

Propaq[®] MD

All the Advantages of a Propaq Monitor with a Defibrillator



Propaq[®] MD was specifically designed to meet the needs of the military and air medical operations in 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

- 60% smaller and 40% lighter than other similar monitors/defibrillators.
- First critical care monitor/defibrillator to pass the IP55 ingress protection from 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™ battery technology to provide more than 6 hours of monitoring of all physiological parameters: 12-Lead ECG, NIBP, EtCO₂, SpO₂, three invasive pressures, and two temperature channels.
- First transport monitor/defibrillator to offer multiple display modes to operate in bright sunlight or during night missions (NVG friendly display).

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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 recorder paper identifies R-wave discharge point.
Built-In Defibrillator Tester: Tests defibrillator energy output and continuity of universal cable and paddles.

External Pacer

Type: External transcutaneous pacing
Pulse Types: Rectilinear, constant current
Pulse Width: 40 ms ± 2ms
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 goggle) friendly
Waveform Durations: 4.8, 9.5 seconds

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.



Specifications subject to change without notice.

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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
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: 50 mm

SpO₂ NELLCOR®

Compatible with NELLCOR sensors
Waveform and pulse amplitude meter
Saturation Range: 0 – 100%
Probe Accuracy:
70 – 100% ± 3%
0 – 70% unspecified
Pulse Rate Measurement Range:
20-250 BPM ± 3% or 3 BPM whichever is greater
Saturation update period:
Updated once per second

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

EtCO₂

Range:
0 – 150 mmHg
Accuracy (mmHg):
0 – 38: ± 2 mmHg
39 – 150: ± 5% + .08%/mmHg >38
Respiration Range: 0 – 150 breaths per minute
Respiration Rate Accuracy:
0 – 70 BPM: ±1 BPM
71 – 120 BPM: ±2 BPM
121 – 150 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
Operating Time: 6 hours (display brightness at 30%, ECG, SpO₂, EtCO₂, IPx3, Temp x2 and NIBP every 15 min)

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: 9.9 lbs without battery and paper
11.6 lbs with battery and paper
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,
-26 C to 60 C for 6 hours, per MIL STD 810G Method 501.5, Procedure III, and Method 502.5 Procedure II

Operating Relative Humidity: 15% - 95%, NC
Operating Altitude: Up to 15,000 ft

Transport/Storage Temperature: -30° – 70° C
Shock: 75G per MIL STD 810G

Drop:

1 meter per MIL STD 810G, 26 drops,
2 meter per IEC 60601-1

Vibration: MIL STD 810G

Enclosure Protection: (IEC 60529)

Solid Foreign Object: IP5X
Water Ingress: IPX5

