PFP
pleated
Polypropylene
fibre filters

PFP pleated Polypropylene fibre filters

Product description

Introduction

PFP filters provide reliable and efficient filtration with a maximum service life for semi critical and medium duty applications in Food & Beverage, Pharmaceutical and Chemical industries.

The filters effectively retain particles through a single layer of melt blown PP fibre. The nominally rated filter media with support layers is integrated into a robust cage with reinforced core and end cup making it suitable for nearly all operation, service and cleaning conditions.

Devices

PFP filters are available in a wide range of scalable, cartridges, mini cartridges and capsules that allow for fast and easy scale-up of your production. From laboratory-scale filters to production-scale assemblies, all filters incorporate the same media and identical materials of construction, eliminating the need to requalify filter units as processes are scaled up.

Key features

- Wide range of ratings and devices
- High flow and low pressure drop
- Thermally bonded: no surfactants or binders
- Wide chemical compatibility

Compatibility

PFP filters are completely made from polypropylene utilizing thermal welding techniques to seal all the components thus optimizing device integrity, thus assuring a broad chemical compatibility with a large number of solvents, acids and bases. Polypropylene is a highly chemically resistant material, enabling the filters to be chemically regenerated. The all polypropylene construction guarantees a small extractable footprint.

Documentation

PFP filters are designed, developed and manufactured in accordance with a ISO 9001 certified Quality Management System. A Validation Guide are available for compliance with regulatory requirements.

All the raw materials used comply with the European Union Regulation (EC) No. 1935/2004 as well as the Regulation (EU) No. 10/2011. concerning plastic materials and articles intended to come into contact with foodstuffs. These guidelines for plastics allow the use in food and beverage applications. All materials used meet the requirements of the CFR Title 21.

Applications

Thanks to its chemical compatibility PFP filters are widely used in Food & Beverage, Pharmaceutical, Cosmetics and Chemical Industries.

- Retention of particles in liquids
- Pre-filtration for final membrane filters
- Edible liquids: bottled water, beer, wine, spirits, juices, soft drinks, non-carbonated drinks, etc.
- Non-edible liquids: water, serums, formulations, WFI, aggressive solvents, chemicals, etc.

Protecting process, products and people

Atlas Copco's process filters optimize your productivity while protecting your process, product and consumers. Our portfolio of cartridges and housings covers all your filtration needs. The products are made from proven, high quality materials from reputable suppliers and manufactured in a controlled environment subjected to strict QA/QC procedures.

Technical data

Micron ratings (µm)
0,2/0,45/1/3/5/10/20/50 µm

Cartridge length
10"/20"/30"/40"

Cartridge diameter
68 mm

Effective filtration area (typical)
0,51 m^2 (10")

Material of construction

Filter media	Polypropylene
Core	Polypropylene
Cage	Polypropylene
End caps	Polypropylene + reinforcement
Housing	Polypropylene
Seal	Silicone, Viton, EPDM

Maximum operating temperature
80°C (cartridges), 60°C (capsules)

Maximum differential pressure forward (cartridges)
6,9 bar @25°C, 2,4 bar @80°C

Maximum differential pressure reverse (cartridges)
3,0 bar @25°C, 1,0 bar @80°C

Maximum differential pressure forward (capsules)
5,2 bar @38°C, 3,1 bar @60°C

Sterilization SIP (cartridges)
20 cycles for 30 minutes @125°C, 0.3 bar dP

Hot water sanitization (cartridges)
50 cycles for 30 minutes @85°C

Chemical sanitization (cartridges)
50 cycles for 30 minutes @40°C with sodium hypochlorite (100ppm) or peroxyacetic acid (100ppm)

Regulatory compliance

TOC/Conductivity @25°C

Autoclaved filter effluent meets USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after UPW flush of specified volume

Non-fiber releasing

Non-fiber releasing: component materials meet the criteria for a "non-fiber releasing filter" as per 21 CFR 210.3(b)(6)

Bacterial endotoxin

Aqueous extraction of autoclaved filter contains < 0.25 EU/ml as determined by Limulus Amebicide Lysate (LAL), USP <85>

USP <88> biological reactivity

Meets criteria of USP <88> Biological Reactivity Test for class VI-121°C plastics

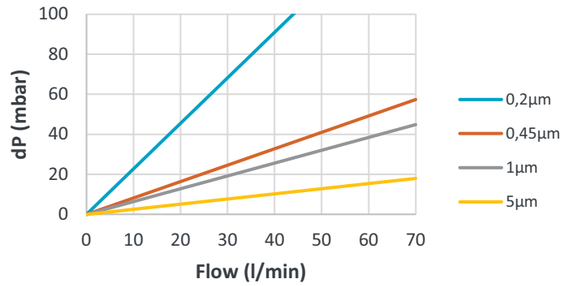
Indirect food additive

The product complies with food contact regulation 21 CFR §177-182 and (EC) No 1935/2004 and subsequent amendments

Quality assurance

For each filter cartridge an electronic Certificate of Conformity is available, detailing relevant test data, biological safety information and product approvals against the specific batch number and part number for the filter. The filter cartridges are manufactured in a controlled clean room environment that generally meets the requirements for ISO 14644-1 Class 8 Cleanrooms.

Flow rate



Note: 10" cartridge tested with water @20°C, 1.005 cP (typical flow rate)

Product configuration

Cartridges

Series	Rating (µm)	Length	End cap	Seal
PFP	0,2/0,45	5″	C2 (2x226 O-ring + 2 tabs/flat)	S (Silicone)
	1/3/5	10″	C3 (2x222 O-ring/flat)	E (EPDM)
	10/20	20″	C7 (2x226 O-ring + 2 tabs/fin)	V (Viton)
	50	30″	C8 (2x222 O-ring/fin)	
		40″	C28 (2x222 O-ring + 3 tabs/fin)	
			DOE (flat + gasket/flat + gasket)	

Example: PFP 0,2µm 10″ C7 S

Mini cartridges

Series	Rating (µm)	Style	Seal
PFP	0,2/0,45	J2.5T/J5T	S (Silicone)
	1/3/5	J2.5B1	E (EPDM)
	10/20	J2.5I/J3I/J5I	V (Viton)
		J1.5F/J5F	
		J2.5S/J5S	
		J1.5E/J2.5E/J5E	

Example: PFP 0,2µm J5T S

Capsules

Series	Rating	Style	Length[1]
PFP	0,2/0,45	C1	5″
	1/3/5	C2/C3	10″
	10/20	C4/C5	20″
		C6/C7	30″
		C8	
		C9/C10	

[1] = for C4/C5
Example: PFP 0,2µm C4 10″

Atlas Copco Process Filtration
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