

|                                                                                                                                                |                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <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 (≤100 bpm) ± 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                                                                                               |
| Date displayed                                                                                                                                 | Oxygen saturation, pulse rate, plethysmogram, bar graph, short and long term trends                                                    |
| Indicators                                                                                                                                     | Signal quality, pulse amplitude, battery status, alarm silenced, sensor detection, sensor disconnection                                |
| <b>Trend Information</b>                                                                                                                       |                                                                                                                                        |
| Short term trend                                                                                                                               | 15 / 30 / 240 minutes                                                                                                                  |
| Long term trend                                                                                                                                | > 480 hours                                                                                                                            |
| <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 Class IIb in accordance with MDD 93/42/EEC<br>BS EN 60601-1:2006, BS EN 60601-1-1:2001<br>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                                                                                                                                |
| VM-2160*                                                                                                                                       |                                                                                                                                        |
| EAN-13 (GTIN-13) Barcode: 5051826000007                                                                                                        | 0012160                                                                                                                                |
| NATO Stock Number: 6515-99-915-8170                                                                                                            |                                                                                                                                        |
| * Language package: Central European, includes: English, Afrikaans, Dutch, French, German, Hungarian, Italian, Polish, Portuguese and Spanish. |                                                                                                                                        |
| VM-2160 - Scandinavian languages (English, Danish, Finnish, Swedish)                                                                           | 0012161                                                                                                                                |
| VM-2160 - Special EU characters languages (English, Greek, Russian, Turkish)                                                                   | 0012162                                                                                                                                |
| VM-2160 - Asia I languages (English, Chinese and Traditional Chinese)                                                                          | 0012163                                                                                                                                |
| VM-2160 - Asia II languages (English, Japanese and Korean)                                                                                     | 0012164                                                                                                                                |
| <b>Additional Accessories Available</b>                                                                                                        |                                                                                                                                        |
| Sensor Wraps - for use with 0014835 and 0014592 Silicone Wrap Sensors                                                                          | 0014890                                                                                                                                |
| Posey Sensor Wraps - 6554                                                                                                                      | 0021013                                                                                                                                |
| Posey Sensor Wraps - Paediatric - 6554P                                                                                                        | 0021018                                                                                                                                |
| Silicone Protective Cover                                                                                                                      | 0022160                                                                                                                                |
| Carrying Case                                                                                                                                  | 0022178                                                                                                                                |
| Universal Mounting Plate, V-adaptor 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                                                                                                                                |
| <b>Sensors and Cables</b>                                                                                                                      |                                                                                                                                        |
| Reusable Adult Finger Sensor - 1.2m cable length                                                                                               | 0014650                                                                                                                                |
| Reusable Silicone Wrap Sensor - 1.2 cable length                                                                                               | 0014835                                                                                                                                |
| Reusable Autoclavable Silicone Wrap Sensor - 1.2m cable length                                                                                 | 0014592                                                                                                                                |
| Reusable Adult Silicone Soft Sensor - 0.3m cable length                                                                                        | 0014755                                                                                                                                |
| Reusable Adult Silicone Soft Sensor - 1.2m cable length                                                                                        | 0014750                                                                                                                                |
| Reusable Adult Autoclavable Silicone Soft Sensor - 0.3m cable length                                                                           | 0014595                                                                                                                                |
| Reusable Adult Autoclavable Silicone Soft Sensor - 1.2m cable length                                                                           | 0014590                                                                                                                                |
| Reusable Paediatric Silicone Soft Sensor - 0.3m cable length                                                                                   | 0014756                                                                                                                                |
| Reusable Paediatric Silicone Soft Sensor - 1.2m cable length                                                                                   | 0014751                                                                                                                                |
| Reusable Paediatric Autoclavable Silicone Soft Sensor - 0.3m cable length                                                                      | 0014596                                                                                                                                |
| Reusable Paediatric Autoclavable Silicone Soft Sensor - 1.2m cable length                                                                      | 0014591                                                                                                                                |
| Reusable Ear Sensor - 1.2m cable length                                                                                                        | 0014825                                                                                                                                |
| Pulse Oximetry Extension Cable, 1.2m cable length (XT6500)                                                                                     | 0014895                                                                                                                                |
| Pulse Oximetry Extension Cable, 2.4m cable length (XT6501)                                                                                     | 0014896                                                                                                                                |
| Disposable Micro Foam Tape - Box of 24 - Adult                                                                                                 | 0014985                                                                                                                                |
| Disposable Micro Foam Tape - Box of 24 - Paediatric                                                                                            | 0014986                                                                                                                                |
| Disposable Micro Foam Tape - Box of 24 - Infant                                                                                                | 0014987                                                                                                                                |
| Disposable Micro Foam Tape - Box of 24 - Neonatal                                                                                              | 0014988                                                                                                                                |
| Disposable Transpore Tape - Box of 24 - Adult                                                                                                  | 0014989                                                                                                                                |
| Disposable Transpore Tape - Box of 24 - Paediatric                                                                                             | 0014990                                                                                                                                |
| Disposable Plaster Tape - Box of 24 - Adult                                                                                                    | 0014993                                                                                                                                |
| Disposable Plaster Tape - Box of 24 - Paediatric                                                                                               | 0014994                                                                                                                                |
| Disposable Plaster Tape - Box of 24 - Infant                                                                                                   | 0014995                                                                                                                                |
| Disposable Plaster Tape - Box of 24 - Neonatal                                                                                                 | 0014996                                                                                                                                |

\* 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: 0092171  
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
- Includes a 3rd generation soft silicone sensor\*
- 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 at the bedside 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 VM-2160 can be used in a variety of applications, from use in hospitals, paramedic ambulances, clinics and dental surgeries - making this an extremely flexible and durable piece of equipment.



## The VM-2160 offers a efficient and cost effective solution for spot monitoring or constant monitoring of SpO<sub>2</sub> and Pulse rate

- For spot checking or constant monitoring of SpO<sub>2</sub> and Pulse Rate
- Includes a 3rd generation soft silicone sensor - \*other sensors can be specified
- Stores and restores up to 480 hours of trend data
- Adjustable high and low alarms

### VM-2160 Standard Package

- VM-2160
- Reusable adult silicone finger sensor\*
- Silicone protective cover
- PC review software
- USB data cable
- 3 x AA batteries

\* Please select from Soft Sensor (Adult or Paediatric), Finger Sensor, Silicone Wrap Sensor, Ear Sensor and indicate at the time of ordering. Autoclavable sensors are available.



**Long term  
monitoring  
and  
trending**

## Key features of the VM-2160 Hand Held Pulse Oximeter

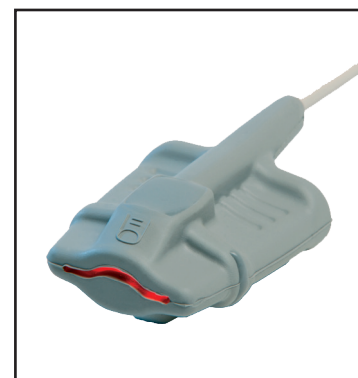
- Self-explanatory and ergonomic functions enable intuitive operation
- The colour information display, as well as the simple information structure, support quick decisions and a rapid user reaction in critical situations
- Intelligent linking of visual and acoustic information and signals
- The pulse tone rate provides information about 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
- The most modern technologies and energy-saving elements enable continued use of the device over several days
- Rapid data transfer using a standard USB interface
- Silicone protective cover included in the package
- Powered by standard AA alkaline batteries



VM-2160 Display

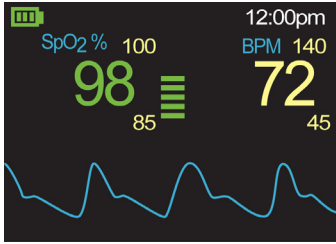


VM-2160 in Protective Cover

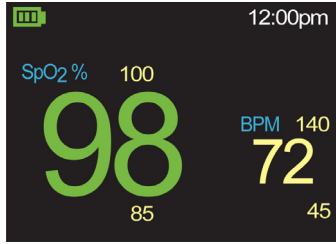


**Silicone Soft Sensor for VM-2160. Other types available on request**

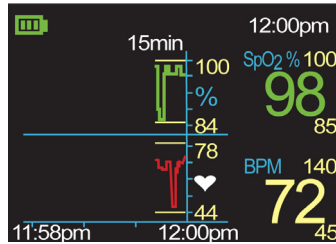
## Display Formats



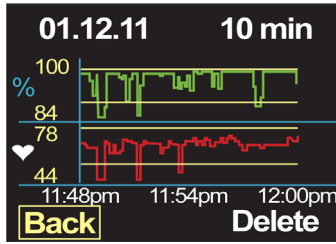
Default Display



Large Digit Display



Short Term Trending Display



Long Term Trending Display



Actual Size

## Sensors and Cables



0014650

Reusable Adult  
Finger Sensor  
1.2m cable length



0014755

Reusable Adult Silicone  
Soft Sensor  
0.3m cable length



0014756

Reusable Paediatric  
Silicone Soft Sensor  
0.3m cable length



0014825

Reusable Ear Sensor  
1.2m cable length



0014835

Reusable Silicone Wrap  
Sensor  
1.2m cable length

Autoclavable version

0014592

Reusable Autoclavable  
Silicone Wrap Sensor  
1.2m cable length

0014750

Reusable Adult Silicone  
Soft Sensor  
1.2m cable length

Autoclavable versions

0014595

Reusable Adult  
Autoclavable Silicone  
Soft Sensor  
0.3m cable length

0014590

Reusable Adult  
Autoclavable Silicone  
Soft Sensor  
1.2m cable length

0014751

Reusable Paediatric  
Silicone Soft Sensor  
1.2m cable length

Autoclavable versions

0014596

Reusable Paediatric  
Autoclavable Silicone  
Soft Sensor  
0.3m cable length

0014591

Reusable Paediatric  
Autoclavable Silicone  
Soft Sensor  
1.2m cable length

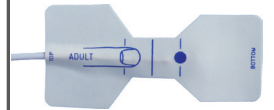


0014895

Pulse Oximetry  
Extension Cable  
1.2m cable length

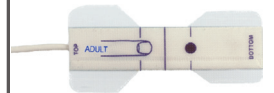
0014896

Pulse Oximetry  
Extension Cable  
2.4m cable length



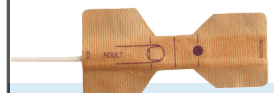
Disposable  
Micro Foam Tape  
Box of 24 sensors

|            |           |
|------------|-----------|
| Adult      | 0014985** |
| Paediatric | 0014986** |
| Infant     | 0014987** |
| Neonatal   | 0014988** |



Disposable  
Transpore Tape  
Box of 24 sensors

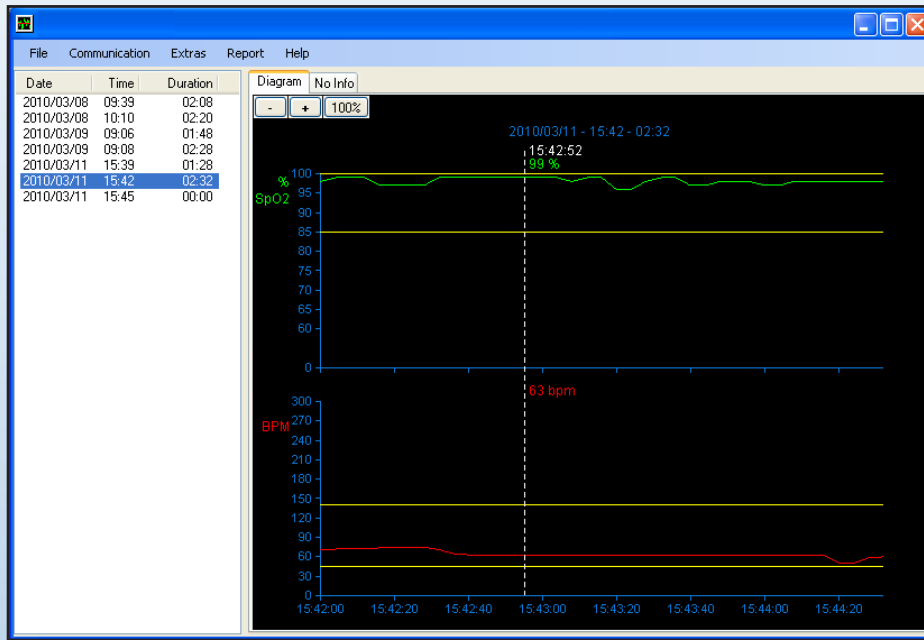
|            |         |
|------------|---------|
| Adult      | 0014989 |
| Paediatric | 0014990 |



Disposable  
Plaster Tape  
Box of 24 sensors

|            |         |
|------------|---------|
| Adult      | 0014993 |
| Paediatric | 0014994 |
| Infant     | 0014995 |
| Neonatal   | 0014996 |

# 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.

## Mounting Options and Accessories

For use with VM-2160

- 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

0022178



**Carrying Case**

0022160



**Silicone Protective Cover**

0022171



**Universal Mounting Plate**

0121180



**'V' Wall Mount**

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**

0121200



**Universal Mounting Clamp**

0014890



**Sensor Wraps**  
Pack of 12

0021013



**Posey Wrap**  
Pack of 12 - 6554

0021018



**Posey Wrap Paediatric**  
Pack of 12 - 6554P

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

## Applications

The VM-2160 with Silicone Finger Sensor is suitable for the following applications:

- Clinical Environments
- Rescue and emergency services
- Sleep studies
- Home care
- Long-term monitoring
- Stress testing

