



**Allied Healthcare Products, Inc.**

1720 Sublette Avenue – St. Louis, MO 63110

314-771-2400, 800-444-3954, Fax 314-771-0650

Email: [www.alliedhpi.com](http://www.alliedhpi.com) - International Offices In Europe, Asia and South America

**OIL-LESS SCHUCO® VAC**

**INSTRUCTION MANUAL FOR MODEL NUMBERS**

**S130, S130-GLASS, S132, S230 & S230A**

**S168-489-001**

**REV A**



## READ AND SAVE THESE INSTRUCTIONS

### IMPORTANT SAFEGUARDS:

When using electrical products, especially when children are present, basic safety precautions should always be followed:



**READ ALL INSTRUCTIONS BEFORE USING. THIS IS FOR YOUR SAFETY AND UNDERSTANDING THIS PUMP.**



**DANGER: TO REDUCE THE RISK OF ELECTROCUTION:**

1. Always unplug this product immediately after using.
2. Do not use this product in water nor place or store where it can fall or be pulled into water or liquid.
3. Do not reach for a product that has fallen into liquid. Unplug immediately.



**WARNING: TO REDUCE RISK OF BURNS, ELECTROCUTION, FIRE OR INJURY TO PERSONS:**

1. A product should never be left unattended when plugged in.
2. Keep the cord away from heated surfaces.
3. Electrical products generate heat so never touch this product during or immediately after using.
4. Never operate this product if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return the product to a service center for examination and repair.
5. Do not use this product outdoors or operate where aerosol (spray) products are being used or where oxygen is being administered in a closed area or flammable or explosive liquids or vapors may exist. Use in well ventilated areas.
6. Never block the air openings of this product or place it on a soft surface, such as a bed or couch, where the air openings may be blocked. Keep the air openings free of lint, hair or other foreign objects.
7. Connect this product to a properly grounded outlet only. See Grounding Instructions.
8. Close supervision is necessary when this product is used by, on or near children or physically challenged individuals. Instruction on usage should be from a Physician or Qualified Health Care professional.
9. Use this product only for intended use as described in this manual. Do not use attachments not recommended by the manufacturer.
10. Never use while sleeping or drowsy.
11. Never drop or insert any object into any of the openings.
12. This unit is oil-less. DO NOT lubricate.
13. The unit is thermally protected and can restart automatically when the protector resets.
14. Failure to observe safety and instructional information could result in bodily injury, including death in extreme cases.
15. Instructions on application of this product must be directed by a Physician or Qualified Health Professional as to its applications.



**CAUTION: FEDERAL LAW RESTRICTS THIS DEVICE TO SALE BY OR ON THE ORDER OF A PHYSICIAN.**



**CAUTION: RISK OF ELECTRIC SHOCK. DO NOT DISASSEMBLE MOTOR HOUSING. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**

## READ AND SAVE THESE INSTRUCTIONS

### GROUNDING INSTRUCTIONS:

This product should be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This product is equipped with a cord having a grounding wire with a grounding plug. The plug must be plugged into an outlet that is properly grounded.

**⚠ DANGER** - Improper use of the grounding plug can result in a risk of electric shock. If repair or replacement of the cord or plug is necessary, do not connect the grounding wire to either flat blade. The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire. If the grounding instructions are not completely understood, or if in doubt as to whether the product is properly grounded, check with a qualified electrician or serviceman.

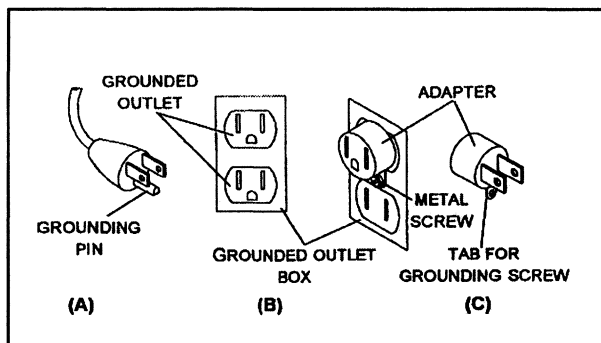


Figure 1

The S130 is for use on a nominal 115 V/60 Hz (S230 – 230 V/50 Hz), (S230A – 230 V/60 Hz) circuit and has a grounding plug that looks like the plug illustrated in Sketch A, in Figure 1. A temporary adapter, which looks like the adapter illustrated in Sketch B and C may be used to connect this plug to a 2-pole receptacle as shown in Sketch B, if a properly grounded outlet is not available. The temporary adapter should be used only until a qualified electrician can install a properly grounded outlet, Sketch A. The green colored rigid ear, tab, etc. extending from the adapter must be connected to a permanent ground, such as a properly grounded outlet box cover. Whenever the adapter is used, it must be held in place by a screw.

### ELECTRICAL:

The motor of this compressor has a thermal overload protector. If the motor should overheat, the overload protector will shut off the motor. If this should occur shut the compressor off and allow the motor to cool (approximately 5 minutes). If the compressor fails to start, check for circuit breakers activated or blown fuses, the compressor may need to cool further before attempting to restart. If the overload protector shuts off the motor frequently, you may have a low voltage solution. Low voltage can also be suspected when:

1. The motor does not get up to full power or speed.
2. Fuses or circuit breakers activate when starting the compressor.
3. Lights dim or remain dim when the compressor is started.
4. Other motor operated appliances fail to operate properly. Too many motor operated appliances on the same circuit.

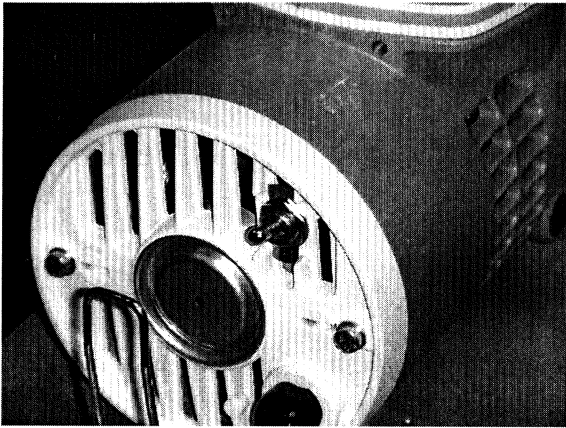
### EXTENSION CORDS:

Make certain your extension cord is in good condition. Make certain your extension cord wire size is not less than 18 gauge for 25 feet, 16 gauge for 50 feet, and 14 gauge for 100 feet.

## READ AND SAVE THESE INSTRUCTIONS

### SET-UP:

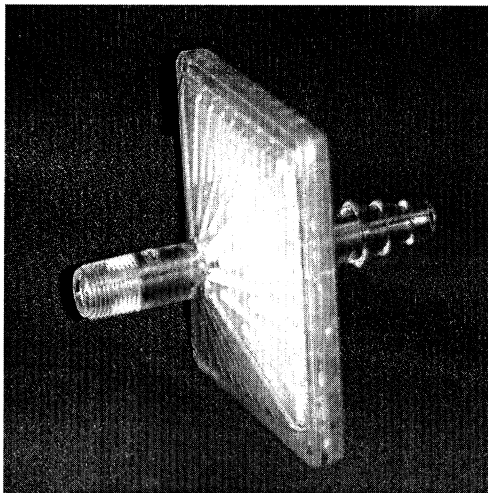
1. In order to become familiar with this unit, note where the following features are: ON/OFF switch, vacuum gauge, control knob and hydrophobic bacterial filter.
2. The mechanical shut-off valve under the lid will stop suction if collected fluids reach the shut-off valve level. If this happens, turn the unit off and empty the bottle or replace disposable canister.
3. This product has been provided with a hydrophobic filter, which will protect the pump from contaminants. **WHEN THIS FILTER COMES IN CONTACT WITH LIQUID, THE SUCTION FLOW WILL STOP (MOTOR WILL STILL RUN). IF THIS HAPPENS, THE FILTER MUST BE REPLACED.** It is suggested that the filter be replaced after each patient use or on a monthly basis if the same patient uses the unit or when a reduction in airflow is detected. To replace the filter, remove the hose from the hose barb on the back of the filter. Unscrew the filter from the control valve and discard. Carefully screw the fresh filter into the control valve and reconnect the hose to the hose barb. Do not over tighten filter because this may cause damage to the pump. Replacement filters (Part Number 01-90-3100 or 01-90-3100-KIT) should be kept on hand.



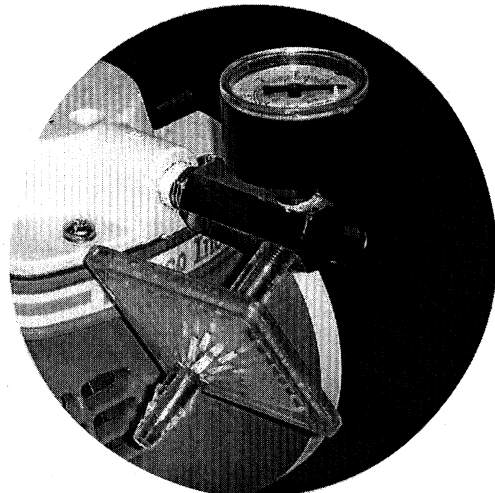
ON/OFF SWITCH



VACUUM GAUGE ASSY.  
W/CONTROL KNOB AND FILTER INPUT



HYDROPHOBIC BACTERIA FILTER



REMOVE PLUG AND SCREW FILTER INTO REGULATOR BODY

## READ AND SAVE THESE INSTRUCTIONS

### OPERATION:



**WARNING: PROPER USE OF THIS PRODUCT IS NECESSARY TO AVOID PHYSICAL HARM. IMPROPER USE CAN CAUSE PERSONAL INJURY AND/OR TISSUE DAMAGE. THIS PRODUCT SHOULD NOT BE USED UNLESS A PHYSICIAN OR OTHER QUALIFIED HEALTH CARE PROFESSIONAL HAS INSTRUCTED THE OPERATOR.**

1. The ON/OFF switch should be in the OFF position.
2. Plug the line cord into a grounded electrical outlet, making sure that it is the same voltage as indicated on the unit nameplate.
3. Be sure the length of the tubing from the Disposable Canister Unit (DCU)/glass bottle to the filter is dry.
4. Turn the ON/OFF switch to the ON position.
5. The control knob will adjust the vacuum. As the knob is turned counterclockwise, the vacuum will decrease. As the knob is turned clockwise, the vacuum will increase. Inches of vacuum will register on the gauge. Use only the vacuum setting directed by the Physician or Qualified Health Care professional. Check degree of vacuum by pinching off patient tube.
6. The level of vacuum in mm/inches of Hg will register on the vacuum on the gauge.
7. The pump is now ready for patient use.
8. The DCU is a throw away item and after complete use or full, turn off the unit, disconnect the tubing, seal the open ports, and dispose of the DCU properly.
9. The glass bottle should be emptied after complete use or when full. To empty the bottle, turn the unit off, disconnect the tubing, and remove the cap and float assembly.
10. Follow the cleaning procedures listed below. Once these procedures have been completed, see Step 1 under Set-Up before next patient use.

### CLEANING PROCEDURE TO BE USED AFTER EVERY USE:

#### 1. 750-cc Glass Bottle and Lid:

It is recommended that the bottle, lid assembly and tubing be cleaned after every use. To ensure the longest life for these parts the following procedures **must be** followed:

Clean the 750-cc autoclavable bottle, lid assembly, gasket, seal washer, float guide and float **thoroughly** with a mild soap. Rinse **thoroughly** with clean water and dry **thoroughly**.

Place parts in autoclave as follows ensuring the parts are not touching:

- Bottle with open end down
- Float and float guide upright with large ends down
- Gasket and seal washer can be placed in a gusset pouch prior to autoclaving

Autoclave for 3 to 5 minute cycle at 270° F (132° C).

In lieu of autoclave sterilization, the above parts can be soaked in an activated dialdehyde solution.

#### 2. Vacuum Pump:



**WARNING: DO NOT SUBMERGE VACUUM PUMP IN WATER!!!**

Make sure the unit is unplugged; wipe the exterior surface with a mild disinfectant or a solution of 70% Isopropyl Alcohol solution. Wipe all surfaces with a soft cloth or disposable wipe moistened in the cleaning solution.

## READ AND SAVE THESE INSTRUCTIONS

### TUBING REPLACEMENT:



THE TUBING SHOULD BE CHANGED AFTER EACH PATIENT USE OR ON A MONTHLY BASIS IF THE SAME PATIENT USES UNIT.

### BACTERIA FILTER REPLACEMENT:

The high efficiency bacteria filter (01-90-3100) is custom engineered to prevent fluid and aerosol contamination of mobile suction units. This filter features a hydrophobic, micro-porous membrane, which filters air with maximum efficiency (0.3-micron particles in air), while blocking the flow of aqueous fluids and aerosol contaminants. This high efficiency filter protects against suction pump contamination. in the case of canister/bottle overflow from reaching the pump.



THE HYDROPHOBIC BACTERIA FILTER SHOULD BE CHANGED AFTER EACH PATIENT USE OR ON A MONTHLY BASIS IF THE SAME PATIENT USES UNIT.



CARE MUST BE TAKEN WHEN REPLACING THE FILTER TO PREVENT THREAD DAMAGE DUE TO CROSS-THREADING AND OVER TIGHTENING.

To replace the bacteria filter:

1. Unscrew the filter from the filter connection fitting by hand turning the filter in a counterclockwise direction.
2. Carefully screw the new filter into the fitting by turn the filter in a clockwise direction.
3. Tighten only finger tight.

### RECOMMENDED SERVICE PROCEDURE FOR SCHUCO-VAC PRODUCTS:

#### 1. Preventative Maintenance:

Preventative maintenance on Schuco-Vac Suction Units should be completed a minimum of once each year.

#### 2. Suction Pump Preventative Maintenance:

Suction pump preventative maintenance includes the following:

- Visually inspecting and cleaning external surfaces, controls, attachments and accessories.
- Replacing the inlet filter.
- Verification of the vacuum gauge.
- Performance of ground resistant test and current leakage test for hospital grade plug units.

#### 3. Exterior Inspection:

- Turn off the unit and disconnect from the AC or power source.
- Inspect the exterior surfaces of the unit for broken or loose knobs. Check the power cord and plug for damage.
- Replace the pump head filter, Part Number S641020, if damaged or worn.
- Check the o-ring gasket, Part Number S633212, for wear and replace if necessary.

## READ AND SAVE THESE INSTRUCTIONS

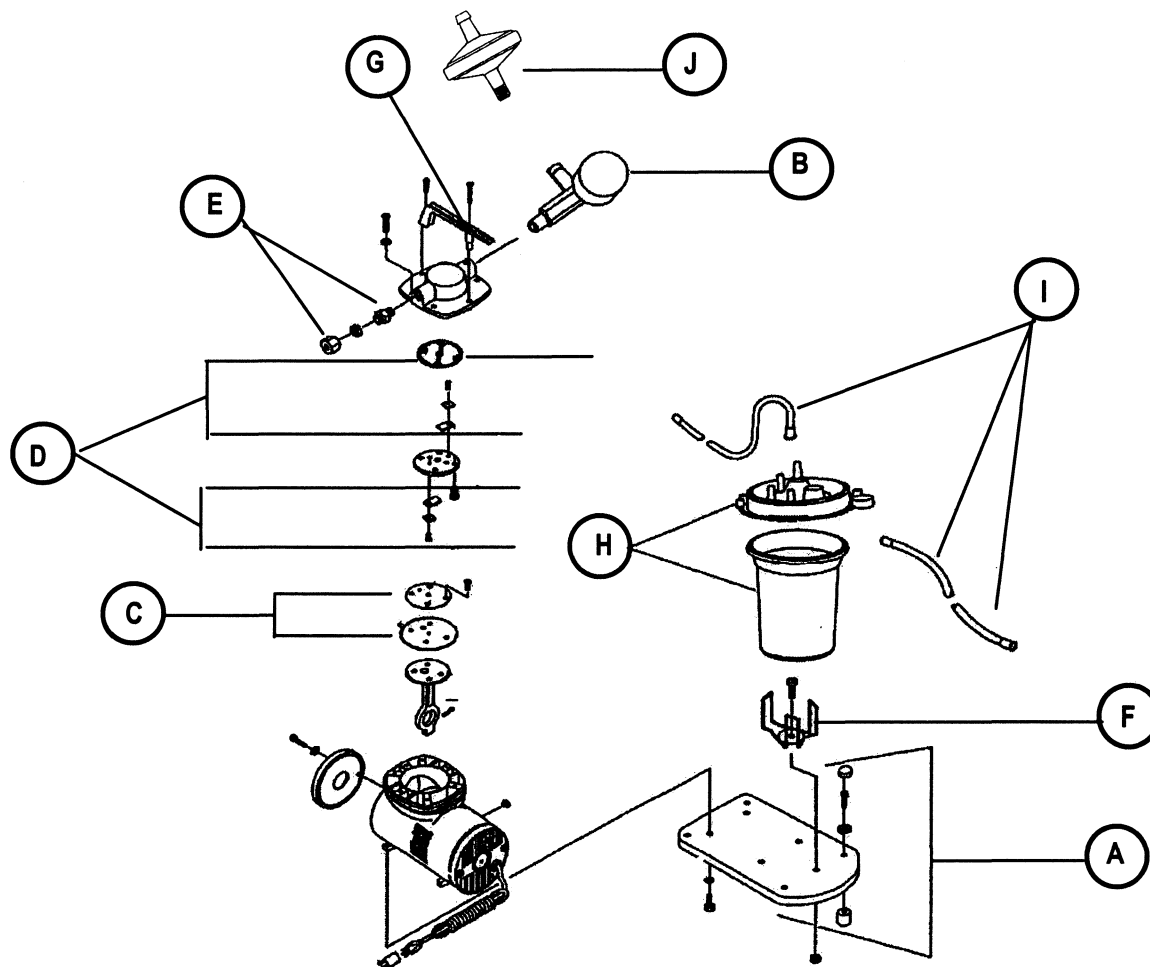
### SPECIFICATIONS FOR S130, S132, S230 & S230-A:

<b>Pump Type:</b>	Oil-less Diaphragm
<b>Motor Type:</b>	AC Shaded Pole
<b>Voltage/Hertz:</b>	115 Volts/ 60 Hertz (S130), 230 Volts/50 Hertz (S230) or 230 Volts/60 Hertz (S230-A)
<b>Horsepower:</b>	1/15
<b>Displacement:</b>	30 LPM
<b>Maximum Vacuum:</b>	560 mm Hg @ Sea Level
<b>Usage Rating:</b>	Continuous Operation
<b>Weight:</b>	6.2 – 6.7 Kg
<b>Service Free Life:</b>	5,000 – 8,000 Hours
<b>Overall Dimension</b>	13.8" (L) X 7.89" (W) X 11.02" (H)

### ORDER CONTENTS:

One DCU or one 750 cc Glass Bottle  
One Disposable Tubing Package  
One Package of 3 Bacteria Filters  
One Compact Pump  
One Instruction Manual

# **READ AND SAVE THESE INSTRUCTIONS**



**FIGURE 2**

## **REPLACEMENT KITS AND PARTS:**

### **A S616727-KIT – BASE ASSEMBLY KIT CONTAINS:**

Description	Qty
Screw #12 x 7/8	4
Base – Blue	1
Rubber Bumper	4
White Cap	4
Base Cap	4

### **C S608144-KIT - DIAPHRAGM KIT CONTAINS:**

Description	Qty
Screw 8-32 x 3/8	4
Diaphragm	1
Diaphragm Hold-down Plate	1

### **E S607144-KIT – HOSE CONNECTOR KIT CONTAINS:**

Description	Qty
Hose Connector	1
Nut Hose Connector	1
Filter Silencer	1

### **B S699204-KIT VACUUM GAUGE KIT CONTAINS:**

Description	Qty
Vacuum Gauge	1
Vacuum Control Assembly	1

### **D S621102-KIT - INTAKE & EXHAUST VALVE KIT CONTAINS:**

Description	Qty
Screw 6-32 x 3/16	2
Valve Keeper Strip	2
Valve Flapper – Intake Exhaust	2
O-ring Gasket	1

### **F S629149-KIT - BOTTLE HOLDER KIT CONTAINS:**

Description	Qty
Nut-stop 8-32	1
Screw 8-32 x 5/8	1
Bottle Holder	1

## READ AND SAVE THESE INSTRUCTIONS

### REPLACEMENT KITS AND PARTS KITS (CONTINUED):

#### **G** S629152-KIT - PLASTIC HANDLE ASSEMBLY KIT CONTAINS:

Description	Qty
Screw 10-24 x 7/8	1
Screw 10-24 x 1-1/4	1
Plastic Handle	1

#### **H** COLLECTION UNITS & LID ASSEMBLY:

Part No.	Description	Qty
S1160 -RPL	1200 cc Disposable Canister Unit	1
S1160A	2000 cc Disposable Canister Unit	1
S1160B -RPL	800 cc Disposable Canister Unit	1
S1160B-CS	800 cc Disposable Canister Unit	70/Case
S1161	750 cc Glass Bottle Replacement	1
S620127	Lid Assembly	1

#### **I** REPLACEMENT TUBING:

Part No.	Description	Qty
S615473	13" Blue Tipped Tubing	1
S615725	72" Blue Tipped Tubing	1
S610100	Blue Tipped Tubing Kit Contains: One 13" Piece One 72" Piece	1

#### **J** BACTERIA FILTERS:

Part No.	Description	Qty
01-90-3100	Bacteria Filters, Barb X Thread	1 Set of 3
01-90-3100-KIT	Bacteria Filters, Barb X Thread	10 Sets of 3
S644-3	FILTER GUIDE (KIT OF 3)	1 Set of 3

### OTHER SCHUCO-VAC PRODUCTS:

#### Schuco-Vac Medical Aspirators & Breast Pumps:

Part Number	Description
S1000	Breast Pump Kit For S136 Breast Pump
S1125	Deluxe Mobile Stand
S1260	12 Volt Power Pack For Powering DC Equipment
S131	#130 Aspirator With Deluxe Stand
S135	Portable 12 Volt Aspirator
S136	Breast Pump
S136A	Carrying Case For S136 Breast Pump
S138	Portable DC Aspirator (Battery and Case)
S139	High Vacuum Aspirator( 27" Hg) ( 680 mm)

#### Nebulizer Compressors:

Part Number	Description
S102	15 PSI Compressor
S106	15 PSI Schuco Mist Nebulizer With 61400 Kit
S120	0-50 PSI Heavy Duty Compressor
S3000	Schuco 3000 Nebulizer (115 Volts / 60 Hertz)
S3000-BAG	Storage Pouch - Carries Compressor, Nebulizer and Tubing
S3000-EX	Schuco 3000 Nebulizer (230 Volts / 60 Hertz)
S3000-EX2	Schuco 3000 Nebulizer (220-240 Volts / 50 Hertz)
S641136	Reusable Foam Filter



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