

HeartSine® samaritan® PAD 450P

Connected AED

Semi-automatic public access defibrillator with integrated Wi-Fi® connectivity

Data sheet

Readiness matters.

When sudden cardiac arrest occurs, immediate treatment is vital. A victim's chance of survival dramatically decreases for every minute without treatment.¹ This means not only must an automated external defibrillator (AED) be close at hand and easy to use, it must be ready to shock.

Connected for extra protection, HeartSine samaritan PAD 450P Connected AED with CPR Rate Advisor offers real-time feedback on CPR rate as well as offering key features that help ensure readiness:

- Simplified readiness monitoring
- Integrated Wi-Fi connectivity
- AED program management
- Low cost of ownership



Readiness made easy



LIFELINKcentral AED program manager

Monitors AED programs by tracking AED readiness status, Pad-Pak expirations, CPR/AED training certificates and more.



Integrated connectivity

Communicates via Wi-Fi with LIFELINKcentral AED program manager to enable AEDs to be managed across a single or multiple locations.





Made for you



Integrated real-time CPR rate feedback

Easy-to-understand visual and voice prompts guide the rescuer through the entire resuscitation process, providing specific feedback on the rate of compressions ("Push faster," "Push slower," "Good speed").



Unique Pediatric-Pak

Ensures the guidelines-recommended energy level is delivered for children, between 1 and 8 years of age or up to 55 lb (25 kg).



Highly portable

With one of most compact footprints and at just 2.83 lb, HeartSine AEDs can be easily transported and fit into constrained spaces.



Clinically validated technology²

Advanced electrode technology and SCOPE (Self-Compensating Output Pulse Envelope) biphasic technology, a low energy escalating waveform that automatically adjusts for differences in patient impedance.



High level of protection from dust and water

Offers IP56 rating, one of the highest ratings in the industry.

Simple to own



Two parts, one expiration date

The innovative Pad-Pak, an integrated battery and electrode single-use cartridge with one expiration date, offers one simple maintenance change every four years.



Low cost of ownership

Shelf life of four years means that the Pad-Pak may offer savings over other defibrillators that require separate battery and electrode replacements.



8-year warranty

AED is backed by an 8-year limited warranty.



Specifications

Defibrillator

Waveform: Self-Compensating Output Pulse Envelope (SCOPE) optimized biphasic escalating waveform compensates energy, slope and duration for patient impedance

Patient analysis system

Method: Evaluates patient’s ECG, electrode contact integrity and patient impedance to determine if defibrillation is required

Sensitivity/Specificity: Meets IEC/EN 60601-2-4

Impedance range: 20-230 ohms

Energy selection

Pad-Pak:

Shock 1: 150 J
Shock 2: 150 J
Shock 3: 200 J

Pediatric-Pak:

Shock 1: 50 J
Shock 2: 50 J
Shock 3: 50 J

Charge time (typical):

150 J in < 8 seconds
200 J in < 12 seconds

Environmental

Operating/Standby temperature:

32°F to 122°F (0°C to 50°C)

Transport temperature:

32°F to 122°F (0°C to 50°C)

Note: If the device with Pad-Pak or Pediatric-Pak has been transported while temperatures are below 32°F (0°C), it should be returned to an ambient temperature of between 32°F to 122°F (0°C to 50°C) for at least 24 hours before use

Relative humidity: 5% to 95%

non-condensing

Water resistance: IEC 60529/ EN60529

IPX6 with electrodes connected and battery installed

Dust resistance: IEC 60529/ EN60529

IP5X with electrodes connected and battery installed

Enclosure: IEC/EN 60529 IP56

Altitude: -1,250 to 15,000 feet (-381 to 4,575 meters)

Shock: MIL STD 810F Method 516.5, Procedure 1 (40 G’s)

Vibration: MIL STD 810F Method 514.5+, Procedure 1

Category 4 Truck Transportation – US Highways

Category 7 Aircraft – Jet 737 & General Aviation

Atmospheric pressure: 572 hPa to 1060 hPa (429 mmHg to 795 mmHg)

EMC: IEC/EN 60601-1-2

Radiated emissions: IEC/EN 55011

Electrostatic discharge:

IEC/EN 61000-4-2 (8 kV)

RF immunity:

IEC/EN 61000-4-3 80 MHz-2.5 GHz, (10 V/m)

Magnetic field immunity:

IEC/EN 61000-4-8 (3 A/m)

Aircraft: RTCA/DO-160G, Section 21 (Category M)

RTCA/DO-227 (TSO/ETSO-C142a/ EASA.210.10042190)

Falling height: 3.3 feet (1 meter)

Physical characteristics

With Pad-Pak inserted and HeartSine Gateway, with batteries, attached:

Size: 9.21 in x 7.25 in x 1.9 in (23.4 cm x 18.4 cm x 4.8 cm)

Weight: 2.83 lb (1.285 kg)

Accessories

Pad-Pak Electrode and Battery Cartridge

Shelf life/Standby life: See the expiration date on the Pad-Pak/Pediatric-Pak

Weight: 0.44 lb (0.2 kg)

Size: 3.93 in x 5.24 in x 0.94 in (10 cm x 13.3 cm x 2.4 cm)

Battery type: Disposable single-use combined battery and defibrillation electrode cartridge (lithium manganese dioxide (LiMnO₂) 18V)

Battery capacity (new):

> 60 shocks at 200 J or 6 hours of battery use

Electrodes: Disposable defibrillation pads are supplied as standard with each device

Electrode placement: Anterior-lateral (Adult)

Anterior - posterior or Anterior-lateral (Pediatric)

Electrode active area: 15 in² (100 cm²)

Electrode cable length: 3.3 feet (1 meter)

Aircraft safety test (TSO/ETSO-certified Pad-Pak): RTCA/DO-227 (TSO/ETSO C142a1/ EASA.210.10042190)

HeartSine Gateway Battery

Type: CR123A 3V, Non-rechargeable

Type number: 6205

Designation IEC: CR 17345

Weight (per battery): 17g

Quantity: Four

System: Lithium Manganese Dioxide / Organic Electrolyte

UL recognition: MH 13654 (N)

Nominal voltage (per battery): 3V

Typical capacity load:

100 Ohm, at 68°F (20°C), 1550 mAh down to 2V

Volume: 0.43 in³ (7 ccm)

Data storage

Memory type: Internal memory

Memory storage: 90 minutes of ECG (full disclosure) and event/incident recording

Review: Custom USB data cable (optional) directly connected to PC with Saver EVO Windows-based data review software

Materials used

Defibrillator housing / HeartSine

Gateway: ABS, Santoprene

Electrodes: Hydrogel, Silver, Aluminium and Polyester

Warranty

AED: 8-year limited warranty

HeartSine Gateway: 2-year limited warranty

Communications

- Wireless 802.11 b/g/n data transfer to LIFELINKcentral AED program manager
- USB connection to Saver EVO software through Micro USB port

HeartSine samaritan PAD 360P and 450P Automated External Defibrillators (AEDs) with a prescription requirement

BRIEF SUMMARY OF INDICATIONS AND IMPORTANT SAFETY INFORMATION

INDICATIONS FOR USE: The HeartSine samaritan PAD 360P (SAM 360P) and HeartSine samaritan PAD 450P (SAM 450P) are indicated for use on victims of cardiac arrest who are exhibiting the following signs: unconscious, not breathing, without circulation (without a pulse).

The AEDs are intended for use by personnel who have been trained in their operation. Users should have received training in basic life support/AED, advanced life support or a physician-authorized emergency medical response training program. The AEDs are indicated for use on patients greater than 8 years old or over 55 lb (25 kg) when used with the adult Pad-Pak (PAD-PAK-01 or PAD-PAK-07). They are indicated for use on children between 1 and 8 years of age or up to 55 lb (25 kg) when used with the Pediatric-Pak (PAD-PAK-02).

CONTRAINDICATION: If the patient is responsive or conscious, do not use the HeartSine samaritan PAD to provide treatment.

WARNINGS: AEDs: • The HeartSine samaritan PAD (AED) delivers therapeutic electrical shocks that can cause serious harm to either users or bystanders. Take care to ensure that no one touches the patient when a shock is to be delivered. • Touching the patient during the analysis phase of treatment can cause interference with the diagnostic process. Avoid contact with the patient while the AED is analyzing the patient. The AED will instruct you when it is safe to touch the patient. • Do not delay treatment trying to find out the patient's exact age and weight. If a Pediatric-Pak or an alternative suitable defibrillator is not available, you may use an adult Pad-Pak. • Disconnect non-defibrillation protected electronic devices or medical equipment from the patient before using the AED. • Do not use the AED in the vicinity of explosive gases, including flammable anesthetics or concentrated oxygen. • Do not use portable RF communications equipment closer than 12 in (30 cm) to any part of the AED. • Place pads at least 3.1 in (8 cm) away from a pacemaker. • The SAM 360P is a fully automatic defibrillator. When required, it will deliver a shock to the patient WITHOUT user intervention. • The SAM 450P CPR Rate Advisor is only intended to provide feedback on adult patients. If you treat a pediatric patient with the SAM 450P and an adult Pad-Pak, ignore any voice prompts regarding the rate of CPR. • Do not open or repair the AED under any circumstances as there could be danger of electric shock. If damage is suspected, immediately replace the AED. • Do not use any accessories other than those specified or provided by HeartSine Technologies as the AED may malfunction. **Pad-Pak and Pediatric-Pak:** • Do not use if the gel is dry. • Not for use on patients under 1 year old. • Pediatric-Pak is for use with children up to the age of 8 years or up to 55 lb (25 kg). DO NOT DELAY THERAPY IF YOU ARE NOT SURE OF EXACT AGE OR WEIGHT. • Pediatric-Pak is suitable for use only with HeartSine samaritan PADs with the adult/child symbol*. If the AED you are using does not have this label, use the adult Pad-Pak if no alternatives are available. • The use of the Pediatric-Pak will enable delivery of 50 J shocks to the pediatric patient. • It is advised that the Pediatric-Pak is stored separately when not in use. • Never charge, short circuit, puncture, deform, incinerate, heat above 85°C or expose contents of TSO (Aviation) Pad-Pak to water. Remove when discharged.

PRECAUTIONS: AEDs: • Check the AED periodically in accordance with the service and maintenance instructions provided in the user manual. • If you hear a warning message when you turn on your AED, consult Troubleshooting in the user manual. • Proper placement of the electrode pads is critical. Electrode pads must be at least 1 in (2.5 cm) apart and should never touch one another. • Do not use electrode pads if pouch is not sealed. • Do not pull green tab on Pad-Pak during set-up. • If a non-shockable rhythm is detected, the AED will end its ready to shock condition if it previously decided to shock. • Use of the AED outside the operating and storage ranges specified in the user manual may cause the AED to malfunction or reduce the shelf life of the Pad-Pak. • Do not immerse any part of the AED in water or any type of fluid. • Do not clean the AED with abrasive materials, cleaners or solvents. • Do not turn on the AED unnecessarily as this may reduce the standby life. • Do not use any unauthorized accessories with the AED as it may malfunction if non-approved accessories are used. • Dispose of the AED in accordance with national or local regulations. • Check with the relevant local government health department for information about any requirements associated with ownership and use of a defibrillator in the region where it is to be used. **Pad-Pak and Pediatric-Pak:** • Single use only. Reuse may cause AED to be unable to deliver therapy leading to a failure to resuscitate or lead to cross-infection between patients. • Do not use if open or damaged. • Check expiration date. • It is advised that a spare Pad-Pak be stored with AED in rear section of carry case. **Saver EVO Software:** • Download the complete HeartSine samaritan PAD memory prior to erasing it. This information should be stored safely for future reference. Ensure that only the events you want to delete have been selected prior to deleting. Once deleted from your computer's memory, events cannot be regenerated, and all information will be lost.

POTENTIAL ADVERSE EFFECTS: The potential adverse effects (e.g., complications) associated with the use of an automated external defibrillator include, but are not limited to, the following: • Failure to identify shockable arrhythmia • Failure to deliver a defibrillation shock in the presence of VF or pulseless VT, which may result in death or permanent injury • Inappropriate energy which could cause failed defibrillation or post-shock dysfunction • Myocardial damage • Fire hazard in the presence of high oxygen concentration or flammable anesthetic agents • Incorrectly shocking a pulse-sustaining rhythm and inducing VF or cardiac arrest • Bystander shock from patient contact during defibrillation shock • Interaction with pacemakers • Skin burns around the electrode placement area • Allergic dermatitis due to sensitivity to materials used in electrode construction • Minor skin rash

CAUTION: U.S. Federal law restricts the SAM 360P and SAM 450P AEDs to sale by or on the order of a physician.

Please consult the user manuals at [heartstine.com](https://www.heartstine.com) for the complete list of indications, contraindications, warnings, precautions, potential adverse events, safety and effectiveness data, instructions for use and other important information.



References

- Graham R, McCoy M, Schultz A. Strategies to improve cardiac arrest survival, a time to act. *Institute of Medicine Report*. 2015.
- Walsh SJ, McClelland A, Owens CG, et al. Efficacy of distinct energy delivery protocols comparing two biphasic defibrillators for cardiac arrest. *Am J Cardiol*. 2004;94:378-380.

If you purchased your HeartSine Connected AED from an authorized Stryker distributor or reseller, this distributor or reseller will have access to your LIFELINKcentral AED program manager account and may receive notifications prompted by the HeartSine Connected AED. Please note that this setting to notify your distributor or reseller can be disabled at ANY time: if you wish to disable this setting, please send a request to Stryker Customer Support to self-manage your site without notifications to your distributor or reseller.

All claims valid as of 04/2023.

For further information, please contact your Stryker representative or visit our website at strykeremergencycare.com

Emergency Care Public Access

AED users should be trained in CPR and in the use of the AED. Although not everyone can be saved, studies show that early defibrillation can dramatically improve survival rates. AEDs are indicated for use on adults and children. AEDs may be used on children weighing less than 25 kg (55 lb) but some models require separate defibrillation electrodes.

The information presented is intended to demonstrate Stryker's product offerings. Refer to operating instructions for complete directions for use indications, contraindications, warnings, cautions, and potential adverse events, before using any of Stryker's products. Products may not be available in all markets because product availability is subject to the regulatory and/or medical practices in individual markets. Please contact your representative if you have questions about the availability of Stryker's products in your area. Specifications subject to change without notice.

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 0123 Pad-Pak; Pediatric-Pak  HeartSine Gateway

 US HeartSine samaritan PAD: UL Classified. See complete marking on product.

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