

# APKV Series

## Bottled Water Pre-filtration



Masterfilter APKV series is a pre-stabilization 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 & 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-stabilization 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	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 & spoilage

### Quality Assurance

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

### Materials of Construction

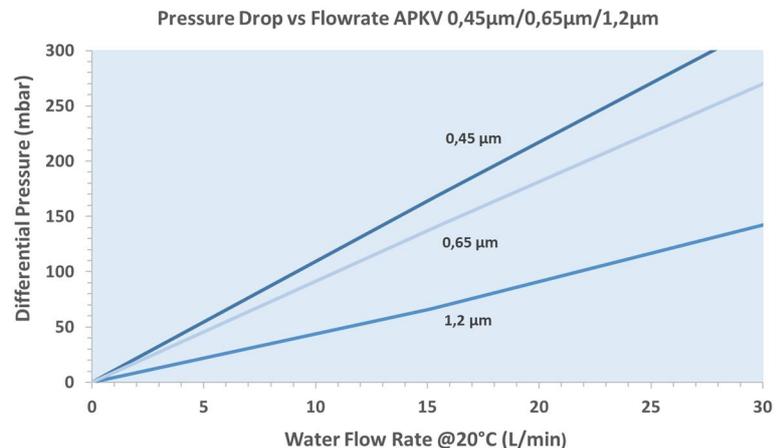
- Membrane: Multilayer Polypropylene & Nanofiber PVDF
- Support Layers: Polypropylene
- Inner Core: Polypropylene
- Outer Cage: Polypropylene
- End Caps: Polypropylene

### Operating Parameters

- Max differential pressure forward: 4,2 bar (21°C)
- Max differential pressure reverse: 2,1 bar (21°C)
- Max operating temperature: < 85°C / 185°F
- pH range: 1.0 – 14.0

Effective Filtration Area (EFA)  
0.68m<sup>2</sup> (7.32ft<sup>2</sup>) / 10" (250mm)

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*.



### Part Numbers

APKV		10			HSF		S	
Code	Removal rating micron	Code	length mm	length inch	Code	end caps	Code	O-Rings
0065		10	254	10	STC	Satorius code 28	S	Silicone
0045	0,45	20	508	20	HTC	222 O-ring/flat (Code 3)	E	EPDM
0065	0,65	30	762	30	HTF	222 O-ring/fin (Code 8)	V	Viton
0120	1,2	40	1016	40	HSF	226 O-ring/fin (Code 7)		
0300	3,0				HSC	226 O-ring/flat (Code 2)		

e.g. part number: APKV065-10-HSF-S  
multi layers PP/PVDF filter, 0,65 µm, 10" length, Code 7 end caps, silicone O-rings