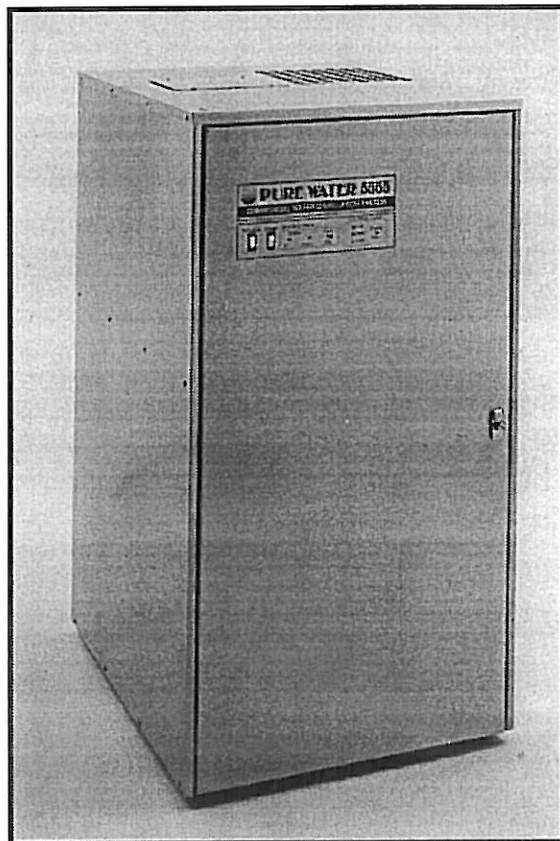

Pure Water 5555™

Owners Manual



For use with
the Pure Water
ULTIMA™ Program

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INTRODUCTION

Distillation: Contaminated water in the boiling tank is turned into steam by the energy from the electrical heating elements. Contaminants remain in the tank, while pure water vapor (steam) is driven off and condensed back into water in the condenser.

These contaminants become concentrated in the boiling tank and are frequently dumped to the drain automatically. This helps ensure maximum purity of the distilled water, and reduces the need to chemically clean the boiling tank.

The large activated carbon post filter incorporated into the Ultima 5555 design compliments the distillation process. This must be replaced periodically for top results.

This Ultima 5555 distiller needs to be connected to an electrical source, a water supply and a sewer line. It is the responsibility of the person installing the machine to ensure installation complies with local and national ordinances.

Model and serial number may be
found on the back panel of the Ultima 5555.

You should record model, serial number
and purchase date below for future reference.

Model _____
Serial Number _____
Purchase Date _____

The Ultima 5555 has been designed and constructed by a pioneer company in the home and commercial distillation markets. This product has been thoroughly tested in the laboratory and field tested under a variety of conditions. Due to the wide variation of water contamination and the conditions of use which are beyond the control of Pure Water, Inc., it is the responsibility of the user to ensure the distilled water produced meets the requirements for intended use. Pure Water, Inc. recommends the distilled water be tested as frequently as the application deems prudent.

PLEASE READ ALL INSTRUCTIONS THOROUGHLY BEFORE OPERATING YOUR NEW UNIT.

- 1) It is important to complete the enclosed warranty card and return it within ten days. This information is required should you ever need parts or repairs for your unit.
- 2) Your distiller has been tested at the factory to ensure proper unit operation. Therefore, it may have traces of a water ring inside the boiling tank.
- 3) The boiling tank has been Heliarc welded, and as you distill water, the mineral contaminants may cause discoloration along welded seams. The tank is fabricated from type 304 stainless steel and the appearance of the seams should not be a matter of concern.
- 4) DO NOT subject your unit to misuse or abuse.
- 5) The physiological effects of the operation of this appliance, beneficial or otherwise, have not been investigated by UL.

INSTALLATION

To install this equipment you will need:

- A qualified electrician to wire the unit into a 240 volt power source.
- 1/2"OD food-grade plastic tubing for delivery of water to the point-of-use.

Additional considerations:

- You may need to vent the exhaust heat from the distiller to the outside of the room or building. It is recommended that a local ventilation contractor be consulted.
- To minimize cleaning of the boiling tank, we recommend that a water softener be used. This is essential in hard water areas.
- National or local ordinances may require you to have an intermediate dump tank for the very hot residue water dumped by the 5555's boiling tank.

Design of the Dispensing System:

The pump in your Ultima 5555 is designed to give a maximum flow of 3 gallons per minute (gpm) or 11.4 liters per minute (lpm). If water is to be drawn from the downstream side of the pump at a slow rate (less than 1 gpm or 3.8 lpm), it is necessary to install a bladder tank downstream of the pump in order to stop the pump from cycling rapidly. Such cycling will quickly wear out the pump and motor.

Pure Water, Inc. has a suitable bladder tank made with F.D.A.-approved materials.

Ventilation . . .

Because of the quantity of heated air generated from condensing the steam during the distillation process, the Ultima 5555 unit needs to be well ventilated. Since air is drawn into the bottom of the unit, a 3" (7.6 cm) air gap on all four sides is recommended, thus requiring a 31" x 38" (79cm x 96cm) floor space. The distiller should preferably be vented to the outside of the room or building through an external wall or ceiling. Room ventilation must be adequate to keep surrounding air temperature below 90° F (32° C).

A professional air conditioning/ventilation contractor should be consulted if a ducting system is needed for venting the heated air from the distiller. Air flow through the distiller is designed for 350 cubic feet per minute (cfm) with an operating exhaust temperature of approximately 110° F (43° C). Parts for a ventilation system can be readily fabricated by a ventilation contractor.

WARNING: Restricting air flow to less than 350 cfm may decrease the production rate of your Ultima 5555 distiller and result in damage. It could also cause moisture damage to the area where the 5555 is operating.

Electrical . . .

The unit operates off 240 volts and should be electrically connected by a qualified electrician in one of two ways:

- a) By wiring the Ultima 5555 with a standard 240V/50A range cord and plug, the unit can be plugged into a 240V/50A wall socket. Due to differing 240V/50A connector configurations available, a range cord is not included with the distiller.
- b) The Ultima 5555 can be hard wired into a 40A electrical supply circuit. For safety reasons, a service disconnect should be installed in the hard wired service line.

The circuit should be protected by a 40 amp fast blow fuse or a 40 amp circuit breaker. An electrical terminal block is located at the back of the distiller.

The Ultima 5555 is designed to produce 50 gallons (189 liters) of distilled water per day. The unit is equipped with a volt meter to allow you to determine the actual voltage on which the unit is operating. If less than 240 volts are available at the unit, the distiller will produce proportionately less water. To compensate for the various voltages available around the world, this unit is equipped with two heating elements.

If less than 240 volts are available at the unit and it is critical the unit produce 50 gallons (189 liters) per day, larger heating elements can be easily installed. **CAUTION:** DO NOT install larger elements than what is specified. Damage to the unit could occur.

<u>Maximum Voltage at Unit</u>	<u>Maximum Heating Element Capacity (Total)</u>
236 - 240	6.5* kilowatts
228 - 235	7.0
220 - 227	7.5
214 - 219	8.0
208 - 213	8.5
202 - 207	9.0
196 - 201	9.5

*Standard from the factory.

Various size heating elements are available from your Ultima Dealer.

CAUTION: Before removing any panels, electrically isolate the unit by unplugging it from the outlet, or turning off the service disconnect if the machine is hard wired. Turning the Power Switch OFF does not completely isolate the unit from its power source.

Plumbing Connections . . .

Plumbing is required for supply water, distilled water and drain water. Inlet/Outlet connections are located on the back of the distiller (see figure 1). The machine needs to be connected to a supply of softened water and to a sewer system which can accept boiling water when it is drained periodically from the boiling chamber.

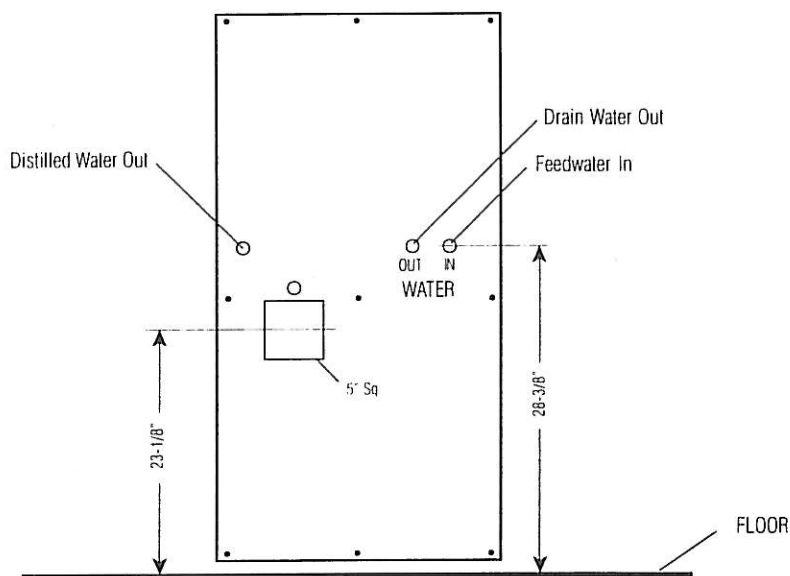


Figure 1

Feedwater Line Hook-up . .

Note: Water should be fed to the distiller from a valve or faucet in the supply water line.

1. Install the 1/2" male nylon elbow on the "Water In" connection on the back of the distiller. Attach one end of the 1/2" plastic tubing to the elbow. **Note:** It is recommended that a water softener be used to treat the hard feedwater. Two fittings are included in the parts kit to connect the 5555 to the softener outlet.
2. Have a qualified plumber install the water softener. Hook-up the softener inlet to the cold water source.
3. Install the 3/4" x 1/2" nylon bushing on the softener outlet and install the 1/2" male nylon connector on the bushing. Attach the other end of the 1/2" plastic tubing to the connector.

If a water softener is not used, follow instruction #4 below:

4. Install the 3/4" x 1/2" nylon reducer and the rubber washer on the cold water source. Install the 1/2" female nylon connector on the reducer. Attach the other end of the 1/2" plastic tubing to the connector.
5. Turn on the water supply and check for leaks.

WARNING: Do not use 1/4" plastic tubing or pipe tapping kit for the supply water line. These cannot supply the flow needed when water is being added.

Sewer Line Hook-up . .

To minimize mineral build-up in the boiling chamber and to prevent contaminant carryover into the distilled water, the machine will shut down regularly and dump the contents of the boiling tank.

The 5555 comes with 12' (91 cm) of high-temperature 1/2" drain hose that will attach to the distiller drain (1/2"NPT male). This should run to a floor drain or sink no higher than 18" (46 cm) above floor level to allow the tank to drain properly. Do not connect the drain line directly to a waste water drain, sewer line or trap. Always allow an air gap between the drain line and the waste water to prevent the possibility of waste water being forced back into the unit. Make sure the end of the hose is secured so it cannot accidentally be displaced from the sewer line.

The water dumped to the sewer will be at or near boiling temperature. Plastic piped sewer drains are not designed for these temperatures. If the sewer piping is plastic, an intermediate dump tank is recommended with a 4-5 gallon (15-19 liter) capacity. A 4 gallon (15 liter) tank is available for purchase from Pure Water, Inc.

Note: Some localities have ordinances governing the temperature of water sent to the sewer. Check with your local Department of Sanitation.

Distilled Water Line Hook-up . .

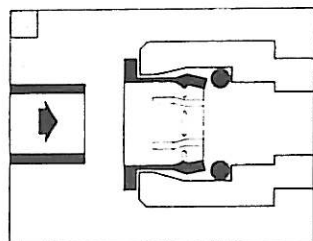
The Ultima 5555 distilled water outlets utilize quick-connect fittings which are a rapid, simple and secure method of connecting 1/2" tubing. To release the plugs from the fittings, depress the fitting collet and hold while removing the plug. See figure 2.

Using only 1/2" food-grade plastic tubing (never copper), connect the distilled water outlet port (1/2" quick-connect) on the back or side of the distiller to the faucet or dispenser desired.

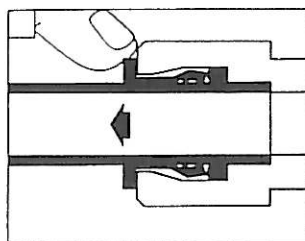
When connecting the tubing into the quick-connect fittings supplied with this unit, it is critical the tubing be inserted fully. The tubing should insert into the fittings 1/2" to 3/4". Failure to do so could result in the tubing being released when the line is pressurized with water.

We recommend that prior to inserting the tubing into a fitting, you mark the tubing 1/2" from the end being inserted into the fitting to ensure the tubing is fully and properly installed.

If you need to remove the distilled water line from the fitting, be sure to turn the Power Switch OFF and relieve line pressure before disconnecting. To release the tubing from the fitting, depress the fitting collet and hold while pulling on the tubing.



Simply push in tube to attach



Push in collet to release tube.

OPERATION

Distillation . . .

Once the power, feedwater, sewer and distilled water connections have been completed, you can put the Ultima 5555 into operation.

- 1) Turn the Power Switch ON.
- 2) Water will start to enter the boiling tank and once it reaches the desired level, the heating elements will automatically turn on. The condensing fan will run when the heating elements are energized.
- 3) Within 15 minutes, production of distilled water will begin.
- 4) Feedwater should be added to the boiling tank every 2-1/2 to 3 minutes. If the cycle time between water additions is longer than 3 minutes, progressively close the faucet or valve on the feedwater supply line until the cycle time is between 2-1/2 to 3 minutes. Longer cycle times may result in decreased water production.
- 5) After 2 hours of operation, distilled water will be available from the storage tank. A faucet downstream from the storage tank will need to be turned on to bleed the distilled water line of air. Allow the unit to run until the holding tank is filled with water and the machine shuts down. This will take approximately 24 hours.

Note: The purity light may come on while distilling the first tank of water. This is normal and to be expected. Drain and discard the first tank of water produced as it is not suitable for drinking, however you may use this distilled water for sterilization of the storage tank as described below.

Sterilizing the Storage Tank . . .

Prior to dispensing distilled water, the storage tank needs to be sterilized. Open the front panel to gain access.

WARNING: Disconnect the Ultima 5555 distiller from the power source before opening the front panel.

To sterilize the tank:

- 1) Turn the Power Switch OFF and remove the filter cartridge from the filter housing. Reinstall the empty filter housing.
- 2) Add chlorine bleach to the storage tank full of distilled water and splash solution into the top surface of the storage tank. Follow the precautions listed on the container label.
 - A. Add 1 cup of chlorine bleach to make a 50+ ppm chlorine solution and allow to stand for 8 hours.
- 3) After following the allowed standing time, turn the Power Switch ON and empty the storage tank by running the disinfecting solution through the distilled water line to a drain.
- 4) Rinse the storage tank by allowing the unit to fill the storage tank with distilled water and draining it again. This will take approximately 24 hours. You may wish to rinse the storage tank by manually filling the tank with bottled distilled water. This will help speed up the process.
- 5) After the storage tank is rinsed, replace the activated charcoal filter cartridge in the filter housing. The activated carbon filter will filter out any remaining chlorine.
- 6) Secure the front panel and the unit is ready to continue operation.