

Emflon PFR Filters

High Strength, Long Life
Sterilising Filters for Air and Gas

Description

'Emflon' PFR filters have been developed from the successful **Emflon** filter range launched in 1981 and widely used as air and gas sterilising filters in the pharmaceutical and biotechnology industries. The double layer 'Pall' PTFE membrane is inherently hydrophobic, chemically inert and designed specifically for removal of contaminating bacteria and viruses.

Emflon PFR filters meet the ever increasing demand for air filters with greater strength, longer life and the ability to withstand the rigours of *in-situ* steaming in the forward or reverse direction.

Superior Performance

Emflon PFR filters provide high assurance of filter integrity and long life, even during continuous use in hot air up to 60°C and after repeat steamings for a typical period of up to 12 months.

This is combined with high flow rates and excellent dewetting characteristics resulting in very economical filtration through the use of smaller installations and reduced energy costs. In addition, the filters can be tested *in-situ* by the Forward Flow integrity test or by a Water Intrusion test. Both tests are correlated to liquid bacterial challenge - the 'worst case' challenge.



Scientific Validation

Emflon PFR filters have been extensively and scientifically validated using the most advanced methods and the most sensitive equipment available. They have an absolute removal rating of 0.2µm in liquids and 0.003µm in gases and have been validated by:-

- *Brevundimonas (Pseudomonas) diminuta* liquid challenge at 10⁷/cm²
- *Brevundimonas (Pseudomonas) diminuta* aerosol challenge
- PP7 and MS-2 bacteriophage aerosol challenge
- *Bacillus subtilis Var niger* spores aerosol challenge
- Airborne sodium chloride aerosol challenge at 100 l/min flow (0.003µm rated in gases).

Materials of Construction

Membrane	Double layer hydrophobic PTFE
Support and drainage layers	Polypropylene
End cap, core and cage	Polypropylene
O-rings (Excluding SLK styles)	Silicone elastomer
Internal adaptor support ring (MCY2230/4463 styles only)	Stainless Steel

Cumulative Steam Life

Up to 142°C and 0.3 bar ΔP	
MCY1110PFRPH4	100 hours
MCY4440PFRPH4	
MCY4463PFRPH4	
MCY2230PFRPH4	50 hours
MCY3330PFRPH4	
SBF1PFRPH4	
SLK7001PFRP	
SLK7002PFRP	

Steam life validated using 1 hour cycles

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 filters long term resistance to steam sterilisation and hot air service. Filters should be qualified for each process application.

Maximum Differential Pressure

All Styles
4.1 bar up to 80°C

Differential pressure at 50 Nm³/h air flow and 2 bar g inlet pressure

Part number	Differential pressure
MCY1110PFRPH4	500mbar
MCY2230PFRPH4	200 mbar
MCY3330PFRPH4	160 mbar
MCY4440PFRPH4	120 mbar
MCY4463PFRPH4	180 mbar
SBF1PFRPH4	790 mbar
SLK7001PFRP	175 mbar
SLK7002PFRP	80 mbar

Pressure drops are for filter elements only. To obtain the total pressure drop of a complete assembly the housing pressure drop must be added. Please refer to the relevant housing literature or contact Pall for specific sizing information.

Effective Surface Area

MCY1110PFRPH4	0.05m ²
MCY2230PFRPH4	0.14m ²
MCY3330PFRPH4	0.17m ²
MCY4440PFRPH4	0.23m ²
MCY4463PFRPH4	0.28m ²
SBF1PFRPH4	0.04m ²
SLK7001PFRP	0.14m ²
SLK7002PFRP	0.28m ²

Ordering Information

Part numbers:	MCY1110PFRPH4	SBF1PFRPH4
	MCY2230PFRPH4	SLK7001PFRP
	MCY3330PFRPH4	SLK7002PFRP
	MCY4440PFRPH4	
	MCY4463PFRPH4	



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