

Ultrac A silicone free

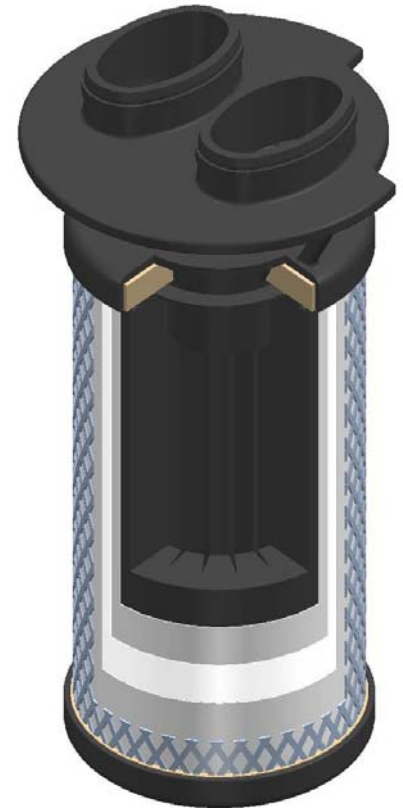
Silicone free adsorption filter for the removal of oil vapour, hydrocarbons and odours

Product description:

The silicone free adsorption filter Ultrac 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 microfibre 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 utilization of the filter material.

At appropriate pre purification (see „Recommended pre purification“) a residual oil content of < 0,003 mg/m³ is achieved.



Cross section of the Ultrac adsorption filter

Applications:

The Ultrac adsorption filter is for example being used as decentral final filtration in:

- Automobile industry (applications of lacquer finishes)
- Chemical industry
- Petrochemical industry
- Pharmaceutical industry
- Breathing air supply
- Prefiltration 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 *
0035	35
0070	70
0120	120
0210	210
0320	320
0450	450
0600	600
0750	750
1100	1100

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 0320

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

* m³/h related to 1 bar abs. and 20°C

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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, labs-free
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

