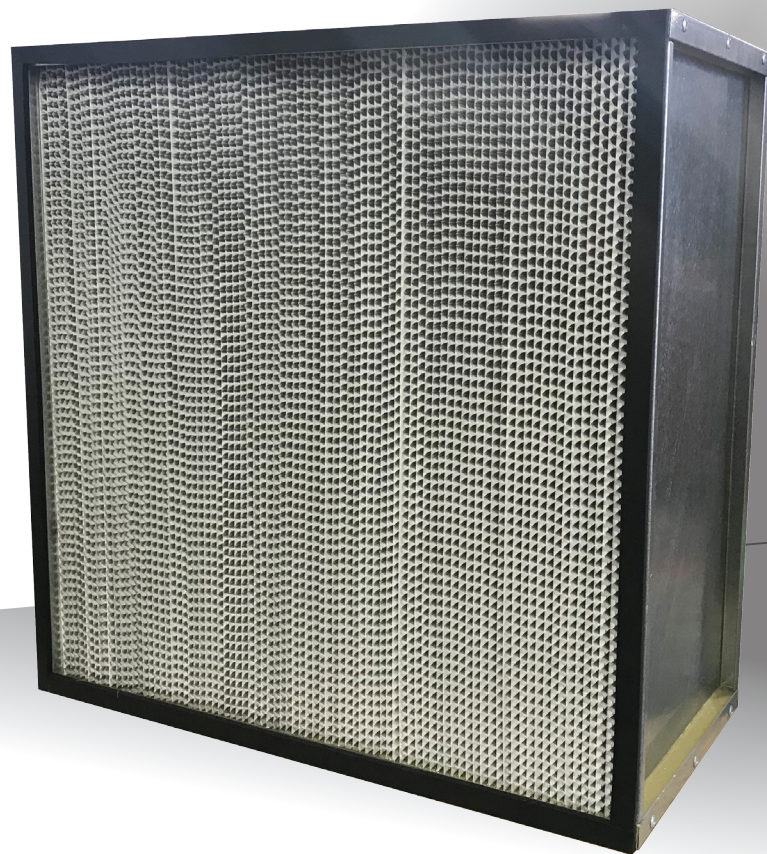


HEPA Filters

For critical air environments



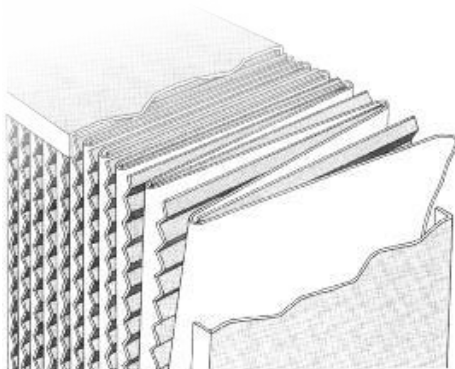
Applications

Email Air Handling HEPA filters are designed for use in such critical applications as:

- › Hospital operating theatres
- › Sterile goods processing
- › Biological safety cabinets
- › Radioactive particle barriers
- › Electronics manufacture
- › Precision instrument assembly
- › Critical industrial process
- › Gas Turbine
- › Off-shore and Marine applications

Because these filters are used in situations where human life may be at risk, filter performance is critical and only the most stringent testing methods will suffice.

Conventional HEPA
Construction



Features

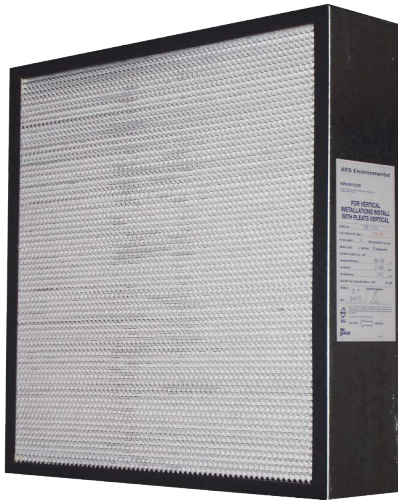
Individually Tested: Every filter is tested on a special rig to ensure that it complies with the rigorous performance requirements of AS 4260. Each filter has guaranteed efficiencies and resistance to airflow. The results of this testing, together with the filter code and the test airflow, are given on serialised NATA certification labels attached to the filter and its carton, providing easy and rapid identification.

Quality Manufacture: Ensures HEPA filters conform to the stringent requirements of EN 1822, quality construction and factory testing serves to reduce transit damage of sensitive HEPA filtering medium.

Lower Resistance to Airflow: Email Air Handlings' high-performance design provides a higher air flow capacity and in turn aids in energy savings and a reduction over life-cycle costs.

Partnership with the best: Email Air Handling ensures that it brings the best products home by utilising Hollingsworth and Vose (H&V) material in the construction of its HEPA filters. H&V is considered the global market leader for HEPA filtering medium.





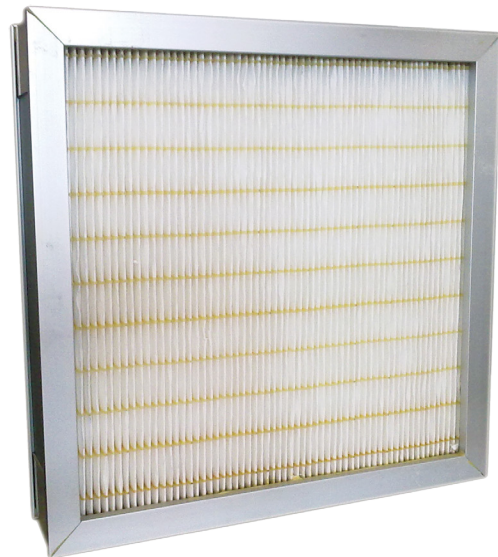
Description

Conventional Filters: The glass-paper filtering medium is pleated into a narrow vee formation and held in place by corrugated aluminium separators inserted between the pleats. This forms the filter element which is bonded into a rigid corrosion-resistant steel frame with all joints encapsulated and sealed in a special urethane elastomer.

Standard HEPA frames have a closed-cell neoprene gasket on the air leaving side. Alternatively the outer frame can be supplied with extended sides for gel or fluid seal applications.

Minipleat Filters: These filters are of low-depth construction and use very close pleating of the medium, with separation of the pleats achieved by means of continuous, narrow beads of a special hot-melt compound.

In situations where space may be limited, Email Air Handlings' mini-pleat construction provides a light-weight solution that is also adaptable and maintains a high performance level.



Resistance V's Airflow

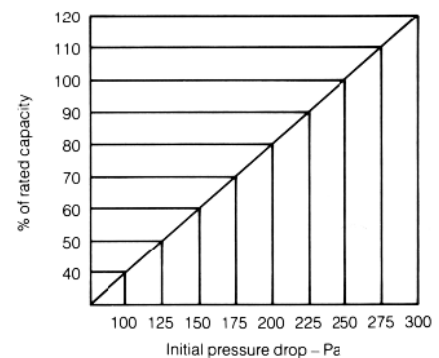
Unlike most filters, which have a square law resistant characteristic, HEPA filters have a linear characteristic i.e. If the filter is operated at half airflow capacity, the resistance to airflow is also halved.




Performance

Email Air Handling HEPA Filters are manufactured by AES Environmental on a controlled product line using H&V HEPA media. H14 efficiency of 99.995% is guaranteed by way of Sodium Flame test rig in accordance with AS4260. AES Environmental manufacturers HEPA filters to the stringent construction standards in AS4260 and each HEPA filter is also leak-tested in accordance with AS1807.6 prior to boxing to ensure that each HEPA filter is ready for the most critical applications.

Initial resistance/airflow characteristics

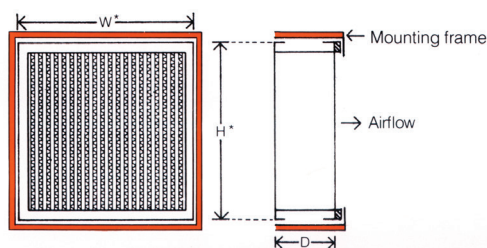


Part No.	 Dimensions			Airflow L/S	Capacity CFM	Filter Efficiency	Initial Pd Pa.	Weight Kg.
	H	W	D					
GASKET SEAL								
1589-7182/302	203	203	149	26	55	H14	250	2.6
1589-7182/303	305	305	149	71	150	H14	250	4.1
1589-7182/304	610	610	149	366	775	H14	250	9.8
1589-7182/305	610	610	292	566	1200	H14	250	17.1
1589-7182/306	610	762	292	708	1500	H14	250	19.7
1589-7182/307	610	762	149	441	935	H14	250	11.4
1589-7182/308	610	914	149	529	1120	H14	250	13.2
1589-7182/309	610	1219	149	713	1510	H14	250	16.3
1589-7182/324	762	610	149	441	935	H14	250	19.7
1589-7182/327	762	762	149	552	1170	H14	250	14.3
1589-7182/328	762	914	149	661	1400	H14	250	16.5
1589-7182/329	762	1219	149	882	1870	H14	250	20.4
FLUID SEAL								
1589-7112/533	300	300	210	56	120	H14	250	4.2
1589-7112/534	300	600	210	122	260	H14	250	6.6
1589-7112/536	300	900	210	188	400	H14	250	9
1589-7112/540	600	600	210	300	635	H14	250	9.9
1589-7112/542	600	900	210	462	980	H14	250	13.2
1589-7112/543	600	1200	210	624	1320	H14	250	16.3
HIGH CAPACITY - GASKET SEAL								
1589-7452/51	610	610	305	760	1610	H14	250	20

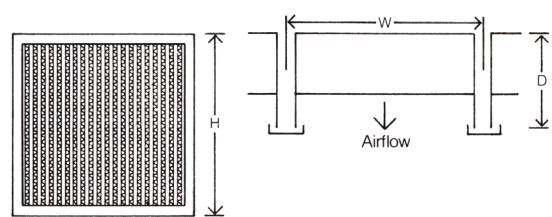


Design Considerations

- ▶ Gel seal installations are suitable for applications up to 50oC and 100% RH.
- ▶ Gasket seal installations are suitable for applications up to 120oC and 100% RH.
- ▶ All HEPA filters require adequate pre-filtration to prolong filter life and AES Environmental pre-filtration solutions are recommended for this purpose. Email Air Handling HEPA filters can be operated up to 2.5 Kpa. but increasing fan energy costs usually make replacement more economical when the filter reaches a pressure drop of 500 Pa. or twice initial P.D.




Gasket seal



Fluid seal

Options

Email Air Handling HEPA filters are available in a variety of frame and separator materials and sealant types for specialist applications. Also available are special containment housings, HEPA fan filter modules and portable negative air units. Holding frames that provide effective clamping and sealing of filters are available for ducted applications.

Part No.	Dimensions 			Airflow L/S	Capacity CFM	Efficiency Filter	Initial Pd Pa.	Weight Kg.
	H	W	D					
HIGH CAPACITY - GASKET SEAL								
1589-7452/51	610	610	305	760	1610	H14	250	20
1589-7452/37	305	610	305	380	805	H14	250	11
MINI-PLEAT - GASKET SEAL								
1589-7452/411	305	305	70	83	175	H14	250	2.7
1589-7452/412	305	610	70	165	350	H14	250	4
1589-7452/413	610	610	70	335	710	H14	250	7.1
1589-7452/414	610	762	70	418	885	H14	250	8.8
1589-7452/416	610	914	70	510	1080	H14	250	10.2
1589-7452/417	610	1219	70	670	1420	H14	250	13.3
1589-7452/418	762	914	70	550	1165	H14	250	9.2
1589-7452/419	762	1219	70	665	1405	H14	250	12.2
MINI-PLEAT - GASKET SEAL - FACE GUARD BOTH SIDES								
1589-7452/411G2	305	305	70	83	175	H14	250	2.7
1589-7452/412G2	305	610	70	165	350	H14	250	4
1589-7452/413G2	610	610	70	335	710	H14	250	7.1
1589-7452/414G2	610	762	70	418	885	H14	250	8.8
1589-7452/416G2	610	914	70	510	1080	H14	250	10.2
1589-7452/417G2	610	1219	70	670	1420	H14	250	13.3
1589-7452/418G2	762	914	70	550	1165	H14	250	9.2
1589-7452/419G2	762	1219	70	665	1405	H14	250	12.2
MINI-PLEAT - FLUID SEAL								
1589-7452/522	600	600	130	315	665	H14	250	7.3
1589-7452/523	600	900	130	475	1005	H14	250	10.4
1589-7452/524	600	1200	130	645	1365	H14	250	12.5





On-site testing

Email Air Handling HEPA filters are factory-tested and certified by a NATA-Accredited laboratory.

Additional testing and certification should be carried out on site prior to use, and subsequently as follows;

- a) After filter replacement
- b) At least annually
- c) In special circumstances, e.g. if filter leakage is suspected.

Email Air Handling provides comprehensive on-site maintenance, testing and certification services for HEPA filter installations, cleanrooms, safety cabinets, laminar flow workstations and fume cabinets.

Other HEPA Products

- › HEPA modules
- › UCV Systems
- › Laminar Flow Workstations
- › Class II Cabinets and custom enclosure.
- › Packaged HEPA filtration units.

Other Products & Services

- › Primary and secondary-stage general or filters.
- › Air filtration audits.
- › Filter maintenance & replacements.
- › Dust collection products.



AES Environmental maintains an ISO 9001:2015 quality management system to ensure process and product conformance.

THE COMPANY

AES Environmental manufactures products under Clyde-Apac, Email Air Handling and IFC brand names for industries that are as varied as industrial plants, commercial buildings, power stations, food processing, healthcare, science and electronics. AES Environmental began in Australia, providing its products to government, pharmaceutical and HVAC operators and has since expanded into Asia and the UK. AES considers international standards ISO 14644 and ISO 16890 along with regional standards, such as EN 1822, as a core component of its product mix and has developed an export market in 25 countries, promoting quality standard based manufacturing, engineering and critical solutions.

AES Environmental, a trusted manufacturer capable of delivering reliable product solutions to highly-critical applications, where the control of hazardous airborne contamination is often critical to process and personnel.

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In keeping with our policy of continuing product improvement, we reserve the right to alter specifications without notice.



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