

# HeartSine® samaritan® PAD 450P

## Connected AED

### Semi-Automated Public Access Defibrillator with Integrated Wi-Fi® Connectivity

## Data sheet

### A Ready AED and High Quality CPR

#### Important links in the chain of survival

Sudden cardiac arrest strikes with little time to react and even less time to think. This means an Automated External Defibrillator (AED) must be close at hand, promote quality CPR and be ready to shock. Featuring CPR Rate Advisor™, HeartSine samaritan PAD 450P Connected AED 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 single or multiple locations.

#### Made for you

- **Integrated real-time CPR feedback**  
Provides real-time visual and verbal feedback to the rescuer on the rate of CPR compressions during an SCA resuscitation, without the use of an accelerometer.
- **Portable and lightweight**  
Most portable AED with its light weight (2.83 lb) and compact footprint.



- **Clinically validated technology**  
Proprietary electrode technology and SCOPE™ biphasic technology, a low energy escalating waveform, that automatically adjusts for differences in patient impedance.
- **Highest level of protection against dust and water**  
Offers unmatched ruggedness with its high IP56 rating.

#### 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 offers significant savings over other defibrillators that require separate battery and electrode replacements.
- **8-year Warranty**  
AED is backed by an 8-year warranty.

## Specifications

### Defibrillator

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

### Patient analysis system

**Method:** Evaluates patient’s ECG, signal quality, 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:

Shock 1: 150J

Shock 2: 150J

Shock 3: 200J

#### Pediatric-Pak™:

Shock 1: 50J

Shock 2: 50J

Shock 3: 50J

#### Charge time (typical):

150J in < 8 seconds,

200J in < 12 seconds

### Environmental

#### Operating/Standby temperature:

32°F to 122°F (0°C to 50°C)

#### Transportation temperature:

14°F to 122°F (-10°C to 50°C) for up to two days. If the device has been stored 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:** 0 to 15,000 feet (0 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

**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 80MHz-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)

**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 (4 years from manufacture date)

**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 200J or

6 hours of continuous monitoring

**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 in<sup>2</sup> (100 cm<sup>2</sup>)

**Electrode cable length:** 3.3 feet (1 meter)

**Aircraft safety test (TSO/ETSO-certified Pad-Pak):** RTCA/DO-227 (TSO/ETSO-C142a)

### 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 in<sup>3</sup> (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 or LIFENET System. USB connection to Saver EVO software through Micro USB port



# HeartSine® samaritan® PAD

## Automated External Defibrillators (AEDs)

### BRIEF SUMMARY OF INDICATIONS AND IMPORTANT SAFETY INFORMATION

#### INDICATIONS FOR USE

The HeartSine samaritan PAD SAM 350P (SAM 350P), HeartSine samaritan PAD SAM 360P (SAM 360P) and HeartSine samaritan PAD SAM 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 devices 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 devices are indicated for use on patients greater than 8 years old or over 55 lbs (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 lbs (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 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 HeartSine samaritan PAD is analyzing the patient. The device 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.
- 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 currently 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 use the HeartSine samaritan PAD in the vicinity of explosive gases, including flammable anesthetics or concentrated oxygen.
- Do NOT open or repair the device under any circumstances as there could be danger of electric shock. If damage is suspected, immediately replace the HeartSine samaritan PAD.

##### Pad-Paks:

- Do not use if the gel is dry.
- The Pediatric Pad-Pak is not for use on patients under 1 year old. For use with children up to the age of 8 years or up to 55 lbs (25 kg). DO NOT DELAY THERAPY IF YOU ARE NOT SURE OF EXACT AGE OR WEIGHT.
- Only HeartSine samaritan PADs with the  label are suitable for use with the Pediatric-Pak. If the HeartSine samaritan PAD 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 50J shocks to the pediatric patient.
- The Pediatric-Pak contains a magnetic component (surface strength 6500 gauss). Avoid storage next to magnetically sensitive storage media. It is advised that Pediatric-Paks are 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:

- Proper placement of the HeartSine samaritan PAD 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.
- Check the device periodically in accordance with the service and maintenance instructions provided in the User Manual.
- Operate the HeartSine samaritan PAD at least 6 feet (2 meters) away from all radio frequency devices or switch off any equipment causing interference.
- Use of the device outside the operating and storage ranges specified in the User Manual may cause the device to malfunction or reduce the shelf life of the Pad-Pak.
- Do not immerse any part of the HeartSine samaritan PAD in water or any type of fluid.
- Do not turn on the device unnecessarily as this may reduce the standby life of the device.
- Do not use any unauthorized accessories with the device as the HeartSine samaritan PAD may malfunction if non-approved accessories are used.
- Dispose of the device 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-Paks:

- Check expiration date.

#### 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 this device to sale by or on the order of a physician.

**Please consult the User Manual at [www.heartsine.com](http://www.heartsine.com) for the complete list of indications, contraindications, warnings, precautions, potential adverse events, safety and effectiveness data, instructions for use and other important information.**

For further information contact us at [heartsinesupport@stryker.com](mailto:heartsinesupport@stryker.com) or visit our website at [www.heartsine.com](http://www.heartsine.com).

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The HeartSine products described in this brochure meet the European Medical Directive requirement.

UL Classified. See complete marking on product.

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**CAUTION:** U.S. Federal law restricts this device to sale by or on the order of a licensed practitioner.

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