

PW90 Field Guide

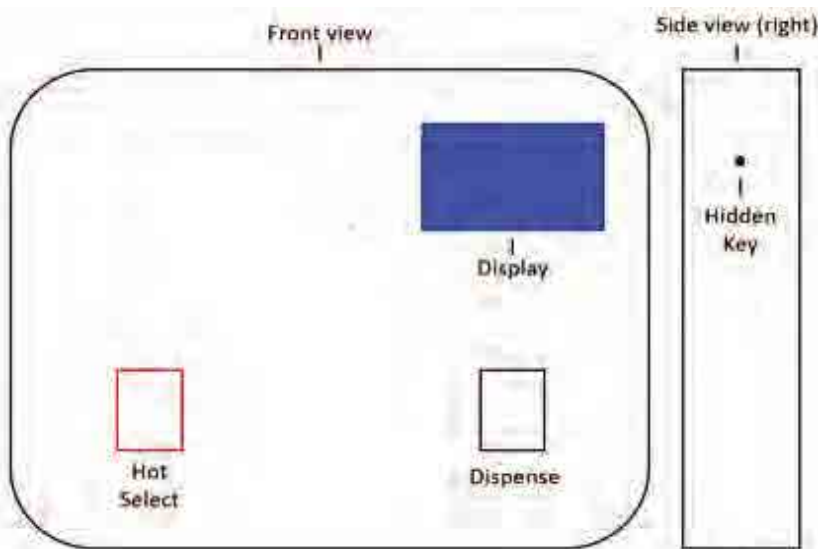


	PW90
Weight	70 lbs
Dimensions	50.9H x 14"W x 17"D
Cold Capacity	3 gallons
Hot Capacity	.5 gallons
Dispense Area	11.5" tall
Recommended water PSI	60-70psi
Voltage	120VAC
AMPS	5.5amps

How to Use

Front Panels and Controls

PW90



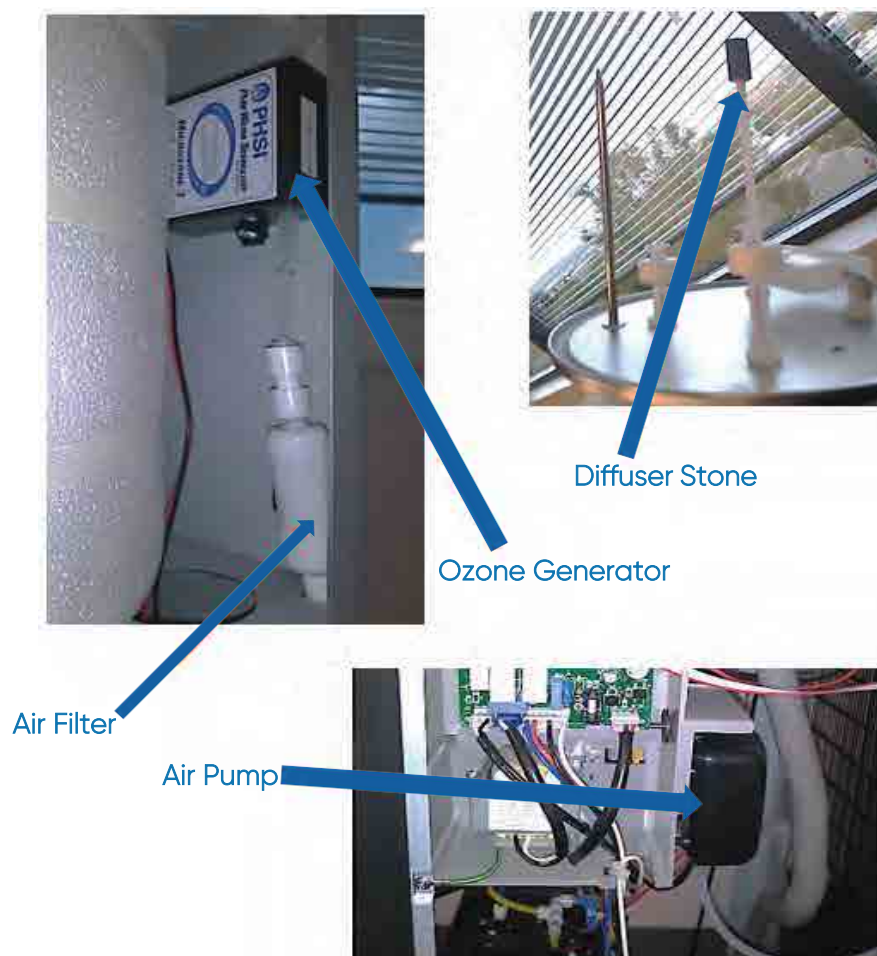
PW90 CT



Ozone Summary

The Ozone generator turns on 12 hours after the last dispense and runs for 5 minutes every day by default. The unit will let you know this by displaying a message, Activated Oxygen on and lighting up the Activated Oxygen led during the sanitizing process. This system is used to sanitize the water in the cold tank. There are four main components in this system:

1. Air pump- Provides air to the O-Zone generator. This is located next to the control board, behind the right panel.
2. Air Filter- filters the air going to the O-Zone generator. This is located behind the cold tank on the right side.
3. O-Zone generator- makes o-zone. This is located above the air filter.
4. Diffuser Stone- Diffuses o-zone into the water. This is located in the cold tank.



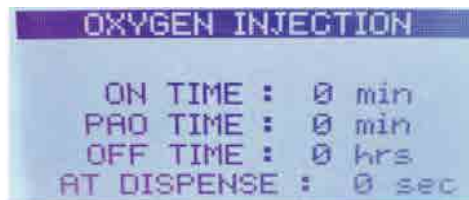
Programing the Ozone

PW90

The unit comes pre-programed from the factory at 5 minutes and should not need to be programed. But depending on your customer you may want to change programing to suit their needs. The PW90 Ozone settings can be adjusted with the PW90 app, or on the display panel on the unit itself. NOTE: If the Ozone settings are too high, it can affect the taste and odor of the water.

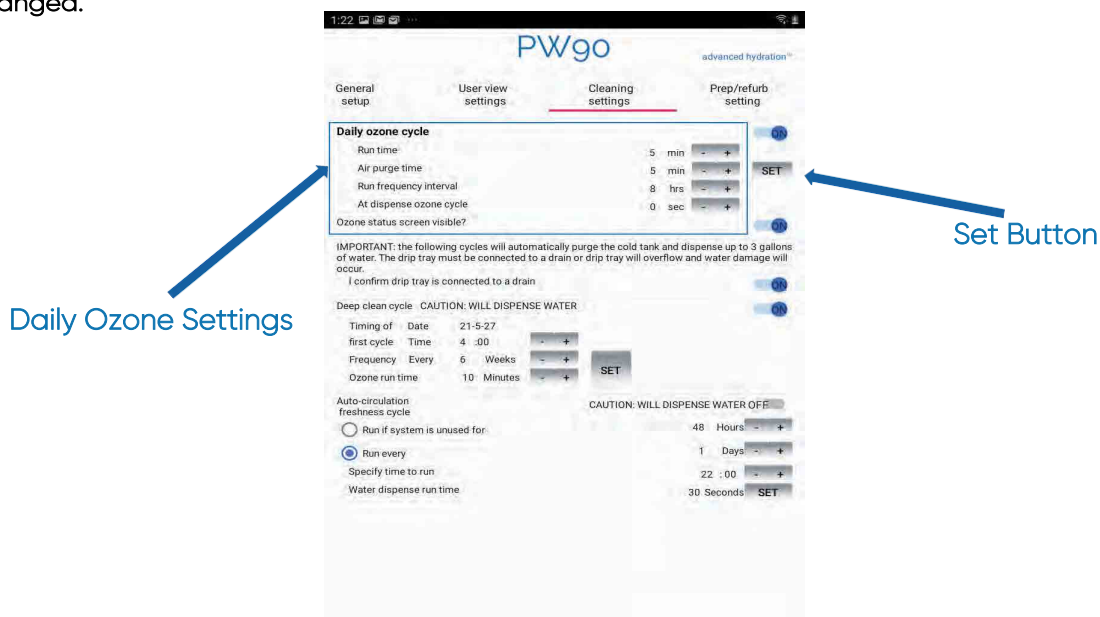
PW90 Display panel:

1. Enter program mode.
2. Wave hand over the Hot button until the cursor is resting on "Oxygen Injection"
3. Wave hand over the Dispense button to select "Oxygen injection"
4. While in the "Oxygen injection" mode wave hand over the Hot button to scroll through options and Dispense button to make changes.
5. For example, please review illustration below: - To adjust the on time, wave hand over the Dispense button while the cursor is blinking over "On time" until the desired time is selected
 - To adjust the air purge time, wave hand over Hot button until "PAO time" is blinking, wave hand over Dispense button until desired time is selected
 - To adjust the interval/off time, wave your hand over Hot button until "off time" is blinking, wave hand over dispense button until desired time is selected
 - To adjust to activate at time of dispense, wave hand over Hot button until "At dispense" is selected. Wave hand over Dispense button until desired time is selected



PW90 APP:

1. Enter the PW90 APP.
2. Press the cleaning settings tab
3. Turn "Daily Ozone Cycle" into the ON position
4. Adjust desired settings and press "set"
5. Unit dispense light will blink purple to indicate settings have been changed.



Installation

1. The water cooler must be installed indoors.
2. The water inlet is a ¼" quick connect water inlet located on the rear right bottom corner.
3. Place the cooler so that it is not in the way of traffic and leave two inches behind it so it has proper ventilation.
4. Coil the power cord and waterline behind the cooler.
5. This water cooler does not need a drain unless an RO system is being used for filtration. If a drip tray drain is needed, part number "DrainKit" can be ordered. This is a drain designed to connect to the back side of the top front panel so the drip tray can drain efficiently.

NOTE: please refer to local plumbing codes when connecting the Drip tray, or RO filters to a drain.

6. Filters need to be flushed at this point. Please see filter flushing instructions.

NOTE: leave the hot tank switch in the off position until the hot tank is full of water.

7. The filter settings should be pre-set from the factory, but if changes are needed, you can turn filters on or off, and program filter life into unit.

PW90 Display Panel:

1. Enter the program mode.
2. Wave hand over the Hot button until the cursor is resting on "Filter life mode"
3. Wave hand over the dispense button to select "Filter life mode"
4. Wave hand over the dispense button until desired setting is selected
 - Time sets filter alerts based on elapsed time
 - Gallon sets filter alerts based on gallons consumed
 - Both sets filter alerts based on time and gallons; the first to reach its limit will set off the filter alert in program mode.



5. The cursor will first rest on enable/disable for the pre- sediment filter.
 - To enable filter alarm alerts select enable, to turn off filter alarm alert select disable
 - To change the filter alert wave hand over the dispense button while the cursor is over disable/enable until the desired setting is selected.
 - Wave hand over the hot button to move cursor to Life, time or both and set in order to change the count down time until the filter alert is triggered.
 - Usage will display total usage on the filter since the last time it was reset, this mode will reset when the filter is reset.

Installation

PW90 APP

1. Enter the PW90 APP.
2. Press on the Filter Settings Tab.
3. Specify if you would like alerts to be set to time, gallons, or whichever comes first between time or gallons.
4. The time and gallons can be adjusted to desired amounts for each individual filter.
5. Alerts can also be turned on or off for all filters listed; those that do not apply to the system will be automatically turned off.



PW90 CT

If changing the filter life settings on the PW90CT is deemed necessary, it can be done Via Dip switch settings on the main board. Please see dip switch chart below.

[Filter 1, 2 Life time option]		[Filter 3, 4 Life time option]	
SW4	SW5	SW6	SW7
0	0 : Disable	0	0 : Disable
0	1 : 12 months	0	1 : 18 months
1	0 : 18 months	1	0 : 24 months
1	1 : 24 months	1	1 : 30 months



Preventative Maintenance

1. Remove the filter door, grab bottom and pull out, then inspect for leaks.
2. Drain the unit from the drain tube located under the hot tank switch in the back of the unit.
3. Remove the top cover and tank lid.
4. Spray 1 part hydrogen peroxide to 4 parts water solution into the cold tank, let stand for 5 minutes and wipe clean with a rag.
5. Replace the lid and flush the tank.
6. Filters should be replaced using this schedule:
 - Sediment= 1 year
 - Pre Carbon= 1 year
 - RO Membrane= 2-3 years
 - Boost= 1 year
 - Post carbon= 2-3 years
 - Lead and Cyst= 1 year
7. Please see flushing instructions
8. Wipe down the outside of the unit and sanitize the water dispense area.
9. Reset the filters that were changed during the PM in the programming of the machine.

PW90 Display:

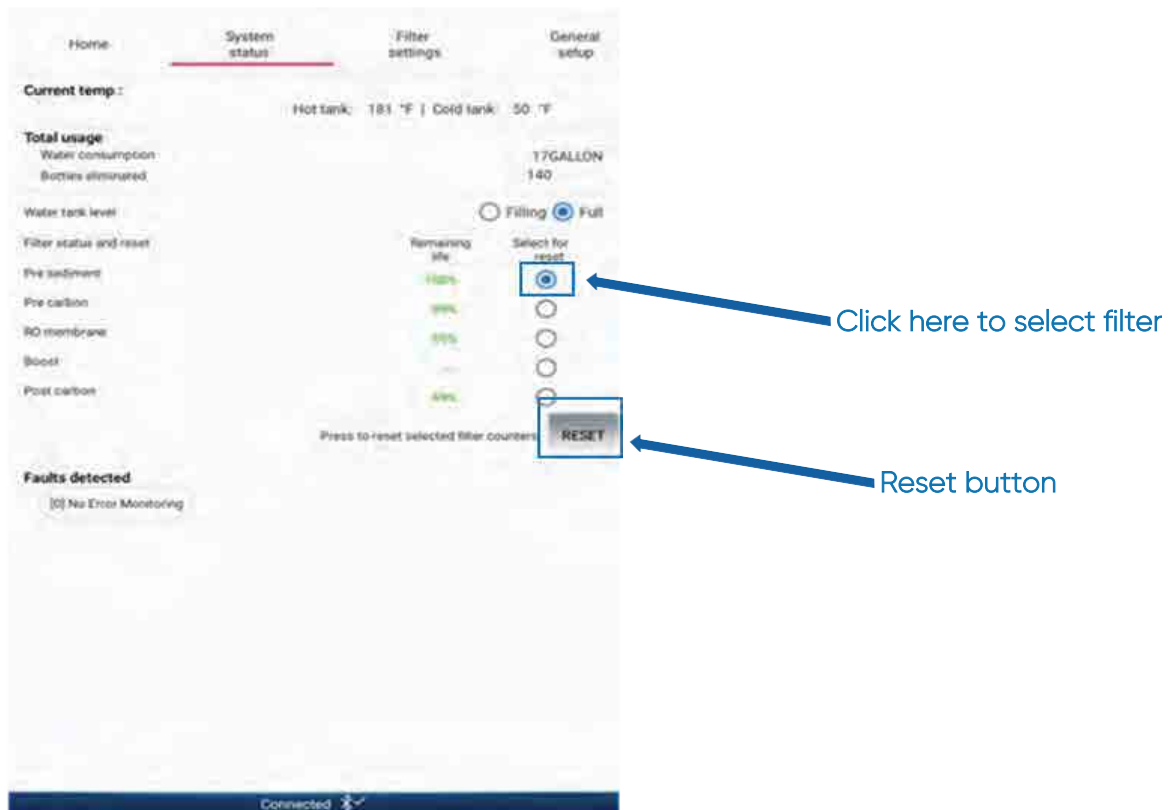
1. Enter the program mode
2. Wave hand over the hot button until the cursor is resting on "Filter life time set "
3. Wave hand over the dispense button to select "Filter lifetime set".
4. In this mode, the hot button will act as scroll and the dispense button as select.
5. The cursor will first rest on enable/disable for the pre- sediment filter.
6. To reset the filter, wave hand over the hot button until "Reset?" is blinking
7. Wave hand over the dispense button one time
8. Usage will change to 0 when complete
9. To select the next filter, wave hand over the hot button. Repeat above until all desired filters are adjusted

FILTER SEDIMENT	FILTER PRE CARBON	FILTER RO
ENABLE Life Set : 15 Month Usage : 0 Month RESET ?	ENABLE Life Set : 0 Month Usage : 0 Month RESET ?	DISABLE Life Set : 0 Month Usage : 0 Month RESET ?
FILTER POST CARBON	FILTER BOOST	
DISABLE Life Set : 0 Month Usage : 0 Month RESET ?	ENABLE Life Set : 12 Month Usage : 0 Month RESET ?	

Preventative Maintenance

PW90 APP:

1. Enter the PW90 APP.
2. Press on the System Status Tab.
3. Click the circle next to any filters changed during the PM. The circle should change from white to blue.
4. Press the Reset button and any selected filters should read 100% in the remaining life column.



PW90CT:

1. The filter life indicator triggers the Service light to illuminate. The indicator can be reset without opening the system, by using a sequence of motions with the sensors.
2. To reset the filter life, Wave hand in front of hot for 5 seconds, wave hand in front of dispense for 5 seconds, audible chime will sound after each step

Filter Flushing

Please Note:

- Filters are located behind the bottom front panel on the PW90
- Filters are located behind an access panel located on the right side panel of the PW90CT
- The line wrapped in yellow tape line will represent the drain line
- The line wrapped in green tape will represents the source line

To Flush Pre-Filters

1. Remove the tubing from the filter side of the leak stop (gray collet) and connect your source line directly to the tubing with a union fitting.
2. Remove the tubing that connects to the "out" fitting on the carbon block filter head and connect a drain line to this fitting.
3. Turn the water on and flush according to the instructions on the filter label
4. Turn off water when completely flushed
5. Remove the supply and drain lines and reconnect the tubing to their originally installed location.



To Flush Post-Carbon Filter

1. Remove the "out" tubing from the RO membrane.
2. Connect the source line directly to the tubing that is removed from this fitting.
3. Then connect a drain line to the "out" fitting on the boost filter location
4. Note, if a boost filter will be used, please refrain from installing the boost filter until after the "Post Carbon" filter is flushed.
5. Turn the water on and flush according to the instructions on the filter label. After turning the water off you may put the tubing back to the previously installed locations.



Filter Flushing

IF Installing or Flushing a Boost [+] Filter

1. Prior to returning the tubing after step B, move the supply feed and connect to the tubing from the "out" of the "post carbon" filter head.
2. Leave the drain line connected to the "out" fitting on the top of the "Boost" filter head.
3. Install the "Boost" filter in position and turn the water and flush according to the instructions on the filter label.



Flushing RO Membrane (30 minutes)

1. It is important to flush the RO membrane with all filters inline for a full 30 minutes. Although the RO membrane will flush down to 98% reduction in TDS within 5-10 minutes, the remaining 20 minutes is necessary to completely flush the preservative out of the membrane and to flush the higher TDS water out of the post filter.

Note: Failure to complete this test, especially when using the "Boost" filter will result in poor taste and may cause damage to the equipment.
2. Connect the source line to the back of the system in the "tap water" bulkhead fitting.
3. Connect a drain line into the "RO drain" bulkhead fitting

Note: This is represented with the black tubing with no tape color
4. Plug the power cord into active power.

Note: Failure to do will result in the solenoid not engaging and as a result no water will pass through the filters.
5. Keep the drain line connected to the "out" fitting from the "Boost" filter head.
6. Turn the water on for 30 minutes.
7. Prior to turning off the water supply, ensure:

Note: For RO only systems, the TDS is .02% vs the tap water TDS (98% reduction).

Note: For Systems using Boost, the TDS is about 8-12 ppm higher than the RO only variant.
8. If you have issues achieving these readings, make sure you have 60-70 PSI feeding the system, the drain is not restricted in any way including a reversed check valve, the inline flow restrictor is in place and working properly and the unit is properly flushed.



Please contact technical support for further assistance.

PW90 Troubleshooting

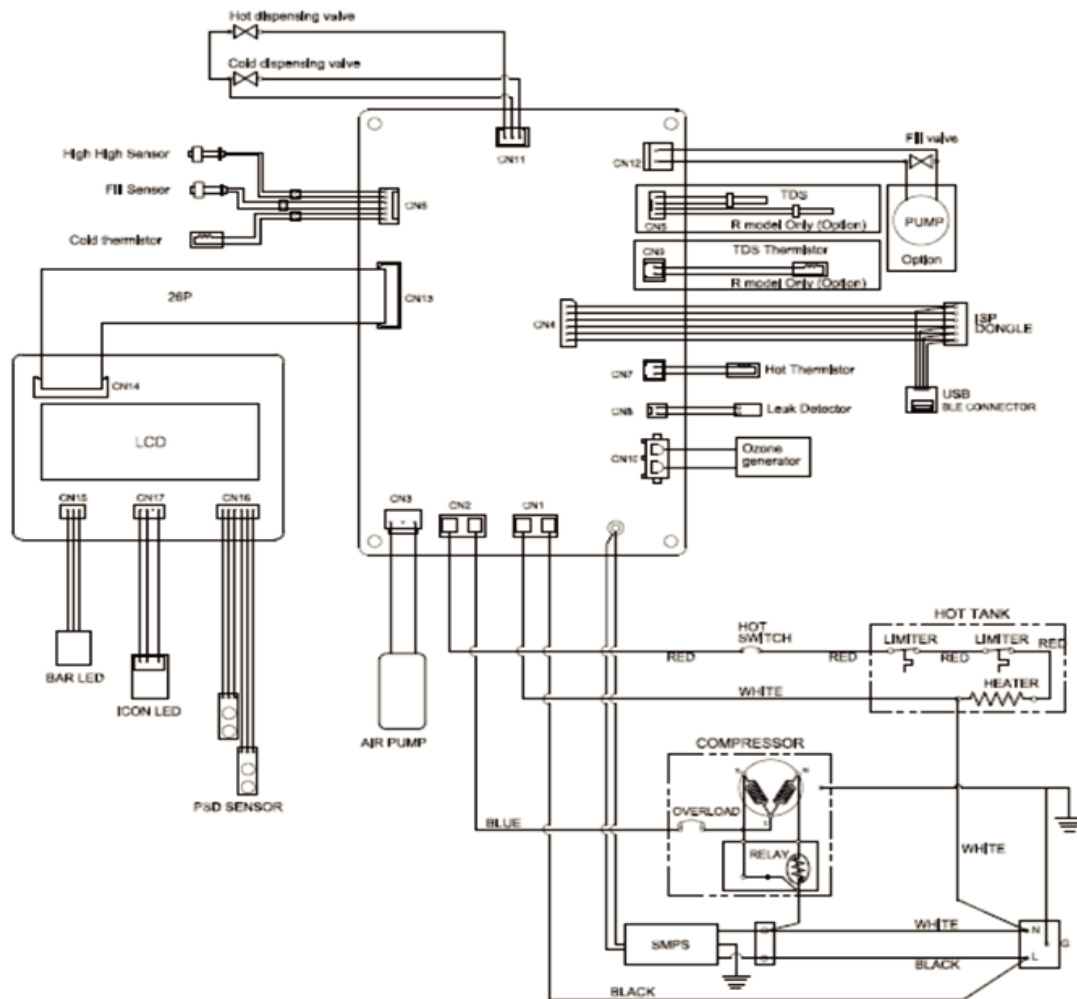
Problem	Possible Cause	Solution
No power.	Unplugged.	Plug in system.
	Power supply	Check power to outlet.
	Blown fuse.	Check fuses F2 and F3 on the circuit board.
No Water	No power to system.	Plug in system.
	Water supply turned off.	Turn water on.
	Clogged filters.	Replace sediment and pre carbon filters.
	Dispensing valve.	When the cold button is pushed, you should hear a click. If not click, check fuse F1
	Fill sensor	Make sure the fill sensor is not stuck in the "up" position.
	Overuse.	Check flow rate to reservoir. If flow rate is correct, usage has exceeded flow.
Not enough water.	Clogged filters.	Replace sediment and pre carbon filters.
	Overuse.	Check flow rate to reservoir. If flow rate is correct, usage has exceeded flow.
Water not cooling	Cooler not plugged in.	Plug in system.
	Cold control not turning on compressor.	Replace cold control.
	Refrigerant loss.	Call service center.
Water not hot.	On/Off switch.	Turn switch on.
Reservoir overflows	Fill valve stuck open.	Check fill valve and fill sensor.
	Reservoir overfull.	Check fill sensor. It should slide freely on stem.
Service light on.	Refer to error codes on following page.	
Leak detector alarm.	External source of water like floor mopped.	Check for leaks in unit or other source of water on leak detector pad. Dry leak detector pad and then unplug system. Plug back in.

PW90 Error Codes

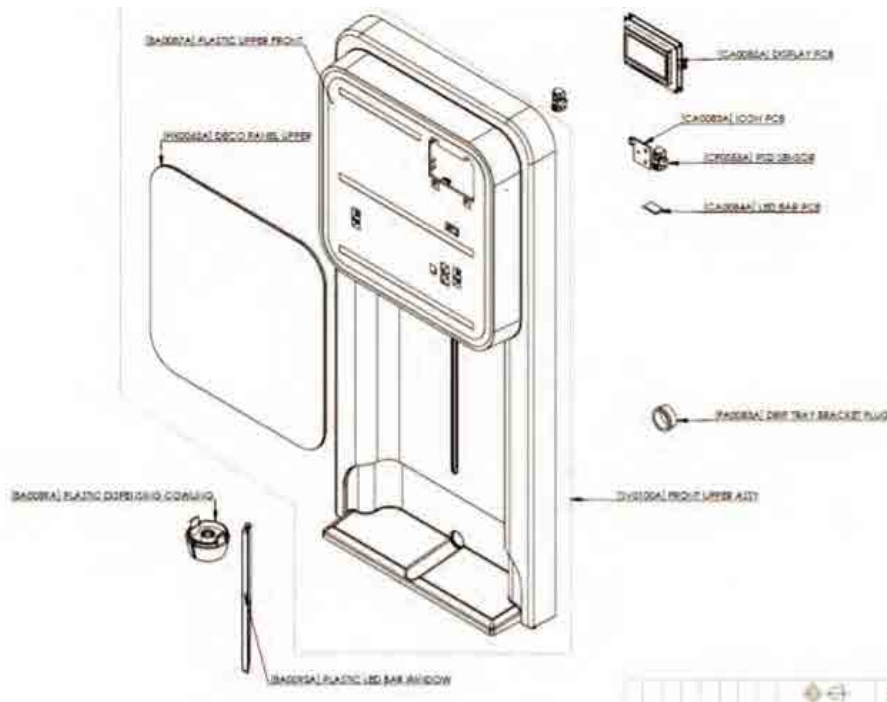
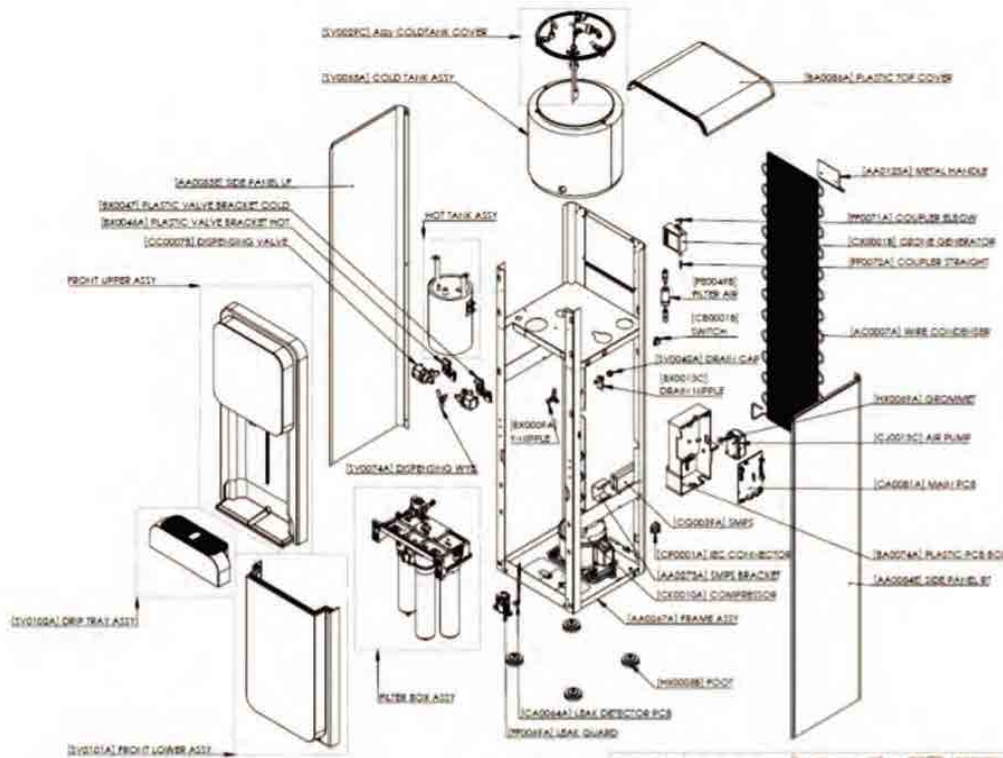
Code No.	Reference
01	Cold Sensor open
02	Cold Sensor Short
03	Hot Sensor Open
04	Hot Sensor Short
05	Ozone Pump error
06	Ozone Generator error
07	Tank Overfill
08	High TDS
09	Filter Life Warning

PW90 Diagrams

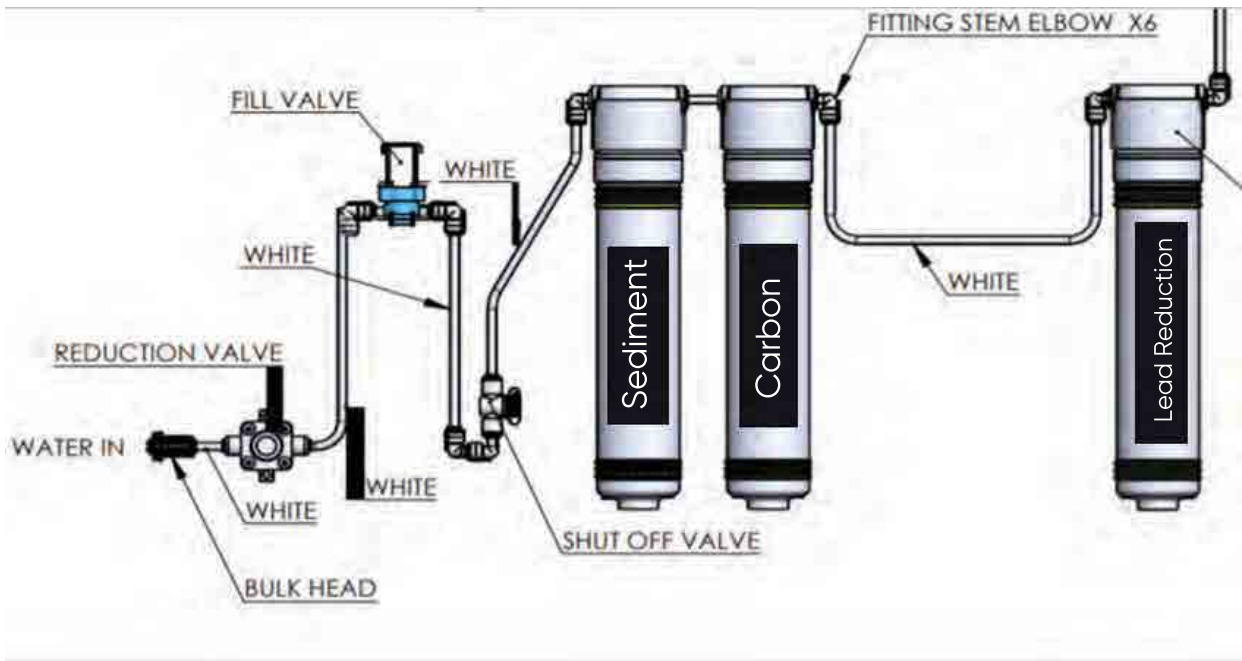
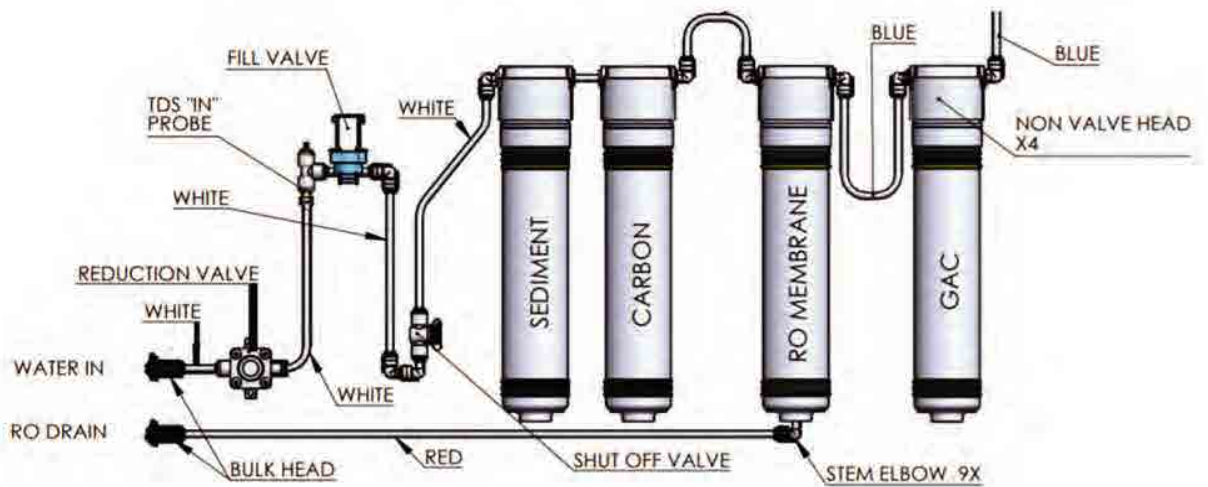
WIRING DIAGRAM PW90



PW90 Diagrams



Filter Diagrams



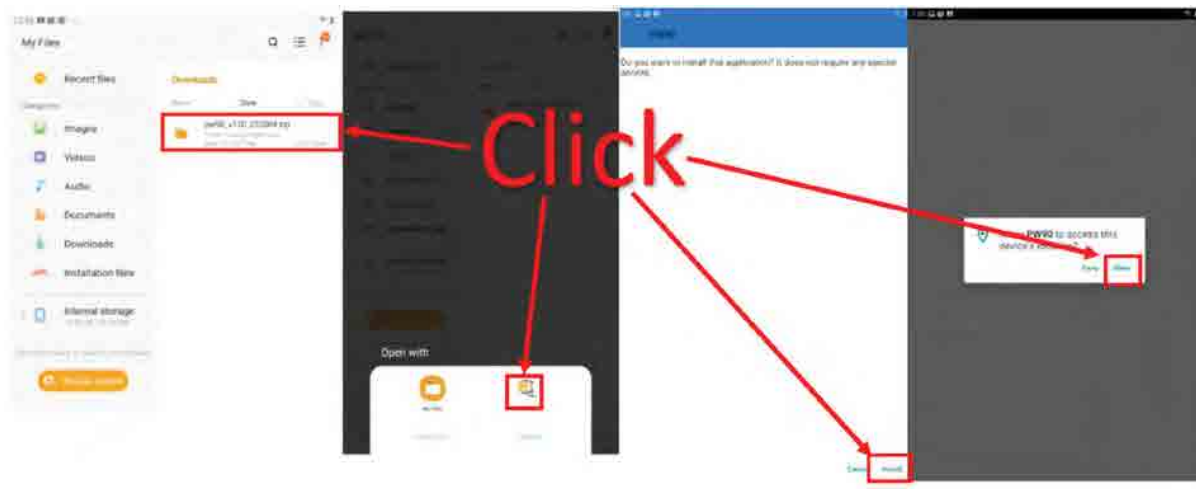
PW90 Parts

Units		Panels	
PW90-R	PW90 RO	AA0272A	Assy Metal Frame
PW90-M	PW90 Microfiltration	BA0086A	PW90 - PLASTIC TOP COVER
Wetted		SV0100A	PW90 - ASSY FRONT UPPER
DrainKit	Drain Assembly Kits	SV0101A	PW90 - ASSY FRONT LOWER
FA0083A	Front Upper Drain Cap	SV0102A	PW90 - ASSY TRAY
4600-0010 : FA0070A	Gasket, Cold Tank, 3i	7000-0006 : AA0053E	Metal Side Panel, Left Side, Black, Gen 3, 3i
1900-0030 : SV0029C	3i Cold Tank Lid Assy	7000-0012 : AA0054E	Metal Side Panel, Right Side, Black, Gen 3, 3i
FF0022B	FITTING BULKHEAD PLUG	7150-0001 : AA0044B	Assy Metal Frame (Previously AA0044A)
FF0022B	FITTING BULKHEAD PLUG (new style 3i)	SV0089A	ASSY FILTER BRACKET (3i)
BX0047A	VALVE BRKT RT (Plastic)	O-Zone	
4000-0002	Fill Valve	4300-0010 : BX0020A	Clip, Air Filter
7800-0005 : FA0013A	Cock Ring, Silicon	SV0080A	Air Stone Tree Assy
FF0012C	3i Dispensing Wye Assy [YO-6AGNN]	5600-0004 : CJ0013C	Air Pump, 3i
4140-0007 : FF0004A	Inlet Fitting, Bulkhead, 1/4" Acetal, Drain, Coffee, Water	7000-0042 : AA0055B	Pump Shield 3i
4150-0008 : BX0009A	Y-Nipple for 3i Drain assembly	7900-0002 : FF0019A	Diffuser, Ceramic Air Stones
5300-0002 : CF0047A	Thermister, Hot, Gen 3 ES (and 3i)	7900-0028 : HX0058A	Bushing, Pump, 3i
5300-0004 : CF0045A	Thermister Cold, Gen 3 ES, 3i, 2i	CE0273A	PUMP WIRE 3i
5300-0005 : SV0075A	Mechanical Float- Gen 3, 3i, 2i	CX0001B	Ozone Generator, 3i, Legacy Gen 3,
5300-0020 : CF0027C	Sensor, TDS, 3i	Tools	
CC0007B	Valve, Hot and Cold Dispense, Gen 3/3i	BLE Dongle Module	PW90 Bluetooth Dongle
SV0022A	Pump Kit-3i	Refrigeration	
SV0046A	Float Switch, Yellow, High High, 3i, 2i	7520-0008 : SV0062A	Assy Cold Tank, 3i (No Lid Assy Included)
SV0049A	Float Switch, Red, Fill Tank, 3i, 2i	CK0009A	PTC Relay, Daewoo, Gen 3
SV0070A	Cold Tank Cover, Assy 3i	8200-0001 : HG0001A	Dryer, For Compressor - Must purchase multiples of 6 EA
Electronic		CK0005A	Over load Protector
CF0055A	PW90 - PSD SENSOR	Condenser Wire Gen 3 3i	Condenser Wire Gen 3 3i
CG0039A	PW90 - POWER SUPPLY ADAPTER		
CE0321A	Hot and Cold Wiring Harness- PW90		
CA0081A	PW90 - MAIN PCB		
CA0083A	PW90 - ICON PCB		
CA0082A	PW90 - DISPLAY PCB		
CA0084A	PW90 - LED BAR PCB		
BA0092A	PW90 - LED BAR WINDOW		
HCO032A	Screw for Bimetal		
5000-0016 : CA0064A	Leak Detector, 3i (Previously CA0065A) electronic		
5400-0001 : CB0001B	Switch, hot		
CH0004A	Power cord, E Series, P/S US, Gen 3		

Installing the PW90 App

Note: App must be used on an Android device. Call or e-mail tech support to receive the file.

- Download the zip file
- Install a zip file if your device does not currently have one.
- File will be located in your download file.
- Click on the file to download and install it
- Allow access to your device's location.



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