



The Wound Trapper[®]

**“WP” “WC” & “WF”
Series Filter Cartridges
for Fluids and Gases**

The Nowata Wound Trapper Filter Cartridge

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 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.

The “3W” 29-1/4 inch length cartridge is made in one continuous piece that is three times the length of the “1W” cartridge, which eliminates the possibility of channeling at the mating cartridge surfaces.

The Wound Trapper Series Features

“WP” SERIES POLYPROPYLENE CARTRIDGES

The standard polypropylene (Poly) fiber and core “WPU” cartridge has excellent compatibility with strong acids and concentrated alkalis. 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 “WCA” 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 “WCA” 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 “WFS” cartridge has a broad range of chemical compatibility except with alkalis, steam and hydrofluoric acid. Maximum recommended operating temperature is 750°F (400°C). The “WFS” 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 applications and fluids. On special order, Nowata Filtration offers other specific purpose media such as: Unbleached Cotton, Fibrillated Polypropylene, Rayon, Nylon and Polyester. Contact the Nowata Filtration Technical Sales Department for pricing and availability.



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Wound Trapper Performance

Operational Considerations

The 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.

Flow Rating

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) 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. Multiply the number of single length 9-3/4 inch cartridges in a housing times the Cartridge Data flow rating to determine the total housing capacity.

Standard Sizes

Wound Trapper cartridges are 2.5" OD x 1" ID (6.35 cm OD x 2.54 cm ID).

Single length (1W) cartridges are: 9.75" (24.75 cm) long.

Triple length (3W) cartridges are: 29.25" (74.25 cm) long.

All Trapper cartridges are ideally suited for use in Nowata filter housings. For specific information about Nowata housings or other types of cartridges to fit your application, contact your local representative or the Nowata Filtration Technical Sales Department.

Cartridge Data

| Nominal Micron Rating | Actual Opening In Inches | Cartridge Flow Rating* GPM per 9-3/4" Length | | |
|-----------------------------|--------------------------------|---|---------------|--------------|
| | | 1WP Poly | 1WC Cotton | 1WF Glass |
| 0.5 | .0000197 | 0.9 | 0.4 | 0.5 |
| 1 | .0000394 | 1 | 0.5 | 0.7 |
| 3 | .0001181 | 3 | 1 | 1 |
| 5 | .0001969 | 4 | 2 | 1 |
| 10 | .000394 | 5 | 3 | 1.5 |
| 20 | .000787 | 6 | 4 | 2 |
| 30 | .001181 | 7 | 6 | 3 |
| 50 | .001968 | 8 | 8 | 4 |
| 75 | .002953 | 8 | 8 | 5 |
| 100 | .003937 | 8 | 8 | 7 |

* Water at a 2 psi clean pressure drop. Flow ratings for fluids with viscosities different than water will vary considerably. Contact the Nowata Filtration Technical Sales Department for sizing assistance. Depending on the contaminant loading level, flow ratings may need to be decreased to give acceptable life.

Wound Trapper Nomenclature

Cartridge Model Number: Example 3WCA10

| 3 | W | C | A | 10 |
|----------------------------|----------------------------|------------------------------|-----------------------|-----------------------|
| Cartridge Length in Inches | Wound Cartridge Dimensions | Filter Media | Support Core Material | Nominal Micron Rating |
| 1=9-3/4" | W=2-1/2" OD x 1" ID | C=Bleached Cotton | A=304 SS S=316 S | 0.5 1 |
| *2=19-1/2" | | P=Polypropylene F=Glass F | U=Polypropylene | 3 5 |
| 3=29-1/4" | | | | 10 20 |
| *4=40" | | | | 30 50 75 100 |

* Non Stock Item - available by special order



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