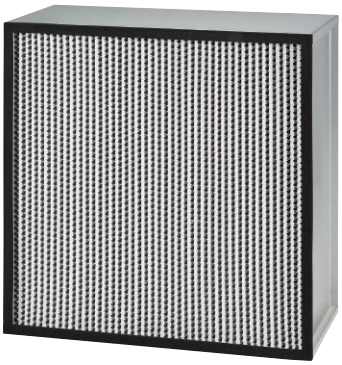
THE WORLD LEADER IN CLEAN AIR SOLUTIONS

MEGAcel® I

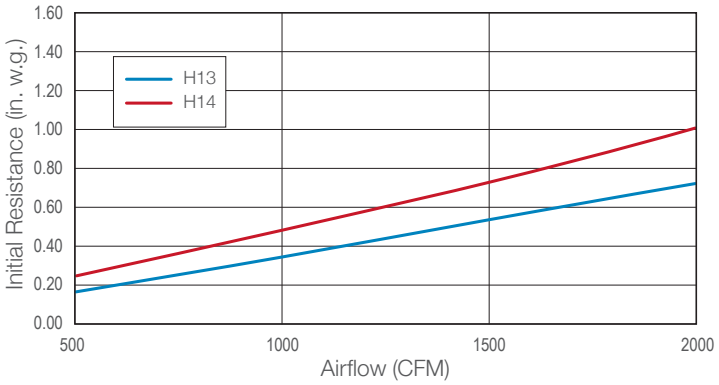
SEPARATOR STYLE HEPA FILTERS



Benefits

- Available in 99.99% @ 0.3µm, H13 and H14
- Dual-layer eFRM media combines ultra-high efficiency and particulate loading with low pressure drop
- High tensile strength and chemically inert properties of eFRM reduce risk of media damage and degradation
- Lowest offgassing properties available
- Compatible with Discrete Particle Counter (DPC) and photometric test methods, including high concentration oil-based aerosol testing

MEGAcel® I eFRM H13/H14
Initial Resistance vs. Airflow Capacity

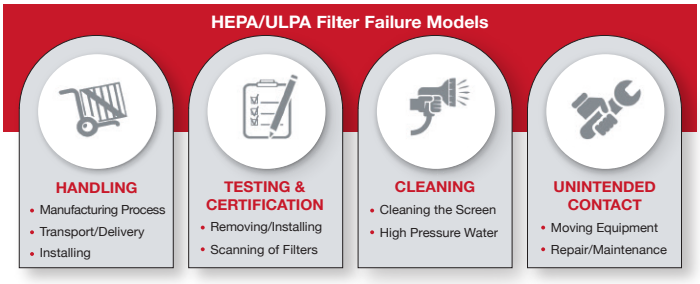


Performance data based on a 24˝ x 24˝ x 11½˝ filter.

Flow Rate (CFM)	500	1000	1500	2000
H13 (in. w.g.)	0.17	0.34	0.53	0.73
H14 (in. w.g.)	0.24	0.48	0.74	1.01

Evolution Meets Revolution

Expanded FluoroResin Media, or eFRM, is the next generation of membrane media technology, designed specifically for applications where oil-based test aerosols (i.e. PAO) are utilized or fine particulate (i.e. Hydrocarbons) are present. This patented HEPA filtration media provides superior mechanical performance at significantly lower energy cost while maintaining the most stringent filtration requirements in these demanding environments.

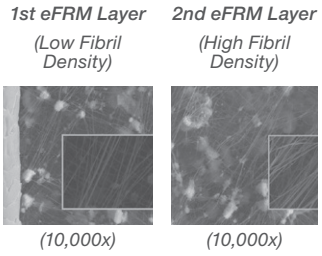


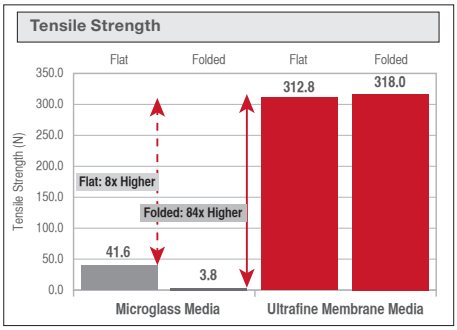
HEPA Filters typically fail due to some form of contact combined with the poor mechanical strength of the media.

Media Resilience

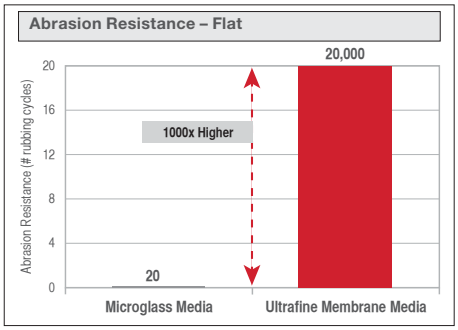
AAF's HEPA/ULPA filters utilizing Daikin's ultra-fine fiber membrane media technology are the product of choice in the most demanding environments.

Dual-layer eFRM media reduces risk of media damage and degradation.

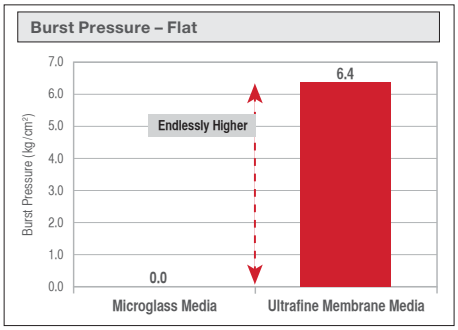




Results based on Test Standard DIN EN 29073-3.



Results based on Test Standard DIN EN 12947-2.



Results based on Test Standard DIN EN 13938-2.

AAF® INTERNATIONAL
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Submittal Options Configuration Nomenclature

E24A24A	A	1	P	13	F	2	T	0	AA
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

(1) SIZE	(2) DEPTH	(3) SEALANT	(4) MEDIA	(5) ACCEPTANCE LEVEL	(6) GASKET MATERIAL	(7) GASKET LOCATION	(8) SEPARATOR	(9) FACEGUARD	(10) FRAME & CONFIGURATION

(1) Size: E 24 A 24 A

- E – Designates Imperial Measurement
- 24 – Filter Height in Whole Inches
- A – Filter Height in Additional Fractions of an Inch (see chart below)
- 24 – Filter Width in Whole Numbers
- A – Filter Width in Additional Fractions of an Inch (see chart below)

Fractional Notation for Imperial Sizes:

A = 0	B = 1/8	C = ¼	D = 3/8
E = ½	F = 5/8	G = ¾	H = 7/8

Example: E23D11G
23 3/8" High x 11 ¾" Wide

(2) Depth:
A – 11 ½"

(3) Bond:
1 – Polyurethane

(4) Media:
P – eFRM (99.99% on 0.3 micron or H13)
T – eFRM (99.999% on 0.3 micron or H14)

(5) Acceptance Level:
13 – 99.99% on 0.3 micron, scanned
14 – 99.999% on 0.3 micron, scanned
21 – 99.95% on MPPS (H13)
22 – 99.995% on MPPS (H14)

(6) Gasket/Gel Material:
B – Polyurethane Gel
E – EPDM
F – Silicone Gel
P – None
T – Neoprene
U – Poron
*Gaskets are ¼" thick x ¾" wide

(7) Gasket/Gel Location:
0 – None
1 – Air Entering SIde
2 – Air Leaving Side
3 – Both Sides
5 – Extractor Clips

(8) Separator:
T = Aluminum
W = Vinyl Coated Aluminum

(9) Faceguard:
0 – None
1 – Air Entering SIde
2 – Air Leaving Side
3 – Both Sides

(10) Frame and Configuration:
AA – Galvanized Steel - Gel Seal
AB – 304 Stainless Steel - Gel Seal
AC – 409 Stainless Steel - Gel Seal
AD – Aluminum - Gel Seal
BA – Galvanized Steel - Gasket Seal
BB – 304 Stainless Steel - Gasket Seal
BC – 409 Stainless Steel - Gasket Seal
BD – Aluminum - Gasket Seal

MEGAcel® I eFRM Specifications

1.0 General
1.1 Air filters shall be HEPA grade air filters with eFRM (expanded FluoroResin Media), aluminum separator, of metal frame, urethane sealant, and either polydimethylsiloxane fluid seal or dry gasket seal.

1.2 Sizes shall be noted on drawings and/or other supporting materials.

2.0 Construction
2.1 Filter media shall be of continuously pleated eFRM (expanded FluoroResin Media), no glass allowed, and pleated using aluminum foil separators.

2.2 eFRM media shall be compatible with industry standard validation and testing methodologies using an acceptable oil aerosol agent (i.e. PAO).

2.2.1 The aluminum separator shall be tapered at a 3:1 ratio to aid in aerodynamic and compression properties and shall be minimum 13 mils thick.

2.3 The media pack shall be affixed permanently to the filter frame assembly by means of a polyurethane sealant.

2.4 The filter frame shall be of minimum of 18ga. galvanized steel, galvaneal, 304 SST or 0.063 in. mill finished aluminum. The filter frame shall be designed for use in either gasket seal or fluid seal systems.

2.5 Gasket system filters shall be factory installed 1/4" thick by 3/4" wide dovetailed, close-celled neoprene affixed to the sealing surface. Filter frame sealing surface to have a flatness tolerance of +/- 1/32".

2.6 Fluid Seal system filters shall have:

2.6.1 A continuous trough around the perimeter of the filter with continuous, integral indication of acceptable fluid seal fill level. The fluid seal trough shall be filled at the factory.

2.6.2 Fluid seal material shall be characterized for all salient mechanical, physical, and chemical properties such as Hardness/Penetration, Tack, and Migration of free silicone.

2.6.3 Fluid seal material shall be characterized for chemical resistance to known industry accepted decontamination agents, cleaning agents, and filter testing reagents.

2.6.4 Fluid seal material shall be tested for chemical compatibility to all materials in contact during manufacturing including gloves, tools, mixing equipment, dispensing equipment, and packaging materials, as well as potential airborne contaminants and poisons.

2.6.5 Fluid seal material shall demonstrate resistance to accelerated life cycle testing.

2.6.6 Fluid seal shall withstand knife-edge insertion to partial depth without complete depth cutting or full length splitting.

3.0 Performance
3.1 The filter shall have a tested efficiency of (99.99% or 99.999% @ 0.3um OR 99.95% or 99.995% @ MPPS) when tested under the guidance of either IEST RP-CC-001 or EN1822.

3.2 Each Filter shall be tested for initial (clean) pressure drop at rated flow. Maximum initial pressure drop per overall efficiency rating for 24" x 24" x 11½" filter shall be as follows:

Overall Efficiency	Airflow (CFM)	Nom. Initial ΔP
99.99% @ 0.3µm/99.95% @ MPPS	2000	0.73" w.g.
99.999% @ 0.3µm/99.995% @ MPPS	2000	1.01" w.g.

3.3 Each filter shall be factory scanned in accordance with IEST-RP-CC034 or EN1822.

3.4 Filter shall be listed by Underwriters Laboratories as UL 900.

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