

Operating instructions

Gas filters GFK



Cert. version 10.17

Contents

| | |
|--------------------------------------|----------|
| Gas filters GFK | 1 |
| Contents | 1 |
| Safety | 1 |
| Checking the usage | 2 |
| Type code | 2 |
| Part designations | 2 |
| Type label | 2 |
| Installation | 2 |
| Tightness test | 2 |
| Maintenance | 3 |
| Cleaning or replacing the filter pad | 3 |
| Technical data | 3 |
| Logistics | 4 |
| Certification | 4 |
| Declaration of conformity | 4 |
| Filter pads | 4 |
| Contact | 4 |

Safety

Please read and keep in a safe place



Please read through these instructions carefully before installing or operating. Following the installation, pass the instructions on to the operator. This unit must be installed and commissioned in accordance with the regulations and standards in force. These instructions can also be found at www.docuthek.com.

Explanation of symbols

■, **1**, **2**, **3**... = Action

> = Instruction

Liability

We will not be held liable for damage resulting from non-observance of the instructions and non-compliant use.

Safety instructions

Information that is relevant for safety is indicated in the instructions as follows:

DANGER

Indicates potentially fatal situations.

WARNING

Indicates possible danger to life and limb.

! CAUTION

Indicates possible material damage.

All interventions may only be carried out by qualified gas technicians. Electrical interventions may only be carried out by qualified electricians.

Conversion, spare parts

All technical changes are prohibited. Only use OEM spare parts.

Changes to edition 06.14

The following chapters have been changed:

- Installation
- Maintenance
- Certification
- Filter pads

Checking the usage

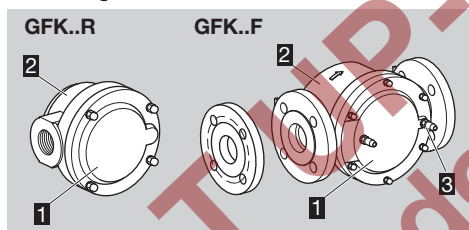
Gas filter GFK is used for filtration of the fuel gas and combustion air supply to all gas consuming appliances.

This function is only guaranteed when used within the specified limits – see page 3 (Technical data). Any other use is considered as non-compliant.

Type code

| Code | Description |
|---------------|---------------------------------------------|
| GFK | Gas filter |
| 15–250 | Nominal size |
| T | T-product |
| R | Rp internal thread |
| F | Flanged connection to ISO 7005 |
| N | NPT internal thread |
| A | ANSI flange |
| | Max. inlet pressure p_u max |
| 10 | 1 bar (14.5 psig) |
| 40 | 4 bar (58 psig) |
| 60 | 6 bar (87 psig) |
| -3 | Screw plug at the inlet and outlet |
| -6 | Pressure test point at the inlet and outlet |

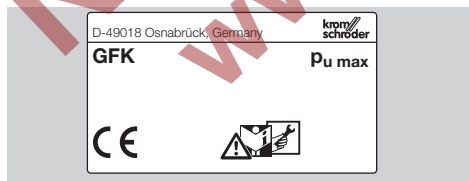
Part designations



- 1** Housing cover
- 2** Lower housing section
- 3** Pressure test point

Type label

- ▷ Max. inlet pressure: see type label.

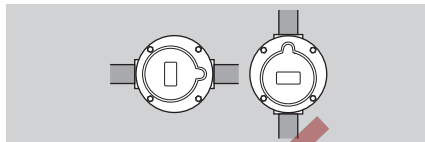


Installation

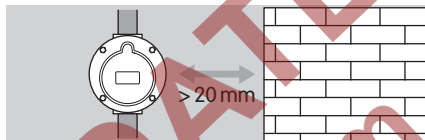
! CAUTION

Dropping the device can cause permanent damage. In this event, replace the entire device and associated modules before use.

- ▷ Installation position: any, in horizontal or vertical pipework – recommended: housing cover to the side.

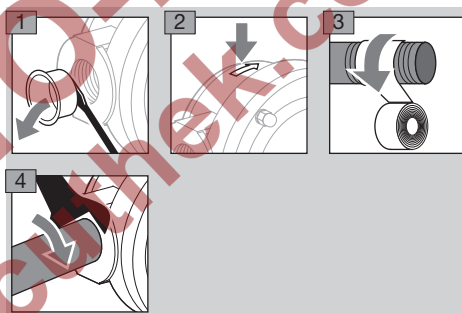


- ▷ The housing must not be in contact with masonry, minimum distance 20 mm (0.79").

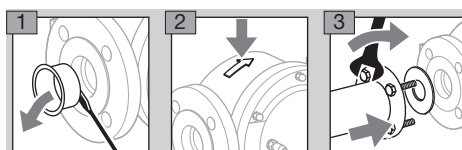


- ▷ We recommend applying a protective coating when installing in the open air.

GFK..R

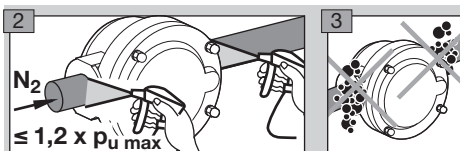


GFK..F



Tightness test

- 1** To be able to check the tightness, shut off the downstream pipeline close to the gas filter.



- 4** Tightness OK: open the pipeline.

- ▷ Pipeline leaking: replace the seal.

Maintenance

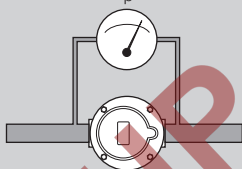
! CAUTION

In order to ensure smooth operation: clean or replace the filter pad of the GFK every year, or every six months if operated with biologically produced methane.

When cleaning or replacing the filter pad, no dirt may contaminate the clean gas circuit.

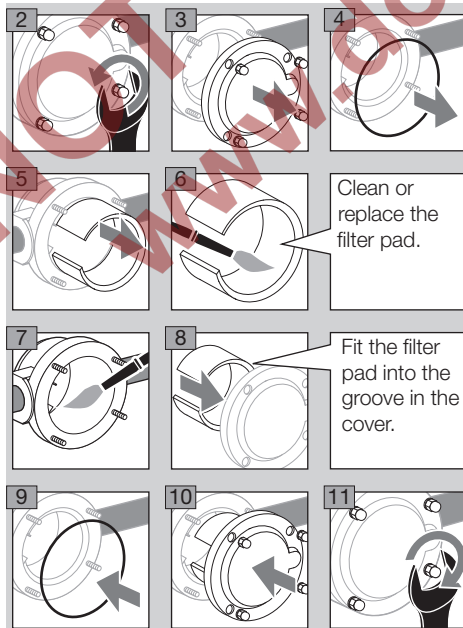
- ▷ The filter pad should be changed at a pressure gradient ≥ 20 mbar (8 °WC).
- ▷ Pressure test points on the cover:
 - GFK 15 to 100:
 - Inlet side: Rp 1/8 pressure test nipple,
 - Outlet side: Rp 1/8 pressure test nipple.
 - GFK 125 to 250:
 - Inlet side: Rp 1/8 plug,
 - Outlet side: Rp 1/8 plug.
 - GFK 15T to 100T:
 - Inlet side: Rp 1/8 plug,
 - Outlet side: Rp 1/8 plug.

Recommended $\Delta p_{\text{max.}} = 20$ mbar



Cleaning or replacing the filter pad

- 1 Shut off the gas supply.



Clean or replace the filter pad.

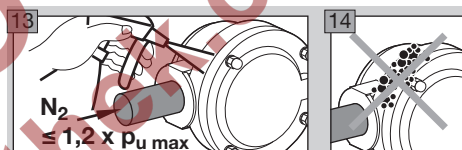
Fit the filter pad into the groove in the cover.

- ▷ Tighten screws in a crosswise fashion and pay attention to the torque, see table:

| Type | Torque [Nm] |
|---------|-------------|
| GFK 15 | 5 |
| GFK 20 | 5 |
| GFK 25 | 8 |
| GFK 32 | 8 |
| GFK 40 | 8 |
| GFK 50 | 8 |
| GFK 65 | 8 |
| GFK 80 | 20 |
| GFK 100 | 20 |
| GFK 125 | 60 |
| GFK 150 | 60 |
| GFK 200 | 80 |
| GFK 250 | 80 |

Checking tightness and function

- ▷ When replacing the filter pad, the gas-filled space in the GFK is opened. Therefore, check for tightness once the filter pad has been reinstalled.
- 12 To be able to check the tightness, shut off the downstream pipeline close to the gas filter.



- 15 Tightness OK: open the pipeline.

Technical data

Gas type: natural gas, town gas, LPG (gaseous), biologically produced methane and air.

Max. inlet pressure $p_{u \text{ max.}}$:

GFK 15 to 250: 1 bar (14.5 psig),

GFK 15R to 65R: 4 bar (60 psig),

GFK 15TN to 100TN: 4 bar (60 psig),

GFK 40F to 100F: 6 bar (87 psig).

Storage temperature: -15 to +60°C (5 to 140°F).

Ambient temperature: -15 to +80°C (5 to 176°F).

Continuous operation at high temperatures accelerates the ageing of elastomer materials.

Version to DIN 3386.

Housing material:

GFK 15 to 100: AISi.

GFK 125 to 250: sheet steel.

Connection:

GFK..R: Rp internal thread connection to ISO 7-1.

GFK..F: flanged connection to ISO 7005, PN 16.

GFK..N: NPT internal thread.

GFK..A: ANSI 150 flanged connection.

Filter pad: polypropylene fleece (standard 50 µm).

Designed lifetime

This information on the designed lifetime is based on using the product in accordance with these operating instructions. Once the designed lifetime has been reached, safety-relevant products must be replaced. Designed lifetime (based on date of manufacture) in accordance with EN 13611 for GFK: 10 years.

You can find further explanations in the applicable rules and regulations and on the afecor website (www.afecor.org).

This procedure applies to heating systems. For thermoprocessing equipment, observe local regulations.

Logistics

Transport

Protect the unit from external forces (blows, shocks, vibration). On receipt of the product, check that the delivery is complete, see page 2 (Part designations). Report any transport damage immediately.

Storage

Store the product in a dry and clean place.

Storage temperature: see page 3 (Technical data).

Storage time: 6 months before using for the first time. If stored for longer than this, the overall service life will be reduced by the corresponding amount of extra storage time.

Packaging

The packaging material is to be disposed of in accordance with local regulations.

Disposal

Components are to be disposed of separately in accordance with local regulations.

Certification

Declaration of conformity



We, the manufacturer, hereby declare that the product GFK, marked with product ID No. 0063AU1408, complies with the essential requirements of the following Directives and Standards:

Contact

If you have any technical questions, please contact your local branch office/agent. The addresses are available on the Internet or from Elster GmbH.

We reserve the right to make technical modifications in the interests of progress.

Directives:

- 2009/142/EC – GAD (valid until 20 April 2018)
- 2014/68/EU

Regulation:

- (EU) 2016/426 – GAR (valid from 21 April 2018)

The relevant product corresponds to the tested type sample.

The production is subject to the surveillance procedure pursuant to Directive 2009/142/EC Annex II paragraph 3 (valid until 20 April 2018) and to Regulation (EU) 2016/426 Annex III paragraph 3 (valid from 21 April 2018).

Elster GmbH

Scan of the Declaration of conformity (D, GB) – see www.docuthek.com

Filter pads

With 50 µm separation rate

| Designation | Order No. |
|-------------------------------------------------------------|-----------|
| Spare parts set GFK 15/20, 10 filter pads and 10 O-rings | 71935010 |
| Spare parts set GFK 25/32, 10 filter pads and 10 O-rings | 71937010 |
| Spare parts set GFK 40/50, 5 filter pads and 5 O-rings | 71939010 |
| Spare parts set GFK 65, 1 filter pad and 1 O-ring | 74923284 |
| Spare parts set GFK 80, 1 filter pad and 1 O-ring | 74923285 |
| Spare parts set GFK 100, 1 filter pad and 1 O-ring | 74923286 |
| Filter pad GFK 125 | 35448581 |
| O-ring 308x8 for GFK 125/150 | 03110013 |
| Filter pad GFK 150 | 35448583 |
| O-ring 308x8 for GFK 125/150 | 03110013 |
| Filter pad GFK 200/250 | 35448584 |
| O-ring 430x8 for GFK 200/250 | 03109164 |

- ▷ Filter pads with special separation rate of 10 µm for GFK 15 – 100 on request.

Honeywell

**krom/
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