ULTRASTAR CLEANROOM PANELS

Filtrair® HPP
High Performance Products

- **99.99% (HEPA) Minimum Removal** on 0.3µm efficiency
- **99.9995% (ULPA) Minimum Removal** on 0.12µm efficiency
- **2.0" up to 5.5" Mini-Pleat Media Packs**
- **Anodized Extruded Aluminum** 3.06" and 5.88" frame
- **Efficiency Tested and Probe Scanned** in accordance with IES-RP-CC-001.4
- **UL 900 Class 2 Listed**

DESCRIPTION

The UltraStar Cleanroom Panels use mini-pleated wet laid glass media with efficiency of 99.99% (HEPA) on 0.3µm particle size or 99.9995% (ULPA) on 0.12µm particle size. Designed for easy installation and longer service life. The media pack is available from a 2.0" (51mm) up to a 5.5" (140mm) version with a frame depth of 3.06" or 5.88".

BENEFITS

- Low pressure drop design reduces energy consumption
- Low profile design allows for installations with minimal overhead space
- White painted screen protects the media pack while providing an attractive finished appearance

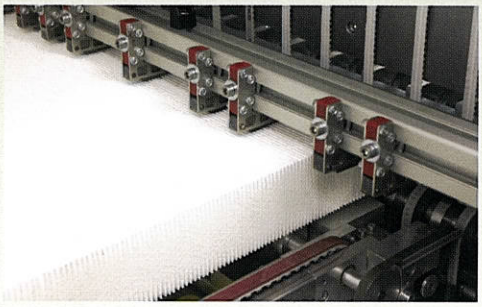
APPLICATIONS

These filters are designed to optimize performance in filtration applications for the pharmaceutical, medical, semiconductor, microelectronic, biotechnology mini-environment, bio-safety cabinets and photographic industries as well as for surgical rooms in hospitals.

THE **SENTINEL PLEAT** DEFINES PRECISION PLEATING

WHY PRECISION IS SO IMPORTANT...

Sentinel precision pleat geometry plays a critical role in the ability of the filter media to perform over the life expectancy of the filter. Poor pleat shape and spacing results in non-uniform airflow characteristics, poor velocity profiles and shortened filter life expectancy. With the Sentinel Pleat, these potential issues are no longer a concern—the Sentinel Pleat is that efficient and precise.

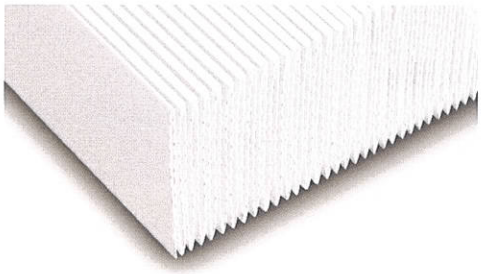


EXCEEDING INDUSTRY STANDARDS...

The Sentinel Pleat is a world class process that exceeds all industry standards with its optimized, unidirectional airflow performance. With the Sentinel Pleat, Filtration Group has the technological advantages and manufacturing flexibility to exceed the demands and design requirements of customers, OEMs and all aftermarket applications.

TESTED TO YOUR SPECIFICATIONS...

When scanning and efficiency testing the filters Filtration Group tests per IEST-RP-CC-001.4 (for HEPA), IEST-RP-CC-007.1 (for ULPA) as well as EN 1822 (for MPPS)—depending on customer requirements. We offer a variety of test challenges including oil (PAO) and non-oil (PSL) based aerosols.

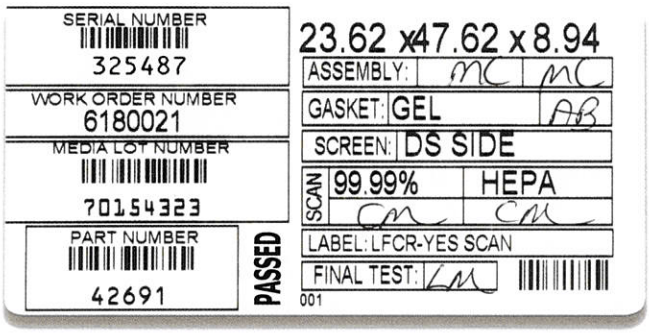


QUALITY YOU CAN TRUST...

Following Six Sigma standards, production data, manufacturing history, test results as well as the traceability of raw materials are recorded and stored for each product according to its own unique serial number. The test history is monitored to assure performance through statistical process capability analysis.

BAR CODING ASSURES COMPLIANCE...

A mistake proof labeling system utilizing bar codes assuring each product is properly labeled. Each label displays a particular product's airflow, efficiency and initial pressure drop which was recorded during the testing process and is retrieved from stored data before the label is printed. Other information that appears on the label includes filter size, serial number and part number, which is also converted and printed as bar codes on the label.



THE SENTINEL PLEAT IS UNIQUELY SUPERIOR...

- 100% testing provides an accurate assessment of product performance
- Tests are made to industry standards and specified customer requirements
- A bar-coded process control label is utilized to assure process compliance with automatic stop-gates on product dimensions, test compliance, operator identification and material lot traceability documentation
- Custom labeling, packaging and performance testing is also provided.

EXTRUSION PROFILES

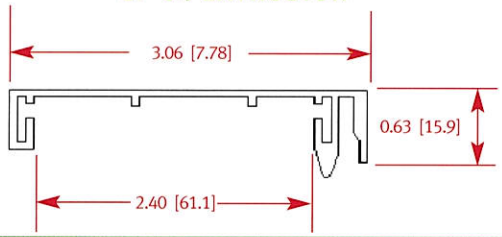
GASKET SEAL	MAX. PACK	DEPTH
CP-04	2.0" Pack	3.06"
CP-06	2.5" Pack	3.06"
CP-07	5.5" Pack	5.88"
CP-26	2.0" Pack	2.72"

GEL SEAL	MAX. PACK	DEPTH
CP-03	2.5" Pack	3.06"
CP-32	2.0" Pack	3.06"
CP-34	4.0" Pack	5.88"

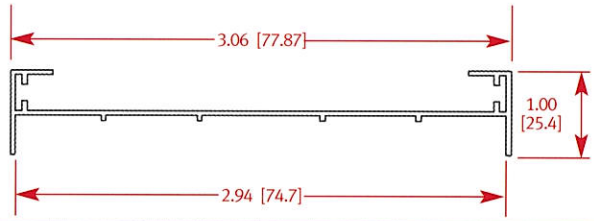
KNIFE EDGE	MAX. PACK	DEPTH
CP-15	4.0" Pack	5.75"

GASKET SEAL

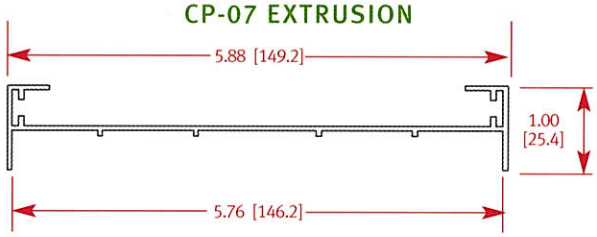
CP-04 EXTRUSION



CP-06 EXTRUSION



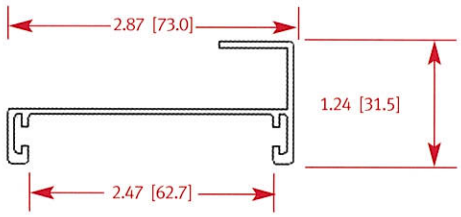
CP-07 EXTRUSION



CP-26 EXTRUSION

GEL SEAL DOWNSTREAM

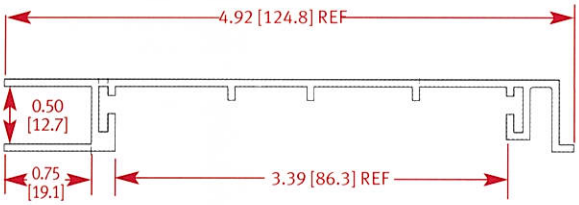
CP-32 EXTRUSION DOWNSTREAM



CP-34 EXTRUSION DOWNSTREAM

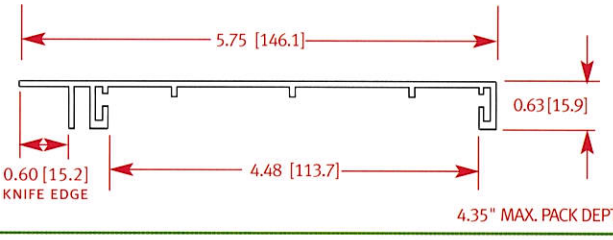
GEL SEAL UPSTREAM

CP-03 EXTRUSION UPSTREAM



KNIFE EDGE

CP-15 EXTRUSION

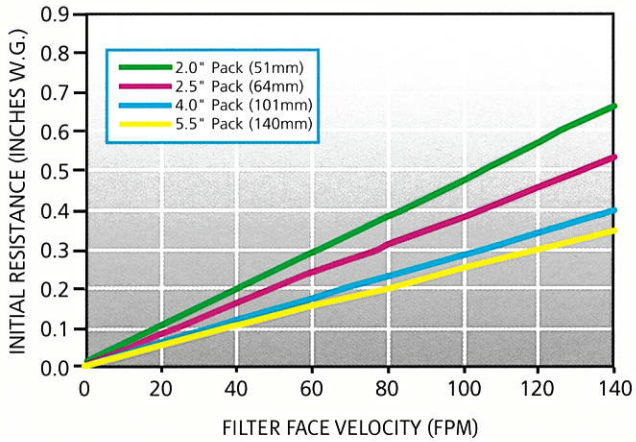


ULTRASTAR CLEANROOM PANELS

FEATURES	BENEFITS
Frame corners secured with corner clips and urethane seal	Leak Proof
Maximized media content for lower pressure drop and extended service life	Lower Energy Cost
70% open face screen keeps the high performance of the media intact	Low Pressure Drop
Protective screen is offset from pleat tips to eliminate wear due to vibration, installation and handling	No Media Damage
Aluminum frames reduce weight and need for structural support	Easy Installation, Light Weight

INITIAL RESISTANCE VS. FACE VELOCITY

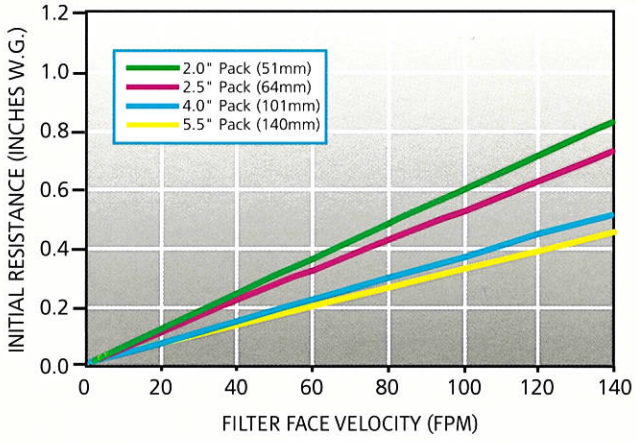
HEPA



Note: This graph represents a typical rating. The inside face dimension (not including filter frame) is used to calculate resistance. Filters are tested at 100 fpm at the factory. Recommended service resistance is approximately two times the initial resistance at the factory test flow rate.

Filter Face Velocity (fpm) = $\frac{\text{Rated Flow [cu ft per min]} \times 144}{\text{(Height of Filter [in] - 1.24")} \times \text{(Width of Filter [in] - 1.24")}}$

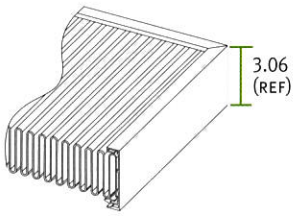
ULPA



Note: This graph represents a typical rating. The inside face dimension (not including filter frame) is used to calculate resistance. Filters are tested at 100 fpm at the factory. Recommended service resistance is approximately two times the initial resistance at the factory test flow rate.

Filter Face Velocity (fpm) = $\frac{\text{Rated Flow [cu ft per min]} \times 144}{\text{(Height of Filter [in] - 1.24")} \times \text{(Width of Filter [in] - 1.24")}}$

3.06" SMOOTH FRAME AND 2.0" MEDIA PACK

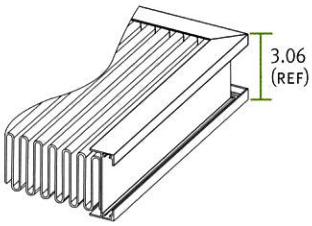


Efficiency % (min)	Size (in.) (W X L X D)
99.99	23.62 x 23.62 x 3.06
99.99	23.62 x 35.62 x 3.06
99.99	23.62 x 47.62 x 3.06
99.9995	23.62 x 23.62 x 3.06
99.9995	23.62 x 35.62 x 3.06
99.9995	23.62 x 47.62 x 3.06

AVAILABLE OPTIONS

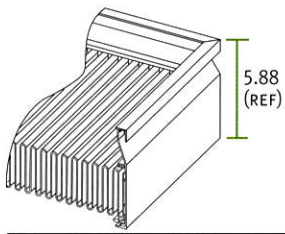
- Downstream gasket
- Divider with test port
- Stainless steel or anodized aluminum downstream screen

3.06" C-CHANNEL FRAME AND 2.5" MEDIA PACK



Efficiency % (min)	Size (in.) (W X L X D)
99.99	23.62 x 23.62 x 5.88
99.99	23.62 x 47.62 x 5.88
99.9995	23.62 x 23.62 x 5.88
99.9995	23.62 x 47.62 x 5.88

5.88" FRAME AND 2.5" MEDIA PACK



Efficiency % (min)	Size (in.) (W X L X D)
99.99	23.62 x 23.62 x 5.88
99.99	23.62 x 47.62 x 5.88
99.9995	23.62 x 23.62 x 5.88
99.9995	23.62 x 47.62 x 5.88

*Painted (white) Downstream Screen—Standard
Contact Customer Service for additional sizes and information.

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National Air Filtration Association