

HEPA filter



- ➔ HEPA efficiencies of 95% up to 99.9995% (@ 0.3 µm)
- ➔ Finedust efficiencies of 60% up to 98% ASRHAE
- ➔ High quality micro fibreglass media
- ➔ Lowest initial pressure drop
- ➔ Rigid frames
- ➔ Frame height of 68mm up to 292mm
- ➔ High quality standard due to Quality Assurance System
- ➔ HEPA filter tested by laser particle counting system
- ➔ Highly economical through high final pressure drop
- ➔ For use in Clean Rooms up to class 1
- ➔ Usable in two flow directions

Description:

High Efficiency Particulate Air Filters (HEPA) and Ultra Low Penetration Air Filters (ULPA) are the most efficient air filters commercially available. They have a broad application in clean rooms and other areas requiring the highest levels of contamination control.

Construction:

HEPA filters are available in a variety of construction materials. Available types include; particle board or metal construction, single or double flange, conventional or fluid seal.

The filter media is manufactured from sub-micron glass fibres formed into high density paper. Continuous sheets are pleated to provide a high ratio of media area to face area, resulting in low media velocity which is essential for ultra high efficiency filtration.

HEPAs are available in aluminium separator type or close pleat configuration. The sealing to filter housing or frame is achieved through a leak-free, dry seal system. High capacity HEPAs are also available.

Efficiency

HEPA Efficiency - 99.99% minimum efficiency on 0.3 micron particles.

Every HEPA filter is individually tested to international standards before it leaves the manufacturers factory. The penetration and actual resistance at test air flow rate are clearly indicated on the filter label.

Installation:

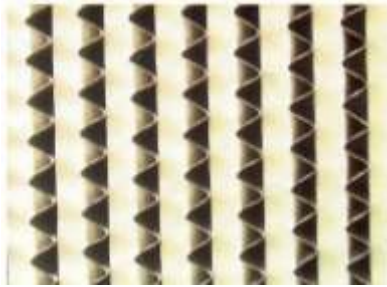
Filters are installed into specially designed modules or permanent mounting frames which incorporate clamps, that when tightened ensure that the filters gasket is sealed against the mounting frame.

Filter installation should be on-site NATA certified to ensure that the HEPA filter was not damaged during delivery or installation and to ensure the integrity of the seal between the filter/frame seal.

Due to the high performance of the HEPA filter it is recommended that a pre filter be installed to extend the service life of the filter.

It is also recommended that a pressure gauge be installed across the filter bank, to ensure optimum filter life is achieved.

HEPA filter



**Aluminium separator
media pack**



**Separatorless
media pack**

Aluminium separator style:

Part no.	Size	Capacity l/s @ 250 Pa.
6-0054	305 x 305 x 150	93
6-0055	305 x 610 x 150	186
6-0060	305 x 610 x 292	282
6-0056	610 x 610 x 150	372
6-0061	610 x 610 x 292	566
6-0057	610 x 762 x 149	465
6-0062	610 x 762 x 292	706
6-0058	610 x 914 x 150	557
6-0059	610 x 1215 x 150	743

Separatorless style:

Part no.	Size	Capacity l/s @ 250 Pa.
6-0004	305 x 305 x 150	70
6-0005	305 x 610 x 150	140
6-0010	305 x 610 x 292	280
6-0006	610 x 610 x 150	280
6-0010	610 x 610 x 292	560
6-0007	610 x 762 x 149	350
6-0018	610 x 762 x 292	690
6-0008	610 x 914 x 150	420
6-0009	610 x 1215 x 150	560

Fluid seal style:

Part no.	Size	Capacity l/s @ 250 Pa.
6-2000	560 x 560 x 210	300
6-2001	560 x 890 x 210	462
6-2002	560 x 1160 x 210	624

Mini pleat HEPA filter

The Filterfit Minipleat is designed and tested to extract the smallest particles out of the air.

The Filterfit Minipleat contains a fibreglass media pack in five (5) different heights (47mm, 56mm, 70mm, 93mm, 140mm) and in different kinds of extruded aluminum frames. The filter media is pleated in Minipleat shape with a new application technology of Hot Melt Spacers to achieve lowest pressure drop results.

- ➔ HEPA efficiencies of 95% up to 99.99995% (@ 0.3 μm)
- ➔ Finedust efficiencies of 60% up to 98% ASRHAE
- ➔ High quality micro fibreglass paper
- ➔ Lowest initial pressure drop
- ➔ Rigid frames
- ➔ Frame height of 70 mm up to 197 mm
- ➔ High quality standard due to Quality Assurance System
- ➔ HEPA filter tested by laser particle counting system
- ➔ Highly economical although high final pressure drop
- ➔ For use in clean rooms up to class 1
- ➔ Usable in two flow directions

Design

The filter frame is made from anodized extruded aluminum profile with two angles in each corner to get a rigid straight filter. Each of the different types of extruded aluminum profiles contains a few sealant anchors to prevent any leakage between frame and media during the filter life. Furthermore, there are features available such as a knife-edge for fluid seal connection. Alternatively, the fluid can be incorporated within the filter frame. All



types of Minipleat filters are available with one or two screens and gaskets. The fibreglass media pleated in Minipleat shape, available in five (5) different heights (47, 56, 70, 93 and 140 mm) is cast with polyurethane sealant into the frame. This design achieves a highly active filter surface and ensures the minimal pressure drop of the Minipleat model.

Testing

Each Minipleat filter is tested and packed in accordance to American Standard IEST-RP-CC-001.3 (HEPA and ULPA Filters) or in accordance with the European standard EN 1882-1, 4 & 5 (Testing filter elements HEPA and ULPA efficiency and scan method) or customer requested testings.

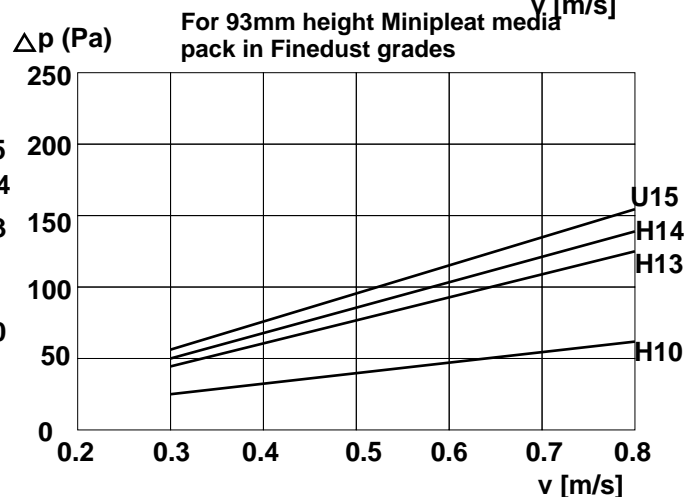
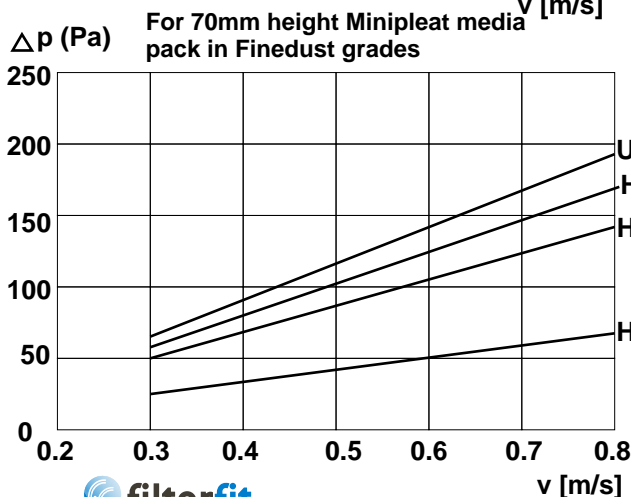
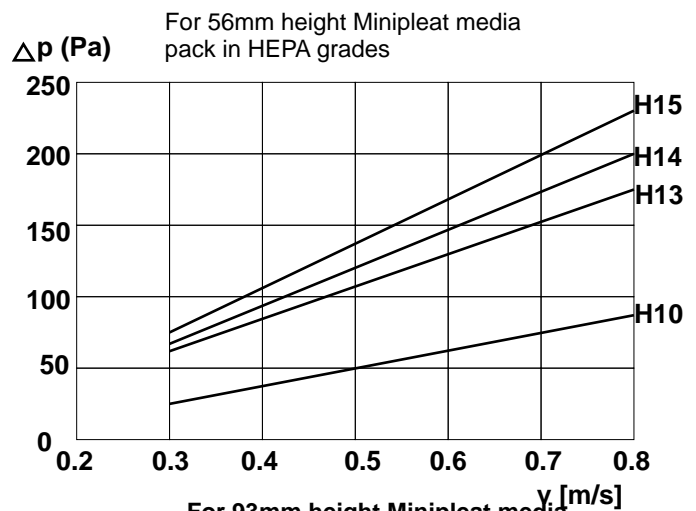
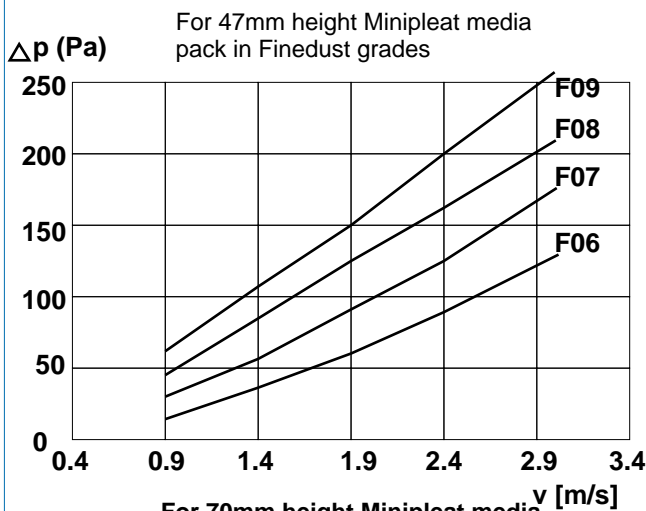
Low velocity HEPA filter data:

Mini pleat HEPA filter

		H10	H13	H14	U15
Rated face velocity	m/s	0.5	0.5	0.5	0.5
Media pack	mm	47, 56, 70, 93	47, 56, 70, 93	47, 56, 70, 93	47, 56, 70, 93
Initial pressure drop @ rated airflow	Pa	53, 48, 40, 36	120, 110, 88, 80	133, 120, 100, 88	155, 138, 115, 98
Filter class as per EN 1822		H10	H13	H14	H15
Filter class as per Eurovent 4/4		EU10	EU13	EU14	
Filter class as per DIN 24184		R	S	T	
Initial efficiency @ rated airflow					
Test with MPPS (integral)	%	>85	>99.95	>99.995	>99.9995
Test with aerosol s0.3 Fm (integral)	%	>95	>99.995	>99.9995	>99.9995
Recommended final pressure drop	Pa	600	600	600	600
Flammability classification to DIN 53438		K1/F1	K1/F1	K1/F1	K1/F1
Max. relative humidity	%	100	100	100	100
Max. continuous temperature	0C	80	80	80	80

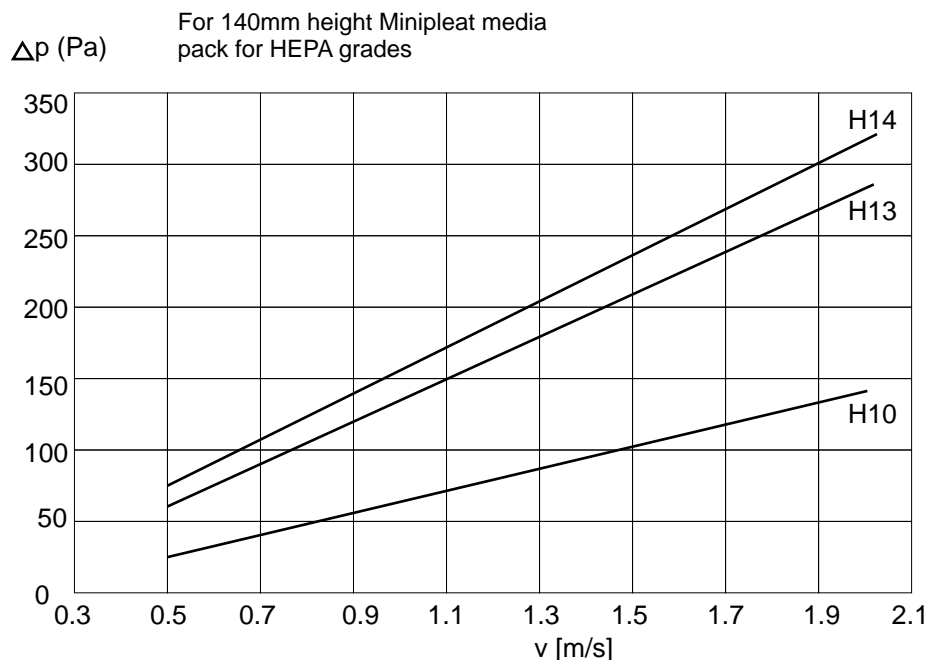
High velocity HEPA filter data:

		H10	H13	H14
Rated face velocity	m/s	1.5	1.5	1.5
Media pack	mm	140	140	140
Initial pressure drop @ rated airflow	Pa	53, 48, 40, 36	205	230
Filter class as per EN 1822		H10	H13	H14
Filter class as per Eurovent 4/4		EU10	EU13	EU14
Filter class as per DIN 24184		R	S	T
Initial efficiency @ rated airflow				
Test with MPPS (integral)	%	>85	>99.90	>99.995
Test with aerosol s0.3 Fm (integral)	%	>95	>99.990	>99.9995
Recommended final pressure drop	Pa	600	600	600
Flammability classification to DIN 53438		K1/F1	K1/F1	K1/F1
Max. relative humidity	%	100	100	100
Max. continuous temperature	0C	80	80	80



Due to on-going product development, Filterfit reserves the right to change design and specifications without notice

Mini pleat HEPA filter



Specifications:

Filter sizes (mm)	HEPA filter rated airflow l/sec media pack 47-93 mm @ velocity 0.5 m/s	HEPA filter rated airflow l/sec media pack 140 mm @ velocity 1.5 m/s	Finedust filter rated airflow l/sec media pack 47-70 mm @ velocity 2.4 m/s
305 x 305	47	139	222
305 x 610	93	279	447
610 x 610	186	559	893
762 x 610	233	697	1115
915 x 620	279	837	1338
1220 x 610	372	1116	1786