

RHOMBUS INSTALLATION & MAINTENANCE INSTRUCTIONS

Before installing and using your new reverse osmosis system, carefully read through the instructions and ensure that your feed water meets the guidelines below (e.g. minimum water pressure 2.7 bar (40 psi) and maximum water pressure 5.8 bar (85psi). if you suspect that the pressure is too high or low, check this before installing. Operating a system outside the guidelines will result in poor performance and will void the warranty.

OPERATING PARAMETERS

Minimum water pressure	2.7 bar (40psi)	Maximum water pressure	5.8 bar (85psi)
Maximum dissolved solids	1500ppm	Range of pH	5 – 9 (inclusive)
Minimum feed water temp.	4 deg. C (40 deg. f)	Maximum feed water temp.	29 deg. C (85deg. f)
Production rate (max / 24hr)	150ltr*	Feed water type	chlorinated or un chlorinated

*Production rate is based upon optimum feed water conditions. Actual rate of production will depend upon site conditions and age of membrane.

INSTALLATION SPECIFICATION

Main Module		Reservoir		General Data	
Height	425mm	Height	420mm	Saddle valve	10 – 15mm
Width	400mm	Diameter	280mm	Drain clamp	1.5” WP
Depth	140mm	Capacity (max)	9 litre	DO NOT FREEZE	

After removing your system from the outer packaging and before you start the installation procedure, check that all the parts listed below are included (please refer to picture).

Purification module	2 Gallon Reservoir (10)	Faucet (14)	Tubing (15)
Drain clamp (13)	TDS meter (16)	Membrane (9)	Spanner (19)
Saddle valve (12)	Tank valve (11)		

TOOLS YOU WILL NEED

An electric drill with a 12mm bit and a 4mm drill bit.

An adjustable spanner.

Gloves for handling the membrane.

Stanley knife / scissors / tube snip for cutting the tubing to length.

Pozi – drive screwdriver.

Hammer

Centre pop (optional)

USING A PLUMBER

You may only need a plumber if you are not confident, or need to fit a deeper trap to a sink unit (the drain clamp should be above the water line of a trap to comply with the regulations). (page 1 of 4).

INSTALLATION PROCEDURE - RHOMBUS R.O.

I PURIFICATION MODULE

This is the main unit, comprising two filter housings, membrane housing and control devices. The unit should be installed against a vertical surface, in a position which allows for the filters and membrane to be replaced periodically. The module should be as close as possible to the storage tank (10) and faucet (14), to give a good flow of water. Using the bracket (3) as a template, mark the position of the fixing screws, leaving at least 40mm of free space below the housings for filter changes.

II SELF TAPPING SADDLE VALVE (12)

Identify the mains cold water pipe and use a section that is straight, free from scratches, dints and paint. Connect the saddle valve to the supply by closely following the instructions provided by Opella. Once the feed pipe has been pierced, do not open the valve until all the connections have been made.

III DRAIN SADDLE (13)

The drain saddle should be fitted above the sink trap (i.e. the pipe loop below the basin / sink), or onto a washing machine stand pipe. **Be sure to comply with local plumbing codes.** Choose your spot so that there will be enough room to fix the two halves of the clamp together. Drill a 4.0mm hole in the 1.5” waste pipe and line up the tube adaptor collar hole with the one you have drilled by using an awl (or nail). Tighten the mounting bolts firmly. Unscrew the black plastic nut on the drain saddle. Push the black tubing through the centre of the nut, so the nut is hanging loose on the tube. Push the tube into the drain clamp and tighten up the nut. Cut the tube to a length that runs smoothly to the drain restrictor outlet (on the rear right hand side of the module, next to the white tee piece).

IV RESERVOIR ISOLATING VALVE (11)

Simply wind four wraps of P.T.F.E. around the threads of the reservoir inlet / outlet. Offer the vacant threaded port of the valve onto the threads and tighten clockwise. **Do not over tighten** – this is not a high pressure joint.

V INSTALLATION OF THE MEMBRANE (9)

The membrane is supplied separate to the module (blue item in sealed bag). **This is a fragile, high value item that must be handled with care (using rubber gloves).**

Remove the blue horse shoe collet lock from the membrane inlet cap fitting (5) and remove the tube by pushing down on the collet (white ring) while pulling the tube.

Remove the membrane housing cap (5), which is at the right hand side and has ribs on it.

Remove the membrane from the packaging and insert it into the membrane housing making sure that the pipe with the two small ‘O’ rings goes in first. Push membrane in firmly and twist to seat it.

Replace the membrane housing cap and white tubing, finishing off with the horse shoe collet clip.

FAUCET / TAP (14)

Select a position for the tap on the counter or sink shoulder. The faucet should be located in a position that gives a flow of water into the sink bowl. Ensure (check) that you have enough room below the desired position to connect the tubing (15) to the tap. Using a centre pop (or nail) mark where the centre of the tap stud will be and drill a 12mm hole through the surface. Secure the tap in place by using the fixing kit provided. Cut a length of tubing that will run smoothly from the tap down to the outlet of the module (O).

CONNECTIONS

- (A) Connect a length of black tubing between the drain clamp (13) and the drain restrictor (D) on the module (this is a white fitting marked 420ml). Remove the horse shoe collet clip and blue plug before trying to push the tube into the fitting. The ends of the tubing should be cut square with no scratches / burrs.
- (B) Connect a length of tubing between the saddle valve (12) outlet and the module inlet (I).
- (C) Connect a length of tubing between the faucet / tap (14) and the outlet of the module (O).
- (D) Connect a length of tubing between the storage tank valve (11) and the post filter inlet tee (T).

IN LINE TDS METER (NDSM105)

The RHOMBUS system is supplied with an 'in line' TDS monitor, which allows the operator to monitor the quality of two separate water lines (i.e. the feed and the product). Please follow the instructions for the installation and operation of the unit carefully. The tee pieces are 'spliced' into the target tubing in the same way as the tubing is connected on the main system.

START UP PROCEDURE

Once all the tubes are tightly connected, open the saddle valve knob anti-clockwise. This will allow water to flow and the system as a whole should be checked for leaks. Water will flow to drain until the storage tank reaches its' cut off pressure. It may take a few hours to fill the system from empty.

CAUTION

A new system contains preservatives that must be flushed to drain before water from the system is used. Allow the tank to fill for at least two hours and then empty the storage tank via the faucet until the faucet only drips. The system will now be ready to use. Please discount any readings on the in line TDS monitor during this purging stage of the installation.

SYSTEM MAINTENANCE

It is very important to follow the scheduled maintenance programme. Change the consumables as below:

PRE – FILTER:	(7)	AC18/10	UP TO SIX MONTHS
POST – FILTER	(8)	AC20A	UP TO SIX MONTHS
MEMBRANE	(9)	ACTFC50	1 – 3 YEARS (depends on feed water quality)

PRE FILTER / POST FILTER CHANGING

Turn off the saddle valve (12) and isolate the storage tank using valve (11).

Open the faucet to relieve system pressure.

Place a drip tray beneath the module and remove the filter housing (turn left) by using the spanner (19).

Clean out the inside of the housing using a mild detergent.

Wearing protective gloves, install the new pre – filter and re-pressurize the system.

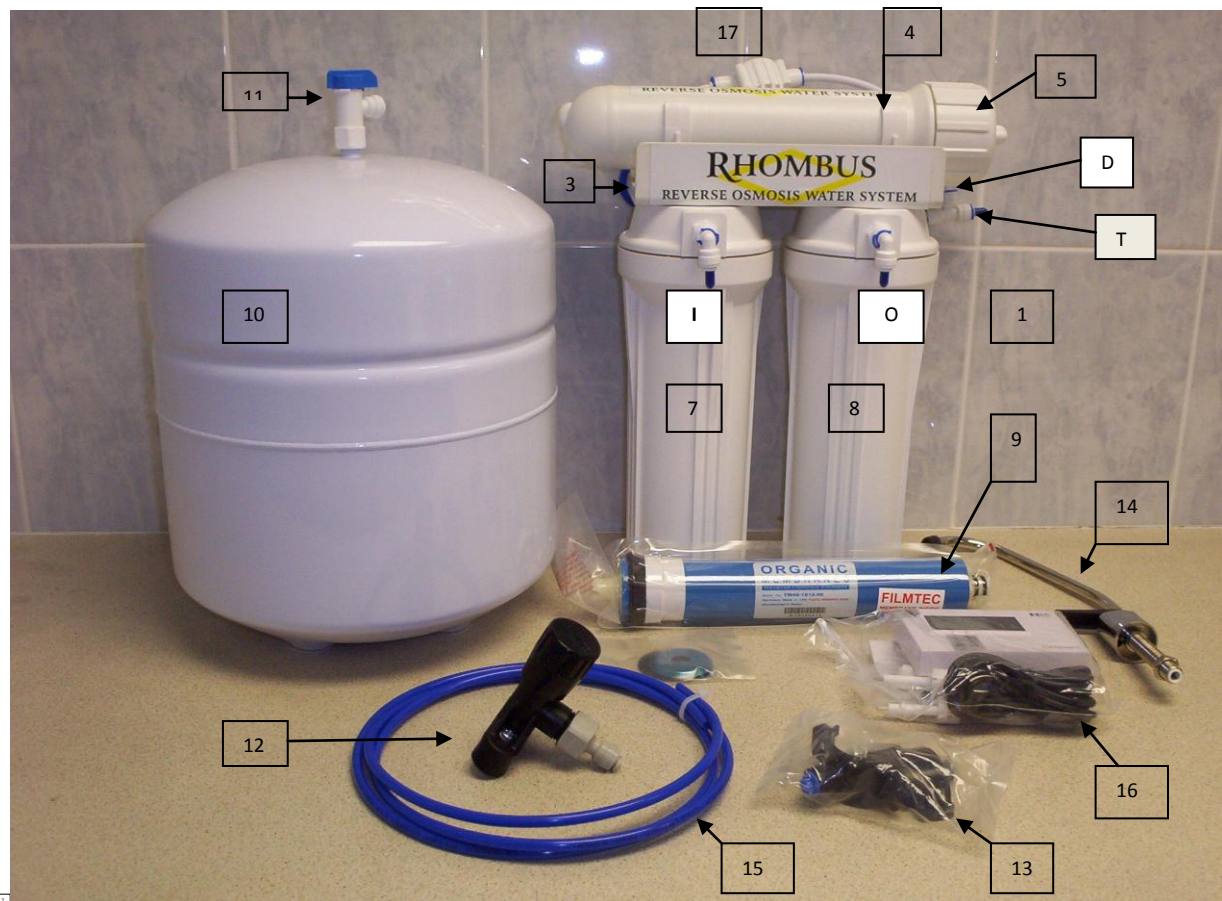
Dispose of the old filter in an environmentally secure fashion.

MEMBRANE CHANGES

Follow the procedure as above to de-pressurize the system.

Refer to the original fitting instructions for installing a membrane. The old membrane will need to be pulled out with a pair of pliers.

The first two hours of production should be sent to drain to flush out any preservatives.



For installation advice and spares, please contact your supplier. Thank you for your purchase.