

# Air Mobile Water Purification



**The incredibly powerful and very portable Air Mobile water purifier efficiently produces safe, clean potable water free of sediment, lead, bacteria, viruses and parasites from untreated water sources such as streams, ponds or contaminated municipal water. Utilizing AC, DC, battery or solar power, each Air Mobile water purifier can produce 22-25 gallons per hour on site to avoid costly transport of prepackaged water.**



Air Mobile Ministries

***[www.airmobile.org](http://www.airmobile.org)***

**P.O. Box 406**

**Sneedville, Tn 37869**

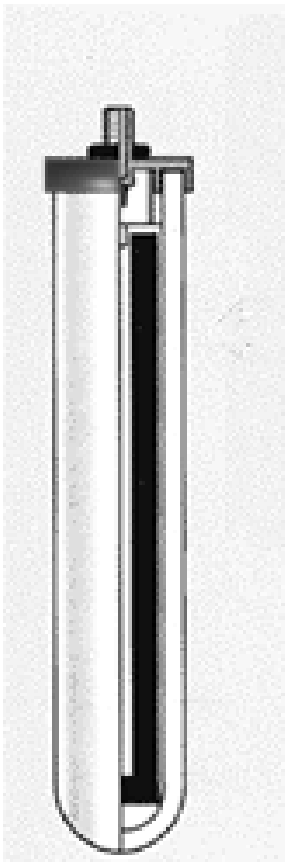
**Office 321-544-7757**



The Air Mobile water purifier uses the same powerful purification process found in nature.

**The Air Mobile water purifier is a seven stage, self-contained electro-mechanical water filtration and purification system that provides fresh, clean drinking water. The system has been designed to remove sediment, lead, bacteria, and viruses from untreated water sources such as rivers, streams, lakes, ponds, springs, reservoirs and wells.**

- Stage 1 – Large Particle Pre-filtration** – For use in contaminated city water, a stainless steel suction screen is used at the point of entry to remove any large particles. For more cloudy water, a 1 micron suction pre-filter is recommended.
- Stage 2 – Sub Micron Particle Pre-Filtration and Water Clarification** – A .9 (9/10) micron ceramic diatomaceous filter with Sterasyl membrane is used to remove pathogens, sediment and improve clarity prior to the water purification process.



The chemically inert ceramic diatomaceous filter can be stored long term without losing its effectiveness.

Pathogens of the most varied diseases which are reliably filtered from the water include; cholera, typhus, cryptosporidium, amoebic dysentery, ecoli, colibacillose or bilharzia, anthrax spores among others. To prevent the proliferation of accumulated pathogens, the filters are manufactured with a small amount (about 0.07%) of pure silver (Ag) through-out the porous ceramic shell. In the presence of air (oxygen in water), metallic silver forms silver oxide, which also has a bactericidal effect.

Sterasyl membrane: Used for microbiological removal. The only ceramic element in the world to meet the stringent NSF antimony and arsenic extraction test featuring:

- >99.99% E.coli removal
- Tested with live Cryptosporidium cyst to 100% removal far exceeding EPA three log cyst reduction requirements
- 100% efficiency at 0.9  $\mu\text{m}$  absolute (0.5  $\mu\text{m}$  absolute ANSI standard)
- > 98% efficiency at 0.2  $\mu\text{m}$
- > 90% efficiency at 0.05  $\mu\text{m}$
- < 0.07 NTU turbidity reduction

•**Stage 3 – Ozonation** – Ozone is generated within the unit and is mixed with the water that has passed Stage 2. Like chlorine, ozone is a powerful oxidizer. Unlike chlorine, ozone leaves no chemical residue.

Ozonation oxidizes soluble metals, such as iron and manganese, which are then filtered out through the carbon filter in stage 6.

•**Stage 4 – Ultraviolet (UV) Light Exposure** – The ozone saturated water is flooded with ultraviolet light, which inactivates harmful microorganisms.

•**Stage 5 – Photo-oxidation** – An ozone / UV photo oxidation process takes place. Photo-oxidation is what makes the Air Mobile water purifier process of purification unique, combining the ozone and UV in a synergistic process. The UV “catalyzes” the ozone to amplify the oxidation of contaminants.

•**Stage 6 – Activated Carbon Post Filtration** – Water is filtered through an activated carbon filter. This purification process uses a high performance, 1 micron cartridge with a special lead absorption media. This filter is designed to trap dissolved lead and chlorine, and very small particles such as the byproducts oxidized in stages 3 through 5.



**The following are water contaminants that can be reduced to acceptable standards by activated carbon filtration.**

*Inorganic Contaminants:* Chlorine, Heavy metals, Arsenic Complexes, Chromium Complexes, Mercury (Hg+2) & Mercury Complexes

*Organic Contaminants:* Organic compounds such as pesticides and petroleum products.

**\*\* Important note - Limitations:** If the nature of the water contamination is predominantly the above compound contaminants in an extraordinarily high concentration, additional post-filtration may be necessary.

**\*\*This water purifier does not remove salt.**

•**Stage 7 – Post Filtration UV** – As further protection against microorganisms, the filtered water is again exposed to high-density UV light.



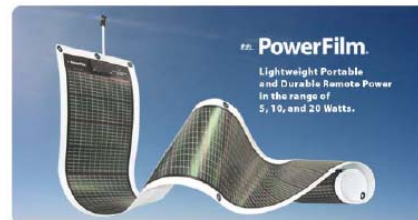
## Kit Includes

- Complete, ready to use Air Mobile water purifier
- Operating / Cleaning instructions
- Travel Case –standard weather resistant
- Spout with Exit Tube
- Suction Tube with Suction Screen
- Suction Filter kit with filter
- 2 pair of large Durable, Non-latex gloves
- A/C Power Cord
- D/C Power cord with banana plugs
- D/C Power cord adapter kit with alligator clips
- International Plug Set
- Scouring pad
- 3 support stand stabilizers
- Spare Suction Filter
- Spare Ceramic Filter
- O-Ring Kit (2 Spare ceramic filter housing o-rings, 1 water purifier o-ring and 1 carbon filter o-ring)
- Fuse Kit (2 water purifier fuses and 1 pump fuse)

## Optional Accessories



### Backpack Carry System



### 40 & 60 Watt Solar Power

(40 Watt – 2 Panels 60 Watt – 3 Panels)

Used as sole or supplemental power for a Power Pack

Wide variety of electrical adapters available

## Power source notes

Please note there are several sources available in undeveloped countries for 12 volt DC including car and motorcycle batteries. Motorcycle batteries are especially useful as they are small and very portable.

12 Volt Rechargeable Power Supplies or jump start packs, which may include features such as emergency light, power inverter (for charging cell phones laptops, running radios, etc.) can be purchased at big box stores stateside.

## **SPECIFICATIONS**

- Physical Dimensions: 5.5"x16.5"x10.5" alone, 7.5" x 19.5" x 15.5" in case
- Weight: 20 lbs alone, under 30 lbs. in case
- Power Requirements: DC 12V; AC 100-240V, 50-60 cycles (50 Watts Nominal and 55 Watts Peak)
- UV Exposure Intensity: In excess of 22,500 microwatt seconds per square centimeter.
- Flow Rate: up to 25 Gallons/Hour continuous
- Vortex<sup>™</sup> Purification Post Filtration Module has been tested against ANSI/NSF standards 42, 53, and 55 for lead, cyst, and turbidity reduction, and for UV performance. The unit is listed under the trade name "Aquacure" as WQA goldseal certified.
- All parts that touch water are NSF certified.

## **SYSTEM OPERATING CLAIMS**

- .9 (9/10) Micron Pre-Filter: Replace after approx. 10,000 gallons.
- Water purifier UV Lamp: Life 10,000+ on/off cycles
- Activated Carbon Filter is Style Formed radial-flow activated carbon for pollutant removal. This filter can last from a few months to over a year depending on your water supply contamination. The carbon filter should be replaced if the water starts to taste or smell bad.

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