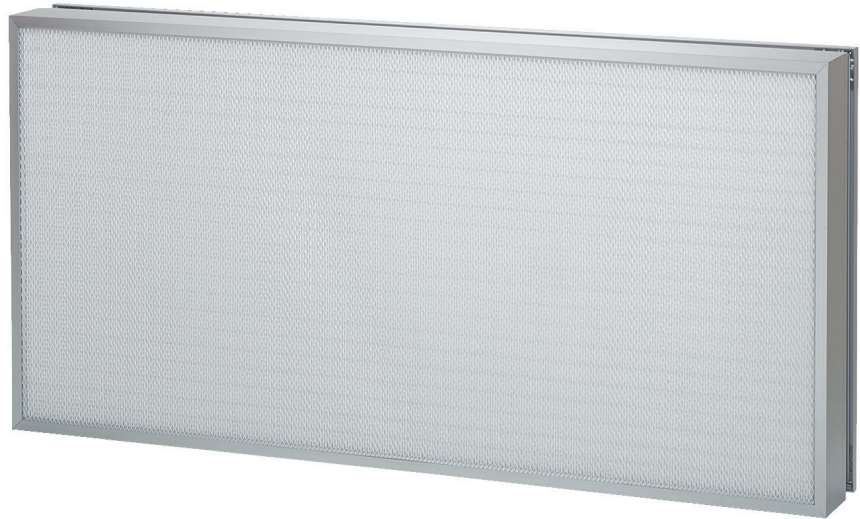


PRODUCT OVERVIEW

- Cleanroom Panels for pressure plenum gasket or gel grid systems
- Typical component of critical environment HEPA diffusers and fan filter units
- HEPA 99.99% 0.3µm or ULPA 99.9995% 0.12µm efficiency 2.0" thru 6.0" mini-pleat media
- Anodized extruded aluminum frame with galvanized hood sheet and inlet collar in gasket, gel and knife edge design
- UL 900 Classified
- Ideal for use in critical environments
 - Health Care
 - Microelectronics
 - Pharmaceutical
 - Aerospace
 - Pharmacy
 - USP 797 Compliance



CLEANROOM PANELS

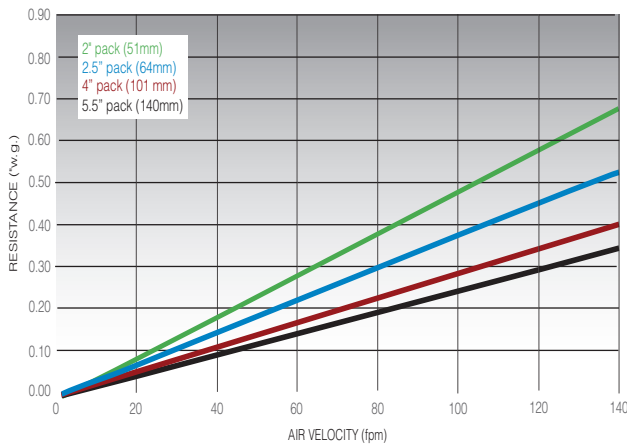
WHY FLOWSTAR CLEANROOM PANELS?

- Flowstar Cleanroom Panels are constructed from wet laid micro fiberglass media with a water repellent binder using state-of-the-art technologies to form a mini-pleated media pack
- The media is installed into an anodized extruded aluminum frame with a two component polyurethane sealant, that is low viscosity to ensure a complete seal around the entire periphery
- Filters are UL 900 Classified and suitable up to 180°F environments
- Cleanroom Panels are available in efficiencies of 99.99% to 99.9995% with 2.0" thru 6.0" media pack depths
- Panels may include a center divider with single access port to measure filter differential pressure and inlet test challenge concentration. Additional the port permits adjustment of the diffusion plate or butterfly damper when installed in Critical Environment Diffusers
- Filters are individually tested in accordance with IEST-RP-CC001 and IEST-RP-CC034 latest revision
- Cleanroom Panels may also be factory validated per EN1822

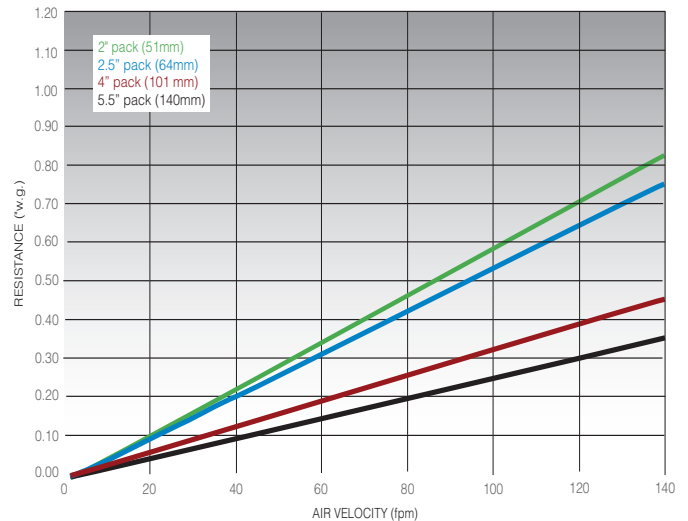
EXTRUSION NAME	EXTRUSION TYPE	SEAL	MEDIA PACK DEPTH	OVERALL DEPTH
CP-04	Smooth Extrusion	Gasket	2.0"	3.06"
CP-26	Smooth Extrusion	Gasket	2.0"	2.72"
CP-27	Smooth Extrusion	Gasket	2.5"	3.54"
CP-28	Smooth Extrusion	Gasket	4.0"	4.61"
CP-06	C-Channel	Gasket	2.5"	3.06"
CP-07	C-Channel	Gasket	5.0"	5.88"

EXTRUSION NAME	EXTRUSION TYPE	SEAL	MEDIA PACK DEPTH	OVERALL DEPTH
CP-32	Gel Seal	Downstream	2.0"	2.88"
CP-42	Gel Seal	Downstream	2.75"	3.50"
CP-34	Gel Seal	Downstream	4.0"	4.88"
CP-38	Gel Seal	Upstream	2.0"	3.56"

INITIAL RESISTANCE VS. FACE VELOCITY (HEPA)



INITIAL RESISTANCE VS. FACE VELOCITY (ULPA)



ENGINEERING SPECIFICATIONS

1.0 Scope

- This specification covers room side replaceable HEPA filters for use in cleanroom or clean space applications. Filters shall be Flowstar CP** as manufactured by Filtration Group.

2.0 Physical Characteristics

- The filter frame shall be constructed of extruded aluminum alloy 6063-T5 with a clear anodized finish. The sides frame shall be joined together with black spring steel internal corner locks. External corner locks and riveted frame construction will not be permitted so that any contamination of the filter by metal shavings is prevented. Sharp edges and riveted corners where the edges are joined together will be not accepted.
- The filter shall have a downstream gel trough filled with a two component polyurethane gel.
- Filter media shall be micro glass fiber type mini-pleated into closely spaced pleats with thermo plastic resin separators. The media pack shall be *** contained within a ** deep frame. Formed dimpled media separators shall not be allowed.
- The media pack shall be sealed on all sides with a solid UL Classified polyurethane sealant and form a completely leak proof seal with the frame.

3.0 Performance Characteristics

- Each filter shall be tested and certified to have an efficiency of not less than 99.99% per the Institute of Environmental Sciences and Technologies Recommend Practice for HEPA and ULPA filters Type C (IEST-RP-CC001)

- Each filter shall be factory scan tested to a maximum allowable leak rate of 0.01% per IEST-RP-CC0034 Section 9. Factory repairs shall not exceed 1% of the filter face area and no individual repair may exceed 2 in² (13cm²).
- The clean filter static pressure drop shall be no greater than

	Tested Face Filter Velocity	
	HEPA - 100 fpm	ULPA - 155 fpm
2"	0.52" w.g.	0.68" w.g.
4"	0.36" w.g.	0.45" w.g.

- The filters shall be approved and listed by Underwriters Laboratories Inc, UL Standard 900
- Filter labels shall have the following information:
 - Tested efficiency
 - Tested air flow
 - Serial number
 - Initial resistance at tested air flow
 - Part number
 - Filter type according to IES-RP-CC-001

4.0 Quality System

- Manufacturer shall provide documentation from an external certification body that the manufacturing location is ISO 9000 Registered.
- If requested manufacturer shall make available a copy of their Corporate Quality Manual.
- If requested the manufacturer shall make available printed performance test results by a letter of compliance.