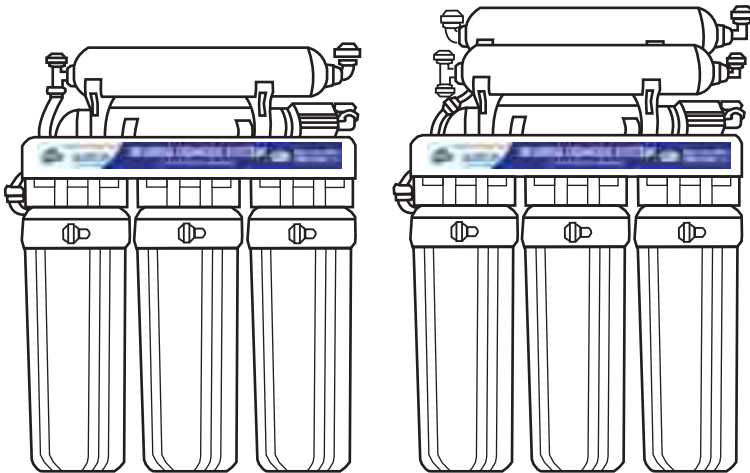

REVERSE OSMOSIS SYSTEM

HR-800(M)

USER'S MANUAL



- 01 Introduction of HR-800(M)
- 02 Components
- 03 Cartridge filters
- 04 Installation diagram
- 05 Change membrane
- 06 Change filters
- 07 Operation regulation
- 08 FAQ
- 09 Maintenance checking list
- 10 Memo

Thank you very much for selecting Hyundai Wacotec. co., ltd.
In order to bring the best use of your system, please read the
user's manual carefully before installation and follow the regula-
tions.

Introduction of HR-800(M)

HR-800(M)

- Saving Space

In compliance with the new RO technology, HR-800(M) is designed for places where feed water has very low water pressure (under 45psi), or where source water contains higher than normal amount of dissolved solids.

- Benefits

It uses high quality booster pump that can provide 100~120 psi water pressure to pass through the membrane even with areas under low water pressure.

The booster pump improves the TDS (Total Dissolved Solids) rejection. It is capable to remove over 90~95% of TDS, 99% of all organics and 99% of all bacteria. HR-800(M) meets all different water quality needs.

Recommended Operating Regulation of RO

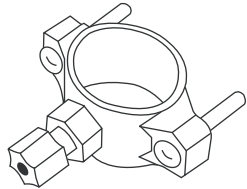
1. Need enough flushing after installation and changing filters.
2. It takes 1 week to get the correct value of TDS (after stabilizing RO membrane)
3. Rate of removal and the volume of treated water depends on water temperature, water pressure, condition of raw water and etc.
4. Product Specifications for RO Membrane.

Model name	Water Pressure (kgf/cm ²)	Water Temperature (°C)	Capacity of treated water (ml/min)	GPD	Rate of Removal (%)
50 GPD	4.2	25	178	67.9	91.3
75 GPD	4.2	25	235	89.7	93.9
100 GPD	4.0	25	272	103.8	94.9
150 GPD	5.6	25	401	152.8	94.5

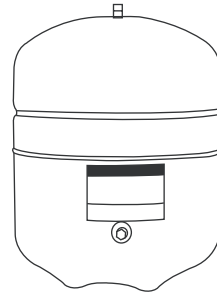
Permeate flow and salt rejection are based on the following test conditions.
: 250 ppm (NaCl) softened tap water, 77°F (25°C), 15% recovery and the specified applied pressure

Components

Components



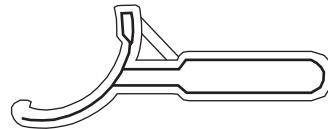
Drain Saddle



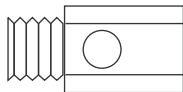
3.2G Water Storage Tank



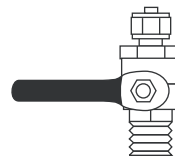
1/4 inch tubing for system connection



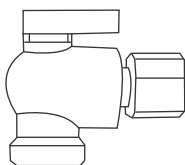
Housing Wrench



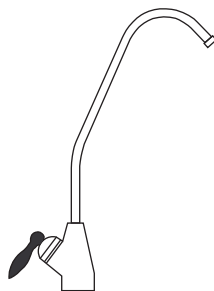
Water Supply Connector



Deliver-Valve



Tank Ball Valve



Faucet



Fitting Opener

Cartridge Filter 1

Cartridge Filter	Filter Description	service life (nomal type)	service life (optional type)
<u>Stage 1-1</u> Pre-Sediment Filter (optional) 	This filter removes ordinary sediments (clay, rust, sand, etc) though 1~10 micron(1micron=0.001mm) pores in the water. The sediment filter cartridge is easy to change and allows the customers to verify the filters level of contamination through naked eyes, providing a high reliability. ※Note : To protect other filters and extend service life of filters, please connect Pre-Sediment filter to extend service life of filters in the place that the raw water is bad quality. EX: In case of hard water and if water condition is bad (like TDS value is more than 400) and water pressure isn't constant.		1 month
<u>Stage 1-2</u> 5 Micron Sediment Filter 	This 5 micron sediment filter is made of 100% pure polypropylene fibers. High capacity filter removes dusts, particles and rests.	3 months	2~3 months
<u>Stage 2</u> Pre-Carbon Filter 	The carbon filter that uses activated carbons utilizing chemical absorption eliminates the generated chlorine during the process of treatment for the city water and also other organic compounds and odors to make the city water to be just a natural water.	6 months	4~6 months

Cartridge Filter 2

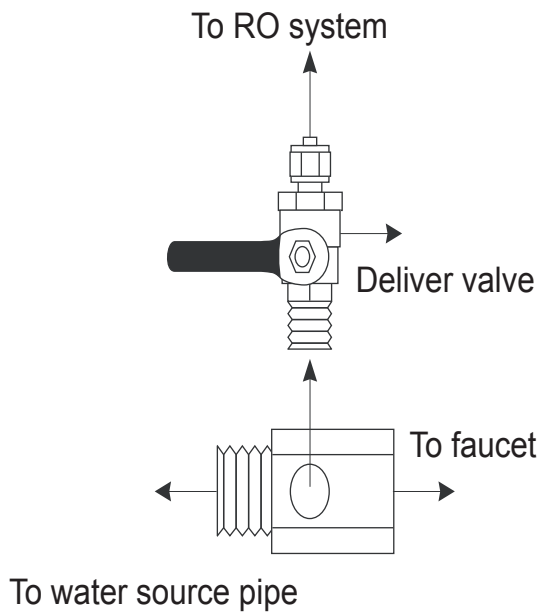
Cartridge Filter	Filter Description	service life (nomal type)	service life (optional type)
<u>stage 3</u> Carbon Block Filter 	This carbon block filter is composed of high-performance carbon that removes free chlorine, odor, organic contaminants, pesticides and chemicals that contribute to taste and odor.	9 months	6 months
<u>stage 4</u> RO Membrane 	High rejection TFC type membrane with the capacity of producing 80 gallons per day. This membrane removes the following hard water contaminants that may be present in your water : lead, cooper, barium, chromium, mercury, sodium, cadmium, fluoride, nitrite, nitrate and selenium.	12~18 months	9~12 months
<u>stage 5</u> Post Carbon Filter 	This post carbon filter is designed to improve taste. It removes any residual impurities and odors from the tank and provides a finer conditioning of pure water.	9 months	9 months

※ There are several analysis specifications for water quality. But Normal Type is generally used once TDS is under 200ppm and it is necessary to add Pre-Sediment filter where TDS is 200~400ppm as optional type.

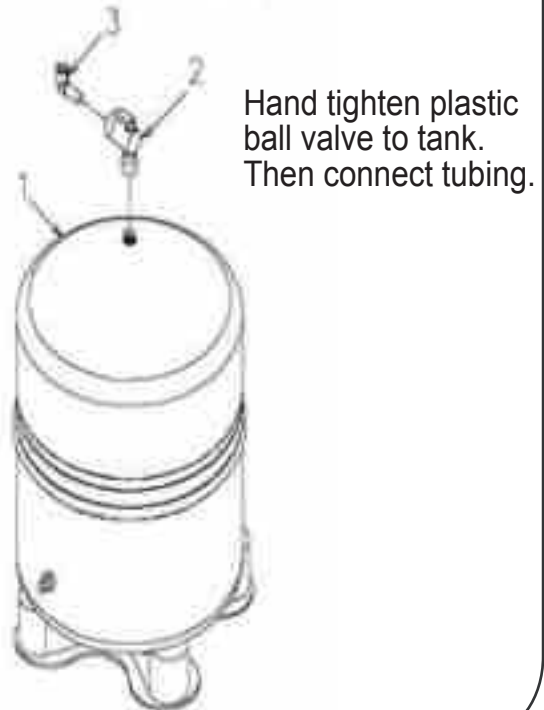
※ Filtering System and Service Life should be adjusted according to Raw water conditions. And Service Life depends on Raw water conditions.

Installation diagram 1

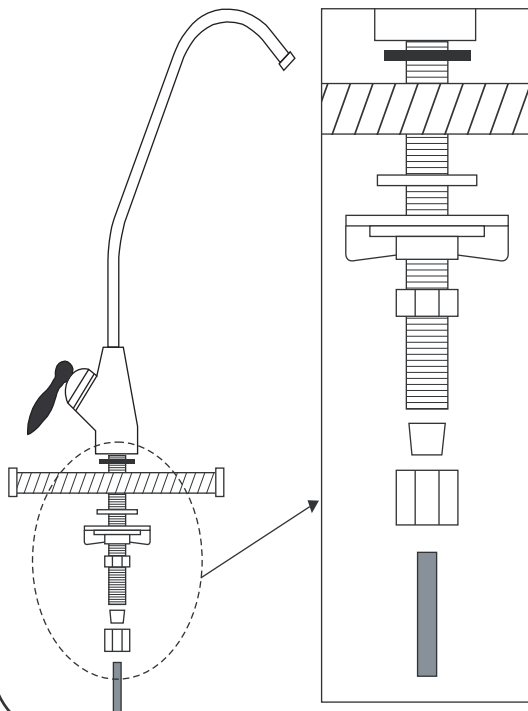
Input water:



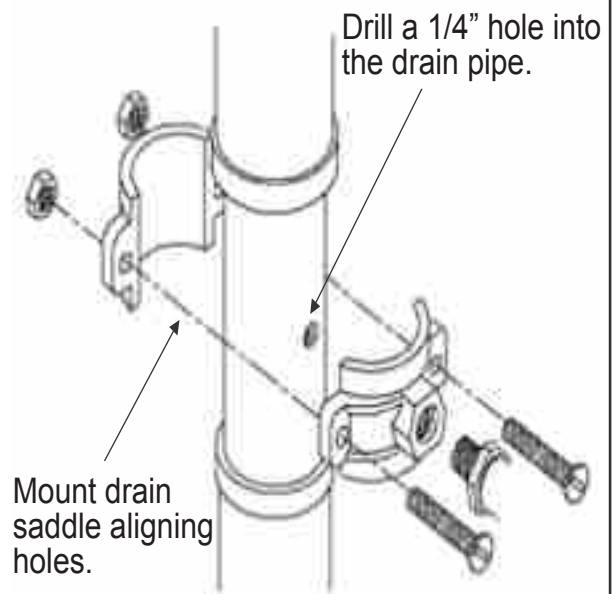
Install water tank:



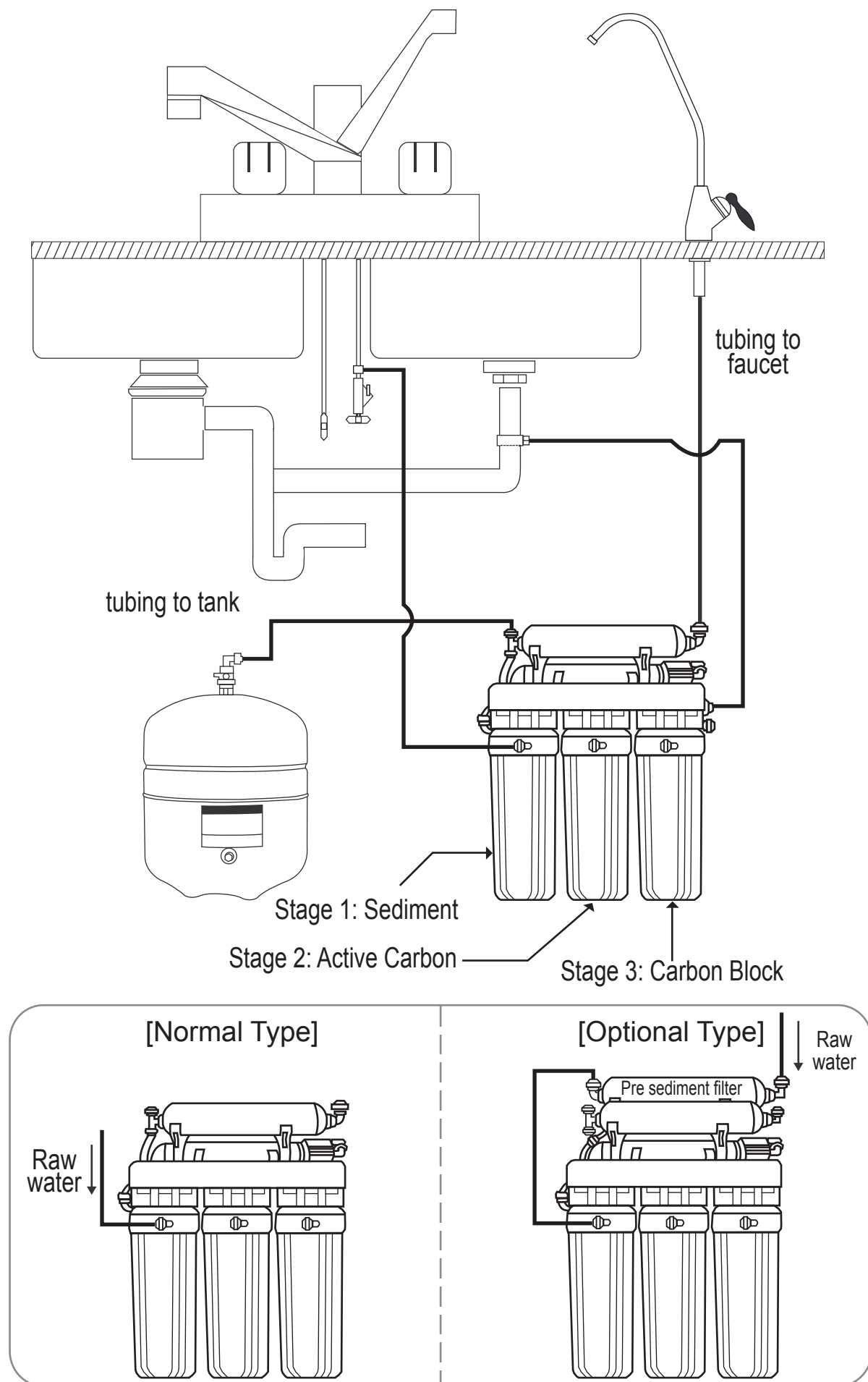
Install faucet:



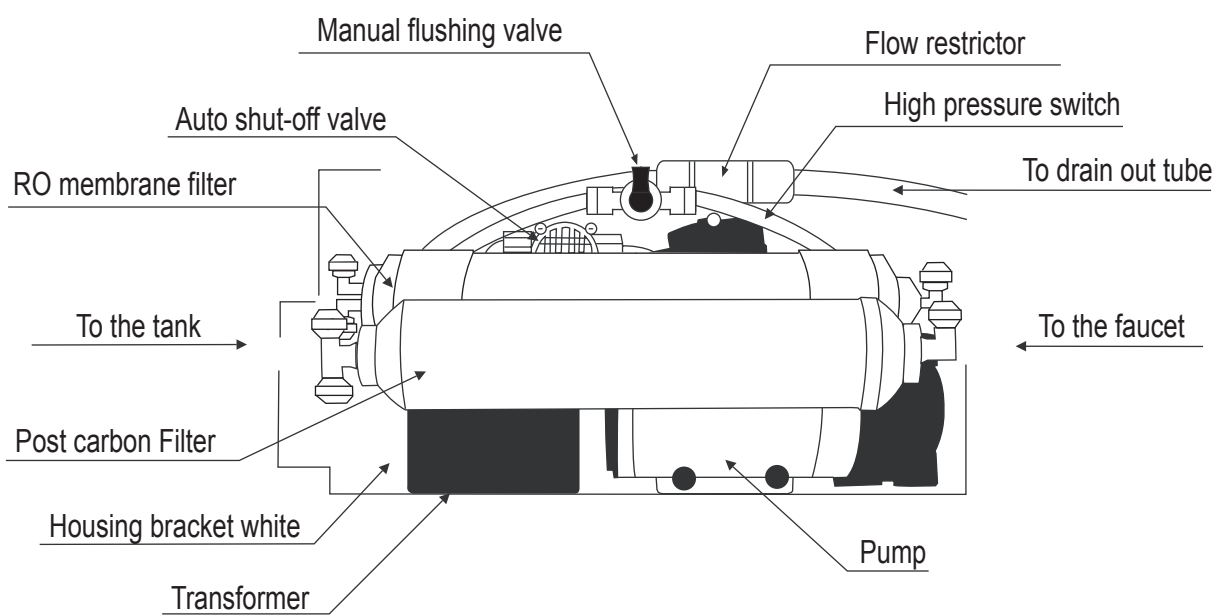
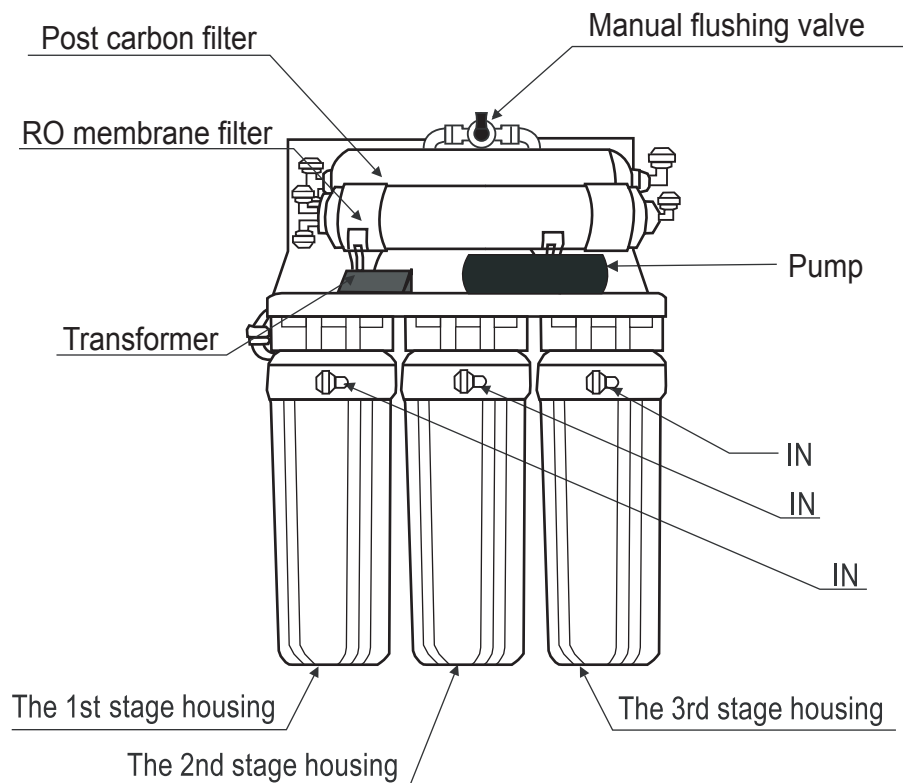
Install drain saddle:



Installation diagram 2

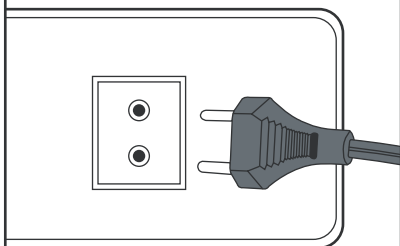


Each part of main body

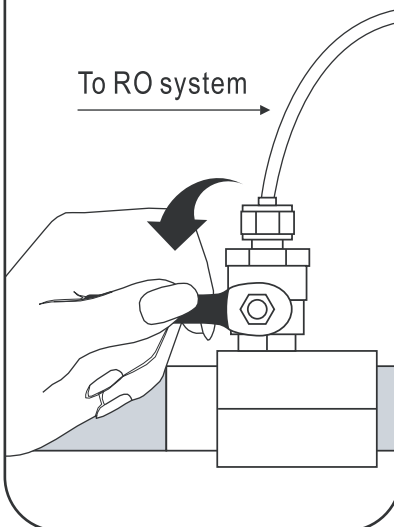


Change of RO membrane

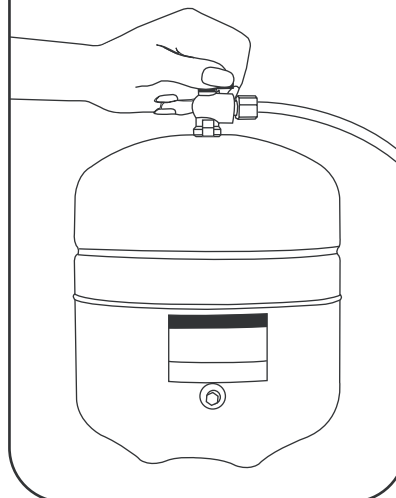
1 Unplug electricity.



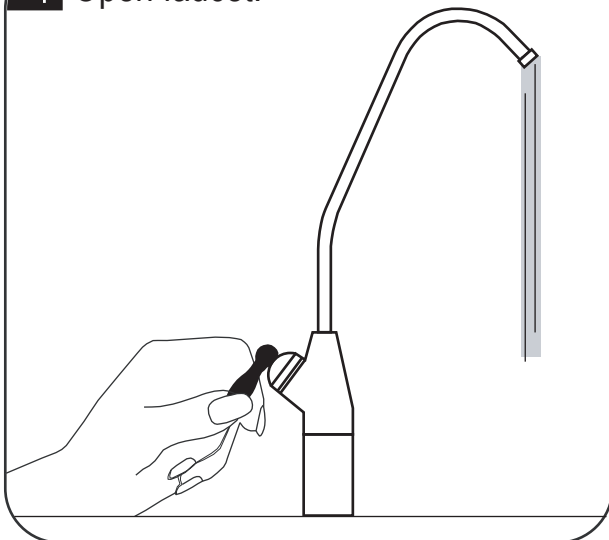
2 Turn off water source.



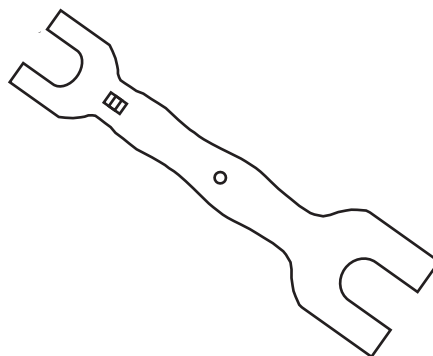
3 Turn off water tank.



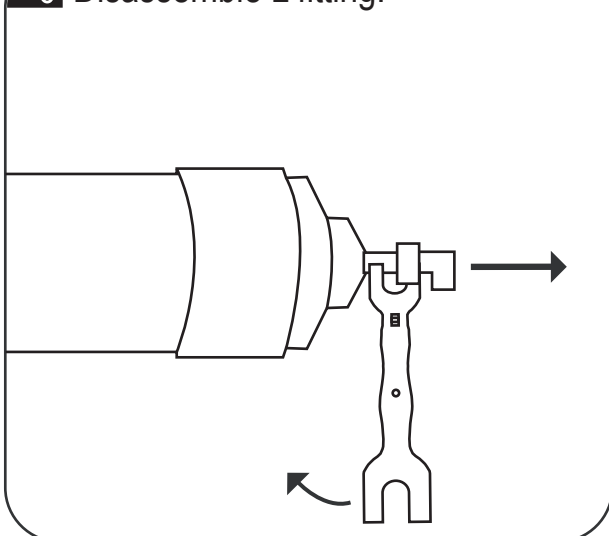
4 Open faucet.



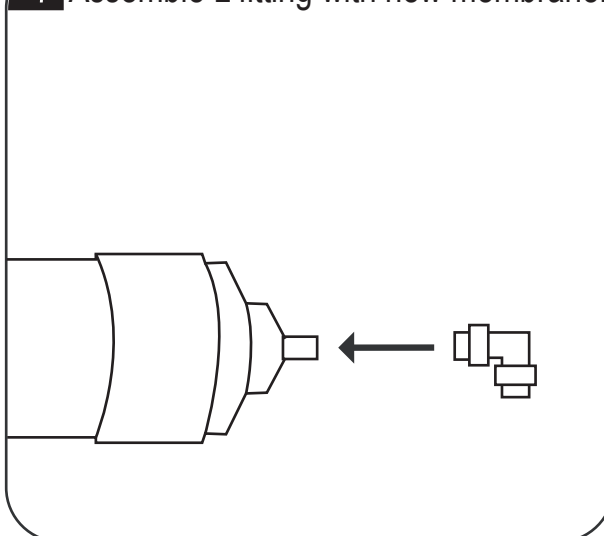
5 Prepare fitting opener.



6 Disassemble L fitting.

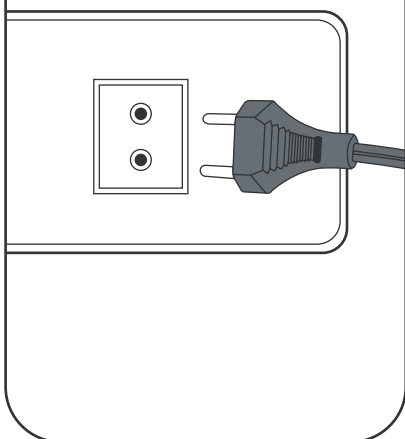


7 Assemble L fitting with new membrane.

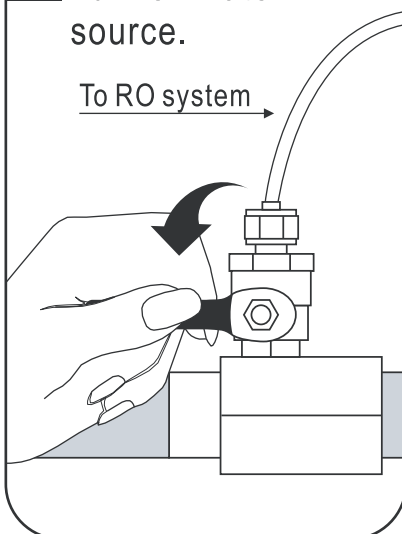


Change of filters

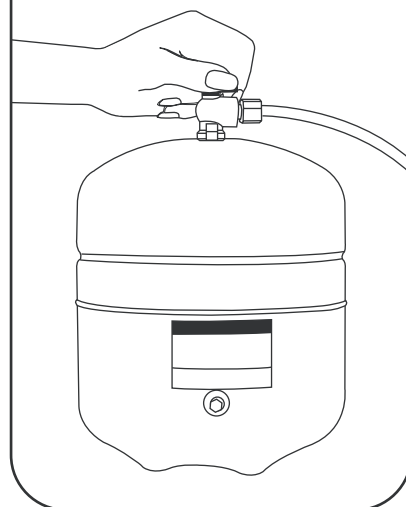
1 Unplug electricity.



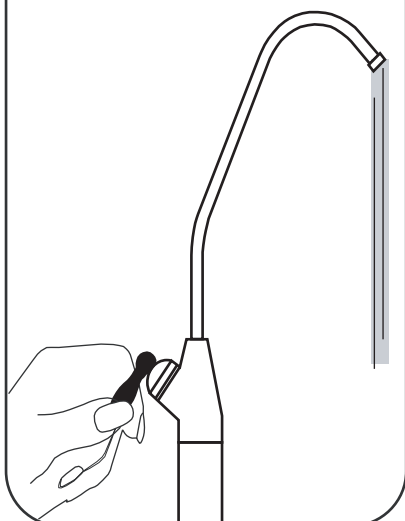
2 Turn off water source.



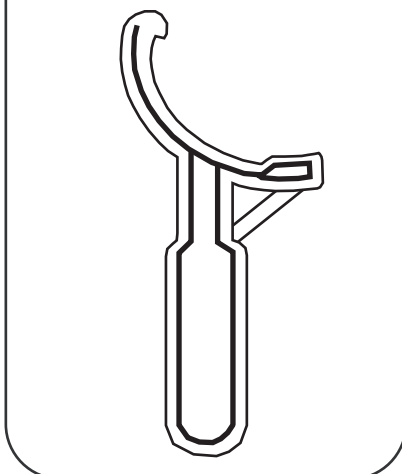
3 Turn off water tank.



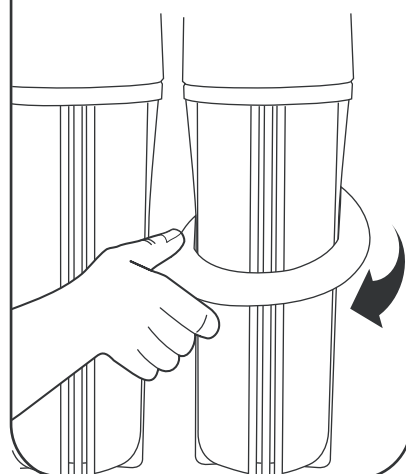
4 Open faucet.



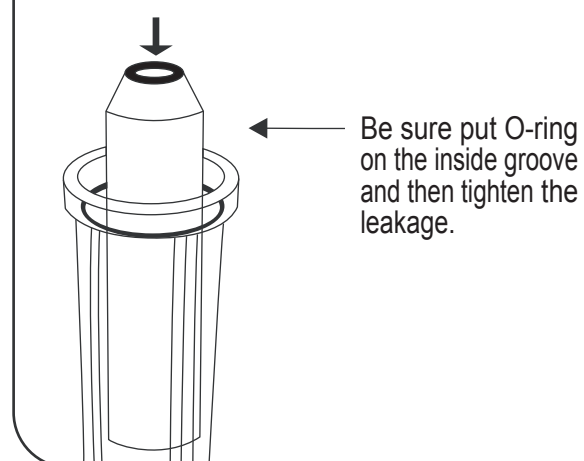
5 Prepare a housing wrench.



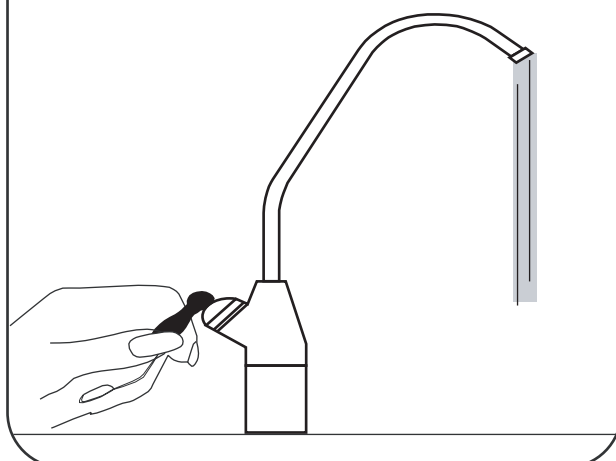
6 Open housings clockwise with a wrench.



7 Put the replacement filters in the housings and double O' ring.

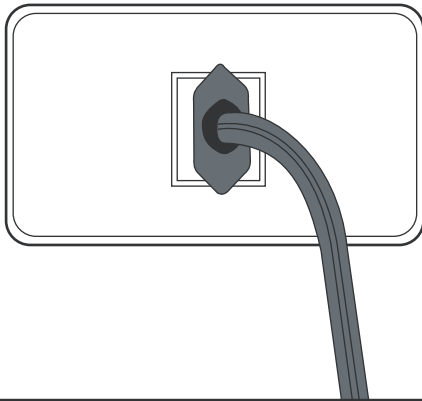


8 Drain out 1 Gallon of water to purify replacement filters.

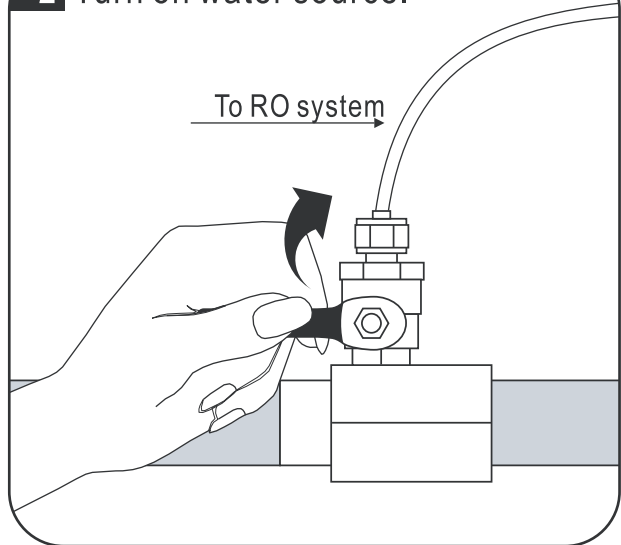


Operation regulation

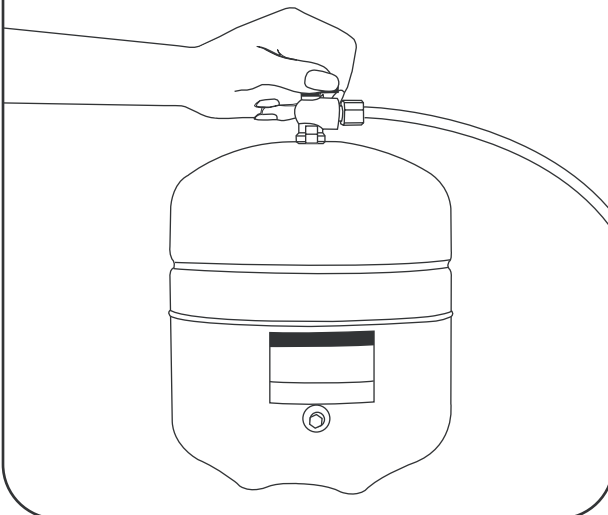
1 Plug in electricity.



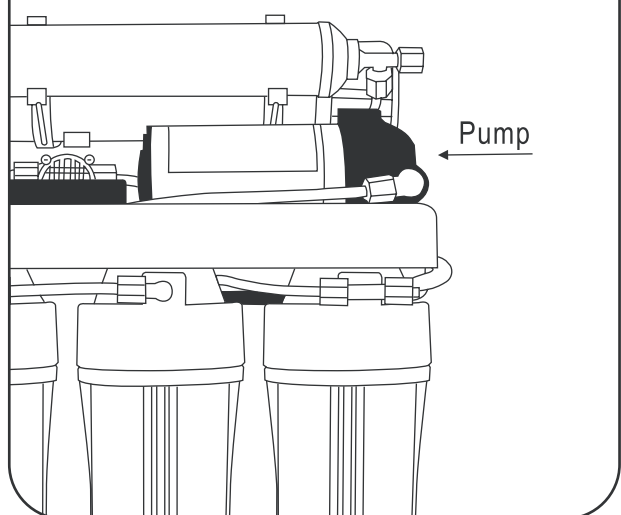
2 Turn on water source.



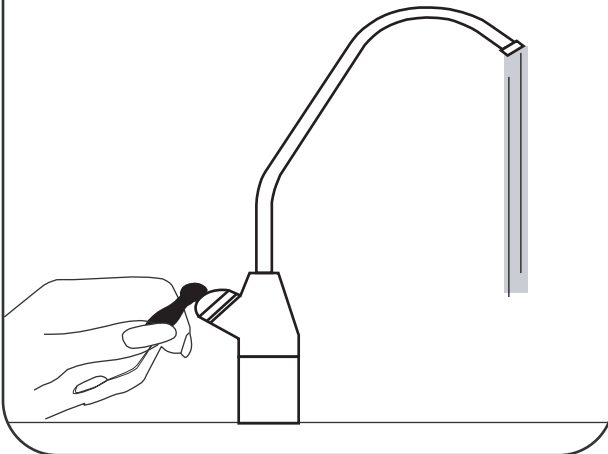
3 Valve on water tank.



4 Make pump to function.



5 Let the water run for at least 30 minutes. This flushes the carbon filters for the initial use.



Q: What do factors affect the quantity and the quality of the water production?

There are four major variables to consider :

1. Pressure - The ideal water pressure is 60~80 psi for the better water capacity and quality.
2. The ideal water temperature for RO is 25°C . In case under 25°C , it will cause the reduction of water capacity to half. The maximum recommended water temperature is 29.4°C .
3. TDS - In case of a high level of TDS such as the higher amount of dissolved contaminants in water, additional water pressure is necessary to obtain the required water.
4. Membrane - Different membranes have different characteristics. Some membranes produce more treated water than others; some has better capabilities of contaminant rejection; some has greater resistance to chemical abrasion for longer life. Wacotec system includes the Thin Film Composite (TFC). Membranes combine the best of these characteristics and they are considered the finest membrane in the world.

Q: Can the WACO system be connected to an extra faucet?

It only takes a 1/4" tee and tubing to run the water to a refrigerator or an extra faucet. Some families run Wacotec system to all of their bathrooms.

Q: What taste is the WACO series for drinking water?

The taste of the WACO water depends on the amount of contaminants in the tap water originally. If 90~95% of dissolved minerals and chemicals are removed, RO water may taste like distilled water (no minerals), bottled water (low minerals) or natural spring water (moderate mineral content).

FAQ

Q: How will the water of WACO series affect the mixed beverages?

It allows the natural taste of your beverages to come through because RO removes invisible contaminants that mask flavor. You will be able to use less coffee and still get the full flavor. Concentrated beverages like orange juice will taste tangier. You will probably be drinking a lot more water as well, since many people drink soda, Kool-Aid, concentrated juices, and beer as an alternative to bad-tasting tap water. Also, Wacotec eliminates most of the lime build up on drip coffee makers, preventing the need for frequent cleaning. No longer you will find the white scum on the inside of pans after boiling water.

Q: How much water does the WACO system produce?

Under ideal conditions, the TFC membrane is rated at 100 gallons of production per day (100gpd at 60 psi, 150 gpd at 80 psi). Under the average conditions, the consumer can expect 100-150 GPD.

Maintenance checking list

Filters Date	Stage1-1 (Pre-Sediment filter) <optional>	Stage1-2 (5 Micron Sediment filter)	Stage 2 (Pre- Carbon filter)	Stage 3 (Carbon Block filter)	Stage 4 (RO Membrane)	Stage 5 (Post Carbon filter)

Memo

Type of product			
Date of purchase			
Name		Tel	
Address			



waco Corp.

MADE IN KOREA



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Nowon-ro 15-gil, Nowon-gu, Seoul, Korea

Tel. 82-2-948-0657 Fax. 82-2-948-2342