

## HYDROPHOBIC PTFE PLEATED FILTER CARTRIDGES

Engineered for the extremes, ADG's PTFE Pleated Filter Cartridges are specifically designed for critical sterile filtration of compressed air, gas, and hot fluid tank venting. The robust, hydrophobic PTFE membrane provides an absolute barrier to contaminants, ensuring total process security in high-temperature environments.

In the food and ingredient industry, these cartridges are the proven choice for demanding applications like fermentation inlet/exhaust air and aseptic packaging systems. They are also ideal for use in oxygen-enriched air for fermenters and bioreactors, where improved aeration helps you unleash higher product yields and maximize efficiency. When your process cannot be compromised, trust ADG to deliver purity and performance.

### Key Applications:

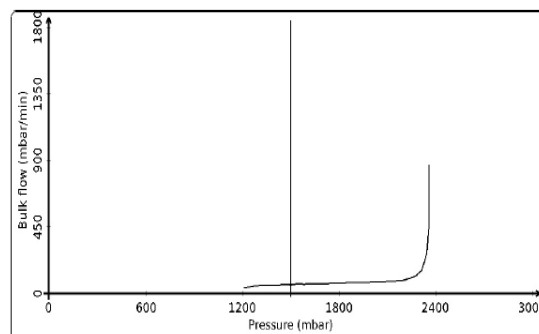
- Critical high-temperature sterile air & gas filtration
- Hot fluid tank venting
- Fermentation inlet and exhaust air
- Aseptic packaging & blow-fill-seal systems
- Oxygen-enriched air for bioreactors

### MATERIAL OF CONSTRUCTION

<b>Media:</b>	Double-Layer 0.2 Hydrophobic Polytetrafluoroethylene
<b>Support Media:</b>	Polyester
<b>Inner and Outer Core:</b>	Polypropylene
<b>End caps:</b>	Polypropylene

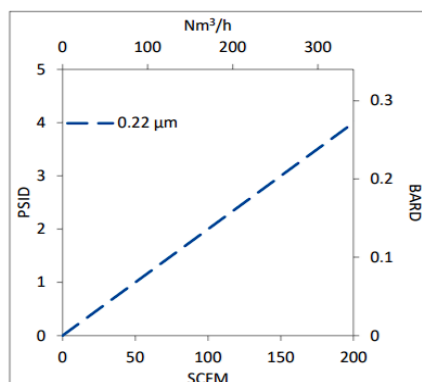
### TECHNICAL SPECIFICATION

<b>Lengths:</b>	10", 20", 30", 40".
<b>Outside diameter:</b>	Ø 70mm
<b>Typical surface Area:</b>	254 mm (10 in.) cartridge 0.6 m <sup>2</sup>
<b>Gaskets/O-rings:</b>	Silicone, nitrile, fluorocarbon elastomer
<b>Sealing Method:</b>	Thermal bonding



Bubble Point Test Graph

### Air/Gas Flow Rates for SCIFIL PTFE Cartridge



Flow rates for Cartridge filters are per 10-inch length. The test fluid is compressed air at ambient temperature.

ADG/PFC/PTFE/Y5H21

## VALIDATION:

**Bacterial Retention:** SCIFIL PTFE cartridges are validated using test procedures that comply with the intent of BFE protocols for the determination of bacterial retention in filters used for air and gas filtration. The challenge level for the 0.22 µm filter membrane is  $1.31 \times 10^8$  organisms per cm<sup>2</sup> of filter media of *Brevundimonas diminuta* (ATCC 19146).

SCIFIL PTFE filters are also validated using test procedures that comply with ASTM F 838-20 protocols for the determination of bacterial retention in filters used for liquid filtration. The challenge level is a minimum of  $10^7$  *Brevundimonas diminuta* organisms per cm<sup>2</sup> of filter media. SCIFIL filters have >7-log removal when challenged with the *Brevundimonas diminuta* (0.2µm meets the FDA definition of sterilizing grade filters).

**FDA Compliance:** Materials meet the requirements listed by the FDA as appropriate for use in articles intended for repeated food contact as specified in Title 21 CFR sections 177.1520 and 177.2600 as applicable

**Bacterial Endotoxins:** The levels of bacterial endotoxins in aqueous extracts from filters are below current USP limits as specified for water for injection.

**Toxicity Compliance:** Materials used to make polypropylene hardware of this filter are non-toxic and meet the requirements of the United States Pharmacopeia (USP) for Class VI - 121 °C Plastics.

## FUNCTIONAL SPECIFICATION:

Max Differential Pressure:	Temperature	Forward Direction		Reverse Direction
	Up to 40 °C	5.4 bard (78 psid)		3.0 bard (43.5 psid)
	Up to 80 °C	3.4 bard (49.3 psid)		1.0 bard (14.5 psid)
<b>Integrity test:</b>				
<b>Forward Flow</b>	<b>Solvent</b>	<b>Gas</b>	<b>Pressure</b>	<b>10 in. Cartridge</b>
	70:30 IPA:WATER	AIR	1040mBar	Maximum 16ml/min
<b>Water intrusion</b>	WATER	AIR	2500mBar	Maximum 0.70ml/min
<b>Bubble Point(BP):</b>	70:30 IPA:WATER	AIR	@	Minimum BP 1500 mbar
<b>Non-fiber Releasing:</b>	Meets the criteria for a "Non-fiber releasing" filter as defined in 21 CFR 210.3			
<b>Sanitization:</b>	Inline Steam : 275 °F (134 °C), 20 min, ΔP should not be above 0.3 bar - 100 cycles Autoclave : 250 °F (121 °C), 30 min			

## ORDERING INFORMATION

Filter Element Part Number : ADG- 1 - 2 - 3 - 4 - 5 - 6

TABLE 1- MOC	
MATERIAL	CODE

PTFE PT

TABLE 2- GRADE	
CONFIG.	CODE

DUAL LAYER D

TABLE 3- MICRON	
μ	CODE

0.1 1  
0.2 2  
0.45 4  
1 10  
5 50

TABLE 4 -LENGTH	
LENGTH	CODE

2.5" (Ø56mm) 2.5  
5" (Ø56mm/70mm) 05  
10" (Ø70mm) 10  
20" 20  
30" 30  
40" 40

TABLE 5 -CONNECTIONS	
END CAPS	CODE

222+FLAT S3  
222+FIN S8  
226 + FLAT S6  
226 + FIN S7  
DOE S0  
INTERNAL O  
RING(Ø56mm) SR

TABLE 6- SEAL	
SEAL	CODE

SILICONE S  
EPDM E  
FLUOROELASTOMERS V  
NITRILE B

## END CAPS:



222+ FIN



222 + FLAT CAP



226 + FIN



226+FLAT



DOE



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ADG/PFC/PTFE/Y5H21

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