



**Kleenpak™ Nova Capsules with Fluorodyne® II DBL Membrane**

### Description

This 0.45 µm rated filter is predominantly used in pre-filtration applications or viscous fluid filtrations. Validated retention of *Serratia marcescens* (ATCC 14756) with typical TR of 10<sup>6</sup> (6 LRV) makes it also suitable for bioburden control. The serial layer (0.65/0.45 µm) membrane construction allows for high throughputs and high flow rates compared to other 0.45 µm rated filters.

Pall's range of Kleenpak™ Nova capsules are designed for use in medium to large scale production environments (100 L > 1000 L), often selected by the end user following scaling studies using smaller Kleenpak capsule formats. With the AB style cartridge format at its core, this capsule filter style can be supplied with the most comprehensive range of filter media.

### Key Features and Benefits

- Encapsulated format for higher flexibility, minimized cleaning and low installation costs
- Incorporated prefiltration layer
- Low extractables
- High protein transmission
- Rapid preservative recoveries
- Easy integrity testing
- Compatible with organic solvents, acids and chemicals <sup>1</sup>
- Resin and surfactant-free
- Melt-sealed, non shedding

<sup>1</sup> Except ketones and amides

### Quality Standards

- Manufactured for use in conformance with cGMP
- 100% integrity tested
- ISO 9000 Certified Quality System
- Meets USP Biological Reactivity Test, in vivo, for Class VI-121 °C Plastics
- Every filter tested during manufacture. Test correlated to microbial retention
- Certificate of Test provided includes:
  - Fabrication Integrity
  - Bacterial Retention
  - Materials of constructions
  - Effluent quality for cleanliness, TOC and Water Conductivity, pH and Pyrogens

### Specifications

## Materials of Construction

Filter Membrane	Hydrophilic modified PVDF
Support/Drainage	Polypropylene
Core/End Caps	Polypropylene
Cage	Polypropylene
O-rings	Silicone elastomer
Sealing Technology	Thermal bonding without adhesives
Housing Bowl	Polypropylene
Housing Head*	Polypropylene

\*Formulated with TiO<sub>2</sub> whitener which does not contribute to organic extractables

## Operating Parameters<sup>(1)</sup>

Maximum Temperature	40 °C
Maximum Operating Pressure	3 bar (44 psi) at 40 °C
Maximum Differential Pressure (forward direction)	3 bar (44 psi) at 40 °C

(1) In compatible fluids which do not soften, swell or adversely affect the filter or its materials of construction

## Sterilization<sup>(2)</sup>

Autoclavable 'G' Version	3 x 60 minutes at 125 °C
Autoclavable 'S' Version	1 x 60 minutes at 125°C
Gamma Irradiation	Maximum of 50 kGy

(2) • Pre-sterilized Kleenpak Nova capsules must not be re-sterilized  
• Kleenpak Nova capsules must not be sterilized in-situ by passing steam under pressure

## Typical Extractables in Water at 20 °C<sup>3</sup>

'G' Version	< 10 mg per 254mm (10 in.) size
'S' Version	< 20 mg per 254mm (10 in.) size

\*Tested on elements without pre-flushing

## Nominal Dimensions

In Line	NP6	NP7	NP8
Maximum Diameter including valves	154 mm (6.1 in.)	154 mm (6.1 in.)	154 mm (6.1 in.)
Length with hose barb inlet/outlet	397 mm (15.6 in.)	644 mm (25.4 in.)	895 mm (35.2 in.)
Length with sanitary inlet/outlet	335 mm (13.2 in.)	584 mm (23.0 in.)	834 mm (32.8 in.)

T Style	NT6	NT7	NT8
Maximum Diameter including valves	240 mm (9.5 in.)	240 mm (9.5 in.)	240 mm (9.5 in.)
Length	349 mm (13.7 in.)	598 mm (23.5 in.)	848 mm (33.4 in.)

## **Nominal Effective Filter Area (EFA)**

0.55 m<sup>2</sup> per 254 mm module (5.9 ft<sup>2</sup> per 10 in. module)

## **Typical Flow Characteristics**

Flow data will be added shortly.

If you urgently require the flow information, please contact Pall.

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## **Contact Information**

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