

ANKERSMID Fluid particle filter

AFP series

Application

The **Ankersmid** aerosol/coalescence filter is suitable for filtration of fluid particles of all types and is recommended for sample gases with an acid dew point above 100°C. Application examples are measurements in flue gas of heavy oil and black coal combustions.

The filter separates the aerosols (very fine fluid particles) which still pass the gas cooler. The most effective position of the filter is downstream the sample conditioning close to the flow meter of the analyser. For additional system protection we provide the version with integrated hydrophobic diaphragm, working as a liquid stop.

Description

The filter element of the Ankersmid aerosol/coalescence filter is constructed in two sections with a flow direction from the inside to the outside of the filter element. The inner, very fine, glass-fiber layer binds the fluid particles suspended in the gas and leads them together with the gas flow to the outer, larger layer. On their way through the filter element, the very fine fluid particles accumulate with others and form droplets. The vertical flow direction and the force of gravity cause the droplets to drip into the filter pot.

The filter element remains fully effective even when completely saturated with fluid. If it is not affected by solid particles, the lifetime is nearly unlimited. The compressed Micro-Fibers are made with binding of PVDF in order to prevent influences on the sample gas.

A version equipped with an integrated liquid stop for water and water identical liquids is available. The modified filter element clamp has a protective hydrophobic diaphragm. In case the sample conditioning system does not work proper, the filter will stop the liquid in front of the filter outlet.

The condition of the filter is visible through the glass body without opening the filter. The separated acid mist can continuously be discharged with an external mounted peristaltic pump (option) connected by the GL25 adapter. No tools are required to change the filter element. The optimised position of the O-ring always guarantees a safe sealing of the filter body to the filter head.

A special bracket is available to place these filters on the Ankersmid Modular System.

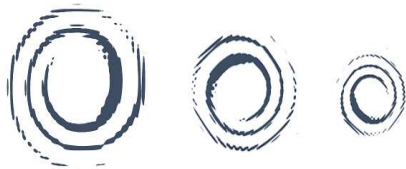
The filter can be rotated about 180° in the holder for wall-mounting or Ankersmid Modular System.

This allows a flexible adaptation of in- and outlet to local conditions.

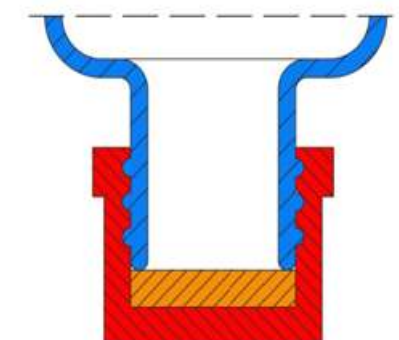
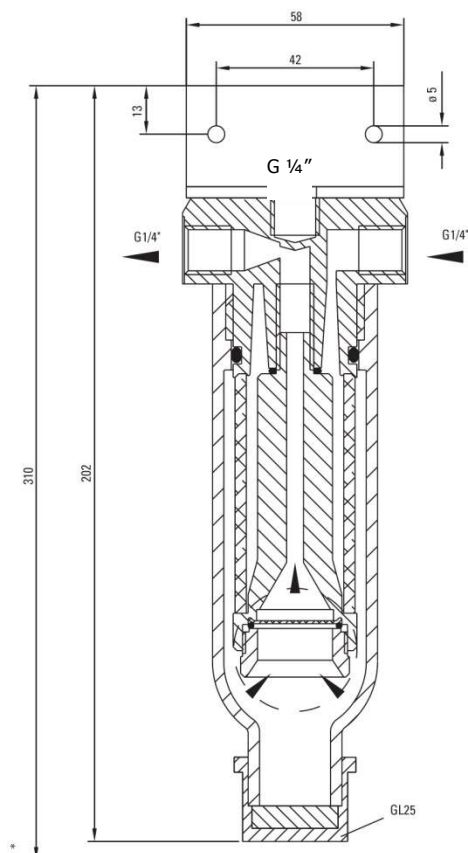


* Picture may vary

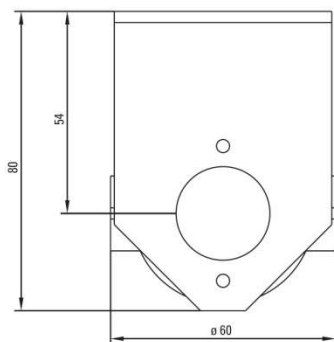
- **High separation rate of 99,9999% for particles > 0,1µm**
- **Optional liquid stop (hydrophobic membrane) for analyzer protection**
- **Visible condition of filter element from outside**
- **Easy change of filter element**
- **Wall-mounting**



Dimensions



GL25 connection with Blind cap



* Constructional size

Technical data

| | |
|-----------------|--|
| Separation rate | 99,99% or particles > 0,1 µm |
| Flow rate | Max. 300l/h |
| Pressure | Max. 2bar abs |
| Gas temperature | Max. 80°C |
| Connections | G1/4" f (gas inlet, gas outlet), GL25 (condensate outlet) |
| Materials | PVDF (filter head), PTFE (filter element holder) Duran® glass (body) Glass-fiber (filter element) |