

GNS Capsule Filters

Nano-Spun, Hydrophilic
Polypropylene Depth Media



Nano-spun polypropylene for efficient retention and high dirt holding capacity

Remove contaminants in high value liquids

Protection of downstream membrane filters

Performance of critical filtration applications

Applications

- ◆ Fermentation Broths
- ◆ Wine, Beer
- ◆ Bottled Water, Fruit Juices
- ◆ Specialty Chemicals
- ◆ CMP Slurries
- ◆ Inks & Dyes
- ◆ Buffers and Media

Nano-Spun Depth Media GNS filter capsules are made using media produced in a tightly controlled process. The spun media is created by laying down graded density fibers on a spinning core. The result is a highly consistent product that provides 99% retention at the rated pore size and holds large amounts of contaminant. GNS media is ideal for protection of downstream membrane filters and performance of critical filtration applications.

These capsules can be used wherever it is critical to economically remove contaminants in high value liquids with high contamination loads. Applications include clarification of wine, beer, and fruit juices; prefiltration of fermentation broths and fluids used in making pharmaceuticals; prefiltration of bottled water; and filtration of specialty chemicals. They are also used as critical filters in applications such as CMP slurry polishing in semiconductor making as well as final filtration of inks and dyes.

GNS Capsule Filters - Filtration Area

Media	Capsule Length				
	2"	5"	10"	20"	30"
Nano-Spun Hydrophilic Polypropylene Depth	2" Module (5.08 cm)	5" Module (12.7 cm)	10" Module (25.4 cm)	20" Module (50.8 cm)	30" Module (76.2 cm)

Flow Rate / Filtration Area

The following table represents typical water flow at a one psi (69 mbar) pressure differential across a single 2 inch capsule with a 2" (5.08 cm) nominal length depth filter module and 1/2" FNPT ports. The test fluid is water at ambient temperature. Higher pressure drops are acceptable, but as flows increase the pressure drop of the housing becomes more apparent.

Pore Size	0.5 µm	1 µm	3 µm	5 µm	7 µm	10 µm	20 µm	30 µm	40 µm	50 µm
GPM	0.16	0.20	0.30	0.45	0.55	0.65	0.80	1.20	1.60	1.80
LPM	0.61	0.76	1.14	1.70	2.08	2.46	3.03	4.54	6.06	6.81

* For approximate flow rates for 5" through 30" capsules, refer to the appropriate cartridge data sheet

Construction Materials

Housing	Polypropylene
Filtration Media	Nano-Spun, Hydrophilic Polypropylene Depth Media
Media Support	Polypropylene
End Caps	Polypropylene
Center Core	Polypropylene
Outer Support Cage	Polypropylene
Sealing Method	Thermal Bonding

Maximum Operating Parameters

Liquid Operational Pressure	80 psi (5.5 bar) at 20 °C (68 °F)
Gases Operational Pressure	60 psi (4.1 bar) at 20 °C (68 °F)
Operating Temperature	60 °C (140 °F) at 10 psi (0.69 bar) in water
Forward Differential Pressure	40 psid (2.7 bard) at 20 °C (68 °F)
Reverse Differential Pressure	20 psid (1.4 bard) at 20 °C (68 °F)
Recommended Changeout Pressure	25 psid (1.7 bard)

Integrity Test Information

Representative sample capsule elements are factory tested for integrity before shipment. Field duplication of these tests is not practical because of the complexity of the testing process and absence of commercial portable testing equipment.

Sanitization/Sterilization

Chemical Sanitization Industry standard concentrations of hydrogen peroxide, paracetic acid, sodium hypochlorite and other selected chemicals.

FDA and EC Compliance

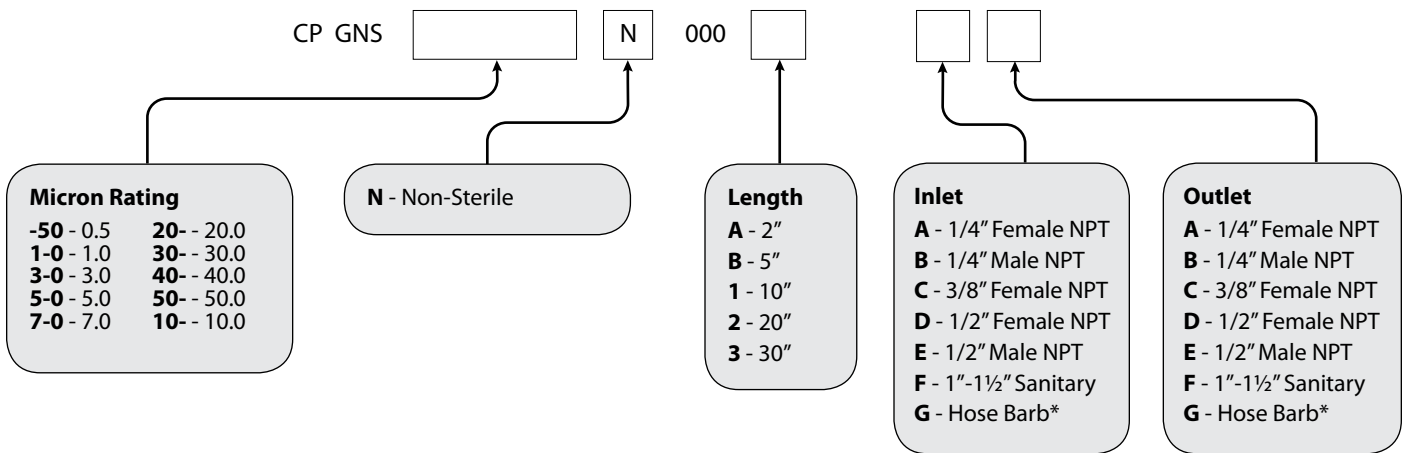
All Critical Process Filtration capsule filters are designed to meet the FDA requirements for processing food and beverage products. The materials used to construct GNS capsule filters are listed by the FDA as appropriate for use in articles intended for repeated food contact as specified in Title 21 CFR sections 174.5, 177.1500, 177.1520, 177.1630, 177.2440 and 177.2600 as appropriate. GNS filters comply with Title 21 CFR sections 210.3 (b)(6) and 211.72, for non-fiber releasing filters. All materials used to make the filters are listed in European Commission Regulation EU/10/2011, Annex 1.

Extractables

GNS capsule filters exhibit low levels of non-volatile residues.

Ordering Information

Capsule order number example: General Service Grade Nano-Spun Polypropylene Depth Media, 3 Micron Rating, Non-Sterile, 10" Length, 1/2" Male NPT Inlet, 1/2" Male NPT Outlet = CPGNS3-0N0001EE.



Hose Barb Diameter Ranges*

	Minimum	Maximum
Outer Diameters	11/32" (8.6mm)	9/16" (14.0mm)
Inner Diameters	5/32" (4.0mm)	13/32" (10.5mm)

Quality Assurance and Standards

Critical Process Filtration uses state of the art computer controlled equipment to consistently produce high quality products as well as significantly reduce hand operations that can compromise quality. All manufacturing and testing is continuously monitored in real time so that data can be quickly and easily analyzed to facilitate improvements in both quality and cost.

The Critical Process Filtration manufacturing and quality systems meet rigorous ISO 9001:2008 standards. Each operation, including assembly, testing, cleaning, drying and packaging, is done in an appropriately rated clean room. Manufacturing is controlled using a sophisticated manufacturing system that networks work stations, manufacturing centers and inspection points. During the manufacturing and inspection processes, data is collected in real time to allow continuous quality monitoring and full traceability of all materials and processes.

Total Performance

Critical Process Filtration, Inc. is a vertically integrated manufacturer of filtration products to industries in which filtration is considered a critical part of the manufacturing process. We supply a complete line of products and services to help you cost effectively satisfy all your filtration requirements from a single source.

Request a QUOTE from your area representative



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