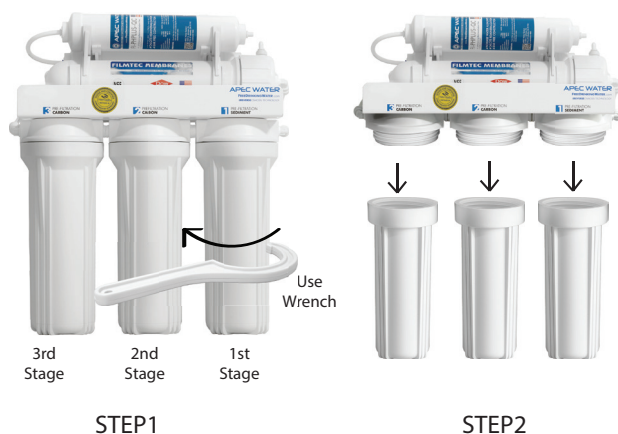


# APEC RO-PH90 System Filter Change Instruction

## Changing Stages-1, 2, 3 Pre-Filters: (should be changed at least every 12 months)

- 1) Turn OFF cold water supply to RO system. Turn OFF the tank ball valve. Turn ON RO faucet briefly to relieve the built-up pressure inside the RO system. This will make opening the housings easier.
- 2) Open housing: Have the RO standing upright. Slip the plastic wrench onto the #1 housing. Looking down from a top view, you should open the housing turning **clockwise**. If necessary, lay RO down on the floor to get a better leverage. If the housing is too tight, use a hammer and lightly tap on the wrench handle to help turn the wrench.
- 3) Discard 3 used filters, wash housings with mild soap, rinse off. Put 3 new filters into their respective housings: sediment filter in stage-1, carbon block filters in stage-2 and stage-3.
- 4) Close up the housings. Make sure each housing has a **black O-ring** in the thread grooves. Use wrench to tighten each housing.
- 5) Remember: Turn ON the cold water supply and OPEN the tank valve after finished changing filters!
- 6) **Check for leaks!**



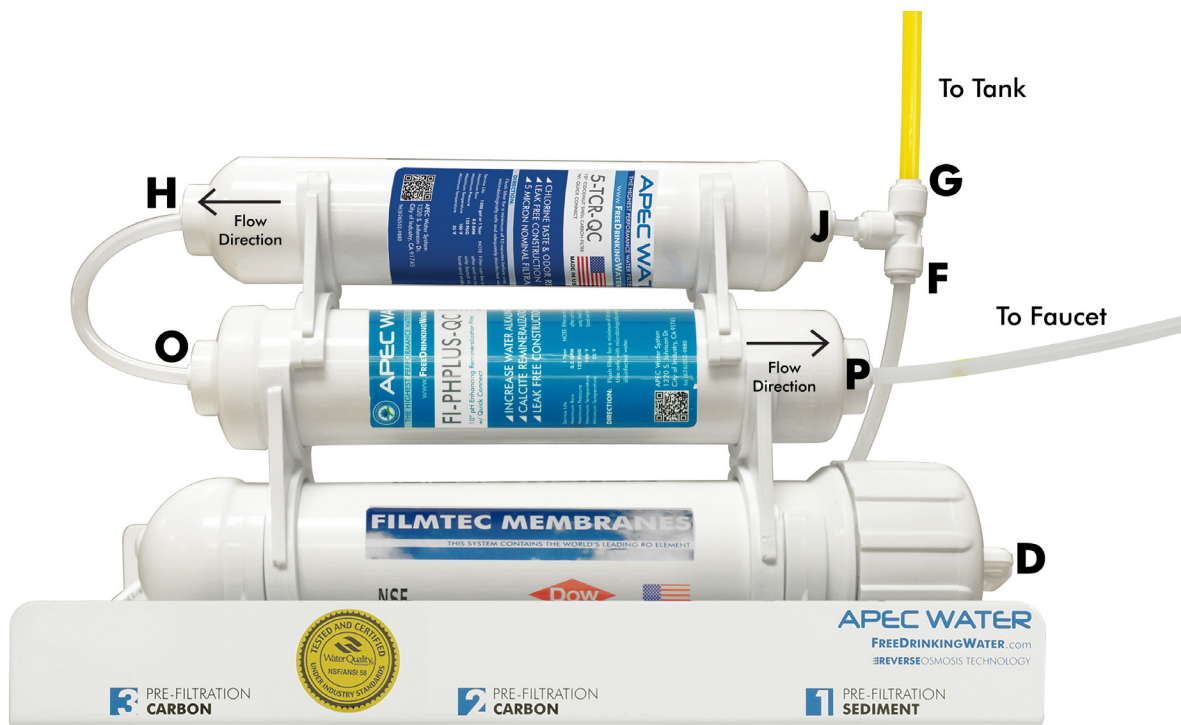
After taking the housings off, take out the dirty filters and put the new 3 pre-filters in. Remember, Stage-2 and Stage-3 are same carbon filters.



**Fig. A**

## Changing Stage-4 Membrane: (should be changed every 3-5 years)

- 1) Turn OFF cold water supply to RO system. Turn OFF the tank ball valve. Turn ON RO faucet briefly to relieve the built-up pressure inside the RO system. This will make opening the housings easier.
- 2) See **Fig. B**. Locate the Membrane housing on the system (labeled "Membrane"). Remove the RED tubing from the housing's cap at **point D**. To remove tubing, push in and Hold Down on the collet ring square against the fitting. With the collet held in this position the tubing can be removed. Open up the cap (turn counter-clockwise). Remove the used membrane. Discard. Insert the new membrane using a pair of pliers. Push membrane into housing tightly. Avoid touching the Membrane with your hands to prevent contamination!
- 3) **Important!** Make sure the "double-ring" end of the membrane goes into the housing first as shown in **Fig. A**. above. The membrane cannot filter water if it's inserted in the **WRONG** direction!
- 4) Close the housing cap. Reconnect the RED tubing to the cap. **Turn on** the cold water supply and **open** the tank valve. Let the RO system run to re-fill the tank (takes about 2-3 hours).
- 5) **Check for leaks!**
- 6) Drain the first tank of water (through faucet) to flush out the new membrane! The 2<sup>nd</sup> tank of water is ready for use.



**Fig. B**

**Changing Stage-5 Carbon TCR Filter:** (should be changed every 3-5 years with Membrane)

- 1) Remove the OLD filter: See **Fig. B**. Disconnect the Input tubing from **point J** and Output tubing from **point H**. To remove the tubing, push in and hold down on the collet ring square against the fitting. With the collet held in this position the tubing can be removed. Unclip the filter from the membrane housing and discard the used filter.
- 2) Install NEW Filter: The QC filter will come with 2 end plugs. Please remove both end plugs before reattaching tubing. Connect the filter back onto the membrane housing. Make sure the "Flow →" on the filter is pointing to the pure water output direction.

Sanitize: Use some mild bleach solution to rinse the 2 tubing ends, and the 2 ports of the new filter. This is to prevent contamination.

- 3) Connect the Tee fitting on the Inlet (**point J**) of the filter. Push the tubing into the QC fitting, then gently pull back on the tubing to make sure connection was secure. Lastly connect pure water output line to Outlet (**point H**) on filter.
- 4) **Check for leaks!**

**Changing Stage-6 PH Filter:** (should be changed at least every 6-12 months)

- 1) Turn OFF cold water supply to RO system. Turn OFF tank ball-valve by turning the blue handle 90°. Turn ON RO faucet briefly to relieve the built-up pressure inside the RO system. This will make removing the tubing easier.
- 2) Remove the CLEAR outlet tubing at **point P**. See **Fig. B**. To remove the tubing push in and hold down on the collet ring square against the fitting. With the collet held in this position the tubing can be removed. Once the outlet tubing is disconnected, please remove the inlet tubing at **point O**. Remove old filter and discard.
- 3) The new PH filter will come with 2 end plugs. Please remove the plugs before connecting the tubing to the filter.
- 4) To reconnect the tubing to **point O** and **P**, push the tubing into the QC fitting, then gently pull back on the tubing to make sure the connection was secure. Make sure the "Flow →" on filter is pointing to the drinking water faucet.