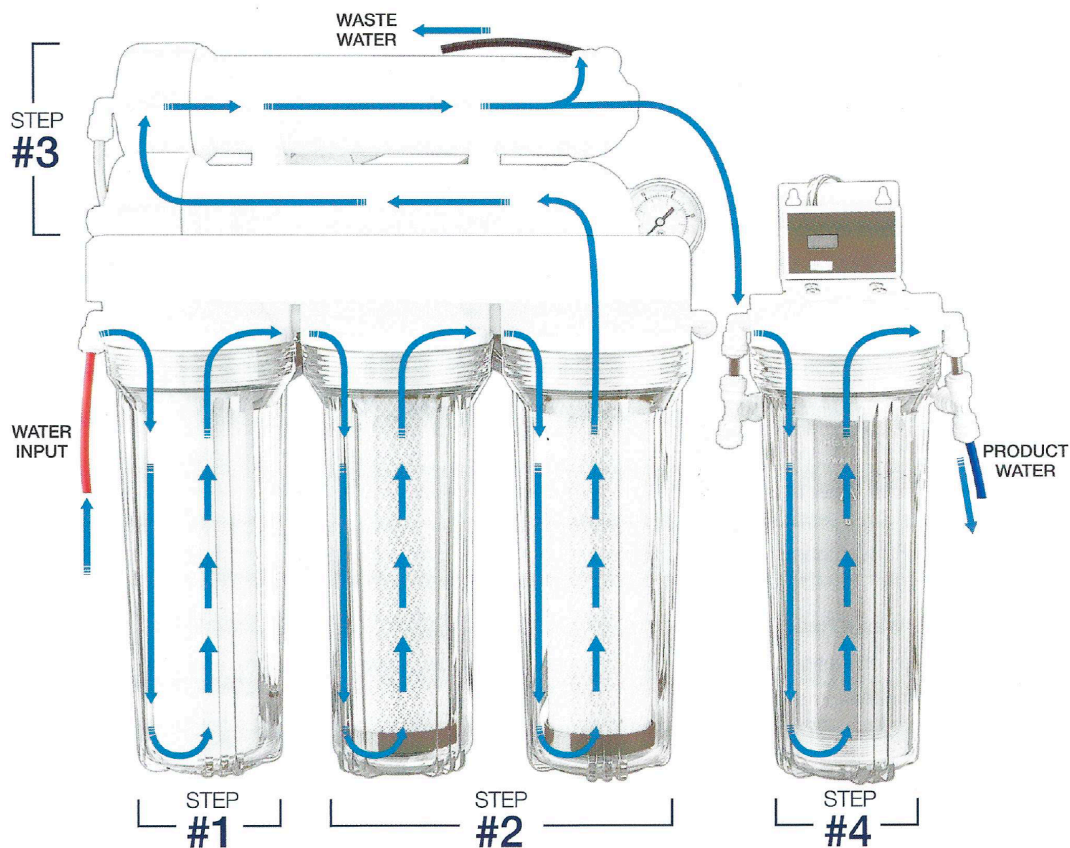


6 Stage RO System

The number of treatment stages may vary with extra carbon blocks or DI cartridges, but the order of flow and treatment is the same for each. Understanding how water passes through the system and the order of purification can assist in verifying proper operation and maintenance needs.



STAGE 1 (Step #1)

Water enters the system through the red line on the left canister and passes through the sediment filter, removing dirt and other particulate matter that would clog later stages.

STAGES 2 & 3 (Step #2)

Carbon blocks remove harsh chemicals and disinfectants such as VOC's, chlorine and chloramines, which can harm the membrane. **2 serial canisters are provided.**

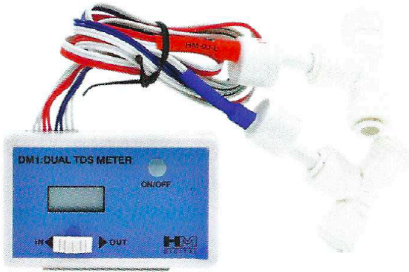
STAGE 4 (Step #3)

Water enters the membrane chamber where clean water passes through the RO membrane and into the blue product water line. The majority of water purification occurs here, with up to 99% of impurities being rejected by the membrane and sent to the black waste line.

STAGES 5 & 6 (Step #4)

Final water polish occurs as water passes through the DI resin stage(s). All elements with an ionic charge are pulled from the water, producing pure water. **2 serial canisters are provided.**

Get the most out of your RO/DI System and keep tabs on filter performance with these helpful features.



TDS METER

Verify the purity of water, and monitor membrane and DI resin performance through the measurement of total dissolved solids (TDS). TDS meters include multiple probes to measure water quality at key points in the purification process. While DI resin color change provides a general indication of resin life, a TDS meter is a more accurate measurement of water quality and should be used to identify when resin has been exhausted. The last line measures the final product water and if it indicates anything higher than zero, it's time to replace the resin.

PRESSURE GAUGE

The pressure gauge provides visibility of one of the most critical components of RO membrane performance. It is important to maintain proper operating pressure. A drop in pressure can indicate that it's time to change out clogged filters.



MEMBRANE FLUSH VALVE

The membrane flush valve has an integrated flow restrictor with a bypass valve and provides a convenient way to manually flush the membrane. Regular use helps to rinse the membrane of buildup and may extend the life of the membrane. When the handle on the valve is "in-line" the valve is bypassing the flow restrictor and is in "flush mode," if the handle is perpendicular to the valve then the unit is ready for normal use. When the RO system is running (creating permeate), concentrate (waste) water will be continually flowing to waste.

Filter Maintenance

Sediment and carbon block pre-filters provide critical support of the membrane and protect it from clogging and harsh chemicals that may damage the membrane material. Filter life depends on many different factors including the volume of water production and quality of the source water.

Premium, Deluxe and Pro Systems include Carbon Blocks that were developed to be the best solution for chlorine and chloramine removal. These carbon blocks are excellent for well water treatment. The 1 micron blocks contain increased volume and surface area over standard carbon blocks to provide chloramine removal from up to 3,500 gallons of source water, and chlorine removal from up to 35,000 gallons of source water.

Replace filters in steps 1 & 2 when changing the resin (2,000 gallons or 2 years, whichever comes first). Just be aware that if the carbon stops removing chlorines and fluorines, this will foul the membrane. The periodic use of a chlorine test is recommended. Chlorine test strips are a fast and easy test option.

Color changing DI resin post-filter

DI Resin removes the majority of elements that pass through the RO membrane and is the final water polish. Resins in our systems are color indicating* and will normally change color as they exhaust. Replace resins prior to complete color change (approximately 90%). Using DI resin to complete exhaustion can lead to increased TDS in product water.



Value, Premium, and Deluxe Systems include mixed bed resin with blue anion color indicator which changes from blue to golden brown from the bottom up as it depletes. On Deluxe, dual DI systems, the second cartridge catches any impurities released by the first stage. We recommend swapping the second DI resin cartridge into the first position, and placing the refilled cartridge in the second position to ensure that no impurities are released into the product water.

Pro Systems use three different color indicating resins to target specific impurities in water.

Cation Resin starts out purple and changes color to amber when exhausted. It targets and removes positively charged ions such as ammonia, lithium, and aluminum.

Anion Resin starts out blue and changes to golden brown when exhausted. It targets and removes negatively charged ions such as phosphates, nitrates, and silica.

Mixed Bed Resin in the final stage as a catch-all, and uses purple cation resin as the color indicator.

**Color change is a pH based indicator of depletion and abnormally high or low pH levels could interfere with the color change process.*