

micRO75

Compact Reverse Osmosis System

75 GALLONS PER DAY



User Manual





Ready to GROW?

HydroLogic's family of world-class reverse osmosis and dechlorinator water filters offer something for everyone. Visit us at HydroLogicSystems.com and check out our huge line of diverse water filter solutions.

pure water's not **magic...**
...it's **logic**



Warranty:

A One Year Warranty comes with each unit against manufacturer's defects. This does not include clogged filters due to lack of regular maintenance or excessive sediment and/or contaminants in water. This warranty also excludes damage to units caused by using the unit outside of the specified parameters. Do not operate unit if incoming pressure exceeds 90 psi or there is problem with water hammer spikes. If unsure of water pressure, check with a pressure gauge available at your dealer or hardware store. Install the optional pressure regulator if inlet pressure is above 90 psi.

***Do not contact your dealer or distributor for warranty issues.
Contact Hydro-Logic directly.***

Tech Support / Contact:

If you have a particular application or setup question, you can call or email Hydro-Logic: ***Support@HydroLogicSystems.com***

1-888-H2O-LOGIC
(1-888-426-5644)

Visit us on the web at:

www.HydroLogicSystems.com



Important Information on Reverse Osmosis Filters:

Reverse Osmosis is the most cost effective and efficient way to remove 98%+ of all contaminants from your water. The key component of the system is the RO membrane that is tightly wrapped sheets of a semi-permeable material. Under pressure the membrane allows pure H₂O to pass through it and rejects, or flushes away, most impurities down the drain. That is why all RO systems have a certain amount of waste water. The ratio of waste water is determined by the restrictor used on the drain line. The **micRO75** is designed to run at a ratio of 2:1 (2 parts drain to 1 part product water) being about 50% more efficient than similar RO systems.

The flow of water is determined by inlet pressure, inlet temperature, and inlet PPM's. The **micRO75** has the capacity to produce 75 gallons per day, with inlet water at 77° F, 60 PSI, 500 PPM. The higher the inlet pressure and temperature, the better the flow. You will notice in colder areas or in the winter when water temperatures are lower that the water flow can be slower. A minimum of 40 psi is required to properly operate the system.

Inlet water that is very high in total PPM or very hard with calcium or magnesium may shorten the life of the membrane and/or cause slower flow rates. The RO membrane included with the filter can handle water up to 1000 PPM and with a hardness of 170 PPM or 10 grains of hardness per gallon. Note that this is considered both very contaminated and very hard water and may shorten the life of the membrane. At these levels of contamination and hardness, and especially beyond, you may consider pre-treatment in the form of a water softener or other equipment. Please contact HydroLogic for more information.

All RO systems exhibit "TDS creep". The first few ounces of RO water produced are higher in PPM than after the system has run a few minutes. Take any PPM readings a full five minutes after turning the system on to assure accuracy.

Description:

The **micRO75** is a customized Reverse Osmosis water filter that is capable of removing up to 98%+ of most contaminants. The system is designed for use with hydroponic or horticultural applications, but can also be used effectively in a variety of other settings as well. The filter is built to give the maximum amount of flow from the membrane while sending less waste water to drain, compared to similar RO filters. Please read the following setup and maintenance guide to get the maximum results from your filter and your plants.

The micRO75 unit includes:

- 1 RO Membrane
- 1 KDF/Carbon Pre-Filter
- Wall/Floor Mount Bracket
- 6 Feet of 1/4" Feed, Product and Drain tubings
- Garden Hose Connector for the Supply Line
- 1/4" Inline Shut-off Valve
- Auto Shut Off Valve
- External Flow Restrictor
- Pressure Gauge with Safe Operating Zones

Optional accessories available at your dealer: See page 8

- DI Post Filter #HL22072
- Ultra-Violet sterilization post-filter #HL35015
- TDS monitor #HL19006
- Float Valve - For use when filling reservoir unattended #HL27015
- Booster pump for inlet pressure below 40 psi #HL29060

Special note on chloramines:

*Chloramines are a disinfecting agent that is being added by some cities to the water supply place of, or in addition to, chlorine. They are a much more stable form of chlorine and do not dissipate from letting the water sit out. They cause the same damage to all living things as does chlorine. Manufacturers of carbon block filters, such as the one that comes standard with the **micRO75**, do not make specific claims for chloramines removal. If you are sure your water supply contains chloramines, be sure to always use **KDF85/catalytic carbon filters**.*

micRO75® Setup:

1. Carbon/KDF Pre-filter housing
2. Tap water inlet
3. RO membrane housing
4. Wall/floor mount bracket
5. Blue product water line
6. Black waste water line
7. Automatic shutoff valve
8. Flow-restrictor
9. 1/4" inline shut-off valve



Your **micRO75** has some simple plumbing that consists of quick connect push in fittings and food grade tubing.

Insert tubing into proper fittings. The White inlet tubing (with garden hose connector) goes into the right side of the top canister (#2, above). The Blue tubing goes into the Product Water fitting, immediately after the shut off valve. The Black Drain tubing fits in the waste water line, immediately after the flow restrictor.

Note: The 1/4" Inline Shut-Off Valve can be installed anywhere on the Blue RO tubing. This allows you to shut down the entire system, including the drain line. Make sure you make a clean, square cut in the tubing. Use sharp scissors or a blade.

Thread the garden hose connector onto an appropriate source (40 psi, minimum). Your dealer has options that allow connections to your other existing plumbing.

Flush the system for 30-45 minutes to remove the food grade preservative that the membrane comes shipped with. You are now ready to use your system.

Membrane/Filter Changes:

It is essential that you keep the **micRO75** pre-filter changed often. The filter has a rated life of approximately 1,000 gallons of Reverse Osmosis product water. The membrane usually lasts 6-18 months depending on the quality of your tap water and how often you change the carbon/KDF pre-filter. Additional pre-filtration may be necessary depending on the quality of your tap water.

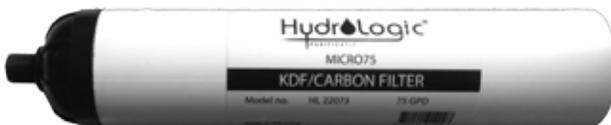
Filter Housings:

- Housing - Reinforced Polypropylene
- O-Ring - NBR
- Maximum Temperature - 100 °f
- Maximum Pressure - 100 psi

Carbon/KDF Pre-Filter Cartridge:

- 100% Coconut shell Granular Activated Carbon.
- KDF 85 media for chloramine reduction.
- Up to 99% chlorine reduction.
- FDA grade components & materials.

micRO75 KDF/Carbon Filter #HL 22073



micRO75 Membrane #HL 22074



Changing the micRO75 Membrane

The Reverse Osmosis membrane should be changed about once a year, but may be more or less frequently, depending on water quality. If your water is really dirty then you may need to change the membrane more often. If your water is relatively clean and you keep up with your pre-filter changes, the filter may last 1.5+ years. The only way to truly know is to test the RO and inlet water and see what percentage of the inlet water's PPM the **micRO75** is filtering out. You should see at least a 94% rejection of incoming PPM's.

Another indication it is time to change your membrane is if your flow rate of product water slows down. This typically means the membrane has become clogged.



Changing the RO membrane is an easy process. First, depressurize your system by shutting off the water source to your **micRO75** unit. Then remove the elbow fitting (as shown) by pushing in the collet and removing the elbow. **NOTE:** Be sure and have a bucket and towel handy when you change the membrane, as there will be residual water in the housing.

Grab a hold of the membrane housing's body with one hand, and the cap with the other hand and twist cap off.

You can now remove the membrane with either a strong set of needle-nose pliers or something similar. Hold onto the membrane housing body and pull straight out until you release the membrane. It may seem tight but with straight and even pressure, it will come out.



Before installing a new RO membrane you should lubricate (with silicone grease or water) the black rubber gasket that is closest to the inlet, as well as the two small o-rings on the stem opposite the gasket. This will help the membrane seat better and come out easier. Push the membrane back into the housing with the end that has the two black o-rings going in first. Push firmly until it bottoms out and can't go in further. Then thread the cap back on tight, re-connect elbow fitting and you are ready to flush the system for 30-45 minutes before using.

Changing the Carbon/KDF Pre-Filter

Changing the KDF Pre-Filter is very easy. First, depressurize your system by shutting off the water source to your **micRO75** unit. Next, remove the elbow fitting as shown, by pushing in the grey collet and removing the elbow. Unscrew cap with the filter attached.



Seated rubber "O" ring.

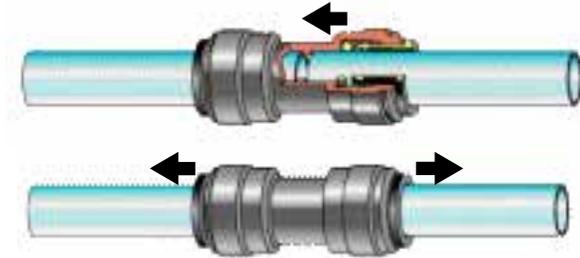
The pre-filter then simply unscrews from the cap, and then the new filter screws right back in. It is important to make sure the rubber "O" ring is seated at the bottom of the threaded stem. When installing the new filter, be careful not to over-tighten. Only a snug hand-tightening is needed to make a leak-proof seal.

Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

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Push In/Quick Connect Fittings:

Connecting Push-In Fittings:



Push tube firmly into the fitting, all the way to tube stop. The collet (gripper) has stainless steel teeth which hold the pipe firmly in position whilst the 'O' Ring provides a permanent leak proof seal. Pull tubing to check for security. If some tube pulls out then push all the way in again until it stops.

It is good practice to test the system prior to leaving site and/or before use.

Dis-connecting Push-In Fittings:



Ensure system is depressurized by turning off source water before removing fittings. Push in the collet evenly toward the fitting. With the collet held in this position the tube can be removed by simply pulling. You can use a collet release tool (available from your dealer) or small crescent wrench. The fitting can then be re-used. If the tube has been removed several times you may see score marks on the ends. This can lead to leaks so cut the end off the tubing totally square with a sharp blade using care.

Upgrade Options:



DI Post Filter #HL22072

Clips onto the **micRO75** as a final polishing stage. Removes any last traces of TDS to produce ultra pure water.



TDS Monitor #HL19006

Measures unpurified water PPM going in to reverse osmosis system and purified water PPM coming out. Monitors the performance of your RO system. Instantly displays values and allows you to switch back and forth between dirty and clean water TDS. Indicates when it's time to change the RO membranes.



Float Valve #HL27015

1/4" float valve allows unmonitored filling of reservoirs. No more floods!



UV Sterilizer Kit #HL35015

100% protection against bacteria, viruses, cysts and pathogens.



Booster Pump #HL29060

For inlet pressure less than 40 psi. Boosts pressure to ideal levels for increased flow rate and higher performance.

pure water's not **magic**
it's **logic**



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