

RadiCel P

HEPA/ULPA Filter



The RadiCel P HEPA/ULPA with PTFE membrane is designed as an alternative HEPA/ULPA of fiberglass. It is widely used as it provides extremely high particulate filtration efficiencies, lower pressure drops and negligible off-gassing, and it is highly resistant to corrosive environment.

Typical Applications

Semiconductor	Flat panel display
Hard Disk Drive	Microelectronics
Pharmaceutical	Food and beverage

Perfect Filter Media

Compared with micro-fiberglass media, the PTFE media provides superior benefits including inert chemical properties, more uniform fiber distribution, smaller fiber diameters and pore size, which reduces resistance with higher filtration performance to achieve substantial energy savings.

Perfect Pleat Design

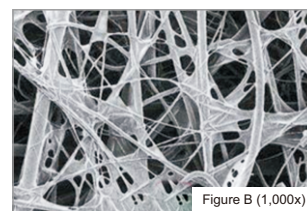
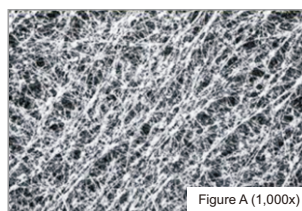
The PTFE membrane pack is produced to assure precision in pleat spacing and height, thereby reducing "dead-spots" and promoting consistent and uniform air distribution throughout the filter. The pleat design allows the air to move throughout the entire depth of the filter, utilizing the full cleaning capability of the membrane.

Energy Conservation

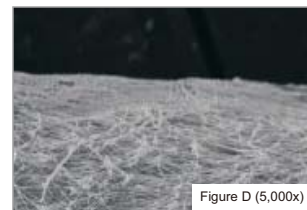
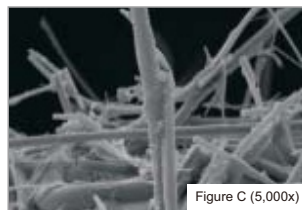
PTFE pleated pack resistance is a minimum of 30% lower than conventional micro-fiberglass media, a factor contributing to greatly reducing fan energy consumption. The new pleating method using intermittent separators allows more open media area, optimizing pleat pack resistance.

Product Overview

- PTFE Membrane combines ultra-high efficiency with negligible pressure drop
- Lower energy saving more than 30%
- High resistance to corrosive environment (acids, alkalis, organic substances)
- Negligible off-gassing properties (boron, sodium, potassium, silicon)
- Tougher media, more resistance to rough handling in transportation and installation
- Lower profile, reducing space and weight
- UL 900 certificated



Photographed at 1,000x magnification, these images illustrate the finer diameter and more consistent composition of PTFE membrane media (Figure A), when compared with ULPA micro-fiberglass (Figure B).



Examining the structure under the microscope clearly shows the broken glass fibers at the pleat edge (Figure C) while the fold of the PTFE media (Figure D) is intact.

Chemical Advantages of PTFE Media

Negligible Off-gassing: RadiCel P membrane has a smaller pore size and fibre diameter than micro-fiberglass. These characteristics significantly reduce the levels of off-gassing impurities typical to micro-fiberglass (which include boron, sodium, potassium, and silicon) to almost zero.

High Corrosion Resistance: PTFE membrane has been proven to be resistant in highly corrosive environments including alkaline, acid, and organic substances. All of these environments can be found in semiconductor manufacturing processes.

Superior Water Resistance: Based on A-PLUS test lab results and customer testimonials, PTFE media provides superior water resistance in comparison with micro-fiberglass and low boron micro-fiberglass media.

Specifications

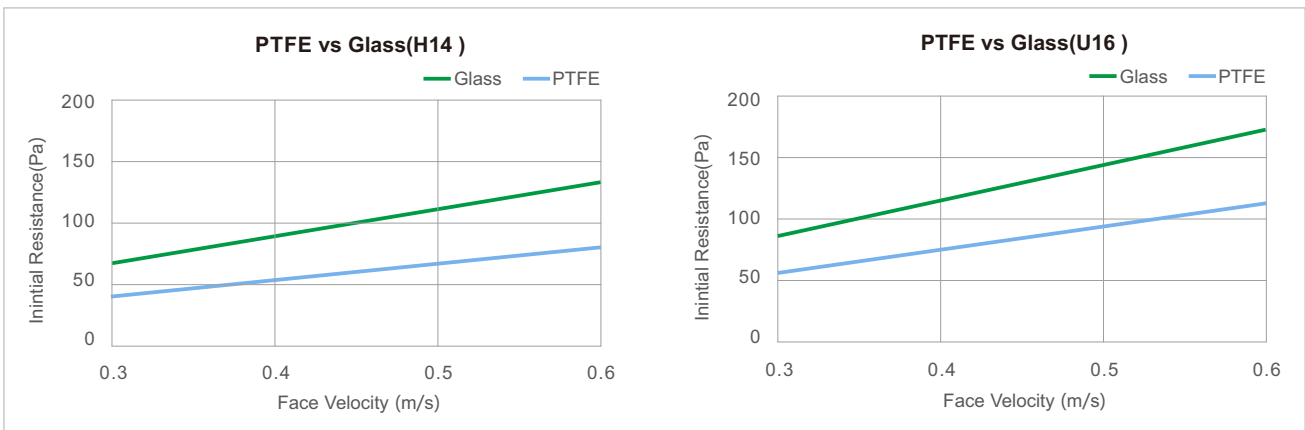
Filter depth	50/69/80mm
Efficiency	H13, H14, U15, U16, U17
Media	PTFE
Frame materials	Anodized AL
Separator	Hotmelt
Sealant	PU
Faceguard	GI/AL/SUS
Gasket	EPDM
Special size available	Yes
Max operating temperature	131°F(55°C)

Standard Size and Performance Parameters

Frame(Pleat) (mm)	Initial Resistance (Pa)			
	H13	H14	U15	U16
50(35)	50	65	85	95
69(40)	45	60	80	85
80(55)	30	40	60	65

Special size is available upon request.
Special pleat design is available upon request.

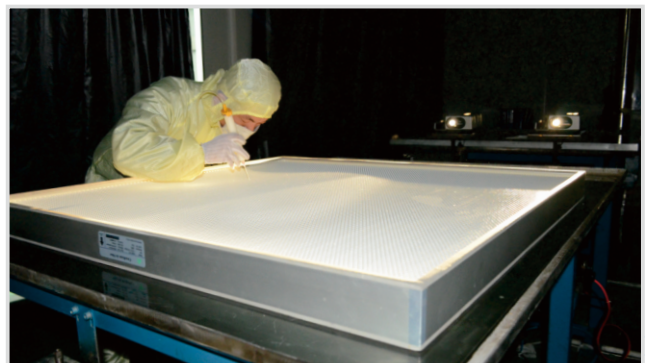
Initial Resistance vs Face Velocity(69mm Depth)



AutoScan & DinScan Tester



A-PLUS testing procedures for overall efficiency include laser particle counters with liquid or solid aerosol challenge.



Pinhole leaks can be detected using either A-PLUS's proprietary static test or automatic scan testing.

