ResQPOD® Impedance Threshold Device

The ResQPOD is an impedance threshold device (ITD) that provides Perfusion on Demand (POD) by regulating pressures in the thorax during states of hypotension.

Animal and clinical studies* have shown that during CPR, the ResQPOD:
- Doubles blood flow to the heart
- Increases blood flow to the brain by 50%
- Doubles systolic blood pressure
- Increases survival rates
- Increases the likelihood of successful defibrillation
- Provides benefit in all arrest rhythms
- Circulates drugs more effectively
Technical Specifications

Construction Description: Material
Exterior Housing: Polycarbonate
Interior Molded Components: Polycarbonate
Diaphragm: Silicone
Valve Gasket: Silicone
Valve Spring: Nickel coated stainless steel
Note: The ResQPOD does not contain latex

Timing Assist Lights
Power Source: Lithium button battery

Physical Specifications
Patient side connection: 15 millimeters ID
22 millimeters OD
Ventilation side connection: 22 millimeters ID
Height: 8.2 centimeters (3.25 inches)
Diameter: 5.3 centimeters (2.1 inches)
Circumference: 16.6 centimeters (6.6 inches)
Weight: 62 grams
Dead Space: 41 milliliters
Valve Cracking Pressure: -10 cmH2O
Airway Impedance: < -5 cmH2O
Timing Assist Lights Flash Rate: 10/minute
Operating Conditions: -18º to +45º C.
Storage Conditions: -40º to +60º C.
Shelf Life: Four years

Clinical Data

The ResQPOD, or an earlier version of the ITD, has been evaluated in over 12 animal and 11 clinical studies (www.advancedcirculatory.com). These studies have shown that the ResQPOD doubles blood flow to the heart and brain, and significantly increases circulation and survival in out-of-hospital cardiac arrest. In a Milwaukee (WI) study of cardiac arrest patients undergoing conventional CPR, systolic blood pressure and 24-hour survival rates in patients presenting in a rhythm other than asystole almost doubled when an active (functional) ITD was used compared to a sham (placebo) ITD (p<0.05 for both).


*The generally cleared indication for the ResQPOD is for a temporary increase in blood circulation during emergency care, hospital, clinic and home use. Studies are ongoing in the United States to evaluate the long-term benefit of the ResQPOD for indications related to patients suffering from cardiac arrest. This information is not intended to imply specific outcome-based claims not yet cleared by the US FDA.