DeltaMax® Absolute-Rated Polypropylene Depth Filter

The DeltaMax® filter is a polypropylene depth filter with absolute removal ratings of 0.5, 1, 3, 5, 10, 20, 40 and 70 micron. It is available in standard industry lengths up to 40 inches. The DeltaMax® filter’s unique spiral construction creates a gradient pore structure that maximizes service life and flow rates.

The DeltaMax® filter is compatible with a wide array of chemicals and cleaning agents. It is free of surfactants, lubricants, resin binders, adhesives, antistatic or release agents and other additives.

Features and Benefits
- Absolute-rated media
- Rigid support core for added strength
- Chemically inert polypropylene components
- High dirt-holding capacity for long service life
- Gradient pore structure provides high flow rates
- Resists contaminant unloading even at high differential pressures
- Withstands multiple in situ steam cycles (SIP), hot water sanitizations and chemical cleanings
- Variety of configurations available to fit existing housings

Typical Applications
DeltaMax® filters are ideal for clarification, polishing, bioburden reduction and prefiltration in:
- Pharmaceutical and biological product and process liquids
- Cosmetics and personal care product liquids
- Microelectronic chemicals, solvents, UPW and CMP slurries
- Wine, beer, mineral water, soft drinks and other beverages
- Water purification systems
- Chemical process

Meissner Technical Services (MTS) provides clients with support for all Meissner products in applications ranging from clarification through sterilization. Complete validation testing and documentation are available for critical applications.
Product Specifications

Materials of Construction
- Filter Media: Polypropylene
- Core/Outer Cage: Polypropylene
- End Caps: Polypropylene
- Sealing Method: Thermal bonding
- O-rings: Buna, EPR, silicone, Teflon® over silicone, Teflon® over Viton®
- Gaskets: Polyethylene

DeltaMax® cartridges are made of filter media which meet the criteria for a non-fiber releasing filter as defined in 21 CFR 210.3(b)(6). The cartridges meet the requirements as specified in the current USP Class VI plastics tests. All materials of construction listed above are FDA approved for food contact use per CFR Title 21,177. DeltaMax® cartridges are manufactured in conformance to cGMP. No binders, lubricants, adhesives, surfactants, anti-static or release agents 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
- Absolute Pore Sizes: 0.5 µm, 1 µm, 3 µm, 5 µm, 10 µm, 20 µm, 40 µm, 70 µm

Cartridge Dimensions (Nominal)
- DMG Diameter: 2.75” (7 cm)
- DMN Diameter: 2.5” (6 cm)

Nominal Lengths
- 10”, 20”, 30”, 40” (25, 50, 75, 100 cm)

Maximum Operating Temperatures & Pressures
- Δp 80 psi @ 100° F (Δp 5,5 bar @ 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 @ 121-135º C, 30-60 minutes
- [15 psi (1 bar) to 30 psi (2 bar), 30-60 minutes]
- Autoclave: 121-135º C, 30-60 minutes

Sanitization
- Hot water maximum 90º C, 30 minutes

Water Flow Rates per 10" Cartridge

- **Flow Rate, gpm**
  - **∆p (mbar) L min⁻¹**
  - 0.5 µm
  - 1 µm
  - 3 µm
  - 5 µm
  - 10 µm
  - 20 µm
  - 40 µm
  - 70 µm

- **Initial Differential Pressure, psid**
  - 0
  - 2
  - 4
  - 6
  - 8
  - 10

- **Flow Rate, gpm**
  - 0
  - 2
  - 4
  - 6
  - 8
  - 10
**DMG Configuration**

-226 O-ring
- External -226 O-rings with locking tabs; open end for 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

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

**Filter Media**

<table>
<thead>
<tr>
<th>Absolute Rating (μm)</th>
<th>Cartridge Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMG = DeltaMax® absolute-rated polypropylene; outer cage for greater mechanical strength (2.75” diameter)</td>
<td></td>
</tr>
<tr>
<td>0.5</td>
<td>1 = 10” (25 cm)</td>
</tr>
<tr>
<td>1</td>
<td>2 = 20” (50 cm)</td>
</tr>
<tr>
<td>3</td>
<td>3 = 30” (75 cm)</td>
</tr>
<tr>
<td>5</td>
<td>4 = 40” (100 cm)</td>
</tr>
</tbody>
</table>

**End Cap Configuration**

- C1 = SOE; -222 nO-ring®, button cap end
- F1 = SOE; -222 nO-ring®, fin end
- C2 = SOE; -222 O-rings, button cap end
- F2 = SOE; -222 O-rings, fin end
- C3 = SOE; -226 nO-ring®, button cap end
- F3 = SOE; -226 nO-ring®, fin end
- C4 = SOE; -226 O-rings, button cap end
- F4 = SOE; -226 O-rings, fin end

**Reinforcement Ring Option**

- (Blank) = Standard - no reinforcement ring
- R = Reinforcement ring; required for autoclave/SIP applications

**O-Ring Material**

- B = Buna
- E = EPR
- S = Silicone
- T = Teflon® over silicone
- V = Viton®
- X = Teflon® over Viton®

**DMN 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

Flat Gasket
- Flat Gasket; open end for GS and GL DOE configurations

Button Cap
- Button Cap; closed end for C2 and C6 SOE configurations

Alignment Fin
- Alignment Fin; closed end for F2 and F6 SOE configurations

**Filter Media**

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<tr>
<td>DMN = DeltaMax® absolute-rated polypropylene; no cage (2.5” diameter)</td>
<td></td>
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<tr>
<td>0.5</td>
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**End Cap Configuration**

- C2 = SOE; -222 O-rings, button cap end
- F2 = SOE; -222 O-rings, fin end
- C6 = SOE; -226 O-rings button cap end
- F6 = SOE; -226 O-rings, fin end
- GS = DOE; flat gaskets (0.75", 1.95", 29.25", 39" length filters)
- GL = DOE; flat gaskets (10", 20", 30", 40" length filters)

**Reinforcement Ring Option**

- (Blank) = Standard - no reinforcement ring
- R = Reinforcement ring; required for autoclave/SIP applications

**O-Ring Material**

- B = Buna
- E = EPR
- S = Silicone
- T = Teflon® over silicone
- V = Viton®
- X = Teflon® over Viton®
- P = Polyethylene gaskets (GS/GL end caps only)