

"No previously healthy person should die of hypothermia after they have been rescued and treatment has been started."

(Cameron C. Bangs, M.D. The Mountaineers 1986.)

Saving Lives Since 1983

RES-Q-AIR model Ht-1000

A Non-Invasive Core Rewarming System for hypothermia and trauma victims.

Shown without insulation, Incredibly compact,
9" long - 3" wide - 2" high, net weight 4.5 lb.



The first half hour during rescue is the most critical phase of hypothermia management.

"Truly the most significant hypothermia rescue tool designed to date." ➤ (Andrew D Weinberg, MD)

* Survival rates for inhalation rewarming method are in the range from 73 to 100 percent.

* Profound hypothermia can mimic clinical death, the statement that patients are not dead until they are warm and dead is valid, and recovery is most often complete for previously healthy individuals.

RES-Q-AIR Model Ht 1000

Hypothermia treatment, described in many current protocols such as the State of Alaska Cold Injuries Guidelines (Revised 1/2005) recommend that heated 108°F (42°C) and humidified oxygen or air should be administered

The RES-Q-AIR ® is a non-invasive Core Rewarming System, going right to the heart of the problem for hypothermia and trauma victims, by thermally stabilizing the "critical core" temperature in the field and during transportation en-route to the hospital.

* Pre-hospital stabilization Continued cooling if not arrested, can lead to ventricular fibrillation of the heart. Preventing cardiac dysrhythmias must be the highest priority, patients with a temperature below 30°C or 80°F, may not respond to defibrillation. Thermally stabilizing a patient is necessary to prevent cardiac complications.

* Inhalation rewarming is a simple, non-invasive treatment suitable for active core rewarming in the field, available to rescuers, paramedics and first responders to thermally stabilize the "critical" core temperature in the field.

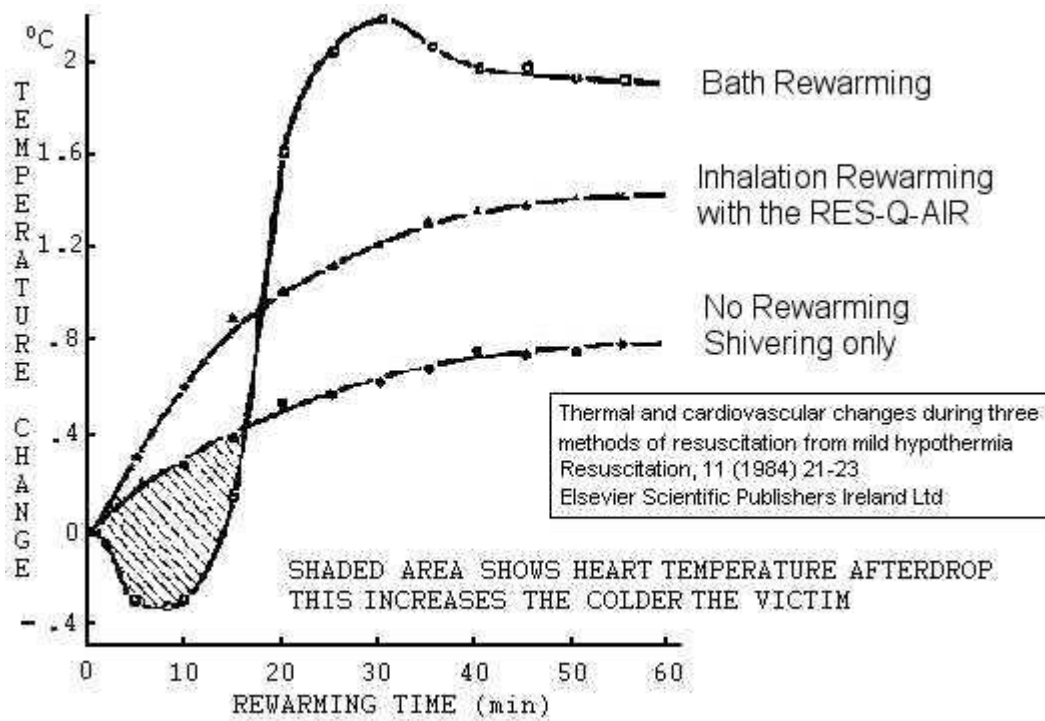
* Core rewarming is a very effective and safe treatment for all levels of hypothermia, donating heat directly to the head, neck, and thoracic core (the critical core) through inhalation of warm water-saturated air or oxygen.

* This method also warms the hypothalamus, the temperature regulation centre, the respiratory centre, and the cardiac centre at the base of the brainstem; this rewarming of the central nervous system at the brainstem reverses the cold-induced depression of the respiratory centres and improves the level of consciousness.

* In urban environments, the use of alcohol, psychiatric emergencies such as disorientation of Alzheimer's patients, and major trauma all are associated with hypothermia.

RES-Q-AIR Model 1000 • Incredibly compact, 9" long - 3" wide - 2" high, net weight 4.5 lb. • Complies with present hypothermia protocols and treatment guidelines. • The RES-Q-AIR system increases probability of survival for hypothermia victims. • The RES-Q-AIR system is specially designed to provide warm humidified air or oxygen, donating heat directly to the "core" and is non invasive. • Helps stabilize core temperature of hypothermia victims, reducing possible cardiac complications in the field. • Minimal training required, to operate: i) Pour in 70 ML water, ii) Plug into power source, iii) Apply the facemask, finished. (see: basic set up figures1 & 2 below)	• Manufactured to Military quality control standards MIL - I - 45208. • Simple, positive automated electronic temperature control. • May be operated from any 12 Volt DC power source (i.e. car, boat, ATV, helicopters). Current drain is only 6 amperes. • Ready to use immediately, no shelf life limit, no periodic maintenance required. • Cost effective, early pre-hospital care may avoid the need for other intensive treatments; patients could possibly be discharged sooner in absence of complications. • Can be integrated with other respiratory equipment e.g. bag-resuscitator, mechanical ventilator, incubators etc.
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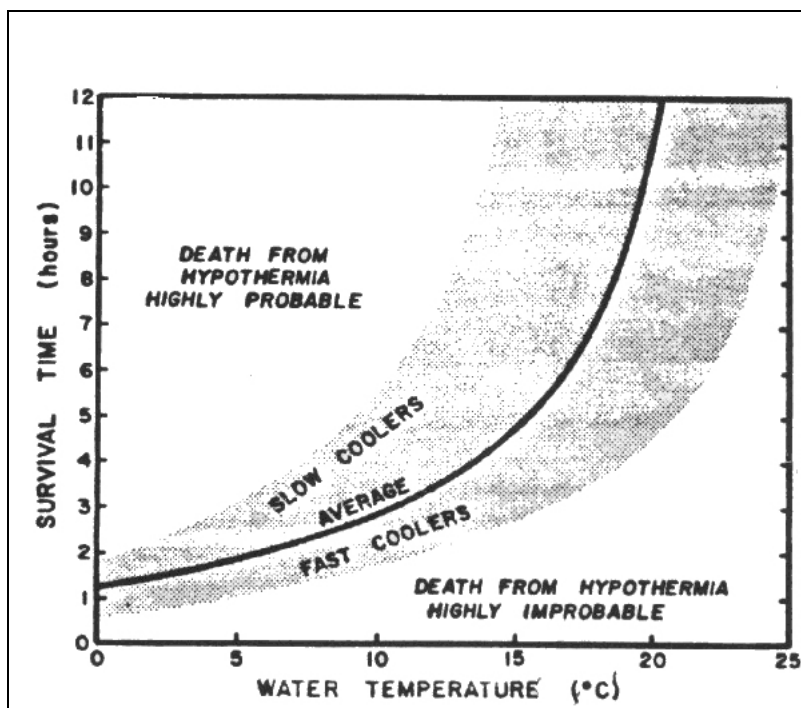




Cardiac temperatures during three different methods of rewarming

External rewarming (this example bath) causes a large afterdrop in core temperature due to vasodilatation of the blood vessels in the extremities (arms, legs and outer shell) this can lead to post rescue collapse and cardiac arrest of the hypothermic victim. This study clearly shows that inhalation rewarming limits the occurrence of afterdrop of the "critical core."

Beside this strategic donation of heat, inhalation rewarming also eliminates Respiratory heat loss. This accounts for 10% to 30% of the body's heat loss. This is particularly important in rescue situations where the ambient air is cold.

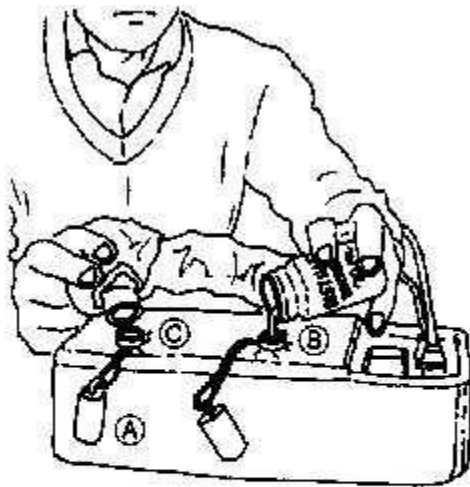


*** After-drop;** A further cooling of core temperature occurs after the victim is removed from the cold environment and during transportation to a medical facility. This after-drop is often responsible for post-rescue collapse and often causes ventricular fibrillation of the heart

In summary, inhalation rewarming is highly effective in providing "basic life support" through thermally stabilizing the core and brainstem temperatures. It is safe and non invasive treatment for all levels of hypothermia, but is particularly important for severe cases, because insulating alone (blankets), does not prevent further cooling of the core.

Avoid having the victim assist with their own rescue. Muscular activity by the hypothermic victim pumps cold peripheral blood from the arms and legs into the central circulation causing the core temperature to drop even further. Gentle handling is critical! A cold heart is particularly susceptible to ventricular fibrillation, and some victims may suffer fatal ventricular fibrillation when jolted about during initial handling or transportation.

RES-Q-AIR Basic Operating instructions pictures 1 and 2

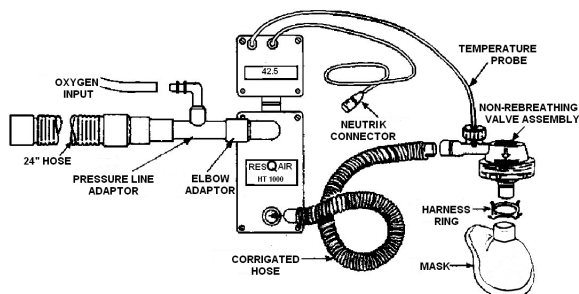


1. Remove protective dust caps (A) Do not replace when unit is in use.
2. Pour 70 ml (2.5 oz.) distilled water into Inlet port (B)
3. Attach airway to lower port (C)

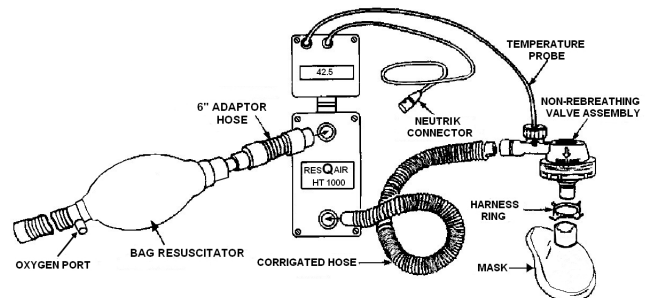


4. Attach power cable to battery (D) (or 12VDC power supply or vehicle power)
5. Attach mask and head harness to patient making sure HT 1000 is positioned lower than the patient's face

RES-Q-AIR AND OXYGEN HOOKUP



BAG MASK RESUSCITATOR HOOKUP



Sealed Rechargeable 12 A/Hr Battery



PS-12120 L

General Specifications

8.38 inches / 213 mm Length
2.75 inches / 70 mm Width
5.50 inches / 140 mm Height
9 pound / 4.2 kg Weight

Power Supply and Battery Charger Combination



12BC Characteristics

Automatic chargers combine the advantages of float and cycle chargers; recharge time is short yet batteries are safe from being overcharged. This charger is ideal for cyclic applications where recharge time is critical and the battery may be left on charge indefinitely, such as standby for emergency response. As a result charging is fool-proof.

This model is microprocessor controlled. Automatic dual rate charger senses battery requirements and switch from bulk to float mode, or visa versa. LED's provide visual indication of the charging mode.



Output Current 10 amps continuous duty
Output Voltage 13.8 VDC +/- 150 mV
Input Voltage Ranges switch able 110 - 220 VAC 50 and 60 Hz. Weight 3.5 lbs.
Dimensions 8.5 "L X 7.05" W X 1.7"H

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Websites [Http://www.hypothermia-ca.com](http://www.hypothermia-ca.com) and <http://www.hypothermia.org>

Hypothermia Equipment for the Treatment of Hypothermia victims in the field, during transportation and in the emergency room.