

# Absolute (HEPA) Filters E10, H12, H14 to EN 1822



## Applications

Absolute (HEPA) filters are used in a wide range of applications such as clean rooms, operating theatres, research facilities, the electronic and micro-electronic industries, nuclear and pharmaceutical industries and high speed turbines.

Clean Rooms tend to employ the narrow 146mm deep filter and utilise a lower face velocity in accordance with the relevant clean room standard requirements, thus providing a laminar air flow either across the work area or across the complete room depending upon the application.

## Construction

The filtration medium is provided by microfine glass fibres formed into a paper-like surface, supplied in various grades depending upon filtration efficiency required. The filter paper is formed into a close pleated package to provide a large surface area. Spacers of aluminium or hot melt are inserted between each pleat to provide support for the pleat and maximise the surface of the filtration medium.

## Selection of Filter Construction °C:

**Spacers:** Aluminium spacers (up to 250°C and 100% RH for aluminium spacers).

**Casings:** For temperatures up to 120°C chipboard. For temperatures above 120°C galvanised or zintec steel casings (up to 250°C)

**Sealants:** Standard Urethane Sealant is suitable for temperatures up to 120°C. Temperatures above 80°C and up to 250°C use a 2 part silicone.

**Gasket:** Filter gaskets are closed cellular polyethylene with sealed butt joints at corners usually 20mm x 6mm.

**Filter Paper:** Filter paper used is water repellent (i.e. suitable For 100% RH but no free moisture).

## Technical Information

Grade	Overall Efficiency	Local Value Efficiency	Suggested for ISO 14644:1999
E11	95%	–	–
H12	99.5%	–	ISO Class 8
H13	99.95%	99.75%	ISO Class 6
H14	99.995%	99.975%	ISO Class 5
U15	99.9995%	99.9975%	ISO Class 4

## Airflow Capacities for Grade E11 to EN1822

Size			Rated	
H mm	W mm	D mm	Flow (m3/s)	Pressure (Pa)
609	609	292	0.47	150
305	609	292	0.23	150
593	593	292	0.45	150
288	593	292	0.21	150

# Absolute (HEPA) Filters (Continued)



## Airflow Capacities Standard Flow Grade H12 – H14 to EN1822

Size			Rated	
H mm	W mm	D mm	Flow (m3/s)	Pressure (Pa)
508	508	75	0.12	200
609	609	75	0.17	200
609	762	75	0.21	200
609	918	75	0.25	200
609	1220	75	0.34	200
609	1524	75	0.42	200
609	1828	75	0.15	200
762	762	75	0.27	200
762	918	75	0.32	200
762	1220	75	0.42	200
762	1524	75	0.53	200
762	1828	75	0.64	200
305	305	146	0.06	250
457	457	146	0.10	250
508	508	146	0.16	250
609	609	146	0.24	250
609	762	146	0.30	250
609	918	146	0.35	250
609	1220	146	0.47	250
609	1524	146	0.59	250
609	1828	146	0.71	250
762	762	146	0.37	250
762	918	146	0.44	250
762	1220	146	0.59	250
762	1524	146	0.74	250
762	1828	146	0.89	250
918	918	146	0.53	250
918	1220	146	0.71	250
918	1524	146	0.89	250
918	1828	146	1.06	250
305	305	292	0.12	250
457	457	292	0.27	250
508	508	292	0.33	250
609	609	292	0.45	250
609	762	292	0.59	250
609	918	292	0.71	250
609	1220	292	0.94	250

## Airflow Capacities High Capacity Grade H12 – H14 to EN1822

Size			Rated	
H mm	W mm	D mm	Flow (m3/s)	Pressure (Pa)
609	609	146	0.40	280
609	762	146	0.50	280
609	918	146	0.60	280
609	1220	146	0.80	280
609	1524	146	1.00	280
609	1828	146	1.20	280
762	762	146	0.63	280
762	918	146	0.75	280
762	1220	146	1.00	280
762	1524	146	1.25	280
762	1828	146	1.50	280
918	918	146	0.90	280
918	1220	146	1.20	280
918	1524	146	1.50	280
918	1828	146	1.80	280
305	305	292	0.20	280
457	457	292	0.45	280
508	508	292	0.56	280
609	609	292	0.80	280
609	762	292	1.00	280
609	918	292	1.20	280
609	1220	292	1.61	280

**Notes:**

75mm deep are fitted with 1 x 6mm gasket on clean face, filters giving an 81mm deep filter  
 146mm deep filters are fitted with 1 x 6mm gasket on clean face, giving an 152mm deep filter  
 292mm deep filters are fitted with 1 x 6mm gasket on clean face, giving an 298mm deep filter  
 Non Standard sizes are also available