

Graymills

Model PH822-A Heated Handi-Kleen® Recirculating Parts Cleaner

Operations and Maintenance Instructions

Be sure anyone operating this unit reads and understands all warnings and instructions. Keep this manual available for reference/training.

SAFETY WARNINGS

You will find various types of safety information on the following pages and on the labels attached to Graymills equipment. The following Safety Statements explain their meaning:



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid personal injury or death.



DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



CAUTION, without the safety alert symbol, is used to address practices not related to personal injury.

READ BEFORE OPERATING



- Never use a flammable or combustible fluid in this unit. Use only nonflammable, non-combustible, water-based, low foaming cleaning compounds in this machine. For best results, Graymills' recommends using Aquatene 330, Super Aquatene 360, or Aquatene 571.
- Do NOT contaminate cleaning fluid with any flammable or combustible material such as gasoline, alcohol, mineral spirits, etc. Drain parts to be cleaned of any flammable material or combustible material before placing inside cleaning tank. Even small quantities can create a dangerous fire hazard.



- Never work with equipment you feel may be unsafe. Contact your supervisor immediately if you feel a piece of equipment is in an unsafe condition.
- Cleaning solutions may be irritating to skin and eyes. **Always wear gloves, apron and safety glasses when using.** If splashed in eyes, flush thoroughly with water and follow directions on cleaning solution MSDS.
- Install machine in a well ventilated area to avoid possible buildup of cleaning solution fumes.

CAUTION

- Cleaning fluids should have a pH under 12.5.
- This is a heated system. Always use caution when first putting hand into cleaning solution. Higher temperatures can cause burns to skin and will damage pump. This unit's thermostat has a maximum temperature of 120°F. **Do NOT attempt to exceed thermostat setting.**
- **Should cleaning solution become uncomfortably hot despite adjusting thermostat to a lower temperature and/or the heat light is on continuously, unplug machine and discontinue use.** For instructions on changing the thermostat, please see the Troubleshooting section.
- If any cleaning solutions are splashed on clothing, change promptly and thoroughly wash any body areas which have been in contact with solution. Apply lotion. **Do NOT permit saturated clothing to remain in contact with skin.**

CAUTION

- After extended use, the gas-spring used to assist in opening and closing the lid may lose its ability to keep the lid open. At the first sign of this, replace the gas-spring immediately. (See Spare Parts List)
- Automatic Safety Cover. Since certain soils may be combustible, e.g., oils, greases. This unit is equipped with a fusible safety link cover mechanism designed to support the open cover at a slightly forward angle. In the event of a fire, the fusible link will melt at 165°F permitting the cover to slam shut, cutting off oxygen supply to the fire. (See Spare Parts List)
- **Failure to keep proper liquid level will result in burning out the pump and heater coil, creating a potential fire hazard.** To help prevent this, this unit is equipped with a low liquid level device which will shut off the pump and heater. If solution stops circulating and the red "FAULT" light becomes illuminated, immediately turn off and unplug unit. For instructions on filling the reservoir, please see the Troubleshooting section.
- **Do not leave the unit unattended with parts in the tank which would prevent the cover from closing completely in the event of a fire. Keep cover closed when unit is not in use. If the fusible link breaks, do not operate the unit until a replacement link is installed.** (See Spare Parts List)
- Turn heater and pump off when unit is to be idle for extended periods (overnight and weekends).
- Maximum shelf capacity 150 pounds.
- Maximum fluid capacity 30 gallons.

POWER SUPPLY, WIRING AND GROUNDING

WARNING

- Failure to permanently ground the unit and controls before connecting to electrical power can cause shock, burns or death.
- Install ground and wiring according to local and national electrical code requirements.
- Install a fused disconnect switch on all power legs near the unit
- Disconnect and lockout electrical supply before installing or servicing unit.
- Unit must be properly grounded to prevent electric shock hazard. Connect only to three-prong outlet. Should cord become cracked, frayed or damaged in any way, it should be repaired/replaced immediately by a qualified electrician. Never use an extension cord. (See Spare Parts List)
- The full-load amperage draw for this machine is 12 amps.

MACHINE INSTALLATION

1. Unit is shipped fully assembled.
2. Place unit on smooth, level surface in a well-ventilated area.
3. Close drain valve before filling tank.
4. Fill tank with 30 gallons of aqueous cleaning solution according to solution manufacturers' suggested dilution instructions. For best results, Graymills recommends Aquatene 330, Super Aquatene 360, or Aquatene 571. Maximum fluid level is equal to the tops of the slots in the baffle screen (Right). Fluid level must be maintained above pump and heater coil.
5. Open lid and read warnings on inside left hand portion of lid.
6. Place stainless steel shelf on mounting ridges inside tank. Flow-Thru brush rests on shelf.
7. Plug cord into properly-grounded three prong 120V, 60 Hz single-phase outlet.



Max-Fill Slots

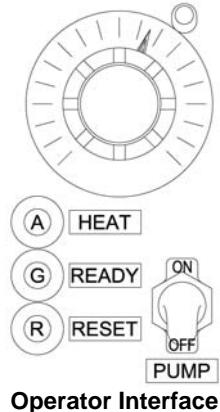
MACHINE OPERATION

1. Inspect pump, electrical cord and plug.

WARNING

Do not use machine if any wear or damage is noticed until impaired components are repaired or replaced.

2. Check cleaning solution level and add if necessary.
3. Press TEST button on GFCI to ensure switch is operating properly. Press RESET button on GFCI to prepare unit for operation.
4. Toggle POWER switch located on the underside of the electrical box to the ON position. The red "RESET" light will illuminate.
5. Toggle RESET switch located under the electrical box to begin operation. The green "READY" light will illuminate and the red "RESET" light will extinguish.
6. Turn thermostat to desired operating temperature. If heat is required you should hear the thermostat engage with a "CLICK" and the amber "HEAT" light will illuminate. Should this not happen, press the red reset button above the thermostat. Should you wish to run the unit unheated, rotate the thermostat dial counterclockwise until it stops. For best results, allow cleaning fluid to reach desired temperature before operation.
7. To operate the fluid pump, toggle PUMP switch on front of electrical box to the "ON" position.
8. For fluid via the flexible hose turn the directional valve counterclockwise to the left.
9. For fluid via the flow-thru brush turn the directional valve clockwise to the right.
10. Turn heater and pump off when unit is to be idle for extended periods (overnight and weekends). This will minimize liquid loss due to evaporation as well as reduce operating costs.



Operator Interface

To the left of the Operator Interface, a detailed description of step 6 is provided: "Turn thermostat to desired operating temperature. If heat is required you should hear the thermostat engage with a 'CLICK' and the amber 'HEAT' light will illuminate. Should this not happen, press the red reset button above the thermostat. Should you wish to run the unit unheated, rotate the thermostat dial counterclockwise until it stops. For best results, allow cleaning fluid to reach desired temperature before operation."

ADDING FLUID TO UNIT

CAUTION

Follow instructions and exercise appropriate safety precautions before adding fluid.

1. Turn machine off and unplug.
2. Open lid and remove stainless steel shelf.
3. Add properly diluted cleaning solution to top of max-fill slots (right).
4. Reinstall shelf, restore power and resume normal operation.



Max-Fill Slots

RECOMMENDED MAINTENANCE

CAUTION

Be sure electrical cord is unplugged and cleaning solution and heater coil is cool before performing any maintenance.

1. To maximize cleaning efficiency, fluid should be changed regularly. Heavy, constant use may warrant daily fluid changes.
2. Inspect heater coil on a monthly basis. To inspect, remove baffle screen. Remove any deposits or buildup with a soft wire brush.

CAUTION

Deposits and buildup can cause premature failure of the heating coil.

3. Filter cartridge will require periodic replacement depending upon the volume and types of soils involved. A significant reduction in the flow through the flexible hose signals the need to replace the filter cartridge.

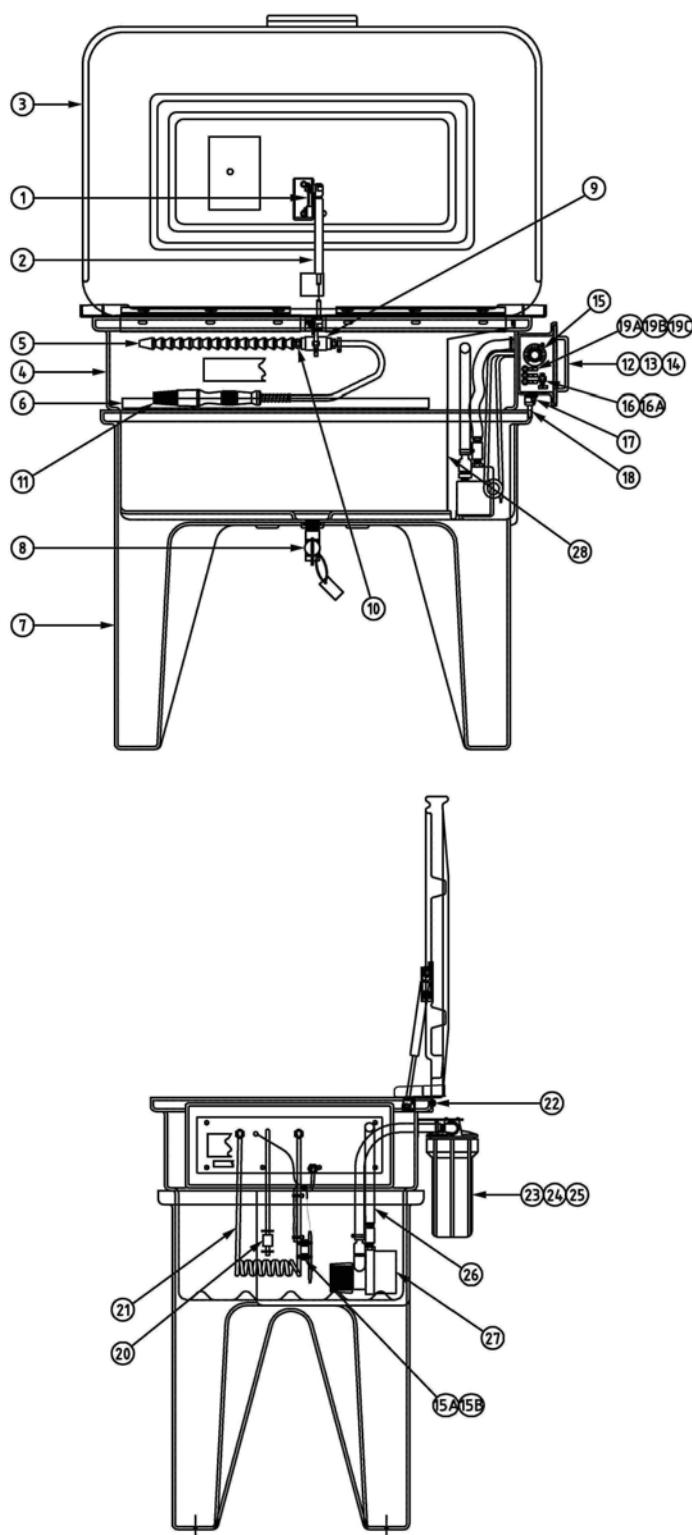
Save this manual for future training. Do not allow operation without reading and understanding these instructions.

TROUBLESHOOTING

Problem	Probable Cause	Suggested Remedy
No Machine Function	Machine unplugged	Plug machine into appropriate wall socket
	GFCI tripped	Press RESET button on GFCI
	No power at outlet	Consult plant electrician
Heat Not Working	Thermostat tripped	Press red thermostat reset button
	Heater malfunction	Contact Graymills for more information 1-888-472-9645
	Heater coil dirty	Clean heater coil (see Recommended Maintenance)
Red "RESET" Light ON	Machine needs to be reset	Toggle RESET switch
	Low solution level	Add cleaning solution
	Float sensor or control relay malfunction	Contact Graymills for more information 1-888-472-9645
Little or No Fluid Flow	Valve shut off	Turn valve fully to the left or right to open valve
	Clogged filter	Replace filter element (Part #742-09335-1)
	Cracked or broken hose	Inspect and replace hose (See parts list)

If your problem is not listed above or problems persist, please contact Graymills for further assistance. 1-888-472-9645

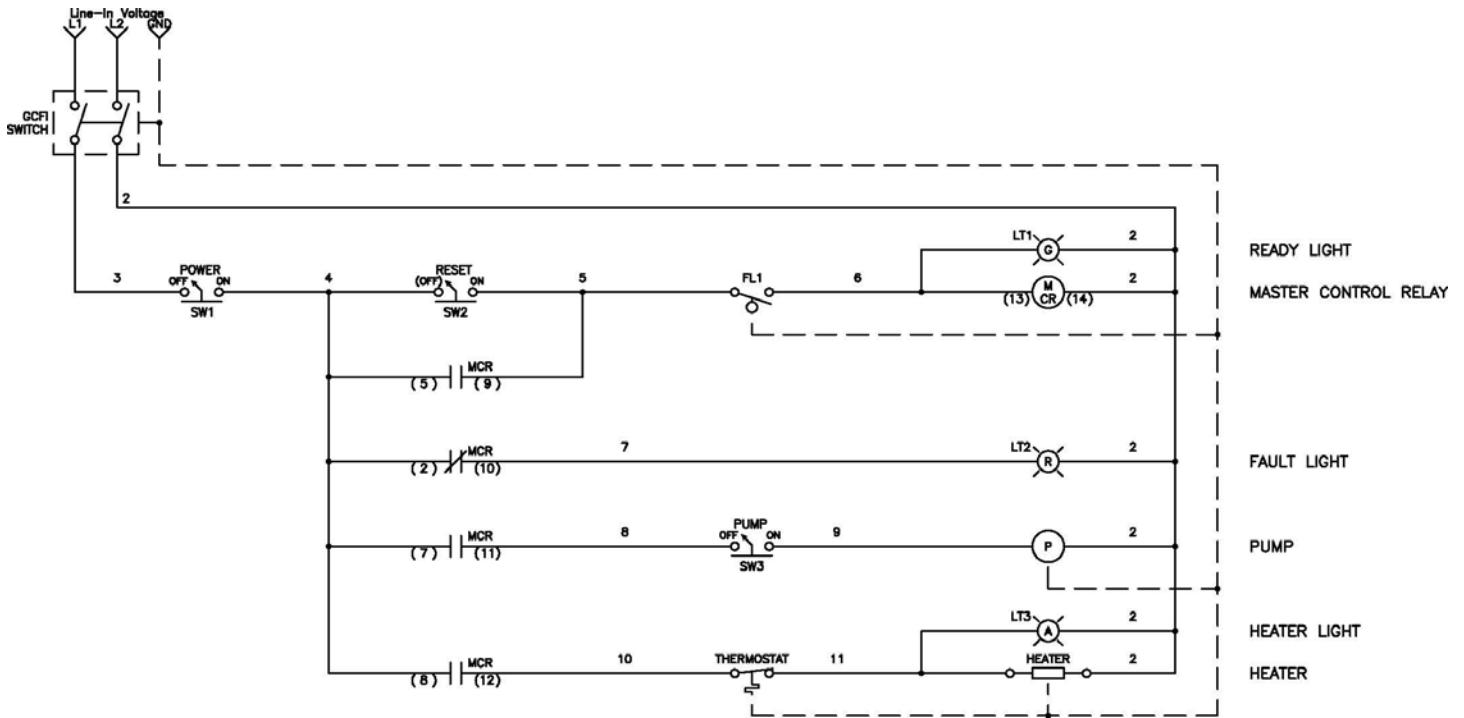
PH822-A DRAWING AND PARTS LIST



REF	DESCRIPTION	PART NO.
1	Fuse Link Assembly	451-23482
2	Gas Spring	765-09631
3	Tank Lid	727-92064-BLACK
4	Tank	727-92064T
5	Flexible Hose Assembly	728-90951
6	Stainless Steel Shelf	645-35922-81
7	Tank Base	727-92064
8	Drain Valve	738-09669
9	Directional Valve	738-90795
10	Flex Hose Adapter	728-90796
11	Flow-Thru Brush Ass'y	749-09925
12	Electric Box	727-92064B
13	Electric Box Gasket	744-35793
14	Electric Box Cover	727-92064C
15	Thermostat Kit	C-38718
15A	Spring	765-03264-81
15B	S.S. Cable Tie	769-07704
16	Toggle Switch	770-09192
16A	Toggle Switch Boot	770-08481
17	Pushbutton Switch	770-07011
18	8' Power Cord	777-04152
19A	Indicator Light -Amber	772-92078
19B	Indicator Light -Green	772-92079
19C	Indicator Light -Red	772-92080
20	Float Switch Assembly	770-09644
21	Heater	771-35248
22	Hinge	764-34711-81
23	10" Filter Housing	742-90186
24	Filter Cartridge, 30 Micron	742-09335-1
25	O-Ring	744-90187
26	3/4 Dia Neoprene Tube, 16" Long	729-90327
27	Pump	390-09663
28	Baffle Screen	647-39748-81
29*	Relay	782-92066
30*	Relay Socket	782-92126
31*	Terminal Block	780-91292
32*	Jumper 3 Pole	780-91289
33*	Jumper 4 Pole	780-91290
34*	End Anchors 35mm	780-91111

* - These items are not shown on the diagram

ELECTRICAL SCHEMATIC



WARRANTY INFORMATION

Graymills Corporation warrants that the equipment manufactured and delivered, when properly installed and maintained, shall be free from defects in workmanship and will function as quoted in the published specification. **Graymills** does not warrant process performance, nor assume any liability for equipment selection, adaptation, or installation.

Warranty does not apply to damages or defects caused by shipping, operator carelessness, misuse, improper application or installation, abnormal use, use of add-on-parts or equipment which damages or impairs the proper function of the unit, and modifications made to the unit. Warranty does not apply to expendable parts needing replacement periodically due to normal wear and tear.

A new Warranty period shall not be established for repaired or replaced materials or products. Such items shall remain under Warranty for only the remainder of the Warranty period of the original material or product.

THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, WHETHER ORAL, WRITTEN, EXPRESSED, IMPLIED OR STATUTORY. **GRAYMILLS CORPORATION** MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE AFORESTATED OBLIGATION ARE HEREBY DISCLAIMED BY **GRAYMILLS CORPORATION** AND EXCLUDED FROM THIS SALE. **Graymills** warranty obligations and Buyer remedies (except to title), are solely and exclusively stated herein. In no case will **Graymills** be liable for consequential damages, loss of production, or any other loss incurred due to interruption of service.

Graymills' obligation under this Warranty shall be limited to:

1. Repairing or replacing (at **Graymills** sole discretion) any non-conforming or defective component within one year from the date of shipment from **Graymills**.
2. Repairing or replacing (at **Graymills** sole discretion), components supplied by, but not manufactured by **Graymills**, to the extent of the warranty given by the original manufacturer.
3. This warranty does not cover rusting of a mild-steel parts cleaner used with aqueous (water-based) materials.

Buyer must give **Graymills** prompt notice of any defect or failure.

If you believe you have a Warranty claim, contact **Graymills** at (773) 248-6825. Any return material must have an RMA number on the outside of the package and shipping prepaid or shipment will be refused. **Graymills** will promptly examine the material and determine if it is defective and within the Warranty period.