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# sapphire™ epidural

Dedicated, color-coded,  
pain management system  
for epidural infusions



## Accurate infusion care, simple, fast, effective, and future-ready

The Sapphire Epidural Infusion Pump is a dedicated, color-coded pain management system for epidural infusions. Specifically designed to accommodate the needs and limitations of Epidural infusion Sapphire Epidural provides the complete solution for Epidural delivery.



Compact, lightweight device that is intuitive and easy to use



Consistent accuracy with robust performance



Built in safety mechanisms aimed to enhance patient safety



Smart technology that helps you minimize dosage errors and false alarms

## Optimized Patient Outcomes, for the Long-Run

Sapphire Epidural infusion pumps are small in size, yet big in performance. Offering tailored solutions for a variety of infusion needs and to enhance patient care. Sapphire's Epidural quick setup and intuitive workflows can help you improve response time and leave you with more time to care for your patient.

### The Sapphire Epidural Infusion Pump supports different modes of operation

- **CEI** (Continuous Epidural Infusion): Delivers Epidural Infusion at a constant rate with the option to administer a clinician bolus
- **PCEA** (Patient Controlled Epidural Analgesia): Delivers epidural boluses, either alone or in addition to a basal rate. A clinician bolus can also be administered
- **Intermittent Epidural**: Delivers epidural infusions at intermittent programmed intervals
- **PIEB** (Programmed Intermittent Epidural Bolus): Intermittent programmed intervals with optional PCEA, to allow patient and clinician Boluses throughout the intermittent infusion

### Key features

- Quick access to delivery history during and after infusion
- Configurable delivery limits, per volume or number of doses
- Supports up to 10 different Preset Programs per mode (PCEA/ Epidural Intermittent)
- Optional automatic lock requiring password to start infusion or update infusion parameter

# Make Sapphire Your Advantage

## Dedicated Epidural mode

- Color code differentiated
- Intuitive point-of-care programming
- Configurable settings and patient-specific parameters
- Highest  $\pm 2.5\%$  accuracy rate, like leading syringe pumps

## Exceptional ease that drives patient safety

- Large, clear, color touchscreen
- Quick setup for rapid response
- 4 lock levels
- Dual anti-free flow mechanism in the pump and administration set
- Auto restart after downstream occlusion
- Resume option after shutdown during infusion
- On-screen troubleshooting for easy alarm adjustment

## Future-ready care and confidence

- Flexible software-driven pump for versatility and fast enhancement
- Cost-effective upgrades
- Powerful platform, supporting multiple epidural protocols

## Thrive with low a total cost of ownership

- Minimized costs throughout product life-cycle, from purchase to upgrade
- High uptime, with unique pumping mechanism that reduces wear on moving parts
- Remote upgrading online, and on-site annual certification
- Reduced spending on training and inventory, Feature-rich functionality and intuitive user interface
- Highly durable with high protection against fluids, impact, and power surges



## Epidural Key Specifications

### Dimensions

143 x 96 x 49 mm (5.63 x 3.78 x 1.93 in.)  
(H x W x D)

### Weight (excluding battery)

418 g (14.7 oz.)

### Infusion device

Volumetric, peristaltic

### Pumping mechanism

Single channel volumetric,  
with an integral pressure sensor

### Infusion delivery modes

CEI, PCEA, Epidural Intermittent & PIEB

### KVO rate

Up to 20 mL/h in increments of 0.1 mL/h

### Accuracy

$\pm 2.5\%$  under normal conditions  
(per IEC60601-2-24 standard)

### Battery

Rechargeable Li-Ion battery 7.4V, 1960  
mA/h, 24 hrs @ 125 mL/h (with a fully  
charged battery and backlight Off)  
Recharge time: up to 6 hrs  
(when the pump is not in operation)

### Continuous Rate

0-25 mL/h in increments of 0.1 mL/h

### Configurable Bolus Rate

125/200 mL/h

### Volume (VTBI)

0.1 - 9999 mL in increments of 0.1 mL

### External power supply

100-240V 50-60 Hz, 0.6A

### Downstream occlusion

Up to 1.2 Bar (17.4 PSI or 900 mmHg)

### Air in line sensor

the Sensor detects single and accumulated  
bubbles of selectable sizes varying from  
0.02 mL - 0.5 mL

### Operating temperature

+5° (41oF) to 40°C (104oF)

### Water ingress and dust protection

IP24 according to IEC 60601-1-11

### Prime

Manual or automatic priming (600 mL/h,  
or from the air in line alarm 900 mL/h)

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**Technical Service Contact Information:**

[service@eitanmedical.com](mailto:service@eitanmedical.com)

**Customer Support Contact information:**

[support@eitanmedical.com](mailto:support@eitanmedical.com)

+972.73.2388888 | fax: +972.73.2388800

[www.eitanmedical.com](http://www.eitanmedical.com)



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Q Core Medical Ltd. is the manufacturer of Sapphire products.