



Installation Guide for Replacement Elements MR5 whole house water filter

Read all instructions before installation

Professional plumber installation recommended

**Licensed Plumbers who wish to sell and install the MR5
contact 612 232 6651**

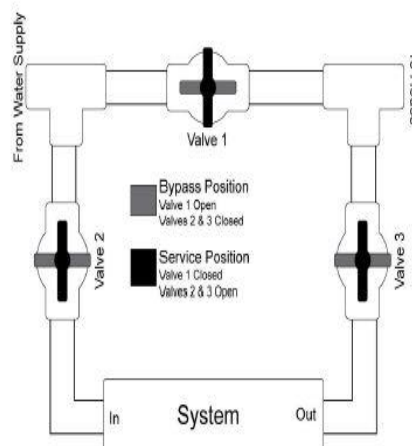
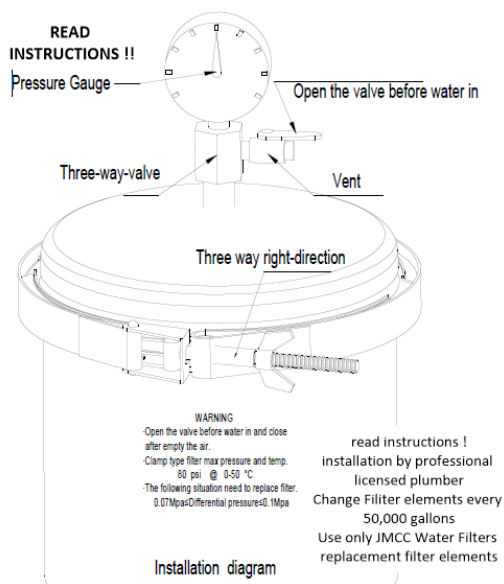
Installation details: If you are not familiar with standard plumbing practices and local zoning regulations then you should have a professional licensed plumber install the MR5 unit. The following instructions are a summary of the installation and are not meant to be a complete step by step instruction list. Refer to a local licensed plumber for installation.

The general rule is to clock 57,000 gallons on your water meter before replacing the MR5 filter elements. If you have high levels of toxins, your usage may be less than 57,000 gallons. The filter elements are all the same (this is not a series of filters that remove different toxins). You have five large 20" filters to gain the rated flow rate of the filter.

Shut off all water in the building if possible and **completely isolate the MR5 systems with the shut off valves that were installed**. If there is a UV filter then also isolate the UV filter with shut off valves (replace the UV bulb according to its maintenance schedule). Open the relief valve on the top of the MR5 unit to remove pressure from the system (water will come out). Next remove the small plastic drain plug (or if you installed a drain valve open it) at the bottom of the MR5 unit. Only when the pressure has been released and the MR5 is vacated of water, remove the top sealing band and remove all pieces including the filter elements. Save all parts in order because you will need them to install the new filter elements.

Remove the plastic wrappers from the 5 new filter elements. Install the filter elements making sure the original plastic caps are inserted in the top and bottoms of each filter element (top plastic plug is closed and bottom plug is open). Replace the stainless steel plate with 5 holes over the 5 filter elements, tighten the nut and place the silicone sealing O-Ring. Fasten the stainless steel sealing band. **NOTE: put food grade lubricant on the steel tightening band so it pulls tight around top and bottom joint.**

Do not lubricate O-Ring. **BEFORE PLACING THE STAINLESS STEEL SEALING BAND, LUBRICATE ALL SURFACES WITH FOOD GRADE LUBRICANT (COOKING OIL). LUBRICATE ALL OF THE SURFACES WHERE THE STEEL BAND WILL TOUCH – THE LIPS OF BOTH THE MR5 BOTTOM AND TOP WHERE THEY MEET AND THE STAINLESS STEEL BAND INSIDE AND THE BOLT WITH LARGE WING NUT. Do not get lubricant on the O-Ring or MR5 surfaces where the O-RING sets.** Fasten stainless steel sealing band with large wing nut. **NOTE use a food grade lubricant such as cooking oil on the steel band to allow for easy tightening. You can tap the sealing band around the edge with a wooden mallet to help force into locking position during the tightening process. You can use a wrench to further tighten the large wing nut to get a good seal. ALL MR5 units are pressure tested before shipment so any leaks are due to insufficient pressure from the sealing band.**



The pressure gauge for the MR5 reads in units of Megapascal (MPa). The full scale reading of 1.0 MPa is equal to 145 PSI. The MR5 unit is rated for a maximum **static pressure** of 0.68 MPa = 100 PSI but you should not have line pressure coming into the unit of more than 0.40 MPa = 60 PSI. A pressure relief valve should have been installed on the input side of the MR5 to release at 60 PSI. Typical line pressure is between 40 and 60 PSI or 0.25 to 0.40 MPa on the dial. To protect the unit from line pressure surges you must have a functional pressure release valve on the pipe inlet port of the MR5 next to the unit. There is a release valve on the top of the MR5 to be opened when you first start to allow water into the MR5 unit after making all connections. This allows air vacate the unit. **Follow instructions below to turn on water after replacing the filter elements.** When placing the final seal on the MR5 (sealing the top to the unit) make sure that the top and bottom are matched and the stainless seal completely covers the lip on both top and bottom. Checking all fittings and plugs.

			
Final Installation MR5 & UV	Filter Elements in place in MR5	MR5 20" Filter element plastic bottom end cap & washer	Pressure Gauge and release valve on top
			
Top of MR5 parts	Replace SS top plate	Another view of top plate	Final – Tighten Cap Ring

Never remove the seal band when the unit is under pressure. Always isolate the MR5 unit completely using shut off valves and remove pressure from the unit prior to doing any maintenance. You can replace the plastic lower drain plug with a valve (not included). **When filling the system with water for the first time or after a filter element change, use the following order of opening valves.**

- 1) Turn off all water usage in the building and shut off the main valve to the building. You do not want the water from the building draining backwards into the MR5 unit as you slowly fill it with water.
- 2) Close valve # 1 (diagram above).
- 3) Verify that valve # 2 and # 3 are both closed.
- 4) Open slowly and completely valve # 3.
- 5) With the top of unit pressure relief valve open (to allow air to vacate the MR5 housing while filling with water) SLOWLY open valve # 2 slightly (just enough for a small amount of water to flow) to allow the system to vacate air and fill with water before opening completely. When water starts to come out of the top release valve close the release valve and allow pressure to build in the MR5. Check for any leaks and if there are leaks turn off the valves, drain any pressure and then drain water from the system. Fix leaks. Then follow procedure to slowly open valve # 2 to fill the system with low water flow before opening valve # 2 completely. If water flow slows over time then examine the filters for surface clogging. If you have excessive grit or other material that clogs the system (common with well water or high mineral content water) then it is recommended you place a sediment pre-filter in the line before the filter (recommended a ROSCO Spin Down Filter). If you have hard water then you should put a water softener upstream from the MR5 to prevent clogging the MR5 filter elements and shortening their life time.