



A Revolutionary Point-of-Use Water Filtration Device

www.wpisolutions.com

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What Is It?

The ProCleanse™ filter is a patented water purification system which removes harmful pathogens from contaminated water, stores clean water, and operates with no power, moving parts or chemicals.



Advantages Over Other Filters

- **Disinfection** – kills Bacteria, Viruses and Cysts - exceeds World Health Organization (WHO) standards for bacteria (E-Coli), protozoa (fecal coliform) and clarity
- **Simple** – no assembly, chemicals or boiling required, ready for use on day one
- **Power** – none required - gravity feed only
- **Sustainable** – low maintenance, durable, 10 year use
- **Replacement Parts** – none required, no operating costs
- **Disposal** – no components to dispose
- **Storage** – 18 litres of clean water storage



Design Features

- **Dimensions** - less than 40 lb (18 kg) dry, 15" (38 cm) diameter x 24" (64 cm) height
- **Output** – up to 3 to 5 US gallons (10-20 liters) per hour, or 460,000 US gal (1.7 million liters) over 10 years
- **Disinfection** – combines granular ceramic filtration, biocidal ion exchange and clean water storage in one device
- **Water Clarity** – reduces water cloudiness, exceeds WHO 'turbidity' standards
- **Dual Chamber** – first for filtration and disinfection, second for storage
- **Durable** – tough, food grade hard plastic (HDPE) construction
- **Job Creation** – can be used to produce clean water for sale to others = employment income



Metal Extraction

- In addition to waterborne pathogen removal, the ProCleanse[®] filter can be adapted to remove certain waterborne trace metal pollutants such as arsenic and mercury.
- Metal types and concentrations will dictate extractor design scope and cost

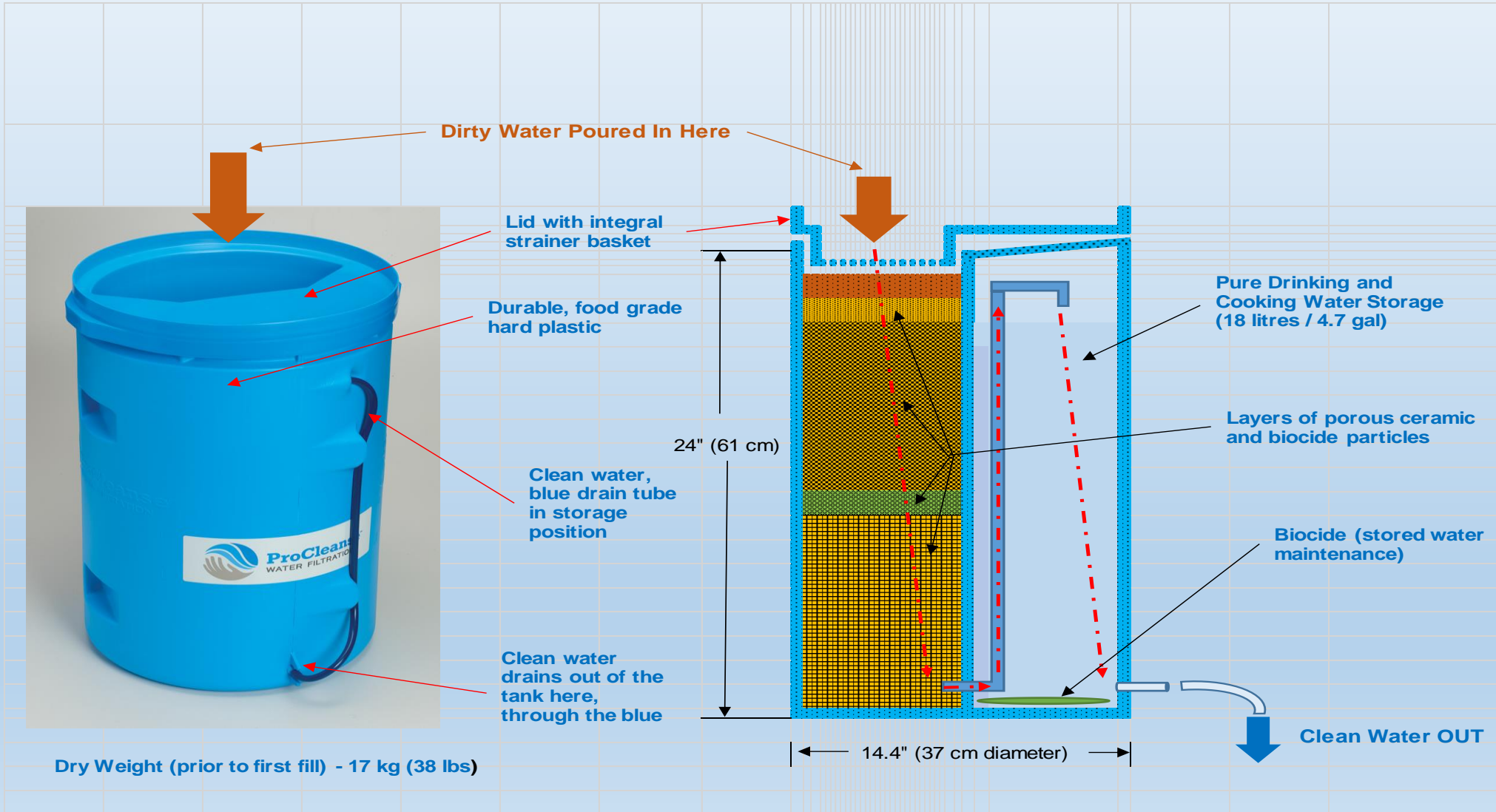




ProCleanse™
WATER FILTRATION

How It Works

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World Health and Household Water Treatment & Storage Targets

Pathogen class	Log ₁₀ reduction required ^b		
	Interim	Protective ^c	Highly ^c protective
	Requires correct, consistent and continuous use to meet performance levels		
Bacteria	Achieves "protective" target for two classes of pathogens and results in health gains	≥ 2	ProCleanse ≥ 4
Viruses		ProCleanse ≥ 3	≥ 5
Protozoa		≥ 2	ProCleanse ≥ 4

^b Computed as $\log_{10} (C_{\text{untreated water}} / C_{\text{treated water}})$, where C = microbe concentration in water.

^c Treated water achieving the log₁₀ reduction required to meet the health-based target of 10⁻⁴ ("protective") and 10⁻⁶ ("highly protective") DALY per person per year, based on the given assumptions for background water quality and using the QMRA models as described in the GDWQ (WHO, 2011).

Packaging / Installation

- Palletized and crated - 27 units
- Shipped in 53 ft trucks (726 units) or in 40 ft sea containers (540 units)
- Installation requires simple placement minimum 30 cm off the ground, removal of packaging materials on and under lid, then priming with 50 litres of water



Where Is It Being Used?

ProCleanse™ water filters have been in use since 2010 in over 24 countries worldwide for clean water supply to

- Schools
- Hospitals
- Villages
- Homes
- Orphanages
- Emergency sites
- Remote sites



Cost?

	<u>ProCleanse™</u>	<u>Competitor</u>
Initial Cost	\$450	\$90
After 11 days		
Clean water generated, gal	550 ¹	550 ¹
Replacement cartridges	n/a	\$367 ²
Total cost	\$450	\$457
<i>ProCleanse™ Filter is paid back within 11 days !</i>		
After 30 days		
Clean water generated, gal	1,500	1,500
Replacement cartridges	n/a	\$1,000
Total cost	\$450	\$1,090

1. Assumes 50 US gallons of clean drinking water generated per day
2. Assumes competitor cartridge replacement every 30 US gal @ \$20 each



ProCleanse™ Water Filter Placements (2010 - 2016) ~ 7,600 units

