



Operation procedures

81125V-81250V Hobby reverse osmosis

Read user manual completely before using your reverse osmosis.

Concentration procedure

- 1) Close all drain valves, including sampling valves V1 to V1 to V3, V5 to V10
- 2) Install strainer housing at pressure feed pump inlet.
- 3) Install prefilter housing. It is recommended to use a fresh cartridge for maple sap process.
Tighten drain cap under filter housing.
- 4) Make sure that blue feed hose is secured to pump inlet.
- 5) Open wide concentration control valve V4.
- 6) According to equipment power requirement, connect RO to 110 volts 20 amps or 220 volts power outlet
- 7) Insert blue suction line into maple sap tank
- 8) Insert permeate and concentrate hose in their respective tanks.
- 9) Press down green start button and hold. Gradually begin to close valve V4 until pressure switch contact interlocks. At this instant, recirculation pump will be activated. Run equipment at low pressure until air is purged out of flowmeters.
- 10) Gradually adjust V4 concentration valve until concentrate flow evens permeate flow.
- 11) Periodically monitor operation parameters.
- 12) Once concentration process is final, gradually lower pressure by opening V4 concentration valve until RO stops.

***Warning, it is not recommended to run RO until sap runs out. Feed pumps may be damaged when running dry**

***concentration of maple sap at higher level than 8 brix is not recommended.**

Unsugaring procedure

- 1) Insert RO feed and permeate hose in the permeate tank, concentrate hose remains in the concentrate tank
- 2) Start RO to begin unsugaring of the system. (See step 9 of concentration cycle)
- 3) Take concentrate samples at regular intervals until sugar concentration is at 0.5 brix.
- 4) Stop RO.

Rinsing Procedure

- 1) Insert RO feed hose in permeate tank. Insert permeate and concentrate hose to drain
- 2) Start RO. (See step 9 of concentration cycle). Adjust pressure at 60 psi. use a minimum of 80 gal. for the prewash rinse
- 3) Stop the RO when minimum water quantity has been used.

Wash Procedure

- 1) Replace filter cartridge by a unit that will be only dedicated to wash procedure
- 2) Insert concentrate and permeate hoses in the wash tank (remove blue cap from wash tank).
- 3) Connect suction hose to feed pressure pump.
- 4) Fill washing tank with permeate ideally heated at 40°C. Add necessary quantity of soap.
Follow manufacturer recommendation.
- 5) Open wash tank valve to pumps and start RO.
- 6) Adjust pressure to 60 psi, wash in closed circuit until max temperature stop at 43°C./110°F

Shutdown procedure

- 1) Drain liquid from the wash tank
- 2) Loosen drain cap from filter housing. Remove filter cartridge from housing
- 3) Open all drain valves, sampling valves and concentration valves V1 to V10.
- 4) Disconnect suction hose and drain water out of it.
- 5) Unfasten and drain strainer housing at pressure pump inlet. Leave it off
- 6) Press and hold green start button for **2 seconds**. **This operation will allow to flush residual water from the pump.**
- 7) Repeat step 6 twice at 10 seconds intervals.
- 8) Disconnect electrical plug.

Operating cycles

