GE Healthcare

CARESCAPE V100

Vital signs monitor

Connecting intelligence and care.

The CARESCAPE* V100 monitor is designed for care areas where patients require vital signs measurements. It can go with you from one patient to the next, and because of its speed, accuracy and connectivity, the CARESCAPE V100 monitor collects the right information at the point of care to help you make fast, quality care decisions.

Features

- Can be used for spot-checking or for continuous monitoring, providing you the flexibility of a "2 in 1" device
- Designed for adult and pediatric use, as well as neonatal patients with very low perfusion rates
- Includes the same advanced parameters and algorithms as other higher acuity GE monitors, helping ensure measurement consistency across all care areas
- Non-invasive blood pressure measurement uses GE's exceptional DINAMAP* technology
- Three choices for pulse oximetry include GE TruSignal,* Nellcor™ OxiMax™ or Masimo SET®
- Three options for temperature include Exergen® Temporal*Scanner*,™ Alaris® Turbo Temp® and Alaris Tri-Site
- Allows for inflation setpoints, so you can be sensitive to patients' special circumstances and ensure their comfort
- Large display makes it easy to read even from a distance
- Stores up to 40 measurements for up to 24 hours with the capability to print strips
- Designed for easy serviceability and simple field-replacement kits
- Connectivity can be made with a PC or other third-party connectivity solutions such as Capsule™ Technologie and Cerner®
- Typical battery life of up to 11 hours before requiring recharge. If the battery is discharged, it maintains the data
- Connect up to three additional accessories simultaneously with the DINAMAP Serial Hub, via the monitor's HostComm (sold separately)

Technical specifications

Portability	Carried by recessed handle or on a roll stand

Printer

Printer type	Thermal dot array
Resolution	384 dots/inch horizontal
Paper type	Must be compatible with GE PN 770137
Languages printed	English, German, French, Italian, Spanish, Portuguese, Hungarian, Polish, Czech, Finnish, Swedish, Danish, Dutch, Norwegian, and Slovak

Temperature options

Exergen Temporal*Scanner* temporal artery thermometer

Alaris Turbo Temp thermometer

Alaris Tri-site thermometer

NIBP options

GE DINAMAP SuperSTAT*

GE DINAMAP Classic (intra-arterial or auscultatory reference)

Performance specifications

GE TruSignal SpO_2 specifications

Measurement range

SpO_2	1 to 100%
Pulse rate	30 to 250 bpm

Accuracy

Saturation

Adult	70 to 100% ±2 digits (without motion)
Neonate[1]	70 to 100% ±3 digits (without motion)
Adult/Neonate[2]	70 to 100% ±3 digits (during clinical motion)
Low perfusion	70 to 100% ±2 digits (during clinical low perfusion)

Pulse rate

Adult/Neonate	30 to 250 bpm: ±2 digits or ±2%, whichever is greater, (without motion)
	30 to 250 bpm: ±5 digits (during motion)
Low perfusion	30 to 250 bpm: ±3 digits

Note: Accuracy may vary for some sensors; always check the instructions for the sensor.

GE sensor accuracy

Sensor model	SpO_2 range 70 to 100%
TruSignal	
TS-F-D[3]	±2 digits without motion
TS-W-D[3]	±2 digits without motion
TS-E-D[3]	±3 digits without motion
TS-SE-3[3]	±2 digits without motion
TS-AF-10[3]	±2 digits without motion
TS-AF-25[3]	±2 digits without motion
TS-F2-GE	±2 digits without motion
TS-F4-GE	±2 digits without motion
TS-E2-GE	±3 digits without motion
TS-E4-GE	±3 digits without motion
TS-SA4-GE	
TS-SA-D[3]	

For TS-SA4-GE and TS-SA-D sensors the accuracy range is as following

70 to 100%	90 to 100%	80 to 90%	70 to 80%	below 70%
±2 digits	±1 digits	±2 digits	±3 digits	unspecified

Sensor light source

Wavelength[4]	Infrared: 930 to 950 (nominal) Red: 650 to 670 (nominal)
Maximum output power for each LED	< 15mV

(1) SpO_2 measurement accuracy is based on deep hypoxia studies using TruSignal sensors on healthy adult volunteer subjects. Arterial blood samples were analyzed simultaneously on multiple CO-oximeters. This variation equals plus or minus one standard deviation. Plus or minus one standard deviation encompasses 68% of the population.

(2) Applicability: TS-AF sensors.

(3) Requires compatible interconnect cable TS-G3

(4) Information about wavelength range can be especially useful to clinicians.

Performance specifications *(continued)*

Masimo SET specifications[5]

Measurement range

SpO_2	1 to 100%
Pulse rate	25 to 240 bpm
Perfusion range	0.02 to 20%

Accuracy and motion tolerance

Saturation

Without motion adult/pediatric[6]	70 to 100% ±2 digits
Without motion neonate[6]	70 to 100% ±3 digits
With motion adult/ped/neonate[7, 8]	70 to 100% ±3 digits
Low perfusion[9]	70 to 100% ±2 digits 0 to 69% unspecified

Pulse rate

Without motion	25 to 240 bpm ±3 digits
With motion	Normal physiologic range 25 to 240 bpm ±5 digits

Low perfusion performance

0.02% Pulse amplitude	Saturation (% SpO_2)
% transmission >5%	±2 digits Pulse rate ±3 digits

Interfering substances: Carboxyhemoglobin may erroneously increase readings. The level of increase is approximately equal to the amount of carboxyhemoglobin present. Dyes, or any substance containing dyes, that change usual arterial pigmentation may cause erroneous readings.

Masimo sensor accuracy[10]

Sensor model	SpO_2 range 70% to 100%
LNOP	
LNOP ADT	±2 digits without motion
LNOP NEO	±3 digits without motion
LNOP NEO-L	Foot ±3 digits without motion Finger ±2 digits without motion
LNOP NEO PT-L	±3 digits without motion
LNOP Adtx	±2 digits without motion
LNOP Pdtx	±2 digits without motion
LNOP DCI	±2 digits without motion
LNOP DCIP	±2 digits without motion
LNOP Hi Fi-Neo/adult	Foot ±3 digits without motion Finger ±2 digits without motion
LNOP Hi Fi-Infant/Ped	±2 digits
LNOP Blue Infant	Thumb/Toe[11] ±3 digits (for 80-100) without motion ±4 digits (for 60-80) without motion ±3.3 digits (for 70-100) without motion
LNOP YI Multi-Site	Foot/hand ±3 digits without motion Finger/toe ±2 digits without motion
LNOP DC-195	±2 digits without motion
LNOP TC-I	±3.5 digits without motion
LNCS	
LNCS TCI	±3.5 digits without motion
LNCS DC-I	±2 digits without motion
LNCS DC-IP	±2 digits without motion
LNCS Adult Adtx	±2 digits without motion
LNCS Ped Pdtx	±2 digits without motion
LNCS Infant-L	±2 digits without motion
LNCS Neo PT-L	±3 digits without motion

(5) Masimo CSD-1201 (MS-2011 specifications cleared by the FDA).

(6) The Masimo SET SpO_2 parameter with LNOP-Adt sensors has been validated for no-motion accuracy in human blood studies on healthy adult volunteers in induced hypoxia studies in the range of 70-100% SpO_2 against a laboratory CO-oximeter and ECG monitor. This variation equals plus or minus one standard deviation. Plus or minus one standard deviation encompasses 68% of the population.

(7) The Masimo SET SpO_2 parameter with LNOP-Adt sensors has been validated for motion accuracy in human blood studies on healthy adult volunteers in induced hypoxia studies while performing rubbing and tapping motions at 2 to 4 Hz at an amplitude of 1 to 2 cm and a nonrepetitive motion between 1 to 5 HZ at an amplitude of 2 to 3 cm in induced hypoxia studies in the range of 70-100% SpO_2 against a laboratory CO-oximeter and ECG monitor. This variation equals plus or minus one standard deviation. Plus or minus one standard deviation encompasses 68% of the population.

(8) The Masimo SET SpO_2 parameter with LNOP-Neo Pt sensors has been validated for neonatal motion accuracy in human blood studies on neonates while moving the neonate's foot at 2 to 4 cm against a laboratory CO-oximeter and ECG monitor. This variation equals plus or minus one standard deviation. Plus or minus one standard deviation encompasses 68% of the population.

(9) The Masimo SET SpO_2 parameter has been validated for low-perfusion accuracy in bench-top testing against a Bio-Tek Index 2 simulator and Masimo's simulator with signal strengths of greater than 0.02% and a % transmission of greater than 5% for saturations ranging from 70 to 100%. This variation equals plus or minus one standard deviation. Plus or minus one standard deviation encompasses 68% of the population.

(10) Masimo CSD-1109 (sensor specification)

(11) Masimo SET Technology with LNOP Blue sensors have been validated for no-motion accuracy in human blood studies on neonatal, infant and pediatric patients with congenital, cyanotic cardiac lesions in the range of 60% to 100% SpO_2 against a laboratory CO-oximeter. This variation equals plus or minus one standard deviation, which encompasses 68% of the population.

Performance specifications *(continued)*

Resolution

Saturation (% SpO_2)	1%
Pulse rate (bpm)	1

Sensor light source

Wavelength[12]	Infrared: 905 nm (nominal) Red: 660 nm (nominal)
Power dissipation	Infrared: 22.5 mW (max) Red: 27.5 mW (max)

Nellcor OxiMax specifications[13]

Measurement range

SpO_2	1 to 100%
Pulse rate	20 to 250 bpm
Perfusion range	0.03 to 20%

Accuracy

Saturation

Adult[14]	70 to 100% ±2 digits
Neonate[14]	70 to 100% ±3 digits
Low perfusion[15]	70 to 100% ±2 digits

Pulse rate

Adult and neonate	20 to 250 bpm ±3 digits
Low perfusion[15]	20 to 250 bpm ±3 digits

OxiMax sensor accuracy[16]

Sensor model	SpO_2 range 70 to 100%

Note: All Nellcor OxiMax sensors must be used with the Nellcor cable; the SCP-10 cable. RS-10 and Oxisensor™ II sensors are not compatible with the CARESCAPE V100 monitor.

OxiMax

MAX-A, MAX-AL	±2 digits
MAX-N (adult)	±2 digits
MAX-N[17] (neonate)	±3 digits
MAX-P	±2 digits
MAX-I	±2 digits
MAX-FAST	±2 digits
SC-A (adult)	±2 digits
SC-PR (neonate)	±3 digits
SC-NEO	±3 digits
MAX-R[18]	±3.5 digits

OxiCliq™

OxiCliq A	±2.5 digits
OxiCliq P	±2.5 digits
OxiCliq N (adult)	±2.5 digits
OxiCliq N[17] (neonate)	±3.5 digits
OxiCliq I	±2.5 digits

Reusable sensor models

D-YS (infant to adult)	±3 digits
D-YS (neonate)	±4 digits
D-YS & D-YSE	±3.5 digits
D-YS & D-YSPD	±3.5 digits
DS-100A	±3 digits
OXI-A/N (adult)	±3 digits
OXI-A/N (neonate)	±4 digits
OXI-P/I	±3 digits

Sensor light source

Wavelength[19]	Infrared: 890 nm (nominal) Red: 660 nm (nominal)
Power dissipation	Infrared: 22.5mW (max) Red: 30 mW (max)

Note: Neonatal Sensor Accuracy: When sensors are used on neonatal subjects as recommended, the specified accuracy range is increased by ±1 digit, as compared to adult usage, to account for the theoretical effect on oximeter measurements of fetal hemoglobin in neonatal blood. For example, MAX-N accuracy on neonates is ±3 digits, rather than ±2 digits.

(12) Information about wavelength range can be especially useful to clinicians.

(13) Nellcor N600x Operator's Manual

(14) Adult specifications are shown for OxiMax® MAX-A and MAX-N sensors with the N-600. Saturation accuracy will vary by sensor type. This variation equals plus or minus one standard deviation. Plus or minus one standard deviation encompasses 68% of the population. Accuracy is based on deep hypoxia studies on healthy adult volunteer subjects. Arterial blood samples were analyzed simultaneously on multiple CO-oximeters.

(15) Applicability: OxiMax MAX-A, MAX-AL, MAX-P, MAX-I, and MAX-N sensors.

(16) Nellcor oxygen saturation accuracy specification grid (DOC0318495)

(17) The MAX-N, D-YS, OXI-A/N, and OxiCliq N were tested on patients >40 kg.

(18) The accuracy specification has been determined between saturations of

Performance specifications *(continued)*

NIBP specifications

Cuff pressure range	0 to 290 mmHg (adult/ped) 0 to 145 mmHg (neonate) (Normal operating range)

Blood pressure accuracy

DINAMAP SuperSTAT NIBP algorithm	Mean error ≤5 mmHg,
NIBP algorithm	Standard deviation ≤8 mmHg (Meets ANSI/AAMI Standard SP10:1992)
Classic and auscultatory	Mean error ≤5 mmHg, standard deviation ≤8 mmHg (Meets ANSI/AAMI Standard SP10:2002)
Maximum determination time	120 s (adult/ped) 85 s (neonate)
Overpressure cutoff	300 to 330 mmHg (adult/ped) 150 to 165 mmHg (neonate)

Blood pressure range

DINAMAP SuperSTAT NIBP algorithm	
Systolic	30 to 290 mmHg (adult/ped) 30 to 140 mmHg (neonate)
MAP	20 to 260 mmHg (adult/ped) 20 to 125 mmHg (neonate)
Diastolic	10 to 220 mmHg (adult/ped) 10 to 110 mmHg (neonate)
Classic and auscultatory	
Systolic	30 to 245 mmHg (adult/ped) 40 to 140 mmHg (neonate)
MAP	15 to 215 mmHg (adult/ped) 30 to 115 mmHg (neonate)
Diastolic	10 to 195 mmHg (adult/ped) 20 to 100 mmHg (neonate)

Pulse rate range

SuperSTAT	30 to 240 beats/min (adult/ped)
NIBP algorithm	30 to 240 beats/min (neonate)
Classic and auscultatory	30 to 200 beats/min (adult/ped) 30 to 220 beats/min (neonate)
Pulse rate accuracy	±3.5% or 3 bpm, whichever is greater

Note: To ensure accurate measurements, use only recommended blood pressure cuffs available from GE.

Exergen Temporal*Scanner* specifications

Accuracy	±0.1°C or 0.2°F
Temperature range	61° to 110°F (16° to 43°C)
Operating environment	60° to 104°F (16° to 40°C) (ambient)
Arterial heat balance range for body temperature[20]	94° to 110°F (34.5° to 43°C)
Resolution	0.1°F or 0.1 °C
Response time	0.04 seconds (approx.)

Alaris Turbo Temp specifications

Accuracy[21]	0.2°F or ±0.1°C

Temperature range

Predictive mode	96° to 106°F (35.6° to 41.1°C)
Monitor mode	80° to 107.9°F (26.7° to 42.1°C)
Response time	As fast as 7 seconds

Alaris Tri-Site specifications

Accuracy[21]	0.2°F or ±0.1°C

Temperature range

Predictive mode	95° to 106°F (35° to 41.1°C)
Monitor mode	80° to 107.9°F (26.7° to 42.1°C)
Response time	As fast as 11 seconds

Note: To ensure accurate measurements, use only recommended blood pressure cuffs available from GE.

(20) Automatically applied when temperature is within normal body temperature range, otherwise reads surface temperature.

(21) When tested in a calibrated liquid bath; meets ASTM E1112, Table 1, in range specified. Accuracy measured in continuous (monitor) mode.

Power specifications

AC input voltage	100 to 250VAC, 12VA
DC output voltage	12VDC at 1A
	The AC mains power adapter contains a non-resettable and non-replaceable fuse
Protection against electrical shock	Internally powered or Class II when powered from specified external power supply
DC input voltage	12 VDC, supplied from a source conforming to IEC 60601-1
Fuses	Monitor contains three fuses, mounted within. The fuses protect the low voltage DC input, the battery, and the remote alarm output. The +5 V output on the host port connector is regulated by internal supply

Battery

Type	Sealed lead acid, 6V, 3.3 Ahr
Battery life	5 hours with NIBP every 5 minutes and SpO_2, temperature and printer active 11.5 hours non-SpO_2 versions with a usage scenario of: NIBP determinations every 15 minutes without temperature active
Charge time	Approximately 5 hours from full discharge when the monitor is off.
	Approximately 8 hours when the monitor is on

Environmental specifications

Operating conditions

Temperature	41° to 104°F (5° to 40°C)
Atmospheric pressure	500 hPa to 1060 hPa

Storage conditions

Storage temperature	-4° to 122°F (-20° to 50°C)
Humidity range	5% to 95% noncondensing
Radio frequency	Complies with IEC 60601-1-2. Medical Electrical Equipment, Electromagnetic Compatibility Requirements and Tests and CISPR 11 (Class B, Group 1) for radiated
	and conducted emissions

Physical specifications

Dimensions (H x W x D)	19.5 x 21.9 x 13.5 cm (7.7 x 8.6 x 5.3 in)
	19.5 x 25.4 x 13.5 cm (7.7 x 10 x 5.3 in) with Alaris temperature option
Weight	2.4 kg (5.4 lbs) including battery
Mountings	Self-supporting on rubber feet, pole mounted;[22] or wall mount bracket

DINAMAP *Mobility* Workstation roll stand (optional)

Height to mounting platform	101 cm (40 in) from floor to lowest position 144 cm (45 in) from floor to highest position
Base Diameter	53.3 cm (21 in) 5-7.1 cm (2.8 in) casters – 3 locking
Accessories (H x W x D)	
Accessory bin	10.2 x 33.3 x 22.4 cm (4.0 x 13.1 x 8.8 in)
Surface tray	3.0 x 30.0 x 5.5 cm (1.2 x 11.8 x 2.2 in)
Rear canister bin	10.7 x 13.5 x 13.0 cm (4.2 x 5.3 x 5.1 in)
Weight	8.0 kg (17.5 lbs)

Warranty

Two year standard warranty.

Certifications

UL 60601-1, CAN/CSA C22.2 No. 601.1, IEC 60601-1, IEC 60601-1-2, IEC 60601-1-4, IEC 60601-1-8, IEC 60601-2-30, IEC 60601-2-49, EN 1060-1, EN 1060-3, ISO 9919 CE marked to the Medical Devices Directive - 93/42/EEC

(22) Pole mount option not available on the DINAMAP *Mobility* Workstation roll stand.

About GE Healthcare

GE Healthcare provides transformational medical technologies and services to meet the demand for increased access, enhanced quality and more affordable healthcare around the world. GE (NYSE: GE) works on things that matter – great people and technologies taking on tough challenges. From medical imaging, software & IT, patient monitoring and diagnostics to drug discovery, biopharmaceutical manufacturing technologies and performance improvement solutions, GE Healthcare helps medical professionals deliver great healthcare to their patients.

GE Healthcare
8200 West Tower Avenue
Milwaukee, WI 53223
U.S.A.

GE Healthcare 3/F Building # 1,
GE Technology Park
1 Huatuo Road, Zhangjiang
Shanghai, China 201203
Asia

GE Healthcare Finland Oy
Kuortaneenkatu 2
00510 Helsinki, Finland
Europe

imagination at work

DOC0385787 REV5 6/13