

Pipeline Ancillaries

Strainers and Filters SF 2.00

Pot Strainers for Large Nominal Diameters



Technical Data

Connection DN	25 - 400
Nominal Pressure PN	6 - 40
Temperature	200 °C
Medium	liquids, gases and steam

Description

Strainers protect plant and equipment such as regulators, valves, measuring equipment against damage or operational failure caused by contamination. They are essential for start-up as well as continuous operation.

SF 2.00 is a welded steel construction and has a drain plug in its cover and in the bottom of the body. The flat strainer mesh which is positioned perpendicular to the flow, and the straight-through flow result in a minimum pressure drop and a large sludge collecting chamber.

It is recommended that the larger strainer sizes (from DN 200) should be installed with the cover at the top.

The SF 2.00 strainer may be fitted with pressure gauges upstream and downstream of the strainer.

Cleaning is extremely simple and quick. Only the cover has to be removed for dismantling.

Standard

- » stainless steel mesh
DN 25 - 150 mesh size 0.5 mm
DN 200 - 600 mesh size 1 mm
- » drain plug in cover and body bottom

Options

- » strainer sizes DN 500 – 1000 see Data sheet SF 2.00K/2.1.091.1
- » strainer mesh sizes 0.25 mm, 1 mm or 2.5 mm
- » pressure gauges upstream and downstream of the strainer
- » 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.



Screen Netting

screen	light screen aperture mm	open screen area %	standard
no. 3	0.25	41	
no. 4	0.5	51	DN 25 - 150
no. 5	1.0	67	DN 200 - 400
no. 7	2.5	69	

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Materials			
Nominal Diameter	DN 25 - 80	DN 100 - 150	DN 200 - 400
Temperature	200 °C	200 °C	200 °C
Body	St 37-2	St 37-2	St 37-2
Seal	Nova Universal	Nova Universal	Nova Universal
Screen	CrNiMo-steel	CrNiMo-steel	CrNiMo-steel
Screen Frame	CrNiMo-steel	grey cast iron opt. CrNiMo-steel	steel zincd opt. CrNiMo-steel

Dimensions [mm]											
size	PN	nominal diameter DN									
		25	32	40	50	65	80	100	125	150	
A	up to PN 40	160	180	200	230	290	310	350	400	480	
B		140	140	160	190	200	200	230	260	300	
B*		250	250	310	350	360	360	430	490	600	
C		200	200	240	320	340	340	400	470	560	
ø D		185	185	200	235	270	270	300	375	450	
E		G 1/4	G 1/4	G 1/4	G 1/4	G 1/2	G 1/2	G 3/4	G 3/4	G 1	

*size B with screen pulled out

Dimensions [mm]						
size	PN	nominal diameter DN				
		200	250	300	350	400
A	6 - 16	500	600	700	800	900
A	25	550	650	750	900	950
B	up to PN 25	310	360	420	480	550
*		750	900	1050	1150	1350
C		600	700	820	930	1050
ø D		450	530	580	710	750
E		G 1	G 1 1/4	G 1 1/4	G 1 1/2	G 1 1/2

*size B with screen pulled out

Weights [kg]										
nominal pressure	nominal diameter									
	25	32	40	50	65	80	100	125	150	
PN 16	-	-	-	-	25	35	45	55	75	
PN 40	12	15	19	28	35	45	70	90	125	

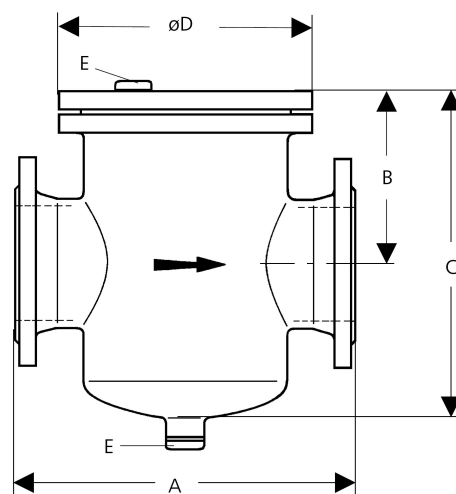
Weights [kg]					
nominal pressure	nominal diameter DN				
	200	250	300	350	400
PN 6, 10	85	145	205	310	430
PN 16	120	160	215	340	510
PN 25	170	250	320	460	650

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



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Flow resistance Δp [bar] for water, screen no. 4, clean

Mesh size [mm] [mm]				
screen no.	3	4	5	7
mesh size	0.25	0.5	1	2.5

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Calculation of flow resistance

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

ζ : Coefficient of flow resistance (see table below). The values are based on a clean screen no. 4.

w [m/s]: Flow velocity in cross-section of connection (nominal diameter). Please refer to our flow data charts.

ρ [kg/m³]: Density of medium.

Coefficient of flow resistance for clean screen no. 4									
flange connection DN	15	20	25	32	40	50	65	80	100
mesh size cm ²	16	26	30	40	52	68	86	106	160
coefficient ζ	1.2	1.9	2.0	1.6	1.8	1.4	1.5	1.7	2.4

Coefficient of flow resistance for clean screen no. 4							
flange connection DN	125	150	200	250	300	350	400
mesh size cm ²	220	330	650	1050	1500	2100	2500
coefficient ζ	2.7	2.9	3.3	3.5	3.6	3.6	3.5

Coefficient of flow resistance for clean screen no. 4							
screwed connection G	3/8	1/2	3/4	1	1 1/4	1 1/2	2
mesh size cm ²	16	16	26	30	40	52	68
coefficient ζ	1.2	1.2	1.9	2.0	1.6	1.8	1.4

For screens other than no. 4 the resistance value is given in the tables above should be multiplied by a correction factor.

Correction factor for other mesh sizes			
screen no.	3	5	7
correction factor	1.15	0.9	0.85