

# Element AKP

The ultrafilter silicone and release agent free activated carbon adsorption filter for removal of oil vapour and hydrocarbons as well as odours. Specially developed for painting applications.

## Product description:

The ultrafilter adsorption filter type AKP consists of 2 filter stages. At the adsorption stage oil vapour, hydrocarbons and odours are removed by adsorption at activated carbon.

Particles are removed at the depth filter stage, consisting of NANO-fibre fleece. In addition, support fleece and an outer stainless steel support sleeve ensure the adjustment of the adsorption and filter stage.

## Characteristics:

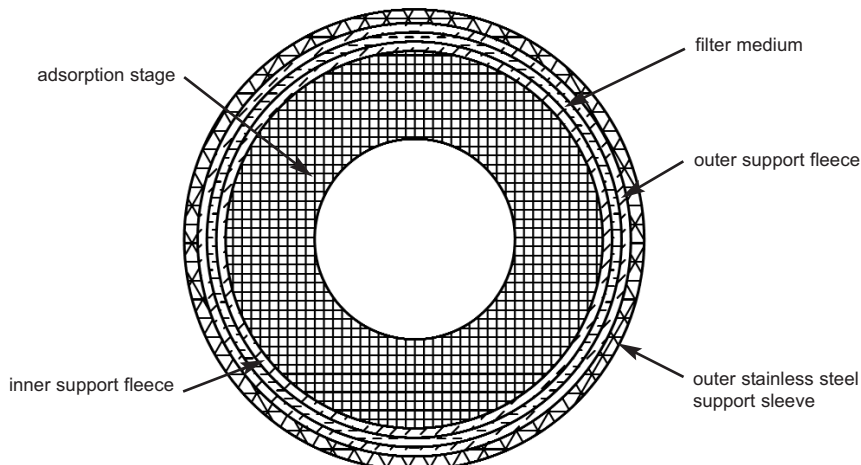
The ultrafilter AKP filter elements consist of a two-stage filtration. All particles are kept in a nanofibre depth filter media, while the activated carbon adsorbs all oil vapours and gaseous hydrocarbons.

- Residual oil content of < 0,003 mg/m<sup>3</sup> with according prefiltration.



Cross section of the AKP adsorption filter

## Adsorption filter design



## Applications:

The AKP adsorption filter is for example being used in the following industries

- Chemical industry
- Petrochemical industry
- Pharmaceutical industry
- Breathing air supply
- Prefiltration of sterile air
- Filling machines
- Packaging machines
- Food industry
- Beverage industry
- Process industry for instrumentation and control air

## Element AKP

Features:	Benefits:
High packing density and inner surface of activated carbon foam	High adsorption capacity and improved efficiency guarantee optimum purification performance over the whole life time
Working temperatures +10°C to +40°C (Max. +60°C with reduction of capacity)	Optimal adsorption
Activated carbon incorporated into support foam	Prevention of activated carbon abrasion
Microfibre fleece depth filter stage at filter outlet	Improvement of particle retention - class 2 acc. to ISO 8573- 1 achievable

Materials:	
Adsorption stage	Activated carbon granulate, embedded into PUR ester foam
Filter medium	Binderfree borosilicate
Support fleece	Polyamide fleece
Bonding	Polyurethane
End caps	Aluminium
2 O-Rings	Perbunan-silicon-free and free of compound (standard)
Support-sleeves	Stainless steel 1.4301/ 304

Adsorption efficiency of AKP Some example:	
Ethane	D
Toluene	A
Acetic acid	A
Methanol	B
Acetone	B
Isopropyl ether	A
Methyl acetate	B
Sulphuric acid	A
Hydrogen sulphide	C
Chlorine	B
Freon	C
Ammonia	C
Citrus fruits	A
Perfumes	A

Key:
A= very good
B= good
C= poor
D= slight

Recommended application temperature:
+10°C...+40°C (Tmax = +60°C)

Recommended pre purification:
Residual oil content < 0,01 mg/m <sup>3</sup> , e.g. by ultrafilter Submicrofilter SMF

Retention rate:
Residual oil content < 0,003 mg/m <sup>3</sup> , at appropriate pre purification

Initial differential pressure at nominal flow:
0,07 bar