Profile II

FILTER CARTRIDGES

Profile II polypropylene (PP) filters have a wide range of applications, including the filtration of fermentation broths, lysates, biological fluids, blood products, ophthalmics, organic solvents, pH adjusters, buffers, purified water, parenterals, and many other fluids.

The features and benefits of Profile II filter cartridges include:

- Extensive selection of particulate removal efficiencies from 0.3 to 120 µm absolute to support a broad spectrum of applications.
- Excellent compatibility with a wide range of chemicals.
- Continuous operating temperatures up to 82°C.
- No media migration – the fibers are continuous and fixed by intertwining during the manufacturing process.
- Very low extractables – no binders, lubricants, or surfactants are used during manufacture.
- Available in AB style cartridges and Kleenpak™ Nova capsules.
- Choice of cartridge length to match flow rates.

Fig 1. AB style cartridge and Kleenpak™ Nova capsule.

Designed for pharmaceutical applications

Cytiva pharmaceutical-grade filters are designed for use in conformance with cGMP in manufacturing, processing, packing, or holding of drugs (21CFR210) and cGMP for finished pharmaceuticals (21CFR211.72) including batch release certificate and full traceability.

- All materials of construction are FDA listed.
- All PP components have been tested according to USP Class VI Biological Tests for Plastics at 121°C.
- All filters are batch traceable.

Specifications

Operating conditions*

Operating temperature	30°C	50°C	70°C	82°C
Maximum differential pressure	4.0 bar (58 psi)	3.4 bar (49 psi)	2.0 bar (29 psi)	1.0 bar (15 psi)

* In fully compatible liquids which do not soften, swell, or attack the filter or its materials of construction.

Extractables

Extractables (non-volatile residues) of less than 10 mg per 254 mm (10 in.) cartridge were found in a standard 24 hour reciprocating test in water at 20°C.

Removal ratings and liquid flow rates

Filter grade code	Removal ratings† (µm)				Flow rates for a 254 mm (10 in.) element with water (1 cP) (L/min)	
Maximum differential pressure	ß ≥ 5000 (> 99.98%)	ß = 1000 (99.9%)	ß = 100 (99%)	ß = 10 (90%)	Pressure drop = 100 mbar (1.45 psi)	Pressure drop = 50 mbar (0.75 psi)
003	0.3‡	< 0.3‡	< 0.3‡	< 0.3‡	1.6	-
005	0.5‡	< 0.5‡	< 0.5‡	< 0.5‡	1.8	-
010	1.0	0.5‡	< 0.5‡	< 0.5‡	2.1	-
020	2.0	1.5	1.0	< 1.0‡	2.9	-
030	3.0	2.5	1.8	< 1.0‡	3.7	-
050	5.0	4.0	3.0	2.0	6.7	-
100	10.0	9.0	7.5	6.5	-	8.3
150	15.0	13.0	10.0	8.0	-	16.7
200	20.0	18.0	14.0	10.0	-	27.7
300	30.0	26.0	18.0	14.0	-	33.3
400	40.0	35.0	30.0	20.0	-	50.0

† Modified OSU-F2 test.
‡ Extrapolated data.

Sterilization

AB style cartridges	Autoclave or steam sterilized *in-situ*, up to 125°C, 1 cycle
Kleenpak Nova capsules§ Non-sterile version (code ends in G)	Autoclave up to 125°C, 1 cycle Gamma irradiation up to 50 kGy
Pre-sterilized version (code ends in S)	Gamma irradiated, dose of ≥ 25 kGy

§ Kleenpak Nova capsules are not suitable for in-situ steam sterilization.

Materials of construction

AB style cartridges

Filter membrane	PP
Support and drainage layers	PP
End-cap/adapters	PP
Internal core	PP
External cage	PP
Elastomeric O-ring seals	Silicone and EPDM available

Kleenpak Nova capsules

Filter membrane	PP
Support, drainage, core, cage, end caps	PP
Housing bowl	PP
Housing head¶	PP
O-rings	Silicone elastomer

¶ Formulated with titanium dioxide (TiO_2) whitener which does not contribute to organic extractables.

Ordering information

AB style cartridges:

- Double 226 O-ring with bayonet lock and fin end
- Pharmaceutical grade

AB [ ] **Y** [ ] **7 P** [ ]

Code	Nominal length
1	254 mm (10 in.)
2	508 mm (20in.)
3	762 mm (30 in.)
4	1016 mm (40 in.)

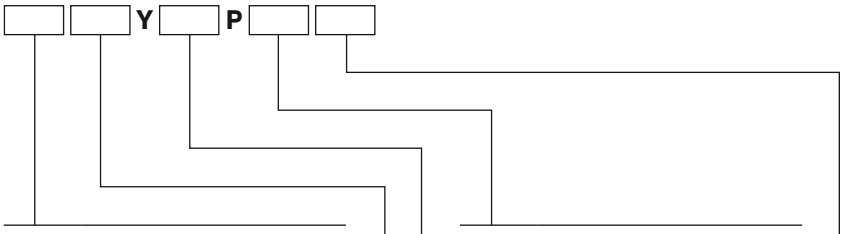
Code	Removal rating**
001	0.1 µm
003	0.3 µm
005	0.5 µm
010	1 µm
020	2 µm
030	3 µm
050	5 µm
100	10 µm
150	15 µm
200	20 µm
300	30 µm
400	40 µm

Code	O-ring option
H4	Silicone
J	Ethylene propylene

** The removal rating is the value in microns at which the modified OSU-F2 test gives a beta value of ≥ 5000.

Other O-ring materials available on request.

Kleenpak Nova capsules:



Code	Capsule style
NP	In-line
NT	T-style

Code	Sterilization option
G	Non-sterile
S	Pre-sterilized

Code	Nominal length
6	254 mm (10 in.)
7	508 mm (20in.)
8	762 mm (30 in.)

Code	Inlet and outlet connections
1	1 to 1½ in. (25 to 38 mm) sanitary flange
6[††]	13 mm hose barb

Code	Removal rating[**]
001	0.1 µm
003	0.3 µm
005	0.5 µm
010	1 µm
020	2 µm
030	3 µm
050	5 µm
100	10 µm
150	15 µm
200	20 µm
300	30 µm
400	40 µm

[**] The removal rating is the value in microns at which the modified OSU-F2 test gives a beta value of ≥ 5000.
[††] Only available with an in-line style capsule.

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For local office contact information, visit cytiva.com/contact

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