



AKP

ACTIVATED CARBON FILTER ELEMENTS

fits Donaldson AG, HD & SG housings

Process Filtration

Silicone-free adsorption filter elements for removal of oil vapors, hydrocarbons, and odors.

Donaldson® AKP silicone-free adsorption filters consists of two filter stages. During the adsorption stage oil vapors, hydrocarbons, and odors are removed by activated carbon. Particles are then removed at the depth filter stage through the use of microfiber fleece. An additional layer of fleece and an outer stainless steel sleeve offer additional support.

A special flow insert ensures optimum flow distribution at flow direction through the filter from inside to outside. This creates minimal pressure loss and ensures full utilization of the filter material. When appropriate pre-purification is used (see "Recommended Pre-purification") a residual oil content of $< 0.003 \text{ mg/m}^3$ is achieved.

APPLICATIONS

AKP adsorption filter elements are ideal in the following industries and applications:

- Automotive
- Chemical
- Petrochemical
- Pharmaceutical
- Breathing air supply
- Pre-filtration of sterile air
- Filling machines
- Packaging machines
- Food & Beverage
- Instrumentation and control air
- Paints/inks



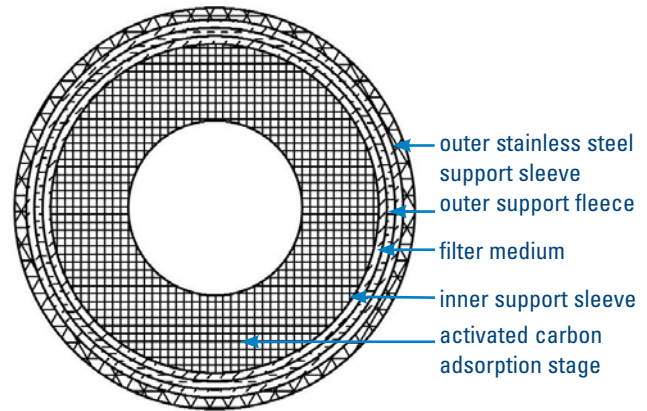
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FEATURES	BENEFITS
High density and internal surface area of activated carbon media	High adsorption capacity and improved efficiency guarantee optimal purification performance over lifetime
Flow distributor at filter inlet	Reduced flow resistance ensures optimal incoming flow of adsorption material
Activated carbon incorporated into support foam	Prevention of activated carbon abrasion
Microfiber fleece depth filter stage at the filter outlet	Improved particle retention - class 2 acc. to ISO8573-1 achievable

SPECIFICATIONS

MATERIALS	
Adsorption Stage	Activated carbon granulate, embedded into PUR ester foam
Filter Media	Binder-free borosilicate
Support Fleece	Polyamide fleece
Bonding	Polyurethane
End Caps	Aluminium
Two O-Rings	Viton®
Support Sleeves	304 SS

Adsorption Filter Design



Inside-to-Outside Flow

AKP ELEMENT ADSORPTION EFFECTIVENESS	
Ethane	Slight
Toluene	Very good
Acetic Acid	Very good
Methanol	Good
Acetone	Good
Isopropyl Ether	Very good
Methyl Acetate	Good
Sulphuric Acid	Very good
Hydrogen Sulphide	Poor
Chlorine	Good
Freon	Poor
Ammonia	Poor
Citrus Fruits	Very good
Perfumes	Very good

Retention Rate	Residual oil content <0.003 mg/m ³ in combination with SMF element
Initial Differential Pressure at Nominal Flow	0.08 bar (1.16 PSI)
Recommended Application Temperature	10° C - 40° C (50° F - 104° F). Temperature maximum = 60° C (140° F). Adsorption efficiency decreases at higher temperatures)
Recommended Replacement Interval	2,000 operating hours

Important Notice: Many factors beyond the control of Donaldson can affect the use and performance of Donaldson products in a particular application, including the conditions under which the product is used. Since these factors are uniquely within the user's knowledge and control, it is essential the user evaluate the products to determine whether the product is fit for the particular purpose and suitable for the user's application. All products, specifications, availability and data are subject to change without notice, and may vary by region or country.



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