



EASYpure[®] II RF

OPERATION MANUAL
AND PARTS LIST
Series 1305

Model D7031
100-240 Volts

Table of Contents

Safety Information	4
Alert Signals.....	4
Warnings	4
Introduction.....	6
General Specifications	7
Dimensions and Clearance Requirements.	7
Electrical Requirements	7
Feedwater Requirements.....	7
Product Water	7
Environmental Conditions	8
Declaration of Conformity	8
Unpacking	9
Installation	10
Locating Unit	10
Cartridge Installation	11
Controls	12
Power Switch	12
Control Panel	12
Switches.....	12
Display.....	12
Operational Modes.....	13
Run Mode	13
Standby	13
Idle Mode.....	13
Initial Operation	14
Storage Reservoir Filling and Cartridge Rinse Up.....	14
Normal Operation	15
Operation	15
Water Draw-Off	15
Feedwater Replenishment.....	15
Maintenance and Servicing	16
System Sanitization	16
Cleaning the Resistivity Cell	18
General Cleaning Instructions	20
Cartridge Replacement	20
Cartridge Removal	21
0.2 Micron Final Filter Replacement	21
Ventgard Cap Replacement.....	21
Fuse Replacement.....	22
Unit Shutdown	22
Troubleshooting	23
Error Conditions	25
Replacement Parts.....	26
Consumables	26
General Maintenance.....	26
Safety Stock.....	27
Wiring Diagram.....	28
Ordering Procedures	29
One Year Limited Warranty	32

Figures

Figure 1: EASYpure II RF Front10
Figure 2: EASYpure II RF Back10
Figure 3: Cartridge Installation11
Figure 4: Control Panel12
Figure 5: Disconnecting Resistivity Cell18

Safety Information

Alert Signals



Warning

Warnings alert you to a possibility of personal injury.



Caution

Cautions alert you to a possibility of damage to the equipment.



Note

Notes alert you to pertinent facts and conditions.

Your Barnstead EASYpure® II RF has been designed with function, reliability, and safety in mind. It is your responsibility to install it in conformance with local electrical codes. For safe operation, please pay attention to the alert signals throughout the manual.

This manual contains important operating and safety information. You must carefully read and understand the contents of this manual prior to the use of this equipment.

Water purification technology employs one or more of the following: chemicals, electrical devices, mercury vapor lamps, steam and heated vessels. Care should be taken when installing, operating or servicing Barnstead products. The specific safety notes pertinent to this Barnstead product are listed below.

Warnings

To avoid electrical shock, always:

1. Use a properly grounded electrical outlet of correct voltage and current handling capacity.
2. Do not place the EASYpure II RF directly over equipment that requires electrical service. Routine maintenance of this unit may involve water spillage and subsequent electrical shock hazard if improperly located.
3. Replace fuses with those of the same type and rating.
4. Do not disassemble water lines or remove cartridges where spilled water could contact equipment that requires electrical service. Electrical shock hazard could result.
5. Disconnect from the power supply prior to maintenance and servicing.

To avoid personal injury:

1. Do not use in the presence of flammable or combustible materials; fire or explosion may result. This device contains components which may ignite such materials.

2. Do not use in the presence of highly corrosive substances such as bleach or acid baths; fire may result.
3. This device is to be used with water feeds only. Sanitizing/cleaning agents must be used in compliance with instructions in this manual. Failure to comply with the above could result in explosion and personal injury.
4. Avoid splashing disinfecting solutions on clothing or skin.
5. Ensure all piping connections are tight to avoid chemical leakage.
6. Carefully follow manufacturer's safety instructions on labels of chemical containers and material safety data sheets.
7. Refer servicing to qualified personnel.
8. Ensure adequate ventilation.
9. Depressurize system prior to opening cartridge access door or removing top cover.

Introduction

The Barnstead EASYpure II RF is a batch-fed water purification system designed to provide Type I reagent-grade water with extremely low organic carbon content. It uses a three-stage deionization process combined with a 0.2 micron final filter to polish pretreated water (distilled, deionized, or reverse osmosis) to produce water with a resistivity of up to 18.2 megohms-cm and with a total organic carbon content of less than 10 ppb. Water resistivity is continuously sensed by a resistivity cell and displayed on a digital display.

The EASYpure II RF is designed to be a bench mounted unit. If wall mounting is required, contact Barnstead International customer service for information on a wall bracket and mounting accessory.



EASYpure II RF

General Specifications

Dimensions and Clearance Requirements

EASYPure II RF dimensions - 12" W X 19" D X 18 1/8" H (30.5 cm X 48.3 cm X 46.0 cm).

Clearances:

Sides - 4" (10.1 cm) minimum to allow air flow

Above - 12" (30.5 cm) minimum for reservoir replenishment

Cartridge replacement requires that you be able to access the back of the unit and open the cartridge access door (total depth, unit + open door, = 34") (86.4 cm).

Storage Reservoir Capacity - Approximately 6.5 liters usable, 7.0 liters total

Electrical Requirements

The EASYPure II RF is equipped with two power cords and corresponding fuses taped to each power cord to be plugged into a grounded electrical outlet of the appropriate voltage.

Model D7031: 100-240 VAC +5% -10%, 47-63 Hz.

Feedwater Requirements

The EASYPure II RF requires water pretreated by either distillation, deionization or reverse osmosis.

TOC - Less than 1.0 ppm

Turbidity - Less than 1.0 N.T.U.

Temperature - 40°F - 104°F (4.4°C - 40°C)

Silica - Less than 1 ppm

TDS (CaCO₃) -

RO - Less than 50 ppm

DI - Less than 100 ppm

Distilled - Less than 2 ppm

Product Water

Quality

Resistivity: ASTM Type I

TOC: 5-15 ppb

Flow Rate: greater than or equal to 0.8 LPM with a new final filter

Environmental Conditions

Operating: 4°C - 49°C; 20% - 80% relative humidity, non-condensing. Installation Category II (overvoltage) in accordance with IEC 664. Pollution Degree 2 in accordance with IEC 664.

Altitude limit: 3,500 meters.

Storage: -25°C - 65°C; 10% to 85% relative humidity.

Declaration of Conformity

Barnstead International hereby declares under its sole responsibility that this product conforms with the technical requirements of the following standards:

EMC:	EN61000-3-2	Limits for Harmonic Current Emissions
	EN61000-3-3	Limits for Voltage Fluctuations and
Flicker		
	EN 61326-1	Electrical Equipment for Measurement, Control, and Laboratory Use; Part I: General Requirements
Safety:	EN 61010-1	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use; Part I: General Requirements

per the provisions of the Low Voltage Directive 73/23/EEC, as amended by 93/68/EEC.

The authorized representative located within the European Community is:
Electrothermal Engineering, Ltd.
419 Sutton Road
Southend On Sea
Essex SS2 5PH
United Kingdom

Copies of the Declaration of Conformity are available upon request.

Unpacking



Note

Cartridges and the 0.2 micron final filter are **not** provided with the EASYpure II RF and must be ordered separately:

EASYpure Kit Ultra low Organics
Deionized Feed (No Final Filter)
Part No. D502124

EASYpure Kit Ultra low Organics
Distilled or RO Feed (No Final Filter)
Part No. D502125

EASYpure Kit Type I Deionized Feed
(No Final Filter)
Part No. D502126

EASYpure Kit Type I Distilled or
RO Feed (No Final Filter)
Part No. D502127

0.2 Micron Final Filter
Part No. D3750

Unpacking

Remove the unit from its shipping container and ensure that the following items are removed from the packaging materials before discarding:

- a) EASYpure II RF unit
- b) Ventgard® reservoir cap (CV703X4A)
- c) North American power cord with attached fuse bag (CRX72)
- d) European power cord with attached fuse (CRX70)
- e) Operation Manual (LT1305X1)

Installation



Warning

Do not place the EASYpure II RF directly over equipment that requires electrical service. Routine maintenance of this unit may involve water spillage and subsequent electrical shock hazard if improperly located.



Warning

Do not use in the presence of flammable or combustible materials; fire or explosion may result. This device contains components which may ignite such materials.



Warning

This device is to be used with water feeds only. Sanitizing/cleaning agents must be used in compliance with instructions in this manual. Failure to comply with the above could result in explosion and personal injury.

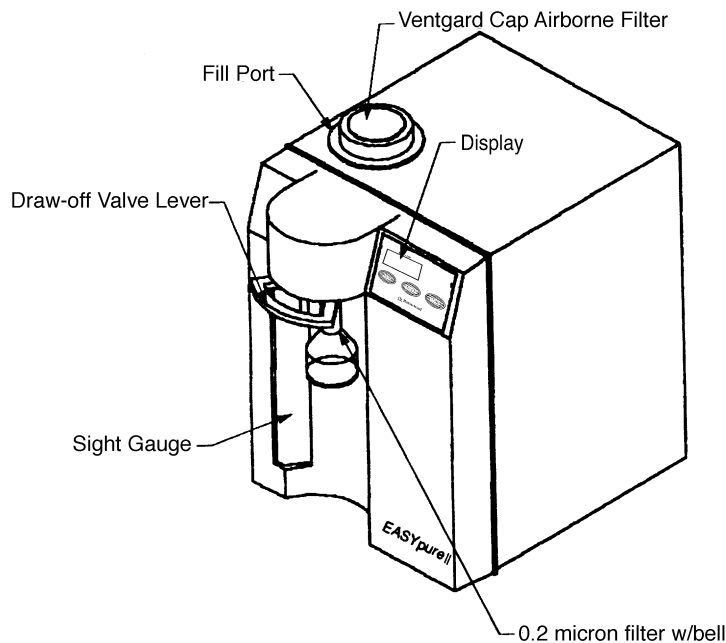


Figure 1: EASYpure II RF Front

Locating Unit

1. Place the EASYpure II RF on a bench top convenient to your work area, noting the Clearance Requirements. If wall mounting is required contact Customer Service.
2. Using 1/2" I.D. tubing and tubing connectors (user supplied), connect the overflow drain tubing (lower left corner of the rear of the unit) to an atmospherically vented sink or floor drain. If an atmospherically vented sink or floor drain is not accessible, a bucket or other container may be placed on the floor beneath the EASYpure II RF's location and emptied when full.

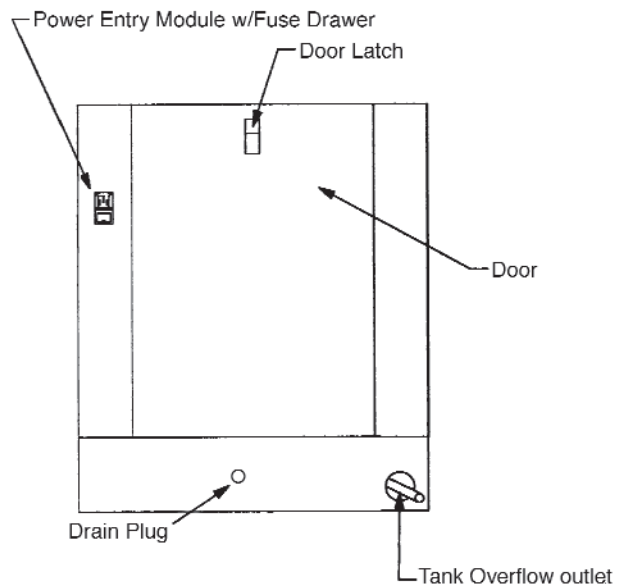


Figure 2: EASYpure II RF Back



Note

The upper end cap is the one with the right-angle turn and the two flanges. The lower end cap extends straight out from the cartridge. (See Fig. 3.)



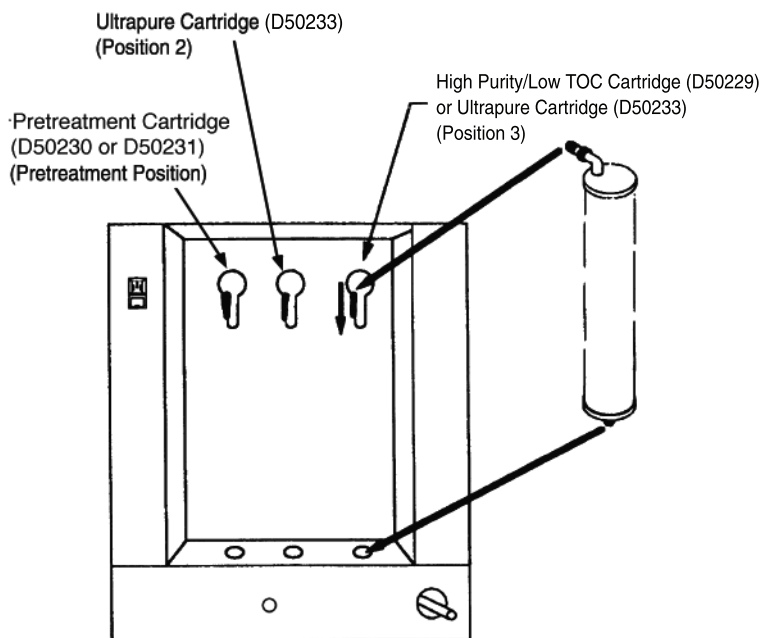
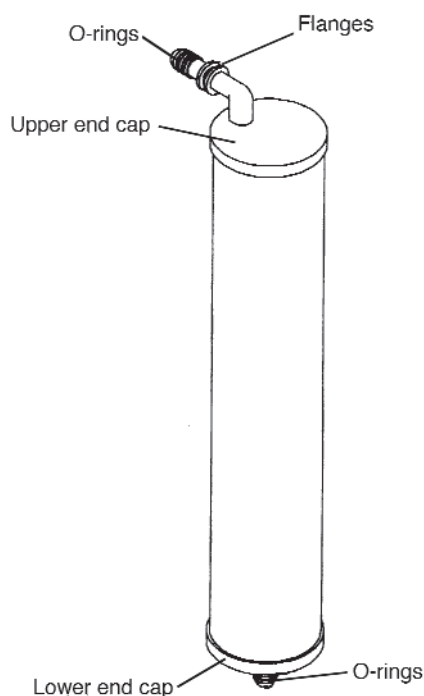
Note

The two flanges on the end cap should be able to slide down on each side of the keyway wall.

Cartridge Installation (See Fig. 3)

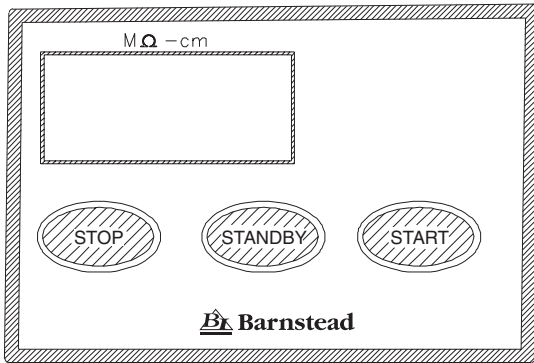
1. Open cartridge access door in the rear of the unit by pushing the door latch down.
2. Remove a new Pretreatment cartridge (part number D50230 or D50231) from its plastic bag.
3. Wet the o-rings with water on both end caps.
4. Press the upper end cap into the pretreatment position until it bottoms out.
5. Lower the cartridge and insert the lower end cap into the lower socket until it is firmly seated.
6. Repeat steps 2 - 5 with the Ultrapure cartridge (Catalog No. D50233) and then the EASYpure High Purity/Low TOC (Catalog No. D50229) or Ultrapure cartridge, placing them in positions 2 and 3.
7. Close cartridge access door. This serves to verify the cartridges have been properly seated.

Figure 3: Cartridge Installation



Controls

Figure 4: Control Panel



Note

On initial power-up, the display will run the following sequence:

- Model type is scrolled -RF
- The display's LEDs will light up,
- Followed by the unit software revision,
- Finally, IdL will be displayed.



Note

On initial start-up, the purity meter may display "Er.1". This is caused by air in the cell and should soon be replaced by a resistivity reading. If "Er.1" does not go out after the pump has run for a minute or if it appears any time while the EASYpure II RF is in operation, refer to the "Troubleshooting" section of this manual.

Power Switch

The power switch on the EASYpure II RF is located on the back right side of the unit directly above the power cord receptacle.

Control Panel

The EASYpure II RF control panel incorporates three switches and a digital display.

Switches (See Fig. 4)

When the main power switch is on, the three switches on the control panel function as follows:

1. **START:** Pressing the START switch when the unit is in either the stop ("IdL") or standby ("SbY") mode will put the unit into run mode.
2. **STANDBY:** Pressing the STANDBY switch when the unit is in either the start (run) or stop ("IdL") mode will put the unit into a standby mode.
3. **STOP:** Pressing the STOP switch when the unit is in either the start (run) or standby ("SbY") mode will put the unit into a stop ("IdL") mode.

Display

In addition to displaying the temperature compensated (25°C) resistivity in megohms, the display also indicates operational modes and error indicators. The following is what can appear on the display:

SbY	Er1
rEC	Er4
IdL	Er5
Add	

**Note**

When the unit is first put in the Run Mode, the display will show 10.0 for a few seconds. This is an arbitrary number that indicates the unit is running. Any number that appears after 10.0 indicates purity.

**Note**

If the unit is in standby and power to the unit is turned off or lost, the unit will return to standby once power is restored.

**Note**

Do not put unit into Idle Mode or turn off the EASYpure II RF during non-work hours. Doing so will allow bacterial growth and other contamination of the water in the system. As a result, the system will require a lengthy rinse-up period at the beginning of the work day to achieve high-quality product water.

Operational Modes

Run Mode

Since not all qualities of permissible feedwater will reach maximum resistivity after one pass through the unit's cartridges (especially as the cartridges near exhaustion), the EASYpure II RF has two operational modes; run and standby.

In the run mode, the pump continuously recirculates water through the cartridges. It is recommended that the EASYpure II RF be left in the run mode during the day. In the run mode, the purity meter display indicates the resistivity of the water available for draw off. Allow the water's resistivity to rise to the desired purity before drawing off water.

STANDBY ("SbY")

In STANDBY ("SbY") mode, the pump will restart for ten minutes out of every hour (i.e 50 minutes off, 10 minutes on). The display reads "rEC" which indicates recirculation. This will allow the unit to produce high quality water quickly upon being placed in the run mode. It is recommended that the EASYpure II RF be placed in the STANDBY mode during non-work hours. At the end of the work day, press the STANDBY switch on the front of the EASYpure II RF to place the unit in STANDBY mode for the night. "SbY" will appear on the display.

Idle Mode ("IdL")

"IdL" indicates the unit is powered and waiting to be placed in Run or STANDBY mode.

Initial Operation



Note

Cartridge rinse up procedure must be followed after each cartridge and/or filter replacement.



Note

In the event that you overfill the feedwater reservoir, allow the excess water to drain from the reservoir through the overflow drain tubing before replacing the Ventgard cap. This will prevent wetting the filter element.



Warning

Use a properly grounded electrical outlet of correct voltage and current handling capacity.



Warning

This device is to be used with water feeds only. Sanitizing/cleaning agents must be used in compliance with instructions in this manual. Failure to comply with the above could result in explosion and personal injury.



Note

It is suggested that Teflon® tape be applied to the threads of the 0.2 micron final filter to ensure a tight seal.



Note

For more demanding applications where low TOC water is required, a third reservoir volume rinse of the cartridges and filter may be necessary.

Storage Reservoir Filling and Cartridge Rinse Up

To fill the reservoir:

1. Remove the molded plastic Ventgard cap.
2. Carefully pour pretreated feedwater into the reservoir until the water is level with the top of the sight gauge on the front of the unit (See Fig. 1). Replace the Ventgard cap.
3. The power connection is located on the right side of the unit, in the upper back corner.
4. Determine which power cord you need (this will be based on your country and outlets available in your lab). Both North American and European power cords are provided with the unit.
5. Remove the fuse holder, install the fuses included with the power cord to be used, and reinstall holder.
6. Verify power switch is turned off and attach receptacle end of power cord into the power socket.
7. Plug other end of power cord into facility power. Turn main power on at power entry module.
8. Place suitable container under draw-off valve. Open draw-off valve.
9. Press START and rinse one complete reservoir volume of water through the cartridges to drain.
10. Close draw-off valve.
11. Remove hose barb connection from draw-off valve. Keep hose barb for future use.
12. Remove the new 0.2 micron final filter assembly from its bag and insert it into the draw-off valve. Gently tighten, turning the filter to the right.
13. Refill the reservoir with pretreated water.
14. Open the draw-off valve and flush second reservoir volume of water through the 0.2 micron final filter.

Teflon® is a registered trademark of DuPont

Normal Operation



Note

When the unit is first put in the Run Mode, the display will show 10.0 for a few seconds. This is an arbitrary number that indicates the unit is running. Any number that appears after 10.0 indicates purity.

Operation

1. Remove the Ventgard cap. Do not allow water to enter the Ventgard cap.
2. Carefully pour pretreated feedwater into the feedwater reservoir until the water is level with the top of the sight gauge. Replace the Ventgard cap.
3. Turn main power on at power entry module.
4. Press the “START” button on the front of the EASYpure II RF. The EASYpure II RF’s pump will begin to run and the purity meter will display “10.0” followed by the number indicating the resistivity of the water in megohm-cm.
5. Allow the water’s resistivity to rise to the desired purity before drawing off water.

Water Draw-Off

1. Remove the protective cap from the 0.2 micron final filter bell.
2. Depress the draw-off lever.
3. When draw off is complete, lift the draw-off lever and replace the protective cap on the 0.2 micron final filter bell.

Feedwater Replenishment

As water is drawn off from the EASYpure II RF, the feedwater reservoir will require refilling. This will be indicated by a low water level in the sight gauge or by the message “Add” on the display. To refill the reservoir:

1. Repeat steps 1 and 2 from “Operation” above.
2. Allow the water’s resistivity to rise to the desired purity before drawing off water.

Maintenance and Servicing



Warning

Disconnect from the power supply prior to maintenance and servicing.

Do not disassemble water lines or remove cartridges where spilled water could contact equipment that requires electrical service. Electrical shock hazard could result.

Refer servicing to qualified personnel.



Note

Drain plug is not attached to unit; use care when removing it over an open drain to avoid dropping it into the drain.



Note

A small amount of water will drain from the cartridge when it is disconnected from the lower socket. Plug the cartridge's lower opening with your finger to minimize water spillage while you finish removing the cartridge.



Note

The cartridges will still contain water when removed. Therefore, you will want to have a sink, bucket or other waterproof container available to place them in after removal.



Note

Used cartridges may be recycled. See P.U.R.E. information packed with new cartridges.

System Sanitization

Frequency of cleaning is difficult to determine because of variability in feedwater and usage. Cleaning is necessary when residual deposits are evident inside the feedwater reservoir or if a new 0.2 micron final filter clogs rapidly after installation even though the cartridges were properly rinsed before the 0.2 micron final filter was installed. To sanitize the EASYpure II RF, remove the 0.2 micron final filter and attach the hose barb that came installed on the unit. The purification cartridges must be removed and replaced with empty cartridges. These must be ordered separately. Contact Barnstead International and order part number D7034.

1. Drain the system.
 - a. Place the 0.2 micron final filter over a sink or place a bucket or other suitable large container under the filter and draw off water as described under **Water Draw-Off** in the **Operation** section of this manual. Draw off water until the water level in the feedwater reservoir is lowered to the point that the reservoir float switch disables the pump. Lift draw-off valve to closed position.
 - b. Disconnect the power cord from the power entry module.
 - c. Turn the unit around to provide access to the drain plug on the lower edge of the back panel.
 - d. Place the drain plug over a sink, or place a bucket or other suitable large container under the drain plug. Remove the drain plug by turning it while pulling until it comes out.
 - e. Drain remaining water from the reservoir and system.
 - f. Replace the drain plug, taking care to fully insert it into the drain tubing.
 - g. Remove cartridges and install empty cartridge tubes (part number D7034) according to the instructions in **Cartridge Replacement**.

**Warning**

Avoid splashing disinfecting solutions on clothing or skin.

Ensure all piping connections are tight to avoid chemical leakage.

Ensure adequate ventilation.

Carefully follow manufacturer's safety instructions on labels of chemical containers and material safety data sheets.

- h. Remove 0.2 micron final filter and install the hose barb that was shipped with the system.
2. Remove Ventgard cap and pour 6 liters of pre-treated feedwater into reservoir.
3. Add 10ml to 20ml of household chlorine bleach (5.25% sodium hypochlorite) to reservoir.
4. Reconnect power cord to the power entry module and turn unit on. Press the "START" button and put unit into Run Mode.
5. Allow the unit to recirculate the disinfecting solution for thirty minutes. Cycle the draw-off valve to sanitize the valve.
6. Drain the system as described in step 1 of this section.
7. Refill the reservoir with suitable feedwater and recirculate the water through the system for ten minutes.
8. Drain the system as described in step 1 of this section.
9. Remove the empty cartridge tubes according to the instructions in the **Cartridge Removal** section. Drain and retain the empty cartridge tubes for future use. Remove the hose barb from the draw-off valve.
10. Install and rinse new cartridges according to the instructions in the **Cartridge Installation** section. *Do not reinstall used cartridges or 0.2 micron final filter* (they may contain large amounts of bacteria.)
11. Install and rinse new 0.2 micron final filter according to the instructions in the **0.2 Micron Final Filter Replacement** section of this manual.
12. Reconnect power cord to the power entry module and turn unit on. Press the "START" button.

MAINTENANCE AND SERVICING



Warning

Depressurize system prior to opening cartridge access door.



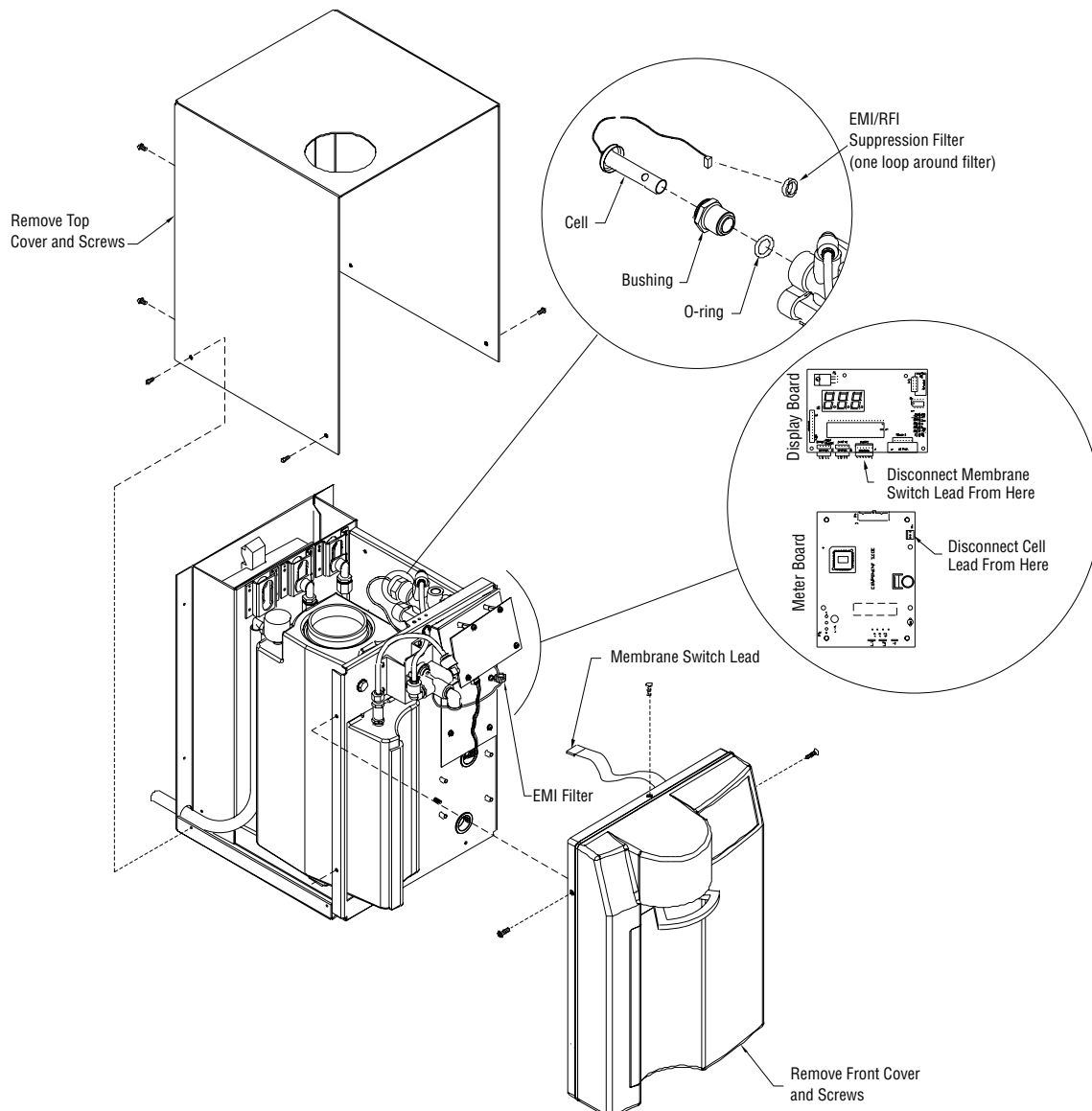
Note

Ensure you have an o-ring (part # GSX29) available prior to cleaning resistivity cell.

Cleaning the Resistivity Cell

1. Turn off the EASYpure II RF. Remove the power cord.
2. Depressurize the system by opening the unit dispenser draw-off valve, allowing water to drain until no more flows from the valve.
3. Remove the Ventgard cap.
4. Remove the screws securing the EASYpure II RF top cover.

Figure 5: Disconnecting Resistivity Cell



**Caution**

The cell electrodes are etched to improve wetting characteristics. Do not mechanically abrade or damage this surface (i.e. do not clean with a wire brush, sandpaper, etc.).

Do not immerse the entire cell assembly in cleaning solution, only the electrode portion.

**Warning**

Carefully follow manufacturer's safety instructions on labels of chemical containers and material safety data sheets.

5. Remove the cover by lifting it straight up.
6. Remove the 0.2 micron final filter. Carefully remove the front cover screws and pull the cover off. Disconnect membrane switch lead from the display board (see Fig. 5).
7. Disconnect the cell lead from the meter board, remove the EMI/RFI suppression filter and gently pull the cable out of the EASYpure II RF frame. Note orientation.
8. Unscrew and remove the cell.
9. Carefully remove and discard the o-ring before cleaning the cell.
10. Wash the cell in a mild detergent solution followed by a 10% Hydrochloric or 10% Sulfuric acid solution (follow acid manufacturers warnings and recommended handling procedures found on package labels and Material Safety Data Sheets). This may be done in an ultrasonic cleaner or with a soft brush.
11. Thoroughly rinse the cell in deionized or distilled water following the detergent and/or acid cleaning.
12. After cleaning, reinstall with the replacement o-ring on cell (part # GSX29).
13. Reinstall the cell and hand tighten. Reroute the cable up through the housing, reinstall the EMI/RFI suppression filter (loop wire 1 time around filter) and reconnect cell lead to meter board.
14. Reinstall membrane switch lead. While lifting dispense handle, replace the front cover. Reinstall the 0.2 micron final filter.
15. Reinstall the EASYpure II RF top cover.
16. Reinstall the Ventgard cap and 0.2 micron final filter.
17. Reattach the power cord and reconnect the unit to the power supply.
18. Refill the reservoir with feedwater and operate normally.

General Cleaning Instructions

Wipe exterior surfaces with lightly dampened cloth containing mild soap solution.

Cartridge Replacement (See Fig. 3)

The frequency with which you will need to replace cartridges is dependent on your feedwater characteristics, your purity requirements, and your daily usage. Replace the cartridges when the product water purity drops below acceptable levels of resistivity or when organic levels become too high.

Remember, used cartridges can be recycled; See P.U.R.E. information packed with your new cartridges.

Cartridge Removal

1. Turn off the EASYpure II RF and depressurize system by disconnecting unit feedwater, opening draw-off valve and allowing water to drain from the unit until draining ceases.
2. Open the cartridge access door in the rear of the unit by pushing back the door latch.
3. Remove the cartridge in the pretreatment position by pulling the cartridge straight up until the upper socket is in the keyhole of the keyway. Next pull the cartridge straight out.
4. Remove a new Pretreatment cartridge (Part No. D50230 or D50231) from its plastic bag.
5. Wet the o-rings with water on both end caps.
6. Press the upper end cap into the pretreatment position until it bottoms out.
7. Lower the cartridge and insert the lower end cap into the lower socket until it is firmly seated.
8. Repeat steps 3-7 with the EASYpure ULTRApure (Part No. D50233) cartridge, placing it in position 2 and the EASYpure High Purity/Low TOC (Part No. D50229) cartridge, placing it in position 3. Be sure to remove and replace one cartridge at a time.



Warning

Depressurize system prior to opening cartridge access door.

9. Close the cartridge access door.
10. Remove the old 0.2 micron final filter from the draw-off valve.
11. Install the hose barb into the fitting in the draw-off valve.
12. Turn unit on and open draw-off valve.
13. Press START and rinse one complete reservoir volume of water through the cartridges to drain.
14. Close the draw-off valve.



Note

If a newly installed 0.2 micron final filter clogs rapidly after installation, the EASYpure II RF may need to be sanitized to remove bacterial contaminants. See **System Sanitization**.



Note

It is suggested that Teflon tape be applied to the threads of the 0.2 micron final filter to ensure a tight seal.

0.2 Micron Final Filter Replacement

Replace the 0.2 micron final filter whenever any of the following conditions occur: the product water flow rate is reduced or you experience bacteria break through when cartridges are replaced or system is sanitized. The 0.2 micron final filter is shipped assembled with a bell. To replace the 0.2 micron final filter assembly:

1. Remove the old 0.2 micron final filter assembly by turning it to the left to unscrew it from the draw-off valve.
2. Remove the new 0.2 micron final filter assembly from its bag and insert it into the draw-off valve. Gently tighten, turning the filter to the right.
3. Open the draw-off valve and flush one reservoir volume of water through the 0.2 micron final filter.

Ventgard Cap Replacement

The purifying media and filter in the Ventgard filter element have a limited capacity. Therefore, the Ventgard cap should be replaced every 120 days. The Ventgard cap is shipped as a complete unit; replacement involves simply removing the new Ventgard cap from its plastic storage bag and placing it on the reservoir. A Ventgard cap can be stored in a cool, dry place almost indefinitely, provided its plastic storage bag has not been opened.



Warning

Replace fuses with those of the same type and rating.

Fuse Replacement

1. Disconnect the EASYpure II RF from the power supply.
2. Remove the power cord from the power entry module.
3. Pull out the fuse drawer located in the power entry module on the back right side of the unit.
4. Remove old fuses and replace with fuses of the same type and rating. (See **Replacement Parts** list.)
5. Replace fuse drawer.
6. Replace power cord.
7. Reconnect unit to power supply

Unit Shutdown

If the EASYpure II RF will be inactive for a period up to a month, place the unit in Standby. For periods of time greater than a month, disconnect water and power sources, drain unit, close customer supplied water valve, and remove and discard cartridges and final filter. See **Sanitization, Cartridge Replacement and 0.2 Micron Final Filter Replacement** sections for reactivation.

Troubleshooting

Problem	Possible Causes	Action
<p>EASypure II RF completely inactive. (Pump not operating, display not lit, etc.)</p> <p>Note: When unit is powered and not operating, nor in standby, "IdL" will normally be displayed.</p>	<p>No electrical power to EASypure II RF.</p> <p>Membrane switch leads not connected.</p> <p>Main power switch off.</p> <p>Fuses blown or not installed properly.</p>	<p>Ensure that the EASypure II RF power cord is connected to a live power source and completely plugged into electrical outlet.</p> <p>Disconnect unit from power. Check and reconnect. (See Fig. 5)</p> <p>Place to "On" position.</p> <p>Check to make sure proper fuses were installed.</p> <p>Replace the fuses as indicated in the Fuse Replacement section.</p>
<p>Pump does not run. Display showing purity information.</p>	<p>Loose wire connection to pump.</p> <p>Display/control board is defective.</p> <p>Pump worn out or defective.</p>	<p>Ensure pump is properly connected to display/control board (PC1286X3).</p> <p>Replace board. Call Barnstead International Technical Service.</p> <p>Replace pump. Call Technical Service.</p>
<p>Recirculated water will not rinse up to desired purity level.</p>	<p>Exhausted cartridge</p> <p>Cartridges out of order.</p> <p>Dirty resistivity cell.</p> <p>Water path restriction.</p> <p>Resistivity meter board out of tolerance.</p>	<p>Replace the cartridge as indicated in the Cartridge Replacement section.</p> <p>Install the cartridges in the proper order as indicated in the Cartridge Installation section.</p> <p>Clean resistivity cell as indicated in the Maintenance and Servicing section.</p> <p>Check tubing for constriction (kinks) or blockages.</p> <p>Replace board (PCX70). Call Technical Service.</p>
<p>Reduced or no product flow from the 0.2 filter assembly.</p>	<p>0.2 micron final filter clogged.</p> <p>Water path restriction</p>	<p>Replace the 0.2 filter assembly as indicated in the 0.2 Micron Final Filter Replacement section.</p> <p>Check tubing.</p>

TROUBLESHOOTING

Problem (cont.)	Possible Causes (cont.)	Action (cont.)
0.2 micron final filter clogs rapidly after replacement.	<p>Possible feedwater contamination.</p> <p>Cartridges not properly rinsed up before use.</p> <p>EASYpure II RF contaminated with bacteria.</p>	<p>Call Technical Service for possible feedwater testing.</p> <p>Rinse up cartridges as described in Cartridge Rinse-Up Procedures. Replace the 0.2 micron final filter assembly as indicated in the 0.2 Micron Final Filter Replacement section.</p> <p>Sanitize EASYpure II RF according to the instructions in System Sanitization. Replace the 0.2 micron final filter assembly as indicated in the 0.2 Micron Final Filter Replacement section.</p>
Short cartridge life.	<p>Cartridges being used are beyond expiration date.</p> <p>Change in feedwater characteristics.</p> <p>Increased product water usage.</p>	<p>Check the expiration date. Cartridges begin to lose capacity after being stored two years from the date of manufacture. Replace the cartridges with unexpired ones.</p> <p>Call Technical Service for possible feedwater testing.</p> <p>Verify usage.</p>
Water leakage inside EASYpure II RF.	<p>Loose connections.</p> <p>Tubing is not inserted completely.</p> <p>Missing or defective cartridge o-rings.</p> <p>Leak at cartridge.</p>	<p>Tighten connections.</p> <p>Insert tubing completely. See Push-to-Connect Tubing Installation section of this manual.</p> <p>Install or replace cartridge o-rings.</p> <p>Make sure cartridge access door is closed and latched.</p>
Water leakage at a final filter	<p>Not installed far enough.</p>	<p>Install or screw in further and/or add Teflon tape.</p>

Error Conditions

Problem	Possible Causes	Action
Display reads "Er1". (Purity data error)	Air in system. Resistivity cell not connected to circuit board. Resistivity cell dirty. Resistivity cell out of tolerance. Meter board out of tolerance.	Purge air from system by drawing off water according to the instructions in the Operation section. Check resistivity cell lead connections. (P1 on meter board, PCX70) Clean cell and reinstall. Replace resistivity cell. Call Barnstead International Technical Service.
Display reads "Er4". (Cell temperature sensor error)	Resistivity cell not connected to circuit board. Resistivity cell dirty. Meter board out of tolerance.	Call Technical Service. Replace resistivity cell. Call Technical Service.
Display reads "Er5". (Meter board communication error)	Meter board needs to be reset. Meter board not connected to display/control board.	Turn unit "Off" and back "On". Call Technical Service.

Replacement Parts

Consumables

Consumable parts are those *required* to support the day-to-day operation of this equipment. Barnstead International establishes two types of consumables; those items that *must* periodically be replaced to maintain performance (filters, resin cartridges, etc.) and other items of limited life (indicator lights, fuses, etc.) that you can expect to replace on a more or less random basis. Where practical, Barnstead International recommends the frequency of replacement, or provides information on life expectancy from which you may calculate a replacement interval compatible with your usage pattern.

The replacement of consumable parts is discussed in the **Maintenance and Servicing** section to assist you in accomplishing your own service.

Consumables may be ordered separately and in some cases, as an expendables kit. Check with your Barnstead International representative for additional information on the expendables kit.

Description	Catalog No.	Recommended Quantity	Max. Shelf Life
EASYpure Kit Ultra low Organics Deionized Feed	D502124	1	2 years ¹
EASYpure Kit Ultra low Organics Distilled or RO Feed	D502125	1	2 years ¹
EASYpure Kit Type I Deionized Feed	D502126	1	2 years ¹
EASYpure Kit Type I Distilled or RO Feed	D502127	1	2 years ¹
EASYpure High Purity/Low TOC Cartridge	D50229	1	2 years ¹
Pretreatment Cartridge DI Feed	D50230	1	2 years ¹
Pretreatment Cartridge RO - Distilled Feed	D50231	1	2 years ¹
Ultrapure Mixed Bed Cartridge	D50233	1	2 years ¹
0.2 Micron Final Filter and Bell Assembly	D3750	2	N/A
Fuse, Power Entry:			
100-120 volt (slow blow 1.6 amp)	FZX47	2	N/A
240 volt (IEC127 timelag 0.63 amp)	FZX54	2	N/A
Ventgard Cap	CV703X4A	1	N/A
Empty Cartridges for Sanitization	D7034	1	N/A

¹ This is reference information. Please check actual expiration dates on individual cartridges for shelf life end dates. Cartridges used past the shelf lifetimes will exhibit decreased capacity.

General Maintenance

General maintenance parts are defined as laboratory level repair parts which do not require great expertise or special tools for installation. Barnstead International recommends that you stock the general maintenance parts as an aid to ensuring the continued operation of this equipment.

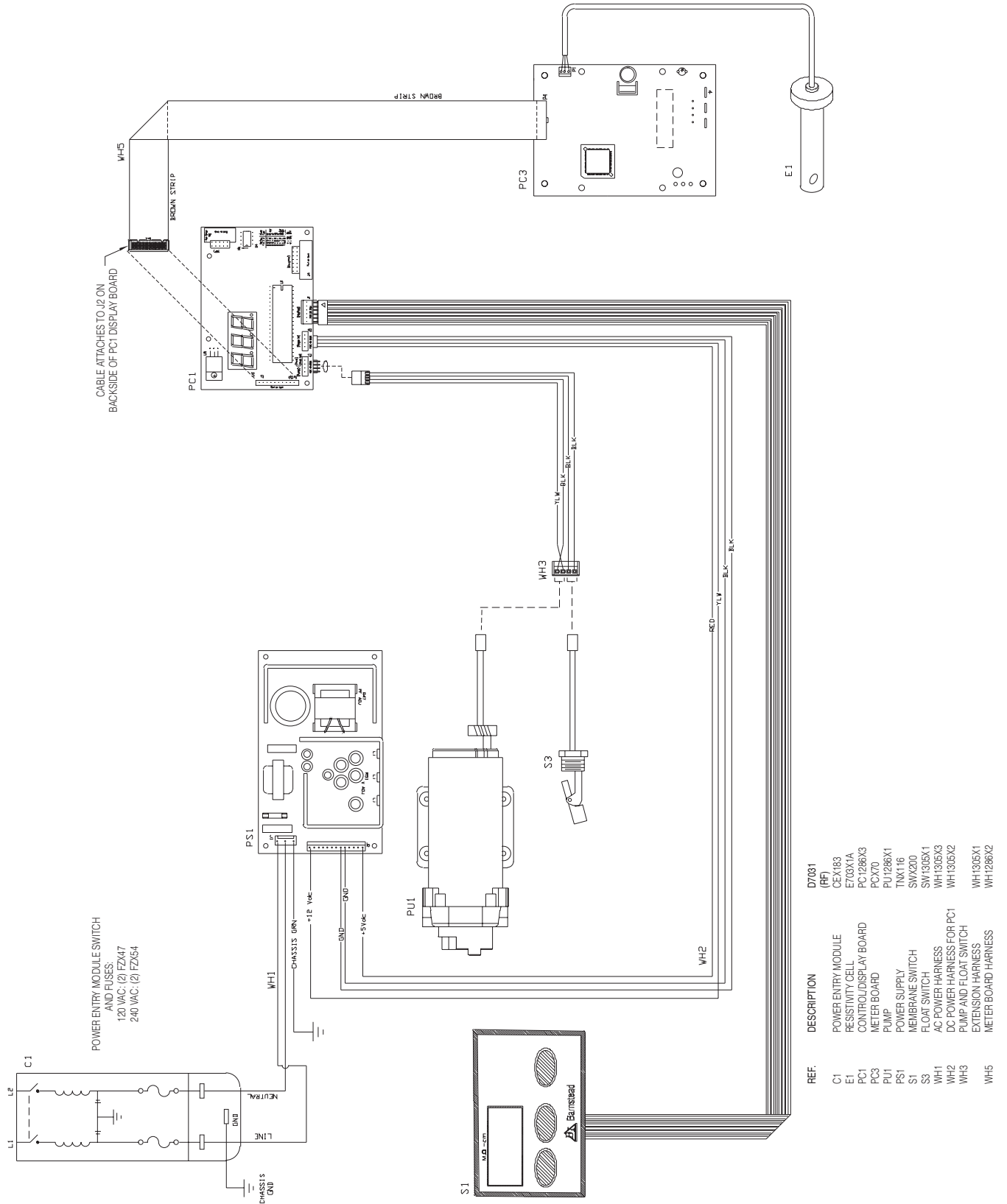
Description	Catalog No.	Recommended Quantity
Check valve	02214	1
Hose Barb Fitting	05930	1

Safety Stock

For critical applications where performance with *minimum* downtime is required, Barnstead International recommends that you maintain a local stock of those parts listed in the **General Maintenance** parts and **SAFETY STOCK** sections.

Description	Catalog No.	Recommended Quantity
Replacement Control/Display PCB	PC1286X2	1
Resistivity Meter Board	PCX70	1
Pump and Motor Ass'y 100-240 Volt	PU1286X1	1
Resistivity Cell	E703X1A	1
Resistivity Cell O-ring	GSX29	1
Draw-off Valve Ass'y	PM1305X1	1
Float Switch	SW1305X1	1
Power Supply	TNX116	1

Wiring Diagram



Ordering Procedures

Please refer to the Specification Plate for the complete model number, serial number and series number when requesting service, replacement parts or in any correspondence concerning this unit.

All parts listed herein may be ordered from the Barnstead International dealer from whom you purchased this unit or can be obtained promptly from the factory. When service or replacement parts are needed we ask that you check first with your dealer. If the dealer cannot handle your request, contact our Customer Service Department at 563-556-2241 or 800-553-0039.

One Year Limited Warranty

Barnstead International (“BARNSTEAD”) warrants that if a product manufactured by Barnstead shall be free of defects in materials and workmanship for one (1) year from the first to occur of (i) the date the product is sold by BARNSTEAD or (ii) the date the product is purchased by the original retail customer (the “Commencement Date”). Except as expressly stated above, BARNSTEAD MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, WITH RESPECT TO THE PRODUCTS AND EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES, INCLUDING BUT NOT LIMITED TO, WARRANTIES OF DESIGN, MERCHANT ABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

An authorized representative of BARNSTEAD must perform all warranty inspections. In the event of a defect covered by BARNSTEAD’s warranty, BARNSTEAD shall, as its sole obligation and exclusive remedy, provide free replacement parts to remedy the defective product. In addition, for products sold by BARNSTEAD within the continental United States or Canada, BARNSTEAD shall provide provide free labor to repair the products with the replacement parts, but only for a period of ninety (90) days from the Commencement Date.

BARNSTEAD’s warranty provided hereunder shall be null and void and without further force or effect if there is any (i) repair made to the product by a party other than BARNSTEAD or its duly authorized service representative, (ii) misuse (including use inconsistent with written operating instructions for the product), mishandling, contamination, overheating, modification or alteration of the product by any customer or third party or (iii) use of replacement parts that are obtained from a party who is not an authorized dealer of BARNSTEAD.

Heating elements, because of their susceptibility to overheating and contamination, must be returned to the BARNSTEAD factory and if, upon inspection, it is concluded that failure is due to factors other than excessive high temperature or contamination, BARNSTEAD will provide warranty replacement. As a condition to the return of any product, or any constituent part thereof, to BARNSTEAD’s factory, it shall be sent prepaid and a prior written authorization from BARNSTEAD assigning a Return Materials Number to the product or part shall be obtained.

IN NO EVENT SHALL BARNSTEAD BE LIABLE TO ANY PARTY FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR ANY DAMAGES RESULTING FROM LOSS OF USE OR PROFITS, ANTICIPATED OR OTHERWISE, ARISING OUT OF OR IN CONNECTION WITH THE SALE, USE OR PERFORMANCE OF ANY PRODUCTS, WHETHER SUCH CLAIM IS BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE), ANY THEORY OF STRICT LIABILITY OR REGULATORY ACTION.

The name of the authorized Barnstead International dealer nearest you may be obtained by calling 1-800-446-6060 (563-556-2241) or writing to:

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