mineralPRO™

PURE WATER · SMART SOLUTIONS

MineralPRO – UF

Installation, Operation, & Maintenance Manual

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Mfg. Ltd. PO Box 1499 Parksville B.C.V9P-2H4 Canada T 250.586-6667 F 250.586-6670 MineralPRO

Thank-you for your purchase of a state-of-the-art MINERALPRO Ultra Filtration (UF) water treatment system.

Water quality concerns are becoming more of a focus for the public. This MineralPRO water treatment system has been designed and tested to provide you with high quality water for years to come. The following is a brief overview of the system.

Stage 1 – Purify/Pre-Carbon Filter (yellow), recommended change 1 year or 1500 gallons.

The first stage is a heavy-duty lead and chemical reducing carbon filter block. This specially formulated block is capable of reducing lead, as well as harmful Volatile Organic Chemicals (VOC's). These water contaminants can enter ground water from a variety of sources including localized use of herbicides and pesticides, gasoline or oil spills, leading underground fuel tanks, septic system cleaners, and chemicals used in the dry-cleaning industry.

Stage 2 – Detoxify/Ultra Filtration Membrane (red), recommended change 1 year or 2000 gallons.

The second stage is our state-of-the-art UF hollow Fiber Technology membrane. Ultra filtration is a membrane filtration process which uses standard home water pressure to push water through its semi permeable membrane. Suspended particles and materials of high molecular weight are unable to pass through the 0.2 micron UF membrane. Ultra filtration is capable of running at low water pressures, is a direct flow system, does not require a separate water storage tank, and provides a continuous supply of premium quality drinking water directly to your tap.

Stages 3 & 4 – Mineralize/Natural Mineral Balancing and Coconut Carbon Filter (blue), recommended change 1 year or 2000 gallons.

The third and forth stages are combined into a single filter cartridge. The Natural Mineral Balancing consists of naturally occurring minerals which return the water to its natural state by stabilizing the pH to slightly alkaline and providing the water with healthy natural minerals. The Natural Coconut Carbon filter provides a final polish for crystal clear, high quality, crisp tasting water!

Note: Filter replacements may vary based on quality of water supply and/or volume of water usage.

System Maintenance

Just because you can not taste it, does not mean that it is not there. Contaminants such as lead, chromium, VOC's and arsenic are undetectable to the taste. Additionally, over time if you do not replace the filter elements, other bad tastes and odors will be apparent in your drinking water.

This is why it is important to change out your filters at the recommended intervals as indicated in this system manual. Should you have any further questions please contact the dealer from whom you purchased the unit.

With proper installation and maintenance, this system will provide you with high quality water for years to come.

NOTE:

It is end user's responsibility to ensure that this system is installed according to all local jurisdiction codes and regulations.

Table of Contents

Operational Parameters:

Operating Temperatures:	Maximum 100°F (37.8°C)	Minimum 40°F (4.4°C)
Operating Pressure:	Maximum 85 psi (6.0 kg/cm2)	Minimum 20 psi (2.80 kg/cm2)
pH Parameters:	Maximum 10	Minimum 5
Flow Rate:	0.5 GPM @ 60 psi	

Note: The operating pressure in your home should be tested over a 24 hour period to attain the maximum pressure. If incoming pressure is above 85 psi a pressure regulator is recommended and if over 100 psi then a pressure regulator is required.

Contents of MINERALPRO-UF

1 MINERALPRO-UF System
3 Filter Cartridges
1 Parts Bag
¼ " Tubing
1 Faucet Assembly
1 Manual and Warranty

If any of the items are missing
please contact your dealer.

*NOTE: Extra parts may be included in the parts bag for optional installation types.

Tools Recommended For Installation

Tube cutters
Robertson screwdriver
Variable speed electric drill
Adjustable Wrench
Plumber's putty
Lubricating oil / dish soap

Stainless Steel Sink Type (If drilling hole is required)

½" High speed drill bit for stainless steel
Hole punch or large nail
Hammer

Porcelain, Enamel, Ceramic on Metal or Cast-Iron Sink Type (If drilling hole is required)

½" Diamond Tip drill bit
Masking tape

Step 1 – Determine Location for the Faucet

Note: Some sinks are predrilled or may have knockouts with 1 ½" or 1 ¼" diameter holes that can be used for your UF faucet.

Determine the desired location for the faucet on your sink and check below the sink and countertop to ensure clearance of any obstructions. If the sink has a sprayer or soap dispenser, it may be disconnected for faucet installation. A pipe cap or plug may be necessary to seal the sprayer connection.

To make a faucet hole (if sprayer hole or a secondary hole is not used) inspect under the sink area to make sure the drill does not interfere with anything below. The faucet should be positioned so it empties into the sink and the spout swivels freely for convenience.

If the sink has a hole that can accommodate the UF faucet, no drilling is required. Proceed with step 4 – Faucet Installation.

For stainless steel sinks please see step 2. For Porcelain sinks please see step 3. For other sink types and under-counter mountings please contact your dealer. If no locations are possible, please contact your dealer about other faucet options.

Step 2 – Drill a Hole for the Faucet in a Stainless Steel Sink

Note: A variable speed drill with a ½" drill bit or a carbide tipped drill bit is required to drill the hole. Drill lubrication such as liquid soap is recommended.

Note: The use of eye protection is recommended.

2(a) - **Make a dimple in the sink in the center of the hole**. Use a hole-punch or equivalent sized nail and a hammer to create this small dent.

2(b) - **Tape**. To prevent the drill from "walking" as you drill, place a strip of masking tape over the dimple. This keeps your drill on target.

2(c) - **Lubricate**. Form shallow putty around the hole area and fill with enough lubricant to lubricate drill bit. Add more lubricant as needed.

2(d) - **Drill**. Make sure to wear your safety goggles. Use a carbide tipped metal hole cutter with a variable speed drill. It is very important that you drill at a slow speed (180 rpm). Push carefully at first until the pilot bit has penetrated the stainless steel sink. The drill bit or sink can be easily damaged if care is not taken. Once the carbide teeth are touching the surface of the sink push down harder and maintain the slow speed. Make sure to lubricate often. Only drill through the stainless steel for now.

2(e) - **Remove tape and clean-up.** Be very careful with the metal chips and the edge of the hole, they are extremely sharp.

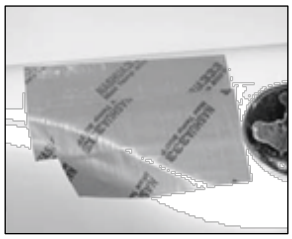
2(f) - **Drill countertop if necessary.** Inspect hole and determine if more drilling is required to drill through any countertop that may be present under the sink. Use the appropriate drill bit suitable for counter material. Clean-up when drilling is completed.

Step 3 – Drill a Hole for the Faucet in a Porcelain, Enamel, Ceramic on Metal or Cast Iron

Note: ***Precautions must be taken to penetrate the porcelain through to the metal base and prevent it from chipping or scratching.***

Note: ***The use of eye protection is recommended.***

3(a) - **Mark the center of the hole.** Place masking tape over location where hole is to be drilled, and mark the center of the hole on the tape.

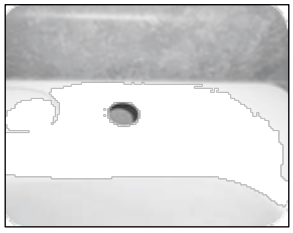


3(b) - **Lubricate**. Form shallow putty around the hole area and fill with enough lubricating oil or liquid soap to lubricate drill bit. Add more lubrication as needed.

3(c) - **Drill pilot hole**. Make sure to wear your safety goggles. Using a variable speed drill on the slowest speed, carefully drill the pilot hole through all layers. (If drill bit gets hot it may cause porcelain to crack or chip, add more lubricating oil or liquid soap as needed.)

3(d) - **Drill faucet hole.** Make sure to wear your safety goggles. Using a ½" drill bit, proceed to drill the large hole. Keep drill speed on the slowest speed and use lubricating oil or liquid soap to the keep the hole saw cool during cutting.

3(e) - **Remove tape and cleanup.** Carefully remove all sharp edges and clean-up all lubrication. Make sure surroundings of the sink are cooled from drilling before mounting the faucet to the sink after drilling.



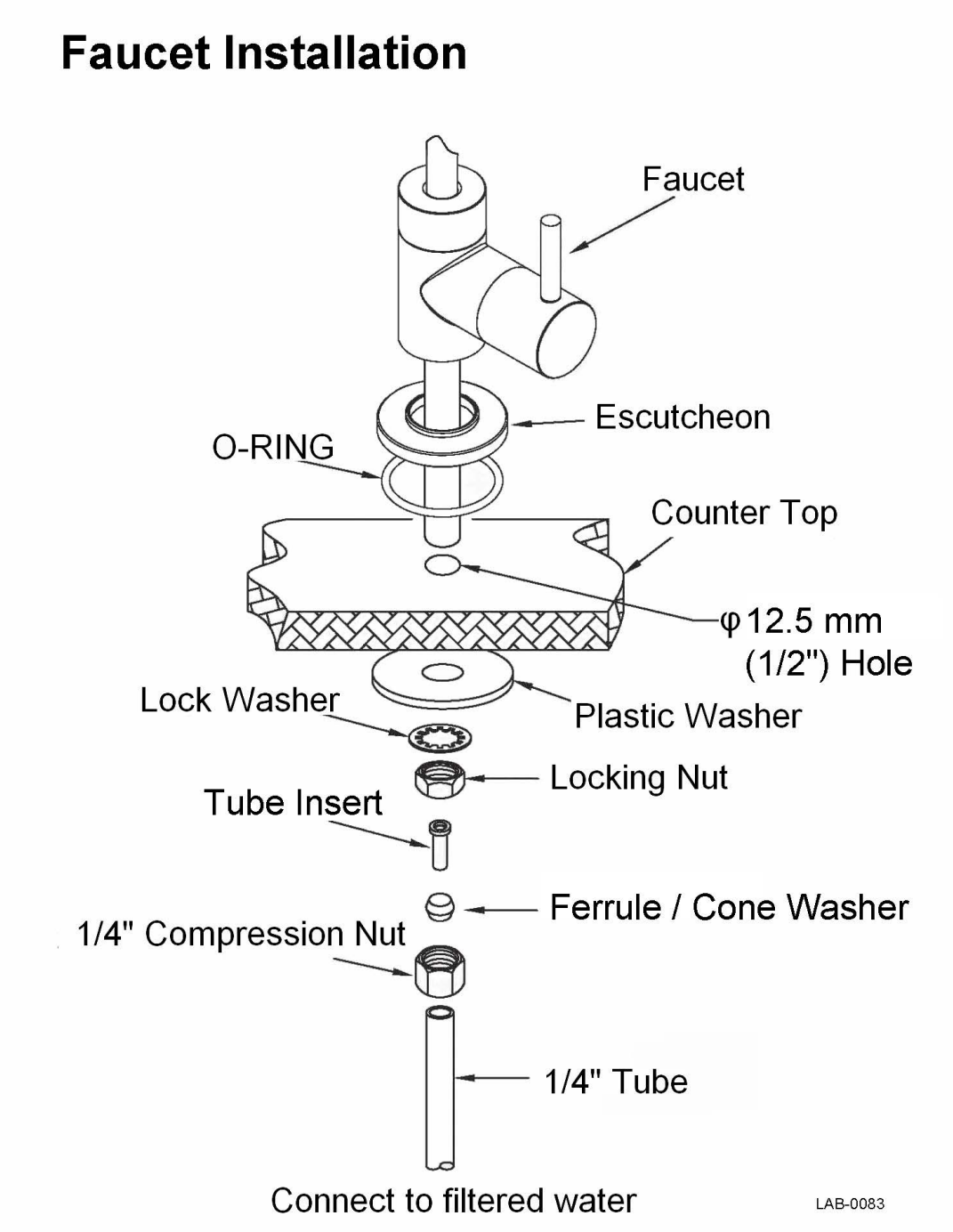
3(f) - **Drill countertop if necessary.** Inspect hole and determine if more drilling is required to drill through any countertop that may be present under the sink. Use the appropriate drill bit suitable for counter material. Clean up when drilling completed.

Step 4 – Faucet Installation

4(a) - Place the escutcheon chrome plate and the black rubber washer on the faucet shank. (Parts found in faucet box).

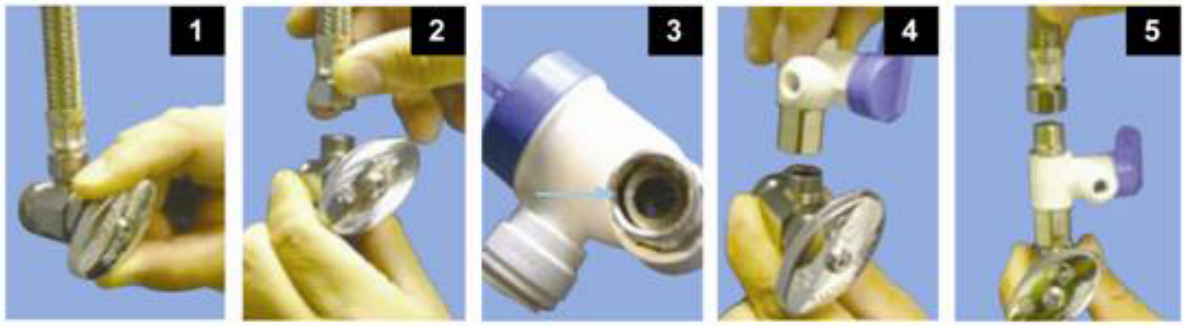
4(b) - Insert the faucet shank through the hole in the sink and let it rest on the sink top.

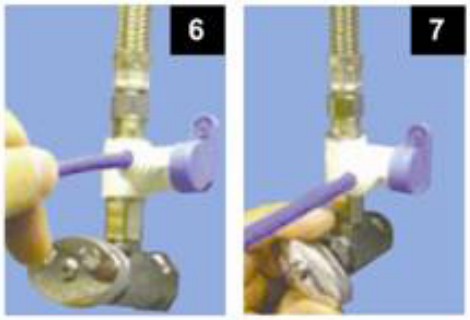
4(c) - From the underside of the sink slide on the location washer, lock washer and locking nut onto the shank. Check orientation of faucet then tighten locking nut securely.



Step 5 – Water Valve Installation

The **Angle Stop Adapter Valve** is offered in white polypropylene with food grade EPDM o-rings.
Our **Angle Stop Adapter Valve** connects between your valve and riser, to the sink faucet.





1. Shut off water supply at brass/chrome supply valve.
2. Disconnect riser from brass/chrome supply valve.
3. Ensure that the sealing gasket is fully seated into the Angle Stop Valve female thread.
4. Install Angle Stop Adapter Valve on supply valve and tighten as needed.
5. Connect the riser to the Angle Stop Adapter Valve and tighten as needed.
6. Fully insert white 1/4" tubing into the Speedfit® side of the valve.
7. Open kit supply valve and check for leaks.

Caution: Water supply line to the system MUST be from the cold water supply line only. Hot water will severely damage your system.

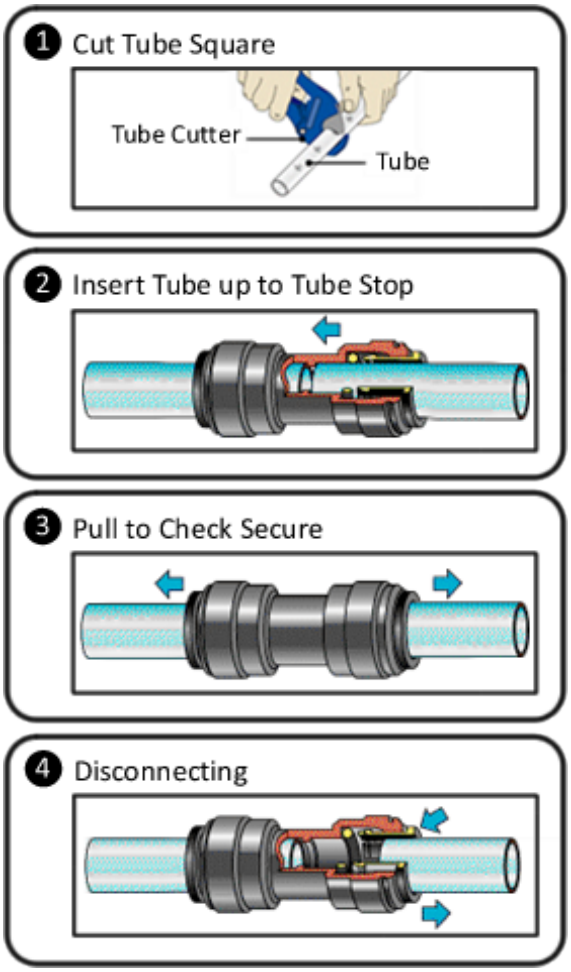
Step 6 – MINERALPRO-UF Module Mounting

6(a) - Determine best location for the UF module to be mounted to allow for future system maintenance. Allow approximately 2" clearance between the bottom of the filter housing and the floor of the sink cabinet.

6(b) - Using the mounting holes on the bracket, mark the location for the mounting screws on the cabinet wall under the sink. The parts bag has 2 self tapping screws. Using a Robertson screwdriver, screw them into the cabinet wall at the marked locations.

6(c) - Hang the module on the screws using the mounting holes in the bracket and tighten the screws so the module is secure to the cabinet.

Step 7 – How to Use the Quick Connect Fittings on the UF Module



Cut tube square with tube cutter. Do not use hacksaw or any other saw. O-ring must be free from burrs and sharp edges.

Push the tube into the fitting, to the pipe stop. The collet (gripper) holds the tube firmly in position and the 'O' Ring provides a permanent leak proof seal.

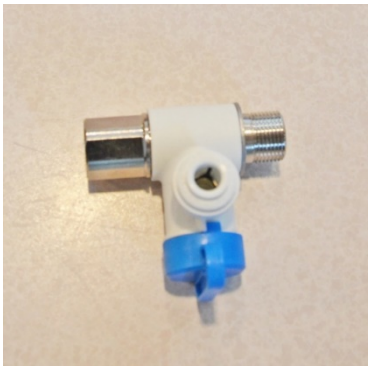
Pull on the tube to check that it is secure. It is a good practice to test the system prior to leaving site and / or before use.

To disconnect, ensure the system is depressurized before removing the tube. Push in collet squarely against face of fitting. With the collet held in this position, the tube can be removed. The fitting can then be reused.
Note: Cut 3/4" off end of tube before re-inserting.

Step 8 – ¼" Tube Connection

8(a) - Insert ¼" white tube into side outlet of angle valve and push tubing into valve fitting to the pipe stop, pull back slightly to ensure good fit.

8(b) - Run the tube to the inlet on the side of the MINERALPRO system. Leave enough tube so it does not kink and cut the tube to desired length. Insert the tube into the “inlet” port of the MINERALPRO system.



Step 9 – ¼" Tube Connection (Faucet <---> MINERALPRO-UF)

9(a) - Locate ¼ " white tubing labeled "*faucet*" and run up to the base of the faucet. Cut if necessary and connect to faucet. Install the ¼ " white tubing into faucet as shown in the "FAUCET INSTALLATION" diagram. Slide ¼ " compression nut over end of tube, slide cone washer (ferrule) over pipe, insert tube insert into end of tubing, then slide tubing into end of faucet and tighten up the ¼ " compression nut to secure in place.

9(b) - Run the tube from the faucet to the outlet on the right-hand side of the MINERALPRO system. Leave enough tube so it does not kink and cut the tube to desired length. Insert the tube into the outlet of the MINERALPRO system.

Step 10 – Install Cartridges

10(a) - Identify each cartridge and the proper location on the system by matching the colors and description.

Stage 1	– Purify/Pre-Carbon Filter
Stage 2	– Detoxify/UF Hollow Fiber Membrane
Stages 3/4	– Mineralize/Mineral/Carbon Filter

10(b) - Write the date of installation on each cartridge and insert each cartridge with a ¼ turn in the clockwise direction. The cartridge is installed properly when the label is facing toward the front of the unit. Record the installation information on the system service record.

Note: See Cartridge Replacement Instructions on page 10 for further information.

Step 11 – Start-Up Instructions

14(a) - Turn on the incoming cold water at the angle stop valve. Open the valve on the Adapta-Valve by turning counter-clockwise. Check the system for leaks and tighten any fitting as necessary. (Check frequently over the next 24 hours to ensure no leaks are present).

14(b) - If system is connected to an ice maker or cooler, turn the ice maker or cooler off (or do not allow water to flow to the ice maker or cooler) until Step 11(e) “flushing” is complete. Connection from the UF to the ice maker system or cooler should have an in-line valve installed before the ice maker or cooler so it can easily be closed to prevent water flowing during start up and periodic maintenance.

14(c) - Open the UF faucet and allow three gallons of water to flow through the unit in order to flush out the normal black carbon particles. Sputtering of the faucet is normal as air is working its way through the system. Initially, the water may appear cloudy which is due the tiny air bubbles and will clear up shortly. Close the faucet when finished.

Maintenance Instructions

NOTE: This ultra filtration system contains replaceable components critical to the efficiency of the system. Replacement of the filters should be with one of identical specifications, as defined by the manufacturer, to assure the same efficiency and contaminant reduction performance. Periodic inspection and following proper system maintenance is critical for continued performance.

Cartridge Replacement Instructions

The following steps should be followed to change the cartridges.

Note: A small amount of water may be released when changing cartridges.

Step 1 Turn off the water supply to the unit.

Step 2 Open the faucet, allow the system to depressureize, and then close the faucet.

Step 3 Rotate the old cartridge ¼ turn counter clockwise.

Step 4 Remove the old cartridge and dispose of it.

Step 5 Remove the protective cap from the new cartridge.

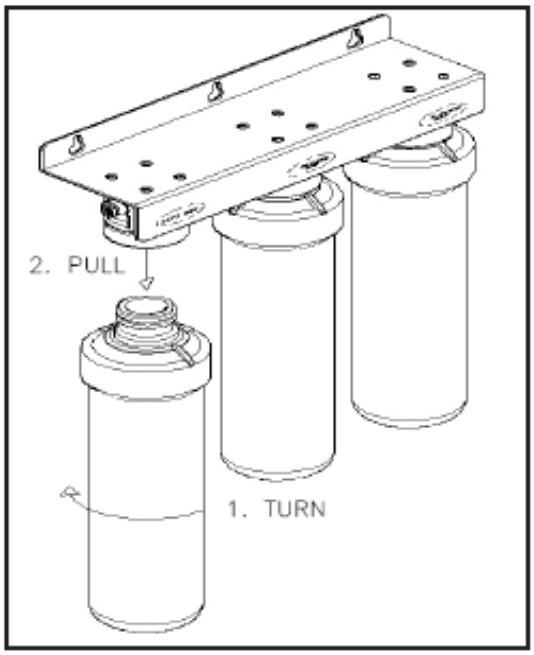
Step 6 Write the date of installation on the new filter cartridge.

Step 7 Orient the new cartridge with the label facing to the left (9 o'clock position)

Step8 Push the new cartridge into the head and rotate it clockwise ¼ turn.

Step 9 Wipe up any spilled water.

Step 10 Record the date and information of the cartridge change(s) on the system service record.



Cartridge Replacement Schedule

Stage	Cartridge Name	Replacement Schedule
1	Purify/Pre-Carbon Filter	1 year
2	Detoxify/UF Membrane	1 year
3/4	Mineralize/Mineral/Carbon Filter	1 year

Procedure for Extended Non-Use (2 months or longer)

If the system will not be used for an extended period (more than 2 months) perform the following:

Step 1 Turn off the incoming water supply at the Adapta-Valve.

Step 2 Open the faucet, allow the system to depressureize, and then close the faucet.

Step 3 To begin using the unit again, replace all three filter stages as outlined in the cartridge replacement instructions.

Troubleshooting

Problem	Cause	Solution
1. Low/Slow Production	Low water pressure	Assure a minimum of 40 psi incoming water pressure. MineralPRO sells a booster pump if home water pressure is low. Make sure water supply is turned on and Adapta-Valve is all the way open.
	Crimps in tubing	Check tubing and straighten or replace as necessary.
	Clogged Carbon pre-filter	Replace Carbon pre-filter.
2. Colored Water	Air in System	Air in the system is a normal occurrence with initial start up of the system. This milky look will disappear during normal use. If condition reoccurs after filter change, flush system for approx. 5 minutes.
3. Noise from faucet	High water pressure	Check incoming water pressure to make sure it does not exceed 100psi. A pressure relief valve or pressure regulator valve may be necessary.
4. Water leaks from the filter housing	Not properly tightened.	Tighten the cartridge.
	Missed or kinked O-ring	Turn off water supply. Release the water pressure, remove the filter cartridge and replace the O-ring. Make sure the O-ring is seated correctly in the filter cartridge before reinstalling the filter cartridge.

Service Record

Serial No. _____

Date of Purchase: _____ *Date of Install:* _____ *Installed by:* _____

Date	1st Stage Pre-Carbon (1 year)	2nd Stage UF Membrane (1 year)	3rd Stage Carbon/ Mineral (1 year)	

NOTES:

Limited Warranty

This Ultra Filtration System is warranted against defects in material and workmanship for a period of one year from the date of installation, not to exceed 2 years from the date of manufacture. Expendable items such as filter cartridges and membranes are not covered by this warranty.

How to obtain Warranty Service: Contact the dealer that you purchased the system from. MineralPRO will work in conjunction with our dealer to repair or replace at our discretion any unit that is determined to be defective. No returns will be accepted without proper return authorization.

What this warranty does not cover: This warranty does not cover defects resulting from improper installation, abuse, misuse, misapplication, improper maintenance, neglect, alteration, accidents, casualties, water pressure spikes, fire, flood, freezing, or other such environmental factors. Return shipping charges are not included in this warranty and are the responsibility of the end user.

This warranty will be void if defects occur due to failure to observe the following conditions:

1. The Ultra Filtration System must be hooked up to a potable cold water supply.
2. The pH of the water must not be lower than 2 or higher than 11.
3. The incoming water pressure must be between 20 and 100 pounds per square inch.
4. Incoming water to the UF cannot exceed 105 degrees F (40 degrees C.)
5. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

This warranty does not cover any equipment that is relocated from the site of its original installation.

LIMITATIONS AND EXCLUSIONS:

MINERALPRO WILL NOT BE RESPONSIBLE FOR ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. MINERALPRO WILL NOT BE RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING WATER DAMAGE, TRAVEL EXPENSE, TELEPHONE CHARGES, LOSS OF REVENUE, LOSS OF TIME, INCONVENIENCE, LOSS OF USE OF THE EQUIPMENT, AND DAMAGE CAUSED BY THIS EQUIPMENT AND ITS FAILURE TO FUNCTION PROPERLY. THIS WARRANTY SETS FORTH ALL OF MINERALPRO'S RESPONSIBILITIES REGARDING THIS EQUIPMENT.

OTHER CONDITIONS:

If MineralPRO chooses to replace the equipment, it may be replaced with reconditioned equipment. Parts used in repairing or replacing the equipment will be warranted for 90 days from the date the equipment is returned to you or for the remainder of the original warranty period, whichever is longer. This warranty is not assignable or transferable.