HSA Product Information

Overview

HomeSeal Advance (HSA) is the next generation of Aeroseal home sealing systems. Not only is the HSA the most efficient sealing system available, it's also the simplest, lightest, easiest to use, maintain, and repair system we've made. Prep and tear down are faster, you don't need a compressor, and it takes up less space on your truck, helping you to work more efficiently and effectively to grow your duct sealing business.

Background

The Aeroseal duct sealing system is based upon a patented process for injecting sealant particles into ducts to seal leaks. The patented aerosol injection machine aerosolizes the sealant, evaporates the water in the sealant, and pressurizes the duct system with air that carries the particles to the leaks.

In a properly prepared duct system, the only outlets for the aerosol-laden air are duct leaks. The sealant particles travel to the leaks, attach to the wall at the leaks and then to each other, thereby reducing the size of the duct leaks until they are sealed.

The HomeSeal machine utilizes a patented high-pressure small-angle nozzle with isolated compressed air heating.

Components

HSA is made up of several components that work together as a system.

Fanbox

The fanbox is the core component in the HSA system. The fanbox includes all the mechanical parts, including heater, pump, wifi antenna, fan, sealant reservoir, nozzle, and pressure measurement sensors.

Layflat

Layflat is the clear plastic sheeting that runs from the fanbox to the duct system. The layflat is attached to the fanbox using the foam lined clamp. An injection point is selected in the duct work, a hole is cut, the HVAC system is isolated, and the layflat is attached to the hole with an injection flange.

Scrubber Fan

The HSA includes a free-standing 1500cfm fan in a box covered with (5) Merv14 filters. The fan is used to "inhale" airborne particles from the air. Place the scrubber fan near the inlet gate of the fanbox if used in areas of heavy overspray and fogging. Ideal places include living spaces or where homeowners keep personal items.

Laptop

A Dell laptop is provided with the HSA system. It connects to the fanbox via a wifi signal. When connected, the AeroSuite software drives the sealing process – from project setup, system description, to the pre- and post-seal steps, ending with a Certificate of Completion.

LT Duct Sealant

LT duct sealant is a safe, non-toxic, low VOC acrylic polymer. It is heated and aerosolized by the HSA equipment and sprayed into the duct system. The sealant seals gaps up to 5/8" size. Any opening larger than 5/8 should be manually repaired.

Sealant is mold and mildew resistant, warrantied for 10 years and is used in other industries like paint and medical devices. It is advisable to take conservative precautions when in use.

Parts Kit

HSA comes with a parts kit that contains tools and materials needed to seal ductwork. Parts include Buckeye Workout Cleaner, layflat tubing, blue duct mask, corrugated plastic (for isolating HVAC system), closed cell foam, fog juice and a fog machine.

Wye Kit

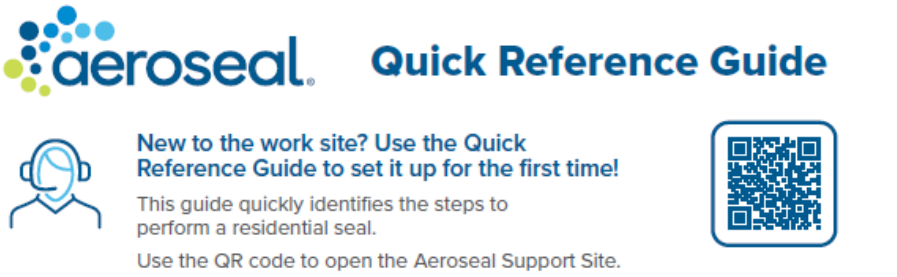
A Wye Kit is intended to split the flow of aerosolized sealant into two streams to deal with tricky situations. If there is no space to accommodate a 10" injection flange, the Wye Kit is used to inject sealant into two registers. Also known as "Reverse Injection" splitting the aerosolized sealant between two registers allows for the sealant to flood the ducts from the far end of the duct system, likely on one side of the floorplan. A like-sized boot is inserted into the existing boot using tape and screws. Attach the layflat from the Wye legs with zip ties and tape.

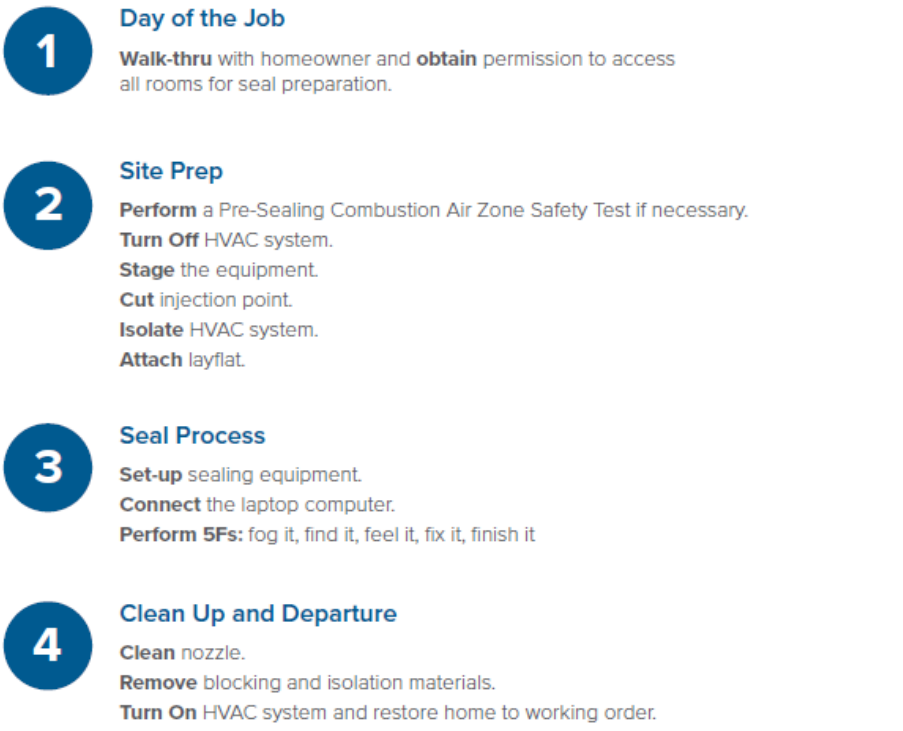
Quick Reference Guide

Duct sealing is a fairly straightforward job. While each home is unique, including different construction types in wildly different environments, the process can be broadly explained in a few steps.

The Quick Reference Guide is a simple guide to keep the sealing event on the right track.

New to the work site? Use the Quick Reference Guide to set it up for the first time!





Technical Data Sheet

Technical Data Sheet
HomeSeal Advance

aeroseal DUCT

SECTION 1: Product Details

Product Name HomeSeal Advance

Description Patented Aeroseal duct sealing system with built in wireless and GSM modules suitable for residential applications. The unitary system includes "Aerosuite" software that controls the machine and provides a user-friendly interface for monitoring sealing process, measuring PreSeal and PostSeal leakages, and printing certificates.

User Interface Laptop with Aerosuite Software

SECTION 2: Product Specifications

Power Requirements	3 X 120V/15A – HSA Core System
Power	3300W (three separate circuits required)
Communication	USB, Wifi, GSM
Wifi range	200 ft. *Wifi range is dependent on ambient weather conditions, home construction materials*
Operating temperature	40 °F to 140 °F
Storage temperature	Above 32 °F
Weight	75 lbs.
Dimensions	27" (l) x 20.5" (w) x 18" (h) 5.77 ft³
Frequency	60 Hz

Sealing range	Up to 1600 CFM_{25} (Pduct > 10 Pa)
Measurement range	15 to 1600 CFM_{25} (+/- 5% Accuracy)
Fan capacity	600 CFM
Add-on fan capacity	N/A
Fan static (max)	660 Pa
Sealant injection	Dual speed pump (0-48 ccm/58 ccm depending on operating conditions)

SECTION 3: Other Utilities / Accessories Needed for Aeroseal Process

	MINUMUM REQUIREMENTS
Generator (optional)	6500W (for operating machine and accessories)
Air scrubber	> MERV 13 filtration (3 - 10 micron particles) capability 1 x 120V/10A; 1200W power requirements

225 Byers Road, Miamisburg, OH 45342

Case Studies

The HSA machine is used in residential homes that are already built. Aeroseal refers to these homes as **Residential Retrofit**.

It's common for ductwork to leak air. Whether the house has sheet metal or flex ducts, situations like holes, disconnected ducts, and boot damage provide openings for air to leak. All of which contributes to uneven temperatures, uneven airflow, poor indoor air quality, and air infiltration/exfiltration. Resulting in reduced comfort in the home.