

GreenPro™

Water Systems

GreenPro™ Point-of-Use (POU) Water System Arsenic Reduction Filter



Installation, Operation & Service Instructions

Attention GreenPro™ Water Systems Customer:

Your local independently operated GreenPro™ Water Professional employs trained service and maintenance personnel who are experienced in the installation, function and repair of R.E. Prescott Co., Inc.'s equipment. This publication is written specifically for these individuals and is intended for their use.

We encourage you to learn more about R.E. Prescott Co., Inc. products, but we believe that product knowledge is best obtained by consulting with your GreenPro™ Water Systems Professional. Untrained individuals who use this manual assume the risk of any property damage or personal injury.

IT IS VITAL TO THIS PROGRAM THAT THE REGISTRATION CARD INCLUDED WITH THE SYSTEM BE RETURNED IN ORDER TO BE ENROLLED IN THE WATER TESTING PROGRAM. THIS SYSTEM COMES STANDARD WITH A 2 YEAR TESTING PROGRAM, BEGINNING 6 MONTHS FROM THE DATE OF INSTALLATION. ADDITIONAL TESTS MAY BE PURCHASED TO EXTEND THE TESTING PROGRAM. CONTACT US FOR MORE INFORMATION.



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Introduction

Installation and use of the GreenPro™ Point of Use (POU) System must comply with state and local laws and regulations. This system must be installed on a **COLD** water source in accordance with the detailed instructions in this manual. The R.E. Prescott Co., Inc. GreenPro™ POU System is not intended to purify non-drinkable sources of water. Do not use with water that is microbiologically unsafe or with water of unknown chemistry without adequate disinfection before or after the system. **The GreenPro™ Water System POU system is not a disinfection or purification system.**

GENERAL OPERATIONAL AND MAINTENANCE REQUIREMENTS

Compliance with operational, maintenance and replacement requirements as noted in this manual is essential for the product to perform properly.

For installations in Massachusetts, the Commonwealth of Massachusetts Plumbing code 248 CMR shall be adhered to. Consult with your licensed plumber for installation of this system. This system and its installation must comply with state and local regulations. The use of saddle valves is not permitted.

Safe Practices

Throughout this manual there are paragraphs set off by special headings.

NOTE: Note is used to emphasize installation, operation or maintenance information which is important, but does not present any hazard. Example:

Note: Systems with tanks greater than 12" diameter will require media loading

CAUTION! Caution is used when failure to follow directions could result in damage to equipment or property. Example:

CAUTION! Do not use Vaseline, oils or other hydrocarbon lubricants or spray silicone anywhere on the system.

WARNING! Warning is used to indicate a hazard which could cause injury or death if ignored. Example:

WARNING! Electrical shock hazard! Unplug the unit before removing the cover or accessing any internal control parts.

Serial Numbers

The GreenPro™ Water Systems water filter has one serial number located on the media tank under the “Layne at the Core” label. **DO NOT REMOVE OR DESTROY THE SERIAL NUMBER DECALS. IT MUST BE REFERENCED IF EVER YOU REQUIRE REPAIRS OR PARTS REPLACEMENT UNDER WARRANTY.**

If you wish to service your system or maintain replacement components, please consult your local GreenPro™ Water Systems Professional or call (603) 772-4321 for a Water Treatment Professional near you.

This publication is based on information available when approved for printing. Continuing design refinement could cause changes that may not be included in this publication.

Please read this booklet carefully before beginning the installation of the GreenPro™ Water Systems Arsenic Reduction Filter. It contains important information about the unit, including the tools and materials needed for installation, accessories available from hook-up to plumbing, and instructions covering installation, settings, start-up, and operation. The GreenPro™ Water Systems have been thoughtfully designed and engineered to provide conditioned water when properly applied, installed, and operated.

This system and installation must comply with state and local regulations.

This system is designed to reduce arsenic to less than 0.010 mg/L (ppm), (10 µg/L (ppb)). Actual performance of the system may vary depending on specific water chemistry and conditions at the consumer's installation. Following installation of this system, the installation site should have the treated water tested for arsenic to verify arsenic reduction is being achieved and the system is functioning properly. Please see “Arsenic Facts” for further information.

Arsenic Fact Sheet

Media used for arsenic removal are affected by a number of water parameters. The R.E. Prescott Co., Inc. GreenPro™ Water Arsenic Reduction System is designed to reduce pentavalent arsenic. Actual performance of the system may vary depending on specific water conditions at the consumer's installation. Following installation of this system, the consumer should have the treated water tested for arsenic to verify that arsenic reduction is being achieved and the system is functioning properly.

The arsenic removal component of this system must be replaced at the end of its useful life when the treated water exceeds 0.010 mg/l (0.005 mg/l in NJ & SC) of arsenic. The replacement component can be purchased from your local GreenPro™ Water Systems Professional.

ARSENIC FACTS

Arsenic (As) is a naturally occurring contaminant found in many ground waters. It generally occurs in two forms (valences or oxidation states): pentavalent arsenic (also known as As(V), As(+5), and arsenate) and trivalent arsenic (also known as As(III), As(+3), and arsenite). In natural ground water, arsenic may exist as trivalent arsenic, pentavalent arsenic, or a combination of both. More information about arsenic and its toxicity can be found on the Agency for Toxic Substances and Disease Registry Toxicological Profile on Arsenic web-site at <http://www.atsdr.cdc.gov/toxprofiles/phs2.html> and U.S. Environmental Protection Agency website at <http://www.epa.gov/safewater/arsenic.html>.

Arsenic does not generally impart color, taste or smell to water and therefore, can only be detected by a chemical analytical test. Public water supplies are required to monitor delivered water for arsenic (trivalent plus pentavalent arsenic) and the results are available to the public from the utility. Consumers using private water sources will need to make arrangements for testing. It is recommended that the test be done by a laboratory.

CAUTIONS:

Oxidation/Disinfection:

Oxidizing agents, such as chlorine or sodium hypochlorite (bleach), can degrade the arsenic treatment media. If chlorine is present in the raw water (> 1.0 ppm residual), it should be removed prior to the media with activated carbon filtration.

Hydrogen Sulfide:

If hydrogen sulfide is present, the arsenic treatment media will temporarily remove it from the water before it is displaced by sulfates. Once it is displaced, the hydrogen sulfide will impart an odor to the water.

Total Arsenic

If the total arsenic concentration is above 0.050 mg/L please consult your GreenPro™ Water Systems Professional.

Arsenite As(III)

The GreenPro™ System is designed to remove As(V). If arsenite is present it is recommended that you oxidize the water prior to the arsenic removal media. Contact your GreenPro™ Water Systems Professional for oxidizing options

pH

Adsorption media operate most effectively between pH 5.5 and 8.5. At elevated pH, silica becomes a more aggressive interfering species. Do not use organic acids (such as citric or acetic acid) to adjust the pH ahead of the media.

Silica

Levels above 20 mg/L begin to interfere with arsenic adsorption on the media when combined with a pH above 7.5.

Phosphate (PO₄)

Levels above 0.150 mg/L as PO₄ or levels above 0.05 mg/L as P will reduce media life for arsenic adsorption.

Iron & Manganese

Soluble iron and manganese may precipitate onto the media bed. If iron and manganese are above the secondary MCLs (0.30 mg/L and 0.05 mg/L respectfully), it is recommended to remove them before the arsenic removal system

Hardness

Hardness does not significantly affect the performance of the arsenic removal media.

GreenPro™ Water Systems™ Performance Specifications

Table 1:

Specifications		
Model Number	POU-06	POU-08
Service Flow Rate	2 gpm	5 gpm
Capacity (gallons treated) ³	Water Chemistry and Usage Required	Water Chemistry and Usage Required
Tank Size	6" x 18"	8" x 35"
Filter Media	LayneRT	LayneRT
Total Media Amount	0.16 cuft	0.7 cuft
Underbedding	None	None
Foot Print (Dia X H)	6" X 22"	8" X 40"
Inlet/Outlet	1/2" FNPT (Supplied Loose)	1/2" FNPT (Supplied Loose)
Rated Service Flow @ Pressure Drop	2 gpm @ 5 psi	5 gpm @ 5 psi
Temperature Range	40°F-100°F	40°F-100°F
Operating Pressure	30-120 psi	30-120 psi
Electrical Requirements	Not Applicable	Not Applicable
Backwash	Not Applicable (Not Required)	Not Applicable (Not Required)
Water Quality Criteria		
pH Range	5.5 – 8.5	5.5 – 8.5
Arsenic ¹	< 0.05 mg/l	< 0.05 mg/l
Arsenic Type ²	Pentavalent	Pentavalent
Phosphate (PO4) (Phosphorus P)	< 0.150 mg/l (< 0.05 mg/l)	< 0.150 mg/l (< 0.05 mg/l)
Silica	< 20 mg/l	< 20 mg/l
Iron	< 0.3 mg/l	< 0.3 mg/l
Manganese	< 0.05 mg/l	< 0.05 mg/l
Hydrogen Sulfide	Non Detectable	Non Detectable
Chlorine Residual	< 1.0 ppm	< 1.0 ppm
Tannins	Non Detectable	Non Detectable
Hardness	Not Applicable	Not Applicable

¹ If the total arsenic concentration is above 0.050 mg/L please consult a GreenPro™ Water Systems Professional.

² The arsenic removal media removes As (V). If As (III) is present oxidation is recommended.

³ Capacity will vary by individual site based on water quality and usage. See Arsenic Facts

IT IS VITAL TO THIS PROGRAM THAT THE REGISTRATION CARD INCLUDED WITH THE SYSTEM BE RETURNED IN ORDER TO BE ENROLLED IN THE WATER TESTING PROGRAM. THIS SYSTEM COMES STANDARD WITH A 2 YEAR TESTING PROGRAM, BEGINNING 6 MONTHS FROM THE DATE OF INSTALLATION. ADDITIONAL TESTS MAY BE PURCHASED TO EXTEND THE TESTING PROGRAM. CONTACT US FOR MORE INFORMATION.

The GreenPro™ Water System is the hardware portion of an entire program designed to reduce arsenic from home drinking water. This program includes the hardware, adsorptive media, water testing and disposal. This guide includes detailed instructions for proper installation of the system. The ONLY reliable way to assure your drinking water has been treated for arsenic is to perform a laboratory test for arsenic. R.E. Prescott Co., Inc. will send out sampling kits with instructions at intervals depending on your water chemistry.

Replacement Tanks: Replace system every two (2) years or when test results indicate arsenic levels ≥ 0.010 mg/L, whichever occurs first. The performance and tank replacement frequency of this unit will vary based on water conditions and daily use. See Page 4.

Water Testing: IT IS VITAL TO THIS PROGRAM THAT THE REGISTRATION CARD INCLUDED WITH THE SYSTEM BE RETURNED.

System Components

Check with your state and local public works department for plumbing and sanitation codes (see Cautions pg 4). You must follow these guidelines as you install the GreenPro™ tank assembly. Use of an installation & licensed professional is recommended.

The GreenPro™ POU Models consist of:

- Pressure vessel with internal distribution system
- Adsorptive media bed (see table 1 for required amount)
- Inlet 1" NPT x ½" FNPT Fitting Flow Restrictor
- Outlet 1" NPT x ½" FNPT Fitting

UNPACK AND INSPECT SYSTEM COMPONENTS

Recommended Equipment:

In addition to the GreenPro™ POU System, R.E. Prescott Co., Inc. recommends the following (items not included):

- 5 Micron Pre-Filter.
- Inlet and outlet isolation valves (not required for installations where the By-Pass valve is installed)

Space Required:

- See Table 1 above

The system must be installed with clear access to the media tank. Before unpacking the system, note the condition of the packaging. Any apparent damage should be documented before opening the boxes. Inspect the tank to tank head connection that it didn't come loose in shipping.

WARNING:

IT IS VITAL TO VERIFY THAT THE TANK HEAD TO TANK CONNECTION IS TIGHT AND SEALED PRIOR TO INSTALLATION.

Pre-Installation Guidelines

(All electrical and plumbing work should be done in accordance with all local codes)

Select Installation Location:

Select a location for the GreenPro™ that is:

- Protected from freezing.
- Not exposed to direct sunlight.
- Easily accessible for media tank exchange
- Cold water supply

Water Quality: On rural water supplies there is often a problem with sand or sediment in the water. (This problem occasionally occurs in public water supplies.)

Note: Well and/or pump problems affecting the operation of the system are repairs that are not covered under warranty. To prevent these unnecessary and expensive repairs that are not covered under warranty, we recommend the installation of an in-line filter system ahead of a GreenPro™ system.

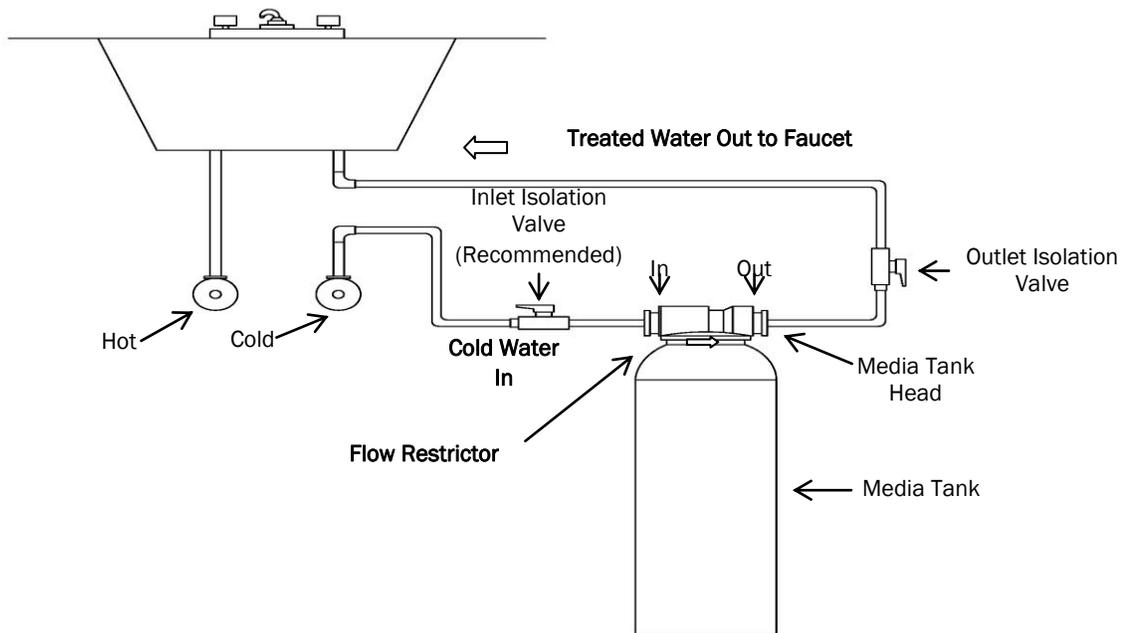
General Installation Conditions and Restrictions

Installation and use of the R.E. Prescott Co., Inc. GreenPro™ Water System Arsenic Reduction Filter must comply with state and local laws and regulations. This system must be installed near the incoming potable water line in accordance with the detailed instructions in this manual. The R.E. Prescott Co., Inc. GreenPro™ Water System Arsenic Reduction Filter is not intended to purify non-potable sources of water. Do not use with water that is microbiologically unsafe or with water of unknown chemistry without adequate disinfection before or after the system. The GreenPro™ Water System is not a disinfection or purification system. The GreenPro™ Water System is designed to reduce arsenic to less than 0.010 mg/L. Please see "Arsenic Fact Sheet" for further information. (See page 5)

General Operational and Maintenance Requirements

Compliance with operational, maintenance, water testing requirements and replacement requirements as noted in this manual is essential for the product to perform properly.

DRAWING OF INSTALLED SYSTEM



Installation Instructions

(All plumbing should be done in accordance to all local codes)
Use the GreenPro™ Water System on a potable, safe-to-drink home water supply only.

CAUTION:

- Do not use Vaseline, oils or other hydrocarbon lubricants or spray silicone anywhere on the system. A silicone lubricant may be used on black O-rings but is not necessary. **Avoid any type of lubricants, including silicone, on red or clear lip seals.**
 - Do not use pipe dope or other sealants on threads. Only Teflon tape may be used on threads. Teflon tape is not necessary on the nut connection or caps because of O-ring seals. Do not use Teflon tape or other sealant on the control tank threads or tank.
1. When positioning the system, ensure that the space beneath is solid, clean and level.
 2. Locate the system in a protected area where it cannot freeze.
 3. Do not install in an outside location prone to freezing temperatures or anywhere exposed to sunlight and freezing.
 4. Allow easy access to the tank for removal and exchange.
 5. Do all necessary plumbing (inlet to inlet, outlet to outlet). The tank head, fittings and/or bypass are designed to accommodate minor plumbing misalignments but are not designed to support the weight of a system or the plumbing.
 6. When assembling the installation fitting package (which includes the inlet flow restrictor and outlet connections), connect the fitting to the plumbing system. Heat from soldering or solvent cements may damage the fittings. Solder joints should be cool and solvent cements should be set before installing the system. Avoid getting primer and solvent cement on any part of the fittings.

Initial Start Up

The initial startup will most likely be done by the technician installing the system.

If not, the following step by step instructions will guide you through the process:

1. Complete all plumbing connections: inlet and outlet.
 - a. Slowly turn on the water supply.
 - b. Check the entire system for leaks.
 - c. If leaking from fittings, shut off water supply and tighten or reseal fittings.
 - d. If leaking between the tank head assembly and media tank, tighten the media tank while holding the head assembly.
2. Allow the system to flush for a minimum of 25 minutes.

Before Leaving the Installation Site

- **Ensure the registration card is mailed.**
- **Explain the operation of the filter to the customer.**
- **Clean up the unit and installation site.** Remove any soldering or pipe thread residues from the equipment and surrounding area with a damp towel. Remove all packaging material, and sweep up any debris that may be on the floor.

The GreenPro™ System is now in service, reducing arsenic.

Care and Cleaning

1. Use only mild soap and warm water when cleaning the exterior of the conditioner. Never use harsh, abrasive cleaning compounds or those which contain acid, such as vinegar, bleach and similar products.
2. **Important:** Protect your system from freezing temperatures. DANGER! If your unit freezes, do not attempt to disassemble it. Call your GreenPro™ Water Systems Professional.
3. **Important:** GreenPro™ Water Systems are sold for use on potable water, only. If at any time the water becomes contaminated, such as during a “boil water” situation, the operation of the water filter should be discontinued until it is verified that the water is again potable. To do this call your GreenPro™ Water Systems Professional to have your system sanitized before it is placed into service.

Caution! Oxidizing agents, such as chlorine or sodium hypochlorite (bleach), can degrade the arsenic treatment media. When using these products put the GreenPro™ Water Arsenic Reduction Systems in by-pass. For disinfecting the GreenPro™ Water Arsenic Reduction System consult your GreenPro™ Professional.

Note: Following the manufacturer’s instructions regarding operation, maintenance and replacement requirements, including replacement of filters if applicable, is essential for GreenPro™ Water Systems to perform as advertised.

Should service, adjustment or trouble-shooting information be needed, or if you have further questions, please call your local independently operated GreenPro™ Water Professional. He or she will be glad to assist you. For your nearest Professional call (603) 772-4321, or email info@repscott.com

Recommended Preventative Maintenance Inspection Schedule

The GreenPro™ Water Systems have been design to provide good, consistent service life. Routinely inspecting the system may help avoid potentially costly breakdowns related to circumstances outside of the control of the GreenPro™ Water Professional and/or user. The filter is for problem water use and routine maintenance is required. Contact your local GreenPro™ Professional to perform routine maintenance.

Component	Suggested Inspection Frequency	Reason for Maintenance
Entire System	At Start-up, after infrequent use (idle for one week or more) or every 6 months to a year.	On private supplies, the appearance of off-taste and odors, particularly if musty or “rotten egg” (caused by harmless sulfate reducing bacteria) may indicate a need for the system to be sanitized. (see caution above)
Media	As needed	Replace when arsenic can no longer be removed.

Replacement Media

MODEL NUMBER	MEDIA & TANK
POU-06	POU-06
POU-08	POU-08

LIMITED WARRANTY

What does this warranty cover?

- R.E. Prescott Co., Inc. Company ("R.E. Prescott Co., Inc.") warrants to the original purchaser the Manufactured Product (the "Product") to be free from any defect in materials or workmanship for one (1) year from the original purchase date.

What does this warranty not cover?

This warranty excludes:

- Performance of the media (The only reliable way to assure your drinking water has been treated for arsenic is to perform a laboratory test for arsenic. R.E. Prescott Co., Inc. will send out a sampling kit with instructions at intervals depending on your water chemistry. Please contact your npXtra™ Professional for details.)
- Use of the Product where water is microbiologically unsafe of unknown chemistry, without adequate disinfection before or after the media tank assembly. The term "media tank assembly" means the media tank head assembly and media tank which together form a filter pressure vessel.
- The cost of shipping the Product for repair.
- The cost of water quality test on your well.
- Service trips to your home to teach you how to use the Product.
- Service calls to your home to repair the Product.
- Improper installation of the Product for repair.
- Product defects that result from improper installation or damage not caused by R.E. Prescott Co., Inc..
- Well or pump problems affecting the operation of the Product.
- Liability on the part of R.E. Prescott Co., Inc. for incidental, indirect, special or consequential damages.
- Defect in the Product caused by normal wear and tear, or physical damage to components of the Product which may occur during normal use.
- Defect in the Product caused by accident, negligence, casualty, improper service, improper maintenance, power outage or spike, or earthquake, fire, flood or any other Act of God.
- Defect in the Product caused by failure to comply with any of the procedures specified in the Owner's manual.
- Defect in the Product resulting from abuse, misuse, alteration or use for other than intended purpose.
- Defect in the Product caused by extreme operating or environmental conditions.
- Defect in the Product caused by modification, tampering, or repair by any party other than R.E. Prescott Co., Inc..
- Defect in the Product resulting from damage during shipping

For how long after the original purchase?

- This Warranty is in effect for one (1) year from the original purchase date.

How do I make a warranty claim?

- Contact the dealer from whom you purchased the unit.

How does state law relate to this warranty?

- This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

DISCLAIMER:

THE WARRANTIES SET FORTH HEREIN ARE EXCLUSIVE. R.E. PRESCOTT CO., INC. DISCLAIMS ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTY CLAIMED TO ARISE FROM COURSE OF DEALING, COURSE OF PERFORMANCE, OR USAGE OF TRADE.