

Owner's Manual

PuriFire™ 3S3P



(System configurations vary, and yours may not appear exactly as above)



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PuriFire™ 3S3P UV lamp installation Instruction

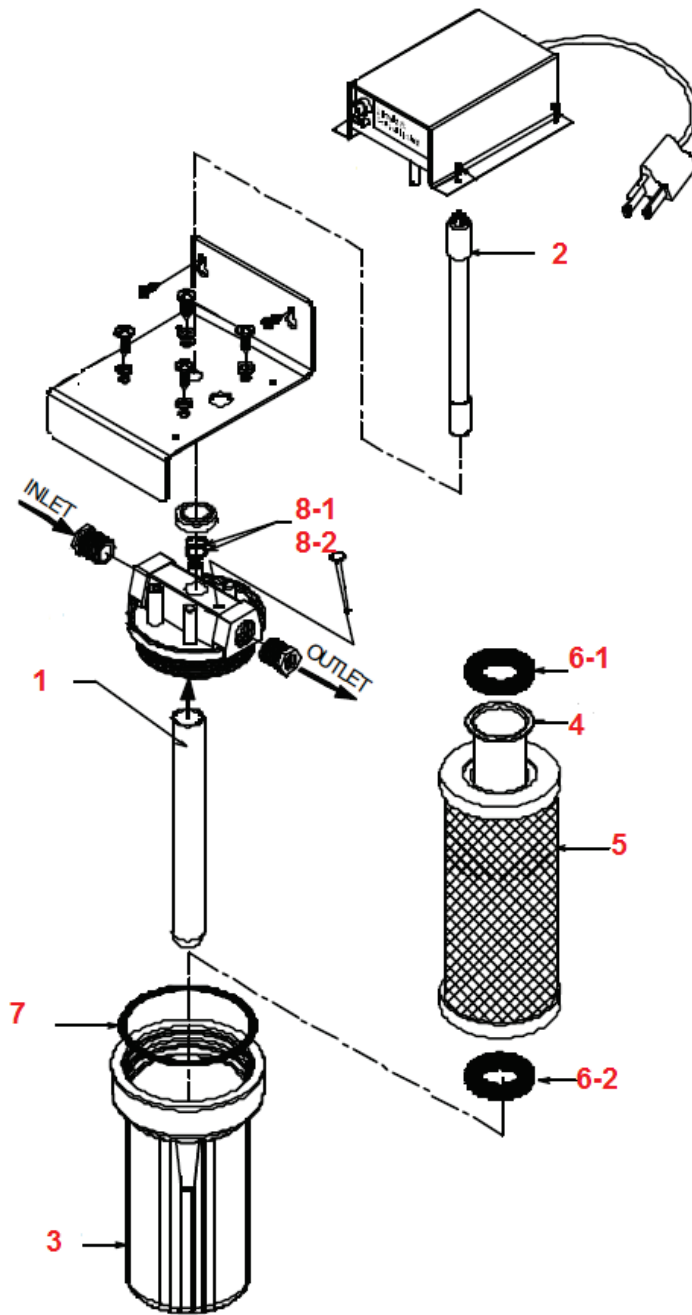
Dear valued customer,

Thank you for purchasing the PuriFire 3S3P portable unit. When you open the PuriFire 3S3P suitcase, you will find the UV lamp and Quartz sleeve are in two packing tubes (to protect them from damage during shipping). The following instruction will guide you to install the UV lamp within a few minutes.

Caution: QUARTZ SLEEVE IS VERY FRAGILE! For safety, wear a protective glove when handling quartz sleeve. Do not touch quartz sleeve or UV lamp with bare hands. Fingerprints will reduce the effectiveness of the light.

1. Remove the sump (**Item 3**, right hand side, blue color) using the sump wrench (included in the package);
2. Remove the EPCB sleeve (**Item 4**) carbon block filter (**Item 5**) and set aside with its two filter gaskets (**Item 6-1, 6-2**);
3. Take UV lamp (**Item 2**) out from packing tube, hold UV lamp by ceramic ends only, push to connect UV lamp into four-pin socket located at the bottom of UV control module;
4. Take Quartz sleeve (**Item 1**) out from packing tube, apply even pressure to insert Quartz sleeve into the UV head. To avoid breakage, make sure Quartz sleeve goes in straight by pushing it with slight twisting motion. As Quartz sleeve passes both O-ring (Items 8-1 and 8-2, already installed), resistance will be felt.
5. Put EPCB sleeve (**Item 4**), carbon filter (**Item 5**) and its gaskets (**Item 6-1, 6-2**) back, and use sump wrench to secure the sump (see page 2, note that gasket 6-1 is placed on top of EPCB sleeve);
6. Plug the system into an electrical outlet, if the LED indicator on the UV head is on, then the system is now ready to use.





Item	
1	Quartz sleeve
2	UV lamp
3	Sump
4	EPCB sleeve
5	Carbon block filter
6-1, 6-2	Gasket for carbon filter
7	O-ring for sump (pre-installed)
8-1, 8-2	O-rings for Quartz sleeve (pre-installed)

Videos

Videos of the PuriFire 3S3P can be found at the following links:

<http://www.youtube.com/watch?v=FU7tDVx2684>

<http://www.youtube.com/watch?v=KvR7gAGeWiM>

Congratulations!

You have purchased the finest portable water purification system on the market today. You have taken a major step in improving the quality of your drinking water and in contributing to your family's health.

The PuriFire™ water purification system is a uniquely designed system that provides the user with drinking water when tap water is not available in an outdoor situation and is easily installed.

PuriFire™ provides clean, clear, better-tasting water while eliminating the potential bacteriological problems associated with ordinary filtration systems.

This process represents the best technology available to remove unwanted impurities yet retain good taste.

According to a study conducted by the United Nations, polluted water is one of the major causes of infectious diseases. The new PuriFire™ system protects the quality of your drinking water.

PuriFire™ utilizes ultraviolet sterilization because it has proven to be the most effective method to kill bacteria and viruses in your drinking water. The UV energy far exceeds other residential units.

Before beginning installation and operation procedures, read the OWNER'S MANUAL thoroughly. Return WARRANTY REGISTRATION CARD within 30 days of purchase.

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GENERAL PRECAUTIONS

- ❖ CAUTION: The PuriFire™ 3S3P unit is intended for purifying uncontaminated surface freshwater only. DO NOT attempt to purify water that is chemically, microbiologically unsafe or of unknown quality without adequate treatment before or after the system.
- ❖ WARNING: DO NOT attempt to purify and make safe drinking water from seawater or saline water sources. DO NOT use for anything other than purifying water. This Purifier is not intended to, nor does it soften or remove all minerals from water.
- ❖ WARNING: DO NOT use the Purifier if damaged, or if the electrical cord is defective or wet.
- ❖ WARNING: Use your Purifier on a dry, level surface, and well ventilated area, away from other heat sources. DO NOT immerse electric part of the Purifier in water.
- ❖ NOTE: Replace the filter cartridge at least twice each year; replace the ultraviolet bulb each year.
- ❖ WARNING: DO NOT move the Purifier while it is operating; DO NOT operate in a moving vehicle.
- ❖ NOTE: When installing the water pump, positive voltage (+12 VDC) must be connected to the red fused lead wire. Reversing polarity will instantly blow the fuse and may permanently damage the controller.
- ❖ WARNING: If you are uncertain with respect to any of this information, PuriFire™ highly recommends that a qualified technician perform your installation and determine the existing polarity of your current wiring.
- ❖ WARNING: Never operate the pump in an atmosphere where flammable gases may be present, since arcing at the motor brushes or switch contacts may cause an explosion.
- ❖ WARNING: After extended operation, or if malfunctioning, metal surfaces of the pump may become hot and cause burns if touched. If this occurs, disconnect electrical power and wait 30 minutes before touching pump.
- ❖ WARNING: Never mount the pump where the surface temperature of the motor or the controller (200 F maximum) may cause ignition of the surrounding materials.

- ❖ CAUTION: DO NOT wrap the pump with an insulating material or enclose it so tightly that air circulation around the pump is prevented. The pump will generate approximately the same amount of heat as a 75 watt lightbulb.
- ❖ CAUTION: The pump is equipped with a pressure sensing demand switch which controls the maximum operating pressure as set at the factory. Never subject the pump to pressures above 80 PSI maximum.
- ❖ WARNING: Always consider electrical shock hazards when working with and handling electrical equipment. If uncertain in your abilities, please consult an electrician.
- ❖ WARNING: The pump is equipped with an automatically resetting thermal protector. If a pump is not running, it may restart at any time.
- ❖ WARNING: The pump includes a fuse-holder. It is important to use only a 10 amp AGC fuse for the pump. Once again, use only these types of fuses with these specific pumps.
- ❖ CAUTION: It is necessary to use a screen filter between the water holding tank and the pump to prevent debris from entering the pump. Particulate matter may cause the valves inside the pump to stick open. This filter needs to be cleaned on a regular basis, or it will restrict water to the pump.
- ❖ CAUTION: Winterizing the pump: If water is not drained from the system during freezing temperatures, damage to the pump and the plumbing is likely:
 - a. Drain the water from filter housings.
 - b. Open all faucets and run the pump to expel all water.
 - c. Disconnect inlet and outlet fittings and run pump to remove residual water from the pump.
 - d. Leave fittings disconnected from pump.
- ❖ WARNING: Unplug the unit before servicing. The ultraviolet lamp uses in excess of 70 volts, which could represent a shock hazard. Keep it out of reach of children while servicing.
- ❖ WARNING: Never look at the ultraviolet lamp while it is on. Exposure could cause serious eye damage up to blindness.
- ❖ WARNING: Never drink water when TDS meter readout is greater than 500 mg/L.
- ❖ WARNING: Never drink water when ultraviolet lamp is out of service.

- ❖ **WARNING:** Always disconnect the UV from the power source. Follow the procedures provided in this manual. Improper handling can result in death or serious injury. Do not look directly at the UV lamp. This can cause retina/eye damage.
- ❖ **WARNING:** DO NOT touch the UV bulb. Any fingerprints or dirt will reduce the efficiency of the bulb and may cause it to explode.
- ❖ **WARNING:** Observe caution when inserting quartz sleeve to prevent breakage and cracking, which may result in injury and damage to unit.
- ❖ **NOTE:** When handling the UV bulb hold only the plastic-covered ends of the bulb. If the bulb has been touched, remove bulb and clean with alcohol before reinserting.
- ❖ **CAUTION:** If water pressure exceeds 65 psi, a pressure regulator, set at less than 65 psi, must be installed before the Ultraviolet system.
- ❖ **CAUTION:** Install on cold water lines only.
- ❖ **CAUTION:** DO NOT install where system is exposed to direct sunlight.
- ❖ **CAUTION:** DO NOT use wicking or sealing agents for fitting connections. Teflon® tape is recommended.
- ❖ **CAUTION:** Because of the product's limited service life, and to prevent costly repairs or possible water damage, we strongly recommend that the bottom of all opaque housings be replaced every ten years. If the bottom of your housing has been in use for more than this period, it should be replaced immediately. Date the bottom of any new or replacement housing to indicate the next recommended replacement date.
- ❖ **NOTE:** Filter cartridge life varies depending on filter type, usage and water conditions. The ultraviolet UV-110 allow a minimum of 12 inches clearance under the filter for changing the cartridge, and above the system to allow the UV bulb to be changed.

GENERAL INFORMATION

This PuriFire™ 3S3P is a three-stage, 3 gallon per minute production rate, and portable unit. It can be powered by a vehicle cigarette lighter or 12 VDC power source.

PuriFire™ 3S3P can filter particle size down to less than 1 micron, and effectively kill bacteria, cysts, and virus when operated properly. A waterproof poly case makes it easy to transport. Key components in this system are NSF International certified, which guarantee the best purification ability and safety to human health. All connections on PuriFire™ 3S3P are quick connections, which make it easy to assemble and tear down. Sediment filter uses poly-pleated material, which is washable and reusable, and will have minimum microbiological growth compared to traditional filter material.

The integration of carbon block and Ultraviolet technologies saves space and prevents microbiological growth in the carbon block, prolonging the service life of carbon block. This is especially true when the unit is not operated on a daily basis.

PuriFire™ 3S3P is designed to treat uncontaminated surface/ground freshwater; freshwater sources should be classified by state EPA as Class 1 Public Water. There is an inline TDS meter which monitors the raw water and product water displaying both simultaneously. You should stop using the PuriFire™ 3S3P if raw water or product water indicates a TDS reading of greater than 500 mg/L.

ITEMS	QTY
Pentek UV 110 + Carbon block + housing (Opaque)	1
Pentek sediment filter + housing (Opaque)	1
Sump wrench	1
Inline strainer	1
Connection hoses	
Inlet hose	1
Outlet hose	1
Aquatec Pump	1
HM dual display TDS (Total Dissolved Solid) meter	1
Power inverter (12 VDC to 110 VAC)	1
Valves	2
Pelican case	1

Components certifications:

Pentrek UV 110 ultraviolet device has UL certification (listed 41Y4), and a US patent (No. 4,971,687).

The Pentrek sediment clear housing is tested and certified by NSF International to NSF/ANSI Standard 42 for material and structural integrity requirement.

Aquajet ES 550 Pump has NSF/ANSI Standard 58 certification.

Installation Instructions

The three-stage water purification system is easy to install. All components are connected by quick push-in connections.

Components are connected in the following sequence: Inlet hose → pump inlet adapter → pump → pump outlet adapter → connection hose → shutoff valve → Tee (TDS monitoring point 1) → Clear housing sediment filter → connection hose → UV 110 and Carbon blocks (opaque housing) → connection hose → Tee (TDS monitoring point 1) → shutoff valve → outlet hose.

Pump is directly connected to the cigarette lighter, while UV110 is connected to the cigarette lighter through a 12 VDC-110 VAC power inverter.

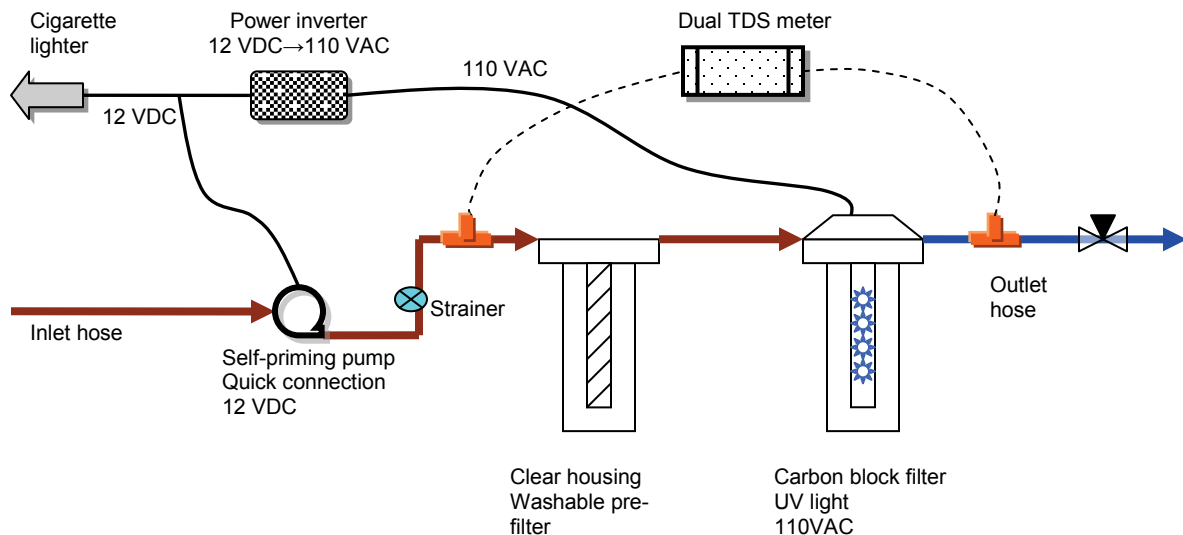


Figure 1 PuriFire™ 3S3P components connection diagram

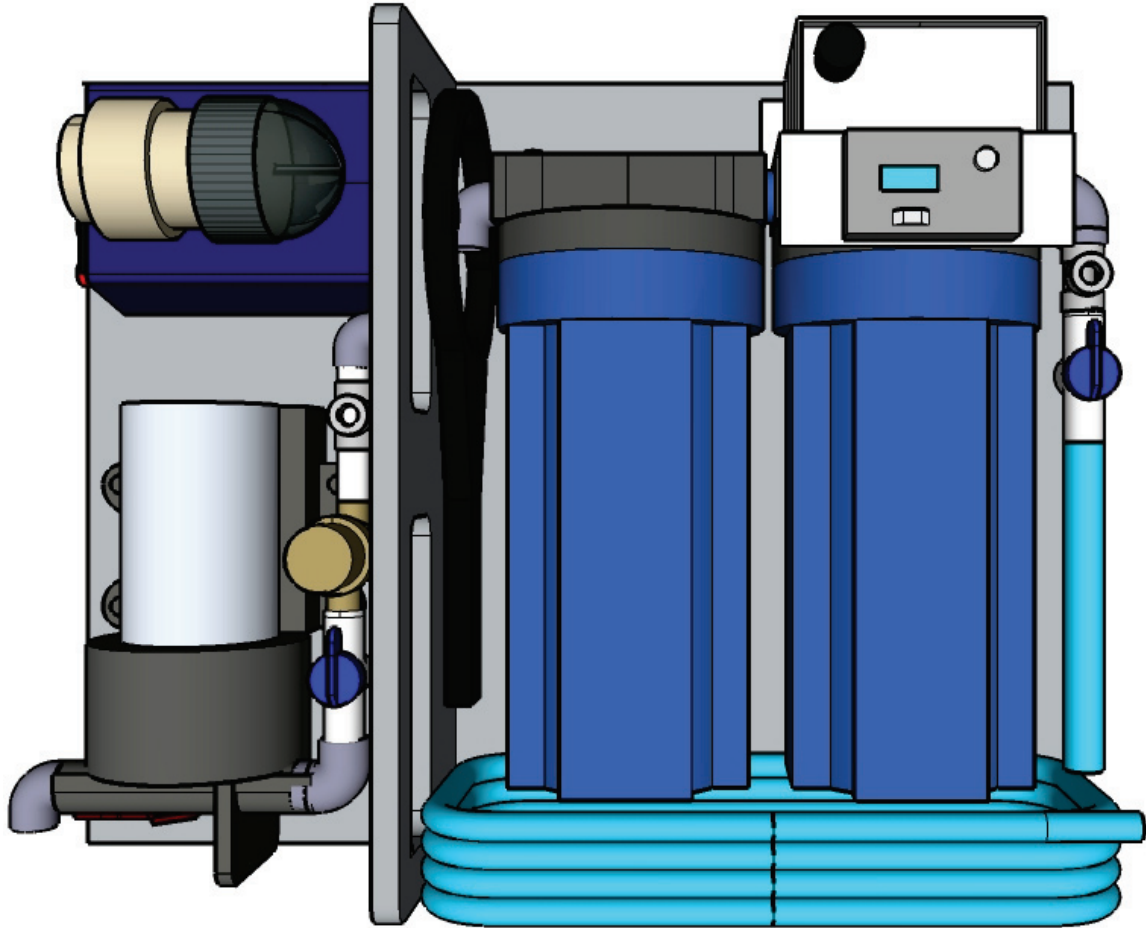


Figure 2. PuriFire™ 3S3P layout (top view)

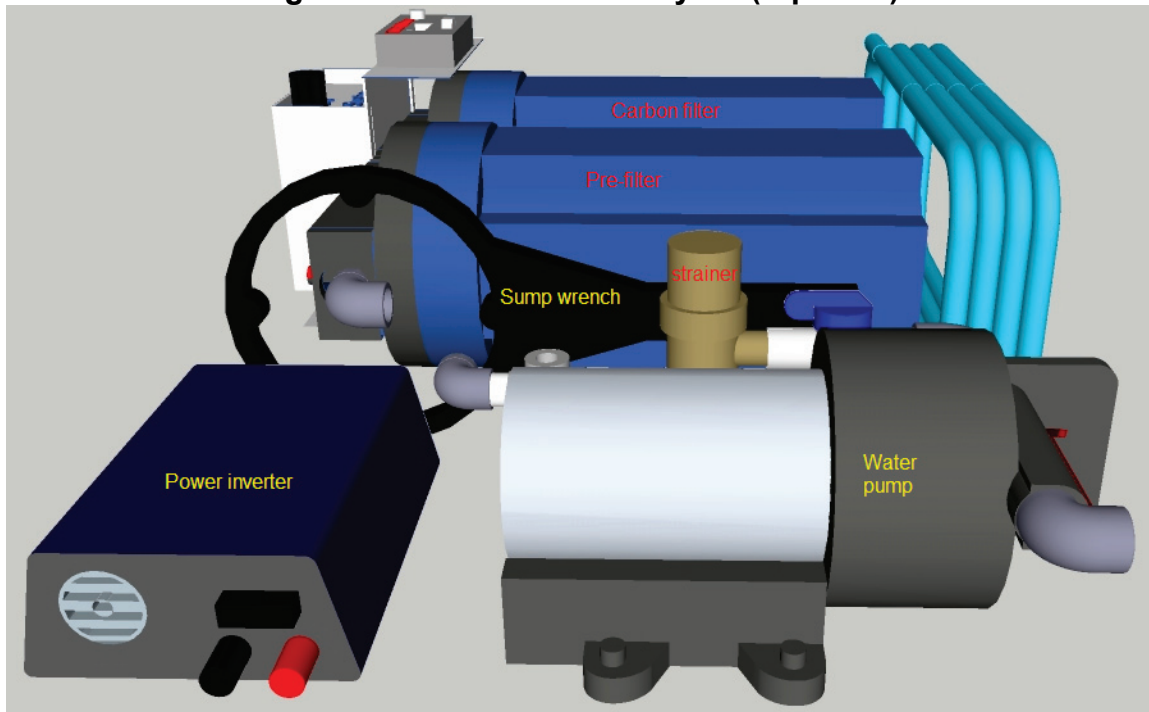


Figure 3. PuriFire™ 3S3P layout (side view)



Figure 4. PuriFire™ 3S3P assembled

INITIAL SYSTEM OPERATION

- 1) Setup the system on a level surface
- 2) DO NOT operate in direct sunlight
- 3) Ensure all electrical power cords and hoses are connected
- 4) Turn on the valves
- 5) Turn on the pump.
- 6) Allow a minute for the water to fill the system.
- 7) Read the TDS inlet/outlet value less than 500 mg/L.
- 8) System is now ready for use.

SYSTEM MAINTENANCE

Under normal operation, the system requires minimal maintenance. Usually, the only maintenance requirement is of changing the filter cartridge every six months to a year depending on the water, and the UV lamp once a year.

Individual usage and inlet water quality may dictate more frequent filter replacement. The filters should be replaced immediately if your water flow becomes restricted, or if bad taste and odors return, even if six months have not yet elapsed.

Change Filter Cartridge

1. Turn off water supply to filter. If unit is valve-in-head style, rotate handle on top of housing to OFF position.
2. Depress pressure release button (if present) to relieve pressure in filter housing.
3. Unscrew housing using spanner wrench.

NOTE: *When opening filter housing to change cartridge, it is common for O-ring/Gasket to lift out of housing and stick to cap.*

4. Remove used cartridge and discard. Rinse out housing and fill about 1/3 full with water. Add about 2 to 3 tablespoons of bleach and scrub thoroughly with brush or sponge. Rinse thoroughly.
5. Remove O-ring/Gasket from sump and wipe groove and O-ring/Gasket clean. Lubricate O-ring/Gasket with a coating of clean silicone grease. Place O-ring/Gasket back in place and press O-ring down into the groove with two fingers (or place gasket on rim of sump).

NOTE: *This step is important to ensure proper filter seal. Make sure the O-ring is seated level in the groove (or gasket is on rim of sump).*

CAUTION: *If O-ring/Gasket appears damaged or crimped it should be replaced at this time. See your local dealer for replacement parts.*

6. Insert a new cartridge into the sump making sure that it slips down over the sump standpipe.
7. Screw the sump onto the cap and hand tighten. DO NOT over-tighten. Make sure cartridge slips over the cap standpipe.
8. Turn on the water supply slowly to allow housing to fill with water. When using a valve-in-head, rotate handle slowly to ON (filter) position.
9. Depress the pressure release button (if present) to release trapped air from filter.
10. Check for leaks before leaving installation.

WARNING: DO NOT use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the unit.

NOTE: An activated carbon cartridge (Taste/Odor) may contain a small amount of carbon fines (very fine black powder) and a new cartridge, after installation, should be flushed with sufficient water to remove the fines before using the water. Each time you use your water from your filtered water tap for drinking or cooking purposes, it is recommended that you run (flush) the tap at least 10 seconds prior to using water. This is particularly important if the water tap is not used daily.

NOTE: Certain types of harmless bacteria will attack cellulose material. Cartridges containing cellulose may seem to disintegrate, produce a “musty” or “moldy” odor, or form a black precipitate due to the bacteria. If you notice any of the above problems while using the cellulose media cartridge, switch to a synthetic media cartridge or consult the manufacturer.

NOTE: The replacement cartridge has a limited service life. Exhaustion of the service life of those parts often cannot be easily detected. Commonly, it is only after leakage has been observed or water damage has occurred that one is made aware that the service life has been exhausted.

IMPORTANT NOTICE: To prevent costly repairs or possible water damage we strongly recommend that the bowl or sump of all plastic housings be replaced periodically: every five years for clear sumps, and every ten years for opaque sumps. If your sump has been used for more than that the recommended period, it should be replaced immediately. Be sure to date any new or replacement sump for future reference and indicate the next recommended replacement date.

Cleaning UV 110

The quartz sleeve should be cleaned with warm soap and water every three months.

UV bulb should be replaced every 9-12 months. The bulb does not normally burn out, however the efficiency of the bulb decreases after one year.

Contact your local water treatment professional for replacement cartridge and bulb pricing or call 1-800-645-0267 for a dealer near you.

Replacing UV Lamp and Filter

To ensure optimal performance from your PuriFire™ system and to protect your warranty, use only genuine PuriFire™ filters and lamps available from your PuriFire™ dealer.

UV lamp replacement

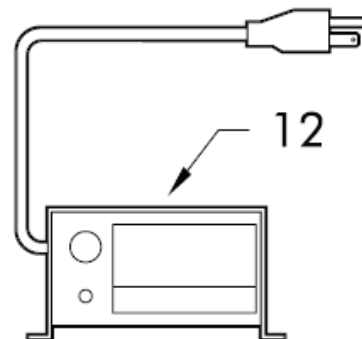
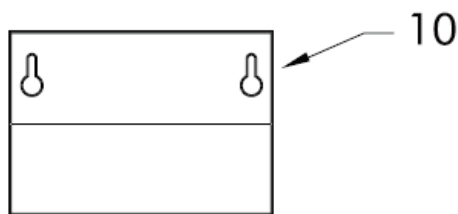
1. Turn off all electrical power to the system by unplugging or throwing the circuit.
2. Unscrew the UV control module from the mounting bracket (4 screws) for Models UV-110
3. Slide the old bulb out and unplug from the control module.

NOTE: Hold the UV lamp only by the plastic covered ends of the bulb.

4. Carefully discard the old UV lamp.
5. Hold the new UV lamp only by the plastic covered ends of the bulb, plug the new UV lamp into the control module or power cord. Slide the new bulb into the cartridge housing and reattach UV control module or secure mounting bracket retainer.
6. Restore electrical power to unit and check for leaks.

UV-110 REPLACEMENT PARTS

	Part Description	Part Number
1.	10" Housing	153001
2.	O-ring	143011
3.	CBU-10	155271-03
4.	Teflon® Sleeve	163518
5.	Quartz Sleeve	163509
6.	O-rings for Quartz sleeve	163516
7.	Plunger Rod w/retainer	163519
8.	3/4" blk cap w/o pr	SPECIAL ORDER
9.	Spacer Bushing	163517
10.	Mounting bracket	SPECIAL ORDER
11.	UV Lamp	163508
12.	Control Module (120v/60Hz)	163506 for use with UV-110-1
13.	SW-2 Wrench (not shown)	150295



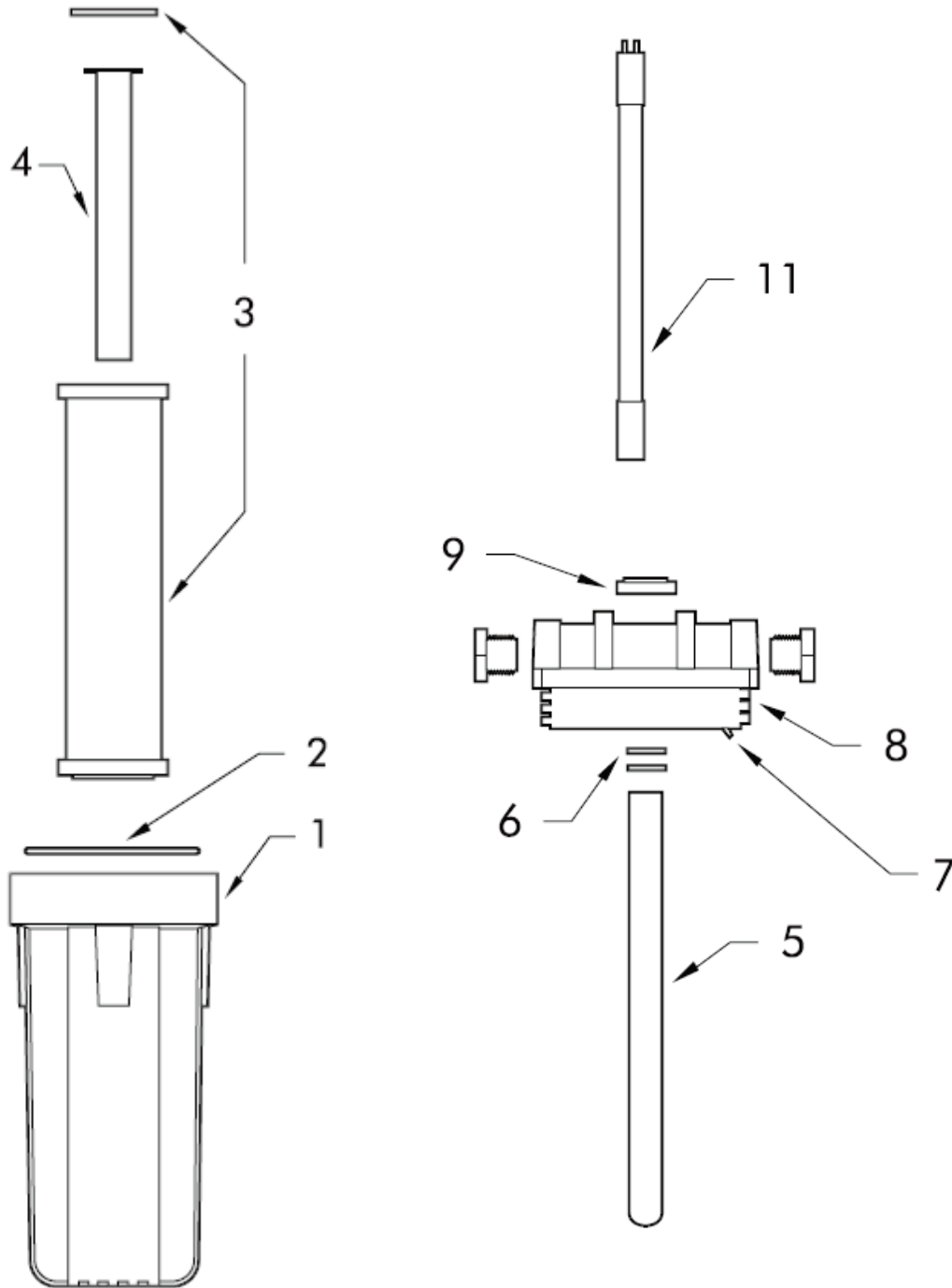


Figure 5. UV110 components assembly

Maintenance Record

Date (MM/YY)	/	/	/	/	/	/
Prefilter cleaning						
Prefilter change						
Carbon block change						
UV quartz sleeve cleaning						
UV light bulb change						
Filter housing change						
Connection hose change						
Sanitization						
TDS record						
TDS meter calibration						

SYSTEM SPECIFICATIONS

Overall System Specifications

TDS maximum level	500 ppm
Operating pressure	65 psi (4.5 bar)
pH Range	6–9
Temperature range	40–100°F / 4–38°C
Flow rate	0 – 3 gpm
Power Requirements	Input: 12 VDC
Weight	50 lbs
Molded resin carrying case	25" L x 20" W x 9" D

Pentek™ UV 110-1 120V UltraViolet System specifications

Dimensions	5-1/2" W x 15-1/2" L (140mm x 394mm)
Inlet/Outlet	3/4"
Voltage	120 VAC
Hertz	60
Recommended Flow Rates	2 gpm (7.6 L/min)
Maximum Operating Pressure	65 psi (4.5 bar)
Temperature Rating	40–100° F(4.4–37.8° C)
Amps (electric current)	0.42
Watts (required power)	14

Flow-Max® filter cartridge specifications

Maximum operating pressure	100 psi (4.5 bar)
Media	100% Chemical Resistant PP, PE and PET, with no binders or additives
Temperature range	40 – 140 °F (4.4 – 60 °C)
Flow rate @ 60 psi	7 gpm
Micron rating	5 micron
Center tube	PP (standard & BB)

Aquajet ES 550 Pump Specifications

Voltage	12 VDC
Amps (electric current)	6.5
Priming capability	7 feet
Flow rate @ 60 psi	3.5 gpm
Temperature range	Less than 150°F (66°C),
Pump design	5 Chamber Diaphragm Pump, Self Priming, Capable of Being Run Dry

Troubleshooting Guide

Pump problems

a) Pump does not run

Cause	Solution
Tripped thermal protector/blown fuse	Check fuse. If motor is overheated, allow it to cool down prior to restart
Faulty wire connection or power source	Check battery/power supply, polarity, main switch and wiring
Pressure switch malfunctioning	Replace switch assembly p/n PSW-560
Motor	Replace pump
Pump and or motor is frozen	Thaw pump and system and check for damage. The pump/motor may become damaged when a pump is started

b) Pump rapidly cycles on/off with water demand

Cause	Solution
Hydraulic pulsations	Install pulsation dampener p/n 25-174 (elbow fittings) p/n 25-175 (straight fittings)
Restriction on outlet side of pump, resulting in too much back pressure	Check inline filter, if any
Pump controller requires adjustment	Consult factory

c) Pump rapidly cycles on/off without water demand

Cause	Solution
Leak on outlet side of pump	Check tightness of hose selections, check hose for possible damage
Fill valve bypassing to tank	Replace fill valve
Debris under valves	Flush pump in nominal flow direction. If necessary, disassemble and clean valves
Pump controller requires adjustment	Consult factory

d) Pump does not prime

Cause	Solution
Water tank empty	Fill up tank
Leak on inlet side of pump	Check tightness of hose connections at pump, filter and tank. Check valves at inlet side Flush pump (in nominal flow direction) with tap water at maximum flow possible
Perforated diaphragm	Replace diaphragm kit ORV & ARV Series p/n LH5503-4V15 OES & AES Series p/n LH5502-4V15
Inlet or outlet plumbing restricted	Check plumbing. Water should free flow from tank at 2 GPM minimum

e) Pump leaks

Cause	Solution
Perforated diaphragm	Replace diaphragm kit ORV & ARV Series p/n LH5503-4V15 OES & AES Series p/n LH5502-4V15
Inlet/outlet fittings leak	Replace O-rings and/or fittings

f) Pump keeps running when water is no longer demanded

Cause	Solution
Diverter valve in "fill" mode	Close and/or rotate any valve used for filling water tank

Water tank empty	Fill up tank
Leak on outlet side of pump	Check tightness of hose connections. Check hose for possible damage
Air leak on inlet side of pump	Check tightness of hose connections. Check inlet hose, filter, and valves for possible damage, Purge air (refer to user's guide)
Speed controller malfunctioning	Replace controller ORV series p/n 26-195 (without fuse) ARV series p/n 26-195-01 (with fuse) OES series p/n 26-196 (without fuse) AES series p/n 26-196-01 (with fuse)
Low voltage to pump	Change battery/power supply. Check wire gauge (refer to Aquatec installation guide)

g) Low flow/pressure

Cause	Solution
Leak on inlet side of pump	Check tightness of hose connections, check hose for possible damage
Air in pump	Purge air (refer to User's guide)
Low voltage to pump	Change battery/power supply. Check wire gauge (refer to User's guide)
Debris under valves	Flush pump and/or disassemble and clean valves
Motor malfunction	Replace pump

h) Pump is excessively noisy

Cause	Solution
Pump is plumbed directly to rigid tubing	Install pulsation dampener p/n 25-174 (elbow fittings) p/n 25-175 (straight fittings)
Restrictive inlet, pump is cavitating	Check plumbing, water should free flow from tank at 2 GPM minimum
Pump head loose on motor	Tighten screws
Pump mounting is loose	Tighten screws

Pump mounting is too rigid	Use flexible tubing and make sure the dampening rubber feet are used
Defective motor/drive	Replace pump

i) Electromagnetic interference

Cause	Solution
Noise can be heard in stereo system, or TV picture affected when pump is running	Install EMI filter p/n 21-256 in line with pump
Operation of heating/cooling system changes when pump is running	Install EMI filter p/n 21-256 in line with pump

UV 110 Leak

a) At inlet/outlet connections:

- Use Teflon® tape.

b) Between cap and housing:

- Make sure that the O-ring is clean, lubricated and properly seated.
- Hand-tighten the housing.
- Check cartridge length. If cartridge is too long, replace with proper length cartridge.

c) At UV quartz sleeve:

- Turn off all electrical power to the unit by unplugging or throwing the circuit.
- Remove UV lamp and unscrew housing (See UV lamp replacement).
- Check quartz sleeve for cracks, leaks and loose fittings.
- Check that O-rings between quartz sleeve and cap are secure and have not been cut or damaged.
- If the sleeve is broken, replace with a new quartz sleeve and new O-rings.

Warranty

THIS LIMITED WARRANTY COVERS THE PURIFIRE™ PORTABLE 3S3P PRODUCT LINE.

Purifier unit: The PuriFire™ 3S3P portable unit is warranted for a period of one (1) year from the date of purchase against defects in material and workmanship. This warranty covers original components installed by W. S. Darley & Co. at our factory. Expendable items (bulbs and filters) are not covered under this warranty.

This warranty is void if equipment is not installed and operated according to the instructions as listed in the Owners Manual. It does not apply to damage caused by abuse, accident, neglect, freezing, fire, or other abnormal conditions beyond the company's control. This warranty is void on any part from which the original manufacturing date code decal has been removed or made illegible. This warranty requires the use of W. S. Darley & Co. authorized replacement parts. All models must be operated and maintained in accordance with this Owners Manual.

This warranty shall be void if the influent water temperature exceeds 110 degrees F. or goes below freezing. This purifier is intended for use outdoor with cold uncontaminated surface freshwater only.

All defective parts must be returned to W. S. Darley & Co. for inspection and repair or replacement. Contact factory for a Return Materials Authorization Number prior to shipment. W. S. Darley & Co. will inspect, test and determine cause of defective component parts. W. S. Darley & Co. will have final determination as to which component parts are replacement of total units; and the cost of labor, new components, handling and packaging. Defective parts must be sent prepaid freight. W. S. Darley & Co. will not be liable for any labor charges other than factory repairs. Incidental or consequential damages are not covered by this warranty.

All claims must be submitted in writing to your ultraviolet equipment supplier within thirty (30) days from the discovery of the defect. Thereafter, your ultraviolet equipment supplier will correct defective parts and/or workmanship within sixty (60) days from the time of receiving this notice.

This warranty is valid once the customer completes the applicable Warranty Form. These forms must be sent back to the pertinent distribution center to keep on file.

Refer to specific parts for their manufacturer's warranty:

Manufacturers' warranty

Pelican 1600 case:

Send all items for repair or replacement directly to customer service department (postage paid). Call for return authorization number. Per our guarantee, we will replace or repair any broken or defective products. Upon receipt of goods, we will notify you of any handling and return postage charges.

Pelican Unconditional Lifetime Guarantee of Excellence

If for any reason you are not satisfied with the quality or performance of any PELICAN product, we will gladly replace the product or refund your money (at your option) within 30 days of purchase through the original retailer/dealer. Pelican Products will continue to guarantee the product directly for a lifetime against breakage or defects in workmanship. The case is guaranteed to be watertight when properly closed with O-ring in place and undamaged. (Replace

O-ring annually or when damaged). Any liability, either expressed or implied, is limited to replacement of the case and nit its contents. This guarantee is void only if the PELICAN product has been abused beyond normal and sensible wear and tear.

The above guarantee does not cover sharkbite, bear attack or children under 5.

23215 Early Ave. Torrance, CA 90505 USA

Tel (310) 326-4700, (800) 473-5422, Fax (310) 326-3311 www.pelican.com

HM TDS meter

Limited Warranty

HM Digital, Inc. ("the Company") products are warranted to the purchaser against defective materials and workmanship.

Length of Warranty

The following products are covered under the Company's warranty for one (1) year: COM-100, PH-200, ORP-200, PR-1, QC-1, SM-1, DM-1, DM-2, CT-1, PM-1, PM-2, PS-100, PC-100, PS-200, PS-202, PSC-150.

Third-party products not manufactured by HM Digital and products deemed by HM Digital to be accessories, including, but not limited to batteries, fittings, spare rods, adhesives (including Velcro), cases and calibration solutions are not covered under HM Digital's warranty.

What is covered:

Repair parts and labor, or replacement at the Company's option. Transportation charges for repaired or new product to be returned to the purchaser.

Accuracy

Products are guaranteed to perform within the specified accuracy only if and when the product is calibrated properly. NOTE: HM Digital does not guarantee the calibration of any product, including factory-calibrated products. For best performance, all scientific instruments must be calibrated properly and re-calibrated periodically.

What is not covered?

Transportation charges for the defective product to be sent to the Company. Any consequential damages, incidental damages, or incidental expenses, including damages to property. This includes damages from abuse or improper maintenance such as tampering, wear and tear, water damage, or any other physical damage. The Company's products are not waterproof and should not be fully submerged in water. Products with any evidence of such damage will not be repaired or replaced. See additional note below. (NOTE - The COM-100, PH-200 and ORP-200 are watertight and completely submersible. Please ensure that the battery compartment and probe gasket ring are firmly tightened before submersing in water. The warranty does not cover water damage to the COM-100, PH-200 and ORP-200 due to parts not securely closed.)

How to obtain warranty performance

Attach to the product your name, address, description of problem, phone number, and proof of purchase (with date), package and return to:

HM Digital, Inc.

ATTN: Returns

5819 Uplander Way

Culver City, CA 90230

U.S.A.

All returned products **MUST** be included with a proof of purchase and a description of the problem for each product. If a proof of purchase and problem description are not included, HM Digital reserves the right to refuse warranty service.

Implied Warranties

Any implied warranties, including implied warranties of merchantability and fitness for a particular purpose, are limited in duration to five years from date of purchase. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. To the extent any provision of this warranty is prohibited by federal and state law and cannot be preempted, it shall not be applicable. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

NOTE: Warranties are product-specific. Third-party products and products deemed by HM Digital as "accessories" are not covered under warranty. Third-party products include, but are not limited to, batteries and fittings. Accessories include, but are not limited to, precipitator rods, fuses, adhesives, Velcro and product cases.

Pentek UV 110

Pentek warrants to the original owner (under normal use): Ultra Violet Systems to be free from defects in material and/or workmanship one (1) year from the date of purchase. Any replacement products furnished will be free from defects in material and/or workmanship for the remainder of the original warranty period, or 30 days, whichever is longer. This warranty does not cover: (1) cartridges, UV bulbs, and accessories (2) defects not reported within the above time period, (3) items manufactured by other companies, (4) problems arising from failure to comply with Pentek instructions, (5) problems and/or damage arising from acts of nature, abuse, misuse, negligence or accident by any party other than Pentek, (6) problems and/or damage resulting in whole or in part from alteration, modification, repair or attempted alteration, modification or repair by any party other than Pentek, (7) noncompliance with applicable codes/ordinances.

If a defect in workmanship and/or material in a product or part covered by the warranty should arise, Pentek, at its sole discretion, will repair or replace the

defective product or part (Pentek may consider, in good faith, the customer's preference).

All claimed defective product must: (1) be authorized for return by Pentek with an RGA number (2) include proof of the purchase date of the product or part (3) returned to Pentek prior to the expiration of the warranty date, at the customer's expense, shipment pre-paid, (4) be accompanied by a letter detailing the Model Number, Serial Number (if any), and a brief description of the problem.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, PENTEK DISCLAIMS ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH REGARD TO THE PRODUCTS, PARTS AND ANY ACCOMPANYING RITTEN MATERIALS.

To the maximum extent permitted by applicable law, Pentek shall not be liable for any damages whatsoever (including, but not limited to, loss of time, inconvenience, expenses, labor or material charges incurred in connection with the removal or replacement of the Ultra Violet Systems, special, incidental, consequential, or indirect damages for personal injury, loss of business profits, business interruption, loss of business information, or any other pecuniary loss) arising out of the use of or inability to use the defective products or parts, even if Pentek has been advised of the possibility of such damages.

Pentek's maximum liability under any provision of this Limited Warranty shall be limited to the amount actually paid for the Ultra Violet System.

NOTE: Because some states do not allow the exclusion or limitation of incidental or consequential damages, the above limitations or exclusions may not apply.

This warranty grants specific legal rights, and other rights may apply. Such rights vary from state to state.

502 INDIANA AVE, SHEBOYGAN WI 53081 USA

Toll Free Technical Support: 800-861-8758 • Technical Support: 920-451-9301

E-mail: supportspecialist@pentekfiltration.com

Phone: 920-457-9435 • International Fax: 920-457-2417

E-mail: international@pentekfiltration.com • www.pentekfiltration.com

Aquajet ES Pump

Aquatec Water Systems, Inc. ("Aquatec") warrants its Model Aquajet RV Pumps (Part Numbers 5503-4V15-B636, 5503-AV15-B636, 5502-6V15-B668, and 5502-AV15-B668) to be free from defects in material and workmanship under the following terms:

The duration of the warranty will be for a period of 2 years from date of shipping from an Aquatec warehouse. Aquatec's obligation under this warranty shall be limited to, replacing or repairing at Aquatec's discretion, any such product or part

which is returned to Aquatec's factory with a Return Material Authorization Number (RMA No.) and upon evaluation, product is deemed defective under the terms of warranty to Aquatec' satisfaction. Transportation charges will have to be preapproved by Aquatec or prepaid by customer. No credit will be allowed against future purchases for items returned as defective under the terms of the warranty.

This warranty does not extend to any products, which have been altered or modified outside the Aquatec factory, nor does it apply to units that are returned in an unassembled condition.

Furthermore, this warranty does not cover any damage or defects occurring from customer's failure to follow pump label instructions or Operational and Installation Guidelines. The warranty guarantees that pump will perform to Aquatec's flow and pressure specifications through out the life of this warranty, under normal operating conditions. The warranty does not cover wear, appearance, misapplication or external water damage. If the returned product is not found to be defective under the terms of this warranty, customer will be responsible for repair or replacement costs.

This is a Limited Warranty. It covers the product only and the extent of the coverage is limited only to the cost of the product. As the manufacturer has no control over shipping, handling and installation, the warranty cannot cover water damage, or any other damage, caused by a leak or other malfunction.

This warranty is in lieu of all other warranties, expressed or implied, and no person is authorized to give any other warranty or assume obligation or liability in Aquatec's' behalf. Aquatec shall not be liable for any indirect, incidental or consequential damages of any kind incurred by the reason of the use or sale of any defective product or part.

AQUATEC WATER SYSTEMS, INC.

17422 PULLMAN STREET, IRVINE, CA 92614

PHONE: 949-225-2200, FAX 949-225-2201

PuriFire™ 3S3P system is made in the USA.

The information and recommendations contained in this publication are based upon data collected by the W. S. Darley & Company and are believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. Specifications and information are subject to change without notice.



W. S. Darley & Co.
325 Spring Lake Dr. Itasca, IL 60143 U. S. A.

Warranty Registration Card

PuriFire™ 3S3P

Thank you for purchasing PuriFire 3S3P water purification system. To register your warranty for this product, complete the information below, tear off the card and then send to the above address. Thank you for choosing PuriFire.

Name: _____

Address: _____

City/State/Zip code: _____

Telephone: _____

Model purchased: _____

Date purchased: _____

Serial Number: _____

Detailer from which Purchased: _____

May we e-mail you information on other PuriFire products and promotions?

Yes: _____ No: _____

If yes, please provide your e-mail address: _____

Your e-mail address will not be disclosed to any third party.