

POLIFLO PTFE PLUS

STERILE GAS FILTER WITH EXPANDED PTFE MEMBRANE

Leaflet E-35-00



FLUXA

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Sterile Gas Filter with Expanded PTFE Membrane

Introduction

Fluxa Filtri has applied the latest in innovative microfiltration technology to develop its Poliflo PTFE Plus range of cartridges and provide filtration performance second to none. Designed to meet the requirements of the most demanding process applications, they are ideal for high flow rates, where excellent physical strength needs to be combined with minimal pressure drops. Incorporated in the cartridge is high integrity PTFE membrane which has a far higher degree of hydrophobicity than the commonly used PVD, leading to increased security. The high flow capacity of the cartridges is achieved by optimising the pleat design and using a high strength stainless steel core. All construction materials are FDA approved. Rated for gas applications at 0.01 micron, Poliflo PTFE Plus cartridges will remove all airborne bacteria, bacteriophage and a high percentage of viruses.

Features and Benefits

- Absolute rated filtration assures bio-security
- Long steam life
- Hydrophobic PTFE with high voids volume
- ISO 9001 design and assembly
- High flow rates with low differential pressures
- Stainless steel inner core
- Patented fusion bonded assembly process for added strength

Validation

Poliflo PTFE Plus cartridges are assembled from structural components manufactured from materials which conform to USP class VI regulations for plastics. The PTFE membrane is validated by a bacterial challenge with *brevundimonas diminuta* in line with HIMA guidelines, which ensures that each cartridge is of a sterilising grade. Although intended for gas sterilisation applications, Fluxa Filtri consider that a bacterial challenge sets a more rigorous standard than the commonly adopted aerosol challenge. Experience from laboratory tests has shown that a PTFE membrane filter can pass an aerosol challenge or DOP test, but still fail a liquid challenge or bubble/pressure decay test.

Applications

Poliflo PTFE Plus cartridges are ideal for the sterilisation of gases to remove both aerobic and anaerobic micro organisms down to a level of 0.01 micron.

Compressed gas applications include:

- Pharmaceutical fermenter air feeds
- Dairy fermenter air feeds
- Nitrogen filtration
- Carbon dioxide filtration

(For specific gas compatibility, contact Fluxa Filtri Technical Laboratory Services.)

Sterile tank vent applications include:

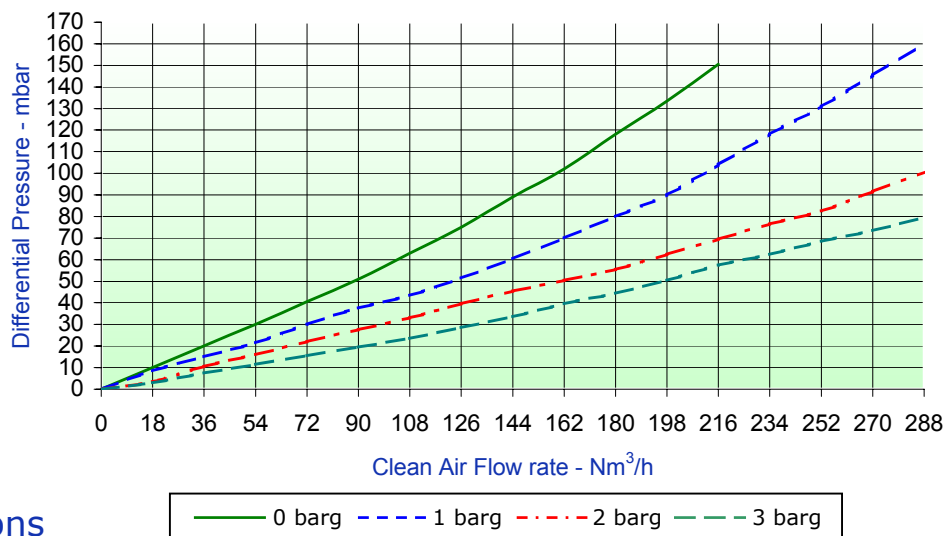
- Water treatment storage tanks
- Pharmaceutical product tanks
- Dairy product tanks

Integrity Testing

All Poliflo PTFE Plus cartridges are integrity tested prior to despatch. They can be retested by wetting the cartridge with a mixture of 60% IPA (or suitable wetting agent) and 40% water and tested using either the bubble point, pressure decay or diffusional flow methods.

Poliflo PTFE Plus 0.2µm - Gas Flow Rate

/250mm (10") Cartridges



Specifications

Cartridge Length	Effective Filtration Area
250mm (10")	0.80m ²
500mm (20")	1.60m ²
750mm (30")	2.40m ²
1000mm (40")	3.20m ²

Note that the flow graph is based on an actual installation and includes housing pressure losses.

Steam Sterilisation

Poliflo PTFE Plus cartridges can be repeatedly steam sterilised in line with the following recommended cycle times, after which they should be replaced.

Temp °C (°F)	Time hrs	The time shown is a total cumulative cycle time including the time taken to reach the required temperature, the time over which the temperature is held and the time taken to return to the ambient temperature. Advice on steaming procedures is available from Fluxa Filtri Technical Laboratory Services.
121 (250)	250	
125 (257)	225	
130 (266)	200	
140 (284)	180	

Maximum Differential Pressure

5 barg at 21°C (70°F) flowing outside to in, through the cartridge.

Ordering Guides

The Fluxa Poliflo PTFE Plus can be ordered using the following codes:

F	20	P	1	V	E
Fluorfil	Micron Rating	(Plus)	Cartridge Length (Nominal)	Adapter	Seal (See Guide)
	20 = 0.2 (0.01gas)		1 = 250mm (10")		E = PTFE Encapsulated Viton

Note: Every cartridge is fully traceable via individual part, serial and lot number clearly marked on each cartridge.