КМF Технические характеристики

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Смоленск (4812)29-41-54

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Applications

The KMF filter is a versatile strainer basket filter for gaseous and liquid media made from GGG-50 (nodular graphite) in accordance with EN-GJS-500-7 or from Rg 10, (special version). It is characterized by high performance, low weight and space-saving design, as well as an extremely easy, fast cleaning.

 Flexible combination of housing sizes, filter surfaces and connecting sleeves.

Six housing sizes can be supplied with different connecting sleeves, which ensures adaptation to the operating requirements and dirt loads.

• Variable filter surface selection.

Brief description

The filter consists of a cast housing with opposing connecting sleeves of equal height. The filter cover is alternatively fastened with stud bolts and nuts or with a clamp. The venting device in the cover and drain device in the housing are included in the scope of supply.

· Quick-acting clamp for cleaning the strainers.

Notice:

The compatibility between medium and vessel or sealing material is the responsibility of the operator.

The design of the pressure vessel is based on a quasi-static operation (load cycle number \leq 1000 according to AD 2000 Merkblatt S1, section 1.4). Max. Differential pressure inletoutlet 1 bar.

Filter media

Alternatively the filter can be equipped with a basket strainer, ring or other inserts. For example the filter insert consists of perforated plate, which is optionally spanned with mesh of different widths. The medium to be filtered flows through the strainer insert from the inside to the outside. The particles remain in the strainer and can be removed with the strainer.

Safety instructions

Do not use the filter with clamp closure for filtering of hazardous media (e.g. toxic, flammable, or caustic media) and gases or vapors! In these cases select bolts and nuts for the cover closure. Prior to using the filter verify the intended use. If there are changes in operating conditions or the medium then a conformity evaluation in accordance with PED EN 2014/68/EU must be carried out (for this please contact us as the manufacturer or execute a hazard analysis with conformity evaluation).

Installation

Installation in pipes is done by the means of sleeve connections. Ensure that the standard version of the filter is installed vertically and mechanically tension-free without additional loads. The medium must flow in the direction specified on the housing. Incorrect installation can cause filter malfunctions and damage the inserts.

Commissioning/operating instructions

- 1. Open the venting device until liquid escapes.
- 2. Close venting device.
- 3. Filter is ready for operation.

Attention:

Since this is a pressure vessel make absolutely sure that the filter is depressurized before starting maintenance tasks. Follow the safety and accident prevention guidelines required for the medium.

Cleaning

- 1. Relieve the pressure on the filter by means of the venting device and drain device.
- 2. Loosen the filter closure and lift off the cover.
- 3. Drain the filter via the drain device to a level that is at least below the strainer support.
- 4. Pull the strainer insert upward and out of the filter housing. The strainer can now be cleaned by carefull blowing it out or blasting it with compressed air, steam, or water. If necessary the strainer must be soaked and cleaned in a suitable cleaning agent. In some circumstances optimum cleaning is achieved by means of ultrasonic bath. For all cleaning types ensure that the filter mesh is not damaged.
- 5. When assembling the filter in the reverse sequence, check the sealing elements for wear and replace them if necessary.

Maintanance & Inspections

A single basket filter does not have a high grade of maintenance. Nevertheless the filter shall regularly be visually inspected from the outside during regular shift maintenance on site. Recommendation for visual inspection is 1 time per month. The filter has to be cleaned acc. site requirements and present grade of impurities (see position: cleaning). During the removal of the basket the filter vessel and insert shall be visually inspected and both insert and vessel cleaned if necessary.

Minimum 1 visual inspection from inside per year is mandatory in operation, an inspection every 6 months is recommended

Recommendation:

All gaskets shall be replaced with new gaskets for safety in operation. Old gaskets can pose a danger of leakage and may damage equipment.

Filter insert shall regularly be changed for a new one, recommended is a change after 3 years of operation as minimum. Optional rubberlined surfaces shall regularly be inspected for superficial damages, recommended is an inspection every 6 months, minimum 1 time per year. Damages shall immediately be repaired acc. manufacturer repair procedure for rubberlining. Operator shall handle rubberlined filters with care and avoid mechanical damage of lining.

During special maintenance (Shutdown of plants or Yard stays) on heavy duty applications a spark test of rubberlining is recommended. The manufacturer shall be contacted for details before performing it to check suitability of test equipment.

Reparable ITEM's of filter

The filter has no repairable items, damaged parts shall be replaced. Its recommended to change gaskets after disassembly of the gasket area.

Disposal Plan

No harmful substances or asbestos are used as material of construction.

The filter has stainless steel and therefore regenerable inserts which can be cleaned by appropriate means and following safety instructions of media retained in inserts. Operator shall follow safety instruction of filtered media during cleaning. Damaged filter insert shall be disposed acc. local regulations for stainless steel metallic waste (fully recyclable) after cleaning. To high differential pressure dirty before cleaning may damage the fine mesh if installed. A dp over 0.5 bar is not recommended.

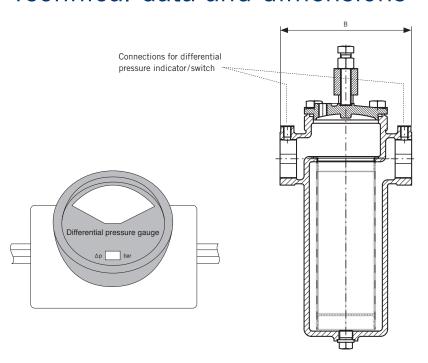
Rubber and synthetic materials (plastic) shall be disposed acc. local regulations, Gaskets are NBR or Aramid fibers reinforced NBR and shall be disposed acc. applicable local regulations.

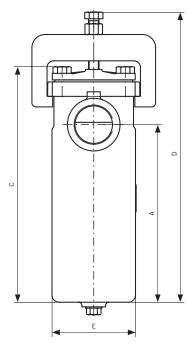
Storage plan

Goods not installed shall be stored in dry place without UV radiation and protected from humidity from temperatures in a recommended range of +5 to +45°C. Recommended shelf time 5 years due to gasket lifetime. Goods stored shall be inspected visually acc. storage conditions on regular basis. Minimum yearly visual inspection (outside/inside) is recommended.

Flanges and all openings shall be closed during storage. Wrapping of items into plastic in storage is not environmentally recommended and also may lead to condensation on metal surface of filter and surface corrosion. Covering of goods is preferred in storage with breathable material (fabric). Drying agent use is recommended.

Technical data and dimensions





	Nom. diameter	Vessel design pressure		E	А	В	С	D	Flow rate	Volume	Filter surface area		Weight
		Clamp	Bolts	Ø			Clamp	Bolts	2.5 m/s		Basket strainer	Ring strainer	
		bar	bar	mm	mm	mm	mm	mm	m³/h	L	cm ²	cm ²	approx. in kg
GR 0.5	G 1/2	10	16	80	153	160.5	208	259	3	0.6	150	195	4.5
	G 3/4	10	16	80	153	160.5	208	259	3	0.6	150	195	4.5
	G 1	10	16	80	153	160.5	208	259	4.5	0.6	150	195	4.5
GR 1	G 1/2	10	16	127	150	230	261	326	3	2	260	390	10
	G 3/4	10	16	127	150	230	261	326	3	2	260	390	10
	G 1	10	16	127	150	230	261	326	4.5	2	260	390	10
	G 1 1/4	10	16	127	150	230	261	326	7	2	260	390	10
	G 1 1/2	10	16	127	150	230	261	326	18	2	260	390	10
GR 2	G 1/2	10	16	127	208	230	308	384	3	2.5	485	730	12
	G 3/4	10	16	127	208	230	308	384	3	2.5	485	730	12
	G 1	10	16	127	208	230	308	384	4.5	2.5	485	730	12
	G 1 1/4	10	16	127	208	230	308	384	7	2.5	485	730	12
	G 1 1/2	10	16	127	208	230	308	384	18	2.5	485	730	12
GR 3	G 3/4	10	16	127	268	230	379	444	3	3	560	840	14
	G 1	10	16	127	268	230	379	444	4.5	3	560	840	14
	G 1 1/4	10	16	127	268	230	379	444	7	3	560	840	14
	G 1 1/2	10	16	127	268	230	379	444	12	3	560	840	14
	G 2	10	16	127	268	230	379	444	18	3	560	840	14
	G 2 1/2	10	16	127	268	230	379	444	30	3	560	840	14
GR 3.5	G 1 1/2	10	16	127	316	230	418.5	507	12	3.7	690	1.150	16
	G 2	10	16	127	316	230	418.5	507	18	3.7	690	1.150	16
	G 2 1/2	10	16	127	316	230	418.5	507	30	3.7	690	1.150	16
GR 4	G 1 1/2	10	16	127	393	230	504	569	12	4.2	870	1.300	18
	G 2	10	16	127	393	230	504	569	18	4.2	870	1.300	18
	G 2 1/2	10	16	127	393	230	504	569	30	4.2	870	1.300	18

Technical data

Technical data						
	Standard version	Special version or supplemental equipment				
Filter insert	Strainer insert	Ring type strainer insert, Double strainers, cartridges, slot wedge wire, star pleated strainer				
Filter mesh	10–1,000 μm (microns) Stainless steel mesh, 1,0–10 mm perforated plate	5 μm, square perforation, braid, cartridges, pleated mesh				
Filter cover	Bolts and nuts	Clamp. Housing with clamp already predrilled for stud bolts - modification by customer possible.				
Venting device	Bolt	Ball valve/Flange				
Draining device	Bolt	Ball valve/Flange				
Connection	Pipe female thread, Withworth	With welded-on ends				
Materials						
Housing and cover	GGG-50, DN 1693 DIN EN 1563 or EN GJS-500-07	Rg 10, GGG-40.3 (EN GJS-400-18)				
Cover seal	NBR	FPM, EPDM, MPQ, PTFE				
Perforated plate/mesh	1.4301/1.4401	1.4571/1.4401, Ms/Bz, Hastelloy C 4, various plastics				
Extras						
Additional filter	-	Magnetic filter insert				
Heater	-	Customized heating connections				
Zinc protection	-	For sea water filters				
Differential pressure indicator	Connection possibility G 1/4"	Optical, with electric contacts				
Housing surface treatment						
Inside	Anti-corrosion primer	Untreated, anti-corrosion oil, epoxy resin, Chemonit 33 (rubberlined), E-CTFE, Levasynt				
Outside	Epoxy paint RAL 5010 blue	Epoxy resin, E-CTFE, Levasynt, RAL acc. specification				
Design/Certification						
	Declaration of Conformity – Lloyds Register certified foundry acc. to DGRL 2014/68/EU	3.1. Certificate, DGRL/TÜV, GL, LS, DNV, ABS, LR TA type approval, TR TF/TR CU Certificates (EAC) or on request				

Accessory

We produce and deliver additional design and material variants on request. We solicit your request.









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