



## Features

Monitored parameters:

Oxygen saturation, heart rate, respiration

Operating time with batteries: 8 h minimum

Displays: Graphical LCD display, 5 LEDs

Memory modes: Event, trend, full-disclosure and compliance

Alarm notification: Acoustic and visual

Data transfer: USB port

# VitaGuard® VG 3100

## The Heart Rate, Apnea and Oxygen Saturation Monitor

The VitaGuard® VG 3100 is the most versatile of the VitaGuard® monitors. It monitors oxygen saturation (SpO<sub>2</sub>), heart rate and respiration of patients of all ages, thus giving medical personnel and caregivers the security they need, both in ambulatory and clinical environments.

### Operation

The VitaGuard® VG 3100 generates acoustic and visual alarms when no respiration or movement is detected for a preset time, i.e. central apnea\*, or when the measured oxygen saturation or heart rate violates the limits set by the operator. For SpO<sub>2</sub>, the Masimo Signal Extraction Technology (SET®) is used. A technical alarm is emitted and a corresponding message displayed should an electrode or the SpO<sub>2</sub> sensor become loose.

### Extensive Data Storage

In the event of a physiological alarm, the measured values, their associated waveforms, and the monitor settings for selectable periods prior to and after the event are automatically stored. Over 400 such events can be captured in the event driven memory. Both manual and interval driven data storage is also possible. Furthermore, additional limits may be set to capture events silently, for example, if the silent SpO<sub>2</sub> lower limit is set to 92 %, then once the SpO<sub>2</sub> value falls

below this limit, the event will be silently registered by the monitor. Parallel to the event driven memory, the VG 3100 incorporates a 144-hour trend loop memory and a 16-hour full-disclosure loop memory for continuous data storage.

### Innovative Technology – Easy to Use

Considering all its features, the versatile monitor weighs only approx. 700 grams. The clearly arranged layout of the control elements ensures ease of operation, not only for trained clinical personnel but also for caregivers without previous medical or technical training. The numerous ways of powering the monitor, be it via the mains supply, the rechargeable power pack or single-use batteries, allow for a wide range of applications.

### Comprehensive Data Evaluation

The stored values and waveforms can be viewed directly on the monitor's high-resolution graphical LCD display. Alternatively, using GETEMED's VitaWin® software, the event, trend, full-disclosure and compliance recordings can be transferred to a PC via the USB port, visualized, evaluated and documented.



\* obstructive apnea cannot be detected

# VitaGuard® VG 3100

## Technical Data

### General

Weight	Approx. 700 g with power pack
Dimensions	205 mm x 135 mm x 45 mm
Power supply	4.8 V NiMH power pack or 4 x 1.5 V alkaline LR6 batteries, 9 V power adapter NA 3000-2
Power adapter NA 3000-2	Input: 100 ... 240 V, 50 ... 60 Hz, Output: 9 VDC
Power pack recharge time	<6 h
Operating time	>8 h with power pack or batteries
Replace battery message	Message on LCD display
Battery exhaustion message	Visual and acoustic warning
Keys	6 pushbuttons
ECG/respiration connector	8-pin miniature round connector, type BF input
SpO <sub>2</sub> connector	14-pin mini-ribbon connector, type BF input
USB connector	Mini USB to connect with a PC
Display elements	5 LEDs and a graphical LCD display (320 x 240 dots) with back- light when powered by external power adapter
Alarm warnings	Visual and acoustic

### Apnea Monitor

Method	Impedance pneumography
Resolution	1/min
Apnea pause settings	8, 10, 12 ... 30, 32, 34 s
End of alarm condition	2 breaths within 6 s
Minimum amplitude	Approx. 0.2 Ohm
Signal recognition	Green LED and selectable beep tone

### Heart Rate Monitor

Heart rate range	20 ... 270/min
Resolution	1/min
Bradycardia alarm settings	30, 35 ... 175, 180/min
Tachycardia alarm settings	100, 105 ... 250, 255/min
Minimum amplitude	Approx. 0.2 mV
Selectable ECG leads	Einthoven I, II or III
Signal recognition	Green LED and selectable beep tone

### Pulse Rate Monitor

Method	Pulse oximetry
Pulse rate range	25 ... 240/min
Resolution	1/min
Accuracy	±3 digits without motion, ±5 digits during motion
Alarm settings	Same as for heart rate monitor

### SpO<sub>2</sub> Monitor

SpO <sub>2</sub> range	1 ... 100 %
Resolution	1%
Accuracy	±3 digits for SpO <sub>2</sub> above 70 %
Alarm settings	Selectable from 50 ... 100 %
Sensitivity	Minimum (APOD = Adaptive Probe Off Detection), standard, maximum

### Memory

Storage functions	Event, trend, full-disclosure and compliance memories
Storage capacity	400 events, 144 h trend, 16 h full-disclosure
Stored data	ECG, heart rate, respiration, basal impedance, SpO <sub>2</sub> , pulse rate, signal IQ, plethysmograph, perfusion index, status

### Classifications

Product classification	IIb according to MDD 93/42/EEC
Ingress protection	IP 21
German "Hilfsmittelnummer"	21.30.01.0005

### Environmental Conditions

Operating temperature	5 ... 40 °C
Relative humidity	5 ... 95 %, non-condensing
Storage and transport temperature range	-40 ... 70°C

### Standard Delivery

VitaGuard® VG 3100, ECG patient cable, neonatal ECG electrodes, SpO<sub>2</sub> patient cable, SpO<sub>2</sub> disposable sensor, power adapter NA 3000-2, NiMH power pack, user manual, pouch including belt, transport case

### Optional Parts

Wide range of SpO<sub>2</sub> sensors (disposable and reusable), VitaWin® analysis software

Subject to change

Distributor



Manufactured by



GETEMED

Medizin- und Informationstechnik AG  
Oderstraße 77 / 14513 Teltow / Germany  
Telephone +49 3328 3942-0  
Telefax +49 3328 3942-99  
info@getemed.de / www.getemed.de