

# Pipeline Ancillaries FI 6.06

## Strainers and Filters

### Stainless Steel Filter



#### Technical Data

Connection DN	15 - 50
Connection G	1/2 - 2
Nominal Pressure PN	16
Temperature	190 °C
Medium	liquids, gases and steam

#### Description

Filters are used to retain contaminants present in fluids. F 6.06 is entirely manufactured from deep-drawn stainless steel featuring excellent corrosion resistance. For this reason it is used for the filtration of corrosive gases and liquids.

Top and bottom sections of the valve body are connected by a clamp ring and two bolts. Servicing/maintenance is easy and does not call for special tooling.

Two different types of tube filters can be fitted in the filter body.  
 Type P: High quality pleated 3-ply filter element (fabric/metallic fibre fleece/ fabric)  
 Type S: Filter element made of sintered stainless steel

Low pressure loss and large dirt retention capacity ensure long life and minimise servicing and maintenance.

The filter may be cleaned by blowing-through with compressed air or steam or flushing-through using a suitable cleaning agent. The best results are obtained by ultrasonic cleaning in an aqueous solution.

#### Standard

- » all stainless steel construction
- » quick-release body clamp ring
- » retained particle size: type P - 25 µm; type S - 20 µm
- » drain plug in body bottom section
- » bleed plug in body top section

#### Options

- » retained particle size 5 µm for types P and S
- » various seal materials suitable for your medium
- » special connections: Aseptic, ANSI or DIN flanges, welding spigots; other connections on request
- » special versions on request

Operating instructions, Know How and Safety instructions must be observed. All the pressure has always been indicated as overpressure. We reserve the right to alter technical specifications without notice.



#### Resistance Coefficient $\zeta$

filter element type	filter mesh $\mu\text{m}$	nominal diameter	
		G 1/2 - 1 1/4 DN 15 - 32	G 1 1/2 + 2 DN 40 + 50
P	25	15	13
	5 (Sonder)	17	16
S	20	16	15
	5 (Sonder)	28	25

#### Permitted Pressure Drop [bar]

filter element type	nominal diameter	nominal diameter	
		G 1/2 - 1 1/4 DN 15 - 32	G 1 1/2 + 2 DN 40 + 50
P	5/25 µm	16	5
S	5 µm	12	11
	20 µm	8	7

#### Calculating the pressure drop

$$\Delta p = \zeta \cdot \omega^2 / 2 \cdot \rho \cdot 10^{-5} \text{ [bar]}$$

$\zeta$  resistance coefficient (see table)

$\omega$  [m/s] flow velocity within the connection cross section (nominal diameter)

$\rho$  [kg/m<sup>3</sup>] density of fluid

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Materials		
Filter Element Type	P	S
max. Temperature	water 100 °C steam and gasses 140 °C	steam and gasses 190 °C
Body	CrNiMo-steel	CrNiMo-steel
Seal	FPM-D	FPM-D
Filter Element	CrNiMo-steel, EP	CrNiMo-steel
Profile Clamp	CrNiMo-steel	

Dimensions [mm]						
size	nominal diameter G					
	1/2	3/4	1	1 1/4	1 1/2	2
A <sub>1</sub> *	160	158	156	204	192	220
B	235	235	235	235	350	350
C	275	275	275	275	420	420
D	140	140	140	140	200	200
E	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4

\* tolerance ± 2 mm

Weights [kg]						
nominal diameter G						
	1/2	3/4	1	1 1/4	1 1/2	2
	3.1	3.2	3.3	3.7	6.8	7

Dimensions [mm]						
size	nominal diameter DN					
	15	20	25	32	40	50
A <sub>2</sub> *	160	160	160	180	200	230
B	235	235	235	235	350	350
C	275	275	275	275	420	420
D	140	140	140	140	200	200
E	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4

\* tolerance ± 2 mm

Weights [kg]						
nominal diameter DN						
	15	20	25	32	40	50
	4.2	4.7	5	6	7.4	10.3

Special designs on request.  
The pressure has always been indicated as overpressure.  
Mankenberg reserves the right to alter or improve the designs or specifications of the products described herein without notice.

### Dimensional Drawing

