RINI TECHNOLOGIES

PERSONAL COOLING SOLUTIONS

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BENEFITS:

- Maintain cognitive skills
- Increase mission duration
- Enhance operational effectiveness
- Helps maintain core body temperature
- Reduce dehydration risk through perspiration reduction
- Mitigate long-term physiological health risks associated with heat stress

APPLICATIONS:

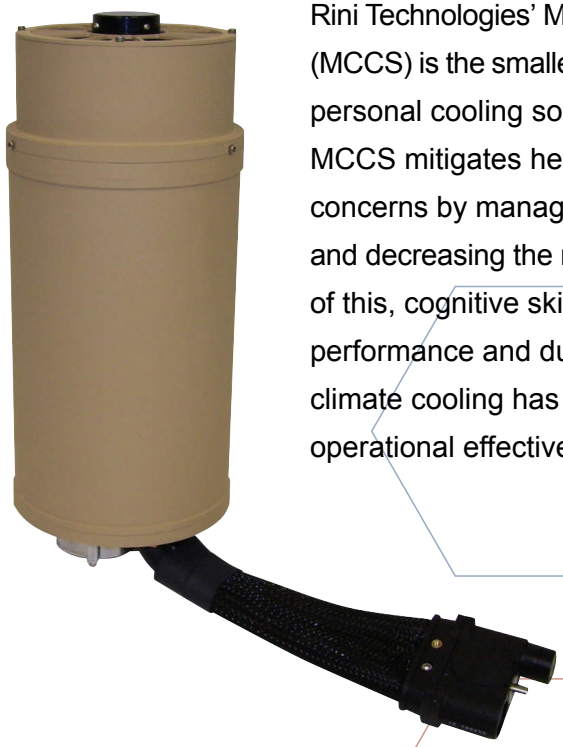
- Military Body Armor
- Bomb Squad EOD Suits
- Chemical/Bio Suits
- Fire Fighting

SPECIFICATIONS:

- **Cooling:** 120 Watts
- **Run Time:** 4 Hours (indefinite with battery swap)
- **Size:** 92 in^3 (1.5 L)
- **Weight:** 3.5 lbs (+2.5 lbs for battery)
- **Ambient:** up to 125°F
- **Power Source:** BB2590 & BA5590 (12 VDC) Batteries, Hybrid Portable Fuel Cells
- **Flow:** 12 GPH
- **Water:** 72°F

Personal Micro-climate Cooling System (MCS)

We all rely upon first responders, war fighters, military personnel, and homeland security professionals to protect our national security and personal safety. On a daily basis these individuals are faced with the arduous task of detecting, classifying, and neutralizing threats, including explosives, chemical and biological warfare, and a wide range of hazardous materials. While designed for safety, the protective gear worn often poses health risks due to induced heat stress.



Rini Technologies' Micro Climate Cooling System (MCCS) is the smallest, lightest and most efficient personal cooling solution yet developed. The MCCS mitigates heat stress and health risk concerns by managing core body temperatures and decreasing the risk of dehydration. Because of this, cognitive skill is maintained and mission performance and duration are enhanced. Micro climate cooling has been proven to increase operational effectiveness and health safety.

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Military

EOD

Chem/Bio

Fire

How the MCCS Works:

The MCCS employs patented technology in a vapor compression cycle to chill water to 72°F. Chilled water circulates through a tube suit heat-transfer garment that is worn beneath protective gear, close to the skin. The water pulls heat from the wearer, and the heat is then released through a heat exchanger.

In this way, the MCCS effectively and efficiently maintains the core body temperature of the person wearing the protective gear. The MCCS works continually and reliably, and can be counted upon to work when they need it the most—such as when engaged in strenuous activities and hot ambient conditions. This cooling capability mitigates heat stress, while extending mission duration as needed and increasing operational effectiveness.

The MCCS was recently tested by US Army individuals, who offered the following feedback:

> *"Cooling capacity is right on….awesome job. I am a big fan…I like how cool it is, I really do. I'm not giving this back; I am taking it home with me"*

About RINI Technologies:

RINI Technologies provides innovative solutions to the toughest thermal-management challenges. The company specializes in advanced Evaporative Spray Cooling (ESC), Thermal Energy Storage (TES) solutions and miniature refrigeration systems. Applications include high-power lasers, power electronics, and personal cooling. Contact RINI Technologies today to discuss how its engineers can address your cooling concerns with a complete system solution.

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