

## AARO Troubleshooting Guide

Problem	Cause and solution
Slow water production / High waste to pure ratio	Low pressure and temperature. Increase pressure with booster pump (item code: HLROBOOSTER). Use a 2:1 or 1:1 flow restrictor and/or a high flow membrane (item code: HL22122 - AKA cold water or low pressure membrane).
Leaking	If leaking from a QC fitting, remove tubing and make a clean flat cut at 90°. Reinsert firmly. If leaking from a threaded fitting, remove and reapply Teflon tape around threads (apply so that tightening the fitting will tighten the tape around the threads). Reinstall fitting. If a fitting is broken, call your retailer or Hydrofarm for a replacement fitting.
No water coming out of pure line	Low pressure, clogged, or lack of flow restrictor. Isolate the stoppage: measure flow after pre-filters (before membrane), then measure flow after the membrane (before ASO). Keep out of extreme temps! Heat can melt the membrane, completely clogging it.
PPM of pure water gradually rising, flow rate gradually increasing	Carbon filter wasn't replaced on schedule, which in turn ruined membrane. Replace carbon filter and membrane (and sediment filter).
Waste water won't shut off / ASO "chattering"	Float valve not sealing, or ASO is defective (rare). Put an inline ball valve (stopcock valve) on the pure line, after the ASO, and close it. If waste water continues to flow, replace ASO. If the ASO is defective, it is most likely because the membrane hasn't been replaced on schedule.

First questions should always be:

What is source water temp and pressure?

Is the unit new or used? If used, how much water has been run through it?

### IMPORTANT NOTES:

The stated flow rates (e.g. 100 GPD) are measured at 77°F, 60 psi, and 500 ppm (industry standard). At 40 psi (the minimum operating pressure) it will produce a reduced flow rate and higher waste to pure ratio. Due to the difficulty of controlling source water temps, a booster pump is the best solution for low water pressure (don't exceed 80 psi).

Using a 1:1 flow restrictor will decrease the amount of waste, but also decrease the life of your membrane. A flush kit is strongly recommended.

A high flow membrane is a great solution for many low pressure/cold water applications, but will only reject 93% of the source water ppm (compared to 98% rejection of the standard membrane).

A wet membrane must stay wet! If the system won't be used for a few weeks or more, take out the wet membrane and put it in a sealed plastic bag, in the fridge.

Proper filter and membrane maintenance is essential for proper operation. Use the Flowmaster, or do the math and mark the canister with replacement date.

For hard water, use a softener before RO.

#### Useful Conversions

$$100 \text{ GPD} = \frac{100 \text{ gal}}{\text{day}} = \frac{4.167 \text{ gal}}{\text{hour}} = \frac{.069 \text{ gal}}{\text{min}}$$

$$200 \text{ GPD} = \frac{200 \text{ gal}}{\text{day}} = \frac{8.333 \text{ gal}}{\text{hour}} = \frac{.139 \text{ gal}}{\text{min}}$$

To measure flow, fill a measuring cup with the pure line for 1 minute using a stopwatch:

The 100 GPD unit should produce around 130-260mL (0.5-1 cup) in 1 min.

The 200 GPD unit should produce around 260-520mL (1-2 cups) in 1 min.

#### Filter replacement schedule

Use rate	Replace Carbon
25 gal/week	1 year
50 gal/week	6 months
100 gal/week	3 months
200 gal/week	6 weeks

Clean the sediment filter regularly, approximately every other month (depending on usage). Discoloration indicates that a cleaning is needed. A simple and effective method is to run it under water in the sink. Replace at least every year.

Membrane life will vary based on many factors. Replace when pure water ppm is higher than acceptable (generally when pure water ppm is less than 90% ppm of source water). Generally, with proper prefilter maintenance, the membrane will last 1-2 years.