



Kleenpak™ Nova Sterilizing-grade and Virus Removal Capsule Filters

Description

The issues of effective cleaning and cleaning validation result in disposable equipment being the preferred option for many processes. [Disposable filters](#) can help eliminate cleaning problems, especially where biological products are to be filtered. In applications where hazardous materials are being filtered, such as cytotoxic drugs, capsule filters can play an important role in helping protect operators.

Kleenpak Nova capsule filters are designed to provide choice, cost effectiveness and flexibility, while ensuring ease of use for the operator.

Designed to Provide Choice and Flexibility

Kleenpak Nova capsule filters are available with either in-line or T-style configurations. The T-style configuration is ideal for manipulating multiple filters in series or in parallel configuration. Kleenpak Nova Capsule filters incorporate either a 10 in. (254 mm), 20 in. (508 mm) or 30 in. (762 mm) length standard Pall cartridge filter which have traditionally been installed in stainless steel housings. In applications where a particular filter is already specified, the user can switch from a stainless steel housing to a fully disposable assembly with minimal requalification. This means the extensive range of sterilizing-grade and virus filters currently available from Pall can easily be provided as a capsule filter, including:

- Low binding, high-flow Fluorodyne® II PVDF filters
- Ultipor® N66 and positively-charged Posidyne® nylon 66 filters
- Supor® polyethersulfone filters
- Ultipor VF DV20 and DV50 virus removal filters

Kleenpak Nova capsules are especially suited to pilot- and process-scale applications. They can be autoclaved or sterilized by Gamma-irradiation and can be supplied as part of pre-sterilized processing systems such as a filter/tubing/bag set. Kleenpak Nova capsules are used in a wide range of critical applications including the sterilization of [biopharmaceuticals](#), biologicals, diagnostic reagents, serum, tissue culture media, and culture-media components.

Kleenpak Nova Filters Reduce Operating Costs

Kleenpak Nova filters have a typical installation cost that is 80 % lower than a similar sized stainless steel housing system. Therefore, they offer an extremely cost-effective alternative to housing and cartridge systems. Kleenpak Nova filters can also provide additional cost savings:

- No housing maintenance — Lower maintenance costs
- No housing cleaning or cleaning validation — Lower labor costs
- Filter is pre-assembled — Lower labor costs
- Filter can be provided pre-sterilized — Lower energy costs

Specifications

Operating Conditions¹

Maximum Operating Temperature	40 °C
Maximum Operating Pressure	3 barg (43.5 psig) at 40 °C (6.2 barg (90 psig) at 40 °C for up to a maximum of 10 hours) ²

¹ With compatible fluids which do not soften, swell or adversely affect the product or its materials of construction

² Integrity test purposes only

Capsule Materials of Construction

Housing Bowl and Head ²	Polypropylene
O-rings	Silicone elastomer

² Formulated with TiO₂ whitener which does not contribute to organic extractables

Sterilization

Autoclave (Maximum)	1 x 60 minutes at 135 °C
Gamma irradiation	Maximum dosage 50 kGy

Consult Pall for procedures

Nominal Dimensions

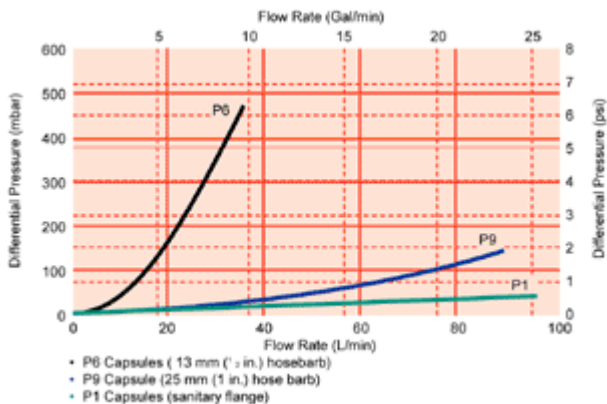
In Line	NP6	NP7	NP8
Maximum Diameter including valves	154 mm (6.1 in.)	154 mm (6.1 in.)	154 mm (6.1 in.)
Length with hose barb inlet/outlet	397 mm (15.6 in.)	644 mm (25.4 in.)	895 mm (35.2 in.)
Length with sanitary inlet/outlet	335 mm (13.2 in.)	584 mm (23.0 in.)	834 mm (32.8 in.)

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.)

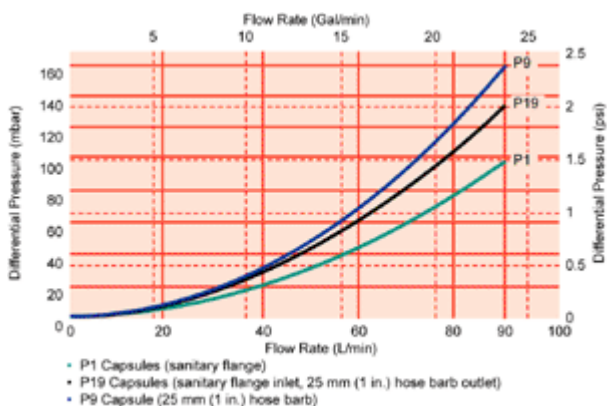
Performance

Typical Flow Characteristics

Kleenpak Nova NP Empty Capsule – Typical Water Flow Rates at 20 °C



Kleenpak Nova NT Capsule – Typical Water Flow Rates at 20 °C



Additional Information

[Allegro™ single use systems](#)

Ordering Information

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NP – In-line		P					
Code	Filter Size	Code	Filter Type	Code	Connection Options	Code	Sterilization State
6	AB1 10 in. (254 mm)		Sterilizing State	1	25 – 38 mm (1 – 1½ in.) sanitary flange inlet and outlet	G	Non-sterilized
7	AB2 20 in. (508 mm)	DFL	0.2 µm rated Fluorodyne II filter	9	25 mm (1 in.) single-barb hose barb inlet and outlet	S	Pre-sterilized
8	AB3 30 in. (762 mm)	DJL	0.1 µm rated Fluorodyne II filter	19	25 – 38 mm (1 – 1½ in.) sanitary flange inlet and 25 mm (1 in.) single-barb hose barb outlet		
		NF	0.2 µm rated Ultipor N66 filter	Options for In-line Only			
		NT	0.1 µm rated Ultipor N66 filter	6	13 mm (½ in.) single-barb hose barb inlet and outlet		
		NFZ	0.2 µm rated Posidyne filter	16	25 – 38 mm (1 – 1½ in.) sanitary flange inlet and 13 mm (½ in.) single-barb hose barb outlet		
		NTZ	0.1 µm rated Posidyne filter	Options for T-style Only			
		EKV	0.2 µm rated Supor filter	1H	25 – 38 mm (1 – 1½ in.) sanitary flange inlet and outlet, with 13 mm (½ in.) sanitary port on inlet		
		92D	0.2 µm rated Suporlife™ filter	1H9	25 – 38 mm (1 – 1½ in.) sanitary flange inlet and 1½ in. single-barb hose barb outlet, with 13 mm (½ in.) sanitary port on inlet		
		Virus Filters					
		LUDV50 [®]	Ultipor VF grade DV50 virus filter				
		LDV20 [®]	Ultipor VF grade DV20 virus filter				
<p>[®] Note: Empty Kleenpak Nova Capsule Housings for water at 20 °C (68 °F), 1 cP. For other liquids, multiply pressure times the viscosity in centipoise. For complete assembly, including AB-Style filter cartridge, add housing, and cartridge media pressure-drop valves. Contact Pall for assistance.</p> <p>Note: Partial list of part numbers. Contact Pall for specific recommendations</p>		<p>[®] -L included in part number for in-line (NP) filters; omitted for T-style filters (NT)</p>				<p>Vent and Drain</p> <p>Code Vent and Drain</p> <p>- Stäubli* vent and stepped hose barb drain</p> <p>A Stäubli* vent and drain</p> <p>* Stäubli is trademark of Stäubli AG.</p>	

Contact Information

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