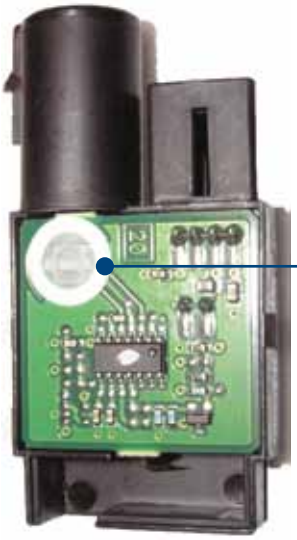
Donaldson
FILTRATION SOLUTIONS

SENSOR VENTS

Integrated Venting Solutions

PROTECTING SENSORS

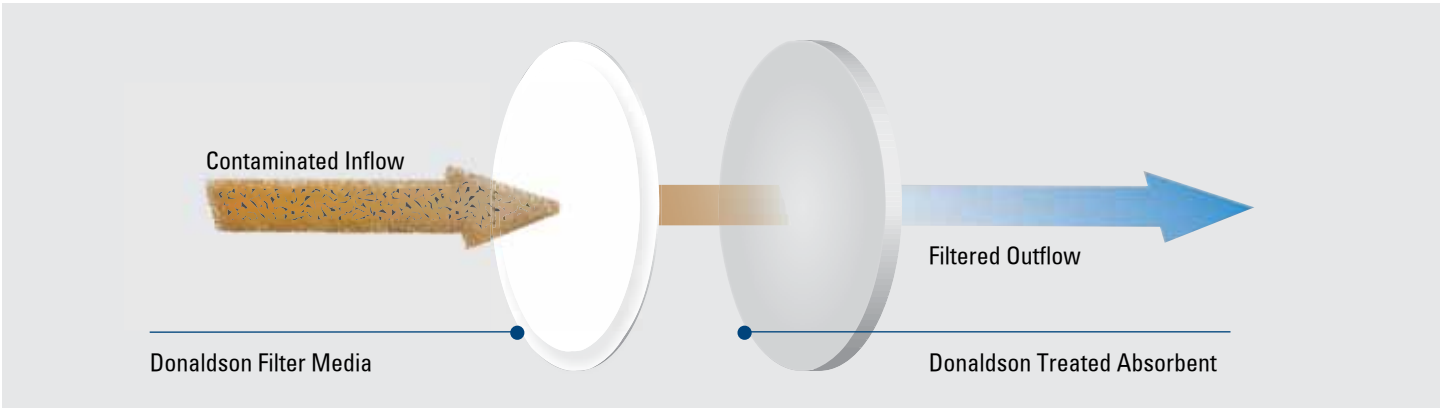
Sensors are being used in exciting new applications. Advances in digital signal processing and MEMs have brought sensor technology to an ever-expanding universe of applications. In many cases, design engineers must devise cost-effective means of contamination control and corrosion resistance to prevent the generation of erroneous signals and protect delicate components of the sensing elements. Donaldson filtration technology can provide this protection while still allowing gases, vapors, and pressure to be detected by the sensor.



Donaldson vents, like this circular one, increase the reliability of sensors

DESIGNING SOLUTIONS

Donaldson technology can provide the most cost-effective solution to your micro-electronics contamination problems. Our filtration experts will work with you to customize the optimum filters to meet your application requirements.



VARIETY

Donaldson can provide prototypes for customers to test. These prototypes can be used to refine filtration techniques, modify system designs, and optimize engineering specifications to ensure proper system performance. Donaldson also has the capability to manufacture injection-molded filter housings with filter media over-molded or welded into the housing, as well as a label-style vent for easy integration.

SENSOR VENTS

CONTAMINATION CONTROL FOR MICRO-ELECTRONICS

There are many forms of contamination in the environment that can reduce the reliability of sensors. Control strategies are summarized below.

Contaminant	Effect	Control Strategies
Particles	• Signal degradation • Short Circuit	• High efficiency membranes
Oils	• Signal degradation • Short Circuit	• Oleophobic Membranes
Liquid Water	• Corrosion • Short Circuit	• Hydrophobic Membranes
Water Vapor (RH)	• Condensation • Corrosion • Short Circuit	• Custom Formulated Adsorbent Blends (Silica Gel, Molecular Sieve)
Volatile Organics	• Loss of sensitivity • Signal degradation	• Custom Formulated Adsorbent Blends (Activated Carbon)
Acid Gases	• Corrosion • Signal degradation	• Custom Formulated Adsorbent Blends (Treated Activated Carbon)

PROVIDING CRITICAL RESOURCES

Donaldson has the analytical and engineering resources to make your product a success.

- Filter Efficiency Testing √
- Permeability Testing √
- Device Level Characterization √
- SEM / EDX Examination & Evaluation √
- Oleophobicity Analysis √
- Hydrophobicity Analysis √
- Environmental Testing √
- Adsorbent Surface Area Analysis √
- Adsorbent Isotherm Characterization √
- Breakthrough Testing √
- Adsorbent Capacity Testing √
- Airflow Analysis √
- MVTR Testing √
- Diffusion Rate Testing √

Contact us to increase the reliability of your micro-electronics.

Donaldson

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