

Description of the technology:

A membrane based water purifier of 12-15 L/hr purification capacity is designated as “High Altitude Water Purification System” (HAWPS). It has been developed keeping in view of harsh field environment conditions of high altitude. It can also be easily operated in desert and plains where the major cause of water contamination is the turbidity due to suspended/ dissolved silt, carbon particles and microbial impurities. The system is equipped with unique antifreeze device for low temperature protection of membrane filters. It is manually powered and backpack type portable water purifier.

Application Areas:

- Soldiers on patrolling
- Army unit located far with no access to power
- Installation in train and other moving vehicles
- Installation at CRPF/ITBP/BSF posts
- Desert, Plain and High Altitude area
- At cold areas where other water purifier bursts due to freezing
- Water contaminated with turbidity, microbial and Carbon particles
- During flood and other natural disaster
- Remotely located villages and hamlets where power source unavailable and service engineer visit is inaccessible

Unique Selling Point (USP):

- Manually operable with option of electric and battery
- Freeze protected
- Backpack type portable system
- Working temperature range is 3 °C to 45 °C (± 2 °C)
- Storage temperature range is (Minus)-25 °C to 50 °C (± 2 °C)
- Manually operated light weight pumping (~ 200 g) system, can purify high turbidity, carbon particle and microbial contaminations (Bacteria and Virus)
- Total system weight (excluding rucksack) is less than 4.7 kg
- Nut and Bolt free user friendly system.
- Service engineer not required to replace the membrane (Replacement time is 2-3 minutes)
- Unique antifreeze device and membrane cleaning valve
- Trouble free self-sealing for system protection, fast turn-on and turn-off
- 100% indigenous components including membranes.
- Self sealing feature protect the system from any outside contamination.

Certification and Test Results: DRDO internal trials and installation at Changla (17,600 feet), Leh.

Demonstration: Defence Minister, Chief of Army Staff (COAS), Deputy Chief of Army Staff (DCOAS), Director General Infantry, BSF DG North, Ministry of Home Affairs

Photographs of HAWPS



HAWPS



HAWPS housed in rucksack



A soldier with HAWPS



Feed Water Quality



Working of HAWPS (Operation by User)