

# MegaCel™

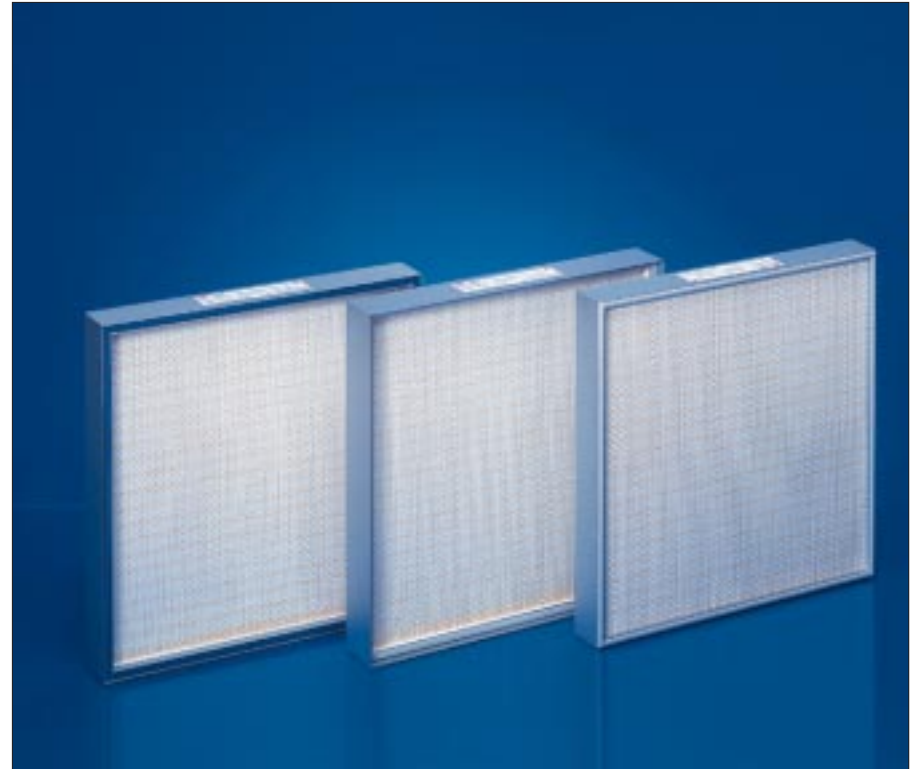
PTFE Membrane Filters for State-of-the-Art Cleanroom Requirements

- PTFE Membrane ULPA filter combines ultra-high efficiency with low pressure drop
- High resistance to corrosive environments
- Negligible off-gassing properties
- 99.99995% minimum efficiency at MPPS, U16 to EN1822
- Meets I300I specifications
- Superior durability over conventional media

The MegaCel™ line of PTFE (PolyTetraFluorEthylene) membrane filters are designed to meet stringent semiconductor industry cleanroom filtration requirements for fab's, modular, mini and micro-environments, as stated in the I300I specifications. The MegaCel™ is developed to provide extremely high particulate efficiency combined with low pressure drop and negligible off-gassing properties.

### State-of-the-art-design

Designed to combine maximum efficiency with lowest pressure drop, the MegaCel™ media pack is available in assorted depth and size configurations, allowing for a variety



of application requirements. 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.

### Chemical advantages of PTFE

MegaCel™ membrane has a smaller pore size and fiber diameter than glass media. These characteristics significantly reduce the levels of off-gassing impurities to almost zero. The impurities include Boron, Sodium, Phosphorous, Potassium and Silica. PTFE membrane has 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.

### Sturdy construction

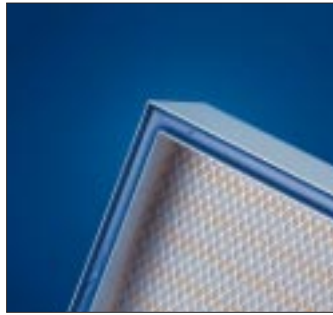
Manufactured with PTFE membrane and protective substances, the MegaCel™ filter is water resistant, chemically resistant and inert. The media pack is permanently attached to an anodized extruded aluminium frame with a urethane adhesive. Frames are available with gasket seal, gel seal or knife edge for fluid grid applications. Although designed specifically for the mini-environment market, the MegaCel's durability and performance characteristics allow for the product to be applicable for most all high filtration requirements, including: fabs, pharmaceutical, labs, hoods and food processing.



B E T T E R   A I R   I S   O U R   B U S I N E S S ®



# MEGAcel™



Fluid Seal



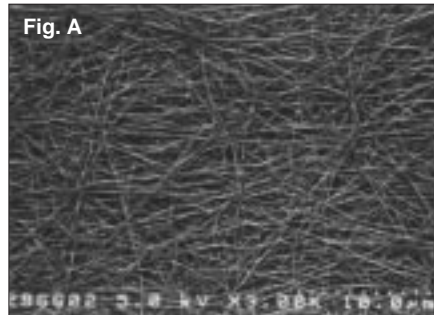
Dry Seal



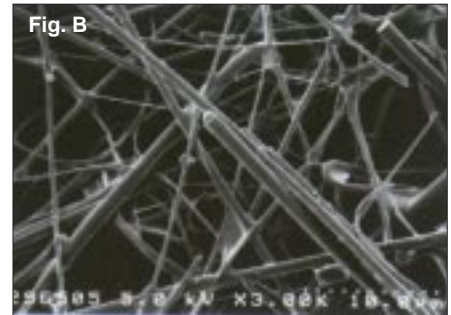
Knife Edge Seal

## High efficiency performane

MegaCel™ provides efficiency and performance which meet rigorous I300I specifications for the manufacturing of 300mm wafers. At a peak airflow of 0,5 m/s, Most Penetrating Particle Size (MPPS) efficiency is superior to the stringent requirements of 99.99995% efficiency, specified in I300I. MegaCel™ filters meet requirements for overall and local efficiency for classification U16 to EN1822. The combination of advanced levels of efficiency and the lowest possible pressure drop makes MegaCel™ a simple choice for use in 300 mm wafer production. Every filter is identified by serial number and is labeled with performance criteria, and part number.

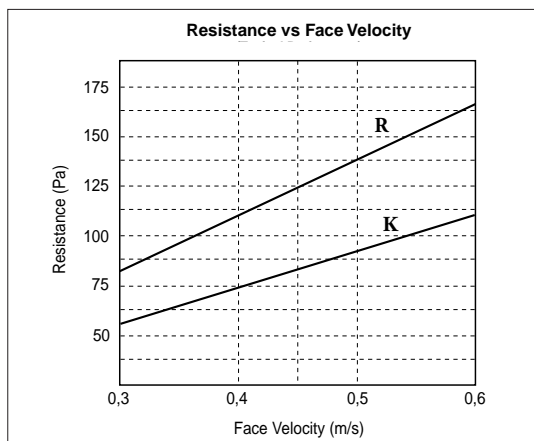


These photo's, taken at 3000 x magnification, illustrate the fine diameter and more consistent composition of PTFE membrane media (Fig. A) in comparison with conventional, high efficiency micro-fiber glass media (Fig. B)



Size in mm	Airflow in m3/h	Pressure drop* in Pa Mediapack "R"	Pressure drop* in Pa Mediapack "K"
305 x 610	300	125	85
570 x 570	525	125	85
610 x 610	600	125	85
570 x 1170	1080	125	85
610 x 1220	1200	125	85
870 x 1170	1650	125	85
915 x 1220	1800	125	85
1170 x 1170	2220	125	85
1220 x 1220	2400	125	85

\* Pressure drop measured at 0,45 m/s filter face velocity (±15%)



## Standard Executions

Insert designator for media pack to complete style code

Fluid Seal	P96...9B2N1	depth 80 mm
Fluid Seal for AstroFan FFU. RSC	P95...9B2N1	depth 80 mm
Knife Edge for AstroGel grid	P98...9L2N2	depth 86 mm
Standard Seal for AstroFan FFU	P98...9S4N1	depth 86 mm
Dry Seal	P99...9S2N3	depth 69 mm

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