

Impedance Threshold Device



Perfusion for spontaneously breathing patients

INCREASED BLOOD PRESSURE

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* The generally cleared indication for the ResQGARD is for a temporary increase in blood circulation during emergency care, hospital, clinic or home use. Studies are on-going in the United States to evaluate the benefit of the ResQCARD for indications related to patients experiencing hypotension during dialysis and severe blood loss. The information listed here is not intended to imply specific outcome-based claims not yet cleared by the US Food and Drug Administration.

ResQGARD[™] Impedance Threshold Device

The ResQGARD is an Impedance Threshold Device (ITD) that provides a safe, simple and convenient way to treat states of low blood pressure in spontaneously breathing patients.

Animal and clinical studies have shown that the ResQGARD increases blood pressure during hypotension from a variety of causes, for example:

- Orthostatic intolerance
- Hypovolemia
- Heat shock
- Dialysis
- Blood donation

The ResQGARD provides therapeutic benefit as soon as a patient begins to breathe through it.

How It Works

During inspiration, a negative pressure (created from expansion of the thorax) draws air into the lungs. When inspiratory impedance is applied to the breathing circuit, it enhances the negative pressure (vacuum) in the chest, which pulls more blood back to the heart, resulting in increased preload and thus, enhanced cardiac output on the subsequent cardiac contraction.

The ResQGARD can be used on a facemask or with a mouthpiece.









Technical Specifications

Construction Description: Material

Exterior Housing: Polycarbonate

Interior Molded Components:

Polycarbonate

Diaphragm:

Silicone

Valve Gasket:

Silicone

Valve Spring:

Nickel coated stainless steel

Physical Specifications

Patient Port:

15 millimeters ID

22 millimeters OD

ISO Standard Supplemental Oxygen Port

Height: 7 centimeters (2.76 inches)

Diameter: 5.2 centimeters (2.0 inches)

Weight: 32 grams

Dead Space:

14 milliliters

Valve Cracking Pressure:

-7 cmH₂O

Exhalation Impedance:

< -1.2 cmH₂0

Operating Conditions:

-18° to +45° C.

Storage Conditions:

-40° to +60° C.

Shelf Life: Four years

Accessories:

Facemask:

High quality facemask with three exhalation ports

Mouthpiece:

22 mm ID

Nose Clip:

Foam tip clip, EVA/POM

ResQStrap™:

Adjustable head strap

Using the ResQGARD with a Facemask

- 1. Connect the ResQGARD to the facemask.
- Explain to the patient that they will feel some slight resistance when inhaling. This means that the device is working and helping to improve blood flow.
- 3. Hold the mask over the nose and mouth maintaining a tight facemask seal.
- 4. A ResQStrap can be used to hold the ResQGARD in place.
- 5. Breathe @ 10-16/min.
- 6. Inhale slowly (over 2-3 secs) and deeply; exhale normally.
- 7. If supplemental oxygen is desired, connect the oxygen tubing to the port and deliver up to 15 lpm.





Using the ResQGARD with a Mouthpiece

- 1. Connect the ResQGARD to the mouthpiece.
- 2. Explain to the patient that they will feel some slight resistance when inhaling. This means that the device is working and helping to improve blood flow.
- 3. Place the mouthpiece into the mouth and maintain a tight seal with the lips.
- 4. Breathe through the mouth only @ 10–16/min. An optional nose clip prevents breathing through the nose.
- 5. Inhale slowly (over 2-3 secs) and deeply; exhale normally.
- 6. If supplemental oxygen is desired, connect the oxygen tubing to the port and deliver up to 15 lpm.



