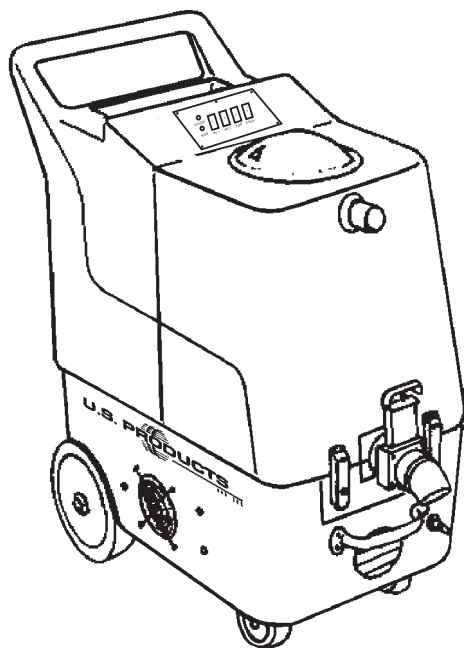




# MIRAI EXTRACTOR 100V



## INFORMATION & OPERATING INSTRUCTIONS



**DO NOT OPERATE MACHINE UNTIL YOU HAVE READ  
ALL SECTIONS OF THESE 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. Use the machine indoors. 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 54° C/130° F 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 130° F/54° C 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 MIRAI 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. 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 5 and 10 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. 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:** HHP-310-MIRAI

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

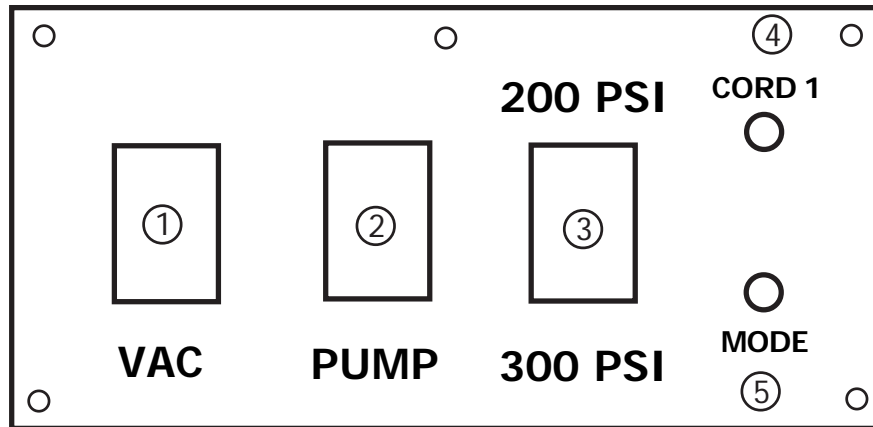
**Write the name and phone number of your distributor:**

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

**(and be sure to register your purchase to activate your warranty)**

**SAVE THESE INSTRUCTIONS**

## SWITCH PLATE:



### VAC (1) & PUMP (2) SWITCHES:

These switches are powered by cord #1. The Vac and Pump switches will illuminate when turned on.

### PRESSURE SETTING SWITCH (3):

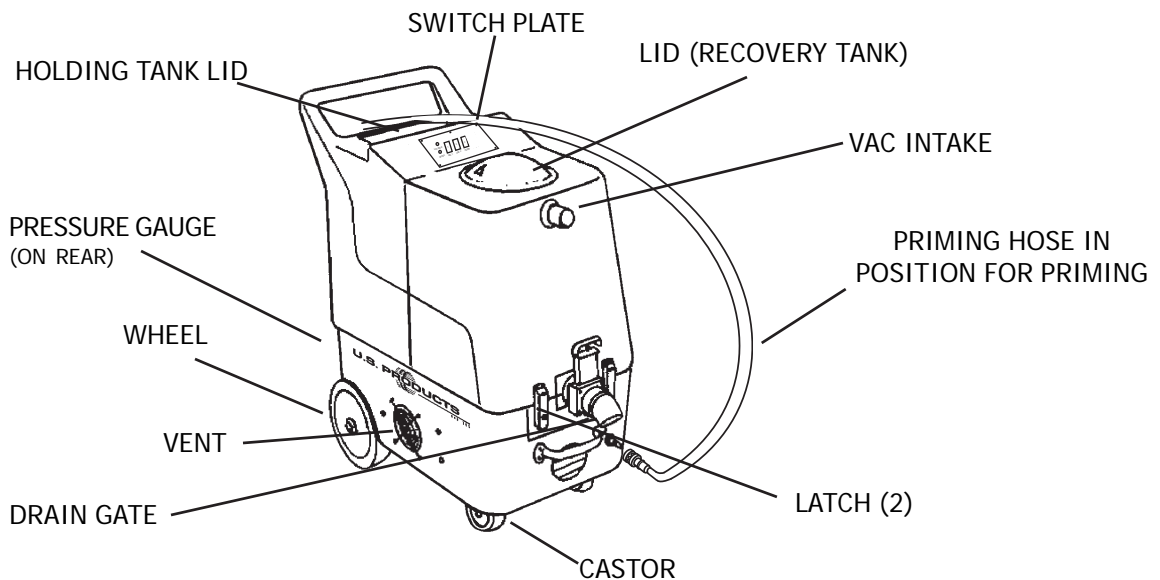
Changes pump pressure.

### CORD 1 LIGHT (4):

This green light will turn on when Cord #1 is plugged in.

### MODE LIGHT (5):

This light will only illuminate when the heater is heating and will turn off when it reaches operating temperature. Note: this light will be on most of the time during normal operation.



## **SET-UP and OPERATION:**

1. Fill the holding tank with clear water and the detergent of your choice. Mix well.  
Although this machine is designed to supply instant hot water, the addition of warm water (not above 54° C/130° F) to the holding tank would increase heater efficiency.
2. Turn off all switches. Plug in cord #1 (vac and pump).
3. Attach the priming hose to the machine (see illustration on previous page). Turn on the pump and select the 200 psi setting. Let the pump run until the pump is fully primed, then turn off the pump. Remove the priming hose.
4. Connect the solution hose and vacuum recovery hose to the machine. Connect the hoses to the cleaning tool.
2. Select either 200 or 300 psi. Turn on the pump and spray through the cleaning tool for only a few seconds to fill the lines with solution. Turn the pump off.
3. Plug in cord #2 (identified by the red "H" on the back of the extractor). **IF THE GREEN LIGHT ILLUMINATES, THE HEAT EXCHANGER WILL TURN ON AUTOMATICALLY (SEE NOTE BELOW).** Wait 2 minutes for the heat exchanger to reach operating temperature.
4. Begin cleaning.
5. When the job is finished, remove all unused solution, empty and clean the recovery tank, and clean and dry the hoses and tools.

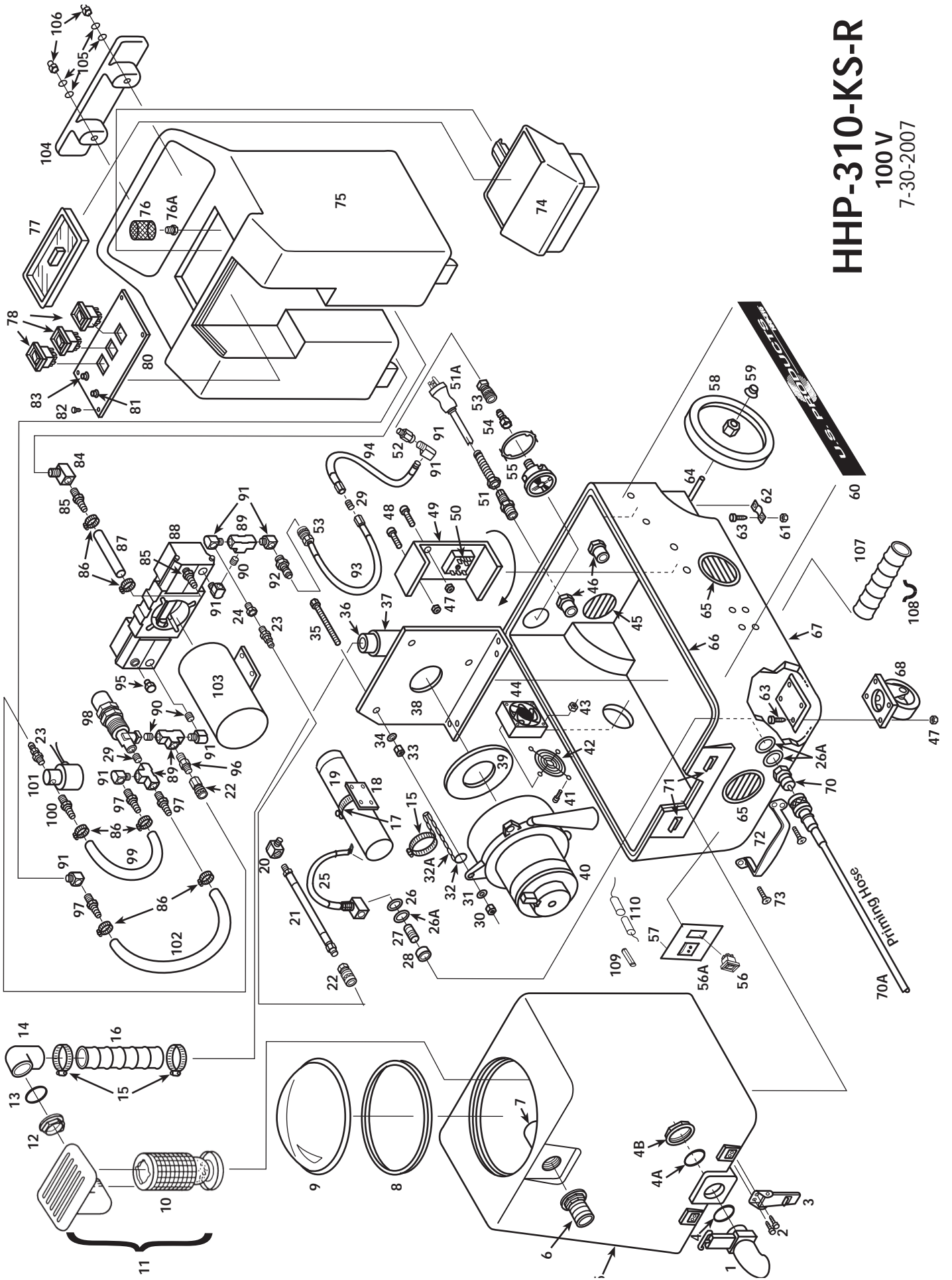
## **BALL FLOAT VAC SHUTOFF:**

When the recovery tank is full, the float system will shut off the incoming air flow and prevent water from entering the vacuum motors. The float may not work properly if the float ball cage is dirty or if there is foam in the tank. Foam will not lift the ball float.

**CAUTION: To avoid vac motor damage, always make sure the float cage is clean and the ball travels freely before turning on the machine, and use a defoamer whenever foam is present.**

# HHP-310-KS-R

100 V  
7-30-2007



# MIRAI PARTS LIST

ITEM	PART#	DESCRIPTION
#1	FP231	Drain Gate, complete
#3	908	Latch
#4	187	O-Ring, Small
#4A	187B	Washer, rubber
#4B	185	Nut, 1-1/2"
#5	V-1	Vacuum Tank, HHP, White
#6	907	Hose Barb, 1-1/2"
#7	922	PVC Elbow, 1-1/2"
#8	2009	Gasket (Vacuum Dome)
#9	FP201	Vacuum Dome
#10	FP193	Ball Float Assembly, Complete
#12	185	Nut, 1-1/2"
#13	187B	Washer, rubber
#14	922	Elbow, PVC
#15	156	Hose Clamp
#16	FP171	Hose, Vacuum, Rubber
#17	76A	Hose Clamp
#18	455	Mounting bracket, heater
#19	FP159G	Heat Exchanger, Complete, 100V
#21	2012	Hose, 26"
#22	222	Quick Disconnect
#23	223	Quick Disconnect
#24	97	Bushing, Brass
#25	313	Hose Assy, braided, heater outlet
#26	31	Washer, brass
#26A	115	Washer, fiber
#27	92A	Nipple, S/S, 1/4"
#28	116A	Bushing, nylon
#29	92A	Nipple, S/S, 1/4"
#38	926	Manifold, vacuum
#39	959	Gasket (Vacuum Motor)
#40	FP323	Vacuum Motor, 3-Stage, w/Connectors
#42	2015	Guard, fan
#44	2014	Fan, cooling
#45	459	Louver, 2-1/2" (includes screws)
#46	937	Reducer, PVC
#49	918	Heat Sink Plate
#50	FP194E	Heat repair kit
#51	184	Cord Retainer
#51A	495A	Power Cord, 25', Yellow
#53	220	Quick Disconnect, Female, Open, 1/4 p.t.
#54	219	Quick Disconnect, Male, Open, 1/4 p.t.
#55	2164	Pressure Gauge, 2-1/2
#56	1005	Switch, rocker, for plug
#56A	340	Cord connector, three-prong
#57	341	Plate, for plug and switch
#58	2003	Wheel, 8"
#59	27A	Axle Cap, Black
#60	969	Label, MIRAI
#62	180	Bracket, axle
#64	910-15.56	Axle rod
#65	928	Louver, 3", includes screws
#66	FP228A	Gasket, Base
#67	BY-1R	Base, HHP, red
#68	905	Castor, swivel
#70	45	Quick Disconnect, Male
#70A	SYP1	Priming Hose
#71	909A	Latch Strike for Latch, S/S
#72	2010A	Handle, Chrome
#74	FP204	Funnel, Black

ITEM	PART#	DESCRIPTION
#75	T-1	Holding Tank, HHP
#76	1557	Filter screen
#77	901	Lid, Holding Tank
#78	FP578	Switch, Pump & Vacuum
#80	968	Switch Plate
#81	78B	Light, Red, Small
#83	78	Light, Green, Small
#86	166	Hose Clamp
#87	946	Hose, Pump Inlet, 1/2" X 14"
#88	FP236	Pump, complete, no motor or solenoid
#89	168	"T", brass
#90	92A	Nipple, S/S
#91	91	Elbow, Brass
#92	221	Quick Disconnect, Male, Open
#93	944	Hose, Pulsation Dampening
#94	FP477	Hose, with Swages
#95	211	Plug, Brass
#96	105	Reducer Nipple, Brass
#97	164	Hose Barb, brass
#98	945	Bypass Valve
#99	925	Hose, 3/8" X 8"
#100	208	Hose Barb, brass
#101	2062A	Solenoid
#102	925	Hose, Pump Bypass, 3/8" X 14"
#103	2060	Motor, for pump
#104	CWBLK	Cord Wrap, Black
#107	FP171B	Hose, Exhaust, 2" x 12"
#108	928A	Bracket, Exhaust Hose

### MISCELLANEOUS ASSEMBLIES/PARTS

291	Rebuild kit, bypass valve
250	Rebuild kit, pump plunger & seals
250CP	Rebuild kit, pump Valve/O-Rings
950A	Bearing/Cam Assembly (for Pump)
FP2008	Vacuum Dome, w/Gasket

(NOTE: Items in kits not sold separately.)

## TROUBLE SHOOTING:

### IF THIS OCCURS    CHECK THIS

NO SPRAY	Solution tank is empty. Clogged spray tip. Pump not running or not primed. Valve on wand not operating.
PUMP DOESN'T RUN	Check the on/off switch an/dor the wires from the switch to the motor.
LOW SUCTION	Debris plugging cleaning tool or vacuum hose. Drain gate is not completely closed, or seals are damaged. Vacuum dome is not seated or is damaged.
NO SUCTION	No power to motor. Test the switch. Test the Electronic Float. Test the vacuum motor. Test the Vacuum Circuit Board.
LOW HEAT	Spraying too long. Try spraying for 12-15 seconds per cycle. Heat exchanger needs to be flushed. Wrong tool being used. Too much water passing through. Longer hose or larger diameter hose, than standard
NO HEAT	No power in the wall outlet - check to see if the breaker has tripped. Check wiring for "opens." Call your distributor for additional help.

## SPECIFICATIONS:

- Rotomolded Body:**    **Lifetime Warranty**  
**Vacuum:**    **7.2", 3-stage**  
**VAC Shutoff:**    **Ball float**  
**Pump:**    **Positive displacement, 300 psi for carpet and 75 psi for upholstery**  
**Waterlift:**    **140"**  
**Heat:**    **Adjustable to 212° F**  
**Heater:**    **1500 Watts**  
**Wand:**    **Stainless steel, double bend, twin tip**  
**Weight:**    **99 lbs.**  
**Dimensions:**    **26.5H x 18W x 28.75L (inches)**

