



## Media

Behringer® Ultra-Wind™ FP Series Wound Polypropylene Depth Filter Cartridges offer absolute filtration for critical process applications, and FDA approval of raw materials for food and beverage contact. Manufactured from FDA-grade polypropylene material, these inexpensive cartridges are an excellent match for a variety of industrial fluids, as well as organic solvents and edible oils. Utilizing an advanced computer-controlled manufacturing process, Behringer Process Filtration's string-wound cartridges are able to achieve a true graded-density media layer. This precisely-patterned fiber structure creates a consistently reliable media with expanded void volume, creating a cartridge that performs with a gradual pressure increase over the life of the cartridge, rather than the abrupt flow cutoff typical of competitor's cartridges. Ultra-Wind™ cartridges are similar to our MAX-Wind™ cartridges in materials and craftsmanship, but add HVV+™ technology. HVV+™ is a precise patterning process that creates a higher void volume area in the graded density depth filter media, and is patterned to offer efficiencies up to 99.99%. This absolutrated cartridge yields higher dirt-holding capacities, higher efficiencies, and better dirt-unloading properties. HVV+™ filter cartridges typically have dirt-holding capacities double that of conventional wound cartridges.

# BEHRINGER®

## Ultra-Wind™ FP

String-Wound FDA Polypropylene  
HVV+™ Depth Filter Cartridges

Absolute-Rated Cartridges  
FDA Listed Materials

### Performance:

Max Differential Pressure: 60 psid (3.5 bar)  
Recommended Change Out: 25 psid (1.75 bar)

Filtration Rating: 0.5, 1, 3, 5, 10, 20  
(Micron sizes) 25, 30, 50, 75, 100,  
200, 250, 400

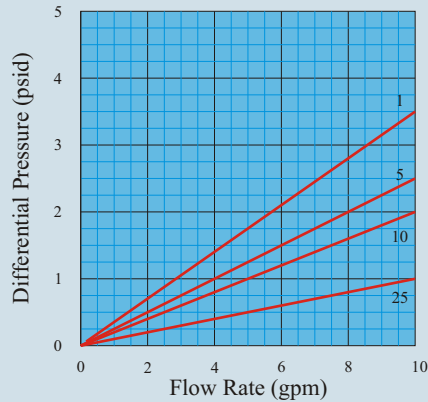
### Features and Benefits

- Graduated Density HVV+™ Technology provides higher void volume resulting in longer life, higher efficiencies, and lower pressure drops.
- HVV+™ cartridges have more than double the dirt-holding capacity of standard wound cartridges.
- Polypropylene media raw materials meet FDA regulations for contact with food and beverages.
- Offered in a wide variety of lengths from 4 in. to 50 in., With diameters ranging from 1.5 in. to 4.5 in.
- Core covers, core extenders, and various different end cap configurations are available to make installation simple in any manufacturer's filter vessel.
- Core options include 304SS, 316SS, Tin, Extended, and polypropylene snap-in extender.
- Filter Construction is easily customized because of HVV™ computer-aided manufacturing.

### Typical Applications

- Chemicals
- Consumer Products
- Beverages
- Edible Oils
- Photography Chemicals
- Pharmaceuticals
- Connectors
- Water
- Juices
- Paint / Ink
- Process Water

## Flow vs. Pressure Information Single 10-inch Wound PP Cartridge



### Pressure drop calculation:

Pressure drop curves are based on fluid with viscosity similar to water, and element length of 10 inches. P across the media is proportionally related to viscosity and element length. The formula for calculating different pressure drops is as follows:

$$\text{New } P = P \text{ Curve} \times \text{Viscosity (cSt)} / \# \text{ of 10 in. Lengths}^2$$

### Notes:

1.) Cartridges should not exceed the recommended max flow rate of 10gpm per 10 inch length. All applications differ, and actual flow rates should be determined on an individual basis.

2.) Initial pressure drop should be kept as low as possible. Initial pressure drops over 3-4 psid may considerably decrease cartridge life.

## Operating Conditions

### Max Operating Temperature:

180° F (82° C)

### Max Permissible p:

60 psid (4 bar) @ ambient temp.

### Recommended Change-Out p:

25 psid (1.75 bar)

### Max Recommended Flow Rate:

10 gpm (37.8 lpm) per 10 in. Length<sup>1</sup>

## Construction

### Media:

Absolute-Rated FDA-Listed HVV+™ Wound Polypropylene

### End Caps:

222 O-rings, 226 O-rings, Fins, DOE Caps, Spears, Flat Gaskets, Springs, Core Extenders, Custom

### Gasket / O-ring Materials:

Polyfoam, Buna-N, Viton, Silicone, EPR, Neoprene

### Outside Diameter:

2.5 in. (63.5 mm)

### Inside Diameter:

1.06 in. (27 mm)

### Nominal Lengths (in):

4¾, 9¾, 10, 19½, 20, 29½, 30, 39, 40, 50, 60

Table 1

Table 2

Table 3

Table 4

Table 5

Table 6

# UFP

## Length

Table 1

4.9	4.875 in. (half)
9.8	9.75 Inch
10	10 Inch (single)
19.5	19.5 Inch
20	20 Inch (double)
29.75	29.75 Inch
30	30 Inch (triple)
39	39 Inch
40	40 Inch (quad)
50	50 Inch

## Core

Table 2

N	None
P	Polypropylene
T	304S/S
S	316S/S
C	1.56 Steel
D	1.22 PP
F	Glass PP
M	1.56 PP
E	EPT

## Filtration Rating

Table 3

0.5 micron	30 micron
1 micron	50 micron
3 micron	75 micron
5 micron	100 micron
10 micron	200 micron
20 micron	250 micron
25 micron	400 micron

## Adders

Table 4

C	Closed End Cap (1 end)
222	222 O-ring / Closed
222F	222 O-ring / Fin End
226	226 O-ring / Closed
226F	226 O-ring / Fin End
FG	Flat Gasket / DOE Caps
CS	Compression Seal
PS	Polypropylene Spring
PCE	PP Core Extender
TCE	304 S/S Core Extender
SCE	316 S/S Core Extender

## Seals

Table 5

omit	None -- depends on adders
E	EPR
N	Neoprene
V	Viton
S	Silicone
B	Buna-N (Nitrile)
PF	Polyfoam

## Core Covers

Table 6

omit	None
C	Cover (compatible material to filter media)

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