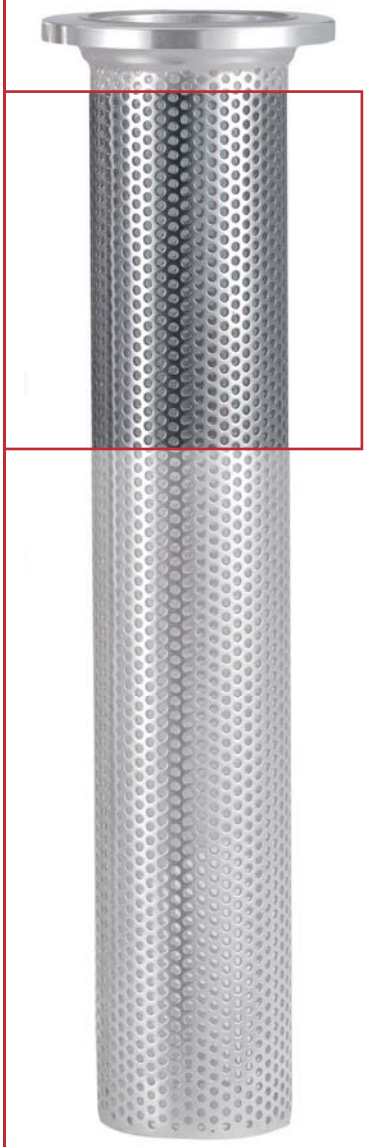
81700 / 82700 / 83700



I Application

Filters have a wide range of applications in the food-processing, cosmetics and some chemical industries as well as in auxiliary services of the pharmaceutical industry.
They have a hygienic design and are used to filter particles capable of damaging pumps and other equipment.

I Operating principle

The filter basically consists of a filter body with an inlet and an outlet for the product.
The screen is fixed inside the body. The screen retains all particles that are equal or larger than the size of the screen openings.

I Design and features

There are several configurations:
*- Cleaning of the screen **without disassembling the filter**:*
Angular filter (82700): the inlet and the outlet form a right angle.
Y filter (83700): the product enters and leaves the filter in the same direction.
*- Cleaning of the screen **disassembling the filter**:*
Straight filter (81700): the product enters and leaves the filter in the same direction.

Low pressure drops.
DIN 11850 standard connections.
Screen with circular (from Ø 0,5 mm to Ø 3 mm) or longitudinal openings (10 x 1 mm).

I Materials

Filter body	*AISI316L*
Gaskets	*EPDM (according to FDA 117.2600)*
Internal surface finish	*Ra < 0,8µm*
External surface finish	*mirror polish*

I Options

Gaskets in FPM.
Connections: DIN, Clamp, SMS, RJT, FIL-IDF, etc.
Wedge wire screen cylinder.
Heating jacket.
Option of filtering from outside to inside of the screen.
Double filter.

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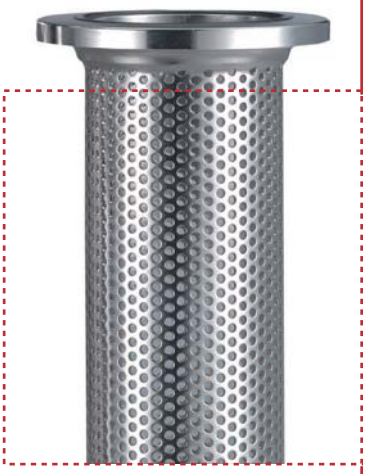
I Technical specifications



STRAIGHT FILTER (81700) / ANGULAR FILTER (82700)

Availabale sizes	DN 25 – DN 100 (1)	1˝ - 4˝
	DN 125 – DN 150 (2)	5˝ - 6˝
Working temperature	-10ºC to +120ºC (EPDM)	14ºF to 248ºF
	+140ºC (SIP, max. 30 min)	284ºF
Max.working pressure	10 bar	145 PSI

Note (1): Classified according to Directive 97/23/CE as Category I filters for use with fluids of Group 1

Note (2): Classified according to Directive 97/23/CE as Category I filters for use with fluids of Group 2

Y FILTER (83700)

Availabale sizes	DN 25 – DN 50 (1)	1˝ - 2˝
	DN 65 – DN 80 (2)	2 ½˝– 3˝
	DN 100 – DN 150 (3)	4˝– 6˝
Working temperature	-10ºC to +120ºC (EPDM)	14ºF to 248ºF
	+140ºC (SIP, max. 30 min)	284ºF
Max.working pressure	10 bar	145 PSI

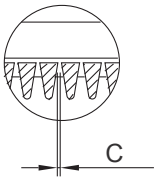
Nota (1): Classified according to Directive 97/23/CE as SEP filters for use with fluids of Group 1

Note (2): Classified according to Directive 97/23/CE as Category I filters for use with fluids of Group 1

Note (3): Classified according to Directive 97/23/CE as Category I filters for use with fluids of Group 2

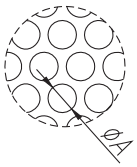
SCREEN: WEDGE WIRE

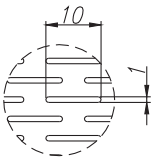
Mesh equiv.	C (mm)	Useful surface (%)
40	0,40	28
60	0,30	23
80	0,20	17
165	0,10	10
325	0,05	5



SCREEN: PERFORATED PLATE

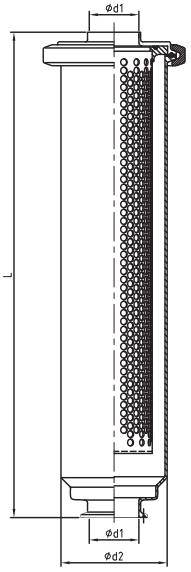
A (mm)	Useful surface (%)
0,5	15
1	28
2	30
5	46
10x1	20





I Dimensions

STRAIGHT FILTER (81700)



WELD / CLAMP DIN			
DN	d1	d2	L
25	26	76,2	386
32	32		
40	38	101,6	472
50	50		
65	66	114,3	648
80	81		
100	100	154	798
125	125	219,1	1032
150	150		

WELD / CLAMP OD			
DN	d1	d2	L
1″	22,1	76,2	377
1½″	34,8	101,6	462
2″	47,5		
2½″	60,2	114,3	637
3″	72,9		
4″	97,4	154	784
5″	123	219,1	1004
6″	146,8		

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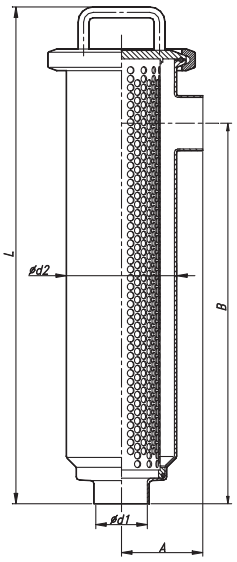
I Dimensions

ANGULAR FILTER (82700)



WELD / WELD DIN					
DN	d1	d2	A	B	L
25	26	76,2	90	300	399
32	32		95		
40	38	101,6	100	370	486
50	50		110		
65	66	114,3	120	525	663
80	81		145		
100	100	154	155	676	823
125	125	219,1	175	912	1089
150	150				

WELD / WELD OD					
DN	d1	d2	A	B	L
1"	22,1	76,2	76	300	399
1½"	34,8	101,6	95	370	486
2"	47,5		121		
2½"	60,2	114,3	140	525	663
3"	72,9		159		
4"	97,4	154	203	676	823
6"	146,8	219,1	220	920	1097

I Pressure loss

	ANGULAR FILTER Kv									
	Wedge wire screen					Perforated plate screen				
	0,05	0,1	0,2	0,3	0,4	10x1	0,5	1	2	5
DN 25	19,8					20,5				
DN 32	33,1					36,8				
DN 40	46,3					47,3				
DN 50	68,4					76				
DN 65	82,6	99,9	107,1	108,5	111,9	122,3				
DN 80	86,5	128,9	136,4	140,9	148,9	160,8				
DN 100	108,8	167,6	192,7	204,8	227,9	287,6				
1"	14,5					16,1				
1½"	33,9					35,6				
2"	59,4					68,9				
2½"	72,3	78,2	81,1	81,4	84,3	86				
3"	85,2	106,6	107,9	114,5	120,1	134,2				
4"	92,8	169,5	186,4	195,5	212,8	273,3				

Tests performed at 20ºC. Values are valid for fluids with viscosity and density similar to water.

Formula for pressure loss calculation: $\Delta p = \left(\frac{Q}{K_V}\right)^2$

Kv = Kv value from the above table
Q = flow rate [m³/h]
Δp = pressure [bar]

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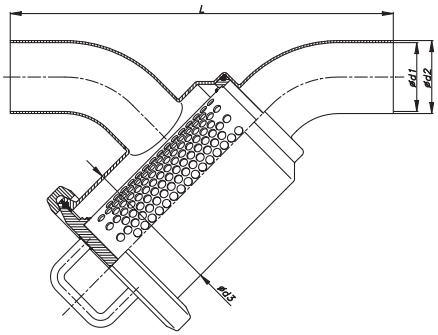
I Dimensions

Y FILTER (83700)



WELD / WELD DIN				
DN	d1	d2	d3	L
25	26	29	76,2	235
32	32	35		242
40	38	41	101,6	260
50	50	53		279
65	66	70	114,3	319
80	81	85		374
100	100	104	154	400
125	125	129	219,1	667
150	150	154		720

WELD / WELD OD				
DN	d1	d2	d3	L
1"	22,1	25,4	76,2	214
1½"	34,8	38,1	101,6	243
2"	47,5	50,8		300
2½"	60,2	63,5	114,3	346
3"	72,9	76,2		378
4"	97,4	101,6	154	470

I Pressure loss

	Y FILTER Kv									
	Wedge wire screen					Perforated plate screen				
	0,05	0,1	0,2	0,3	0,4	10x1	0,5	1	2	5
DN 25	16					18				
DN 32	22,3					27,4				
DN 40	33,5					35,3				
DN 50	53,3					55,8				
DN 65	68,8	88,1	91,1	96,2	*	103,6				
DN 80	75,6	113,5	120	124,7	*	135				
DN 100	*	153,2	*	*	*	234				
1"	12,6					13,9				
1½"	29					29,5				
2"	50,1					53,8				
2½"	60	73,4	77,5	80,3	*	81,6				
3"	61,1	97,1	102,4	107,3	*	109,9				
4"	*	141,9	*	*	*	220,8				

** To be consulted*

Tests performed at 20°C. Values are valid for fluids with viscosity and density similar to water.

Formula for pressure loss calculation: $\Delta p = \left(\frac{Q}{K_v}\right)^2$

Kv = Kv value from the above table
Q = flow rate [m³/h]
Δp = pressure [bar]

SOURCE OF SOLUTIONS