PROCESS AND STERILE FILTRATION

OMEGA AIR

AIR AND GAS TREATMENT

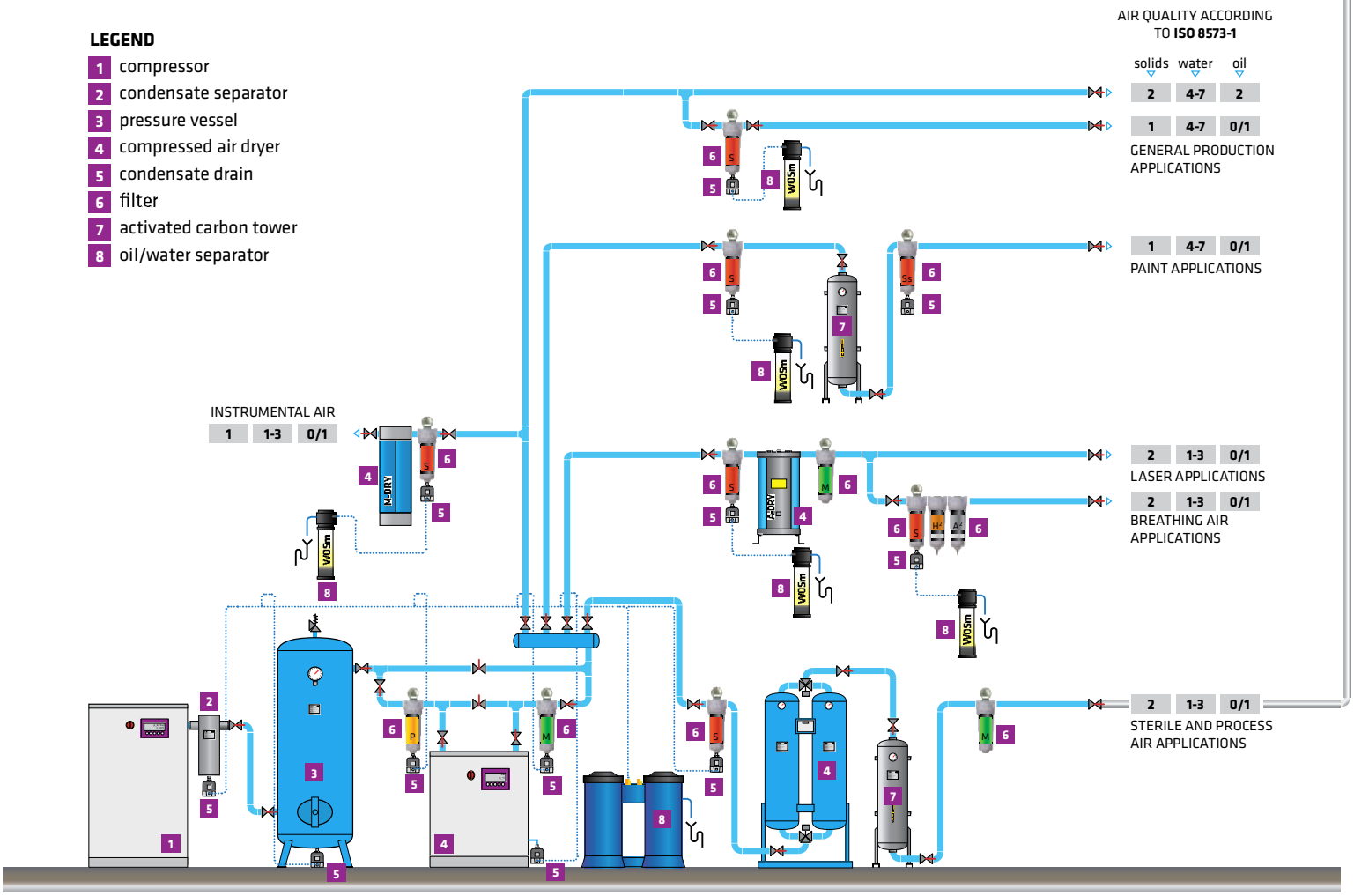
Since 1988 OMEGA AIR is developing and manufacturing quality solutions for treatment of industrial as well as process air and gas. Due to constant investment in research and development and in new production tehnologies we can offer one of the most comprehensive ranges of products for general purpose process filtration, steam filtration, sterile filtration and sterile ventilation of tanks.

TYPICAL APPLICATIONS
- Aseptic processing
- Aseptic packaging
- PET bottle blowing
- Moving ingredients
- Tank ventilation
- General filtration applications
- ....

TYPICAL INDUSTRIES
- Food and Beverage
- Pharmaceutical / Biopharmaceutical
- Electronics / Semiconductor
- Medical / Health care
- ....

CONVENTIONAL COMPRESSED AIR SYSTEM

In process industry purity requirements for air/gas are usually higher or at least different compared to purity requirements for standard industrial applications. Production of compressed air in process industry usually starts in conventional compressed air system with standard equipment for treatment of industrial compressed air/gas. At certain point there is a switchover from industrial to process filtration and from this point on different materials and filtration procedures are applied.

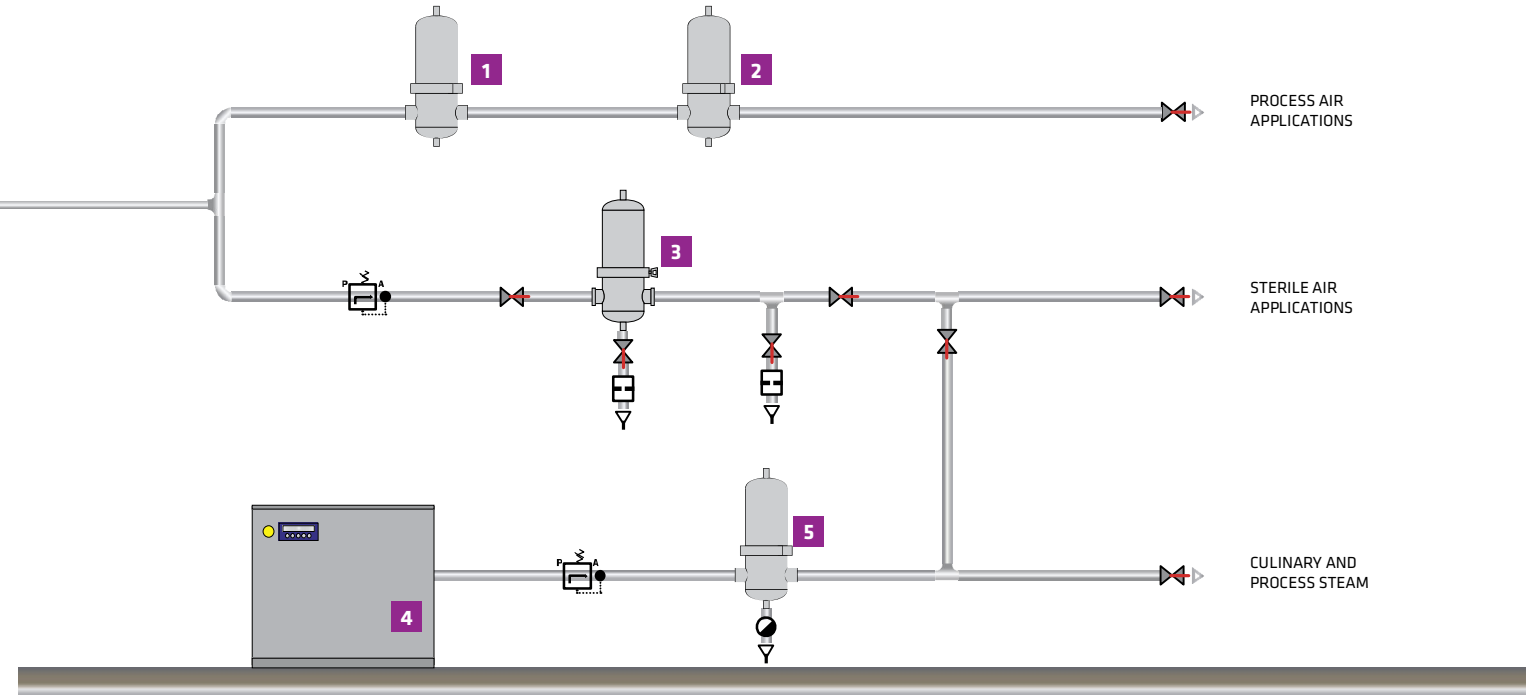


PROCESS AIR/GAS SYSTEM

Due to contaminants such as solid particles, moisture, hydrocarbons or bacteria compressed air/gas when used in process can harm and cause quality and efficiency problems. Applications in process industry require compressed air or gas where above mentioned contaminants are removed or reduced to acceptable level for specific application.

LEGEND

1. stainless steel process filter, PN filter element
2. stainless steel process filter, PPF filter element
3. stainless steel sterile filter, VSF filter element
4. steam generator
5. steam filter, PIW filter element

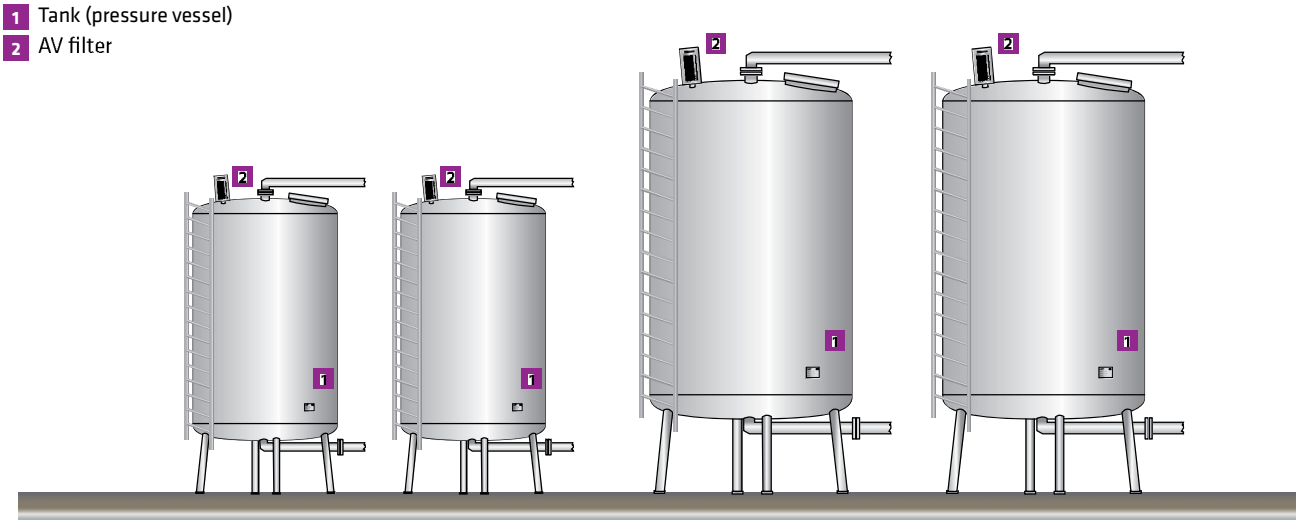


VENTILATION OF TANKS

During filling and emptying of tank with liquid ambient air is being vented in and out of the tank. In order not to harm the process by letting contaminants from ambient into the tank "air-vent" filters (AV series) are installed on the top of the tank. Inside is filter element (AVF) which is designed to intercept any potential particulate or aerosol contaminants including bacteria.

LEGEND

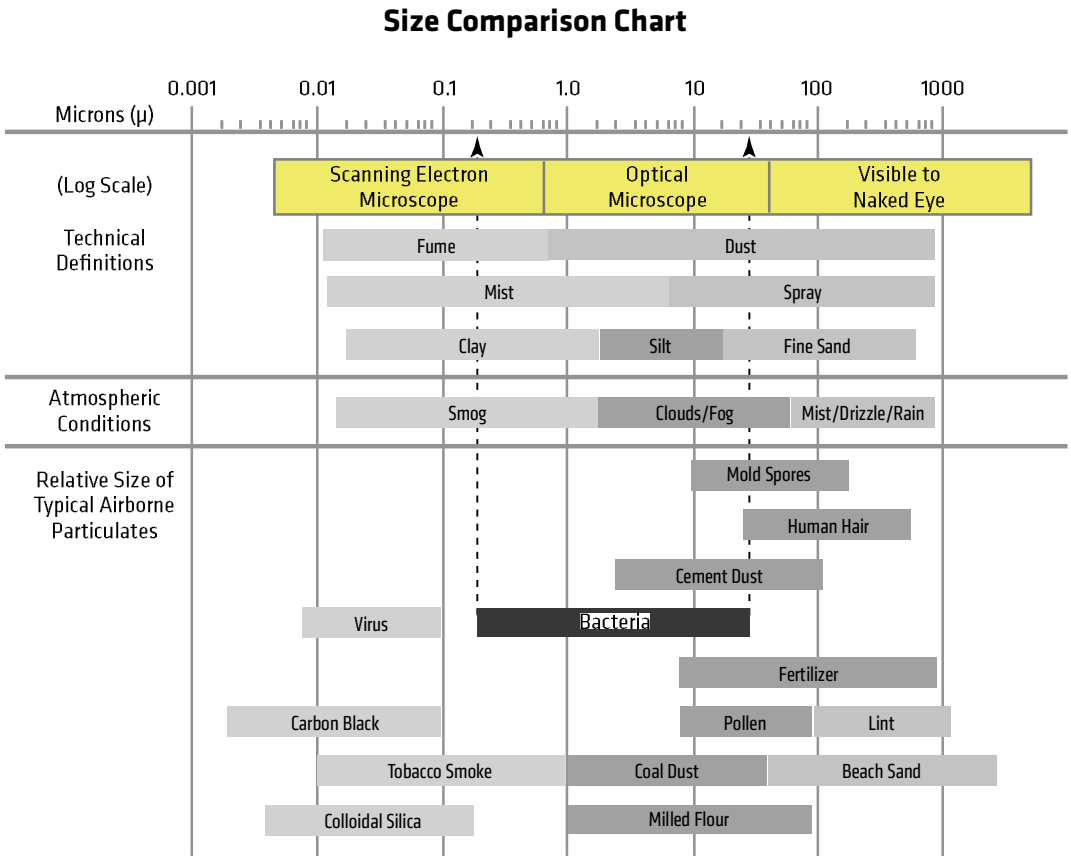
1. Tank (pressure vessel)
2. AV filter



WHAT IS STERILE AIR

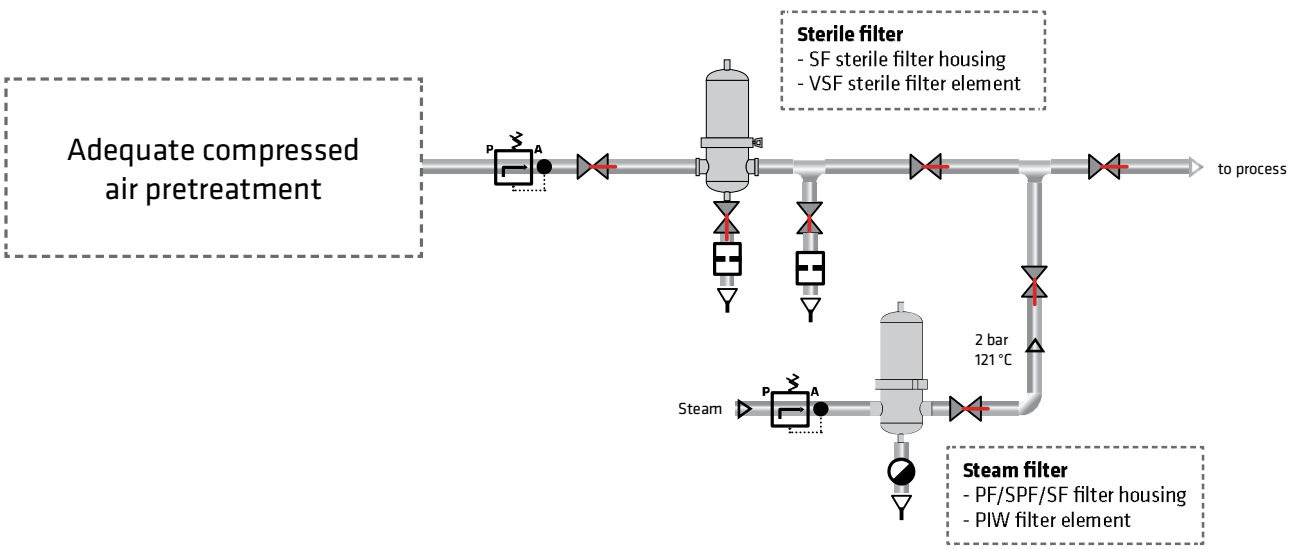
In process filtration applications "sterile" refers to "free from live bacteria or other microorganisms".

SIZE OF BACTERIA



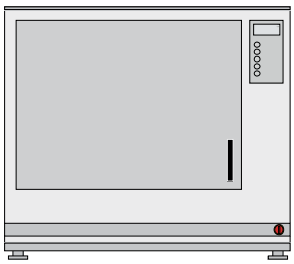
HOW TO PRODUCE STERILE AIR

To produce sterile air proper sterile filter needs to be installed (e.g. SF filter housing with VSF filter element) to filter out / intercept bacteria. It is essential that air on the inlet side of sterile filter is adequately prefiltered upstream and that complete "sterile filter installation" is sterilized regularly. Sterilization is required because intercepted bacteria can colonize in the surface of filter media and begin to grow/migrate through filter media. Two most common types of sterilization are:



STERILIZATION IN PLACE (SIP) where filter or even larger segments of installation are sterilized with stream of steam flowing through complete filter installation. This procedure is done in place of use without removing any parts from the installation.

AUTOCLAVE sterilization where filter element or in some cases even complete filter housing is removed from installation and sterilized in autoclave. Autoclave is a device used to sterilize products by subjecting them to high pressure saturated steam.



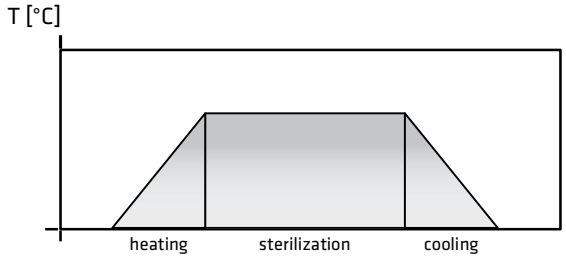
Frequency of sterilization depend on specific application requirements.

STERILIZATION IN PLACE PROCEDURE

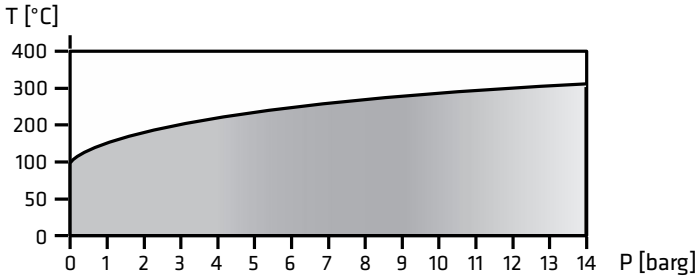
Usually every process or application has specific operating requirements and also sterilization is then performed in accordance with this specific requirements.

Comulative steaming time:

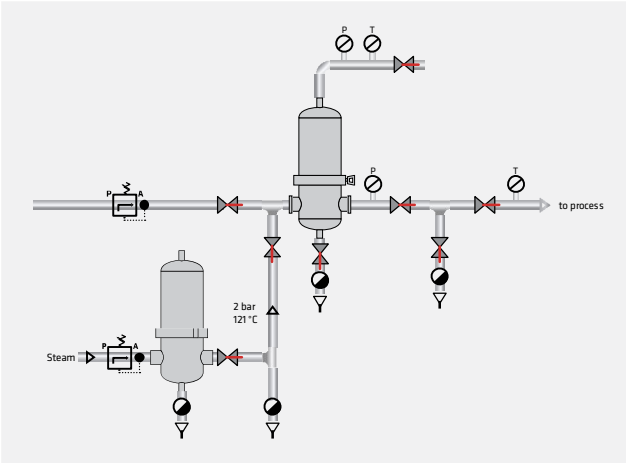
- 121 °C/250 °F, Sterilization 30 min, Heating and cooling 30 min (100 cycles)
- 132 °C/270 °F, Sterilization 20 min, Heating and cooling 40 min (100 cycles)
- 143 °C/290 °F, Sterilization 10 min, Heating and cooling 50 min (100 cycles)



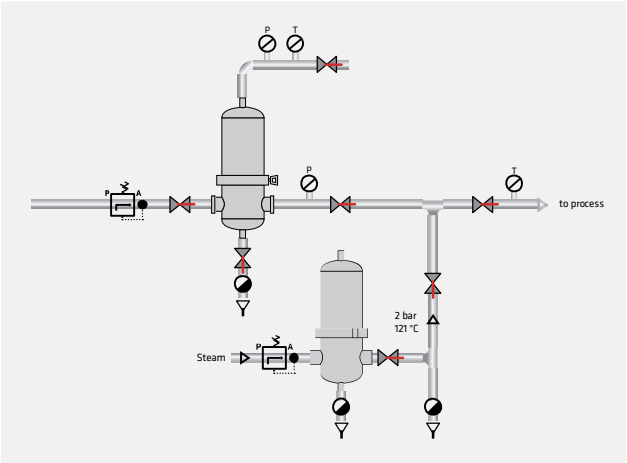
Sterilization cycle



Steam Saturation Curve



Forward steam in place



Reverse steam in place

PF SERIES
STAINLESS STEEL PROCESS FILTERS

operating pressure	**16 (10, 12)** bar
volume flow rate	**75** to **21.120** Nm³/h
side connections	**1/4"** to **3"** threaded
	up to **DN200** flanged
body connections	**DIN11851** (milk pipe conn.)
operating temp. range	up to **150** °C
material	stainless steel **1.4301**
	other types on request
surface	**Ra 1.6**

DESCRIPTION

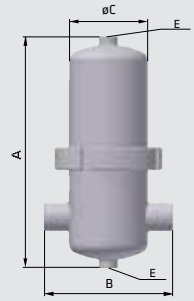
PF process filter housings have been developed for applications in process industry, where the risk for corrosion of compressed air[1] system components is very high. To meet the required compressed air quality[2] appropriate filter element must be installed into filter housing.
PF process filter housing can be used in variety of applications. For applications not listed please contact producer or your local distributor.
[1]For any other technical gas please contact producer or your local distributor.
[2]For oil removal, coalescing filter element must be installed and flow direction inside-out must be provided. General arrangement is filter head on top and filter bowl on bottom.

TECHNICAL DATA

Filter housing size	Pipe size	Oper. press.	Flow rate at 7 bar(g), 20°C		Dimensions [mm]				Mass
	inch	bar	Nm³/h	scfm	A	B	C	D	kg
PF 005	1/4"	16	75	44	202	116	76,1	1/4"	1,7
PF 007	3/8"	16	105	62	232	120	76,1	1/4"	1,9
PF 010	1/2"	16	150	88	230	125	76,1	1/4"	1,9
PF 018	3/4"	16	225	132	254	125	76,1	1/4"	2,0
PF 030	1"	16	315	185	275	136	88,9	1/4"	2,6
PF 047	1 1/4"	16	420	247	337	155	88,9	1/4"	3,0
PF 070	1 1/2"	16	600	353	386	180	114,3	1/4"	4,3
PF 094	2"	16	900	530	457	180	114,3	1/4"	4,8
PF 150	2"	16	1.260	742	583	180	114,3	1/4"	5,3
PF 175	2 1/2"	16	1.680	989	740	224	139,7	1/4"	9,0
PF 200	3"	12	2.400	1.413	1004	224	139,7	1/4"	10,8
PF 240	3"	12	3.600	2.119	1029	252	168,3	1/4"	16,2
PF 450	DN100	10	5.040	2.966	986	410	219,1	1"	45
PF 600	DN100	10	6.720	3.955	1240	410	219,1	1"	46
PF 900	DN150	10	9.600	5.650	1311	480	273,0	1"	70
PF 1200	DN150	10	13.440	7.910	1351	540	323,9	1"	80
PF 1800	DN200	10	17.280	10.171	1496	660	406,4	1"	135
PF 2000	DN200	10	21.120	12.431	1496	660	406,4	1"	135

FILTER ELEMENTS

	PI prefilter 1; 20 µm	**PIW** prefilter 1; 20 µm	**PN** prefilter 5; 25 µm	**PP** prefilter 3 µm	**PR** prefilter 1 µm	**PM** microfilter 0,1 µm	**PS** microfilter 0,01 µm	**PA** activated carbon
PF 005	0310 PI	0310 PIW	0310 PN	0310 PP	0310 PR	0310 PM	0310 PS	0310 PA
PF 007	0410 PI	0410 PIW	0410 PN	0410 PP	0410 PR	0410 PM	0410 PS	0410 PA
PF 010	0420 PI	0420 PIW	0420 PN	0420 PP	0420 PR	0420 PM	0420 PS	0420 PA
PF 018	0520 PI	0520 PIW	0520 PN	0520 PP	0520 PR	0520 PM	0520 PS	0520 PA
PF 030	0525 PI	0525 PIW	0525 PN	0525 PP	0525 PR	0525 PM	0525 PS	0525 PA
PF 047	0725 PI	0725 PIW	0725 PN	0725 PP	0725 PR	0725 PM	0725 PS	0725 PA
PF 070	0730 PI	0730 PIW	0730 PN	0730 PP	0730 PR	0730 PM	0730 PS	0730 PA
PF 094	1030 PI	1030 PIW	1030 PN	1030 PP	1030 PR	1030 PM	1030 PS	1030 PA
PF 150	1530 PI	1530 PIW	1530 PN	1530 PP	1530 PR	1530 PM	1530 PS	1530 PA
PF 175	2030 PI	2030 PIW	2030-PN	2030 PP	2030 PR	2030 PM	2030 PS	2030 PA
PF 200	3030 PI	3030 PIW	3030 PN	3030 PP	3030 PR	3030 PM	3030 PS	3030 PA
PF 240	3050 PI	3050 PIW	3050 PN	3050 PP	3050 PR	3050 PM	3050 PS	3050 PA
PF 450	3x2030 PI	3x2030 PIW	3x2030 PN	3x2030 PP	3x2030 PR	3x2030 PM	3x2030 PS	3x2030 PA
PF 600	3x3030 PI	3x3030 PIW	3x3030 PN	3x3030 PP	3x3030 PR	3x3030 PM	3x3030 PS	3x3030 PA
PF 900	4x3030 PI	4x3030 PIW	4x3030 PN	4x3030 PP	4x3030 PR	4x3030 PM	4x3030 PS	4x3030 PA
PF 1200	6x3030 PI	6x3030 PIW	6x3030 PN	6x3030 PP	6x3030 PR	6x3030 PM	6x3030 PS	6x3030 PA
PF 1800	8x3030 PI	8x3030 PIW	8x3030 PN	8x3030 PP	8x3030 PR	8x3030 PM	8x3030 PS	8x3030 PA
PF 2000	10x3030 PI	10x3030 PIW	10x3030 PN	10x3030 PP	10x3030 PR	10x3030 PM	10x3030 PS	10x3030 PA



quality class - solids (ISO 8573-1)	-	-	-	6	3	2	1	1 [1)]
quality class - oils (ISO 8573-1)	-	-	-	-	-	2	1	1
pressure drop - new element-dry [mbar]	≤2600; ≤60	≤2600; ≤60	10	10	20	50	80	60
filter media	sintered INOX 1.4404	sintered INOX 1.4404	stainless steel mesh 1.4301	acrylic fibres, cellulose	borosilicate micro fibres			borosilicate micro fibres, activ. carbon
pleated version	-	-	-	✓	✓	✓	✓	-
wrapped version	-	-	✓	-	-	-	-	✓
sintered version	✓	✓	-	-	-	-	-	-
min. operating temperature (°C / °F)	0 / 32	0 / 32	0 / 32	1,5 / 35	1,5 / 35	1,5 / 35	1,5 / 35	1,5 / 35
max. operating temperature (°C / °F)	150 / 302	150 / 302	150 / 302	65 / 149	120 / 248	120 / 248	120 / 248	45 / 113

CORRECTION FACTORS

Operating pressure [bar]	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Operating pressure [psi]	29	44	58	72	87	100	115	130	145	160	174	189	203	218	232
Correction factor	0,38	0,50	0,63	0,75	0,88	1	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00	2,13

HPF SERIES

HIGH PRESSURE STAINLESS STEEL PROCESS FILTERS

operating pressure	**50** bar
volume flow rate	**150** to **2.400** Nm³/h
side connections	**1/2"** to **3"** threaded
	up to **DN200** flanged
body connections	**DIN11851** (milk pipe conn.)
operating temp. range	up to **150** °C
material	stainless steel **1.4301**
	other types on request
surface	**Ra 1.6**

DESCRIPTION

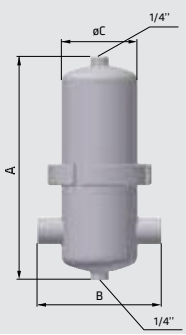
HPF process filter housings have been developed for applications in process industry, where the risk for corrosion of compressed air[1] system components is very high. To meet the required compressed air quality[2] appropriate filter element must be installed into filter housing.

HPF process filter housing can be used in variety of applications. For applications not listed please contact producer or your local distributor.

[1] For any other technical gas please contact producer or your local distributor.
[2] For oil removal, coalescing filter element must be installed and flow direction inside-out must be provided. General arrangement is filter head on top and filter bowl on bottom.

TECHNICAL DATA

Filter housing size	Pipe size	Oper. press.	Flow rate at 7 bar(g), 20°C		Dimensions [mm]			Mass
	inch	bar	Nm³/h	scfm	A	B	C	kg
HPF 010/50	1/2"	50	150	88	231	125	76,1	2,5
HPF 018/50	3/4"	50	225	132	253	125	76,1	2,6
HPF 030/50	1"	50	315	185	274	136	88,9	3,4
HPF 047/50	1 1/4"	50	420	247	336	155	88,9	3,9
HPF 070/50	1 1/2"	50	600	353	387	180	114,3	5,6
HPF 094/50	2"	50	900	530	453	180	114,3	6,2
HPF 150/50	2"	50	1260	742	580	180	114,3	6,9
HPF 200/50	3"	50	2400	1413	1005	224	139,7	14,1



FILTER ELEMENTS

	PI prefilter 1; 20 µm	PIW prefilter 1; 20 µm	PN prefilter 5; 25 µm	PP prefilter 3 µm	PR prefilter 1 µm	PM microfilter 0,1 µm	PS microfilter 0,01 µm	PA activated carbon
HPF 010/50	0420 PI	0420 PIW	0420 PN	0420 PP	0420 PR	0420 PM	0420 PS	0420 PA
HPF 018/50	0520 PI	0520 PIW	0520 PN	0520 PP	0520 PR	0520 PM	0520 PS	0520 PA
HPF 030/50	0525 PI	0525 PIW	0525 PN	0525 PP	0525 PR	0525 PM	0525 PS	0525 PA
HPF 047/50	0725 PI	0725 PIW	0725 PN	0725 PP	0725 PR	0725 PM	0725 PS	0725 PA
HPF 070/50	0730 PI	0730 PIW	0730 PN	0730 PP	0730 PR	0730 PM	0730 PS	0730 PA
HPF 094/50	1030 PI	1030 PIW	1030 PN	1030 PP	1030 PR	1030 PM	1030 PS	1030 PA
HPF 150/50	1530 PI	1530 PIW	1530 PN	1530 PP	1530 PR	1530 PM	1530 PS	1530 PA
HPF 200/50	3030 PI	3030 PIW	3030 PN	3030 PP	3030 PR	3030 PM	3030 PS	3030 PA
quality class - solids (ISO 8573-1)	-	-	-	6	3	2	1	1 [1]
quality class - oils (ISO 8573-1)	-	-	-	-	-	2	1	1
pressure drop - new element-dry [mbar]	≤2600; ≤60	≤2600; ≤60	10	10	20	50	80	60
filter media	sintered INOX 1.4404	sintered INOX 1.4404	stainless steel mesh 1.4301	acrylic fibres, cellulose	borosilicate micro fibres			borosilicate micro fibres, activ. carbon
pleated version	-	-	-	✓	✓	✓	✓	-
wrapped version	-	-	✓	-	-	-	-	✓
sintered version	✓	✓	-	-	-	-	-	-
min. operating temperature (°C / °F)	0 / 32	0 / 32	0 / 32	1,5 / 35	1,5 / 35	1,5 / 35	1,5 / 35	1,5 / 35
max. operating temperature (°C / °F)	150 / 302	150 / 302	150 / 302	65 / 149	120 / 248	120 / 248	120 / 248	45 / 113

CORRECTION FACTORS

Operating pressure [bar]	7	20	30	40	50
Operating pressure [psi]	100	290	435	580	725
Correction factor	1	2,63	3,88	5,13	6,38

SF SERIES
STAINLESS STEEL STERILE FILTERS

operating pressure	**16 (10)** bar
volume flow rate	**75** to **21.120** Nm³/h
side connections	**DN10** to **DN200** sanitary flange (ISO)
body connections	sanitary tri-clamp
operating temp. range	up to **150** °C
material	stainless steel **1.4301**
	other types on request
surface	**Ra 0.8**

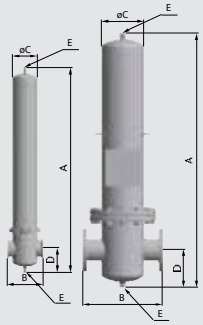
DESCRIPTION

SF stainless steel sterile filter housings have been specifically developed for removing of impurities from compressed air[1] system. To meet the required compressed air quality appropriate filter element must be installed into filter housing. SF filter housing is also designed for sterilisation.

SF process filter housing can be used in variety of applications. For applications not listed above please contact producer or your local distributor.

[1] For any other technical gas please contact producer or your local distributor.

TECHNICAL DATA											FILTER ELEMENTS
Filter housing size	Pipe size	Max. oper. pressure	Flow rate at 7 bar(g), 20 °C		Dimensions [mm]					Mass	VSF sterile 0,01 µm
	inch	bar/psi	Nm³/h	scfm	A	B	C	D	E	kg	
SF 006	DN10 / ø17,2	16/232	75	44	218	125	76,1	69	1/8''	1,6	1 x 0310-VSF
SF 009	DN10 / ø17,2	16/232	105	62	246	125	76,1	69	1/8''	1,7	1 x 0410-VSF
SF012	DN15 / ø21,3	16/232	150	88	251	120	76,1	69	1/8''	1,7	1 x 0420-VSF
SF 018	DN15 / ø21,3	16/232	225	132	275	120	76,1	69	1/8''	1,8	1 x 0520-VSF
SF 032	DN25 / ø35,7	16/232	315	185	303	169	114,3	86	1/4''	3,1	1 x 0530-VSF
SF 048	DN32 / ø42,4	16/232	600	353	363	169	114,3	86	1/4''	3,4	1 x 0730-VSF
SF 072	DN40 / ø48,3	16/232	900	530	446	169	114,3	86	1/4''	3,6	1 x 1030-VSF
SF 108	DN50 / ø60,3	16/232	1.260	742	587	183	114,3	96	1/4''	4,9	1 x 1530-VSF
SF 144	DN65 / ø76,1	16/232	1.680	989	763	195	139,7	120	1/4''	8,4	1 x 2030-VSF
SF 192	DN80 / ø88,9	16/232	2.400	1.413	1015	195	139,7	120	1/4''	10,2	1 x 3030-VSF
SF 432	DN100	10/145	5.040	2.966	1012	410	219,1	183	1/2''	44	3 x 2030-VSF
SF 576	DN100	10/145	6.720	3.955	1266	410	219,1	183	1/2''	45	3 x 3030-VSF
SF 768	DN150	10/145	9.600	5.650	1305	480	273	225	1/2''	70	4 x 3030-VSF
SF 1152	DN150	10/145	13.440	7.910	1418	540	323,9	256	1''	80	6 x 3030-VSF
SF 1536	DN200	10/145	17.200	10.124	1568	660	406,4	306	1''	135	8 x 3030-VSF
SF 1920	DN200	10/145	21.120	12.431	1568	660	406,4	306	1''	135	10 x 3030-VSF



quality class - solids (ISO 8573-1)	1
quality class - oils (ISO 8573-1)	-
pressure drop - new element (dry) [mbar / psi]	80/1,160
pressure drop - new element (wet) [mbar / psi]	190/2,756
filter media	borosilicate micro fibres
pleated version	-
wrapped version	✓
sintered version	-
min. operating temperature (°C / °F)	-20 / -4
max. operating temperature (°C / °F)	150 / 302

CORRECTION FACTORS															
Operating pressure [bar]	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Operating pressure [psi]	29	44	58	72	87	100	115	130	145	160	174	189	203	218	232
Correction factor	0,38	0,50	0,63	0,75	0,88	1	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00	2,13

SPF SERIES
STAINLESS STEEL STERILE FILTERS

operating pressure	**16 (12)** bar
volume flow rate	**75** to **3.600** Nm³/h
side connections	**1/4"** to **3"** threaded
	up to **DN200** flanged
body connections	**DIN11851** (milk pipe conn.)
operating temp. range	up to **150** °C
material	stainless steel **1.4301**
	other types on request
surface	**Ra 0.8**

DESCRIPTION

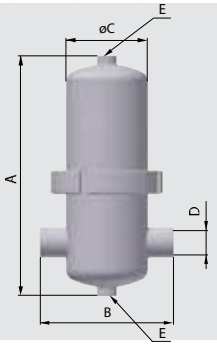
SPF stainless steel sterile filter housings have been specifically developed for applications in process industry, where the risk for corrosion of compressed air[1] system components is very high. To meet the required compressed air quality appropriate filter element (sterile filter cartridge) must be installed into filter housing. SPF process filter housing can be used in variety of applications.

For applications not listed please contact producer or your local distributor. For oil removal, coalescing filter element must be installed and flow direction inside-out must be provided. General arrangement is filter head on top and filter bowl on bottom.

[1] For any other technical gas please contact producer or your local distributor.

TECHNICAL DATA

Filter housing size	Pipe size	Oper. press.	Flow rate at 7 bar(g), 20 °C		DImensions [mm]				Mass
	inch	bar	Nm³/h	scfm	A	B	C	E	kg
SPF 005	1/4''	16	75	44	225	116	76,1	1/8''	1,7
SPF 007	3/8''	16	105	62	251	120	76,1	1/8''	1,9
SPF 010	1/2''	16	150	88	253	125	76,1	1/8''	1,9
SPF 018	3/4''	16	225	132	281	125	76,1	1/8''	2,0
SPF 030	1''	16	315	185	290	136	88,9	1/8''	2,6
SPF 047	1 1/4''	16	420	247	357	155	88,9	1/8''	3,0
SPF 070	1 1/2''	16	600	353	408	179	114,3	1/4''	4,3
SPF 094	2''	16	900	530	476	179	114,3	1/4''	4,8
SPF 150	2''	16	1260	742	602	180	114,3	1/4''	5,3
SPF 175	2 1/2''	16	1680	989	762	224	139,7	1/4''	9,0
SPF 200	3''	12	2400	1413	1030	224	139,7	1/4''	10,8
SPF 240	3''	12	3600	2119	1035	238	154	1/4''	16,2



FILTER ELEMENTS

	PI prefilter 1; 20 µm	**PIW** prefilter 1; 20 µm	**PN** prefilter 5; 25 µm	**PP** prefilter 3 µm	**PR** prefilter 1 µm	**PM** microfilter 0,1 µm	**PS** microfilter 0,01 µm	**PA** activated carbon
SPF 005	0310 PI	0310 PIW	0310 PN	0310 PP	0310 PR	0310 PM	0310 PS	0310 PA
SPF 007	0410 PI	0410 PIW	0410 PN	0410 PP	0410 PR	0410 PM	0410 PS	0410 PA
SPF 010	0420 PI	0420 PIW	0420 PN	0420 PP	0420 PR	0420 PM	0420 PS	0420 PA
SPF 018	0520 PI	0520 PIW	0520 PN	0520 PP	0520 PR	0520 PM	0520 PS	0520 PA
SPF 030	0525 PI	0525 PIW	0525 PN	0525 PP	0525 PR	0525 PM	0525 PS	0525 PA
SPF 047	0725 PI	0725 PIW	0725 PN	0725 PP	0725 PR	0725 PM	0725 PS	0725 PA
SPF 070	0730 PI	0730 PIW	0730 PN	0730 PP	0730 PR	0730 PM	0730 PS	0730 PA
SPF 094	1030 PI	1030 PIW	1030 PN	1030 PP	1030 PR	1030 PM	1030 PS	1030 PA
SPF 150	1530 PI	1530 PIW	1530 PN	1530 PP	1530 PR	1530 PM	1530 PS	1530 PA
SPF 175	2030 PI	2030 PIW	2030 PN	2030 PP	2030 PR	2030 PM	2030 PS	2030 PA
SPF 200	3030 PI	3030 PIW	3030 PN	3030 PP	3030 PR	3030 PM	3030 PS	3030 PA
SPF 240	3050 PI	3050 PIW	3050 PN	3050 PP	3050 PR	3050 PM	3050 PS	3050 PA
quality class - solids (ISO 8573-1)	-	-	-	6	3	2	1	1[1]
quality class - oils (ISO 8573-1)	-	-	-	-	-	2	1	1
pressure drop - new element-dry [mbar]	≤2600; ≤60	≤2600; ≤60	10	10	20	50	80	60
filter media	sintered INOX 1.4404	sintered INOX 1.4404	stainless steel mesh 1.4301	acrylic fibres, cellulose	borosilicate micro fibres			borosilicate micro fibres, activ. carbon
pleated version	-	-	-	✓	✓	✓	✓	-
wrapped version	-	-	✓	-	-	-	-	✓
sintered version	✓	✓	-	-	-	-	-	-
min. operating temperature (°C / °F)	0 / 32	0 / 32	0 / 32	1,5 / 35	1,5 / 35	1,5 / 35	1,5 / 35	1,5 / 35
max. operating temperature (°C / °F)	150 / 302	150 / 302	150 / 302	65 / 149	120 / 248	120 / 248	120 / 248	45 / 113

CORRECTION FACTORS

Operating pressure [bar]	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Operating pressure [psi]	29	44	58	72	87	100	115	130	145	160	174	189	203	218	232
Correction factor	0,38	0,50	0,63	0,75	0,88	1	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00	2,13

AV SERIES
STAINLESS STEEL AIR VENTING FILTER

operating pressure	**1** bar
volume flow rate	**9** to **310** Nm³/h
body connections	**DIN11851** (milk pipe conn.)
operating temp. range	up to **200** °C
material	stainless steel **1.4301**
	other types on request
surface	**Ra 0.8**

DESCRIPTION

AV stainless steel filter housings are designed to remove impurities from air which is being feed or exhausted from tank during changing of liquid level.

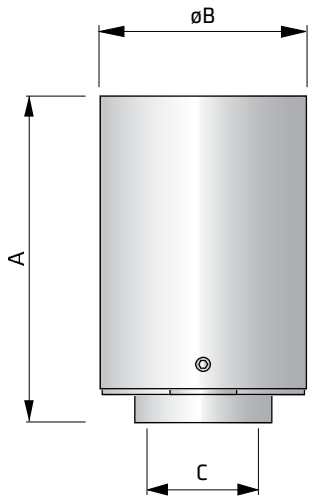
To meet the required air quality appropriate filter element (typically AVF filtration grade) must be installed into filter housing.

AV filter housing is also designed for sterilisation. Before use, if needed for the application, sterilize the filters.

- material: stainless steel 1.4301; on request 1.4404.
- replace filter element al least every 12 months or folow instructions for specific application.

-TRI-CLAMP connection on request.

Filter housing model	Connection DIN 11851*	Flow rate	Dimensions [mm]			Mass	Filter element type
	DN	Nm³/h	A	ø B	C	kg	
AV 006	32	9	115	88,9	Rd 58 x 1/6	1,6	0310 AVF
AV 027	40	25	176	114,3	Rd 65 x 1/6	2,4	0525 AVF
AV 032	50	40	184	114,3	Rd 78 x 1/6	2,5	0530 AVF
AV 072	50	110	320	114,3	Rd 78 x 1/6	3,4	1030 AVF
AV 144	80	210	123	168,3	Rd 110 x 1/4	9,5	2030 AVF
AV 192	80	310	820	168,3	Rd 110 x 1/4	12,0	3030 AVF



Filtration grades

Below only the most common filtration grades for process applications are listed. For complete range of our products please check OMEGA AIR product catalogue or contact us for specific application.

PI grade 1; 20 µm

PREFILTER
particulate

Rating according to ISO 8573-1

Solid p.	Water	Oils
Class -	Class -	Class -

high efficient removal of solid particles from compressed air

Filter media	sintered stain. steel 1.4404
Oper. temper.	0 - 150 °C
Diff. press. (dry)	60 mbar

PIW grade 1; 20 µm

PREFILTER
particulate

Rating according to ISO 8573-1

Solid p.	Water	Oils
Class -	Class -	Class -

high efficient removal of solid particles from compressed air

Filter media	sintered stain. steel 1.4404
Oper. temp.	0 - 150 °C
Diff. press. (dry)	60 mbar

PN grade 5; 25 µm

PREFILTER
particulate

Rating according to ISO 8573-1

Solid p.	Water	Oils
Class -	Class -	Class -

high efficient removal of solid particles from compressed air

Filter media	stainles steel mesh 1.4301
Oper. temp.	0 - 150 °C
Diff. press. (dry)	10 mbar

PP grade 3 µm

PREFILTER
particulate

Rating according to ISO 8573-1

Solid p.	Water	Oils
Class 6	Class -	Class -

high efficient removal of solid particles from compressed air

Filter media	acrile fibres, celulose
Oper. temperature	1,5 - 65 °C
Diff. press. (dry)	10 mbar
Part. reten. (nom.)	99,99% (3 µm)
Part. retent. (ISO)	95 %

PR grade 1 µm

PREFILTER
particulate

Rating according to ISO 8573-1

Solid p.	Water	Oils
Class 3	Class -	Class -

high efficient removal of solid particles from compressed air

Filter media	borosilicate micro f.
Oper. temperature	1,5 - 120 °C
Diff. pressure (dry)	20 mbar
Part. reten. (nom.)	99,9999% (1 µm)
Part. retent. (ISO)	99.8 %

PM grade 0,1 µm

MICROFILTER
particulate+coalescing

Rating according to ISO 8573-1

Solid p.	Water	Oils
Class 2	Class -	Class 2

high efficient filtration in process industry applications, removal of submicrons particles, bacteria

Filter media	borosilicate micro f.
Oper. temperature	1,5 - 120 °C
Diff. pressure (dry)	50 mbar
Part. reten. (nom.)	99,9999% (0,1 µm)

PS grade 0,01 µm

MICROFILTER
particulate+coalescing

Rating according to ISO 8573-1

Solid p.	Water	Oils
Class 1	Class -	Class 1

high efficient filtration in process industry applications, removal of submicrons particles, bacteria

Filter media	borosilicate micro f.
Oper. temperature	1,5 - 120 °C
Diff. pressure (dry)	80 mbar
Part. reten. (nom.)	99,9999% (0,01 µm)

PA grade

ADSORPTION
activated carbon

Rating according to ISO 8573-1

Solid p.	Water	Oils
Class -	Class -	Class -

high efficient removal of oil, hydrocarbons, vapours and odours from compressed air

Filter media	activated carbon, borosilicate micro f.
Oper. temperature	1,5 - 45 °C
Diff. pressure (dry)	60 mbar
Residual oil cont.	<0,0005 mg/m³

VSF grade

STERILE
particulate + bacteria removal + sterile

Rating according to ISO 8573-1

Solid p.	Water	Oils
Class 1	Class -	Class -

high efficient sterile filtration of compressed air, process air and technical gasses

Filter media	borosilicate micro f.
Oper. temperature	-20 to +150 °C
Diff. pressure (dry)	80 mbar
Part. reten. (nom.)	99,9999% (0,1 µm)

AVF grade

STERILE
particulate + bacteria removal + sterile

Rating according to ISO 8573-1

Solid p.	Water	Oils
Class 1	Class -	Class -

high efficient sterile filtration of compressed air, process air and technical gasses

Filter media	borosilicate micro f.
Oper. temperature	-20 to +150 °C
Diff. pressure (dry)	80 mbar
Part. reten. (nom.)	99,9999% (0,1 µm)