

Propaq[®] MD

All the Advantages of a Propaq Monitor with a Defibrillator



The Propaq[®] MD was specifically designed to meet the needs of the military and air medical operations when treating critical patients in the field. It combines the well-accepted and proven monitoring capabilities of the Propaq monitor with the clinically superior therapeutic capabilities of ZOLL defibrillation and non-invasive pacing technologies—at half the size of other monitor/defibrillators.

ZOLL[®]



Propaq MD Smallest, Lightest, Most Advanced Monitor/ Defibrillator Available

- Robust communications options: integrated Wi-Fi, Bluetooth® with USB cellular modem, and Ethernet capabilities.
- 60% smaller and 40% lighter than other similar monitor/defibrillators.
- First critical care monitor/ defibrillator to receive the IP55 ingress protection rating because of its ability to resist jets of water and dust.
- Meets an unprecedented number of military and airworthiness standards.
- Only airworthy monitor/ defibrillator to offer three invasive pressure channels, necessary to monitor critical patients during long transports.
- Utilizes ZOLL's SurePower™ II battery technology. A single battery provides 6 hours of monitoring of all physiological parameters: 12-lead ECG, NIBP, EtCO₂, SpO₂, three invasive pressures, two temperature channels, and 10 200-joule shocks.
- First transport monitor/ defibrillator to offer multiple display modes to operate in bright sunlight or during night missions (NVG-friendly display).
- Available with Masimo rainbow® SET SpO₂, SpCO, SpMet, SpHb, SpOC, PI, and PVI.

ADVANCING RESUSCITATION. TODAY.®

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Propaq MD Specifications

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: Monitor display indicates both selected and delivered energy.

Charge Time: < 7 seconds to 200 J, typical
Charge Controls: Control on apex paddle and on device front panel.

Paddles: External anterior/anterior adult and pediatric. Adult paddles slide off to expose pediatric paddles.

Compatible with ZOLL external paddles (8000-1010-01), ZOLL internal paddles, and the Propaq MD multi-function therapy cable.

Synchronized Mode: Synchronizes defibrillator pulse to patient's R-wave. "SYNC" message displayed on monitor. Marker on display and on recorder paper identifies R-wave discharge point.

Built-In Defibrillator Tester: Tests defibrillator energy output and continuity of universal cable and paddles.

Modes: AED function with manual override, manual defibrillation.

CPR Feedback Technology

See-Thru CPR®: Artifact filtering

Real CPR Help®: Real-time depth and rate feedback
CPR Dashboard™: Numeric readout of depth and rate, release indicator, perfusion performance indicator (PPI)

External 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

Modes: Demand and Fixed

Display

Type: Bright, Color, LCD TFT

Brightness: User adjustable

Resolution: 640 x 480 pixels

Waveform Traces: Up to 4 waveforms

Display Modes: Standard, High Contrast, NVG (night vision goggles) Friendly

Waveform Display Width: 11.5 cm

ECG:

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

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

Cable Compatibility: Propaq Encore, Propaq CS

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

Bandwidth: (User Selectable)

0.67 – 20 Hz Limited mode

0.67 – 40 Hz Monitor mode

0.25 – 40 Hz Filtered Diagnostic mode

0.05 to 150 Hz Diagnostic mode

Heart Rate Range: 30 – 300 BPM

Heart Rate Accuracy: ± 3 BPM or 3%

Pacer detection and display

Electrosurgery interference suppression

ESU and defibrillation 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: Complies with AAMI EC13-2002 section 4.2.9.10.

Patient Modes:

User Selectable: Adult, Pediatric, Neonate.

Sets defaults for alarms, defibrillation energy, and NIBP settings.

Trends (on screen)

Tabular numeric format

All parameters trended/viewable

Trend Intervals: 1, 5, 10, 15, 30, 60 minutes

Duration: 24 hours at 1-minute intervals

Snapshots: Minimum of 32 display data captures (12 seconds of pre- and post-button press)

Quick Access Trend Display via Display Button

Printer

Waveforms Printed: 1, 2, or 3

Print Speeds: 25 mm/sec or 50 mm/sec

Specifications subject to change without notice.

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Printed in the U.S.A. MCN MP 1508 0020

Print Modes: Manual or automatic (user configurable)

On/Off Control: Front panel or paddle

Paper Delay: 6 seconds

Frequency Response: Same as the monitor's settings

Paper Width: 80 mm

Masimo® rainbow® SET SpO₂

Saturation Range: 1 – 100%

Saturation Accuracy:

Oxygen saturation during no-motion conditions:

Adults, Pediatrics: 70 – 100%, ± 2 digits

0 – 69%, unspecified

Neonates: 70 – 100%, ± 3 digits

0 – 69%, unspecified

Oxygen saturation during motion conditions:

Adults, Pediatrics: 70 – 100%, ± 3 digits

0 – 69%, unspecified

Neonates: 70 – 100%, ± 3 digits

0 – 69%, unspecified

Oxygen saturation during low-perfusion conditions:

Adults, Pediatrics 70 – 100%, ± 2 digits

0 – 69%, unspecified

Neonates, 70 – 100%, ± 3 digits

0 – 69%, unspecified

Pulse Rate Range: 25 – 240 bpm

Pulse rate during no-motion conditions:

Adults, Pediatrics,

Neonates: 25 – 240 ± 3 digits

Pulse rate during motion conditions:

Adults, Pediatrics,

Neonates: 25 – 240 ± 5 digits

SpO₂ Average Time Setting:

4, 8 (default), 16 seconds

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/Pediatrics): 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 O₂/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%

Noninvasive Blood Pressure (NIBP)

Smartcuf® and SureBP® NIBP technology

Measurement Intervals: 1-, 2-, 3-, 5-, 10-, 15-, 30-,

and 60-minute, and manual

Quick Action NIBP Start/Stop button

TurboCuf: 5 min of repeated NIBP readings

Systolic, diastolic, mean display

On-screen manometer, with large numerics

Cuff overpressure protection

Typical Measurement Time:

30 – 45 secs (on deflation)

15 – 30 secs – SureBP (on inflation)

Standard Cuff Sizes: Neonate #1 – #5, Infant, Child,

Sm Adult, Adult Long, Lg Adult, Thigh

Default Cuff Inflation Pressure:

Adult: 160 mmHg

Pediatric: 120 mmHg

Neonatal: 90 mmHg

Pressure Measurement Range:

Systolic: 20 – 260 mmHg

Diastolic: 10 – 220 mmHg

Mean: 13 – 230 mmHg

Maximum Cuff Inflation Pressure:

Adult: 270 mmHg

Pediatric: 170 mmHg

Neonatal: 130 mmHg

Microstream® etCO₂

Range:

0 – 150 mmHg

Accuracy (mmHg):

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

ECG Impedance Respiration

User-Selectable Leads: RA-LA, RA-LL

Breath Rate Range:

Adult/Pediatric modes: 2 – 150 RPM

Neonate mode: 3 – 150 RPM

Respiration Rate Accuracy: ± 2

breaths/min or ± 2%

Sweep Speed: 3.13, 6.25, 12.5 mm/sec

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: 5 µV/V/mmHg

Zero Adjustment: ± 200 mmHg

Numeric Pressure Accuracy: ± 2 mmHg or 2% of

reading, plus transducer error

Transducer Connector: Standard 6 pin AAMI

Temperature

Two YSI 400/700 compatible channels

Range: 0° – 50° C,

Units: °C or °F

Display: T1, T2, and Delta temp

Accuracy: ± 0.1° C

Power

Rechargeable, user replaceable, lithium-ion battery

Operating Time: 6 hours (display

brightness at 30%, ECG, SpO₂, EtCO₂, IPx3,

Temp x2 and NIBP every 15 min, and 10 200-joule

shocks)

Battery:

Size: 182 mm x 95 mm x 31 mm

Weight: 1.36 lbs

Battery Indicators: 5 battery capacity LED

indicators, fault indicator, recalibration indicator

Recharge Rate: 4 hours to 100%

AC Power Adapter: 100-240 VAC 50, 60, 400 Hz

(@110V)

General

Weight: 10.6 lbs. without paper and battery

11.7 lbs. with paper and battery

Dimensions: 8.9" x 10.4" x 7.9"

With soft handle: 8.9" x 8.75" x 7.9"

Environmental

Operating Temperature: 0° – 50° C

Operating Relative Humidity: 15% – 95%, NC

Operating Altitude: Up to 15,000 ft

Transport/Storage Temperature: -30° – 70° C

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

Drop:

1 meter per MIL STD 810G, Method 516-6, 26

drops,

EN 1789 30-inch functional drop,

2 meter per IEC 60601-1

Vibration: MIL STD 810G, Method 514.6

4.4.2 Procedure II,

EN ISO 9919 per (IEC 60068-2.64)

EN 1789 for ambulance RTCA/DO-160G (multiple

helicopter frequencies)

Enclosure Protection: (IEC 60529)

Solid Foreign Object: IP5X

Water Ingress: IPX5

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