

Microclimate Cooling System

MCS

COBHAM

The most important thing we build is trust



The Microclimate Cooling System (MCS) is used to provide personal cooling and heat stress mitigation to individuals subjected to elevated ambient temperatures or wearing thermally restrictive clothing.

Cobham's Microclimate Cooling System is liquid based (water-glycol mixture as cooling medium) and consists of an aircraft or vehicle mounted Microclimate Cooling Unit (MCU), Microclimate Cooling Garment (MCG), interconnecting umbilical with integral cooling power control pod and a mounting tray.

The MCS was originally designed and qualified as part of the US Army Air Warrior program for use by helicopter aircrew. The system has been certified for use and fielded aboard the UH-60, CH-47, CH-53 and OH-58 helicopters. The MCS has also been qualified for use on combat and tactical vehicles. Cobham Microclimate Cooling Systems have been fielded on the following ground vehicles: M1 tank, Bradley Fighting Vehicle, Stryker family of vehicles, M88, Light Armored Vehicle (LAV), and the M9 ACE.

Key Features

- Compact, lightweight, design
- High efficiency vapor cycle chiller
- Water-glycol based cooling medium
- Mil qualified

Specifications

Cooling Medium	Water-Glycol Mix	
Cooling	350W nominal at 125 deg F	(52 deg C)
Water Temperature	65 to 68 deg F	(18 to 20 deg C)
Water Flow Rate	10 to 12 gph	(38 to 45 lph)
Weight		
MCU	12.9 lbs	(5.9 kg)
MCG	~ 2.0 lbs	(0.91 kg)
Tray	~ 1.7 lbs	(0.77 kg)
Umbilical Assy	~ 0.3 lb per ft	(0.45 kg per m)
Electrical Characteristics		
Voltage	22 to 30 VDC	
Power	12 ADC max @ 28 VDC	
Specifications	MIL-STD-461, MIL-STD-704	

Operating Environment

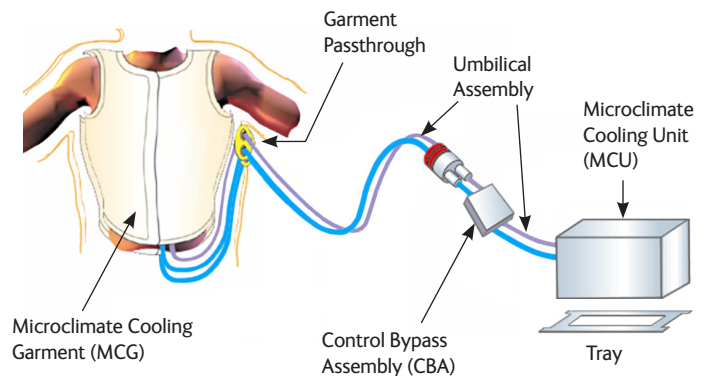
Temperature	55 to 150 deg F	(13 to 66 deg C)
Humidity	95% max at 140 deg F	(60 deg C)
Altitude	0 to 20,000 ft	(0 to 6,100 m)
Shock	consult factory	
Vibration	consult factory	
Crash Safety	20 g each axis	

Non-Operating Environment

Temperature -65 to 160 deg F (-54 to 71 deg C)

Product Interfaces

Power Cable Connector Mil-Style D38999/24WD5PN



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For further information please contact:

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