SpectraPure®
INNOVATORS IN WATER TECHNOLOGY

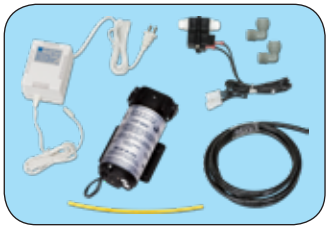
Booster Pump Kits

for

Manual Flush (-MF) and Automatic Flush (-AF)
RO and RO/DI Water Purification Systems

BPLF-MF-115

BPLF-AF-115



BPHF-MF-115

BPHF-AF-115

INSTALLATION MANUAL

WARNING

Please read carefully before proceeding with installation. Failure to follow any attached instructions or operating parameter may lead to the product's failure and possible damage to property.

2019-10-03

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INTRODUCTION

Booster Pumps will help increase pure water production and purity in areas where water pressure levels are below the recommended values. (See your original Owners Manual to determine whether you need to add a Booster Pump to your water filtration system.)

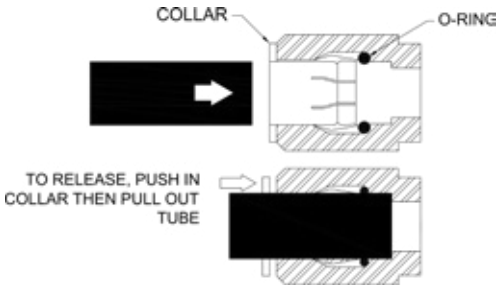
These Booster Pump Kits are intended for use with the SpectraPure line of "-MF" and "-AF" RO and RO/DI Systems. Installations with other configurations may not work without additional components.

INSTALLATION INSTRUCTIONS FOR PUSH FITTINGS

Remove the tubing from its Push Fitting as follows:

1. Firmly depress and hold the Push Fitting collar down with your thumbnail.
2. While the Push Fitting collar is depressed, pull the tubing straight out of the Push Fitting. Once the tubing is removed, release the collar.

NOTE: If the system is still under pressure, you will not be able to depress the collar to remove tubing.



REPAIR INSTRUCTIONS FOR PUSH FITTINGS

If a Push Fitting ever starts to leak:

1. Remove the tubing as described above.
2. Inspect the end of the tubing for lateral scratches. Cut an inch from the end of the tubing if scratched.
3. Remove the floating collar using your thumbnail to leverage it out.
4. Look inside the fitting and observe the o-ring. Gently remove it with a small screwdriver or bent wire.
5. Feel it between your fingers for nicks, cuts, or other aberations. Replace if any are found.
6. Apply a small dab of waterproof grease or Vaseline to the o-ring.
7. Reinsert the o-ring into the groove inside the fitting. Press the collar back into place.
8. Reinsert the tubing with a dab of grease smeared on the tubing.

NOTE: Slowly turn the water back on and check for any more leaks.

PUMP INSTALLATION and MOUNTING

1. Aquatec's Booster Pump is equipped with an adjustable bypass screw that controls maximum operating pressure. Never allow pressure to exceed 100 PSI.

2. DO NOT operate booster pump in harsh environment. (Motor brush and switch may cause electrical arcing.)

3. As long as there is feed water pressure, the booster pump will not stop forward flowing water, even if the motor is turned off! (Be sure that the System has a positive means of shutting off the water supply.)

4. Operate pump on systems that are equipped with a pressure gauge. Install a pressure gauge kit if needed.

5. DO NOT subject pump to extreme temperatures. Operating ambient temperature range is 35°F-110°F.

6. Avoid any sharp bends in tubing that is leading to or from the pump. This may cause crimps and restrict flow. Use elbow fittings if necessary.

7. To prevent foreign debris from damaging the pump, use of an inline sediment filter upstream of the pump's inlet port is recommended.

8. Mount pump in a dry place and away from any source heat. If an enclosure is used, provisions for cooling the motor may be necessary. Contact Aquatec.

NOTE: Pump may be mounted in any position, however, if ceiling mounted with the pump head upside down, air entrapment may reduce operational performance by up to 15%. Contact Aquatec (1-949-225-2235) for ceiling mount solutions.

BOOSTER PUMP KIT for Auto Flush (-AF) Systems

Parts needed:

High-Flow/Low-Flow Booster Pump
(PUMP-BST-HFC-8800/PUMP-BST-LF-6800)

24VDC/2.5A transformer (E-TRN-115V-24VDC-SW)

3ft booster pump patch cable (BP-PATCH)

1LB ¼" tube check valve (V-CK-IL-1LB-4JG)

Fittings for high flow/low flow booster pump (DM-35-4-6, DM-35-4-4)

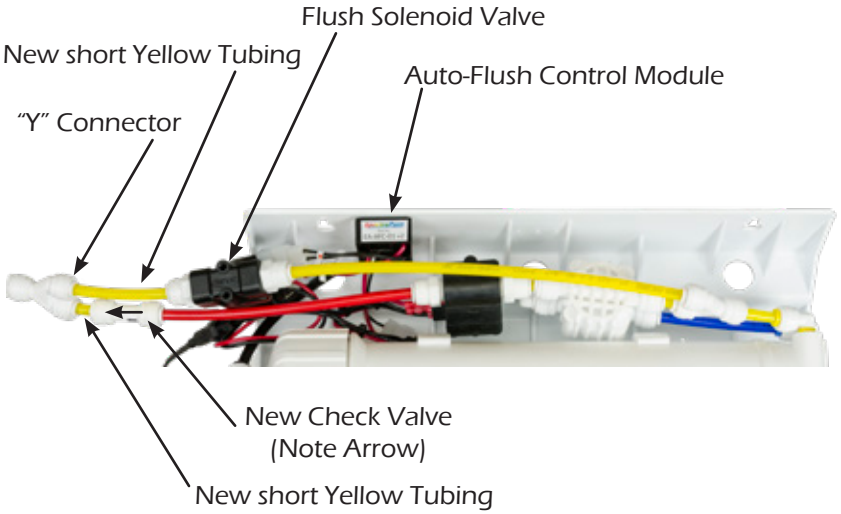
7ft Black ¼" tubing (TUB-4BK)

2ft Yellow ¼" tubing (TUB-4YW)

1. Be sure that the water supply is turned off completely, the pressure gauge reads zero, and the transformer is disconnected from the controller. Set the transformer aside, you will not need it again.
2. Install the fittings provided with the kit into the pump.
3. Remove the ¼" black tubing that connects the right side of the carbon filter to the input of the RO membrane housing.
4. Locate the pump in a convenient and nearby location.
5. Cut an appropriate length of black tubing long enough to connect the right side of the carbon filter to the input side of the pump (the face of the pump will have arrows in the direction of flow).
6. Use the remaining black tubing to connect the output of the pump to the input of the RO membrane housing. The tubing can be cut with a sharp knife or a razor blade.
7. Connect the 3ft. patch cord to the Pump output (the unused pair of wires) on the Auto Flush Control module that is located on the bracket of the system. On the control module, the Pump output is identified with a double pair of black wires that has a white male connector and a small tag with PUMP and a Red dot on the tag. Connect the other end of the patch cord to the booster pump.
8. Locate the green (or red) flow restrictor tube on the system. Disconnect it from the "Y" connector.

9. Disconnect the "Y" connector from the yellow line coming from the Flush Solenoid valve.
10. Remove the yellow tubing from the Flush Solenoid Valve and set it aside.
11. Install the Check Valve, with the arrow pointing towards the drain, on the green (or red) flow restrictor tube.
12. Use the yellow tubing provided to cut two short pieces that will reconnect to the "Y" connector that goes to the drain line. Reconnect the "Y" connector to the new pieces of tubing you just cut and installed.
13. Turn the water back on, check for leaks, and then connect the new transformer where the original one was connected.

NOTE: The pump should run when the system is making water.



BOOSTER PUMP KIT for Manual Flush (-MF) Systems

Parts needed:

High-Flow/Low-Flow Booster Pump
(PUMP-BST-HFC-8800/PUMP-BST-LF-6800)

24VAC/2A Transformer (E-TRN-115V-24VAC/2A) for High-Flow

24VAC/1A Transformer (E-TRN-115V-24VAC/1A) for Low-Flow

Booster pump/Pressure switch Patch Cable (EA-CABLE-BPPSW)

Fittings for high flow/low flow booster pump (DM-35-4-6, DM-35-4-4)

50psi Pressure Switch (E-SW-PR-50PSI)

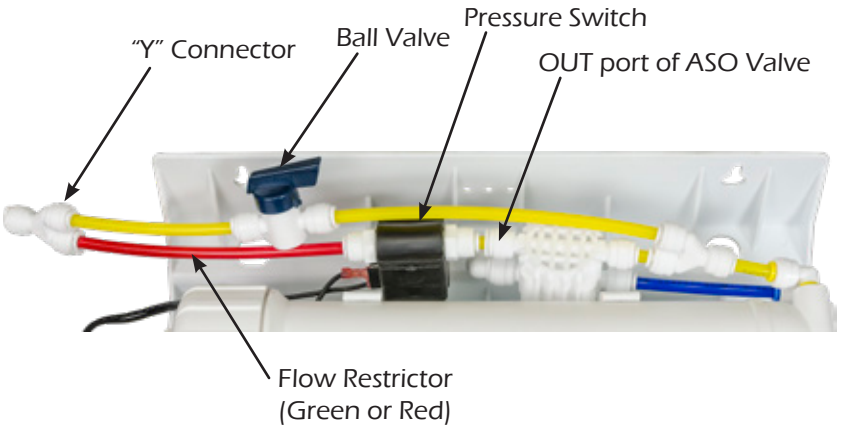
7ft Black 1/4" tubing (TUB-4BK)

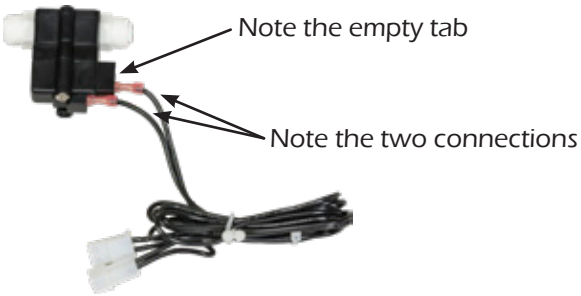
1ft Yellow ¼" tubing (TUB-4YW)

1. Be sure that the water supply is turned off completely and the pressure gauge reads zero.
2. Install the fittings provided with the kit into the pump.
3. Remove the ¼ inch black tubing that connects the right side of the carbon filter to the input of the RO membrane housing.
4. Locate the pump in a convenient and nearby location.
5. Cut an appropriate length of black tubing long enough to connect the right side of the carbon filter to the input side of the pump (the face of the pump will have arrows in the direction of flow).
6. Use the remaining black tubing to connect the output of the pump to the input of the RO membrane housing. The tubing can be cut with a sharp knife or a razor blade.
7. Disconnect the green (or red) flow restrictor from the OUT port of the ASO valve.
8. Cut a three-inch piece of the ¼ inch yellow tubing and insert it into the OUT port of the ASO valve.
9. Connect the pressure switch to the ¼ inch yellow tubing.
10. Connect the green (or red) flow restrictor to the other port on the pressure switch.
11. Remove the "Y" connector from the drain side of the flush assembly and set it aside. Remove the yellow tubing from the ball valve.

12. Insert the remaining ¼ inch yellow tubing into the ball valve and cut it to match the green (or red) flow restrictor's new extended length.
13. Reinstall the "Y" connector on the newly cut ball valve line and the flow restrictor line.
14. Locate the transformer and connect it to the Wiring harness that is attached to the pressure switch. The connections can only be made one way.
15. Turn the water back on, check for leaks, and plug the transformer into the wall.

NOTE: The pump should run when the system is making water.





Pressure Switch

TROUBLESHOOTING GUIDE:

AquaTec Service Phone Number: 1-949-225-2235

1. Pump will not run:

   a. Start at the source to determine where the electrical current flow has been interrupted. Use a multi-meter to check the line voltage, and the transformer output. If the transformer is not functioning properly, its current capacity may have been exceeded. Please consult Aquatec.

      i. If the pump now runs, the pressure switch is faulty, and needs to be adjusted or replaced.

   b. If the transformer is properly sized, and is delivering the correct voltage to the system, remove the holding tank pressure switch (P.S.) from the system by disengaging both connectors, and connecting the pump directly to the transformer.

      ii. If the pump still fails to run, the electrical path has been interrupted within the motor, and should be returned to Aquatec for repair.

2. The pump operation is too noisy:

   a. Entrapped air (which will eventually dissipate).

      i. Make sure air is not being drawn into the pump.

   b. Water may have damaged the bearings, or other motor components.

      ii. Check for internal leaks, as well as water entering the motor from an external source.

c. Squeaking may be associated with the bypass mechanism; brush contact with the commutator surface; or inadequate lubrication in the rear bearing.

iii. Contact Aquatec

3. The flow and/or pressure is too low:

a. Is the pump properly sized to handle the production rate of the membrane, plus the brine flow allowed by the restrictor (usually 2 or 3 times the permeate production)?

i. Purchase the correct Booster Pump size: Aquatec 6800 or Aquatec 8800.

b. Is the system receiving adequate feed water?

ii. The pump's inlet chamber must be flooded to prevent performance robbing air ingestion into the compression chambers.

c. Debris entering the pump, such as residue from unfiltered tap water improperly located on the inlet side of the pump, may restrict the pumping operation.

iii. Consult Aquatec for valve cleaning instructions and install a sediment pre-filter before the pump.

REPLACEMENT PARTS

Model	Replacement Part
PUMP-BST-HFC-8800	High-Flow Booster Pump
PUMP-BST-LF-6800	Low-Flow Booster Pump
E-TRN-115V-24VAC/2A	24VAC, 2amp Transformer (for High Flow Booster Pumps)
EA-TRN-115V-24VAC/1A	24VAC ,1amp Transformer (for Low Flow Booster Pumps)
V-CK-IL-1LB-4JG	1 Lb Check Valve
DM-35-4-6	Adaptor for HFBP
DM-35-4-4	Adaptor for LFBP
E-SW-PR-50PSI	Pressure Switch for -MF System

ONE YEAR LIMITED WARRANTY:

SpectraPure, Inc.® warrants the product to the original owner only to be free of defects in material and workmanship for a period of one year from the date of receipt. SpectraPure's liability under this warranty shall be limited to repairing or replacing at SpectraPure's option, without charge, F.O.B. SpectraPure's factory, any product of SpectraPure's manufacture. SpectraPure will not be liable for any cost of removal, installation, transportation or any other charges which may arise in connection with a warranty claim. Products which are sold but not manufactured by SpectraPure are subject to the warranty provided by the manufacturer of said products and not by SpectraPure's warranty. SpectraPure will not be liable for damage or wear to products caused by abnormal operating conditions, accident, abuse, misuse, unauthorized alteration or repair or, if the product was not installed in accordance with SpectraPure's or other manufacture's printed installation and operating conditions, or damage caused by hot water, freezing, flood, fire or acts of God.

SpectraPure will not be responsible for any consequential damages arising from installation or use of the product, including any water or mold damage due to flooding which may occur due to malfunction or faulty installation, including, but not limited to failure by installer to over- or under-tighten fittings, housings, and/or push-style fittings, or improper installation of push-style fittings. Consumable items such as prefilters and membranes are not covered under the one year warranty.

To obtain service under this warranty, the defective system or components must be returned to SpectraPure with proof of purchase, installation date, failure date and supporting installation data. Any defective product to be returned to the factory must be sent freight prepaid. Documentation supporting the warranty claim and a Return Merchandise Authorization (RMA) number must be included. SpectraPure will not be liable for shipping damages due to the improper packaging of the returned equipment and all returned goods must also have adequate insurance coverage and a tracking number.

SpectraPure will not pay for loss or damage caused directly or indirectly by the presence, growth, proliferation, spread or any activity of "fungus", wet or dry rot or bacteria. Such loss or damage is excluded regardless of any other cause or event that contributes concurrently or in any sequence to the loss. We will not pay for loss or damage caused by or resulting from continuous or repeated seepage or leakage of water, or the presence or condensation of humidity, moisture or vapor, that occurs over a period of 14 days or more. "Fungus" and "fungi" mean any type or form of fungus or Mycota or any byproduct or type of infestation produced by such fungus or Mycota, including but not limited to, mold, mildew, mycotoxins, spores, scents or any biogenic aerosols.

SpectraPure will not be liable for any incidental or consequential damages, losses or expenses arising from installation, use, or any other causes. There are no expressed or implied warranties, including merchantability or fitness for a particular purpose, which extend beyond those warranties described or referred to above.

* **The one year limited warranty does not apply to consumable items, including but not limited to, filters and cartridges unless specifically stated above.**

TERMS AND CONDITIONS:

1. Shipping charges on units or parts submitted to our facility for repair or replacement must be borne by the registered purchaser. After repair or replacement, the factory will return the unit or part freight prepaid to the customer.
2. We assume no warranty liability in connection with our equipment other than as herein specified.
3. This warranty is in lieu of all other warranties expressed or implied, including warranties of fitness for a particular purpose.
4. We do not authorize any person or representative to assume for us any other obligation on the sale of our equipment. This is the exclusive remedy and liability for consequential damages under any and all warranties which are excluded to the extent exclusion is permitted by law.
5. Proof of original purchase date must accompany all warranty claims.
6. SpectraPure, Inc. Reserves the right to change prices without notice when necessary. All prices in the catalog are quoted in US dollars.
7. Claims for error in quantity or condition must be made within 10 days of receipt of material. SpectraPure, Inc. will not be responsible for any claimed shortages not reported within 10 days. Returns other than warranty claims may be subject to 20% restocking fee.
8. SpectraPure, Inc. cannot be held liable for damage or loss to a shipment by a freight carrier. Check shipment for damage before acceptance or note on freight bill subject to inspection for concealed damage. Consignee must file claim. SpectraPure, Inc. will offer as much assistance as possible.
9. A complete credit check is required prior to shipping on a Net 30 basis. In the interim period during which credit references are being evaluated, all orders must be prepaid until approved.
10. All returned checks (due to insufficient funds or closed accounts) will be subjected to a **$35 penalty charge.**
11. Invoices on Net 30 accounts not paid within 30 days of shipment will be considered delinquent and will accrue Finance charges at the rate of 1.5% per month (18% per annum).