PW90 PM & TROUBLESHOOTING GUIDE

PM (Preventative Maintenance)

To ensure proper function and effectiveness of a ***Pure Water Technology PW90*** unit, preventative maintenance must be performed on a timely basis, at a bare minimum of once per year but recommend at least every 3-6 months. PMs typically consist of filter changes but do also require hot tank descaling on a yearly basis, especially if not using RO filtration. The filter change schedule is listed below. DO NOT run the filtration system in the unit before flushing the filters.

PART NUMBER	FILTER TYPE	FILTER CHANGE FREQUENCY
EN1100-0001	SEDIMENT FILTER	6-12mo
EN1100-0002	CARBON BLOCK FILTER	6-12mo
EN1100-0007	GAC FILTER	6-12mo
EN1100-0004	RO MEMBRANE	12-24mo (If TDS Reject Rate falls below 90%, replace)
EN1100-0011	BOOST FILTER (OPTIONAL)	6-12mo
FE0049A	IN-LINE AIR FILTER	3 years

It is imperative to regularly change the filters on the Pure Water Technology PW90 unit. Changing the filters keeps the tanks clean and the water tasting fresh. Failing to change filters regularly can also cause premature degradation of RO filters, which can be increase maintenance costs. Refer to the filter flushing guide for the proper flushing procedure.

Regularly sanitizing the cold tank and descaling the hot tank will also help to improve the water quality and prevent costly maintenance (or even replacement) of the hot tank. The sanitizing and descaling procedures are outlined below.

Sanitizing and Descaling

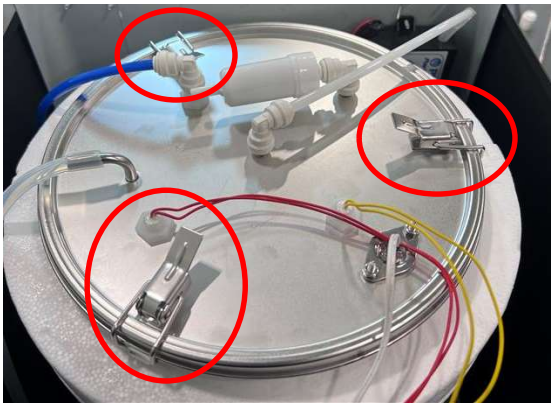
Sanitizing both the cold and hot tanks will help to prevent buildup of Bio-film and will ensure the best water quality and taste. **The procedure for sanitizing is the same for descaling**, the only difference being the solution used, either a **sanitizing agent** or a **descaling solution**. The sanitizing and descaling procedure is outlined below.

1. The unit should already be hooked up to a water supply and power supply and recently had new filters flushed and installed. Ensure the hot tank switch on the back of the unit is turned OFF. If these prerequisites are met, proceed.

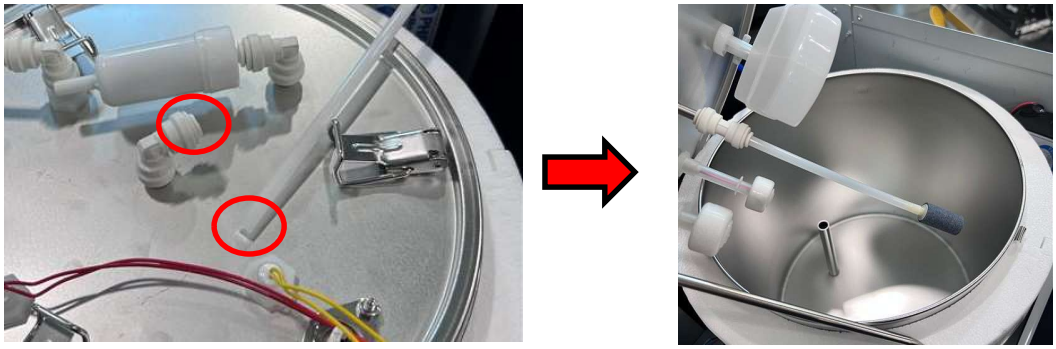
2. Remove the lower front panel of the unit. Two screws down at the bottom of the panel must be removed. Then, grip the bottom lip of the panel and pull outward. The panel should hinge outward, and then come away from the unit completely. Set this panel aside.



3. Remove the top cover. To do this remove the two screws at the back of the top cover, slide the cover backwards, and lift away from the unit. Shut off the water supply and remove the lid of the Cold tank. You will need to disengage the 3 buckles holding the lid down to open it.

4. Also, it usually helps to disconnect the ozone tube to allow the lid to pull away.



5. Add the recommended amount of an approved sanitizing agent OR descaling solution (but not both) to the water inside the cold tank and gently mix. Allow this mixture to sit in the tank for at least 10 minutes. After 10 minutes has passed, position a bucket or large container under the white drain cap on the left side of the unit, behind the lower front panel. Remove the cap to this drain port and allow the solution to drain into the bucket. With a pitcher ready, dispense cold water until the tank is empty.

6. Once the tanks have completely drained, cap the drain port, and open the water supply line to allow water to fill the tanks once more. Once full, open drain again and dispense cold water until the tanks are empty. Repeat this step one more time for a total of three flushes.

7. Cap the drain port and turn the water supply on. Place the tank lid back into position and fasten down the buckles and allow the tanks to fill for the fourth and final time. Once the tanks are full, and using the sensors on the front panel (either touching or holding a hand close to sensor squares), dispense both hot and cold water to ensure flow from tanks.

8. Turn the hot tank switch on the back of the unit to ON. Return the front lower panel and top panel to the unit and reinstall all fasteners. The unit is now ready for use, and the hot water will be up to temp within 15min.

Troubleshooting

1. No Power, Panel not Lit.
2. Cold Water is not Cold
3. Hot Water is not Hot
4. No or Low Flow of Water
5. Overfill of Cold Tank
6. Operation Sensors are Unresponsive
7. Ozone Taste in Water
8. Leak Detection
9. Filtration

1. No Power, Panel not Lit

Possible Reason	Solution
Power Cord Disconnected	Ensure the power cable is properly plugged into the wall power outlet.
Tripped GFCI	Reset GFCI outlet.
Blown Fuse	Check Fuse at the rear of unit where the power cable connects.

2. Cold Water is not Cold

Possible Reason	Solution
Cold Thermistor Fault	Replace Cold Thermistor.
Compressor Failure	Check temperature of compressor and report your readings to technical support.

3. Hot Water is not Hot

Possible Reason	Solution
Hot Tank Thermostat Failure	Hot Tank Thermostat has tripped and will need to be reset.
Hot Switch is Off	Switch on back of machine has been switched off. Switch it On.
Hot Tank Thermistor Failure	Inspect Hot Tank Thermistor in Diagnostics.

4. No or Low Flow of Water

Possible Reason	Solution
Source Water Turned Off	Make sure the source water feed is turned on.
Clogged Filter	Check flow individually from each filter to ensure flow. Replace any filter with reduced flow.
Solenoid Clog or Failure	Check dispense solenoids for proper function. May need to be disassembled to remove blockage, or replaced if failed.

5. Overfill of Cold Tank

Possible Reason	Solution
Mechanical Float Failure	Check function of fill float on underside of tank lid. When the float lifts, it should choke water flow to zero. If not, replace.

6. Operation Sensors are Unresponsive

Possible Reason	Solution
Power Failure	Check power at outlet, and check fuse on the back of unit.
Sensor Failure	Ensure sensor has not disconnected from PCB. Ensure front panel protective film has been removed from the unit. If sensor is still unresponsive, replace them.

7. Ozone Taste in Water

Possible Reason	Solution
Ozone Cycle is running too long	Change the settings for runtime of ozone process on PCB using dipswitches.
Ozone cycle is running to close to heavy use	Change the time of day the ozone process runs by using the dipswitches on the PCB to set delay, then disconnect and reconnect to power

8. Leak Detection

If water leaks into the bottom tray of the unit, two things will happen. **First**, the leak stop will be tripped and the water supply to the unit will be shut off. **Second**, the leak detection in the bottom tray will signal a leak alarm. The front panel screen will display "**LEAK DETECTED**" (shown to right) and a constant audible beep will sound until the power is disconnected and the water in the bottom pan is dried up.

To correct this, any leaks must be found and properly repaired/corrected. Then, any water in the bottom tray must be dried up. Once there is no moisture in the bottom tray, cycle the power on the unit to reset the leak detection. Then, the absorbent puck underneath the leak stop valve must be replaced. **Ensure** that there is no moisture at the bottom of the puck cup. Then, push the leak stop valve down into the cup until it clicks into place.

9. Filtration

It is recommend using RO where possible and almost always if TDS from the tap is greater than 150 PPM. For an RO to work properly it is very important that the following variables are addressed and performed properly.

- Incoming Water Pressure: RO's require 60-70psi to work properly.
- Lower PSI will cause the reduction in TDS to suffer greatly, as well as the recovery rate.
    - 60psi results in (roughly) 7.3oz/min from 80GPD membrane
    - 40psi results in (roughly) 2-3oz/min from 80GPD membrane
    - 60psi results in (roughly) 98% reduction of TDS from the RO
    - 40psi results in (roughly) 80-85% reduction of TDS from the RO
    - Example:

- 500 Tap TDS at 98% reduction = 10TDS product water
- 500 Tap TDS at 85% reduction = 75TDS product water
- 500 Tap TDS at 80% reduction = 100TDS product water
- With the mineral add back filter a high concentration of calcium will negatively impact the amount of scale that will, as a result, negatively impact ice systems.

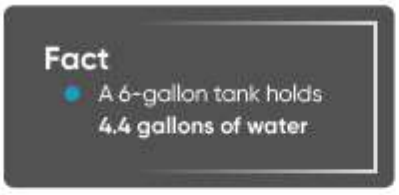
- When using a bladder, this is much more susceptible to manifesting itself as a problem.
  - As the bladder pressure pushes back on the filter, lower pressure will reduce recovery even beyond the above stated levels and will be unable to properly fill the bladder.
  - This will also result in burning through pre filters as it will take much more water to make little product water.
- Signs of this issue in gravity fed tanks will be manifested mostly through form of taste complaints, in this system it will manifest itself as running out of water prematurely.

Solutions for Low Water Pressure:

- Add a Booster Pump
- Use Carbon Filtration (be sure to remove the mineral add back filter)

Bladder Tanks:

- It is important that the right size bladder tank be used in conjunction with sufficient flow.
- It is ALSO important that the bladder tank be set to the correct pressure.



- Increasing air pressure will reduce the water capacity while also increasing water pressure
- Decreasing air pressure will increase the water capacity while also decreasing water pressure
- With no air the water tank will be full, but there will be no pressure to release water

Bladder Tank Water Pressure Changes

Bladder tanks have fluctuating water pressure as they empty. This may impact the flow rate going to the system as the tank is depleted.

- The amount of bladder tanks, filter banks feeding the bladder, pressure, and if a booster pump are needed must all be considered for install requirements. No two accounts are the same and usage will greatly impact the decision. If you have a large bladder tank installed and you have reports of no water, please revert to the above section on how to check to see if water flow is an issue.

- For large usage account with larger bladders, it may be necessary to have additional filter banks to improve the recovery time.
    - Please note that when doing this a booster pump may become necessary even if there a tap pressure of 60psi.
    - Failure to take this into consideration may cause the bladder to ineffectively fill due to pressure drop with multiple units in line which mainly manifests itself as the larger bladder tanks get closer to filling
    - This will also result in burning through pre filters and using a lot of water that will ultimately be just sent down the drain

Please see below for recommended air pressure that should be in the bladder depending on size of the bladder.

Size	Part Number	Size	Recommended Air Pressure
4 Gallon	EQGENE-0004	11" (Diam.) x 14" (Height)	6-7 psi
14 Gallon	EQGENE-0014	15" (Diam.) x 23" (Height)	6-7 psi
20 Gallon	EQGENE-0020	16" (Diam.) x 29" (Height)	7-10 psi
32 Gallon	EQGENE-0032	21" (Diam.) x 28" (Height)	7-10 psi
44 Gallon	EQGENE-0044	21" (Diam.) x 37" (Height)	10-15 psi
85 Gallon	EQGENE-0085	26" (Diam.) x 45" (Height)	10-15 psi
120 Gallons	EQGENE-0120	26" (Diam.) x 60" (Height)	10-15 psi