



HAFFMANS CPM® PRE-FILTERS

FILTRATION



INTRODUCTION

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

GENERAL PRODUCT INFORMATION

Effective pre-filtration is an essential part of your production process and serves as protection for the air and gas line instruments.

The CPM pre-filter, type PVF, is a validated pre-filter for 100 percent particle-free filtration of all types of compressed air, carbon dioxide (CO_2) and other gases. Equipped with the patented, flexible Ecofilter[®] element, consisting of filter membranes in between segmented stainless steel disks, the PVF offers the highest filtration efficiency and security.

The PVF's filter membranes are made of woven stainless steel threads that assure absolute filtration. CPM prefilter membranes can be supplied in a variety of pore sizes to meet your special requirements and allow for high flow capacities against very little pressure loss. The innovative filter design makes 100 percent reverse flow filtration possible.

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

APPLICATIONS

Particle-free finest filtration of all types of compressed air, $\rm CO_2$ and other gases in all industries

ADVANCED MODULAR DESIGN

CPM pre-filters have the most advanced design of filters for compressed air, CO_2 and other gases 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

BENEFITS

- Unique and flexible modular filter design
- Robust stainless steel construction, including stainless steel membranes, results in no damage or aging of the filter element
- Only the filter element is replaced as a wear part
- Easy up- and downscaling of filter capacity
- 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
- Absolute pore size of woven stainless steel thread membranes provides absolute filtration
- Filter membranes can be chemically and/or mechanically cleaned

- 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
 - 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, filter membrane is 100% recyclable

MAXIMUM FLEXIBILITY



SUPERIOR MEMBRANE TECHNOLOGY

CPM pre-filters use an innovative membrane technology that allows for 100 percent particle-free filtration of all types of compressed air, CO_2 and other gases. The filter membranes are available in various sizes. Standard pore size delivered is 32 μ m. Other pore sizes available are 3,10, 25, 50, 75, 100 and 200 μ m.



OPTIMAL PRODUCTION CONTROL

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



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

TECHNICAL DATA

| Filter | Capacity air/gas | | Filter housing, connection | | Weight | | Segmented filter element | | cement branes | Filter housing, max. pressure | |
|--------------|---------------------|----------|-------------------------------|-----------|--------|-----|-----------------------------|----------|------------------|----------------------------------|------|
| Туре | 7 barg | 100 psig | BSP | DIN-11851 | | | Туре | Quantity | Туре | | |
| | Nm³/h | scf/m | G | DN | kg | lbs | , | | | barg | psig |
| PVF-602 MINI | 40 | 24 | 1/2" | 15 | 2.2 | 5 | SF-60/02 | 2 | EM-60/32S | 10 | 145 |
| PVF-604 MINI | 80 | 48 | 1/2" | 15 | 2.5 | 6 | SF-60/04 | 4 | EM-60/32S | 10 | 145 |
| PVF-606 MINI | 120 | 72 | 1/2" | 15 | 2.8 | 6 | SF-60/06 | 6 | EM-60/32S | 10 | 145 |
| PVF-6002 | 40 | 24 | 1/2" | 15 | 3.8 | 8 | SF-60/02 | 2 | EM-60/32S | 16 | 232 |
| PVF-6004 | 80 | 48 | 1/2" | 15 | 4.0 | 9 | SF-60/04 | 4 | EM-60/32S | 16 | 232 |
| PVF-6006 | 120 | 72 | 1/2" | 15 | 4.2 | 9 | SF-60/06 | 6 | EM-60/32S | 16 | 232 |
| PVF-8202 | 120 | 72 | 1" | 25 | 6.4 | 14 | SF-82/02 | 2 | EM-82/32S | 16 | 232 |
| PVF-8204 | 240 | 144 | 1" | 25 | 6.6 | 15 | SF-82/04 | 4 | EM-82/32S | 16 | 232 |
| PVF-8206 | 360 | 216 | 1 1/2" | 40 | 6.8 | 15 | SF-82/06 | 6 | EM-82/32S | 16 | 232 |
| PVF-8208 | 480 | 288 | 1 1/2" | 40 | 7.2 | 16 | SF-82/08 | 8 | EM-82/32S | 16 | 232 |
| PVF-8210 | 600 | 360 | 1 1/2" | 40 | 7.4 | 16 | SF-82/10 | 10 | EM-82/32S | 16 | 232 |
| PVF-1008 | 680 | 408 | 2" | 50 | 14.4 | 32 | SF-100/08 | 8 | EM-100/32S | 16 | 232 |
| PVF-1010 | 850 | 510 | 2" | 50 | 13.8 | 30 | SF-100/10 | 10 | EM-100/32S | 16 | 232 |
| PVF-1012 | 1020 | 612 | 2" | 50 | 14.2 | 31 | SF-100/12 | 12 | EM-100/32S | 16 | 232 |
| PVF-1014 | 1190 | 714 | 2" | 50 | 14.6 | 32 | SF-100/14 | 14 | EM-100/32S | 16 | 232 |
| PVF-1408 | 1360 | 816 | 2" | 50 | 20.0 | 44 | SF-140/08 | 8 | EM-140/32S | 16 | 232 |
| PVF-1410 | 1700 | 1020 | 2" | 50 | 20.5 | 45 | SF-140/10 | 10 | EM-140/32S | 16 | 232 |
| PVF-1412 | 2040 | 1224 | 2" | 50 | 21.5 | 47 | SF-140/12 | 12 | EM-140/32S | 16 | 232 |
| PVF-1414 | 2380 | 1428 | 2 1/2" | 65 | 22.5 | 50 | SF-140/14 | 14 | EM-140/32S | 16 | 232 |
| PVF-1416 | 2720 | 1632 | 2 1/2" | 65 | 24.5 | 54 | SF-140/16 | 16 | EM-140/32S | 16 | 232 |
| PVF-1418 | 3060 | 1836 | 2 1/2" | 65 | 25.5 | 56 | SF-140/18 | 18 | EM-140/32S | 16 | 232 |
| PVF-1420 | 3400 | 2040 | 3" | 80 | 26.5 | 58 | SF-140/20 | 20 | EM-140/32S | 16 | 232 |
| PVF-1426 | 4420 | 2652 | 3" | 80 | 28.0 | 62 | SF-140/26 | 26 | EM-140/32S | 10 | 145 |
| PVF-1432 | 5440 | 3264 | 3" | 80 | 29.5 | 65 | SF-140/32 | 32 | EM-140/32S | 10 | 145 |

| 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 |

| Pore sizes in µm | 3 | 10 | 25 | 32 | 50 | 75/100 |
|-------------------|-----|-----|-----|-----|-----|--------|
| Conversion factor | 0.5 | 0.6 | 0.8 | 1.0 | 1.2 | 1.5 |

Filter housing material Stainless steel AISI 304

Segmented filter element material Stainless steel AISI 304

Filter membranes material Stainless steel AISI 304

Standard pore size 32 µm

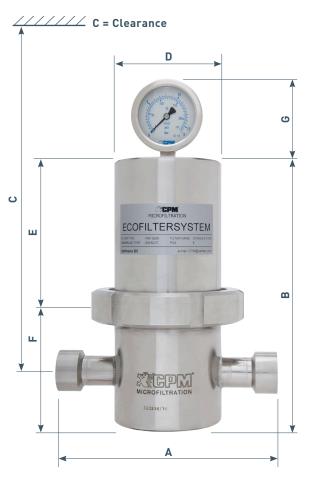
Available pore sizes 3,10, 25, 32, 50, 75, 100, 200 μm

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 housi | ng, dimension | s in mm | | | | | |
|--------------|---------------|---------|------|-----|-----|-----|----|
| Туре | А | В | С | D | E | F | G |
| 602 MINI | 160 | х | 320 | 70 | 175 | 45 | х |
| 604 MINI | 160 | х | 340 | 70 | 175 | 45 | х |
| 606 MINI | 160 | х | 360 | 70 | 175 | 45 | х |
| 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 BV

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