



# For those who get there first

## Philips HeartStart FRx Defibrillator product information

The Philips HeartStart FRx Defibrillator is designed to be easy to use, 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) from ventricular fibrillation in environments and conditions too demanding for many other defibrillators.

### The HeartStart FRx Defibrillator is:

- **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. The blinking green "Ready" light is your assurance that the FRx has passed its last self-test and is ready for use.
- **Safe.** The HeartStart FRx is designed to deliver a shock only if the patient's heart rhythm is shockable. Additionally, Philips' effective yet gentle SMART Biphasic waveform is the industry's most proven therapy.<sup>1</sup>

### The HeartStart FRx Defibrillator brings innovations 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 pads sets 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 using the Palm® handheld platform. It features an infrared data port for easy transmission of information without cables or hardwire compatibility issues.

# PHILIPS

# Product specifications

Defibrillator	
Model (Number)	HeartStart FRx Defibrillator (861304)
How Supplied	Defibrillator, battery (1), SMART Pads II (1 set), Owner Manual, Quick Reference Guide
Waveform	Truncated Exponential Biphasic. Waveform parameters adjusted as a function of each patient's impedance.
Energy	Single energy output: Adult: nominal 150 Joules into a 50-ohm load Infant/Child: nominal 50 Joules into a 50-ohm load
Protocol	Device follows preconfigured settings. Defibrillation and CPR protocol can be customized using HeartStart Event Review or HeartStart Configure software.
User Interface	
Instructions	Detailed voice prompts and visual icons guide responder through use of the defibrillator and adjusts to the responder's pace.
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.
Physical	
Size	2.4 x 7.1 x 8.9 inches (6 x 18 x 22 cm) H x D x W
Weight	With battery and pads case: 3.5 lbs. (1.5 kg) Without battery or pads case: 2.6 lbs. (1.2 kg)
Environmental	
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.
Sensitivity/Specificity	Meets AAMI DF80 guidelines and AHA recommendations for adult defibrillation (Circulation 1997;95:1677-1682).
Quick Shock	Able to deliver a shock after the end of a CPR interval, typically in eight 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	
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 five 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 one battery insertion test and no uses.)
SMART Pads II	
How Supplied	Disposable pads case contains adhesive multifunction defibrillator pads that can be preconnected to the device.
Cable Length	48 inches (121.9 cm)
Use-by Date	Pads case is labeled with a use-by date of at least two years from date of manufacture.
Infant/Child Key	
Function	When inserted into the device, the key puts the FRx into Infant/Child mode, reducing shock energy to nominal 50 Joules and enabling Infant/Child CPR Coaching.
Training Pads II	
Function	Special pads place HeartStart FRx into training mode and disable its energy delivery capability. Features 8 real-world training scenarios.
Automated and User-activated Self-tests	
Daily Automatic Self-tests	Tests internal circuitry, waveform delivery system, pads readiness and battery capacity.
Battery Insertion Test	Upon battery insertion, extensive automatic self-tests check device readiness.
Data Recording and Transmission	
Infrared	Wireless transmission of event data to a PC or a Palm® PDA running an Event Review suite software product.
References	
<sup>1</sup> Philips Medical Systems. SMART Biphasic Studies, listed alphabetically by study author: <a href="http://www.medical.philips.com/main/products/resuscitation/products/fr2plus/fr2plus_resources.html">www.medical.philips.com/main/products/resuscitation/products/fr2plus/fr2plus_resources.html</a> . <sup>2</sup> Frost and Sullivan, 2005. <sup>3</sup> Refer to the HeartStart FRx Defibrillator Owner's Manual for detailed product instructions. All specifications based on 25° C unless otherwise noted. The defibrillator and its accessories are made of latex-free material.	

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## Philips, leading the way

Philips is the market-share leader in public access defibrillation<sup>2</sup> and the trusted choice in early defibrillation. Philips offers a comprehensive solution in resuscitation products, helping responders treat SCA quickly and effectively wherever it occurs.

## Contact Philips today!

For more information about the HeartStart FRx Defibrillator, visit [www.philips.com/heartstart](http://www.philips.com/heartstart) or call 1-800-453-6860.

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