



Sentry™ Wound Depth Filters



Sentry Wound Depth Filters are formed using a computer process that eliminates the traditional mechanical winding process. The methodology creates dual-pattern filters with 100% fully functional funnel-shaped depth filtration.

Wound Depth Filters offer excellent chemical compatibility, are non-leaching with no extractables, and operate at high flow rates with low pressure drops. Sentry wound depth filters are available in a variety of media and come in nominal or high particle removal efficiencies to meet customer specified filter applications.

The Sentry Solution for Liquid/Process Filtration

Industry Uses & Applications

- Process Chemicals
- Food & Beverages
- Plating Solutions
- Printed Circuit Boards
- Pharmaceuticals
- Electronics Manufacturing
- Waste Treatment
- Petro-Chemicals
- Paint Coatings
- Plant Utilities

Features & Benefits

- A broad range of media providing excellent chemical compatibility
- Cotton, rayon, polypropylene, and polyester media are FDA CFR Title 21 listed as acceptable for potable and edible liquid contact
- Multiple length cartridges minimize change out time, eliminate spacers, and are available to fit competitive filter vessels
- Double Open End (DOE) and Single Open End (SOE) with numerous o-ring and end cap options available
- Extender cores available in tinned steel, 304 SS, or 316 SS

Chemically Compatible with:

- Aqueous Solutions
- Petroleum Oil & Lubes
- Animal/Vegetable Oils
- Microorganisms/Bacteria
- Mineral Acids
- Alkaline Solutions
- Oxidizing Agents
- Organic Acids

Design Properties

- Operating temperature to 160°F (70°C)
- Higher ratings depending on core selection
- Maximum pressure drop to 50 psid (3kg/cm²)



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Removal Ratings (1µm to 100µm)

H	High Efficiency	98%
X	Extended Life	95%
N	Nominal	90%

Recommended Operating Conditions

- Change out differential pressure: 30 psi (2.1 bar)
- Max. operating differential pressure @ ambient temperature: 60 psi (4.1 bar)

Cartridge Dimensions

- 1" ID x 2½" OD
- 10, 20, 30, and 40 in. nominal lengths

Flow Rate and Pressure Drop

Calculations

$$\text{Flow Rate (gpm)} = \frac{\text{Clean } \Delta P \times \text{Length Factor}}{\text{Viscosity} \times \text{Flow Factor}}$$

$$\text{Clean } \Delta P = \frac{\text{Flow Rate} \times \text{Viscosity} \times \text{Flow Factor}}{\text{Length Factor}}$$

Notes

1. **Clean DP** is filter differential pressure at start.
2. **Viscosity** is measured in centistokes (cks). Use conversion tables for other units.
3. **Flow Factor** is ΔP /gpm at 1 cks per 10 in. length.
4. **Length Factor** convert flow or ΔP from 10 in. length to required cartridge length, 10" = 1, 20" = 2, 30" = 3, 40" = 4

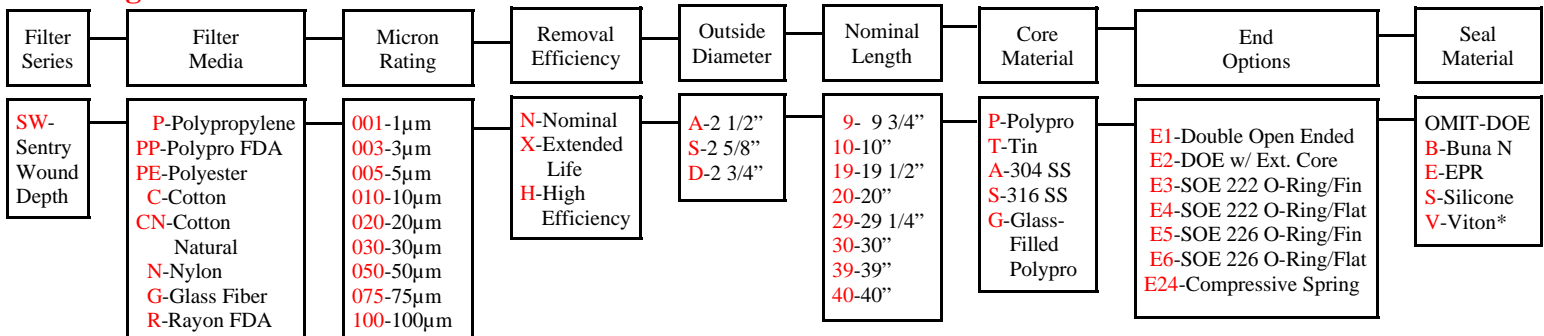
Wound Cartridge Flow Factors for Aqueous (Water Based) Fluids (psid/gpm @ 1 cks)

Rating (µm)	Polypropylene Polyester Nylon	Cotton Rayon Acetate	Glass Fiber
1	0.75	2.00	0.50
3	0.33	0.63	0.42
5	0.24	0.36	0.35
10	0.14	0.19	0.20
20	0.09	0.11	0.11
30	0.07	0.09	0.08
50	0.06	0.07	0.07
75	0.05	0.06	0.06
100	0.05	0.06	0.06

Wound Cartridge Flow Factors for Nonaqueous (Solvent or Oil Based) Fluids (psid/gpm @ 1 cks)

Rating (µm)	Polypropylene Polyester Nylon	Cotton Rayon Acetate	Glass Fiber
1	1.00	0.75	0.50
3	0.58	0.30	0.42
5	0.30	0.19	0.35
10	0.13	0.10	0.20
20	0.06	0.04	0.11
30	0.02	0.02	0.08
50	0.01	0.01	0.07
75	0.01	0.01	0.06
100	0.01	0.01	0.06

Ordering Information



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