



The **Physio-Control Lifepak 15** defibrillator/monitor gives you more monitoring capabilities than any other defibrillator/monitor. The Lifepak 15 continuously monitors all 12-leads in the background and alerts the operator to any changes, gives EtCO₂ with continuous waveform capture, and features Masimo Rainbow technology to help detect hard-to-diagnose conditions with noninvasive monitoring of carbon monoxide, SpO₂, and methemoglobin. Using the CODE-STAT data review software, the Lifepak 15 allows the operator to transmit, trend, or display the recorded data for post-event review.

Features

- ADAPTIV Biphasic Technology Manual; AED External Defibrillation
- 8.4" Color LCD Screen
- CPR Metronome uses audible prompts to guide you without distracting vocal critique
- Noninvasive Pacing (Demand & Non-Demand)
- 12-Lead ECG capability
- 100mm Printer
- Lithium-ion dual battery system
- Handle that fits two gloved hands for easy passoff.



Specifications

Dimensions

- Height: 12.5 in (31.7 cm)
- Width: 15.8 in (40.1 cm)
- Depth: 9.1 in (23.1 cm)

Weight

- Basic monitor/defibrillator with new roll paper and two batteries installed: 17.5 lb (7.9 kg)
- Fully featured monitor/defibrillator with new roll paper and two batteries installed: 18.5 lb (8.4 kg)
- Lithium-ion battery: ≤ 0.6 kg (1.3lb)
- Accessory Bags and Shoulder Strap: 3.9 lb (1.77 kg)
- Standard (hard) Paddles: 2.1 lb (0.95 kg)

Display

- Height: 5 in (12.8 cm)
- Width: 6.7 in (17.1 cm)
- Diagonal: 8.4 in (21.2 cm)
- Resolution: 640 x 480 dot color backlit LCD
- User Selectable Display Mode: Full color or SunVue high-contrast
- Display: Minimum of 4 seconds of ECG and alphanumeric for values, device instructions, or prompts
- Display: up to 3 waveforms
- Waveform Display Sweep Speed: 25mm/sec for ECG, SpO2 IP and 12.5 mm/sec for CO2

Data Management

- Three format types of CODE SUMMARY critical event record (short, medium, and long)
- 12-Lead ECG with STEMI statements
- Continuous ECG (transfer only)
- Trend Summary
- Vital Sign Summary
- Snapshot
- Memory Capacity: 360 minutes of continuous ECG and 400 single waveform events.
- Maximum memory capacity for a single patient includes up to 200 single waveform reports and 90 minutes of continuous ECG

Communications

- Capable of transferring data records by wired or wireless connection
- Serial Port RS232 communication + 12V available
- Bluetooth technology provides short-range wireless communication with other Bluetooth-enabled devices

ECG

- 3-wire cable for 3-lead ECG
- 5-wire cable for 7-lead ECG monitoring
- 10-wire cable is used for 12-lead ECG acquisition
- Heart Rate Display: 20-300 bpm digital display
- Accuracy: $\pm 4\%$ or ± 3 bpm, whichever is greater
- QRS Detection Range Duration: 40 to 120 msec
- Amplitude: 0.5 to 5.0 mV
- Heart Symbol: flashes for each QRS detection

SpO2

- Sensor: MASIMO Sensors including Rainbow Sensors
- Displayed Saturation Range: 50 to 100%
- Saturation Accuracy: 70-100%
- Pulse Rate Range: 25 to 240 bpm

SpMet

- Sensor: Only Rainbow Sensors
- SpMet Saturation Rang : 0 to 15%
- SpMet Display Resolution: 0.1% up to 10%, then single digit resolution up to 15%
- SpMet Accuracy: ± 1 digits

SpCO

- Sensor: Only Rainbow Sensors
- SpCO Concentration Display Range: 0 to 40%
- SpCO Accuracy: ± 3 digits

NIBP

- Blood Pressure Systolic Pressure Range: 30 to 255 mmHg
- Diastolic Pressure Range: 15 to 220 mmHg
- Mean Arterial Pressure Range: 20 to 235 mmHg
- Units: mmHg

- Blood Pressure Accuracy: ± 5 mmHg
- Blood Pressure Measurement Time: 20 seconds
- Pulse Rate Range: 230 to 240 pulses per minute
- Pulse Rate Accuracy: ± 2 pulses per minute or $\pm 2\%$

CO2

- CO2 Range: 0 to 99 mmHg
- Units: mmHg, %, kPA
- Respiration Rate Accuracy: 0 to 70 bpm ± 1 bpm; 71 to 99 bpm ± 2 bpm
- Respiration Rate Range: 0 to 99 breaths/minute
- Rise Time: 190 msec
- Response Time: 3.3 seconds
- Initialization Time: 30 Seconds
- Ambient Pressure: Automatically compensated internally

Invasive Pressure

- Transducer Type: Strain-guage resistive bridge
- Transducer Sensitivity: $5\mu V/V/mmHg$
- Excitation Voltage: 5 VDC
- Connector: Electro Shield: CXS 3102A 14S-6S
- Bandwidth: Digital filtered, DC to 30 Hz (< -3 db)
- Zero Drift: 1 mmHg/hr without transducer drift
- Zero Adjustment: ± 150 mmHg including transducer offset
- Numeric Accuracy: ± 1 mmHg or 2% of reading
- Pressure Range: -30 to 300 mmHg, in six user selectable ranges

Invasive Pressure Display

- Display: IP waveform and numerics
- Units: mmHg
- Labels: P1 or P2, ART, PA, CVP, ICP, LAP (User selectable)

Trend

- Time Scale: Auto, 30 Minutes, 1,2,4,or 8 hours
- Duration: Up to 8 Hours



Specifications Continued

Interpretive Algorithm

- 12-Lead Interpretive Algorithm: University of Glasgow 12-Lead ECG Analysis Program, includes AMI and STEMI statements

Defibrillator

- Biphasic Waveform: Biphasic Tuncated Exponential
- Energy Accuracy: ± 1 joule or 10% of setting, whichever is greater, into 50 ohms ± 2 joules or 15% of setting, whichever is greater, into 25-175 ohms.
- Voltage Compensation: Active when disposable therapy electrodes are attached. Energy output within $\pm 5\%$ or ± 1 joule, whichever is greater, of 50 ohms value, limited to the available energy which results in the delivery of 360 joules into 50 ohms.
- Paddle Options: QUIK-COMBO pacing/defibrillation/ECG electrodes (standard). Cable Length 8 foot long (2.4 m) QUIK-COMBO cable (not including electrode assembly).
- Optional standard paddles

Manual Defibrillator Mode

- Energy Select: 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 20, 30, 50, 70, 100, 125, 150, 175, 200, 225, 250, 275, 300, 325, and 360 joules
- Charge Time: Charge time to 360 joules in less than 10 seconds
- Synchronous Cardioversion: Energy transfer begins within 60 msec of the QRS peak
- Paddles Lead Off Sensing: The transition point at which device changes from assuming that QUIK-COMBO electrodes are properly connected to patient to assuming that electrodes are not connected is 300 ± 50 ohms.

AED Defibrillator Mode

- Shock Advisory System (SAS): an ECG analysis system that advises the operator if the algorithm detects a shockable or nonshockable ECG rhythm. SAS acquires ECG via therapy electrodes only.

- Shock Ready Time: Using a fully charged battery at normal room temperature, the device is ready to shock within 20 seconds if the initial rhythm finding is "SHOCK ADVISED"
- Biphasic Output: Energy Shock levels ranging from 150–360 joules with same or greater energy level for each successive shock
- cprMAX™ Technology: In AED mode, cprMAX™ technology provides a method of maximizing the CPR time that a patient receives, with the overall goal of improving the rate of survival of patients treated with AEDs. continuous ECG and 400 single waveform events. Maximum memory capacity for a single patient includes up to 200 single waveform reports and 90 minutes of continuous ECG

Pacer

- Pacing Mode: Demand or non-demand rate and current defaults (user configurable)
- Pacing Rate: 40 to 170 PPM
- Rate Accuracy: $\pm 1.5\%$ over entire range
- Output Waveform: Monophasic, truncated exponential current pulse (20 +1.5 msec)
- Output Current: 0 to 200 mA
- Pause: Pacing pulse frequency reduced by a factor of 4 when activated
- Refractory Period: 200 to 300 msec $\pm 3\%$ (function of rate)

Power

- Dual battery: Capability with automatic switching
- Low battery indication and message: Low battery fuel gauge indication and low battery message in status area for each battery
- Replace battery indication and message: Replace battery fuel gauge indication, audio tones and replace battery message in the status area for each battery. When replace battery is indicated, device auto-switches to second battery. When both batteries reach replace battery condition, a

voice prompt instructs user to replace battery.

Battery

- Battery Type: Lithium-ion
- Weight: 1.3 lb (0.59 kg)
- Voltage: 11.1V typical
- Capacity (rated): 5.7 amp hours
- Charge Time (with fully depleted battery): 4.5 hours (typical)
- Battery indicators: Each battery has a fuel gauge that indicates its approximate charge. A fuel gauge that shows two or fewer LEDs after a charge cycle indicates that the battery should be replaced.
- Charging Temperature Range: 41° to 95°F (5° to 35°C)
- Operating Temperature Range: 32° to 122°F (0° to 50°C)
- Long Term (>1 day) Storage Temperature Range: 32° to 95°F (0° to 35°C)

