

## LifeSPARC™

Life Support Simplified.  
For more patients, in more places.



### The next generation of support

The TandemHeart pump was the driving force behind the world's first percutaneous left heart support system. With LifeSPARC, we're adding to this legacy of innovation, bringing more powerful advanced circulatory support with a redesigned pump and controller.

### LifeSPARC features:

- 40% more power, with up to 8 LPM of flow
- Sterile on-patient pump
- Quick and easy prime
- Simple user interface
- Lightweight and portable

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### Simple enough for new programs.

### Powerful enough for experienced centers.

### Versatile for a variety of hospital settings.

Millions of patients are affected by cardiac and respiratory disease each year. LifeSPARC is designed to ensure that more of those patients can be supported in a variety of hospital settings.



- Rapid, repeatable initiation of support with a streamlined user interface and simple to prime pump – essential for varying emergent rescue environments.
- The small, but powerful pump includes a magnetic pivot bearing and provides up to 8 LPM of blood flow to support a variety of cardiac and respiratory rescue conditions.
- With a small, sterile integrated pump and motor, the LifeSPARC system can be primed in minutes enabling temporary circulatory support anytime and anywhere it is needed within the hospital.
- The system can be used with four ready-to-deploy kits, which support a diverse range of cannulation strategies.

## The LifeSPARC™ difference.

### Compare to the Previous Generation



### LifeSPARC



### Escort Controller and TandemHeart Pump

#### Controller

Dimensions	H 30.48 cm (12 in) W 21.59 cm (8.5 in) D 20.32 cm (8 in)	H 38.10 cm (15 in) W 25.15 cm (9.9 in) D 25.91 cm (10.2 in)
Weight	16.5 lbs. (7.48 kg)	21 lbs. (9.53 kg)
Mobility Options	Mount to IV pole Detachable controller - 6 lbs. (2.72 kg) Shoulder strap	IV pole clamp
Interface	Four loop panel GUI	Multilevel GUI
Alarms	Multiple visual and audio indications	Single visual and audio indications
Power Source	AC power (docking station) Removable, rechargeable Lithium Ion batteries	AV power with Internal Lithium Ion battery

#### Pump

The LifeSPARC pump includes the best features of the legacy TandemHeart pump: fully integrated non-pulsatile centrifugal pump with direct (actual) flow measurement and compatibility with the full line of legacy TandemLife cannulae.

Improvements to the pump include:

Flow	Up to 8 LPM		Up to 5 LPM
Speed	2,000-7,500 RPMs		3,500-7,500 RPMs
Max Pressure	600 mmHg at 7,500 RPM		435 mmHg at 7,500 RPM
Bearing	Magnetic pivot bearing		Hydrodynamic (fluid) bearing
Pump Body Priming Volume	16 mL		12 mL

**LifeSPARC system:** The LifeSPARC system is intended to pump blood through an extracorporeal circuit for periods lasting less than six hours for the purpose of providing either: (i) full or partial cardiopulmonary bypass (i.e., circuit includes an oxygenator) during open surgical procedures on the heart or great vessels; or (ii) temporary circulatory bypass for diversion of flow around a planned disruption of the circulatory pathway necessary for open surgical procedures on the aorta or vena cava.

**TandemHeart Controller:** The TandemHeart Escort Controller is intended to be used with the TandemHeart System. The TandemHeart System consists of the TandemHeart Blood Pump, a single use, disposable device; the TandemHeart Escort (T.H.E.) Controller, a reusable control system for the TandemHeart Blood Pump; and disposable accessory items used in conjunction with the TandemHeart System.

**TandemHeart Pump:** The TandemHeart pump is intended to pump the blood through an extracorporeal circuit for periods lasting less than 6 hours for the purpose of providing either: (i) Full or partial cardiopulmonary bypass (i.e., circuit includes an oxygenator) during open surgical procedures on the heart or great vessels; or (ii) Temporary circulatory bypass for diversion of flow around a planned disruption of the circulatory pathway necessary for open surgical procedures on the aorta or vena cava.