

# Power Soak®

## Owner's Manual

PS-275





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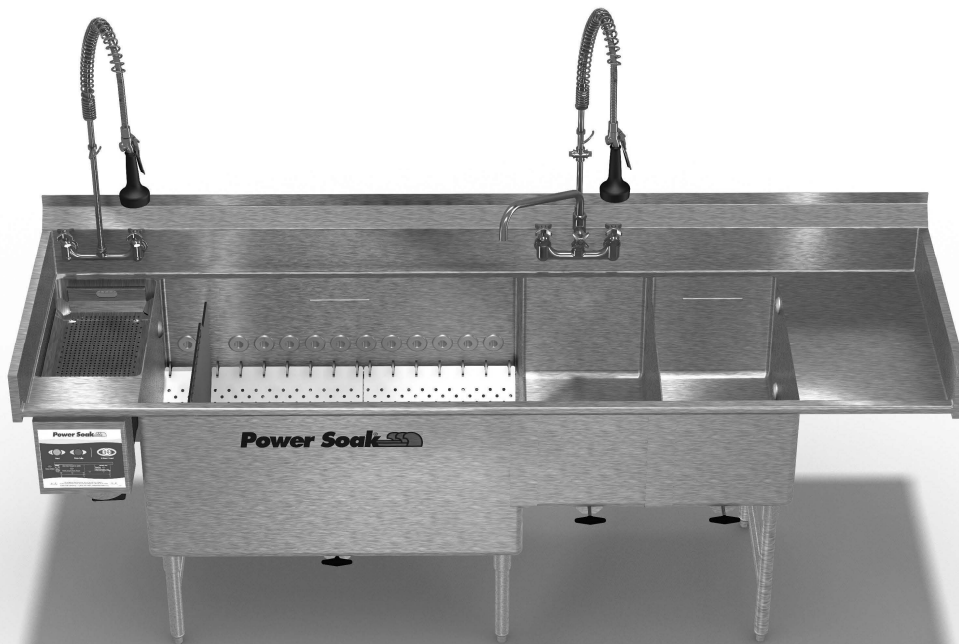
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# Power Soak<sup>®</sup>

## Introduction and Conventions

PS-275



# Product Introduction

Thank you for purchasing a Power Soak ware washing machine. Your new Power Soak pot, pan and utensil washing machine will provide years of dependable, efficient and trouble-free service.

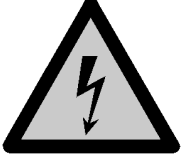



As a Power Soak owner, you will benefit in numerous ways:

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

Every machine 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 machine are of the highest quality. The faucets and drains are designed for quick filling and emptying of the machine's tanks. 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: 888-754-4516.

# Explanation of Warning Messages

Read, understand and follow all DANGER, WARNING, and CAUTION messages located in this guide and on the equipment.

<p><b>Personal Injury and Property Damage Hazard</b> Will result in serious injury or death. Will cause extensive equipment damage.</p>	
<p><b>Property Damage Hazard</b> Will result in property or equipment damage</p>	
<p><b>Chemical Hazard</b> Will 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 the cleaning chemicals are responsible for providing this information.</p>	
<p><b>Personal Injury Hazard</b> Hazard from sharp objects. Will result in serious injury or death.</p>	

# Requirements for Detergents and Sanitizers

## Detergents

The PS-275 can use two types of detergents, one type for normal cleaning and one type for "Deep Cleaning" for more effective deep cleaning. The materials to be cleaned and the type of debris to be removed will be a factor in selecting the proper detergent. Provide this information to a chemical supplier when selecting the type of detergent. Use of the correct detergent in the Power Soak machine is critical to its washing performance. Improper detergents could damage the equipment. If there are problems with cleaning results, please contact the Power Soak service department 800-444-9624.

The Power Soak PS-275 requires a low-foaming detergent that is safe for human hands. The detergent should have good grease cutting abilities but not have an excessively high or low pH level. A metal/aluminum-safe formula is recommended. Consult a chemical provider for a suitable deep cleaning chemical.



## Sanitizers

The method of sanitizing used in the Power Soak PS-275 is a "chemical sanitizing" method. There are a number of products on the market that work well in this application. A chemical sales representative should assist in selecting the proper sanitizer. Ask the cleaning chemical provider to determine detergent concentration, sanitizer "parts per million" (ppm) and sanitizer submersion times to meet local health codes.

## Power Soak Service Assistance

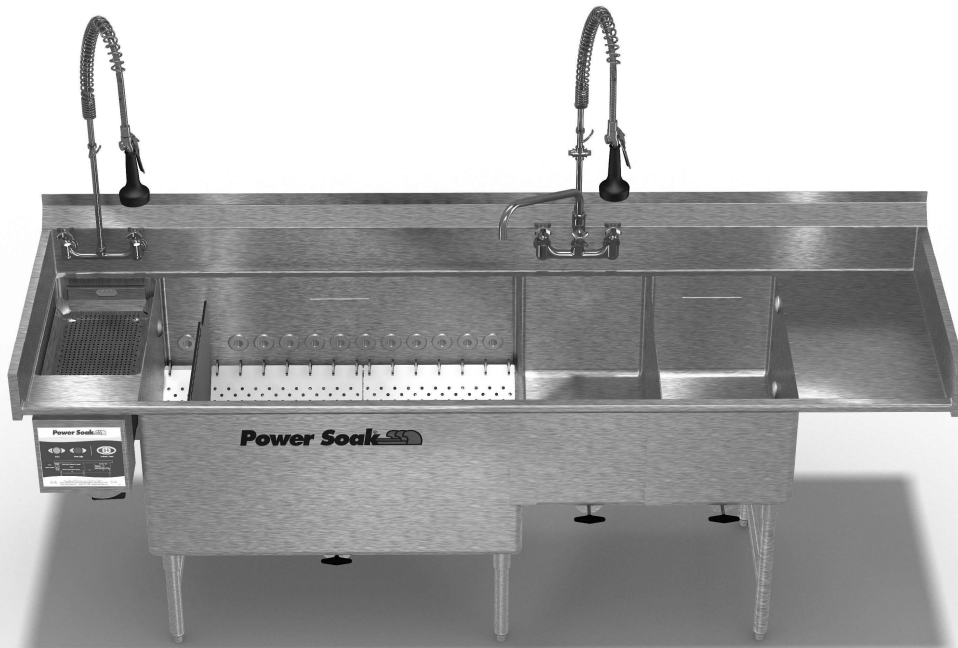
If a chemical sales representative is having difficulty selecting a detergent or sanitizer, or if there are poor results with the chemicals that a representative has recommended, please contact the Power Soak factory at 800-444-9624.



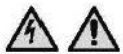
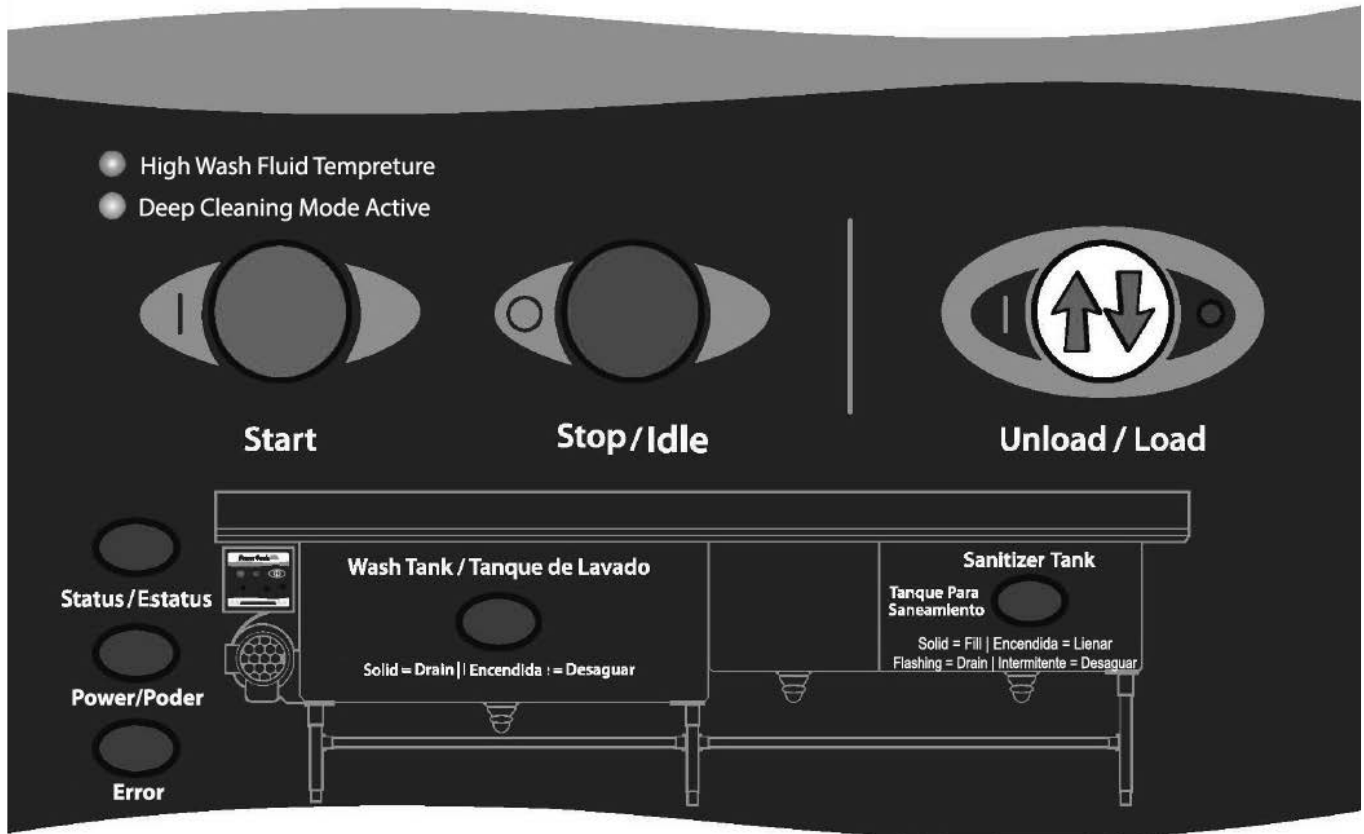
# Power Soak<sup>®</sup>

## Control Features

PS-275



# Control Panel and Features








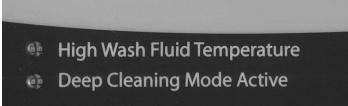
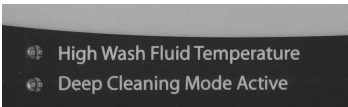

This panel must ONLY be opened by an authorized service agency.  
This panel is an electrical hazard to untrained, unauthorized personnel. May result in electrical shock, burns or death.  
Power Soak Systems | + 1 (816) 222-2400 | [www.PowerSoak.com](http://www.PowerSoak.com)



36275

The illustration shows the PS-275 Control Panel Overlay. The overlay is adhered to the front of the control panel box and contains buttons and lights that are imbedded into the overlay. Communication with the UPM is accomplished with cables that extend from the back side of the overlay.

<p><b>START Button</b></p> <p>The START button is green and labeled “Start”. When pressed and released within 4 seconds it will start the “Normal Mode” wash action. When pressed and held for 8 seconds, it will start the Deep Clean Mode. Pressing the STOP button within 10 seconds will release the selection and return to “stand by” mode. An automatic chemical dispenser will be signaled to add the chemicals according to the mode that has been started when the START button is pressed. If a cycle does not start when the START button is pressed and released, refer to the trouble shooting section. (See page 8 for operating instructions)</p>	
<p><b>STOP/IDLE Button</b></p> <p>The red STOP/IDLE mode button is used to stop or “pause” the wash action. The wash action will stop when pressed. Some programming selections will automatically resume the wash action after a short period of time if the wash tank is not drained. (See page 8 for operating instructions)</p>	
<p><b>UNLOAD/LOAD Button</b></p> <p>The UNLOAD/LOAD button is white with green up and down arrows. It is used to indicate to the program controller that the machine is receiving proper attention when using the timed unload/load wash cycle functions. (See page 14 for operating instructions)</p>	
<p><b>WASH TANK Light</b></p> <p>The blue WASH TANK light is used to indicate when the wash fluid needs to be changed.</p>	
<p><b>SANITIZER TANK Light</b></p> <p>The red SANITIZER TANK is used to indicate when the sanitizer fluid needs to be either filled or drained.</p>	

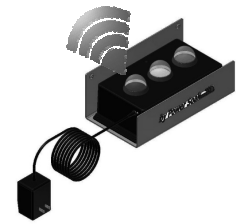
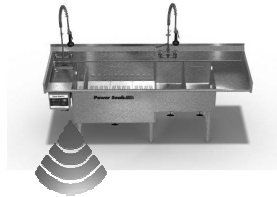
<p><b>High Fluid Wash Temperate - Light</b>  This light operates along with the orange beacon to indicate that the wash tank fluid temperature is above 120°F / 49°C.</p>	
<p><b>Deep Cleaning Mode Active - Light</b>  When the START button is pressed for more than 5 seconds this light will illuminate indicating that the machine is operating in the Deep Cleaning Mode.</p>	
<p><b>STATUS Light</b>  The STATUS light will be green when it is illuminated. Flashing indicates ready, solid illumination indicates the program is operating.</p>	
<p><b>POWER Light</b>  This light is illuminated when the power is turned on to the machine and the transformer in the control panel is producing the proper control voltage.</p>	
<p><b>ERROR Light</b>  When an error occurs this light will blink in a pattern that will identify the possible cause of the error (see page 26).</p>	

# Indirect Beacon System

The indirect beacon system shines ultra-bright lights on the floor to signal next action to team members and managers. An optional wireless remote alert light kit is available to repeat these messages in another part of the kitchen.



LED Beacons on the bottom of the control panel.



Optional Wireless Remote Alert Lights

## Blue Beacon

The blue beacon is used alone and in combination with green and red to indicate action messages. Generally, these messages have to do with the wash tank.



## Green Beacon

The green beacon is used alone and in combination with red and blue to indicate action messages. Generally, these messages have to do with the timed unload/load cycle.



## Red Beacon

The red beacon is used alone and in combination with green and blue to indicate action messages. Generally, these messages have to do with the sanitizer tank.



## Orange Beacon

When the Deep Cleaning Mode is started the Orange beacon will illuminate. It will flash when the water temperature in the wash tank rises above 120°F / 49°C, indicating the water temperature is hot enough to cause discomfort. Use caution when the placing hands or objects in the water when the orange beacon is illuminated.



# Preparing the Machine

## Filling the Machine

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

- Wash tank (115°F / 48°C)
- Rinse tank (75°F / 24°C) – For Dip Rinsing Method
- Sanitizer tank (75°F / 24°C)

All tanks should be filled to the “waterline” mark that is located in each tank. Do not overfill the tanks; overfilling will cause the tanks to overflow when items are added.

## Wash Fluid

The method used to fill the wash tank (the wash tank contains the water jets) will vary depending on how the chemicals are dispensed. The following descriptions will describe the methods for filling and adding chemicals to the wash tank.

### **Direct Dispensing**

Fill the wash tank using the faucet with water that is approximately 115°F / 48°C prior to adding chemicals. The hot and cold taps on the faucet are used 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. When the tank is full, the chemical can be manually added to the water when the wash pump has been started. Never place concentrated chemicals into an empty tank. If the machine is equipped with the Power Soak Chemical Dispensing system, the control system of the machine will dispense the chemical when the wash pump is started.

### **Metered or Pre-Mixed Dispensing**

If the machine is filled using a metered chemical dispensing system the introduced water temperatures should be approximately 115°F / 48°C. The hot and cold taps on the faucet can be used to adjust the water to the appropriate temperature. Some machines are supplied with a set of mixing valves that pre-mix the water to the correct temperature. The temperature adjustments for these valves are located on the front of the valve. When using a dispensing system, do not add water using the faucet. Water that is added by a source other than the mixing system will dilute the chemical solution and reduce its effectiveness.

### **Optional Wash Tank Filling Alerts**

The PS-275 controller can help reduce labor and wasted chemicals in the filling process by signaling that a wash tank fill is nearly complete. This

allows an operator to begin filling the wash tank, and return to other duties. When the tank is within a few minutes of completing its fill, the blue and green beacons will flash in an alternating pattern.



When the top liquid level sensor detects that the unit is full, the pattern will speed up to communicate urgency that the water needs to be turned off.

## Rinse Water

### Submersion Rinsing

If the wares are to be rinsed by submersing them in fresh water, fill the rinse tank (middle tank) with water that is approximately room temperature, 75°F/24°C. The hot and cold taps on the faucet are used to adjust the water to the appropriate temperature. Drain and refill this tank as necessary to maintain clean water in the tank.

### Spray Rinsing

When using the faucet or hand held spray nozzle to rinse the wares, leave the wash tank empty, with the drain open.

## Sanitizer Water

### Direct Dispensing

Fill the sanitizing tank using the faucet with water that is approximately 75°F / 24°C prior to adding chemicals. The hot and cold taps on the faucet are used to adjust the water to the appropriate temperature. When the tank is full, the chemical can be manually added to the water. Never place concentrated chemicals into an empty tank. If the machine is equipped with the Power Soak Chemical Dispensing system, the control system of the machine will dispense the chemical when the wash pump is started.

### Metered or Pre-Mixed Dispensing

If the machine is filled using a metered chemical dispensing system the introduced water temperatures should be approximately 75°F / 24°C. The hot and cold taps on the faucet can be used to adjust the water to the appropriate temperature. Some machines are supplied with a set of mixing valves that pre-mix the water to the correct temperature. The temperature adjustments for these valves are located on the front of the valve. When using a dispensing system, do not add water using the faucet. Water that is added by a source other than the mixing system will dilute the sanitizing solution which will reduce its effectiveness and violate health codes.

### Optional Sanitizer Tank Filling Alerts

The PS-275 controller can help reduce labor and wasted chemical in the filling process by signaling the operator that a sanitizer tank fill is nearly

complete. This allows the operator to begin filling the tank, and return to other duties. When the tank is within a few minutes of completing its fill, the red and green beacons will flash in an alternating pattern.



When the top liquid level sensor detects that the tank is full, the pattern will speed up to communicate urgency to turn off the water supply.

## Manually Adding Detergents & Sanitizers

After the tanks have been filled with water, add the proper amount of detergent and sanitizer. The detergent goes into the wash tank (the tank with the water jets) and the sanitizer goes into the sanitizer tank (the tank furthest from the wash tank).

It is important to add the proper amount of chemicals to each tank. The amount to be used should be provided by the chemical supplier. Do not add the detergent or sanitizer to the tank prior to or during filling.

Most detergents and sanitizers lose effectiveness as time goes on. Some local health departments have requirements limiting the amount of time water can be used for cleaning before the water must be changed. Most chemical companies recommend changing wash water after a certain time frame. Those times vary, but are generally around two to four hours. Check with the chemical provider for recommended time for effective use.

Sanitizing solutions also have a limited safe use period. Check with the chemical provider on how often to check and or replace the sanitizing fluid.

### **Acceptable Normal Wash Chemicals:**

- Chemicals must be safe for contact with human skin.
- The detergent must be low foaming, not excessively caustic and metal/aluminum-safe are recommended.
- Cleaning solutions need to be selected for the type materials to be cleaned.
- Most standard sanitizers can be used with the PS-275, however; consult with a chemical provider to be sure the chemical that is selected is a good choice.

### **Deep Cleaning Chemicals:**

- Solid or liquid
- Matched to PPE of your company's specifications.
- Consult with a chemical representative for proper PPE instructions.



# Operating the Power Soak

## Starting and Stopping the Wash Action

To start the wash action, press and release the green “START” button. A strong “rolling” action should become present in the wash tank. When the wash cycle is started the green STATUS light will change from flashing to solid. When the STATUS light is solid, the wash fluid timer is timing down to the next wash fluid change.

To pause the wash action, press the red “STOP/IDLE” button. This puts the machine into an idle mode that stops the wash pump but continues the wash timer. Some UPM program settings will automatically start the wash pump and resume the wash action after a short period of time. For this type of operation, the wash action cannot be completely stopped without draining the wash tank. When the machine is in idle mode, the small indicator light beside the Unload/Load button will be flashing. It will flash faster and faster until the unit auto restarts.

Pressing and holding the START button for more than 8 seconds will start the DEEP CLEANING CYCLE (see page 17). Note: if the START button is held for more than 3 second, but less than 8 seconds, the wash motor will not start. The button must be pressed again for less than 3 seconds to start the Normal Wash or more than 8 seconds to start the Deep Clean Mode.

## 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, rinsed 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 tank in order to reduce the amount of debris circulating in the wash tank. Deposit the excess soils into a garbage can. Some machines may have an optional pre-scrapping area with a pre-rinse spray; soils may be deposited into the scrapper tray. Empty the scrap collection tray regularly.

## Loading and Using the Wash Tank

The Power Soak is a “random loading” machine. This means that Power Soak items are not racked for washing. Instead, they are randomly loaded one at a time and circulate in the wash tank. When items are brought to

the machine and the scraps removed, they should be immediately dropped into the wash tank. The Power Soak is a “continuous motion” machine, meaning that the machine does not operate on a set cycle time like a cabinet-type washing machine. During normal operating hours where washing is required, the machine 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 and should be allowed to circulate in the wash tank until they are clean.

### **Overloading**

If there is no movement of items in the wash tank, or if items are stationary above the waterline, the machine has been overloaded and some items must be removed. It is very important not to overload the wash tank as it reduces the effectiveness of the wash action.

### **Nesting**

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 tank will not be properly washed.

## **Unload/Load**

The Power Soak tank does not have to be continuously monitored. There are a couple of ways to manage the ware washing task using a Power Soak.

### **Continuous Throughput**

One way to manage labor with the Power Soak is through the process of completing a wash cycle when an item is dropped off. When a ware is dropped off the operator will:

1. Remove the scraps from the soiled item and drop it into the wash tank.
2. Remove a clean item from the wash tank, rinse it and drop it into the sanitizer tank.
3. Remove a sanitized item from the sanitizer tank and place it on the clean drain board to air dry.
4. Remove a dry item from the clean drain board and place it in the proper storage location.

By progressively moving items through these steps, a full wash cycle is completed every time an item is dropped off. It should take only a minute or two to complete the cycle and the Power Soak is not continuously monitored.

### Timed Unload/Load

The Power Soak PS-275 is equipped with programming and alert lights to monitor the wash cycle. If enabled, this feature will time wash and Unload/Load cycles and then signal the operator when it is necessary to transfer the wares to the next step. The work flow should take place as follows:

1. Drop off soiled items on a soiled landing area like the soiled drain board.
2. Remove the scraps and fill the wash tank with a full load of items to be washed. The program will time a wash cycle.
3. At the completion of the timed wash cycle the green beacon will flash.



The flashing beacon indicates that the timed wash cycle has expired and an unload/load cycle should be performed.

4. When an operator arrives to perform the unload/load cycle, they should first press the Load/Unload (↕) button on the control panel. The green flashing beacon will turn solid to acknowledge the operators action.



5. The dry, sanitized items should be moved to their designated storage location.
6. All of the items should be removed from the sanitizer tank and arranged for air drying on the clean drain board.
7. All of the clean items should be removed from the wash tank, rinsed and placed in the sanitizer tank. When necessary some finishing (light hand scrubbing) may be necessary.
8. Remove the scraps from a full wash load of items and place them in the wash tank.
9. When these tasks are complete, press the Load/Unload (↕) button on the control panel. The solid green beacon will turn off to acknowledge the completion of the unload/load cycle. The wash timer will be started and the cycle will repeat. The operator may return to other duties.

Between cycles, soiled items should be dropped off on the soiled drain board or other soiled ware landing area.

## Loading and Washing Utensils

Each PS-275 Power Soak machine comes with a utensil area that is a 6" divided area in the wash tank. All utensils and other small wares should be loaded into and washed inside this area.

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 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, without letting go of the item and immediately place the item into proper storage.



## Rinsing Pots and Pans after Wash is Complete

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

## Sanitizing Pots & Pans

After items have been properly rinsed they must be sanitized in the sanitizing tank. It is necessary for each item to remain submersed in a correctly titrated 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 the chemical supplier's instructions to ensure that all items are properly sanitized.

## Drying of Pots & Pans

After items have been sanitized, they should be thoroughly air 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.

## Deep Cleaning and "Night Washing"

The Power Soak can be used as a "total cleaning system". Any item in the operation that can be submersed for cleaning and is not fragile or sharp can be washed in the Power Soak. Extremely soiled items and pieces of cooking equipment that require regular, intensive cleaning can be washed in the Power Soak machine overnight.

These are some examples of items that are typically deep-cleaned overnight in the "Night Wash" cycle:

- Hood Filters
- Roasting Pans
- Stove Tops
- Frying Equipment
- Stock pots
- Carbonized items
- Soiled storage racks

Many other items in the operation may qualify. Be creative and set up a regular "Night Wash" program for improved sanitation. Items that have been cleaned overnight should be removed, rinsed, sanitized (if necessary) and put away or back in place. Sanitation supervisors should establish standard operating procedures for items to be cleaned using the Night Washing feature of the Power Soak.

## Deep Cleaning Mode

The Deep Cleaning Mode can only be activated by completely draining the wash tank below the low level sensor and refilling the wash tank. When the START button is pressed and held for at least 8 seconds, the wash pump motor will start when the program enters the Deep Clean Mode. If the START button is simply pressed and released, the wash pump motor will start and the machine will enter the "Normal Cleaning" mode that is used for day time operation. If the normal cleaning is stopped within 30 seconds the machine can be re-started in the Deep Cleaning mode. After 30 seconds of operation, the mode is "locked in" and the tank will have to be completely drained and refilled to start a different mode of operation. When the pump motor starts in the Deep Cleaning Mode, the indicator light on the control panel labeled "Deep Cleaning Mode Active" will illuminate. (Note: if the START button is held for more than 3 second, but less than 8 seconds, the wash motor will not start. The button must be pressed again for less than 3 seconds to start the Normal Wash or more than 8 seconds to start the Deep Clean Mode.)

The Deep Cleaning Mode will elevate the water temperature to 128°F / 53°C which is higher than the normal daytime wash temperature (115°F / 48°C). When the Deep Cleaning Mode is entered, the orange beacon and the control panel light that is labeled "High Wash Fluid Temperature" will illuminate to indicate that the cleaning solution temperature is going climb above the normal wash temperature. When the cleaning solution

temperature is raised above the control panel light and orange beacon will flash. The flashing light and beacon will continue as a reminder that the water is hot enough to be unpleasant for human contact. Waterproof thermal protective gloves are to be used for protecting the operator's hands when the water temperature is above 120°F / 49°C. Gloves must be long enough that the open end of the gloves cannot be submerged during use.

A different chemical may be beneficial for the deep cleaning cycle, see a chemical supplier for recommendations on the type of chemical to use for this type of operation. Solid or liquid chemicals can be used in the Power Soak.

Since different chemicals are commonly used during the "Normal" daytime operation and the "Deep Clean Mode", the programming will not allow the mode of operation to be changed until the wash tank is completely drained and refilled. The 30 second "grace period" after the START button is pressed allows the operator to verify the correct mode of operation. When the "grace period" expires the PS-275 is locked into the mode of operation until the wash tank is fully drained and re-filled.

The Deep Cleaning Mode will run the pump motor continuously for two hours. At the end of the two hour cleaning period the pump will stop continuous operation and start an intermittent cycle, ON for 5 minutes and OFF for 10 minutes. Since the heating element only operates while the pump motor is running, the cleaning solution temperature will be allowed to cool down according to the program setting, no lower than 110°F (43°C). The pump motor can be stopped and started during the continuous operation of the Deep Clean Mode, however; pressing the STOP button during the intermittent cycle (after the two hour wash cycle) will cause the program to end the Deep Clean Mode and the pump will not start until the wash tank is completely drained and re-filled. When a cycle has ended the blue light on the control panel and the blue beacon will illuminate indicating that the wash tank must be drained and re-filled.

1. Load the items to be deep cleaned into the Power Soak's wash tank.
2. Drain the wash tank and start with a fresh washing solution by filling the wash tank with clean water and the proper detergent for the Deep Clean operation.
3. Press and hold the START button for at least 5 seconds.
4. Verify that the Deep Clean Mode is activated by observing the illumination of the "Deep Clean Mode Active" light on the control panel.

5. Leave the PS-275 to run. When the deep wash period is complete, the deep cleaning period will automatically turn the wash action on and off (cycle time is selected in the program settings).

Note: During the Deep Cleaning Mode, if sanitizer warning light should illuminate, it will not affect the cleaning operation.

## Changing the Wash Solution

The wash solution will need to be drained and refilled every four hours. The control program will keep track of this time. 15 minutes before the wash tank timer expires, the blue beacon will begin flashing.



The beacon will flash faster and faster until the timer expires. When the timer expires, the wash action will stop and the blue beacon will become solid.



This indicates that it is time for the wash fluid to be changed. The wash action can be restarted for one minute using the START button to aid in unloading the wash tank before draining. (This can be repeated five times)

## Changing the Sanitizer Solution

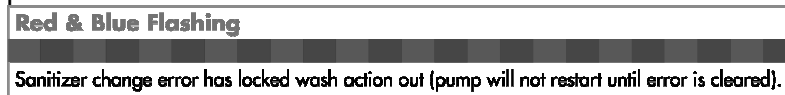
In most cases, the sanitizer solution will need to be drained and refilled typically every two hours or as advised by the chemical provider. In some situations a chemical provider and local codes allow a different change interval. When the sanitizer tank is filled a timer is started. 15 Minutes before the sanitizer tank timer expires, the red beacon will begin flashing.



The beacon will flash faster and faster until the timer expires. When the timer expires, red beacon will become solid.



If the program does not detect a solution change after a time, the wash action will stop and the red and blue beacons will flash in an alternating pattern.



Once this has happened, the wash pump is “locked out” and the only way to restart the wash action is to drain and refill the sanitizer tank. The “lock out” is a setting in the program that can be turned off.

## Wash, Rinse and Sanitizer Clean-Up

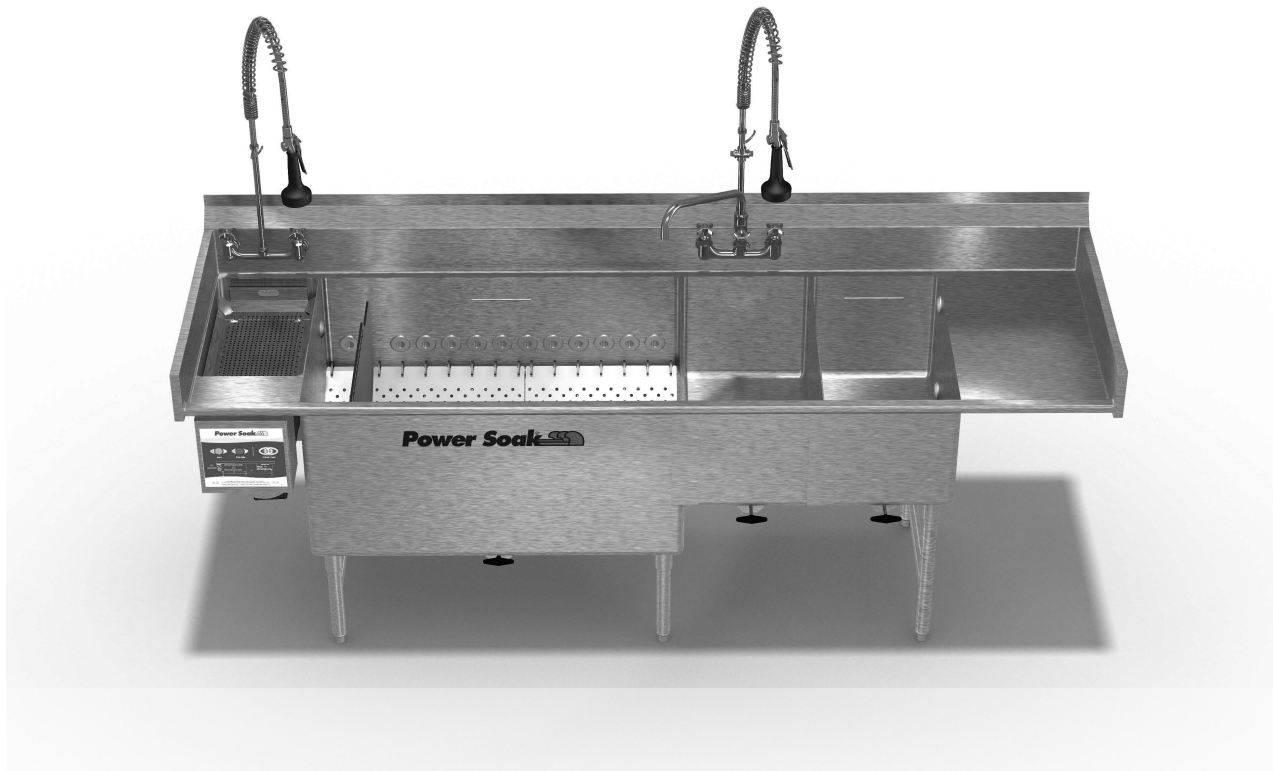
Between each water change and at the end of each night, all tanks and drain boards should be thoroughly cleaned with hot, soapy water. It is also recommended to wipe down all the tanks and drain boards with a sanitizing agent. Ask a chemical provider to recommend a sanitizer for this application.



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## Preventative Maintenance

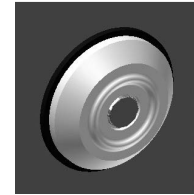
PS-275



The Power Soak PS-275 requires minimal, routine preventative maintenance. The following procedures should be done to ensure that the PS-275 remains reliable. If there are any questions regarding the preventative maintenance procedures, please contact the factory at 800-444-9624.

## Daily

Clean the liquid level sensors that 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 washcloth and soapy water are all that is required.

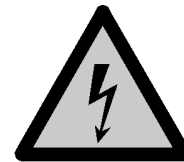


If the liquid level sensors are not cleaned regularly, the machine may fail to operate; or it may be possible to run it without water, which will cause serious damage to the PS-275. Running the machine without water in the wash tank will cause damage that is not covered by warranty.



## Monthly

**IMPORTANT:** Turn off the power to the PS-275 at the main breaker prior to performing the following task!



Clean the pump motor fan shroud with a damp, soapy cloth. 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.



Note: The motor bearings are permanently sealed and do not need to be greased.

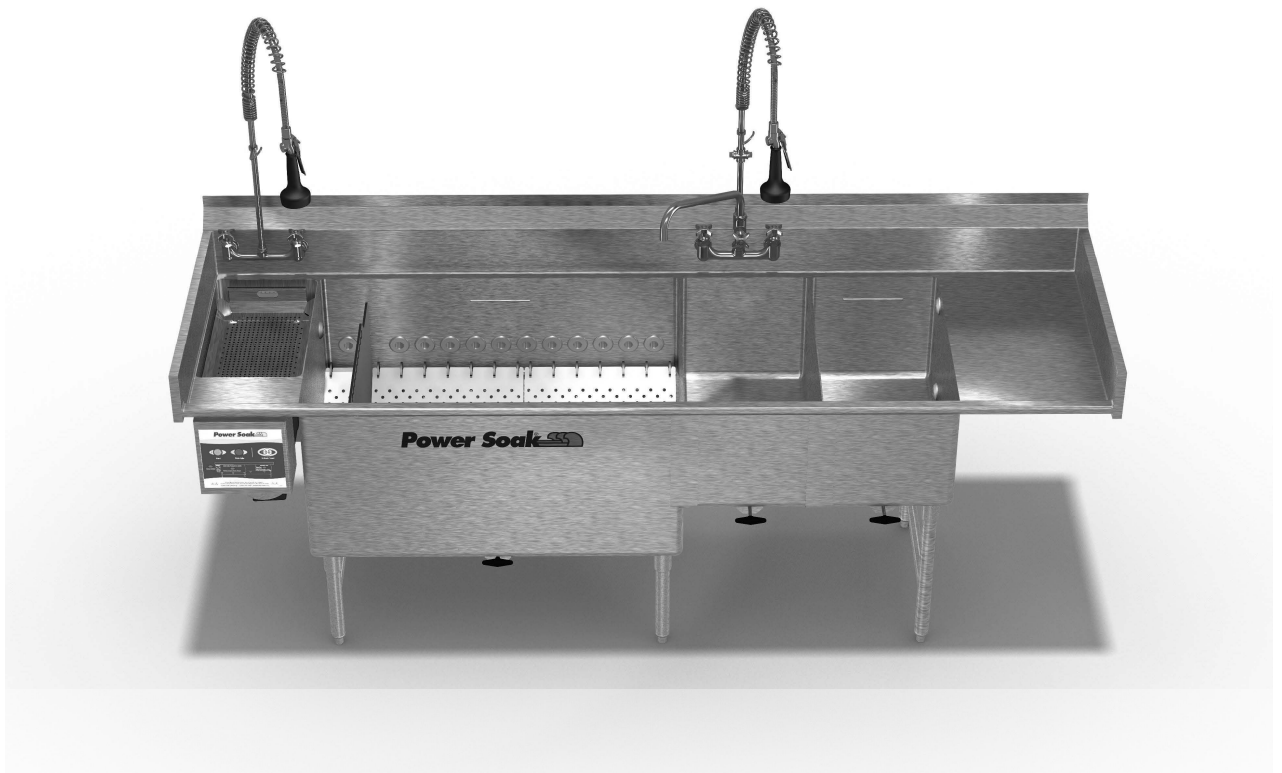
## As needed

De-lime the wash tank. Simply add a recommended titration of de-liming agent to a tank of warm, fresh water and run the machine overnight. Ask a chemical sales representative to recommend a specific de-liming agent.

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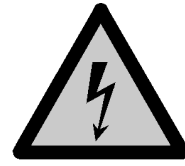
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PS-275



# Facility Owner/Manager Section

The only troubleshooting procedure that the facility owner or manager can perform is 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 the Power Soak Service Department at 800-444-9624.



If the wash action will not start:

- Check to make sure the main electrical power breaker for the Power Soak machine is in the “ON” position.
- See that the wash tank is filled to the waterline.
- Examine the liquid level sensors to see that they are clean and free of any debris or grease. The liquid level sensors are located on the side walls of the wash and sanitizer tanks (the white plastic disc with a metal center).
- Make sure the temperature of the water in the wash tank is below 128F.

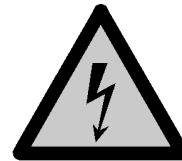
If the above trouble shooting procedures do not correct the problem, contact Power Soak Systems, Inc. at 800-444-9624 or an authorized service agency. Have the serial number of the machine ready when the call is placed.

# Authorized Service Agency Section

There are hazards 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 the Power Soak Service Department at 800-444-9624.



When performing troubleshooting procedures, the authorized service agency will need to open the Power Soak machine's main electrical enclosure cover. The cover to the enclosure must be properly closed before reconnecting the power to the machine.



## Explanation of LED Sequence

To verify the proper operation of the Power Soak machine, the operating logic of the controls will need to be examined. This will require opening the control box by removing the two screws on the face of the enclosure cover. The Universal Programming Module (UPM) is mounted to the inside of the control enclosure cover. The UPM has four 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. W-L is wash tank low level
4. W-H is wash tank high level
5. S-L is sanitizer tank low level
6. S-H is sanitizer tank high level

## Wash Pump Will not Operate

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



Verify that the POWER light on the control panel and the LED #1 (Power On) is illuminated on the UPM. If LED #1 is not illuminated, check:

- Main power supply circuit breaker.
- 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.

Check to see that the Liquid Level LEDs #5 and #6 are illuminated when the sanitize tank is filled to the waterline.

If any of the LED's (3 thru 6) are not illuminated when the tanks are filled:

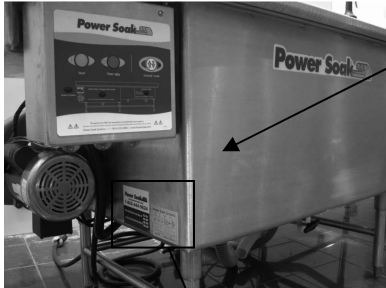
- Clean the liquid level sensors as described in the "Preventive Maintenance" section of this manual.
- Be sure that all connections to and from the Liquid Level sensors are secure and that there is no physical damage to the wiring.
- If damage to connectors and/or wiring is found, contact Power Soak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

If the troubleshooting guidelines shown above 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 and the "ERROR" green LED on the front of the control panel. If there is a control logic error, the ERROR light and 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  
----.... = Over Temperature Problem  
----..... = Current Sensor Error  
----..... = Membrane Error

Note: If the Machine is flashing an error code, try having the service person cycle the breaker for the Power Soak. Occasionally an unstable power situation from the incoming power supply can cause a false error. This type of error can be reset by turning the power to the machine off for a few seconds and then turning it back on.

Please have the "Error Code" information available prior to calling Power Soak Systems. The machine serial number will also be needed at the time of the call.



The serial number is 5-6 digits long and located on the lower corner of the wash tank closest to the controller.



SERIAL NUMBER

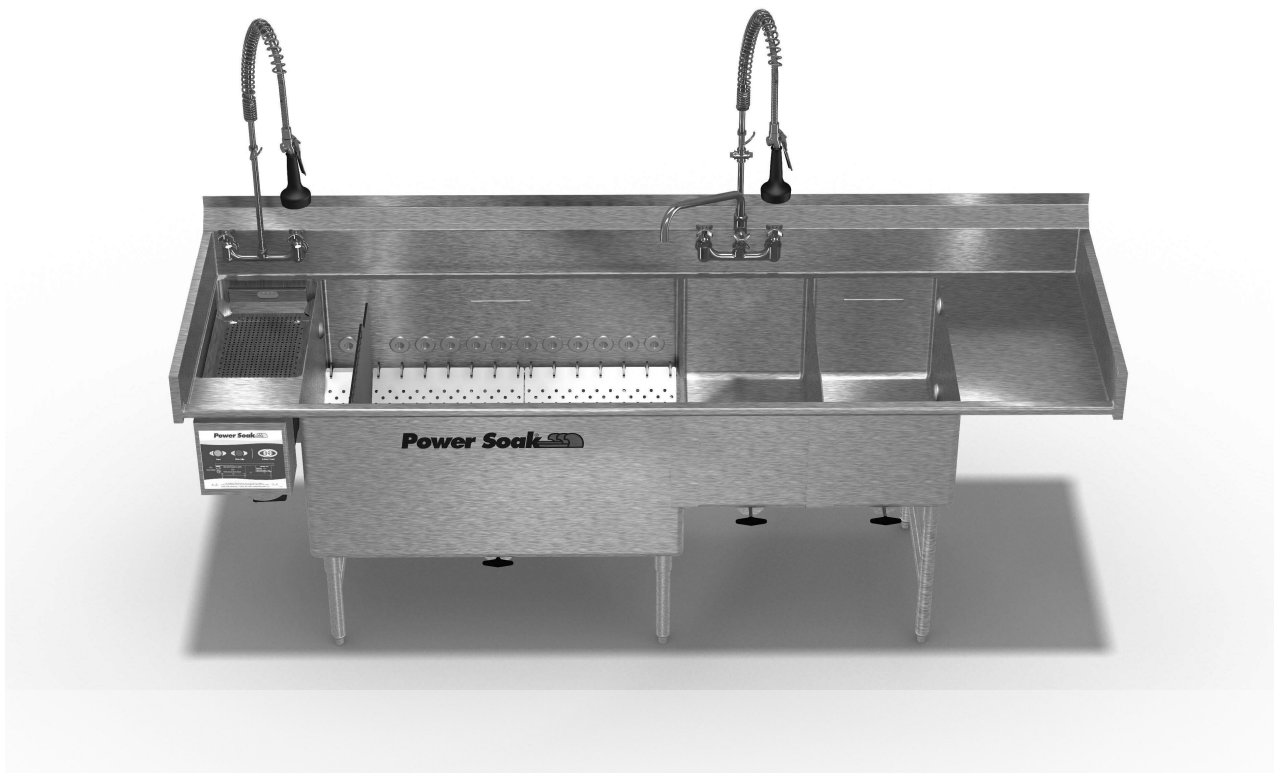
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# Power Soak®

## Installation

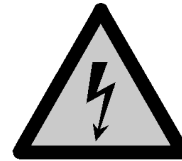
PS-275



The installation and initial operational check of the PS-275 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 machine using a power cord and plug or an extension cord of any kind.



Please refer to the detailed installation instructions that were sent with the Power Soak PS-275.

## Electrical Requirements

The electrical requirements of the PS-275 are on the serial number plate located on the front corner of the wash tank, adjacent to the control panel enclosure and inside the enclosure itself.

- All Power Soak machines have a single point electrical connection, and a dedicated circuit is required. A  $\frac{3}{4}$ " seal tight conduct knockout is provided on the rear of the control panel.
- The machine is completely pre-wired and tested at the factory, and a hard-wired connection from an appropriate power source junction box is required.
- The installer is to provide a disconnect that should be incorporated in the fixed wiring. Note: In areas where the walls are washed this should be a waterproof style disconnect.
- Properly sized watertight conduit, fittings and parts are required, as well as the appropriate gauge wire.
- If the machine is a "left-to-right" unit, the power source junction box should be located at the left end of the machine. (The opposite would be true for a "right-to-left" machine.) Ideally, the junction box should be located on the wall directly behind the pump motor and control panel.
- If the machine requires 3 phase power, the motor rotation can be tested by holding down the start button for 10 seconds, with no water in the machine. This will momentarily rotate the motor to see the direction that it will be turning when it is started. Verify the motor rotation matches the arrow on the pump housing.

- A wiring diagram is located in the machine's control panel enclosure.

Specific part numbers and part information can be obtained from the factory by calling 800-444-9624. Service information is also found on the Power Soak web site (<http://powersoak.com>) under the SUPPORT tab.

## Plumbing Requirements

The PS-275 requires the following plumbing connections:

- One 3/4" (19mm) or 1/2" (12 mm) cold water supply line.
- One 3/4" (19mm) or 1/2" (12 mm) hot water supply line.
- One 3" (75mm) connection is recommended for an in-floor main line.
- One waste water connection minimum 1-1/2" (38mm).

Note: Each tank will have a rear drain exit 1-1/2" (38mm) female threaded connection that will have to be connected to the waste water connection. Drain connection must not exceed elevations higher than 10-1/2 inches above the floor where the Power Soak machine is located.

# **Power Soak<sup>®</sup>**

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

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