

# HEPA Aluminium Separator

Final or HEPA Filters H11 95%@0.3um H13 99.99%@0.3um H14 99.999%@0.3um

## General Characteristics

High Efficiency Particulate Air (HEPA) Aluminium Separator (Al-Sep) filters, also known as Absolute Filters for efficiencies more than 99.97%@0.3um. The traditional HEPA Aluminium Separator construction filters are used as final filters to collect most penetrating particles sizes in the air filtration systems, air handling units of non-directional cleanrooms and final filters to protect the terminal modules in directional cleanrooms. They are used extensively in industries such as pharmaceutical production, electronics, hospitals, clean rooms, laboratories, exhaust systems, nuclear establishments, injectable production, film production, and fall-out shelters.

- + HEPA Filtration with 95%@0.3um, 99.99%@0.3um and 99.999%@0.3um efficiencies
- + Micro Fibreglass with Aluminium Separators
- + Aluminium, Particle Board Wood or Stainless Steel Frame (HT models)
- + Extended Surface Media Area
- + Rubber gaskets at downstream of filters
- + HT model of high temperature up to 250°C

## Construction

### Filter Media

The filter media is micro fibreglass paper which is water repellent and anti-fungicide. The fibreglass media has graduated density coarse fibres on air in and finer fibres on the air out to develop high dust holding capacity. High Capacity (HC) rated packed with more media area is highly recommended for lower pressure drop, lower energy cost and longer filter lifespan.

### Separators

The fibreglass paper is deep pleated with aluminum crimped spacers acting as separators.

### Enclosing Frame

The filter media pack is enclosed with aluminium, galvanised steel or particle wood board frame. High temperature models are enclosed with stainless steel frame. The standard frame option is double-turned flange (DTF) or box C-styled (NH).

### Sealant

Hotmelt or equivalent adhesive is applied to the filter pack to the enclosing frame. Each filter is fitted with a one-jointed synthetic rubber seal downstream of filters. Silicone is used as sealant and gasket for high temperature (HT) models.

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## Specifications

Model	S1BA		H4BA		H5BA	
Description	HEPA AI-Sep		HEPA AI-Sep		HEPA AI-Sep	
Efficiency at 0.3um	95.0%@0.3um		99.99%@0.3um		99.999%@0.3um	
Standard Capacity (SC) High Capacity (HC)	SC	HC	SC	HC	SC	HC
<b>Rated Airflow cmh 610x610x292mm</b> Standard cap at 1.4m/s * Rated Airflow at 2.5m/s	3400*	3400*	1890	3400* (2500)	1890	3400*
Initial Pressure Drop Pa for Depth 292mm	250	200	250	333 (250)	280	370
<b>Rated Airflow cmh 610x610x150mm</b> Standard cap at 1.4m/s High Capacity at 1.25m/s	1700	1700	1000	1620	1000	1620
Initial Pressure Drop Pa for Depth 150mm	250	200	250	250	280	280
Filter Class to EN1822	H11		H13		H14	
IES RP-CC-001.3	N.A		Type C		Type D	
EN1822 MPPS Global/ Integral value	≥95.0%		≥99.95%		≥99.995%	
PAO/ DOP/PSL @ 0.3um	≥97.0%		≥99.99%		≥99.999%	

Performance data is based on IES RP-CC-001.3 and EN1822. Test method, data provided is for comparison and information  
Test Report results of HEPA with the serial number will be affixed onto label on HEPA Filter.

MPPS: Most Penetrating Particle Size

Gasket of 5mm thickness are provided downstream of filters. Optional both sides gaskets can be requested.

## Technical Data

### Filter Media

Water-Repellant Micro Fibreglass Paper

### Enclosing Frame

Aluminium (Al)

Option: Galvanised Steel (Gi), MDF (Wood),  
Stainless Steel 304 (SS304)

### Separator

Aluminium

### Sealant

Hotmelt / Epoxy

### Gasket

Rubber

Continuous Operating Temperature 80°C  
Relative Humidity 90%  
Recommended Final Pressure Drop 500 Pa  
Maximum Final Pressure Drop 650 Pa

## Dimensions

Actual Size L x W x D  in mm	Rated Air Flow m <sup>3</sup> /h		Media Area m <sup>2</sup>		Nett Weight	Packing per carton
	Standard Cap 0.78 m/s	High Cap 1.25 m/s	Standard Cap 0.78 m	High Cap 1.25 m/s	kg	
305 x 305 x 150	250	405	2.1	3.2	4.6	8
305 x 610 x 150	500	810	4.3	6.5	8.2	4
610 x 610 x 150	1000	1620	8.6	13.1	9.3	2
1220 x 610 x 150	2000	3240	17.2	26.2	12.3	1

Actual Size	Standard Cap 1.4 m/s	High Cap 2.5 m/s	Standard Cap 1.4 m	High Cap 2.5 m/s	Nett Weight	Per carton
305 x 305 x 292	470	850	4.2	6.5	4.6	4
305 x 610 x 292	945	1700	8.5	13.0	8.2	2
610 x 610 x 292	1890	3400	17.0	26.1	9.3	1

Other sizes can be customised, rated airflow in proportional to face area of 610x610.

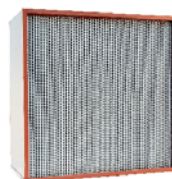
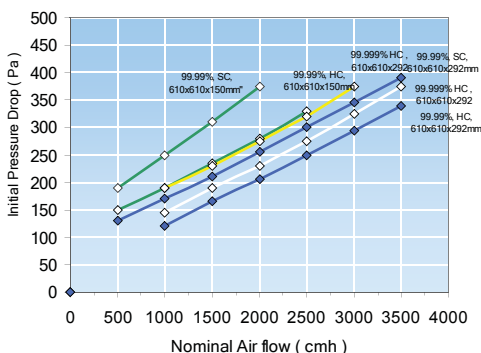
Standards for Reference

IES RP-CC-001.3 Type C PAO/PSL Testing 99.99% at 0.3um

- EN1822-5 for Classes H12, H13 and H14
- IES RP-CC-001.3 for TYPE A/B/C/D

Each single filter media roll used in production is systematically tested in accordance with standard EN 1822-3.

In accordance to Recommended Practice IES RP-CC-001, at the end of the production, individual filter element is tested by using non-toxic aerosol of PAO/ polystyrene latex spheres (PSL) challenge and leak scanned by using photometer. Filter Efficiencies or penetrations are determined by measuring upstream and downstream concentration. For EN1822-4, the test is carried out with a mono-dispersed Emery/ PSL aerosol to determine the local efficiency. The pressure loss is also determined. The filter test results are recorded on labels and affixed onto the HEPA filter.



High Temperature (HT) models up to 250°C can be requested. The filter comes with Stainless Steel 304 Frame with High Temperature Silicone as sealant and gaskets