
AirCare Conventional HEPA Filters



- **Proven and reliable**
- **Range of sizes and efficiencies**
- **Range of frame constructions**
- **Metal-free versions available**
- **Hi-flow versions available**
- **Hi-temperature versions available**

Quality

AirCare conventional HEPA (High Efficiency Particulate Air) filters are manufactured in an ISO9002 facility. All filters are tested in accordance with US MIL-STD-282 for resistance and penetration at the filter's nominal rated capacity as defined in MIL-F-51068.

Description

HEPA media is made from ultra-fine glass fibre formed into a high density paper. Continuous sheets are pleated to provide a high ratio of media area to filter face area. Corrugated separators maintain uniform spacing between pleats to allow free flow of air through the filter and provide pack strength. The edges of the separators are rolled to prevent media tearing. Each media pack is completely encapsulated in a specially developed sealant to ensure no leakage around the filter media and then encased in a frame of aluminium or other material. Interlocked neoprene gaskets provide an airtight seal.

Performance

Standard filters are rated for 100°C, but temperature ratings up to 400°C can be obtained.

The HEPA filter media is designed to withstand 100%RH, but is not designed to resist long-term operation in direct contact with water, steam, other vapours or fluids.

The filters are generally operated at face velocities up to 0.9 m/s for standard 149 mm depth, 1.4 m/s for standard 292 mm depth and 2.5 m/s for High Flow filters.

Standard **AirCare** HEPA filters as listed in the table are 99.99% efficient against 0.3 micron particles. (H13). They have aluminium separators, anodised extruded aluminium frames with a single neoprene gasket - either upstream or downstream. For other filters specify the size, the efficiency, the frame material, gasket locations, and any other options such as paper separators, high-temperature, High-Flow, or faceguard(s).

Mounting

Options include:

AirCare Inline Modules for in-duct applications.

AirCare Safechange Modules for use with hazardous substances.

PAPWORTH ENGINEERING Side Access Filter Housings.

Note: Pleats should be vertical (not horizontal) if filter is mounted vertically.



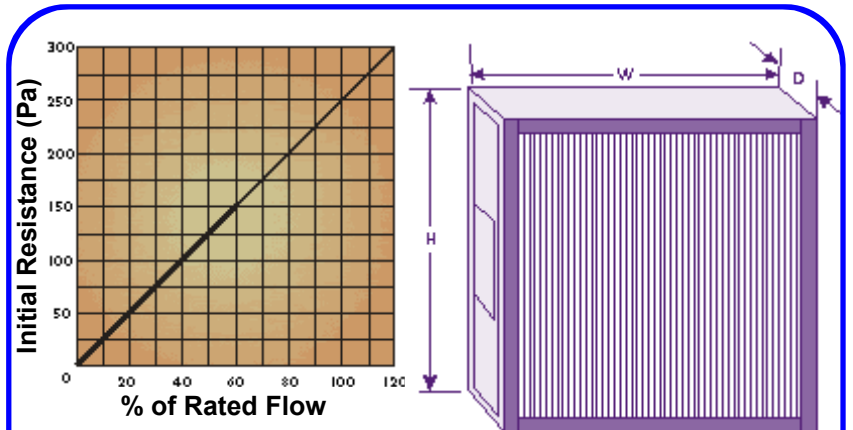
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Physical and Performance Data

Product Code	Dimensions	Gasket location	Airflow at 250 Pa (AFr) (Initial Typical)	Approx Weight
	H x W x D (mm)		L/S	kg
FI5010	610 x 610 x 149	DG	330	6
FI5012	610 x 762 x 149	DG	410	7
FI5014	610 x 914 x 149	DG	495	8.5
FI5016	610 x 1219 x 149	DG	660	11
FI5017	610 x 1829 x 149	DG	990	16
FI5019	762 x 914 x 149	DG	610	10.5
FI5020	762 x 1219 x 149	DG	825	13.5
FI5022	762 x 1829 x 149	DG	1225	19.5
FI5105	305 x 610 x 292	UG	260	7
FI5111	610 x 610 x 292	UG	520	12
FI5130	610 x 762 x 292	UG	650	14
FI5120*	305 x 610 x 292	UG	360*	8
FI5121*	610 x 610 x 292	UG	720*	13

*High Flow filters rated at 470 / 940 L/s at 335 Pa.



Airflow/Pressure drop: The pressure drop across a HEPA filter is closely proportional to the airflow through it. Thus the initial pressure drop for a given design airflow can be easily calculated by using the relationship:

$$Pd/250 = AFd/AFr$$

Where: Pd = initial pressure drop at the design airflow
AFd = design airflow
AFr = rated airflow at 250 Pa (from table)

Options

Efficiencies:

99.97% against 0.3 micron -H12

99.999% against 0.3 micron -H14

Frame Material:

Galvanised Steel -G

Stainless Steel -S

High Density Particle Board -B

Gasket / Faceguard Location:

Gasket Faceguard

Upstream -UG -UF

Downstream -DG -DF

Both -BG -BF

Other:

Paper separators -PS

High temperature -Specify

High Flow -High Flow

Related Products:

AirCare BIO-MEPA Filters

PAPWORTH ENGINEERING Filter Housings

AirCare Inline Modules

AirCare Safechange Modules

Data Sheets:

E54124

E54146

E54103

E54104

DS: E54121 Rev.4