ThermoFisher SCIENTIFIC



Industrial filtration

Betafine PBG filter cartridges

thermo scientific

Pleated polypropylene graded-porosity filter cartridges



Filters for food and beverage applications

The Thermo Scientific™ Betafine™ PBG Filter Cartridge represents a major advance in pleated filter technology and performance. This absolute-rated, graded-porosity 100% polypropylene pleated filter cartridge features Advanced Pleat Technology (APT) that increases the usable filtration surface area while maintaining standard industrial cartridge dimensions. The result is a filter cartridge that dramatically enhances service life.

Features and benefits

Features	Benefits
Advanced Pleat Technology (APT) construction for high surface area as compared to competitive filters	• Higher product throughputs for prolonged service life • Lower total filtration operating costs • Lower pressure drops for higher flow rates
Absolute-rated filter performance	• Higher product quality and yields
Graded-porosity multi-layer filter media	• Capture of contaminant throughout the filter media to help maximize filter life • Higher contaminant holding capacity
Backflushable, polypropylene cartridge components	• Very low extractable levels for optimum filtrate purity • Broad compatibility with solvents and cleaning solutions

Applications

Betafine PBG filter cartridges are ideal for a wide array of prefiltration and clarification applications where reliability and economy are critical. Suggested applications include:

Food and beverage service

- Protection and longevity of membrane final filters
- Final particle control
- Food fermentation feeds, intermediates and fermentation clarification
- Blending water filtration
- Cleaning fluids
- Solvent streams, air and gas prefiltration and final filtration

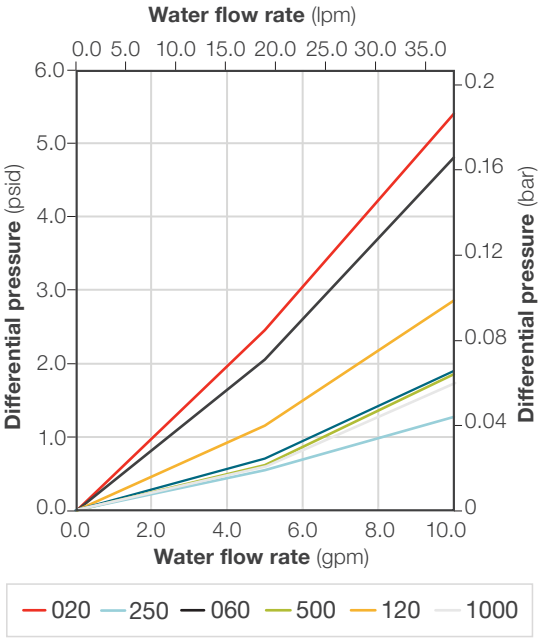
Betafine PBG filter cartridges for food and beverage service

Certain Betafine PBG filter cartridges are compliant with US FDA 21 CFR, EU Food Contact Regulation (EC) 1935/2004, EU Food Contact Regulation 10/2011, and other food contact regulations. Contact your Thermo Fisher Scientific Inc. representative for detailed declaration of compliance information for food contact applications. The filter cartridge can be autoclaved, steamed-in-place (in situ), and sanitized with hot water. The durable polypropylene construction provides excellent performance in all food and beverage filtration applications.

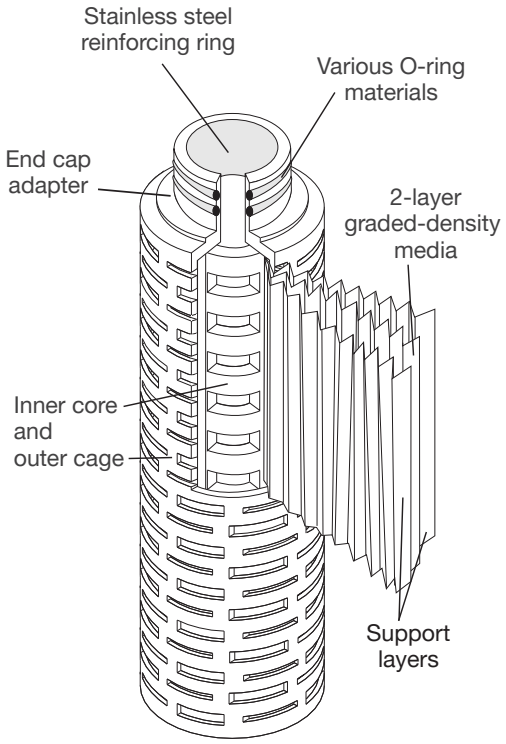
- Backflushable — Betafine PBG filter cartridge applications can be designed with a variety of methods to extend service life. Combined with hot water sanitation or other in-line cleaning procedures, backflushing Betafine PBG filter cartridge systems can extend service life significantly.

Protection of final membranes

Beverage bottlers frequently employ membrane filter cartridges to achieve microstability without heat pasteurization. Typical retention ratings for the final filter are 0.45 µm or 0.65 µm. The Betafine PBG filter cartridge's absolute retention, graded-porosity structure and large surface area are ideal for prefiltration protection of final sterilizing membranes. By removing contaminants before the final filter, the service life of expensive membrane filter cartridges are extended significantly.



Graph 1. Clean water flow per 10-inch Thermo Scientific™ Betafine™ PBG Filter Cartridge at ambient temperature 68ºF (20ºC)



Operating parameters and specifications

Material of construction		
Filter media	Graded-porosity pleated polypropylene	
Media support layers	Polypropylene	
Inner core, outer cage, end cap adapters	Polypropylene	
Gasket and O-ring options	Silicone, FEP/PFA, TES	
Adapter support ring	Stainless steel	

Filter cartridge dimensions		
Filtration surface area	060, 100, 120, 250	8.8 ft^2 (0.82 m^2)
Filtration surface area	020	8.1 ft^2 (0.75 m^2)
Filtration surface area	500	8.6 ft^2 (0.8 m^2)
Outside diameter	2.8 in (71 mm)	
Nominal length	10 in (254 mm), 20 in (508 mm), 30 in (762 mm)	

Operating parameters	Specification
Maximum operating temperature	140°F (60°C), 176°F (80°C)
Maximum differential pressure (forward and reverse)	60 psid (4.1 bar) @ 77°F (25°C)

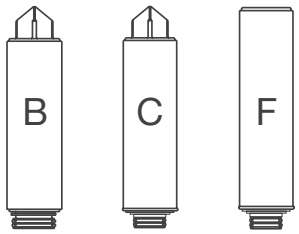
Ordering guide

Betafine PBG filter cartridges ordering guide

Cartridge type	Grade code and rating (µm)	Configuration	Length (inches)	End modification	Gasket material/O-ring	Reinforcing ring
PBG	020 - 0.20 060 - 0.60 120 - 1.2 250 - 2.5 500 - 5.0	B	01 / 10 in 02 / 20 in 03 / 30 in	B - 226 O-ring & spear C - 222 O-ring & spear F - 222 O-ring & flat cap	A - Silicone K - TEV - Encapsulated PTFE X - FEP/PFA - Encapsulated silicone	Stainless steel
				D - Double open end (DOE)	A - Silicone	N/A

[1] Retention ratings determined by Thermo Fisher test method TP. The 0.2 µm rating has been extrapolated. For more information, contact your Thermo Fisher Scientific representative.

Please note: The order guide above is for reference only.
Not all combinations are available. Please consult with your Thermo Fisher Scientific representative to determine the appropriate part number for your application.



Intended Use: Betafine PBG filter cartridge products are intended and are compliant for use in Food and Beverage filtration applications of aqueous and non-aqueous fluids in accordance with the product instructions, specifications and where materials of construction are compatible. For specific details regarding use or limitations for food contact applications please contact your Thermo Fisher Scientific Inc. representative for more information.

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