LIFEPAK® 15 MONITOR/DEFIBRILLATOR

Works like you work.™
Building on a Proud Legacy

The pioneer in portable defibrillation and monitoring technology, Physio-Control continues to define the standard for cardiac emergency care equipment.

Our LIFEPAK devices have been carried to the top of Mount Everest and launched into orbit on the International Space Station. More than half a million units are in use today on fire rescue rigs, ambulances and hospital crash carts worldwide. Since Physio-Control was founded in 1955, our products have helped save tens of thousands of lives and positively impacted countless more.

Even as we bring ground-breaking products to market, some things don’t change. As always, the LIFEPAK brand stands for a rugged, portable device that you can trust—every single day.

A LIFEPAK device never stands on its own. Our goal is to provide complete solutions for cardiac emergencies—from first responder through the hospital. Our products are systems. Everything works with you—whether it’s accessories, disposables, flexible energy dosing, or data solutions that help you capture patient data and learn from it to improve care.

When you buy a LIFEPAK monitor/defibrillator, you get a leading-edge monitor/defibrillator AND the company that stands behind it. With Physio-Control, you get:

- The pioneers of prehospital cardiac monitoring and defibrillating equipment.
- Innovators continually at the forefront of improving patient care—ADAPTIV™ biphasic technology up to 360J to give patients the best chance at survival; secure, web-based flow of ECG data to help improve STEMI patient outcomes; and carbon monoxide monitoring to catch the number-one cause of poisoning deaths.
- The most comprehensive warranty in the business.
- Industry-leading technical field service.
- A company that has been in business for more than five decades.

We’re inspired and informed by the rescuers who rush our products to life-threatening emergencies every day. Knowledge gained from working with the world’s largest medical providers keeps us innovating—raising the bar on durability and clinical standards.
The New Standard

Your monitor is measured by what it can do for you. You need a product with the latest clinical capabilities. One designed to provide the performance you need today and in the future, and one tough enough to ensure it continues to deliver in all conditions you encounter when delivering emergency care.

Physio-Control defibrillators have set the standard for over 50 years, and the 15 raises the bar. Leading the way with new clinical and operational innovations, and surrounded with legendary 360 degree ruggedness that defines LIFEPAK TOUGH."
The New Standard...

...in Clinical Innovation

- **New monitoring parameters** — Detect hard-to-diagnose conditions and improve patient care with Masimo® Rainbow® Technology. The 15 is the first monitor integrating noninvasive monitoring for carbon monoxide, SpO₂ and methemoglobin (to detect chemical exposures and certain drugs).

- **Advanced support for treating STEMI patients** — Easily acquire a pre-medication 12-lead ECG and then rely on the 15 to continuously monitor all 12 leads in the background and alert you to changes via our ST-Segment Trending feature. Using your 15 in conjunction with the Web-based LIFENET STEMI Management Solution lets you automatically and simultaneously share critical patient data with multiple patient care teams throughout a region.

- **Most potent escalating energy available** — ADAPTIV™ biphasic technology provides the option to escalate to 360J for best results. Recent studies have shown that refibrillation is common among VF cardiac arrest patients and that defibrillation of recurring episodes of VF is increasingly difficult.1,2,3 Another recent randomized controlled clinical trial shows the rate of VF termination was higher with an escalating higher energy regimen of 200J and over.1 The 15 gives you the option to escalate your energy dosing up to 360J for difficult-to-defibrillate patients.

- **Proven CPR guidance** — Demonstrated to aid users in performing compressions and ventilations within the recommended range of the AHA Guidelines,4 the CPR Metronome uses audible prompts to guide you without distracting vocal critique. And get the post-event feedback you need to improve CPR performance with CODE-STAT™ Data Review Software with Advanced CPR Analytics.
...in Operational Innovation

- **Dual-mode LCD screen with SunVue™ display**—With one touch, switch from full-color to high-contrast SunVue mode for the best sunlight viewability in the industry. A large screen (8.4 inches diagonally) and full-color display provide maximum viewability from all angles.

- **Upgradable platform**—Our products are built as platforms—flexible to adapt to evolving protocols and new guidelines and upgradeable when you are ready to deliver new therapies. With more processing power and speed, the 15 is designed to grow as your needs change, helping you avoid costly premature replacements. This flexibility means the 15 is ready for the anticipated changes coming from the 2010 Guidelines.

- **Latest Lithium-ion battery technology**—Battery power that beats or matches every competitor in the market. The smart technology included in this battery system helps you manage your battery inventory appropriately letting you know when battery life is coming to an end.

- **Data connectivity**—As you treat patients, collect monitoring data in your LIFEPAK monitor/defibrillator. Then easily connect to ePCR and other systems so information flows to where it’s needed. Bluetooth® has been simplified so you just touch a button to transmit data.

- **Attention to detail**—We didn’t overlook a thing. Finishing touches on this next-generation monitor/defibrillator include an ergonomic handle, larger SPEED DIAL for easy selection, and updated, easy-to-clean keypad.

...LIFEPAK TOUGH

- **Works when dropped, kicked, soaked, dirty**—Just like you. The LIFEPAK 15 monitor/defibrillator passes 30-inch drop tests—equal to falling off a patient litter or dropping it in transit. IP44 rating means it keeps working in steady wind, rain and other harsh environments.

- **Toughened inside and out**—We listened to your feedback and added a shock-absorbing handle, a double-layer screen that can take a beating in the harshest environments, and redesigned cable connections for confident monitoring and therapy delivery.

- **Unmatched field service**—Our one-of-a-kind service team* operates 24/7 in North America. The unit’s self-checking feature alerts the service team if the device needs attention—so you know it’s ready when you need it.

* A variety of customized service options are available.
LIFEPAK 15 Monitor/Defibrillator
The New Standard in Emergency Care

1. The only monitor/defibrillator on the market with Carbon Monoxide and Methemoglobin monitoring integrated into the device.

2. ST-Trend Tracking and 12-lead ECG transmissions via the LIFENET STEMI Management Solution makes the 15 a vital part of decreasing EMS-to-Balloon (E2B) response times.

3. CPR Metronome is a proven technology that actively guides users to a consistent compression rate without the need for extra external hardware.

4. Latest Lithium-ion battery technology allows for nearly six hour run time and an approximate two-year replacement cycle.

5. Redesigned cable connector gives you the confidence for secure therapy delivery.

6. Ergonomically designed handle has built-in shock absorbers for cushion and fits two gloved hands for easy pass off.

7. With one touch, switch from LCD color view to SunVue mode for best viewing in sunlight available.
With nearly 100,000 LIFEPAK 12 devices in the field worldwide, we had an incredible natural laboratory to work with in designing the LIFEPAK 15 monitor/defibrillator.
Working WITH you
Five decades of working with medical providers around the world gives us the experience to offer innovative solutions that work—whether in clinical settings or challenging, dynamic field operations.

Continuum of care
From the field to evacuation to the hospital, we offer a full suite of effective, reliable solutions, no matter what you need, where you need it.

Our product line ranges from AEDs for minimally trained responders (LIFEPAK® 1000 defibrillator and LIFEPAK CR® PLUS AED) to sophisticated devices for ALS (LIFEPAK 12 and LIFEPAK 15 monitor/defibrillators) to the ideal hospital crash-cart device (LIFEPAK 20e defibrillator/monitor). Consistency among our products means you can count on uniform energy doses across LIFEPAK devices, easily share data, and minimize training costs.

Quality CPR to help save more lives
Physio-Control equips the new LIFEPAK 15 monitor/defibrillators with proven CPR guidance (the CPR Metronome) and offers the LUCAS™ Chest Compression System for effective, consistent and uninterrupted compressions in accordance with AHA guidelines—a must when longer, more difficult transports might delay treatment.

In tandem with CODE-STAT 7.0 Data Review Software and Advanced CPR Analytics, these products give you a powerful feedback loop to drive improvements in resuscitation outcomes.

Training you can trust
When your team acquires a defibrillator/monitor or a LUCAS Chest Compression System from Physio-Control, we’ll arm you with the knowledge, skills and abilities necessary to get the most out of your system. Our Train-the-Trainer approach prepares personnel within your organization to educate others, so you will always have qualified inhouse trainers on standby.

Physio-Control addresses specific training needs with a wide range of options. Our capnography and 12-Lead ECG training choices include interactive, self-paced CDs, step-by-step Train-the-Trainer guides, web-based and on-site classes and PowerPoint® programs. Our 12-Lead training is customizable according to skill levels—from basic to advanced.

We’ve got you covered
We build our products LIFEPAK TOUGH and back them with the most comprehensive warranty in the business. We make them easy to configure for your protocols and procedures, and we provide software upgrades as technology advances.

Physio-Control has three customized service plans—Repair & Inspect, Repair Only and Preventative Maintenance/Inspection Only—and are designed to meet your needs. Our On-Site Service Support Plan brings factory-trained and authorized field-service representatives to your facility for inspections and repairs with original manufacturer parts. Our representatives have an average tenure of 12 years and possess extensive knowledge of the current product line, as well as legacy products still in use today. In recent years, our representatives have gained unique experience helping customers after 9/11, Hurricane Katrina, and other U.S. government and military operations.

We offer ship-in service plans for customers located beyond the typical on-site service range. Quality Assurance Inspections and/or repairs are performed at regional Service Centers by trained field service representatives. No matter what your service plan or needs, our service representatives will become a key part of your team and will ensure your products perform effectively and consistently at all times.

Accessories make the most of your system
When it comes to LIFEPAK accessories, we know you want the very best. Physio-Control offers a wide array of adjunct products that deliver the reliability and consistency you expect.

From battery chargers to cables to sensors to CapnoLines®, your service representatives will help you assemble an impressive cache of ancillary tools to boost your unit’s power and performance—and help you save lives and improve patient care.

LIFEPAK 15 Monitor/Defibrillator
The New Standard in Emergency Care
The New Standard in Emergency Care
**LIFEPAK® Defibrillators/Monitors**

**LIFEPAK 1000 Defibrillator**
The 1000 is a powerful and compact device designed to treat cardiac arrest patients and provide continuous cardiac monitoring capabilities. Built-in flexibility allows the 1000 to be programmed for use by first responders or professionals and enables care providers to change protocols as standards of care evolve. A large, intuitive screen displays graphics and ECG readings that are clear and easy to read from a distance. The most rugged defibrillator in the LIFEPAK fleet, you can carry the 1000 with confidence into the harshest environments.

**LIFEPAK CR® Plus Automated External Defibrillator**
Designed for minimally trained rescuers in non-medical settings, the CR Plus guides the rescuer step by step with calm, clear voice prompts. Simple to use, it is built with the same advanced defibrillation technology used by EMS and hospital personnel.

**LIFEPAK CR® Plus Automated External Defibrillator**

**LIFEPAK 20e Defibrillator/Monitor**
Building on the design of its predecessor, the LIFEPAK 20e defibrillator/monitor is compact, lightweight and easy to rush to the scene or use during transport. The 20e is highly intuitive to use, putting early, effective defibrillation into the hands of BLS personnel. The 20e skillfully combines AED function with manual capability so that ACLS-trained clinicians can quickly and easily deliver advanced diagnostic and therapeutic care. Clinically advanced and packed with power, the 20e uses Lithium-ion battery technology that provides extended operating time for transporting patients from one area of the hospital to another and includes ADAPTIV™ biphasic technology up to 360 joules.

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**Experience the legendary quality that has made LIFEPAK products and services the clear favorite around the world.**

As your trusted partner in saving lives, we offer a full suite of solutions from field to hospital, whether your need is emergency response or quality control analysis.
CPR Assistance

LUCAS™ Chest Compression System
The LUCAS Chest Compression System gives you the opportunity to improve a cardiac arrest victim's chance for a successful outcome and improve your system's operations. LUCAS is an automated device designed to deliver uninterrupted chest compressions to facilitate delivery of vital oxygen to the brain and prime the heart for a successful shock. Easy to carry and handle, LUCAS sets up quickly to minimize interruptions to CPR, and works tirelessly to deliver efficient compressions in accordance with AHA guidelines, freeing up responders for critical tasks. Available in both an air-powered and the all-new battery-powered version.

LIFENET® System

LIFENET System
The LIFENET System provides EMS and hospital care teams with reliable, quick access to clinical information helping to improve patient care flow and operational efficiency. The LIFENET System provides customers with a reliable and secure web-based platform linking care teams with critical information for emergent patient data and post-event review. From providing an advanced alert of an incoming patient, to reviewing post event data, to tracking assets, the LIFENET System is the most comprehensive system on the market today.
The LIFEPAK 15 monitor/defibrillator has six main operating modes:

- **AED Mode**: for automated ECG analysis and a prompted treatment protocol for patients in cardiac arrest.
- **Manual Mode**: for performing manual defibrillation, synchronized cardioversion, noninvasive pacing, and ECG and vital sign monitoring.
- **Archive Mode**: for accessing stored patient information.
- **Setup Mode**: for changing default settings of the operating functions.
- **Service Mode**: for authorized personnel to perform diagnostic tests and calibrations.
- **Demo Mode**: for simulated waveforms and trend graphs for demonstration purposes.

### PHYSICAL CHARACTERISTICS

- **Weight**: Basic monitor/defibrillator with new roll paper and two batteries installed: 6.6 kg (18.9 lb); Fully featured monitor/defibrillator with new roll paper and two batteries installed: 9.1 kg (20.1 lb)
- **Lithium-ion battery**: 0.59 kg (1.3 lb)
- **Accessory Bags and Shoulder Strap**: 1.77 kg (3.9 lb)
- **Height**: 31.7 cm (12.5 in)
- **Width**: 40.1 cm (15.8 in)
- **Depth**: 23.1 cm (9.1 in)

### DISPLAY

- **Size (active viewing area)**: 212 mm (8.4 in) diagonal; 171 mm (6.7 in) wide x 128 mm (5.0 in) high
- **Resolution**: display type 640 dot x 480 dot color backlit LCD
- **User Selectable Display Mode**: full color or SunVue™ high contrast
- **Display**: a minimum of 4 seconds of ECG and alphanumeric values, device instructions, or prompts
- **Display**: up to three waveforms
- **Waveform Display Sweep Speed**: 25 mm/sec for ECG, SpO2, IP, and 12.5 mm/sec for CO2

### COMMUNICATIONS

- **Bluetooth**: Limited to devices drawing maximum 0.5 A current
- **Serial Port RS232 communication + 12V available**
- **Wireless connection**: The device is capable of transferring data records by wired or wireless connection.

### MONITOR

**ECG**

ECG is monitored via several cable arrangements:

- A 3-wire cable is used for 3-lead ECG monitoring.
- A 5-wire cable is used for 7-lead ECG monitoring.
- A 10-wire cable is used for 12-lead ECG acquisition. When the chest electrodes are removed, the 10-wire cable functions as a 4-wire cable.
- Standard paddles or QUIK-COMBO pacing/defibrillation/ECG electrodes are used for paddles lead monitoring.

**Frequency Response**:

Monitor: 0.5 to 40 Hz or 1 to 30 Hz
Paddles: 2.5 to 30 Hz

**Lead Selection**:

- Leads I, II, III (3-wire ECG cable)
- Leads I, II, III, AVR, AVL, and AVF acquired simultaneously (4-wire ECG cable)
- Leads I, II, III, AVR, AVL, and AF (6-wire ECG cable)
- Leads I, II, III, AVR, AVL, AF, V1, V2, V3, V4, V5, and V6 acquired simultaneously (10-wire ECG cable)

**ECG Size**: 4, 3, 2.5, 2, 1.5, 1, 0.5, 0.25 cm/mV (fixed at 1 cm/mV for 12-lead)

**Respiration Rate**

**Respiration Rate Range**: 20 to 240 bpm
**Respiration Rate Accuracy**: ±2 bpm and ±2%, whichever is greater

**Blood Pressure**

- **Blood Pressure Systolic Pressure Range**: 30 to 255 mmHg
- **Blood Pressure Diastolic Pressure Range**: 20 to 140 mmHg
- **Mean Arterial Pressure Range**: 30 to 235 mmHg
- **Blood Pressure Accuracy**: ±5 mmHg

### DATA MANAGEMENT

The device captures and stores patient data, events (including waveforms and annotations), and continuous waveform and patient impedance records in internal memory.

The user can select and print reports, and transfer the stored information via supported communication methods.

**Report Types**:

- 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**

- Total 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.

**SpO2**

**Sensors**: MASIMO® Sensors including Rainbow Sensors

**Displayed Saturation Range**: 50 to 100%

**Saturation Accuracy**: 70%–100% (0–69% unspecified)

**SpO2 Accuracy**: ±2 digits (during no motion conditions)

**SpO2 Sensitivity User selectable**: Normal, High

**SpO2 Measurement**: Functional SpO2 values are displayed and stored

**SpO2 Update Average Rate User selectable**: 4, 8, 12 or 16 seconds

**SpO2 Pulse Rate Range**: 25 to 240 bpm

**SpO2 Pulse Rate Accuracy (Adults/Pediatrics)**:

- ±3 digits (during no motion conditions)
- ±5 digits (during motion conditions)

**Optional SpO2, waveform display with autogain control**
### 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  
**ST Segment**: After initial 12-lead ECG analysis, automatically selects and trends ECG lead with the greatest ST displacement  
**Display Choice of**: HR, PR (SpO₂), PR (NNBP, SpO₂ (%), SpCO₂ (%), SpMet (%)), CO₂ (ECO₂-FICO₂), RR (CO₂), NNBP, P1, P2, ST

### ALARMS

**Quick Set**: Activates alarms for all active vital signs and includes an indicator for which alarms are active.  
**VF/VT Alarm**: Activates continuous Continuous Patient Surveillance System (CPS) monitoring in Manual mode  
**Apnea Alarm**: Occurs when 30 seconds has elapsed since last detected respiration  
**Heart Rate Alarm Limit Range**: Upper, 100–250 bpm; lower, 30–150 bpm

### INTERPRETIVE ALGORITHM

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

### PRINTER

**Prints continuous strip of the displayed patient information and reports**  
**Paper Size**: 100 mm (3.9 in)  
**Print Speed**: 25 mm/sec or 12.5 mm/sec  
**Delay**: 8 seconds  
**Autoprint**: Waveform events print automatically (user selectable)  
**Frequency Response**:  
- Diagnostic: 0.05 to 150 Hz or 0.05 to 40 Hz  
- Heart rate alarm limit range: upper, 100–250 bpm; lower, 30–150 bpm

### DEFIBRILLATOR

**Biphasic Waveform**: Biphasic Truncated Exponential  
**The following specifications apply from 25 to 200 ohms, unless otherwise specified:**  
- **Energy Accuracy**: ± 1 joule or 10% of setting, whichever is greater, into 50 ohms ± 5% or 15% of setting, whichever is greater, into 25–175 ohms.  
- **Voltage Compensation**: Active when disposable therapy electrodes are attached. Energy output within ±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**: QU-K-COMBO® pacing/defibrillation/ECG electrodes (standard); Cable Length 8 foot long (2.4 m)  
- **Standard paddles (optional)**

### Manual Mode

**Energy Mode**: Set 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, typical

### 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 QU-K-COMBO electrodes are properly connected to patient to assuming that electrodes are not connected is 300±50 ohms.

### AED Mode

**Shock Advisory System™ (SAS)**: an ECG analysis system that advises the operator if the algorithm detects a shockable or non-shockable 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.

### Setup Options

- **Auto Analyze**: Allows for auto analysis. Options are OFF, AFTER 1ST SHOCK  
- **Initial CPR**: Allows the user to be prompted for CPR for a period of time prior to other activity. Options are OFF, ANALYZE FIRST, CPR FIRST  
- **Initial CPR Time**: Time interval for Initial CPR. Options are 15, 30, 45, 60, 90, 120, and 180 seconds.  
- **Pre-Shock CPR**: Allows the user to be prompted for CPR while the device is charging. Options are OFF, 15, 30 seconds.  
- **Pulse Check**: Allows the user to be prompted for a pulse check at various times. Options are ALWAYS, AFTER EVERY SECOND NSA, AFTER EVERY NSA, NEVER  
- **Stacked Shocks**: Allows for CPR after 3 consecutive shocks or after a single shock. Options are OFF, ON  
- **CPR Time**: 1 or 2 User selectable times for CPR. Options are 15, 30, 45, 60, 90, 120, 180 seconds and 30 minutes

### PACER

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

### ENVIRONMENTAL

**Unit meets functional requirements during exposure to the following environments unless otherwise stated.**  
**Operating Temperature**: 0° to 45°C (32° to 113°F), -20°C to -4°F  
**Storage Temperature**: -20° to 65°C (-4° to 149°F) except therapy electrodes and batteries  
**Relative Humidity, Operating**: 5 to 95%, non-condensing, NNBP only: 15 to 95%, non-condensing  
**Atmospheric Pressure, Operating**: -382 to 4,572 m (-1,253 to 15,000 ft), NNBP only: -152 to 3,046 m (-500 to 10,000 ft)  
**Water Resistance, Operating**: IP44 (splash proof, dust and sand resistant) per IEC 529 and EN 1798 (without accessories except for 12-lead ECG cable, hard paddles, and battery pack)

### Vibration

**Vibration**: MIL-STD-810E Method 514.4, Propeller Aircraft - category 4 (figure 514.4.7 spectrum a), Helicopter - category 6 (3.75 Gms), Ground Mobile - category 8 (3.14 Gms), EN 1789: Sinusoidal Sweep, 1 octave/min, 10–150 Hz, ±0.15 mm/2 g

### Shock (drop)

5 drops on each side from 18 inches onto a steel surface EN 1789: 30-inch drop onto each of 6 surfaces

### Shock (functional)

Meets IEC 60601-2-27 and MIL-STD-810E shock requirements 3 shocks per face at 40 g, 6 m/s half-sine pulses

### Bump

1000 bumps at 15 g with pulse duration of 6 msec

### Impact, Non-operating

**IEC 60601-1-0.5 + 0.05 joule impact UL 60601-1 6.78 Nm impact with 2-inch diameter steel ball. Meets IEC/ES262 protection level IK 04.

### EMC

**EN 60601-2-2**: 2001 Medical Equipment - General Requirements for Safety - Collateral Standard: Electromagnetic Compatibility - Requirements and Tests EN 60601-2-2003: (Clause 38) Particular Requirements for the Safety of Cardiac Defibrillators and Cardiac Defibrillator-Monitors

### Cleaning

Cleaning: Cleaning 20 times with the following: Quaternary ammonium, isopropyl alcohol, hydrogen peroxide

### Chemical Resistance

60 hour exposure to specified chemicals: Betadine (10% Povidone-Iodine solution), Coffee, Cola, Dextrose (5% Glucose solution), Electrode Gel/Paste (88% water, 2% Carbopol 940), HCl (0.5% solution), Isopropyl Alcohol, NaCl solution (0.3% solution), Cosmetic discoloration of the paddle well shorting bar shall be allowed following exposure to HCL (0.5% solution).

### 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 Capacity

**For two, new fully-charged batteries, 20°C (68°F)**

<table>
<thead>
<tr>
<th>Operating Mode</th>
<th>Monitoring (minutes)</th>
<th>Pacing (minutes)</th>
<th>Defibrillation (360J discharges)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Capacity to Shutdown</td>
<td>360</td>
<td>340</td>
<td>420</td>
</tr>
<tr>
<td>Minimum Capacity</td>
<td>340</td>
<td>320</td>
<td>400</td>
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<tr>
<td>Capacity After Low Battery</td>
<td>21</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Minimum Capacity</td>
<td>12</td>
<td>10</td>
<td>6</td>
</tr>
</tbody>
</table>

### BATTERY

**Battery Specifications**  
**Battery Type**: Lithium-ion  
**Weight**: 0.59 kg (1.3 lb)  
**Voltage**: 11.1V typical  
**Capacity (rated)**: 5.7 amp hours

### Charge Time

**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

**5° to 35° C (41° to 95°F)**

### Operating Temperature Range

**0° to 50°C (32° to 122°F)**

### Long Term (≥1 day) Storage Temperature Range

**0° to 35° C (32° to 95°F)**
For more than 50 years, Physio-Control, maker of the renowned LIFEPAK defibrillators, has been developing technologies and designing devices that are legendary among first response professionals, clinical care providers and the community.

REFERENCES


All statements and information in this brochure are valid as of August 2009.

For further information please contact your local Physio-Control representative or visit www.physio-control.com.