



ProCleanse is a subsidiary of a technology-driven company that has been an industry leader for more than 40 years in the business of soil modification, erosion & sediment control and water management. The ProCleanse water filtration process is a revolutionary, patent-pending technology and the first to combine the proven technologies of granular media filtration and biocidal ion exchange into a single filtration/deactivation process. This process was developed through extensive research and laboratory testing and is based upon a strong foundation of science. ProCleanse is considered the next generation point-of-use (POU) water filter for the household water treatment sector serving families that do not have access to clean drinking water.

Access to clean water is a worldwide epidemic. To help address this problem, the ProCleanse filter was designed with the following state-of-the-art water filtration technology features:

- A lightweight yet durable device (~ 18 kg or ~ 40 lb) that can be easily distributed;
- A simple to use device that requires no assembly in the field and no replacement parts;
- Built in safe storage for the clean water;
- Effective at producing safe drinking water on first day of use;
- A production capacity of 4 – 8 liters (1.0 – 2.0 gallons) per hour;
- Effective against bacteria, viruses and cysts;
- A device that works from gravity, requires no input energy or chemical additions from the user;
- Provides residual disinfection capabilities;
- Expected 10 year functional longevity, with a simple maintenance program; and
- A device that is cost competitive.

Each of these features have been verified from a variety of outside organizations and combine to provide an optimally balanced POU device that is cost effective, sustainable and provides superior performance for the household water treatment marketplace.

Our device is a dual chamber cylinder that is approximately 56 cm (22 in) tall with a diameter of 36 cm (14 in). The filter media consists of porous ceramic particles blended with positively charged biocidal materials. While passing through the chambers, negatively charged pathogens are attracted to the positively charged biocide ions. When they come into contact, the pathogens are deactivated. The first chamber of the device traps suspended solids, cysts, protozoa, larger micro-organisms and provides the biocidal deactivation of pathogens. The clean water is stored in the secure and safe second chamber ready for use.

After your filter is delivered it is simple to use. First, remove the top lid which contains the debris strainer. Remove the foam inserts found in chamber 1. Replace the lid/debris strainer onto the filter. Next, pour dirty water into the debris strainer until it is about $\frac{3}{4}$ full. Continue to pour water into the debris strainer and keep the filter flowing until the output water is relatively clear. This initial output water will contain fine particles washed from the filter media. The startup and cleansing process takes about 2 hours to finish and will take about 70 liters of water (20 liters to prime, 50 for flushing). Once completed, the device is ready to produce clean water. Pour dirty water into the debris strainer again until it is $\frac{3}{4}$ full, adding more water as needed.



Some of the key advantages of the ProCleanse Water Filter are:

- Able to consistently produce sufficient quantities of microbiologically safe water to meet daily household needs;
- 1 – 2 gallons/hour, 4 – 8 liter/hour throughput;
- Built in safe storage with a capacity of approximately 18 liters for the clean water;
- Capable of producing more than 180,000 liters (48,000 gallons) over the life of the unit;
- Effective for treating many different water sources;
- Meets the WHO goal for turbidity of < 5 NTU when tested over a wide range of input turbidity values;
- No assembly, no replacement parts, no used parts to dispose of throughout the life of the unit;
- Light weight, ~ 40 lb when shipped, yet durable;
- Arrives ready for use, effective on day 1;
- Stackable units and compact design allow for 720 units in one shipping container (helping up to 4,320 people with a single shipment);
- No input energy, no added chemicals over the life of the unit;
- No need to replace the filter media;
- Residual disinfection benefit;
- No biological layer required;
- Expected life of 10 years;
- Simple to use and maintain; and
- Filter body, parts and contents are recyclable.

Maintenance, when required, takes about 15 minutes. The frequency of maintenance depends on the turbidity of the input water. A simple procedure of stirring and decanting water is employed. Pour water into the debris strainer until it is $\frac{3}{4}$ full. Remove the lid/debris strainer from the ProCleanse Filter. Stir the water in the top 5 cm (2 inches) of filter media with your hand or a spoon to suspend the sediment. Using a cup, collect and discard the dirty water containing the suspended sediment. Repeat 8 – 10 times until the water appears to be clear again. Rinse out the lid/debris strainer and place it back onto the ProCleanse Filter. Pour water into the debris strainer until it is about $\frac{3}{4}$ full to begin use of the device again.

The ProCleanse filter is an effective, sustainable, simple to use, reliable, low cost point-of-use household water treatment filtration device for access to clean, and safe drinking water.

For more information, please contact ProCleanse at info@procleansfilters.com.