EMAIL AIRHANDLING

HEPA Filters

For critical air environments

AES ENVIRONMENTAL

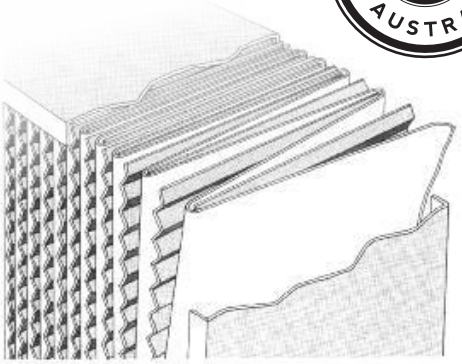
Applications

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 Australian 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.

Local Manufacture: Australian manufacture ensures that filters conform to the stringent requirements of AS 4260, local 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.

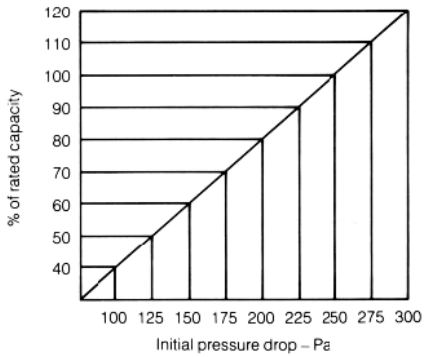
Resistance V's Airflow

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 individually tested on a NATA registered rig to AS 1324 and filter efficiency of 99.97% or 99.99% Hot DOP is guaranteed. The Hot DOP method, with its consistent 0.3 micron particle test medium, provides the most stringent test of the efficiency and safety. In addition, Email Air Handling HEPA filters are scan tested using cold DOP to AS 1807.6 prior to boxing, ensuring that each HEPA filter sent to site is fit for the most critical applications.

Initial resistance/airflow characteristics



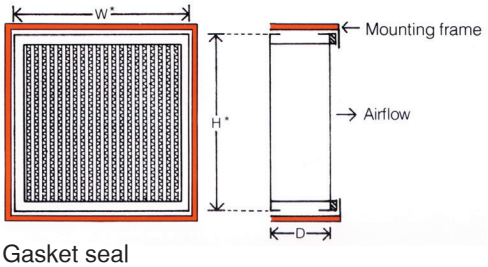
GASKET SEAL							
1589-7182/302	203	203	149	26	55	250	2.6
1589-7182/303	305	305	149	71	150	250	4.1
1589-7182/304	610	610	149	366	775	250	9.8
1589-7182/305	610	610	292	566	1200	250	17.1
1589-7182/306	610	762	292	708	1500	250	19.7
1589-7182/307	610	762	149	441	935	250	11.4
1589-7182/308	610	914	149	529	1120	250	13.2
1589-7182/309	610	1219	149	713	1510	250	16.3
1589-7182/324	762	610	149	441	935	250	19.7
1589-7182/327	762	762	149	552	1170	250	14.3
1589-7182/328	762	914	149	661	1400	250	16.5
1589-7182/329	762	1219	149	882	1870	250	20.4
FLUID SEAL							
1589-7182/533	300	300	210	56	120	250	4.2
1589-7182/534	300	600	210	122	260	250	6.6
1589-7182/536	300	900	210	188	400	250	9
1589-7182/540	600	600	210	300	635	250	9.9
1589-7182/542	600	900	210	462	980	250	13.2
1589-7182/543	600	1200	210	624	1320	250	16.3
HIGH CAPACITY - GASKET SEAL							
1589-7452/51	610	610	305	760	1610	250	20

Design Considerations

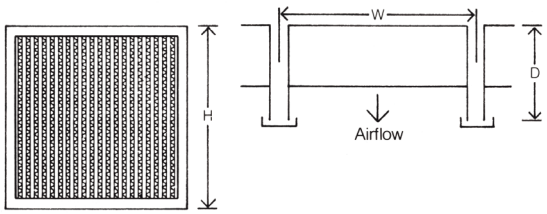
- Gel seal installations are suitable for applications up to 50oC and 100% RH.
- Gasket seal installations are suitable for applications up to 120oC and 100% RH.
- All HEPA filters require adequate pre-filtration to prolong filter life and AES Environmental pre-filtration solutions are recommended for 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.

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.



Gasket seal



Fluid seal

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

bsi. ISO 9001 Quality Management

AES Environmental maintains an ISO 9001:2008 quality management system to ensure process and product conformance.

THE COMPANY

AES Environmental is an Australian owned manufacturing business producing products under Clyde-Apac, Email Air Handling and Vokes brand names for industries that are as varied as industrial plants, commercial buildings, power stations, food processing, healthcare, science and electronics. AES Environmental considers the Australian Standards as a core component of its product mix and has developed an export market in 25 countries, promoting Australian Standards, engineering and manufacturing 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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CLYDE-APAC EMAIL AIRHANDLING VOKES Filtration Technology

NATA ACCREDITED FOR TECHNICAL COMPETENCE

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