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homeseal™ ADVANCE

Technical Manual

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1 Table of Contents

2 TABLES AND FIGURES

The Technical Manual for HomeSeal Advance is the property of Aeroseal LLC. This manual cannot be reproduced without the written approval from Aeroseal.

Refer to the manual for diagnostic information, aerosol sealing techniques, troubleshooting, repairs, and maintenance. Specifications subject to change without notice.

3 INTRODUCTION

3.1 Overview

Thank you for your purchase of a HomeSeal Advance (HSA) sealant system; we are thrilled to have you on board in reclaiming homeowner comfort and HVAC efficiency. This manual serves as a baseline of knowledge to get you up and running as well as a reference for new operators. For any questions or clarifications, please do not hesitate to reach out to your Technical Support team at (800) 772-6459.

For comments, questions, improvements, and ideas, please contact your Residential Application Engineer through the Dealer Marketing Toolbox: https://aeroseal.com/res/dealer-toolbox/

3.1.1 Technical Support Product Information

Information like the date of purchase, dealer name, products and case IDs are helpful to have on-hand when calling for Support. You may wish to record this information in the manual.

Aeroseal's Tech Support group is here to help you with your technical support needs: (800) 772-6459.

Table 1. Product information

Date of Purchase:	**Dealer:**
Product(s) Owned:	**Case ID(s):**

3.1.2 Proprietary Information

All information in this Technical Manual is confidential and meant only for direct use by the dealer and their current employees who are engaged in providing building envelope sealing services. All information in the Technical Manual is proprietary and unauthorized release or use constitutes a violation of the sublicense agreement.

3.1.3 Safety

The primary concern of Aeroseal is that this equipment is operated and maintained with the safety of the Homeowner, Technician, and Equipment in mind. To assure safe and reliable operation:

- Read and understand this manual before attempting to install or operate this equipment.
- Assure that the appropriate personnel are informed of the contents of this manual.

- Assure that this manual is kept with the equipment, or if possible, permanently affixed to it.
- Be aware of the appropriate safety data sheets (SDS) located in Section 7.

3.1.4 Intended Use

The HSA from Aeroseal LLC that allows the user to seal the ductwork of a residential system fully, efficiently, and accurately on an active building site.

3.1.5 Electromagnetic Interference

HSA was designed and built to minimize electromagnetic interference with other devices. However, if interference is noticed:

- Increase separation between or remove interfering device from vicinity of HSA (or vice versa, whichever is most appropriate).
- Contact Aeroseal Tech Support if interference persists.

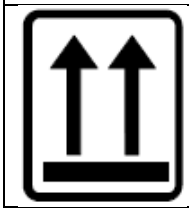
3.1.6 Safety Symbols

Table 2. Safety Symbols

	**WARNING:** Indicates a potentially hazardous situation which could result in serious injury or product damage.
	**CAUTION:** Indicates a potentially hazardous situation which may result in minor injury or product damage, unintentional misuse, or unsafe practices.
	**CAUTION:** Indicates a potentially hazardous situation which could result in product damage, unintentional misuse, or unsafe practices.

3.1.7 Shipping Symbols

Table 3. Shipping Symbols

	Caution Shipping Damage		Fragile
	Proper Shipping Orientation		Max Stacking Heigh (Refer to “n” number on package.)

3.1.8 Transportation / Storage Conditions

Table 4. Environmental Storage Conditions

Ambient Temperature Range:	1°C to 50°C (34°F to 122°F)
Relative Humidity:	0% to 95% (non-condensing)
Atmospheric Pressure:	3 PSI to 16 PSI

3.1.9 Items Included in Original Shipment

Table 5. Packing List

Part No.	Count	Description	Image
FR00164	1	HSA	
FR00166	1	HSA Spare Parts Kit	
MN00353	1	10” Clamp	

Part No.	Count	Description	Image
MT00338	1	75’ Blue Tube	
LC00531	3	10’ Power Cord	
MC00352	1	12” Clamp	
MN00347	1	12” Flange	
FR00115	1	Mini Scrubber	

Part No.	Count	Description	Image
FB00103	1	Laptop and Case	

4 HARDWARE & SOFTWARE SET UP

4.1 Components

4.1.1 Fanbox

The fanbox contains:

- Nozzle assembly
- Wifi antenna
- 25 micron filter
- 1500W heater elements (x2)

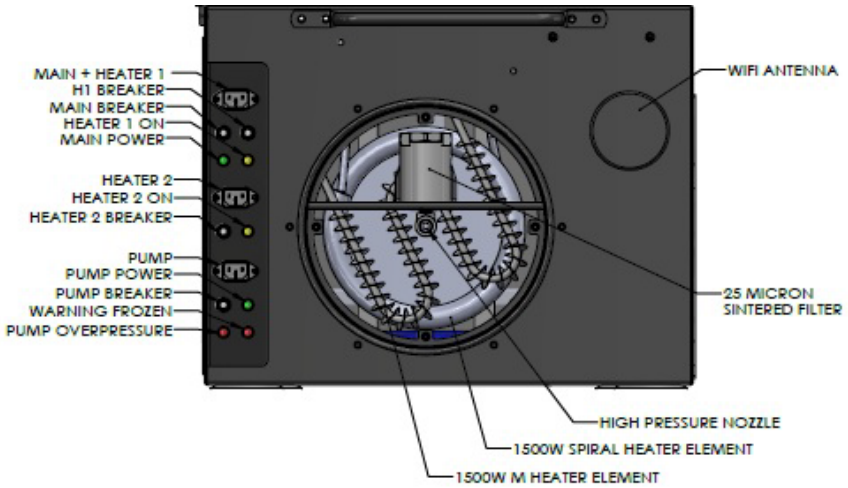


Figure 1. Fanbox

The front panel includes:

- Main heater 1
  - H1 breaker
  - Main breaker
  - Heater 1 on light
- Main power
- Heater 2
  - H2 on light
  - H2 breaker
- Pump
  - Power
  - Breaker
  - Warning frozen light
  - Overpressure light

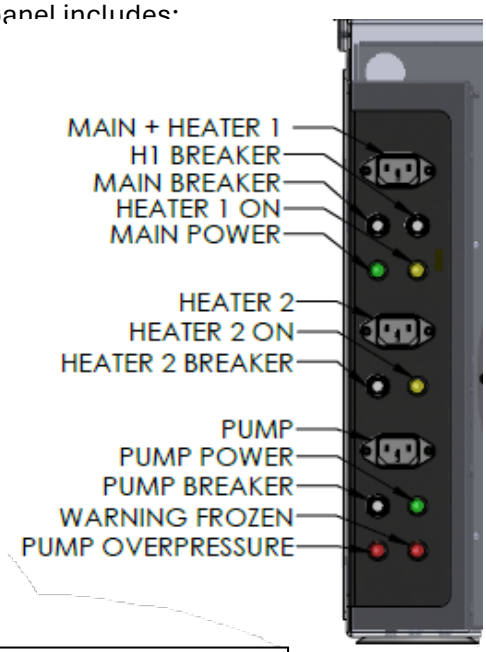


Figure 2. HSA Front Panel

The interior includes:

- Electronics box
- 10” diameter fan
- Heater cylinder
- Sealant reservoir
- Prime assist button
- Drain and seal valve lever
- Reservoir tank thawing heater
- Automatic adjusting gate
- Filter rack

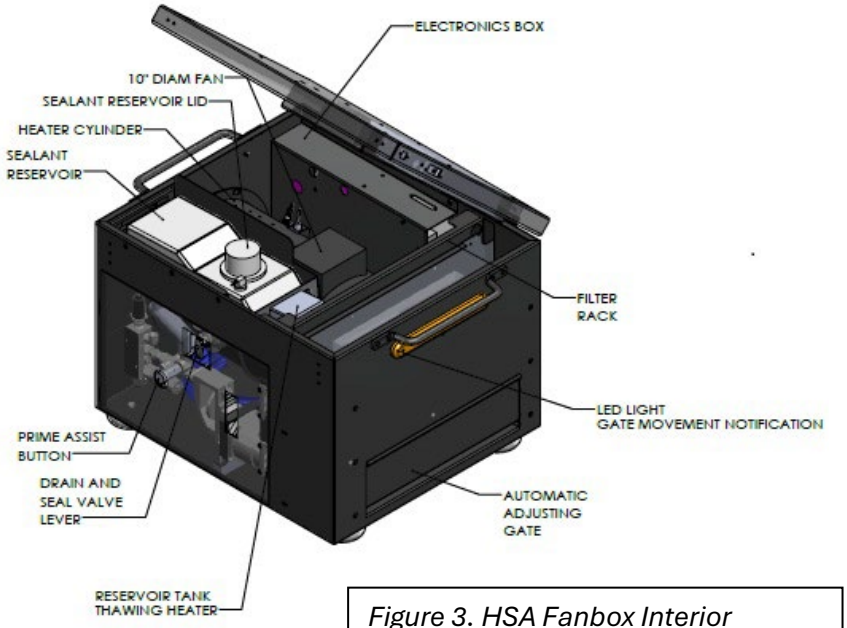


Figure 3. HSA Fanbox Interior

The interior mechanics include:

- Pump pressure transducer
- High pressure outlet line to aerosolizing nozzle
- Pump inlet check valve
- Pump thawing heater
- Pump AC motor
- 4000psi overpressure switch
- Pump outlet check valve
- 3000psi (9000psi burst) hydraulic accumulator hose

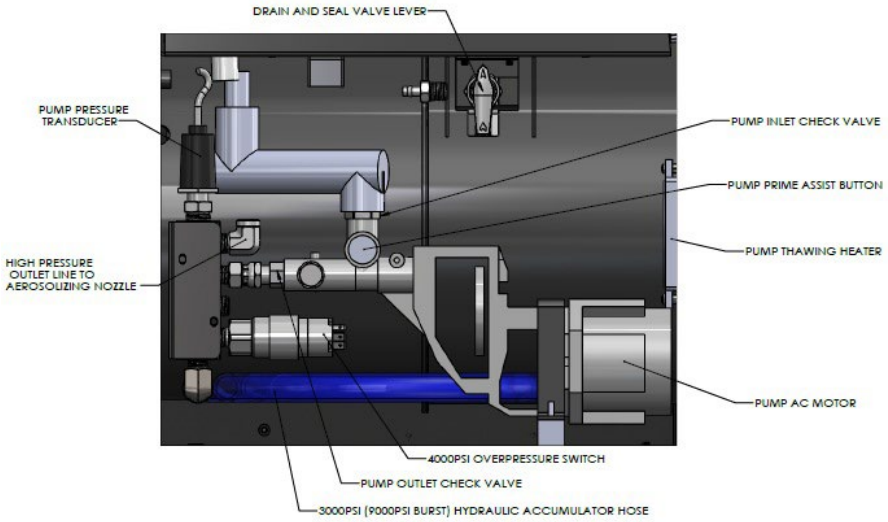


Figure 4. HSA Interior Pump Mechanics

The fanbox lid includes:

- Digiman manometer
- USB-B bulkhead
- Outside reference pressure
- Reference pressure
- Duct pressure
- Negative fanbox pressure
- Temperature sensor
- Power indicator
- Internet status
- MRS board

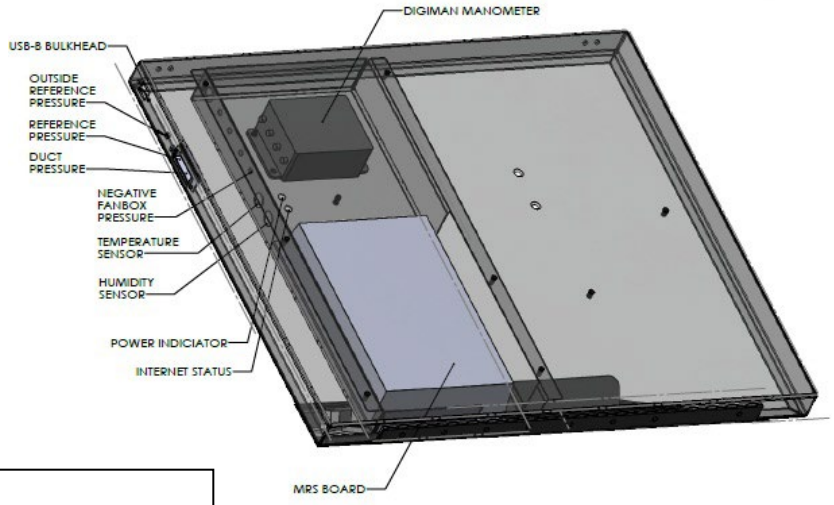


Figure 5. HSA Fanbox lid

4.1.2 Controls & Indicators

The HSA system uses the AeroSuite software program on the laptop. Control screens include:

4.1.2.1 Sealing Screen

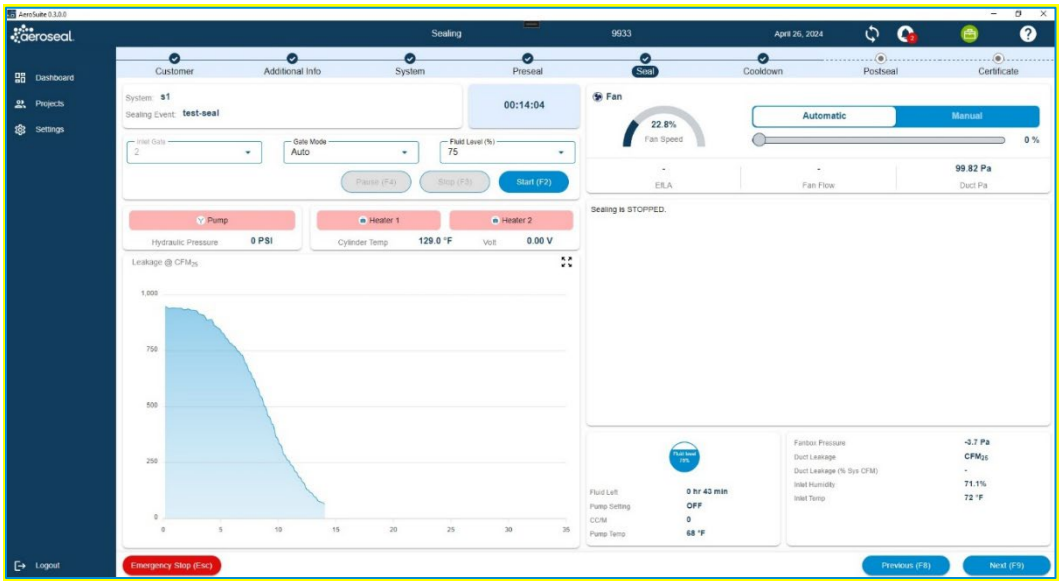


Figure 6. Sealing Screen

4.1.2.2 Dashboard

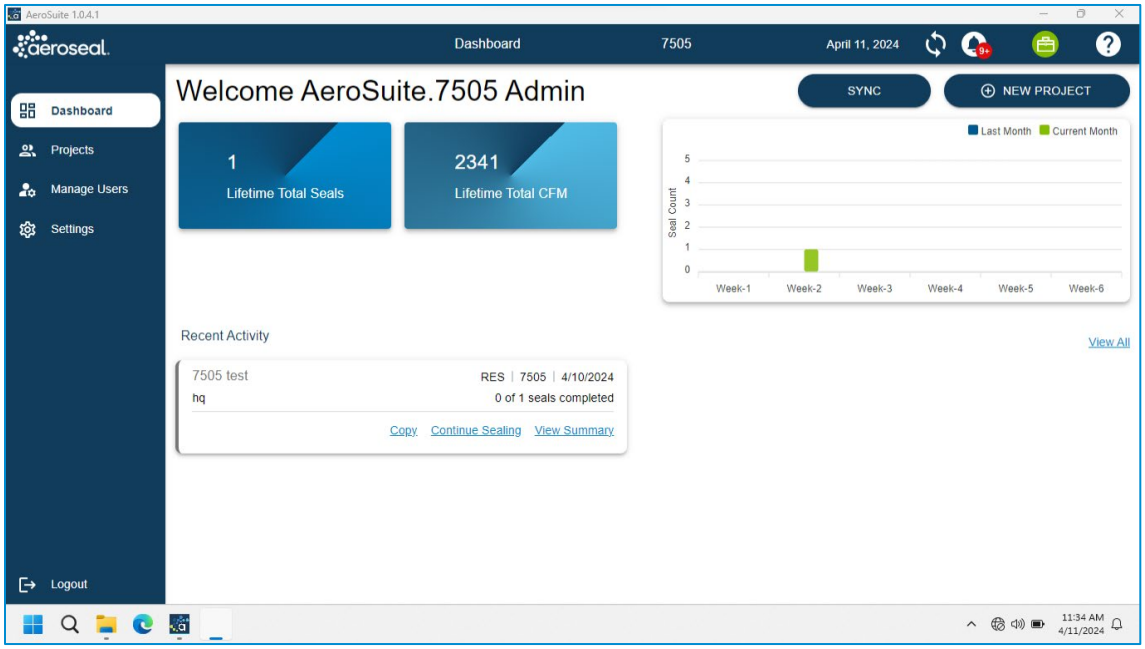


Figure 7. Dashboard

4.1.2.3 Thawing Sealant

Do not store the HSA in freezing conditions as the pump/reservoir is always filled with fluid. Allowing the pump/reservoir to freeze can crack the pump casting and void the manufacturer's warranty.

If the sealant freezes, the AeroSuite software can detect its temperature and notify the user to start the thaw sequence. Once the sealant HSA thawed, above 35°F, the sealing event can proceed.

Figure 8. Frozen Sealant Alert

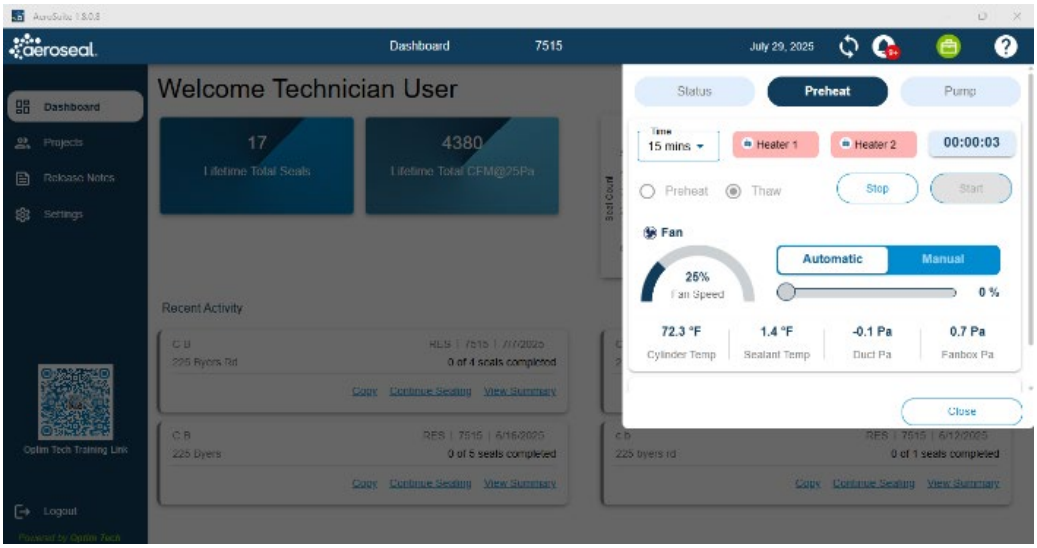


Figure 9. Thaw Sequence

4.1.3 Operating Environment

Table 6. Operating Environment

Ambient Temperature Range:	4°C to 40°C (40°F to 105°F)
Relative Humidity:	0% to 95%

Atmospheric Pressure:	3 PSI to 16 PSI

4.1.4 Weights & Dimensions

Table 7. Measurements

Item	Weight	Dimensions
HSA	75 lbs.	21” (l) x 18” (w) x 28” (h); 3.93 ft^3

4.1.5 Environmental Support Surface

- No portion of the HSA should rest in standing water though resting on damp ground is acceptable.
- The surface should be flat and level.
- The HSA should be elevated at least on foot off the ground to allow for full inflation of the layflat.

4.1.6 Clearance Requirements

- No obstructions within six feet of the inlet gate or within two feet of the sides.
- Shield all reference pressure tubes and ports from windy conditions, which may affect pressure measurements.
- Place the blue tube at the furthest point from the HSA within the duct system and a minimum of six feet away from the nozzle.

4.1.7 Electrical Requirements

- Three separate 120V 15A electrical circuits.
- Standard plug size is IEC C13.

5 OPERATION OVERVIEW – SEALING A HOME

The following is a high-level overview of performing an Aeroseal job.

5.1 Home Survey

If available, walk through the home or review plans before the day of the job.

5.2 Home Preparation

On the day of the seal, the operator and a helper arrive at the scheduled time. The HSA and support equipment are brought in, blocking of registers and equipment completed, the injection point cut, and the HSA connected to the injection point.

5.3 Pre-Seal Test

Information is entered into AeroSuite and a sealing event is set up in the software. The Pre-Seal Test is conducted to establish the initial volume of leakage the HVAC system HSA.

5.4 Seal Event

The sealing process is started through AeroSuite. During the seal, the operator and helper walk through the residence to ensure register blocking is secure and any other large leakage areas are manually sealed as required.

5.5 Post-Seal Test

At the seal event's completion, the Post-Seal Test is conducted to measure the final volume of leakage in the system. The final certificate is saved to the laptop.

5.6 Closeout and Cleanup

The HSA is disconnected from the HVAC equipment and removed from the residence. All blocking and isolation are removed, and the injection point patched with appropriate materials.

6 INITIAL SETUP

6.1 AeroSuite Software

6.1.1 Date and Time

Verify that the date and time on your laptop is correct for your location.

6.1.2 Sync

1. Upon first opening AeroSuite, the program will require the operator to perform a sync to the Aeroseal database.
2. Connect the laptop to the internet to complete the sync.
3. Sync at least once every 31 days. It is recommended to upload by the 5th of every month to ensure that seals from the previous month are billed appropriately.

Note: Failure to upload for a period greater than 31 days will cause AeroSuite to stop operating until a sync is completed.

6.1.3 Initial Contractor Information

AeroSuite will prompt the operator to enter relevant information to associate the software and hardware with the correct contractor. All lines with an asterisk (*) are required.

6.1.4 Logo

A logo can be uploaded to be displayed on the certificate printed at the end of the seal. Save your logo file to the **Documents** folder on the laptop and use the **Browse** button on the **Profile** page to select it.

Note: The logo can be updated by navigating back to the **Profile Information** pop up through Settings>Profile.

6.2 HSA

6.2.1 Unpacking

Carefully unpack all equipment and reference the included packing slip to verify that all items are accounted for. If an item is missing, please contact Aeroseal immediately to have it delivered as soon as possible.

6.2.2 Initial Power Sequence

Verify operation of the HSA by plugging in each plug of the HSA into separate 120V 15 Amp circuits. The LED indicators on the inside of the lid on the HSA will turn on when powered.

Verify connectivity by connecting the laptop to the HSA; this can be accomplished either through a USB connection on the lid of the HSA to the laptop or by connecting to the HSA via its onboard Wi-Fi network. The network name is “aerosealXXXX” where the four “X” s are the associated Case ID. If not already set up, the Wi-Fi password is located inside the HSA on the lid.

7 EQUIPMENT OPERATION

7.1 Building Preparation

7.1.1 Blocking

Block every outlet of the HVAC system with an impermeable material that can withstand approximately 100 Pascals of pressure during the sealing process.

7.1.2 Injection Point

To allow ample airflow into the ductwork, a hole with a minimum cross-sectional area of 80 square inches should be cut into the plenum (approximately 10 inches in diameter).

Mount the 12” flange to metal ductwork with self-tapping screws in each mounting hole or 1 ½" drywall screws backed up with metal attachment plates in duct board plenums.

7.1.3 Isolation

Isolate the coil and heat exchanger from the flow of sealant with an impermeable material which can withstand approximately 100Pa.

7.2 AeroSuite Software

7.2.1 Connectivity

Connect AeroSuite to the HSA through a USB connection to the laptop or via the onboard Wi-Fi network. The network name is “aerosealXXXX” where the four “X” s are the associated Case ID. The briefcase icon in the top right corner will turn green when connected and a notification will pop up noting a connection to the HSA.

7.2.2 Entering Customer Information

From the Dashboard of AeroSuite, select **Create New Customer** and enter the required information.

7.2.3 Preseal Combustion Safety Test Acknowledgement

Sealing an air handling system can, in some circumstances, result in back-drafting of naturally drafted appliances, which can cause carbon monoxide to enter the home.

If the residence HSA within the conditioned airspace a naturally drafted combustion appliance, such as a water heater or 80% efficiency furnace, a Combustion Area Zone test must be performed in accordance with ANSI/ACCA 12 QH-2014. Section 3.2.2, Appendix A, Section A4 (Depressurization Test for the Combustion Appliance Zone).

If the test reveals back-drafting, then additional combustion air sources must be added until the back-drafting is prevented.

7.2.4 Entering Equipment Information

Select **Add System** near the top of the page and provide a description of the HVAC equipment, like the type of system, where it is located, and its configuration (for example “Furnace Basement Up flow”).

1. Enter the equipment model if available as well as the tonnage and furnace BTU. If there is no furnace, set the furnace capacity to “0”.
2. Select **Add Sealing Event** to enter information about the sealing event or continue to keep adding information if it’s the first time entering a system.
3. Enter a brief description of the event such as “Supply Plenum Injection.”
4. Select whether the equipment is set up to seal the supply, the return, or both.
5. Click **Save**.
6. Click **Next**.

Note on data quality: Data entered in AeroSuite is uploaded directly to Aeroseal’s Seal Database. This information is used to study duct leakage and communicate energy savings to utilities, government agencies, and other interested parties. The higher quality the data, the more precise Aeroseal can be in its measurements and energy modeling. This data leads to homeowner rebates for duct sealing and further market adoption of advanced sealing using aerosol above mastic and other traditional methods.

7.2.5 Pre-Seal Leakage Test

1. Ensure the HSA is connected to the HVAC equipment, all blocking is complete, and the duct pressure tube is inserted into the register farthest from the injection point.
2. On the **Preseal** screen click **Start** or press the **F2** key. The Pre-Seal Leakage Test will proceed automatically.
3. The test ramps up the fan and measures the resultant airflow at 25 Pascals (Pa).
4. When the test is complete, the results post automatically to the **Test Results** section on the left-hand side of page.
5. Click **Next** or press the **F9** key to proceed to the Seal screen.

7.2.6 Sealing

Select the fluid level in the reservoir and begin the seal by clicking **Start** or press the **F2** key. The sealing process will begin automatically.

The fan will initially ramp up to an appropriate flowrate and the system will begin to warm up utilizing the two on-board electric heaters. After approximately two minutes of pre-heating the pump will begin to pressurize and inject sealant into the flow of air. The Sealing Process graph will automatically update every 10 seconds with the estimated leakage remaining at CFM25.

Note: Due to the mathematical extrapolation that occurs when converting CFM (Cubic Feet per Minute) at a higher pressure down to CFM25, the software may interpret the current leakage as lower than measured. To ensure code compliance, be sure to continue the sealing event until the Sealing Process graph shows at least 10 CFM below the intended target. The final graph, displayed

on the test certificate, will show this difference as an upward spike at the end. The only value required for code compliance is the final leakage value in CFM25.

When the estimated effective leakage is below five square inches, AeroSuite will provide a notification.

1. Continuing sealing to an effective leakage at or below three square inches will provide a pop-up prompt recommending the user to stop sealing and to continue to cooldown. The user can either select **Stop Sealing** or **Continue**.
2. Proceed to the cooldown screen by selecting **Next** or pressing the **F9** key.
3. Select a desirable **Cooldown Time.**
4. Select **Start** or press the **F6** key.
5. When the cooldown is complete, proceed to the Postseal Test by clicking **Next** or pressing the **F9** key.

7.2.7 Post-Seal Leakage Test

The Post-Seal Leakage Test will proceed in the same way as the Pre-Seal Leakage Test.

On the **Postseal** screen select **Start** or press the **F2** key. When the test is complete, the results post automatically to the Test Results section on the page.

Note: If the Post-Seal Leakage test fails, the duct pressure target may need to be increased due to the low airflow coming from the HSA. Increase the target pressure by clicking **Target** and typing a number that is as low as possible but achievable by the HSA. Generally, 35-50 Pascals will allow the test to complete.

7.2.8 Certificate

Upon the seal's completion, a certificate detailing the initial and final leakage is generated. Save this document to the laptop by pressing the “Certificate” button and saving the document to the desired folder. The certificate may also be printed from this screen.

After saving or printing the certificate, if additional seals are to be performed for the residence, click **Run additional seals for the current customer** and AeroSuite will return to the **Add Event** screen.

7.2.9 Syncs and Updates

An upload to the Aeroseal database can be requested by first being connected to the internet and navigating to Dashboard > Sync. This process will complete automatically and check for software updates. Updates should be installed whenever they are available.

Note: Failure to sync for a period greater than 31 days will cause AeroSuite to stop operating until an upload is accomplished.

7.2.10 License Fee

Per the sublicense agreement, signed by the contractor, the license fee covers fully sealing two HVAC systems in a single residence. Any seals beyond two per system (supply and return on each) will incur an additional license fee.

7.3 Operations

7.3.1 Power On Sequence

Connect the three plugs on the HSA to three separate 120V 15A circuits in the home or a generator.

7.3.2 HSA to HVAC connection, layflat tubing

The 36” layflat tubing is used to create an artificial piece of ductwork through which sealant is injected into the HVAC system. A minimum of 8 feet of straight, level, layflat is required directly in front of the HSA. Any additional length should be kept as short as possible as every additional length of layflat decreases the seal time.

- To HSA – Attach the 36” layflat to the nose of the HSA by first passing several inches through the 10” clamping ring and evenly distributing the layflat around the edge. Install the layflat and clamping ring to the nose of the HSA and insert the supplied cotter pin to secure the clamp handle.
- To Flange – Pull the layflat from the HSA to the installed injection flange on the HVAC equipment ensure there are no twists or tight turns in the run and attach to the flange using the supplied 12” clamp ring.

7.3.3 Duct Pressure Measurement Tube (Blue Tube)

Connect the provided Blue Tube (75 feet) to the duct pressure port located on the lid of the HSA and route it through the residence to the farthest accessible register in the ductwork from the injection point. The blue tube can be pressed next to the register blocker or pushed through the foam blockers by first creating an opening with a sharp tool. The end of the Blue Tube must not be obstructed and should be positioned fully within the ductwork.

7.3.4 Loading Sealant

Using a gallon jug of sealant with a funnel, fill the sealant reservoir to the bottom of the reservoir threads. Turn the flow knob to be vertical.

7.3.5 Power-Down Sequence

Disconnect any remaining electrical plugs, blue pressure tube connections, and layflat.

7.3.6 Storage

IMPORTANT: The HSA must not be stored in freezing conditions as the pump/reservoir is always filled with fluid. Allowing the pump/reservoir to freeze can crack the pump casting and void the manufacturer’s warranty.

7.3.7 Adding Heat in Cold Environments

Cold temperatures can reduce the sealing rate. This can be mitigated by adding heat into the system by directing an electric, diesel, or kerosene heater into the inlet gate of the HSA while keeping any heaters of this kind at least three feet away from the HAS. The maximum inlet temperature that the HAS can handle is 150°F.

8 MAINTENANCE

8.1 Routine Maintenance Schedule

Use this quick reference to keep track of maintenance activities on a per seal/day/month basis.

Table 10. HSA Maintenance Schedule

	EVERY SEAL	DAILY	MONTHLY	DURATION
REPLACE NOZZLE ASSEMBLY	X			2 MINS
CHECK AIR FILTERS		X		2 MINS
CLEAN EXTERIOR OF EQUIPMENT WITH BUCKEYE WORKOUT CLEANER			X	5 MINS
CLEAN AND FLUSH INLET CHECK VALVE			X	20 MINS
REPLACE 25 MICRON FILTER AND CLEAN FILTER HOUSING			X	20 MINS
LAPTOP: AEROSUITE SYNC AND UPDATE			X	5 MINS
LAPTOP: COMPLETE WINDOWS UPDATE			X	10 MINS

IMPORTANT:

- Do not store the HSA in freezing conditions as the pump/reservoir is always filled with fluid. Allowing the pump/reservoir to freeze can crack the pump casting and void the manufacturer's warranty.
- If the HSA is used infrequently, drain the sealant before storage. Sealant can dry and clump.

8.2 Cleaning

Every month, the inlet check valve must be cleaned to ensure no sealant accumulates. This is done by fully flushing the system with clean water followed by opening the inlet check valve to remove larger pieces of sealant and removing/cleaning the filter.

1. Supply power to the top and bottom outlets of the HAS and connect the equipment to AeroSuite via the onboard Wi-Fi network.
2. Remove the nozzle from the sprayer assembly and replace it with the white flushing adapter.

3. Remove the filter from the u-channel housing and position the white flushing adapter so it will flush into an empty sealant jug.
4. In AeroSuite, select the green icon in the top right corner followed by **Pump**. Note: if the icon is not green, the HSA isn't properly connected to the computer.
5. Select **Flush/Drain** followed by **Start** to begin removing any remaining sealant from the reservoir.
6. Continue flushing until the reservoir is empty.
7. Fill the reservoir half-way with water, position the white flushing adapter to empty into a waste container, and flush again.
8. Stop the flush once the reservoir is empty.

Clean the inlet check valve and change the 25 µm filter.

1. Inlet check valve.
    a. Remove the worm clamp on the inlet barb/hose using the provided nut driver.
    b. Remove the inlet barb using the provided adjustable wrench.
    c. Remove the spring and ball using the provided four-prong pickup tool.
    d. Clean the spring, ball, and inlet to remove large sealant accumulation.
2. 25 µm filter.
    a. Remove the filter from the filter housing using the provided adjustable wrench.
    b. Replace with new filter and supplied O-rings.

Reassemble all components to working order.

1. Inlet check valve.
    a. Reassemble the check valve by first inserting the spring into the pump, setting the check valve ball on top, and reinstalling the check valve body with the 7/8" socket.
    b. Reattach the inlet tube and tighten the worm clamp with the provided nut driver.
    c. Reinstall the silicone tubing.
2. 25 µm filter
    a. Reassemble filter into filter housing and righten with adjustable wrench.
    b. Refill the reservoir with sealant. Using the waste container, "Test/Prime" the pump to ensure no issues arose during reassembly.
    c. Reattach the filter with the u-channel housing and reattach the nozzle tip removed previously. Safely discard the waste and disconnect power from the HS-ADV.

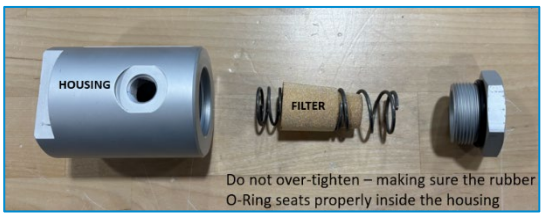


Figure 10. Components

8.3 AeroSuite Software and Laptop

8.3.1 Updates

Whenever an upload occurs from AeroSuite, the software will also check for updates. Be sure to install updates as soon as they become available. AeroSuite is constantly evolving with quality-of-life updates as well as more technical updates which prolong the life of the equipment and ensure an efficient seal event.

Windows updates should be performed as they become available. If a Windows update causes anything to stop working in AeroSuite, please contact the Technical Support team immediately.

8.3.2 Sync

When the laptop is connected to the internet, a prompt to sync displays.

Note: Failure to sync for a period greater than 31 days will cause AeroSuite to stop operating until a sync is performed.

9 TROUBLESHOOTING & FAQ

Troubleshooting for AeroSuite Software Errors and Alarms

9.1 Errors and Warnings

AeroSuite will display a notification and pause the seal whenever an error has occurred. Follow the instructions on the notification to remediate the error and press “Continue” to return to sealing.

If no instructions are listed, it is a more technical problem that should be addressed by Technical Support. Technical Support can be reached 24/7 at the tech support hotline: 1 (800) 772-6459.

Table 11. Errors and Warnings

Problem	Blown Seal Alarm
Source	Software detects a sudden change in duct pressure
Solutions	1. **Check blue tube** Ensure blue tube is connected to duct system and to the manometer 2. **Close fanbox lid** Ensure the fanbox lid is properly locked 3. **Look for disconnected ducts** Inspect the duct system for any large breaks or holes

Problem	Low Duct Pressure
Source	Occurs when the system cannot create the minimum of 10 Pa for sealing or 5 Pa for leak testing
Solutions	1. **Check Blue Tube** Make sure the blue tube is not obstructed, pinched, loose, or disconnected at ductwork and/or fanbox 2. **Look for disconnected ducts** Perform fog test. Find any damaged or disconnected ducts. 3. **Check fan and layflat** Make sure the fan is on and layflat is connected to the fanbox. 4. **Check all blocking and isolation materials for failure** 5. **Check for any bypass duct work attached between supply and return** Examples include bypass humidifiers, barometric zone bypass duct/dampers

Problem	Low Fanbox Pressure
Source	Occurs when not enough negative pressure inside the fanbox to calculate leakage

Solutions	If the software does not make a gate change recommendation: 1. **Close fanbox lid** Ensure the fanbox lid is properly locked 2. **Check manometer port** Make sure the manometer port is not clogged in the fanbox

Problem	Low Duct Flow
Source	Not enough air is going through ducts. Also indicates ducts are sealed.
Solutions	1. **Close fanbox lid** Ensure the fanbox lid is properly locked 2. **Check fanbox filter** If the filter needs to be replaced, use only MERV-1 filters 3. **Still high?** Open inlet gate and increase fan speed in manual mode

9.2 Mechanical Components

Mechanical components of the HSA have been selected to be robust but user serviceable when required. For the minor issues below, the operator should be able to remedy them with little to no issue. For any other issues, Technical Support can be reached 24/7 at (800) 772-6459.

9.2.1 Failure to Prime

Issues that cause the pump to not fully prime include:

- Sealant filter clogged. Replace the sealant filter.
- Insufficient sealant. Add more sealant.
- Clogged tubing. Clean or replace tubing.

9.2.2 Automatic Gate not Moving

The Automatic Gate is equipped with a robust linear motor; however, there are situations which could cause the gate to not move. Check the following points prior to contacting Technical Support.

Electrical connection – Ensure that the plug to the Automatic Gate, inside the HSA is fully seated.

Sealant build up – In extreme cases, sealant build up on the gate can cause it to move slowly or not move at all. Clean the gate fully with Buckeye Workout Cleaner or a citrus-based cleaner to remove sealant.

Racking – If the guides for the sides of the gate become loose over time, the gate can move slightly in the horizontal direction and become stuck. Ensure the gate is centered and tighten the gate guides inside of the HSA.

Troubleshooting Hardware

Table 12. Hardware Troubleshooting

Problem	Digital manometer and/or control board not found
Solutions	1. **Check AeroSuite software for a pending update** Connect the laptop to the internet. Do not connect using a mobile hotspot. If prompted to update the software, click **Yes**. 2. **Check Blue Tube** Make sure the blue tube is not obstructed, pinched, loose, or disconnected at ductwork and/or fanbox 3. **Check power to fanbox** Unplug the fanbox and wait 30 seconds before plugging in.

Problem	WiFi
Solutions	1. **Power down to restart Wifi connection** Unplug the fanbox and wait 30 seconds before plugging in. 2. **Use the USB cable**

Problem	No Power
Solutions	1. **Check power source(s) with a multimeter** 2. **Use separate circuits for the heaters and fanbox.** The main power for the HSA draws 3 amp, each heater draws 13 amp.

Problem	Don’t Know Log-in
Solutions	1. **A sticker with the username and password is on the top of the laptop.**

Problem	Can’t sync
Solutions	Sync is required every month. 1. **Connect the laptop to the internet.** Use the internet, not a mobile hotspot, to update the software. 2. **Run Windows updates** 3. **Log into AeroSuite and click Sync to finish the update.**

Problem	Computer and Software Update/Spinning Update Icon

Solutions	1. **Power down the laptop, wait 30 seconds and turn it back on.**

10APPENDIX A: SDS

DUCT SEAL LT

Ductseal LT is a stable, non-toxic, non-flammable water-based emulsion of acrylic polymer. Visit www.aeroseal.com/sealant.

11WARRANTY CLAIM FORMS

SUBLICENSEE DEALER CLAIM FORM – EQUIPMENT WARRANTY

_____ a Certified Aeroseal Sublicensee warrants that the machine is operated and maintained by the Aeroseal LLC trained technician and used as per Aeroseal, LLC's procedures and standards.

Dealers: Submit this claim form to Aeroseal Warranty Support, 225 Byers Rd., Miamisburg, Ohio 45342, or to: WarrantySupport@Aeroseal.com. Aeroseal will respond after receiving the claim. Please call Customer Service (877) FIX-DUCT with any questions.

Description of Defect _____

Component and Serial Number _____

Registered Case ID Number _____

Name and Number of Dealer _____

Certified Technician _____

Signature _____

aeroseal

SUBLICENSEE DEALER CLAIM FORM – SEALING APPLICATION WARRANTY

_____ a Certified Aeroseal Sublicensee warrants that the sealing application at the below address was completed by an Aeroseal, LLC Certified Technician and complies with Aeroseal, LLC's application procedures and standards.

Dealers: Submit this claim form to Aeroseal Warranty Support, 225 Byers Rd., Miamisburg, Ohio 45342, or to: WarrantySupport@Aeroseal.com. Aeroseal will respond after receiving the claim. Please call Customer Service (877) FIX-DUCT with any questions.

Date of Original Application _____ **Date of Failure** _____

Description of Failure _____

Name of Customer _____

Address of Customer _____

Quantity of Sealant Required to Reseal _____

Direct Labor Hours to Reseal _____ **Direct Labor Hour Rate** _____

Name of Certified Technician _____ **Case ID Number** _____

Dealer Signature _____