



AEROBARRIER[®]
— CONNECT —

Why Air Sealing Matters

Air Sealing Is Vital To An Efficient, Durable, Healthy Building

Air leakage, or infiltration, occurs when outside air enters a building uncontrollably through cracks, gaps, and openings throughout the building envelope.

Buildings with higher air leakage require larger HVAC systems to keep the indoors comfortable. But these issues go well beyond HVAC system performance. Uncontrolled air leakage also allows moisture to enter a building, which can lead to building failure and costly repairs.

Leaky houses ruin the air we breathe, allowing dust, allergens, pollutants, and other airborne particulates to enter a building, leading to poor indoor air quality.

Reducing the amount of air that leaks in and out of buildings is a cost-effective way to address all of these issues..

Why does that matter? Because air leakage...

- 1** Is the largest driver of energy use in a building, comprising 30% – 70% of wasted energy
- 2** Is usually the biggest contributing factor for drafts, hot/cold spots, and other comfort issues
- 3** Often the largest contributor to moisture problems, especially mold and mildew
- 4** Addresses thermal, vapor, and air flow control issues

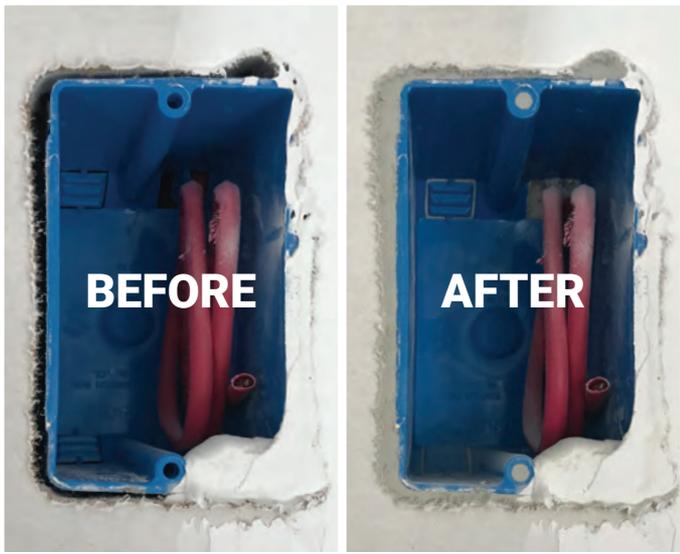
Provide a True R-Value

Brand new insulation will not perform as designed if air leakage is compromising its integrity. Studies show a leaky enclosure can decrease insulation's effectiveness by a factor of 4.8 – making a 500 sf leaky building require the same amount of heating as a 2,400 sf airtight building. Less air leakage makes insulation more effective.

Manage Vapor Diffusion

Water vapor can permeate even solid building materials like gypsum drywall. The drywall will absorb moisture on the damp side and then evaporate through the dry side.

Research from Building Science Corporation shows even a small air leak amplifies this issue by 90 times. AeroBarrier stops air leakage, which stops vapor diffusion in its tracks.





How It Works

AeroBarrier is the only air sealing technology to reach any level of air tightness the first time, every time.

The entire AeroBarrier system is designed to offer builders and contractors a faster, more precise method to seal more building envelopes each day. Here's how it works.

Smart Nozzle Stations Apply Sealant

Smart nozzle stations are deployed throughout the building. Each station emits precise levels of our safe, non-toxic sealant based on temperature and humidity sensor data. This ensures each room receives the exact amount of sealant required to seal its leaks. The stations communicate progress to the main control unit in real-time using a mesh network.

Blower Door Pressurizes the Building

The building is pressurized using a blower door and our high-powered, centrifugal fan. This ensures the water-based sealant particles are carried throughout the building and automatically drawn to any leak -- visible or not, up to 1/2", and as small as a human hair.

System Measures & Records Results

Technicians monitor the results from the main control unit using a laptop as the results are recorded. This allows them to dial in tightness levels to their exact requirements. The system then provides a certificate of completion with before and after results for construction records.

Get **Guaranteed** Results in 4 Easy Steps



STEP 1 Prep & Setup

Prep the area by covering any openings that won't be sealed. This includes taping or covering any designed openings or finished horizontal surfaces within the space. Then deploy the smart nozzle stations throughout the area to be air sealed. The rest of the equipment is also prepared, including the hoses, lay flat tubing, fan, blower door, and main control unit.



STEP 2 Pressurize & Apply

Using the blower door, the space is pressurized. After that, the computer controls the entire process, taking into account the temperature, pressure and humidity data coming from each nozzle station to ensure sealant is distributed efficiently during the process.



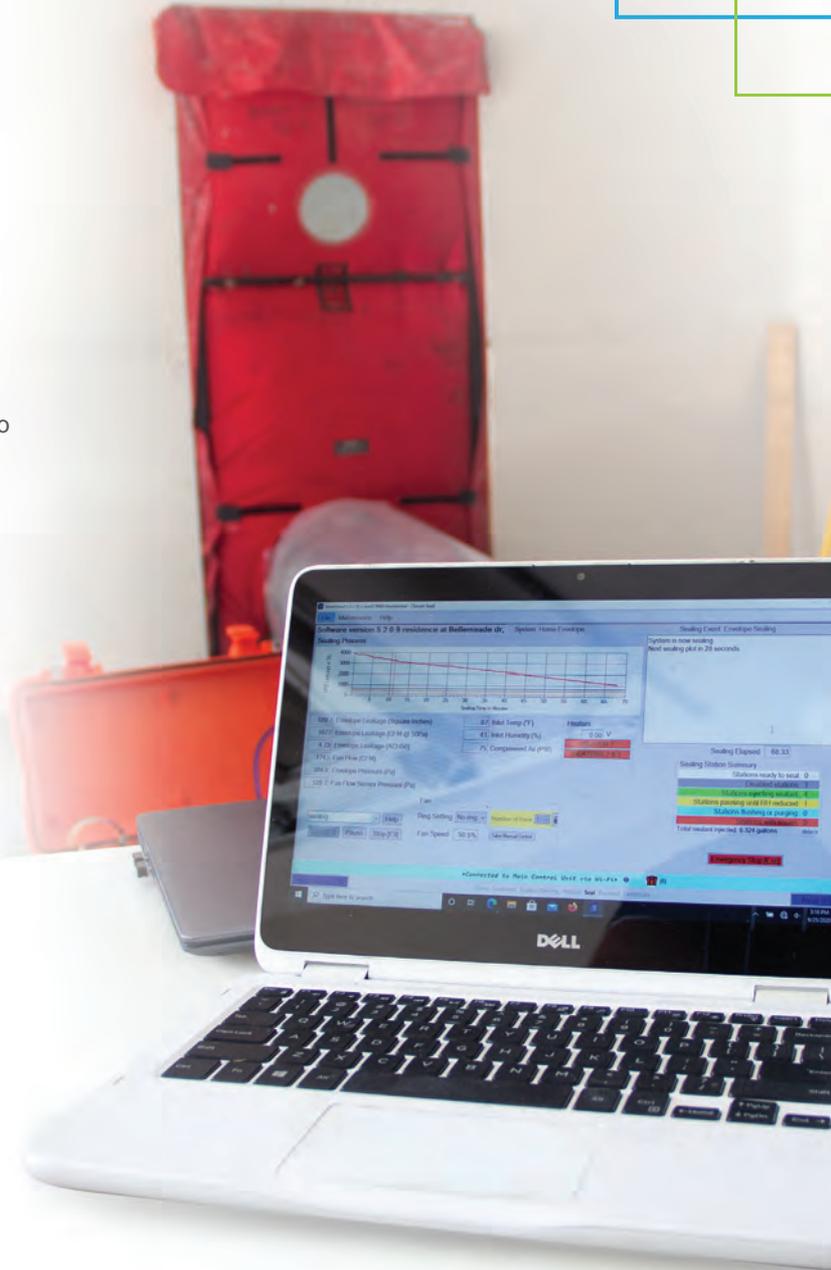
STEP 3 Seal & Monitor

With the AeroBarrier process, you see results in real time. You have complete control over your desired level of air tightness and can achieve any level required. At the end of the process, a final blower door test is run to verify the air sealing results. AeroBarrier then provides a Certificate of Completion that shows pre and post leakage.



STEP 4 Clean Up

Once the air sealing is complete, work can resume in the space within 30 minutes. At that time, clean-up of all equipment and removal of all tape and coverings can occur.



Air Sealing For Any Building



Deliver Affordable Airtightness

For residential applications, reduced building envelope leakage means increased durability, reduced mechanical loads, improved energy efficiency and more economical renewable energy options. More importantly, a tighter building envelope can increase the comfort and overall indoor air quality within the building, leading to a better living environment.



Code Compliance Made Easy

Compartmentalization, especially at party walls, is critical to properly control fire, smoke, odors, sounds, and indoor air quality. A properly compartmentalized building allows ventilation systems to work more effectively, especially if the building uses a shared ventilation system. AeroBarrier helps projects exceed new requirements at a more affordable cost, to qualify it for tax incentives in addition to increasing tenant demand and lease-up rates.



Fastest Path to Energy Savings

AeroBarrier reduces up to 80% of the building leakage and more importantly, it is able to bring commercial buildings within the USACE specification for building envelope leakage. Using AeroBarrier in new or retrofit commercial applications improves air sealing effectiveness, reduces labor costs, and improves the consistency of installation.

Experience the Benefits of AeroBarrier Connect

Launched in 2018, the AeroBarrier system has been completely redesigned to make the air sealing process simpler, faster, and more efficient than ever before.

1. Finish More Air Sealing Projects

AeroBarrier Connect is designed for fast and easy setup, clean up, and maintenance. This means more air sealing jobs per day and more revenue for your business.

2. Save Time & Money with Smart Nozzles

Each smart nozzle station is equipped with sensors to closely monitor temperature and humidity levels in each room. They rely on a mesh network to relay this data in real-time, working independently of the main control unit. This ensures ultra-precise sealant delivery, customized to each room, for less sealant waste and faster air sealing.

3. Work Independently on Any Project Site

AeroBarrier Connect's full-service trailer includes an electronic air compressor and

a separate compartment for an industrial grade, diesel generator. Now air sealing can be done anywhere without delay or the need to use a project site's power source.

4. Ensure Safety, Durability of Air Sealing

Our sealant is GreenGuard Gold certified, with low-VOCs and no off-gassing. It's been tested to meet various ASTM standards for fire spread, smoke production, antifungal properties, and tensile strength. And exacting third-party certification shows it will withstand a 50-year durability test.

5. Dial-In Tightness to Meet Any Requirement

Real-time measurements enable precise tightness levels to meet the most stringent codes or requirements, including IECC, Energy Star®, LEED, Passive House and Net Zero. The system software, working with a blower door, measures leakage and pressurizes the space. As the structure becomes more airtight, the pressure changes are relayed to the software in real-time.

6. Set Up & Clean Up Faster with Ready to Use Hoses, Powerful Fan

With AeroBarrier Connect hoses are ready to go as they are unpacked from the trailer and come with integrated flushing to increase the speed of cleanup. The air

sealing system's powerful centrifugal fan increases pressure and shortens the time it takes for the sealant to find the leaks. And with less sealant being injected into a room, sealant backflow is minimal for less frequent cleaning and maintenance.

7. Rethink Your Build

Eliminating the unreliable, inconsistencies of manual air sealing creates multiple opportunities to save money and bring a new level of flexibility to the build. From right-sizing mechanicals to qualifying for more rebates, AeroBarrier easily integrates into any build, requiring minimal training and resources.





CASE STUDY

Energy Efficient, Healthy Homes

Thrive Home Builders Eliminates Stress of Meeting Code with AeroBarrier

Home builders in the greater Denver area deal with exacting air tightness levels. While some builders might avoid cities with strict enforcement of low air tightness levels, Thrive Home Builders has turned this challenge into an opportunity. In fact, continuous innovation has differentiated Thrive locally and established it as a nationally recognized pioneer.

“We felt it was important to build a brand around energy-efficient homes,” said Bill Rectanus, Thrive’s Vice President of Home Building Operations. “Making it an option for homeowners doesn’t

work. But they will pay for a better home. We made energy efficiency a brand standard, regardless of price point.”

As a result, every new Thrive home is designed to meet the highest standards, including LEED®, EPA Indoor airPLUS, Zero Energy Ready Homes, and Energy Star®. This has fueled innovation at Thrive – innovation focused on better ways to create healthy, energy-efficient homes within these standards.

PROJECT OVERVIEW

PROJECT

3-Story Rowhomes

BUILDER

Thrive Home Builders

CONTRACTOR

Rocky Mountain AeroBarrier

LOCATION

Wheat Ridge, CO

RESULTS

Pre-leakage: 5 ACH50

Post-Leakage: 1.6 ACH50

Reduction: 70%

Air Sealing Solves Multiple Issues

Thrive’s innovation extends to air sealing, using AeroBarrier to reach 3 ACH50 airtightness with the rowhomes at its West Ridge community in Wheat Ridge, Colorado. These three-story, solar-powered homes come with attached garages.

Prior to AeroBarrier, Thrive was having issues with the garage separation walls. They were failing inspection and requiring the installation of fans to pass reinspection – an expensive, unsustainable solution.

“Our townhomes are grouped together in four, five and six units” said Rectanus. “This makes for a lot of shared walls. In addition to sound and odor mitigation, AeroBarrier ensures air from each garage doesn’t infiltrate any of the homes.”

AeroBarrier emits precise levels of safe, non-toxic sealant mist into the pressurized space, automatically drawing the sealant to leaks around windows, drywall, electrical outlets, recessed lighting, and other areas. The computer-guided process allows tightness to be dialed in and is faster, simpler and more effective than the imprecise and inconsistent manual envelope sealing.

AeroBarrier Passing Tests, Reducing Stress

After Rocky Mountain AeroBarrier applies AeroBarrier for Thrive, finishes are applied before the home’s final certification test. An independent energy rater must certify the home’s air tightness before it can be handed off to its owner.

“Certification is the final hurdle for our projects,” said Rectanus. “AeroBarrier consistently passes the blower door test. It’s made our Construction Superintendents’ lives less stressful. They know they’re going to pass and won’t have to scramble to fix any unforeseen issues. Eliminating this issue is a major benefit.”

Thrive Focused on Continuous Improvement

Thrive has evolved to make energy-efficiency a competitive point of difference. But the home builder understands this evolution must continue. As a result, Thrive will not rest in its search for ways to improve its homes.

This restlessness and focus on innovation are clearly paying off for Thrive. In addition to being singled out for multiple industry awards, its application of air sealing with garage separation walls is being studied by the Department of Energy.

AeroBarrier’s made our Construction Superintendents’ lives less stressful. Eliminating worry about certification is a major benefit.

Bill Rectanus
Thrive Home Builders

In addition to sound and odor mitigation, AeroBarrier ensures air from each garage doesn’t infiltrate any of the homes.

Bill Rectanus
Thrive Home Builders





CASE STUDY

“Sunset at Sarsons” Residential Home

BC Home Builder Shrinks Mechanical Costs 20% with AeroBarrier Air Sealing

Like most cities in North America, COVID-19 has brought uncertainty to British Columbia’s housing market. Smart builders are using this disruption to their advantage, finding new ways to differentiate their homes by finding the ideal mix of value, quality, and comfort.

Edward West Luxury Homes is a perfect example of this trend. This family-owned, custom home builder is based in Kelowna, BC. Just 90 miles from the United States border, the city sits on Okanagan Lake and offers homeowners world-class vineyards, great weather, beaches and even ski hills.

Making Air Sealing a Non-Issue

“In addition to offering comfort and beauty, our homes are sustainable and efficient,” said Edward West’s Sebastian Motora. “We knew air sealing was critical to achieving this goal. But we had to make sure our approach would be efficient, affordable, and effective.” As a result, Motora experimented with several varieties of air sealing before settling on AeroBarrier.

“We spent thousands of dollars and hundreds of labor hours on expensive tapes and mechanically

PROJECT OVERVIEW

PROJECT

Residential Home

BUILDER

Edward West Luxury Homes

CONTRACTOR

Okanagan AeroBarrier

LOCATION

Kelowna, British Columbia

RESULTS

Pre-leakage: 2.2 ACH50

Post-Leakage: 0.58 ACH50

Reduction: 75%

fastened air barriers,” said Motora. “But the results were inconsistent and, often, ineffective.”

The AeroBarrier system can dial in and measures building envelope performance. Once the building envelope has been pressurized, AeroBarrier atomizes precise levels of non-toxic sealant mist that is automatically drawn to any leaks. The process is proven safe, using a water-based sealant that has no off-gassing.

Once desired tightness has been achieved, the system’s software prints out a certificate to verify results and shows before and after ACH levels.

It is faster, simpler and more effective than the imprecise and inconsistent nature of manual envelope sealing and provides guaranteed results.

“The consistency and precision of AeroBarrier air sealing eliminates many unknowns from the home building process. Knowing this technology will deliver allows us to plan around air sealing. AeroBarrier has given us a new level of flexibility and cost savings; we use it to air seal every home we build.”

Air Sealing Impacts HVAC Design

A recent Edward West project showed the impact of AeroBarrier air sealing on HVAC system design. Two spec homes were being built next to each other, one with a more modern design and the other a more traditional aesthetic. The HVAC contractor would not initially right size the HVAC system based on the lower ACH from a tighter building envelope.

“The traditional home’s HVAC system was sized based on an ACH greater than five,” says Motora. “It was a larger system, designed to compensate for envelope leakage. The modern home’s HVAC system was right sized based on an ACH of 0.59. Air sealing ensures the home exceeds code requirements and reaches efficiency goals using a smaller HVAC system. This reduced our mechanicals cost by 20 percent, for a savings of \$10,000.”

In addition to cost-savings, a smaller HVAC system fits better in the floor joists, eliminating the need for space wasting bulkheads.

Air Sealing: A Builder’s Competitive Advantage

In addition to cost savings, air sealing has brought Edward West several other benefits.

The housing market will always fluctuate. And codes will continue to change, increasing the builder’s requirements. But Edward West Luxury Homes is ready.

Thanks to AeroBarrier, offering a high-performance home is no longer a trade-off requiring you to sacrifice a homeowner amenity to cover the cost. In fact, by not having to upgrade the HVAC system and other benefits, air sealing is now a competitive advantage.

Sebastian Motora

Edward West Luxury Homes

The consistency and precision of AeroBarrier air sealing eliminates many unknowns from the home building process. We use it to air seal every home we build. Air sealing ensures a home exceeds code requirements and reaches efficiency goals using a smaller HVAC system. This reduced our mechanicals cost by 20 percent, saving us \$10,000.

Sebastian Motora

Edward West Luxury Homes





CASE STUDY

Multi-Family Development Goes Solar

600-Unit Multi-Family Development Goes Solar Using AeroBarrier

The Wasatch Group knew Soleil Lofts was an ambitious project during the design phase. A first of its kind development, featuring 600 solar powered, all-electric apartment units certainly sounds ambitious. But a unique issue was driving the Salt Lake City real estate developer.

Winter Air Quality Issues Drive Net Zero Design

The picturesque mountain ranges surrounding the Salt Lake area create a valley and, during the winter months, inversions. Inversions are when warmer air above the valley traps cooler air near

the ground. Fine particulate emissions are trapped in the cooler air, creating a smoggy haze, and decreasing air quality. Soleil Lofts had to be a net zero development – addressing this issue without contributing to it.

“We knew we had to reduce energy consumption by 50 percent to support solar,” said Josh Roy, Wasatch Group’s Vice President of Sustainability. “The AeroBarrier technology consistently gave us the results we needed. By making air sealing a dependable process, we were able to make changes in the design phase that were critical to this project’s success.”

PROJECT OVERVIEW

PROJECT

Soleil Lofts, a 600-Unit Multi-Family Building

BUILDER

The Wasatch Group

CONTRACTOR

AeroBarrier West

LOCATION

Herriman, UT

RESULTS

Pre-Leakage: 10 ACH₅₀ average per unit

Post-Leakage: < 1 ACH₅₀ per unit

Rebates added up to more than the cost of AeroBarrier – a 150% return on investment

For solar to work, energy storage was also paramount. Wasatch addressed this by creating a “virtual power plant” – a network of battery storage systems managed by the local utility. When it came to energy reduction, Wasatch explored multiple options.

Air Sealing Unlocks Savings During Design Stage

“We looked at other energy efficiency measures, including lighting and appliances, but energy modeling showed us they aren’t as cost-effective as air sealing,” said Roy.

AeroBarrier was chosen because the project needed a level of consistency and precision not seen in manual air sealing. Wasatch was relying on the air sealing process for more than simply meeting code.

“During the design phase, we realized if air sealing could bring all 600 units could down to a 1 ACH₅₀ we could reach our performance goals with HVAC systems half the size we originally planned,” said Roy.

The AeroBarrier technology emits precise levels of safe, non-toxic sealant mist into the pressurized space, automatically drawing the sealant to leaks around windows, drywall, electrical outlets, recessed lighting, and other areas.

“AeroBarrier gave us the confidence to not overcompensate with an oversized HVAC system to hit our performance goals. This cut our HVAC costs in half and reduced the amount of capital invested in mechanicals.”

Utility Rebates Deliver a 150% ROI

AeroBarrier air sealing helped Soleil Lofts qualify for several different utility rebates. In fact, the rebates added up to more than the cost of AeroBarrier – a 150% return on investment.

The rebates are just part of the impact air sealing has had on this project. There have been no homeowner issues or callbacks due to comfort. Since they're able to stay comfortable year-round without pushing their mechanicals to the limit, homeowners are seeing utility savings and getting

longer life from their HVAC systems. And during the winter months, no pollution is infiltrating their home, while ERVs ensure they have clean and healthy indoor air.

“AeroBarrier makes it possible to cost-effectively create a high-performance home using standard quality materials,” said Roy. “It's exceeded our expectations and our architects have added it as a specification for future projects.”

And if there were any doubt The Wasatch Group more than achieved the ambitious goals set for this project, the all-electric, solar-powered multifamily community is also one of Utah's largest net zero projects.

AeroBarrier gave us the confidence to not overcompensate with an oversized HVAC system to hit our performance goals. This cut our HVAC costs in half and reduced the amount of capital invested in mechanicals. AeroBarrier makes it possible to cost-effectively create a high-performance home using standard quality materials. It's exceeded our expectations and our architects have added it as a specification for future projects.

Josh Roy
The Wasatch Group

The AeroBarrier technology consistently gave us the results we needed. By making air sealing a dependable process, we were able to make changes in the design phase that were critical to this project's success.

Josh Roy
The Wasatch Group



What The Industry Says

Making the air sealing process effective and dependable has disrupted the building industry.

As a result, AeroBarrier has been recognized throughout the industry as a safe and effective alternative to manual air sealing.

"AeroBarrier makes it possible to cost-effectively create a high-performance home using standard quality materials. Our architects are specifying it for all future projects."

Josh Roy
Wasatch Group

"AeroBarrier's makes our construction superintendents' lives less stressful. Eliminating worry about certification is a major benefit."

Bill Rectanus
Thrive Home Builders

"AeroBarrier reduces energy demand to make zero energy homes financially feasible on a grand scale."

Dave Everson
Mandalay Homes

"AeroBarrier reduced our mechanicals cost by 20%. Air sealing is now a competitive advantage."

Sebastian Motora
Edward West Luxury Homes

"AeroBarrier is a revolutionary technology. It took my home from 1 ACH to .3 ACH and it's changing how homes are built in North America."

Matt Risinger
The Build Show

"AeroBarrier is a reliable, cost-effective way to control leaks in the building envelope. There isn't a more important technology in our industry."

Gord Cooke
Construction Instruction

"Air infiltration is a constant issue when you're building homes. AeroBarrier is a game-changing technology that eliminates this issue and allows for smaller mechanicals in the home."

Richard Tretheway
This Old House

"AeroBarrier provides a more cost-effective, less fussy, and much faster way to hit air tightness targets."

Fine Homebuilding

AeroBarrier Is The Most Award-Winning Air Sealing Technology, With Nine Different National Awards, Including:

BEST OF IBS AWARDS
WINNER
MOST INNOVATIVE
BUILDING PRODUCT



FAST COMPANY
WORLD CHANGING
IDEAS 2019

BEST OF IBS AWARDS
WINNER
BEST IN SHOW



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Air Sealing Technology from Aeroseal



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