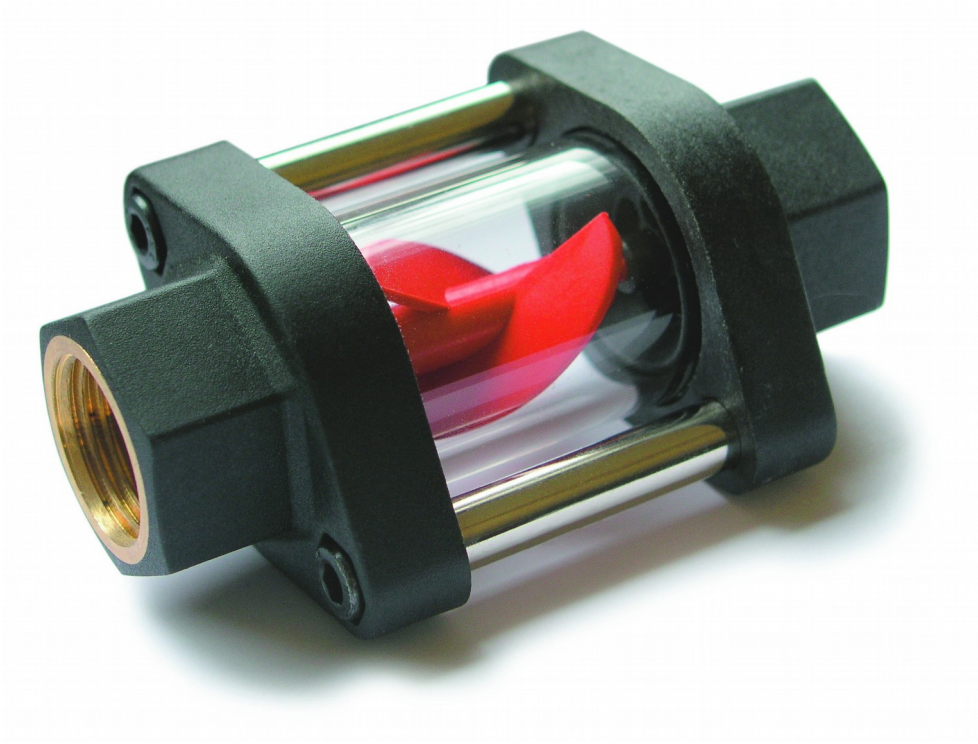
Instruction Manual

DG03

Sight Flow Indicator with rotor



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Safety Information

General Instructions

To ensure safe operation, the device should only be operated according to the specifications in the instruction manual. The requisite Health & Safety regulations for a given application must also be observed. This statement also applies to the use of accessories. Every person who is commissioned with the initiation or operation of this device must have read and understood the operating instructions and in particular the safety instructions!

The liability of the manufacturer expires in the event of damage due to improper use, non-observance of this operating manual, use of insufficiently qualified personnel and unauthorized modification of the device.

Proper Usage

The flow indicators of the series DG03 are used for reliable optical control of transparent liquids which do not attack the materials used. Any other use of the device is prohibited and outside the scope of application.

In particular, applications in which shock loads occur (for example, pulsed operation) should be discussed and checked in advance with our technical staff.

The devices of the DG03 series should not be used as sole monitoring devices in order to detect or even avoid dangerous operating states in plants and machines. The plant or machine itself must be planned and constructed in such a way that critical conditions which pose a danger to man and the environment are excluded from the outset

Dangerous substances

For dangerous media such as e.g. Oxygen, Acetylene, flammable or toxic substances as well as refrigeration systems, compressors, etc. must comply with the relevant regulations beyond the general rules.

Qualified Personnel

The devices of the DG03 may only be installed by trained, qualified personnel who are able to mount the devices correctly. Qualified personnel are persons, who are familiar with assembling, installation, placing in service and operating these devices and who are suitably trained and qualified.

Inward Monitoring

Please check directly after delivery the device for any transport damages and deficiencies. Additional with reference to the accompanying delivery note the number of parts must be checked.
Claims for replacement or goods which relate to transport damage can only be considered valid if the delivery company is notified without delay.

Installation and commissioning

Assembly and installation

The following points must be observed during assembly and installation to ensure trouble-free use of our devices.

- Take appropriate measures to prevent the medium from freezing. If the device is later to be exposed to environmental temperatures < 4 °C, it must not be operated with pure water. Observe the permissible mounting positions in the product information.
- The device must not be used as a fixed point.
- The connecting flange / thread must match.
- A filter should be provided for heavily soiled media.
- Observe the specified operating pressure and the permissible temperature range.
- Thermal expansion of the pipelines must be compensated by compensators.
- The device can be used horizontally or vertically.
- With the DG03 series unit, flow in both directions is possible.
- When tightening the screw connection, lock the connection so that no torque is transmitted to the body.
- The devices are designed for low viscosity media. High viscosity media delay the start-up of the turbine.

Commissioning

Before commissioning, observe the limit values specified in the product information, e.g. for pressure stage, temperature range or maximum permissible flow rate.

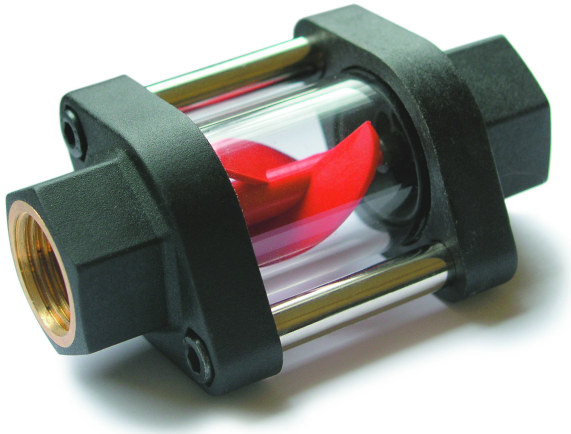
- If protective caps are used, remove them directly before installation.
- Flush the pipe system before installation to remove dirt.
- Seal the device properly during installation.
- For aggressive media, the resistance must be checked.
- In order to avoid strong pressure surges, we recommend that you fill and vent the system before commissioning. Pressure surges must not exceed the value of PN.
- Make sure that the installation is carried out properly.

Maintenance and care

The devices operate maintenance-free with a clean medium. We recommend that a filter be provided for contaminated media.

DG03

Turbine Flow Indicator



- applicable for liquids and gases
- robust plastic housing
- any flow direction
- turbine 360° visible
- bidirectional
- max. temperature 100 °C
- max. pressure 10 bar

Description:

The flow indicator DG03 are used for a reliable visualization of transparent liquids. An indicative red turbine wheel rotates inside a glass-tube proportional to the flow. In this way it provides an indication of the flow rate at present.
The devices have a 360° vision of the turbine. They are built for a long working life, thanks to the design of the turbine's bearings.

Typical applications:

The flow indicator DG03 are used for monitoring of liquids with low and medium viscosities in pipe systems.

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Nominal diameters and flow rates:

Connection G	Qmax recom. l/min water	Start up turbine l/min		
		water	40 mm²/s	41-150 mm²/s
G 1/4	6	0,6	2,5	3,5
G 3/8	10	1,2	3	4
G 1/2	15	1,2	3	4
G 3/4	30	2,1	3,7	5
G 1	50	2,1	3,7	5

Model Code:

Order Number:	DG03.	10.	0

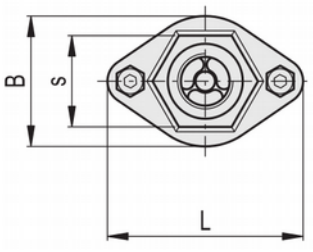
Turbine flow indicator

Connection:
08 = G 1/4 female, design A
10 = G 3/8 female, design A
15 = G 1/2 female, design A
20 = G 3/4 female, design B
25 = G 1 female, design B

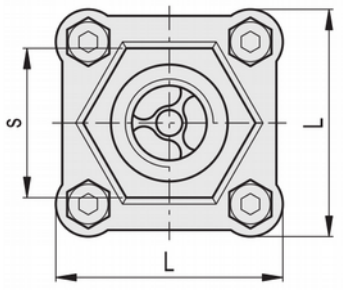
Special Features:
0 = without
1 = please specify in plain text

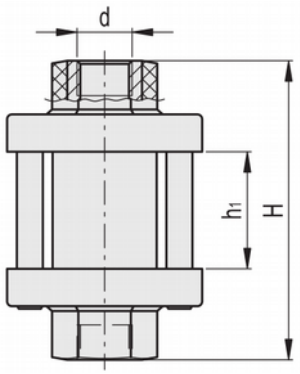
Dimensions:

Design A



Design B





Technical Data:

Max. pressure:	140 psi/ 10 bar
Medium temperature:	-20...+100°C (-4...+212°F)
Ambient temperature:	-20...+70°C (-4...+158°F)
Installation position:	any

Materials:

Housing:	PPh
Connection:	brass CW614N
Turbine:	PPh
Axis:	PPh
Bearing:	stainless steel balls 1.4301
Glass:	borosilicate glass
Gasket:	NBR

Maximum flow velocity with liquids should not be more than 3 m/s.

d	Design	H [mm]	h1 [mm]	L [mm]	s [mm]	Weight [kg]
G 1/4	A	66	22	44	20	0,11
G 3/8	A	92	36	60	28	0,18
G 1/2	A	92	36	60	28	0,18
G 3/4	B	114	46	70	46	0,60
G 1	B	114	46	70	46	0,60

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