Sudick

Filter

GF.....

Overview

This filter, used for gas internal pipelines, boasts a high dust - collection capacity. The maximum flow velocity is 20 meters per second. It can be equipped with a pressure - measurement joint to monitor the filter.

Applications

Models GF/1, GF/3, and GF are gas and air filters designed to protect subsequent valves. They are suitable for filters using gases in groups 1, 2, and 3, as well as other neutral gaseous media.

Description

Functions

- The filter can be installed in gas internal pipelines and compressed air pipelines to protect subsequent valves.
- The filter element, made of polypropylene non - woven fabric, has a pore diameter of ≤50μm.
- The non - woven fabric can trap dust, chips, iron rust, and other solid impurities and pollutants in the gas.
  The filter will lose its protective function when the dust collection capacity is exceeded or the pressure drop is too high.

Installation

- Pay attention to the airflow direction indicated by the arrow on the filter housing.
- Allow space for replacing the filter element.
- Installing the filter cover vertically facilitates cleaning of the filter housing.
- Check the airtightness after completing the installation.

Filter Element Replacement

- Replace at least once a year
- Replace when the pressure drop exceeds that of a new filter element by 100%.
- Replace when the pressure drop reaches the maximum value of 50 mbar.

Filter Monitoring Device

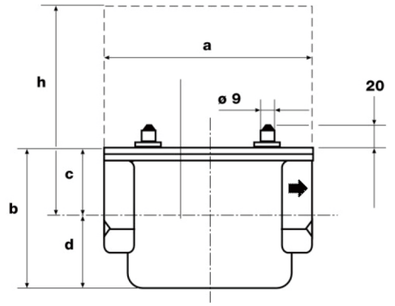
- For GF 5..., the G1/4 measurement joint can be replaced with a suitable threaded joint, enabling connection of a gas differential pressure monitor for pressure drop monitoring.
  Note: There should be no direct contact between the filter and hardening brick walls, concrete walls, floors, etc.

Technical Parameters - Thread Specifications

Nominal Diameter Screw Threads	DN 15 DN 20 DN25DN40 DN 50 Rp 1/2 Rp 3/4 Rp 1 Rp 1 1/2 Rp 2 According to ISO 7-1 Standard
Max Working Pressure	GF 1…/1 bar GF 6…/6 bar
Max Flow Velocity	≤20 m/s
Ambient Temperature	-15℃ to +80℃
Filter Element Pore Diameter	≤50 μm
Materials	Housing Die-cast Aluminum Sealing Parts NBR Filter Element Synthetic Fiber Filter Housing POM
Installation Position	Any position, preferably with the cover installed vertically

Installation Dimensions [mm] - Thread Specification

H Space Required for Filter Replacement



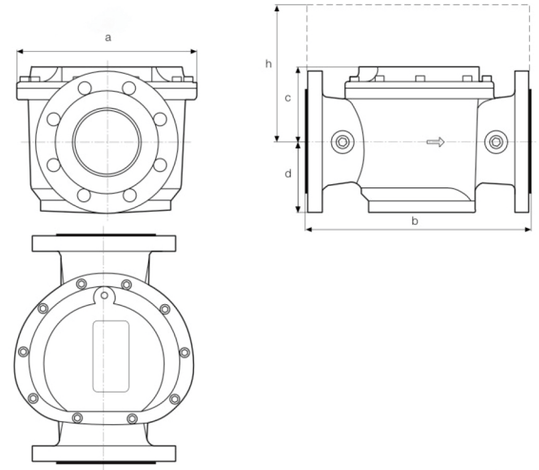
Model	Max Working Pressure (bar)	Connection Rp	Installation Dimensions					Weight
			a	b	c	d	H	[kg]
GF 1005/1	1.0	Rp 1/2	120	90	35	55	125	0.64
GF 1007/1	1.0	Rp 3/4	120	90	35	55	125	0.64
GF 1010/1	1.0	Rp 1	160	105	54	51	159	1.22
GF 1015/1	1.0	Rp 1 1/2	160	105	54	51	159	1.14
GF 1020/1	1.0	Rp 2	186	140	75	65	215	2.02
GF 6005/1	6.0	Rp 1/2	120	90	35	55	125	0.688
GF 6007/1	6.0	Rp 3/4	120	90	35	55	125	1.26
GF 6010/1	6.0	Rp 1	160	105	54	51	159	1.27
GF 6015/1	6.0	Rp 1 1/2	160	105	54	51	159	1.25
GF 6020/1	6.0	Rp 2	186	140	75	65	215	2.07

Technical Parameters - Flange Specifications

Nominal Diameter Screw Threads	DN 65 DN 80 DN 100 Connection flanges comply with DIN 2501 Part 1 and suit pre-welded flanges meeting DIN 2633 (PN 16) and ISO 7005–2 (PN 16)
Max Working Pressure	6.0 bar
Max Flow Velocity	≤20 m/s
Ambient Temperature	-15°C to +80°C
Filter Element Pore Diameter	≤50 μm
Measurement Connection / Ignition Gas Connection	Special closed screw connector G1/4, conforming to DIN ISO 228, installed on the left side of the housing before and after the filter element.
Materials	Housing Die-cast Aluminum Sealing Parts NBR Filter Element Synthetic Fiber
Installation Position	Any position, preferably with the cover installed vertically

Installation Dimensions [mm] - Thread Specification

H Space Required for Filter Replacement

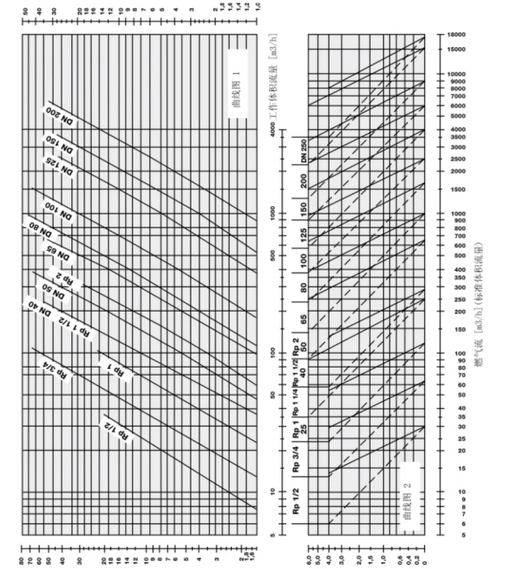


Model	Max Working Pressure (bar)	Connection Rp	Installation Dimensions					Weight
			a	b	c	d	H	[kg]
GF 60065	6.0	DN65	194	256	93	95	188	6.5
GF 60080	6.0	DN80	234	294	105	101	206	9.5
GF 600100	6.0	DN100	281	353	119	110	229	12.1

Volumetric Flow Rate Curve Diagram

Volumetric Flow vs. Pressure Drop Characteristics Curve

Pressure Loss Δp [mbar], Natural Gas, Petroleum Gas (dv = 0.64)



Pressure Loss Δp [mbar], Air (dv = 1)

Inlet Pressure pe [bar]

Mode

Sizing the Filter

Calculating Filter Dimensions

1.1Set the flow rate to the standard value on the lower scale.

1.2Draw an auxiliary line parallel to the dotted line, extending it to the height of the current inlet pressure.

1.3Determine the filter size range at the intersection point. Read the corresponding working volumetric

Mode of Operation

Calculating Pressure Loss

2.1Set the flow rate to the standard value on the lower scale.

2.2Draw an auxiliary line parallel to the dotted line, extending it to the height of the current inlet pressure.

2.3From this intersection, move vertically upwards into Curve Diagram 2. At the intersection with the previously determined filter sizing curve, read the