

Profile Star

MEMBRANE FILTERS

Profile Star membrane filters incorporate the proven successes of the Profile II particulate filters and HDC II pleated filters to provide an absolute rated polypropylene (PP) pleated particulate filter. Our technique of varying fiber diameter produces a pore size gradient from coarse (upstream) to fine (downstream) while maintaining constant high void volume throughout the depth of the filter medium. Profile Star filters are available in absolute removal ratings from 1.5 μm to 90 μm and in four nominal cartridge lengths: 254 mm (10 in.), 508 mm (20 in.), 762 mm (30 in.) and 1016 mm (40 in.). Their all-polypropylene construction makes them compatible with an extremely wide range of fluids.

The benefits of Profile Star membrane filters include:

- **Absolute rating:**
 - 100% efficient removal rating.
 - Consistent, verifiable filtration.
- **Pleated high area:**
 - Very high dirt holding capacity.
 - Long service life.
 - High flow rates.
 - Excellent gel removal capability.
- **Fixed pore structure:**
 - No solids unloading under variations in flow or pressure differential.
 - Fibers will not migrate or become dislodged and contaminate the process fluid.
- **All-polypropylene construction:**
 - Extremely good chemical compatibility with a wide range of fluids.
 - Very low extractables.
 - No surfactants or binder resins are used during manufacture.
 - Continuous construction without side seam.
 - Media melt-sealed to solid components to ensure maximum integrity.
- **Designed for pharmaceutical applications:**
 - All materials of construction are FDA listed.
 - All polypropylene components have been tested according to USP Class VI biological tests for plastics at 121°C.
 - Batch traceable.
 - Statistical testing of filter effluent for:
 - Particle and fiber counts.
 - Total organic carbon (TOC).
 - Pyrogens using LAL test.
 - pH shift test.



Fig 1. Profile Star membrane filters.

Technical specifications

Liquid flow vs differential pressure

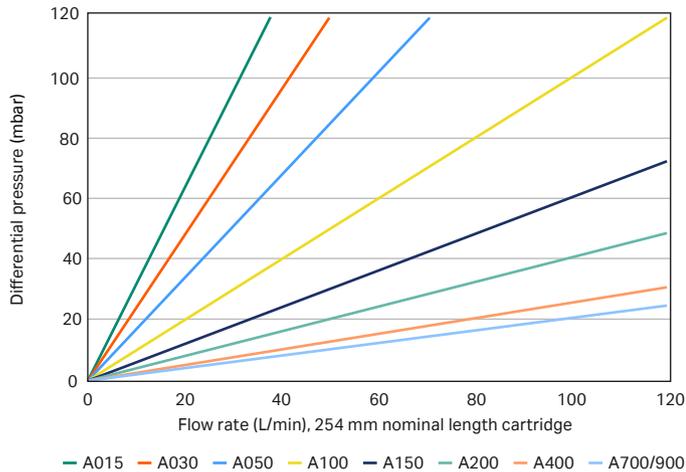


Fig 2. Liquid flow vs differential pressure by filter grade, in water at 20°C.

Operating parameters ¹

Maximum operating temperature	Maximum differential pressure
50°C	5.0 bar
80°C	3.4 bar

¹ In compatible liquids which do not soften, swell or adversely affect the filter or materials of construction.

Note: Differential pressures are for liquids with a viscosity of 1 cP. Differential pressures for liquids at other viscosities can be conservatively estimated by multiplying the indicated differential pressure by the viscosity in cP. For filters of 508 mm, 762 mm and 1016 mm nominal length, divide the differential pressure by 2, 3 and 4 respectively. To obtain the total pressure drop of a complete filter assembly the housing pressure drop must be added. Please refer to the relevant housing information or contact Cytiva.

Sterilization

Steam sterilization temperature (<i>in-situ</i> or autoclave)	125°C
Maximum recommended cumulative steam life at 125°C	10 hours

Filter style

		Code 7	Code 3
AB style	Single open-ended element with external O-rings at one end	Double O-ring with bayonet lock and finned end	Double O-ring with flat end

Ordering information

Configurations

254 mm (10 in.) AB style code 7 filters

Absolute rating (µm) [*]	Seal material	Product code
1.5 [†]	Silicone	AB1A0157PH4
	EPDM [‡]	AB1A0157PJ
3	Silicone	AB1A0307PH4
	EPDM	AB1A0307PJ
5	Silicone	AB1A0507PH4
	EPDM	AB1A0507PJ
10	Silicone	AB1A1007PH4
	EPDM	AB1A1007PJ
15	Silicone	AB1A1507PH4
	EPDM	AB1A1507PJ
20	Silicone	AB1A2007PH4
	EPDM	AB1A2007PJ
40	Silicone	AB1A4007PH4
	EPDM	AB1A4007PJ
70	Silicone	AB1A7007PH4
	EPDM	AB1A7007PJ
90	Silicone	AB1A9007PH4
	EPDM	AB1A9007PJ

508 mm (20 in.) AB style code 7 filters

Absolute rating (µm) [*]	Seal material	Product code
1.5 [†]	Silicone	AB2A0157PH4
	EPDM	AB2A0157PJ
3	Silicone	AB2A0307PH4
	EPDM	AB2A0307PJ
5	Silicone	AB2A0507PH4
	EPDM	AB2A0507PJ
10	Silicone	AB2A1007PH4
	EPDM	AB2A1007PJ
15	Silicone	AB2A1507PH4
	EPDM	AB2A1507PJ
20	Silicone	AB2A2007PH4
	EPDM	AB2A2007PJ
40	Silicone	AB2A4007PH4
	EPDM	AB2A4007PJ
70	Silicone	AB2A7007PH4
	EPDM	AB2A7007PJ
90	Silicone	AB2A9007PH4
	EPDM	AB2A9007PJ

AB style code 3 filters are also available. Please contact your Cytiva representative.

^{*} Absolute rating in this publication means the value in microns at which the modified OSU-F2 test gives a Beta value of > 5000.

[†] Extrapolated value.

[‡] Ethylene-propylene-diene monomer.



762 mm (30 in.) AB style code 7 filters

Absolute rating (µm) *	Seal material	Product code
1.5 †	Silicone	AB3A0157PH4
	EPDM	AB3A0157PJ
3	Silicone	AB3A0307PH4
	EPDM	AB3A0307PJ
5	Silicone	AB3A0507PH4
	EPDM	AB3A0507PJ
10	Silicone	AB3A1007PH4
	EPDM	AB3A1007PJ
15	Silicone	AB3A1507PH4
	EPDM	AB3A1507PJ
20	Silicone	AB3A2007PH4
	EPDM	AB3A2007PJ
40	Silicone	AB3A4007PH4
	EPDM	AB3A4007PJ
70	Silicone	AB3A7007PH4
	EPDM	AB3A7007PJ
90	Silicone	AB3A9007PH4
	EPDM	AB3A9007PJ

1016 mm (40 in.) AB style code 7 filters

Absolute rating (µm) *	Seal material	Product code
1.5 †	Silicone	AB4A0157PH4
	EPDM	AB4A0157PJ
3	Silicone	AB4A0307PH4
	EPDM	AB4A0307PJ
5	Silicone	AB4A0507PH4
	EPDM	AB4A0507PJ
10	Silicone	AB4A1007PH4
	EPDM	AB4A1007PJ
15	Silicone	AB4A1507PH4
	EPDM	AB4A1507PJ
20	Silicone	AB4A2007PH4
	EPDM	AB4A2007PJ
40	Silicone	AB4A4007PH4
	EPDM	AB4A4007PJ
70	Silicone	AB4A7007PH4
	EPDM	AB4A7007PJ
90	Silicone	AB4A9007PH4
	EPDM	AB4A9007PJ

* Absolute rating in this publication means the value in microns at which the modified OSU-F2 test gives a Beta value of > 5000.
 † Extrapolated value.

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