900 N. 400 W. Ste. 11
North Salt Lake, UT 84054

7000 SERIES
OPERATOR'S MANUAL

Produced by General Water Technologies

Thank you to our loyal customers!

Contact: 888-586-5654 M-F 8:00 AM – 5:00 PM MST (message prompt after hours for emergency response 24/7)
Service: *service@genwater.com*
Sales: *sales@genwater.com*
Orders: *orders@genwater.com*
Accounting: *accounting@genwater.com*

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Safety References

This water purification system complies with state-of-the-art standards in terms of technology and safety regulations. All parts have been produced and or manufactured by preferred vendors to GWT specifications, and then assembled by GWT personnel (henceforth “supplier”) according to our proprietary design.

The supplier has taken all precautions to ensure safe operation. Users must ensure that the installation is performed in a manner that the method/mode of operation will not be affected. A signature at installation verifies that this is the case. Return visits to amend this placement will be subject to additional fees.

The system is supplier factory-approved and fulfills our safety standards.

> ***Please read the following safety precaution before start-up and comply with them during operation***.

The system must be operated by trained staff. Users should read this manual prior to utilizing this equipment.

The user is allowed to carry out only that maintenance work described in this manual or provided at training by the installation team. Only use designated spare parts for maintenance work.

The system must be connected to a fused, grounded power supply.

If leaks in the system become evident, the unit must be isolated immediately from the electrical supply and the fault rectified. If required, inform your suppliers customer service department.

Carry out maintenance and inspections as recommended by the supplier at the recommended intervals to insure user-safety and optimal system performance.

The supplier does not take any responsibility for injuries to users caused by improper application of this system, including negligence or abuse.

Specifications

Basic System Info (per system)

Model	GWT 7000
Production Capability	Dependent on House DI delivery
Delivery (Peak Flow) Capability	4 gpm
Footprint (System face on)	24" depth x 14" wide x 44" tall
System Weight (floor mount only)	300 lbs in operation
Footprint w/Pan & Pump Kit	25" x 25" square, 2" lip, (system and all components fit inside footprint)
Door Hinge	Right, opening left to right
RO Pressure (Range)	Not included in this model
Delivery Pressure	As Indicated by instrumentation, adjustable
Dispense Tap for Manual Fill	Included
Manual feed by lab in event of water outage	Included - call service line for instructions
Touchscreen Interface	Not included in this model
Live Remote Viewing	Not included in this model
Audible Leak Detection/Alarm	Not recommended
GWT 2000 DI Canister Consumable Footprint	9" diameter, 24" tall, exchange as necessary
LC 123 Carbon Filters	Not included in this model
Startup Amperage	6-7 AMP
Running Amperage	3-4 AMP

Presite Requirements (per system)

De Ionized Water Feed to Equipment	1/2” Supply/DI line
Connection to De Ionized Feed	1/2" FNPT ball valve
Minimum Pressure	30 PSI
Power Connection	120 VAC/20 AMP
Drain Capacity	3 gallons/minute

Water Purity Conversion Charts

Parts Per Million (PPM)	Grains Per Gallon (GPG)	Hardness Rating
0 - 75	0 – 4.3	Soft
76 - 150	4.4 – 8.7	Moderately Hard
151 - 300	8.8 – 17.5	Hard
Over 300	17.6+	Very Hard

Conductivity (Microsiemens/cm)	Resistivity (MegOhm/cm)
0.056	18
0.063	16
0.071	14
0.083	12
0.100	10
0.133	7.5
0.200	5
0.500	2
1.000	1
1.333	0.75
2.00	0.5
4.00	0.25
10.00	0.1
20.00	0.05
40.00	0.025
80.00	0.013
100.00	0.01
200.00	0.005
500.00	0.002
1000.00	0.001
2000.00	0.0005
5000.00	0.0002
10000.00	0.0001

Purification Process

The process flow with all components is illustrated on the flow chart (see pg. 8).

When the system is started in normal operation the inlet valve opens and allows the flow of deionized water to be polished. The inlet valve will close when the system is shutdown, unplugged, or the reserve tank is full

The system must be connected to a tank with the level control. Deionized water production and filling of the reserve tank is regulated with the level control. When water is produced to the amount (tank level) that it reaches the top-level control, (100%) the production will be stopped. If the tank level falls under 70%, deionized production will recommence, and the tank will again be filled to the maximum level. If the tank level falls below 10%, the distribution pump will automatically shut off and illuminate “Tank Empty” light to prevent a pump failure.

Continuous Decontamination

The deionized water is stored in the storage tank. The tank is equipped with a distribution / circulation pump. The pump is continually circulating the water from the storage tank through the UV disinfection (the cell walls of bacteria, virus, and protozoa are penetrated, permanently altering the DNA of the microorganisms. This effectively inactivates the microorganisms, making them unable to infect and reproduce). Then passes through a Mixed Bed DI Resin as well as a .2-micron filter. From there, water either feeds to the analyzer on a demand-basis, or back into the tank, where it will undertake the process another time, thus ensuring continuity in the decontamination
process.

The quality of the pure water being delivered is constantly monitored by a Product MOhm*cm Sensor viewable on the front Display.

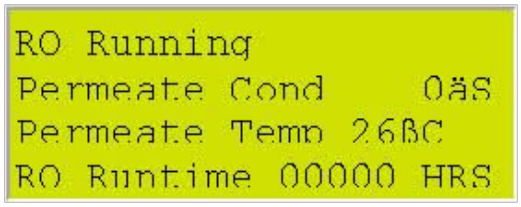
System Features

This water purification system is designed to polish in house DI water. It unifies purification technologies to the latest developments. The system is connected to a tank with level control measurement.

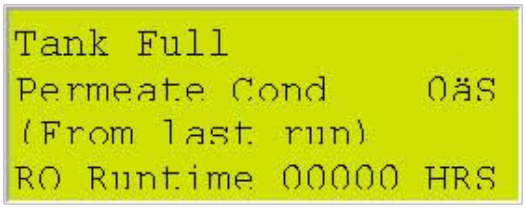
The production rate of deionized water is dependent on how fast the house DI water can deliver it to fill the reserve tank. Water quality and tank filling is displayed on the systems screen.

The system runs in the following modes:

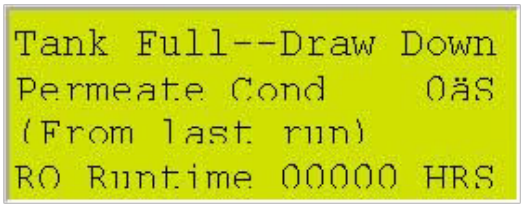
RO RUNNING Mode: Deionized water production and tank filling



TANK FULL Mode: Production is stopped, and the system is waiting for new water demand.



TANK FULL DRAW DOWN Mode: Production is stopped, and the system is waiting for new water demand.

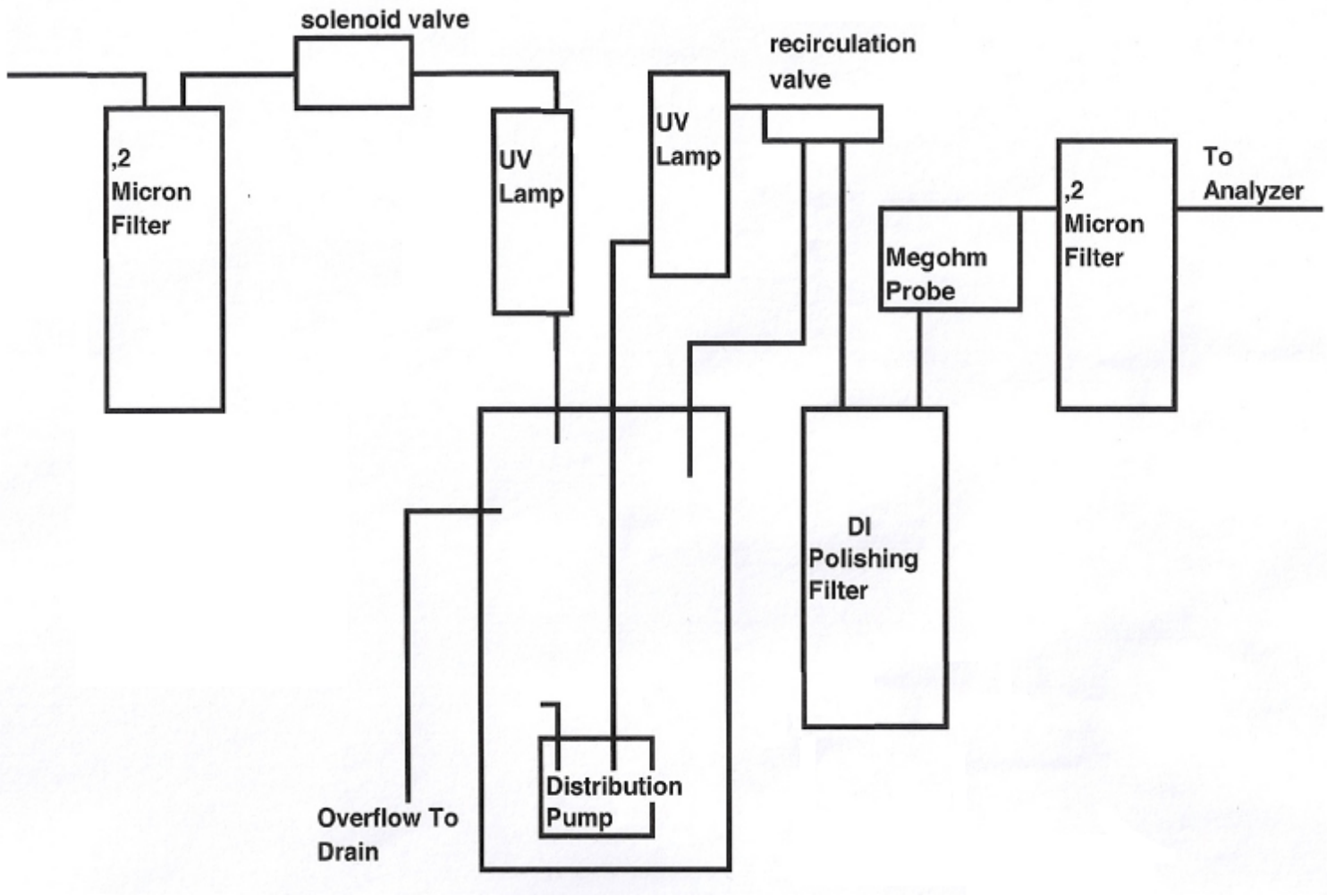


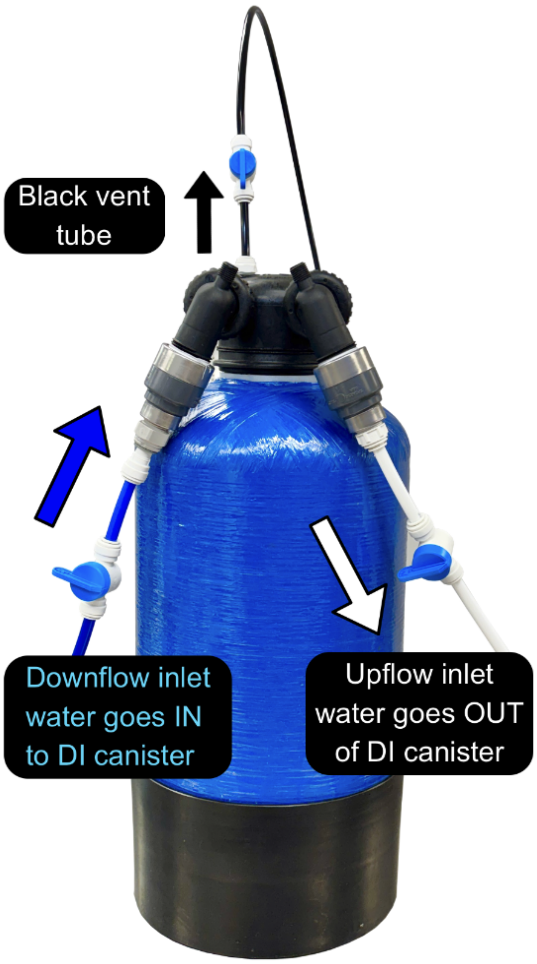
POWER OFF Mode: System has been turned off.

All components of the water systems cabinet are assembled in an aluminum housing. The front door can easily be opened for the access of the modules. The rear panel can be accessed by removing four screws.

The deionized water storage tank is 60 liters and is made of Polypropylene.

Flow Chart


solenoid valve
recirculation valve
,2 Micron Filter
UV Lamp
UV Lamp
Megohm Probe
,2 Micron Filter
To Analyzer
DI Polishing Filter
Distribution Pump
Overflow To Drain



How to Replace the DI Canister

1. Turn off valves on white and blue tubing.
2. Relieve pressure by opening valve on black vent tube on top of canister.
3. Move black vent tube from existing canister to new canister.
4. Remove elbows (tire fittings) by loosening retaining rings, place in the same position on new canister, hand tighten retaining rings. (do not use wrench to tighten)
5. Open valve on blue tubing, wait for steady stream of water to flow out of black vent tube (1 to 2 minutes), close valve on black vent tube, open valve on white tubing.

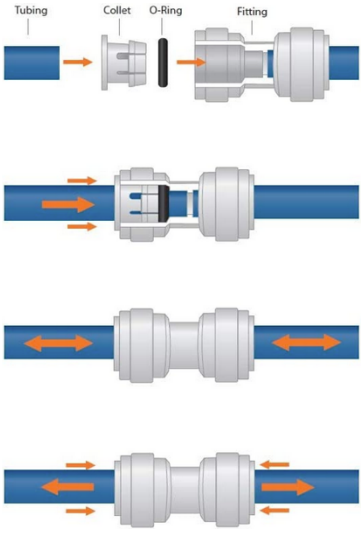
Recommended Filter & Membrane Replacement Schedule

FILTER	FREQUENCY (Approx)	
DI Canister	Change as your own standard operating procedure dictates. GWT recommends: • Type 1 water = 10.0-18.2 Megohm (replace when below 10Megohm) • Type 2 water = 1.18.2 Megohm (replace when below 1 Megohm)	
.2 Micron Germ Filter	1-3 Years	GWT Replaces this during yearly recertification.
Ultraviolet Light	9000 Hours	GWT Replaces this during yearly recertification.

*Replacement frequency depends on feed water quality and pure water usage.

Making a connection with Push-Fit Fittings

John Guest fittings are used throughout the system.



Step 1 – Cut Tubing
Cut the tube square ensuring it is free of score marks. Avoid damage to the internal. O-ring by removing burrs and sharp edges on the tubing. Inside the fitting are stainless steel grippers that grab the tubing.

Step 2 – Assemble the Connection
Push the pipe into the fitting to the tube stop. The collet has stainless steel grippers that hold the pipe firmly in position. The O-ring provides a permanent leak proof seal. Simply pull on the tube to check it is secure.

Step 3 – Disconnect
Depressurize the line before removing the tube. Push in the collet (ring closest to tube) squarely against the face of the fitting. The tube can be removed when the collet is pushed in. The fitting can be re-used.

Daily Checklist

Month _____ Year _____ Serial # _____

*Please contact General Water Technologies 801-294-2426 with any questions.

Date	Product Mohm*cm *Range 10.0 - 18.2*	Runtime	CLS Signature
1			
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