable Sensors



Ear Sensor

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: < 1 minute to full specification
- Maintenance and calibration-free technology
- Colour OLED display
- Application range from neonates to adults

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 parameters.

- Halothane, Isoflurane, Enflurane, Sevoflurane and Desflurane
- N_2O
- $etCO_2$, $FiCO_2$
- Oxygen saturation
- Respiration and Pulse Rate

By direct mainstream measurement, there is no monitoring time delay.

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 plugs (UK and EU)
- 4 x AA batteries
- 1 x Li-Poly battery (CT-2500)
- Silicone protective cover
- PC software
- Instruction manual on CD

* 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.

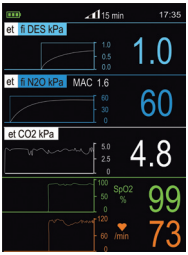
Reliable automatic agent identification and quantification

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

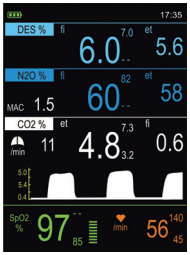
- Innovative micro-optic technology
- Direct mainstream measurement without time delay
- Compact, robust and ultra-light multigas analyser
- Warm-up time: < 1 minute to full specification
- Maintenance and calibration-free technology
- Self-explanatory, ergonomic operating functions facilitate intuitive operation
- The Colour OLED information display, as well as the simple information structure - support quick decisions and a rapid user reaction in critical situations
- Leading-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 Agents

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 Autoclavable version 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 microorganisms or multi-resistant germs.

Available Sensors See page 13

(A) **Also available in Autoclavable version**

(A) Adult Soft Sensor

(A) Paediatric Soft Sensor

Finger Sensor

(A) Silicone Wrap Sensor

Disposable Sensors

Ear Sensor

Powerful Capnograph MG PC Software

With the convenient Capnograph MG 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 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 **IRMA AX+ Multigas Analyser** which weighs just 25g, sets new standards in mainstream anaesthetic agent monitoring and provides reliable and comprehensive monitoring 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
- Innovative 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 on adults to infants in hosptials and mobile operating rooms, recovery rooms, intensive care units and emergency care departments.

VM-2500-M

Specific Accessories

4420505

Replacement IRMA CO_2 Analyser

4420511

IRMA Airway Adapter
Adult/Paediatric. Box of 25

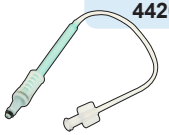
4420521

IRMA Airway Adapter
Infant. Box of 10

VM-2500-S

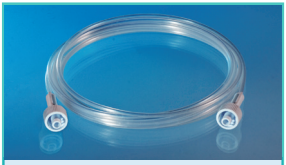
Specific Accessories

The VM-2500-S offers two sampling solutions; a reusable Nomo adapter used in conjunction with single patient use sampling lines, or VersaStream; a complete one-piece single patient use solution - see page 15 for further information on the VersaStream range.



4420525

Nomo Adapter
For use in conjunction with standard single patient use sampling lines

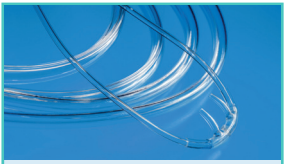


Sampling Lines
with Luer Lock - LLM/LLM

Airway adapter
Available in Adult and Paediatric

Airway Adapter and Sampling Line

Nasal Sampling Line



Nasal Sampling Cannula

Nasal/Oral Sampling Cannula

15mm Airway Adapter
Range available: I.D. 2.0mm to 10.0mm

VM-2500-MG
Specific Accessories

4420506

Replacement IRMA AX+ Analyser

4420511

IRMA Airway Adapter
Adult/Paediatric. Box of 25

4420521

IRMA Airway Adapter
Infant. Box of 10

4000 Series SpO_2 Sensors

Reusable and disposable pulse oximetry sensors and cables

- Manufactured using the latest technology and materials
- Quality and robust designs
- Reliable and accurate

The 4000 Series includes:

- Finger sensors
- Soft silicone finger sensors
- Wrap sensors
- Ear sensors
- Disposable sensors
- Extension and adapter cables

Compatible for use with most original equipment manufacturers' pulse oximeters and patient monitors including:

- BCI
- CSI
- Datascope
- Datex
- GE
- HP/Philips
- Minolta
- Nellcor
- Nihon-Kohden
- Nonin
- Novametrix
- Ohmeda
- Palco
- Sensormedics
- Spacelabs
- Viamed

(A) **Also available in Autoclavable version**

General Accessories

for use with VM-2500 series

4420611

Silicone Protective Cover for VM-2500 Series

4420615

Protective Rubber Boot/Stand

4420620

Carrying Case

4420621

Carrying Case
with clear viewing panel

4420628

Carrying Case
with A&E logo

4420590

Battery Li-Poly

4420594

Power Supply

Power Supply - UK adapter, EU adapter, AUS adapter and US adapter

4420601

Universal Mounting Kit*
Rev. 2

0121200

Universal Mounting Clamp

0121180

'V' Mount Wall Plate

0121181

'V' Mount Pole Clamp
Small: 14 - 25mm clamping width

0121182

'V' Mount Pole Clamp
Large: 16 - 40mm clamping width

0121184

'V' Mount Rail Clamp
Attaches to most types of medirail 30mm (H) x 10mm (D)

0121197

'V' Mount Pole Clamp
Horizontal

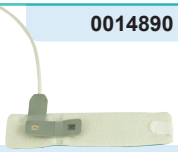
0021013

Posey Sensor Wrap
Box of 12 - 6554
Also available in cases

0021018

Posey Sensor Wrap Paediatric - 6554P
Box of 12
Also available in cases

0014890



Viamed Sensor Wrap
For use with Viamed Wrap Sensors, Pack of 12

4420597

USB Cable
For use with VM-2500 series

9910127

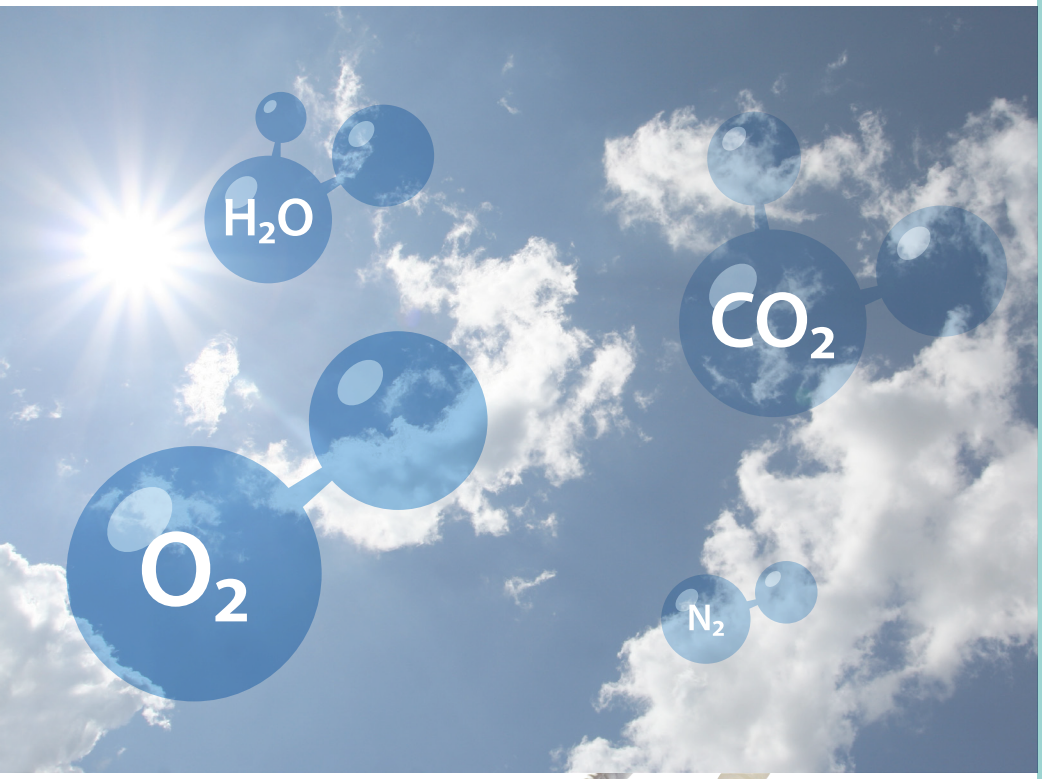
Lanyard
with screw thread

*The universal mounting kit is required when using any of the mounting options shown.

VersaStream®

VM-2500 Series
CO_2 Sampling Lines

Innovative Solutions for Sidestream CO_2 Monitoring
for use with Viamed VM-2500 series Capnographs



VersaStream® CO_2 sampling lines

The VersaStream® gas sampling lines combine reliability, flexibility and cost efficiencies

Why VersaStream® CO_2 sampling lines?

- Cost-effective alternative to Nafion® tubes
- The gas-selective non-porous material facilitates fast and complete removal of condensation from the sampling line
- The integrated bacterial filter prevents contamination
- Reliable measured gas values, due to negligible dead space volume of the filter - even in cases of high respiration rates
- For use with VM-2500 series Capnographs
- Integrated bacteria filter and water removal reduces the number of patient circuit parts and speeds up patient monitoring preparation time

Innovative material technologies

Latest material technologies permit active and complete removal of moisture and water – even in cases of low temperatures and high humidity.

No need to use expensive Nafion® tubes, which are not resistant to bending.

VersaStream® CO_2 sampling lines are very flexible and are suitable for short-term and long-term applications.

Available CO_2 sampling lines

Nasal Sampling Line

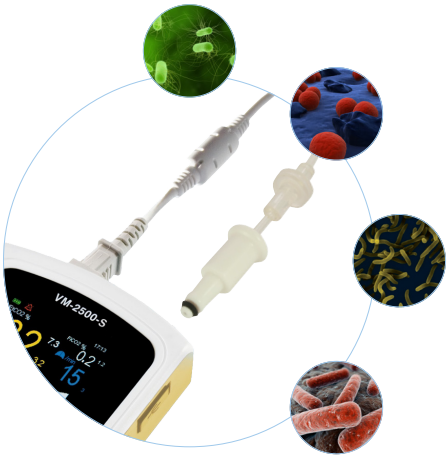
Nasal Cannula

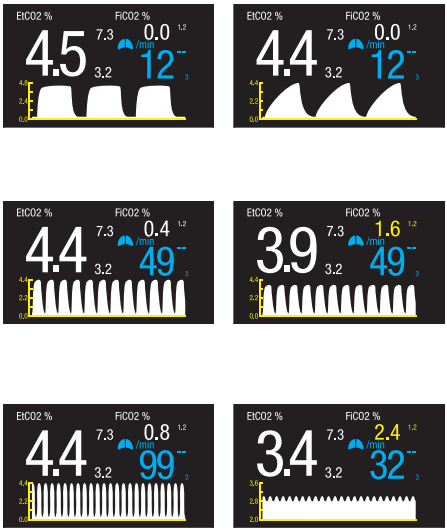
Nasal/Oral Cannula

Airway Adapter Sampling Line

Reduction of contamination risks

The integrated bacteria filter of the VersaStream® CO_2 sampling lines prevent contamination of gas-conducting components in and at the patient monitor. Transmission of germs, e.g. by contamination at the sample gas connection port of the monitor is prevented.





VersaStream®

LDS filter – Low-dead-space bacteria filter

Reliable measured values – even in cases of high breathing or ventilation frequency

The dead space volume of the filter unit has been reduced to only a few micro litres, thus facilitating precise measurement of CO_2 concentrations in the breathing gas – even at high respiration rates.

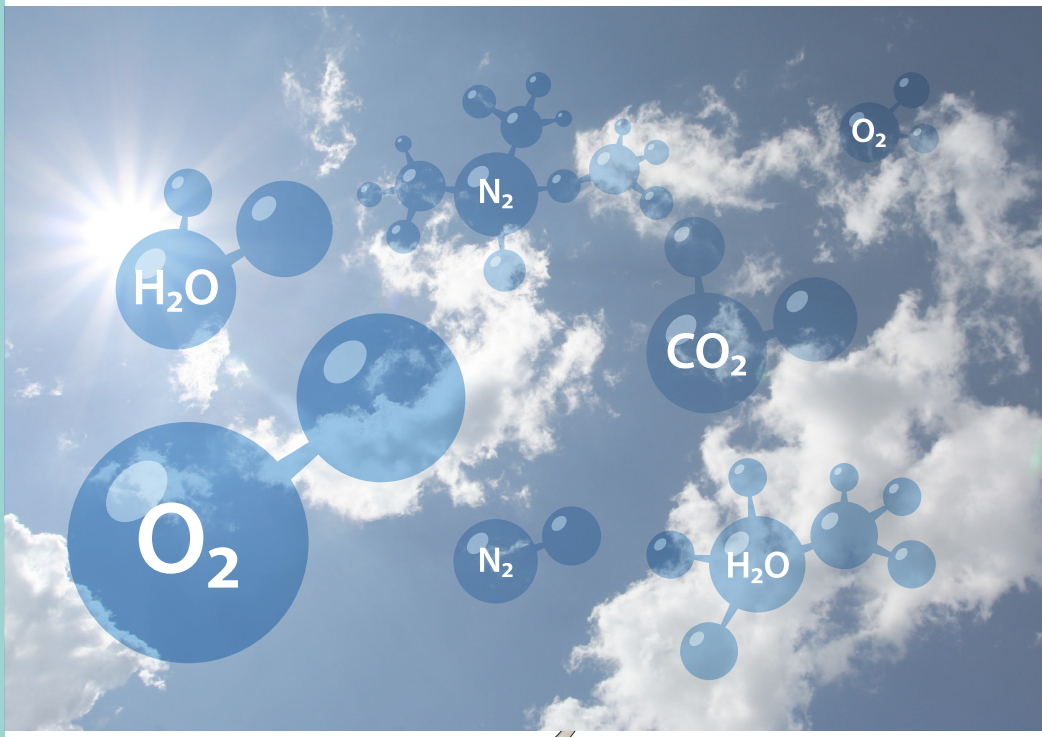
Diverse areas of application

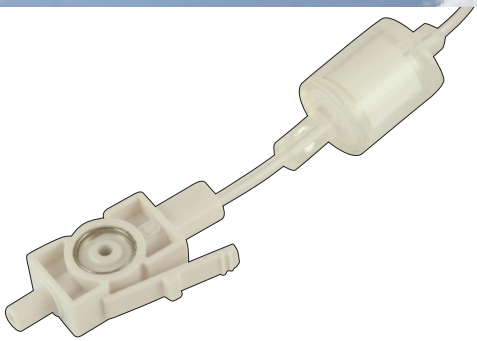
VersaStream® CO_2 sampling lines are suitable for use in areas, such as:

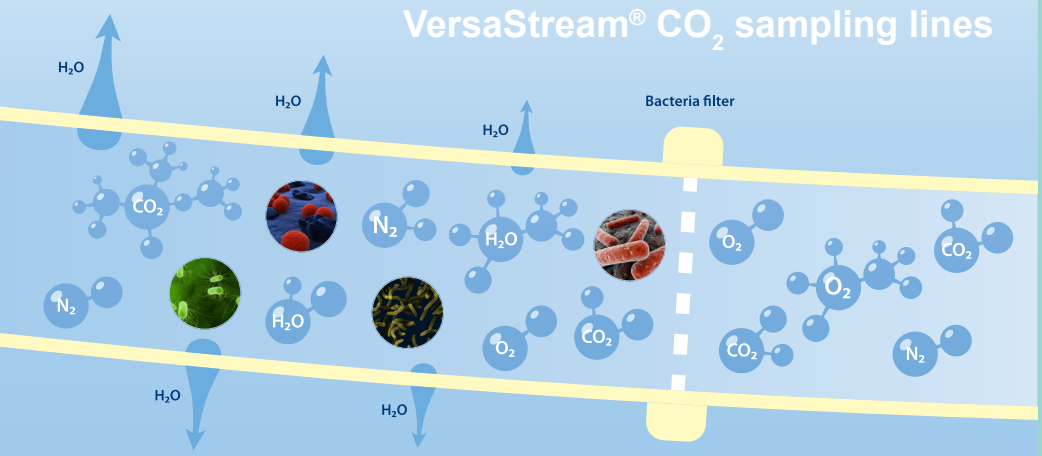
- Short and long term patient monitoring applications
- Monitoring of intubated and non-intubated patients
- Emergency medicine
- Patient transport
- Anaesthesia
- Intensive-care medicine – for adults and children
- Sedation
- Pain therapy, pain therapy management
- Homecare
- Sleep clinics and CPAP-ventilation

VersaStream®
Respironics CO_2 Sampling Lines

Innovative Solutions for Sidestream Monitoring







The VersaStream® CO_2 sampling lines combine reliability, flexibility and cost efficiencies

Why VersaStream® CO_2 sampling lines?

- Cost-effective alternative to Nafion® tubes.
- The gas-selective non-porous material facilitates fast and complete removal of condensation from the sampling line.
- The integrated bacterial filter prevents contamination.
- Reliable measured gas values, due to negligible dead space volume of the filter - even in cases of high respiration rates.
- For use with LoFlo™ sidestream modules
- Integrated bacteria filter and water removal reduces the number of patient circuit parts and speeds up patient monitoring preparation time.

Innovative material technologies

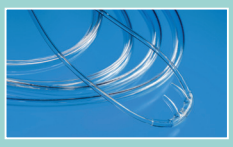
Latest material technologies permit active and complete removal of moisture and water – even in cases of low temperatures and high humidity.

No need to use expensive Nafion® tubes, which are not resistant to bending.

VersaStream® CO_2 sampling lines are very flexible and are suitable for short-term and long-term applications.

Available CO_2 sampling lines

Nasal Sampling Line



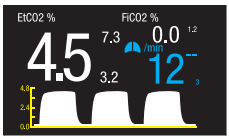
Nasal Cannula

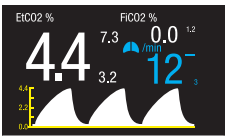
Nasal/Oral Cannula

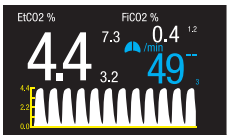
Airway Adapter Sampling Line

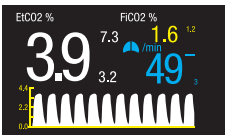
Reduction of contamination risks

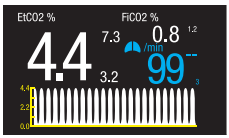
The integrated bacteria filter of the VersaStream® CO_2 sampling lines prevent contamination of gas-conducting components in and at the patient monitor. Transmission of germs, e.g. by contamination at the sample gas connection port of the monitor or at the water separation unit is prevented.



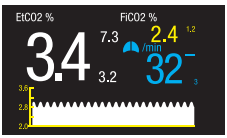








VersaStream®



LDS filter – Low-dead-space bacteria filter

Reliable measured values - even in cases of high breathing or ventilation frequency

The dead space volume of the filter unit has been reduced to only a few micro litres, thus facilitating precise measurement of CO_2 concentrations in the breathing gas - even at high respiration rates.

Diverse areas of application

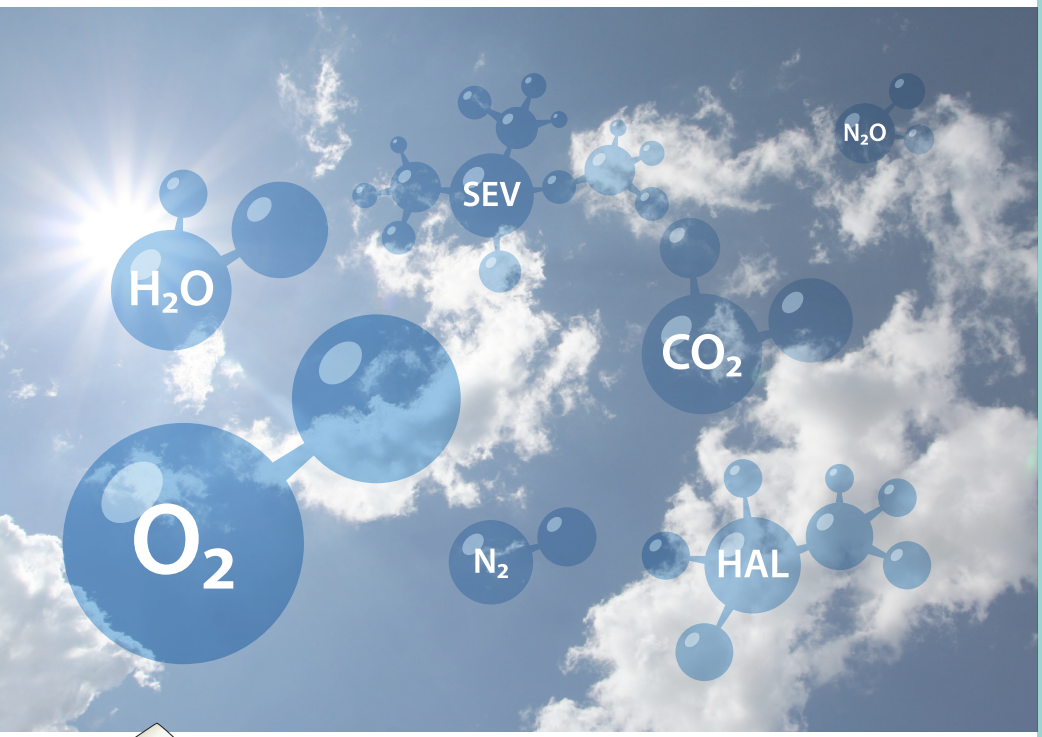
VersaStream® CO_2 sampling lines are suitable for use in areas, such as:

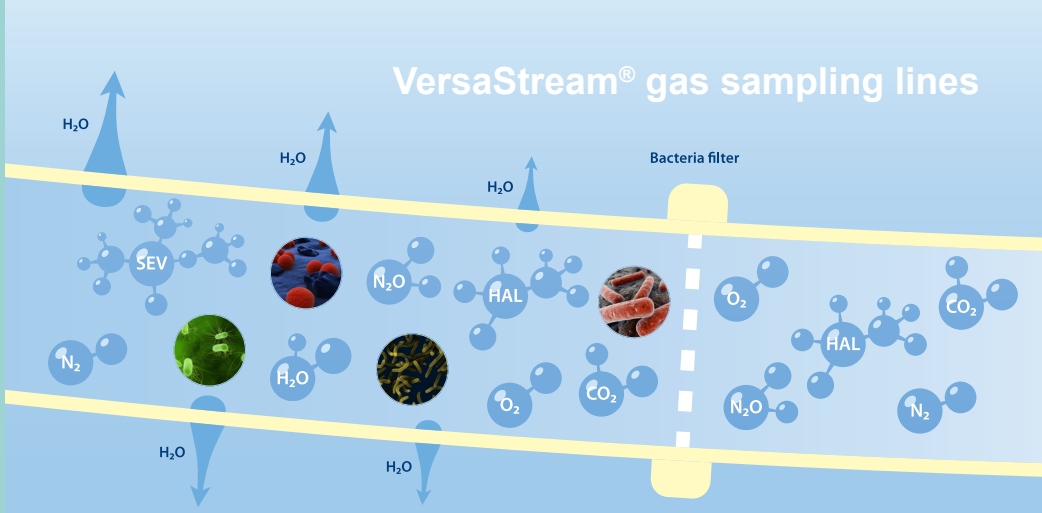
- Short and long term patient monitoring applications
- Monitoring of intubated and non-intubated patients
- Emergency medicine
- Patient transport
- Anaesthesia
- Intensive-care medicine – for adults and children
- Sedation
- Pain therapy, pain therapy management
- Homecare
- Sleep clinics and CPAP-ventilation

VersaStream®

Luer Lock Gas Sampling Lines

Innovative Solutions for Sidestream Gas Monitoring for use with Capnographs and Multigas Monitors that incorporate a Luer Lock sampling port





The VersaStream® gas sampling lines combine reliability, flexibility and cost efficiencies

Why VersaStream® gas sampling lines?

- Cost-effective alternative to Nafion® tubes.
- The gas-selective non-porous material facilitates fast and complete removal of condensation from the sampling line.
- The integrated bacterial filter prevents contamination.
- Regular water trap exchange (if present) is not required.
- Reliable measured gas values, due to negligible dead space volume of the filter - even in cases of high respiration rates.
- For use with many common types of gas exchange monitors, either low-flow or high-flow.
- Integrated bacteria filter and water removal reduces the number of patient circuit parts and speeds up patient monitoring preparation time.

Innovative material technologies

Latest material technologies permit active and complete removal of moisture and water – even in cases of low temperatures and high humidity.

No need to use expensive Nafion® tubes, which are not resistant to bending.

VersaStream® gas sampling lines are very flexible and are suitable for short-term and long-term applications.

Available gas sampling lines

Nasal Sampling Line

Nasal Cannula

Nasal/Oral Cannula

Airway Adapter Sampling Line

Reduction of contamination risks

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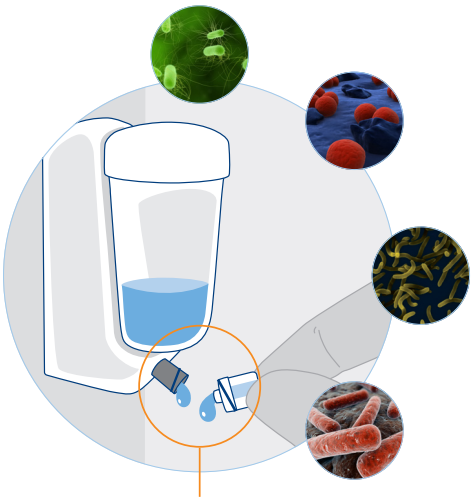
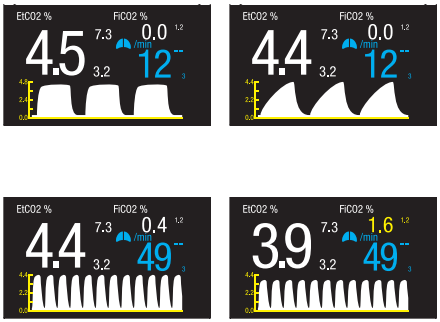
Water traps or water absorbers that are used in many gas monitoring applications in anaesthesia or intensive care – require either no replacement; or reduced need for replacement and emptying when using VersaStream® gas sampling lines.

Alarms triggered at the gas monitor by full water traps are significantly reduced. The associated patient monitoring labour and consumables costs are reduced considerably.



Contamination risk where standard lines are used with systems that employ water traps. VersaStream® lines resolve this potential infection control issue.



VersaStream®

LDS filter – Low-dead-space bacteria filter

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