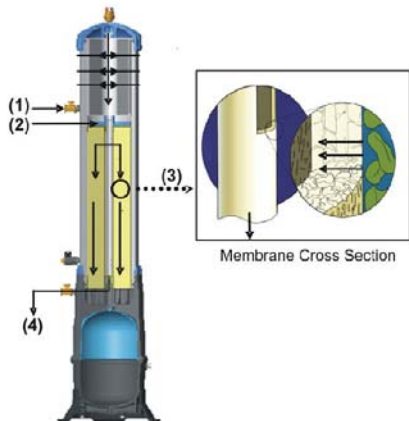


## K. FREQUENTLY ASKED QUESTIONS (FAQ)

### What does the System do?

This System has been tested to significantly physically block pathogens including bacteria, viruses and cysts from your water. The pore size on the surface of the ultrafilter membrane is 0.02 microns nominal. The System has been certified by the National Sanitation Foundation (NSF) for NSF 42 and 53 (aesthetic and health claims) for the removal of Cysts, Turbidity, Particulates and Chlorine. Further test results from BioVir Laboratories in California include bacteria and virus reduction performance. Please refer to **C. CERTIFICATION** for more information.



### How does the System work?

**Filtering** - When a household water fixture is turned on, the water pressure forces unfiltered water into the Prefilter Housing.

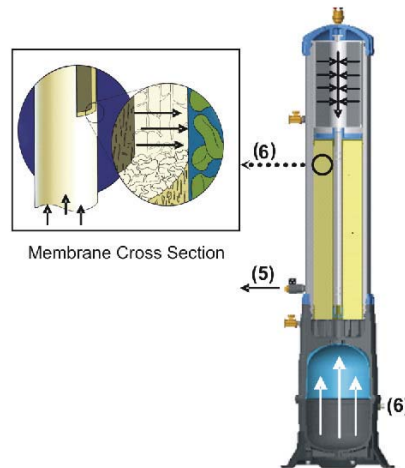
- (1). Larger particles (and chlorine when using the Carbon Prefilter) are removed as the water passes from the outside of the Prefilter to the inside.
- (2). The prefiltered water then passes down into the System to the membrane chamber.
- (3). In the membrane chamber, the water travels through membrane pores from the outside of the hollow fibre membrane to the inside, leaving behind unwanted particles such as bacteria, parasites and certain viruses.
- (4). The filtered water then travels through the household piping, to the household fixture that is being used.

**Automatic Cleaning Cycle** - The System uses two methods to clean its membrane: a) flushing and b) draining. The Controller automatically executes a cleaning sequence consisting of a number of flushes and drains to clean the membrane. For Systems equipped with a Base or Advanced Controller, System cleaning is performed daily. For Systems equipped with an Advanced Plus Controller, System cleaning may be performed multiple times per day, up to 24 times. For choices of cleaning sequences and intervals, refer to the **Controller Settings** section under **E. INSTALLATION INSTRUCTIONS**. Water pressure inside the dwelling will be significantly reduced during System cleaning.

**Flushing:** Flushing includes a Front-flush and a Back-flush. Systems that are installed in municipal, cistern, or ground water sources may use the flushing method to control the fouling rate of the membrane.

(5). Front-flush - The Controller opens the Drain Solenoid Valve. The water supply line pressure causes an inrush of water into the System, scouring the surfaces of the membrane and expelling impurities through the drain.

(6). Back-flush - At the same time, the air bladder inside the Backpulse Tank expands rapidly, pushing clean water out of the membrane surfaces from the hollow cores. This action dislodges and pushes out impurities trapped inside the membrane pores. Impurities are then expelled out of the System through the drain port.



**Draining:** Systems that are installed in surface water sources must use the draining method in addition to the flushing method to control the fouling rate of the membrane. During draining, the Controller closes the Inlet Solenoid Valve and opens the Drain Solenoid Valve, allowing water to be completely drained out of the System.

### Where should the System be installed?

The System is installed inside the home at the point where water enters the house so that filtered water is provided from every tap. In order to allow only indoor water to be treated, a dedicated line should be installed from the inlet of the System to all external taps for pool or hot tub makeup valves and irrigation systems. Reducing the volume of water filtered will assist in prolonging the life of the System membrane. For Spacing Requirements refer to **J. SPECIFICATIONS**.

### Does the System require electricity?

In most installations, the System runs on existing household water pressure provided that a minimum pressure of 30 psi is met. Unless electricity is required for pump operation, the System will continue to filter water during a power failure and Controller settings will be saved by battery backup power. The Controller must be plugged into a standard 120V outlet to provide power to operate the solenoid valves that initiate flushing of the System. If electrical power is not available, the System will not conduct automatic cleaning and the rate of fouling will increase.

**Will the System act as a water softener?**

The system will not soften water or remove dissolved solids. Given the pore size of the membrane, dissolved particles smaller than 0.02 microns nominal will pass through the membrane and remain in your water. This includes calcium and magnesium which contribute to your hard water, and other dissolved solids like essential minerals and flouride.

**How long does the automatic cleaning cycle take?**

Depending on the program selected, each cleaning cycle may take from 2.5 to 16.5 minutes. Refer to the **Controller Settings** section under **E. INSTALLATION INSTRUCTIONS** for details.

**How much water is used in the daily cleaning cycle?**

Depending on the program selected, each cleaning cycle may use from 7.5 to 19.5 US Gallons of water. Refer to the **Controller Specifications** section under **J. SPECIFICATIONS**.

**If the Hoespring™ Water Purifier System unit removes chlorine out of the water, is there an issue with bacteria in the pipes inside the house?**

If you already had municipally chlorinated water in your household pipes and there have been no water quality issues, there should be no pathogenic bacteria in your household pipes. Upon installation, the System should block and prevent any new growth of pathogenic bacteria in the household lines. Over time non-pathogenic HPC bacteria may become present in your household pipes. However, scientific studies have shown that there are no health concerns with these non-pathogenic bacteria. Sanitization of the household municipal fed water lines will provide further reassurance for the elderly, small children or those who are otherwise immune depressed. If there has been a water quality issue such as a recent boil water alert or water main break from the municipal water source, the household pipes should be sanitized upon installation of the System.

**How long does the activated carbon filter last?**

The Activated Carbon filters have been certified to filter over 130,000 US gallons (491,400 litres) for the tall Carbon Prefilter and over 65,000 US gallons (245,700 litres) for the short Carbon Prefilter (UFC 207 Series model only). The average homeowner will find it necessary to change the activated carbon filter approximately every 12 months. The quality of water, the amount of chlorine and other contaminants in the water, and the amount of water used determines the actual life of the Activated Carbon filter.

**What does the Carbon Prefilter do?**

The Carbon Prefilter is Certified by NSF International against NSF/ANSI 42 and 53 for chlorine, taste and odour reduction. The Carbon Prefilter is packed with Activated Carbon which can significantly reduce residual chlorine, chlorine related tastes and odours, and tastes and odour of inorganic or organic particles which can be unappealing to the homeowner. The Prefilter also protects and extends the life of the System by preventing large, sharp particles from passing through the System membrane.

**What minimum water line pressure is recommended for the System?**

The minimum water pressure requirement is 30 psi. If the System is installed on a pump/pressure tank scenario the requirement may be less. Refer to the **System Installation** section under **E. INSTALLATION INSTRUCTIONS** to adjust the backpulse tank pressure.

**Does the System affect the water pressure?**

There is minimal effect on existing water pressure. Under most circumstances, no change in water pressure will be noticed.

**How often does the System need to be serviced?**

To maintain warranty, the System must be serviced by a Hoespring™ Qualified Technician at least once per year. During this service the system is cleaned and tested using the Integrity Tester to ensure that the membrane is functioning correctly. Twice per year service visits may be recommended depending on water quality (e.g. dirtier lake sources). Also at this time, the Carbon Prefilter is replaced, or the Stainless Steel Prefilter is cleaned and reused. If an External Prefilter is present, the External Prefilter cartridge is also replaced.

**How long does the System last?**

The System will generally last an average of 10 years or more if used on municipal or well water and will last from 5 to 10 years on surface/lake waters depending on the level of contamination of the incoming water. Regular maintenance and bypassing the System for outdoor taps, pool and hot tub makeup valves and irrigation systems will extend the life of the System membrane.

**What is the maximum size water feed line the Hoespring™ Whole Home Water Filtration System can be installed to?**

The inlet and outlet ports and devices of the System are 3/4 inch. The plumbing must be adapted to this 3/4 inch measurement at the system. Independent of the plumbing size, the operational limits of the system remain constant.

**How often does the System need to be replaced?**

The life of the System relies primarily on the lifespan of the membrane. When the membrane is fouled, the water flow rate is too low and the annual clean does not correct the fouling, the System, excluding the attached parts, will need to be replaced.

**Will the system remove iron / sulfur?**

The pore size of the membrane is 0.02 microns nominal which may help in the filtration of particulate iron. The carbon filter may help in the reduction of taste and odour caused by sulphur.