



Modular Individual Water Heater (MIWH)



The Modular Individual Water Heater (MIWH) will improve morale and operational readiness by providing soldiers with an effective capability to heat water for beverages, dehydrated rations, and personal hygiene.

Why is it Needed?

Soldiers in the field do not have an effective means of heating water. The Meal, Ready-to-Eat (MRE) provides a chemical heater for the entrée, but not for beverages. Dehydrated meals in the Long Range Patrol Food Packet and the Meal, Cold Weather require at least a pint of hot water. Fuel bars have systemic supply problems and can produce noxious fumes, and commercial camp stoves are too expensive, large, and heavy for infantry use, produce too much heat, and cannot reliably burn battlefield fuels. Because many soldiers now wear water bladder hydration packs, a solution is needed that works with both bladders and standard issue canteens.

Technology:

The core of the MIWH system is the heat source. It is a revolutionary pocket-sized stove that burns JP-8 fuel cleanly and safely. To deliver fuel, the stove uses a capillary pump and a novel liquid vaporizer constructed of ceramic layers. The MIWH has no moving parts and has no need for a pressurized fuel tank. The stove is designed to be modular and interchangeable. To heat water, the stove is connected either to a hot water coil that interfaces directly with a hydration pack drink tube, or to a specialized mug that is designed for high-efficiency heat transfer.

Key Features / Benefits:

High Performance...Lightweight and fuel-efficient, the system boils a pint of water in minutes.

Convenient...The burner ignites with an MRE match. The system is compact and nests for stowing in a backpack pocket.

Logistic Support...The system uses readily available JP-8 fuel. Special hardware facilitates fuel transfer from 5-gallon cans.

Technology Base...The heat source can be applied to other small heat-driven devices, such as beverage chillers, personnel warmers, lanterns, generators, and infrared markers.

Point of Contact:

DoD Combat Feeding

Phone: COMM (508) 233-4401, DSN 256-4401

E-Mail: amssb-rcf@natick.army.mil



**NATICK
SOLDIER
CENTER**

Kansas St.
Natick, MA
01760

nsc.natick.army.mil

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