OPERATIONS

Aeroseal HomeSeal Connect 4.0 is intended for dealers and technicians trained in the use and maintenance of the sealing equipment.

1.1.1 BEST PRACTICES

During the preparation phase, consider the following best practices:

- Use ground fault protection when using household outlets
- Ensure ducts are thoroughly inspected
- Use a fog machine with high-density liquid to find leaks before sealing
- Take care not to push or pull sealant into the fanbox during sealing.

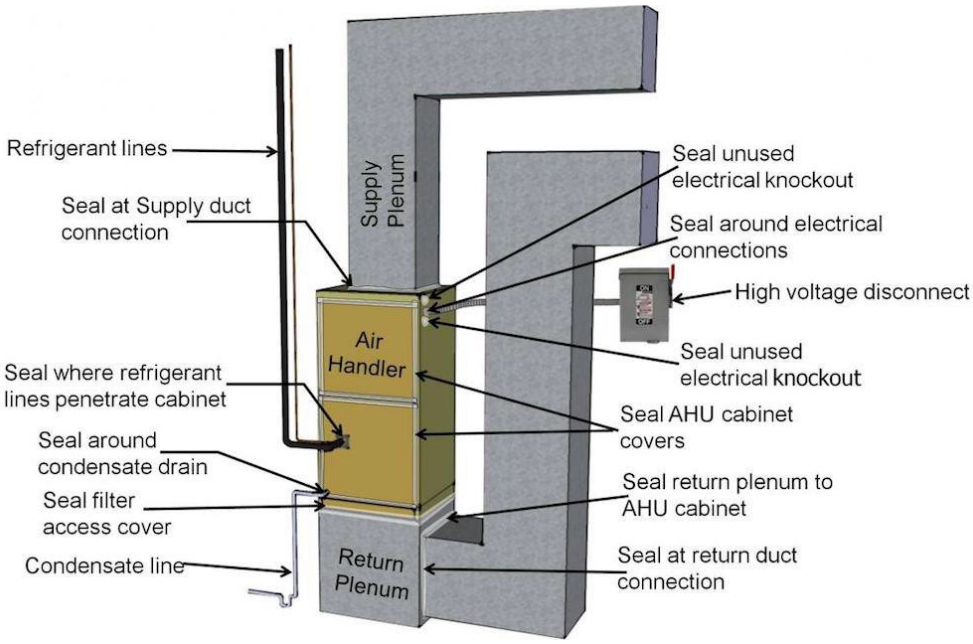


Figure 5.1 Seals in Ductwork

1.2 AEROSUITE SOFTWARE OPERATION

After the worksite has been thoroughly prepared, the seal event is managed directly from the AeroSuite software.

To start a new job in AeroSuite, follow these steps:

1. Click **New Job**
2. Select the type of job being performed: **Residential Retrofit** or **Residential New Construction** (RNC).

CUSTOMER INFORMATION

3. Complete all the fields in the **Customer** screen.
4. Click **Save**.

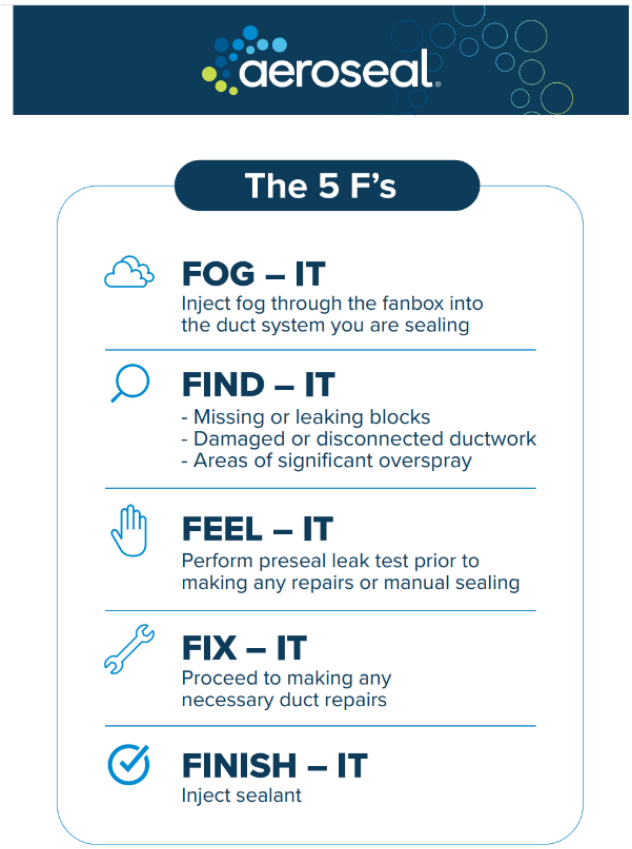
ADDITIONAL INFORMATION

5. In the **Additional Info** screen, type notes and upload photos.
6. Click **Save**.
7. Watch the Combustion Area Zone (CAZ) video and check the **Acknowledge** box.

SYSTEM

8. In the **System** screen, type the system and seal event details.
9. Click **Save**. The new job with details displays.
10. Select the seal event and click **Next** to proceed to the PreSeal screen.
11. Follow The 5 F's to prepare the jobsite for a sealing event.

1.3 5F's OF SEALING OPERATIONS



1.3.1 FOG.IT¿Inflate.layflat–Perform.fog.test

The.use.of.a.fog.machine.to.test.blocked.areas.is.an.effective.way.to.reduce.errors.and.overspray. during.a.seal.event¡.Most.sealing.problems.are.due.to.poor.seals.at.registers.or.HVAC.equipment. isolation¡

Using.the.manual.fan.control.knob?increase.the.fan.speed.just.enough.to.ensure.no. twists–disconnects.in.the.layflat.are.present¡.Avoid.collapsing.the.layflat.more.than.❶6↘ .of.its. internal.diameter¡

Using.the.fog.machine?inject.fog.through.the.gate.in.the.back.of.the.machine.to.saturate.the.duct. system.to.identify.missed.blocking?large.holes?disconnects¡

1.3.2 FIND.IT¿Search.for.fog.in.home

Using.the.fog.as.an.indicator?visually.determine.where.any.missed–leaking.blocks?duct. damage–disconnections.larger.than.❶-❹ ?and–or.areas.of.significant.overspray.are.present¡.Fix.any. missed–leaking.designed.openings.and.use.a.scrubber.fan.as.appropriate¡.(Add.definition.of.defined. openings.into.training.materials)

7¡9¡8¡7 SCRUBBER.FAN.SYSTEM

CAUTION: LIFT HAZARD

To minimize the risk of overspray in occupied spaces, use the provided high-volume, high-efficiency scrubber fan.

NOTE: Always use PLEATED FILTERS SPECIFICALLY DESIGNED TO CAPTURE SMALLER PARTICLES (MERV-14 Ultra Allergen or better).

1. Face the outlet of the scrubber in a direction where it is not blowing away from the homeowner's property or walls to avoid situations where small particles pass through the filters and be blown out of the fan outlet. If the fan outlet discharge is within 15 feet of any items or walls, those items or walls should be covered with a protective tarp to prevent any sealant from sticking to them.
2. Although the high-flow scrubber fan is fitted with small-particle filters should provide an acceptable environment, it is recommended that technicians wear N95 NIOSH approved dust mask when working in areas of high overspray concentration. The sealant is non-toxic and there should be no alarm to the homeowner, but the technician working in the presence of high overspray concentration day in, and day out should take the proper preventive precautions to avoid significant inhalation/ingestion of the Aeroseal sealant.

1.3.3 FEEL.IT¿PreSeal

NOTE: The.PreSeal.leak.test.is.recommended.prior.to.making.any.manual.and~~-or~~.mechanical. repairs.or.hand.sealing¡.This.ensures.the.seal.certificate.is.as.accurate.as.possible¡.

Start the pre-seal leakage test using the software following prompts for gate changes.

1. Start the PreSeal on **Gate 2**. If the software suggests a change, adjust to the recommended gate.
2. Click **Start**. The PreSeal test runs. Be sure not to disturb the layflat or manometer tubing during the test.
3. When the PreSeal test is completed, the seal data displays. The data includes the total CFMs and square inches of leakage.
4. Click **Next** to continue to the Seal screen.

1.3.4 FIX IT: Make Necessary Repairs

The results of the PreSeal test may find openings that were overlooking during prep. Repair areas of leakage and block all missed openings.

1.3.5 SEAL

Start the seal and follow any software prompts to seal the duct system. During the seal, perform frequent safety checks throughout the home, looking for missing/loose blocks, areas of significant overspray. Pause the seal to address any concerns that arise.

 CAUTION: DO NOT PUSH OR PULL AEROSOLIZED SEALANT into the fanbox, including electric heaters, bi-metal over-temperature protection switches.

 CAUTION: Use ground fault circuit protection when using household electrical outlets.

 Click **EMERGENCY STOP** at any time to stop the seal event.

1. Begin the Seal on the same gate setting as the PreSeal leak test.
2. During the warm-up, the system tests the nozzle for overheating.
3. If there are no problems, the dialog box states System Spraying.
4. At this time, look through the layflat and check that the spray cone looks good from the nozzle tip.
5. Watch the Leakage graphline to track the sealing progress.
6. When the leakage area is at or below 5 sq. in., the dialog box indicates proceeding with the Flush/Cool Down. **Note**: The seal can stop at 5 sq. in. If additional sealing is necessary, follow the Low Seal Protocols until 3 sq. in. At this time, the seal process must stop.
7. Click **Stop**. The seal event does not stop until Stop is clicked.

1.3.6 MINIMIZE OVERSPRAY

For residences that have a high risk of overspray (panned returns) use a conservative approach and lower the sealant injection rate initially (pausing pump periodically).

1.3.7 FLUSH COOLDOWN

Unplug both heater cords. Replace the sealant jug with the flush jug and proceed to the Flush/Cooldown screen. Open the lid of the fanbox during flush and cooldown. After completion of cooldown, close the fanbox lid.

1. Unplug the H1 and H2 cords from the fanbox.
2. At the **Flushing Time** field, select the numbers of minutes for the flush. The minimum is 2 minutes.
3. Click **Start**.

4. Once both flush and cooldown are complete, ensure the cylinder temperature is below 130 degrees before proceeding.
5. Click **Next** to continue to the PostSeal screen.

1.3.8 FINISH IT: Perform post-seal leakage test

Start post-seal leakage test. Continue to Certificate screen to view, print, and save the certificate.

1. With the gate set at the same setting during the seal, click **Start**. If the software indicates a gate change, adjust the gate to the recommended level.
2. When the PostSeal is completed, a message displays in the dialog box. Additionally, the PostSeal and Improvement data displays.
3. Click **Next** to proceed to the **Certificate** screen.

1.3.9 PRINT CERTIFICATE

From the **Certificate Option** field, select **Basketball**, **Bar Graph**, or **Line Graph** for the homeowner's certificate.

Print the certificate.

All homeowners shall be provided with a printed or electronic copy of the Certificate of Completion generated by or verifying the sealing job. After selecting Certificates in the Aeroseal Software Program on the certificate screen, place a blank sheet of paper into the printer and press print. Be sure to give the printed certificate to homeowner and provide a brief explanation of the results.

Note: Before you print out the homeowner sealing certificate, make sure that all Homeowner details (like name and address) are correct. After printing, all fields get locked, and you will NOT be able to make any further changes to the certificate.

1.3.10 CLEAN UP

Clean nozzle assembly

Proper cleaning and maintenance will greatly reduce the risk of nozzle overheating and is critical for proper sealant droplet formation in the ducts.

Clean the nozzle after every seal. It is critical to follow cleaning procedures to ensure that there are no obstructions in key components of the injection system. For more information, see 6.2 CLEANING.PROCEDURES.

Remove blocking and isolation/Return equipment to vehicle

Disconnect power from HSC, remove layflat, and pack out equipment to vehicle. Take appropriate steps to remove isolation of HVAC and patch holes as needed.

Restore home to working order

Return power to the HVAC system and ensure proper operation of equipment. Return any smoke alarms/security systems to their original condition and remove all trash.