

### 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.

Connections: DIN EN 10357 series A and ASTM A269/270 (corresponds to OD pipe).

Screen with circular (from  $\varnothing$  0,5 mm to  $\varnothing$  5 mm) or longitudinal openings (10 x 1 mm).

### I Materials

Filter body	AISI 316L
Gaskets	EPDM
Internal surface finish	$Ra \leq 0,8 \mu\text{m}$
External surface finish	Matt

### I Options

Gaskets in FPM.

Other connection types.

Y filter Clamp OD 6".

Wedge wire screen cylinder.

Heating jacket.

Option of filtering from outside to inside of the screen.

Double filter.



## I Technical specifications

### STRAIGHT FILTER (81700) / ANGULAR FILTER (82700)

Available sizes	DN 25 – DN 100 <sup>(1)</sup>	1" – 4"
	DN 125 – DN 150 <sup>(2)</sup>	6"
Working temperature	-10°C to +120°C (EPDM)	14°F to 248°F
	+140°C (SIP, max. 30 min)	284°F
Max. working pressure	10 bar	145 PSI

Note (1): Classified according to Directive 2014/68/EU as Category I filters for use with fluids of Group 1.

Note (2): Classified according to Directive 2014/68/EU as Category I filters for use with fluids of Group 2.

### Y FILTER (83700)

Available sizes	DN 25 – DN 50 <sup>(1)</sup>	1" – 2"
	DN 65 – DN 80 <sup>(2)</sup>	2 ½" – 3"
	DN 100 – DN 150 <sup>(3)</sup>	4"
Working temperature	-10°C to +120°C (EPDM)	14°F to 248°F
	+140°C (SIP, max. 30 min)	284°F
Max. working pressure	10 bar	145 PSI

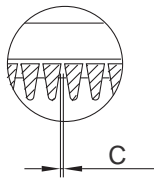
Nota (1): Classified according to Directive 2014/68/UE as SEP filters for use with fluids of Group 1.

Note (2): Classified according to Directive 2014/68/UE as Category I filters for use with fluids of Group 1.

Note (3): Classified according to Directive 2014/68/UE as Category I filters for use with fluids of Group 2.

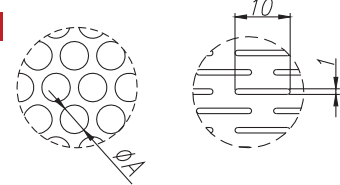
### SCREEN: WEDGE WIRE

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



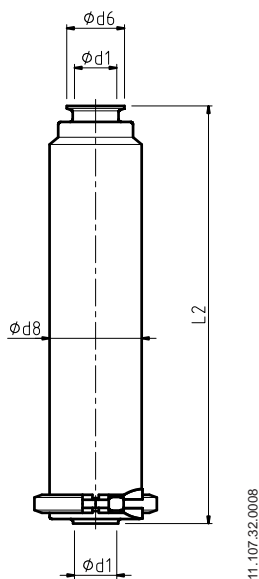
### SCREEN: PERFORATED PLATE

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



## I Dimensions

### STRAIGHT FILTER (81700)



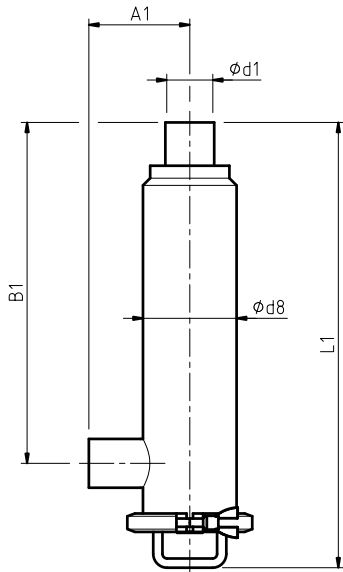
DN	Weld / Clamp DIN				
	$\phi d1$	$\phi d6$	$\phi d8$	L2	kg
25	26	50,5	76,2	407	2,7
32	32	50,5	76,2	407	2,4
40	38	50,5	101,6	493	3,7
50	50	64	101,6	493	4,4
65	66	91	114,3	671	5,5
80	81	106	114,3	671	5,6
100	100	119	154,0	820	12,0
125	125	155	219,1	1187	25,3
150	150	183	219,1	1187	25,3

OD	Weld / Clamp OD				
	$\phi d1$	$\phi d6$	$\phi d8$	L2	kg
1"	22,1	50,5	76,2	390	2,7
1½"	34,8	50,5	101,6	476	4,7
2"	47,5	64,0	101,6	476	4,8
2½"	60,2	77,5	114,3	646	5,7
3"	72,9	91,0	114,3	646	5,8
4"	97,4	119	154,0	802	11,9
6"	146,8	167	219,1	1188	25,3



## I Dimensions

### ANGULAR FILTER (82700)



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Weld / Weld DIN						
DN	$\phi d1$	$\phi d8$	A1	B1	L1	kg
25	26	76,2	90	300	399	2,8
32	32	76,2	95	300	399	2,8
40	38	101,6	100	370	486	4,1
50	50	101,6	110	370	486	4,1
65	66	114,3	120	525	663	6,9
80	81	114,3	145	525	663	6,9
100	100	154,0	155	676	823	13
125	125	219,1	175	912	1089	19
150	150	219,1	175	912	1089	20

Weld / Weld OD						
OD	$\phi d1$	$\phi d8$	A1	B1	L1	kg
1"	22,1	76,2	76	300	399	2,8
1½"	34,8	101,6	95	370	486	4,1
2"	47,5	101,6	121	370	486	4,1
2½"	60,2	114,3	140	525	663	6,9
3"	72,9	114,3	159	525	663	6,9
4"	97,4	154,0	203	676	823	13
6"	146,8	219,1	220	920	1097	25

## I Pressure loss

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

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

$K_v$  =  $K_v$  value from the above table

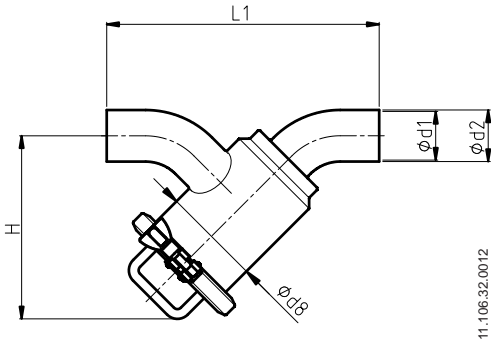
$Q$  = flow rate [ $m^3/h$ ]

$\Delta p$  = pressure [bar]



## I Dimensions

### Y FILTER (83700)



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Weld / Weld DIN						
DN	ød1	ød2	ød8	L1	H	kg
25	26	29	76,2	235	169	1,5
32	32	35	76,2	242	171	1,6
40	38	41	101,6	260	196	2,5
50	50	53	101,6	279	201	2,5
65	66	70	114,3	319	246	3,5
80	81	85	114,3	374	252	3,8
100	100	104	154,0	400	276	7,4
125	125	129	219,1	667	356	17
150	150	154	219,1	720	368	18

Weld / Weld OD						
DN	ød1	ød2	ød8	L1	H	kg
1"	22,1	25,4	76,2	214	169	1,7
1½"	34,8	38,1	101,6	243	196	2,9
2"	47,5	50,8	101,6	300	201	3,2
2½"	60,2	63,5	114,3	346	246	3,8
3"	72,9	76,2	114,3	378	252	4,1
4"	97,4	101,6	154	470	276	7,3

## I Pressure loss

DN	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]

