

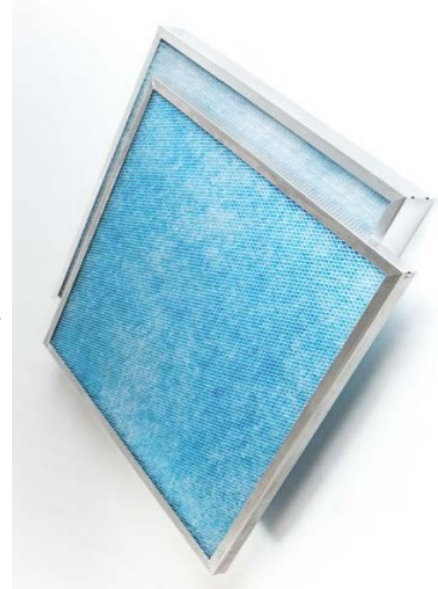


Clean Liquid Systems LLC
20150 Kuykendahl Rd. #200
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Electrostatic Washable Filters

Application:

The ES Series Washable Electrostatic Filter is a permanent washable panel filter designed to replace disposable air filters commonly used in residential, commercial and industrial HVAC applications to remove airborne particulate from the air stream. It uses a “passive electrostatic” media combination which increases its initial efficiency to MERV 6. A polypropylene media generates an electrostatic charge as air passes through it, and airborne pollutants such as dust, pollen, mold, bacteria and lint particles are held in place until washed away. Corner drain holes prevent water and detergent from pooling when cleaning and, therefore, facilitate faster drying time. The ES Series is an ideal permanent filter solution for home and commercial heating, cooling and ventilation systems. Filter will also work for coalescing applications



Construction:

The ES Series uses a mill-finished aluminum frame to enclose an electrostatic media pack. The media pack includes one layer of polyester media and one layer of polypropylene between two expanded metal face guards. The pack is made to fit firmly inside the frame giving the filter exceptional strength and durability. The frame is made with mitered corners and is secured with rivets. The frame has drain holes in three corners.

Filter Cleaning

1. The ES Series should be cleaned every 30 days, or as often as necessary to maximize effectiveness. As with any filter, as dust loads its efficiency diminishes and air resistance increases, so a well maintained filter will last longer and cost less.
2. To clean a dirty filter, rinse it with a moderate-to-heavy stream of warm water in the opposite direction of the airflow. Pre-soaking the filter in a solution of warm water and mild detergent prior to rinsing is acceptable. High-powered steam cleaning or chemical dips are unnecessary and not recommended.

PRODUCT HIGHLIGHTS

- 85% Dust Arrestance
- Washable and Reusable
- Uses Static Electricity
- Low Pressure Drop
- Corner Drain Hole



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SIZING INFORMATION

- What does Nominal mean? Standard size filters are of a nominal dimension. This means the height and width dimensions are undercut by a certain amount. See below for the exact amount of undercut for each dimension.
 - ** Filter Thickness: ½" is exact, nominal 1" (actual 7/8") and nominal 2" (actual 1-3/4").
1. Standard nominal filters are ½" undercut on the height and width dimensions.
 2. Special size filters are made to the exact height and width dimensions provided.
 3. Standard and Special size filters are available in ½" exact, nominal 1" (7/8" actual) and nominal 2" (Actual 1-3/4").
 4. Tolerance height and width: ± 1/8" 5. Tolerance thickness: ± 1/32"

CLASSIFICATION AND TEST NOTES

1. UL Classified 900
2. Rated Airflow: 300 fpm
3. Acceptable Airflow Range: 250 – 350 fpm.
4. Initial Efficiency: MERV 6 at rated airflow
5. Dust Holding Capacity: 23 grams per square foot of face area (HxW)
6. Average Arrestance: 85% at rated air flow
7. Recommended final resistance is 1.00" W.G.
8. Independent test report available for performance details
9. Max Temp : 150 degrees F

INSTALLATION CONSIDERATIONS



1. The ES Series filter may be installed in HVAC systems vertically or horizontally.

ADDITIONAL INFORMATION

1. The ½" exact filter uses an .025" thick aluminum frame.
2. The ½" exact filter is 4-ply.
3. The nominal 1" (actual 7/8") filter is 4-ply.
4. The nominal 2" (actual 1-3/4") filter is 4-ply



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Filter Description			
Generic Filter Type	Electrostatic Panel Filter		
Nominal Dimensions (H x W x D)	24" x 24" x 1"		
Pocket / Pleat Quantity	N/A		
Media Type	Polypropylene and Polyester		
Est. Gross Media Area	4 Ft ²		
Adhesive Type	N/A		
			
Test Conditions			
Loading Dust Type	ASHRAE	Test Air Temp (degrees F.)	74
Barometric Pressure (In. Hg.)	29.62	Relative Humidity (%)	46
Test Results			
Airflow Rate (CFM)			1180
Nominal Face Velocity (fpm)			295
Initial Resistance (In WG)			0.13
Final Resistance (In WG)			0.50
Dust Fed (gms) to Final Resistance			109
E1 (%) Initial Efficiency 0.30 - 1.0 um			4
E2 (%) Initial Efficiency 1.0 - 3.0 um			18
E3 (%) Initial Efficiency 3.0 - 10.0 um			35
Estimated * Minimum Efficiency Reporting Value (MERV)			MERV 6 @ 1180 CFM
* If initial data is minimum			
Comments			
Final Pressure Drop ("w.c.)	<u>0.50" w.c.</u>		
Dust Holding Capacity (gms)	93		
Average Arrestance (%)	85.0		



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