# **⊘getemed**





### Features

Monitored parameters: Oxygen saturation, pulse rate

Operating time with batteries: 8 h minimum

Displays: Graphical LCD display, 4 LEDs

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

Alarm notification: Acoustic and visual

Data transfer: USB port

### VitaGuard® VG 310 The Pulse Oximeter

Monitoring the vital signs of patients and other risk groups is particularly difficult in situations where movement cannot be avoided. Especially at home, in emergency situations or during patient transport monitoring devices are needed which provide reliable and precise measurement of physiological values. GETEMED's VitaGuard® VG 310 pulse oximeter was designed with these requirements in mind and safely and effectively monitors oxygen saturation (SpO<sub>2</sub>) and pulse rate in both ambulatory and clinical environments.

### **Comforting Monitoring**

Monitoring can be accomplished at any time and in almost every place. The VitaGuard® VG 310 incorporates the Masimo SET® technology (Signal Extraction Technology) and generates acoustic and visual alarms when the measured pulse rate or oxygen saturation values violate the limits set by the operator. A technical alarm is emitted and a corresponding message displayed should the sensor become loose. A port is also provided for connecting the monitor to an external alarm unit or a nurse call unit.

### **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  $\text{SpO}_2$  lower limit is set to 92 %, then once the  $\text{SpO}_2$  value falls below this limit, the event will be silently registered by the monitor. Parallel to the event driven memory, the VG 310 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, single-use batteries, or using the car power adapter, 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.





## VitaGuard® VG 310 Technical Data

### General

Veneral	
Weight	Approx. 700 g with power pack
Dimensions	205 mm x135 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, 400 mA / Output: 9 VDC, 1.5 A
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
SpO <sub>2</sub> connector	14-pin mini-ribbon connector, type BF input
USB connector	Mini USB to connect with a PC
AUX connector features	Interface for modem, external alarm unit output, nurse call unit output and 2 analog inputs (AUX 1 & 2)
Display elements	4 LEDs and a graphical LCD dis- play (320 x 240 dots) with backlight when powered by external or auto- mobile power adapter
Alarm warnings	Visual and acoustic as per DIN EN 60601-2-49 and DIN EN 60601-1-8
Pulse Rate Monitor	
Method	Pulse oximetry
Pulse rate range	25 240/min
Resolution	1/min
Accuracy	±3 digits without motion, ±5 digits during motion
Bradycardia alarm settings	30, 35 175, 180/min
Tachycardia alarm settings	100, 105 250, 255/min
Signal recognition	Green LED and selectable beep tone

SpO <sub>2</sub> Monitor	
SpO <sub>2</sub> range	1 100 %
Resolution	1 %
Accuracy	$\pm 3$ 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	Up to approx. 400 events, depend- ing on pre-alarm and post-alarm settings, 144 h trend, 16 h full-disclosure
Stored data	SpO <sub>2</sub> , pulse rate, signal IQ, plethys- mograph, perfusion index, status, analog inputs AUX 1 & 2
Classifications	
Product classification	IIb according to MDD 93/42/EEC
Ingress protection	IP 21 according to DIN EN 60529
German "Hilfsmittelnummer"	21.30.02.1002
Environmental Conditions	
Operating temperature	5 40 °C
Relative humidity	5 95 %, non-condensing
Storage and transport temperature range	–40 70°C

#### **Standard Delivery**

VitaGuard<sup>®</sup> VG 310, 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 Accessories**

Automobile power adapter NAK 3000-2, wide range of SpO<sub>2</sub> sensors (disposable and reusable), external alarm unit, clinic mounting frame, VitaWin® analysis software

Subject to change

### Distributor

#### Manufactured by



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