

# VM-2160 Hand Held Pulse Oximeter

<b>Measuring Range</b>	
SpO <sub>2</sub>	0 - 100%
Pulse Rate	20 - 300 bpm
<b>Accuracy</b>	
SpO <sub>2</sub> (70 - 100%)	±2%
Pulse Rate	± 1 digit (≤100bpm) ± 1% (>100 bpm)
<b>Optical Specifications</b>	
Red emitter	660nm, typ 3.5mW
Infra-red emitter	905nm, typ 3.5mW
<b>Display</b>	
Features	Colour, 65,000 colours, 128 x 160 pixels
Data displayed	Oxygen saturation, pulse rate, plethysmogram, bar graph, short and long term trends
Indicators	Signal quality, pulse amplitude, battery status, alarm silenced, volume silenced, sensor detection, sensor disconnection
<b>Trend Information</b>	
Short term trend	15 / 30 / 240 minutes
Long term trend	> 480 hours, maximum 50 datasets
<b>Environmental Conditions</b>	
Operating temperature	-20 - 50°C , 15 - 95% RH, 600 - 1300 hPa
Storage temperature	-30 - 70°C, 10 - 95% RH, 600 - 1500 hPa
<b>Regulatory Approvals</b>	
Standards	CE BS EN 60601-1:2006, BS EN 60601-1-1:2001 BS EN 60601-1-2:2007, BS EN ISO 9919:2005
Safety	Class II, Type BF
<b>Assembly</b>	
Construction	IP32
Dimensions	118 mm (L) x 60 mm (W) x 25 mm (H)
Weight	Approximately 160g (including batteries, without sensor)
Power Supply	3 x AA alkaline batteries
Battery Life	> 2 days continuous operation or approximately 5 days in economy power mode
PC interface	USB 2.0
<b>Part Numbers</b>	
VM-2160*	0012175
* Language package: Central European, including: English, Afrikaans, Dutch, French, German, Hungarian, Italian, Polish, Portuguese and Spanish	
<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	0022160
Carrying Case	0022178
Universal Mounting Plate, V-adapter with female pole-mount thread (1/4 - 20)	0022171
'V' mount wall plate	0121180
'V' mount pole clamp (Small: 14 - 25mm clamping width)	0121181
'V' mount pole clamp (Large: 16 - 40mm clamping width)	0121182
'V' mount rail clamp	0121184
'V' mount pole clamp, horizontal	0121197
Universal Mounting Clamp, with vertical and horizontal adjustments	0121200

NB. When ordering the VM-2160 please select from the following reusable sensor styles:  
Standard Lingual Clip Sensor or Multi-Site Y sensor (supplied with a choice of lingual clip - small, medium or large) and indicate at the time of ordering.

\* In accordance with ISO 9919:2005 Standards.

N.B. The universal mounting plate is required when using any of the above mounting options.

Specifications subject to change.

CE 0086

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Part Number: 0092173  
Date: 03/15



ISO 13485:2003



# VM-2160

## Hand Held Pulse Oximeter

Designed with the most difficult conditions in mind

- For spot checking or constant monitoring of SpO<sub>2</sub> and pulse rate
- Clear and bright, colour display
- Robust, ergonomic design with durable silicone protective cover
- Stores and restores up to 480 hours of trend data
- Adjustable high and low alarms
- Antibacterial keypad



The ergonomic VM-2160 hand held pulse oximeter has the durability of a compact and lightweight hand held unit for spot checking of SpO<sub>2</sub>, but also has the power and functionality of a stand alone pulse oximeter.

The VM-2160 incorporates adjustable high and low alarms for both the SpO<sub>2</sub> and pulse rate with audible pulse tones, and is able to store and restore up to 480 hours of patient trend data, enabling the unit to also be used for continual patient monitoring.

Utilising the latest display technology, the clear and bright colour screen offers superb visibility in all lighting conditions, including direct sunlight.



# The ergonomic design of the VM-2160 Hand Held Pulse Oximeter combines outstanding performance and reliability in pulse oximetry

## Standard Package

- VM-2160 Pulse Oximeter Monitor
- Reusable SpO<sub>2</sub> sensor\*
- USB data cable
- 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-2160 Hand Held Pulse Oximeter

- Self-explanatory and ergonomic functions enable intuitive operation
- The colour information display, as well as the simple information structure, support quick decisions and a rapid user reaction in critical situations
- Intelligent linking of visual and acoustic information and signals
- The pulse tone indicates the level of oxygen saturation
- Automatic suppression of ambient light influences
- Signal quality indications
- Simple handling and clear error messages effectively prevent incorrect operation of the VM-2160
- 20 language options available - for operational control
- Rapid data transfer using a standard USB interface
- Silicone protective cover included in the package
- Powered by standard AA alkaline batteries
- The most modern technologies and energy-saving elements enable continued use of the device over several days



VM-2160 Display



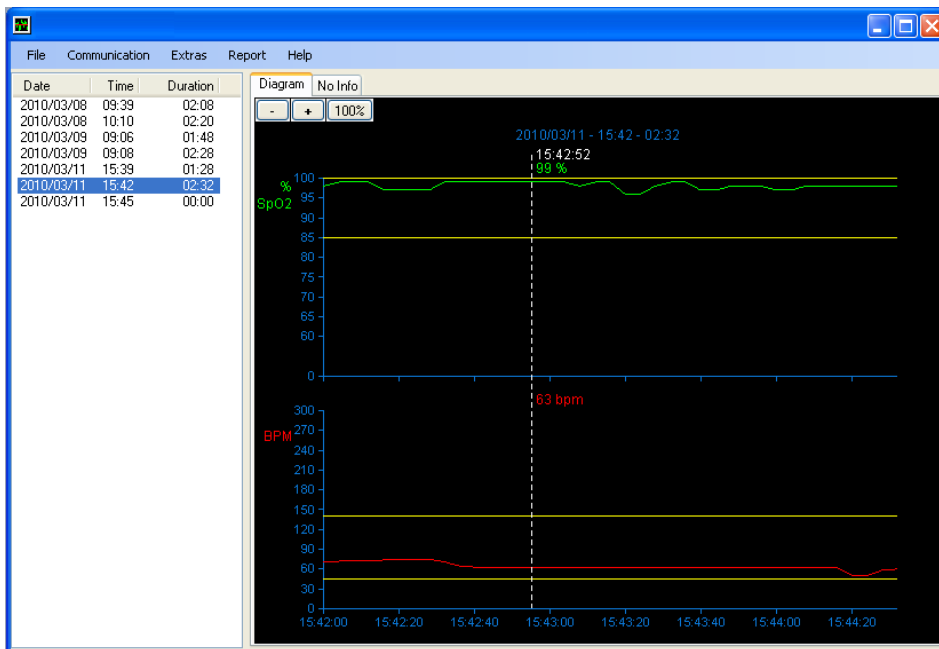
VM-2160 in Protective Cover





**Actual Size**

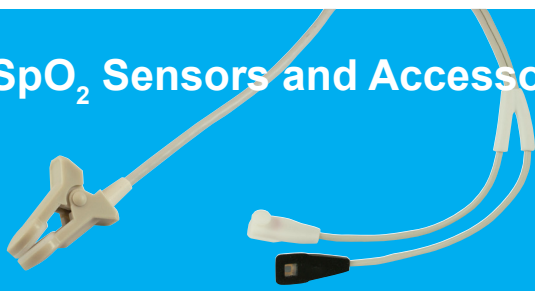
## Powerful Pulse Oximetry PC Software



With the convenient Pulse Oximetry 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.

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



**Lingual Sensor**  
Part Number: 0015000



**Multi-site Y Sensor**  
Part Number: 0015002



**Extension Cables**  
1.2m Part Number: 0014895  
2.4m Part Number: 0014896

### For use with Multi-site Y Sensor



**Small Lingual Clip**  
Part Number: 0025010



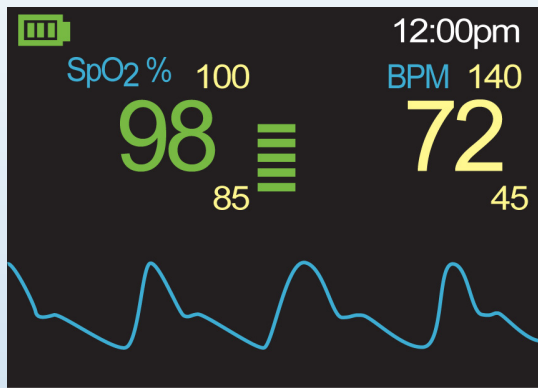
**Medium Lingual Clip**  
Part Number: 0025011



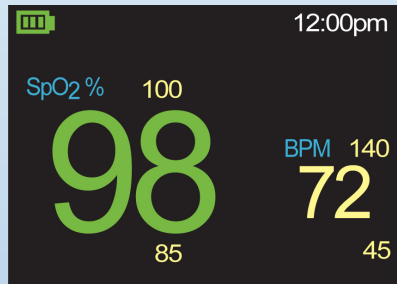
**Large Lingual Clip**  
Part Number: 0025012



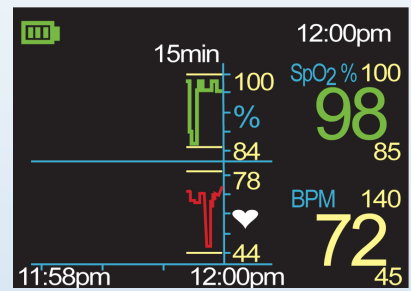
# Display Formats



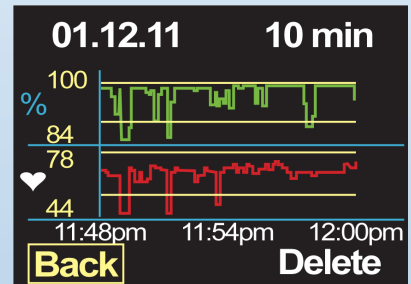
Default Display



Large Digit Display



Short Term Trending Display



Long Term Trending Display

## Mounting Options and Accessories

For use with VM-2160

**0022178**

- 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

**Carrying Case**

**0022160**

**Silicone Protective Cover**

**0022171**

N.B.: The universal mounting plate is required when using any of the mounting options shown.

**Universal Mounting Plate**

**0121180**

**'V' Wall Mount**

**0121200**

**Universal Mounting Clamp**

**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) medirail