



## IMPORTANT NOTICE:

This owner's manual has been converted to a FLASH<sup>fi</sup> animation and is visible in the SUPPORT section of our web site. Viewing the FLASH<sup>fi</sup> animation takes only a few minutes and details setup, installation, and filter replacement.

We strongly encourage you to view the animation before installing your TrueSpring BEV-100 Series pure water appliance.

[www.purewatersystems.com/100install.php](http://www.purewatersystems.com/100install.php)





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## Getting Started

Thank you for your purchase of this quality water purification system by Pure Water Systems, Inc. Your new TS™ BEV-100 system combines several of the most efficient methods of water treatment to achieve a very specific result—pure water that meets the rigorous Vincent (BEV) standards for bio-compatibility.

As the new owner of a TS™ BEV-100 pure water appliance there is a totally new experience awaiting you. You and your family will be amazed at the delightful new taste of your tap water—it's like owning your own personal mountain spring.

This manual provides information about the application and servicing of your TS™ BEV-100 pure water appliance. Descriptions of the components and their functions will help to answer frequently asked questions. By thoroughly reading this manual you will be better able to operate your new system and perform simple maintenance.

### Setting Up Your BEV System

Your TS™ BEV-100 system requires no electricity—the only requirement is adequate water pressure. This unit is designed to operate within a pressure range of 40–100 PSI. The amount of pure water produced depends primarily on your water pressure, temperature, and the amount of dissolved solids. Normal production is ~1.5 gallons/hour (up to 40 gallons/day). If you plan to install this unit on a private well system, you should check your pressure gauge. If the pressure is less than 40 PSI, ask a plumber to adjust and raise the pressure to the minimum level of 40 PSI.

## ***Quick Description of Installation...***

- Unpack
- Install the Spigot
- Change out the aerator on your faucet
- Attach the Quick-Connect Coupler
- Turn on the COLD water
- Produce and discard the first tank of water
- Begin enjoying the many benefits of drinking pure, BEV quality water.

### **1) Unpack the System**

As you unpack your new TS™ BEV-100 unit, inspect all parts to make sure they have not been damaged in transit. If damage has occurred immediately file a claim with the freight company. Should you need to return the unit to Pure Water Systems, you must first obtain an RMA number by contacting customer service.

#### ***Contents include:***

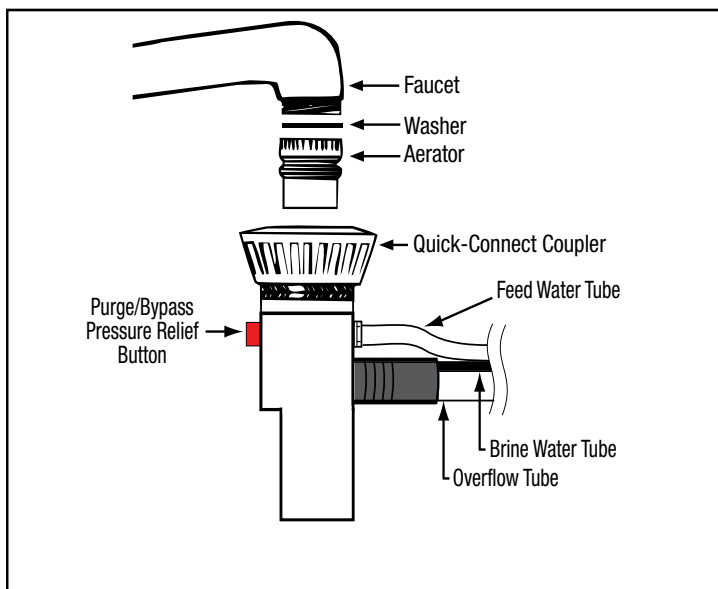
- Black Spigot Assembly
- Quick-Connect Faucet Aerator
- TS™ BEV-100 System (with attached tubing and coupler)
- Owner's Manual
- Registration & Warranty Card

### **2) Installing The Spigot**

- a) Unscrew the black nut from the spigot assembly and remove one (1) washer. *Do not remove the dome shaped washer.* (The dome of the washer faces the housing.)
- b) Push the threaded end of the black spigot through the hole in the front of the housing.
- c) Replace the washer and nut. Tighten just until firm. (It is not necessary to fully compress the washers to achieve a leak-free assembly. )
- d) Rotate the spigot assembly to a vertical position.

### 3) Installing The Quick-Connect Faucet Aerator:

Before attaching the quick-connect aerator to your faucet, it is necessary to remove old aerators and/or filters. A new aerator, specifically designed to match your BEV unit, is provided. The aerator has outside (male) and inside (female) threads. If your faucet has outside threads simply screw the new aerator onto the faucet. (See Figure 1)



*Figure 1, Quick-Connect Faucet Coupler Assembly*

If the faucet has inside threads, screw the chrome threaded adaptor into the aerator. Place the thin black washer (also supplied) on the top of the chrome adaptor and screw the adaptor assembly into the faucet.

This combination adaptor fits most U.S. manufactured faucets, but in case it does not an adaptor kit is available from Pure Water Systems. Adaptors are also available from most hardware and home improvement stores.

To tighten, wrap electrical tape around the top outside part of the aerator then lightly grip with a pair of pliers. Do not grip the bottom of the aerator. (A pair of leather gloves can be useful for gripping and tightening the aerator by hand.)

**CAUTION:** If the aerator is damaged, the coupler will not seat properly. Water leaking from the top of the coupler is usually due to a bent aerator or one that is not tightened sufficiently. It may be necessary to experiment with various washers to find one that works best with your faucet.

#### 4) Attaching The Quick-Connect Coupler:

To attach the BEV unit to your faucet push down the movable white plastic collar of the quick-connect coupler and push it up onto the aerator. When the collar is covering the aerator, release it and the white coupler will snap into place.

#### 5) Starting the TS™ BEV-100 System the First Time:



The flush valve on the front of the housing (see Figure 2, opposite page) should be in the FLUSH position when you turn on the cold water the first time.

**Slowly** turn the **cold** water on all the way. *Never use hot water—it will damage the membrane!*



As water begins to move through the system you will begin to see dirty black water coming forcefully out the bottom of the faucet coupler. When the water runs clear (2–4 minutes), turn the FLUSH VALVE to the PRODUCTION position.

A small stream of brine water should always run from the bottom of the coupler when the system is in production mode. Brine flow is factory set (~1 cup/minute under normal conditions).

Completely fill—then drain and discard the first full tank of water. *Do not use the first tank of water for drinking or cooking.*



## 6) Disconnecting your TS™ BEV-100 system:

- a) Turn the cold water supply completely OFF.
- b) Wait a few seconds for water pressure to bleed off, or push the red button on the side of the coupler.
- c) Pull the white plastic ring down and remove the coupler from the faucet.

## Operating Notice

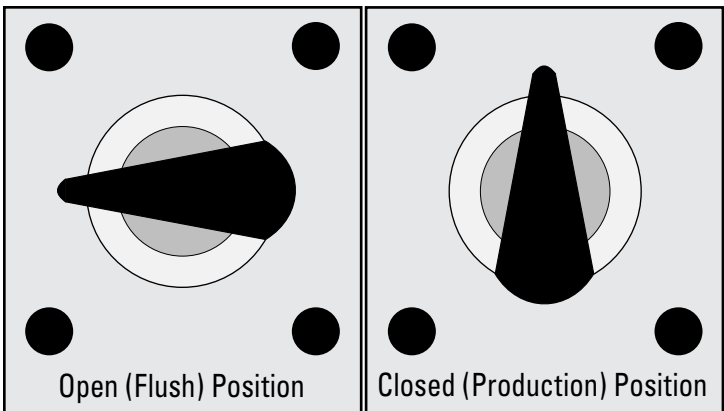
It will take several minutes for water to begin to appear in the reservoir.



If no water comes from the bottom of the coupler when in PRODUCTION mode do not continue to use your system. Try rotating the flush valve back and forth between flush and production modes, which will usually clear an obstruction in the brine orifice. If the problem persists contact Pure Water Systems Customer Support.

## Flushing:

Flushing is the single most important maintenance function you will need to perform to keep your system operating at peak



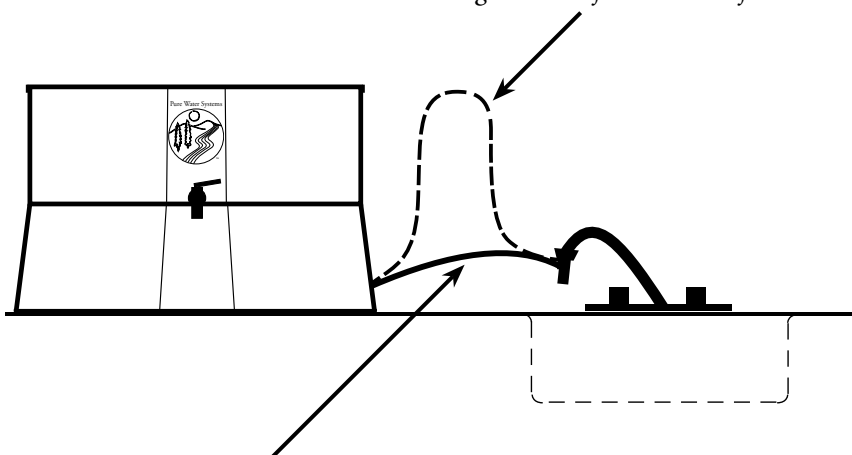
*Figure 2, Front Mounted Flush Valve*

efficiency. This simple operation only takes a few minutes, yet makes a great difference in the quality of the water your unit produces, and extends the service life of the RO membrane.

- a) Connect your system normally, then simply move the black valve on the lower-right front of your unit parallel to the countertop (see Figure 2, above). This will open the flush valve and allow water to rush across the surface of the RO membrane, washing away concentrated contaminants. You should notice a strong flow of water coming from the bottom of the coupler.
- b) Flushing the unit for 5 minutes once per week is ideal.

If your unit has been disconnected for several days (e.g. while you are on vacation) flush the membrane for 5-10 minutes as described above, and discard the first full tank of water.

**NOT GOOD!** *If the hose loops above the top of the housing, excess water will spill out of the housing instead of out the overflow tube.*



**GOOD!** *Keep hose and coupler below the middle of the BEV-100 Series housing.*

## Getting to Know Your BEV System

Your TS™ BEV-100 system includes seven unique stages in three different modules. Every system combines the proven water filtration methods of carbon adsorption, reverse osmosis, and de-ionization. By carefully matching the components utilizing these methodologies, Pure Water Systems is able to assure your system produces water which meets or exceeds the Vincent standards for bio-compatibility.

### A Look At The Seven Stages

*The first module, a 2½" x 12" pre-filter, contains stages one and two.*

#### Stage One:

Water entering the unit is first subjected to a 12" bed of compression packed, steam washed, bituminous grade granular activated carbon (GAC) for removal of chlorine and adsorption of organic contaminants. Removal of chlorine at this stage protects the polyamide thin-film-composite (TFC) reverse osmosis membrane downstream.

#### Stage Two:

Any suspended particles such as sand, rust, or other deposits commonly found in the feed water supply are removed by a nominal 10-20 micron post filter. This protects the reverse osmosis membrane from particles which might clog the pores of the membrane.

### Stage Three: (second module)

A custom designed and extremely efficient spiral wound reverse osmosis membrane produces up to 18 gallons of purified water per day. This membrane utilizes the unique properties of a semi-permeable material which allows passage of pure water molecules while not allowing dissolved salts, heavy metals, and organics to pass through. Our extraordinary membrane is designed to consistently and significantly reduce the total dissolved solids in the source water supply by greater than 97%. It also has a tremendous capacity to reject organic and biological contaminants, including waterborne microorganisms. (EPA EST. No. 52531-FL-01)

The operating parameters for this custom designed reverse osmosis membrane are found in the Specifications section of this manual.

*Stages four through seven are contained in our unique four stage, RO matched de-ionization module.*

### Stage Four: (third module)

This stage includes a unique blend of deionization resins carefully matched to our exceptional reverse osmosis membrane and provides superior rejection of monovalent ions and the ionic residues of pesticides and other hydrocarbon contaminants. It is the inclusion of deionization resins which sets the BEV systems apart from other reverse osmosis systems. It is not enough to include any commercial grade resins; the blend of cationic and anionic resins must be a nuclear grade and carefully engineered to match the reverse osmosis membrane.

### Stage Five:

Following the DI resins are four inches of granular activated carbon to polish the product water for a clean, fresh taste. The flow rate at this stage provides tremendous contact time to assure complete removal of any remaining organic contaminants.

## Stages Six and Seven:

The final two stages of our proprietary DI module are included to prevent the reverse migration of contaminants into the system. The inclusion of these technologies further separates the BEV systems from other manufacturer's designs. After carefully combining the elements of the previous five stages it is essential to include this technology to assure contaminants cannot enter the system from the product water end.

## Component Description

Following is a brief description of the main components of your TrueSpring™ BEV-100 system.

### Quick-Connect Faucet Coupler Fitting (Aerator)

This fitting replaces the current aerator on your kitchen faucet. The new fitting comes with an adaptor which will allow the fitting to be applied to most existing faucet designs. (Adaptors for unique faucets can generally be obtained from any home improvement store, or from Pure Water Systems.) This part allows for connection of the heavy duty coupler and hose assembly to your faucet.

### Quick-Connect Coupler

The quick-connect faucet coupler allows for easy connection of the TrueSpring™ BEV-100 system to your water supply. This heavy duty coupler includes our unique bypass and pressure relief button which provides access to the raw tap water without having to disconnect the coupler.

### Hose Assembly

The unique three part hose assembly of the TrueSpring™ BEV-100 system includes the high pressure feed water tube, the brine water exhaust tube, and the overflow tube.

## Two-Stage Pre-filter

This fully encapsulated filter module contains a carefully chosen grade of granular activated carbon to remove chlorine, chloramines, and other organic contaminants along with a nominal 10-20 micron sediment filter to remove silt, sand, rust, scale and other suspended particulates.

## RO Pressure Vessel

The pressure vessel houses the polyamide thin-film-composite reverse osmosis membrane. The design provides a means to collect the purified product water and an exhaust opening to drain off the concentrated brine water.

## RO Membrane

Reverse osmosis is a scientific method of reversing nature's biological process where a dilute or lighter solution passes through a semi-permeable membrane into a more concentrated solution. In the human body fluids pass in and out of such membranes (cell tissues) by the phenomenon known as osmosis while plants absorb food and moisture from the soil in the same way. Scientists have long realized if the natural process of osmosis could be reversed—if water from concentrated sources could be made to pass through a selective membrane and emerge as pure water, many practical applications could be developed. For instance, unwanted salts and other dissolved inorganic minerals could be removed from all kinds of water sources. The process was originally perfected by NASA and DOW® Chemical to purify and re-use all liquids aboard spacecraft. Reverse osmosis filters out all particles greater than .0001 microns in diameter.

The membrane used in your TrueSpring BEV-100 system is a privately manufactured, custom rolled, spiral wound polyamide thin-film-composite membrane. This membrane has the ability to remove in excess of 97% of the dissolved inorganics. Rejection is based on degree of removal of sodium and chloride ions.

Although RO has a higher percentage of removal of all di, tri, and quadri-valenced elements (e.g. >99% of aluminum) any mono-valenced elements are rejected at ~97% level. The nominal remaining 3% of dissolved solids, mostly monovalent, enter the next stage of the process—the deionization module.

## Deionization (DI) Module

Deionization resins are a man-made plastic bead chemically made anionic (OH<sup>-</sup>) and cationic (H<sup>+</sup>). The resins in your TrueSpring™ BEV-100 series system are of nuclear grade and carefully matched to the reverse osmosis membrane. (As opposed to commercial grade resins typically found in water softeners.) In the DI module, H<sup>+</sup> and OH<sup>-</sup> are exchanged for the mono-valenced elements in the product water coming from the RO membrane. The only thing added to your TrueSpring™ BEV-100 system is hydrogen ions (H<sup>+</sup>) and hydroxyl (OH<sup>-</sup>) ions, which combine to form H<sub>2</sub>O, or pure water.

Following the DI resins are several additional inches of granular activated carbon. This is included to insure the complete removal of any organic contaminant that might appear in trace form from a partial degree of removal via RO and DI. Since we've never found any organics which are not removed either by the upstream GAC pre-filter or RO membrane, the GAC at this stage acts primarily to polish the product water for a clean, fresh taste. GAC is the most common product used to filter bottled or “spring” waters.

Finally, the end of the DI module contains two additional stages which are in place as safeguards against any reverse migration of contaminants.

## The TrueSpring™ BEV-100 Housing

Injection molded using the highest grade of inert ABS plastics, the housing of your TrueSpring™ BEV-100 system is designed to stand up to years of service without cracking, warping, or ultra-violet degradation. The patented design allows for complete drainage of all product water and includes a built-in overflow gutter. The

translucent LEXAN® top allows you to see the remaining water level without having to remove the lid.

### **Built-in Flush Valve**

The built-in flush valve on your TrueSpring™ BEV-100 housing provides a quick and simple method to periodically flush the surface of the RO membrane. Simply opening the flush valve once a week for five minutes will wash away impurities that may be concentrating near the surface of the RO membrane. If not occasionally flushed from the membrane surface, impurities might concentrate and clog the pores of the membrane. Flushing the membrane insures longer service life and greater rejection of contaminants.

## **Operating Parameters**

To insure proper operation of your BEV system, it is advisable to collect the following information about your water supply. This information is generally available from your municipal water department.

### **Pressure**

In order to overcome the natural osmotic force, adequate water pressure must be available from your water supply. The osmotic force is directly proportional to the concentration of dissolved solids in the water. When the water pressure is equal to the osmotic force, there will be no movement of pure water molecules across the semi-permeable membrane. A minimum of 40 psi is recommended. (If your water pressure is below 40 psi, a booster pump is available. If you are on a private well, have your plumber raise the minimum pressure above 40 psi.)

In general, the higher the pressure (up to 100 psi), the better the performance of the membrane at rejecting contaminants. Pressures below 40 psi will result in poor rejection rates and may reduce the service life of the membrane.



## pH

The TFC membrane will hold up very well when the pH of the feed water is between 3 and 11. Water supplies with pH over 11 are very rarely, if ever, found. (Chlorine bleach has a pH of ~11.5.)

## Chlorine

Chlorine is the most common substance added to municipal water supplies. Its purpose is to eliminate biological growth (i.e. chlorine is toxic). Regulations usually require there to be residual chlorine when it reaches your tap. Typically, the residual concentrations of chlorine in household water range from 0.5 to 1.0 parts-per-million (ppm).

Besides being toxic, chlorine will degrade the TFC reverse osmosis membrane. Therefore, it is essential to remove chlorine from your feed water before it reaches the RO membrane. Your BEV system includes a pre-filter containing a special grade of granular activated carbon (GAC) which will very effectively remove the chlorine from your tap water. It is important to replace the pre-filter annually to insure no chlorine is reaching the membrane.

## Sediment

In areas with very high sediment concentrations the pre-filter may clog prematurely. If the pre-filter becomes clogged, you will likely notice a decrease in the production rate from your system. In areas with very high sediment concentrations, it may be necessary to replace the pre-filter on a semi-annual basis.

## Iron

The exceptional RO membrane in your TrueSpring™ BEV-100 series system can handle up to 3 ppm ferrous iron. RO membranes in ordinary RO systems can typically handle only 0.1 ppm. If your water supply has iron concentrations above 3ppm, pre-treatment is recommended.



## Maintenance And Servicing

Minimal work is required to keep your BEV system in peak operating condition. As with many home appliances, it is important to keep the system clean both externally and internally. This, along with replacing the modules as recommended, will insure your unit consistently produces pure water meeting the Vincent (BEV) standards for bio-compatibility.

Take care of your BEV system and it will provide many years of healthful drinking and cooking water for your entire family.

### Exterior Cleaning

The exterior surface of your BEV system can be kept looking like new by occasionally cleaning the surfaces with a soft cloth. Great care was taken in the choice of plastics for your unit, but the housing cannot withstand harsh chemicals or solvents. Use a mild, non-abrasive dish washing detergent or diluted spray cleaner to remove smudges or food stains, then rinse and dry the surface. Use of abrasive scouring powders or glass cleaning products containing ammonia are not recommended.

### Cleaning the Reservoir

We recommend cleaning the water reservoir every 60-90 days.

- 1) Drain all the water from the reservoir.
- 2) Remove the cover.
- 3) Wash the inside of the reservoir with a mild, non-abrasive dish washing detergent, rinse thoroughly, and replace the lid.

- 4) Use the first tank of water after cleaning the unit for watering plants, etc. This will allow pure water to rinse away any traces of detergent remaining in the reservoir.
- 5) The unit is now ready to be placed back into regular service.

## Flushing

Flushing is the single most important maintenance function you will need to perform to keep your system operating at peak efficiency. This simple operation only takes a few minutes, yet makes a great difference in the quality of the water your unit produces, and extends the service life of the RO membrane.

- a) After connecting your system to the faucet and turning the cold water on, simply move the black handled valve on the front of your TrueSpring™ BEV-100 housing parallel to the countertop. This will open the flush valve and allow water to rapidly flow across the surface of the RO membrane, washing away contaminants which, if allowed to accumulate, might clog the pores of the membrane. You should notice a strong flow of water coming from the bottom of the quick-connect coupler.
- b) Flushing the unit for several minutes once per week is ideal. Alternately, you can flush the membrane for 1 minute after each use.

If your unit has been disconnected for several weeks (e.g. while you are on vacation) flush the membrane for 5-10 minutes as described above.

## Filter Replacement

After 12 months of use, it is time to replace the 2-stage pre-filter and the 4-stage DI module to insure your system is producing water within BEV parameters. Replacement modules can be ordered directly from Pure Water Systems via our web site <http://www.purewatersystems.com>.

The process of filter replacement is detailed below. Please read through these simple instructions before proceeding.

- 1) Disconnect the coupler from your faucet.
- 2) Drain all the water from the reservoir.
- 3) Choose a work area with a large flat surface such as a kitchen table.
- 4) Place a soft clean towel on the working surface—it will absorb the small amount of water that will spill from the modules as they are changed out, and it will protect the surface of both the table and your BEV system housing.
- 5) Remove the lid
- 6) Turn the unit over on the towel, exposing the filter modules.

## Removing The Modules

Before proceeding, study Figure 3 below:

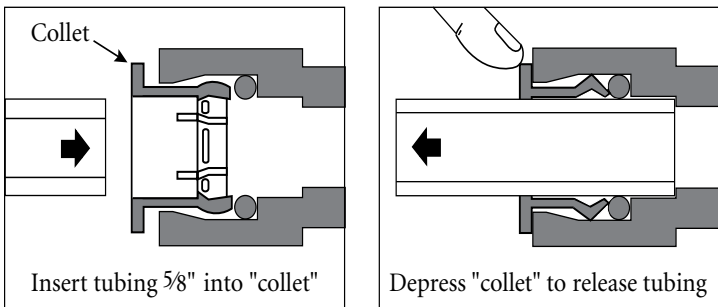


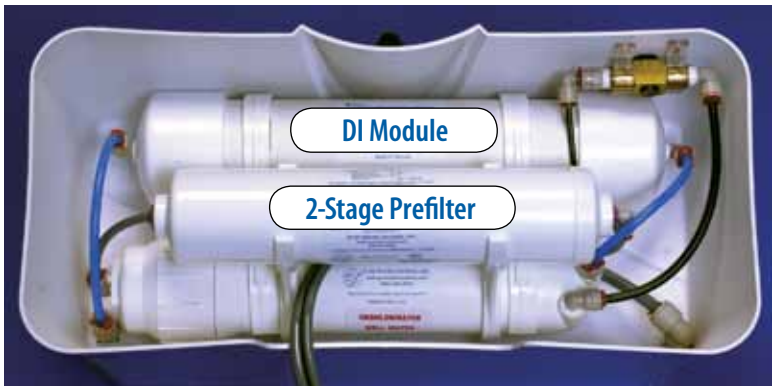
Figure 3, John Guest® “Speedfit” Push-In Fittings

- 1) The first module you can see is the 2-stage pre-filter. It is supported by two “Double C” clamps which are attached to the reverse osmosis (RO) pressure vessel. At one end of the module the feed water tube enters from the hose assembly. At the other end a piece of tubing connects to the the RO pressure vessel.

*Your system shipped with shaped foam packing blocks (not shown) securing the RO pressure vessel and DI module from shifting during shipping. You can remove these as you disassemble the filters if you choose.*

The tubing is attached to the module using a unique push-in fitting system manufactured by John Guest® Company (see figure 3 above). The “collet” assembly will securely hold the tubing under normal conditions. An O-ring behind the collet assures a leak free seal.

To insure your system will be water-tight even after being shipped across country, we have inserted small [red] plastic retaining clips on each fitting. These are easily removed with your fingers or, if grabbing the clip is difficult, you may wish to use a pair of needle-nose pliers.



- 2) Remove the retaining clips from each end of the pre-filter, then remove the tubing itself. You will feel some resistance as the tubing slides away from the O-ring inside the fitting.
- 3) With the module free of its connections, it can be removed from the two “Double C” clamps holding it to the RO pressure vessel. Remove the two “Double C” clamps and set them aside.

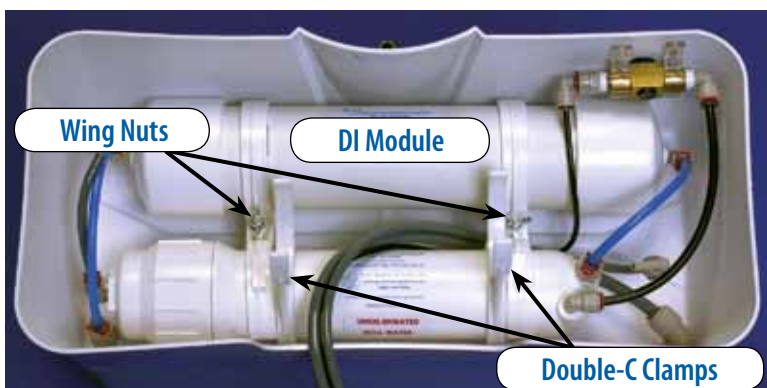
*Note the direction of the “FLOW” arrow. You will need to install the new pre-filter in the same orientation.*

- 4) With the pre-filter removed, you now have access to the DI Module and the RO pressure vessel. These modules are attached with a custom clamp secured by two wing nuts. Before removing the wing nuts, you need to disconnect several more tubes from their fittings...
- 5) Disconnect the tubing from each end of the de-ionization (DI) module.

*Note the direction of the “FLOW” arrow. You will need to install the new DI module in the same orientation.*

- 6) One end of the reverse osmosis pressure vessel has two connections—the blue tube connects to the DI module, and the black tube connects to the flush valve assembly. Remove the black tube from the RO pressure vessel.
- 7) You can now remove the two wing nuts which secure the RO pressure vessel and DI module to your BEV-100 Series housing.
- 8) You are now ready to remove the RO pressure vessel and DI module from the housing.

If this is the first time you are replacing the DI module, you will find both the DI module and RO pressure vessel are secured to the clamps with double sided



adhesive tape (installed to prevent damage during transit). The adhesive will release if you carefully, and slowly, rotate the DI module away from the clamp. It is not necessary to replace the adhesive when re-assembling the system.

- 9) Place the new DI module into the housing. Re-insert the tubing which connects the reservoir to the DI module, taking care to attach the tubing to the outlet end of the module.
- 10) Replace the RO pressure vessel and clamps. Re-insert the blue tubing coming from the RO pressure vessel into the inlet end of the DI module.
- 11) Re-insert the black tubing into the brine water discharge port on the RO pressure vessel.
- 12) Replace the retaining clips.
- 13) Replace the two wing-nuts which secure the RO/DI clamp.
- 14) Snap the two “Double C” clamps back onto the RO pressure vessel.
- 15) Place the new Sediment and Carbon Pre-filter into the clamps, being sure the “FLOW” arrow points the same direction as noted in step 3 above.



- 16) Re-insert the feed water tube from the hose assembly into the inlet end of the pre-filter. Re-insert the tubing from the RO pressure vessel inlet into the outlet end of the pre-filter. Replace the retaining clips.
- 17) When all filters have been replaced and all tubes have been reconnected, hook the unit up to the faucet and turn on the water. Let the unit produce water for 10–15 minutes then drain the water, invert the unit, and inspect for leaks.

If any water appears at any of the tubing connections, remove the retaining clip, remove and re-insert the tubing. Replace the retaining clip. (A leaking connection is extremely rare.)

- 18) You can now return the unit to service. Let the reservoir fill and discard the first tank of water (use it to water plants, etc.) You are now ready to enjoy great tasting, pure BEV water for another 12 months!



## Frequently Asked Questions

**Q:** How long will my pre-filter last before it needs to be replaced?

**A:** Under most normal city water conditions, the pre-filter is designed to function properly for 12 months, and should be replaced annually. Sediment concentrations vary greatly between municipal systems so there is no way of determining the lifetime of a filter without knowing more about the feed water. In some very rare cases, it may be necessary to replace the pre-filter more frequently.

**Q:** How long will my reverse osmosis membrane last?

**A:** The membrane's life depends on the water conditions as listed in the specification section of this manual. If all these conditions are met, the life of the membrane is generally 2–3 years. If a membrane fails or its performance becomes reduced before this time, the cause can usually be traced to feed water conditions outside the specifications.

**Q:** How do I know if there is a problem with the membrane?

**A:** The best method is to measure the resistivity (conductivity) of the product water and compare it to the feed water. You can obtain a resistivity meter from Pure Water Systems. (Poor rejection rates may also be an indication of a plugged pre-filter, so check that filter first.) A large increase in the production rate is also an indication of membrane failure, and can often be traced to the membrane having been subjected to either freezing or hot water.

To monitor overall system performance and rejection rates, the best method is to obtain TDS meter from Pure Water Systems.

**Q:** A small stream of water is constantly running from the bottom of the quick-connect coupler—is this normal?

**A:** Yes. To keep reverse osmosis membranes from fouling, water must continuously be washing over the membrane surface, carrying away concentrated contaminants. Your BEV system uses 2.5–3 gallons to produce 1 gallon of pure BEV water. (Filling the reservoir uses less water than a typical 5 minute shower).

**Q:** Will I lose valuable trace minerals by drinking reverse osmosis water?

**A:** No. Our bodies do not easily assimilate the inorganic minerals found in drinking water. We obtain the majority of our minerals from the foods we eat. There are many, many more chelated minerals in a piece of organic fruit or a serving of organic vegetables than in several gallons of water.

**Q:** Will hot water ruin my RO membrane?

**A:** YES! Hot water over 100° F will damage the membrane and cause poor rejection of the contaminants in your water. Make sure you use only COLD water in your BEV system.

**Q:** How should I store my purified water?

**A:** We recommend using a sealable glass container. Used gallon fruit juice bottles are an excellent choice. If you store or transport your BEV water in plastic or polycarbonate containers, be sure to keep the containers out of direct sunlight.

**Q:** How should I store my unit when not in use?

**A:** If your unit is out of service for several days (while you are vacationing, for example) no special precautions are required. However, we do recommend you flush the unit for 10 minutes when you return the system to production.

## Limited Warranty

Pure Water Systems, Inc. warrants to the original owner each TrueSpring™ BEV-100 Series pure water appliance to be free from defects in materials and workmanship for as long as you own the product.

### What The Warranty Covers

Full Lifetime Warranty on all parts (excluding normal module changes or abuse).

### Exceptions to Lifetime Warranty

The Lifetime Warranty does not include damage caused by or resulting from unreasonable use, including failure to provide reasonable maintenance, or incidental or consequential damages, such as water damage or damage to appliances, fixtures or other equipment.

Warranty will be void if product failure or damage is due to any of the following:

1) Misuse, misapplication (e.g. unacceptable water conditions), neglect (e.g. inadequate filter changes), alteration, hot feed water, freezing, or accident.

2) Improper installation, operation, or servicing.

No one is authorized to change or add to this Warranty.

### What We Will Do To Correct An Inconvenience

Upon notice, we will repair or replace covered defective parts, free of charge.

If it is necessary to ship the product to Pure Water Systems, Inc. or bring it to a dealer for service, the buyer must pay for any shipping or travel costs.

Pure Water Systems, Inc. will pay for any return shipping charges in the U.S. for parts or products covered under the warranty.

Pure Water Systems, Inc. will furnish any factory labor to make repairs on parts or products returned to the factory that are covered under the warranty.

### **How You Can Get Service**

Contact the Pure Water Systems, Inc. customer service department for instructions and authorization number for returning the defective part or product.

Pure Water Systems, Inc.  
Customer Service Dept.  
5707 238th Place N.E.  
Redmond, WA 98053  
Phone: (425) 836-5665  
Fax: (425) 898-1706

Your TrueSpring™ BEV-100 Pure Water appliance is a sophisticated water treatment system. Failure to use genuine Pure Water Systems, Inc. components shall void the exclusive lifetime warranty.

### **How State Law Relates To The Warranty**

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty applies to the original purchaser and gives you specific legal rights. You may also have other rights which vary from state to state.

## Specifications

Following are the recommended operating parameters for our custom rolled reverse osmosis membrane:

Membrane type	Spiral Wound Polyamide Thin Film Composite (TFC)
Production	Up to 40 Gallons-Per-Day (GPD)
Maximum Operating Temperature	40–100° F (4–38° C)
Operating Pressure	40–100 psi (2.75–6.9 bar)
pH Range	3.0–11.0
TDS Level, Maximum	2000 ppm
Turbidity	< 1.0 Net Turbidity (NTU)
Chlorine (Cl <sub>2</sub> )	0.00 mg/l *
Hardness (CaCO <sub>3</sub> )	< 350 mg/l (<20 grains/gallon)
Iron (Fe) & Manganese (Mn) combined	< 3 mg/l Ferrous Iron
Hydrogen Sulfide (H <sub>2</sub> S)	0.00 mg/l

\* Every system is equipped with our unique combination pre-filter to remove sediment and chlorine.

You can obtain specifics about your water supply from either your local water department or a water testing service (listed in the Yellow Pages under “Analytical Labs.”) If the parameters of your water do not fall within the specified ranges as noted above, please contact Pure Water Systems or your local dealer for further treatment options.

Production is rated at optimum temperature of 70° F, 60 PSI, and 500 ppm TDS. Actual production will vary depending on local temperature, pressure, and TDS level.

Low tap water pressure will reduce the volume and quality of the water produced by your system. In low pressure situations (less than 40 PSI) BEV values cannot be assured. The addition of a booster pump (TS-BP-100) is strongly recommended.

(A simple gauge for measuring water pressure can be obtained from home improvement stores, usually for less than \$10.)

**ALWAYS USE COLD WATER**—hot water will damage the TFC membrane.

The unit must not be allowed to freeze. Freezing water will expand inside the modules—damaging the membrane and potentially rupturing the filter housings. Damage of this type will void the warranty.



# B

## Replacement Schedule

Below you can find the recommended replacement schedule and part numbers for the components of your TS™ BEV 118 pure water appliance.

### Replacement Components

Module	Replacement Schedule	Order No.
TS™ Sediment & GAC Pre- filter	Annually	TS-BEV100-012
TS™ 4-Stage Deionization Module	Annually	TS-BEV-DI
TS™ BEV-100 Series RO Membrane	2-3 years (as needed)	TS-BEV-RO40

Purchase Date: \_\_\_\_\_

Purchased From: \_\_\_\_\_

Serial Number: \_\_\_\_\_

### Maintenance Log

Module	Date Replaced

[www.truespring.com](http://www.truespring.com)

