



Owner's Manual

SKEWER WASH



Table of Contents

Introduction.....	1
Product Introduction	2
Explanation of Warning Messages	3
Danger	3
Warning	3
Chemical Hazard	3
Personal Injury Hazard	3
Requirements for Detergents and Sanitizers	4
Detergents	4
Sanitizers	4
Factory Assistance	4
Operating Instructions	5
Preparing the System	6
Filling the System	6
Wash Water	6
Sanitizer Water	6
Adding Detergents & Sanitizers	7
Manual Chemical Dispensing	7
Automatic Chemical Dispensing	7
Control Buttons and Lights	8
Green Button	8
Red Button.....	8
Green Light.....	8
Blue Light.....	8
Red Light	8
Operation.....	9
Introduction.....	9
Properly preparing the skewers	9
Loading the Skewer Rack.....	9
Washing Skewers	10
Unloading the Skewer Rack.....	10
Rinsing Skewers	10
Sanitizing Skewers	10
Drying of Skewers.....	11

Wash, Rinse and Sanitizer Clean-Up	11
Preventive Maintenance.....	13
Daily.....	14
Monthly	14
Troubleshooting.....	15
Definition of Responsibilities	16
Facility Owner/Manager.....	16
Service Agency.....	16
Control Panel Lights and Buttons.....	17
Status Lights on Control Panel	17
Green Light (under the green “Start” button).....	17
Blue Light (between the green “Start” and red “Stop” buttons).....	17
Red Light (under the red “Stop” button)	17
Control Module (UPM) LED Lights	18
Wash Pump Will Not Operate	19
Owner/Manager Check List	19
Service Company Check List.....	19
Installation	21
Electrical Requirements.....	22
Plumbing Requirements.....	23

- Intentionally blank page -

Power Soak[®]

Introduction

SKEWER WASH



Product Introduction

Thank you for purchasing a Power Soak skewer washing system.

Your new Power Soak Skewer Wash machine will provide years of dependable, efficient and trouble-free service.

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

- Your skewer washing operation will be more efficient.
- Skewers will be cleaner.
- The overall level of sanitation in your scullery area will improve.
- Skewer labor washing hours will decrease as employee morale increases.
- Chemical and water usage will decrease.

Every system is manufactured to last, using only high-quality, heavy-duty, 14 gauge stainless steel 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

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.

This symbol indicates a source for serious injury or death and creating extensive equipment damage.



Warning

Property Damage Hazard.

This symbol indicates a source for property or equipment damage.



Chemical Hazard

This symbol indicates a source for serious injury or death from chemical contact. Instructions, labels and Material Safety Data Sheets (MSDSs) are to be supplied with all detergents and sanitizing chemicals by the manufacturers, importers and/or distributors of the cleaning chemicals.



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

Personal Injury Hazard

Hazard from sharp objects.

This symbol indicates a source for contact with a device that has a cutting, pinching, and/or shearing action that will result in serious injury or death.



Requirements for Detergents and Sanitizers

Detergents

Improper detergents may damage the Skewer Wash machine! Use of the correct detergent in the Power Soak equipment is critical to its washing performance. If there are problems with achieving the desired cleaning results, please contact the factory.

The Skewer Wash requires a low-foaming, metal/aluminum-safe detergent that is safe for human hands. The detergent should have good grease cutting abilities but not have an excessively high pH level and must be safe to use with stainless steel, rubber and plastic materials.



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. A chemical sales representative should assist in selecting the proper sanitizer for this application.

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

Factory Assistance

If the chemical sales representative is having difficulty selecting a detergent or sanitizer, or the results with the chemicals are not satisfactory, please contact the factory at 800-444-9624.

Power Soak[®]

Operating Instructions

SKEWER WASH



Preparing the System

Filling the System

At the beginning of each day or shift see that the sinks are empty and clean, and then fill the sinks with water that is metered to approximately the correct operating temperatures:

- Wash sink (115°F / 48°C)
- Sanitizer sink (75°F / 24°C)

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

Do not put chemicals in the sinks until the sinks have been filled with water.

The wash pump will not operate if the water temperature exceeds 135°F

Wash Water

Fill the wash sink (the sink with the rotating rack) with water that is approximately 115°F / 48°C. The hot and cold water taps on the faucet are used to adjust the water to the appropriate temperature as the sink is filled. A good rule of thumb is that the water should be hot to the touch but not so hot that it is uncomfortable to submerge a person’s hand.

Sanitizer Water

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

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 rotating rack) and the sanitizer goes into the sanitizer sink.

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

Most detergents and sanitizers lose effectiveness as time goes on. The rinse water will also dilute the wash detergent when a large number of skewers have been rinsed. Some local health departments have requirements limiting the amount of time water can be used for cleaning before the water should be changed. Most chemical companies recommend changing wash water after a certain time frame. Those times vary, but are generally around four hours. Check with the chemical provider for the recommended usage.

The correct chemical concentration for sanitizing is very important to the sanitizing step in cleaning skewers. Check with the chemical provider on how often to replace the sanitizer solution in the sanitizer sink.

Automatic Chemical Dispensing

Automatic chemical dispensing equipment is available from the chemical supplier. The Power Soak Skewer Wash is equipped with a 24 VAC electrical connection for operating a chemical dispenser. Contact the chemical supplier for recommendations on the type of equipment and the chemicals to use with the Skewer Wash.

Chemicals that are safe to touch when mixed with water can be dangerous to touch in the concentrated form. Use chemical resistant gloves and protective clothing when handling concentrated chemicals. Consult the manufacturers label for handling and safety information.



Control Buttons and Lights

Green Button

The green button starts the water circulation in the wash sink. The rotation of the skewer rack is caused by the water circulation pushing on the skewers in the rack. If the rack is not fully loaded, it may not rotate. If the water circulation does not start, refer to trouble shooting section.



Red Button

The red button stops the water circulation. The rotation of the skewer rack will stop when the water circulation stops.



Green Light

Slow Flashing – “POWER ON” – The Power Soak system is ready for filling.



Solid Illumination – “RUNNING” – wash sink is full of water and the system is running. (The light will not become solid until after start button is pushed.)



Blue Light

Solid Illumination – “CHANGE WASH WATER” – four hours after the start button is pushed, the blue light will illuminate indicating that the wash sink must be completely drained and refilled.



Red Light

Slow Flashing – “FILL THE SANITIZER TANK”



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



Operation

Introduction

Dirty skewers should be brought to the Skewer Wash as soon after the cooking process as possible. Do not allow the skewers to sit and air dry. The sooner the skewers are brought to the Skewer Wash and put in the wash tank, the easier they are to clean!

Properly preparing the skewers

Excess soils should be removed from the skewers prior to placing them in the rack located in the wash sink.

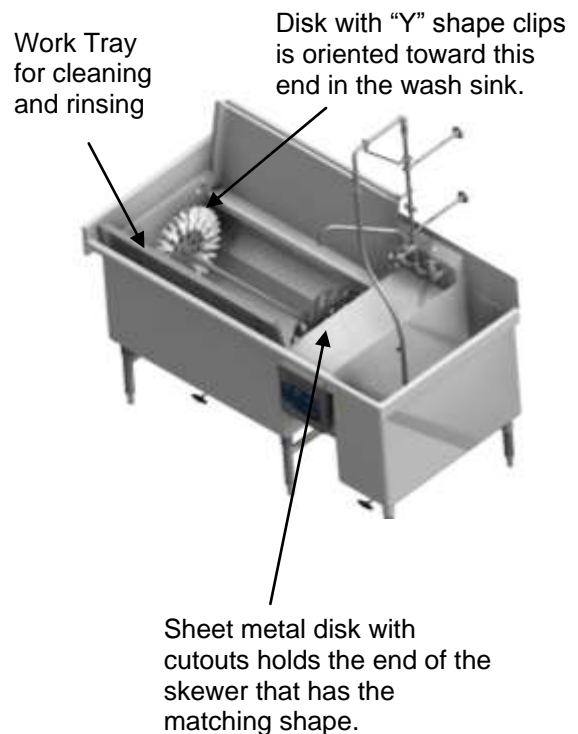
Dispose of the excess soils by placing them into a garbage can.

Loading the Skewer Rack

The skewer rack will lift out of the machine if necessary. When placed in the machine, it should be oriented as shown in the illustration with the shaft ends inserted into the bearing blocks that are attached to the walls of the sink.

The ends of a skewer are not shaped the same and the skewer must be oriented properly to fit into the skewer rack.

1. Insert the end of the skewer that does not have the round shaft into the sheet metal disk by aligning the shape of the skewer with the shape of the cutout in the sheet metal.
2. Snap the end with the round shaft into the opening of the "Y" shape of a single retainer clip that is in line with the sheet metal opening. (When properly installed the skewer will be straight across the wash tank.)
3. Repeat steps one and two until all the slots in the skewer rack are filled. If there are not enough skewers to fill the rack, evenly space the skewers so that the rack is balanced. The water flow will not rotate the rack if it is too heavy on one side or does not have enough skewers loaded into the rack.



Washing Skewers

When the wash sink is full of water with proper detergent added to the water and the skewer rack is properly loaded; close the lid and work tray. Press the green START button to start washing the skewers. The machine will operate with the lid open, but due to the water splashing out of the wash sink it is best to operate the machine with the lid and work tray closed.

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

The combination of detergents and soiled skewer conditions make it impossible to specify an exact wash time. Periodically check the skewers to see if they are clean.

Unloading the Skewer Rack

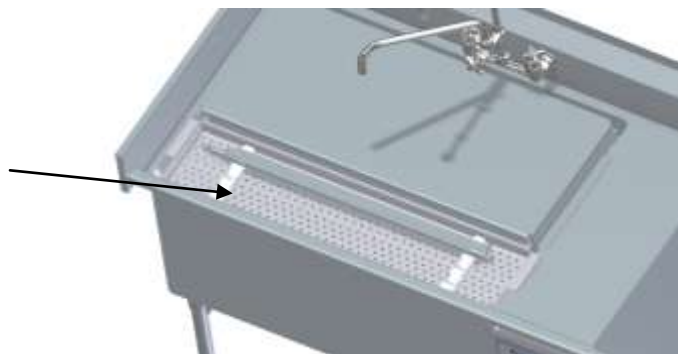
Press the STOP button and remove the skewers from the rack by lifting on the end of the skewer that is held by the “Y” shaped retainer clip. Place the skewer in the work tray and examine the surfaces of the skewer to see that they are clean and free of debris. It may be necessary to hand scrub areas that did not come clean. The area that was covered by the retainer clip often needs to be hand cleaned.

Rinsing Skewers

Clean skewers that have been removed from the wash sink should be thoroughly rinsed before placing in the sanitize tank. Use the spray nozzle to rinse the skewers in the work tray or on the drain board.

It is important to remove any remaining detergent residue from the skewers prior to sanitizing in order to reduce the dilution of the sanitizing solution.

Work tray for cleaning
and rinsing skewers



Sanitizing Skewers

After the skewers have been properly rinsed, they must be sanitized by placing them in the sanitizing sink. The liquid in the sanitizing sink must cover the entire skewer.

It is necessary for each skewer to remain submerged 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. Follow the chemical manufacturer's instructions to ensure that all skewers are properly sanitized.

Drying of Skewers

After skewers have been sanitized, they should be thoroughly dried on a clean drain board or on drying shelves. Adhere to all local health codes and recommendations for proper drying and stacking of the skewers.

Wash, Rinse and Sanitizer Clean-Up

Between each water change and at the end of each night, both tanks and drain boards should be thoroughly cleaned with hot, soapy water. Wipe all surfaces of both the tanks and drain boards with a sanitizing agent. The chemical provider can recommend a sanitizer for this application.

Intentionally blank page

SKEWER WASH



The Power Soak Skewer Wash requires routine preventive maintenance. The following list of duties should be done on a routine basis to ensure that the machine 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 with a washcloth and soapy water. Removal of debris and grease is very important to allow the sensors to function properly.

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 unit.



Monthly

De-lime the wash sink by adding a de-liming agent to a sink of warm, fresh water and run the machine overnight without skewers in the rack. Ask the chemical sales representative to recommend a specific de-liming agent. Power Soak does not sell or provide chemicals.

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.

If there are any questions regarding the preventive maintenance procedures, please contact the factory at 800-444-9624.

SKEWER WASH



Definition of Responsibilities

Facility Owner/Manager

The troubleshooting that can be accomplished by people without technical training is limited to reviewing the status lights, draining / filling the sink and operating the appropriate control panel buttons. All other service procedures including opening the control panel must be conducted by trained personnel. It is the responsibility of the owner/manager to see that trouble shooting and service procedures are conducted by people with the proper training.

All procedures related to opening the control panel or servicing electrical components 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.



Service Agency

The Power Soak Skewer Washing machine contains high voltage components that require the knowledge of a certified electrician. Do not attempt to service the machine without proper training.

The control panel, pump motor and heater (optional) contain high voltage electrical connections. Disconnect the power to the machine at the main circuit breaker before attempting to service the machine.

Properly install covers and close the control panel before reconnecting the power to the machine.



Control Panel Lights and Buttons

Status Lights on Control Panel

The lights on the control panel will indicate the status for operation of the Skewer Wash. The wash pump will be automatically stopped by several features of the control system.

Green Light (under the green “Start” button)

Slow Flashing – “POWER ON” – Indicates the electrical system is energized and ready to have the wash and sanitize sinks filled. The upper sensor does not sense a water level high enough to start the machine.

Solid Illumination – “OPERATING” – Indicates that the wash sink is full and the START button has been pressed. The UPM program will continue operating (solid illumination of the green light) when the STOP button is pressed and the wash pump motor has stopped. The green light will return to flashing when the wash tank is drained.

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

The blue light is not used for normal operation. It is only used during service procedures.

Red Light (under the red “Stop” button)

Slow Flashing – “FILL SANITIZER TANK” – When the wash tank is filled with water, the red light will blink indicating the sanitizer tank must be filled to the water line. It will turn off when the sanitizer tank is full.

Solid Illumination – “CHANGE SANITIZE SOLUTION” – Two hours after the tank is filled to the top level sensor, the red light will illuminate indicating that it is time to change the sanitizing solution.

Control Module (UPM) LED Lights

The Universal Programming Module (UPM) is mounted to the inside surface of the control enclosure cover. This device has indicator lights to aid in troubleshooting. To view this device the control panel cover must be opened by removing the two screws at the top of the control panel face.

Examination of the UPM lights will require that the power is turned on while the control panel door is open. Be aware that the components inside the control panel operate with high voltage and must not be touched while the power is turned on. Touching the high voltage connections will result in severe electrical shock and will cause serious injury or death.



The UPM has six LEDs mounted on its top edge. The function 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

Important
* indicates lights that must be illuminated for the wash pump to operate.

For an explanation of the sensor lights call the Power Soak service department (800-444-9624), 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. For example:

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 Power Soak Systems

Wash Pump Will Not Operate

Owner/Manager Check List

Review the control panel lights and complete the following procedures. If these steps do not allow the machine to start, contact the Power Soak service department (800-444-9624) or an authorized service company.

- No lights on the control panel:
 - Power is turned off; check the main circuit breaker to see that it is turned on.
 - Power supply is defective; call a service company to restore power to the machine.
 - Water temperature is above 135°F.
- Green light is flashing:
 - Liquid level in the wash sink is below the top sensor; fill the wash sink to the waterline.
 - Liquid level sensor is dirty and does not detect the water level; clean the liquid level sensors as described in the “Preventive Maintenance” section of this manual. (The liquid level sensors are the white plastic disc with a metal center located on the side walls of the wash and sanitizer sinks.)

Service Company Check List

The Owner/Manager Check List (above) must be verified. If there are no lights on the control panel, check the following:

- 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, see that all connections to and from the liquid level sensors are secure and that there is no physical damage to the wiring. In the event that damaged connectors and/or wiring are found, contact Power Soak Systems, Inc. at 800-444-9624.

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

Intentionally blank page.

Installation

SKEWER WASH



The installation and initial operational check of the Power Soak Skewer Wash must be performed 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.



Please refer to the detailed installation instructions that were sent with the Power Soak Skewer Wash.

Electrical Requirements

The electrical requirements of the machine are on the serial number plate located on the front of the wash sink, adjacent to the control panel enclosure and inside the enclosure on the back face of the enclosure door.

The machine is completely pre-wired and tested at the factory.

All Power Soak systems have a single point electrical connection, and a dedicated circuit is required. A “hard-wired” connection from an appropriate power source junction box to the control panel is used to power the machine. The junction box power source should be located at the end of the machine nearest the motor. Ideally, the junction box should be located on the wall directly behind the pump motor and control panel.

The installer is to provide an electrical disconnect that should be incorporated in the “hard wire” electrical connection to the machine. Properly sized watertight conduit, fittings and parts are required, as well as the appropriate gauge wire.

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

Plumbing Requirements

The Skewer Soak will require the following plumbing connections:

- 3/4" (19mm) or 1/2" (12 mm) hot water supply line.
- 3/4" (19mm) or 1/2" (12 mm) cold water supply line.
- One waste water connection 1-1/2" (38mm) or larger.
- One wash tank overflow connection 1-1/2" (38mm) or larger.



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

Power Soak Systems. Inc.
903 East 104th Street, Suite 130
Kansas City, MO 64131
Phone (816) 761-3250 Fax (816) 761-0544
(800) 444-9624
www.powersoak.com

Part#: 33529
Rev: Draft
Rev Date: Richard Powers10-1-12