

Masterfilter APKV series

The Masterfilter *PreFil* APKV series is a pre-stabilisation filter has been developed for the reduction of microbial and colloidal contamination in the processing of bottled and mineral water and also protecting the service life of the final membrane filters. Constructed from a unique multilayer of Polypropylene and PVDF nanofibers, the absolute rated APKV filters offer high flow rate and optimized graded density, facilitating the reduction of a range of microorganisms, colloids and polymorphous organic matter depending on the source of the water. The robust nanofiber media construction gives the filter high porosity and strength enabling the filter to perform with consistency and assurance.

Bottled Water Application

Pre-stabilisation of bottled and mineral water

The classification of water is governed by respective country legislation and European Directives and can influence how 'spring water, mineral water and table water' are processed as bottled water for consumer use. These regional regulations determine the level of filtration that is accepted by different regions. The bottled water must be safe to drink and free from certain types of microbial pathogens.

The APKV filter is universally suited for the various classifications of bottled water pre-stabilisation. Primarily acting to reduce the pathogens and colloidal suspensions depending on the source of the water. The APKV filter is very effective in filtering suspended non-precipitated colloids and pathogens, and so maintaining the service life of the final sterilising membrane filters and reducing overall operating costs. Where the filtered post stabilisation water' is stored prior to filling, the APKV filters ensure that reduction of the bioburden prevents the risk of biofilm growth whilst the filtered water is in storage, so maintaining a hygienic environment and product

Features and Benefits

- Nanofiber PVDF/PP matrix – High porosity offering excellent flux rates
- Absolute rated for reduction of colloidal suspensions and microbial pathogens - Removal of colloidal conjugates preventing iron precipitation post bottling
- Construction designed to handle broad CIP chemical compatibility and back wash regeneration of the filter - Increased service life and performance
- Graded density layer media - High retention capacity of bioburden and spoilage



Materials of Construction

- Membrane: Multilayer Polypropylene and Nanofiber PVDF
- Support layers: Polypropylene
- Inner core: Polypropylene
- Outer cage: Polypropylene
- End caps: Polypropylene
- O-ring: EPDM, Silicone, Viton

Operating Parameters

- Max. differential pressure forward: 4.2 bar at 21 °C
- Max. differential pressure reverse: 2.1 bar at 21 °C
- Max. operating temperature: < 85°C / 185 °F
- pH range: 1.0 to 14.0
- Effective filtration Area (EFA): 0.68 m² (7.32 ft²) for 10" (250mm) length

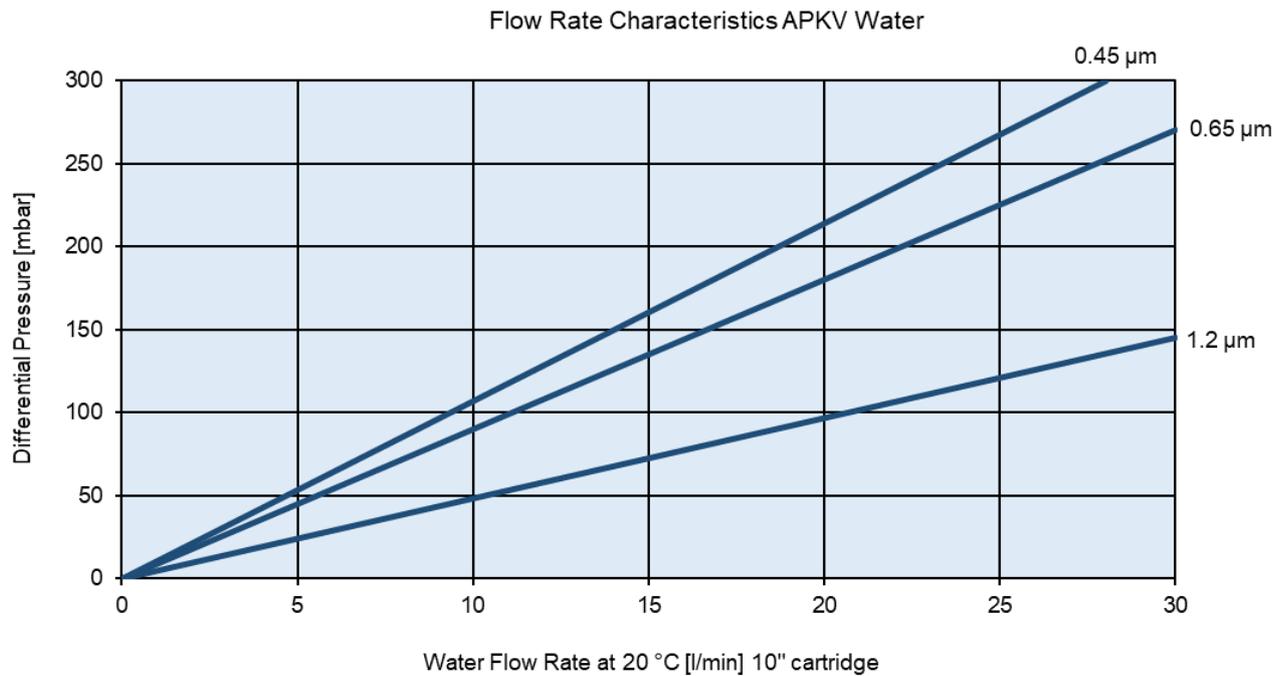
Quality Assurance

- All materials used in APKV meet the requirements of FDA 21 CFR and EU No. 1935/2004 and EU10/2011

Microbiological Retention

APKV pre-filter (1.2 µm, 0.65 µm and 0.45 µm) is an absolute rated filter that is suited for microbial reduction of E.Coli, Streptococci, sulphide and nitrate activating bacteria and pseudomonas species.

Flow Rate Characteristics



Part Numbers

APKV 0065 - 10 - HSF - S

| Code | Removal rating [µm] |
|------|---------------------|
| 0045 | 0.45 |
| 0065 | 0.65 |
| 0120 | 1.2 |
| 0300 | 3 |

| Code | Length | |
|------|--------|--------|
| | [mm] | [inch] |
| 10 | 254 | 10 |
| 20 | 508 | 20 |
| 30 | 762 | 30 |
| 40 | 1016 | 40 |

| Code | End caps |
|------|--------------------------|
| STC | Sartorius code 28 |
| HTC | 222 O-ring/flat (Code 3) |
| HTF | 222 O-ring/fin (Code 8) |
| HSF | 226 O-ring/fin (Code 7) |
| HSC | 226 O-ring/flat (Code 2) |

| Code | O-rings |
|------|----------|
| S | Silicone |
| E | EPDM |
| V | Viton |

e.g. part number: APKV0065-10-HSF-S

APKM with multi layers PP/PVDF filter, 0.65 µm, 10" length, Code 7 end caps, Silicone O-rings