



AIR WARRIOR MICROCLIMATE COOLING GARMENT (MCG) | TSPID

OVERVIEW:

The **Air Warrior Microclimate Cooling Garment (MCG)** was developed by the U.S. Army Natick Soldier RD&E Center (NSRDEC) to interface with the Air Warrior Microclimate Cooling Unit (MCU) used onboard U.S. Army rotary wing aircraft and some armored vehicles. The MCG is a lightweight, comfortable, breathable, tube type undergarment worn against the skin. When interfaced with the aircraft mounted MCU, it provides the means to circulate a coolant fluid to the torso of the body to remove metabolic heat from aircrew conducting operations in heat stress environments.

Human studies conducted in a flight simulator have demonstrated the ability of the system to increase aircrew mission duration from 1.6 hours to more than 5 hours in a 100°F environment, while wearing MOPP4 protective clothing.

The Air Warrior Microclimate Cooling Garment is currently being procured by the Product Manager-Air Warrior. It has been in production since 2004.

The AW MCG received one of the US Army's Top Ten Greatest Inventions Awards in 2002.

FEATURES:

- Based on NSRDEC patented laminating technology that captures coolant tubes between two layers of 100% cotton fabric
- Available in three sizes, to fit 90% of the U.S. Army male and female population
- Capable of removing 180 watts of body heat from the torso when the fluid is delivered at a temperature of 65°F and a flow rate of 12 gallons per hour (gph)
- Weight with fluid: 2 pounds
- The Liquid Quick Disconnect (L-QDC) provides a hands-free breakaway capability for emergency egress
- Low pressure drop
- Machine launderable



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DETAIL OF L-QDC



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