
AirCare **Mini-pleat** **HEPA Filters**



- **For ultra-clean environments**
 - **Cleanrooms**
 - **Clean work stations**
- **No corrugated separators**
- **Low profile**
- **High efficiency and low pressure drop**
- **Range of sizes, efficiencies and frames.**

Quality

AirCare mini-pleat HEPA filters are manufactured in an ISO 9002 accredited 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

The filter media is made from ultra-fine glass fibre formed into a 0.38 mm thick mat and pleated to allow a large amount of surface area to be incorporated within the housing. The pleats are spaced apart by hot-melt adhesive that allows air to flow through the filter with minimum resistance. The filter is sealed inside the housing with adhesive to eliminate voids and bypass leakage.

Performance

The air flow, initial resistance and dust holding capacity of the mini-pleat panels with 55 mm media depth are better than conventional HEPA filters made with corrugated aluminium separators that are nearly 150 mm deep.

Relatively large volumes of air are processed in a typical cleanroom application. So the cost of operating power becomes a prime consideration, both in the design of the system and in the design of the equipment. One of the most important areas to be evaluated is the resistance of the pressure drop across the HEPA filters in the system, because this element is the single largest energy consumer in a cleanroom.

Aircare mini-pleat HEPA filters are rated to operate continuously up to 65°C and 100% RH (non-condensing.) Standard mini-pleat HEPA filters may be operated at up to 0.75 m/s face velocity and to a maximum final pressure drop of 500 Pa

Standard **AirCare** mini-pleat HEPA filters as listed in the table are 99.99% efficient against 0.3 micron particles. They have anodised extruded aluminium frames with a gasket upstream and an expanded painted metal face guard downstream. Other options are available.

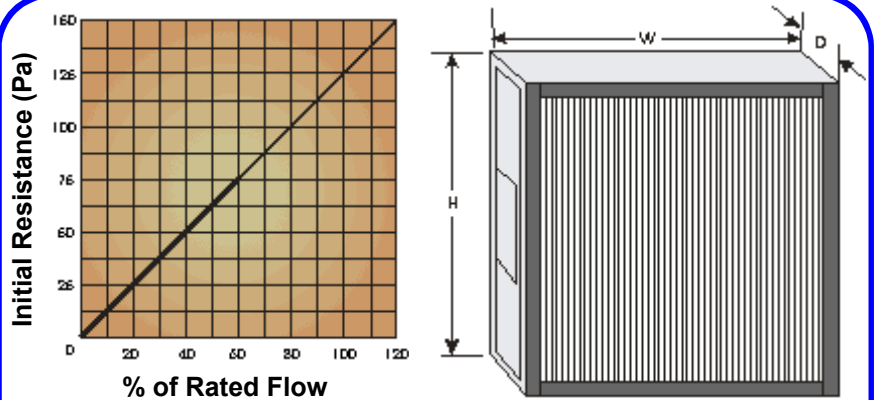
Mounting

AirCare Terminal Modules are designed to fit **AirCare** Mini-pleat HEPA filters.

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

Physical and Performance Data

Product Code	Dimensions	Airflow at 125 Pa (AFr) (Initial Typical)	Approx Weight
	H x W x D (mm)	L/S	kg
FI5205	305 x 305 x 73	45	1.5
FI5206	610 x 305 x 73	95	3
FI5210	610 x 610 x 73	200	5
FI5212	610 x 914 x 73	300	7
FI5214	610 x 1219 x 73	400	9
FI5215	610 x 1829 x 73	605	13
FI5220	762 x 914 x 73	380	8.5
FI5217	762 x 1219 x 73	505	11
FI5219	762 x 1829 x 73	765	16
FI5325	305 x 305 x 124	80	2
FI5326	610 x 305 x 124	165	3.5
FI5330	610 x 610 x 124	340	6
FI5331	610 x 1219 x 124	695	10



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:

$$Pd/125 = AFd/AFr$$

Where: Pd = initial pressure drop at the design airflow
 AFd = design airflow
 AFR = rated airflow at 125 Pa (from table)

Options

Efficiencies:	Frame Material:
99.97% against 0.3 micron	-H12
99.99% against 0.3 micron	-H13
99.999% against 0.3 micron	-H14
99.9995% against 0.1-0.2 micron	-U1
99.9999% against 0.1-0.2 micron	-U2
99.999999% against 0.1-0.2 micron	-U3
99.9999999% against 0.1-0.2 micron	-U4
	Galvanised Steel -G
	Stainless Steel -S
	Wood -W
	Knife Edge Frame -K

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Related Products:

Data Sheets:

Airefil Disposable PRE Panel Filters E54111
Airefil Washable Panel Filters E54131
Airefil GT2 Filter Coalescer Panels E54126
AirCare Terminal Modules E54102