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## *AirCare* V-HEPA Filters

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- **High effective media area**
- **High capacity**
- **Low resistance**
- **Long service life**
- **Ideal for in-duct applications**

## Quality

**AirCare** V-HEPA 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

Glass microfibre media is used in **AirCare** V-HEPA filters. The media is folded into mini-pleats which are separated by thermo-sealing adhesive and spacers to ensure optimum pleating geometry. Every media pack is completely sealed within end panels and support struts to ensure there is no leakage. Each filter is an assembly of multiple 'V's in an aluminium frame. This configuration allows up to 90% more media than standard HEPA filters and this results in greater flow capacity, lower resistance and longer service life. Interlocked neoprene gaskets provide an airtight seal.

## Performance

Standard **AirCare** V-HEPA Filters are rated for 90°C and 100% RH. (120°C rated V-HEPA filters are also available.) They are not, however, designed to resist long-term operation in direct contact with water, steam, other vapours and fluids. The filters may be operated at face velocities up to 3.0 m/s (99.99% efficiency) and 3.75 m/s (95% efficiency). Standard V-HEPA Filters have aluminium frames with an upstream gasket. Other constructions are available. Filters are also available in H14 (99.999% efficiency)

## Mounting

Options include:

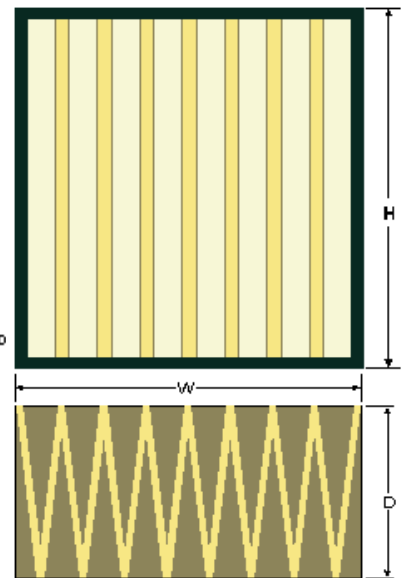
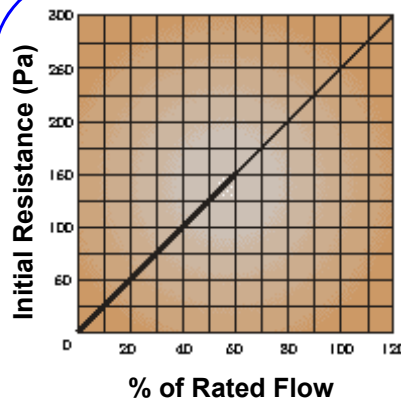
**AirCare** Inline Modules for in-duct applications.

**AirCare** Safechange Modules for use with hazardous substances.

**PAPWORTH ENGINEERING** Side Access Filter Housings.

## Physical and Performance Data

Product Code	Efficiency (against 0.3 micron particles)	Dimensions	Rated airflow at 250 Pa (AFr) (Initial Typical)	Approx Weight
		H x W x D (mm)	L/S	kg
FI3940	95% (H11)	610 x 610 x 292	1270	20
FI3941	95% (H11)	610 x 305 x 292	630	11
FI5420	99.99% (H13)	610 x 610 x 292	920	20
FI5419	99.99% (H13)	610 x 305 x 292	460	11



**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)



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Related Products:

**Airefil** V-Cell Filters  
**AirCare** Safechange Modules  
**AirCare** Inline Modules  
**PAPWORTH ENGINEERING** Filter Housings  
**AirCare** HEPA Hoods

Data Sheets:

E54115  
 E54104  
 E54103  
 E54146  
 E54123