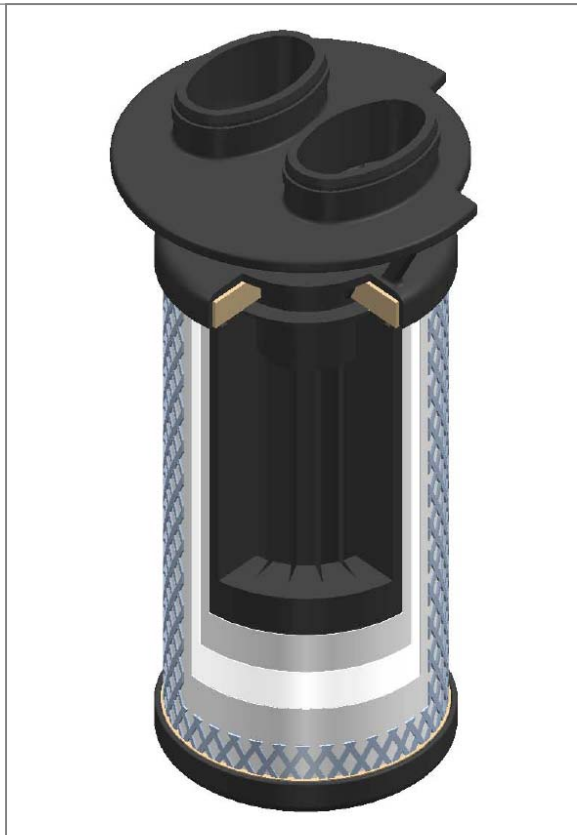


Activated Carbon Filter GDK-A

Adsorption filter for the removal of oil vapour, hydrocarbons and odours.

The adsorption filter GDK-A consists of 2 filter stages. At the adsorption stage oil vapour, hydrocarbons and odours are removed by activated carbon adsorption. Particles are removed at the depth filter stage, consisting of micro-fibre fleece. In addition, support fleece and an outer stainless steel support sleeve ensure proper fixation of the adsorption and filter stage. A special flow insert ensures optimum flow distribution.

The flow direction through the filter is from inside to outside. This creates minimum pressure loss and ensures fully utilisation of the filter material. At appropriate pre purification (see "Recommended pre purification") a residual oil content of < 0,003 mg/m³ is achieved.



Applications

The adsorption filter is for example being utilised as de-central final filtration in:

- . Chemical industry
- . Petrochemical industry
- . Pharmaceutical industry
- . Breathing air supply
- . Pre filtration of sterile air
- . Filling machines
- . Packaging machines
- . Food industry
- . Beverage industry
- . Process industry (instrumentation and control air)

Element Type	Flowrate at 7 bar g m ³ /h *
0045	45
0085	85
0140	140
0240	240
0350	350
0510	510
0680	680
0860	860
1200	1200

Sizing example for pressure which deviates from nominal pressure:
 $\dot{V}_{nom} = 350 \text{ m}^3/\text{h}$, operating pressure = 9 bar (g)

$$\dot{V}_{corr} = \frac{\dot{V}_{nom}}{f_p}$$

$$\dot{V}_{corr} = \frac{350 \text{ m}^3/\text{h}}{1.25} = 280 \text{ m}^3/\text{h}$$

Calculated Size: Type 0350

* m³/h related to 1 bar abs. and 20°C

Operating Pressure bar g	Pressure conversion factor f _p
1	0.25
2	0.38
3	0.50
4	0.63
5	0.75
6	0.88
7	1.00
8	1.13
9	1.25
10	1.38
11	1.50
12	1.63
13	1.75
14	1.88
15	2.00
16	2.13

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Technical Data

Features:	Benefits:
Flow optimized design	Minimum pressure losses, therefore savings of energy costs
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
Flow distributor at filter inlet	Reduces flow resistance and ensure optimum oncoming flow of the adsorption material
Activated carbon embedded in support foam	Prevention of activated carbon abrasion
Microfibre fleece depth filter stage at filter outlet	Improvement of particle retention - class 2 acc. to ISO8573-1 achievable

Materials:	
Adsorption stage	Activated carbon granulate, embedded in PUR ester carrier material
Filter medium	Binderfree borosilicate
Support fleece	Polyamide fleece
Bonding	Polyurethane
End caps	Glass-fibre reinforced polymer
2 O-Rings	Viton: silicone free and free of compound (standard)
Support-sleeves	Stainless steel 1.4301/ 304

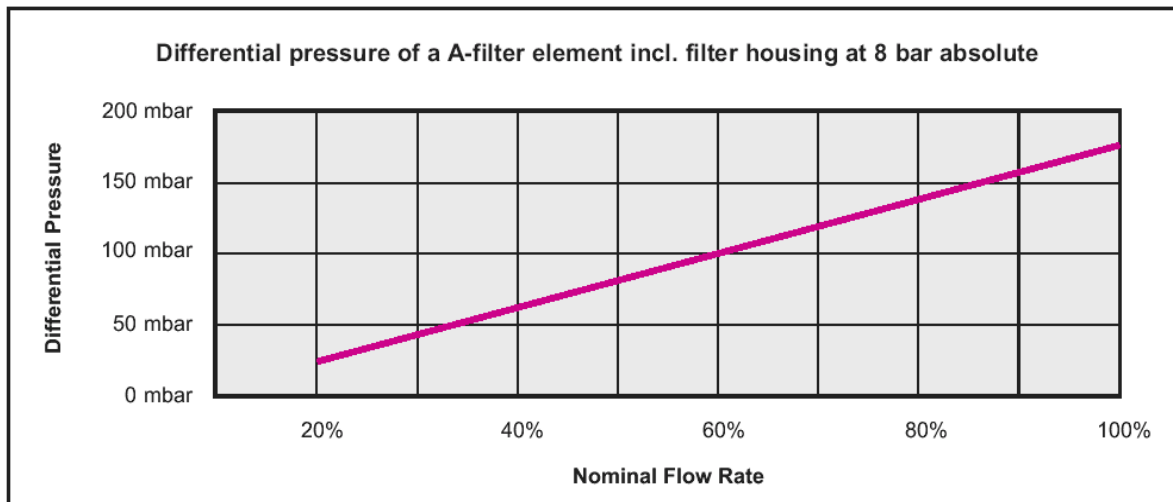
Adsorption efficiency of AK Some examples:	
Oil vapour	A
Benzene	A
Ethane	D
Toluene	A
Acetic acid	A
Methanol	B
Acetone	B
Isopropyl ether	A
Methyl acetate	B
Sulphuric acid	A
Hydrogen sulphide	C
Chlorine	B
Freon	C
Ammonia	C
Citrus fruits	A
Perfumes	A

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

Recommended pre purification:
Residual oil content < 0,01 mg/m ³ , e.g. by sub microfilter

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

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



For additional information please contact Gardner Denver or your local representative.

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