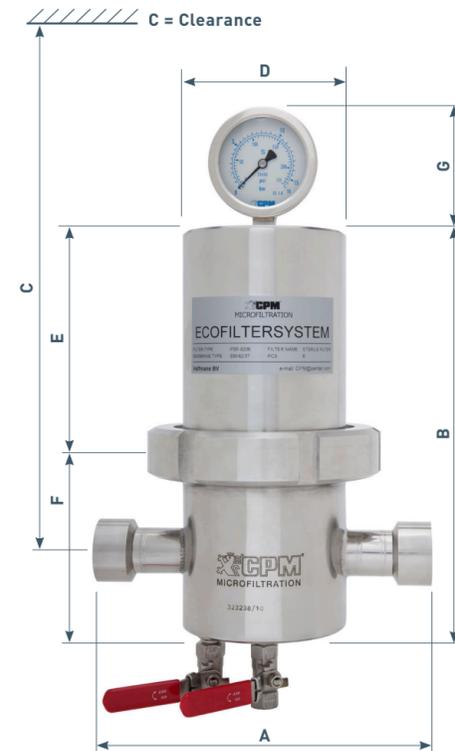


# STANDARD FILTER HOUSINGS

CPM standard filter housings are designed for upstream and downstream sampling as well as in-line testing of the filter element with a suitable filter tester.

Filter housing, dimensions in mm							
Type	A	B	C	D	E	F	G
602 MINI	160	x	320	70	175	45	x
604 MINI	160	x	340	70	175	45	x
606 MINI	160	x	360	70	175	45	x
6002	160	235	310	70	143	100	85
6004	160	235	330	70	143	100	85
6006	160	235	350	70	143	100	85
8202	210	248	320	104	143	115	85
8204	210	248	340	104	143	115	85
8206	210	248	360	104	143	115	85
8208	210	293	430	104	188	115	85
8210	210	293	450	104	188	115	85
1008	330	397	500	154	237	170	85
1010	330	397	520	154	237	170	85
1012	330	397	540	154	237	170	85
1014	330	397	560	154	237	170	85
1408	330	392	500	154	234	170	85
1410	330	392	520	154	234	170	85
1412	330	392	540	154	234	170	85
1414	330	455	610	154	234	185	85
1416	330	455	630	154	234	185	85
1418	330	508	710	154	335	185	85
1420	330	508	730	154	335	185	85
1426	330	657	940	154	484	185	85
1432	330	657	1000	154	484	185	85

STANDARD FILTER HOUSING



MINI FILTER HOUSING



# HAFFMANS CPM<sup>®</sup> STERILE FILTERS

FOOD & BEVERAGE

FILTRATION



HAFFMANS BV  
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#### INTRODUCTION

CPM sterile filters feature a revolutionary design that provides advantages over conventional filter cartridges for food, beverage, and other process applications.

#### GENERAL PRODUCT INFORMATION

Effective sterile air or gas filtration, to prevent contamination, spoilage and product loss, is an essential part of your production process.

The CPM sterile filter, type PSF, is a validated sterile filter for 100 percent contamination-free filtration of air, compressed air, carbon dioxide (CO<sub>2</sub>), and other gases. Equipped with the patented, flexible Ecofilter® element, consisting of filter membranes in between segmented stainless steel disks, the PSF offers the highest filtration efficiency and security.

The PSF's filter membranes, made of high-quality PTFE, are permanently hydrophobic and reject bacteria transfer and growth. The filter membranes have an absolute retention rate of 0.2 µm and an extremely high, 95 percent, pore distribution. This allows high flow capacities against very little pressure loss.

The innovative filter design makes 100 percent reverse flow filtration and in-line steam sterilization possible.

With the PSF MINI there is also a solution available that offers all the advantages of the CPM sterile filters at a lower cost.

#### APPLICATIONS

All industries, typically used in the brewing and beverage, food and dairy industries

# ADVANCED MODULAR DESIGN

CPM sterile filters have the most advanced design of air and gas filters on the market today. All CPM filters have been thoroughly tested and proven effective with the greatest reliability and longest life at an economical cost.

#### FEATURES

- Unique and flexible modular filter design
- Robust stainless steel construction, no damage or aging of filter element
- Only the filter membrane is replaced as a wear part
- Easy up- and downscaling of filter capacity
- High temperature resistance of filter membranes that can be sterilized up to 284 °F (140 °C)
- High filter capacities possible
- Filter elements can be retrofitted within conventional filter housings
- CPM standard filter housings are equipped with condensate release connections for both the inlet and outlet that can also be used for filter element testing
- 100 percent reverse flow filtration and sterilization possible

#### BENEFITS

- Up to 50 percent of Total Cost of Ownership savings due to:
  - Robust stainless steel segmented filter elements
  - Use of easy-to-exchange cost-effective filter membranes
  - Long filter membranes lifetime – can be sterilized up to 150 times
  - Reduced inventory and disposal costs
- High filtration security
  - Easy control of proper filter performance, easy detection of filter damages
- Sustainable Solution, less waste due to replacement of just the filter membrane



#### SUPERIOR MEMBRANE TECHNOLOGY



CPM sterile filters provide 100 percent membrane efficiency with an absolute retention rate of 0.2 µm. The membrane materials are pure without resins or binders thus preventing growth of any bacteria and other organisms.

#### OPTIMAL PRODUCTION CONTROL



The CPM Ecofilter's all stainless steel construction guarantees high temperature resistance. CPM sterile filters come standard with a glycerine-filled pressure gauge (except MINI series).

#### MAXIMUM FLEXIBILITY



All CPM sterile filters with standard filter housings can be used for primary and secondary sampling, and to drain condensate. CPM sterile filters are optionally delivered with valves for condensate release connections.

#### TECHNICAL DATA

Filter Type	Capacity air/gas		Filter housing, connection		Weight		Segmented filter element Type	Replacement membranes		Filter housing, max. pressure	
	7 barg	100 psig	BSP	DIN-11851	kg	lbs		Quantity	Type	barg	psig
PSF-602 MINI	40	24	½"	15	2.2	5	SF-60/02	2	EM-60/3T	10	145
PSF-604 MINI	80	48	½"	15	2.5	6	SF-60/04	4	EM-60/3T	10	145
PSF-606 MINI	120	72	½"	15	2.8	6	SF-60/06	6	EM-60/3T	10	145
PSF-6002	40	24	½"	15	3.8	8	SF-60/02	2	EM-60/3T	16	232
PSF-6004	80	48	½"	15	4.0	9	SF-60/04	4	EM-60/3T	16	232
PSF-6006	120	72	½"	15	4.2	9	SF-60/06	6	EM-60/3T	16	232
PSF-8202	120	72	1"	25	6.4	14	SF-82/02	2	EM-82/3T	16	232
PSF-8204	240	144	1"	25	6.6	15	SF-82/04	4	EM-82/3T	16	232
PSF-8206	360	216	1 ½"	40	6.8	15	SF-82/06	6	EM-82/3T	16	232
PSF-8208	480	288	1 ½"	40	7.2	16	SF-82/08	8	EM-82/3T	16	232
PSF-8210	600	360	1 ½"	40	7.4	16	SF-82/10	10	EM-82/3T	16	232
PSF-1008	680	408	2"	50	14.4	32	SF-100/08	8	EM-100/3T	16	232
PSF-1010	850	510	2"	50	13.8	30	SF-100/10	10	EM-100/3T	16	232
PSF-1012	1020	612	2"	50	14.2	31	SF-100/12	12	EM-100/3T	16	232
PSF-1014	1190	714	2"	50	14.6	32	SF-100/14	14	EM-100/3T	16	232
PSF-1408	1360	816	2"	50	20.0	44	SF-140/08	8	EM-140/3T	16	232
PSF-1410	1700	1020	2"	50	20.5	45	SF-140/10	10	EM-140/3T	16	232
PSF-1412	2040	1224	2"	50	21.5	47	SF-140/12	12	EM-140/3T	16	232
PSF-1414	2380	1428	2 ½"	65	22.5	50	SF-140/14	14	EM-140/3T	16	232
PSF-1416	2720	1632	2 ½"	65	24.5	54	SF-140/16	16	EM-140/3T	16	232
PSF-1418	3060	1836	2 ½"	65	25.5	56	SF-140/18	18	EM-140/3T	16	232
PSF-1420	3400	2040	3"	80	26.5	58	SF-140/20	20	EM-140/3T	16	232
PSF-1426	4420	2652	3"	80	28.0	62	SF-140/26	26	EM-140/3T	16	232
PSF-1432	5440	3264	3"	80	29.5	65	SF-140/32	32	EM-140/3T	16	232

Working pressure	barg	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	psig	14.5	29	43.5	58	72.5	87	101.5	116	130.5	145	159.5	174	188.5	203	217.5	232
Conversion factor		0.25	0.38	0.50	0.63	0.75	0.9	1.0	1.1	1.3	1.4	1.5	1.6	1.8	1.9	2.0	2.1

**Filter housing material**  
Stainless steel AISI 304

**Segmented filter element material**  
Stainless steel AISI 304

**Filter membrane material**  
PTFE (polytetrafluoroethylene)

**Retention rate absolute**  
0.20 µm

#### RECOMMENDED STERILIZATION PROCEDURES

**Saturated steam**  
20 minutes at 250 °F (121 °C)  
10 minutes at 266 °F (130 °C)  
6 minutes at 284 °F (140 °C)

**Hot air**  
12 hours at 250 °F (121 °C)