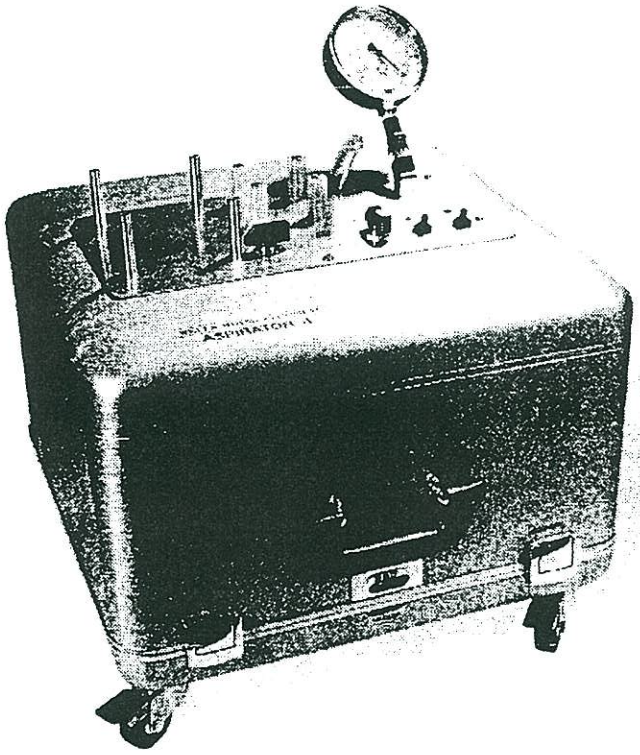
Aspirator II

20-5027-00 (110V)
20-5029-00 (220V)

USER'S MANUAL



WELLS JOHNSON

WARRANTY

- One (5) year on parts and labor from the date of shipment.
- Unauthorized handling of the Aspirator II will void warranty of the unit.
- Any aspirated material found to have been ingested into the pumping system will void the warranty.
- Retain the custom-made packing box with foam for returns.
- All returns require prior authorization from the Wells Johnson Quality Assurance Department.
- For questions about the warranty, call the Quality Assurance Department: 800-528-1597.

For technical assistance call
Customer Service or Technical Support:
800-528-1597

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GENERAL DESCRIPTION

The Aspirator II is a high-powered suction system that uses two oil-less vacuum pump compressors, designed to pull a vacuum on any closed container, or any open process system. The vacuum is accomplished by four carbon vanes mounted in the rotor. As the motor reaches speed, these vanes drop into place.

When the system is connected, the air flow will be from the tip of the cannula (or any other instrument) and follow through the tubing, collection system, overflow trap, bacterial filter, and finally the pumps. Once material is applied to the end of the cannula, the vacuum pumps evacuate the air from the lines, creating a vacuum pulling material in the same direction as the air flow. Aspirated material continues to the collection system under normal suction until the cannula is exposed to air again.

Vacuum and volume controls are marked on the Aspirator II, and can be adjusted by turning the corresponding knobs.

Specifications

Item number	20-5027-00 (110V) 20-5029-00 (220V)
Weight	64 lbs.
Dimensions	17-1/2" x 18-1/2" x 18-3/4"
Configuration	mobile
Suction system	2 piston pumps
Maximum vacuum	29+ inches of Hg
Maximum flow rate	6 cubic feet per minute
Gauge units	Inches Hg/Kilopascals
Overflow protection	auto cutoff and in-line filter
Sound level	52+/- 3db
Pump type	2 cylinder piston
Number of pumps	2-1/3 hp
Power	2/3 hp

CHECKLIST

Carefully unpack the Aspirator II. Check that the following accessories are included in the package and were received in good condition.

- Aspirator II
- Canister Holder
- Vacuum Gauge
- Power Cord
- Foot Switch
- 1-box Sterile, Disposable Tubing (10 per box)
- 2-Bacterial Filters
- 1-Overflow Trap with one 9" and one 6" silicone tube
- 1-box of Disposable Canister Liners (10 per box)
- User's Manual

Note: You will receive either 1 or 2 canisters, depending on which collection system you ordered.

Baxter™ System ..... 1 Canister

Sorenson™ System .... 2 Canisters

Call Customer Service immediately
to report any damaged or missing items:
800-528-1597

COMPONENT DESCRIPTION

Vacuum Pumps

The Aspirator II uses two (2) 1/3 hp piston pumps

- Oil-less, non-lubricated piston and cylinder
- Permanently lubricated ball bearings
- Stainless steel valves
- Light weight aluminum components
- Long-life, high performance piston seals
- Twin fan cooling system
- UL recognized motors
- Thermal protected
- Balanced for low vibration operation
- Capacitor

Circuit Breaker

To protect the equipment and reduce shock hazard, a resettable circuit breaker is installed on the **right side**, near the power cord outlet. If there is a voltage surge or the pump motor overheats, the circuit breaker will pop out. To reset, turn the Aspirator II off, push in the circuit breaker button, and turn the Aspirator II on. **If the unit fails to start**, the Aspirator II may require a cool-down period or technical repairs.

Note: Do not let technicians by-pass the circuit breaker.

Control Valves

Vacuum Control

Operate Vacuum Control by turning pointer between **High** and **Low** (pressure is reduced). The vacuum gauge on the panel will indicate a pressure change.

Note: The Aspirator II system has been calibrated at 2,500 feet above sea level to 26+ in. Hg. For each additional increase of 1,000', the vacuum should drop by 1" Hg. And conversely, for each additional decrease of 1,000', the vacuum should increase 1" Hg.

Volume Control

Operate the Volume Control by turning pointer between **High** and **Low** *(reducing the amount or volume of flow)*. Air flow is decreased.

Note: Do not position both the Vacuum and Volume Control valves in the LOW position at the same time, as there will be no noticeable suction.

Foot Switch

The Aspirator II can be operated with or without a foot switch.

- OPERATION **WITH** FOOT SWITCH

  Plug the foot switch cord into the unit. Turn the **Foot Switch** and **Power** switches to the **On** position. Press the pedal and the Aspirator II will start. Press the pedal again to stop the power of the unit.

- OPERATION **WITHOUT** FOOT SWITCH

  Turn the **Power** toggle switch to the **On** position, leaving the toggle for the Foot Switch **Off**.

Note: The Power switch must be in the On position before the unit will start.

OVERFLOW TRAP

The Overflow Trap is designed to catch aspirated material which has by-passed, or overflowed, from the main collection canister. The fluid entering the trap will cause the ball inside the plastic jar to float up into the bell shaped tube, which will cause the vacuum to stop.

Note: The plastic ball acts as safety only. There is no guarantee that the ball will completely stop the power of the unit.

If there is a problem with the overflow, please check the following:

1. The liner may be collapsing, causing material to overflow into the trap.
2. The collection system may be full.
3. The collection system may not be set up properly.

NO ASPIRATED MATERIAL SHOULD BE ENTERING THE OVERFLOW TRAP AT ANY TIME.

Read the trouble shooting section of this manual for instructions to correct an overflow situation.

SAFETY INFORMATION

- Read all instructions carefully before operating equipment.
- Avoid ingesting aspirated material into the pumps. Severe damage can occur to the pumping system upon contact with aspirated material.
- Always disconnect the power supply to the Aspirator II before servicing.
- Motors are thermally protected and will automatically restart when protector resets.
- Current leakage tests are performed and are certified within the UL maximum 300uA limit for medical devices.
- Safety checks should be scheduled according to purchaser's policies.
- Additonal warnings and power requirements, which are part of the labeling, are located on the right side of the Aspirator II.
- **Caution: Federal law restricts this device to sale by or on the order of a physician.**

SET-UP AND OPERATION

1. Carefully remove the Aspirator II from the shipping carton. Be sure to save the box and packing material for convenient maintenance returns.
2. Read all instructions carefully before operating the unit.
3. After you have removed the Aspirator II, open the accessory box and locate the power cord and foot switch. Plug the foot switch into the Aspirator II. Plug the power cord into the Aspirator II, then into the power outlet.
4. Locate the vacuum gauge and connect the item to the quick-connect lock on top of the Aspirator II.
5. Turn the Power switch and the Foot Switch ON.
6. To test the unit, place a finger over the main suction hose coming directly out of the top of the Aspirator II. Note the reading of the vacuum gauge. Keep in mind that vacuum changes according to elevation. After checking the vacuum, turn the Aspirator II off.

NEXT:

7. Place the Overflow Trap between the 4 small metal pegs on the top panel of the Aspirator II. The arrow on the top of the overflow trap should point toward the vacuum gauge.
8. Connect the Bacterial Filter to one end of the Overflow Trap using the 6" silicone tube. Connect the other end of the Bacterial Filter to the main suction hose.

   Note: The Bacterial Filter is bi-directional, therefore the item can be placed in line either way.

9. Locate the Collection System. Determine if the system is a Baxter™ or Sorenson™ canister system, then read the applicable instructions included in this manual to set up the collection system.

NEXT:

Set up the collection system as described.

At this point, the following accessories should now be connected:

- Power cord and foot switch
- Vacuum gauge – to quick connect
- Bacterial filter – connected to the main suction hose and the 6" silicone tubing which is connected to the overflow trap
- Canister – placed in the canister holder with liner intact

The unit is now ready for operation.

TROUBLE SHOOTING

No Suction

1. Turn vacuum and volume control knobs to High. If one or both knobs are on Low, there will be no noticeable suction.
2. Check for a collapsing liner.
3. Remove bacterial filter and place a finger over the main suction hose. If there is no suction, turn the unit off, remove finger from hose, wait a moment, then turn the unit on again.

   Note: Before starting any suction procedure, let the Aspirator II go to full vacuum when switched on. During operation, if the Aspirator II is momentaily turned off, let the vacuum gauge indicator return to "0" before restarting the machine. All the air must clear from the vacuum lines before all the pumps will start again. Failure to follow this procedure can result in the loss of vacuum.

Overflow Situation

1. Monitor the collection system for fluid level. Do not overflow.
2. A collapsing liner can cause the aspirated material to overflow into the overflow trap.
3. Check for a crack in the canister. This can cause the liner to collapse, resulting in an overflow situation. A collapsing liner bag does not mean that there is something wrong with the Aspirator II.

   Note: With proper operation and monitoring, at no time during any procedure, should an overflow situation occur.

Broken Canister

1. Do not use a damaged canister. A damaged canister will cause the liner bag to collapse, causing the aspirated material to overflow into the overflow trap.

WARNING

Ingesting aspirated material into the pumping system can severly damage the pumps and void the warranty. If material is going into the overflow trap, check the collection system immediately to see if the liner bag is collapsing or is too full. If further assistance is needed, call technical support at 800-528-1597.

Refer to the Collection System section and instructions for proper set up.

BAXTER™ CANISTER SYSTEM SET-UP & OPERATION

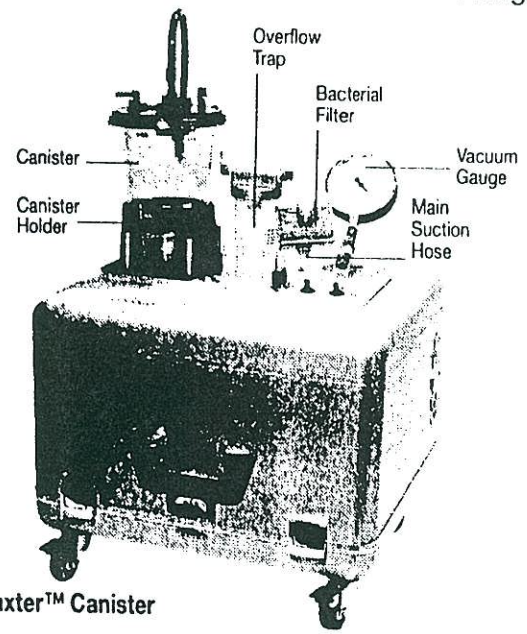
1. Place canister on top panel of Aspirator II inside canister holder between the 4 large metal prongs.
2. Snap the red liner lid onto a soft-shell liner. Insert liner inside the hard-shell canister.
3. Plug the red hose on the canister into the top of the liner lid on the port marked **Vacuum**.
4. Attach the 9" piece of silicone tubing from the overflow trap to the red spout on the side of the canister.
5. The sterile aspiration tubing will connect to the port labeled: **Patient.**

THE CANISTER SYSTEM IS NOW READY FOR OPERATION.

Note: Aspirated material should not enter the overflow trap at any time.

If an overflow situation occurs, please do the following:

1. Turn off the power immediately.
2. Check the connections between accessories to make sure the unit was set up correctly.
3. Check for a crack in the canister.
4. Check the vacuum and volume settings (should be on high).



Baxter™ Canister

A collapsing liner bag or aspirated material going into the overflow trap does not mean that something is wrong with the Aspirator II. An overflow situation indicates there is an interference with the liner bag vacuum.

SORENSON™ CANISTER SYSTEM SET-UP & OPERATION

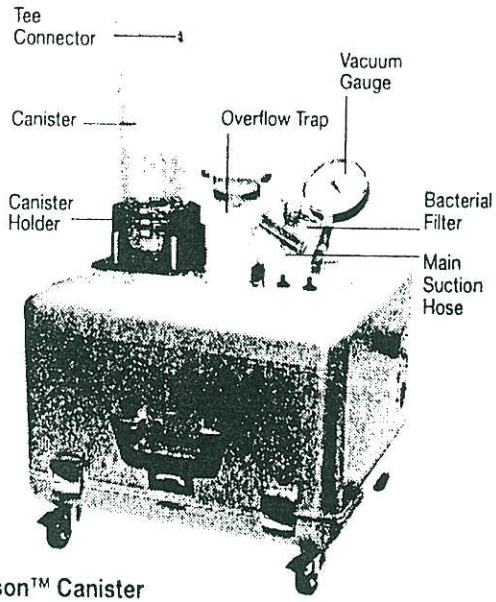
1. Place canister on top panel of the Aspirator II inside canister holder between the 4 large metal prongs.
2. Insert a Sorenson™ liner into the canister and secure the lid.
3. Connect the piece of tubing that is connected to the liner lid to one end of the Tee connector.
4. Connect the 9" piece of silicone tubing from the overflow trap to the other end of the Tee connector.
5. The sterile aspiration tubing will connect to the liner lid on the port labeled: **Patient.**

THE CANISTER SYSTEM IS NOW READY FOR OPERATION.

Note: Aspirated material should not enter the overflow trap at any time.

If an overflow situation occurs, please do the following:

1. Turn off the power immediately.
2. Check the connections between accessories to make sure the unit was set up correctly.
3. Check for a crack in the canister.
4. Check the vacuum and volume settings (should be on high).



Sorenson™ Canister

A collapsing liner bag or aspirated material going into the overflow trap does not mean that something is wrong with the Aspirator II. An overflow situation indicates there is an interference with the liner bag vacuum.

MAINTENANCE

- All Aspirators are thoroughly checked by the Quality Assurance Department before being released for shipping. Inspect the unit upon receipt to insure the equipment was not damaged during shipping. The vacuum power should also be checked.
- Do not lubricate pumps. The oil-less components are sealed and packed with optimum level of lubricant, requiring no lubrication.
- Do not let liquid or aspirated material enter the pumping system.
- The mufflers (Part No. 16-5073) should be changed after approximately 80 hours of operation, or whenever the white filter inside the muffler becomes black.
- No scheduled maintenance is recommended. Follow the proce dures established by your engineering department.
- Warnings are part of the labeling and are indicated on the Aspirator II. The serial number is stamped on a small metal tag, located on the left side of the Aspirator II. Record the serial number.
- Inservices on new equipment can be provided by telephone with either your sales representative, or our technical support staff. If additional information is needed, call Customer Service or Technical Support at 800-528-1597.

PARTS LIST

ITEM	PART NO.
Aspirator II (110V)	20-5027-00
Aspriator II (220V)	20-5029-00
Power Cord (AC 110V)	20-5100-00
Power Cord (AC 220V)	20-5101-00
Foot Switch (single)	20-5102-00
Vacuum Gauge	16-5030-00
Bacterial Filter (case of 10)	20-5201-00
Overflow Trap (plastic) with 6" and 9" silicone tubing	17-5100-00
Overflow Ball	16-5107-00
6" Silicone Tubing	17-5101-00
9" Silicone Tubing	17-5106-00
Baxter™ Canister	20-5153-00
Baxter™ Disposable Soft-Shell Liners	20-5154-00
Sorenson™ Canister	20-5157-00
Sorenson™ Disposable Soft-Shell Liners	20-5158-00
Canister Holder	
Baxter™	20-5159-02
Sorenson™	20-5159-01
Standard Tubing, 9 ft., sterile (for Baxter™ System)	24-5103-00
MB Tubing, 9 ft., sterile (for Sorenson™ System)	24-5104-00
Premium Tubing, 8 ft., sterile (for Sorenson™ System)	24-5100-00
Soft-Flexible Tubing, 10 ft., sterile	
Baxter™	24-5102-02
Sorenson™	24-5102-01
Vacuum Pumps 1/3 hp, piston, hi-flow (1 ea.)	18-5057-01
Vacuum Pump 1/3 hp, piston, hi-vac (1 ea.)	18-5058-01
Muffler (MIN) (2 per unit)	16-5073-00
Tubing (internal PVC)	17-5003-00