



# GPVWL Filters

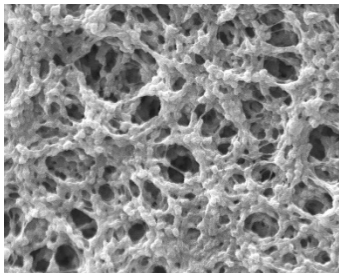
Hydrophilic PVDF Membrane



GPVWL filters are part of Critical Process Filtration's economical, general service product line that can be used to lower the total cost of filtration from simple to the most complex applications. Produced using the same quality materials and manufacturing excellence as our other product lines, you can be assured of their performance, dependability and scalability. While general service filters are not integrity tested or validated for retention, these highly efficient filters remove large amounts of contaminants early in the process to reduce the load on your expensive downstream filters. They are also useful as stand-alone clarifying or particle removal filters in less critical applications.

GPVWL cartridge and capsule filters consist of a single layer, hydrophilic, high capacity Polyvinylidene fluoride (PVDF) membrane. These filters are used for fine particle removal, clarifying and prefiltering of aqueous liquids. Pore sizes range from 0.22 to 1.0  $\mu\text{m}$ . GPVWL filters deliver high flow and throughput with the broad chemical compatibility of a fluoropolymer.

Critical Process provides unrivaled delivery times, technical consulting before purchasing, and very competitively priced high-performance products. Our comprehensive testing & analysis and validation services support your team whenever they need it. Your process experts partnering with our filtration experts is how we deliver your company's solution right the first time.

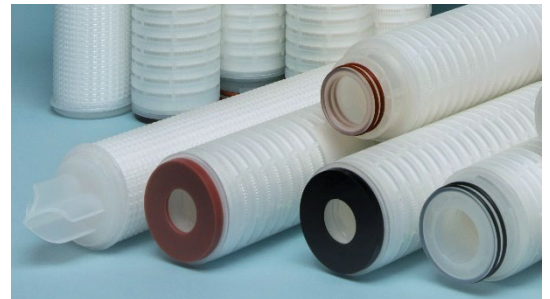


GPVWL filters are recommended for filtering:

- Process Water
- DI Water
- Inks & Dyes
- Compatible Chemicals
- Acids and Bases

## Fine Particle Removal

## Clarification & Prefiltration



**CARTRIDGES – Nominal Dimensions**  
Length: 5 to 40 in. (12.7 to 101.6 cm)  
Outside Diameter: 2.75 in. (7.0 cm)



**CAPSULES – Nominal Dimensions**  
Length: 2 to 30 in. (5.1 to 76.2 cm)  
Outside Diameter: 3.50 in. (8.9 cm)

## Maximum Operating Parameters

|                                       | CARTRIDGES                             | CAPSULES                                       |
|---------------------------------------|--|--|
| <b>Liquid Operational Pressure</b>    | N/A                                    | 80 psi at 68 °F (5.52 bard at 20 °C)           |
| <b>Gases Operational Pressure</b>     | N/A                                    | 60 psi at 68 °F (4.14 bar at 20 °C)            |
| <b>Operating Temperature (water)</b>  | 180 °F at 30 psid (82 °C at 2.07 bard) | 110 °F at 30 psid (43 °C at 2.07 bard)         |
| <b>Forward Differential Pressure</b>  | 80 psid at 68 °F (5.52 bard at 20 °C)  | Liquid - 80 psid at 68 °F (5.52 bard at 20 °C) |
| <b>Reverse Differential Pressure</b>  | 50 psid at 68 °F (3.45 bard at 20 °C)  | 50 psid at 68 °F (3.45 bard at 20 °C)          |
| <b>Recommended Changeout Pressure</b> | 35 psid (2.41 bard)                    | 35 psid (2.41 bard)                            |

## Sanitization & Sterilization

|                              |  |                                    |
|------------------------------|--|------------------------------------|
| <b>Filtered Hot Water*</b>   | 90 °C (194 °F), 30 minutes, multiple cycles, max 3 psid forward flow   | N/A                                |
| <b>Inline Steam*</b>         | 275 °F (135 °C), 30 min, 25+ cycles  | N/A                                |
| <b>Autoclave*</b>            | 250 °F (121 °C), 30 min, 25+ cycles  | 250 °F (121 °C), 30 min, 5+ cycles |
| <b>Chemical Sanitization</b> | Performed using industry standard concentrations of hydrogen peroxide, peracetic acid, sodium hypochlorite and other selected chemicals. |                                    |

\*Cartridge Filters – For all elevated temperature procedures above, a stainless-steel support ring is required.

## Filtration Area (Nominal)

|        | CAPSULES            | CARTRIDGES AND CAPSULES |                     |                      |                      | CARTRIDGES           |
|--------|---------------------|-------------------------|---------------------|----------------------|----------------------|----------------------|
|        | 2"                  | 5"                      | 10"                 | 20"                  | 30"                  | 40"                  |
| Length | 5.08cm              | 12.7cm                  | 25.4cm              | 50.8cm               | 76.2cm               | 101.6cm              |
| Area   | 1.0 ft <sup>2</sup> | 2.8 ft <sup>2</sup>     | 6.0 ft <sup>2</sup> | 12.0 ft <sup>2</sup> | 18.0 ft <sup>2</sup> | 24.0 ft <sup>2</sup> |
|        | 0.09m <sup>2</sup>  | 0.26m <sup>2</sup>      | 0.56m <sup>2</sup>  | 1.12m <sup>2</sup>   | 1.68m <sup>2</sup>   | 2.24m <sup>2</sup>   |

## Construction Materials

|   |   |
|---|---|
| <b>Filtration Media</b>   | Hydrophilic High Capacity Polyvinylidene Fluoride (PVDF) Membrane                                 |
| <b>Media Support</b>  | Polypropylene   |
| <b>End Caps, Center Core, Outer Support Cage, Capsule Housing</b> | Polypropylene   |
| <b>Sealing Method</b>   | Thermal Bonding   |
| <b>O-Rings/Gaskets Cartridges only</b>                            | Buna, Viton® (or FKM), EPDM, Silicone, FEP Encapsulated Silicone, FEP Encapsulated Viton (or FKM) |

## Extractables

GPVWL filters typically exhibit low levels of non-volatile residues.

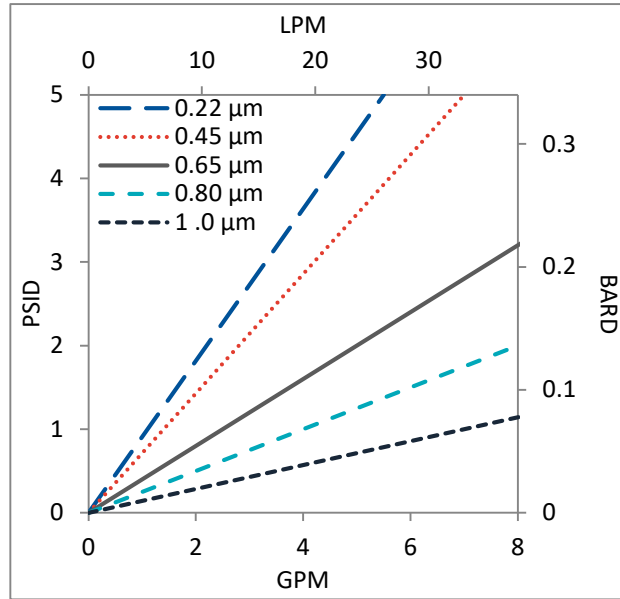
## Non-Fiber Releasing

The GPVWL filters comply with Title 21 CFR sections 210.3 (b)(6) and 211.72, for non-fiber releasing filters.

## FDA and EC Compliance

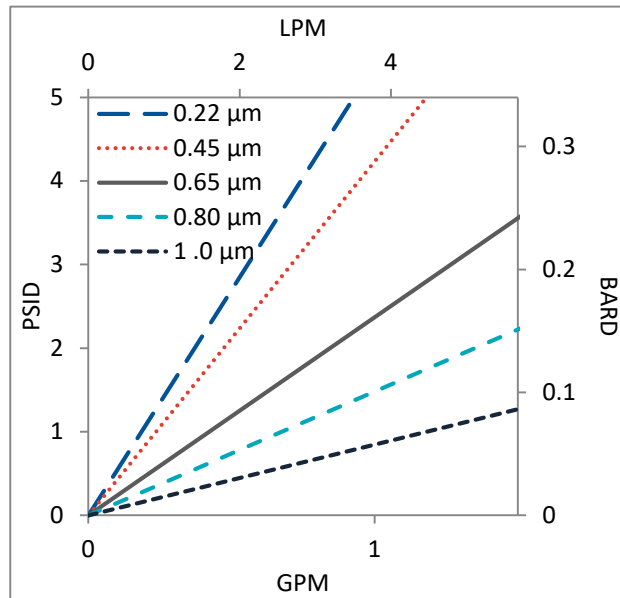
Materials meet the requirements listed by the FDA as appropriate for use in articles intended for repeated food contact as specified in Title 21 CFR sections 174.5, 177.1500, 177.1520, 177.1630, 177.2440, and 177.2600 as applicable. All materials used to make the filters are listed in European Commission Regulation EU/10/2011, Annex 1.

## Flow Rates for GPVWL Cartridges by Pore Size



Flow rates for Cartridge filters are per 10-inch length. The test fluid is water at ambient temperature.

## Flow Rates for GPVWL Capsules by Pore Size



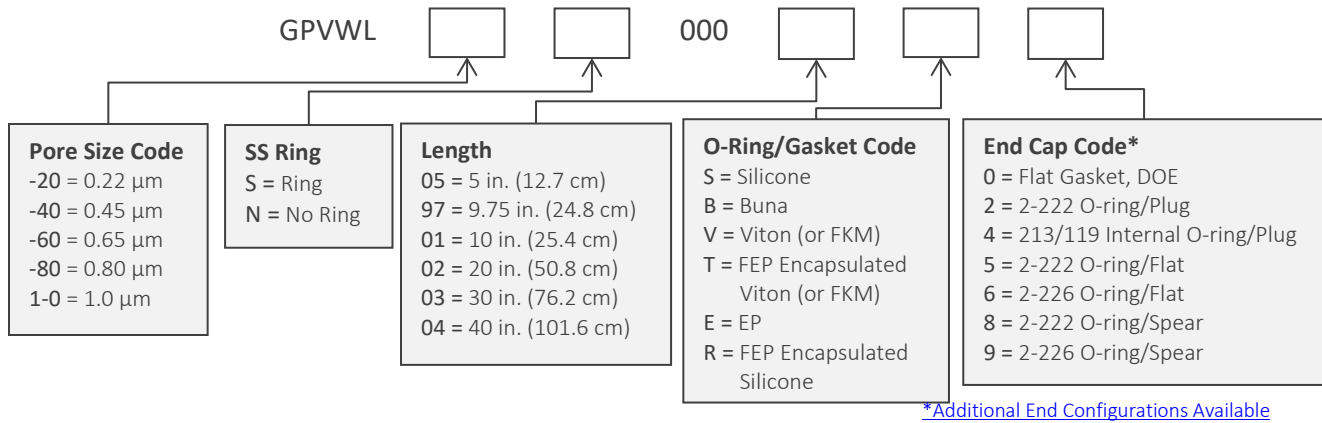
Flow rates for Capsule filters are tested using a 2" capsule filter with 1" sanitary inlet and outlet ports. The test fluid is water at ambient temperature. Flow rates for larger capsules will scale with filtration area. Rates will vary based on end configuration of the capsule.

## GPVWL Filters Ordering Information

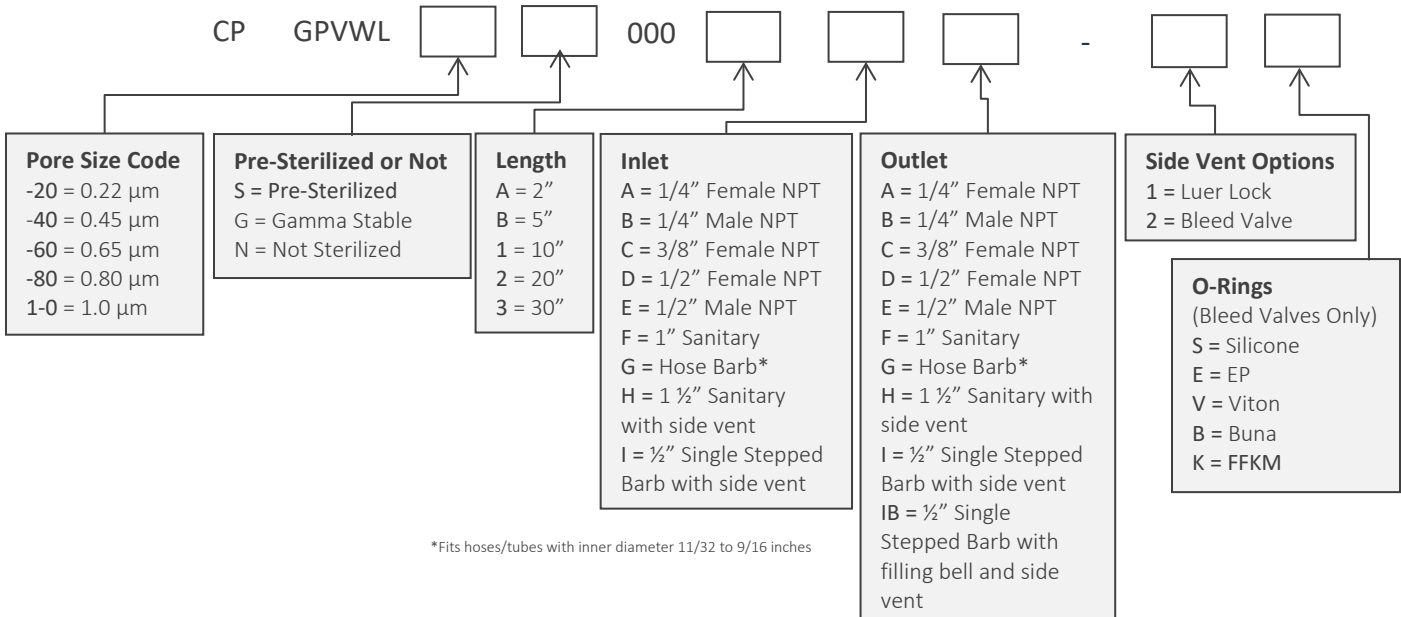
Fill in the corresponding codes in the boxes below to build your Part Number.

To consult with one of our technical team members, request a quote or place an order:  
call (603) 880-4420 or [contact us here](#).

### Cartridge Filters



### Capsule Filters



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Data Sheet GPVWLDS Rev A