

Sartopure® GF Plus
The depth filter for
adsorptive retention

Sartopure GF Plus – Optimizing your Beverage Production Process

One of the most critical production steps in beverage processing of water and wine is the final filtration immediately before filling. In this last filtration step, where beverages typically contain heavy concentrations of particles, colloids, and bio burden, the service-life of the final membrane filter is heavily influenced by the effectiveness of the upstream prefilter. Therefore selecting the most suitable prefilter is key to optimizing the overall beverage production process and also to lowering production costs to a minimum.

Sartorius' Sartopure GF Plus filter cartridges are the newest generation of adsorptive prefilters designed especially to meet the stringent requirements of such applications. The new design and construction are based on long-term studies of beverage filtration applications and needs therein – to provide high flow rates, exceptional particulate retention efficiency as well as longer service-life.

Sartopure GF Plus design and construction

Media configuration and features

Fundamental features of the Sartopure GF Plus filters include a media matrix consisting of a three dimensional network of drainage and glass fibre layers, with a relatively non-directional structure. The higher charge potential and compactness of the new glass fibre media yield better particulate retention efficiency by both mechanical and electrostatic capture mechanisms.

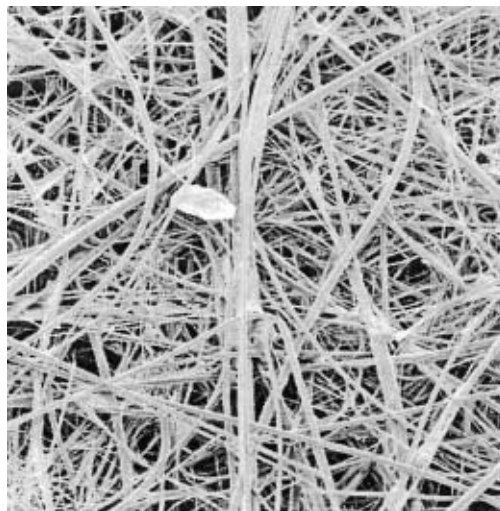
Filter configuration and features

The filter construction of Sartopure GF Plus cartridges incorporates innovative pleat design which allows the exceptionally low differential pressure characteristics. Integral to this construction are rigid inner (core) and outer (cage) polypropylene support structures.

Sartopure GF Plus provides high dirty holding capacity in combination with heightened adsorption capacity to capture particles smaller in size than their actual pores. The high thermo-mechanical stability of Sartopure GF Plus construction guarantees performance to the highest level for food & beverage application requirements. Sartopure GF Plus are your best choice for the filtration of wine, water and spirits.

Sartopure GF Plus construction

The double layer filtration matrix of Sartopure GF Plus ensures high dirt holding capacity. The combination of glass fibre layers and high surface area, has an important influence in lowering filtration costs.



Densely packed, high charge potential glass fibre media of Sartopure GF Plus



Applications

Sartopure GF Plus filters are the ideal choice for beverage filtration applications where the selection of prefilter and final membrane filter are critical to process efficiency and overall process cost.

Filtration of wine

Sartopure GF Plus filter cartridges offer the dirt holding capacity necessary in rigorous wine filtration applications. They are used widely in wineries to protect Vinosart PS and Vinosart CA membrane filters at the final filtration step before bottling.

Filtration of water

Typical filtration setup with Sartopure GF Plus upstream of a membrane filter, such as Aquasart PS, ensures a robust process. The highly charged glass fiber filtration layers provide excellent clarification of colloids and particles from the water stream.

Filtration of spirits

The high adsorptive attributes of Sartorius GF Plus help "brighten up" turbid spirits.

Sartopure GF Plus reduce production costs

Whether your target application is filtration of wine, water or spirits, Sartopure GF Plus prefilters ensure best protection for the final membrane filters. High adsorption and dirt holding capacity, and low differential pressures are key features which make Sartopure GF Plus filters the most excellent choice when optimizing any beverage filtration process.

Process solution for filling operations

An appropriate combination of Sartorius GF Plus prefilters and any Sartorius membrane filter cartridge provides a streamlined and optimized filtration train. The number of filter change-outs and production downtimes are minimized and therefore filtration costs are also reduced appreciably.

Product availability

Sartopure GF Plus filters are available in 20, 30 and 40" cartridges in micron retention rates of 0.65 μm and 1.2 μm .

Compliance

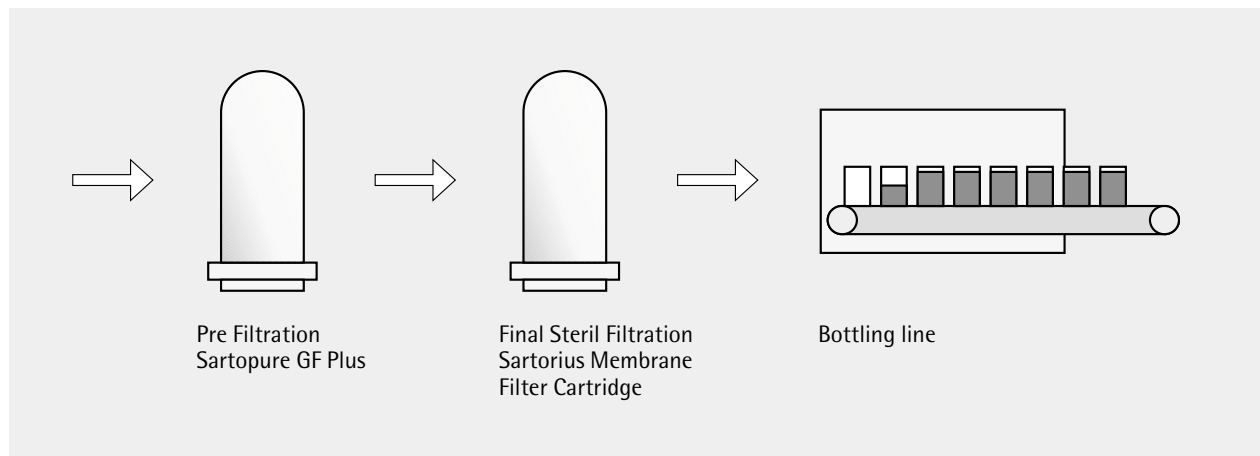
All materials used for the construction of Sartopure GF Plus meet FDA requirements for use in food and beverage applications.

About Sartorius products

Sartorius offers a full line of prefilters and final filters for any food and beverage application. Our applications department is available to offer you assistance with filterability testing and to help properly optimize your filtration process. Please contact your local Sartorius representative with specific enquiries.

Flow diagram

Sterile filtration before bottling



Technical specifications

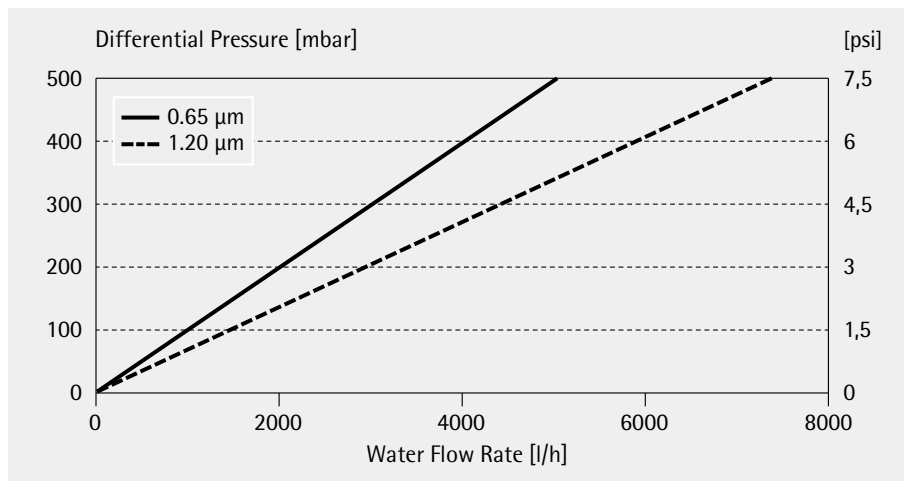
Filter medium	Polypropylene glass fibre
Core outer support	Polypropylene
End caps	Polypropylene
O-rings	Silicone (EPDM, Viton)*
Filtration area	0.6 m ² 10" filter cartridges
Retention rates	0.65 µm 1.2 µm
Heights	20" (500 mm), 30" (750 mm), 40" (1,000 mm)
Maximum differential pressure (in the direction of filtration)	5 bar (73 psi) at 40°C 3 bar (44 psi) at 80°C 2 bar (29 psi) at 121°C 1 bar (14.5 psi) at 134°C 0.5 bar (7 psi) at 134°C
Maximum back pressure	3 bar (44 psi) at 21°C 1 bar (15 psi) at 80°C
Sterilization	Autoclaving: 121°C, 1 bar (15 psi), 30 min or 134 °C, 2 bar (29 psi), 20 min; In-line steaming: 1 bar (15 psi) outlet pressure, 1.5 bar max. (22 psi) inlet pressure, 30 min; or 2 bar (29 psi) outlet pressure, 2.4 bar (35 psi) max. inlet pressure, 20 min.

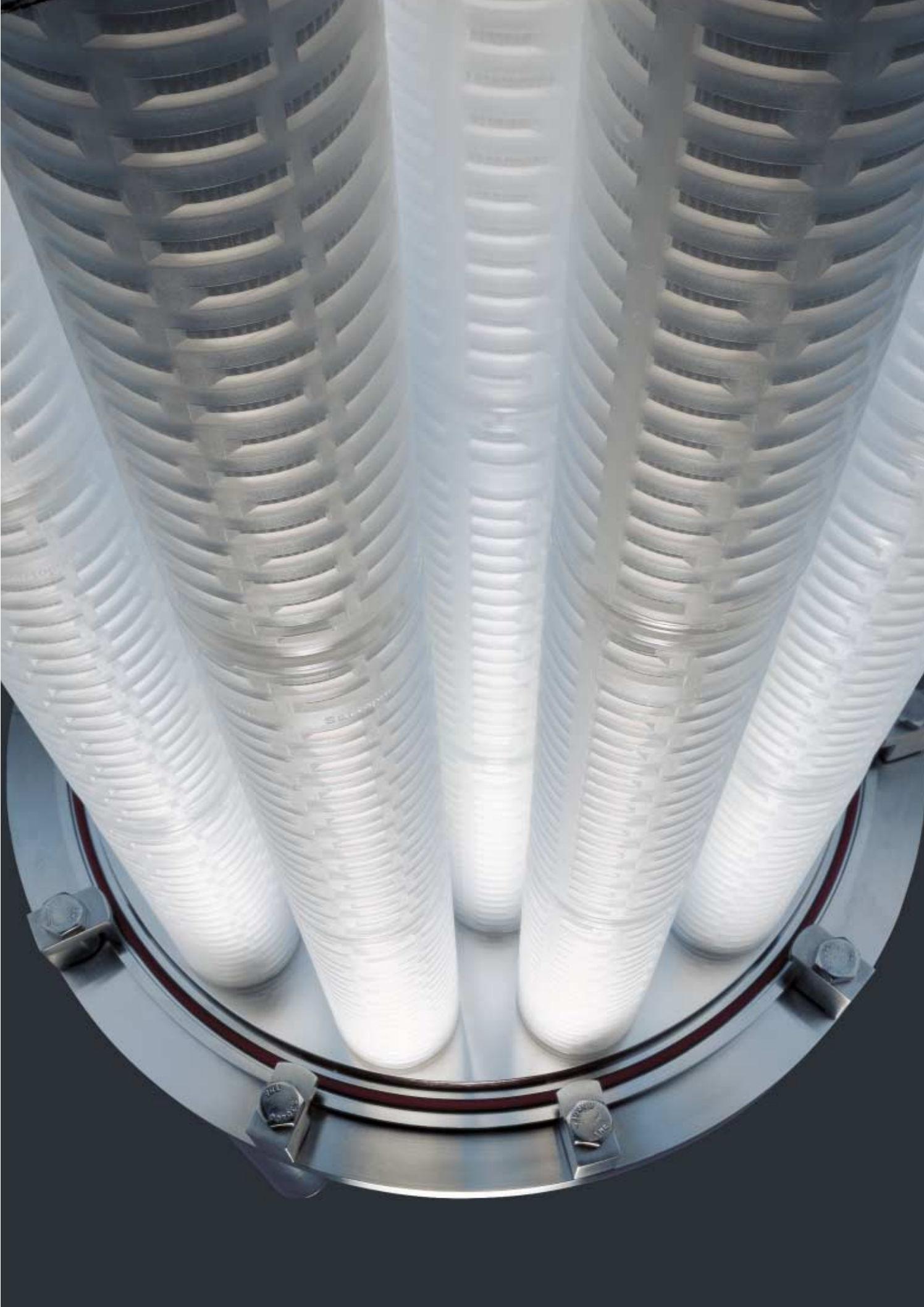
*Available as accessories

Ordering information

555	28	03	P	1	Adapter	25	S-adapter on top, 2-flange bayonet adapter with double O-ring on bottom
						27	Double-O-Ring
						28	S-adapter on top, 3-flange bayonet adapter with double O-ring on bottom Nominal retention rating
					Retention rate	03	1.2 µm
						05	0.65 µm
					Height	2	20"
						3	30"
						4	40"

Flow rate for water through 10" Sartopure GF Plus filter cartridges





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