Operating Instructions

for

Rotor flow Indicator

Model: DKF

1. Contents

Manufactured and sold by:

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2. Note

Please read these operating instructions before unpacking and putting the unit into operation. Follow the instructions precisely as described herein.
The devices are only to be used, maintained and serviced by persons familiar with these operating instructions and in accordance with local regulations applying to Health & Safety and prevention of accidents.

When used in machines, the measuring unit should be used only when the machines fulfil the EC-machine guidelines.

as per PED 2014/68/EU

In acc. with Article 4 Paragraph (3), "Sound Engineering Practice", of the PED 2014/68/EU no CE mark.
Diagram 8, Pipe, Group 1 dangerous fluids

3. Instrument Inspection

Instruments are inspected before shipping and sent out in perfect condition.
Should damage to a device be visible, we recommend a thorough inspection of the delivery packaging. In case of damage, please inform your parcel service / forwarding agent immediately, since they are responsible for damages during transit.

Scope of delivery:
The standard delivery includes:
- Rotor Flow Indicator: Model: DKF
- Operating Instructions

4. Regulation Use

Any use of the Rotor Flow Indicator, model: DKF, which exceeds the manufacturer's specifications, may invalidate its warranty. Therefore, any resulting damage is not the responsibility of the manufacturer. The user assumes all risk for such usage.

5. Mechanical Connection

5.1 Before installation

- Remove all packing materials and transport restraints and ensure that no such materials remain in the device.
- Make sure that the maximum operating pressure and temperature of the device are not exceeded. (see section 6.Technical Information..)
- Install the flow indicator in the piping system, ensuring that the piping is rigidly supported at the inlet and outlet of the unit with pipe clamps
- Ensure that the piping is aligned with the inlet and outlet fittings and the no piping induced stresses are exerted in the indicator. This stress can result in damage to the device during system operation
- Protect the device from external damage.
- Avoid pressure surges within the indicator chamber, such as those arising from fast start up/shut off of flow or pulsating flow.
- If possible, after completing the mechanical installation, check the threaded connection between the device and the piping for leakage immediately.

6. Technical Information

Maximum Temperature: 120 °C
Maximumg Pressure: 6 bar

Materials:

	DKF-11...	DKF-21...
Housing:	brass (MS-58)	brass (MS-58)
Glass dome:	Borosilicate glass	Borosilicate glass
Rotating vane:	POM	PTFE
Axle:	brass (MS-58)	brass (MS-58)
Sealing:	EPDM	Viton
Rings:	brass (MS-58)	brass (MS-58)
Screws:	st. steel	st. steel

7. Order Codes

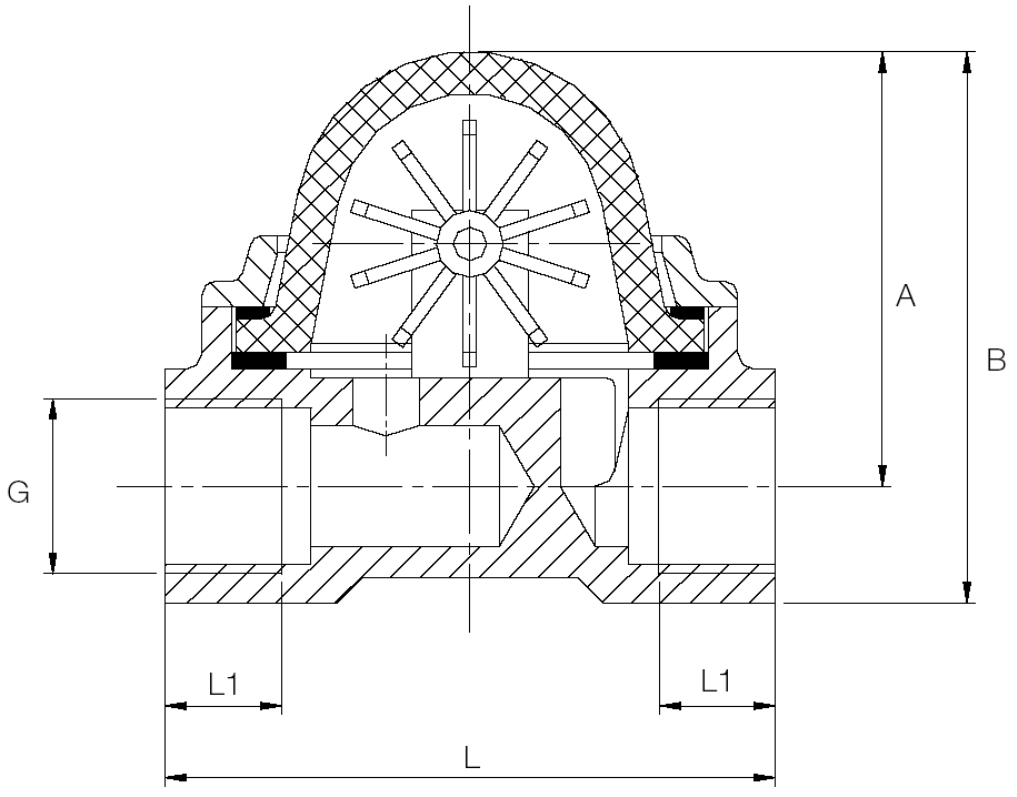
Order data (Example: **DKF-1101H R06**)

Indication range		Model		Connection	
l/min water	∆ P (bar)*	DKF-11..	DKF-21..	G-thread	NPT-thread
0.14 - 2	1	**DKF-1101H..**	**DKF-2101H..**	**R06**	**N06**
0.25 - 7	1	**DKF-1102H..**	**DKF-2102H..**	**R08**	**N08**
0.45 - 18	1	**DKF-1103H..**	**DKF-2103H..**	**R10**	**N10**
0.6 - 28	1	**DKF-1104H..**	**DKF-2104H..**	**R15**	**N15**
1 - 61	1	**DKF-1105H..**	**DKF-2105H..**	**R20**	**N20**
1.8 - 83	1	**DKF-1106H..**	**DKF-2106H..**	**R25**	**N25**

* max. flow

8. Dimensions

Model	p_{max}	t_{max}	G	NPT	L1	L	A	B	Weight kg
DKF-..01H	6 bar	120 °C	G 1/8	1/8“	8	56	41	50	0.3
DKF-..02H	6 bar	120 °C	G 1/4	1/4“	10	56	41	50	0.28
DKF-..03H	6 bar	120 °C	G 3/8	3/8“	14	73	53	67	0.57
DKF-..04H	6 bar	120 °C	G 1/2	1/2“	14	73	53	67	0.54
DKF-..05H	6 bar	120 °C	G 3/4	3/4“	16	109	72	94	1.41
DKF-..06H	6 bar	120 °C	G 1	1“	18	109	72	94	1.30



9. ATEX - Declaration of the Manufacturer

9.1 General

Risk analysis report pursuant to EN 13463 (positive list) for use in category 2 Explosion Risk Area was done.
When used properly, and being a piece of mechanical equipment, the rotor flow indicator Type DKF-x1****** does not have its own potential source of ignition**; it is not assigned an ID in the sense of the ATEX Directive.**

9.2 Areas of use

The units can be used as follows:

- In the Zone 2 (Gas-Ex, Cat. 3G) into explosion group of IIA, IIB and IIC
- In the Zone 22 (Dust-Ex, Category 3D) at non-conductive dusts with a minimum igniting energy of > 3 mJ
- In the Zone 1 (Gas-Ex, Cat. 2G) into explosion group of IIA, IIB and IIC
- In the Zone 21 (Dust-Ex, Category 2D) at non-conductive dusts with a minimum igniting energy of > 3 mJ
- In normal use, the rotor flow indicators are **completely filled with medium**. Zone 2 – or Zone 1 – conditions may prevail for a short time.

9.3 Evaluation

Adherence to EN 13463, Parts 1 to 8 (Mechanical Explosion Prevention)
When used properly, the rotor flow indicator does not have its own potential source of ignition as per the conditions of Categories 2 and 3. It does however fulfil the following requirements:

- The manufacturer has subjected all exposed parts of the device to the impact and environmental strain tests pursuant to EN 13463-1.

When installed, the device must be protected against external energy impact – or measures should be taken to take into account any possible zone violations in the system.

- The outer casing of the device is made of brass or stainless steel and borosilicate glass; there are no light metal parts.

Hofheim, 12. Nov. 2015

H. Peters
General Manager

M. Wenzel
Proxy Holder