

PIPELINE ANCILLARIES

Strainers and filters SF 3.00

High pressure strainer



Technical data

Connection DN	15 - 100
Nominal pressure PN	160 - 500
Temperature	550 °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 3.00 is manufactured from forged steel and features a lenticular-section metallic body seal. The standard model has welding ends. The flat stainless steel 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.

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

Installation can be carried out in any position; installation with the cover at the bottom is recommended.

Standard

- » Welding ends
- » Stainless steel mesh, mesh size 0.5 mm

Options

- » Screen mesh, mesh size 0.25 mm, 1 mm or 2.5 mm
- » Special materials such as Duplex, Superduplex, Hastelloy® or titanium, others on request
- » special connections: DIN-, ANSI or JIS flanges, other connections on request
- » Special versions on request

Product



Picture similar

Technical specification

Screen netting

screen	light screen aperture mm	open screen area %
No. 3	0.25	41
No. 4	0.50	51
No. 5	1.0	67
No. 7	2.5	69

Coefficient of flow resistance for clean screen no. 4

nominal diameter DN	15	20	25	32	40	50	65	80	100
mesh size cm ²	16	26	30	40	52	68	86	106	160
Coefficient of flow resistance	1.2	1.9	2.0	1.6	1.8	1.4	1.5	1.7	2.4

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

Calculating the pressure drop

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

ζ : Resistance coefficient, the value applies to clean filter inserts

ω = [m/s]: Flow velocity in the connection cross section (nominal diameter)

ρ = [kg/m³]: density of the fluid

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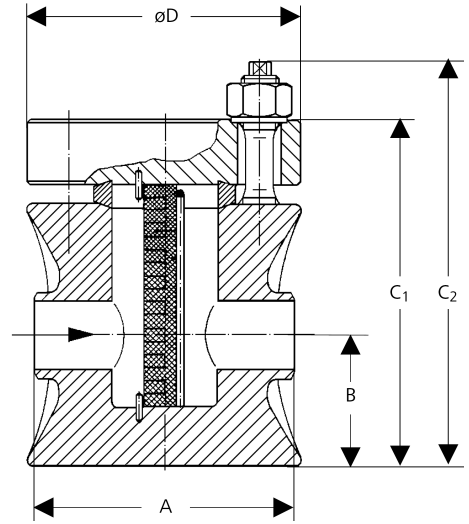


Materials

Materials				
nominal pressure	PN 160 - 500			
Temperature	400 °C	450 °C	520 °C	550 °C
Body	C 22.8	15M03	13CrMo44	
seal	ST 35.8	15Mo3	13CrMo44	10CrMo910
Screen netting	stainless steel			
Screen frame	stainless steel			

Dimensions and weights

Dimensions [mm]										
PN	size	nominal diameter DN								
		15	20	25	32	40	50	65	80	100
160	A*	125		165	165	180	180	205	250	280
	B	45		65	80	75	100	105	105	130
	C ₁	125		175	205	200	250	265	270	335
	C ₂	150		205	240	240	285	305	310	375
	øE	130		170	170	190	190	220	270	300
250	A*	125		175	175	190	190	225	250	280
	B	45		70	80	80	100	115	110	135
	C ₁	130		195	215	220	260	290	300	355
	C ₂	165		230	255	265	300	330	350	400
	øE	130		180	180	200	200	240	270	305
315	A*		140	175		200	200	225	260	285
	B		62.5	70		82.5	100	112.5	110	140
	C ₁		170	195		220	265	300	300	365
	C ₂		205	235		270	310	350	350	415
	øE		145	180		210	210	245	280	315
400	A*	130	145	185		205	195	230	270	295
	B	45	65	70		82.5	100	112.5	110	140
	C ₁	125	180	195		225	250	310	310	375
	C ₂	160	220	230		275	295	355	365	430
	øE	135	150	190		215	205	250	290	320
500	A*			195	185		200			
	B			70	75		100			
	C ₁			200	215		270			
	C ₂			245	255		310			
	øE			200	190		210			



*overall length tolerances in acc. with DIN EN 558

Weights [kg]										
Nominal pressure PN	nominal diameter DN									
	15	20	25	32	40	50	65	80	100	
160	9	16	25	31	35	42	65	90	130	
250	13	18	30	35	41	50	76	105	160	
315	15	22	33	38	48	58	85	110	175	
400	16	24	35	42	53	60	105	140	190	
500	18	28	37	45	55	63	115	150	250	

Customs tariff number
84818099

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Please send us your enquiry and allow us to advise you. Special designs on request.
The pressure has always been indicated as overpressure. Mankenberg reserves the right to alter technical specifications without notice.