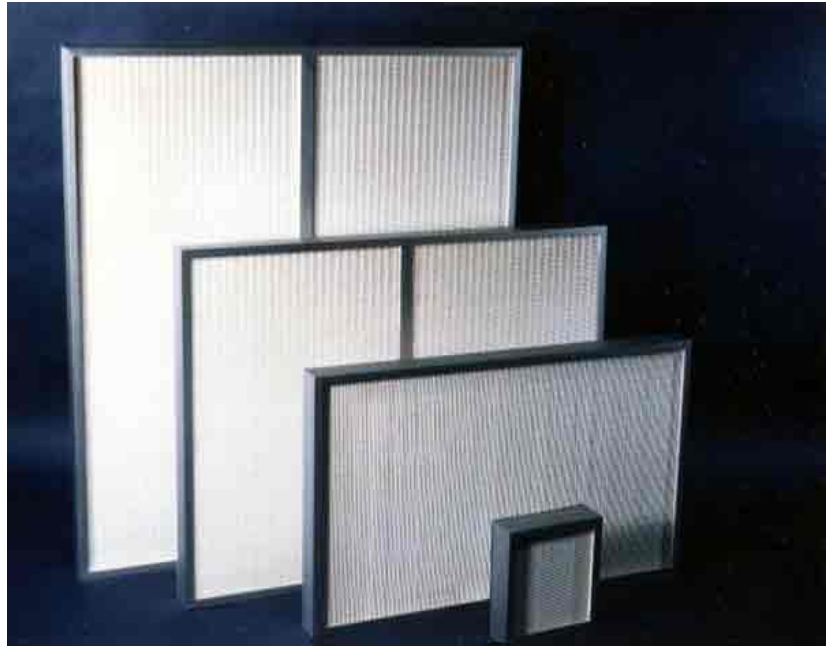


HEPA Filters (High Efficiency Particulate Air)

Features

- Standard and high-capacity design
- Available in 99.97%, 99.99%, and 99.999% (ULPA)
- Multiple cell options
- Frame options, steel or stainless steel
- Gasket or gel seal
- High capacity design
- High temperature
- Individually tested



HEPA/ULPA Filters

Each HEPA has a minimum efficiency of 99.97% on 0.3 micron particles. ULPA filters are also available.

Scan Testing

Each filter is tested in accord with IEST guidelines.

HEPA Housings

Flanged, ducted enclosures to allow installation of HEPAs into your specialized design.



HEPA Filters



Application

Filters are extensively used in industries where particulate free or sterile air is required. Certain production processes demand the clean air that HEPA filters provide. Applications range from filtration systems for factory, office and hospital air systems, as well as assembly areas where precision parts are assembled. These include aerospace, microelectronics, research and photo process laboratories. Food and beverage processing plants and pharmaceutical packaging systems are prime users of clean air systems. The applications are many and diverse depending on the contamination control required. Halco provides a broad range of HEPA filters manufactured to strict tolerances and from various materials.

Description

The HEPA (High Efficiency Particulate Air) filter is designed and constructed from one continuous sheet of glass microfiber paper. This accordion folded media is kept separated by corrugated aluminum. The separation allows filtered air to pass through with a minimum of resistance while providing a maximum filter surface. HEPA filters feature low initial resistance with high dust holding capacities, resulting in longer filter life with lower maintenance costs.

A frame surrounds the filter pack. Frames can be wood, steel, stainless, or optional materials. Special adhesive bonds the pack to the rigid frame forming a positive seal. Gasketing is positioned on the frame, either upstream or downstream, to provide an additional seal when the filter is installed. Seals can be either neoprene gasketing or gel seals for higher resistance to penetration.

All filters with an efficiency of 99.97% or higher are tested to meet or exceed ISO standards. Therefore, every filter with a minimum efficiency of 99.97% is guaranteed to be efficient in removing particles 0.3 microns in size or larger.

Design & Construction

HALCO filters are available in various frame materials.

- 16, 18, or 24 Ga. Galvanized Steel
- .063 Ga. Aluminum (Anodized)
- 16 Ga. 304, 316, or 321 Stainless Steel
- Other special materials

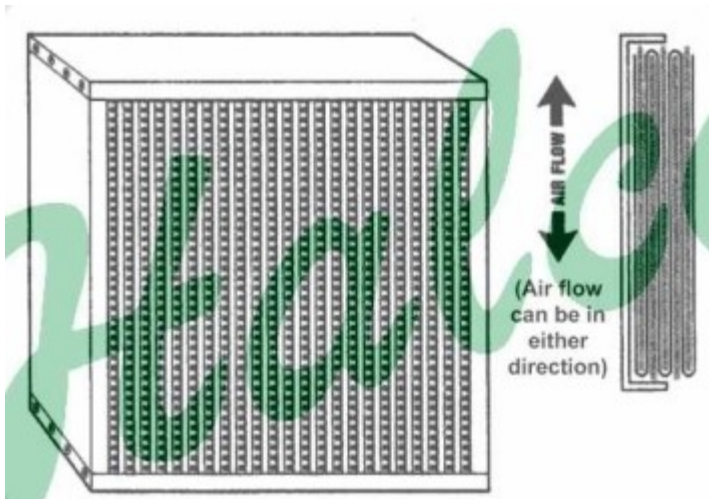
Each filter is manufactured to provide a rigid enclosure for the filter pack. Metal frames consisting of aluminum, galvanized steel, or stainless steel are available also where corrosion or temperature limits exceed those applicable for the standard particle board frames.

Separators

HEPAs can be provided with separator-less minipleat design or media separators with corrugated aluminum. A single aluminum separator is placed between each pleated sheet of media. These closely spaced separators prevent the paper from squeezing together restricting airflow and filtration. What they do is provide the media with the largest possible filtering surface allowing air to pass through with a minimum of resistance.



*SEPERATOR-LESS DESIGN ALSO AVAILABLE



Media

Each filter is constructed from one continuous sheet of highly efficient glass microfiber paper. These special efficient all glass waterproof materials represent the latest media improvements that optimize efficiency, pressure drop and tensile strength.

Adhesive/Sealant

The standard sealant utilized is Fire-Retardant adhesive. This fluid sealant when dry, hardens, providing a positive seal between filter pack and rigid frame.

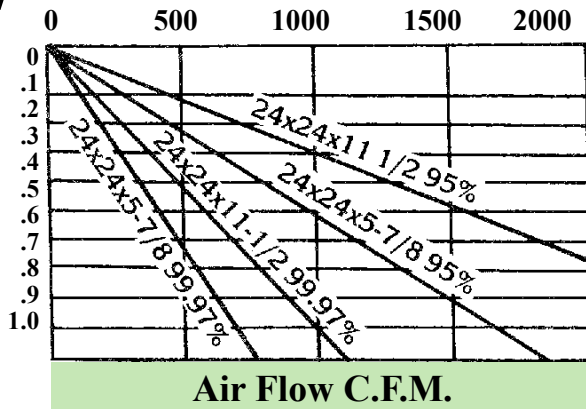
Gaskets

All standard (HEPA) filters are equipped with sponge neoprene gaskets. Placement is on the downstream (optional upstream or both) side of the filter unless otherwise specified. If gasketing is required on both the upstream and downstream side, it must be so indicated when ordered.



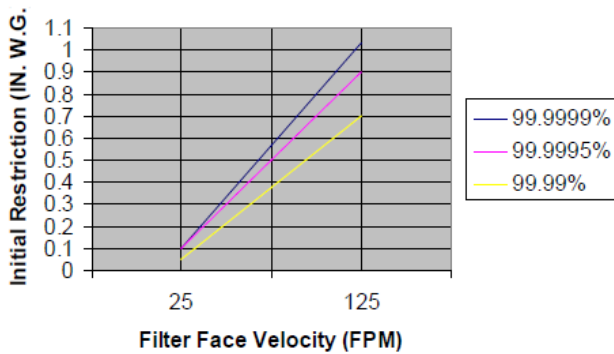
Initial Resistance vs. Air Flow

Pressure Drop
Inches W.G.



Air Flow C.F.M.

Initial Restriction vs. Face Velocity



PSL Testing

The polystyrene latex spheres (PSL) aerosol test is the most precise dust count procedure used to test our filters. The PSL aerosol generator is specially controlled to generate smoke particles of 0.3 micron size. All HEPA filters are individually tested using this PSL method. This assures you of a filter that is 99.97% efficient on particles of 0.3 microns in size or larger. For higher efficiency filters of 99.99% or 99.999% a scanning technique (sometimes called probing) is utilized to supplement the overall PSL testing. Both 5-7/8" and 11-1/2" deep filters have a clean filter resistance of 1.0 (or lower) inches of water when operated at rated air flow.

Temperature & Humidity Limits

The physical properties of the materials during continuous duty are rated up to 250 degrees Fahrenheit with humidity up to 100% RH. Certain applications may require other materials of construction such as special metal frames and glass mat packing. This can increase the temperature limits up to 800 degrees Fahrenheit. It is suggested that for special construction other than the standard specifications the factory should be consulted for more information.

Size & Dimensions

HALCO offers over 90 standard sizes in seven different efficiencies. If you are unable to find a standard size to meet your requirements, custom or odd size filters can be constructed. Our filters are listed with the height (vertical) dimension first. This is the direction in which the media and separators run. Overall dimensions shall be correct within $-1/8" + 0"$, squareness shall be within $1/8"$. This is to avoid unnecessary problems during installation in benches or frames that might be slightly undersized. If you require filters of a special dimension, please note the difference on your order so provisions can be made to meet your specifications.

Filter Certification & Testing Service

We offer a complete service to test and certify laminar flow equipment. You will be issued a certification once your equipment has been thoroughly tested and meets with ISO #14644-1 (001.3). A Preventive Maintenance Test Program may be the best solution to assure you that your equipment is functioning to its capabilities and eliminate costly down time for malfunctioning systems. Call or write for more information concerning this service.

MODEL NUMBERS & SIZES



99.97%	MODEL NO.	SIZE HXWXD	WEIGHT	CUBIC FEET PER MINUTE (CFM)
	H-88A	8x8x5-7/8	4	78
	H-1212A	12x12x5-7/8	8	175
	H-1224A	12x24x5-7/8	12	350
	H-1818A	18x18x5-7/8	17	395
	H-1824A	18x24x5-7/8	22	525
	H-1836A	18x36x5-7/8	32	788
	H-2323A	23-3/8x23-3/8x5-7/8	23	664
	H-2424A	24x24x5-7/8	23	700
	H-2430A	24x30x5-7/8	30	875
	H-2436A	24x36x5-7/8	32	1050
	H-2448A	24x48x5-7/8	35	1400
	I-i-2460A	24x60x5-7/8	38	1750
	H-2472A	24x72x5-7/8	43	2100
	H-3024A	30x24x5-7/8	30	875
	H-3030A	30x30x5-7/8	33	1094
	H-3036A	30x36x5-7/8	36	1312
	H-3048A	30x48x5-7/8	41	1750
	H-3060A	30x60x5-7/8	45	2187
	H-3072A	30x72x5-7/8	50	2625
	H-3624A	36x24x5-7/8	32	1050
	H-3630A	36x30x5-7/8	36	1312
	H-3636A	36x36x5-7/8	40	1575
	H-3648A	36x48x5-7/8	46	2100
	H-3660A	36x60x5-7/8	53	2625
	H-3672A	36x72x5-7/8	60	3150
	H-1212B	12x12x11-1/2	16	275
	H-1224B	12x24x11-1/2	25	550
	H-1824B	18x24x11-1/2	30	825
	H-2323B	23-3/8x23-3/8x11-1/2	40	1044
	H-2424B	24x24x11-1/2	40	1100
	H-2430B	24x30x11-1/2	46	1375
	H-2436B	24x36x11-1/2	52	1650
	H-3024B	30x24x11-1/2	46	1375

5 7/8 deep @ rated flow = 1.0" W.G. 11 1/2 deep @ rated flow = 1.0" W.G.

95%	MODEL NO.	SIZE HXWXD	WEIGHT	CUBIC FEET PER MINUTE (CFM)
	M-88A	8x8x5-7/8	4	133
	M-1212A	12x12x5-7/8	8	300
	M-1224A	12x24x5-7/8	12	600
	M-2323A	23-3/8x23-3/8x5-7/8	23	1200
	M-2424A	24x24x5-7/8	23	1200
	M-2430A	24x30x5-7/8	30	1500
	M-2436A	24x36x5-7/8	32	1800
	M-2448A	24x48x5-7/8	35	2400
	M-1212B	12x12x11-1/2	15	500
	M-1224B	12x24x11-1/2	25	1000
	M-2323B	23-3/8x23-3/8x11-1/2	40	2000
	M-2424B	24x24x11-1/2	40	2000
	M-2430B	24x30x11-1/2	46	2500

5 7/8 deep @ rated flow = .65" W.G. 11 1/2 deep @ rated flow = .65" W.G.



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