



Adsorption Filter

ADF

Application

The adsorption filters series **ADF** are used for continuous extractive gas analytics. They are usually installed downstream the sample gas cooler and serve for removal of interfering gas components due to adsorption. Upstream the sample gas cooler the filter is also suitable for pre-separation of condensing liquids. Typical applications for the filters series **ADF** are process gases whose gas matrix allows to remove gas components selectively without influence on the measurement.

Technology

The adsorption filters series **ADF** are designed particularly corrosion resistant and easy to maintain. The filter head is made of PVDF, body is made of glass and sealing is made of FKM. The glass frit in the lower part of the glass body prevents leakage of the solid filling material. Regarding design special attention was also paid to an extra low dead volume and at the same time a high filling degree for fast response time. Due to the G1/4" f-thread the sample gas connections can be determined variably by means of an appropriate screw fitting.

Functions

With appropriate filling material interfering sample gas components will be adsorbed. Here the precise choice of the correct adsorption material is important to remove selectively only these components that should not be measured. The gas inlet is at the bottom of the filter glass (GL25-12). With glass ball filling condensing liquids and / or solids can be removed. The sample gas outlet then is located at the filter head. The glass body allows quick and easy to assess the condition of the adsorption material.

- ✓ Filling with various adsorption materials
- ✓ Filling with glass balls for large reaction surface
- ✓ Durable corrosion resistant materials: PVDF, Duran-glass, FKM
- ✓ Quick and easy change of filling
- ✓ Easy mounting and integration
- ✓ Low dead volume for fast response time
- ✓ Optical control of adsorption material
- ✓ Wall mounting





Technical Data

ADF Filter		
Filling material		solid adsorption material
Sample gas inlet / outlet		2 x G1/4" f or GL25-12 / 1 x G1/4" f
Ambient temperature	°C	-20...+80
Max. gas temperature	°C	+80
Materials media wetted parts		PVDF (head), PTFE (cartridge), Duran® glass (body, frit) FPM (head seals), PTFE/Silicone (GL-connection seals)
Max. operating pressure at 20°C	bar abs.	5
Max. flow rate V _n	l/hr	500
Dead volume	ml	65 (for 75mm-cartridge) / 190 (for 150mm-cartridge)
Filter surface	cm ²	70 (for 75mm-cartridge) / 140 (for 150mm-cartridge)
Design data		
Mounting		wall mounting with mounting bracket
Options		
Straight connector DN4/6		G1/4" m – DN4/6 PVDF
GL adapter GL25-DN4/6		GL25 – DN4/6 PVDF

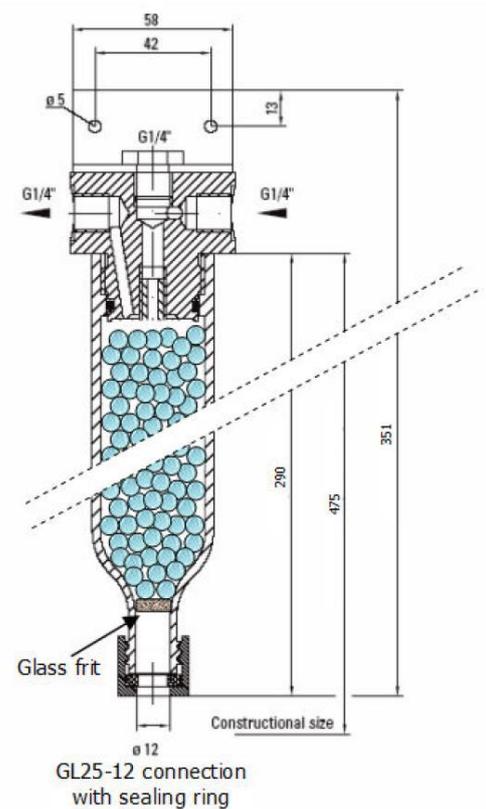
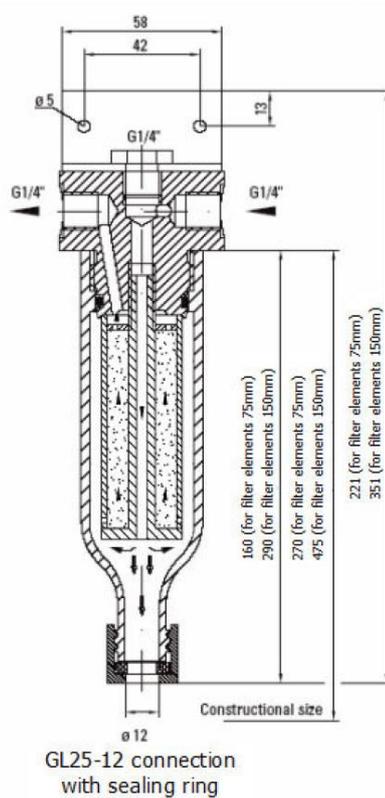
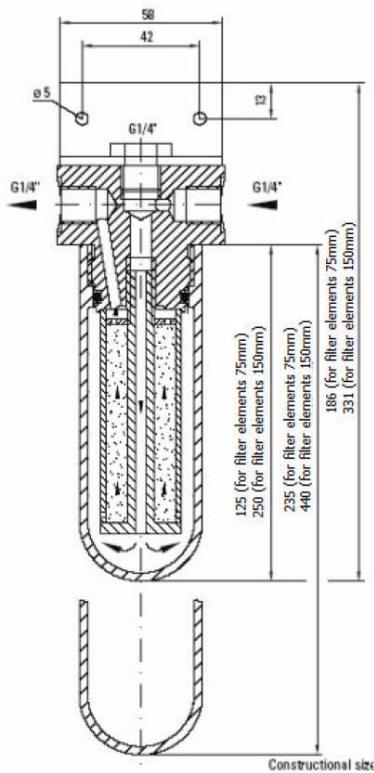
Order numbers for ADF filters	Part No.
with bottom frit to fill with adsorption materials or glass balls. Filter body length: 120mm Materials: PVDF (head), Viton® (o-ring), Duran® glass (body, frit) Connection: GL25-8 (gas inlet), G 1/4" f (gas outlet) Incl. bracket for wall-mounting, material: aluminium	30008677
with bottom frit to fill with adsorption materials or glass balls. Filter body length: 240mm Materials: PVDF (head), Viton® (o-ring), Duran® glass (body, frit) Connection: GL25-8 (gas inlet), G 1/4" f (gas outlet) Incl. bracket for wall-mounting, material: aluminium	30008678
with (empty) filter cartridge, cartridge length: 75mm, filter body length: 120mm Materials: PVDF (head), PTFE (cartridge), Viton® (o-ring), Duran® glass (body) Connection: G 1/4" f (gas inlet, gas outlet) Incl. bracket for wall-mounting, material: aluminium	30008711
with (empty) filter cartridge, cartridge length: 150mm, filter body length: 240mm Materials: PVDF (head), PTFE (cartridge), Viton® (o-ring), Duran® glass (body) Connection: G 1/4" f (gas inlet, gas outlet). Incl. bracket for wall-mounting, material: aluminium	30008712
Order numbers for consumables	Part No.
Adsorption material Active-coal, quantity: 1kg	30008687
Adsorption material Purafil II, quantity: 1kg	30008689
Adsorption material Silicagel, quantity: 1000ml	30008688
Adsorption material Bronze granulate	30008694
Volume displacer/surface extension glass balls, diameter: 10mm, quantity: 1kg	30008695

Adsorption material

Adsorption material	Components to be interrupted	Cross sensitive against
Active charcoal	Vapour of solvents or essential oil	SO ₂ , CO ₂ , Cl ₂ , NH ₃
Silica-gel	Water vapour	SO ₂ , NH ₃ , HCl, CO ₂ , C _n H _m
Purafil II	SO ₂ , SO ₃ , NH ₃ , CS ₂ , H ₂ S	C ₂ H ₂ , C ₂ H ₄ , CH ₄ O
Calcium hydroxide	CO ₂	SO ₂ , Cl ₂ , H ₂ O
Eisenberger Masse	Aerosols	HF
Sodium-calcium	CO ₂	SO ₂ , Cl ₂ , H ₂ O



Dimensions



Dimensions in mm



PSG[®]
Perfect Sample Gas