PALL Life Sciences

USD 2106

Emflon CPFR Filter Cartridges

Emflon® CPFR Filter Cartridges

Air, Gas and Vent Sterilizing Filter
for High Temperature Applications

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Description

Pall® **Emflon** CPFR High Temperature filters have been developed from the long life and high strength **Emflon** PFR filter range. They have been designed and liquid validated as sterilizing filters for air, gas and vent service in critical high temperature applications in the biopharmaceutical and bioprocess industry, like fermentation inlet air, aseptic packaging, or hot WFI tank vents.

The oxidation-resistant components typically allow extended use in air up to a 80°C (176°F) and for shorter periods up to 120°C (248°F). The high strength cartridges can also withstand high differential pressures in forward or reverse direction during multiple steam in place sterilization cycles. The filters incorporate a double layer (0.2µm) of inherently hydrophobic polytetrafluoroethylene (PTFE) membrane, manufactured by Pall. **Emflon** CPFR filters are identified by their unique colored oxidation resistant components and the easy-to-read laser-etched part number and serial number.

Features and Benefits

Feature

Validated in accordance with:

- *Brevundimonas diminuta* in liquid at 10^7 per cm^2 according to modified ASTM Standard Test Method F383-83 and FDA Guidelines on Sterile Drug Products Produced by Aseptic Processing (1987).

Benefit

High validation standards ensure highest removal efficiency and safety margins even in processes with high temperatures, humid conditions and variable bioburden.

Feature

Correlation of challenge test data with:

- Forward Flow Test and
- Water intrusion test

Benefit

Allows a safe, easy and fast confirmation of filter integrity for assurance of sterile filtration in critical applications.

Feature

Lot tests for multi-cycle autoclave challenges.

Benefit

Repeat steamability *in situ* and robust construction optimized for air, gas and vent service with enhanced life at high temperatures.

Certified "P" Quality

Emflon CPFR cartridges have been designed and qualified for pharmaceutical use. The provided "P" Certificate meets and confirms pharmaceutical requirements on the effluent regarding:

Effluent quality tests (P tests)

- Cleanliness per USP Particulates in injectables
- Non Fiber-Releasing per 21 CFR
- Non-Pyrogenic per USP Bacterial Endotoxins (< 0.25 EU/ml)
- Meets total organic carbon and conductivity per USP Purified Water, pH per USP packaged water

Biological Tests

- Meets USP biological reactivity, *in vivo,* for Class VI 121°C (249.8°F) plastics

The quality management system for manufacturing of **Emflon** CPFR occurs in conformance with Certified Quality System BS EN ISO9002: 1994.

Each filter is 100% integrity tested and fully traceable by individual laser marked lot and serial number.

Technical Information

Materials of Construction

Membrane	Double layer proprietary hydrophobic PTFE
Drainage Layers	Specially developed, resin impregnated polyaramid non-woven material
End cap, core and cage	Pigmented polypropylene
Adapter	Pigmented polypropylene with encapsulated stainless steel reinforcing ring

Effective Surface Area

AB1CPFR7PVH4	Typically 0.72 m^2 (7.7 ft^2)

Maximum Differential Pressure

Maximum forward differential pressures in air, nitrogen or other compatible gas service are:

5.4 bard at 50°C (80 psid at 122°F)

4.1 bard at 80°C (60 psid at 176°F)

3.4 bard at 90°C (50 psid at 194°F)

Maximum Operating Temperature (in compatible gases)

120°C (248°F)

Maximum Forward Steaming Conditions

1 bard at 125°C (14.5 psid at 257°C)

0.3 bard at 142°C (4.4 psid at 288°C)

Maximum Reverse Steaming Conditions

0.5 bard at 125°C (7.3 psid at 257°C)

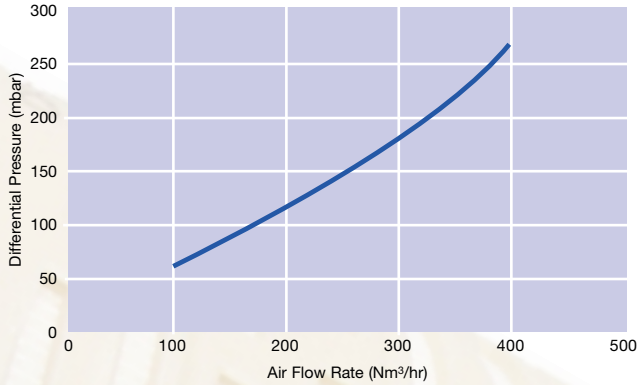
0.2 bard at 142°C (3.0 psid at 288°C)

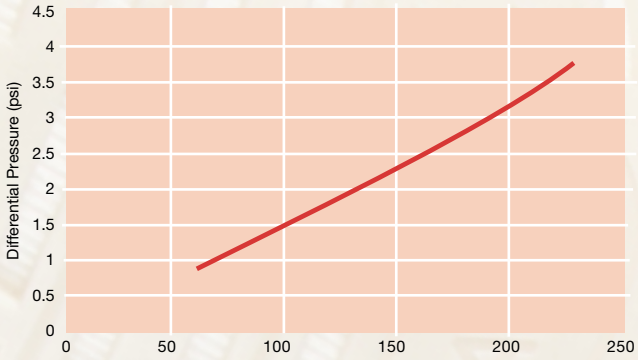
Integrity Test Values*

Forward Flow Test	With 60/40 IPA/Water wet (v:v) and air as test gas ≤14ml/min at 1040 mbar (15 psi)
Water Intrusion Test	≤0.3ml/min at 2500 mbar (36psi)

*Values are for one 254mm (10 inch) filter at 20°C (68°F).
Please contact Pall for multi-element integrity test values.

Typical air flow at 20°C and 2 barg (30 psig) inlet pressure vs. differential pressure for an AB1 size cartridge**





**Please contact Pall for specific application sizing

Typical Service Life in continuous flowing air service***

1 year	at 100°C (212°F)
6 months	at 110°C (230°F)
2 months	at 120°C (248°F)

Typical Cumulative Steam Life***

100 hours (1 hr cycles)	at 140°C (284°F)

***The steam life and service life data were determined by testing under controlled laboratory conditions up to the time indicated. Actual operating conditions may affect the filter's long term resistance to steam sterilization and hot air service. Filters should be qualified for each process application

Ordering Information

Ordering Information****

Pall Part Number: **AB** ☐ **CPFR** ☐ **PV** ☐

Code	Nominal Length
05	125mm (5 inch)
1	254mm (10inch)
2	508mm (20inch)
3	762mm (30inch)

Code	Style
7	Double O-ring with bayonet lock and finned end
2	Double O-ring with bayonet lock and flat end

Code	O-ring material
H4	Silicone (other materials available)

****This is a guide to the part number structure only. For availability of specific options, please contact Pall or your local Pall distributor.

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