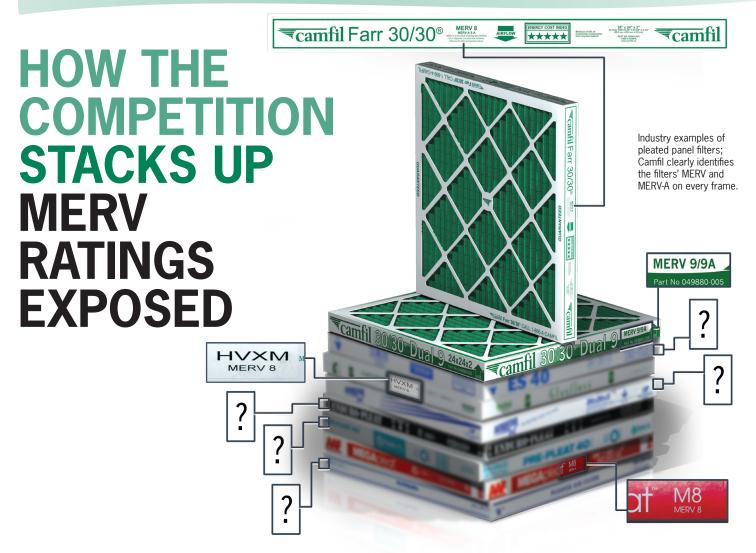


TECHNICAL BULLETIN

MERV Ratings Exposed



A standard is a formal document published by a recognized authority that establishes procedures or requirements consistent with accepted or recognized practices and typically authored through a consensus body of recognized industry experts. For the evaluation of air filters, the American Society of Heating, Refrigeration and Air-Conditioning Engineers publishes ASHRAE Standard 52.2-2017, Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size.

The Standard provides guidance on how to test a specific air filter and award it a Minimum Efficiency Reporting Value (MERV).

This value is then used by design engineers and contractors to apply a specific MERV level filter based upon the level of protection the application or facility requires as recommended by cognizant authorities.

One example would be that MERV 13 filters are recommended for commercial or office buildings to protect building occupants from unseen contaminants that may cause health difficulties, either short term or developed over a period of time. They also help prevent transfer of some common maladies such as colds or other items that can become airborne through sneezes, coughs and even talking. In another example, medical facilities require

filters with a MERV of 14 per documents or codes published by cognizant authorities. Users expect their building occupants and processes to be protected by using a filter with the correct MERV. Improper due diligence regarding using the proper filters can even result in legal accountability in the future. Most manufacturers have their filters evaluated using ASHRAE Standard 52.2-2017, but others have used the term MERV even though they have no testing facility or have never had their product tested at all. Even if they don't have their own testing facility there are multiple independent laboratory testing facilities available throughout the country.

Continued



TECHNICAL BULLETIN

MERV Ratings Exposed

These manufacturers have even used MERV values directly on their filters misleading users into a false sense of security. A filters' performance depends on multiple factors; including the quality of the filter media, sealing of media to prevent air bypass and proper construction components to avoid premature filter failure. All of these items are identified through proper air filter testing.

Other manufactures have only tested their product using parts of the procedure which can produce misleading results but they cut the cost of doing the test. A filter cannot receive a MERV unless the entire procedure per the Standard is used.

In their latest revision, ASHRAE has added a statement to the Standard that only allows use of the term MERV with the following caveat in Section 12.5: The classification term "MERV" shall only be used in the performance report and product labeling if the entire procedure prescribed by the standard has been included.

Camfil recommends that every filter purchaser request an ASHRAE Test Report for each type of air filter used in their facility to ensure that they are receiving the air filtration value they are paying for.

To limit a facilities liability in case of air quality problems the reports should be kept on file at the facility for reference if needed.

Best practices for your facility should include:

- Only install air filters marked with the MERV value on the filters' frame or label.
- Identify your MERV requirement on all paperwork including purchase orders.
- Request the optional procedure per the Standard which identifies the filters' MERV-A, indicative of the filters ability to maintain efficiency throughout its life.
- Maintain copies of manufacturer's written performance guarantees. Guarantees may reference maintained MERV throughout the life of the air filter, period of life for filters within the system and/or pressure drop versus filter failure statements.

