Vangard®

Polypropylene Microfiber Filter

MEISSNER FILTRATION PRODUCTS

Vangard® Filter Cartridge

The Vangard® filter cartridge is a high efficiency, long life, pleated filter made entirely of chemically resistant polypropylene. The Vangard® filter's advanced design and construction has resulted in a very economical, premium quality product that provides consistently high filtration efficiency, superior flow rates, considerable dirt holding capacity and exceptional service life. Its all-polypropylene thermally bonded construction and its extremely low extractables, make Vangard® effective in a wide range of fluids and applications.

The Vangard® filter cartridge is available in nominal retention ratings from 0.1 µm to 99 µm and is offered in a variety of lengths and styles that allow service in most commonly used filter housings.

Features and Benefits

- All-polypropylene construction
- Wide chemical compatibility; permits application to broad range of fluids
- Particle removal ratings from 0.1 µm to 99 µm
- High filtration efficiency at rated level
- Self-bonded filter media
- Fixed pore structure; consistent particle removal; no migration of filter media; non-fiber-releasing
- Contains no binders, adhesives or surfactants
- Wide solvent compatibility; extremely low extractables; immediately rinses in 18 megohm-cm water
- Maximum effective surface area
- High flow rates; reduced pressure loss
- High dirt holding capacity
- Long filter service life; high throughputs; lower operating costs
- Biologically inert and non-toxic
- Meets FDA requirements for food contact use; passes USP Class VI Plastics biological reactivity tests

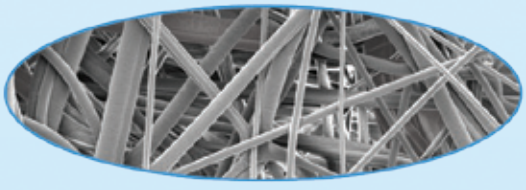
Typical Applications

Vangard® polypropylene filter cartridges may be used as either prefilters or final filters. Vangard® filters are most appropriate for use when high efficiency filtration and economy are crucial.

Common industries that use Vangard® filters include:

- Water purification
- Chemical
- Electronics
- Magnetic Storage Media
- Biologicals
- Diagnostics
- Cosmetics
- Food and Beverage
- Photographic
- Plating
- Oil and Gas

Other uses for Vangard® filters include filtering electrostatic and jet inks, coatings, paints, polymers, pesticides, metal etching solutions, air and gases.



Vangard® SEM

Materials of Construction

Filter Media:	Polypropylene
Upstream Support:	Polypropylene
Downstream Support:	Polypropylene
Core/Outer Guard:	Polypropylene
End Caps:	Polypropylene
Sealing Method:	Thermal Bonding
O-ring/Gasket Seal:	Buna, EPR, polyethylene, silicone, Teflon®, Teflon® over silicone, Teflon® over Viton®

Vangard® filters are manufactured in conformance to cGMP. All materials of construction listed above are FDA approved for food contact use per 21 CFR 177. Vangard® filters meet the requirements as specified in the current USP Class VI plastics, cytotoxicity and pyrogenicity tests. No binders, adhesives or surfactants are used in its construction. The filters comply with European Commission Directive 2002/72/EC and subsequent amendments up to 2008/39/EC and Commission Regulation (EU) No 10/2011.

Filtration Ratings

Nominal Pore Sizes:
0.1, 0.2, 0.4, 1, 3, 5, 10, 30, 60, 99 µm

Cartridge Dimensions

Diameter: 2.75" (7 cm)
Nominal Lengths:
10", 20", 30", 40" (25 cm, 50 cm, 75 cm, 100 cm)

Maximum Operating Temperatures and Pressures

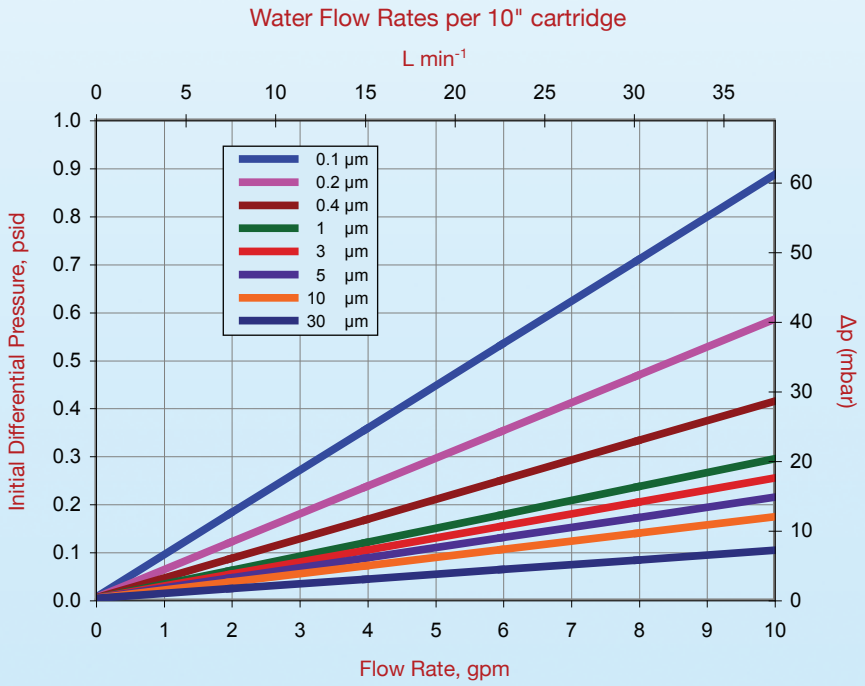
Δp 80 psi @ 32 °F to 100 °F (Δp 5,5 bar @ 0 °C to 38 °C)
Δp 60 psi @ 150 °F (Δp 4,1 bar @ 66 °C)
Δp 30 psi @ 180 °F (Δp 2,1 bar @ 82 °C)

Sterilization

Steam-in-place (SIP):
Saturated steam @ 121-135 °C, 30-60 minutes
[15 psi (1 bar) to 30 psi (2 bar), 30-60 minutes]

Autoclave: 121-135 °C, 30-60 minutes

Vangard® cartridges are capable of repeated sterilization cycles. For applications requiring autoclave/SIP, a stainless steel reinforcement ring must be ordered. See "Reinforcement Ring Option" within "Ordering Information."



End Cap Configuration

-226 O-ring

External -226 O-rings with locking tabs; open end for C6 and F6 SOE configurations

-222 O-ring

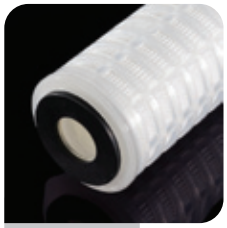
External -222 O-rings; open end for C2 and F2 SOE configurations

-226 nO-Ring

External -226 nO-Ring® with locking tabs; open end for C5 and F5 SOE configurations

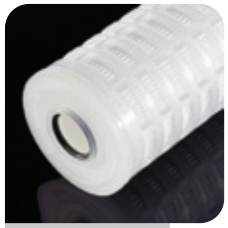
-222 nO-Ring

External -222 nO-Ring®, open end for C1 and F1 SOE configurations



Flat Gasket

Flat Gasket; open end for GS and GL DOE configurations



Internal O-ring

Internal O-ring; open end for DN and DA DOE or RN and RA SOE configurations

Button Cap

Button Cap; closed end for C1, C2, C5 and C6 SOE configurations

Alignment Fin

Alignment Fin; closed end for F1, F2, F5 and F6 SOE configurations

Recessed Cap

Recessed Cap; closed end for RN and RA SOE configurations

DOE = Double Open End
SOE = Single Open End

Ordering Information

Filter Media	Nominal Rating (µm)	Cartridge Length	End Cap Configuration	Reinforcement Ring Option	Seal Material (O-ring or Gasket)
MN	*5* —	*3*	*F2*	*R*	*S*
MN = Vangard® polypropylene microfiber	0.1 0.2 0.4 1 3 5 10 30 60 99	**1** = 10" (25 cm) **2** = 20" (50 cm) **3** = 30" (75 cm) **4** = 40" (100 cm)	**GS** = DOE; flat gaskets (9.75”, 19.5”, 29.25”, 39” length filters) **GL** = DOE; flat gaskets (20”, 30”, 40” length filters) **C1** = SOE; -222 nO-Ring®, button cap end **C2** = SOE; -222 O-rings, button cap end **F1** = SOE; -222 nO-Ring®, fin end **F2** = SOE; -222 O-rings, fin end **C5** = SOE; -226 nO-Ring®, button cap end **C6** = SOE; -226 O-rings, button cap end **F5** = SOE; -226 nO-Ring®, fin end **F6** = SOE; -226 O-rings, fin end **DN** = DOE; internal -120 O-rings **RN** = SOE; internal -120 O-ring, recessed cap end **DA** = DOE; internal -213 O-rings **RA** = SOE; internal -213 O-ring, recessed cap end	**(Blank)** = Standard - no reinforcement ring **R** = Reinforcement ring; required for autoclave/ SIP applications	<u>O-ring Seal</u> **B** = Buna **E** = EPR **S** = Silicone **T** = Teflon® over silicone **V** = Viton® **X** = Teflon® over Viton® <u>Gasket Seal</u> **B** = Buna **E** = EPR **P** = Polyethylene **S** = Silicone **T** = Teflon® **V** = Viton®

MEISSNER FILTRATION PRODUCTS, INC.
800.391.9458 • Int’l: +1.805.388.9911 • Camarillo, California
www.meissner.com