Wound Cartridge Filters

Recommended Applications:
- Coatings
- Oil Patch
- Waste Water
- Potable Water
- Process Water
- Pharmaceutical
- Photo Emulsions
- Photo Processing
- Electronics/Plating
- Magnetic Coatings
- Food and Beverage
- Chemical Processing

Features:
- True Depth Filtration
- Wide Choice of Porosities
- Various Core and Wind Material
- Chemical and Temperature Compatibility

Nomenclature [ex: UP10R10PVSOCISWL]

<table>
<thead>
<tr>
<th>U</th>
<th>P</th>
<th>10</th>
<th>R</th>
<th>10</th>
<th>Core Material</th>
<th>Core Cover</th>
<th>End Treatment</th>
<th>Packaging</th>
<th>Label</th>
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<td>U - Standard</td>
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<td>0.5</td>
<td>Tin Plated Steel</td>
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Micron Rating
- 0.5
- 1
- 3
- 5
- 10
- 15
- 20
- 25
- 30
- 40
- 50
- 75
- 100
- 125
- 150
- 200

Lengths
- OD: T - 2" |
- E - 2-1/4"
- F - 2-3/8"
- R - 2-1/2"
- H - 2-5/8"
- S - 2-3/4"
- L - 2-7/8"
- P - 3"
- BB - 4"
- J - 4-1/2"
- K - 4-5/8"
- X - Special

Recommended Applications:
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- Food and Beverage
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901 S. Grant • Amarillo • TX • 79101 • Phone: 806.373.8386 • Fax: 806.371.7783 • www.unitedfilters.com
**Wound Cartridge Filters**

**Standard Polypropylene**
Recommended for concentrated acids and alkalies, strong oxidizing agents, corrosive fluids, and gases. FDA and Non-FDA available — Consult factory. Easily incinerated to traces of ash. Excellent microorganism resistance. For use to 200°F.

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</thead>
<tbody>
<tr>
<td>Oxidizing Agents</td>
<td>Alkalies</td>
<td>Organic Acids</td>
<td>Portable Water</td>
<td>Demineralized Water</td>
<td>Photographic Solutions</td>
<td>Ethyl Alcohol</td>
</tr>
</tbody>
</table>

**Fibrillated Polypropylene - “Electronic Grade”**
Non-migrating slit film polypropylene free of extractables recommended for use in ultra-pure liquids, electronics, and plating where non-leaching is critical. No extractables or sizing agents present. Chemical resistance equal to standard polypropylene. Low moisture adsorption and outstanding abrasion resistance. Lowest static propensity of any man-made fiber. High dry or wet strength.

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<td>Photographic Solutions</td>
<td>Ethyl Alcohol</td>
</tr>
</tbody>
</table>

**Modacrylic**
For strong acids, concentrated alkalies, and oxidizing agents. For use to 200°F. Not recommended for organic solvents.

<table>
<thead>
<tr>
<th>Strong Acids</th>
<th>Concentrated Alkalis</th>
<th>Oxidizing Agents</th>
<th>Organic Acids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diluted Acids</td>
<td>Animal, Petroleum and Vegetable Oils</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Polyester**
Chemical resistance similar to polypropylene, with higher temperature resistance. For use to 350°F.

<table>
<thead>
<tr>
<th>Organic Solvents</th>
<th>Alkalies</th>
<th>Dilute Acids</th>
<th>Strong Acids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic Acids</td>
<td>Animal, Petroleum and Vegetable Oils</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Organic Solvents  Alkalies
Process Water   Hydrocarbons
Nylon
For special process applications, concentrated alkalies, and hydrocarbons. Excellent micro-organism resistance. For use to 300˚F.

Organic Solvents  Oils
Organic Acids   Alkalies
Alcohols - Hydrocarbons  Fatty Acids
Rayon
Fluid compatibility similar to bleached cotton, but with more coarse fibers, and less absorbent than cotton. Swells in aqueous solutions. For use to 300˚F.

Oxalic Acid   Organic Solvents
Phosphoric Acid  Oils
Sulfuric Acid   Organic Acids
Oxidizing Agents  Strong Acids
Sodium Cyanide  Dilute Acids
Nitric Acid
Heat Cleaned Glass Fiber
Traces of oil sizing removed by heat cleaning, yielding virgin glass fiber. Recommended for high temperatures and high corrosion applications. For use to 750˚F.

Vegetable Oils - Fatty Acids  Paints
Beverages - Citric Acids  Organic Solvents
Hydrocarbons - Alcohols  Petroleum Oils
Process Water
Natural Cotton
For oils, water, paints, organic solvents, alcohols, and petroleum. Non-FDA applications. For use to 300˚F.

Organic Solvents
Oils
Alkalies
Fatty Acids
Rayon
For special process applications, concentrated alkalies, and hydrocarbons. Excellent micro-organism resistance. For use to 300˚F.

Bleached Cotton
Bleached to meet FDA standards for distilled water, beverages, vegetable oils, petroleum, fatty acids, and alcohols. For use to 300˚F. Poor micro-organism resistance.

Animal, Petroleum and Vegetable Oils

Vegetable Oils - Fatty Acids  Paints
Beverages - Citric Acids  Organic Solvents
Hydrocarbons - Alcohols  Petroleum Oils
Process Water

Demineralized Water
Photographic Solutions
Organic Solvents
Animal, Petroleum and Vegetable Oils

Bleached Cotton
Bleached to meet FDA standards for distilled water, beverages, vegetable oils, petroleum, fatty acids, and alcohols. For use to 300˚F. Poor micro-organism resistance.

Natural Cotton
For oils, water, paints, organic solvents, alcohols, and petroleum. Non-FDA applications. For use to 300˚F.

Heat Cleaned Glass Fiber
Traces of oil sizing removed by heat cleaning, yielding virgin glass fiber. Recommended for high temperatures and high corrosion applications. For use to 750˚F.

Rayon
Fluid compatibility similar to bleached cotton, but with more coarse fibers, and less absorbent than cotton. Swells in aqueous solutions. For use to 300˚F.

Nylon
For special process applications, concentrated alkalies, and hydrocarbons. Excellent micro-organism resistance. For use to 300˚F.
Wound Cartridge Filters Guides

### Core Selection Guide

<table>
<thead>
<tr>
<th>Media Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene</td>
<td>Economical core of choice for most applications in water and corrosives to 200º F. FDA material.</td>
</tr>
<tr>
<td>Tin Plated Steel</td>
<td>General purpose metal core for oils, solvents, paints, and other non-FDA applications. For use to 400º F. These cores are vapor de-greased to remove trace amounts of oil or residue prior to winding.</td>
</tr>
<tr>
<td>304 SS</td>
<td>For high temperature applications on diluted acids and moderately corrosive fluids. FDA applications. For use to 750º F. These cores are vapor helically-welded to eliminate a possible source of filtrate contamination and vapor-degreased to remove trace amounts of oil or residue prior to winding.</td>
</tr>
<tr>
<td>316SS</td>
<td>For high temperature applications on strong acids and highly corrosive fluids. FDA applications. For use to 750º F. These cores are vapor helically-welded to eliminate a possible source of filtrate contamination and vapor-degreased to remove trace amounts of oil or residue prior to winding.</td>
</tr>
<tr>
<td>Core Cover</td>
<td>For fiber migration control. Core material compatible with and/or equal to the resistance of the fiber is standard. Materials include voile, polypropylene, nylon, polyester, fiberglass, etc.</td>
</tr>
<tr>
<td>End Treatment</td>
<td>For additional fiber migration protection. End treatment is compatible with and/or equal to the resistance of the fiber medium.</td>
</tr>
<tr>
<td>Extended Core</td>
<td>Available in polypropylene and 316SS only. Extended cores eliminate chamber V-posts and increase cartridge change-out time.</td>
</tr>
</tbody>
</table>

### General Cartridge Filtration Guide

1. Cartridge filtration is favored in systems where the contaminant levels are less than 0.01% by weight (<100ppm)
2. Cartridges need to be replaced when the differential pressure (AP) approaches 35 psid.
3. Never exceed a differential pressure (AP) of 75 psid because the cartridge could collapse or “unload” the contaminants.
4. Clean initial pressure drop in liquid applications should be a differential pressure of 2-5 psid.
5. The cost of filtration increases as the micron rating of the cartridge decreases. “Never do a better job of filtration than you must or than is required.”
6. The lower the flow rate, the greater the contaminant-holding capacity of the filter tube. Flows in excess of 5 gpm per 10” tube are not recommended, with 2.5-3 gpm being preferred.
7. Over sizing your cartridge vessel will help minimize the flow rate per cartridge. We recommend a minimum of 1-10” cartridge per 50 gallons of solution to be filtered. When 2-10” cartridges per 50 gallons are employed, cartridge consumption is reduced by approximately 29%. When 4-10” cartridges per 50 gallons are employed, cartridge consumption is reduced by approximately 50%.
8. Also, over sizing by a factor of 4 doubles the dirt holding capacity per cartridge as well. Consider series filtration in lieu of single.