

WaterPro PS

**Models 90005-00, 90005-01, 90005-02, 90005-03,
90006-00, 90006-01, 90006-02, 90006-03,
90007-00, 90007-01, 90007-02, 90007-03,
90007-04, 90007-05, 90008-00, 90008-01**

INSTRUCTION MANUAL

**Product designs are subject to change without notice
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Printed in U.S.A.**

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Components Shipped

Carefully check the contents of the carton for damage that may have occurred in transit. Do not discard the carton or packing material until all components have been checked against the following list and the equipment has been installed and tested.

As shipped, the carton should contain the following:

Part Number	Description
90005-00	General Chemistry Model
90005-01	General Chemistry Pistol Model
90005-02	General Chemistry Model, 230 VAC
90005-03	General Chemistry Pistol Model, 230 VAC
90006-00	HPLC Model
90006-01	HPLC Pistol Model
90006-02	HPLC Model, 230 VAC
90006-03	HPLC Pistol Model, 230 VAC
90007-00	UF Model
90007-01	UF Pistol Model
90007-02	UF Model, 230 VAC
90007-03	UF Pistol Model, 220 VAC
90007-04	HPLC/UF Hybrid
90007-05	HPLC/UF Hybrid 230 VAC
90008-00	Premier Model
90008-01	Premier Model, 230 VAC

INTRODUCTION

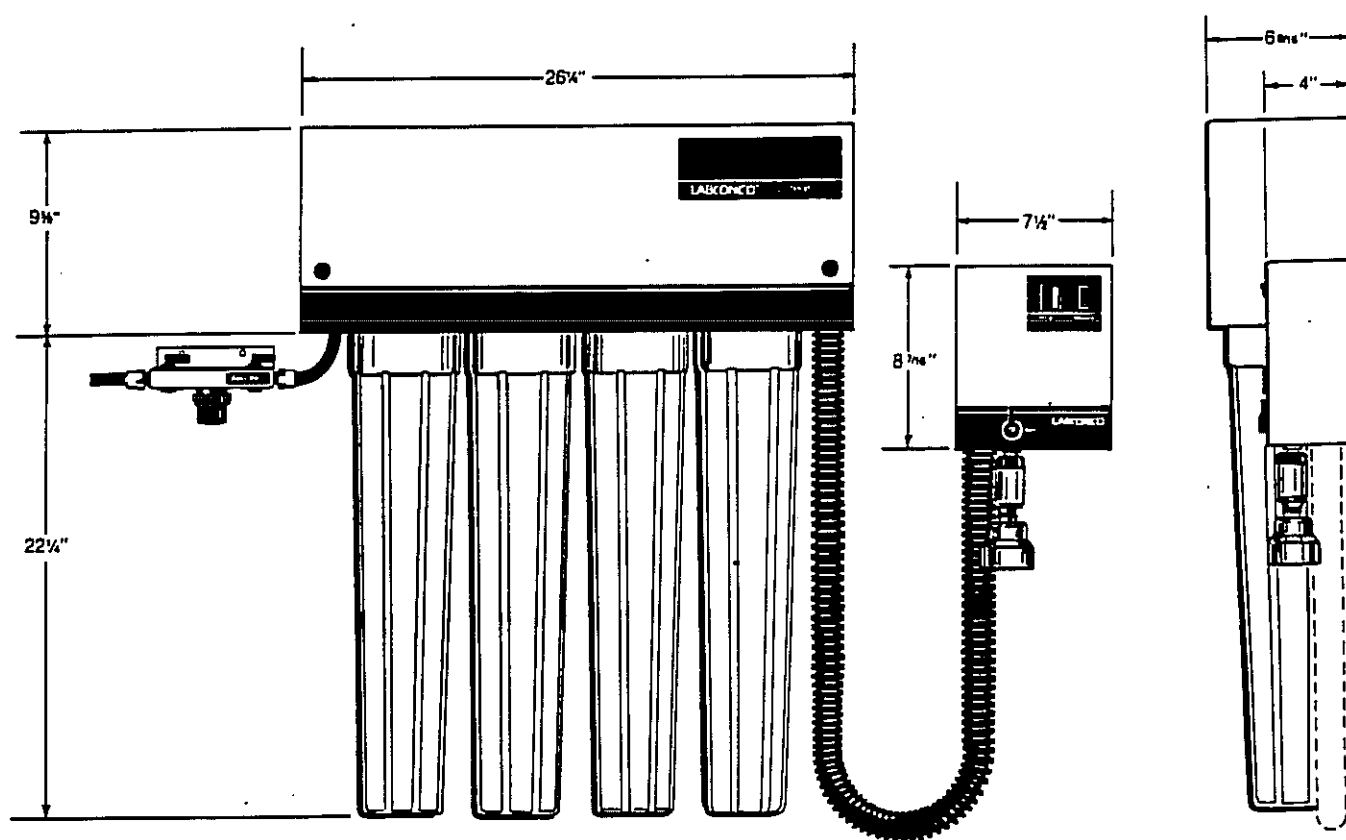
General Description

The Labconco WaterPro PS polishing systems have been specifically designed to meet the ultrapure water needs in a variety of laboratory applications.

The system design allows the dispenser with water quality monitor to be mounted in a convenient location, while placing the main polishing unit up to six feet away. Automatic recirculation to the dispense valve allows the WaterPro PS to maintain optimal water quality while minimizing bacterial build-up.

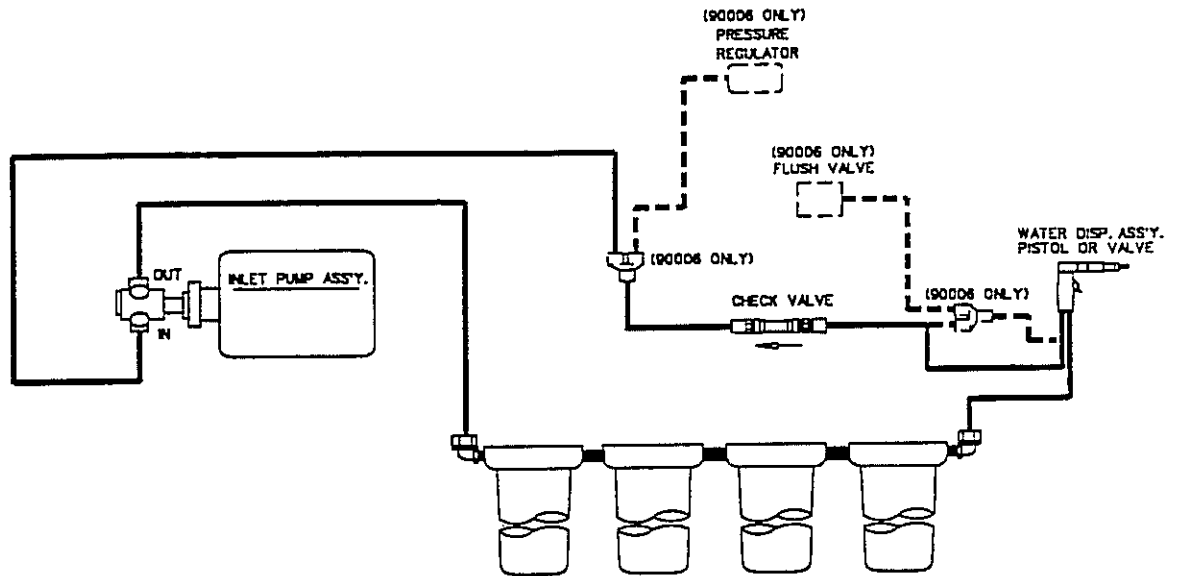
The standard WaterPro PS models are ideally suited for general chemical research. The WaterPro PS HPLC models are specifically designed for demanding analytical chemistry work, requiring the lowest levels of Total Organic Carbon (TOC). The WaterPro PS UF models are suited for bioanalytical research, requiring pyrogen-free water.

Diagram



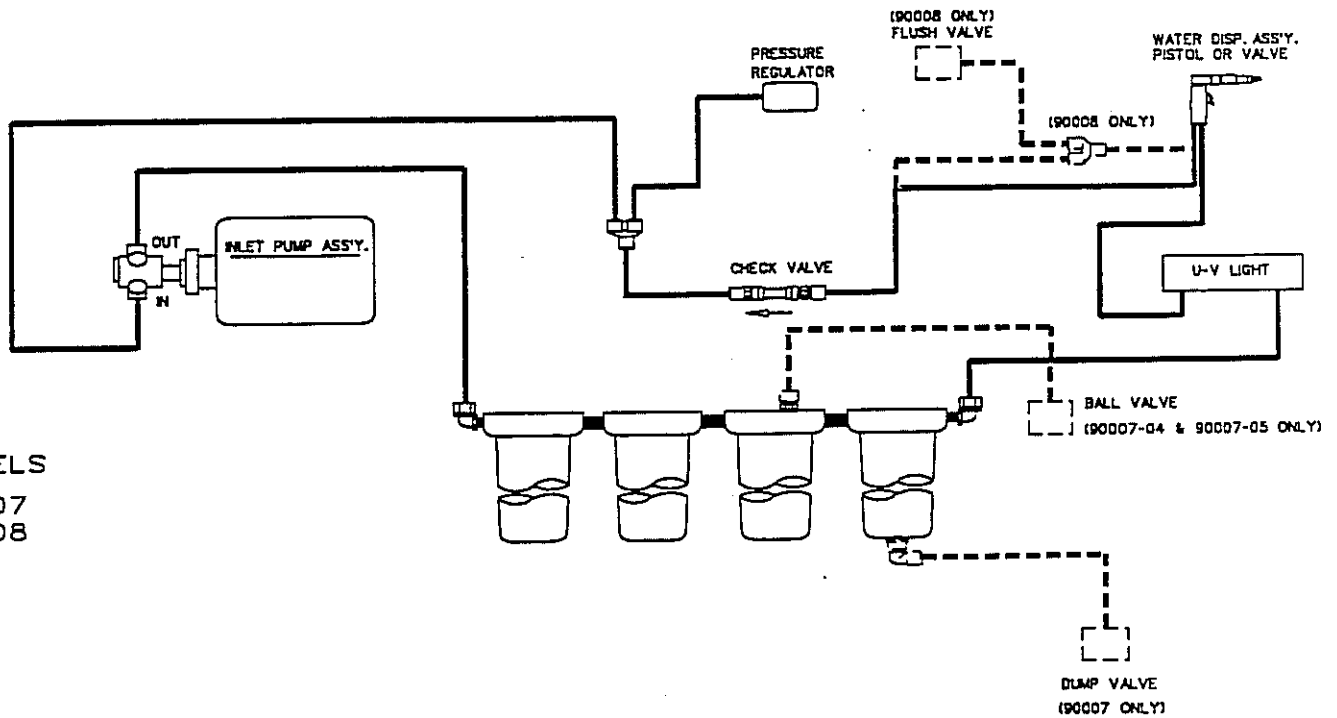
MODELS

90005
90006



MODELS

90007
90008

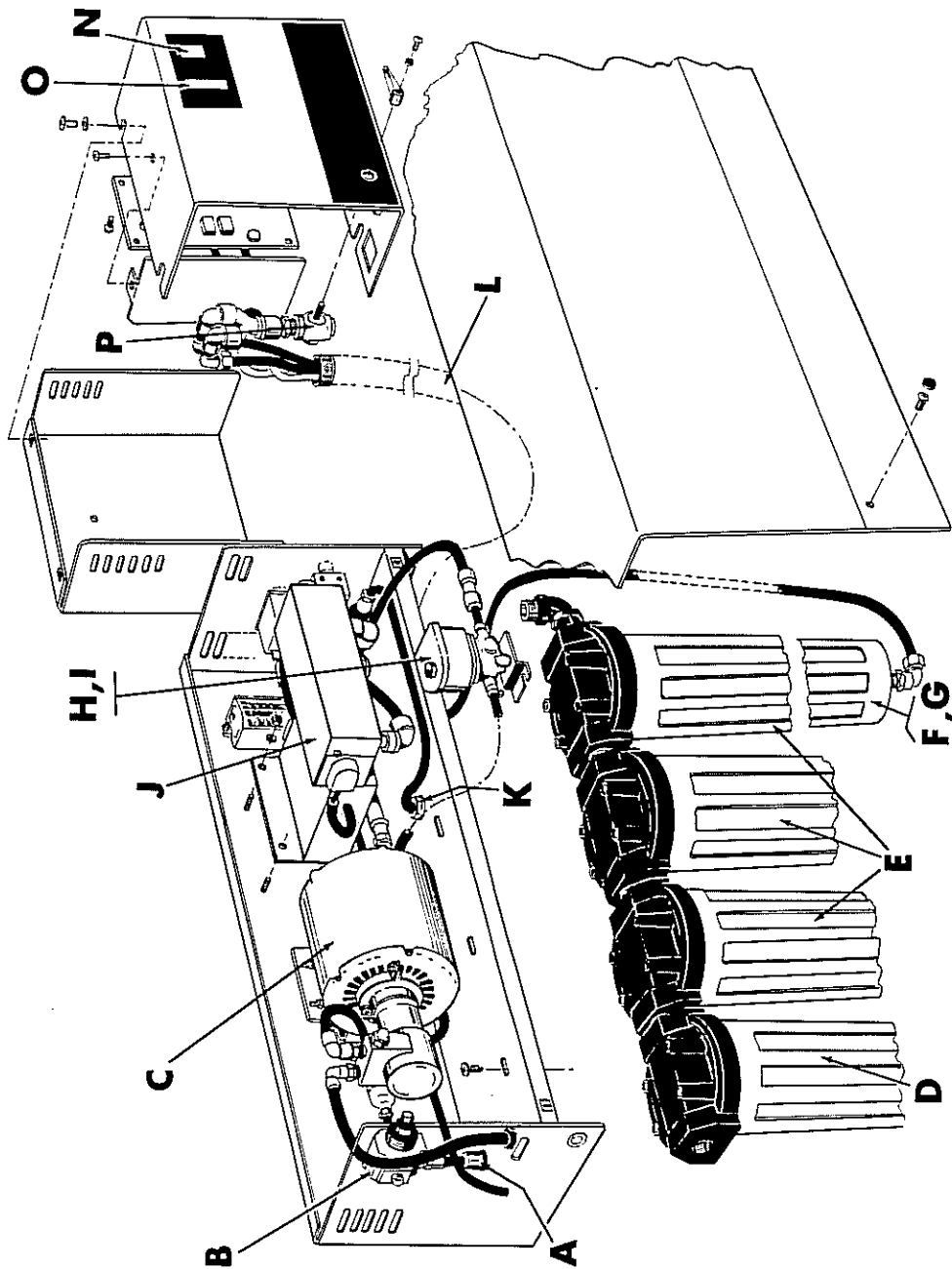


Flow Diagram

INTRODUCTION

Component Identification

- (A) **Inlet Port. (located on underside).** Connects the WaterPro PS to the feedwater supply line (3/8" O.D. rigid plastic tubing).
- (B) **Pressure Regulator.** Protects the system from excessive inlet pressure.
- (C) **Recirculation Pump & Motor.** Circulates water through the system.
- (D) **Carbon Cartridge.** Contains activated carbon for the removal of organics.
- (E) **Deionization Cartridges.** Contains nuclear grade ion exchange resin for the removal of ionic contaminants.
- (F) **Organic Adsorption Cartridge. (HPLC Systems only).** Contains organic adsorption media for the removal of trace organic contaminants.
- (G) **Ultrafilter. (UF Systems only).** Removes particulates greater than 10,000 Daltons in size.
- (H) **TOC Dump Valve. (HPLC Systems only).** Directs a small portion of purified water to drain during automatic recirculation, allowing the system to maintain low TOC values.
- (I) **Ultrafilter Dump Valve. (UF Systems only).** Allows the UF to flush itself during automatic recirculation operations, extending the life of the ultrafilter.
- (J) **UV Reactor. (UF Systems and HPLC Premier System only).** Irradiates the purified water before it is dispensed, ensuring low bacteria counts and low organics. (UF systems - 254 nm, HPLC units 185 nm)
- (K) **Resistivity Sensor.** Reports the resistivity (purity) of the purified water to the water quality monitor.
- (L) **Tether.** Connects the remote dispensing station to the main polishing unit.
- (M) ***Decontaminator. (UF Systems and HPLC Premier System only).** Allows the operator to use a solid decontaminator tablet for system sanitization.
- (N) **Power Switch.** Activates the recirculation pump and water quality display. It has no effect on the automatic recirculation or the dump valve options.



DETAILED COMPONENT DIAGRAM

INTRODUCTION

Component Identification (Con't)

- (O) **Water Quality Display.** Displays the resistivity of the purified water in Meg-Ohm-cms. The display is color coded as follows:

Green - 16-18 Meg-Ohm-cm
Yellow - 10-15 Meg-Ohm-cm
Red - 0-9 Meg Ohm-cm

As the resistivity of the purified water approaches a particular value (18 Meg-Ohm, for example) that specific LED segment will begin to flash. When the resistivity equals that value, the corresponding LED will remain lit.

- (P) **Dispense Valve.** The quarter turn valve dispenses purified water.
- (Q) ***Final Filter.** The hollow fiber filter removes bacteria and particulate matter to 0.2 microns.
- (R) ***Filling Bell.** Minimizes airborne contamination of the purified water during dispensing operations.
- (S) ***Optional Dispense Pistol.** (not shown). The dispensing pistol allows greater freedom and is included on all WaterPro PS Pistol™ and Premier models.
- (T) ***Optional Dispensing Pistol Heater** (not shown). The holster for the dispensing pistol contains an integral heater which keeps the outlet of the final filter bacteria-free and is included on a WaterPro PS Pistol™ and Premier models.

***Not Shown**

System Description:	Self contained, cartridge water purification system.
Technologies:	STANDARD MODELS Activated carbon adsorption, Deionization. HPLC MODELS Activated carbon adsorption, deionization, organic adsorption. UF MODELS Activated carbon adsorption, deionization, ultrafiltration. HYBRID MODELS Activated carbon adsorption, deionization, organic adsorption and ultrafiltration.
Water Production Rate:	Up to 2.0 liters per minute.
Water Dispensing Systems:	Remotely located quarter turn valve with quick connect fitting for attachment of hollow fiber final filter. Filling bell is included. Flow rate adjustment is infinite and continuous. Optional dispensing pistol with quick connect fitting for installation of hollow fiber final filter. Flow rate is infinitely adjustable or continuous full flow.
Water Quality Produced:	Meets or exceeds the following: American Society for Testing and Materials Type 1 Water College of American Pathologists-Type 1 Water National Committee for Clinical Laboratory Standards-Type 1 Water

SPECIFICATIONS

Dimensions	Main Polishing Unit	Remote Dispensing Station	PS Pistol™ & Premier Dispensing Station
Height:	9-5/8"	8-7/16"	8-7/16"
Width:	26-1/4"	7-1/2"	8-1/2"
Depth:	6-9/16"	4"	4"
Weight: (dry)	55 lbs.	5 lbs.	6 lbs.
Feedwater Requirements:			
Type:	Prepurified via reverse osmosis, distillation, deionization, or tapwater with a conductivity of $\leq 100 \mu S$		
Temperature:	10-30 degrees Centigrade (32-83 degrees Fahrenheit)		
pH:	4-10		
Pressure and Flow:	0-100 PSIG (0-7 Bar) providing up to 0.5 Gallon per Minute (2 Liters/Minute)		
Deionization Capacity:	Standard Systems 2484 Grains as CaCO ₃		
	HPLC and UF Systems 1,656 Grains as CaCO ₃		
Electrical Requirements:	115 VAC, 60 Hz, 7.5 Amps or 230 VAC, 50 Hz, 4.0 Amps Single Phase		
Environmental Conditions Temperature:	5-26 degrees Centigrade (40 - 80 degrees Fahrenheit)		
Relative Humidity:	Less than 80% R.H.		
Deionization:	Nuclear grade mixed bed resin		
Ultrafiltration: (optional)	Polysulfone membrane in a spirally wound configuration		
Final Filtration:	Self-venting hollow fiber filter		

Preparation

The WaterPro PS main polishing unit and remote dispensing station should be located adjacent to appropriate electrical, feedwater and drain connections. For further information, read the Service Connection Section below.

Do not remove the polishing unit from its shipping box until it is ready to be placed in its final location. Call Labconco at (800) 821-5525 or (816) 333-8811 or return the business reply card to obtain your WaterProfile test kit. Pretreatment of the feedwater if required will be recommended after analysis.

Inspection

Your WaterPro PS has been fully tested and inspected prior to shipment. Inspect your unit thoroughly, however, at the time of installation and prior to use. Report any damage that may have occurred in transit immediately to your local authorized laboratory supply dealer.

Installation Factors

Unfold the installation template included and follow the instructions listed on it to prepare the surface for mounting.

NOTE: The 6 foot long tether line allows the main polishing unit to be located remotely from the remote dispensing station, on any suitable vertical surface. The main polishing unit may be installed under counters, in closets, or supply corridors, etc., provided there is enough clearance for routine maintenance.

Service Connections

The service connections for both the main polishing unit and the remote dispensing station should be identified before attaching either to their mounting surface. The service connections required are as follows.

Electrical Connection

Your Labconco WaterPro PS main polishing unit comes fully wired with electrical cord and plug to connect to a standard outlet. A fused 115 volt, 1 phase, 7.5 amp supply is required. (230 volt, 1 phase, 4 amp, supplied with electrical cord without plug).

Feedwater Quality

The WaterPro PS systems are designed for use with water which has been prepurified, such as distilled or reverse osmosis product water, or on tap water with a conductivity of 100 μ S or less.

INSTALLATION

NOTE: System performance and cartridge life-span are directly related to the feedwater quality. It is important to establish feedwater quality before operating the unit. If you are uncertain about the quality of your feedwater supply, or would like us to calculate the capacity of your system's cartridges given your feedwater, contact Labconco at 1-800-821-5525.

WARNING: Do not install the main polishing unit or remove dispensing station directly over or near equipment that uses electrical service. Routine use and maintenance of the unit may involve water spillage and the potential for electrical shock if improperly located.

Feedwater Connection

The feedwater line should be 3/8" O.D. rigid plastic tubing or 3/8" I.D. flexible tubing, using the hose barb adaptor included. At a convenient spot in the supply line, a valve (supplied by the customer) or the decontaminator assembly (in units equipped with this feature) should be installed so that the WaterPro PS may be isolated from the feedwater supply. Line pressure should not exceed 100 PSIG.

NOTE: Organic adsorption and deionization cartridges have a finite capacity for purifying water before being exhausted. As the cartridges approach exhaustion, the system will require longer recirculation times to achieve high resistivity, and the water quality may fluctuate during dispensing. Upon exhaustion, the resistivity will decrease rapidly without recovery. Replacement of the organic adsorption and deionization cartridges will restore the purified water quality.

Drain Connections

The HPLC and UF models are equipped with a drain line that must be routed to a suitable drain.

Tubing Connections

To connect the feedwater supply to the inlet port, cut the tube with a sharp knife and check for burrs. Grasping the tube (or hose adaptor) firmly, push it straight into the inlet port of the unit, located on the bottom left side, until the tube stops. To release the tube, press the dark gray collar in, while pulling the tube straight out.

NOTE: When connecting the WaterPro PS to a non-pressurized feedwater supply, such as a storage tank, use a feed tube with at least 3/8" inner diameter. The length of the supply tube, and the height from the tank to the WaterPro PS inlet should not exceed 5 feet.

- . **IMPORTANT:** The WaterPro PS may employ one or more of the following chemicals, electrical devices, mercury vapor lamps, high pressure pumps, or pressurized lines. Care should be taken when installing, operating, or servicing your WaterPro PS system.
- . **WARNING:** Ensure that the unit is connected to electrical service in accordance to local and national electrical codes. Failure to do so may create a fire or electrical hazard.
- . **WARNING:** Ensure that the WaterPro PS is connected to a pre-purified source of water, or to a potable water supply with a conductivity of 100 μ s or less. All feed and drain lines should be connected and routed in accordance to local and national plumbing codes.
- . **WARNING:** Do not install the main polishing unit or the remote dispensing station directly over or near equipment that uses electrical service. Routine use and maintenance of the unit may involve water spillage and the potential for electrical shock if improperly located.
- . **WARNING:** The WaterPro PS automatically starts and stops at intervals during nonuse. To prevent the possibility of water spillage or electrical shock, always unplug the unit prior to servicing it.
- . **WARNING:** The germicidal lamp used in some models emits ultraviolet radiation during operation. ALWAYS unplug the system before removing the main polishing unit cover or servicing the lamp.
- . **WARNING:** When sanitizing the system:
 - Avoid splashing the sanitizing solution on skin or clothing.
 - Ensure that all piping connections are tight to avoid leakage.
 - Always depressurize the system COMPLETELY before disassembly.
 - Ensure adequate ventilation.
 - Carefully follow the manufacturer's safety instructions when handling sanitizers and always dispose of sanitizing solutions in accordance with local and national laws.
- . **NOTE:** System performance and cartridge life-span are directly related to the feedwater quality; it is important to establish the feedwater quality before operating the unit. If you are uncertain about the quality of your feedwater supply, or would like us to calculate the capacity of your system's cartridges given feedwater, contact Labconco at (800) 821-5525.

SAFETY PRECAUTIONS

. **NOTE:** When activating a new Polishing Station, or one that has been in storage, the system will initially be full of air, which will cause the water quality display to operate erratically or incorrectly. This is common, and the display will resume normal operation when all of the air has been displaced from the system.

. **NOTE:** When installing or servicing cartridges in the Polishing Station, air may be introduced into the system which will cause the water quality display to operate erratically or incorrectly. This is common, and the display will resume normal operation when all of the air has been displaced from the system.

. Mounting Surface Composition, condition and construction must be considered when mounting this unit. The surface must be able to support at least 500 lbs. Inadequate support may result in damage to the mounting surface and/or equipment.

Initial Operation and Cartridge Replacement

- (1) Remove the front panel by removing the two screws on the front and unscrew the four bowls. Install the carbon filter in the first bowl. Replace other bowls empty. Check each bowl to ensure that the O-ring is seated properly. Carefully thread the bowls back into position **HAND TIGHTENING ONLY**.

CAUTION: Hand tighten the bowls only. Never use the supplied spanner wrench or any other tool to tighten the bowls, this may result in damage to the bowls.

**CARTRIDGE INSTALLATION SEQUENCE
(FROM LEFT TO RIGHT)**

Model	Cartridge Type	Kit Number	Part No.
Genl Chemistry Models 90005 90005-01	Carbon Deionization Deionization Deionization	90471-01	9007201 9007301 9007301 9007301
HPLC and Premier Models 90006 90006-01 90008	Carbon Deionization Deionization Organic Adsorption	90472-01	9007201 9007301 9007301 9053300
UF Models 90007 90007-01	Carbon Deionization Deionization	90474-01	9007201 9007301 9007301
	Ultrafilter		90489

Hybrid Models 90007-04 90007-05	Carbon Deionization Organic Adsorption	90666	9007201 9007301 90533
	Ultrafilter		90489

NORMAL OPERATION

- (2) DO NOT install final filter at this point.
- (3) Place a suitable container or drain under the remote dispensing station (or pistol) and SLOWLY open the inlet supply valve and dispense valve.
- (4) Plug the unit into an electrical outlet and turn the power switch on.
- (5) When there is a steady flow of water from the final filter connector, shut off the feed water and disconnect the unit. Remove the last three bowls, discard the water and install the cartridges in the sequence shown in Table 1. Avoid excessive handling of the cartridges. Check each bowl to ensure that the O-ring is seated properly. Carefully thread the bowl back into position **HAND TIGHTENING ONLY**.
- (6) Turn the feed water on and plug the unit into an outlet. When there is a steady flow of water from the final connector, close the dispense valve and check all fittings for leaks and tighten as required.
- (7) Reinstall the main polishing unit cover by tightening the two screws and snapping the screw covers over the screw heads.
- (8) Remove the final filter from its plastic bag, and orient it as shown on the filter label.
- (9) Thread the filter into the valve. Hand tighten the fitting. On the PS Pistol™ and Premier models the final filter installs in the dispensing pistol in the same manner.
- (10) Install the filling bell (if desired) by pushing it onto the filter outlet.
- (11) After installing new cartridges, the water quality monitor will display a gradual increase in resistivity (water quality) during recirculation.

After installing new cartridges, or when the system is new, the rinse up time may be as long as 24 hours before the resistivity equals or exceeds Type I specifications.

NOTE: When activating a new Polishing Station, or one that has been in storage, the system will initially be full of air, which will cause the water quality display to operate erratically or incorrectly. This is common, and the display will resume normal operation when all of the air has been displaced from the system.

NOTE: When installing or servicing cartridges in the polishing station, air may be introduced into the system which will cause the water quality display to operate erratically or incorrectly. This is common, and the display will resume normal operation when all of the air has been displaced from the system.

For routine operations, the recirculation pump should be turned on at the start of the workday to prevent waiting for the unit to rinse up to optimal quality. The unit should be turned off at the end of the day,

The resistivity (purity) of the product water is continuously displayed by the water quality monitor. The LED segments are colored as follows:

Green - 16-18 Meg Ohm-cm
Yellow - 10-15 Meg Ohm-cm
Red - 0-9 Meg Ohm-cm

As the resistivity of the purified water approaches a particular value (18 Meg-Ohm, for example) that specific LED segment will begin to flash. When the resistivity equals that value, the corresponding LED will remain lit.

Automatic Recirculation

All of the WaterPro PS systems are designed to automatically start and recirculate water during periods of nonuse to minimize rinse up time and bacterial growth. The automatic recirculation cycles last for approximately 4 minutes every two hours.

Ultrafilter Dump Valve Operation

The UF dump valve has been preset to open for one minute on alternate recirculation cycles (the valve opens for one minute every four hours), to flush the ultrafilter membrane.

TOC Dump Valve Operation

The TOC dump valve has been preset to open for one minute on alternate recirculation cycles (the valve opens for one minute every four hours), to maintain the lowest possible TOC values.

Final Filter Sterilization

The final filter may be autoclaved at 121°C for 30 minutes, with a slow exhaust. Repeated autoclavings are not recommended.

NORMAL OPERATION

UV Lamp Replacement (UF Systems and HPLC Premier Systems only)

The UV lamp should be replaced annually. To replace the lamp, use the following procedure:

- (1) Unplug the unit and remove the main polishing unit cover by removing the two screws on the front.
- (2) Remove the lamp by gently prying off either of the white lamp sockets at each end of the reactor body. Carefully slide the lamp out of the reactor by pulling on the attached lamp socket. Remove and discard the old lamp and install a new lamp by reversing the steps listed above.

Bypassing TOC Dump Valve Operation

To prevent the TOC dump valve from operating, use the following procedure:

- (1) Unplug the unit.
- (2) Loosen the four screws which secure the face of the remote dispense station.
- (3) Pull the face of the remote dispense station straight off.
- (4) Switch the TOC dump valve off by moving the switch located in the center of the small circuit board to the "off" position.
- (5) Reassemble the unit by reversing the steps.

Final Filter Replacement

It is recommended that the final filter be replaced every 2-3 weeks, when there is an unacceptably high passage of bacteria through the filter, or when the flow rate drops below an acceptable level. The filter should be replaced, following the steps outlined in the INITIAL OPERATION SECTION.

System Sanitization

Frequency of system cleaning and sanitization will depend directly on the quality of the feedwater and the operating environment of the unit. The unit should be cleaned when needed, such as when the bacterial or organic contaminant concentrations become unacceptable.

FOR SYSTEMS EQUIPPED WITH THE DECONTAMINATOR, THE SANITIZATION PROCEDURE IS AS FOLLOWS:

- (1) Unplug the Water Pro PS and remove the cartridges and final filter as described in the Cartridge Replacement section.
- (2) Close BOTH of the valves on the top of the decontaminator. Unscrew the bowl of the decontaminator, and discard the water.
- (3) Place one decontaminator tablet in the bowl, and reattach observing the following warning.

WARNING: The decontaminator tablets should always be stored in a cool, dry well ventilated area, with the container tightly closed.

- (4) Open BOTH of the decontaminator valves and plug in the WaterPro PS.
- (5) Place a suitable container under the dispense valve, turn on the WaterPro PS, and open the dispense valve until a steady stream of water flows from the valve.
- (6) Close the dispense valve and unplug the unit. IMMEDIATELY close BOTH of the decontaminator valves and remove the decontaminator pellet, disposing of it properly.
- (7) Reinstall the decontaminator bowl and reopen both of the valves. Allow the WaterPro PS to recirculate the Sanitizer for at least two hours, periodically opening the dispense valve to sanitize it.
- (8) Unplug the unit and open the dispense valve to depressurize the system.
- (9) Carefully discard the sanitizing solution, WITHOUT RINSING OUT THE BOWLS.
- (10) Install new cartridges in the appropriate bowls, plug in and turn on the WaterPro PS.

ROUTINE MAINTENANCE

- (11) Leave the dispense valve open until approximately 10 liters have been dispensed, then close the valve and install a new final filter. Allow the unit to recirculate until the resistivity is acceptable. The unit is now ready for operation.

WARNING: Decontaminator tablets are highly corrosive. Avoid contact with eyes, skin or clothing. ALWAYS use adequate eye, hand, and clothing protection and ventilation when handling the Decontaminator Tablets. Avoid breathing dust and fumes. In the event of skin contact, wash the affected area thoroughly for 15 minutes.

WARNING: Decontaminator tablets contain a strong oxidizing agent. Use them ONLY as described in this manual. DO NOT attempt to reuse the tablets. After use, carefully dispose of the tablet, avoiding contact with moisture, organic matter, or other reactive chemicals. DO NOT mix the decontaminator tablets with any other chlorinated or non-chlorinated cleaning compounds.

FOR SYSTEMS NOT EQUIPPED WITH THE DECONTAMINATOR, THE SANITIZATION PROCEDURE IS AS FOLLOWS:

- (1) Close the inlet valve (supplied by customer), unplug the WaterPro PS and remove the cartridges and the final filter as described in the Cartridge Replacement section.
- (2) Prepare approximately 16 liters of ONE of the following solutions:
 - .3% Bleach (1 liter of 5.25% household bleach in 15 liters of clean water)
 - Or
 - 2.0% Formaldehyde
 - Or
 - 3.0% Hydrogen Peroxide

WARNING: When sanitizing the system:

Avoid splashing the sanitizing solution on skin or clothing.

Ensure that all piping connections are tight to avoid leakage.

Always depressurize the system COMPLETELY before disassembly.

Ensure adequate ventilation.

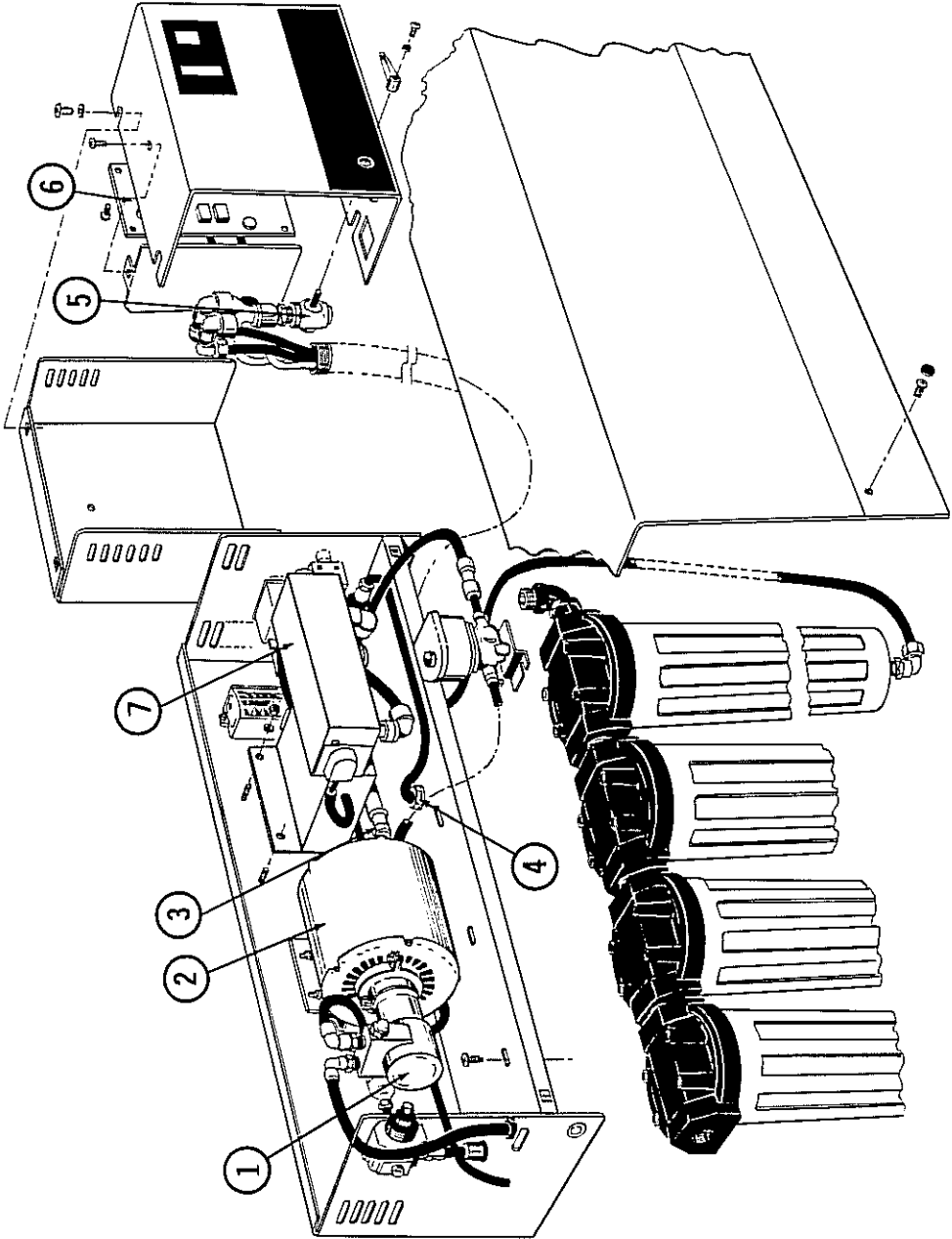
Carefully follow the manufacturer's safety instructions when handling sanitizers and always dispose of sanitizing solutions in accordance with local and national laws.

- (3) Partially fill each bowl with a portion of the sanitizing solution, and reattach them to the unit. Disconnect the feedwater line from the WaterPro PS and place it in the container of sanitizing solution.
- (4) Place a suitable container under the dispense valve until a steady stream of sanitizing solution flows from the valve.

- (5) Allow the WaterPro PS to recirculate the Sanitizer for at least two hours, periodically opening the dispense valve to sanitize it. After the sanitization is complete, unplug the unit and open the dispense valve to depressurize the system.
- (6) Carefully discard the sanitizing solution, **WITHOUT RINSING OUT THE BOWLS.**
- (7) Install new cartridges in the appropriate bowls, plug in and turn on the WaterPro PS.
- (8) Leave the dispense valve open until approximately 10 liters have been dispensed, then close the valve and install a new filter. Allow the unit to recirculate until the resistivity is acceptable. The unit is now ready for operation.

REPLACEMENT PARTS

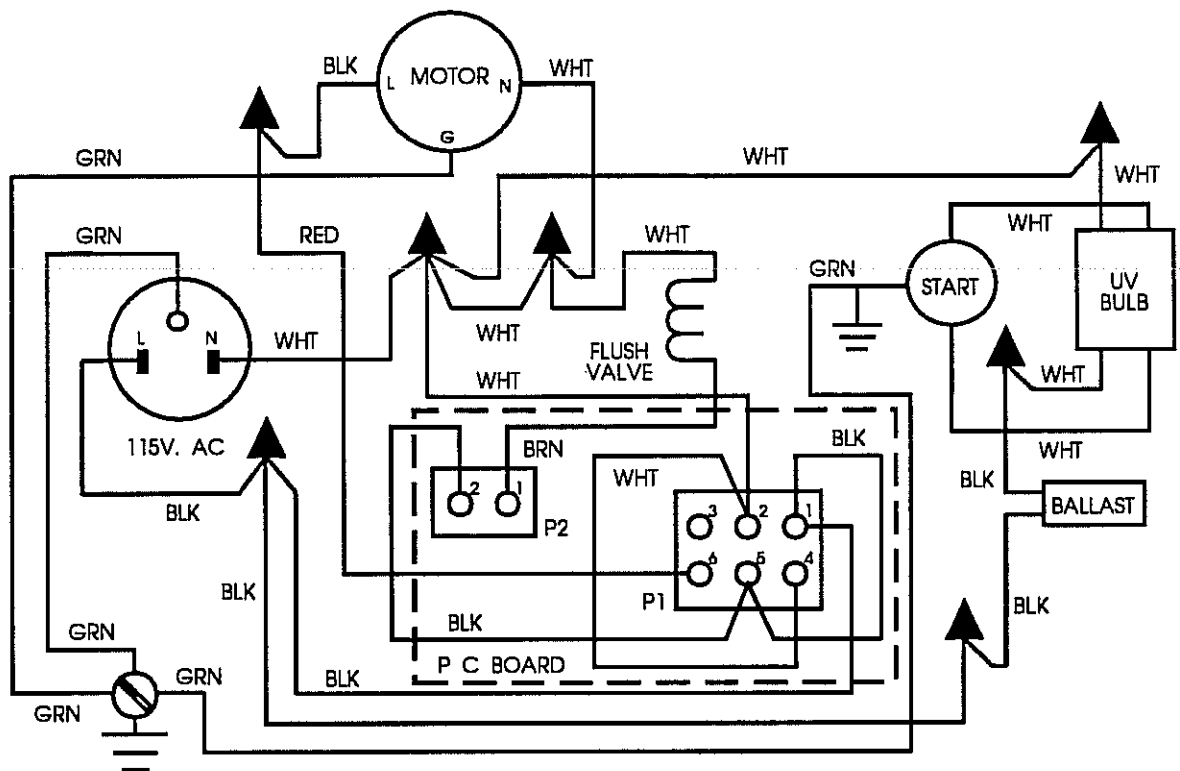
ITEM	QTY	PART NO.	DESCRIPTION
1	1	9047500	Pump Assembly, 115 VAC
1	1	9047501	Pump Assembly, 220 VAC
2	1	1210101	Motor Pump, 115 VAC
2	1	1210102	Motor Pump, 200 VAC
3	1	9048100	Check Valve Assy.
3	1	9048101	Check Valve Assy, HPLC Systems
4	1	9011100	Resistivity Cell
5	1	1360500	Dispense Valve
6	1	9049500	Printed Circuit Board
7	1	9096800 & 01	UV Reactor Assembly with 254nm UV
8		9096802 & 03	UV Reactor Assembly with 185 nm UV
9	1	9009500	254nm UV Lamp (not shown) for Models 9000700-01-02-03- 04-05
10	1	9048900	Ultrafilter Element (not shown) for Models 9000700-01-02-03- 04-05
11	1	9066500	185nm UV Lamp (not shown) for Models 9000800-01



REPLACEMENT PARTS DIAGRAM

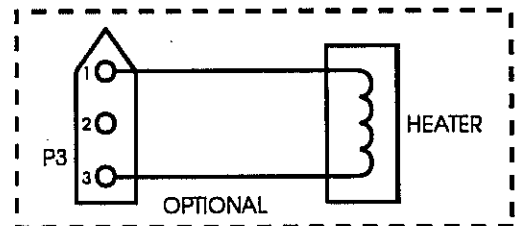
WIRING DIAGRAMS

115V, 60Hz Units with Junction Box

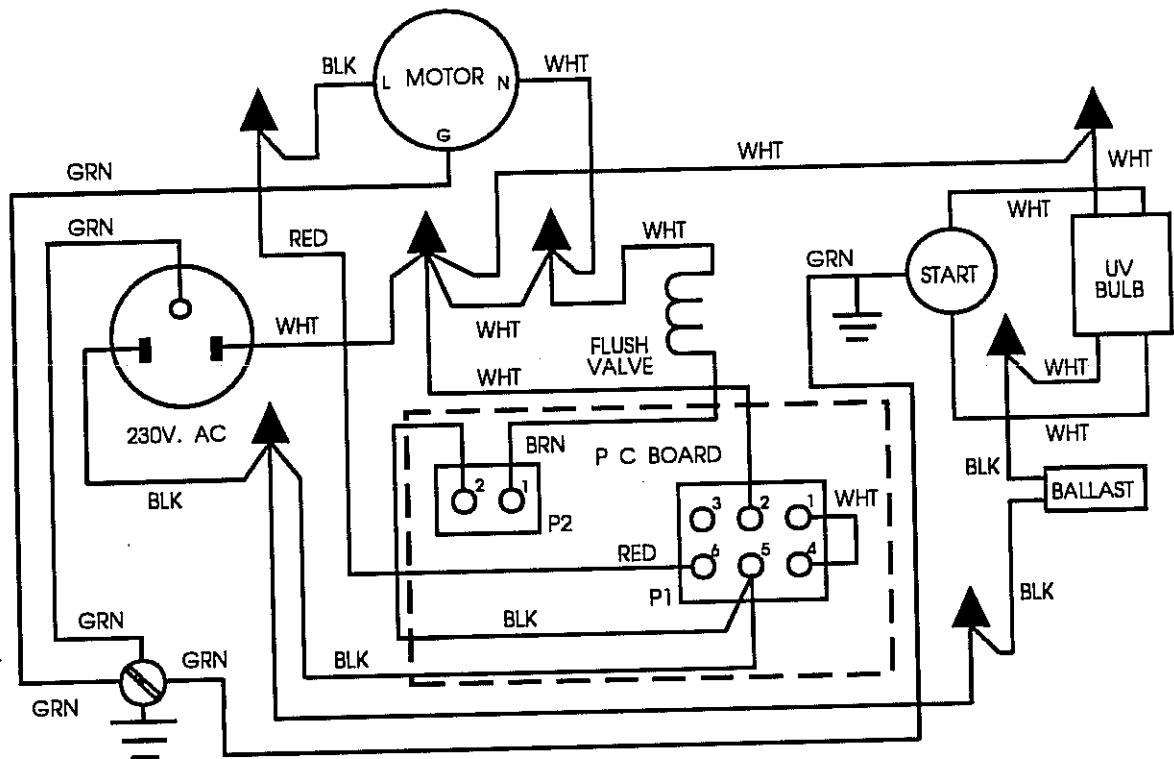


LABCONCO

WIRING DIAGRAM
PART NO. 90674



230V, 60 Hz units with Junction Box

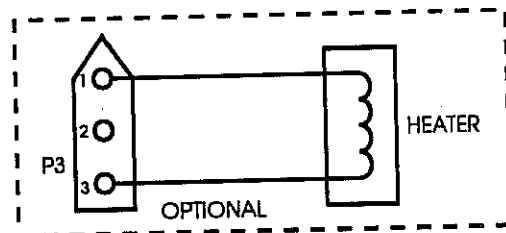


LABCONCO

WIRING DIAGRAM

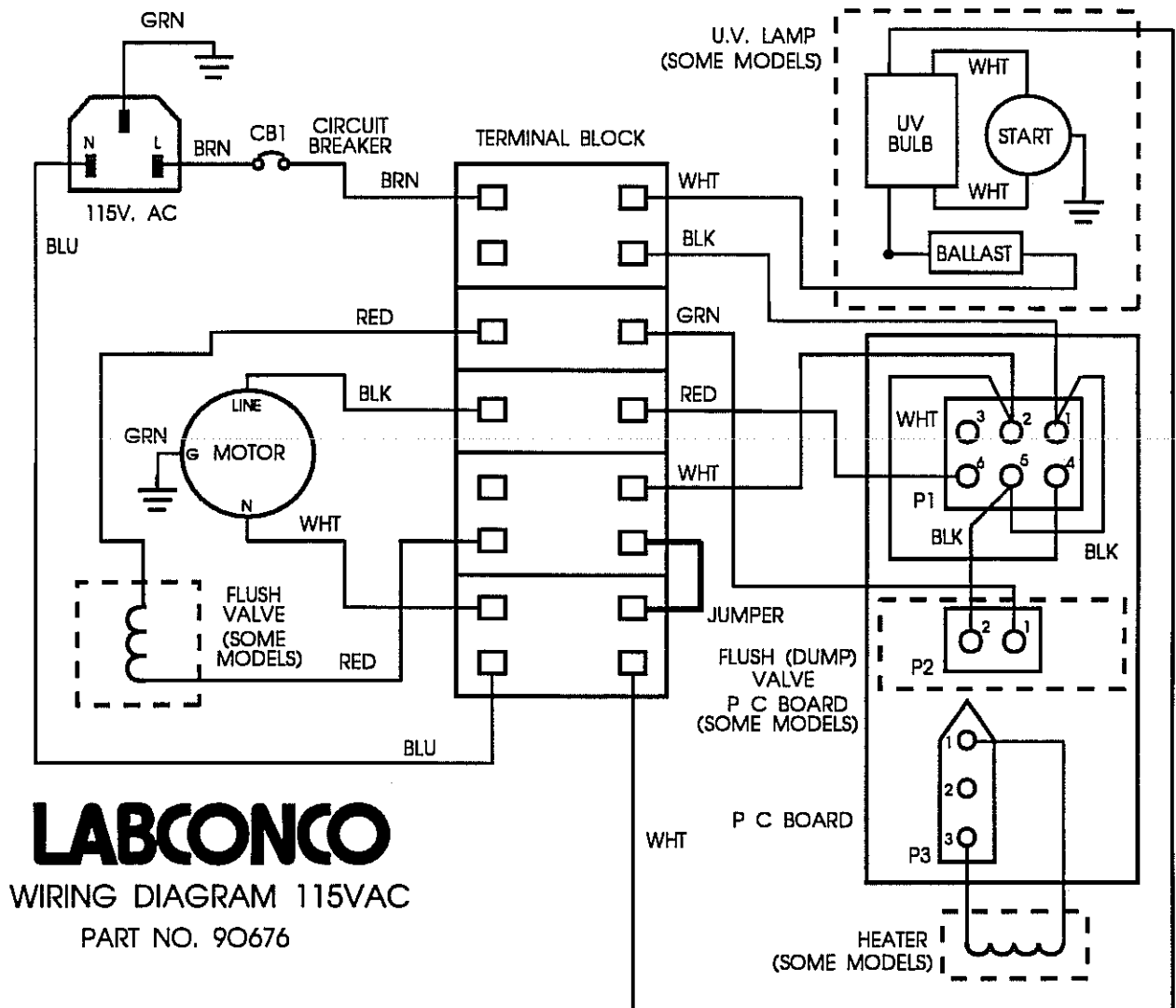
PART NO. 90675

REV -

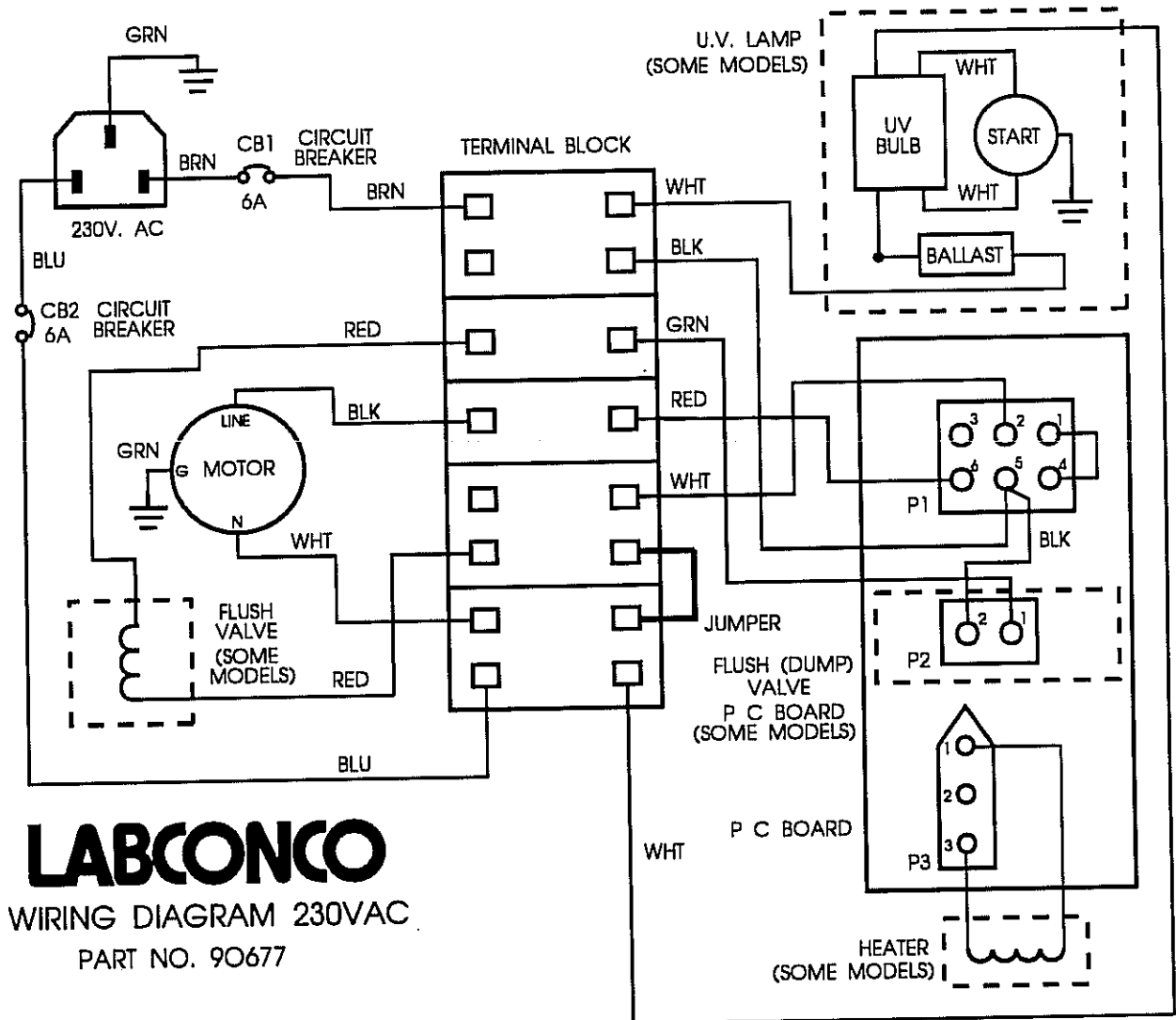


WIRING DIAGRAMS

115V, 60Hz units with Terminal Block



230V, 60Hz units with Terminal Block



TROUBLESHOOTING

PROBLEM	CAUSES	CORRECTIVE ACTION
Unit inoperative no LED segments lit.	Unit not plugged into facilities' outlet	Plug the Polishing Station into appropriate electrical service
	Circuit breaker tripped/fuse blown	Reset circuit breaker/replace fuse.
Unit inoperative only red LED segment is lit.	Power switch is in the off position.	Press power button to switch system on
	Defective circuit board	Replace circuit board
Recirculation Pump operates but no water is dispensed	Feed valve or decontaminator valve is closed	Open the valve
	Feedwater line is kinked, restricted, or out of water supply	Inspect and adjust feedwater line as required
	Final filter is clogged	Replace final filter
	Return line check valve is defective	Replace check valve assembly.
	Recirculation pump is defective	Replace recirculation pump
Water Quality Display acting erratically	New cartridges installed in system	Purge all of the air out of the polishing system
	Air trapped in resistivity cell	Purge all of the air out of the polishing system

PROBLEM	CAUSES	CORRECTIVE ACTION
Water Quality display acting erratically (Con't)	Deionization cartridges are exhausted	Replace the deionization cartridges
	Polishing loop resistivity cell not connected to wiring harness	Reconnect cell to wiring harness
	Polishing loop resistivity cell is defective	Replace cell
Reduce Flow at Dispense valve/pistol	Final filter is blocked	Replace final filter
	Kinked or restricted tube in the feed line or polishing system	Inspect polishing loop tubing for any kinks or restrictions
Polished water will not rinse up to desired quality	Cartridges are past expiration date	The shelf life of cartridges is two years from the day of manufacture. Replace the expired cartridges with new ones. Check the manufactured date
	Cartridges installed in wrong sequence	Install the cartridges as described in the 'Initial Operation and Cartridge Replacement' section

TROUBLESHOOTING

PROBLEM	CAUSES	CORRECTIVE ACTION
Polished water will not rinse up to desired quality (Con't)	Water is bypassing the cartridges	Ensure that the O-rings at the top of the deionization cartridges and the post at the top of the canister are intact.
Reduced cartridge life	Cartridges are past expiration date	Check the manufactured date on the cartridge package. The shelf life of cartridge is two years from the day of manufacture. Replace the expired cartridges with new ones.
	Feedwater quality has changed	If the source is tap water, some water supplies are subject to seasonal variations in quality, or the source of the tap water may have changed. Submit a sample to Labconco for analysis by the WaterPro File System. If the source is a reverse osmosis system, ensure that it is working properly. If the source is a still, ensure that it is working properly, and that the feed-water temperature is below 40°C (104°F) If the source is a central water supply verify that it is still working properly.