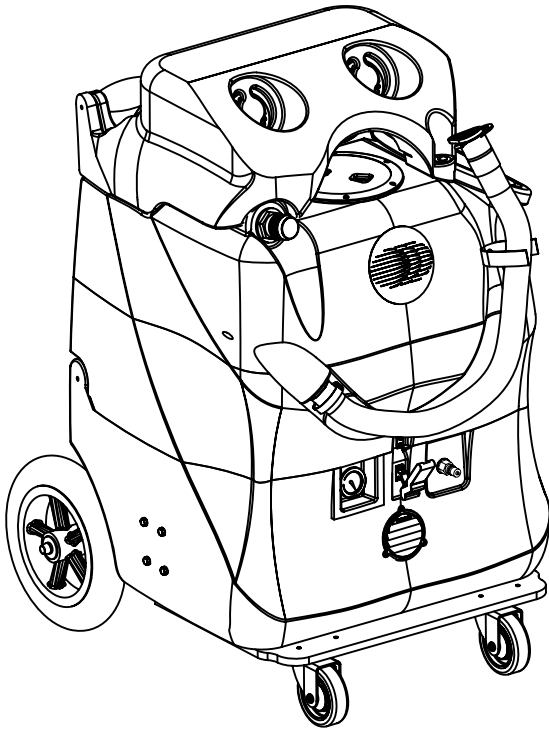




# SOLUS-500 EXTRACTOR 100V



## INFORMATION & OPERATING INSTRUCTIONS

**DO NOT OPERATE MACHINE UNTIL YOU HAVE READ  
ALL SECTIONS OF THIS INSTRUCTIONS**

**IMPROPER USE OF THE MACHINE WILL VOID THE WARRANTY**

1. Always use a defoamer when foaming occurs to prevent vacuum motor damage.
2. Keep machine from rain and snow, extremes in temperatures, and store in a heated location. DO NOT let the machine or the wand freeze. Do not use outdoors.
3. Do not let the pump run dry.
4. Use approved chemicals only. NO SOLVENTS.
5. Wear gloves or use rags when removing quick disconnects to prevent burns.
6. Never use water above 130 °F/54 °C in the solution tank.

# IMPORTANT SAFETY INSTRUCTIONS

This machine is only suitable for commercial use, for example in hotels, schools, hospitals, factories, shops and offices other than normal residential housekeeping purposes.

When using any electrical appliance, basic precautions should always be followed, including the following:

**NOTE:** Read all instructions before using this machine.

## **WARNING!**

**To reduce the risk of fire, electric shock, or injury:**

- Do not leave the machine unattended when it is plugged in. Unplug the unit from the outlet when not in use and before servicing.
- To avoid electric shock, do not expose to rain or snow. Store, and use, indoors.
- Do not allow to be used as a toy. Close attention is necessary when used near children.
- Use only as described in this manual. Use only the manufacturer's recommended attachments.
- Never add water over 54° C/130° F to the solution tank.
- Do not use with damaged cord or plug. If the machine is not working as it should, has been dropped, damaged, left outdoors or dropped into water, return it to a service center.
- Do not pull by the cord, use the cord as a handle, close a door on the cord, or pull the cord around sharp edges or corners. Do not run the machine over the cord. Keep the cord away from heated surfaces. To unplug, grasp the plug, not the cord.
- Do not handle the plug, the cord or the machine with wet hands.
- Extension cords must be 12/3 and no longer than 50 feet. Replace the cord or unplug immediately if the ground prong becomes damaged.
- Do not put any object into openings. Do not use with any opening blocked; keep free of dust, lint, hair, and anything that may reduce air flow.
- Keep loose clothing, hair, fingers, and all parts of body away from openings and moving parts.
- Do not pick up anything that is burning or smoking, such as cigarettes, matches, or hot ashes, or any health endangering dusts. Do not use to pick up flammable or combustible liquids such as gasoline or use in areas where they may be present.
- Turn off all controls before unplugging.
- Use extra care when cleaning on stairs.
- Connect to a properly grounded outlet only.
- Liquid ejected at the spray nozzle could be dangerous as a result of its temperature, pressure, or chemical content.

## **INSPECTION:**

Carefully unpack and inspect your SOLUS-500 for shipping damage. Each machine is tested and inspected before shipping. Any shipping damage incurred is the responsibility of the carrier. You should notify the carrier immediately if you notice damage to the box or to the machine or parts.

## **CLEANING SOLUTIONS:**

We recommend liquid cleaning chemicals, such as our Magic Fabric Cleaner. Powder chemicals may be used, but unless mixed very thoroughly they could cause a build-up in the pump, lines, heat exchanger and/or quick disconnects. Any problem caused by a chemical build-up is not covered by warranty. Use a neutral cleaner with a pH between 6 and 9 to avoid premature wear of the pump, seals, and/or other components. Damage caused by the use of strong chemicals is not covered by the warranty.

## **MAINTENANCE:**

For optimum performance flush the machine with clear water at the end of each working day. Once a month, minimum, run a flushing compound through the machine to break up any mineral or chemical build-up that may have formed. U.S. Products' "X-1500" is recommended. The vacuum motor, pump motor, and the pump do not require any scheduled maintenance; however, the motors may require replacement brushes after 1000 - 1500 hours, and the pump and bypass valve may require rebuild kits after 1000 - 1500 hours, typically (refer to machine part list for numbers). Clean the body with an all-purpose detergent, and protect it with an automobile interior polish. Lubricate the wheels, castors, and quick disconnects with an all purpose silicone spray.

## **PARTS AND SERVICE:**

Repairs, when required, should be performed by your authorized distributor who maintains an inventory of original replacement parts and accessories. Call the distributor from whom you purchased this machine if you need parts and service. Be sure to specify the machine model. Have your serial number handy.

**Serial Number:** \_\_\_\_\_

**Model:** SOLUS-500-JP

**Purchase Date:**\_\_\_\_\_

**Write the name and phone number of your distributor:**

\_\_\_\_\_  
\_\_\_\_\_

*(and be sure to register your warranty: go on-line to [www.usproducts.com](http://www.usproducts.com))*

## KNOW YOUR MACHINE

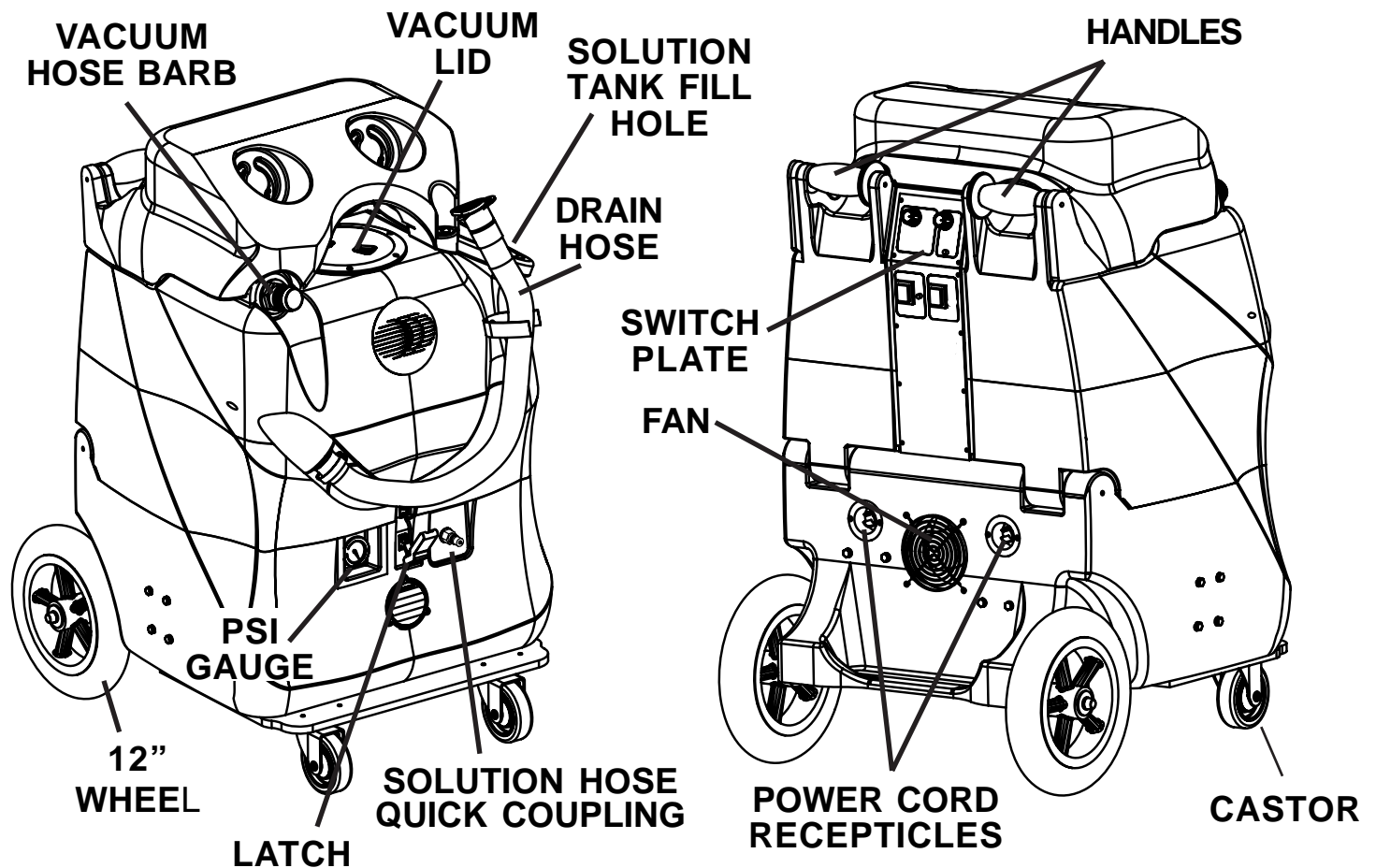
**VACUUM LID** - This lid provides access into your recovery tank so that you can clean the tank. The lid must be closed before you try to clean..

**SOLUTION TANK FILL HOLE** - This is where you fill the tank with water and cleaning solution.

**VACUUM HOSE BARB** - This is where you connect your vacuum hose to the machine. A tight connection is necessary to prevent a vacuum leak which would reduce the amount of suction.

**DRAIN HOSE** - This is how you empty the dirty water from your recovery tank. Place the hose over a drain, and open the cap. When cleaning out the tank at the end of a job, simply place this hose into a drain and use clean water to rinse out the dirt and debris from the tank. **NOTE:** be sure to close the cap tightly before using the machine again.

**HANDLES** - The handles are used to move the machine. These handles allow you to tilt the machine back onto its 12" wheels for easy maneuvering, and/or for moving on stairways.



**SWITCH PLATE** - The switches are located on the rear of the machine, out of the way of water

**FAN** - Removes warm air from the component compartment.

**PSI GAUGE** - indicates the pump pressure. Look at the pressure while you spray.

**LATCH** - The latch holds together the tank and the base compartment.

**SOLUTION HOSE QUICK COUPLING**- This is where you connect the solution line that runs from the machine to the carpet wand or hand tool.

**POWER CORD RECEPTACLES** - The receptacles are where the two power cords connect to the machine.

**CASTOR** - Swivel castor provides easy maneuverability.

**WHEEL** - The rear wheels are 12 inches in diameter to provide superior ease of transportation and stair climbing.

## SWITCH PLATE UNDERSTANDING

### HEAT CONTROL (1):

This dial controls the water temperature. Turn it clockwise to increase water temperature and counterclockwise to decrease temperature. The heater will operate only if the Heat switch (#6) is on.

### HEAT MODE LIGHT (2):

This red light will only illuminate when the heater is heating and will turn off when it reaches operating temperature. During normal operation, the "MODE" light will be on most of the time.

### PUMP CONTROL (3):

This dial controls motor speed and pump pressure. Adjust the dial clockwise to increase pressure and counterclockwise to decrease pressure or turn off pump. The pump runs off of cord #1. The pump spraying pressure will be observable at the pressure gauge.

### VACUUM SWITCH (4):

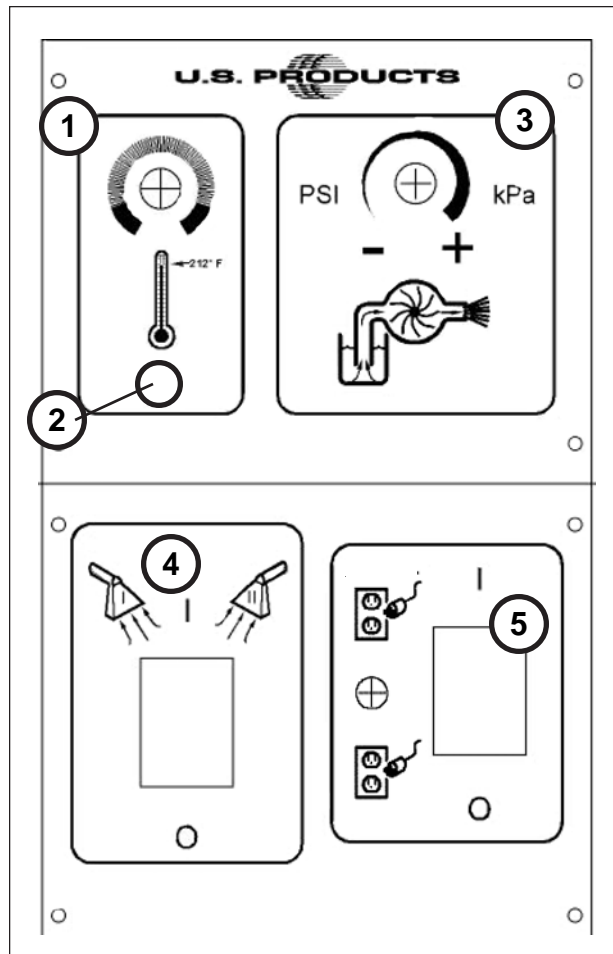
This switch will illuminate when the vacuum motors are on. The vacuum motors run off of cord #1.

### HEAT SWITCH (5):

The heat switch will illuminate when it is turned on.

**NOTE:** if the heater is turned on when both power cords are on the same circuit breaker, the breaker may trip.

## SOLUS-500-JP SWITCH PLATE



**NEVER LET YOUR MACHINE OR YOUR WAND FREEZE**

## SET-UP:

1. Fill the holding tank with clear water and prespray with the detergent of your choice (we recommend a CRI approved chemical). Mix well. Although this machine is designed to supply instant hot water, the addition of warm water to the holding tank would increase heater efficiency. Never use water above 130° F/54° C in the solution tank.
2. Turn off all the switches. Plug in cord #1. (This cord runs the pump and vacuum).
3. Attach the priming hose to the machine and place the open end into the tank.
4. Turn on the pump (turn pump pressure dial all the way clockwise) and let it run until the pump is fully primed (approximately 30 seconds to 1 minute). Once the pump is primed, turn off the pump and disconnect the priming hose. Attach the cleaning hose and tool.

### IF YOU WANT HEATED SOLUTION:

5. Plug in the the heater cord (identified by "H" on the back of the machine). **NOTE:** If the green circuit indicator light does not illuminate when the heater cord is plugged in, then both cords are on the same circuit. Try other outlets until the light comes on.
6. Turn the heat knob clockwise to the desired temperature.
7. Turn on the pump and spray through your tool a few times to fill the lines with solution. Begin cleaning.
8. Refill and empty the tanks as necessary.
9. When finished with the job, vacuum all unused solution into the recovery tank, and dump the tank. Clean the tanks and filters. Clean the tool and hoses. Store the machine in a heated location.

### **CAUTION:**

**If the green light is not on after the two cords are plugged-in, the circuit breaker may trip.**



### **AUTO VACUUM SHUTOFF:**

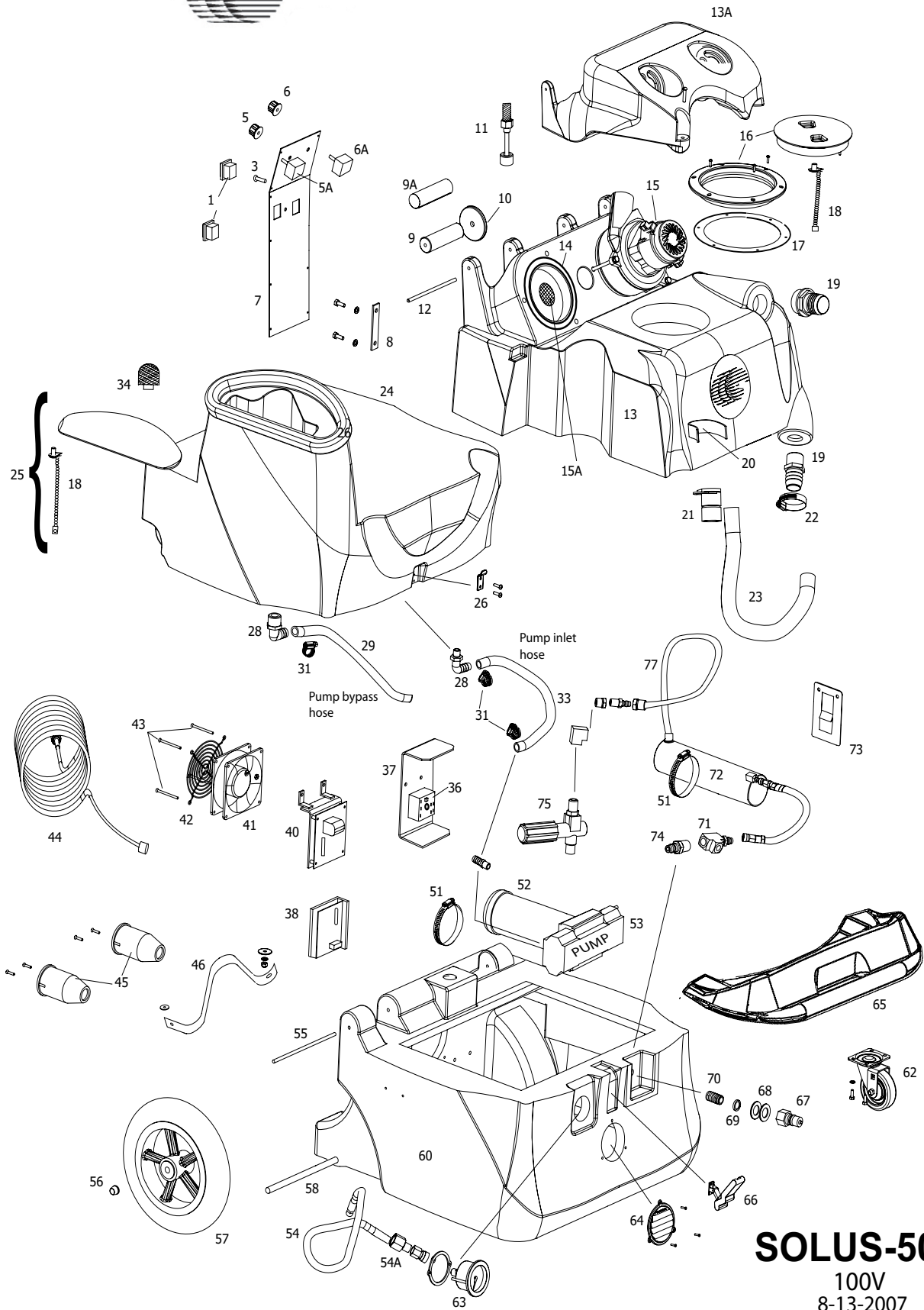
When the recovery tank is full, the float system will shut off the vacuum motor to prevent the machine from overflowing. The float may not work in foam. Always use a defoamer to prevent overflow. Once the vacuum motor shuts off, the vac switch (#7) must be turned off, the recovery tank emptied, and then the vacuum switch turned back on (up position) to get the vacuum motor started again.

**CAUTION: Always make sure the float is clean and travels freely before turning on the machine. A float that is stuck will cause the vacuum motor to suck in water, resulting in vac motor damage.**

### **PUMP PRESSURE:**

Make sure the cleaning tool is spraying when adjusting the pressure, otherwise the pressure reading will be inaccurate.

# U.S. PRODUCTS



**SOLUS-500**  
100V  
8-13-2007

# SOLUS-500 EXTRACTOR

## PART LIST

100V

| <u>ITEM</u> | <u>PART No</u>       | <u>DESCRIPTION</u>                  | <u>ITEM</u> | <u>PART No.</u> | <u>DESCRIPTION</u>                  |
|-------------|----------------------|-------------------------------------|-------------|-----------------|-------------------------------------|
| 1           | FP312                | Switch, DPDT,with cover             | 52          | 948B            | Motor, DC, for pump                 |
| 2           | 78B                  | Light, red                          | 53          | FP_____         | Pump complete, no mtr               |
| 5           | 248                  | Knob, red                           | 54          | FP542           | Hose assembly, pump to gauge        |
| 5A          | FP544                | Potentiometer, heat, w/wires & knob | 54A         | 210             | Snubber, pulsation dampening filter |
| 6           | 249                  | Knob, blue                          | 55          | 801             | Hinge pin                           |
| 6A          | FP543                | Potentiometer, pump, w/wires & knob | 56          | 27A             | Axle Cap                            |
| 7           | 2093A                | Switch plate                        | 57          | 2092            | Wheel, 12"                          |
| 8           | 4404C                | Mating bar                          | 58          | 910             | Axle,                               |
| 9           | 2105                 | Handle                              | 60          | FP_____         | Base                                |
| 9A          | 1590                 | Grip, handle                        | 61          | FP_____         | Castor Plate, BLack                 |
| 10          | 2106                 | Wheel, handle                       | 62          | 905             | Castor, 4"                          |
| 11          | 2026A                | Float, electric, water level        | 63          | FP541           | Gauge, Pump pressure, with QD       |
| 12          | 801D                 | Hinge pin                           | 64          | 928             | Louver, 3", gray                    |
| 13          | FP_____              | Tank, Vacuum                        | 65          | FP_____         | Castor Plate                        |
| 13A         | FP_____              | Cover, for vacuum motors            | 66          | 908             | Latch                               |
| 14          | 2013A                | Gasket, vacuum                      | 67          | 45              | Quick Disconnect, male. 1/4 p.t.    |
| 15          | 408E                 | Vacuum motor,                       | 68          | 115             | Washer, fiber                       |
| 15A         | 1589                 | Screen, 1/8 S/S mesh                | 69          | 116             | Bushing, Teflon                     |
| 16          | 2086                 | Lid & ring, vacuum                  | 70          | 92A             | Nipple, 1/4 p.t. S/S                |
| 17          | 1074                 | Gasket, vacuum lid                  | 71          | 168             | "T" Brass                           |
| 18          | 805                  | Chain, 8"                           | 72          | FP_____         | Heat Exchanger, complete.. 100V     |
| 19          | 907                  | Hose barb, 1-1/2"                   | 73          | 455             | Mount bracket, heater               |
| 20          | 1130                 | Strap, Velcro, 9"                   | 74          | 223             | Quick Disconnect, male              |
| 21          | 1060C                | Cap, drain hose                     | 75          | 945D            | Unloader valve                      |
| 22          | 156                  | Hose Clamp                          | 77          | FP547           | Hose assembly, heater inlet         |
| 23          | 1060B                | Hose, drain                         |             |                 |                                     |
| 24          | FP_____              | Tank, Holding                       |             |                 |                                     |
| 25          | FP545                | Lid and chain, Holding Tank         |             |                 |                                     |
| 26          | 909A                 | Latch strike                        |             |                 |                                     |
| 28          | 1113                 | Hose barb, 90°, 1/2" hose           |             |                 |                                     |
| 29          | 925                  | Hose, 3/8" ID X 17"                 |             |                 |                                     |
| 31          | 166                  | Hose clamp                          |             |                 |                                     |
| 33          | 946                  | Hose, 1/2" ID X 20"                 |             |                 |                                     |
| 34          | 207A                 | Filter, pump inlet                  |             |                 |                                     |
| 36          | See Miscellaneous ** |                                     |             |                 |                                     |
| 37          | 918                  | Heat Sink plate                     |             |                 |                                     |
| 38          | FP361                | Motor Speed Control PCB, pump       |             |                 |                                     |
| 40          | FP225                | Vacuum Motor Control PCB            |             |                 |                                     |
| 41          | 2014                 | Fan, cooling                        |             |                 |                                     |
| 42          | 2015                 | Guard, fan                          |             |                 |                                     |
| 43          | 2B1                  | Screw, 6-32 X 2-1/4"                |             |                 |                                     |
| 44          | 1057B                | Power Cord, 12/3, 25 ft             |             |                 |                                     |
| 45          | 1062                 | Receptacle, AC power in             |             |                 |                                     |
| 46          | 1476                 | Strap, 17"                          |             |                 |                                     |
| 51          | 76                   | Hose clamp                          |             |                 |                                     |

### MISCELLANEOUS PARTS

|              |  |
|--------------|--|
| **FP194E     | Heat repair kit includes thermistor control, thermistor probe & cutout |
| 950CP        | Pump rebuild kit, valves and o-rings                                   |
| 250          | Pump rebuild kit, piston and seals                                     |
| FP_____      | Pump & motor complete with unloader                                    |
| 2102 & 2102A | Label, Solus-500   |
| SYP1         | Syphon Hose  |



## TROUBLE SHOOTING:

| <u>IF THIS OCCURS</u> | <u>CHECK THIS</u>   |
|-----------------------|---|
| NO SPRAY              | Solution tank is empty.<br>Clogged spray tip.<br>Pump not running or not primed.<br>Valve on wand not operating.  |
| PUMP DOES NOT RUN     | Check the brushes in the pump motor. Replace if necessary.<br>No power to pump. Test the Motor Speed Control Circuit Board and potentiometer.   |
| LOW SUCTION           | Debris is plugging cleaning tool or vacuum hose.<br>Drain gate is not completely closed, or seals are damaged.<br>Vacuum dome is not seated or is damaged.  |
| NO SUCTION            | No power to motor.<br>Test the Electronic Float.<br>Test the switch.<br>Test the vacuum motor.<br>Test the Vacuum Circuit Board.  |
| LOW HEAT              | Spraying too long. Try spraying for 12-15 seconds, or about three strokes.<br>Heat exchanger needs to be flushed.<br>Wrong tool being used. Too much water passing through. Longer hose or larger diameter hose, than standard.                             |
| NO HEAT               | Heat is not turned on.<br>No power in the wall outlet - check to see if the breaker has tripped.<br>No power to the heat switch - check wiring for 'opens.'<br>No power out of heat switch to heat exchanger.<br>Call your distributor for additional help. |

## SPECIFICATIONS:

**Rotomolded Body: Lifetime Warranty**

**Vacuum: Two 5.7", 3-stage**

**VAC Shutoff: Electronic**

**Pump: Positive displacement, fully adjustable 0-500 psi**

**Waterlift: 100" -- 170 CFM**

**Heat: Adjustable to 212° F**

**Heater: 2000 Watts**

**Wand: Stainless steel, double bend, twin tip**

**Weight: 110 lbs.**

**Dimensions: 24W x 28L x 41H (inches)**



# SOLUS-500 EXTRACTOR 100V

**NOTES:**



208-772-0573 · 800-257-7982 · FAX: 208-772-0577

Coeur d'Alene, Idaho

VISIT US AT: <http://www.usproducts.com>