Donaldson
FILTRATION SOLUTIONS

P-AK
ACTIVATED CARBON FILTER ELEMENTS

Process Filtration

Adsorption filter elements for removing hydration (oil) vapors and odors.

Donaldson® P-AK adsorption activated carbon filter elements consist of two filter stages. At the activated carbon first stage, the P-AK filter removes oil, hydrocarbon vapors and odors by adsorption. Particles are removed at the microfiber fleece depth filter layer. In addition, a support fleece and an outer stainless steel support sleeve ensure structural integrity of the adsorption and filter stages.

A special flow insert ensures optimum flow distribution through the filter from inside to outside. This creates minimum pressure loss and ensures maximum usage of the filter material.

By using appropriate pre-purification (P-FF, P-MF or P-SMF), a residual oil content of <0.003 mg/m^3 may be achieved.

P-AK

APPLICATIONS

P-AK adsorption filter elements are ideal in the following industries and applications:

- Chemical
- Petrochemical
- Pharmaceutical
- Breathing air supply
- Prefiltration of sterile air
- Filling machines
- Packaging machines
- Food
- Beverage
- Instrumentation and control air

FEATURES	BENEFITS
High packing density and inner surface of activated carbon	High adsorption capacity and improved efficiency ensure optimum purification performance over the filter life
Flow diffuser at filter inlet	Reduces flow resistance and ensure optimum air flow through the adsorption material
Activated carbon incorporated into filter support	Prevention of activated carbon abrasion
Microfiber fleece depth filter stage	Improved particle retention - class 2 according to ISO8573-1 achievable

SPECIFICATIONS

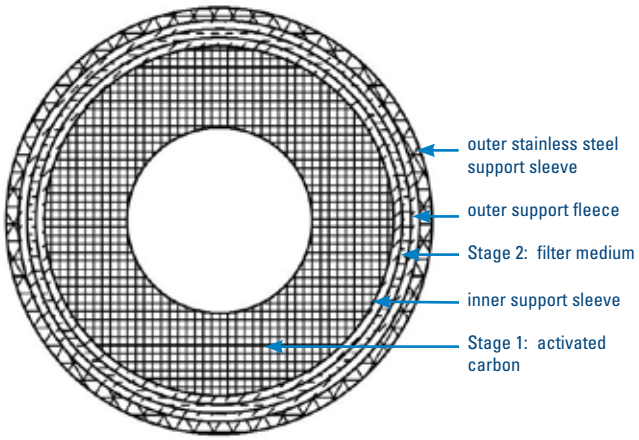
MATERIALS

Adsorption Stage	Activated carbon granulate, embedded into PUR ester foam
Filter Media	Activated carbon
Support Fleece	Polyamide fleece
Bonding	Polyurethane
End Caps	304 SS
O-Rings	Buna
Support Sleeves	304 SS

P-AK 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

Adsorption Filter Design



Inside-to-Outside Flow

Recommended Prepurification	Residual oil content <0.01 mg/m^3 – use submicrofilter SMF element
Initial Differential Pressure at Nominal Flow	1.0 psi
Recommended Application Temperature	50°F-104°F (Tmax = 140°F)
Recommended Replacement Interval	2,000 operating hours

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