



## Technical Specifications

### General

**Weight:** 11.7 lbs. (5.3 kg) - 10.6 lbs. (4.8 kg) without battery and paper

**Dimensions:** 8.9" x 10.4" x 7.9" (22.6 cm x 26.4 cm x 20.1 cm) – With soft handle 8.9" x 8.75" x 7.9" (22.6 cm x 22.2 cm x 20.1 cm)

### Environmental

**Enclosure Protection:** IEC 60529

- Solid Foreign Object: IP5X
- Water: IEC 60529, IPX5

**Operating Temperature:**

- 0°F to 122°F (0°C to 50°C)
- -4°F to 140°F (-20°C to 60°C) \*

**Operating Relative Humidity:** 15 to 95% RH (non-condensing)

**Operating Altitude:** -557 ft to 15,000 ft (-170 m to 4,572 m)

**Transport/Storage Temperature:**

- -22°F to 158°F (-30°C to 70°C)\*

**Airworthy/Safe-to-fly:**

**Vibration:**

- MIL STD 810G, Method 516-6, 26 drops
- EN ISO 9919 (per IEC 60068-2-64)
- RTCA/DO-160G (multiple helicopter frequencies)
- EN 1789 for ambulance # (multiple helicopter frequencies)

**Shock:** IEC 60068-2-27, 100g, 6 ms half sine

**Bump:** IEC 60068-2-29

**Drop:**

- MIL STD 810G, Method 516-6, 26 drops at 3 ft (1 m)
- EN 1789, 30-inch (76 cm) functional drop
- IEC 60601-1, tested at 6 ft (2 m)

### Monitor/Display

**Size:** 6.5" (16.56 cm) diagonal

**Input:** 3-lead, 5-lead, or 12-lead patient cable, paddles (authorised ZOLL electrodes via multifunction cable)

**Type:** Colour LCD, 640 x 480 pixels, 800 MCD

**Sweep Speed:** 25 mm/sec or 50 mm/sec (user selectable)

**Lead Selections:** Paddles (Pads), I, II, III, AVR, AVL, AVF, V1-6

**Night vision mode (NVG)**

**Frequency Response:**

0.525 to 150Hz Diagnostic response

### Patient Modes

**User Selectable:** Adult, Paediatric, Neonate.

Automatically sets configurable defaults for alarm limits, defibrillation energy, and NIBP settings

### Memory Capacity

24 hours of trends at 1-m intervals, 1000 time-stamped events, and 32 snapshots

### Trends (on-screen)

Tabular numeric format. All parameters

**Trend Intervals:** 1, 5, 10, 15, 30, 60 minutes (Tabular)

### Defibrillator

**Waveform:** Rectilinear Biphasic™

**Energy Selections:** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 20, 30, 50, 70, 85, 100, 120, 150, 200 joules

**Energy Display:** Selected and delivered energy

**Charge Time:** < 7 s. Shock/No Shock decision pre-charge in 4 to 5 seconds

**Charge Controls:** Front panel and on apex paddle

**Pads/Paddles:** Hands-free pads

Compatible with ZOLL internal/external adult and paediatric paddles (8000-1010-01)

**Synchronised Mode:** "SYNC" message displayed and markers shown on monitor/recorded ECG.

**Defibrillation Modes:** RapidShock™ mode; manual defibrillation; Built-In tester:

### Pacer

**Type:** External transcutaneous pacing

**Pulse Types:** Rectilinear, constant current

**Pulse Width:** 40 ms ± 2 ms

**Pacer Rate:** 30 – 180 bpm ± 1.5%

**Output Current:** 0 – 140 mA ± 5% or 5 mA, whichever is greater

**Modes:** Demand and Fixed

### Real-Time CPR Feedback Technology

**See-Thru CPR®:** Filters out compression artefact.

**Real CPR Help®:** Real-time depth and rate feedback.

**CPR Dashboard™:** Numeric readout depth and rate, release indicator, perfusion performance indicator (PPI)

**RapidShock™:** Minimises CPR pauses

### ECG

**Cable Detection:** Automatic 3-, 5-, 12-lead ECG

**Cable Compatibility:** Propaq Encore, Propaq CS

**Input:** 3-lead cable, 5-lead cable, 12-lead cable, paddles, therapy cable

**Leads:** I, II, III, AVR, AVL, AVF, V1 – V6

**Heart Rate Range:** 30 – 300 bpm

**Heart Rate Accuracy:** ± 3 bpm or 3%, whichever is greater

**Pacer Detection and Display:** EMI suppression ESU and defib protected

**ECG Sizes:** 0.125, 0.25, 0.5, 1, 2, 4 cm/mV, and auto-ranging

**Sweep Speed:** 25 mm/sec, 50 mm/sec

**Common Mode Rejection:** AAMI EC13-2002 sect. 4.2.9.20

### Impedance Pneumography

**Displayed Data:** Numeric breath rate, Impedance waveform

**Breath Rate Range:**

Adult, Paediatric: 2 (3) to 150 breaths/minute (Neonates)

**Breath Rate Accuracy:** 2% or ± 2, whichever is greater

**Displayed Breath Rate:** Average of last 10 breath-to-breath rates

**User Selectable Leads:** Lead I (RA – LA), Lead II (RA – LL)

**Sweep Speed:** 3.13, 6.25, 12.5 mm/sec

**Alarm Settings:** High, low, and no breath rate alarm

### Non-Invasive Blood Pressure (NIBP)

Smartcuf® and Sure BP® NIBP technology

**Measurement Intervals:** Automatic 1-, 2-, 3-, 5-, 10-, 15-, 30-, 60-minute, and manual

**TurboCuf:** 5 min of repeated NIBP readings

**Display:** Systolic, diastolic, mean.

**Cuff Overpressure Protection**

**Typical Measurement Time:**

- 30 – 45 sec (on deflation)

- 15 – 30 sec – Sure BP (on inflation)

**Standard Cuff Sizes:**

Adult Mode: adult, large adult, small adult, child, thigh

Paediatric Mode: Child, small child, small adult, infant, newborn

Neonate Mode: Neonate #1 to #5 – disposable, newborn #6, infant #7 – reusable

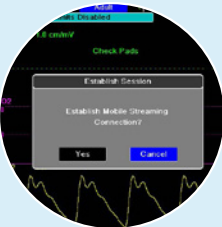
## Propaq MD

### Smallest, lightest and most advanced compact monitor/defibrillator

- Integration into the BATDOK™ (Battlefield Assisted Trauma Distributed Observation Kit) point-of-injury software tool.
- Only military airworthy/safe-to-fly integrated and compact critical care monitor/defibrillator to offer three invasive pressure channels. Necessary to monitor critical patients during long transports
- Smallest and lightest integrated and compact critical monitor/defibrillator that meets an unprecedented number of military and airworthiness standards
- First transport monitor/defibrillator to offer multiple display modes to operate in bright sunlight or during night missions (NVG-friendly display)



Telemedicine capabilities enable continuous transmission of patient vital signs and waveforms to remote locations



Robust communications options: Integrated Wi-Fi, Bluetooth® with USB cellular modem and Ethernet capabilities

TBI Dashboard™ providing clinical decision support for managing TBI patients



Continuously updated data provides trending information of all relevant vital signs (SBP, SpO<sub>2</sub>, etCO<sub>2</sub>) at a glance. The breath-by-breath countdown timer helps to maintain proper ventilation rates.

## ZOLL Medical Corporation Worldwide Headquarters

269 Mill Road  
Chelmsford, MA 01824  
978-421-9655  
800-804-4356

For subsidiary addresses and fax numbers, as well as other global locations, please go to [zoll.com/contacts](#).

### Default Cuff Inflation Pressure:

- Adults: 160 mmHg
- Paediatrics: 120 mmHg
- Neonates: 90 mmHg

### Pressure Measurement Range:

- Systolic: 20 – 260 mmHg
- Diastolic: 10 – 220 mmHg
- Mean: 13 – 230 mmHg

### Maximum Cuff Inflation Pressure:

- Adults: 270 mmHg
- Paediatrics: 170 mmHg
- Neonates: 130 mmHg

### Masimo® SET SpO<sub>2</sub>

Saturation Range: 0 – 100%

Saturation Accuracy: (% SpO<sub>2</sub>)-no motion 60 - 80 ± 3%, Adults/Paediatrics/Infants 70 - 100 ± 2%, Adults/Paediatrics/Infants; ± 3%, Neonates (% SpO<sub>2</sub>)

### Motion Conditions 70-100%

± 3% Adults/ Paediatrics/Infants/ Neonates SpO<sub>2</sub> - Low Perfusion Conditions - 70-100 ± 2%, Adults/ Paediatrics/Infants/Neonates

Pulse Rate Range: Pulse Rate (bpm) 25-240 - No Motion Conditions 25-240 ± 3 bpm Adults/Paediatrics/Infants/ Neonates Pulse Rate (bpm) - Motion Conditions - 25 - 240 ± 5 Adults/ Paediatrics/Infants/ Neonates Pulse Rate (bpm) - Low Perfusion Conditions 25 - 240 ± 3 Adults/Paediatrics/Infants/ Neonates

### SpO<sub>2</sub> AVERAGE time setting:

4, 8 (default), 16s

### Masimo rainbow® SET SpCO®

Range: 0 – 99%

Accuracy: 1 – 40% ± 3 digits

### Masimo rainbow® SET SpMet®

Range: 0 – 99%

Accuracy: 1 – 15% ± 1 digits

### Masimo rainbow® SET SpHb®

Measurement Range: 0 – 25 g/dl

Accuracy (Adults/Infants/Paediatrics): 8 – 17 g/dl +/- 1 g/dl

Resolution (SpHb g/dl): 0.1 g/dl

### Masimo rainbow® SET SpOC™

Measurement Range: 0 – 35 ml of O<sub>2</sub>/dl of blood

Resolution: 0.1 ml/dl

### Masimo Perfusion Index (PI)

Measurement Range: 0.02 – 20%

Resolution: 0.1%

### Masimo Pleth Variability Index (PVI®)

Measurement Range: 0 – 100%

Resolution: 1%

### Microstream® etCO<sub>2</sub>

Range: 0 – 150 mmHg

Accuracy: 0 – 38: ± 2 mmHg

39 – 150: ± 5% + .08% mmHg >38

Respiration Range: 0 – 149 breaths per minute

Respiration Rate Accuracy:

0 – 70 bpm ± 1 bpm

71 – 120 bpm ± 2 bpm

121 – 149 bpm ± 3 bpm

Flow rate: 50 ml/min -7.5 + 15 ml/min

Typical response time: 2.9 seconds

Maximum response time: 3.9 seconds

### TBI Dashboard

Trends for SpO<sub>2</sub>, Systolic BP, EtCO<sub>2</sub>,

Breath-by-Breath Countdown Timer

Systolic BP: last 15 min - on demand.

EtCO<sub>2</sub>: last 3 min - updates every 1s.

SPO<sub>2</sub>: last 3 min - updates every 1s.

### Temperature

Two YSI 400/700 series-compatible channels

Range: 0°C – 50°C (32°F – 122°F)

Units: °C or °F

Display: T1, T2, and Delta temp

Accuracy: ± 0.1°C from 10 – 50°C ± 0.2°C from 0 – 10°C

### Invasive Pressure

Three Channels

Pressure Range: -30 – 300 mmHg

Pulse Rate Measurement Range: 25 – 250 bpm

Formats: S/D, S/D (M), (M) user selectable  
User-Selectable Labels: P1, P2, P3, ABP, AO, ART, CVP, BAP, FAP, LAP, PAP, RAP, UAP, UVP, ICP

Transducer Requirements: 5M µV/V/ mmHg

Zero Adjustment: ± 200 mmHg

Numeric Pressure Accuracy: ± 2 mmHg or 2% reading

Transducer Connector: Standard 6-pin MS connector

### Printer

Type: High-resolution thermal array

Annotation: Time, date, ECG lead, ECG gain, heart rate, defibrillation, and pacing parameters and treatment summary events

Paper Width: 80 mm

Paper Speed: 25 mm/sec, 50 mm/sec

Delay: 6 seconds

Frequency Response: Automatically set to monitor's frequency response

Record Modes: Manual and automatic (user configurable)

Print Option: up to 3 waveform (alarm, snapshots, treatment summary/trend summary)

### Communication Options

Wireless Output

Wi-Fi 802.11 a/b/g/n

Bluetooth

USB port

Ethernet

### Power

Battery Type: Rechargeable lithium-ion, 11.1 V DC, 6.6 Ah, 73 Wh

Operating Time: With a new, fully charged battery operating at room temperature:

- 7h of continuous monitoring of 3/5 lead ECG - 70% Display Brightness.
- 6h of continuous monitoring of ECG, SpO<sub>2</sub>, CO<sub>2</sub>, 3 IP channels, and 2 channels of Temp, NIBP every 15 min, 10 (200 J) shocks (display set to 30%).
- 3.5h pacing, ECG, SPO<sub>2</sub>, CO<sub>2</sub>, 3 IP, 2 channels of Temp, NIBP every 15 min, pacing 180 ppm-140 mA (display set to 30%).
- 3h of AED (Rescue Protocol) monitoring ECG, SpO<sub>2</sub>, CO<sub>2</sub>, 2 channels of Temp, NIBP every 15 min, 2-min CPR intervals, 200 J shock after every CPR interval (display set to 70%).
- At least 2 hours while pacing at 180ppm and 140mA, with continuous monitoring of ECG, SpO<sub>2</sub>, CO<sub>2</sub>, and NIBP measurements every 15 minutes, followed by at least 35 2-minute CPR intervals, with discharges at maximum shock setting (200 J) after every CPR interval (display set to 70%).
- 300 discharges at max shock energy (200 J) no parameters and 70% brightness.
- 10 discharges at max shock energy (200 J) after a Low Battery indication.

AC Power Adapter: 100 – 240 V AC 50, 60 Hz, 2A 100 – 115 V AC 400Hz, 2A

### Telemedicine Capabilities

Streaming of vital sign data over Wi-Fi or Cellular.

\* for 1 hour after the device has been resting at room temperature

Specifications subject to change without notice.

TBI Dashboard functionality not available in the United States, pending FDA approval.

© 2021 ZOLL Medical Corporation. All rights reserved. CPR Dashboard, Rectilinear Biphasic, Real CPR Help, RescueNet, See-Thru CPR, X Series, and ZOLL are trademarks or registered trademarks of ZOLL Medical Corporation in the United States and/or other countries. Smartcut, and Sure BP are registered trademarks of Welch Allyn. Masimo, Rainbow, SET, SpCO, SpHb, SpMet, and SpOC are trademarks or registered trademarks of Masimo Corporation. Microstream is a registered trademark of Oridion Medical 1987 Ltd. All other trademarks are the property of their respective owners.

Printed in the U.S.A. MCN MP 1904 0237-05

# ZOLL®