



## **MicroVantage™ MD SERIES**

### **Polypropylene, and Glass Fiber Filter Elements**

Shelco's MicroVantage™ pleated cartridges are designed to meet the standards of a wide spectrum of industries. From our general grade pleated cartridges designed for high purity applications at an economical cost to our P grade Glass cartridges with a final nonshedding layer of media, these cartridges are manufactured to the most stringent production standards making them the new benchmark of the industry. Materials of construction are specifically chosen to match each application independently. The Shelco MicroVantage™ cartridge should be your choice when critical retention is essential to the process.

### **Features**

- Each cartridge is rinsed to flush away any remaining manufacturing debris and wash away any extractables that may effect performance
- Pharmaceutical grade elements are designed to be used as non-sterilizing grade cartridges
- All materials of construction meet requirements of the FDA Title 21 of The Code of Federal Regulations
- Cartridges are designed for maximum throughput and particle retention at the lowest pressure drop
- Polypropylene or Glass construction offers a wide range of compatibility
- Compatible with Chemical Sanitation, Autoclave, and In-Line Sterilization methods
- Each cartridge is individually tested for integrity and efficiency at its rated pore size.
- Each assembly is validated to pass USP Class 6 Toxicology extractable tests for plastics
- All P Grade cartridges are double layered to ensure integrity

### **Grade Definitions**

G Grade	Designed for general-purpose use at an effective cost. Each cartridge is rinsed with 17+ megohm-cm water to remove potential extraneous manufacturing debris. Each cartridge module is individually tested for integrity then wrapped and individually boxed.
B Grade	Designed for the food and beverage industry. Each cartridge is thoroughly rinsed with 18+ megohm-cm water to remove potential extraneous manufacturing debris. This ensures that all extractables, which may effect taste and performance such as foaming or brightness are removed. Each cartridge module is individually tested for integrity then wrapped and individually boxed.
E Grade	Designed to meet the special needs of the electronics and high purity chemical industries. Each cartridge module is pulse, power flushed until the rinse effluent reaches 17+ megohm-cm and less than 3 ppb TOC. Each cartridge module is individually tested to ensure integrity.
P Grade	Designed to be used as pre-filters and non-sterilization filters in the pharmaceutical industry. Each cartridge is double layered and flushed to remove potential extraneous manufacturing debris to ensure particle free filtrate. Each cartridge module is individually tested for integrity then wrapped and individually boxed
P Grade Glass Fiber	As required by the FDA, our pharmaceuticals grade Glass Fiber Depth media cartridges are double layered and contain a final nonsheathing downstream layer. This means they can be used without additional membrane cartridges downstream. These high capacity cartridges are used in pre-filter applications as well as final filter applications where the goal is bioburden reduction and not sterile product. Each cartridge is tested for integrity before shipment.

# Product Specifications

## Pore Size Retention Ratings

Polypropylene:	0.1, 0.22, 0.45, 0.65, 1.0, 3, 5, 10, 20, 30, 40
Glass:	0.3, 0.5, 1, 3, 5, 10, 20, 30

## Efficiencies

Polypropylene:	99.98%
Glass:	99 %

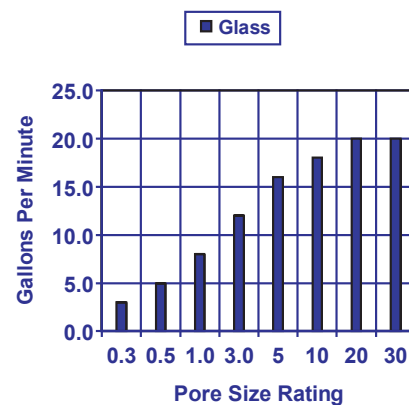
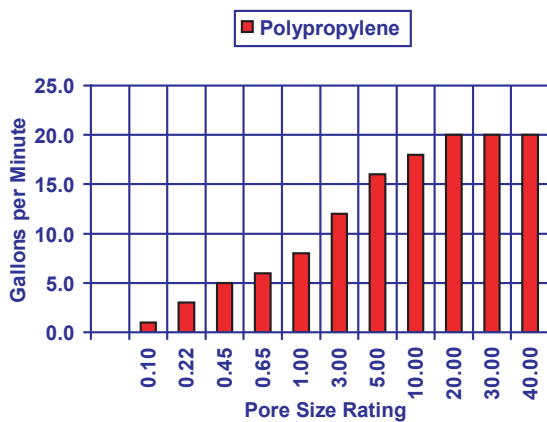
## Materials of Construction

Filtration Media:	Polypropylene	Glass	Glass – P Grade
Filtration Media Support:	Polypropylene	Polypropylene	Polypropylene with non-shedding layer
End Caps:	Polypropylene	Polypropylene	Polypropylene
Center Core:	Polypropylene	Polypropylene	Polypropylene
Outer Support Cage:	Polypropylene	Polypropylene	Polypropylene
Method of Construction:	Thermally Bonded	Thermally Bonded	Thermally Bonded
Gaskets and O-Rings	Buna, Viton, Silicone, Ethylene Propylene, Teflon Encapsulated Silicone		

## Operating Conditions

Recommended change out: 30-35 Psid

Max Temp 180°F (82°C) at 12 Psid



This chart represents typical water flow @ 1 PSID per 10" cartridge length. The test fluid is water at ambient temperature. Extrapolation for multiple elements tends to be linear, but as flows increase the DP of the housing becomes more apparent.

## ORDERING GUIDE

MD	P	0.45	-	10	S4	S	B
PRODUCT CODE	MEDIA	MICRON		LENGTH	END CAP CONFIGURATION	GASKET/O-RING	GRADE
MD	P = Polypropylene G = Glass	0.1 3.0 0.22 5.0 0.3 10.0 0.45 20.0 0.5 30.0 0.65 40.0 1.0		5 = 4 7/8" 975 = 9 3/4" 10 = 9 7/8" 20 = 20" 30 = 30" 40 = 40"	S1 = DOE w/Flat Gaskets S3 = 222 w/Fin End S4 = 222 w/Flat End S5 = 226 w/Fin End S6 = 226 w/Flat End *S7 = Internal O-Ring w/Recessed Plug *S9 = Internal O-Ring Both Ends S10 = 222 w/Recessed Plug S11 = SOE Flat w/Recessed Plug S13 = 020 O-Ring S20 = 223/Flat End	B = Buna E = Ethylene Propylene S = Silicone V = Viton T = Teflon Encapsulated Silicone	Blank = General B = Beverage E = Electronics P = Pharmaceutical

\*Choose O-Ring Size: 119, 120 or 213 available. Please add to end of part number. Example MDP0.45-10S4SB213



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# SHELCO FILTERS

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