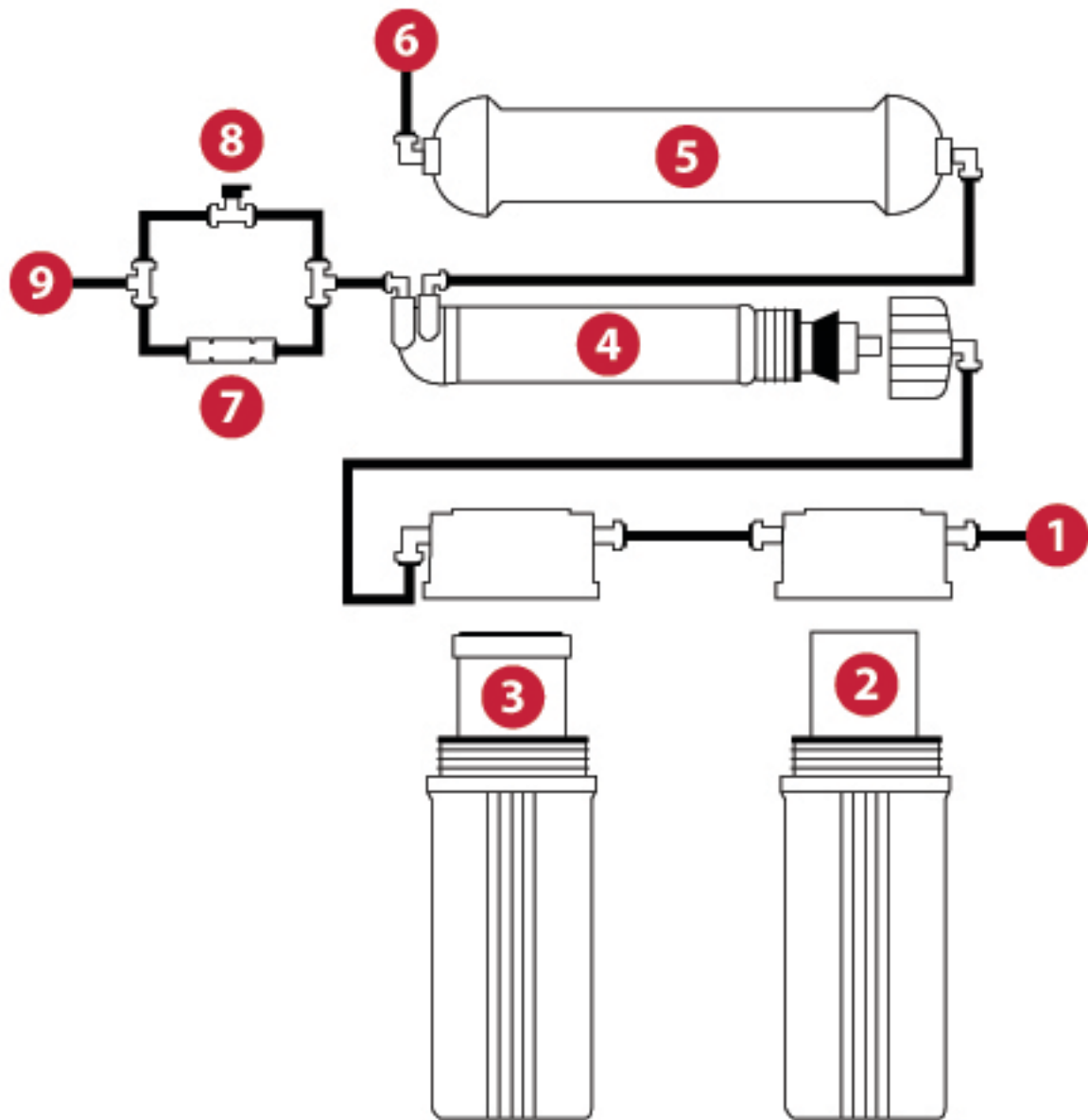


# RO-50 Reverse Osmosis Unit Installation Instructions



- |   |                                   |   |                           |   |                        |
|---|-----------------------------------|---|---------------------------|---|------------------------|
| 1 | Water inlet                       | 4 | RO membrane               | 7 | Waste restrictor valve |
| 2 | 5 micron particle sediment filter | 5 | Inline DI resin cartridge | 8 | Manual flush tap       |
| 3 | CTO carbon block filter           | 6 | Pure water outlet         | 9 | Waste water outlet     |



## Installation Instructions

- 1 Remove all contents from the packaging
- 2 Use larger of the 2 white spanners to unscrew the 2 white vertical pre-filter housings (part 2 & part 3 on the diagram).
- 3 Once removed, then remove the pre-filter cartridges from the housings.
- 4 Remove the plastic wrapping from the 2 pre-filters and replace cartridges back into the housings
- 5 Re-install the housings back onto the system using the same spanner (being careful to re-install them in the correct order).
- 6 Disconnect the single pipe that enters into the lid of the white horizontal ro membrane housing (part 4 on the diagram).
- 7 Unscrew the lid of the RO membrane housing with the included smaller white spanner.
- 8 Remove the blue RO membrane from its wrapper (do not remove any of the blue material from the RO membrane).
- 9 Place a small amount of vaseline on all 3 seals that are installed onto the RO membrane (2 small seals at one end and a larger one at the other end).
- 10 Insert the RO membrane into the ro membrane housing. Ensuring that the end with the 2 small rubber o-rings enter first.
- 11 When the RO membrane has been inserted, use a pair of pliers to grip the plastic central siggot (on the RO membrane) and give it approximately  $\frac{1}{2}$  a turn. You should feel the ro membrane "click" into place.
- 12 Re-install the lid (that was removed in step 3) onto the housing and tighten with the smaller white spanner. (if you find that the RO membrane has to be pushed in with the lid, that is not fully inserted. You would need to remove the RO membrane and repeat steps 10 & 11).
- 13 Do not re-install the pipe that was removed during step 6.
- 14 Remove the single pipe that is connected into the clear DI resin chamber and remove the DI resin chamber from the system (part 5 on the diagram).
- 15 Next remove the 2 blue lids from the clear DI resin chamber (part 5 on the diagram).
- 16 Remove both sponges from the clear DI resin chamber.
- 17 Rre-install the sponge on the outlet of the clear DI resin chamber (the end where the blue plastic stopper is currently connected) and ensure that it is straight.
- 18 Re-install the blue lid onto this end (to confirm, the inlet end lid must not be reinstalled at this point).



- 19 Carefully open your bag of DI resin and fill the clear DI resin chamber with resin. (we would suggest using some form of funnel to do this.).
- 20 Re-install the sponge onto the DI resin layer.
- 21 Re-install the inlet lid onto the clear DI resin chamber.
- 22 Then re-install the clear DI resin chamber back onto plastic clips.
- 23 Re-install the single pipe (that was removed during 14) back into the clear DI resin chamber.
- 24 Make the connection to your water supply (part 1 on the water supply). (If you wish to use the included mains piercing fitting, please refer to the mains piercing fitting part of the instruction manual).
- 25 Make the connection to your waste water outlet. If you wish to use the included drain saddle valve, please refer to the drain saddle valve part of the instruction manual. If you do not wish to connect the waste water outlet pipe onto the included drain saddle valve, please ensure that the pipe is installed somewhere where the waste water can drain freely.
- 26 Remove the red plastic stopper and install a piece of pipe joining this fitting to your mains water supply (that was installed in step 24) (part 1 on the diagram).
- 27 Remove the black plastic stopper and install a piece of pipe joining this to your waste water outlet (as installed in step 25) (part 9 on the diagram).
- 28 Remove the blue plastic stopper and install a piece of pipe joining this fitting to your pure water outlet/storage (part 6 on the diagram).
- 29 Place the pipe that is currently removed from the ro membrane housing lid (as removed in step 6) into a bucket or suitable receptacle.
- 30 Turn the water supply to the system on. Water will now exit the pipe.
- 31 Leave the water running until the water has run clear. Once the water has run clear, then turn the water supply to the ro unit off.
- 32 Re-install the pipe back into the lid of the ro membrane housing (part 4 on the diagram).
- 33 Open the blue handled tap (manual flush valve) on the system (so that it is inline with the pipes entering it) (part 8 on the diagram).
- 34 Turn the water supply to the system on and leave the system for run for 30 minutes.
- 35 Once 30 minutes has passed, then fully close the manual flush valve (blue handled tap) (part 8 on the diagram). The unit is then ready to use.
- 36 Do not install the concentrate (waste-water) outlet pipe at a positive incline as this practice commonly clogs the RO membrane.



## How to use a Saddle Drain Valve

### Important Information

(Please note that this fitting can only be used with pipe that has a diameter of 32-40mm).

We strongly recommend that this is installed above the u-bend (if there is one installed on the pipe that you wish to connect onto).

If you are unable to install the drain saddle valve above the u-bend, it is critical that you install a none return/one way/check valve on the waste water pipe that enters the drain saddle valve

### Installation process

- 1 Drill a ¼" hole in the pipe that you wish to connect the valve onto.
- 2 Dissamble the drain saddle valve.
- 3 Remove the strip from the self adhesive tab and place it onto the inside curved edge on the inlet side of the valve (making sure that the hole in the self adhesive tab lines up to the hole on the inside of the valve).
- 4 Line this up to the hole that you have drilled (in step 1). We recommend that you use the drillbit that you used to create the hole to step 1, to hold this part of the valve in place.
- 5 Connect the other part of the drain saddle valve around the pipe (ensure that the 2 nuts are present within ther respective grooves)
- 6 Tighten the 2 parts of the valve together with the 2 included screws.
- 7 The valve will now be fully installed onto the sink/waste pipe.
- 8 Remove the pre-installed ¼" blue locking clip from the valve
- 9 Install the drain outlet pipe from your reverse osmosis system or water filtration system into the valve.
- 10 Once the pipe is fully inserted, replace the ¼" blue locking clip (that was removed in
- 11 The installation process is now complete.



## How to use a Mains Piercing Fitting

**Please note that this fitting can only be used on copper piping. If the pipe that you wish to connect onto is plastic, do not use this fitting.**

- 1 Remove all parts from the packaging.
- 2 Remove the curved metal piece from the fitting.
- 3 Loosen the bottom brass bolt (that is attached onto the threaded bar) on the mains piercing fitting.
- 4 Slide the main fitting over your copper pipe and re-install the curved metal piece (that was removed during step 2) so that the copper pipe sits inside of the groove.
- 5 Re-tighten the bottom brass bolt so that it tightens the curved metal piece (that you have just re-installed) onto the copper pipe.
- 6 Remove the brass nut from the fitting.
- 7 Slide the nut over the pipe that you wish to connect onto the fitting.
- 8 Install the pipe olive onto the pipe (that you wish to connect onto the fitting)
- 9 Install the plastic pipe insert into the end of the pipe (that you wish to connect onto the fitting).
- 10 Slide the nut to the end of the pipe and re-install onto the thread that it was originally removed from (in step 6).
- 11 Turn the handle of the valve as far as it will go (the valve has now pierced into the copper piping).
- 12 When you are ready to activate the water supply to your filter/filtration system, simply turn the handle in the opposite direction as far as it will go. This will then activate the water supply.

## Maintenance

We would recommend that the unit is ran with the manual flush valve (part 8 on the diagram). Fully open for the first 5-10 minutes of operation. This will help to preserve the lifespan of the RO membrane.

We recommend changing the 2 pre-filters every 6 months or after 16,000 litres of total usage (pure & waste water).

Each time the pre-filters are changed, please follow steps 2-7 and 29-32.

We recommend replacing the ro membrane on average every 12 months.



Each time the ro membrane is changed, please follow steps 6-12 and 32-35

We recommend replacing the di resin on average every 100-300 litres of pure water produced (the lifespan is dependent on the health of the other consumables and your incoming TDS levels).

Each time that the di resin is changed, please follow steps 14-23.

Every time the DI resin on your system is changed, inspect the sponges for any damage or degradation. If the sponges are damaged, then we would recommend replacing them.

