

DESCRIPTION

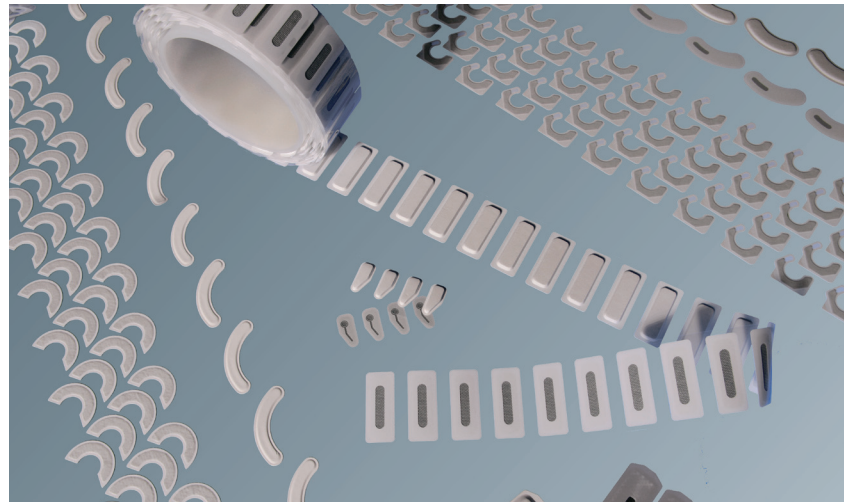
The Adsorbent Breathing Filter (ABF) is comprised of a filtration membrane, adsorbent element, and a pressure-sensitive adhesive ring for securing the filter to the inside of the drive.

A diffusion channel can be incorporated within the adhesive layers.

PRINCIPLE OF OPERATION

The ABF is designed to provide protection from particles, hydrocarbons, and acid gases. The high efficiency filtration membrane removes particles from incoming air and encapsulates the adsorbent element. The adsorbent is specially formulated to control humidity and to adsorb acid gases and hydrocarbons from internal and external sources. The most common adsorbents and their associated functions are as follows:

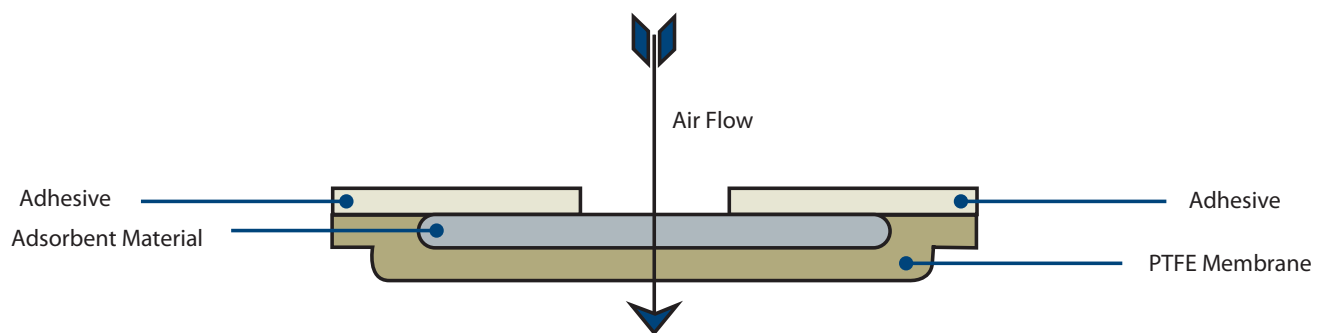
- **Activated Carbon:** Relative humidity control and adsorption of hydrocarbons
- **Chemically Treated Activated Carbon:** Relative humidity control and adsorption of acid gases and hydrocarbons
- **Silica Gel:** Relative humidity control



INSTALLATION IN DRIVE

The ABF is located on the inside of the drive, preferably with a diffusion channel between the breather and the outside environment. The filter location should be in low pressure area of the disk drive so that air can enter through the breather. Generally, the best location is on the cover as close as possible to the spindle.

Airflow restriction into the drive is affected by the size of the filter, choice of filter materials, and the design of the diffusion channel. There is a trade-off between the airflow restriction and the amount of diffusion protection.

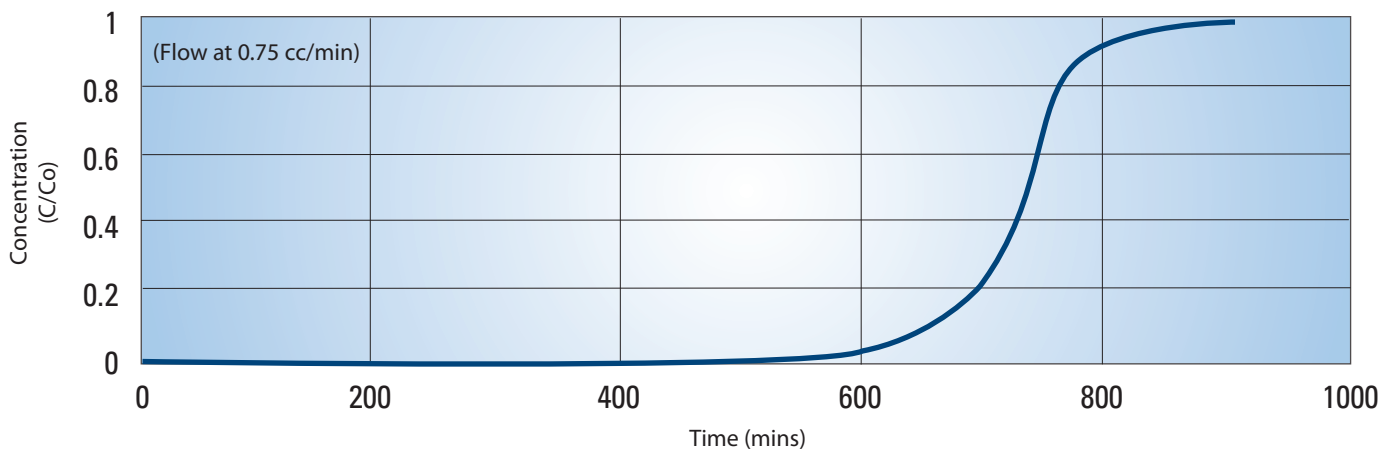


ADSORBENT BREATHER FILTER (ABF)

PRODUCT GUIDELINES AND SPECIFICATIONS

Performance	
Efficiency	> 99.99% - 99.999% on 0.1 µm particles @ 5.3 cm/s (10.5 fpm)
Restriction	48 mm - 535 mm H ₂ O @ 5.3 cm/s (10.5 ft/min)
Packaging	
Release Liner	Polyester with a release coating. Silicone-free coating option available.
Roll Configuration	2000 - 5000 parts per roll on polyethylene cores
Inner Bag	Level 100 cleanroom bag free of silicone, amides, and DOP per NVR/FTIR
Outer Packaging	Inner cleanroom bag enclosed in metalized vapor barrier bag
Contamination Control	Silicone-free release liner option available. Adhered with a high-temperature, low-outgassing, pressure-sensitive adhesive. Designed to pass the most stringent cleanliness specifications. Manufactured in a cleanroom environment

DONALDSON CHEMICAL BREAKTHROUGH TEST



An example of a typical chemical breakthrough graph of an ABF. Actual results vary depending on overall filter size, adsorbent type, and quantity. ABFs are designed to meet customer specifications.

Contact Donaldson today for more information!



Donaldson.

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Adsorbent Breather Filter (07/10)

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