



THE ROLE OF AIR FILTRATION IN LEEDS CERTIFICATION

In the United States buildings account for 70% of electricity consumption

• Green Building Research

LEED is a third party certification program and the nationally accepted benchmark for the design, construction and operation of high performance green buildings

• USGBC

“When the building’s air filters do not remove the particles from the air, the occupants’ lungs become the filter.”

• H.E. “Barney” Burroughs, Building Wellness Consultancy

The USGBC Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is rapidly gaining popularity as more engineers, architects, facility managers, and building owners recognize the value of high performance green buildings. In short, LEED is the national benchmark for sustainable building operation, efficiency, and Indoor Air Quality. The LEED certification process is basically an accumulation of points for specific upgrades and improvement programs. The more points accumulated, the higher the certification.

52-69 POINTS	PLATINUM
39-51 POINTS	GOLD
33-38 POINTS	SILVER
26-32 POINTS	CERTIFIED

LEEDs currently has 9 rating systems to address specific environments, including: New Construction, Existing Building, Schools, and Healthcare.

AIR FILTRATION AND LEED

Air filtration can play a significant role in acquiring certification points. Specific filter MERV efficiency is directly noted in certain sections. High efficiency low resistance air filters can also be part of improvement projects relating to IAQ management programs, energy savings, and waste & source reductions.

SPECIFIC EXAMPLES:

LEED-EB (Existing Building) IEQ Credit 3 – Construction IAQ Management Plan gives one point for using MERV 8 filters or media at each return grille during the construction phase.

LEED-EB IEQ Credit 5.1 – Indoor Chemical & Pollutant Source Control gives one point for installing higher efficiency MERV 13 filters for particulate removal.

LEED-NC (New Construction) mirrors the EB requirements and gives one point each for MERV 8 and MERV 13 efficiencies under

EQ Credits 3.1 and 5.0 respectively. These 4 examples directly link a point value to installing and maintaining approved MERV rated air filters.

MORE OPPORTUNITIES:

LEEDs provides several opportunities for achieving prerequisite requirements and gaining points toward certification. For instance:

LEED-EB Energy & Atmosphere (EA) Prerequisite 2 requires the demonstration that the building has achieved an EPA Energy-Star rating of at least 60. EA Credit 1 – Optimize Energy Performance gives 1-10 points for, “Achieving increasing levels of energy performance above the prerequisite standard...” Advanced low resistance/high efficiency air filters can help achieve both of these objectives by dramatically reducing energy consumption in the HVAC system.

LEED-NC Material & Resources Credit 4.1 gives one point for increasing the demand for products that incorporate recycled content. The AeroStar® Green Pleat frame is made with 100% recycled paper-board frame.

SUMMARY

Listed are just a few of the examples of how air filters are utilized to achieve LEED certification. As you read through the requirements you will notice many more opportunities as well. Replacing large box filters with modern compact designed filters reduces waste disposal of air filter volume by 67%. High levels of IAQ can not be achieved without installing high MERV rated air filters and possibly HEGA® filters to address molecular contamination and odors in the air. High IAQ levels lead to healthy employees and low absentee rates, qualifying for even more LEED points.

There are dozens of opportunities to use air filters to help qualify for certification and greatly improve both the building environment and increase the performance of the building.

ROB SNYDER JOINS FILTRATION GROUPS SENIOR MANAGEMENT TEAM

Filtration Group’s commitment to hiring the best and brightest talent continues with Rob Snyder joining Filtration Group’s senior management team. Rob joined Filtration Group in July of 2007 as Director of Supply Chain. Responsibility for the Aurora facility and High Performance Products (HPP) soon followed in January 2008. Rob brings with him over 20 years of operational experience with companies such as Boeing, Eastman Kodak, and IDEX.

Primary responsibilities for the position include; develop and execute lean policies, assure service and quality level, meet customer needs and demands, identifying transportation strategy, improve the flow of value to the customer, assure inventory levels match the needs of the product line demands, and assure the Aurora (HPP) facility has the talent, tools, and training to provide the products needed.

“Rob is a customer focused operations executive specializing in lean manufacturing concepts, strategic sourcing, progressive organizational design, logistics, and cost management,” said Brandon Ost, CEO for Filtration Group. “Rob has the exact experience and skill sets we require to continue our rapid domestic

and international growth in this global economy,” adds Ost.

Rob has a B.S., Manufacturing Engineering Technology from the University of Wisconsin. He also has extensive training in Lean through Shingijutsu at Boeing and Kodak, and is a certified Six Sigma green belt.

Rob’s technical background and experience will help Filtration Group maintain its position as the operation and automation leader in the air filtration industry for years to come.

Rob and his family reside in St. Charles, IL.





FilterTalk

Spring 2008

GOT A QUESTION FOR US?

Q. LEEDs specifically references the use of MERV 13 level efficiency air filters to achieve a point toward certification. How efficient is a MERV 13 filter?

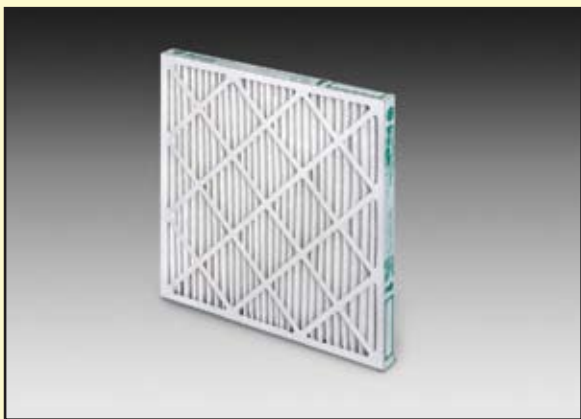
A. MERV 13 air filters as tested by ASHRAE 52.2 provide a very good level of efficiency and captures most molds, pollens, and many airborne allergens and irritants. The definition of MERV 13 efficiency on airborne particulate is as follows;

MERV 13 PARTICLE SIZE EFFICIENCY	
% in Size Range, microns	
.3-1.0	<75
1.0-3.0	>90
3.0-10.0	>90

MERV 13 filters further provide efficiency levels that help protect cooling coils, ductwork, and diffusers from building up dirt and grime. Clean coils improve the transfer of energy and can reduce energy consumption significantly.

As a comparison, a MERV 13 filter removes almost twice as many medium-sized particles (1-3 microns) as a conventional MERV 8 filter. New and advanced filter materials have made raising IAQ levels while simultaneously lowering energy costs' possible.

Product Spotlight: AeroStar® MERV 13 Green Pleat



The AeroStar® MERV 13 Green Pleat was specifically designed to meet LEEDs requirement for air filtration efficiency. The Green Pleat is constructed with the most advanced media technology available, allowing a high efficiency filter with very low resistance to air flow. The frame is 100% recycled paperboard, and the compact design allows for efficiency upgrades without the expensive mechanical retrofitting required to accommodate larger filters. Simply replace lower efficiency filters with the Green Pleat to raise air filtration to much higher levels and meet the LEEDs standards.

The Green Pleat can be a cost sensitive and effective tool in accumulating LEEDs points for building certification. The Green Pleat is also an effective way to upgrade air handling systems to be more effective against allergens, molds, pollens, and other airborne irritants and significantly raising Indoor Air Quality levels.

1111 BUILDING IN MIAMI RECEIVES CLEAN AIR AWARD



The 1111 Building is an architectural gem located in South Beach and adjacent to Miami, Florida. Constructed in 1969 the beautiful art-deco design offers breathtaking views of the Miami skyline and the surrounding waterways.

THE PROBLEM



Vintage Roll-O-Matic machines dated back to 1969

Although the building was beautiful on the outside, the air filtration system dated back to the original construction 39 years ago. The only filtration equipment installed were vintage auto-roll machines that slowly unrolled a low efficiency fiberglass material, yielding a MERV 4-5 level efficiency at best. This is well below any recommended MERV level for modern Indoor Air Quality (IAQ) standards. New building owner Robert Wenett and chief engineer Walter Chung moved quickly to upgrade the air quality level for their tenants.

THE SOLUTION

Walter contacted Daryl McIntosh of A-One Air Filtration in nearby Coconut Creek to discuss how to improve the air quality without major renovation and construction costs. New Trane chillers were recently installed along with a remote monitoring system, creating a perfect opportunity to upgrade air filtration as well. Daryl recommended removing the antiquated auto-roll machines and installing new metal frames capable of holding higher efficiency

filters. Daryl recommend a two-stage system utilizing Filtration Group's AeroStar® Series 400 MERV 8 pleats as prefilters and MERV 13 GeoPleat® as the final filters. In addition, Daryl recommended installing UV lights to keep the coils clean from microbial growth.

The Series 400 and GeoPleat combination required only 6" depth for installation due to the compact design of the filters, meeting Walter's requirements to minimize renovation costs. A-One constructed and installed the frames and converted to the higher efficiency filters over two weekends. It required two more weekends to install all the UV lights. Air quality levels improved from a very low MERV 4 or 5 to an astonishing MERV 13 level.

RESULTS

The tremendous increase in efficiency levels and air quality has created a very healthy environment for 1111 Building occupants. MERV 13 efficiency meets the US Green Building Council's (USGBC) LEEDs criteria for air filtration efficiency, and removes nearly all airborne allergens, irritants, and pollutants. The dramatic increase in IAQ and Walter's dedication to a state-of-the-art filtration system led to the 1111 Building receiving the National Air Filtration Association's prestigious Clean Air Award. Only 112 Clean Air Awards have been awarded in the past 11 years nationwide, and the 1111 Building is the only building in Florida to receive the award.

In addition to the higher indoor air quality, the improvements create a highly efficient cooling system. Clean coils and ductwork transfer energy more easily, causing the system to require much less expensive energy. Energy savings alone will pay for all the upgrades in a very short period of time. Walter and Robert, with the help of A-One and Filtration Group have created an award winning and healthy clean air environment for their tenants. Construction begins in July for an adjacent building and its occupants can be assured that Robert, Walter, and Daryl have already planned for great indoor air quality.



1111 Building engineer Walter Chung holds the NAFA Clean Air Award for increasing indoor air quality



Filtration Group
912 E. Washington Street
Joliet, IL 60433

PRSR.T.STD
US POSTAGE PAID
PERMIT NO. 441
JOLIET, IL