



HOW TO REPLACE MEDIA IN A BACKWASHING FILTER

GENERAL INFORMATION

Point-of-entry (POE) water treatment appliances are designed to treat water as it enters a building or a home. Unlike point-of-use (POU) filters that treat small amounts (up to 1 gallon per minute) of water for drinking purposes, POE appliances are usually installed on ¾” or larger water lines and treat all the water (flows of 6 to 10 gallons per minute or more) after it enters the building.

The purpose of the treatment determines the type of equipment. Hardness is often controlled by water softeners that use a resin to remove calcium and magnesium ions. These resins must be regenerated with salt from a separate brine tank and backwashed. Carbons are used to remove a variety of contaminants like volatile organic chemicals that can cause off-tastes and odors. Specialty carbons are used to remove more difficult to remove contaminants like chloramines, MTBE, hormone disruptors, etc. A variety of specialty resins are used to remove color caused by tannins. Still other media are used to remove excess inorganic contaminants like hydrogen sulfide (rotten-egg odor), iron and manganese that cause red and/or black staining, or treat water to prevent corrosion.

No matter the type, each of these media must be regenerated and/or backwashed periodically to maintain their effectiveness. This process is usually automatic, being controlled by a valve that sits on the top of the tank. Eventually, each of these media becomes depleted to the point where it must be replaced completely. For some media this might be as often as a year. Other media lasts as long as 10 to 15 years.

Media loading or replacement is relatively simple if done properly. It is possible for non-professionals to do the job given the proper directions. That is the purpose of this manual.

DIAGRAM OF A TYPICAL BACKWASHING FILTER

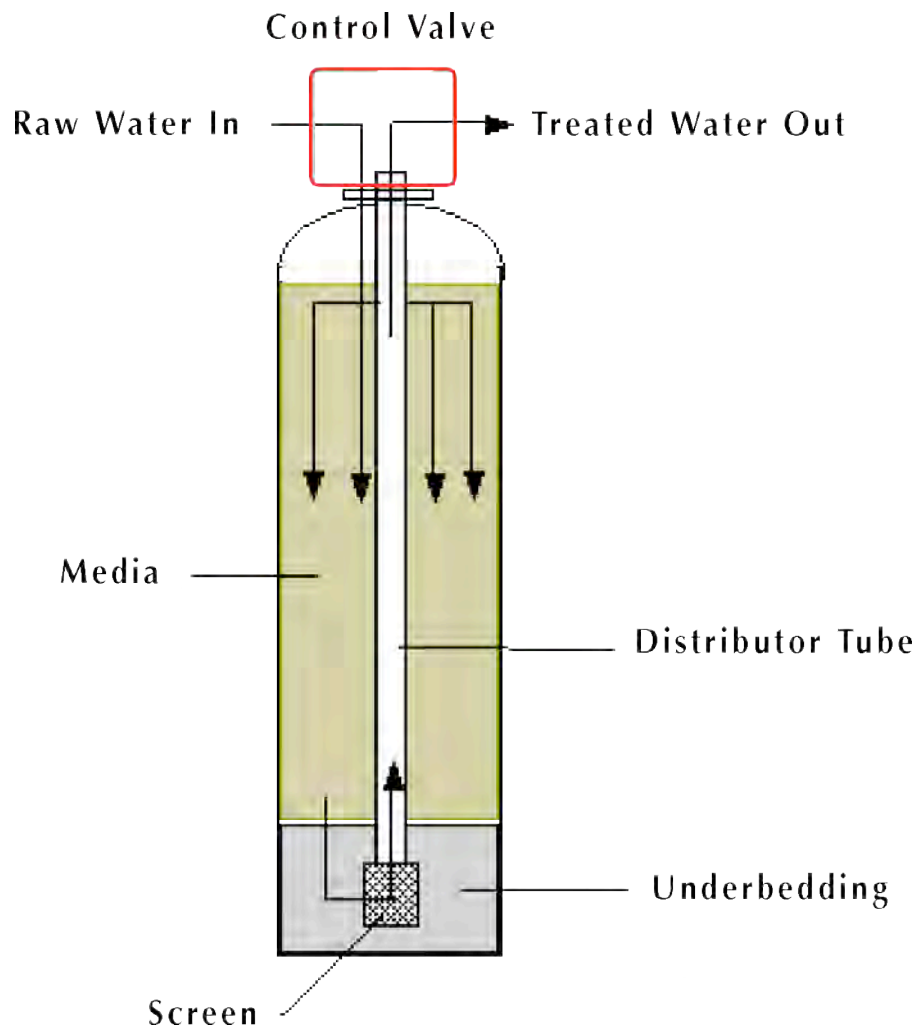


DIAGRAM OF A LIVINGWATERS™ BACKWASHING FILTER WITH CLACK VALVE AND VORTECH TANK VS. TYPICAL FILTER.

Old Way . . .

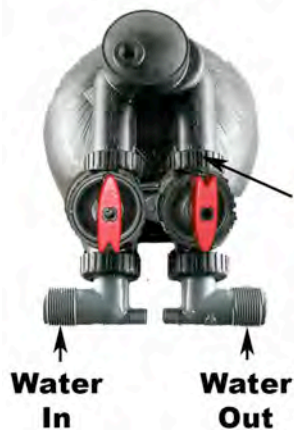
LivingWaters™ Way!



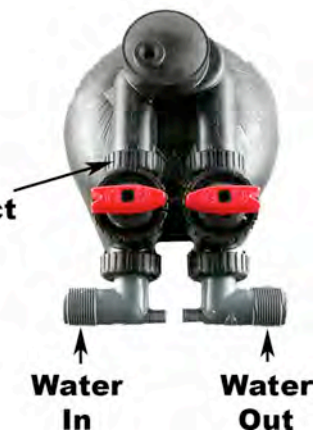
GUIDE TO REPLACING MEDIA

1. Get a copy of the service manual for the appliance, read it, and keep it handy.
2. If this is a first time installation skip to step to Step 15 below. Otherwise go on to Step 3.
3. Turn off the water to the unit by using the bypass valve. (LivingWaters™ units come with bypass valves that easily attach to the control valve body using nuts that only require hand tightening.) Place the unit in bypass by turning the red arrows to where they point to each other. The unit is now in bypass mode.

NORMAL OPERATON



BYPASS MODE



4. Disconnect the appliance from the bypass valve by turning the nuts that attach the bypass valve to the appliance.
5. Manually set the appliance to backwash position (Manual Regeneration) to relieve vessel pressure.

6. Unplug the electrical connection to the control valve.
7. Remove any tubes or plumbing that connect the control valve to other equipment such as brine tanks, etc.
8. Remove any tubes or plumbing that connect the appliance to drains for backwashing purposes.
9. Carefully unscrew the control valve from the top of the tank and set aside.
10. Visually inspect riser tube in center of tank for any damage. Put a piece of tape over the riser tube to prevent media from entering the tube while you are emptying and reloading the media.
11. Carry the tank to a location where the exhausted media can be emptied and collected for disposal. (Don't wash exhausted media down drains.)
12. Lay the tank on its side and flush media out of the tank with a garden hose into a container. Ideal containers are empty rice bags or other porous sacks. You may also wash the media out into a large container like a garbage can that has holes in the bottom covered by screen material to let water out and keep exhausted media in.
13. Discard old media. (KDF® media is heavy and metallic. It may be reused for up to 10 years. If it is over 10 years old, it must be replaced. It is valuable and may be taken to a place that pays for used copper and zinc.)
14. Wash tank out with hose.
15. Place the clean tank in the desired location for connecting to the system.

16. Make sure distributor tube is properly connected to the Vortech® plate.
17. Fill the tank approximately one-third with water to act as a buffer so the media will not break the distributor tube.
18. Slowly pour the appropriate amount of media. For carbon/KDF® tanks pour KDF® in first. For multi-media tanks that do not have a Vortech® plate, pour gravel or garnet in first. For tanks with the Vortech® plate, no gravel or garnet is needed. For multi-media tanks with FilterLite®, top off with enough FilterLite® to bring tank to no more than $\frac{3}{4}$ full. This should be about $\frac{1}{3}$ cubic foot out of the 2 cf supplied. You may discard the rest of this media.
19. After you have finished with filling the tanks clean the top of the tank and tank threads of any resin or gravel.
20. Remove tape used to cover the top hole of the distributor tube and clean tube.
21. Next visually check and clean the valve and distribution tube "o" ring of any foreign matter and lubricate with silicone lubricant or soap. NOTE: Do not use Vaseline or grease as these will degrade the "o" rings and cause leaks.
22. Locate control valve on tank making certain the riser tube is centered.



23. Screw the control valve on the tank until it becomes tight. (Be sure to hold the control valve where there will be no damage to the valve from the pressure you exert from tightening the valve back onto the tank.)
24. Reposition and level the tank if necessary to assure proper alignment.
25. Connect the drain lines, feed lines, and plumbing that connects the control valve to the water supply.
26. Leave all faucets turned off inside the home. Turn the unit into normal operation to restore water flow and check for leaks. If there are no leaks, then turn on one faucet (preferably an outside faucet) and let the water run for 3-5 minutes. This rinses the new media off inside the tank and any particles or color will rinse out through the one open faucet and not throughout your home plumbing.
27. Now you are ready to set up the valve and program it for use. (Consult operations manual for instructions.)
28. Initiate manual regeneration cycle. For appliances that contain carbon allow media to sit wet for 2-4 hours before doing this.
29. Once media is conditioned and backwashed, the appliance is ready for use.



AQUARINSE™ Multi-Media Backwashing Filter

MODEL #: LWMMF10

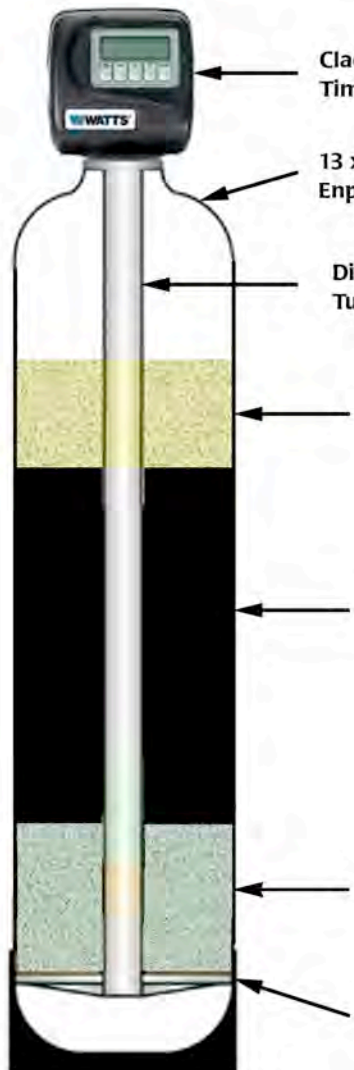
INSTRUCTIONS FOR MODEL #: LWMMF10

Tape across top of distributor tube to keep media from entering and seat funnel in neck of tank over tube.

Fill tank 1/3 with water to prevent clumping.

Pour in media according to the loading order below.

Remove tube from distributor tube, install control valve, and fill with water. Let sit 20 minutes and initiate manual backwash to place unit in service.



Clack®
Timeclock Valve

13 x 65
Enpress® Tank

Distributor
Tube

#3 - Filter Lite Media - Up to 18" from top

#2 - 55 lb (2 Cubic Ft.) 12/40 Mesh GAC

#1 - 44 lb (1/2 Cubic Ft.) Manganese Green Sand Plus

Vortech® Distributor Plate

Loading Order