

second nature

Foldable Air Filter Technical Overview

We're excited to release the first major residential air filter innovation in the last 30 years! This creative folding air filter **performs better**, is **easier to change**, and **creates less environmental waste**.

Best of all? It's every bit as compatible with HVAC units. So, what makes this folding filter so special?

Better Performance

This filter was thoroughly tested in both a laboratory and real-world homes.

- 10% less initial pressure drop compared to standard MERV 8 filters, meaning a **more efficient airflow**.
- Industry standard ASHRAE 52.2 tests verify **this filter meets or exceeds MERV 8 standards**.
- The soft-edge frame creates a tighter seal, which leads to several particle-stopping improvements.



This new filter has been tested and verified to capture:

97%*

more of the smallest particles like bacteria.

38%

more medium-sized particles like mold

16%

more of the largest harmful particles like pollen.

See "Tech Specs" below for more in-depth technical information.

*as compared to a major filter media manufacturer.

Design Upgrades

The frame is constructed from durable medium carbon, spring tempered steel. Strength-wise, the material is comparable to valve springs in car engines. It holds strong well beyond the pressure levels generated in residential HVAC units.

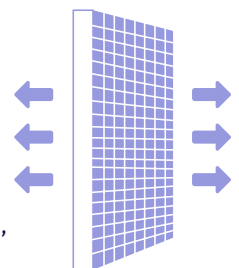
The frame design is similar to designs NASA uses for deploying antennas and solar cells.

The flexibility of the frame means we can package these filters for better durability during shipping, unlike traditional cardboard frames that are subject to collapse.

This new design virtually eliminates damage accidentally caused by the end-user when opening and installing the filter. It also puts an end to damaging inventory while being carried on a service truck.

Simplified Installation

The filtration media on this filter allows for effective and efficient filtration no matter the airflow direction. There's no need to feel confused or unsure during routine change outs. However it's installed, this filter can be trusted to work.



FAQ

Is this new filter okay for most HVAC systems?

Absolutely! It uses much of the same base filtration technology as existing air filters, with much-needed improvements to the overall design. You're actually getting more efficient airflow, which puts less strain on the HVAC unit.

Why does it bend? Is that sturdy?

The Flex-Lock frame is designed to better withstand shipping. Because it's folded up, it can't be damaged as easily as regular cardboard filters. Plus, the smaller package size is easier to transport, and more environmentally friendly. When the filter pops into shape, it "locks" into position, stronger than almost any other air filter on the market. When truck space is at a premium, less space per filter means more sizes and types of filters can be carried and less time spent going back to restock supplies.

How does this filter perform?

It's been tested and verified to perform equal to or better than a typical MERV 8 air filter. That means it's great at removing pollen, pet dander, dust particles and more from your air. In fact, it actually stops up to 97%* more of the smallest particles like bacteria. And unlike a typical MERV 8 air filter that performs worse when installed backward, these air filters are effective and perform well when installed in either direction.

The pleats look flat, is that normal?

Due to shipping, portions of the pleated material may appear slightly flat upon opening. However, once installed, the airflow will straighten these pleats out over a few days, and there are no negative impacts to filter efficiency or HVAC compatibility.

Will this filter damage HVAC coils?

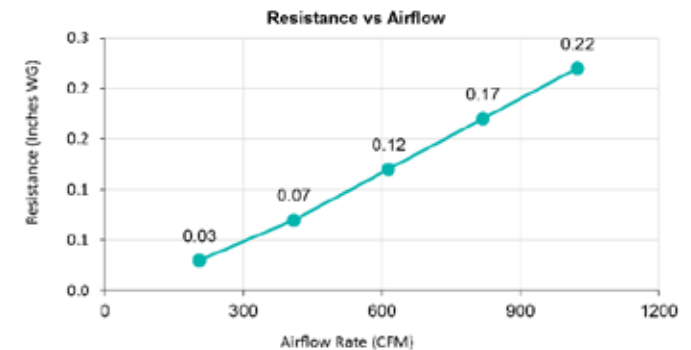
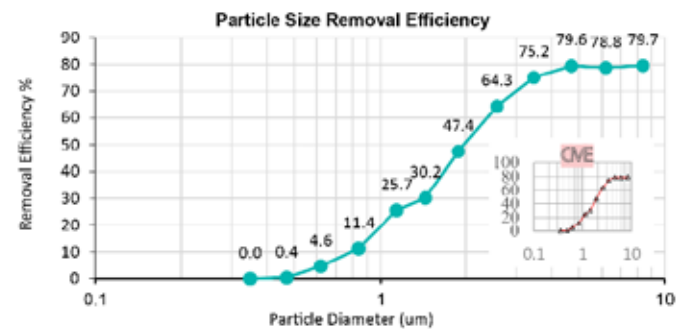
Like many air filters, this filter doesn't touch or interact with the coils. If any type of air filter goes unchanged for too long it can clog up and restrict air flow to the point an overrun HVAC unit can freeze up. Regular air filter changes will prevent this issue.

What happens if something does go wrong?

We've rigorously tested our air filters and verified them to work as expected, but we're happy to help troubleshoot any issue you may encounter, including examining and testing the air filter to identify any anomalies. We stand behind the research and design of our new innovative filter and will work with you, should the need arise, to help find a root cause.

Tech Specs

Manufacturer	Second Nature
Material Name	Thermal Bonded Non-Woven Material
Media Type	Synthetic
Nominal Dimensions (in) W x H x D	20 x 20 x 1
Pocket / Pleats Quantity	22 pleats
Frame	Spring tempered steel
Air Flow Rate (CFM)	819
Initial Resistance (in. WG) @614 CFM	.12
Minimum Efficiency Rating Value (MERV)	MERV 8+
E1 (%) Initial Efficiency 0.30 - 1.0 um	4.1
E2 (%) Initial Efficiency 1.0 - 3.0 um	41.9
E3 (%) Initial Efficiency 3.0 - 10.0 um	78.3
Nominal Face Velocity (ft/min) @819 CFM	205
Test Air Temp (degrees F.)	74
Relative Humidity (%)	28



About Second Nature

Second Nature is dedicated to providing premium quality air filters that stop a wide array of harmful air pollutants. A happier, healthier home is easier than ever with Second Nature's convenient air filter subscription service. The high-quality filters you need, right when you need them. [Learn more at secondnature.com.](https://secondnature.com)