



CLF-T

## Liquid Particle Filter Series CLF®

Versions CLF-T, CLF-SS made out of special materials, for the separation of aerosols from gases

### Special Features

- High retention rate of 99.99 % for particles > 0.1 µm
- High chemical resistance of type CLF-T
- Type CLF-SS suitable for high pressure applications
- Type CLF-T: filter element condition visible from the outside
- Easy change of filter element
- With bracket for wall-mounting

### Application

The M&C liquid particle filter CLF® is suitable for the separation of fine liquid particles of all kinds. The CLF-T is recommended for sample gases with a sample gas temperature of up to 100 °C [212 °F] and the CLF-SS is recommended for sample gases with a temperature of up to 180 °C [356 °F]. Examples are measurements of flue gas of heavy oil and hard coal combustion plants.

The filter separates aerosols (finest liquid particles) which have still passed the sample gas cooler. After sample conditioning, the CLF is best positioned directly in front of the flow meter of the analyzer.

### Description

The filter element of the M&C liquid particle filter CLF® has a two-layer construction and the flow direction is from the inside to the outside. The inner, very fine layer binds the fine liquid particles suspended in the gas and forwards them with the gas flow to the outer, coarser layer. On their way through the filter element, the very fine liquid particles accumulate to form droplets. The vertical flow direction, together with gravity, supports the dripping of the liquid into the filter glass.

The filter element retains its efficiency even when completely saturated with liquid. Without being contaminated by solid particles, its service life is almost unlimited. The pressed microfibers are joined with PVDF binder to prevent the influence on sample gas.

With regard to the CLF-T filter, the condition of the filter is immediately visible from the outside through the glass filter body without opening the filter assembly. The GL 25- or G 3/8"-connection allows an automatic emptying of the liquid by means of an optional external peristaltic pump SR25.2.W or automatic condensate flow trap AD-SS.

No tools are required for filter element replacement. The optimum positioning of the O-ring always ensures a reliable sealing of the filter body to the filter head.

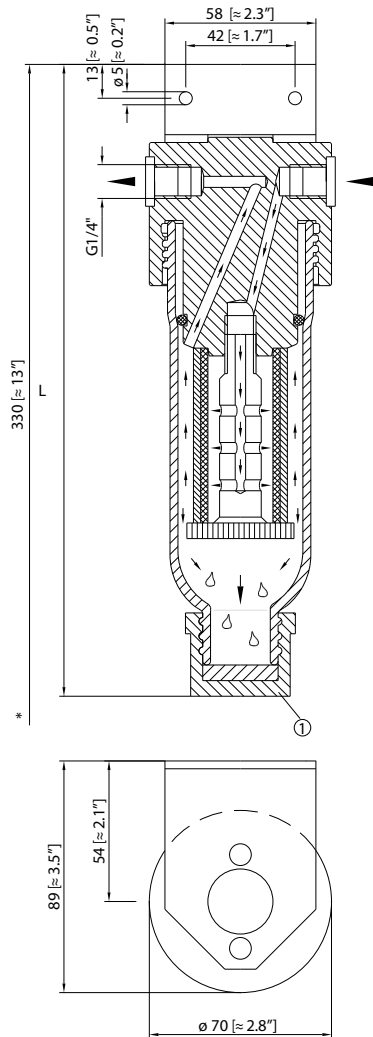
Filter inlet and outlet can be rotated 180° on the wall-mounting so that flexible adaptation to local conditions is possible during installation.

The filter is available in PTFE/glass or stainless steel 316Ti.

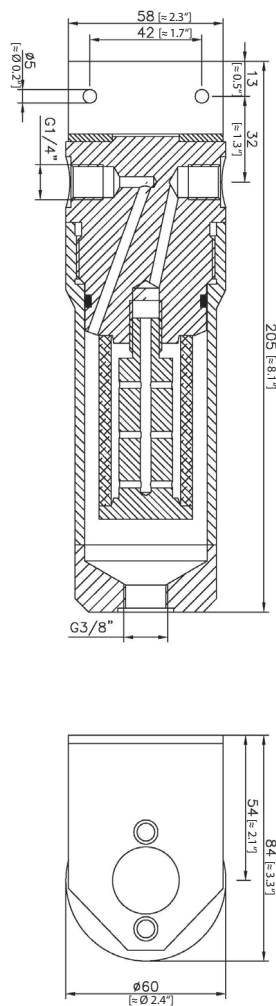
**Handle with care! Danger of acid burns!**

## Dimensions

CLF-T



CLF-SS



Version:	CLF-T	CLF-SS
Measure L:	240 [≈ 9.5"]	210 [≈ 8.3"]
Drain:	① GL25	G3/8"i

\*Dimensions required for dismounting 330 [≈ 13"]

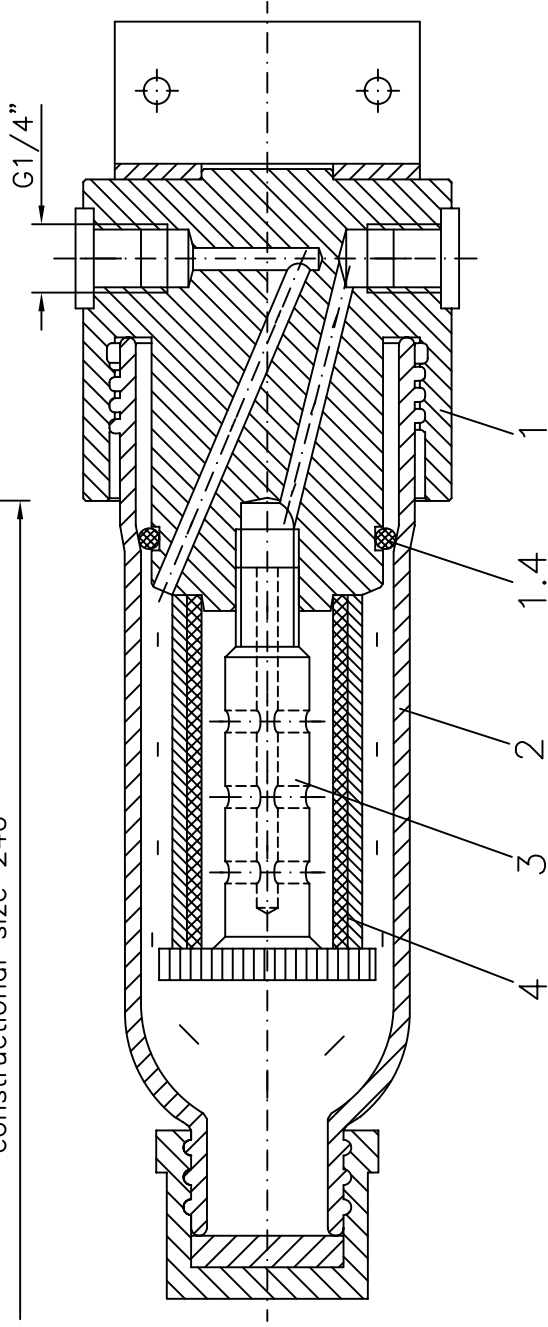
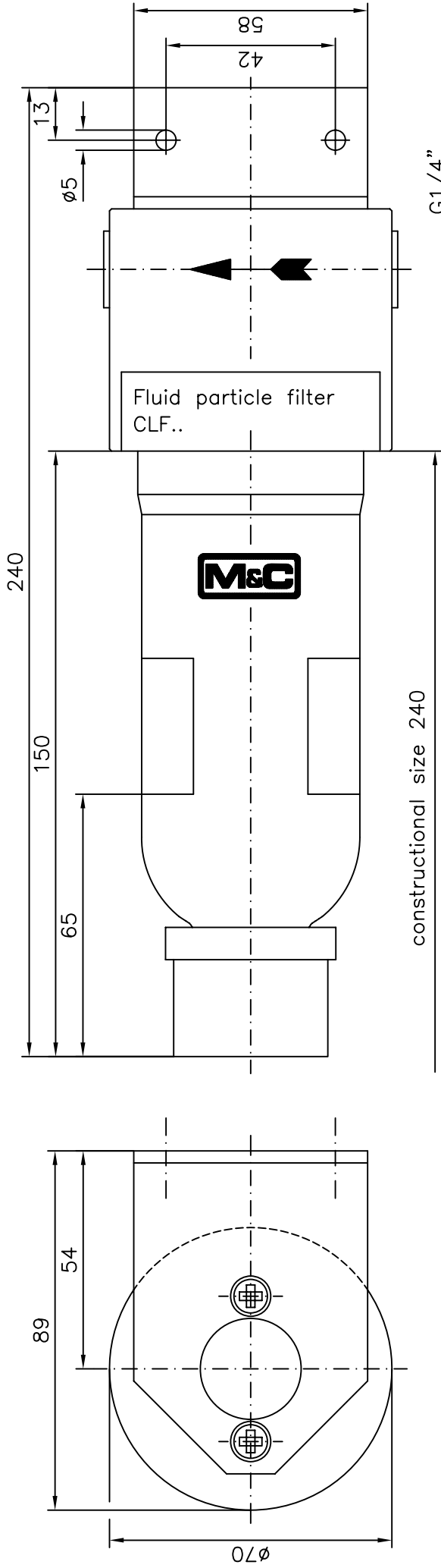
Dimensions in mm [Inches]

## Technical Data

Liquid particle filter	CLF-T	CLF-SS
Part No.	03F2100	03F2300
Material of sample-contacting parts	PTFE, glass, FKM	Stainless steel 316Ti, FKM
Gas pressure ( $\Delta P$ max. 1 bar)	0.2 to 2 bar abs.	0.2 to 26 bar abs.
Gas flow	Max. 300 NI/h	
Differential pressure for a new filter element, with air, 20 °C [68 °F]	1 2.5 4.5 mbar 100 200 300 NI/h	
Sample gas temperature	Max. 100 °C [212 °F]	Max. 180 °C [356 °F]
Ambient temperature	0 to +100 °C [32 to 212 °F]	0 to +180 °C [32 to 356 °F]
Storage temperature	-30 to +120 °C [-22 to 248 °F]	-30 to +180 °C [-22 to 356 °F]
Filter element	2-layer CLF-4	
Retention rate	99.99 % for particles > 0.1 µm	
Filter stagnant space	135 cm <sup>3</sup>	
Volume capacity for liquid	50 ml	
Sample gas connection	G 1/4" i DIN ISO 228/1	
Drain connection	GL 25 cap	G 3/8" plug
Type of mounting	Wall-mounting	
Weight	Approx. 0.8 kg [≈ 1.8 lbs]	Approx. 2.2 kg [≈ 4.9 lbs]

Please note: NI/h and NI/min refer to the German standard DIN 1343 and are based on these standard conditions: 0 °C [32 °F], 1013 mbar.

Fluid Particle Filter CLF..



Dimensions in mm  
 Subject to technical modifications

CLF Part-No. 03F2000

CLF-T Part-No. 03F2100

Item	Description	Part-No.	Material
1	filter head CLF compl.	90F2020	PVDF
1.4	O-ring 39	93F0020	Viton
2	filter glass	90F2010	Duran-glass
3	filter element clamp CLF	90F2015	PVDF
4	filter element	90F2000	glass-fibre
5			
6			

Item	Description	Part-No.	Material
1	filter head CLF-T compl.	90F2025	PTFE
1.4	O-ring 39	93F0020	Viton
2	filter glass	90F2010	Duran-glass
3	filter element clamp CLF-T	90F2017	PTFE
4	filter element	90F2000	glass-fibre
5			
6			