Combined heating oil filter breather type GS Pro-Fi® 3
Breather device with filter and shut-off fitting according to EN 12514-2

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ABOUT THE MANUAL
• This manual is part of the product.
• This manual must be observed and handed over to the operator to ensure that the component operates as intended and to comply with the warranty terms.
• Keep it in a safe place while you are using the product.
• In addition to this manual, please also observe national regulations, laws and installation guidelines.
SAFETY ADVICE

Your safety and the safety of others are very important to us. We have provided many important safety messages in this assembly and operating manual.

✔ Always read and obey all safety messages.

⚠️ This is the safety alert symbol.

This symbol alerts you to potential hazards that can kill or hurt you and others. All safety messages will follow the safety alert symbol and either the word “DANGER”, “WARNING”, or “CAUTION”. These words mean:

**DANGER**

Describes a **personal hazard** with a **high degree of risk**.

- May result in **death or serious injury**.

**WARNING**

Describes a **personal hazard** with a **medium degree of risk**.

- May result in **death or serious injury**.

**CAUTION**

Describes a **personal hazard** with a **low degree of risk**.

- May result in **minor or moderate injury**.

**NOTICE**

Describes **material damage**.

- Has an **effect** on ongoing operation.

**WARNING**

**Escaping, liquid fuels:**

- Are hazardous for water
- Are inflammable category 1, 2 or 3 liquids
- Can ignite and cause burning
- Can cause injury through people falling or slipping

✔ Capture fuels during maintenance work.

GENERAL PRODUCT INFORMATION

The combined heating oil filter breather type GS Pro-Fi® 3 is a **professional filter breather system of the 3rd generation as “closed system” (GS)**. The GS Pro-Fi® 3 meets the requirements of EN 12514-2, E DIN EN 12514-3, the technical regulation for oil firing installations DIN 4755:2004-11, the technical regulation for oil systems TRÖI and TRÖL (AT), respectively, as well as worksheet DWA-A 791 part 1 “Erection, operational requirements, and shut-down of fuel oil consumer systems”.

The GS Pro-Fi® 3 is a combination of a breather device, a filter, and an upstream shut-off fitting. It ensures that the liquid fuel oil is filtered and the gases released during the suction process are discharged at the same time. The gas is not discharged into the environment, but within the closed system via the burner nozzle in the combustion chamber, which is why the system works without producing any smell.

The GS Pro-Fi® 3 is only installed into the suction lines of supply/oil systems designed according to the single string system with return supply.
INTENDED USE

Operating media
- Diesel fuel
- Kerosene
- FAME
- Fuel oil
- Bio fuel oil, 30% (V/V) FAME

**NOTICE** You will find a list of operating media with descriptions, the relevant standards and the country in which they are used in the Internet at [www.gok-online.de/de/downloads/technische-dokumentation](http://www.gok-online.de/de/downloads/technische-dokumentation).

Installation location
- for being installed in oil systems designed as single string system with return supply
- above and below the tank crown, respectively

INAPPROPRIATE USE

All uses that are not appropriate:
- e.g. operating with different media,
- different inlet or outlet pressures
- installation against the flow direction

USER QUALIFICATION

This product may be installed only by qualified experts. These are personnel who are familiar with setting up, installing, starting up, operating and maintaining this product.
"Equipment and systems requiring supervision may be operated only by persons aged at least 18, who are physically capable and who have the necessary specialist knowledge or who have been instructed by a competent person. Instruction at regular intervals, but at least once per year, is recommended."

ADVANTAGES AND EQUIPMENT

Combined heating oil filter breather type GS Pro-Fi® 3:
- guaranteed smell-tight, without any further accessories
- no escaping oil and oil foam, respectively
- safety function in the event of hose rupture
- integrated ball cock as required shut-off fitting upstream of the consumption equipment
- connection hose for oil suction pump
- version with vacuum pressure gauge -1.0 to +0.6bar, for controlling the vacuum in the suction line and therefore the operating states
Combined heating oil filter breather type GS Pro-Fi® 3

**DESIGN**

1. vent screw
2. vent tray
3. holding plate for wall assembly
4. connection burner return line
5. connection burner supply line
6. clamping ring
7. filter insert
8. filter tray
9. vacuum pressure gauge
10. connection for tank line
11. shut-off fitting
12. screws for accepting the holding plate

**Fuel oil consumer installation in single conduit system**

- Anti-siphon device
- Pressure compensation valve Typ DAV
- Withdrawal valve Typ VTK-3
- Aspiration line
- Combined heating oil filter breather type GS Pro-Fi® 3
### Connections

<table>
<thead>
<tr>
<th>Inlet, optional</th>
<th>Trading name and dimensions acc. to standard</th>
<th>Installation notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>screw-in fitting</td>
<td>• IG G 3/8 For accepting a screw-in fitting with O-ring</td>
<td><img src="image1" alt="QR Code" /></td>
</tr>
<tr>
<td>compression fitting RVS</td>
<td>• compr. fit. 6</td>
<td><img src="image2" alt="QR Code" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outlet, optional</th>
<th>Trading name and dimensions acc. to standard</th>
<th>Installation notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ball-cone connector</td>
<td>• thread AG G 3/8-KN</td>
<td>torque 15Nm</td>
</tr>
</tbody>
</table>

### Determination of the Flow Rate, the Pipe Diameter, and the Pressure Loss

**Flow rate**

The outlet pipe must be dimensioned pursuant to DIN 4755 in such a way that the mean flow rate of the fuel oil is between (0.2 and 0.5) m/s. In the event of too large a pipe diameter with low flow rates, undesired formation of gas bubbles may occur.

**Determination of the flow rate \( w \) in m/s**

<table>
<thead>
<tr>
<th>Installation in ⇒</th>
<th>Single string system</th>
<th>Double string system</th>
<th>Conveyor system</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>( V = ) Volume flow rate Operating medium ( (L/h) )</td>
<td>( \approx ) Heat input in kW / 10</td>
<td>( = ) Gear output of the Oil burner pump</td>
<td>( = ) Delivery rate of the booster pump</td>
<td>( w = 0.3537 \cdot V / ID^2 )</td>
</tr>
</tbody>
</table>

\( ID = \) inner pipe diameter \( (\text{mm}) \)

For supply / oil systems, the following mean flow rate is applicable pursuant to DIN 4755:

<table>
<thead>
<tr>
<th>Suction: ((0.2 \div 0.5) \text{ m/s})</th>
<th>Discharge: ((1.0 \div 1.5) \text{ m/s})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taking into account the length of the suction line, the geodesic height, the suction height, and the fuel oil volume flow rate, the following can be recommended for selecting the piping:</td>
<td>( V_{\text{Fuel oil}} ) ( \otimes x t ) Copper pipe</td>
</tr>
<tr>
<td>( 1 \div 10 \text{L/h} )</td>
<td>( 6 \times 1 \text{mm} )</td>
</tr>
<tr>
<td>( 8 \div 45 \text{L/h} )</td>
<td>( 8 \times 1 \text{mm} )</td>
</tr>
<tr>
<td>( 25 \div 130 \text{L/h} )</td>
<td>( 10 \times 1 \text{mm} )</td>
</tr>
<tr>
<td>( 90 \div 170 \text{L/h} )</td>
<td>( 12 \times 1 \text{mm} )</td>
</tr>
</tbody>
</table>

- Lower flow rates in suction mode will result in an undesired formation of bubbles.
- Piping with inner diameters of less than 4mm is not recommended!

Maximum total pressure loss of all fittings in the suction line = \( 0.4 \text{bar} \)
The pressure loss of the GS Pro-Fi® 3 depending on the fuel oil volume flow rate and the filter insert used can be found in the diagram:

**NOTICE ON THE FILTER INSERT:**
There is no such thing as a universal filter insert. The filter insert should be selected based on the specifications of the burner manufacturer according to filter mesh and the present operating conditions. According to the recommendation of the IWO Institut für Wärme- und Öltechnik e.V., filter inserts made of sintered plastic materials with a mesh width of 30-75μm should be used. Regarding oil systems with so-called “Low-NOx burners” and burners with lower heat outputs, the GOK filter inserts FEINFILTERUNG (fine filtration) with a mesh width of < 35μm are recommended.

**ASSEMBLY**
Before assembly, check that the product is complete and has not suffered any damage during transport. Installation, maintenance and start-up may only be carried out by companies that are **specialist companies** for this work in terms of Section 3 of the German Ordinance on Facilities Handling Substances Hazardous to Water (VAwS) from 31 March 2010 (Federal Law Gazette, P. 377).

**Connection assembly**

- Female thread G 3/8 acc. to EN ISO 228-1, as screw-in opening G 3/8-UA-O acc. to prEN 12514-4:2009 Figure D.1
- O-ring dimensions 14x2 mm, included with delivery
- Screw-in connectors, type B acc. to EN ISO 1179-4 or prEN 12514-4 Annex C (adequate with type A acc. to DIN 3852-2)
  - The recommended maximum torque with steel screw-in connector is 15 Nm
Combined heating oil filter breather type GS Pro-Fi® 3

Universal connection set (UA):

- The female thread can also take the GOK universal connection set type UA, which corresponds to a compression joint type G acc. to prEN 12514-4:2009 Annex D.

Piping used:
- Copper pipe with outer diameter 6, 8 or 10 mm, e.g. acc. to EN 1057

Flexible pipe assembly
- The following connections may be used in addition for flexible oil lines and their pendant:
  - cap nut G 3/8 with inside taper 60° pursuant to prEN 12514-4 Appendix B

NOTICE
More information about Universal connection fitting type UA can be found at www.gok-online.de/de/downloads/technische-dokumentation.

NOTICE
A reinforcement ring must be used with all thin-walled pipes and with soft pipe materials.

WARNING
Brass reinforcement rings may not come into contact with aluminium pipe. Risk of corrosion!

NOTICE
More information about compression fittings can be found at www.gok-online.de/en/downloads/technical-documentation/Assembly instructions - Compression fittings.

Installation position and mounting
- Installation position vertical as a matter of principle,
  - filter tray ⑧ with filter insert ⑦ at the bottom
  - vent tray ② at the top.
- The GS Pro-Fi 3® is delivered with pre-mounted holding plate ③ for wall assembly. It can be mounted on both sides of the housing.
- Pull down the holding plate, remove the holding plate, suspend it with the screws on the opposite side of the housing, and push it upwards.

The specialised company and the operator must observe, comply with and understand all of the following instructions in this assembly and operating manual. For the system to function as intended, it must be installed professionally in compliance with the technical rules applicable to the planning, construction and operation of the entire system.
**NOTICE**

Malfunctions caused by residues.
Proper functioning is not guaranteed.
✓ Visually check that there are no metal chips or other residues in the connections.
✓ It is important that metal chips or other residues are blown out.

**NOTICE**

Install with suitable tools, if required.
Regarding screw connections, use a second spanner to brace against the connection nozzle.
Do not use unsuitable tools, such as pliers.

Option assembly metal filter tray PS 16bar instead of plastic filter tray

- Loosen the clamping ring by anti-clockwise rotation, hold and remove the filter tray
- Do not damage the O-ring, refurbish if required (oil new O-ring!)
- Fit the metal filter tray and the O-ring and manually tighten by rotating the clamping ring in a clockwise direction
- Perform leak testing activities!

**LEAK CHECK**

Check the condition of the system:
- before initial start-up,
- after major changes,
- after repairs,
- after the system has been out of operation for more than one year.

Check the system with 1.1 x the operating pressure using air or an inert gas. The system is leakproof if the test pressure does not drop after 10 minutes.
Prior to start-up, the oil system with GS Pro-Fi® 3, including the connections, must be subjected to leak testing. This may be performed within the framework of leak testing pursuant to TRÖI and worksheet DWA-A 791, as well as function check of the oil system.
In the event of possible leaks, these must be eliminated, e.g. repeated assembly of the connections using new gaskets, tightening of the screwed connections.
Observe the notice in MAINTENANCE!

**NOTICE FOR LEAK TESTING**

We recommend using the vacuum test device type UPE-300 item no. 13 602 00 for leak testing.

**NOTICE**

Please find comprehensive information on leak testing pursuant to TRÖI and worksheet DWA-A 791 on the Internet.

Pursuant to TRÖI chapter 4.10.4.2. “Vacuum leak testing”, the test time is:
- 10 minutes plus the time required for temperature equalisation.
The oil line is deemed tight if the pressure increase during the specified test time is not higher than 30mbar. If this requirement is not met, the leak must be found applying a slight over-pressure and foam-forming substances and the error must be eliminated. Thereafter, the oil system must be re-checked.
START-UP

Once leak testing is completed and the system is leak-tight, only the toggle valve of the tank discharge fitting or, for systems without toggle valve, the shut-off safety device must be opened. The vacuum still present in the line will suck fuel oil immediately. If required, re-pump.

Unless specified differently in the burner/boiler manufacturer’s manual, the procedure is as follows:

- bleed the installed oil lines (burner supply and return lines) and the fittings using a suction pump and fill in fuel oil
- open the shut-off fitting and the vent screw
- connect the suction pump directly at the vent screw using the supplied adapter item no. 13610-60
- only stop the suction process once the vent tray is filled with oil as well
- close the vent screw in a leak-tight manner

OPERATION

During ongoing operation of the oil system, the GS Pro-Fi® 3 does not require any operation. The integrated shut-off fitting must be opened. For this, the rotary handle must be rotated in the flow direction.

Due to the design of the GS Pro-Fi® 3, the full fuel oil column without any noticeable shares of air is available when starting the burner.

TROUBLESHOOTING

<table>
<thead>
<tr>
<th>Fault cause</th>
<th>Action</th>
</tr>
</thead>
</table>
| Hose rupture in the supply or return line | • Burner switches to failure due to the sucked in ambient air
✓ Restore the leak-tightness of the system |
| Released air in the vent tray | • Burner switches to failure due to the sucked in ambient air
✓ Restore the leak-tightness of the system |
| Strong noise generation of the burner pump | • Burner switches to failure due to the sucked in ambient air
✓ Restore the leak-tightness of the system
• Filter insert is clogged
✓ For replacing the filter insert, see MAINTENANCE |
| Level in the filter tray decreases | • System has a leak
✓ Restore the leak-tightness of the system |
| Filter tray runs empty, | • System has a leak
✓ Restore the leak-tightness of the system |
MAINTENANCE

The following is recommended within the framework of annual maintenance or after extended periods of non-use:

- leak testing of the fitting, including the connections
- visual inspection of the plastic filter tray ⑧ and the vent tray ② for possible damage: cracks or deformation
- replacement of the filter insert ⑦
- after flooding, clean the external contamination on the filter using a commercially available domestic cleaning agent

**NOTICE**

When using solvent-containing cleaning agents, the plastic filter trays or other plastic parts may be destroyed

REPLACEMENT

If there is any sign of wear or if the product or parts thereof are damaged, it must be replaced. When the product has been replaced, observe the steps ASSEMBLY, LEAK TESTING and START-UP.

Replacing the filter insert:

- Switch off the burner and prevent the return of the oil column into the tank
- Close the shut-off fitting ⑪
- Use a collector
- Clean the line sections downstream of the filter particularly carefully prior to re-installation

<table>
<thead>
<tr>
<th>without replacement filter</th>
<th>with replacement filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Loosen the clamping ring⑥ by anti-clockwise rotation, hold and remove the filter tray ⑧</td>
<td>Loosen the replacement filter by anti-clockwise rotation, hold adapter using a jaw spanner SW 70</td>
</tr>
<tr>
<td>• Do not damage the O-ring, refurbish if required (oil new O-ring!) Use red GOK O-ring only!</td>
<td>• Oil the gasket of the new replacement filter</td>
</tr>
<tr>
<td>• Unscrew the old filter insert ⑦</td>
<td>• Fit new replacement filter and tighten through clockwise rotation</td>
</tr>
<tr>
<td>• Clean the sealing surface and the O-ring</td>
<td></td>
</tr>
<tr>
<td>• Insert the new filter insert ⑦ firmly</td>
<td></td>
</tr>
<tr>
<td>• Fit the filter tray ⑧ and the O-ring and tighten by rotating the clamping ring ⑥ in a clockwise direction</td>
<td></td>
</tr>
</tbody>
</table>

If the filter tray ⑧ is damaged or destroyed, it must be replaced by a new one, the approach is identical to the procedure of replacing the filter insert.
The vent tray ② can only be replaced completely with the vent screw ①.

RESTORATION

If the actions described in TROUBLESHOOTING do not lead to a proper restart and if there is no dimensioning problem, the product must be sent to the manufacturer to be checked. Our warranty does not apply in cases of unauthorised interference.
**SHUT-DOWN**

During extended periods of non-use or MAINTENANCE work, the rotary handle of the shut-off fitting must be rotated to the position perpendicular to the flow direction - the shut-off fitting is closed.

When using the product the next time, observe the steps LEAK TESTING and START-UP!

**DISPOSAL**

*In order to protect the environment, products contaminated with water-hazardous substances or that have come in contact with such substances must not be disposed of in the domestic waste, to public waters or channels.*

The product must be disposed of via local collection stations or a recycling station.

**TECHNICAL DATA**

<table>
<thead>
<tr>
<th>Maximum admissible pressure PS</th>
<th>PS 6bar with plastic tray</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS 10bar with replacement filter insert</td>
<td></td>
</tr>
<tr>
<td>PS 16bar with metal tray</td>
<td></td>
</tr>
<tr>
<td>Housing material</td>
<td></td>
</tr>
<tr>
<td>Pressure resistance housing</td>
<td></td>
</tr>
<tr>
<td>Zinc die cast ZP0410</td>
<td></td>
</tr>
<tr>
<td>PS 16bar</td>
<td></td>
</tr>
<tr>
<td>Nominal flow rate $V_n$</td>
<td>110L/h</td>
</tr>
<tr>
<td>Pressure loss Siku 70μm</td>
<td>110mbar</td>
</tr>
<tr>
<td>Pressure loss Siku 70μm</td>
<td>210mbar</td>
</tr>
<tr>
<td>Pressure loss Siku 70μm</td>
<td>105mbar</td>
</tr>
<tr>
<td>MC 7, 5 - 20μm</td>
<td>120mbar</td>
</tr>
<tr>
<td>Ventilation output</td>
<td>10L/h</td>
</tr>
<tr>
<td>Flow rate $V_{n,R}$ return line – supply line at maximum pressure difference</td>
<td>$\Delta p_{o,d,max} = 1.3$bar</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>-10°C to +60°C</td>
</tr>
</tbody>
</table>
LIST OF ACCESSORIES

<table>
<thead>
<tr>
<th>Product name</th>
<th>Item no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vacuum test device Typ UPE-300</td>
<td>13 602 00</td>
</tr>
<tr>
<td>Oil suction pump with suction and discharge hoses</td>
<td>13 610 00</td>
</tr>
<tr>
<td><strong>Spare parts for filters</strong></td>
<td></td>
</tr>
<tr>
<td>Filter tray 500 plastic blue-transparent 79mm (PS 6bar)</td>
<td>13 850 22</td>
</tr>
<tr>
<td>Filter tray 500 plastic blue-transparent 170mm (PS 6bar)</td>
<td>13 850 23</td>
</tr>
<tr>
<td>Filter tray 500 metal zinc die cast (PS 16bar)</td>
<td>13 850 25</td>
</tr>
<tr>
<td>Clamping ring 500 metal zinc die cast</td>
<td>13 850 60</td>
</tr>
<tr>
<td>O-ring 500 NBR</td>
<td>13 850 24</td>
</tr>
<tr>
<td>O-ring 500 FKM</td>
<td>25 521 64</td>
</tr>
<tr>
<td>Adapter for replacement filter metal zinc die cast</td>
<td>13 851 65</td>
</tr>
<tr>
<td>Sealing ring for adapter NBR</td>
<td>13 851 68</td>
</tr>
<tr>
<td>Retrofit kit replacement filter consisting of: Adapter, sealing ring for adapter and O-ring 500 NBR, without replacement filter (PS 10bar) for GS Pro-Fi® 3 type</td>
<td>13 851 67</td>
</tr>
<tr>
<td>Filter tray 500 plastic blue-transparent 79mm with ventilation valve (PS 6bar)</td>
<td>13 514 25</td>
</tr>
<tr>
<td>Filter tray 500 metal zinc die cast with ventilation valve</td>
<td>13 514 26</td>
</tr>
<tr>
<td><strong>Accessories for filter assembling</strong></td>
<td></td>
</tr>
<tr>
<td>Installation wrench clamping ring 500 plastic</td>
<td>13 850 88</td>
</tr>
<tr>
<td><strong>Changeover kits for filter type GS Pro-Fi® 3</strong></td>
<td></td>
</tr>
<tr>
<td>to filter insert long Siku 70µm</td>
<td>13 852 53</td>
</tr>
<tr>
<td>to filter insert long Siku 35µm</td>
<td>13 852 54</td>
</tr>
<tr>
<td>to replacement filter 25µm</td>
<td>13 851 62</td>
</tr>
</tbody>
</table>

**WARRANTY**

We guarantee that the product will function as intended and will not leak during the legally specified period. The warranty term begins when the product is handed over to the customer. The scope of our warranty is based on Section 8 of our terms and conditions of delivery and payment.

**TECHNICAL CHANGES**

All the information contained in this assembly and operating manual is the result of product testing and corresponds to the level of knowledge at the time of testing and the relevant legislation and standards at the time of issue. We reserve the right to make technical changes without prior notice. Errors and omissions excepted. All figures are for illustration purposes only and may differ from actual designs.
Combined heating oil filter breather type GS Pro-Fi® 3

APPROVAL
- DoCMR pursuant to Building Rules List according to EN 12514-2

CERTIFICATE

Certificate holder: GOK Regler- und Armaturen-Gesellschaft mbH & Co. KG
Oberbreiter Str. 2-16
97340 Marktbrief
GERMANY

Product: Installations for oil supply systems for oil burners: component parts, valves, pipes, filters, counters

Type, Model: GS Pro-Fi 3

Testing basis: DIN EN 12514-2:2000-05
Certification scheme Installations for oil supply systems (2007-01)

Mark of conformity

Registration No.: 2Y115

Valid until: 2020-06-30

Right of use: This certificate entitles the holder to use the mark of conformity shown above in conjunction with the specified registration number.

See annex for further information.

2015-11-03
Dipl.-Phys. Carlo Seiser
Certifier

DIN CERTCO Gesellschaft für Konformitätsbewertung mbH · Albeinstrasse 56 · D-12103 Berlin · www.dincertco.de
ANNEX

Certificate
2Y115 dated 2015-11-03

Technical Data
Type series: Deculator for heating oil with integrated filter and isolation valve for the operation in front of a burner pump for automatic ventilation.

- Working medium: liquid fuels according to prEN 12514-1:2009

class A:
- Heating oil EL according to DIN 51603-1-2008
- Kerosene C2 according to BS 2869
- Gasoil D according to BS 2869
- Heating oil EL according to OENORM C1109
- Heating oil, kerosene and diesel according to DIN EN 13341:2005
- Heating oil according to NBN T 52-716
- Heating oil according to M 15-008
- Heating oil according to UNI 6579
- Heating oil CH-Quality and Euro-Quality according to SN 181160-2
- Heating oil according to SS 155410

class B:
- FAME according to DIN EN 14212 and DIN EN 14124
- Canola oil according to DIN V 51605
- Bio-Liquids for combustion purposes according to prOPS 24

class C:
- Heating oil EL A Bio according to DIN V 51603-6:2008 with a rate of 30 % FAME:
  - AL A Bio max 30
- Diesel according to DIN EN 590
- Diesel according to 51628
- Domestic fuel oil EL with biogenic components according to ONR 31115
- Kerosene C2 according to BS 2869 and Gasoil D nach BS 2869 with a rate of 30 % FAME
ANNEX

Certificate
2Y115 dated 2015-11-03

- Temperature range: - 10 °C to 60 °C
- Working overpressure:
  Plastic cup max. 6 bar
  Easy-change filter max. 10 bar
  Metal cup max. 16 bar
- Oil flow rate (without aerial admixture) according to prEN 12514-3:2009 and OPS 23
  Vn = 110 L/h
  Siku 70 μm = 110 mbar
  Siku 35 μm = 210 mbar
  Siku 70 μm = 105 mbar long
  MC 7, 5 - 20 μm = 120 mbar
- Ventil capacity by Vn 10 l/h (air) according to prEN 12514-3:2009
- Nominal width/connection type:
  Internal thread G3/8-UA-0 or cone connector RVS 6, 8, 10 12 mm or UA-GOK
  universal connecting set (compression type mechanical joint clamped joint type G)
  > connection types according to prEN 12514-4: 2009 annex C and G

Testing laboratory/Inspection body
TÜV Rheinland
Energie und Umwelt GmbH
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Test report(s)
S51 2005 Z2 dated 2005-06-10
S51 2015 Z7 dated 2015-07-03

Remark(s)
The requirements of prEN 12514-3:2009-06 were considered for the evaluation of this fuel oil and deaerator combination.