

Ultrac™ AK

Activated Carbon Filter Element

Adsorption filter element for the removal of oil and other hydrocarbon vapors as well as odors.

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

Characteristics

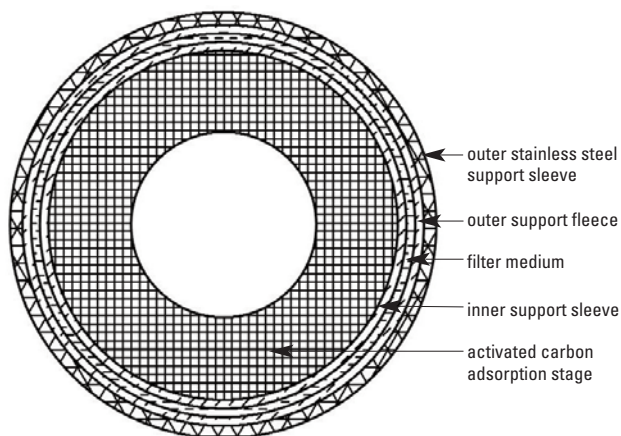
A special flow insert ensures optimum flow distribution through the filter from inside to outside. This creates minimum pressure loss and ensures maximum usage of the filter material.

At appropriate prepurification (see recommended prepurification) a residual oil content of $<0.003 \text{ mg/m}^3$ is achieved.



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Carbon Filter Element

Adsorption Filter Design



Inside-to-Outside Flow

Applications

The Donaldson Ultrac AK adsorption filter element is 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

Ultrac™ AK

Features

Benefits

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

Specifications

Recommended Prepurification	Residual oil content <0.01 mg/m ³ – use submicrofilter SMF element
Retention Rate	Residual oil content <0.003 mg/m ³ in combination with SMF element
Initial Differential Pressure at Nominal Flow	1.16 psi
Recommended Application Temperature	50°F-104°F (T _{max} = 140°F)

Materials

Adsorption Stage	Activated carbon granulate, embedded into PUR ester foam
Filter Media	Borosilicate
Support Fleece	Polyamide fleece
Bonding	Polyurethane
End Caps	Aluminum
Two O-Rings	Perbunan®*: silicone free and free of parting compound (standard)
Support Sleeves	304 stainless steel

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

* Perbunan® is a registered trademark of LANXESS Deutschland GmbH.

