Water Purifier System

Owner's Manual

Retain these instructions for future reference.

homespring™

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IMPORTANT: See safety warnings inside

2006 V10.0 P/N 23331

A. INTRODUCTION

Thank You!

By purchasing the Homespring™ Water Purifier System, you have taken the first step in providing safer, great tasting water in the entire home.

The Homespring™ Water Purifier System (the System) is an advanced Point of Entry (POE) water filtration system that uses ultrafilter membrane technology to provide a physical barrier to bacteria, parasites, viruses, and particles. The System requires minimal maintenance and will provide you with years of cleaner, safer, better tasting water. Simply follow the information found in this manual and schedule an annual maintenance visit with your Homespring™ Dealer.

The System must be installed in strict compliance with provincial or state laws and local laws and regulations. The System conforms to ANSI/NSF 42 and 53 for the specific performance claims as verified and substantiated by test data. The System should only be used to filter water less than 100°F (38°C) and must be protected from freezing.

Dealer and System Information

Dealer's Name _____

Dealer's Phone Number _____

Model Number _____

Qualified Technician _____

Homespring™ Customer Service Number 1-866-418-7412 _____

Emergency Customer Service Number _____

Membrane Module Serial Number _____

Backpulse Tank Serial Number _____

Backpulse Tank Pressure Setpoint _____

Installation Date _____

Manufacturer's Contact Information

GE Water & Process Technologies
3239 Dundas Street West
Oakville, ON, Canada
L6M 4B2

www.homespring.com

Legal Disclaimer

This manual outlines some of the basic principles of household water collection, treatment, and discharge and some of the features of the **Homespring™ Water Purifier System**. It is not intended to be a definitive dissertation on the principles set out above, nor is it intended to be relied upon by anyone but **Homespring™ Customer Care** ("Consultants") and **Qualified Technicians**. Any other reliance is expressly excluded.

The **Homespring™ Water Purifier System** must be installed by a **Homespring™ Authorized Technician** and properly maintained in accordance with the Operations and the Owner's Manual. Failure to properly maintain the System will compromise performance and/or result in the failure to control water quality.

Servicing Information

All service and maintenance must be performed by a Homespring™ Authorized Technician. Should service be required during or after the warranty period, or should you have any questions regarding how to use your Homespring™ Water Purifier System, please contact your Homespring™ Dealer.

IMPORTANT! - Read First

- Read this manual carefully prior to using the System.
- Permanently locate this manual near the System for future references.
- Periodic checks of the System are required to ensure safe and efficient operation.
- Annual maintenance by a Homespring™ Qualified Technician is required to validate the limited warranty.
- Cost of all maintenance visits is the Owner's responsibility.
- Most tools referenced in this manual are available through your Homespring Dealer.
- During servicing of the System, water supply in your home will be temporarily interrupted.

B. SAFETY WARNINGS

It is important to read and understand the following safety warnings to ensure reliable service from your System.

WARNING! Operational

All System Parts and Components must be installed in accordance with all local building and plumbing codes.

The System must be installed on a cold-water supply line only. Failure to do so may cause System damage, leading to personal injury and/or physical damage.

The System has been designed built and tested to offer reliable service, provided if it is installed, commissioned, operated, maintained and tested in strict accordance with the instructions contained in this manual. Failure to properly maintain the System will compromise performance and/or result in a failure to control water quality which may lead to delivery of contaminated water. Consuming contaminated water could result in serious injury or possibly death.

To avoid System damage, ensure that a Stainless Steel Prefilter or Carbon Prefilter is in place during operation of the System. Failure to do so **will void all warranties.** In the absence of either filter, abrasive damage to the System may occur. A damaged System may permit contaminated water to enter the household distribution system causing illness or death. Irreversible and premature fouling of the System may also occur resulting in System replacement at the owner's expense.

Do not attempt to remove System Cap when System is under pressure.

The System must be kept wet at all times after installation. Do not let the System dry for longer than 12 hours. Failure to do so may damage the System causing personal injury, physical damage, illness and/or death and **will void all warranties**.

Premature fouling of the System is not covered by the warranty. After the installation of the System if any noticeable pressure drop occurs, call your local Homespring Authorized Service Person.

Except in emergencies, do not open the Bypass Valve (if applicable); Bypassing the System may contaminate water supply and water supply system.

Always wash hands thoroughly with soap and water after performing any servicing procedures on the System.

Do not plug the Controller transformer in the electrical receptacle if there is water on the electrical wiring or on the power supply. Dry off all components first.
ONLY OEM parts supplied by the manufacturer are to be used when installing or servicing the filtration system (System). Failure to do may result in System damage, serious personal injury, death and/or property damage. Use of non-OEM parts will void the manufacturer's warranty.

WARNING! Biological

The System is not intended for the treatment of water from an obvious contamination source (such as sewage or wastewater).

Biofilm and pathogens already present in home piping lines downstream of the could migrate into filtered water unless the piping has been properly sanitized. All household piping and distribution lines should be sanitized prior to consuming the filtered water using proper sanitization procedures (see your local Health authority). The System owner should verify the water outlet quality at the outlet sources by having it tested by an approved or qualified water testing laboratory prior to consumption.

The System must be commissioned and maintained in accordance with the Owner's Manual by an Authorized Service Person. Failure to properly maintain the System will compromise performance, shorten the life of the System and may lead to delivery of contaminated water. Consuming contaminated water could result in serious injury or possibly death.

WARNING! Emergency Bypass Safety

If System is equipped with a Bypass Valve, do not open Bypass Valve except in emergencies. Opening the Bypass Valve will permit potentially microbially contaminated water to enter the household water distribution system. Drinking contaminated water may cause serious illness and/or death. Do not drink the water if the System has been operated in bypass mode.

If the System has been operated in bypass mode and if the water is being drawn from a well or surface water source, the System and the household water distribution system should be disinfected again once returned to filtration mode.

If the System is in bypass mode, the Controller must be unplugged. Failure to do so may cause System to dry and become damaged, leading to personal injury, and/or physical damage and will **void all warranties**.

A bypass is not required for proper operation of the System. However, some local plumbing codes may require a bypass. If a bypass is to be installed, the procedure described below is to be followed in order to provide water in an emergency or during System malfunction.

Bypass Procedure

1. Close Inlet and Outlet Valves. (If ball valves are installed, turn the handles perpendicular to the water pipe.)
2. Open Bypass Valve (If ball valve is installed, turn the handle in-line with the water pipe).
3. Unplug Controller.

To return to filtered water service:

1. Close Bypass Valve. (If ball valve is installed, turn the handle perpendicular to the water pipe.)
2. Open Inlet and Outlet Valves. (If ball valves are installed, turn the handles in-line with the water pipe.)
3. Plug in the Controller.
4. Follow the **System Membrane Cleaning** section under **E. MAINTENANCE SCHEDULE** in this manual to re-commission the System.

WARNING! Winterization

The System will be damaged if frozen. The System must be winterized according to the Winterization Procedure described in this manual.

The System must be winterized prior to temperatures falling below 32°F(0°C). Failure to do so may cause the System to dry, freeze, become damaged, and **will void all warranties**. Operating a damaged System may lead to personal injury, and/or physical damage.

C. CERTIFICATION

Current System certifications, as well as the limits to those certifications held, are listed below.
The System should only be installed where it complies with provincial, state or municipal laws and regulations.
The System should only be used to filter cold supply water.

NSF Certifications

The System conforms to ANSI/NSF 42/53 for the claims set out below, as verified and substantiated by test data.

The UF 207, UF 209 and UF 211 models have been certified as:

System Tested and Certified by NSF International against NSF/ANSI 42 and 53 for:

- Cyst Reduction
- Turbidity Reduction
- Particulate Reduction - Class 1

The UFC 100, UFC 207, UFC 209, and UFC 211 models (All equipped with a Carbon Prefilter) have been certified as:

System Tested and Certified by NSF International against NSF/ANSI 42 and 53 for:

- Cyst Reduction
- Turbidity Reduction
- Particulate Reduction - Class 1
- Chlorine, Taste and Odour Reduction

UFC 209 and UFC 211 models Chlorine Reduction Capacity Rating:
130,000 / 491,400 (US gallons/litres)
UFC 207 model Chlorine Reduction Capacity Rating:
65,000/ 245,700 (US gallons/litres)

BioVir Laboratories

NELAP* and California Department of Health accredited laboratory

*National Environmental Laboratory Accreditation Program (NELAP) Accredited #05234CA

The Homespring™ UF200 Series** Water Purifiers have been tested by BioVir Laboratories Inc. and found to meet all the requirements of the USEPA's Guide Standard and Protocol for Testing Microbiological Water Purifiers (OPP Task Force Report, 1987) as interpreted by the BioVir Laboratories specifically for the Homespring™ UF200 Series Products.

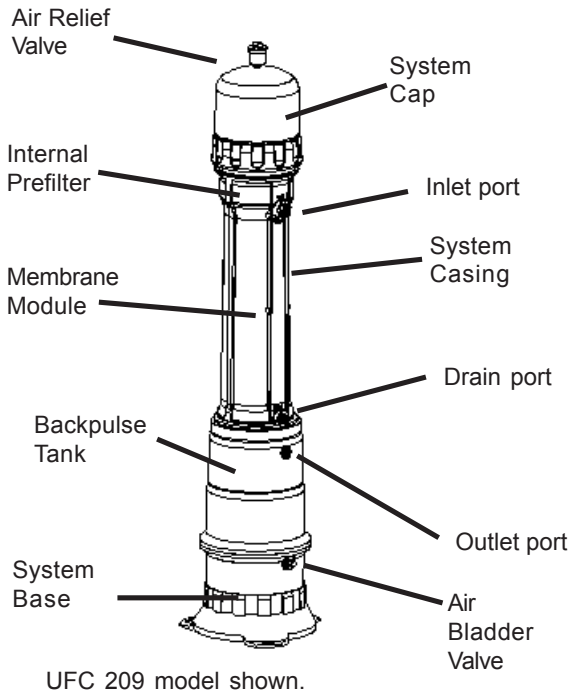
The test results were:
Bacteria Reduction: >99.99999%
Virus Reduction: >99.999%

Water Quality Association

The Homespring™ UF200 Series* Water Purifiers have been Tested and Certified by the Water Quality Association (WQA) to the USEPA's Guide Standard and Protocol for Testing Microbiological Water Purifiers (OPP Task Force Report, 1987) as interpreted by the WQA and to NSF/ANSI 42 and 53.

D. OPERATIONS

System Description



UFC 209 model shown.
All other models may be labeled similarly.

FIGURE 1

Startup Information

Once the Homespring™ Authorized Technician has completed the System installation, the System must be flushed before use. The flushing will remove any food-grade preservative used in the factory and any cleaning agent used in the commissioning of the System. Open a near by cold water tap downstream of the System in full and allow it to run for 60 minutes. Ensure that the drain of the sink is unobstructed and is able to accommodate the flow. Do not leave the running tap unattended.

There may be some chlorine smell in the water in the first few days after the System has been installed. If desired, run a cold water tap for a few minutes on each of the first few days before use.

Sanitizing Information

If the System is used to filter water from sources other than a municipal drinking water supply (e.g. surface water and ground water), the drinking water distribution system of the dwelling must be disinfected prior to use. The cleaning procedure performed during the commissioning of the System does not disinfect the water distribution system of the dwelling.

Normal Operation

The System does not require any special attention under normal operation conditions. The System uses existing water pressure in the water supply line to filter water and will continue to operate even during a power failure. Electricity is only required to activate the self-cleaning sequences.

Setting the Controller

The System uses two methods to clean its membrane: a) flushing and b) draining. During a flushing sequence, the Drain Solenoid Valve of the System opens, allowing contaminants inside the System to be flushed out under the water supply line pressure. For Systems equipped with a Surface Water Option Kit, the System may also perform a draining sequence. During a draining sequence, water is completely emptied out from the System. Both the flushing and draining sequences are done automatically.

NOTE: *Electrical power to the Controller must be on to activate the flushing and draining sequences. The batteries are for keeping the time in case of power failure and will not activate the flushing and draining sequences.*

NOTE: *Once the Controller is set, the Controller will remember the Start Time, Program Number, and Flush/ Drain Interval settings even if the electrical power to the Controller is interrupted.*

NOTE: *When the System is undergoing a flushing or a draining sequence, very little or no water will be available for use in the dwelling. If possible, select a time for the flushing and draining when no water generation is required. Normal operation will resume once the flushing and draining sequences are finished.*

Follow these steps to set the Controller:

1 **Setting the Clock**

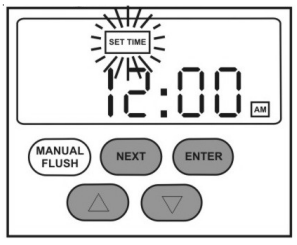


FIGURE 2

1) Press NEXT twice until **"SET TIME"** flashes on screen. Press ENTER.
2) Press the UP and DOWN arrows to set the hour. Press ENTER.
3) Press the UP and DOWN arrows to set the minute. Press ENTER.

2 Setting Flush/Drain Time

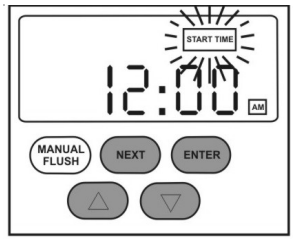


FIGURE 3

1) Press NEXT three times until **"START TIME"** flashes on screen. Press ENTER.
2) Press the UP and DOWN arrows to set the hour. Press ENTER.
3) Press the UP and DOWN arrows to set the minute. Press ENTER.

Note: Select a time that water usage is not expected in the dwelling. (e.g. 2:00 a.m.)

3 Setting the Program

Choosing a program:

NOTE: If surface water is the source and the Surface Water Option Kit is installed, select either Program 3 or Program 4 in this application.

Water Clarity	Advanced Plus Controller
Low Turbidity	Program 1
Medium Turbidity	Program 2
High Turbidity	Program 3
Very High Turbidity	Program 4

Low Turbidity: *Less than 0.5 NTU*
Medium Turbidity: *Peaks to 1.0 NTU, less than 72 min. per day.*
High Turbidity: *Peaks to 5.0 NTU, less than 72 min. per day.*
Very High Turbidity: *Peaks to 10.0 NTU, less than 72 min. per day.*

		Cleaning Sequence	Duration	Approximate Water Consumption per Cleaning Cycle at 5 gpm
Advanced Plus Controller	Program 1	2 flushes	2.5 minutes	7.5 US Gal
	Program 2	4 flushes	6 minutes	15 US Gal
	Program 3	2 flushes and 1 drain	8.5 minutes	13.5 US Gal
	Program 4	2 flushes and 2 drains	16.5 minutes	19.5 US Gal

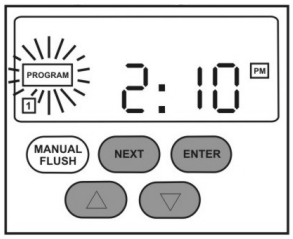


FIGURE 4

1) Press NEXT four times until **"PROGRAM"** flashes on screen.
2) Press ENTER.
3) Press the UP and DOWN arrows to set the Program number. Select the appropriate Program for your application. Press ENTER.

4 Setting the Flush/Drain Interval:

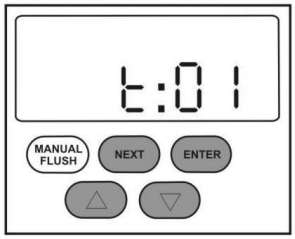


FIGURE 5

1) Press NEXT five times until "**t:01**" appears on screen.
2) To change the flush/drain interval setting, hold the UP and DOWN arrows down **together** and press NEXT. Release all buttons and repeat to shift to the next interval. There are five interval settings to choose from:

Flush / Drain Interval Setting	No. of Flush/Drain Cycles per Day	Time Interval Between Flush/Drain Cycles
t:01	once	24 hours
t:02	2 times	12 hours
t:04	4 times	6 hours
t:08	8 times	3 hours
t:24	24 times	1 hour

Note: Under conditions of turbid water and high usage of the System, select a Flush/Drain Interval setting appropriate to the specific application. Increase frequency of flush/drain cycle if the System TMP rises too quickly. Increasing the number of Flush/Drain cycles per day will prolong the life of the System; however, more water will be used for system cleaning purposes.

Controller Functions

A. Manual Flush

Note: For use when the instructions in this manual call for a Manual Flush.

To manually flush the System, press NEXT once. **"MANUAL"** flashes on the screen. Press MANUAL FLUSH to open the Drain Solenoid Valve. If the MANUAL FLUSH button is held down for 5 seconds, the Drain Solenoid Valve will remain open for 5 minutes. To interrupt flushing, press MANUAL FLUSH again. The Drain Solenoid Valve will be closed automatically after 5 minutes if not interrupted.

B. Light and Alarm Function:

The green light on the controller indicates that the System is in operation. The green light will be on for 10 months from the first commissioning of the System.

WARNING!

The green light is NOT an indication of the integrity of the membrane inside the System.

At the start of the System's 11th month of operation, the yellow service indicator light will come on. This is an indication that the System Annual Maintenance is required.

At the System's 11½ th month of operation, the yellow service indicator light will begin to flash and an audible alarm will start to beep.

To temporarily silence the alarm, depress and hold the UP and DOWN arrows **together** for three seconds. The alarm will come back on in seven days after this command is executed.

To permanently turn the alarm off, depress and hold the UP and DOWN arrows **together** and press ENTER. "A oF" (alarm off) will appear on the screen. To turn the alarm on again, repeat the above step. "A on" (alarm on) will appear on the screen.

The yellow service indicator light and the alarm can only be reset by a Homespring Authorized Technician during the Annual Maintenance.

E. MAINTENANCE SCHEDULE

WARNING!

The System has been designed and tested to offer reliable service, provided if it is installed, commissioned, operated, maintained and tested in strict accordance to the safety instructions contained in this manual. Failure to properly maintain the System will compromise performance and/or result in a failure to control water quality which may lead to delivery of contaminated water. Consuming contaminated water could result in serious injury or possibly death.

A Homespring™ Authorized Technician must perform all service and maintenance. As part of the annual maintenance, the Homespring™ Authorized Technician will perform an Integrity Test to check the condition of the System membrane and perform a cleaning procedure to clean the System membrane. This annual test and cleaning is **mandatory** as part of the 5-year limited prorated membrane warranty.

If the Homespring™ Authorized Technician determines that the System has a high degree of debris and contaminants, causing an abnormally high reduction in System flowrate, the number of maintenance visits per year may be increased to ensure that the System functions within its acceptable operational parameters and to ensure that the limited warranty remains in effect.

Maintenance Schedule

The following maintenance tasks must be performed every 12 months unless specified otherwise. Refer to **H. REPLACEMENT PART LIST AND PROCEDURES** for part numbers.

System Part	Annual Maintenance Tasks	UFC 207, UFC 209, UFC 211	UF 207, UF 209, UF 211
Carbon Prefilter	Replace. Water sources with high level of particulate and/or chlorine will require more frequent replacement.	X	n/a
Stainless Steel Prefilter	Clean. Water sources with high level of sediment will require more frequent cleaning.	n/a	X
System Membrane	Clean	X	X
System Membrane	Perform Integrity Test	X	X
Backpulse Tank Air Pressure	Check and adjust	X	X
Controller Batteries (2-AA)	Replace	X	X
Controller Flushing and Draining Programs	Verify if settings are still appropriate.	X	X

Every 6 Months: For models equipped with the **Surface Water Option Kit**, the External Prefilter cartridge must be inspected, cleaned and/or replaced.

System Membrane Cleaning

The following System cleaning procedures are performed by the Homespring ™ Authorized Technician during the annual maintenance.

WARNING!

Disposable protective gloves must be worn during maintenance of the System to protect your hands. At the end of the procedure, wash your hands thoroughly with soap and water. Do not reuse the gloves. Dispose of the gloves in the garbage.

1 Ensure that the two Mini Ball Valves are closed (To close, turn the handle perpendicular to the Plug/hose end). Remove the Plug from the Inlet Mini Ball Valve by depressing the lock ring and pulling on the Plug.

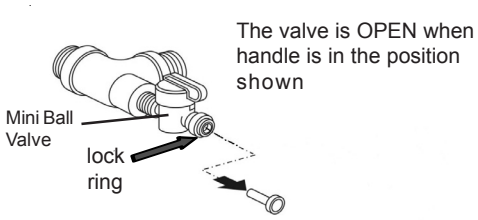


FIGURE 6

2 Close the Inlet and Outlet Valves. Using the Controller, initiate a Manual Flush sequence to bring System pressure to close to zero. Refer to the instructions in the **Controller Functions** section under **D. OPERATIONS** on how to perform a Manual Flush sequence. Slowly open the Mini Ball Valve to ensure there is no pressure in the System. Water will flow out, but should not spray. Close the Mini Ball Valve immediately. If there is spray, repeat the Manual Flush sequence. Reinsert the Plug into the Mini Ball Valve.

3

Vertical Systems:
Remove the System Cap using the Cap Wrench. The water level should be at least 2" above the Internal Prefilter spigot.

If the water level is below 2”, open the Inlet Valve slowly to raise the water level.

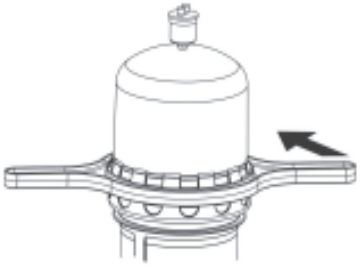


FIGURE 7

Once the cap is removed, wipe the System Cap out with a clean, soft cloth, remove the O-ring carefully, wipe the O-ring with a clean cloth, check the O-ring for damage or wear, apply a very small amount of DOW CORNING 111 silicone lubricant on the O-ring, and replace the O-ring. If necessary, replace the O-ring with a new O-ring.

Horizontally-mounted Systems: Ensure that there is still some water inside the System after the Manual Flush. Do not empty the System completely. If water stops coming out during the Manual Flush, open the Inlet Valve slowly to fill the System again.

WARNING!

Do not use a bottle of bleach more than 3 months old.

If a Bypass Valve is installed, the Bypass Valve should be closed for the entire procedure to avoid contaminated water entering the household distribution system. Contaminated water might cause personal injury and in some cases death.

This cleaning procedure does NOT disinfect the household pipes. If potentially microbiologically unsafe water is present in the pipes, it is strongly recommended that all pipes be sanitized.

4

For Ground Water Systems, refer to Ground Water Application Cleaning Procedures section before beginning this step.

Vertical Systems:
With the Internal Prefilter still removed, pour 2 cups (500 ml) of 5 - 6% unscented household chlorine bleach OR 1 cup (250 ml) of 12% chlorine bleach into the Prefilter cavity. Replace the System Cap. Slowly open the Inlet Valve to pressurize the System. Let stand for **60 minutes**.

Horizontally-mounted Systems:
With the Internal Prefilter still removed, unscrew the ½" Brass Plug on the Air Vent Assembly near the System Cap.

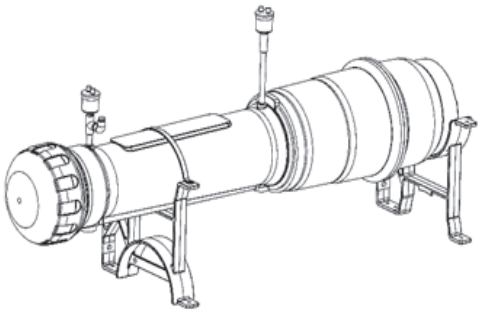


FIGURE 8

Pour 2 cups (500 ml) of 5 - 6% unscented household chlorine bleach OR 1 cup (250 ml) of 12% chlorine bleach into the System Casing cavity. A funnel may be used in this step to assist pouring. Replace the ½" Brass Plug. Slowly open the Inlet Valve to pressurize the System. Let stand for **60 minutes**.

5 Using the Controller, activate the Manual Flush sequence. Refer to the instructions in the **Controller Functions** section under **D. OPERATIONS** on how to perform a Manual Flush sequence. Once the flushing is complete, open the Outlet Valve and a nearby COLD water tap to flush most of the chlorine from the System. Run the tap fully open for at least 60 minutes.

Note: Use only COLD water taps and continue the flow of water until there is no chlorine smell.

Ground Water Application Cleaning Procedures

WARNING!

Service must be done on surface water or turbid water applications before the T.M.P. goes higher than 12 psi. Failure to do so may result in premature fouling which is not covered by warranty.

For ground water installations, clean the membrane following the steps above with the exception of replacing Step 4 with the following:

Pour the contents of the MC1 cleaning agent into a container with 250 mL of water. Mix thoroughly to dissolve the crystals.

For **Vertical Systems**, with the Internal Prefilter still removed, pour the solution into the Prefilter cavity.

For **Horizontally-mounted Systems**, remove the ½" Brass Plug of the Air Vent Assembly and pour the solution into the Casing cavity through the ½" NPT port. Refer to FIGURE 8 for the location of the ½" Brass Plug.

WARNING!

Be careful to avoid MC1 cleaning agent coming in contact with skin or clothing. Wash the mixing container well before reuse.

The MC-1cleaner **SHOULD NOT** be combined with any other chemical or cleaning solution, especially hypochlorite or household bleach. Failure to do can result in serious personal injury, illness, or death.

Replace the System Cap **(Vertical Systems)** or the ½"Brass Plug **(Horizontally-mounted Systems)**. Let stand for **60 minutes**.

Annual Maintenance Check Summary

The HomespringAuthorized Technician performs the following maintenance tasks during the annual maintenance visit.

"Pre-cleaning" TMP completed
"Pre-cleaning" TMP recorded on Service Tag
Backpulse Tank pressure checked
System depressurized and opened
System soaked with cleaning agent (either bleach or MC1 cleaning agent) for 60 minutes
System flushed for 10 minutes
Integrity Test completed
Either Carbon Prefilter replaced or Stainless Steel Prefilter cleaned and reused
If External Prefilter is used, External Prefilter cartridge is replaced
"Post-cleaning" TMP completed
"Post-cleaning" TMP recorded on Service Tag
Batteries (2 AA) are replaced
Service Tag completed
Homeowner informed to leave cold tap on for 60 minutes

Cleaning the Stainless Steel Facade or Nameplate

If required, the surface may be cleaned using a mild soap solution. Do not use any other cleaners or abrasive materials on the stainless steel surface as these cleaners may damage the labels. Wipe surface dry with a soft cloth afterward.

F. WINTERIZATION PROCEDURE

Tools/Supplies Required

For **all Systems** you will need:
Cap Wrench
Adjustable wrench
Nut driver
3 US gallons (12 litres) plumbers antifreeze that is **propylene glycol based** and rated for -58 °F (-50 °C).
1- ¾" MNPT PVC plug
1 - ½" MNPT PVC plug

WARNING!

Never use AUTOMOTIVE type antifreezes when winterizing the System. This may result in serious injury or death.

Only plumbing antifreeze, consisting primarily of **propylene glycol** with no ethanol or other alcohols, rated for -58 °F (-50 °C), may be used to winterize the System. The use of less-expensive 'non-propylene glycol based' plumbing or RV antifreezes may damage the System's internal components **voiding all warranties**. This may also result in serious injury or death.

Plumbing antifreeze containing **propylene glycol** will provide protection of the System against freezing to -40 °F (-40 °C) as long as the proportion of antifreeze to water is correct. This procedure only protects the System from freezing and does not protect the rest of the household water distribution system.

Propylene glycol based antifreeze is available at most hardware stores.

1. Close the Inlet Valve. Completely drain the System and household piping. To drain the System, refer to the **Controller Functions** section under **D. OPERATIONS** on how to perform a Manual Flush. To drain the household pipes, open a cold water tap (on the lowest level of the home) and leave until the tap only drips. Turn off the tap when the pipes are drained.

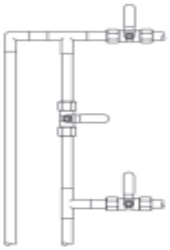


FIGURE 9

2. Remove the drain hose and Nylon Elbow from the Drain Solenoid Valve and install a ½" MNPT or ¾" MNPT PVC plug (depending on the size of the port) into the Drain Solenoid Valve.

3. Drain the filtered water from the System by disconnecting the Outlet Stainless Steel Flex Hose where it connects to the home plumbing, and drain into a large bucket. Plug the Flex Hose and System by installing a ¾" MNPT PVC plug.

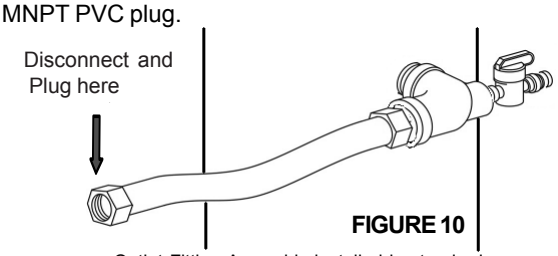


FIGURE 10

Outlet Fitting Assembly installed in standard configuration shown. Systems equipped with the Surface Water Option Kit have different Outlet Fitting Assemblies.

4. If an External Prefilter has been installed, open the Mini Ball Valve on the bottom of the housing and allow to drain. Press the red button on the External Prefilter head to speed up draining. Unscrew the housing from the head and remove the External Prefilter cartridge from the housing, and discard. Do not install a new filter cartridge. Re-attach the filter housing to the head.

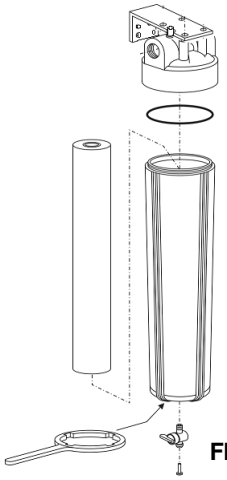


FIGURE 11

5. Remove the System Cap and remove the Prefilter. If the System is equipped with the Carbon Prefilter, discard the Carbon Prefilter. If the System is equipped with the Stainless Steel Prefilter, clean and set aside the Stainless Steel Prefilter temporarily. The Stainless Steel Prefilter can be stored in the System for the winter in Step 7.

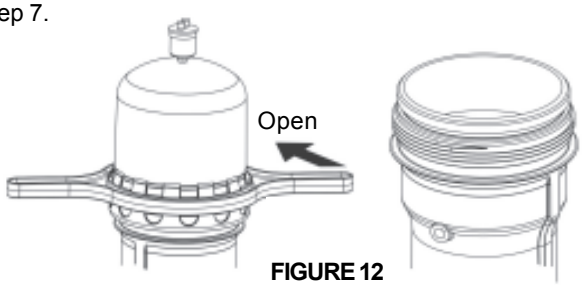


FIGURE 12

6 Fill with approximately 3 US gal (12litres) of -58°F (-50°C) **propylene glycol** based plumbing antifreeze. The UFC 207, UF 207, UFC 209, UF 209, UFC 211 and UF 211 Series models do not have enough internal space to accommodate 3 gallons of antifreeze initially. Remove the plug from the Outlet Stainless Steel Flex Hose and drain some antifreeze/water mix from the System into an empty container. Add the remainder of the antifreeze into the Internal Prefilter cavity. The fluid level in the System must be at least 2" above the bottom of the Internal Prefilter cavity. Reinstall the plug into the Outlet Stainless Steel Flex Hose.

FIGURE 13

7 If a Stainless Steel Prefilter has been set aside, place the Stainless Steel Prefilter in the Prefilter cavity.

8 For all Sytems, replace the System Cap using the Cap Wrench and check both plugs (drain and outlet) for any leaks. The System is ready for winter.

Spring Start-Up Following Winterization

WARNING!

Do NOT allow the plumbing antifreeze/ water mix to drain onto the ground, or into a septic bed, storm sewer or any body of water. Check the plumbing antifreeze manufacturer’s directions and warnings for more information.

1 Drain antifreeze solution from the System by removing the outlet plug. Drain into proper containers. Dispose of the antifreeze solution in accordance with the manufacturer’s directions.

2 Remove drain plug from Drain Solenoid Valve and reconnect the elbow and piping. Ensure the drain is the same as the initial set-up.

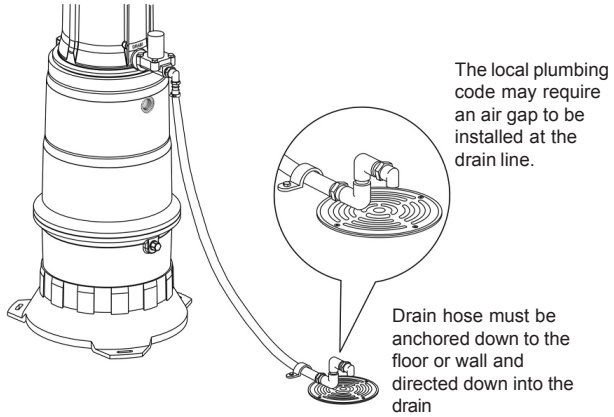


FIGURE 14

3 Open the Inlet Valve to fill the System with water. Air will escape through the Air Relief Valve in the System Cap.

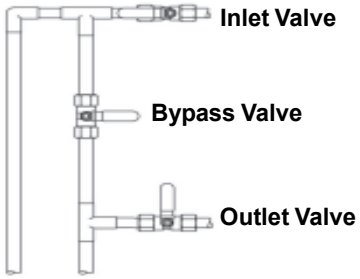


FIGURE 15

4 Open a nearby cold water high demand tap, then open the Outlet Valve. This will prevent antifreeze from spreading throughout the piping system. Run the tap for 30 minutes. Open all other cold water taps in the home and flush separately for 1 minute each.

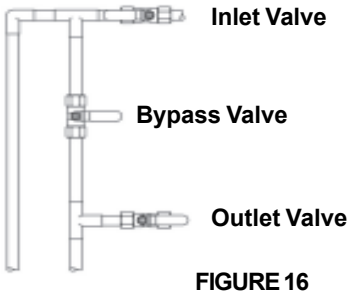


FIGURE 16

5 Close the Inlet Valve and Outlet Valve. Partially drain the System using the Manual Flush function for 1 minute to depressurize the System. Refer to the **Controller Functions** section under **D. OPERATIONS** on how to perform a Manual Flush sequence. Remove the Plug from the Mini Ball Valve on the Inlet Fitting Assembly by depressing the lock ring and pulling on the Plug. Slowly open the Mini Ball Valve to ensure there is no pressure in the System. Water will flow out, but should not spray. Close the Mini Ball Valve immediately. If there is spray, repeat the Manual Flush sequence. Replace the Plug in the Mini Ball Valve.

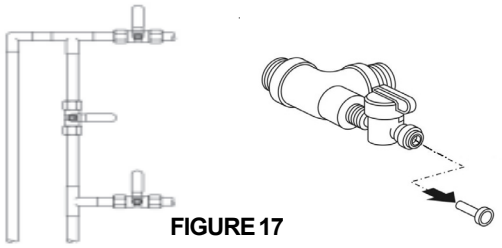


FIGURE 17

6 Remove System Cap. If a Stainless Steel Prefilter was stored in the Prefilter cavity over the winter remove, wash and set aside.

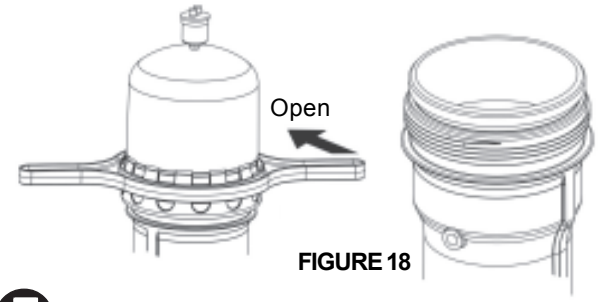


FIGURE 18

7 Be sure the water level in the System is 2" above the bottom of the Prefilter cavity. Add more water by slowly opening the Inlet Valve if necessary. Add 2 cups (500 ml) of unscented household bleach (5 - 6% chlorine) or 1 cup (250 ml) chlorine bleach (12% chlorine), maximum 3 months old, to the System.

8 Allow the System to soak for 15 minutes. With the System Cap tightened, drain the System using the Controller. Open the Inlet Valve and allow System to pressurize.

Note: If the winterization spring start up is combined with the annual maintenance cleaning procedure, the System must soak for 60 minutes. If the System is on ground or well water, the System must be cleaned with MC1 Cleaning Agent instead of chlorine bleach. Follow the directions on the package for preparing the MC1 Cleaning Agent. ***Never mix chlorine bleach with the MC1 Cleaning Agent.***

9 Open the Outlet Valve and a nearby COLD water tap to remove chlorine from the System. Run the tap fully open for 5 minutes. Further flushing must be performed by the homeowner.

10 Close the Inlet Valve and Outlet Valve. Use the Controller to depressurize the System. Ensure that there is no pressure inside the System as described in Step 5.

11 Open the System Cap and install a new Carbon Prefilter. If using a Stainless Steel Prefilter, insert a clean, undamaged Stainless Steel Prefilter and replace the System Cap.

Do not remove the Thimble Filter from the spigot. If the Thimble Filter is dislodged, gently push it back down into the spigot. If the Thimble Filter is damaged, replace with a new Thimble Filter.

FIGURE 19

12 If an External Prefilter is present, drain the housing through the Mini Ball Valve on the bottom and use the red button on the top of the External Prefilter head. Remove the plastic wrap from a new Prefilter cartridge and insert into housing. Tighten the External Prefilter housing to the External Prefilter head.

13 Open the Inlet Valve and fill the System. Watch for leaks. Open the Outlet Valve and a nearby cold water high demand tap. Have the homeowner continue to run the cold water tap for 30 minutes.

Note: If the winterization spring start up is combined with the annual maintenance cleaning procedure, have the homeowner continue to run a cold water tap for 60 minutes instead of 30 minutes. This is required to meet NSF drinking water standards and to remove residual chlorine or MC1. The homeowner may notice a chlorine taste/smell when a tap is first opened for a day or two following this procedure.

G. TROUBLESHOOTING

If there are any problems with the Homespring™ Water Purifier System, contact your dealer or HomespringCustomer Service immediately.

Area	Problem / Situation	Corrective Action / Remedy
General	A part is missing	Contact your Dealer.
	System leaks water	Tighten System Cap.
		Check O-ring is in place, is clean and is intact.
		Ensure connections are tight.
		Contact your Dealer.
	System water flow is noticeably reduced	Check if Thimble Filter is clogged. Depressurize System, remove System Cap and Internal Prefilter, remove Thimble Filter using a pair of needle nose pliers, clean Thimble Filter and reinsert Thimble Filter.
		Check if External Prefilter is clogged, if installed. Refer to **H. REPLACEMENT PART LIST AND PROCEDURES**.
		Check if Internal Prefilter is clogged. Refer to **H. REPLACEMENT PART LIST AND PROCEDURES.**
		Using the Controller, initiate a manual flush sequence. Refer to Controller Functions section under D. OPERATIONS on how to perform a manual flush sequence and ensure button on controller is pressed for a full 5 seconds. A buzz sound should be heard from the Drain Solenoid Valve. Contact your Dealer to replace valve if necessary.
		Contact your Dealer for assistance to check Trans Membrane Pressure and perform a Cleaning if necessary.
	Water does not flow through System	Black cap on Air Relief Valve must be backed off by 1.5 turns from tight to allow air in and out of System.
		If a Surface Water Option Kit is installed, check if Inlet Solenoid Valve is in the normally open position. On the Controller press NEXT once. Simultaneously press MANUAL FLUSH and the down arrow together and hold for a full 5 seconds. A buzz sound should be heard from the Inlet Solenoid Valve. Contact your Dealer to replace valve if necessary.
Checking Backpulse Tank Pressure	Pressure is too HIGH (greater than 35 psi)	Release air from the Air Bladder Valve on the Backpulse Tank by gently pushing in the valve stem.
	Pressure is too LOW	Check the correct pressure setting as recorded on page 2. If pressure is too low, contact your Dealer.
System Cap Removal	System Cap does not loosen	Close Inlet Valve and depressurize the System. Refer to **Controller Functions** section under **D. OPERATIONS** to initiate a manual flush.

Area	Problem / Situation	Corrective Action / Remedy
External Prefilter (with Surface Water Option Kit)	Water does not flow through	Press RED button on top of housing to release air until water flows from button as air may be trapped in housing.
		Replace External Prefilter cartridge if water pressure has been gradually decreasing as the External Prefilter may be plugged or fouled. Refer to **L. REPLACEMENT PART LIST AND PROCEDURES**.
	Does not drain fast enough	Depress red button on housing to drain quickly.
	Water leaks from bottom	Check Mini Ball Valve on bottom of housing. Close tightly.
Drain Solenoid Valve	Does not open to allow flushing	Using the Controller, initiate a manual flush sequence. Refer to Controller Functions section under **D. OPERATIONS** on how to perform a manual flush sequence and ensure button on controller is pressed for a full 5 seconds. A buzz sound should be heard from the Drain Solenoid Valve. Contact your Dealer to replace valve if necessary.
		Check transformer is plugged in.
Inlet Solenoid Valve (with Surface Water Option Kit)	Doesn't close to allow System to drain	On the Controller, press NEXT once. Simultaneously press MANUAL FLUSH and the down arrow together and hold for a full 5 seconds. A buzz sound should be heard from the Inlet Solenoid Valve. Contact your Dealer to replace valve if necessary.
		Check transformer is plugged in.
Controller	Flushing and/or draining of System does not work	Check if the Drain Solenoid Valve functions. Check connection to Controller is correct and initiate a manual flush to hear a buzz sound. Refer to **Controller Functions** under **D. OPERATIONS**.
		Check if both the Inlet Solenoid Valve functions, if installed, and if the Drain Solenoid Valve functions. On the Controller, press NEXT once. Simultaneously press MANUAL FLUSH and the up arrow together and hold for a full 5 seconds. A buzz sound should be heard from both the Inlet and Drain Solenoid Valves. Contact your Zenon Dealer if necessary.
		Check the settings. Refer to **Setting the Controller** under **D. OPERATIONS**.
		Check if the transformer is connected and plugged in.
		Contact your Dealer.

H. REPLACEMENT PART LIST AND PROCEDURES

Replacement Procedures

A. O-RING REPLACEMENT

The O-ring may require a replacement if there is a leak between the System Cap and the System.

Replacement Instructions:

1. Close the Inlet Valve.
2. Depressurize the System by performing a Manual Flush sequence. Refer to the instructions in the **Controller Functions** section under **D. OPERATIONS** on how to perform a Manual Flush sequence.

   For **Horizontally-mounted Systems**, connect a ¼" tubing to the Inlet Mini Ball Valve, direct the other end of the ¼" tubing to a drain or a pail, and open the Inlet Mini Ball Valve to drain the water in the Internal Prefilter cavity.
3. Using the Cap Wrench, remove the System Cap.
4. Carefully remove the O-ring from the System.
5. Clean the O-ring with a clean, soft cloth. Check for nicks, pits, proper formation and cleanliness.
6. If nothing appears unusual, apply a very small amount of DOW CORNING 111 silicone lubricant to the O-ring and reinstall the O-ring. If the O-ring appears damaged, replace the O-ring with a new O-ring.
7. Replace System Cap tightly using the Cap Wrench.
8. Open the Inlet Valve slowly.

B. INTERNAL PREFILTER REPLACEMENT (CARBON OR STAINLESS STEEL)

The Carbon Prefilter may require replacement more frequently than once a year during the Annual Maintenance or if there is a chlorine taste in the water after the System has been in use for a period of time. The Carbon Prefilter may also remove some other tastes and/or odours. In some cases, the Carbon Prefilter may become fouled earlier than one year depending on the intake water source.

The Stainless Steel Prefilter generally does not need to be replaced. It may become dirty and may be cleaned under a tap. Replace the Stainless Steel Prefilter if damaged.

Replacement Instructions:

1. Close the Inlet Valve.
2. Depressurize the System by performing a Manual Flush sequence. Refer to the instructions in the **Controller Functions** section under **D. OPERATIONS** on how to perform a Manual Flush sequence.

   For **Horizontally-mounted Systems**, connect a ¼" tubing to the Inlet Mini Ball Valve, direct the other end of the ¼" tubing to a drain or a pail, and open the Inlet Mini Ball Valve to drain the water in the Internal Prefilter cavity.
3. Using the Cap Wrench, remove the System Cap.
4. Put on a pair of disposable gloves and carefully remove and dispose of the Internal Prefilter.

   Check that the Thimble Filter is in place, seated in the spigot. DO NOT attempt to remove the Thimble Filter. If the Thimble Filter is loose, gently push it into place.
5. Remove the new Internal Prefilter from the packaging.
6. Insert the new Internal Prefilter into the Prefilter cavity and push it down gently to ensure it is seated properly.
7. Replace the System Cap tightly.
8. Open the Inlet Valve slowly.
9. Dispose of the disposable gloves.

C. EXTERNAL PREFILTER REPLACEMENT

Depending on the water quality, the External Prefilter may need to be washed or replaced prior to the Annual Maintenance. A decrease in water pressure at the taps may indicate that the External Prefilter may need to be replaced.

Note: For rinsing of the used External Prefilter cartridge, save a bucket of filtered water from a tap in the dwelling before servicing the External Prefilter. Water supply in the dwelling will be interrupted temporarily during servicing.

Replacement Instructions:

1. Close the Inlet Valve to the External Prefilter.
2. Attach a ¼" tubing to the Mini Ball Valve at the bottom of the External Prefilter. Direct the other end of the ¼" tubing to either a drain or a pail.
3. Open the Mini Ball Valve slowly.
4. Press and hold down the red button on the External Prefilter Head.
5. Once the External Prefilter is drained, close the Mini Ball Valve.
6. Loosen the External Prefilter Housing from the External Prefilter Head.
7. Wear a pair of disposable gloves and carefully remove the External Prefilter cartridge from the External Prefilter Housing.
8. Rinse off the used External Prefilter cartridge. If the used External Prefilter cartridge is no longer reusable, replace it with a new one. If a new External Prefilter cartridge is to be installed, remove the plastic wrap on the outside of the cartridge.
9. Ensure that the O-ring is in good condition and seated at the lip of the External Prefilter Housing. If necessary, replace the O-ring with a new one.
10. Screw the External Prefilter Housing into the External Prefilter Head and tighten the connection using the Housing Wrench.
11. Open the Inlet Valve slowly and depress the red button on the External Prefilter Head to allow air to escape from the External Prefilter Housing.
12. Once water emerges from the button, release the button.
13. Dispose of the disposable gloves.

UFC 207, UF 207, UFC 209, UF 209, UFC 211 and UF 211 Series

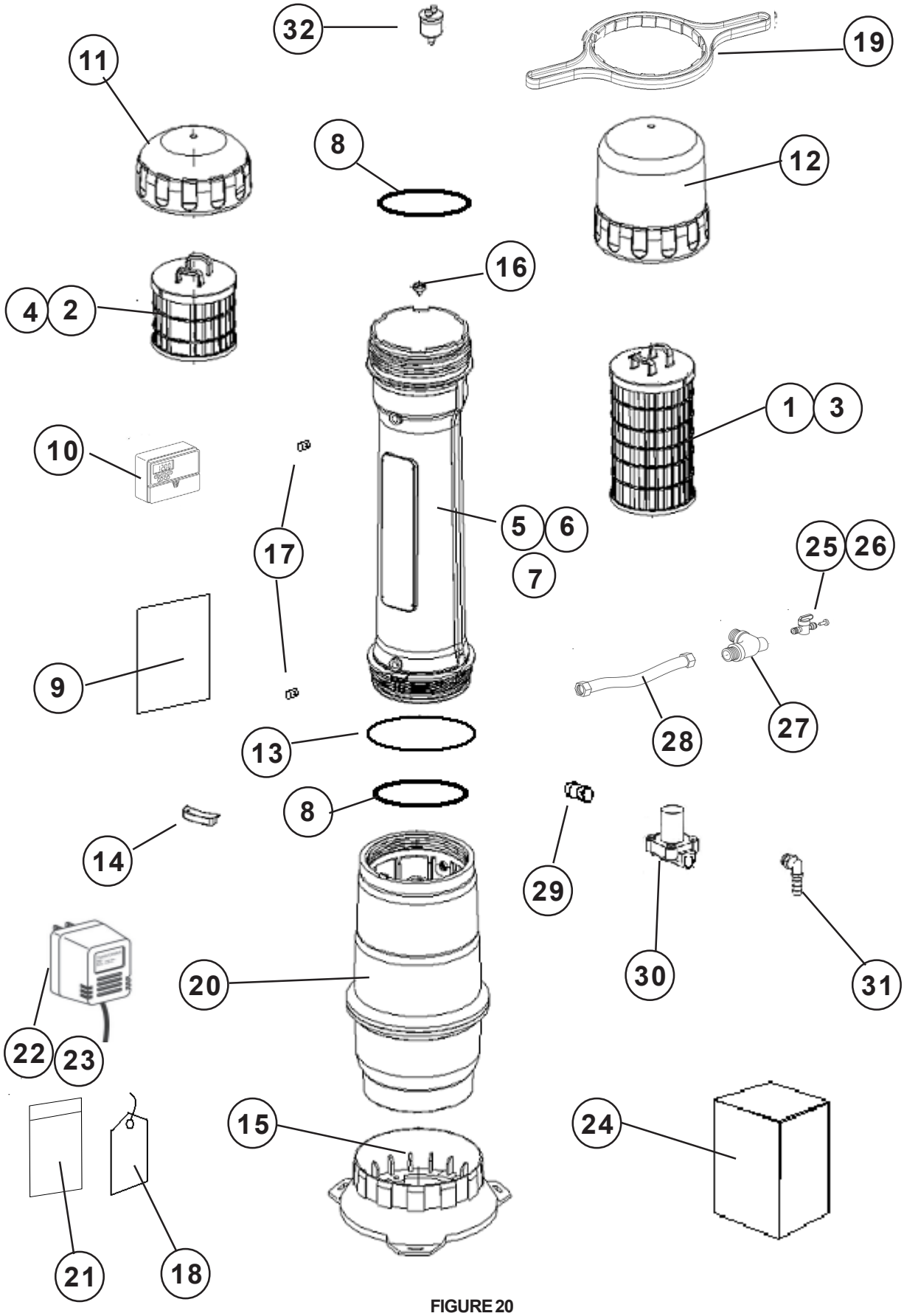


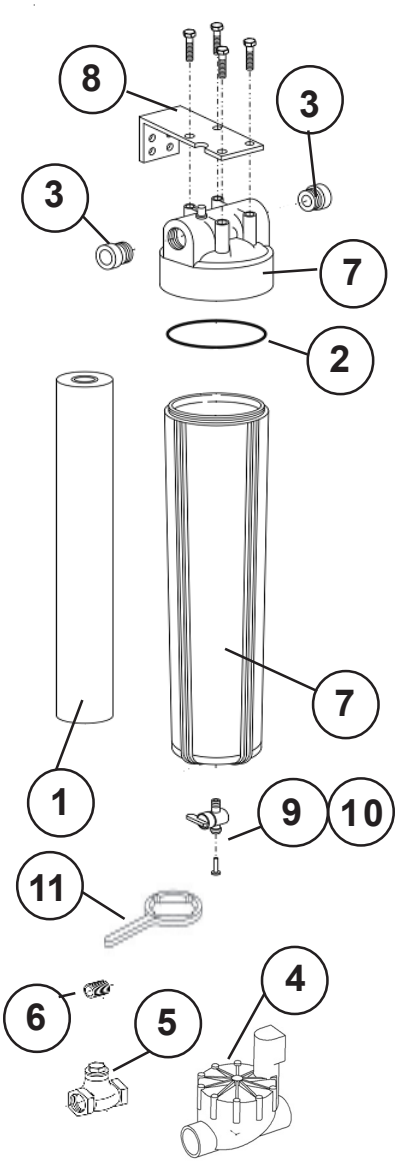
FIGURE 20

UFC 207, UF 207, UFC 209, UF 209, UFC 211 and UF 211 Series

Item No.	Part Number	Description	UFC 207/ UF 207	UFC 209/ UF 209 UFC 211/ UF 211
System				
1	23106	Carbon Prefilter, 12"		UFC models only
2	23155	Carbon Prefilter, 6"	X	
3	23107	Stainless Steel Prefilter, 12"		UF models
4	23313	Stainless Steel Prefilter, 6"		UF models
5	26001	System Replacement for UFC 207, UF 207	X	
6	26002	System Replacement for UFC 209 or UF 209		UFC 209 and UF 209 only
7	26004	System Replacement for UFC 211 or UF 211		UFC 211 and UF 211 only
8	23081	8" O-ring	X	X
9	23331	Owner's Manual	X	X
10	23119	Advanced Plus Controller[1]	X	X
11	23153	System Cap - Short	X	
12	23154	System Cap - Long		X
13	23214	Loading O-ring	X	X
14	23260	Kit, Locking Clip with mounting screw	X	X
15	23159	System Base	X	X
16	23172	Thimble Filter	X	X
17	23221	Plug, 1/4" NPT	X	X
18	23145	Service Tag	X	X
19	23029	Cap Wrench	X	X
20	23160	Backpulse Tank	X	X
21	23070	MC1 Cleaning Agent (*For ground water applications*)	X	X
22	23320	120V ROHS Transformer	X	X
23	23321	230V ROHS Transformer	X	X
Sub Assembly Kits				
24	23236	Installation Sub Assembly Kit (Base, shims, anchors, Mini Ball Valves with Plugs (2), Nylon Elbow, Inlet/Outlet Fittings (2), 1/2" Nipple, Drain Solenoid Valve, Stainless Steel Flex Hoses (2), Air Relief Valve)	X	X
25	23062	Mini Ball Valve	X	X
26	23063	Mini Ball Valve Plug	X	X
27	23203	Inlet/Outlet Fitting	X	X
28	23141	Stainless Steel Flex Hose	X	X
29	23225	1/2" Nipple	X	X
30	23223	Drain Solenoid Valve (normally closed)	X	X
31	23224	Nylon Elbow, 1/2" MNPT x 5/8" Hose Barb	X	X
32	23028	Air Relief Valve	X	X

1 - When ordering controller replacement, refer to the original transformer to find out the voltage requirement.

Surface Water Option Kit



Item No.	Part Number	Description	Surface Water Option Kit
Surface Water Option Kit / External Prefilter Kit Parts			
1	23071	External Prefilter Replacement Cartridge	X
2	23090	External Prefilter O-Ring	X
3	23061	1" to ¾" Reducing Bushing	X
4	23317	Inlet Solenoid Valve	X
5	23054	Check Valve	X
6	23137	¾ " Brass Closed Nipple	X
7	23072	External Prefilter housing and head	X
8	23060	Wall Bracket	X
9	23063	Mini Ball Valve Plug	X
10	23062	Mini Ball Valve	X
11	23104	Filter Housing Wrench	X

FIGURE 21

I. SPECIFICATIONS

Parameter	UFC 207/ UF 207	UFC 209/ UF 209	UFC 211/ UF 211
Recommended maximum peak flow rate[1] (US gallons per minute/ litres per minute)	6 gpm (22.7 Lpm)	9 gpm (34 Lpm)	11 gpm (42 Lpm)
Maximum continuous flow rate	4.5 gpm (17Lpm)	4.5 gpm (17Lpm)	4.5 gpm (17Lpm)
Pressure drop at maximum continuous flow rate when new, at 25°C[2]	10 psi (69kPa)	7 psi (48 kPa)/ 6 psi (41.3 kPa)	5 psi (34.5 kPa)/ 4 psi (27.6 kPa)
Annual water volume treatment capacity[3] (US gallons)	65,000 gal. (245,700 litres)	100,000 gal. (378,000 litres)	130,000 gal. (491,400 litres)
GAC water volume capacity at maximum continuous flow rate (US gallons)	65,000 gal. (245,700 litres)	130,000 gal.[5] (491,400 litres)[5]	130,000 gal.[5] (491,400 litres)[5]
Maximum working pressure	100 psi (690 kPa)	100 psi (690 kPa)	100 psi (690 kPa)
Minimum working pressure	30 psi (207 kPa)	30 psi (207 kPa)	30 psi (207 kPa)
Maximum water temperature	100°F (38°C)	100°F (38°C)	100°F (38°C)
Minimum water temperature	>32°F (>0°C)	>32°F (>0°C)	>32°F (>0°C)
Maximum ambient temperature	140°F (60°C)	140°F (60°C)	140°F (60°C)
Minimum ambient temperature	>32°F (> 0°C)	>32°F (> 0°C)	>32°F (> 0°C)
Operating pH range	6 - 10.5	6 - 10.5	6 - 10.5
Flush volume per day [4]	7.5 - 19.5 gal (28.4 - 73.7 litres)	7.5 - 19.5 gal (28.4 - 73.7 litres)	7.5 - 19.5 gal (28.4 - 73.7 litres)
System efficiency	87% - 94%	92% - 96%	94% - 97%
Controller voltage	24 VAC	24 VAC	24 VAC
Inlet port (female)	3/4 - 14 NPT	3/4 - 14 NPT	3/4 - 14 NPT
Outlet port (female)	3/4 - 14 NPT	3/4 - 14 NPT	3/4 - 14 NPT
Drain port (female)	1/2 - 14 NPT	1/2 - 14 NPT	1/2 - 14 NPT
Vertical mount footprint: inches (cm)	18 X 18 (45 X 45)	18 X 18 (45 X 45)	18 X 18 (45 X 45)
Vertical mount installation height: inches (cm)	68 (173)	74 (188)	74 (188)
Horizontal mount footprint: inches (cm)	24 X 68 (61 X 173)	24 X 74 (61 X 188)	24 X 74 (61 X 188)
Horizontal mount installation height: inches (cm)	36 (91)	36 (91)	36 (91)
Shipping weight	76 lbs (34.5 kg.)	79 lbs (36 kg.)	82 lbs (37.3 kg.)
Shipping dimensions W X H X L inches (cm)	15.5 X 16 X 72.5 (39.4 X 40.6 X 184.2)	15.5 X 16 X 72.5 (39.4 X 40.6 X 184.2)	15.5 X 16 X 72.5 (39.4 X 40.6 X 184.2)
1 - Chlorine reduction claims are based on a continuous flow of 4.5 US gpm (17 Lpm).			
2 - Pressure drops are given for systems when they are new and equipped as specified by the model number. At temperatures below 77°F (25°C) the pressure drop will be higher and at temperatures higher than 77°F (25°C) the pressure drop will be lower.			
3 - Annual water volume capacity is dependent on water quality.			
4 - Flush volumes are based on a drain flow rate of 5 US gpm (18.9 Lpm).			
5 - Applicable to models UFC 209C and UFC 211C only.			

Controller Specifications

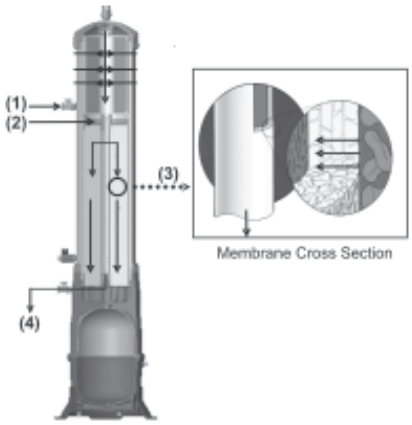
Controller	Advanced Plus
Fuse	3.0 Amp
Voltage in	24VAC
Voltage output	24VAC
Number of outputs	2
Program 1	2 flush/backpulse cycles
Estimated water use[1] (US gallons)	7.5 gal. (28.4 litres)
Program 2	4 flush/backpulse cycles
Estimated water use (US gallons)	15 gal. (56.7 litres)
Program 3	2 flush/backpulse cycles, 1 drain cycle
Estimated water use (US gallons)	13.5 gal (51 litres)
Program 4	2 flush/backpulse cycles, 2 drain cycles
Estimated water use (US gallons)	19.5 gal. (73.7 litres)

The Advanced Plus controller is capable of running the cleaning cycle 1 per day, twice, four times, eight times or 24 times per day. The water usage estimate assumes the controller is running the cleaning cycle once per day.

J. 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 NSF International 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.

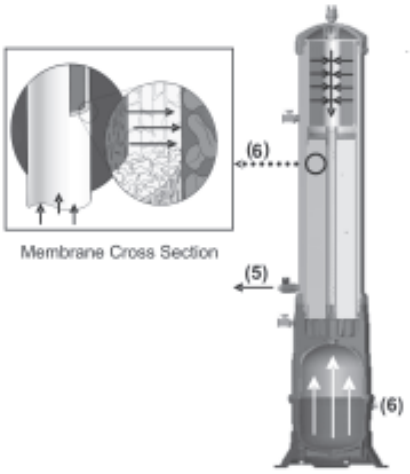
(4). The filtered water then travels through the household piping, to the household fixture that is being used.

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 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 **D. OPERATIONS.** 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 **I. 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 electrical 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 **D. OPERATIONS** 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 **I. SPECIFICATIONS.**

If the 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 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.

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.

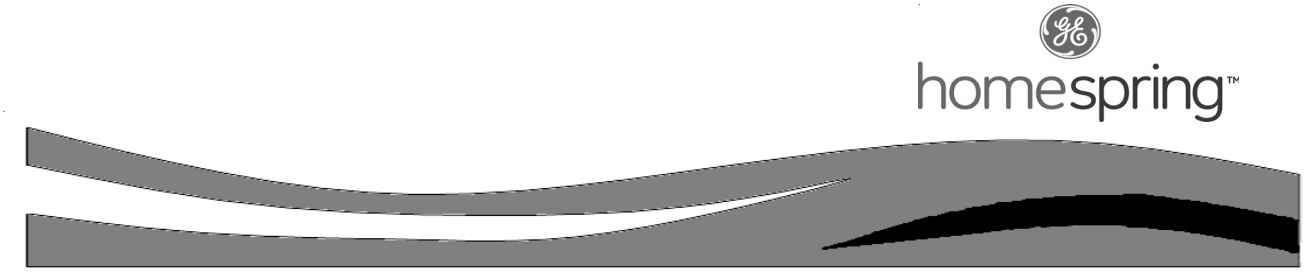
How often does the System need to be serviced?
To maintain warranty, the System must be serviced by a Homespring™ Authorized Technician at least once per year. During this service the system is cleaned and tested using the Integrity Tester to ensure that the membrane is functioning correctly. Twice per year or more 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, pools and hot tub make-up valves and irrigation systems will extend the life of the System membrane.

What is the maximum size water feed line the 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.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