



HAFFMANS CPM[®] COALESCENCE & ACTIVATED CARBON FILTERS



CPM[®] COALESCENCE FILTERS THE ECONOMIC ART OF FILTRATION

INTRODUCTION

CPM coalescence filters and two-stage combination filters offer the most advanced pre-treatment of compressed air, CO₂ and other gases for food, beverage and other process applications.

GENERAL PRODUCT INFORMATION

Effective pre-treatment of air and gases helps prevent contamination, spoilage and product loss during the production process. In addition, it protects the air- and gasline instruments.

The CPM coalescence filter, type PSMF, is a validated filter for the removal of residual oil, water and solid particles. In the filter element, liquid droplets and particles are captured, coalesced and drained to the bottom of the filter housing for easy removal through the condensate drain. The filter element is resistant to all mineral and synthetic oils.

The CPM activated carbon filter, type PAK, is a validated adsorption filter for the removal of residual oil vapor. The activated carbon's large surface area ensures high adsorption capacity and optimum purification performance throughout the filter's life.

Type PSMF-AK, combines both filter types into a two-stage process that ensures the most efficient gas treatment. All CPM coalescence filters have a stainless steel filter element that offers the highest filtration efficiency and security.

APPLICATIONS

Removal of oil, water and solid particles from compressed air, CO₂ and other gases. Can be used in all industries.

PROVEN TECHNOLOGY

CPM coalescence filters are designed for critical air or gas service applications where high-efficiency removal of oil, water or solid particles is required. All CPM filters have been thoroughly tested and proven effective with the greatest reliability and longest life at an economical cost.

HOW COALESCING FILTERS WORK

Coalescing is the separation of liquid aerosols and droplets from a gas. Using a coalescing filter element in a housing with three ports, the gas passes the filter element from the inside out. The inner layer is a high-efficiency coalescing layer and the outer layer is a coarser drainage layer.

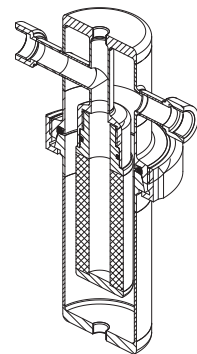
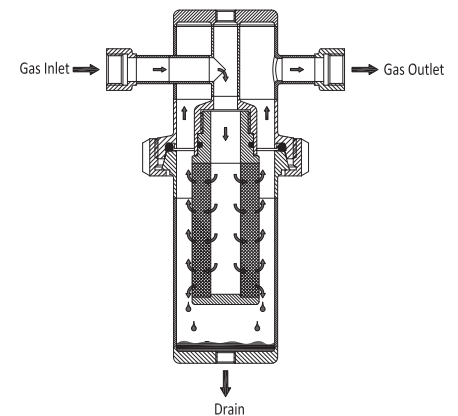
The fine liquid aerosols and droplets are captured by the fibers in the inner layer where they run together along the fibers to form larger drops. These drops are forced to the outside of the filter element and drain to the bottom of the housing by gravity. The condensate drain at the bottom of the filter element allows for easy removal of the captured liquid.

FEATURES

- Robust stainless steel construction, including stainless steel filter elements, results in no damage or aging of the filter element
- High filter capacities possible

BENEFITS

- Effective pre-treatment of compressed air, CO₂ and other gases
- Prevention of product loss, contamination and spoilage
- Increased service life of gas supply network and gas consuming system components



OPTIMAL PRODUCTION CONTROL



The CPM coalescence filter's all stainless steel construction ensures high temperature resistance. CPM coalescence filters come standard with a glycerine-filled pressure gauge.

MAXIMUM FLEXIBILITY



The condensate drain at the bottom of the filter element allows for easy removal of the captured liquid.

TECHNICAL DATA

| Filter Type | Capacity air/gas at 7 barg | | Filter housing, connection | | Weight | | Filter element Type | Filter housing, max. pressure | |
|----------------|-------------------------------|------|-------------------------------|-----------|--------|-----|------------------------|----------------------------------|------|
| | nom. | max. | BSP | DIN-11851 | kg | lbs | | barg | psig |
| | Nm ³ /h | | G | DN | kg | lbs | | barg | psig |
| PSMF-6002 | 60 | 180 | ½" | 15 | 3,4 | 7 | PSMF-04/20 | 16 | 232 |
| PSMF-6004 | 180 | 280 | ½" | 15 | 3,5 | 8 | PSMF-05/20 | 16 | 232 |
| PSMF-6006 | 280 | 350 | ½" | 15 | 3,6 | 8 | PSMF-05/25 | 16 | 232 |
| PSMF-8202 | 350 | 480 | 1" | 25 | 4,8 | 11 | PSMF-05/30 | 16 | 232 |
| PSMF-8204 | 480 | 720 | 1" | 25 | 5,0 | 11 | PSMF-07/30 | 16 | 232 |
| PSMF-8206 | 720 | 1000 | 1 ½" | 40 | 5,2 | 11 | PSMF-10/30 | 16 | 232 |
| PSMF-8208 | 1000 | 1400 | 2" | 50 | 5,4 | 12 | PSMF-15/30 | 16 | 232 |
| PSMF-1008 | 1400 | 1800 | 2" | 50 | 8,8 | 19 | PSMF-20/30 | 16 | 232 |
| PSMF-1010 | 1880 | 2800 | 2" | 50 | 9,2 | 20 | PSMF-30/30 | 16 | 232 |

| Filter Type | Capacity air/gas at 7 barg | | Filter housing, connection | | Weight | | Filter element Type | Filter housing, max. pressure | |
|----------------|-------------------------------|------|-------------------------------|-----------|--------|-----|------------------------|----------------------------------|------|
| | nom. | max. | BSP | DIN-11851 | kg | lbs | | barg | psig |
| | Nm ³ /h | | G | DN | kg | lbs | | barg | psig |
| PAK-6002 | 60 | 180 | ½" | 15 | 6,8 | 15 | PAK-04/20 | 16 | 232 |
| PAK-6004 | 180 | 280 | ½" | 15 | 7,0 | 15 | PAK-05/20 | 16 | 232 |
| PAK-6006 | 280 | 350 | ½" | 15 | 7,2 | 16 | PAK-05/25 | 16 | 232 |
| PAK-8202 | 350 | 480 | 1" | 25 | 9,6 | 21 | PAK-05/30 | 16 | 232 |
| PAK-8204 | 480 | 720 | 1" | 25 | 10,0 | 22 | PAK-07/30 | 16 | 232 |
| PAK-8206 | 720 | 1000 | 1 ½" | 40 | 10,2 | 22 | PAK-10/30 | 16 | 232 |
| PAK-8208 | 1000 | 1400 | 2" | 50 | 10,4 | 23 | PAK-15/30 | 16 | 232 |
| PAK-1008 | 1400 | 1800 | 2" | 50 | 17,6 | 39 | PAK-20/30 | 16 | 232 |
| PAK-1010 | 1880 | 2800 | 2" | 50 | 18,4 | 41 | PAK-30/30 | 16 | 232 |

| Filter Type | Capacity air/gas at 7 barg | | Filter housing, connection | | Weight | | Filter element | | Filter housing, max. pressure | |
|----------------|-------------------------------|------|-------------------------------|-----------|--------|-----|-----------------------|-----------------------|----------------------------------|------|
| | nom. | max. | BSP | DIN-11851 | kg | lbs | 1 st stage | 2 nd stage | barg | psig |
| | Nm ³ /h | | G | DN | kg | lbs | | | barg | psig |
| PSMF-AK-6002 | 60 | 180 | ½" | 15 | 6,8 | 15 | PSMF-04/20 | PAK-04/20 | 16 | 232 |
| PSMF-AK-6004 | 180 | 280 | ½" | 15 | 7,0 | 15 | PSMF-05/20 | PAK-05/20 | 16 | 232 |
| PSMF-AK-6006 | 280 | 350 | ½" | 15 | 7,2 | 16 | PSMF-05/25 | PAK-05/25 | 16 | 232 |
| PSMF-AK-8202 | 350 | 480 | 1" | 25 | 9,6 | 21 | PSMF-05/30 | PAK-05/30 | 16 | 232 |
| PSMF-AK-8204 | 480 | 720 | 1" | 25 | 10,0 | 22 | PSMF-07/30 | PAK-07/30 | 16 | 232 |
| PSMF-AK-8206 | 720 | 1000 | 1 ½" | 40 | 10,2 | 22 | PSMF-10/30 | PAK-10/30 | 16 | 232 |
| PSMF-AK-8208 | 1000 | 1400 | 2" | 50 | 10,4 | 23 | PSMF-15/30 | PAK-15/30 | 16 | 232 |
| PSMF-AK-1008 | 1400 | 1800 | 2" | 50 | 17,6 | 39 | PSMF-20/30 | PAK-20/30 | 16 | 232 |
| PSMF-AK-1010 | 1880 | 2800 | 2" | 50 | 18,4 | 41 | PSMF-30/30 | PAK-30/30 | 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 |
| 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

Filter element material

Stainless steel AISI 304

Residual oil content

PSMF: <0.01 mg/m³

PAK: <0.005 mg/m³

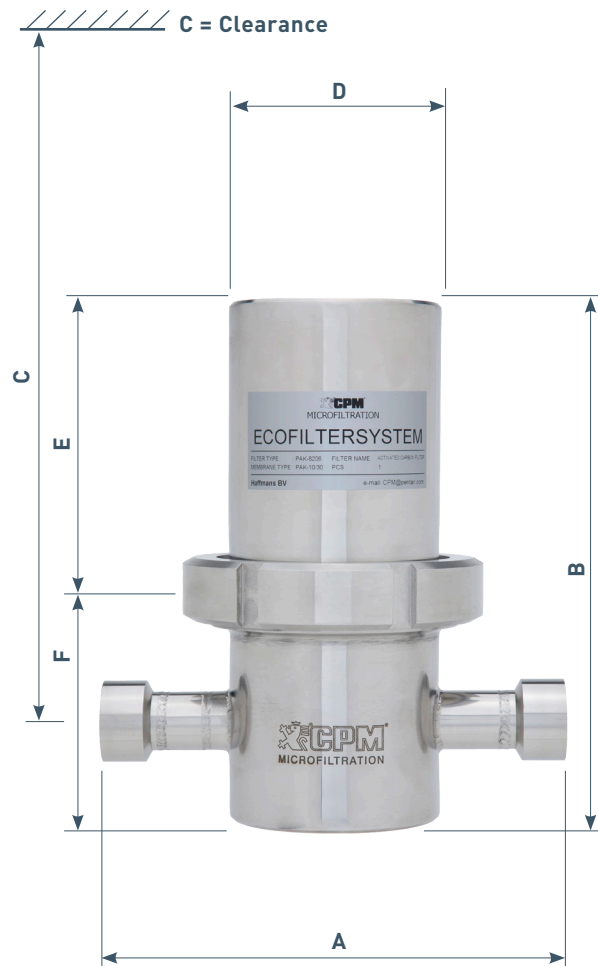
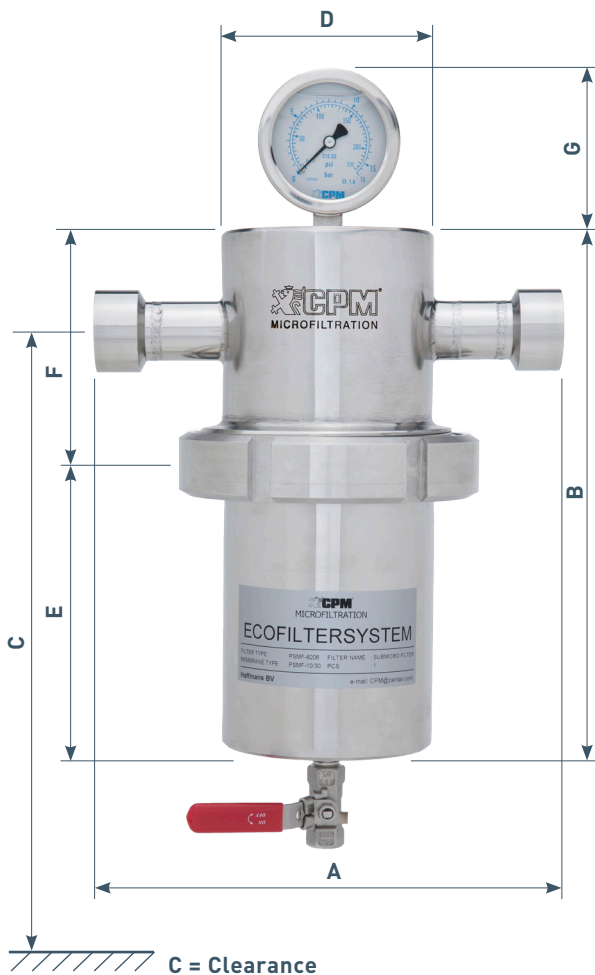
Residual solid particles

PSMF: < 0.01 µm

STANDARD FILTER HOUSINGS

| Filter housing, dimensions in mm | | | | | | | |
|----------------------------------|-----|-----|------|-----|-----|-----|----|
| Type | A | B | C | D | E | F | G |
| 6002 | 160 | 263 | 383 | 85 | 150 | 113 | 85 |
| 6004 | 160 | 263 | 408 | 85 | 150 | 113 | 85 |
| 6006 | 160 | 263 | 408 | 85 | 150 | 113 | 85 |
| 8202 | 210 | 316 | 446 | 104 | 188 | 128 | 85 |
| 8204 | 210 | 463 | 644 | 104 | 335 | 128 | 85 |
| 8206 | 210 | 463 | 720 | 104 | 335 | 128 | 85 |
| 8208 | 210 | 612 | 996 | 104 | 484 | 128 | 85 |
| 1008 | 330 | 733 | 1216 | 154 | 550 | 183 | 85 |
| 1010 | 330 | 983 | 1720 | 154 | 800 | 183 | 85 |

STANDARD FILTER HOUSING, TYPE PSMF



STANDARD FILTER HOUSING, TYPE PAK



HAFFMANS BV

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