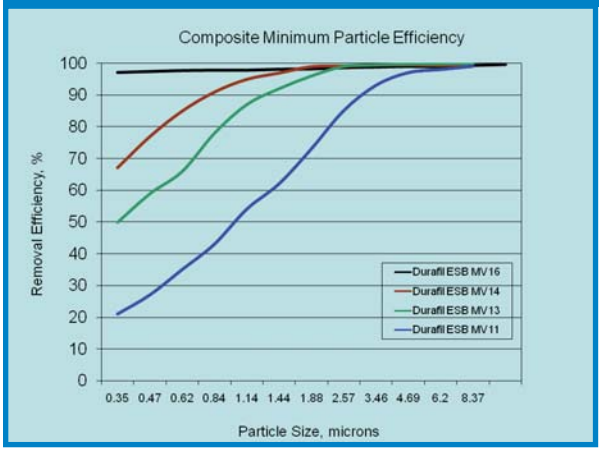
Durafil® ESB

High Efficiency, High Capacity, Energy Saving, Mini-Pleated V-Bank Box Style Air Filter

Saves 20-35% more energy than any other V-bank box style filter



The above chart shows relative efficiency values at various particle sizes when tested in accordance with ASHRAE Standard 52.2-2007. When tested in accordance with Appendix J of that Standard the Durafil ESB maintains these efficiency values throughout the life of the filter.

The Camfil Farr Durafil ESB provides high efficiency ASHRAE air filter performance in a compact energy efficient design. It is specifically designed for front loading built-up filter bank frame installations where a downstream coil may restrict application of other filter types or any other location where a box-style design is required. The Durafil ESB includes:

- A computer optimized pleat-to-height ratio resulting in lower pressure drop and significant 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.
- A special grade of energy saving media with engineered characteristics to reduce pressure drop.
- Is available in four standard efficiencies — MERV 11, MERV 13, MERV 14 and MERV 16 per ASHRAE Standard 52.2-2007. The Durafil ESB has a MERV-A value of 11, 13, 14 or 16 when tested using the conditioning step as specified in Appendix J of the same Standard.
- Includes an integral prefilter spacer section designed to minimize filtration system static pressure when a prefilter is positioned on the face of the Durafil ESB. The lives of the final filter and prefilter are extended and pressure drop is minimized to save energy.
- Includes media separators creating uniform airflow throughout the media pack.
- Incorporates a unique sealant channel ensuring media pack-to-frame bonding to prevent air bypass.
- Includes an impact-resistant plastic enclosing frame with plastic media pack supports ensuring a rigid and durable filter. The frame includes an integral carrying handle to facilitate ease of installation. The frame also has built-in spring fastener attachment locations and prefilter fastener attachment locations.
- Can be installed in systems with airflow capacities to 3,000 cfm. Maximum pressure drop capability is guaranteed to 2.0” w.g. and filter integrity is guaranteed to 10.0” w.g.
- Is the lightest weight V-bank box style air filter available.
- Has an ECI[1] value of five stars.

The Durafil ESB’s 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 Farr sales outlet or on the web at www.camfilfarr.com.

Camfil Farr	Product Sheet
Durafil® ESB	1515B - 0410
Camfil Farr - clean air solutions	

ASHRAE Efficiency	Model	Part Number	Nominal Size (inches) H x W X D	Actual Dimensions (inches) H x W x D	Airflow Capacity (cfm)	Media Area (ft^2)
MERV 16 [a]	DU4V-ESB-11-MV16	855080-171	24 x 24 x 12	23.38 x 23.38 x 12.38	2000	200
MERV 16-A [b]	DU4V-ESB-21-MV16	855080-172	24 x 20 x 12	23.38 x 19.38 x 12.38	1500	160
	DU4V-ESB-51-MV16	855080-173	24 x 12 x 12	23.38 x 11.38 x 12.38	1000	100
MERV 14 [a]	DU4V-ESB-11-MV14	855080-174	24 x 24 x 12	23.38 x 23.38 x 12.38	2000	200
MERV 14-A [b]	DU4V-ESB-21-MV14	855080-175	24 x 20 x 12	23.38 x 19.38 x 12.38	1500	160
	DU4V-ESB-51-MV14	855080-176	24 x 12 x 12	23.38 x 11.38 x 12.38	1000	100
MERV 13 [c]	DU4V-ESB-11-MV13	855080-177	24 x 24 x 12	23.38 x 23.38 x 12.38	2000	200
MERV 13-A [b]	DU4V-ESB-21-MV13	855080-178	24 x 20 x 12	23.38 x 19.38 x 12.38	1500	160
	DU4V-ESB-51-MV13	855080-179	24 x 12 x 12	23.38 x 11.38 x 12.38	1000	100
MERV 11	DU4V-ESB-11-MV11	855080-180	24 x 24 x 12	23.38 x 23.38 x 12.38	2000	200
MERV 11-A [b]	DU4V-ESB-21-MV11	855080-181	24 x 20 x 12	23.38 x 19.38 x 12.38	1500	160
	DU4V-ESB-51-MV11	855080-182	24 x 12 x 12	23.38 x 11.38 x 12.38	1000	100

DATA NOTES:

[a] May provide additional LEED credits. [c] Minimum efficiency selection for LEED consideration.
[b] Discharged efficiency per appendix J of ASHRAE Standard 52.2-2007
Airflow may be in either direction.
Maximum recommended pressure drop is 1.50" w.g., system design may dictate a lower change-out point.
Maximum continuous operating temperature 175º F. (79º C.), relative humidity 99%.
Airflow may be in either direction.
For initial resistance versus airflow chart please contact Camfil Farr R&D at (973) 616-7300.

Options:

Available with gaskets in any location.
Available with a single header as shown below.
See Product Sheet 1515.

SPECIFICATIONS

1.0 General

1.1 – Air filters shall be V-bank mini-pleated fiberglass disposable type with pleat separators, polyurethane pack-to-frame sealant, acrylonitrile butadiene styrene (ABS) 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 microfine glass fibers with an acrylic resin binder formed into uniform pleats with a spacing of 8 pleats per inch and a uniform pleat height of 24 mm. Pleats shall be separated at 25 mm intervals to ensure uniform pleat distribution and even 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.
2.3 - The media packs shall be bonded to the inside periphery of a polystyrene enclosing frame with a polyurethane sealant. The enclosing frame shall include top and bottom molded tracks as an integral part of the frame to ensure a proper seal.
2.4 – Media packs shall be recessed at least 1" from 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 effect a rigid and durable filter.
2.6 – The frame shall include dual headers and a carrying handle shall be an integral part of the filter frame.

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 52.2-2007. It shall also have a MERV-A rating of (11, 13, 14, 16) when evaluated under ASHRAE Standard 52.2-2007 Appendix J.
3.2 - Initial resistance to airflow shall not exceed (0.26, 0.32, 0.34, 0.62) 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, 0.33, 0.37, 0.80) inches w.g. at an airflow of 500 fpm.
3.3 – Filter shall have a 5-Star rating when evaluated per Energy Cost Index.
3.4 - Filter shall be listed by Underwriters Laboratories as UL Class 2.
3.5 - The filter shall be capable of withstanding 10" w.g. without failure of the media pack.
3.6 - Manufacturer shall provide evidence of facility certification to ISO 9001:2000.
3.7 – Supplier shall have the capability of performing an in situ test once the filters are installed to verify efficiency and pressure drop performance.
3.8 – The manufacturer shall provide a written Performance Guarantee stating that the filter has the highest energy savings in its class of product, and will maintain its particle capture efficiency throughout its service life.

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

Filters shall be Camfil Farr Durafil ESB or equal.

Items in parentheses ( ) require selection.

Camfil Farr has a policy of uninterrupted research, development and product improvement. We reserve the right to change designs and specifications without notice.

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