

Disk Drive Adsorbent Breather Assembly (ABA)

Product Guidelines & Specifications

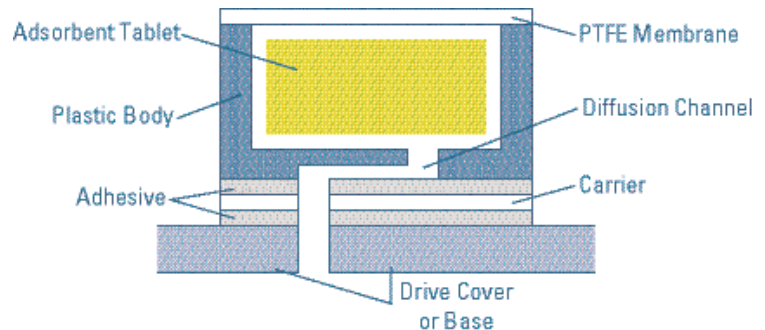
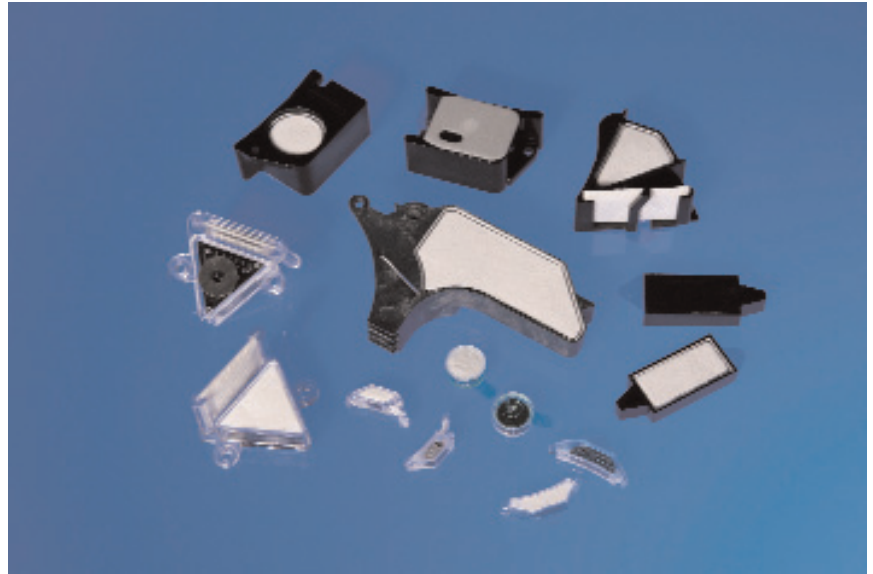
Description

The Adsorbent Breather Assembly (ABA) integrates a breather filter, adsorbent pouch filter and a diffusion channel into a single filter assembly. A pressure-sensitive adhesive label secures the filter over the breather hole inside the drive.

Principle of Operation

The ABA is designed to provide protection from particles, hydrocarbons, acid gases, and the effects of water vapor, such as condensation and corrosion. The filtration membrane removes particles from incoming air. The adsorbent element is specially formulated to control humidity and to adsorb acid gases and hydrocarbons from internal and external sources. The integral diffusion channel reduces the amount of hydrocarbons, water vapor, and acid gases entering the drive from the surrounding environment and thereby extending the life of the adsorbent. 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 ABA is located on the inside of the drive. The filter location should be in a low pressure area of the drive so that air can enter through the breather. Generally, the best location is on the cover or the base casting as close as possible to the spindle.

Parameter

Specification

Performance

Efficiency 99.99% on 0.1 μm particles @ 5.3 cm/s (10.5 fpm)

Restriction 12.7 mm - 50.8 mm H_2O @ 0.5 cm^3/s or customer-specified requirements

Packaging

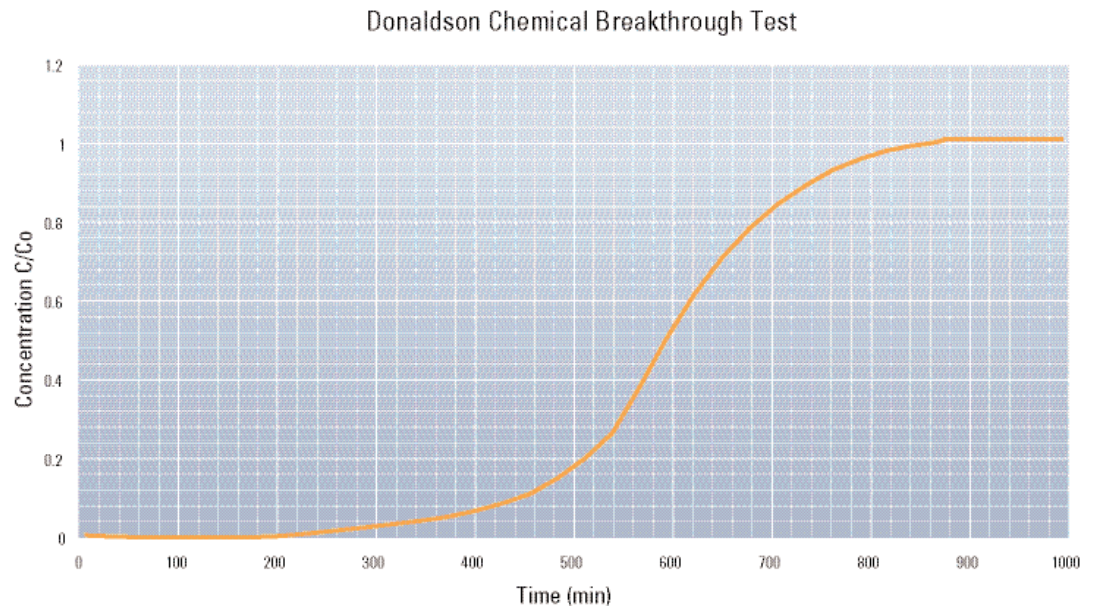
Tray 25 - 75 parts per stackable tray. 5 - 10 trays per inner bag. ESD tray available.

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

Designed to pass the most stringent cleanliness specifications. Manufactured in a cleanroom environment.



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

Contact Donaldson today for more information!



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