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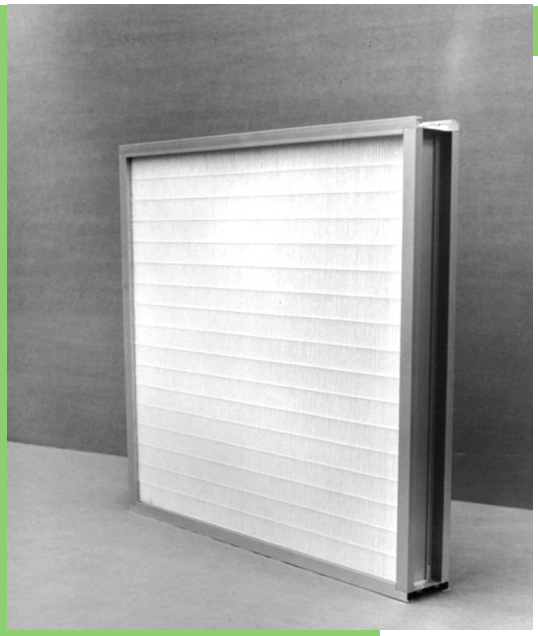
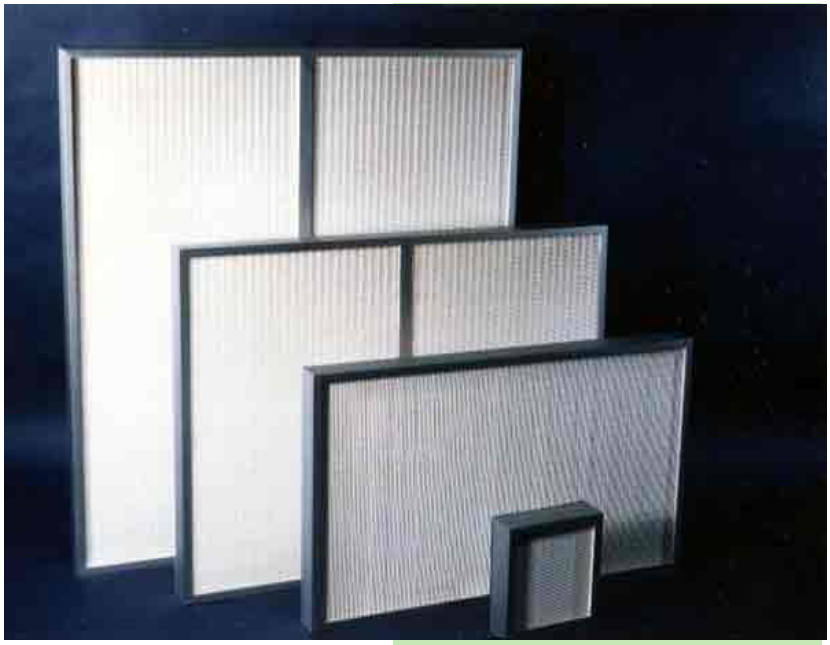
HALCO PRODUCT INFORMATION
400.1000

HEPA Filters
(High Efficiency Particulate Air)

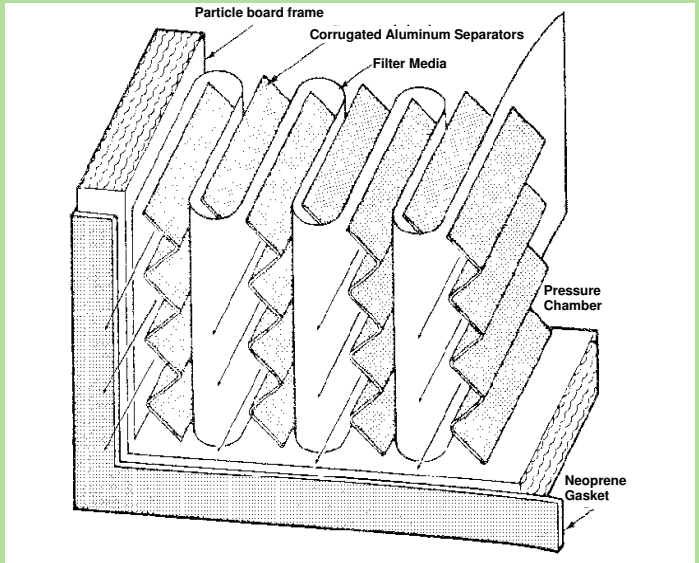




HEPA Filters

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 photoprocess 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. We provide the lower prefilter and factory systems or the medium and high efficiencies for Laminar Flow Benches and Clean Rooms.



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 particle board frame surrounds the filter pack. Special rubber base adhesive bonds the pack to the rigid frame forming a positive seal. Neoprene sponge gasket is positioned on the frame to provide an additional seal when the filter is installed.

All filters with an efficiency of 99.97% or higher are tested to meet or exceed Federal Standard 209E/ ISO. 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 by PSL smoke test.

Design & Construction

HALCO filters are standardized on particle board framing. Each filter is dadoed, glued and stapled to provide a rigid enclosure for the filter pack. Fire retardant particle board frames are available when specified. 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

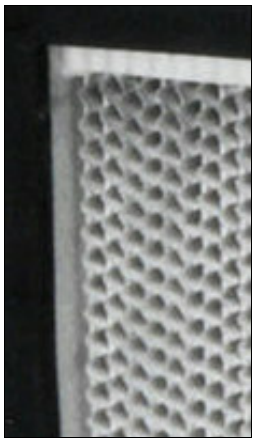
Media separators are corrugated aluminum. A single aluminum separator is placed between each pleated sheet of media. These closely spaced separators prevent the paper from squeezing together restricting airflow and filtration. What they do is provide the media with the largest possible filtering surface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

***SEPERATOR-LESS DESIGN ALSO AVAILABLE**

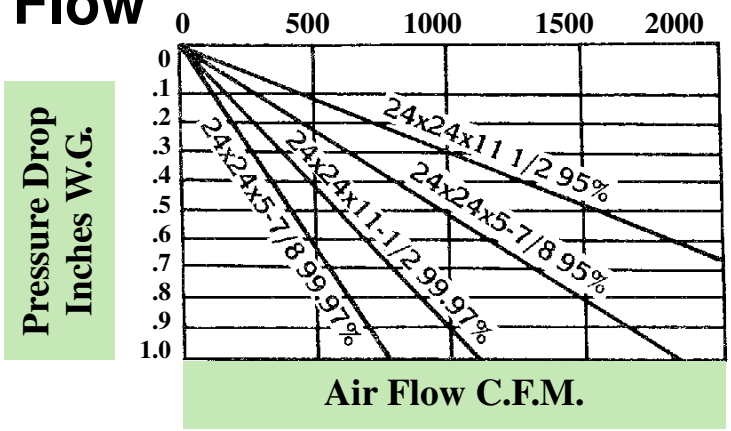
Media
Each filter is constructed from one continuous sheet of highly efficient glass microfiber paper. These special efficient all glass waterproof materials represent the latest media improvements that optimize efficiency, pressure drop and tensile strength.

Adhesive/Sealant
The standard sealant utilized is Fire-Retardant rubber base 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 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



PSL Testing
The polystyrene latex spheres (PSL) smoke test is the most precise dust count procedure used to test our filters. The PSL smoke 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 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. It 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 IES #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	8x8x5-7/5	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%

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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