



For those who get there first

Philips HeartStart FRx Defibrillator

The Philips HeartStart FRx Defibrillator is designed to be easy to set up and use, as well as rugged and reliable for those who get there first. On the scene with law enforcement, on the field with student athletes, or on the job with employees, the FRx Defibrillator treats sudden cardiac arrest (SCA) in environments and conditions too demanding for other defibrillators.

The HeartStart FRx Defibrillator is designed to be:

- **Easy to set up.** The HeartStart FRx Ready-Pack configuration is delivered to you complete and virtually ready to rescue. It arrives with the FRx already inside its carry case, pads pre-connected, battery inserted, and a set of spare pads in place.
- **Easy to use.** Built on a platform of proven ease-of-use, the FRx features CPR coaching and intuitive icon-driven operation. Calm, clear voice instructions are tailored to the responder's actions, providing guidance during the resuscitation of an SCA victim.
- **Rugged.** Designed for real-world use, the FRx was built to surpass rigorous testing requirements: jetting water, loads up to 500 pounds, and a one-meter drop onto concrete.
- **Reliable.** The HeartStart FRx Defibrillator is powered by a long-life (four-year) battery. The device conducts automated daily, weekly, and monthly self-tests including pads readiness. Audible and visual cues for helping assure FRx readiness, including the blinking green "Ready" light.
- **Safe.** The HeartStart FRx is designed to deliver therapy only if the patient's heart rhythm is shockable. Additionally, the Philips SMART Biphasic waveform is highly effective, yet minimizes harmful side effects. Its effectiveness is backed by over 40 published, peer-reviewed studies.¹

Bringing innovation to the treatment of SCA

- **Preconnected SMART Pads II.** Save valuable time in an emergency with preconnected pads that can be used on adults and children. SMART Pads II eliminate the expense of having to purchase different sets of pads for different patient types.
- **Infant/Child key.** Simply insert the Infant/Child key into the FRx to signal to the device that you're treating an infant or child. The defibrillator adjusts to provide special pediatric pads placement and CPR instructions, and reduces the shock energy to a more appropriate level.
- **Wireless data transfer.** The FRx provides a mobile, wireless solution for data management with a Smartphone or PC. It features an infrared data port for easy transmission of information without cables or hardware compatibility issues.

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HeartStart FRx Defibrillator specifications

| Defibrillator | |
|---|--|
| Defibrillator family | FRx. Order 861304 |
| Standard configuration | Defibrillator, battery, SMART Pads II (1 set), Setup and Maintenance Guides, Owners Manual, Quick Reference Guide, Date sticker |
| HeartStart FRx Ready-Pack configuration | Order Option R01. Defibrillator, battery, carry case, SMART Pads II (1 pre-connected set, 1 spare set), Setup and Maintenance Guides, Owners Manual, Quick Reference Guide, Date Sticker |
| Waveform | Truncated Exponential Biphasic. Waveform parameters adjusted as a function of each patient's impedance |
| Therapy | Adult defibrillation: Peak current 32A (150 J nominal into a 50-ohm load). Pediatric defibrillation with optional FRx Infant/Child key installed: Peak current 19A (50 J nominal into 50-ohm load) |
| Protocol | Device follows preconfigured settings. Defibrillation and CPR protocol can be customized using HeartStart Event Review software |
| User interface | |
| Instructions | Detailed voice prompts and visual icons guide responder through use of the defibrillator |
| CPR coaching | Voice coaching for adult and infant/child CPR provides instructions and audio cues for the appropriate number, rate and depth of chest compressions, as well as for each breath |
| Controls | Green On/Off button, blue i-button, orange Shock button, optional Infant/Child key |
| Indicators | Ready light, blue i-button, caution light, illuminated pads, icons, Shock button lights up when shock is advised. |
| Physical | |
| Size | 2.4" x 7.1" x 8.9" (6 cm x 18 cm x 22 cm) D x H x W. |
| Weight | With battery and pads case: 3.5 lbs. (1.5 kg) |

| Environmental/physical requirements | |
|-------------------------------------|---|
| Sealing | Waterjet proof IPX5 per IEC60529 Dust protected IP5X per IEC60529 |
| Temperature | Operating/Standby: 32° - 122° F (0°- 50° C) |
| Altitude | 0 to 15,000 feet |
| Aircraft | Device: RTCA/DO-160D;1997 |
| Crush | 500 pounds |
| Vibration | Operating: meets MILSTD 810F Fig.514.5C-17, random; Standby: meets MILSTD 810F Fig.514.5C-18, swept sine |
| EMI (radiated/immunity) | CISPR II Group I Class B, IEC 61000-4-3, and IEC 61000-4-8 |
| Patient analysis system | |
| Patient analysis | Evaluates patient ECG to determine if a rhythm is shockable. Rhythms considered shockable are ventricular fibrillation (VF) and certain ventricular tachycardias (VT) associated with lack of circulation. For safety reasons, some VT rhythms associated with circulation will not be interpreted as shockable, and some very low-amplitude or low-frequency rhythms will not be interpreted as shockable VF |
| Sensitivity/specificity | Meets AAMI DF80 guidelines and AHA recommendations for adult defibrillation (Circulation 1997;95:1677-1682) |
| Shock advised | Able to deliver a shock as soon as the device indicates a shock is advised |
| Quick Shock | Able to deliver a shock after the end of a CPR interval, typically in 8 seconds |
| Shock-to-Shock cycle time | Typically less than 20 seconds between shocks in a series |
| Artifact detection | Advanced signal processing allows accurate ECG analysis even in the presence of most pacemaker artifact and electrical noise sources. Other artifacts are detected and corrective voice prompts issued |

Battery (M5070A)

| | |
|-----------------|---|
| Item number(s) | Standard: M5070A Aviation: 989803139301 (TSO C-142-U.S. only) |
| Type | 9 Volt DC, 4.2 Ah, lithium manganese dioxide, disposable long-life primary cell |
| Capacity | Minimum 200 shocks or 4 hours of operating time (EN 60601-2-4:2003) |
| Install-by date | Battery is labeled with an install-by date of at least 5 years from date of manufacture |
| Standby life | Four years typical when battery is installed by the install-by date. (Will power the AED in standby state within the specified standby temperature range, assuming 1 battery insertion test and no defibrillation uses) |

SMART Pads II

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| Item number | 989803139261 |
| Active surface area | 12.4"² (80 cm²) each 13.2"² (85 cm²) each |
| Cable length | 48" (121.9 cm) |
| Use-by date | Pads case is labeled with a use-by date of at least 2 years from date of manufacture |
| Infant/Child Key | 989803139311 |

Training Pads II

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| Item number | 989803139271 |
| Function | Training pads place HeartStart FRx into training mode and suspend its energy delivery capability. Features 8 real-world training scenarios |

Automated and user-activated self-tests

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|----------------------------|---|
| Daily automatic self-tests | Tests internal circuitry, waveform delivery system, pads, and battery capacity |
| Pads integrity test | Specifically tests readiness-for-use of pads (gel moisture) |
| Battery insertion test | Upon battery insertion, extensive automatic self-tests and user-interactive test check device readiness |
| Status Indicators | Blinking green "Ready" light indicates ready for use. Audible "chirp" indicates need for maintenance |

Data recording and transmission

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| Infrared | Wireless transmission of event data to a Smartphone or PC, using the IrDA protocol |
| HeartStart Event Review software | Data management software (optional) for download and review of data retrieved through defibrillator's infrared data port |
| Data stored | First 15 minutes of ECG and the entire incident's events and analysis decisions |

* Refer to the HeartStart FRx Defibrillator Owner's Manual for detailed product instructions. Prescription required. All specifications based on 25° C unless otherwise noted. The defibrillator and its accessories are made of latex-free materials.

1. Philips Medical Systems. SMART Biphasic Studies, listed alphabetically by study author: http://www.healthcare.philips.com/au_en/products/resuscitation/biphasic_technology/references.wpd



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Philips is a Global 500 company and one of the world's largest medical products companies

Philips has shipped nearly three-quarters of a million AED units

Philips HeartStart defibrillators are deployed on airlines and in airports, workplaces, schools, healthcare facilities, and communities worldwide

Please visit www.philips.com/FRx for more information



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