1. Introduction

The Wound Trapper, named for its superior dirt trapping ability, is made from long fibers formed into a string. A unique winding process creates spaces between the strings which become progressively smaller approaching the cartridge core. The contaminant is trapped not only on the cartridge surface, but throughout its depth. A rigid support core of either molded polypropylene, tin plated steel, carbon steel or stainless steel is used to stabilize the wound structure and prevent string migration. The core material is selected to be compatible with the string fiber media and the fluid being filtered.

All three standard media, Polypropylene, Cotton and Glass Fiber, will handle the majority of applications and fluids. On special order, other specific purpose media are available such as Unbleached Cotton, Fibrillated Polypropylene, Rayon, Nylon and Polyester.

The Wound Trapper filter cartridges are available in several micron ratings ranging from 0.5 to 100 microns, plus they will withstand differential pressures up to 75 psi. These cartridge elements are Double Open End (DOE) type as shown.

Features

- 2 standard lengths: 9.75 inches and 29.25 inches, (other lengths available upon request)
- 3 standard filter media: Polypropylene, Cotton & Glass Fiber, (other materials available upon request)
- Glass fiber cartridges can withstand temperatures up to 750 °F
- Multiple micron ratings available
- Can withstand differential pressures up to 75 psi
- Ideally suited for use with most Nowata cartridge filter housings and many competitor housings
2. Construction Specifications for the Wound Trapper

WP Series: Polypropylene Cartridges
The WP series, all polypropylene (Poly) fiber and core cartridge has excellent compatibility with strong acids and concentrated alkalies. It is used extensively in filtering all classifications of water, except potable drinking water. The all poly cartridge is an excellent choice for ambient temperature applications requiring low cost and broad compatibility. Maximum recommended operating temperature is 125 °F (52 °C).

WC Series: Cotton Cartridges
The standard bleached cotton fiber on a 304 stainless steel core WC series cartridge has a high dirt holding capacity because of the ribbon shape and rough surface of the natural fiber which cannot be achieved with a synthetic man-made fiber. Maximum recommended operating temperature is 300 °F (149 °C). The WC series cotton cartridge is ideal for filtration of natural gas treating fluids such as: monoethanolamine (MEA) and Diethanolamine (DEA).

WF Series: Glass Fiber Cartridges
The standard Glass Fiber string wound on a 316 stainless steel core, WF series cartridge, has a broad range of chemical compatibility. (Not for use with alkalies, steam, hot water or hydrofluoric acid.) The maximum recommended operating temperature is 750 °F (400 °C). The WF series glass fiber cartridge is designed for applications requiring greater than 300 °F operating temperatures, such as heat transfer fluids and hot oil circulating systems.

Other Media Available
All three standard media, Polypropylene, Cotton and Glass Fiber, will handle the majority of filter applications. On special order, other specific purpose media are available such as: Unbleached Cotton, Fibrillated Polypropylene, Rayon, Nylon and Polyester.

3. Cartridge Operational Data

Flow Rating
Our Wound Trappers, depending on the specific media and the nominal micron rating, handle from 0.5 to 8 gallons per minute of water per (1W - single length) 9-3/4 inches of element length at a 2 psid initial clean pressure drop. A (3W - triple length) 29-1/4 inch cartridge is sized at 3 times the flow rate of the single length (1W) element. These flow ratings should give acceptable life when the contaminant loading is below 10 parts per million. If higher dirt loads are expected, lower cartridge flow rates should be used for sizing purposes.

Operational Considerations
The Nowata Wound Trapper will withstand differential pressures up to 75 psi. Cartridge replacement is suggested at a maximum differential pressure of 20 to 25 psid. Operation above 25 psi differential pressure may cause a significant decrease in filtration efficiency at the stated nominal micron rating.

4. Ordering Information

<table>
<thead>
<tr>
<th>3</th>
<th>W</th>
<th>C</th>
<th>A</th>
<th>10</th>
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</thead>
<tbody>
<tr>
<td>Cartridge Length (inches)</td>
<td>Cartridge Dimensions</td>
<td>Filter Media</td>
<td>Support Core Material</td>
<td>Nominal Micron Rating</td>
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<tr>
<td>1 = 9-3/4*</td>
<td>W = 2-1/2’ OD x 1’ ID</td>
<td>C = Bleached cotton</td>
<td>A = 304 SS</td>
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<tr>
<td>‘1E = 10’</td>
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<td>P = Polypropylene</td>
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<td>‘2 = 19-1/2’*</td>
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<td>F = Glass fiber</td>
<td>S = 316 SS</td>
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<td>‘2E = 20’</td>
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<td>‘V = Unbleached cotton’</td>
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<tr>
<td>3 = 29-1/4’*</td>
<td>K = 2-3/8’ OD x 1’ ID</td>
<td>‘FB = Fibrillated-polypropylene’</td>
<td>U = Polypropylene</td>
<td>10</td>
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<tr>
<td>‘3E = 30’</td>
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<td>‘R = Rayon’</td>
<td>T = Tinned steel</td>
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<td>‘4 = 40’</td>
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<td>‘N = Nylon’</td>
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* Non-stock item - available by special order

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