



For over 30 years the KETCHaire Filter has been recognized regionally for its premium high efficiency multi-pleat and disposable panel air filtration products and its support of the ASHRAE Standard 52.2 industrial air quality standards for most HVAC application. Our primary filtration products are currently installed in over 250 governmental, educational, commercial, medical and industrial accounts.

Our new pleated filters contain 100% synthetic fiber media to ensure efficiency and high dust-holding capacity while effectively eliminating bacteria growth. The media is laminated to a galvanized metal that stabilizes the media during system operation. The pleats are formed in a radial configuration to ensure proper dust-loading while providing maximum surface area to capture microscopic particles. The standard pleated filter is bonded into a two-piece heavy-duty beverage board die-cut frame that creates a double-wall thickness around the filter and prevents air bypass. All pleated filters are available in 1", 2" and 4" standard sizes and 1" & 2" custom sizes. The KETCHaire Pleated filter media has achieved a consistent MERV 8, 11 and 13 rating per the ASHREA 52.2 Test Standards.

The new KETCHaire high performance fiberglass MERV 7 filter line is available in both 1" and 2" standard and custom sizes. The media is enclosed in a two-piece heavy duty beverage board die-cut frame that creates a double-wall thickness around the filter. The double wall construction forms rugged, durable filter which will not warp, delaminate or leak under normal operating conditions. The Ketchaire fiberglass filter media has achieved a consistent MERV 7 rating per the ASHREA 52.2 Test Standards.

### Filter efficiency: MERV Performance Evaluation

Available MERV Values	1.0 – 3.0 microns	0.3 – 1.0 microns	3.0 – 10.0 microns	Typical particles trapped by filter
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#### Most commercial applications and better residential buildings

MERV 7 (fiberglass)			50% - 69%	Pollen, dust mites, standing dust, spray paint dust, carpet fiber, mold spores, hair spray, fabric protector and cement dust
MERV 8 (Multi-pleat)			70% - 85%	

#### Superior residential buildings and better commercial building

MERV 11		65% - 79%	85% or better	Humidifier dust, lead dust, auto emissions, milled flour
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#### Hospital inpatient and general surgery and superior level commercial building

MERV 13	Less than 75%	90% or better	85% or better	Bacteria, most tobacco smoke, droplet nuclei (sneeze)
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# KETCHaire MERV 8

## *MERV 8 Extended Surface Pleated Panel Filters with Mechanical Media*

Upgrade from standard pleated filters

MERV 8 performance ratings

Mechanical MERV 8 media is not reliant on electrostatic charge for efficiency

Low resistance to airflow

High Dust Holding Capacity

Sturdy double-wall frame design

Moisture resistant beverage board frame

Standard and High Capacity models

Available in 1", 2", and 4" depths

### KETCHaire Mechanical MERV 8 Extended Surface Pleated Panel Filters

The KETCHaire MERV 8 is a medium efficiency extended surface pleated panel filter, engineered to provide higher initial efficiencies and overall superior performance than standard pleated filters.

The KETCHaire carries a MERV 8 performance rating in accordance with ASHRAE Test Standard 52.2-2007. The performance rating provided by the KETCHaire MERV 8 make the filter an excellent upgrade from disposable filters and standard MERV 6 and 7 rated pleated filters. The KETCHaire MERV 8 is the best selection in applications such as hospitals, laboratories, pharmaceutical plants, commercial office buildings, and in any system in which a higher degree of indoor air quality is required.

### **KETCHaire MERV 8 Construction**

The Pre-Pleat 8 media is produced with an optimal blend of highly specialized fibers, developed specifically for use in extended surface air filters. Developed to deliver a “one of a kind” performance, this specialized media operates on mechanical filtration principles which provide high efficiency, low pressure drop and high dust holding capacity. The KETCHaire MERV 8 maintains a MERV 8 performance rating before and after conditioning steps when tested in accordance to ASHRAE Test Standard 52.2-2007 and 52.2-2007 Appendix J.

### **Standard Capacity**

Standard Capacity 15 pleat filters provide a combination of efficiency, economy, and excellent overall performance. Standard Capacity KETCHaire MERV 8 filters are an excellent choice in applications where filter change schedules are based on preventive maintenance schedules.

### **High Capacity**

High Capacity KETCHaire 20 pleat is 30% more media. High Capacity filters are similar in construction to the Standard Capacity but have the added advantage of approximately 30% more media. The additional media results in extended filter life, making the KETCHaire-HC the ideal filter for use in filtration systems where filter change schedules are predicated on recommended final pressure drop readings.

# KETCHaire MERV 11

## *MERV 11 Extended Surface Pleated Panel Filters*

- Upgrade from standard pleated filters
- MERV 11 efficiency rating
- Dual-layered filter media
- Low pressure drop
- Superior efficiency
- High dust holding capacity
- Available in 1", 2", and 4" depths

The KETCHaire MERV 11 is a medium efficiency extended surface pleated panel filter, engineered to provide higher initial efficiencies and better overall performance than standard pleated filters.

The KETCHaire carries a MERV 11 fractional efficiency rating in accordance with ASHRAE Test Standard 52.2. The filter will also provide an Initial Dust Spot Efficiency of 45%, and an Average Dust Spot Efficiency of 55-60% in accordance with ASHRAE Test Standard 52.1. The MERV 11 efficiency ratings provided by the KETCHaire make the filter an excellent upgrade from disposable filters and ordinary pleated filters in applications such as hospitals, laboratories and pharmaceutical plants, commercial office buildings, and in any system in which a higher degree of clean air is required.

### **KETCHaire MERV 11 Construction**

The KETCHaire MERV 11 is produced with a highly specialized dual layered 100% synthetic media, developed specifically for use in extended surface air filters. The new media is composed of an upstream electrostatic enhanced layer (the E-Layer), and a downstream mechanical layer (the M-Layer).

### **Standard Capacity**

Standard Capacity 15 pleat filters provide a combination of efficiency, economy, and excellent overall performance. Standard Capacity KETCHaire MERV 11 filters are an excellent choice in applications where filter change schedules are based on preventive maintenance schedules.

### **High Capacity**

High Capacity KETCHaire 20 pleat is 30% more media. High Capacity filters are similar in construction to the Standard Capacity but have the added advantage of approximately 30% more media. The additional media results in extended filter life, making the KETCHaire-HC the ideal filter for use in filtration systems where filter change schedules are predicated on recommended final pressure drop readings.

# KETCH Environmental 13

## *MERV 13 Extended Surface Panel Filters*

MERV 13 performance rating in accordance with ASHRAE Test Standard 52.2-2007

Earns LEED points

Reduces energy cost

Extended filter lifecycle

Conserves resources

Improves indoor environmental quality

Available in 1", 2" and 4"

***The KETCH Environmental 13 is a high efficiency extended surface pleated panel filter, engineered to provide higher initial efficiencies than standard pleated filters.***

The Environmental 13 is a sustainable component of green building development. By virtue of its MERV 13 performance rating, the Green 13 can earn points toward LEED certification in the US Green Building Council's Green Building Rating System. (LEED is Leadership in Energy and Environmental Design, an integral part of the rating system).

The MERV 13 performance ratings provided by the Environmental 13 make the filter an excellent upgrade from disposable filters and ordinary pleated filters in applications such as hospitals, laboratories and pharmaceutical plants, commercial office buildings, and in any system in which a higher degree of clean air is required.

# KETCHaire Fiberglass & PolyStrand filters

## *MERV 7 & MERV 6 disposable Panel Filters*

MERV 7 fiberglass and MERV 6 poly filter performance ratings are in accordance with ASHRAE Test Standard 52.2-2007

Designed for full depth loading and high dust holding capacity to ensure filtration capability and prevent migration of finer particles. The filter media has a skin backing on the downstream side to block transition of particles into the HVAC system.

Progressive density glass or poly filter media

Durable frame and support

Special Sizes Available

KETCH Commercial & Industrial Disposable Panels are economical air filters designed for light-to-medium duty air filtration applications. KETCHaire Disposables are constructed for high performance and durability:

## **KETCHaire Fiberglass and Poly Construction**

*KETCHaire Disposables are constructed for high performance and durability:*

Fiberglass Media – Standard Disposables are constructed with high grade progressively dense glass fibers. The air entry side is composed of open coarse fibers, while the air exit side is made up of tighter fibers. This dual density media configuration allows for proper depth loading and full utilization of the filter media. Each fiber is coated with a non-migrating adhesive to enhance filter performance.

PolyStrand® Media – Disposables are also available with optional polyester filter media, a dual-layered high performance media for applications where synthetic filter media is specified.

Sturdy One-Piece Frame – The KETCH Disposable utilizes a one-piece moisture-resistant craft board frame for strength and ease of installation.

Compound K™ Adhesive – A thermoplastic sealant is used to bond the filter media to the frame on both the upstream and downstream sides of the filter.

KETCHaire Disposable Panel Filters are available in special sizes.

## **Synthetic Air Filter Media**

*A complete line of pads, blankets and bulk rolls*

KETCH offers pads and bulk rolls of Synthetic Air Filter Media for use in air filtration systems of all types. KETCHaire Synthetic Air Filter Media is primarily used as a prefilter for more expensive final filters, often extending the life-cycle of these final filters by 50% or more. Other popular applications include gas turbine air intake systems, commercial/ industrial central air handlers, unit ventilators, fan coil units, or any system where fiberglass or other filtering materials are not preferred.

## **ASHREA filter operations recommendations**

MERV stands for Minimum Efficiency Reporting Value. It is a number from a test method designed by the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE). The number is intended to help people compare filters. Generally speaking, a higher MERV rating indicates better filter performance.

The recommended filter change interval is three months under normal conditions. However, the effectiveness and life of the filter can vary and will depend on the individual conditions in your home. Unusually dirty duct work, construction work, sanding projects, the number of pets, the presence of smokers, burning candles, and running the fan continuously are some of the things that can shorten the life of your filter.

## **Green Product Facts**

- All filter media including Pleated, Polyester Pad and Fiberglass lines are made of 100% remanufacture/recycled materials
- All beverage board frames are composed of recycled paper pulp
- All custom chip board frames are composed of recycled paper pulp
- All expanded metal is composed of remanufactured galvanized steel.
- Bottle cap reinforcement sheet are made from recycled steel by product.
- All packing boxes are composed of recycled paper pulp
- All screen printing inks are composed of biodegradable pigments and palmers

# KETCHaire Standard & Custom Filter Sizes

Size (Nominal)	Size (Actual in Inches)	Carton Quantity
10 X 10 X 1	9 3/4 x 9 3/4 x 3/4	50
16 X 20 X 1	15 1/2 x 19 1/2 x 3/4	12
16 X 25 X 1	15 1/2 x 24 1/2 x 3/4	12
20 X 20 X 1	19 1/2 x 19 1/2 x 3/4	12
20 X 25 X 1	19 1/2 x 24 1/2 x 3/4	12
24 X 24 X 1	23 3/8 x 23 3/8 x 3/4	12
10 X 20 X 1	9 1/2 x 19 1/2 x 3/4	25
12 X 24 X 1	11 3/8 x 23 3/8 x 3/4	24
14 X 20 X 1	13 3/4 x 19 3/4 x 3/4	12
14 X 24 X 1	13 3/8 x 23 3/8 x 3/4	12
15 X 20 X 1	14 3/4 x 19 3/4 x 3/4	12
25 X 25 X 1	24 3/4 x 24 3/4 x 3/4	12
12 X 24 X 2	11 3/8 x 23 3/8 x 1 3/4	24
15 X 20 X 2	14 3/4 x 19 3/4 x 1 3/4	12
16 X 20 X 2	15 1/2 x 19 1/2 x 1 3/4	12
16 X 25 X 2	15 1/2 x 24 1/2 x 1 3/4	12
20 X 20 X 2	19 1/2 x 19 1/2 x 1 3/4	12
20 X 25 X 2	19 1/2 x 24 1/2 x 1 3/4	12
24 X 24 X 2	23 3/8 x 23 3/8 x 1 3/4	12
18 X 24 X 2	17 3/8 x 23 3/8 x 1 3/4	12
20 X 24 X 2	19 3/8 x 23 3/8 x 1 3/4	12
25 X 25 X 2	24 3/4 x 24 3/4 x 1 3/4	12
12 X 24 X 4	11 3/8 x 23 3/8 x 3 5/8	6
16 X 20 X 4	15 1/2 x 19 1/2 x 3 5/8	6
16 X 25 X 4	15 1/2 x 24 1/2 x 3 5/8	6
18 X 24 X 4	17 3/8 x 23 3/8 x 3 5/8	6
20 X 20 X 4	19 1/2 x 19 1/2 x 3 5/8	6
20 X 24 X 4	19 3/8 x 23 3/8 x 3 5/8	6
20 X 25 X 4	19 1/2 x 24 1/2 x 3 5/8	6
24 X 24 X 4	23 3/8 x 23 3/8 x 3 5/8	6
CUSTOM	1 - 144sq in x 1"	12
CUSTOM	145 - 288sq in x 1"	12
CUSTOM	289 - 432sq in x 1"	12
CUSTOM	433 - 576sq in x 1"	12
CUSTOM	577 - 775sq in x 1"	12
CUSTOM	1 - 144sq in x 2"	12
CUSTOM	145 - 288sq in x 2"	12
CUSTOM	289 - 432sq in x 2"	12
CUSTOM	433 - 576sq in x 2"	12
CUSTOM	577 - 775sq in x 2"	12



## Important Consumer Considerations

MERV 5-16 air filters are used to protect individuals from harmful airborne contaminants that may affect health, productivity and life span. When considering proper air filter selection it is important to keep in mind the environmental and health trends currently shaping air filter selection criteria:

- According to the Center for Disease Control, increases in air pollution have been linked to decreases in lung function and increase in heart attacks ([www.cdc.gov/nceh/airpollution](http://www.cdc.gov/nceh/airpollution)). The Environmental Protection Agency's Air Quality Index states that high levels of air pollution directly affect people with asthma and other types of lung or heart disease, as well as vulnerable populations, such as elderly individuals and children ([www.epa.gov](http://www.epa.gov)).
- In "State of the Air," the American Lung Association note that small particle pollution present a serious health risk because the airborne pollutants can enter deep into the lungs and bloodstream ([www.stateoftheair.org](http://www.stateoftheair.org)). Individuals exposed to small particle pollution are at risk for health problems, while long term exposure is linked to increased rates of respiratory and cardiovascular disease, increased hospitalization rates and death.
- According to the American Lung Association, 1 in 5 Americans live in areas where pollution levels are unhealthy year-round, defined as chronic exposure.
- A long-term study commissioned by the American Cancer Society and published in the Journal of the American Medical Association (Vol.287 No 9 1132-1141) confirmed that for an increase of 10 micrograms per cubic volume in fine particulate air pollution (pm 2.5), the following increases also occur:
  - 4% in mortality rates
  - 6% in cardiopulmonary deaths
  - 8% in lung cancer related deaths