

COBHAM

Microclimate Cooling Systems

Keep Troops Battle Ready Cool

COBHAM

The most important thing we build is trust



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Combat Proven Thermal Management Systems

When Ruggedness and Reliability Matter



1 Cobham's Microclimate Cooling Systems mitigate heat stress for personnel burdened with body armor in extreme climates; several thousand units have been fielded on the Stryker and Stryker MGS

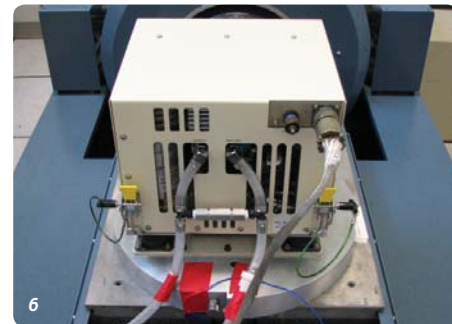
2 Microclimate cooling systems have mitigated the impact of heat stress on ground vehicle crews where cabin temperatures can exceed 150 degrees F

3 Battle tested and combat proven, Cobham's MCUs have been fielded in Iraq and Afghanistan since 2003

4 The MCU is the **unit of choice** for the US Army's Air Warrior program. Use of the MCU was shown to extend safe mission duration by 350% at extreme ambient temperatures



5 Cobham Microclimate Cooling Units (4) installed on Blackhawk helicopter



6 Cobham Cooling Units undergo extensive testing

When unrelenting heat is a merciless enemy, Cobham has the answer with its superior battle tested personal cooling solutions for aircraft and ground vehicle crews.

In the air or on the ground, its Microclimate Cooling Units (MCUs) set the standard for performance by withstanding higher temperatures where other boxes fail. Designed and qualified for the US Army Air Warrior program, the MCU has been shown to increase safe mission duration by more than 350% for helicopter crews operating in high ambient temperature conditions. Cobham's cooling systems decrease the incidence of thermal stress and heat stroke while increasing comfort, safety, and endurance.

Thousands of Cobham's cooling systems have been fielded on US Army and Marine Corps helicopters and ground vehicles.

Also, Cobham engineers have worked closely with military and OEM customers to develop vehicle and aircraft integration solutions. Cobham's microclimate cooling products are

- Single or multi-user systems
 - Compact, lightweight, and rugged
 - Used in aircraft and ground vehicles
- A Microclimate Cooling System consists of
- a small, portable box mounted in the vehicle or on the aircraft
 - a self-contained tube-type, closed-loop vapor-compression system that chills and circulates an environmentally-friendly liquid coolant through a network of small, flexible hoses
 - a 100% cotton vest worn by the warfighter

Cobham's compact and lightweight cooling system maintains the soldier's core body temperature at safe levels and mitigates heat stress, averting thermal fatigue.

Cooling relief is almost instantaneous, as the warfighter adjusts the cooling capacity using the control bypass module. The MCU itself, not including the garment, is designed to withstand explosion, salt fog, sand, rain, fungus, vibration and shock, and rapid decompression. It is rugged, reliable, and intended not only to save lives, but also to enhance crew performance, and it does just that.



7 Microclimate Cooling Unit (MCU)

Microclimate Cooling Unit (MCU)



The MCU is the unit of choice for the US Army's Air Warrior program. Over 15,000 have been fielded for use in US military helicopters and ground vehicles.

- 1 to 2 users
- Cooling Power @ 125 deg F (52 deg C) 350W nominal



8 Two-Man Microclimate Cooling Unit (MCU2)

Two-Man Microclimate Cooling Unit (MCU2)



The MCU2 is a two person drop-in replacement for the MCU.

- 2 users
- Cooling Power @ 125 deg F (52 deg C) 500W nominal



9 Multi-Man Microclimate Cooling Unit (MMCUC)

Multi-Man Microclimate Cooling Unit (MMCUC)



The MMCUC Multi-Man Microclimate Cooling Unit is an enhanced version of the MCU that provides enough total cooling for most vehicle crews.

- 4 to 5 users
- Cooling Power @ 125 deg F (52 deg C) 1000W nominal



10 Microclimate Cooling Garment

Microclimate Cooling Garment

The Microclimate Cooling Garment features a liquid quick disconnect for emergency egress.



11 Microclimate Cooling Unit with Garment and Umbilical