



Water Pasteurizer

Our water pasteurizer is an innovative system capable of providing safe drinking water for entire communities. With an output exceeding 1,000 gallons per day, our pasteurizer produces up to 40 times as much potable water as boiling over an open fire with the same amount of fuel. The system is designed to operate with a gravity-fed water supply and works off the grid with small amounts of solid fuel.

Extensive field trials were conducted in Zambia in October, 2013; additional placements are planned for both Zambia and Haiti. The unit is scheduled to enter full production in 2014.

Attributes

- **Safe** – Water is heated to 71°C, eliminating 100% of waterborne pathogens
- **Reliable** – Failsafe valve prevents contaminated water from passing through the system
- **High-volume** – Produces over 100 gallons per hour, enough for up to 1,000 people per day
- **Efficient** – Less than 1/12th of a pound of wood required to produce 1 gallon of safe water (or less than 10 grams per liter)
- **Affordable** – Low fuel, ease of use, and high flow rate allow water to be affordable by even the poorest of the poor
- **Portable** – Can be quickly and easily transported and set up in remote locations or disaster sites
- **Low environmental impact** – Eliminates the need for chemical sterilization, and greatly reduces demand for fuel use and smoke emissions compared to boiling on an open-fire

UPDATE: As of April, 2014, an improved prototype model has approximately doubled the system output and efficiency. Tentative performance results are shown on the reverse side of this page.

Water Pasteurizer Performance¹

First Generation Prototype Performance:

Performance Measure	Standard	Metric
Average production rate	100 gal/hr	379 L/hr
Fuel consumption per volume of water produced	0.08 lb/gal	10 g/L
Outflow water temperature	113°F	45°C

Current Generation Prototype Tentative Performance (as of April, 2014):

Performance Measure	Standard	Metric
Average production rate	211 gal/hr	800 L/hr
Fuel consumption per volume of water produced	0.04 lb/gal	5 g/L
Outflow water temperature	88°F	31°C



Pasteurizer is mounted on a modified 100L pot lid

¹ Results are dependent on input water temperature (20°C is assumed for these results) and based on testing with prototype units. Ongoing development may improve the performance of the final production model.