

Strainer for pipelines, straight-through style, up to 400 °C

## Technical Data

Connection	G 3/8 - 2 DN 15 - 150
Nominal Pressure	PN 16 - 160

## 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 1.00 is manufactured from cast iron and has a drain plug in its cover. 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.

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

The strainer may be installed in any position; installation with the cover at the bottom is recommended.

## STANDARD EQUIPMENT

- Stainless steel mesh, mesh size 0.5 mm
- Drain plug

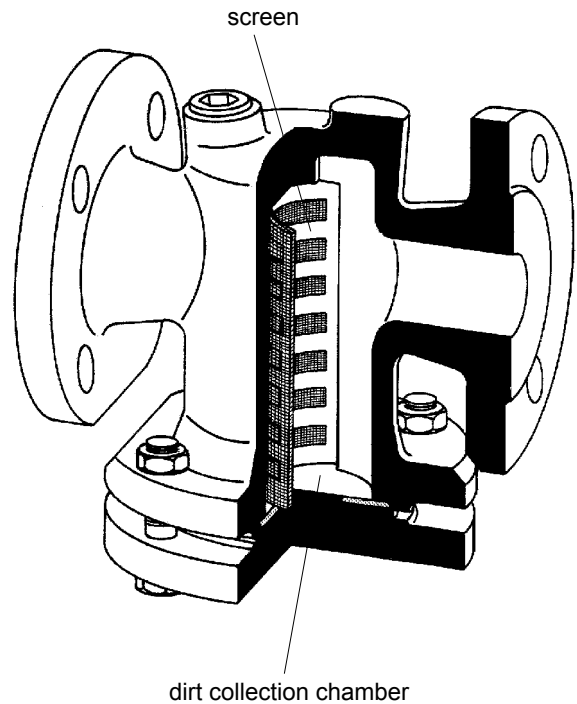
## OPTIONS

- Special versions for up to 400 °C
- 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 versions on request

Operating instructions, Know How and Safety instructions must be observed.

The pressure has always been indicated as overpressure.

We reserve the right to alter technical specifications without notice.



Screen Netting		
screen no. (Nr. 4 = standard screen)	light screen aperture mm	open screen area %
3	0.25	41
4	0.50	51
5	1.0	67
7	2.5	69

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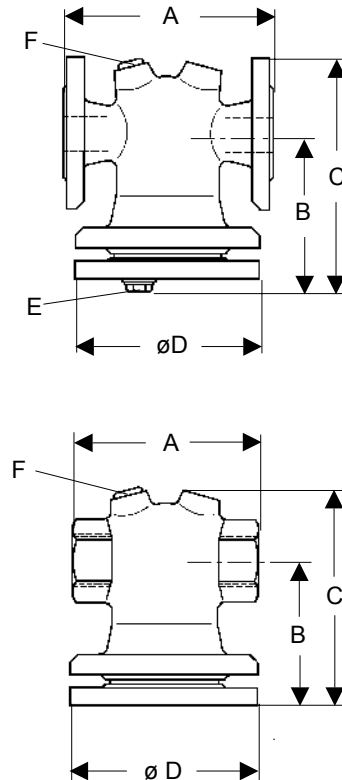
Materials		
Nom. Press.	PN 16	PN 25 - 160
Temperature	200 °C	200 °C
Body	up to DN 25 grey cast iron from DN 32 spheroidal cast iron	cast steel
Seal	Nova Universal	Nova Universal
Screen	1.4571	1.4571
Screen Frame	up to DN 80 CrNiMo-steel from DN 100 grey cast iron optional CrNiMo-steel	

Dimensions [mm]														
size	nominal pressure	nominal diameter DN												
		15	20	25	32	40	50	65	80	100	125	150	200	250
A	PN 16	130	150	160	180	200	230	290	310	350	400	400	480	570
	PN 40	196	200	-	244	-	-	-	-	-	-	-	-	-
	PN 63	210	230	-	-	-	-	-	-	-	-	-	-	-
	PN 100	210	230	-	-	-	-	-	-	-	-	-	-	-
	PN 160	210	230	-	-	-	-	-	-	-	-	-	-	-
B	PN 16	65	110	125	130	135	150	170	160	190	250	275	345	465
	PN 40	120	120	-	130	-	-	-	-	-	-	-	-	-
	PN 63/160	120	145	-	-	-	-	-	-	-	-	-	-	-
C	PN 16	120	160	185	215	220	255	285	275	345	410	490	595	720
	PN 40	170	170	-	215	-	-	-	-	-	-	-	-	-
	PN 63/160	170	200	-	-	-	-	-	-	-	-	-	-	-
ø D	PN 16	110	110	140	140	170	170	210	220	255	320	350	435	540
	PN 40	110	110	-	140	-	-	-	-	-	-	-	-	-
	PN 63/160	110	150	-	-	-	-	-	-	-	-	-	-	-
E	PN 16-160	-	-	-	-	-	-	G 1/2	G 1					
F	PN 16-160	G 1/4						G 1/2		G 1				

Weights [kg]													
nominal pressure	nominal diameter DN												
	15	20	25	32	40	50	65	80	100	125	150	200	250
PN 16	2.5	4.5	6	8.5	13	17	25	30	46	67	90	158	260
PN 40	5.5	6.5	-	11	-	-	-	-	-	-	-	-	-
PN 63	8	16	-	-	-	-	-	-	-	-	-	-	-
PN 100/160	8	16	-	-	-	-	-	-	-	-	-	-	-

Dimensions [mm]									
size	nominal pressure	nominal diameter G							
		3/8	1/2	3/4	1	1 1/4	1 1/2	2	
A	PN 16	90	90	120	140	140	170	170	
	PN 40	120	120	120	-	160	-	-	
	PN 63/160	120	120	120	-	-	-	-	
B	PN 16	65	65	110	125	130	135	150	
	PN 40	120	120	120	-	130	-	-	
	PN 63/160	120	120	120	-	-	-	-	
C	PN 16	120	120	165	185	215	220	255	
	PN 40	170	170	170	-	215	-	-	
	PN 63/160	170	170	170	-	-	-	-	
ø D	PN 16	65	110	110	140	140	170	170	
	PN 40	110	110	110	-	140	-	-	
	PN 63/160	110	110	110	-	-	-	-	
F	PN 16 - 160	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	

Weights [kg]								
nominal pressure	nominal diameter G							
	3/8	1/2	3/4	1	1 1/4	1 1/2	2	
PN 16	1.5	1.5	3	4	5	7.5	10.5	
PN 40	5	5	5	-	7	-	-	
PN 63	6	6	6	-	-	-	-	
PN 160	8	8	8	-	-	-	-	



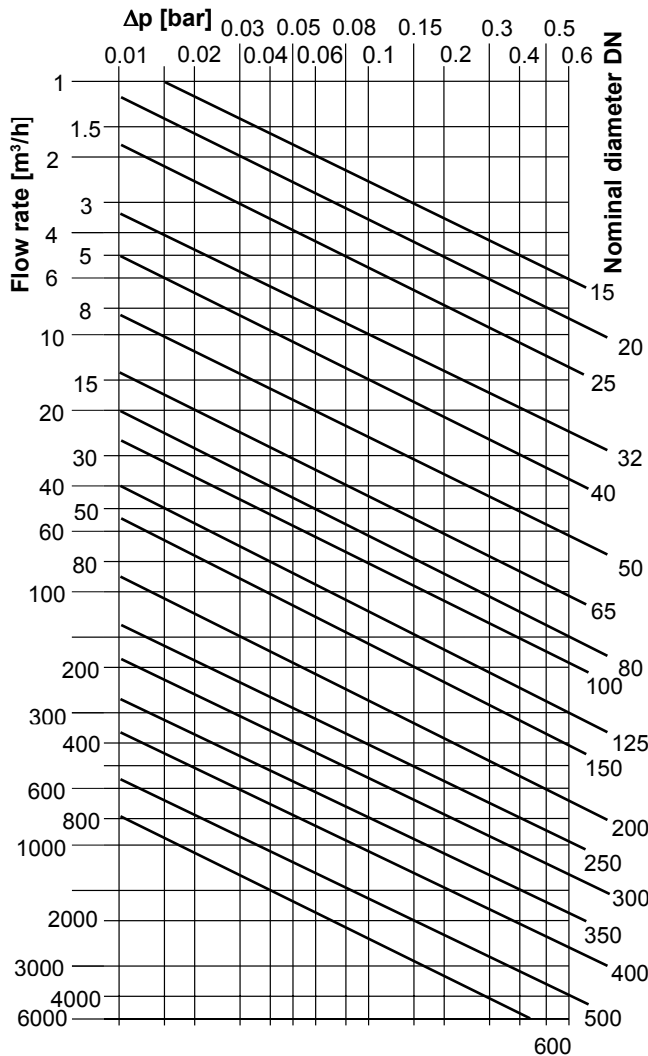
Special designs on request.  
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 FIRMLY IN CONTROL**

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Strainer flow resistance  $\Delta p$  in bar for water, screen no. 4, clean  
 calculation of flow resistance, and correction factor for strainer SF 1.00 and SF 2.00

### Flow resistance $\Delta p$ [bar] for water, screen no. 4, clean



### Calculation of flow resistance

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

$\zeta$  : 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.

$\rho$  [kg/m<sup>3</sup>] : Density of medium

Coefficient of flow resistance for clean screen no. 4											
Flange connection	DN	15	20	25	32	40	50	65	80	100	125
Mesh size	cm <sup>2</sup>	16	26	30	40	52	68	86	106	160	220
Coefficient	$\zeta$	1.2	1.9	2.0	1.6	1.8	1.4	1.5	1.7	2.4	2.7

Coefficient of flow resistance for clean screen no. 4									
Flange connection	DN	150	200	250	300	350	400	500	600
Mesh size	cm <sup>2</sup>	330	480*	760*	1500	2100	2500	4400	6500
Coefficient	$\zeta$	2.9	3.3	3.5	3.6	3.6	3.5	3.5	3.6

\* for SF 2.00 the mesh size is  
 for DN 200: 650 cm<sup>2</sup>  
 for DN 250: 1050 cm<sup>2</sup>

Coefficient of flow resistance for clean screen no. 4						
Screwed connection	G	3/4	1	1 1/4	1 1/2	2
Mesh size	cm <sup>2</sup>	26	30	40	52	68
Coefficient	$\zeta$	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.

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

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

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