



Owner's Manual

PS-200



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Product Introduction

Thank you for purchasing a Power Soak warewashing system.

Your new Power Soak pot, pan and utensil washing system will provide years of dependable, efficient and trouble-free service.

As a Power Soak owner, you will benefit in numerous ways:

- Your warewashing operation will be more efficient.
- Pots, pans and utensils will be cleaner.
- The overall level of sanitation in your scullery area will improve.
- Warewashing hours will decrease as employee morale increases.
- Chemical and water usage will decrease.

Every system is manufactured to last, with only high-quality, heavy-duty, 14 gauge stainless steel used in its construction. All electrical components used in a Power Soak system are of the highest quality. The faucets and drains are designed for quick filling and emptying of the system's sinks.

At Power Soak Systems, we take pride in manufacturing the Power Soak line and are committed to standing behind our customers and products 100%. Should you ever need assistance, please contact us directly at the factory by dialing 800-444-9624 or fax: 816-761-0544.

Explanation of Warning Messages

Be sure to read, understand and follow all DANGER, WARNING, and CAUTION messages located in this guide and on the equipment.

Danger

Personal Injury and Property Damage hazard.
May result in serious injury or death.
May cause extensive equipment damage.



Warning

Property Damage Hazard.
May result in property or equipment damage.



Chemical Hazard

May result in serious injury or death.
Instructions, labels and Material Safety Data Sheets (MSDSs) should be supplied with all detergents and sanitizing chemicals. The manufacturers, importers and distributors of your cleaning chemicals are responsible for providing this information.



Power Soak Systems is not a chemical manufacturer, importer or distributor. Power Soak Systems, Inc., can assist your chemical representative but will not make specific brand recommendations.

Personal Injury Hazard

Hazard from sharp objects.
May result in serious injury or death.



Requirements for Detergents and Sanitizers

Detergents

Remember, improper detergents may damage equipment! Use of the correct detergent in your Power Soak system is critical to its washing performance. If you are having problems with cleaning results, please contact the factory.

Your new system requires a low-foaming, metal/aluminum-safe detergent that is safe for the hands. The detergent should have good grease cutting abilities but not have an excessively high pH level.



Sanitizers

The method of sanitizing used in your Power Soak system is a “chemical sanitizing” method. There are a number of products on the market that work well. Your chemical sales representative should assist you in selecting the proper sanitizer for your application.

Check with your cleaning chemical provider to determine detergent concentration, sanitizer “parts per million” (ppm) and sanitizer submersion times to meet local health codes.

Factory Assistance

If your chemical sales representative is having difficulty selecting a detergent or sanitizer, or if you are getting poor results with the chemicals your representative has recommended, please contact the factory at 800-444-9624.



Operating Instructions



Preparing the System

Filling the System

At the beginning of each day or shift, fill the sinks with water that is metered to approximately the correct operating temperatures:

- Wash sink (115°F / 46°C)
- Rinse sink (75°F / 24°C)
- Sanitizer sink (75°F / 24°C)

All sinks should be filled to, but not above, the “waterline” marks.

Fill the wash sink (the sink with the water jets) with water that is approximately 115°F / 46°C. You can use the hot and cold taps on the faucet to adjust the water to the appropriate temperature. A good rule of thumb is that the water should be hot to the touch but not so hot that it is uncomfortable.

Rinse Water

If your method for rinsing wares is of the “submersion” type, fill the rinse sink (middle sink) with water that is approximately room temperature, 75°F / 24°C. There is no need to fill the rinse sink if your location uses a sprayer for rinsing wares.

Sanitizer Water

Fill the sanitizer sink (the last sink) with water that is approximately room temperature, 75°F / 24°C.

Your Chemical Company Should Be Aware of the Following:

The detergent must be low foaming, metal/aluminum-safe and not excessively caustic. Most standard sanitizers are acceptable.

Adding Detergents & Sanitizers

Manual Chemical Dispensing

After the sinks have been filled with water, add the proper amount of detergent and sanitizer. The detergent goes into the wash sink (the sink with the water jets) and the sanitizer goes into the sanitizer sink.

Be sure to add the proper amount of chemicals to each sink. The amount used should be provided by your chemical supplier. Do not add the detergent or sanitizer to the sink prior to or during filling.

Automatic Chemical Dispensing

Your Power Soak may be equipped with an automatic chemical dispensing system. Be sure to follow the chemical company's instructions regarding the use and care of the dispenser.

The dispensing cycles for the wash tank and sanitizer tank are activated independently from each other.

For each fill cycle of the wash tank, when the level of water reaches the upper liquid level sensor, after a ten-second delay and after the green start button is pushed, the dispenser will inject the proper amount of detergent into the tank.

For each fill cycle of the sanitizer tank, when the level of water reaches the upper liquid level sensor and after a 10 second delay, the dispenser will automatically inject the proper amount of sanitizer into the tank.

The wash and/or sanitizer tank(s) must be filled to the waterline in order to initiate the automatic chemical dispensing.

Controls & Features

Green Button

Starts the washing action.

If cycle does not start, refer to troubleshooting section.



Red Button

Stops the washing action.

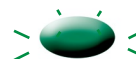


Green Light

Slow Flashing – “POWER ON” – the Power Soak system is energized and ready to fill.



Solid Illumination – “RUNNING” – wash sink is full, system is running. (Will not become solid until after start button is pushed.)



Blue Light

Solid Illumination – “CHANGE WASH WATER” – after a standard four-hour wash cycle, the system becomes disabled and the wash sink must be drained and refilled.



Red Light

Slow Flashing – “FILL SANITIZER TANK”



Solid Illumination – “CHANGE SANITIZER SOLUTION” – after two hours, the sanitizer sink must be drained and refilled.



Controls & Features - Continued

Starting and stopping the wash action

To start the wash action, press the green “START” button. A strong “rolling” wash action should be present.

To stop the wash action, press the red “STOP” button.

Introducing Pots and Pans to the Power Soak

Dirty pots and pans should be brought to the Power Soak in a timely manner. Do not allow items to sit and air dry. The quicker that items are brought to the Power Soak and put in the wash tank, the easier they are to clean!

Properly Scrapping Pots and Pans

Excess soils should be removed from the pots and pans prior to dropping them in the wash sink.

Deposit the excess soils into a garbage can.

Some systems may have an optional pre-scrapping area with a pre-rinse spray. If so, soils may be deposited into the scrapper sink.

Controls & Features - Continued

Loading and Using the Wash Sink

The Power Soak is a “random loading” system. This means that Power Soak items are not racked for washing. Instead, they are randomly loaded one at a time.

As items are brought to the system and scrapped, they should be immediately dropped directly into the wash sink.

If there is no movement of items in the wash sink, or if items are stationary above the waterline, the system has been overloaded and some items must be removed.

It is very important not to overload the wash sink, as it reduces the effectiveness of the wash action.

Some pots and pans stack for storage. This is referred to as “nesting” when it occurs during a Power Soak wash cycle. Make sure that nested items are separated and loaded one at a time. Nested items in the wash sink will not be properly washed.

Power Soak is a “continuous motion” system. This means that the system does not operate on a set cycle time like cabinet-type washing systems. Instead, during normal operating hours where washing is required, the system is (normally) left running. The Power Soak is energy efficient, and it does not cause excessive wear to leave it running continuously.

Typically, it takes between three to fifteen minutes to wash items. Some heavily soiled or burnt-on items may take longer to clean.

Controls & Features - Continued

Loading and Washing Utensils

Each Power Soak system comes with a utensil basket that hangs in the wash sink. All utensils and other small wares should be loaded into and washed inside this basket.

Do not place knives or other sharp objects in the Power Soak. Allowing knives or other sharp objects to tumble freely in the Power Soak wash tank may cause bodily injury.



Knives and other sharp objects must be washed by hand with the pump motor turned OFF. Wash, rinse and sanitize the knife or sharp object and immediately place the item into proper storage.

Unloading the Wash Sink

The employee responsible for pot washing should routinely pass by the Power Soak and remove clean items from the wash sink.

Items that are not 100% clean can be quickly finished off with a scrub pad or dropped back into the wash sink for additional cleaning.

Remember: it is not necessary to turn the wash action off to load or unload items from the wash sink. There are no moving parts within the wash sink that could cause bodily harm.

Controls & Features - Continued

Rinsing Pots and Pans

Clean items that have been removed from the wash sink should be thoroughly rinsed. This is achieved by spraying them off or dipping them in the (center) rinse sink.

It is important that any remaining detergent residue is removed from the items prior to sanitizing.

If items are rinsed by the “dipping” method, it is important to keep the water “fresh” by frequently draining and filling the rinse sink.

Sanitizing Pots & Pans

After items have been properly rinsed they must be sanitized in the (last) sanitizing sink.

It is necessary for each item to remain submersed in the sanitizing solution for a specific amount of time. The amount of time varies according to the type of sanitizer being used and local health codes.

Be sure to follow your chemical sales representative’s instructions to ensure that all items are properly sanitized.

Drying of Pots & Pans

After items have been sanitized, they should be thoroughly dried on a clean drain board or on adjacent drying shelves.

Be sure to adhere to all local health codes and recommendations for proper drying and stacking of items.

Controls & Features - Continued

Deep Cleaning and “Night Washing”

Extremely soiled items and pieces of cooking equipment that require regular, intensive cleaning can be washed in the Power Soak system overnight.

Load the items to be deep cleaned into the Power Soak’s wash sink, turn the system on and leave it running overnight.

The Power Soak will automatically shut down after the four hour wash cycle.

Items that have been cleaned overnight can be removed, rinsed, sanitized (if necessary) and put away or back in place.

Use your Power Soak as a “total cleaning system!” Remember, any item in your operation that can be submersed for cleaning and is not fragile can be washed without labor in your Power Soak!

Here are some examples of items that are typically deep-cleaned overnight in the “Night Wash” cycle:

- Hood Filters
- Roasting Pans
- Stove Tops
- Frying Equipment

Many other items in your operation may qualify. Be creative and set up a regular “Night Wash” program for improved sanitation.

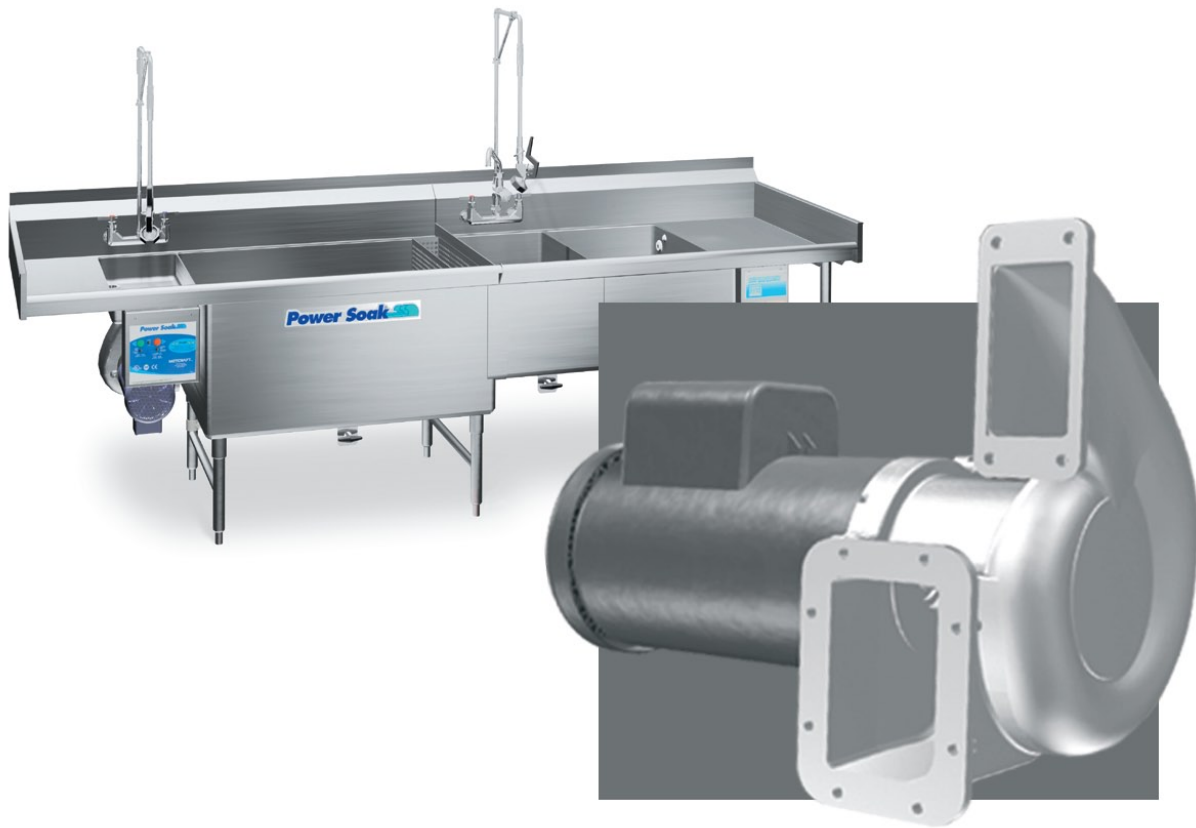
Wash, Rinse and Sanitizer Clean-Up

Between each water change and at the end of each night, all tanks and drain boards should be thoroughly cleaned with hot, soapy water.

It is also recommended to wipe down all the tanks and drain boards with a sanitizing agent. Ask your chemical provider to recommend a sanitizer for this application.



Preventive Maintenance



Preventive Maintenance

Your system requires minimal, routine preventive maintenance. As such, the following should be done on a routine basis to ensure that your system remains reliable:

Daily

Clean the liquid level sensors. These sensors are located on the side walls of the wash and sanitizer tanks. They are the white plastic discs with metal centers. Clean the sensor faces thoroughly. If cleaned regularly, a wash cloth and soapy water are all that is required.

If the liquid level sensors are not cleaned regularly, the machine may fail to operate; or it may be possible to run it without water, which may cause serious damage to the unit.



Monthly

IMPORTANT: Turn off the power to the unit at the main breaker prior to performing the following task!

Clean the pump motor fan shroud with a damp, soapy rag. The motor shroud is the “vented” cover located at the end of the motor (closest to the control panel). This will prevent grease and dust from accumulating in the cover’s openings, which can obstruct the airflow that cools the motor.

De-lime the wash sink. Simply add a de-liming agent to a sink of warm, fresh water and run the system overnight.

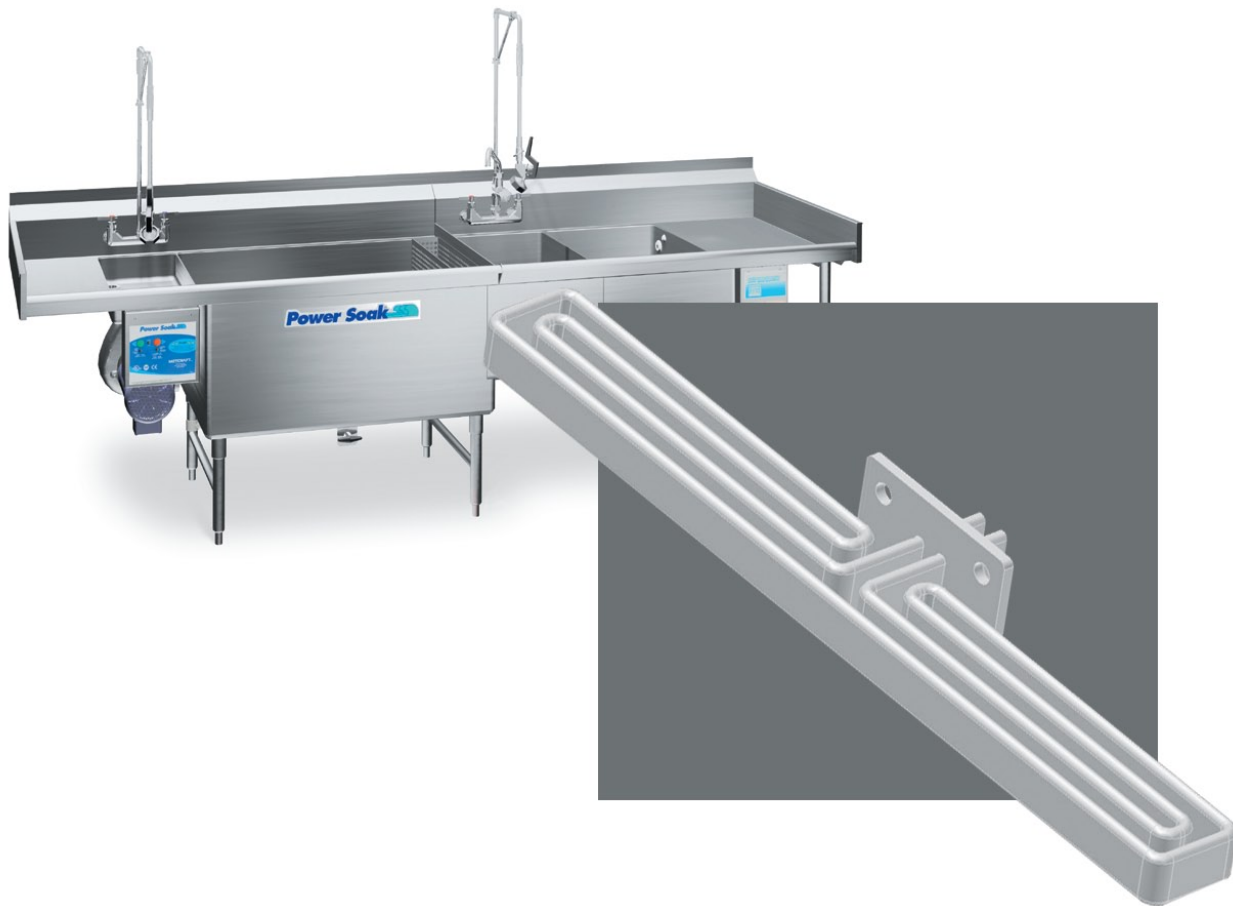
Ask your chemical sales representative to recommend a specific de-liming agent.

There are no other preventive maintenance procedures that you will need to perform on your Power Soak system. You need not be concerned about greasing the motor bearings, as they are permanently sealed. If you have any questions regarding the preventive maintenance procedures, please contact the factory at 800-444-9624.

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Troubleshooting



Facility Owner/Manager Section

The only troubleshooting procedures that the facility owner or manager can perform are listed immediately below. All other procedures must be performed by an authorized service agency. To obtain the name of a recommended service agent in your area, please call Power Soak Systems, Inc. at 800-444-9624



LED Status on Control Panel Overlay

It is recommended that the condition of the system be verified by first observing the "STATUS" LEDs on the front of the control panel. If necessary, take corrective action prior to performing any further troubleshooting.

Green Light (under the green "Start" button)

Slow Flashing – "POWER ON" – system is energized and ready to fill.

Solid Illumination – "READY" – wash sink is full; system is running.



Blue Light (between the green "Start" and red "Stop" buttons)

Solid Illumination – "CHANGE WASH WATER"

After a standard four-hour wash cycle, the system becomes disabled until the wash sink is drained and refilled.



Red Light (under the red "Stop" button)

Slow Flashing – "FILL SANITIZER TANK" – sanitizer tank must be filled to the waterline.

Solid Illumination – "CHANGE SANITIZER SOLUTION"

After two hours, the sanitizer tank must be drained and refilled.



Facility Owner/Manager Section - Continued

If, after reviewing the status of the control panel LEDs, there is still an operating problem, refer to the following troubleshooting guidelines:

Problem: Wash Pump and/or Wash Sink Heater Will Not Operate

- Check to make sure the main electrical power breaker for the Power Soak system is in the "ON" position.
- Check to make sure the wash sink is filled to the waterline.
- Check to make sure that the liquid level sensors are clean and free of any debris or grease. The liquid level sensors are located on the side walls of the wash and sanitizer sinks (the white plastic disc with a metal center).

If the above troubleshooting procedures do not correct the problem, you must contact Power Soak Systems, Inc., or an authorized service agency at 800-444-9624.

Authorized Service Agency Section

Hazard to untrained or unauthorized personnel.

The following procedures are provided for use only by an authorized service agency. No facility owner, manager, employee or other unauthorized person should attempt to perform any of these procedures. To obtain the name of a recommended service agent in your area, please call Power Soak Systems, Inc. at 800-444-9624.



When performing troubleshooting procedures, the authorized service agency will need to open the Power Soak system's main electrical enclosure.

Properly close the control panel before reconnecting the circuits.



Explanation of LED Sequence

To verify the proper operation of the Power Soak system, the operating logic of the controls should be verified. To verify the logic, the control box will need to be opened.

The Universal Programming Module (UPM) is mounted to the inside of the control enclosure cover.

The UPM has six LEDs mounted on its top edge. The meaning of each LED is as follows, starting from the right-most LED:

- #1 – Power On
- #2 – Error Code
- #3 – Wash Tank Low-level Sensor
- #4 – Wash Tank Upper-level Sensor
- #5 – Sanitizer Tank Low-level Sensor
- #6 – Sanitizer Tank Upper-level Sensor

Authorized Service Agency Section - Continued

Problem: Wash Pump and/or Wash Sink Heater Will Not Operate

Refer to the previous checklist under the "Facility Owner / Manager Section" before proceeding to the following checklist items:



Verify that LED #1 (Power On) is illuminated.

If LED #1 is not illuminated, check:

- Main power connection and wiring
- Fuse inside the control enclosure
- Bi-metallic disc switch for water temperature (switch must be closed if water temperature is below 120°F)
- Bi-metallic disc switch for motor temperature (switch must be closed if motor temperature is below 150°F)

Check to see that the Liquid Level LEDs #3 and #4 are illuminated when the wash tank is filled to the waterline.

If either one or both of the lights are not illuminated:

- Clean the liquid level sensors as described in the "Preventive Maintenance" section of this manual.
- Be sure that all connections to and from the liquid level sensors are secure and that there is no physical damage to the wiring.
- If damage to connectors and/or wiring is found, contact Power Soak Systems, Inc. at 800-444-9624.

Authorized Service Agency Section - Continued

If the above troubleshooting guidelines do not correct the problem, it will be necessary to contact Power Soak Systems, Inc. at 800-444-9624.

Prior to calling, please note the "Error Code" (if any) that can be identified by observing LED #2 on the UPM. If there is a control logic error, LED #2 will flash with a "blinking" pattern. The definitions for the patterns are as follows:

A "—" symbol represents a "long" flash

A "." symbol represents a "short" flash

— . . . => Water Level Problem

— => Temperature Sensor Problem

— => Over-Current Problem

Please have this "Error Code" information available prior to calling the Power Soak Systems.

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Installation



Installation Guide

The installation and initial operational check of your new system must be performed only by licensed and certified plumbers and electricians.



Be sure to follow all applicable national and local electrical codes when installing the electrical supply and/or a new breaker. DO NOT connect the system using a power cord and plug or an extension cord of any kind.



Electrical Requirements

The electrical requirements of your new system are on the serial number plate located on the front of the wash sink, adjacent to the control panel enclosure and inside the enclosure itself.

All Power Soak systems have a single point electrical connection, and a dedicated circuit is required.

Installation Guide

Please refer to the detailed installation instructions that were sent with your Power Soak system.

Providing Proper Electrical Service

The system is completely pre-wired and tested at the factory, and a hard-wired connection from an appropriate power source junction box is all that is required.

The installer is to provide a disconnect that should be incorporated in the fixed wiring.

Properly sized watertight conduit, fittings and parts are required, as well as the appropriate gauge wire.

If your system is a “left-to-right” unit, you should locate the power source junction box at the left end of the system. (The opposite would be true for a “right-to-left” system.)

Ideally, the junction box should be located on the wall directly behind the pump motor and control panel.

A wiring diagram is located in the system’s control panel enclosure. Specific part numbers and part information can be obtained from the factory by calling 800-444-9624.

Plumbing Requirements

Your unit requires the following plumbing connections:

- 3/4" (19mm) or 1/2" (12 mm) hot and cold water supply lines.
- One waste water connection (minimum 1 1/2" / 38mm).

Power Soak[®] PS-200

Power Soak is a registered trademark of Cantrell Industries, Inc.
The Power Soak design and concept is fully patented.

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