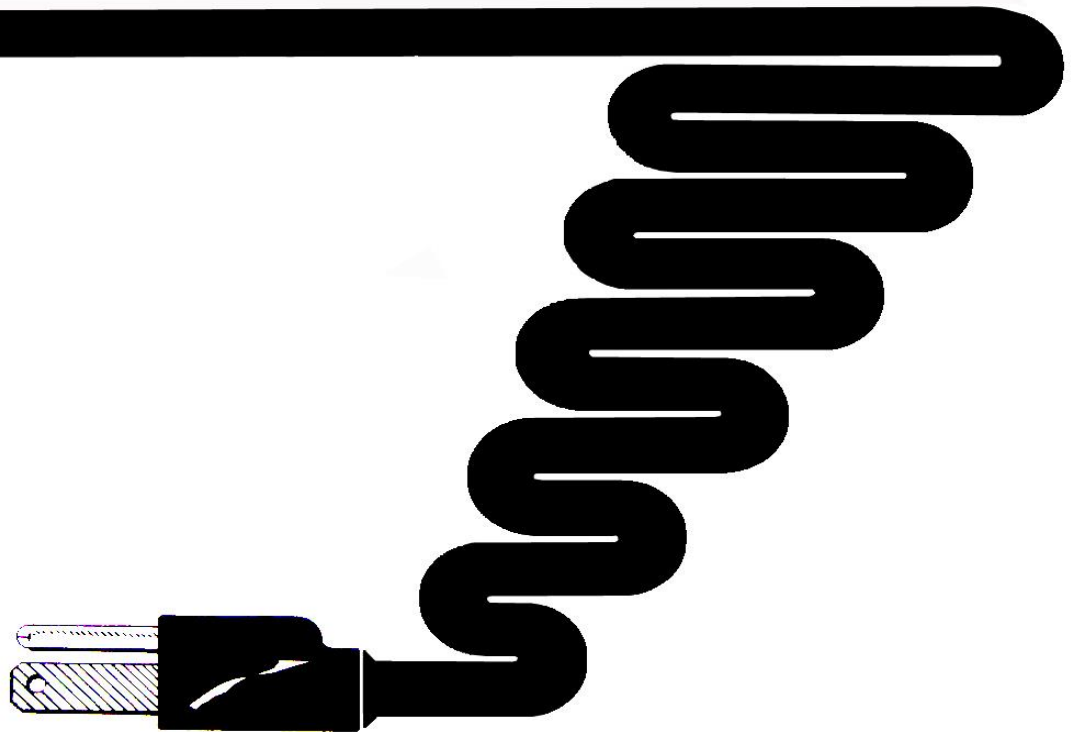


Operating Instructions



675 Series *smartVAC* Vacuum Sealers

Doc#901-0056 Rev F

February 22, 2017

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Introduction

IMPORTANT: READ INSTRUCTIONS COMPLETELY PRIOR TO OPERATION

This Manual is organized in sections. The List of figures and the Introduction are to familiarize you with the manual. The Safety section describes the precautions you should take when you operate, perform maintenance or repair the machine. The Operating instructions describe the machine, physical layout, controls, operating procedures and regular maintenance that should be performed by the operator. The Maintenance section has step by step instructions for the installation of the machine and specific information and descriptions of consumable parts, their function and replacement procedures as well as recommended Maintenance schedules and troubleshooting. The Repair Section includes theory of operation, component parts and their function and repair procedures. The Appendix includes the machine specifications, electrical and pneumatic diagrams, and parts ordering information.

DISCLAIMERS:

Accu-Seal SencorpWhite Inc. disclaims any liability for injuries or damages resulting from use or application of this product contrary to instructions and specifications contained herein. Liability shall be limited to repair or replacement of product if shown to be defective. Observe all safety symbols and information in this manual.

Satisfactory operation of the Heat Sealer depends on proper application, correct installation and adequate maintenance. In addition, modifications to the Heat Sealer may result in less than satisfactory performance and could damage the product, cause injury and void the warranty.

Throughout this manual, you will find Safety Icons. You should pay particular attention to these icons because they signal information that is important to your safety and to the correct operation and maintenance of the equipment.

- ⚡ **WARNING:** Represents possible dangers. In extreme conditions, there is a possibility of serious injury or loss of life.
- ⚡ **CAUTION:** Represents hazardous situations which may result in minor or moderate injury.
- ⚡ **IMPORTANT:** Represents important information to be aware of

📖 **NOTES:** Represents notes and special Instructions.

AUDIENCE:

The Operating section is designed for operators who have baseline knowledge of typical mechanical operations and who have basic reading and math skills.

The Maintenance and Repair section and the Appendix are written for maintenance Technicians who have successfully completed a Certified mechanical training program or who have equivalent maintenance experience. Only qualified repair technicians should be permitted to work on this equipment.

CONTACT INFORMATION:

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Safety

Throughout this manual, you will find safety icons. You should pay particular attention to these icons because they signal information that is important to your safety and to the correct operation and maintenance of the equipment.

- ⚡ **WARNING:** Represents possible dangers. In extreme conditions, there is a possibility of serious injury or loss of life.
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- ⚡ **IMPORTANT:** Represents important information to be aware of

📖 **NOTES:** Represents notes and special instructions.

- ⚡ **WARNING: Do Not Operate the machine in the presence of flammable gasses or fumes; such and environment constitutes a definite Safety hazard**
- ⚡ **CAUTION: When operating the machine, Always keep fingers and hands out of the seal jaw area.**



Figure 1 Pinch Point Sticker



Figure 2 Safety Sticker Hot Surface

PRECAUTION:

To insure safe operation of the Heat Sealer, the operator should be aware of pinch points and possible burn hazard near the Seal Jaw Area.

Do not wear neckties, jewelry, loose clothing or other items that can become caught in moving parts or mechanisms near the machine.

Wear all company-specified personal protective equipment while operating the machine.

Do not operate, troubleshoot, or maintain the sealer while under the influence of any type of drug or alcohol.

Always observe all safety warnings and notices on the machine and in this manual.

Do not use flammable or toxic cleaning fluids such as gasoline, benzene, or ether when cleaning or maintaining the sealer.

- ⚡ **CAUTION:**
Ensure that ONLY pouch materials are present in the seal area before pressing the Foot Switch.

The Operator must be cautious that small objects do not fall out of pouches. Small, hard objects caught in the seal area can damage the heating element.

- ⚡ **WARNING:**
Disconnect Power before Servicing



Figure 3 WARNING Hazardous Voltage Inside

Operating Information

Description of Equipment

The Accu-Seal smartVAC vacuum Sealers are pneumatic impulse heat sealers designed for use in package sealing operations generally used for heat sealing manufactured pouches/bags. The heat sealer is controlled by a digital controller with a large character LCD (liquid crystal display) with LED backlight. The settable sealing parameters are Heat time, cool time, vacuum time, gas time (gas models only) and machine seal pressure.

The machine has an emergency stop, low pressure close and jaw obstruction safety features to ensure safe operating performance.

The machine is designed for portability and can be operated on a tabletop or on a stand in multiple positions. The machine case is rigid steel with a powder coat finish. The sealer has lower heat with a 1/4" wide heating element. A 3/8" wide heating element is optional.

To operate the machine, the foot switch is depressed and the machine will begin running the set seal parameters. When the seal cycle is complete, the seal bar will open allowing the removal of the pouch.

There are three (3) versions of the smartVAC.

Model 1- Vacuum Sealer

Model 2- Gas-Vacuum Sealer

Model 3- Gas Vacuum Sealer with multi cycle and has Gas2 and Vac2 settings.



NOTES:

Refer to **Machine Specifications** in the Appendix for complete details.

Vacuum - Sealing Process

1. Place the product in the pouch to be sealed, place the pouch in the Seal Jaw opening making sure the nozzle is inserted into the pouch.
2. Depress the Foot Switch
3. Seal / Vacuum Bar will close under Low Pressure and vacuum cycle will begin.
4. When the vacuum time expires the nozzle will retract and the Seal Bar will close under High Pressure. Once closed, the heat timer will start.
5. When the Heat timer times out, the Cool timer will start.
6. Seal bar will open automatically when the Cool timer times out. The cycle is complete.
7. Remove the pouch from the seal area.
8. Nozzle will extend ready for next pouch to be sealed.

Physical Machine Layout

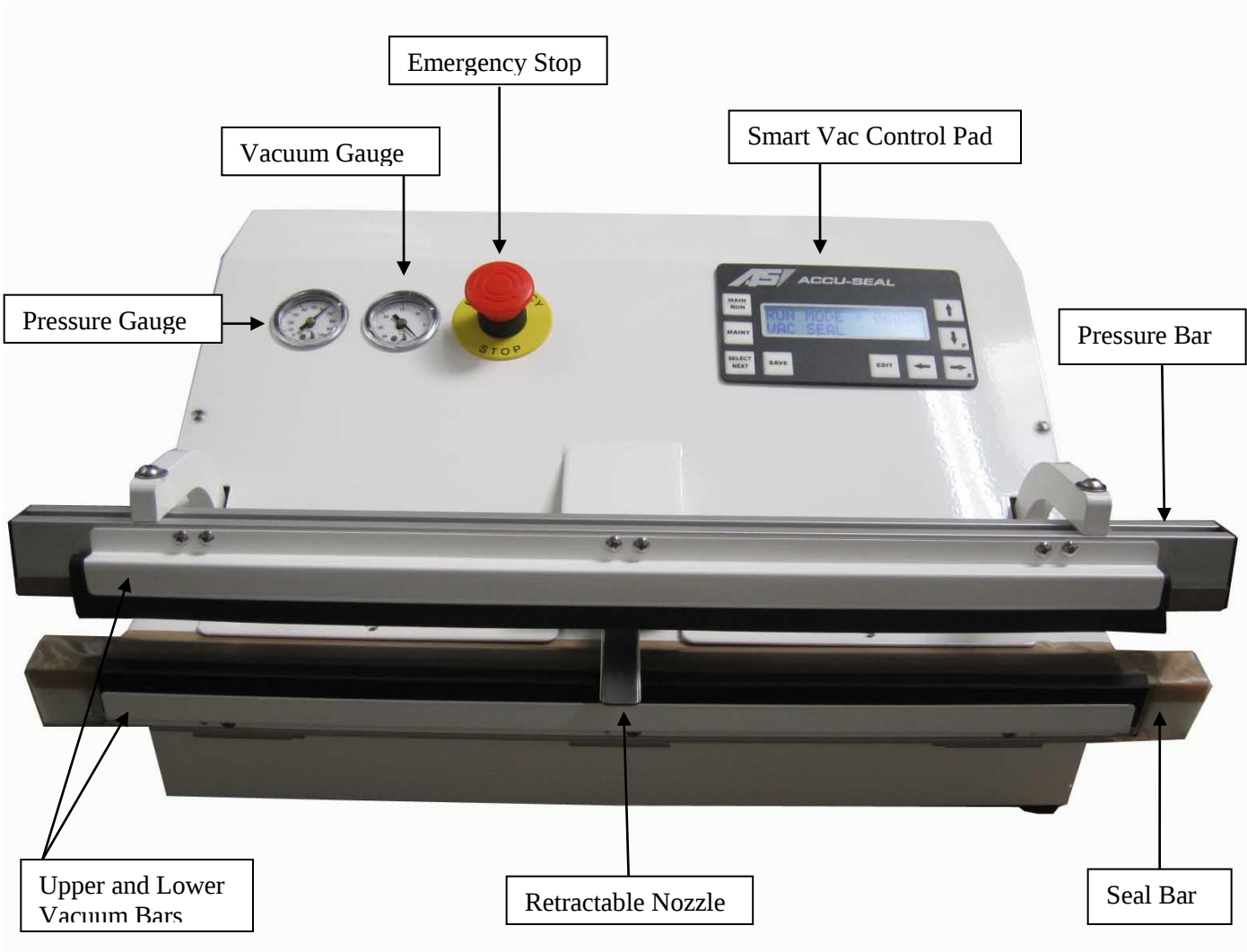


Figure 4 Front of Machine

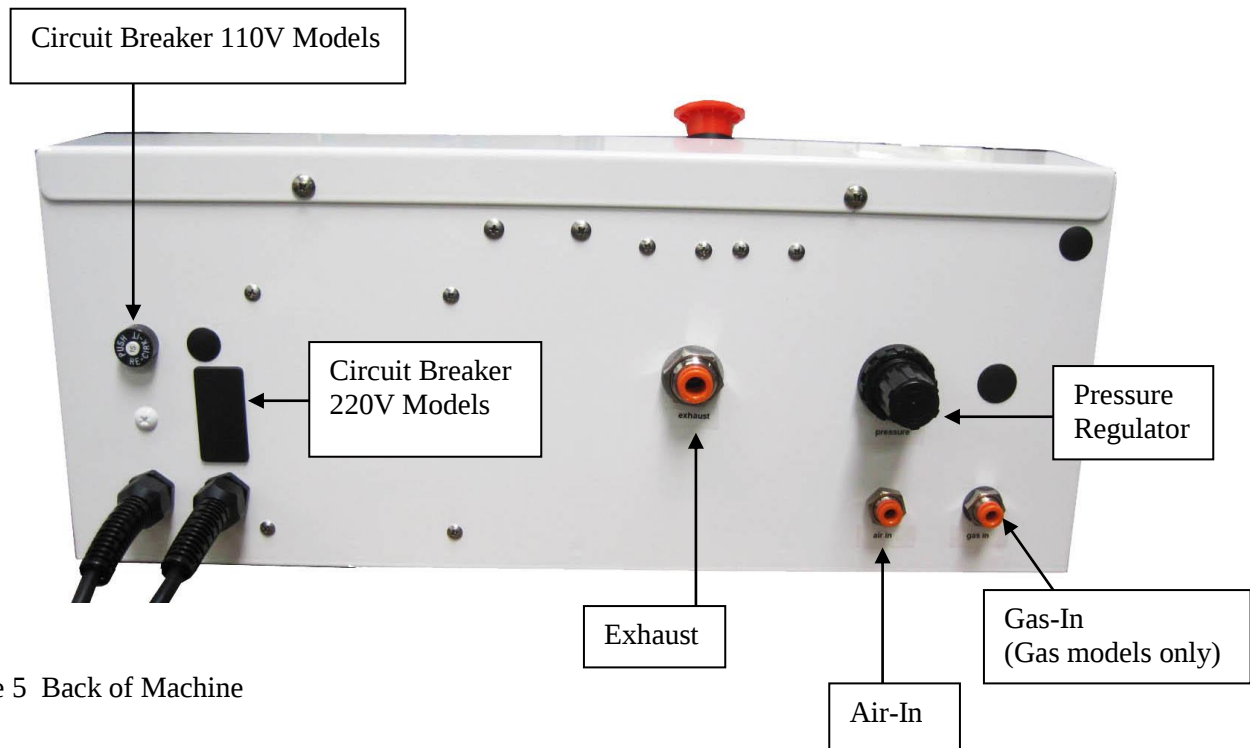


Figure 5 Back of Machine

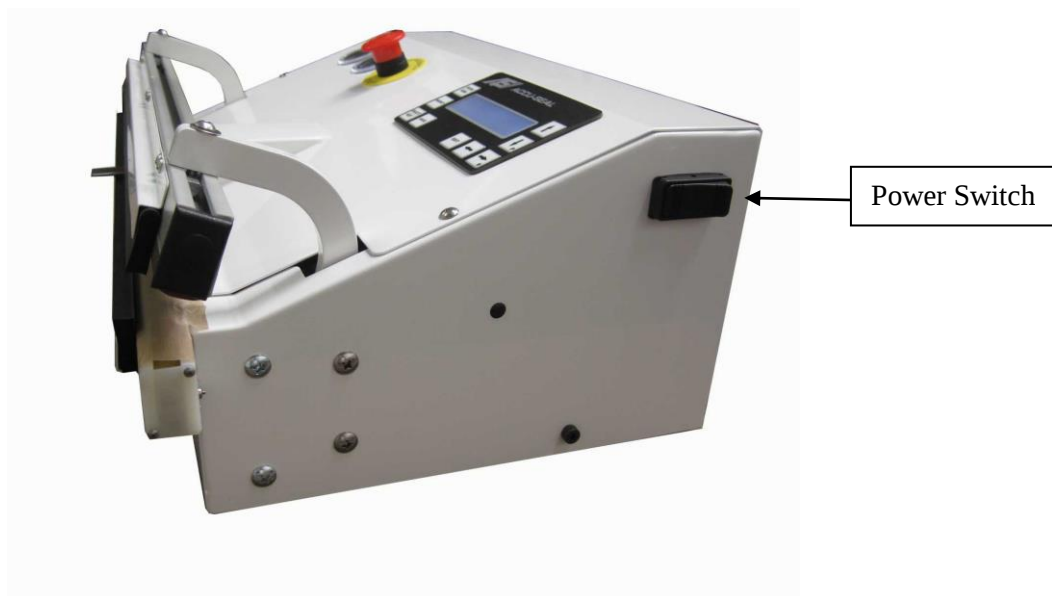


Figure 6 Right Side of Machine

Controls

Controls and their Function:

Power Switch:

Turns power to the machine ON and OFF.

Foot Pedal Switch:

The foot pedal switch is used to start the sealing cycle.

Circuit Breaker:

Breaks the Main Power, to the machine when there is an over load condition.

Emergency Stop: When the Red Button is Pressed, All power to the machine is halted. To reset the E-Stop, Twist to return to On position.

smartVAC Control Pad:

The control pad is used to Monitor, Set or Edit all of the machine parameters.

smartVAC CONTROL PAD:

The smartVAC Control Pad has an LED display and 9 buttons for selecting, editing and monitoring the machine seal settings.

LCD DISPLAY: Main-Run Screen Displays;

RUN MODE: Displays the selected mode for sealing.
Ex: GAS-VAC-SEAL

SEAL COUNT: Displays the number of heat seals completed. Seal Count can be reset.

Function Buttons:

Main/RUN: When pressed, allows operator to scroll through available sealing modes. This button is also used to return you to the main run screen at any time.

SELECT: Used to select a mode to run

NEXT: Used to advance to the next parameter when viewing.

SAVE: Used to save a value after editing

EDIT: Used to edit a value from the view screen

ARROWS: Used to raise or lower a value for entry or move to the position to enter a value.

“P”: On machines with Gas, this button is used to manually purge the nozzle. The purge time is a fixed set value.

“#”: Used to reset seal count

MAINT: Diagnostic tools discussed in Maintenance section.

Alarms

JAW OBSTRUCTION:

Indicates for some reason the Seal bar will not close completely.

NOZZLE RETRACT ERROR: Indicates that the nozzle has not retracted completely from the seal area.

Controls Operation

SETTING MACHINE PRESSURE:

When the Regulator on the back of the machine is adjusted, the pressure gauge on the top of the machine will read the pressure setting. Typical operating pressure is 50-60 psi. or higher when sealing heavy materials.

POWER SWITCH: located on the right side of the machine. When in the ON position, the control pad will light.

CIRCUIT BREAKER: On 120 Volt models the Circuit Breaker is a round reset button, when tripped the white button in the center will pop out. To Reset, Press in on the white button.

On 220V models the Circuit breaker is a rectangular switch. The circuit breaker must be in the ON position for any power to be supplied to the machine. The straight line on the circuit breaker indicates the ON position. The O indicates the Off position. To turn the circuit breaker On, Press down once to reset, press again to turn On.

smartVAC Control Pad Operation:

SELECTING A MODE OF OPERATION

Press the “MAIN/RUN” button to scroll through the available sealing modes. Each time the button is pressed it will advance to the next selectable mode. To select the mode to enter, press the “SELECT” Button. The screen will show The RUN mode selected and the seal count.

EDITING MACHINE PARAMETERS:

When the mode you want to edit is displayed on the screen, Press “EDIT”. The first value to View will appear. Press EDIT and the screen will show that you are in Edit mode and the value will flash indicating that you can change the value. Use the left or right arrow buttons to change the decimal position, or use the up/down arrows to change the number. You must hit SAVE to save the change. When save is pressed it will save the value and advance to the next parameter to view. If the value is acceptable, press NEXT to advance to the next parameter, or press EDIT to edit the value.

EXAMPLE: Selecting and Editing Gas-Vac- Seal mode. Vacuum models will follow the same procedure without the gas selection.

1. Press Main/Run button until Gas-Vac-Seal is displayed on the screen
2. Press the EDIT button.
3. View Gas Time will show on the screen with the current time setting in seconds.
4. If the current setting is acceptable and you do not want to change it, press NEXT to advance to the next setting.
5. If you want to Change the Gas time, Press EDIT, the screen will read EDIT MODE and the gas time setting will blink.
6. Use the UP or Down arrow Keys to increase or decrease the time setting. Use the Right or Left arrow keys to change the position of the cursor position left to right.
7. When you have entered the desired time, Press SAVE. The screen will show that value has been saved.
8. Press NEXT to advance to the next parameter, View VAC time.

9. Press EDIT to edit Vac time, enter values as above and SAVE.
10. Press next to advance to Heat Time. Follow the above procedure to EDIT and SAVE values or Press NEXT to advance to the Cool setting.
11. Once all the values have been entered, you can continue to press the NEXT button and review all the settings. If all settings are correct, Press MAIN/RUN
12. The Main screen is now displayed The machine is ready to begin sealing.

Models with Multi-Cycle Modes with Gas2 and Vac2 times.

The Gas2 and Vac2 times allow you to have a final gas or vacuum time that is different than the Gas1 and Vac1 times. Example: you want to GAS-VAC your product multiple times (1-99) using a 5 second gas time and a 10 second vac time. Then you want to set the final vacuum to be a light vacuum so the last vacuum in the cycle can be set at 2 seconds. The same can be done with Gas, having the ability to leave a specific amount of gas on the final cycle. The gas2 and Vac2 times are always the final cycle prior to sealing.

SEAL COUNT FUNCTION:

The machine counts every seal that is started and successfully completed and displays this on the Main Screen. The seal count can be manually reset through the Seal Count Reset function.

To reset Seal Count you must be on the Main/Run screen. Press the Right Arrow button with the # sign and a screen showing the Batch Ct. 00000 will appear. Press the right arrow key with # symbol again and it will ask you if you want to reset count? If YES, Press the SAVE Button. If NO Press the Main/Run button to exit the reset screen Also displayed is the Total Seal count on the machine, this number cannot be reset.

JAW OBSTRUCTION:

Indicates that for some reason the seal jaw will not close completely. “Jaw Obstruction” appears on the screen and the machine will go into a lock-up mode. The machine will not operate until the condition is corrected and the machine is reset, by pressing the MAIN/RUN button. The main run mode screen will appear. If the Jaw Obstruction condition continues, call maintenance.

IMPORTANT:
General Information for Establishing Seal Parameters.

Set Heat Time based upon the recommendation of the bag manufacturer. If you do not have specific information, we recommend starting with the following setting:

Set the HEAT Time at (2) seconds.

Set the COOL Time at 5 seconds

Set the Pressure at 80psi

Based upon the result of the Seal using the above guideline, increase or decrease the HEAT Time. We recommend when increasing the Heat time, **Not more than ½ to 1 second at a time.** The Cool time should be approximately two times the Heat time.

Operating Procedures

IMPORTANT:

The Start-Up Operating Procedure assumes that the machine has been installed according to the Installation and Set-Up Instructions in the Maintenance Section of this manual. Always perform the daily visual inspections and routine operating maintenance prior to operating.

Start up

1. Verify that the Air Supply is connected and Jaw is in the open position. On Gas models, verify Gas supply is connected.
2. Turn the machine ON by pressing the Power Switch.
3. The *smartVAC* Control screen will light up. When the boot-up sequence is complete, you will see the Main “Run” Screen.
4. Select the mode to Run and verify the settings
5. Verify that no visible blockage exists to keep the seal jaws from closing.

6. Keeping your fingers away from the Seal Area, press and release the Foot Switch. Cycle the machine once or twice to warm it up. Always insert the nozzle into a bag to prevent wear and tear on the vacuum pad material.
7. Place the product to be sealed in the seal jaw area making sure the product inside the bag is not protruding into the Seal Area. Make sure the Nozzle is inside the bag.
8. Keeping your fingers away from the Seal Area, press and release the Foot Switch. When the Foot Switch is pressed, the seal jaw will close under low pressure and the vacuum cycle will begin. (or other function based upon mode selected)
9. When the vacuum cycle is complete the nozzle will retract and the Seal bar will close under high pressure.
10. The heat timer will start and when the heat timer times out the Cool cycle will begin.
11. When the cool time is complete the Bar will open.
12. Remove the product and inspect the seal.

Monitor

At the start of each production run the operator should monitor and inspect the Seal area for bumps, wrinkles or burns in the PTFE Fabric covers. These conditions can cause irregularities in the seal and require maintenance of the Seal Bar.

Shut-Down

At the ends of each shift or production run Turn the Power Switch to the OFF position.

Operator Maintenance

Daily Inspections

At the start of each shift or production run, inspect the following machine controls and the Seal Jaw Area.

1. View the pressure readout on the gauge for reasonability. Also check all settings.
2. Inspect Vacuum rubber for signs of wear or alignment.
3. Visually and manually, check the PTFE Fabric Zone Tape covering the element. It should be smooth.
4. If any bumps or wrinkles are present, the tape should be removed and the element should be inspected. Replace with new element and PTFE Fabric Zone Tape.
5. Check Supply Air filter, clean if necessary.
6. Vacuum Filters (Optional) should be cleaned and drained if necessary.
7. The machine should be clean and there should not be accumulation of dust or particles in the seal area.

If any problems exist, notify maintenance.

⚡ CAUTION:

Ensure that **ONLY** pouch materials are present in the seal area before pressing the foot switch. The Operator must be cautious that small objects do not fall out of pouches. Small, hard objects caught in the seal area can damage the heating element.

Cleaning

⚡ CAUTION:

Prior to performing any cleaning or maintenance procedure turn the power to the machine OFF and unplug the machine.

DO NOT immerse or hose down your Accu-Seal Heat Sealing machine. Use only wipe down cleaning procedures. Failure to follow these cleaning instructions can lead to premature machine failure, shock or fire hazard.

Accu-Seal recommends dampening a cloth with alcohol or soap and water to clean your machine. Do Not spray or pour liquids on the machine. Contact Accu-Seal technical service for other cleaning methods.

Maintenance Information

Introduction and Safety

The Maintenance section includes step-by-step instructions for the installation of the machine including INITIAL SET-UP INSTRUCTIONS. Also discussed is Specific information and descriptions of consumable parts, their function and replacement procedures. This section includes Recommended Maintenance schedules and troubleshooting.

DISCLAIMERS:

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AUDIENCE:

The Maintenance and Repair section and the Appendix are written for maintenance technicians who have successfully completed a certified mechanical training program or who have equivalent maintenance experience. Only qualified repair technicians should be permitted to work on this equipment.

CONTACT INFORMATION:

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⚡ **WARNING:**

Disconnect Power before Servicing

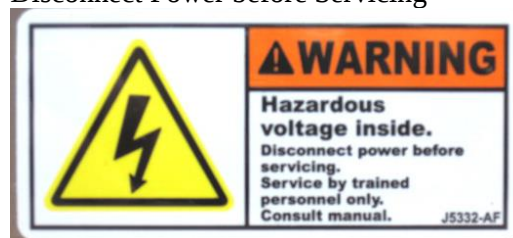


Figure 7 WARNING Hazardous Voltage Inside

Description of Equipment

The smartVAC Series Vacuum Sealers are pneumatic impulse vacuum sealers with vacuum and gas purge capabilities depending on the model selected. All three models have lower heating element and ¼" wide seal. The modes of operation are different between the three models, the modes for each model are describes below.

Model 1:	Vacuum - Seal Seal Only
Model 2:	Gas - Vacuum Seal Vacuum - Seal Seal Only
Model 3:	Vacuum - Seal Gas-Vacuum Seal Vacuum- Gas -Seal Vac1-Gas1 (1-99) + Vac2-Seal Gas1-Vac1 (1-99) + Gas2-Seal Seal Only

Vacuum - Sealing Process

1. Place the product in the pouch to be sealed, place the pouch in the Seal Jaw opening making sure the nozzle is inserted into the pouch.
2. Depress the Foot Switch
3. Seal / Vacuum Bar will close under Low Pressure and vacuum cycle will begin.
4. When the vacuum time expires the nozzle will retract and the Seal Bar will close under High Pressure. Once closed, the heat timer will start.
5. When the Heat timer times out, the Cool timer will start.
6. Seal bar will open automatically when the Cool timer times out. The cycle is complete.
7. Remove the pouch from the seal area.
8. Nozzle will extend ready for next pouch to be sealed.

Installation & Set-Up Procedures

Read this entire Manual thoroughly before attempting to Set-Up, Operate or perform any maintenance on the machine.

BUILDING UTILITIES:

Prior to plugging in the machine, verify the building utilities. The machine requires a dedicated power supply matching the voltage requirement on the machine serial tag.

Do Not operate this machine on an extension cord. Verify the compressed air source is 80-110psi and is clean and dry.

IMPORTANT:

Accu-Seal machines require that the compressed air supply be filtered properly to prevent any moisture or contaminants from entering the machine.

Moisture or particles may damage the internal valves. Contact Accu-Seal if you need additional information regarding supply air filters.

IMPORTANT: If your product is a powder or has moisture, Call Accu-Seal for the proper Vacuum Filter for use on your machine. Using the machine without the proper filter will cause damage your machine.

Initial Set-Up Procedure

Inspect the machine for shipping damage. Damage claims must be resolved with carrier prior to putting the machine in use.

Maintenance and Supervisory personnel should read the entire contents of this manual and have a complete understanding of the controls and machine operation before proceeding.

Machine Installation

Place the machine on a sturdy surface where it is to be used.

Locate the Air In port on the back of the machine and attach a clean dry air supply (80-110psi) using 1/4" OD Tubing supplied with the machine.

Machines with Gas feature: Connect the 1/4" tubing supplied from the gas regulator on your gas supply to the "Gas-In" port on the back of the machine.

Optional: Attach 3/8" OD Tubing to Exhaust Port on the back of the machine.

Verify that all connections are correct and tight and there are no leaks.

Adjust the pressure regulator on the back of the machine until the desired pressure setting is showing in the pressure gauge on the top of the machine. The recommended pressure setting is 50-60psi for most materials. (Supply Air must be 80-110psi.)

Verify that the circuit breaker on the back of the machine is in the ON Position.

Plug the machine power cord into dedicated power receptacle. Refer to Serial Tag on the back of the machine for machine power requirements. Do Not use Extension Cords.

Position the foot pedal for use.

Twist the Emergency Stop button to verify it is in the On position.

Turn the machine ON by pressing the main power switch on the side of the machine.

When the Power is turned On the display will light. When the boot up sequence is complete, you will see the main RUN Screen.

Following the instructions under "smartVAC Control Pad Operation" select the desired seal mode and enter the Heat, Cool, Vac and Gas times.

IMPORTANT: Set the Heat Time at 2 seconds or less and set Cool time at 7 seconds or more for initial testing. Increase heat time slightly to arrive at a proper seal time. Always use a bag when testing.

Test the jaw obstruction using a magazine that is approximately 1/2" thick. Do Not use anything that is hard that could damage the element. Place the magazine in the seal area and press the foot pedal. The jaw should open and the display on the control pad will read: Jaw Obstruction. Reset by pressing Main/Run..

Test sample bags to confirm proper seals, make any necessary adjustments to seal parameters.

Machine Set Up and Installation are now complete.

Maintenance Schedule

All recommended maintenance and inspection frequencies are minimum intervals. Maintenance schedules should be increased based upon actual production levels and the specific operating environment. Harsh environments where liquids, powders and biocides are present require maintenance that is more frequent.

Daily Inspections:

At the start of each shift or production run, inspect the following machine controls and the Seal Jaw Area.

1. View the pressure readout on the gauge for reasonability. Also check all settings.
2. Inspect Vacuum rubber for signs of wear or alignment.
3. Visually and manually, check the PTFE Fabric Zone Tape covering the element. It should be smooth.
4. If any bumps or wrinkles are present, the tape should be removed and the element should be inspected. Replace with new element and PTFE Fabric Zone Tape.
5. Check Supply Air filter, clean if necessary.
6. Vacuum Filters (Optional) should be cleaned and drained if necessary.
7. The machine should be clean and there should not be accumulation of dust or particles in the seal area.

Monthly Inspections:

Accu-Seal recommends monthly inspections of all power cords, Foot switch, and connectors to ensure that there are no frayed cords or damaged connectors. If there are moisture or particle filters on your machine they should be cleaned and filters replaced.

CHECK LIST:

Inspect and tighten all screws and fittings.

Inspect all pneumatic connections for leaks. Inspect he supply air pressure and verify that there is no visible moisture in the pneumatic lines.

Inspect Element end connectors. They must be tight and should not show signs of burning.

Inspect Spring tensioned ends, make sure they move when pressure is applied.

Inspect the element for kinks, bumps or signs of burning, and that it is properly installed. The element should always lay flat on the the element pad.

Check Seal Bar bolts to ensure that the bar is aligned properly on the arms and the bolts are tight.

Test E-Stop

Test Jaw Obstruction

Follow the Installation procedure and check off all Daily Inspection items.

Replace Tapes and elements, element pad, pressure pad and vacuum rubber if they show any signs of wear.

Perform seal tests on Bags for proper seals.

Description of Replacement Parts

Accu-Seal recommends the following consumable parts be maintained with a minimum quantity of two (2) each, to reduce production downtime.

Replacement Consumable Parts:

- Heating Element
- 2" PTFE Fabric Zone Tape or PTFE Tape Set
- Element Pad Assembly
- Pressure Pad Assembly

Other parts are referenced in the Repair Section and in the Parts Ordering information in the Appendix.

Parts may be ordered at your convenience Online at www.accu-seal.com

When ordering parts, you **MUST HAVE** the model and serial number to assure the correct components are shipped.

NOTE:

The most common operating problems arise from improper installation of the element and use of PTFE tapes. Pay close attention to the detailed Replacement Procedures on the following pages. If you have any questions, contact Accu-Seal Tech Support before proceeding.



Figure 8 PTFE Zone Tape

PTFE Fabric Zone Tape:

2" PTFE Fabric Tape with 1" Non Adhesive Zone is used to cover the heating element. It has a non-adhesive area in the center of the tape.

Do Not use any adhesive backed tape over the element, Severe Damage can occur. The element must be able to expand when heat is applied.

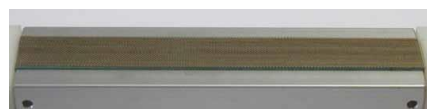


Figure 9 Element Pad Assembly

Element Pad Assembly (EPA):

Element pad assembly is the pad under the element. It is a $\frac{3}{4}$ " wide strip of green gasket material covered with $\frac{3}{4}$ " wide adhesive backed PTFE Fabric Tape.



Figure 10 Element

Heating Element:

Nichrome strip or wire which current passes through and heats to make the seal. The element needs to be covered with a 2" wide with 1" zone PTFE Fabric Zone Tape. Zone tape has a 1" non-adhesive zone in the center of the tape.

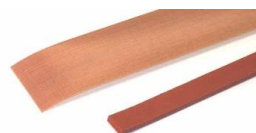


Figure 11 Pressure Bar Cover Set

Pressure Bar Cover Set:

The pressure bar cover set is on the upper bar opposite the heating element. The Pressure bar cover set is $\frac{1}{8}$ " x $\frac{3}{4}$ " wide red foam rubber that is covered with 2" wide PTFE Fabric tape with an adhesive back.



Figure 12 Vacuum Bar Rubber

Vacuum Bar Rubber is black sponge rubber that fits in the channel in front of the Seal and pressure bars.

Maintenance Procedures

It is important to understand all of the components and assemblies in the Seal and Vacuum Jaw area.

The Pressure Bar (upper) applies pressure to the material to be sealed and must be maintained properly. The element and the element pad assembly are located on the lower bar opposite the upper Pressure bar. The Vacuum Rubber fits into the channel on the front of both the upper pressure bar and the lower seal bar.

The main components of the seal jaw are:

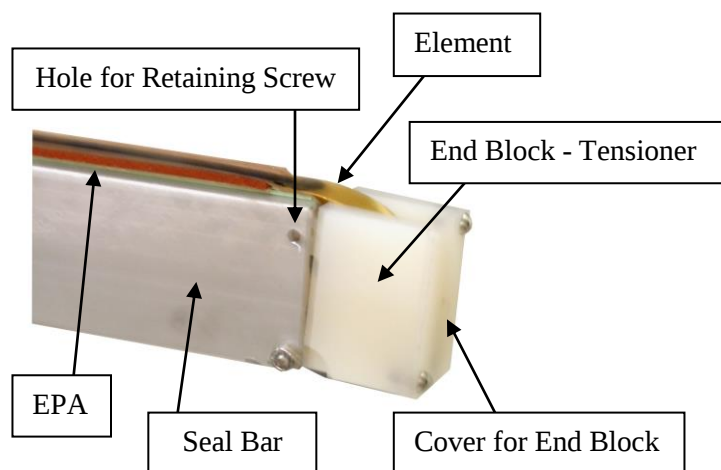
- Element
- Element Pad Assembly (EPA)
- Element tensioner end blocks

- PTFE Zone Tape covering the element
- Pressure Pad Assembly including PTFE Tape covering the rubber pad

- Black silicone Vacuum Rubber

⚡ **CAUTION:**
NEVER PUT ADHESIVE BACKED TAPE OVER THE ELEMENT. Sever damage to the element will occur and possible fire hazard. Adhesive restricts the element from expanding when heat is applied.

Seal Bar Components



Replacing the Element:

Items Required:

- ¼ " Heating Element
- 2" PTFE Tape with 1 " Non-adhesive Zone
- Vise Grip Pliers
- Allen key: 1/16th for end block covers
- Allen key: 7/64th for element terminal
- Retaining Screws (2)

1. Remove the vacuum rubber
2. Remove the PTFE Fabric Tape covering the element on the lower bar. Be sure to remove any residual adhesive on the machine with denatured alcohol.
3. Remove the covers on the end blocks



(Photo of un-mounted seal bar)
Do not remove bar from machine.

4. Using the vise grips as pictured above, using caution not to crush the wire on the bottom of the block, Pull up on the block and insert a retaining screw in the hole and push through the block. The retaining screw will hold the block up to the bar so the tension is removed from the element.
5. Repeat step 4 on the opposite end of the bar.

(Continued)

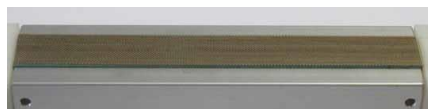


6. Use the 7/64th Allen key to loosen the element. Do this at both ends. Be careful not to drop small parts, terminal screw and washer.
 7. Inspect the element pad assembly for signs of wear or burns. Accu-Seal recommends replacing the element pad whenever the element is replaced.
 8. Install the new element. You will need to carefully shape the brass on the end on the element and then insert the terminal screw and washer through the element and into the terminal. Do not tighten all the way.
 9. Repeat above #8 at the other end. Once both ends are secure in the terminals, Make sure the element is flat and straight in the block and on the pad. Tighten terminal screws at both ends.
- IMPORTANT:**
10. Using the vise grips, Remove the retaining screws at each end of the bar. This will tension the element. Failure to do this will result in damage to the element and tapes and could cause burning.
 11. Install new PTFE zone taper over the element.
 12. Install the Vacuum Rubber

Replacing Element Pad Assembly:

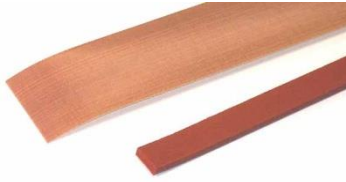
Items Required:

New EPA – Element Pad Assembly
 Denatured Alcohol
 Cloth or Rag
 Flat Blade Screwdriver
 PTFE Zone Tape



1. Remove the 2” PTFE Fabric Tape with 1” Zone. Be sure to remove any residual adhesive on the machine with denatured alcohol.
 2. Remove the Element, (follow procedure for Element replacement)
 3. Remove any residual adhesive from the case.
 4. Wipe down EPA installation area with denatured alcohol.
 5. Remove adhesive backing from new EPA.
 6. Position the new EPA so it is centered on the bar
 7. Install the element following the procedure for Replacement of the Element. Make sure that the element is completely seated flat and straight on the Element Pad Assembly. Tighten nuts at both ends of element.
- IMPORTANT: Remove retaining screws after element replacement.**
8. Install 2” PTFE Fabric Tape with 1” Zone over the element, making sure there are no wrinkles in the tape.
 9. Run proper seal tests at low heat time to verify the machine is operating correctly.

Replacing Pressure Bar Cover Set:



Items Required:

New - Pressure Bar Cover Set

Denatured Alcohol

Cloth or Rag

1. Remove the PTFE fabric tape and red sponge rubber from the bar.
2. Remove any residual adhesive left on the machine case.
3. Wipe down the area with denatured alcohol.
4. Remove the backing from the adhesive side of the new sponge rubber.
5. Center the rubber on the bar and press firmly into position.
6. Install the 2" adhesive backed PTFE fabric tape over the sponge rubber.
7. Run test seals at low Heat time verify machine is operating correctly.

Repair Information

Introduction and Safety

The Repair section includes the machine theory of operation, Component Parts descriptions and procedures for using diagnostics in the Control pad. This section also includes detailed diagrams, parts lists and a Troubleshooting guide.

DISCLAIMERS:

Accu-Seal SencorpWhite Inc. disclaims any liability for injuries or damage resulting from use or application of this product contrary to instructions and specifications contained herein. Liability shall be limited to repair or replacement of product if shown to be defective. Observe all safety symbols and information in this manual.

⚡ WARNING:

Disconnect Power before Servicing



Figure 13 WARNING Hazardous Voltage Inside

AUDIENCE:

The Maintenance and Repair section, and the Appendixes are written for maintenance technicians who have successfully completed a certified mechanical training program or who have equivalent maintenance experience. Only qualified repair technicians should be permitted to work on this equipment.

⚡ WARNING:

The procedures and components discussed in this section may require power to the machine when testing a repair or making internal adjustments. **EXTREME CAUTION MUST BE USED WHEN PERFORMING REPAIRS. ONLY QUALIFIED TECHNICIANS WITH A COMPLETE UNDERSTANDING OF THEIR ACTIONS SHOULD BE ALLOWED TO OPEN THE MACHINE.**

Contact Accu-Seal Technical Support with any questions prior to proceeding

CONTACT INFORMATION:

Accu-Seal SencorpWhite Inc.
(800) 452-6040 or (760) 591-9800
Fax (760) 591-9117.
Email: info@accu-seal.com
www.accu-seal.com

Theory of Operation

The 675 *smartVAC* series machines are Vacuum Impulse Heat Sealers with pneumatically operated seal Jaws and a venturi vacuum system. The machine is controlled by a digital control pad. When the Foot Switch is pressed, a signal is sent to the controller. The Controller then supplies power to the Main Valve, which then closes the Seal Jaw under low pressure. At this point the optical sensor confirms that there is no jaw obstruction. If no obstruction, the gassing or vacuuming begins. When the gas and vacuum cycles end, the nozzle will retract. Power is then supplied to the High Pressure Valve and the SSR. The high-pressure valve applies the high pressure to the closed seal bar and the SSR applies power to the element. The heat timer starts and the element heats up. When the Heat timer times out, the Cool Timer starts. When the Cool timer times out, the Seal Jaw opens. The nozzle will then extend ready for the next seal cycle to begin.

The pressure regulator on the back of the machine regulates the incoming air supply and the pressure setting is displayed on the gauge on the top of the machine. The regulator requires the incoming air pressure to be at least 10psi Higher than the set pressure for the machine to regulate properly.

Description of Components

smartVAC Control Pad: The central digital controller for the machine. All operating modes and sealing values are entered via the control pad.

Transformers: Power source for the element

24VDC Power Supply: Converts AC to DC for all DC powered components in the machine.

Pressure Regulator: Regulates the incoming supply air.

Pressure Gauge: Displays the regulated pressure setting.

Vacuum Gauge: During the vacuum cycle the vacuum gauge displays the vacuum level achieved at the nozzle.

Valve-Gas or Vac: Supplies air pressure to vacuum ejector. On Gas models an additional valve provides gas to nozzle

Valve-3way-Nozzle: Supplies air pressure to retract or extend the nozzle assembly.

Valve 5 way-MAIN, LP: Closes Jaw under Low pressure

Valve High Pressure: Supplies air to main valve to close Jaw in High Pressure

SSR /Solid State Relay: Supplies power to the transformers.

Pressure Bar: The pressure pad is the soft pad opposite the heater element. It applies pressure to the product to be sealed.

Element Tensioned Ends: The spring loaded blocks are at each end of the seal bar. The heating element is connected to the brass terminal on the blocks. The power is fed to the element through the terminal connectors.

Optical Sensors: Senses the seal bar position. Used for Jaw Obstruction Alarm and Switching on the High Pressure Valve.

Vacuum Nozzle Assembly: Consists of carrier, nozzle, cylinder and tubing for vacuum and gas purge function.

Seal Bar Assembly: The seal bar assembly is the lower bar that includes the element, element pad assembly (EPA), and the end tensioned blocks.

Vacuum Pad Assembly: The vacuum pad assembly is mounted to the front of the lower seal bar and the upper pressure bar. The black vacuum bar sponge rubber fits into the metal channel mounted to the bars.

Spring Tensioned End Caps: The spring tensioned end caps are located at the ends of the lower seal bar and have springs positioned inside the bar positioned to maintain tension on the heating element.

Exhaust port: Used to connect a tube to exhaust air out of a clean room. The port can also be used to connect a a silencer to quiet the vacuum operation.

Troubleshooting

Problem	Cause	Solution
No Power	♦ No power to machine ♦ Machine not plugged in ♦ Tripped Circuit Breaker ♦ Power Switch in "OFF" position ♦ Thermal overload condition has occurred	♦ Check that outlet for the machine has power. ♦ Plug in machine. ♦ Check and Reset ♦ Place Power Switch in "ON" position. ♦ Turn OFF power and wait for machine to cool for 1/2 hr. Turn on power. Call Accu-Seal if problem persists. This is a normal protective feature.
No Heat	♦ Broken element ♦ Element Terminal connection is loose or burned. Dirty contact surfaces ♦ Improper Heat settings ♦ Fault in Heating Circuit ♦ Bad SSR	♦ Replace element. ♦ Make sure stud assembly & all element contact surfaces are clean and terminal connector is tight. ♦ Verify Heat time setting is 2-3 seconds ♦ Check all wires and transformers associated with heating circuit. Replace any bad wires or transformers. ♦ Rare, usually bad transformer or connection
Poor Seal/Weak Seal	♦ Hot spots, or burn through Marks in seal ♦ Low Seal Pressure ♦ Faulty High Pressure Valve	♦ Decrease Heat time and increase Cool time. ♦ Replace PTFE zone-tape and/or Replace element if there are kinks or signs of burn ♦ Increase pressure setting on regulator. ♦ Replace High Pressure Valve
No Air Supply	♦ Gauge reading zero or wandering ♦ Regulator not working	♦ Verify Utility supply air ♦ Turn reg. Knob to increase pressure/verify Regulator, replace
No display on smart Control Pad	♦ Cable connector loose or disconnected ♦ Faulty Control Pad ♦ Faulty 24VDC power supply	♦ Check that cable is secure and in place. ♦ Replace Control Pad ♦ Replace 24VDC power supply.
Seal Bar does not come down/Jaw Obstruction Alarm	♦ Obstruction in Jaw ♦ Improper Sensor position ♦ Faulty Optical Sensor ♦ Faulty Main Valve ♦ Faulty High Pressure Valve ♦ No Air supply to machine	♦ Free jaw obstruction ♦ Adjust Optical Sensor ♦ Replace Optical Sensor ♦ Replace Main Valve. ♦ Replace High Pressure Valve ♦ Restore Air supply

Internal Machine Components

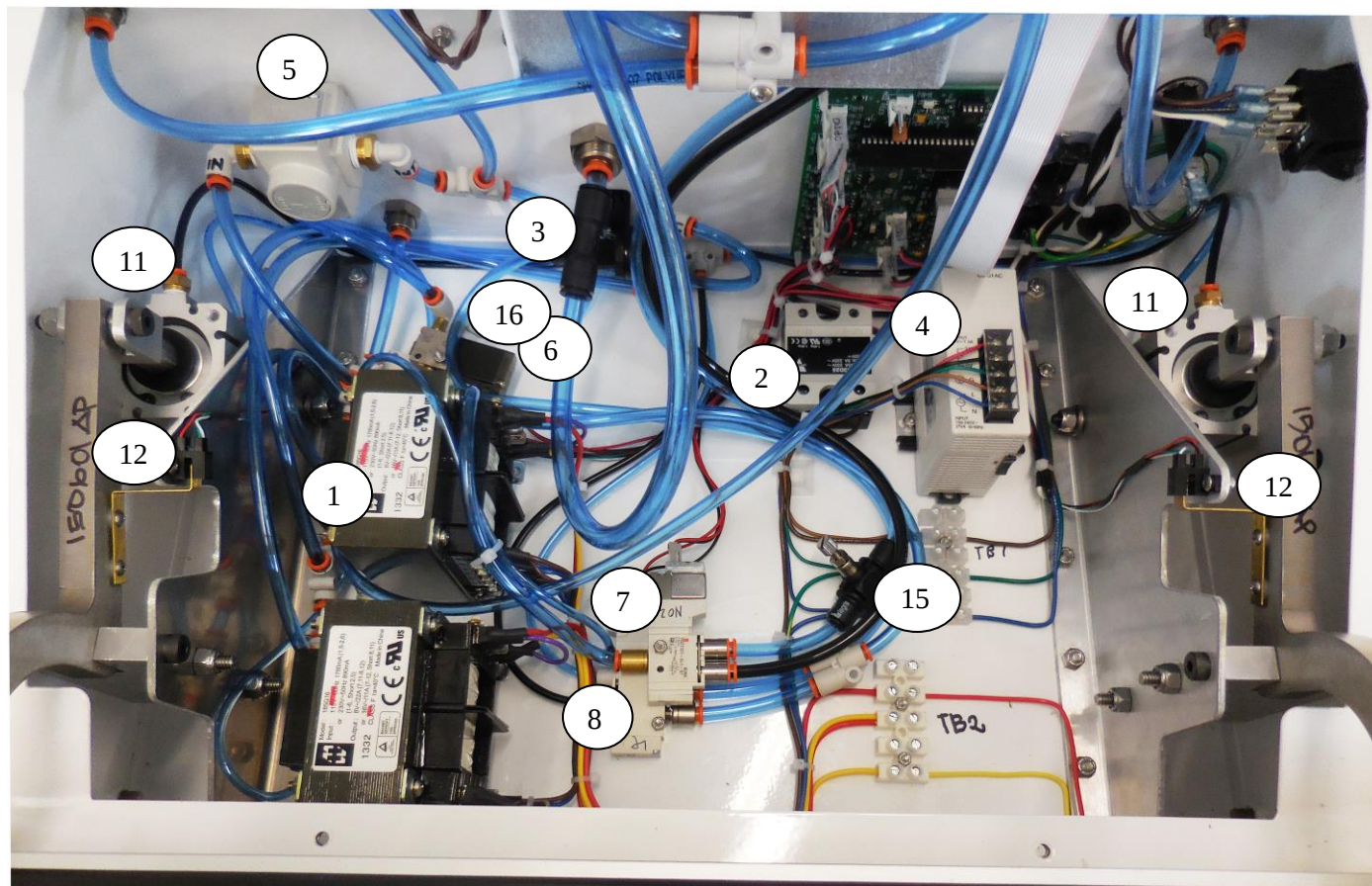


Figure 14 Inside machine

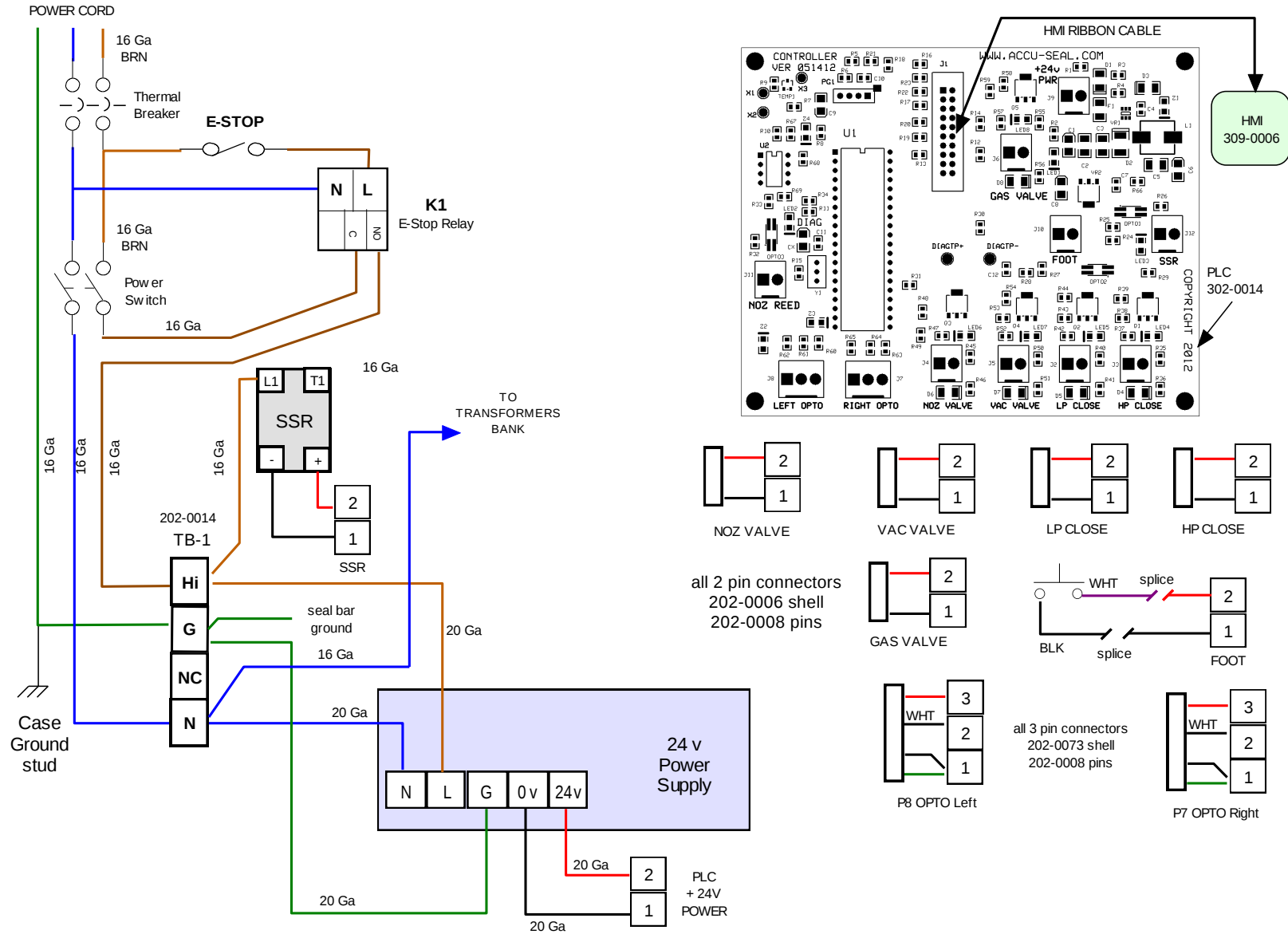
Loc	Part Number	Description
1	311-0014	Transformer (s)
2	304-0013	SSR/Solid State Relay
3	106-0012	Low Pressure Regulator
4	301-0013	24V Power Supply
5	106-0017	High Pressure Regulator
6	604-0015	Valve 2 way connector (1 for Vac, and 1 for Gas)
7	604-0016	Valve-3 way (Nozzle)
8	604-0017	Valve 5-way w/ Connector Main-LP)
9	101-0047	Nozzle Cylinder (not visible)
10	109-0004	Vacuum Ejector (not visible)
11	101-0049	Seal Bar Cylinders
12	604-0019	Black Optical Sensor with connector (One required for each side)
13	105-0006	Vacuum Gauge (on cover)
14	105-0004	Pressure Gauge (on cover)
15	102-0023	Flow Control
16	604-0018	Hi Pressure Valve-3way connector

Appendixes

Machine Specifications

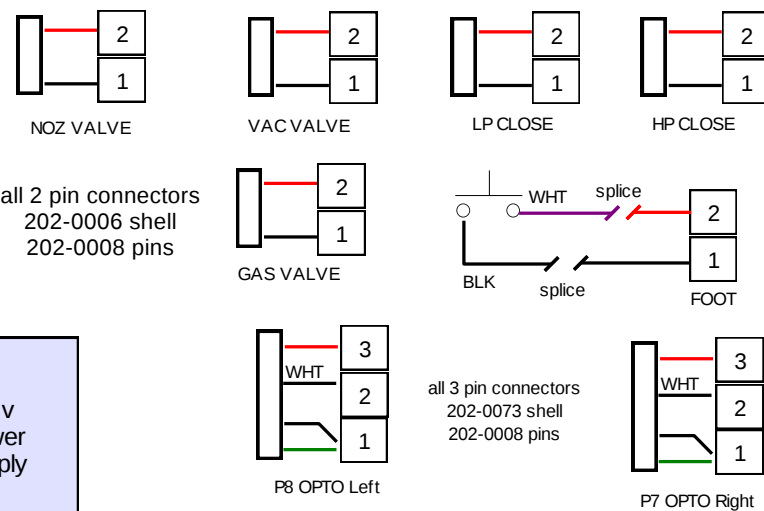
675 Series smartVAC			
For all models: Vacuum, Gas-Vacuum and Multi cycle machines			
Model	20"	25"	30"
Seal Width (1/4"Standard) optional 3/8"	1/4"/3/8"	1/4"/3/8"	1/4"/3/8"
Seal Length	20"	25"	30"
Input Requirements			
Voltage (Standard)50/60 Hz +/-10%	120 Vac	120 Vac	120 Vac
(X) 50/60 Hz	220 Vac	220 Vac	220 Vac
Current (@120 Vac) 50/60Hz	10 Amps	10 Amps	15 Amps
220V 50/60Hz	5 Amps	5 Amps	10 Amps
Air Supply (Min-Max)	80-110 psi	80-110 psi	80-110 psi
Air Consumption (@80 psi)	2.0 CFM	2.0 CFM	2.0 CFM
Control System Limits			
Heat Time	9.9 sec	9.9 sec	9.9 sec
Cool Time	99 sec	99 sec	99 sec
Gas Time	99 sec	99 sec	99 sec
Vacuum Time	99 sec	99 sec	99 sec
Vacuum Limits	26inHG	26inHG	26inHG
Suction Flow	1.5 CFM	1.5 CFM	1.5 CFM
Gas Input Maximum Limit (Gas Models Only)	110Psi Max	110Psi Max	110Psi Max
Pressure Regulator Range	20-100psi	20-100psi	20-100psi
Recommended Sealing Range for most materials	50-60psi	50-60psi	50-60psi
Environmental Specifications			
Ambient Temperature	0°C to +50°C/32°F to +122°F		
Ambient Humidity	RH (Non-Condensing)		
Physical Dimensions			
Case Dimensions:	20x13x8	20x13x8	20x13x8
Footprint:			
Length (in.) Seal length + 3.5"	23.5	28.5	33.5
Depth (in.) (includes Cables)	16	16	16
Height (in.) (includes feet to top of E-Stop)	9	9	9
Weight (lbs.) estimated	50	52	55

Electrical Schematic 120V

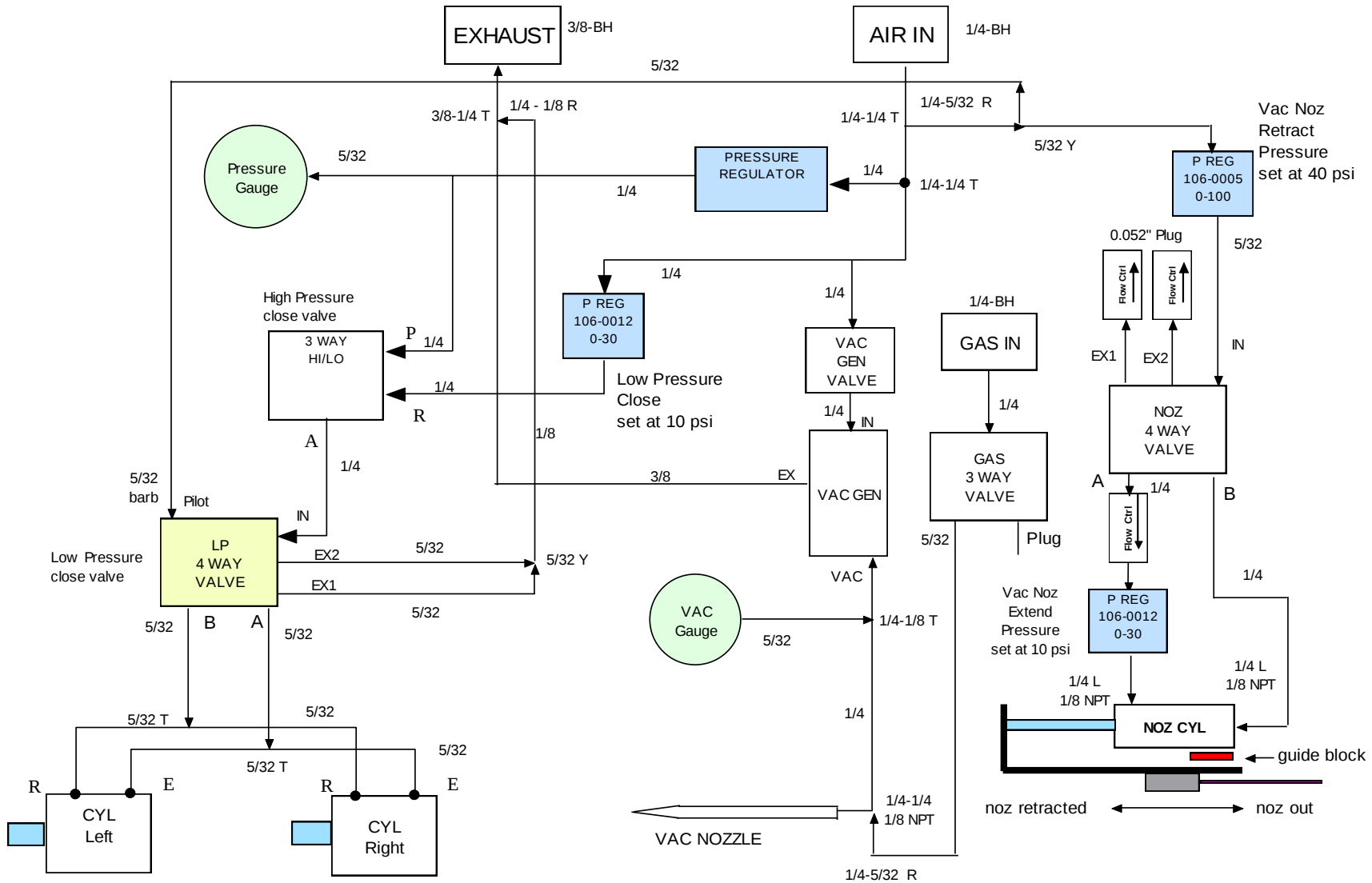


The diagram illustrates the electrical wiring for a control panel (304-0034) and its connection to a transformer bank and a motor. Key components and wiring details include:

- Power Source:** A POWER CORD enters from the top left, passing through a Thermal Breaker and a Power Switch. The main power line is 16 Ga.
- Safety Components:**
 - E-STOP:** A 16 Ga line runs from the power switch through an E-STOP button to the top-left terminal (1) of the 304-0034 terminal block.
 - E-Stop Relay (K1):** The top-right terminal (8) of the 304-0034 terminal block is connected to the E-Stop Relay.
- Terminal Block 304-0034:** A 4x4 terminal block with terminals labeled 1, 7, 8, 6 in the top row and 0, 3, 4, 2 in the bottom row.
- Transformer Bank:** A 220v SSR (Solid State Relay) is connected to the transformer bank. The SSR has terminals L1, T1, -, and +. The transformer bank has terminals 1 and 2.
- Motor Connections:**
 - The motor's N (Neutral) terminal is connected to the 20 Ga line from the transformer bank's 0v terminal.
 - The motor's L (Line) terminal is connected to the 20 Ga line from the transformer bank's 24v terminal.
 - The motor's G (Ground) terminal is connected to the 20 Ga line from the transformer bank's 0v terminal.
- Grounding:**
 - A Case Ground stud is connected to the 16 Ga line from the power switch.
 - A seal bar ground is connected to the 16 Ga line from the power switch.



Pneumatic Schematic



Parts Ordering Information

Seal Bar Length	¼" Heating Element	Element Pad Assembly		Pressure Bar Cover Set	Black Vacuum Bar Rubber	
	#	#		#		
20"	611-0002	608-0059		612-0100	609-0023-20	
25"	611-0003	608-0060		612-0101	609-0023-25	
30"	611-0004	608-0061		612-0102	609-0023-30	

<i>Miscellaneous Parts</i>	<i>Part #</i>
Replacement Nozzle and Block Assembly	613-0016
Power Switch	306-0036
E-Stop	306-0037
Foot Switch (Pedal)	306-0002

PTFE FABRIC TAPE BY THE ROLL	
PTFE FABRIC TAPE-2 1/2" X 1"ZONE-10FT	612-0060
PTFE FABRIC TAPE-2 1/2" X 1"ZONE-25FT	612-0061
PTFE FABRIC TAPE-2 1/2"X1"ZONE -108FT	612-0063

Parts Order Form

ACCU-SEAL SENCORPWHITE INC.
225-B BINGHAM DRIVE SAN MARCOS, CA 92069
ORDER TOLL FREE: 1-800-452-6040
E-MAIL ORDERS TO: info@accu-seal.com
FAX: +1+760-591-9117
ONLINE ORDERS: www.accu-seal.com

Your PO Number:

Delivery Date:

Ordered By:

YOUR COMPANY INFORMATION

BILL TO:	SHIP TO:
<i>Company Name:</i>	<i>Company Name:</i>
<i>Contact Name:</i>	<i>Contact Name:</i>
<i>Address:</i>	<i>Address:</i>
<i>City/State/Zip</i>	<i>City/State/Zip</i>
<i>Phone:</i>	<i>Phone:</i>
<i>Fax:</i>	<i>Fax:</i>
<i>E-mail Address:</i>	<i>E-mail Address:</i>

METHOD OF PAYMENT

☐	NET 30	☐	COD	☐	PREPAY	☐	MC	☐	VISA	☐	AMEX						
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> CC#: </td> <td style="width: 20%; vertical-align: top;"> EXP: </td> <td style="width: 30%; vertical-align: top;"> 3-DIGIT PIN: </td> </tr> <tr> <td colspan="3" style="padding-top: 10px;"> CC NAME: SIGN HERE: </td> </tr> </table>												CC#: 	EXP: 	3-DIGIT PIN: 	CC NAME: SIGN HERE:		
CC#: 	EXP: 	3-DIGIT PIN: 															
CC NAME: SIGN HERE:																	

MODEL#: _____ **SERIAL#:** _____

\$35.00 MINIMUM ORDER REQUIREMENT				
PART #	DESCRIPTION	QTY	COST (ea)	TOTAL
			\$	\$
			\$	\$
			\$	\$
			\$	\$
			\$	\$
			\$	\$
			\$	\$
			\$	\$
			\$	\$
			\$	\$
			\$	\$
			SUB TOTAL	\$
			CALIFORNIA SALES TAX (if applicable)	\$
000-0011			HANDLING FEE	\$ 5.00
			TOTAL	\$

FREIGHT WILL BE ADDED AT TIME OF INVOICING

YOUR SHIPPING ACCT. # (if applicable):

YOUR SHIPPING METHOD: GROUND

OVERNIGHT

Warranty

Accu-Seal SencorpWhite Incorporated

Thank you for choosing an ACCU-SEALER, manufactured in the U.S.A. by one of the country's leading manufacturers of plastic sealing machinery.

WARRANTY

All Accu-Sealers are designed, built and tested to give years of reliable trouble-free service. Accu-Seal machines have a 2-year* limited warranty from date of delivery against electrical or mechanical defects, excluding elements, PTFE fabric tape and consumable parts. This warranty is automatically voided if a machine is damaged through improper use or unauthorized repairs. At our option, any defective Accu-Seal machine that is returned ground freight prepaid within the US will be repaired or replaced by Accu-Seal at no charge.

Accu-Seal SencorpWhite Inc. assumes no responsibility for freight, customs, duties or other shipping costs.

San Marcos, CA 92069

www.accu-seal.com

800-452-6040 / 760-591-9117