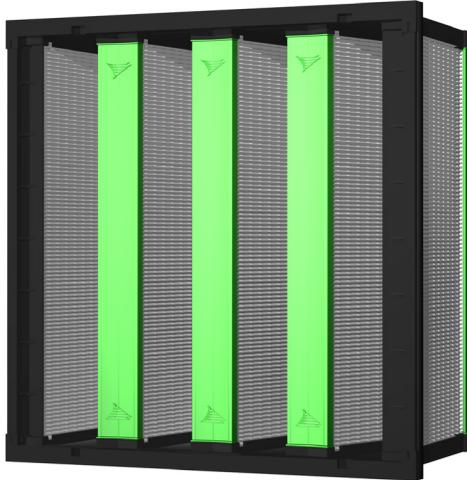




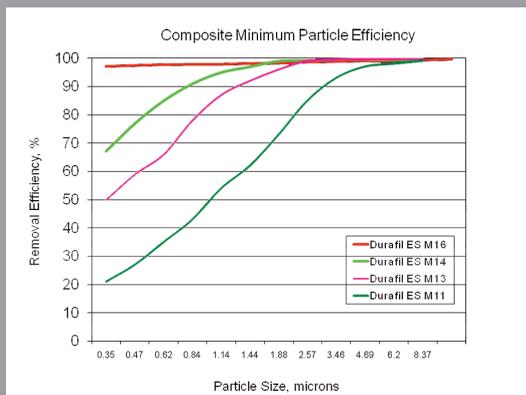
Durafil[®] ES²

High Performance, Best in Class, V-Bank Filter for Reducing Total Energy Consumption

New & Improved



Saves 30-35% more energy than any other V-style filter



The above chart shows relative efficiency values at various particle sizes when tested in accordance with ASHRAE Standard 52.2. When tested in accordance with Appendix J of that Standard the Durafil ES² maintains these efficiency values throughout the life of the filter.

A new generation of Durafil is here. Energy efficiency has been pushed above and beyond anything before. The Durafil has been taken to the next power, with high mechanical particle efficiency per ASHRAE 52.2 standards, delivered in a compact V-Bank design. The Camfil Durafil ES² is the best compact HVAC filter in the world and here are the reasons why:

- A validated and computer optimized pleat-to-height ratio that is integrated into a patented radial air exiting and air entering frame design that offers a 60% larger outlet and 30% larger inlet than any other V-Bank style filter available. The result is the lowest resistance to air flow in the industry providing the greatest energy savings.
- The highest volume of microfine fiber filter media area available for higher dust holding capacity, longer life and lower average pressure drop over the life of the filter to save energy.
- The Durafil ES² media is a proprietary grade of filtration media developed specifically for Camfil.
- Available in four efficiencies: MERV 11, MERV 13, MERV 14 and MERV 16 per ASHRAE 52.2. The Durafil ES² also meets each rated efficiency to MERV-A standards per ASHRAE 52.2 Appendix J. The Durafil ES² is guaranteed to never lose its rated particulate efficiency.
- Includes an integral prefilter spacer section designed to minimize filtration system static pressure when a prefilter is positioned on the face of the Durafil ES². This extends the lives of both the Durafil ES² and the prefilter while also reducing the total system resistance to airflow.
- Design optimized media separators create uniform airflow throughout the media pack reducing pressure drop.
- Includes an impact-resistant ABS plastic enclosing frame with plastic media pack supports ensuring a rigid and durable filter. Bridging supports on each 'V' provide handles for installation and transport and maintains the rigidity of the filter. The frame also has built-in spring fastener attachment locations, prefilter fastener attachment locations and recessed front and back inlet and outlet handles for changing and aligning the filter during installation.
- Includes a one-inch nominal size header as an integral component of the frame for added stability and a secure fit into filter holding mechanism or housing.
- Includes a closed cell polyethelene foam sealing gasket on one vertical header to eliminate air bypass between headers in multiple filter systems.
- Can be installed in systems with airflow capacities to 3,000 cfm. Maximum pressure drop capability is guaranteed to 2.0" w.g.
- Is the lightest weight V-bank filter available.
- Has an ECI¹ value of five stars.

The Durafil ES² has superior performance characteristics relating to human and environmental health, energy efficiency, materials selection and indoor environmental quality make it the final filter of choice for those facilities pursuing green building status.

¹ A 5-Star rating indicates that this filter performs in the top 20% of all products of similar construction in the HVAC industry. Factors of consideration include maintained efficiency, energy usage and resistance to air flow. Detailed evaluation information is available from your Camfil sales outlet or on the web at www.camfil.com.

Performance

ASHRAE Efficiency	Part Number	Nominal Depth (inches)	Nominal Size (H x W) (inches)	Actual Depth (inches)	Actual Dimensions H x W (inches)	Initial Resistance (inches w.g.)	Airflow Capacity (cfm)	Media Area (ft ²)
MERV 16 ^a MERV 16-A ^b	855080-014	12	24 x 24	12.38	23.38 x 23.38	0.60	2000	200
	855080-030		20 x 24		19.38 x 23.38		1500	160
	855080-021		12 x 24		11.38 x 23.38	1000	100	
	855080-188 ^d		20 x 20		19.38 x 19.38	0.80	1250	125
MERV 14 ^a MERV 14-A ^b	855080-009	12	24 x 24	12.38	23.38 x 23.38	0.27	2000	200
	855080-006		20 x 24		19.38 x 23.38		1500	160
	855080-003		12 x 24		11.38 x 23.38	1000	100	
	855080-065 ^d		20 x 20		19.38 x 19.38	0.33	1250	125
MERV 13 ^c MERV 13-A ^b	855080-008	12	24 x 24	12.38	23.38 x 23.38	0.25	2000	200
	855080-005		20 x 24		19.38 x 23.38		1500	160
	855080-002		12 x 24		11.38 x 23.38	1000	100	
	855080-066 ^d		20 x 20		19.38 x 19.38	0.32	1250	125
MERV 11 MERV 11-A ^b	855080-007	12	24 x 24	12.38	23.38 x 23.38	0.21	2000	200
	855080-004		20 x 24		19.38 x 23.38		1500	160
	855080-001		12 x 24		11.38 x 23.38	1000	100	
	855080-063 ^d		20 x 20		19.38 x 19.38	0.27	1250	125

DATA NOTES

- ^a May provide additional LEED credits.
- ^b Discharged efficiency per appendix J of ASHRAE Standard 52.2.
- ^c Minimum efficiency selection for LEED consideration.
- ^d 20" by 20" size does not have spacing plenum for prefilter application, contact factory for prefiltration guidance. 20" by 20" size does not have radial configuration. Airflow may be in either direction. Schedule air filters for change when initial pressure drop has doubled. Final pressure drop should not exceed 1.50" w.g. The Durafil ES² is listed UL 900 by Underwriters Laboratories. Maximum continuous operating temperature 160° F. (79° C.), relative humidity 99%. U.S. Patent No. 6,447,566. Performance tolerance in accordance with ARI Standard 850.

Options: Available with gaskets in any location. Available with dual headers as shown to the right. See Product Sheet 1515B.



1.0 General

- 1.1** - Air filters shall be V-Bank mini-pleat fiberglass disposable type with pleat separators, polyurethane pack-to frame sealant, polystyrene enclosing frame and have an ECI value of five stars.
- 1.2** - Sizes shall be as noted on drawings or other supporting materials.

2.0 Construction

- 2.1** - Filter media shall be of microfibre glass fibers formed into uniform pleats with a spacing of 8 pleats per inch and a uniform pleat height of 24mm. Pleats shall be separated at 25mm intervals to ensure pleat separation and uniform airflow through the filter pack.
- 2.2** - Pleats media packs shall be assembled into a V-bank configuration with sufficient total media area to meet airflow requirements. The filter outlet shall be radial in shape with a maximum of 60% open area to maintain low-pressure drop and uniform airflow (20" by 20" shall be straight V-style design).
- 2.3** - The media packs shall be bonded to the inside periphery of an ABS enclosing frame with a polyurethane sealant. The enclosing frame shall include top and bottom molded tracks as in integral part of the frame to ensure a proper seal.
- 2.4** - Media packs shall be recessed at least 1" from the air entering side of the enclosing frame to allow uniform airflow when a prefilter is mounted directly to the enclosing frame.
- 2.5** - Rigid plastic end caps shall be mechanically fastened to the top and bottom of the media pack enclosing structure to ensure a rigid and durable filter.

- 2.6** - Carrying handles shall be an integral part of the filter frame and shall bridge from media pack to media pack providing additional filter support and filter rigidity. Handles shall include fastener connection locations for the application of spring mounting fasteners when the filter is applied in reverse flow applications. .

3.0 Performance

- 3.1** - The filter shall have a Minimum Efficiency Reporting Value of MERV (11, 13, 14, 16) when evaluated under the guidelines of ASHRAE Standard 52.2. It shall also have a MERV-A rating of (11, 13, 14, 16) when evaluated under ASHRAE Standard 52.2, Appendix J.
- 3.2** - Initial resistance to airflow shall not exceed (0.21, 0.25, 0.27, 0.60) inches w.g. at an airflow of 500 fpm for 24 x 24, 24 x 12 and 24 x 20 sizes. On 20" by 20" respective pressure drops shall be (0.27, 0.32, 0.33, 0.80) inches w.g. at an airflow of 500 fpm.
- 3.3** - Filter shall be listed UL 900 by Underwriters Laboratories.
- 3.4** - Manufacturer shall provide evidence of facility certification to ISO 9001:2008.
- 3.5** - Filter shall have a 5-Star rating when evaluated per Energy Cost Index (ECI).

Supporting Data - Provide product test reports for each listed efficiency including all details as prescribed in ASHRAE Standards 52.2-2007B.

Filters shall be Camfil Durafil ES² or equal.

(Items in parentheses () require selection.

