



Backpack Ultra-Filtration **Water Purification**

- **Dramatic Cost Savings** over bulky, diesel-driven, high operating cost, labor-heavy systems.
- **Weighs only 3.628 kg (8 lb.);** rugged; ITAR-free; No diesel required; solar and/or battery powered.
- **Appr. 7.57 liters (2 gals.) a minute** of 0.01 micron pure water.
- **No maintenance or filter changes:** designed for sustained deployment outside the logistics chain.



The Argonaut 200 Backpack water purification system is a solar and/or battery-powered, ultra-lightweight (less than 8 lb., or 3.628kg) system, totally diesel-free and network-free, capable of generating 1.5 to 2 US gallons (7.57 liters) of purified water per minute (depending on ambient conditions; more under some conditions). Can be connected to automotive and most standard military batteries if required. No filter changes required; no maintenance, other than occasional backwashing to clear filters (as needed). Purification to nominal 0.01 micron filtration of with an absolute rating of 0.02 of purity and zero turbidity. Exceeds all international water standards.

All tubing is anti-microbial-rated with a

silver lining which inhibits the growth of bacteria, mold, fungi, and other forms of microbial contaminants. The material meets current NSF 54 and 61 standards. Enhanced filtration capacity for organic solvents, petroleum oils, alkalis, organic, and mineral acids can be provided by a lightweight, optional pre-filter sleeve. In addition, an optional inline post-filtration carbon filter option can provide additional VOC filtration capabilities, although these optional systems reduce product yield by 35-40% and are non-reusable.



- ▶ **Filtration and Flow:** *Argonaut* systems use a ultra-fine lumen structure of polysulfone fabric with a proprietary coating. System is a looped structure inside a pressure-rated vessel to achieve a filtration of 0.02 micron absolute; 0.01 nominal. Capable of at least 6-log reduction of bacteria and 4 log of virus as tested using P231 Rapid Screen Protocol. Independent lab results available. Filtration designed to flow from the outside of the hollow fiber into the structure. Cleansing of the fiber membrane is achieved from a 1GPM flow in a reverse direction. The fiber membrane is housed in a non-corrosive pressure vessel rated to 100 psi. Service flow is based on 30psi and produces 0.6GPM per filter subassembly. At 50PSI continues flow rates increase to 0.84 GPM per subassembly.
- ▶ **Ruggedized:** *Argonaut* systems are fabricated to MilSpec standards. Pressure pump system is mounted on a custom machined assembly designed to absorb shock loads and reduce vibration-generated noise. Control tray is bedded on a mounting block of sorbathane to further enhance durability.
- ▶ **Medical Grade Water:** When filtration beyond NSF P231 (M microbiological Water Purifier) is needed, the *Argonaut* 200, with the attachment of its optional post-filter assembly, provides filtration to meet NSF 42 (Aesthetic Effects) and NSF 53 (Health Effects) from soluble Volatile Organic Chemicals (VOC) and Methyl tert-butyl ether (MTBE).
- ▶ **Totally ITAR-Free.** Ideal technology for leave-behind, civil affairs operations.
- ▶ **Scaleable.** Can be scaled up for vehicle-borne ops or battalion-level, or down for SpecOps missions.
- ▶ **Colors.** The *Argonaut 200* case can be painted in client-specified color for volume orders.



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