HeartStart OnSite defibrillator specifications

Defibrillator

Defibrillator family	HS1. Order M5066A
Standard configuration	Defibrillator, battery, adult SMART Pads cartridge (1 set), Setup and Maintenance Guides, Owner's Manual, Quick Reference Guide, date sticker
HeartStart OnSite Ready-Pack configuration	Order option R01. Defibrillator, battery, carry case, adult SMART Pads (1 pre-installed set, 1 spare set), Setup and Maintenance Guides, Owner's 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 32 A (150 J nominal into a 50-ohm load) Pediatric defibrillation with optional Infant/Child SMART Pads cartridge installed: peak current 19 A (50 J nominal into 50-ohm load)
Shock-to-shock cycle time	Typically less than 20 seconds between shocks in a series
Quick Shock	Able to deliver a shock after the end of a CPR interval, typically in 8 seconds
Voice instructions	Detailed voice messages guide responder through use of the defibrillator
CPR coaching	Instructions for adult or infant/child CPR available at user's option
Shock delivery	Via adhesive pads placed on patient's bare skin as illustrated on pads
Controls	Green SMART Pads cartridge handle, green On/Off button, blue i-button, orange Shock button
Indicators	Ready light; blue i-button; caution light, Shock button lights up when shock is advised

Physical

Size	7 cm x 19 cm x 21 cm (2.8″ x 7.4″ x 8.3″) D x H x W
Weight	With battery and pads cartridge: 1.5 kg (3.3 lbs.) Without battery or pads cartridge: 1 kg (2.4 lbs.)

Environmental/physical requirements

Sealing	Solid objects per EN60529 class IP2X Drip-proof per EN60529 class IPX1
Temperature	Operating: 0° – 50° C (32° – 122° F) Standby: 10° – 43° C (50° – 109° F)
Humidity	Operating: 0% to 95% relative, non-condensing Standby: 0% to 75% relative, non-condensing
Altitude	Operating: 0 to 15,000 feet Standby: 0 to 8,500 feet > 48 hours and 8,500 to 15,000 feet < 48 hours
Shock/drop abuse	Withstands one-meter drop to any edge, corner or surface
Vibration	Meets EN1789 random and swept sine, road ambulance specification in operating and standby states
EMI (radiated/immunity)	Meets EN55011 Group 1 Level B Class B and EN61000-4-3

Data recording and transmission

Infrared	Wireless transmission of event data to a Smartphone or PC, using the IrDA protocol
Data stored	First 15 minutes of ECG and the entire incident's events and analysis decisions

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.
Quick Shock	Able to deliver a shock after the end of a CPR interval, typically in 8 seconds
Sensitivity/specificity	Meets AAMI DF80 guidelines and AHA recommendations for adult defibrillation (Circulation 1997;95:1677-1682)
Artifact detection	The effects of pacemaker artifact and electrical noise are minimized

Battery (M5070A)

Type	9 Volt DC, 4.2 Ah, composed of disposable long-life lithium manganese dioxide primary cells
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

Adult SMART Pads cartridge	M5071A defibrillation pads for patients 8 years of age and older or 25 kg (55 lbs.) and over
Infant/Child SMART Pads cartridge	M5072A defibrillation pads for patients under 8 years of age or 25 kg (55 lbs.); by prescription only
Active surface area	85 cm^2 (13.2″^{2}) each
Cable length	Adult SMART Pads: 137.1 cm (54″) Infant/Child SMART Pads: 101.6 cm (40″)
Use-by date	Cartridge is labeled with a use-by date of at least 2 years from date of manufacture

Training SMART Pads

M5073A	Adult Training SMART Pads cartridge
M5074A	Infant/Child Training SMART Pads cartridge
Function	Training SMART Pads cartridges feature 8 real-world training scripts; used with training mat (included) or with adapters on manikins

Automated and user-activated self-tests

Daily automatic self-tests	Tests internal circuitry, waveform delivery system, pads cartridge, 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

* Refer to the HeartStart OnSite 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 materials.