



CLF-5

Fluid Particle Filter Series CLF®

Version CLF-5, CLF-5/W for removal of aerosols from gases

Special Features

- High retention rate of 99.9999 % for particles > 0.1 µm
- Also with integrated hydrophobic diaphragm for analyser protection
- Condition of filter element visible from outside
- Easy change of filter element
- Wall mounting

Application

The M&C fluid particle filter CLF-5, CLF-5/W is suitable for filtration of fluid particles of all types and is recommended for sample gases with an acid dew point above 100 °C (212 °F). 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 CLF-.. filter is downstream the sample conditioning close to the flowmeter of the analyser. For additional system protection we provide the version CLF-5/W with integrated hydrophobic diaphragm, working as a liquid stop.

The version CLF-5/W is equipped with an integrated liquid stop for water and water identical liquids. The modified filter element clamp has a protective hydrophobic diaphragm. In case the sample conditioning system does not work proper, the CLF-5/W 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 SR25.1 (option) connected by a 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. The filter in- and outlet can be turned about 180° on the mounting bracket to achieve easy mounting and flexible adaptation to local circumstances.

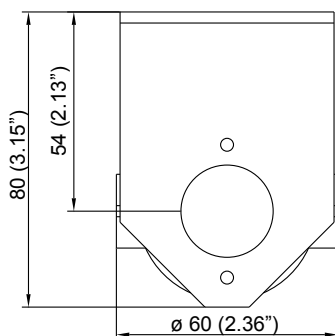
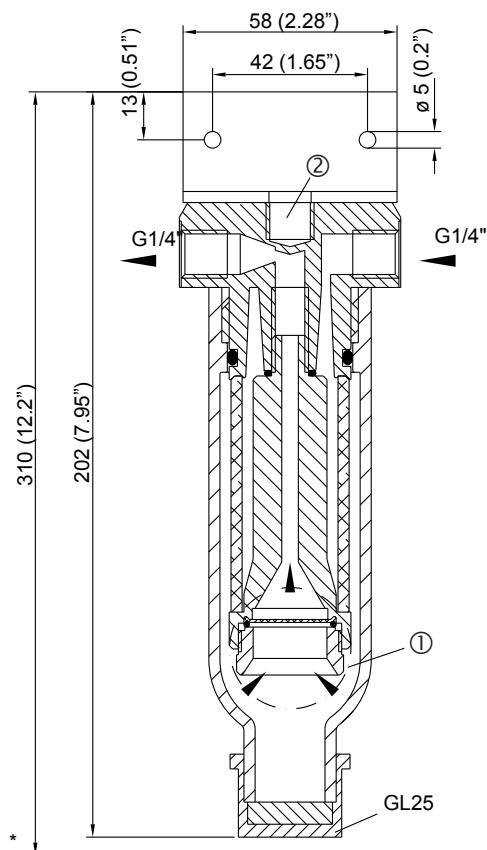
Description

The filter element of the M&C fluid particle filter is constructed in two sections with a flow direction from the inside to the outside of the filter element. The inner, very fine, fibre 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 effected by solid particles, the lifetime is nearly unlimited. The compressed Micro-Fibres are made with binding of PVDF in order to prevent influences on the sample gas.

Handle with care! Danger of acid burns!

Dimensions



* Constructional size

Dimensions in mm (Inches)

- ① Protective hydrophobic diaphragm unit only with version CLF-5/W.
- ② On request the G1/4" thread connection can be used as a second gas outlet through a $\varnothing 5$ mm ($\varnothing 0.2$ ") bore hole.

Technical Data

Fluid particle filter	CLF-5	CLF-5/W
Part No.	03 F 3000	03 F 3005
Option: Water stop	NO	YES
Gas flow	max. 300 NI/h	max. 200 NI/h
Gas pressure	0.2-2 bar abs. ΔP max. 1.0 bar	0.3-2 bar abs. ΔP max. 0.5 bar
Differential pressure with a new filter element, with air, 20 °C (68 °F)	3 6 10 mbar 100 200 300	17 35 mbar 100 200
Sample temperature	max. +80 °C (176 °F)	
Ambient temperature	0 °C to +60 °C (32 °F to 140 °F)	
Storage temperature	-25 °C to +80 °C (~-13 °F to 212 °F)	
Filter element/Retention rate	2-layers CLF-5 / 99.9999% for particles >0.1 μ m	
Filter dead volume	70 cm ³	
Reservoir capacity for liquid	20 ml	
Material of sample contacting parts	PVDF, glass, FPM	PVDF, glass, FPM, PTFE, Polyester
Sample gas-/drain connection	G 1/4" DIN ISO 228/1 / GL25 cap	
Type of mounting/Weight	wall mounting/approx. 0.3 kg (0.66 lb)	