

Green Air Filtration Selection Guide

Air Filtration Products for Green Building Projects,
Environmental Sustainability and LEED Certification



- Earns LEED points
- Reduces energy costs
- Extends filter lifecycles
- Conserves resources
- Improves Indoor Environmental Quality





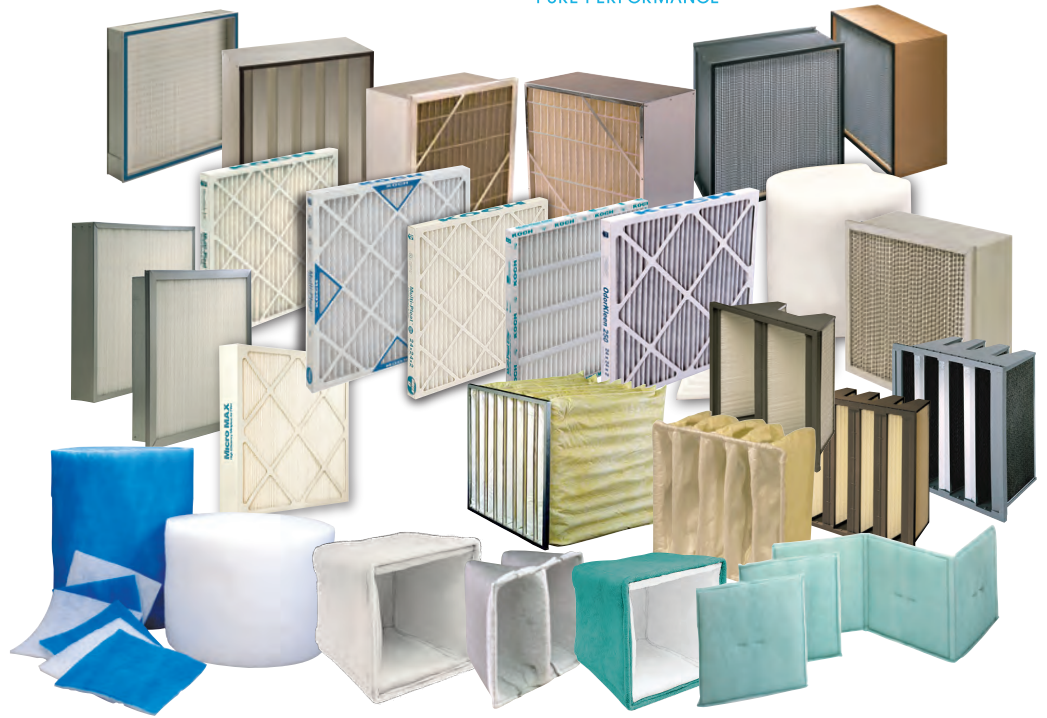
About Green Building

The construction and maintenance of buildings can have a profound effect on the environment. Not only do buildings account for a large amount of land, energy and water consumption, they also contribute to the alteration of land and atmosphere. Considering the impact on the environment, reducing the amount of natural resources that buildings consume and the amount of pollution given off is seen as crucial for future sustainability.

Green Building is a collection of practices and techniques intended to reduce and ultimately eliminate the negative impacts of buildings on the environment. Buildings can be made more "green" by using materials and making decisions that positively benefit health, economics and the environment.

To define **Green Building** and establish a common standard of measurement, the **United States Green Building Council (USGBC)** has developed the **Leadership in Energy and Environmental Design (LEED)** green building rating system. LEED is the nationally accepted benchmark for the design, construction and operation of high performance **Green Buildings**.

KOCH FILTER
PURE PERFORMANCE



Koch Green... What does it mean?

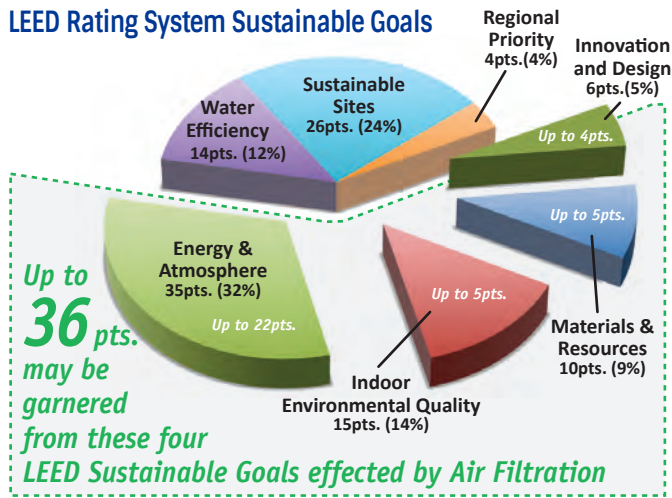
Our Customers regularly ask how air filtration, and Koch Filter's product line in particular, fits into the ever-growing "green building" concept.

Koch Filter designates products within our line that contribute to a sustainable environment in various ways. You will know that product meets or exceeds our criteria in one or more of the following categories:

- *Earns LEED Points*
- *Reduces Energy Costs*
- *Extends Filter Lifecycles*
- *Conserves Resources*
- *Improves Indoor Environmental Quality*

Using the Green Guide is a great way to let your customers know exactly which Koch products can be considered "green". And with our Energy Savings and Lifecycle Calculator and other selling tools provided by Koch, you'll be able to tell them why the filter has earned the use of the Green title!

LEED Rating System Sustainable Goals



Air Filtration's important role in a Green Building/ Sustainability Strategy

Air filtration's impact on Energy & Atmosphere, Materials & Resources, Innovation & Design and Indoor Environmental Quality is quantifiable and significant. As illustrated in the pie chart above of their 66 total points, 36 are directly effected by Air Filtration.

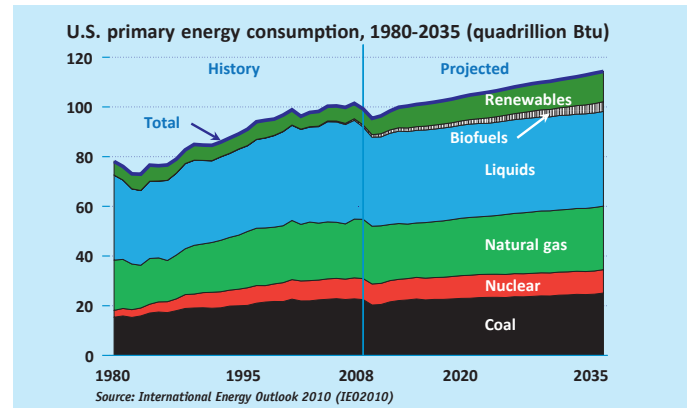
Reducing energy usage is the largest credit component related to air filtration in the LEED rating system, so air filtration selection is of paramount concern.

Reducing Energy Costs

HVAC systems typically account for about 40 percent of a commercial building's electricity expenses. An HVAC filter's energy efficiency depends on its pressure drop: the higher the filter's pressure drop, the more the HVAC system's motor must work to deliver the required air flow. Fortunately, the development of improved filter medias has given the industry the technology to produce lower pressure drop filters while maintaining high particle capture efficiencies. Switching to a lower pressure drop filter is one of the easiest changes to make in an effort toward reduction of energy costs.

During the filter selection process, remember that the cost of energy used by filters far outweighs the initial cost of the filter itself – up to 10 times for a standard pleated filter and 5 times for a high efficiency final filter. That is why it is important to take into account the entire lifecycle cost of the filter and not just its initial purchase price.

To learn more about energy savings, visit www.kochfilter.com and click on the Energy Savings and Lifecycle Calculator.

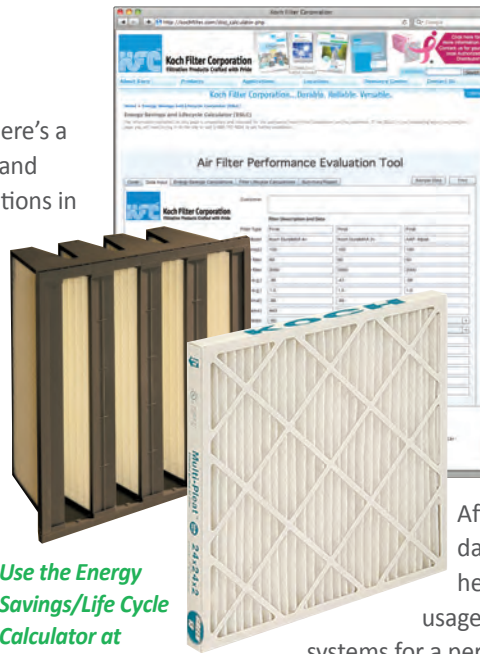


Healthy Savings

One third of the points related to LEED certification involve air filtration and there's a good reason for that. Building owners and managers can achieve significant reductions in operational costs by choosing the proper air filtration and preventive maintenance schedules for their heating, air conditioning and ventilation (HVAC) systems.

Real-World Case Study

Consider the savings realized by a world-renowned healthcare facility in the southeastern United States, one of the nation's largest hospital systems. By implementing a comprehensive air filtration plan developed by Koch Filter Corporation, this medical center reduced operating costs and waste generation in its HVAC air handling systems, reduced annual energy consumption, reduced annual filter usage, and achieved an annual savings of over \$78,000!



Use the Energy Savings/Life Cycle Calculator at www.kochfilter.com to see the cost savings you can have with your systems

Koch Filter and the medical center utilized a two-part strategy. First, the hospital selected Koch Filter products designed to provide low resistance to airflow (energy savings) and extended filter lifecycles (fewer filter changes, reduction of overall waste). In phase two of the project, the medical center implemented a comprehensive preventive maintenance plan designed to optimize the energy return for each air handling system.

After determining the essential baseline data, Koch Filter Corporation and the healthcare facility monitored the energy usage and air filter lifecycles in selected HVAC systems for a period of five years. The results were significant:

- Required horsepower in the selected HVAC systems was reduced by 30% annually.
- Waste disposal volume was reduced by 6400 cubic feet annually.
- Cumulative savings exceeded \$350,000!



Multi-Sak Medium and High Efficiency Filters 1

- MERV 8-15 performance rating
- Efficiency 30%, 40%, 65%, 85%, 95%
- Synthetic or Microfiberglass media
- Design eliminates air bypass and leakage
- Airflows up to 625 FPM

ASHRAE Test Standard 52.2 - 2007
CONSULT BULLETIN NO. K-228-B



Multi-Flo Rigid Air Filters 2

- MERV 11-15 performance rating
- Efficiency 45%, 65%, 85%, 95%
- Sturdy, lightweight galvanized steel
- Synthetic or Microfiberglass media
- Single header, No-header styles

ASHRAE Test Standard 52.2 - 2007
CONSULT BULLETIN NO. K-228-C



DuraMAX High Efficiency Minipleat Filters 3

- MERV 11-16 performance rating
- Efficiency 65%, 75%, 85%, 95%, 98%
- 12" deep minipleat, high efficiency
- Synthetic or Microfiberglass media
- 194 ft² of media in a 24x24x12" frame
- Rugged, lightweight plastic, incinerable

ASHRAE Test Standard 52.2 - 2007
CONSULT BULLETIN NO. K-966 B and K-1205 B



Duo-Cube 1, 2, 3 and 4 Ply 4

- MERV 6-8 performance rating
- Antimicrobial-treated media
- Easy upgrade from conventional panel filters
- 100% synthetic media offers extraordinary combination of resistance to moisture, efficiency and dust holding capacity
- Self-Seal model eliminates air bypass and requires no clips or fasteners

ASHRAE Test Standard 52.2 - 2007
CONSULT BULLETIN NO. K-111C



MicroMAX Minipleat Filters 5

- MERV 10-16 performance rating
- 4" deep extended surface air filters
- Revolutionary minipleat technology
- High efficiencies, low pressure drop
- 125 ft² media in a 24x24x4" filter
- Moisture-resistant beverage board or galvanized frame
- Single header, no-header styles

ASHRAE Test Standard 52.2 - 2007
CONSULT BULLETIN NO. K-195-B



Synthetic Air Filter Media 6

- MERV 4-8 performance rating
- Nine different styles to choose from
- Available in pads and bulk rolls
- Offering extended lifecycle to final filter by 50%
- Tackified medias utilize a non-oily treatment applied to the downstream side
- UL Class 2 standard 900

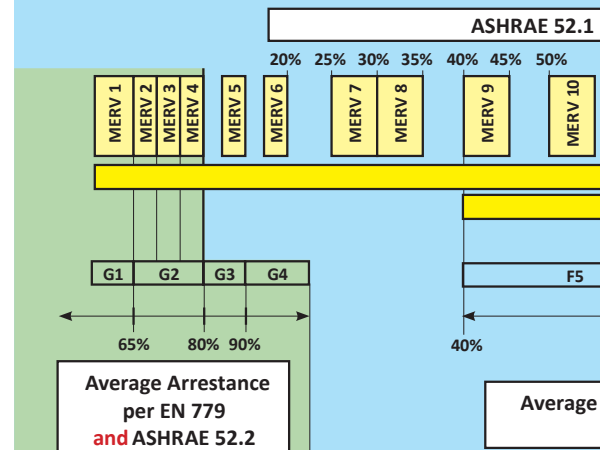
ASHRAE Test Standard 52.2 - 2007
CONSULT BULLETIN NO. PB-001-B

CRITERIA FOR EARNING THE KOCH GREEN

	Earns LEED Points	Reduces Energy Costs	Extend Lifecycle
1	✓	✓	
2	✓	✓	
3	✓	✓	✓
4	✓	✓	✓
5	✓		
6	✓		
7	✓	✓	✓
8	✓		
9	✓	✓	✓
10	✓	✓	✓
11	✓	✓	✓
12	✓	✓	✓

Test Standard Comparison

The chart below is useful in understanding the relationship between
ASHRAE Test Standard 52.2-2007, E1, E2, E3, E4, E5, E6, E7, E8, E9, E10



Source: Mr. Robert Burkhead, President of Blue Heaven Technologies, Louisville, Kentucky

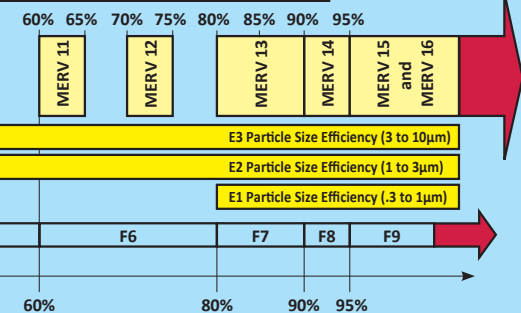
THE KOCH GREEN ICON GREEN UMBRELLA

Filter Cycles	Conserves Resources	Improves Indoor Environmental Quality
	✓	✓
		✓
✓	✓	✓
✓	✓	✓
	✓	✓
	✓	✓
✓		✓
	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓

Comparison Chart

Relationship between ASHRAE Test Standard 52.1-1999, EN 1822-3 and European Test Standard EN 779.

Dust Spot Efficiency



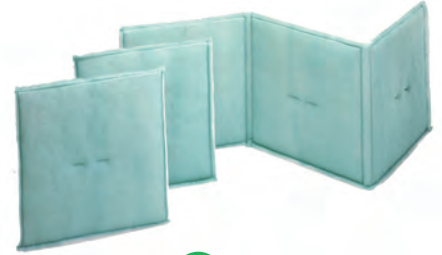
Efficiency on .4µm particulate per EN 779 (correlates closely with 52.1 Dust Spot)



BioMAX, BioMAX CS, BioMAX V2000 HEPA Filters 7

- Efficiencies up to 99.999% on .3 micron size particles
- Contaminant-free air in industrial, medical, and pharmaceutical applications
- Microfiberglass media
- Double-Edge™ aluminum separators
- Standard or High Capacity

CONSULT BULLETIN NOS. K-603A, K-603-B



Maxi-Grid 8

- MERV 7-11 performance rating
- 2-Ply, 3-Ply and 4-Ply panels designed for high efficiency
- Available with antimicrobial-treated media
- Rust resistant 9 gauge internal wire support
- UL Class 2 standard 900
- Available in links

ASHRAE Test Standard 52.2 - 2007

CONSULT BULLETIN NOS. K-902 and K-892-1, 3



Multi-Pleat (Elite, Green 13, XL8, XL11 and MP-GT) Extended Surface Air Filters 9

- MERV 8, MERV-A 8 thru 13 performance rating
- Standard and High Capacity models
- Moisture resistant beverage board frame
- Superior Dust Holding Capacity
- Available in standard and custom sizes

ASHRAE Test Standard 52.2 - 2007

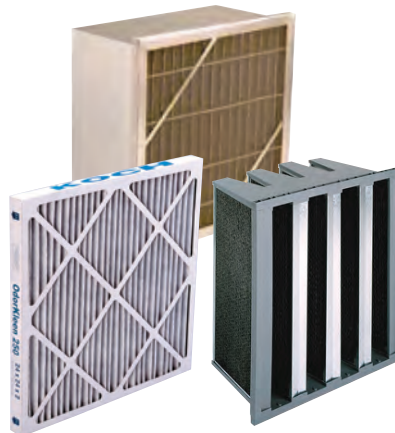


MicroSafe Antimicrobial-Treated Filters 10

- MERV 7-16 performance rating
- Antimicrobial-treated media
- Effectively controls microbial growth
- Improves indoor environmental quality
- Non-toxic antimicrobial has proven history of safe, effective use
- Widely used in hospitals, nursing homes, laboratories and commercial buildings
- UL Class 1 and 2 standards 900

ASHRAE Test Standard 52.2 - 2007

CONSULT BULLETIN NO. K-994



DuraKleen, DuraPURE and OdorKleen Carbon Filters 11

- Removes VOC's (volatile organic compounds), chemical contaminants, and odors
- Available in Standard and High Capacity
- Premium grade activated carbon, impregnated carbon, or potassium permanganate
- DustNet "afterfilter" prevents carbon dust downstream
- Three standard sizes available

ASHRAE Test Standard 52.2 - 2007

CONSULT BULLETIN NOS. PB-1202, K-397, PB-1201



Industrial Coatings Filtration 12

- MERV 8 -15 performance rating
- Exceeds New NESHAP* regulations and MACT** standards
- High efficiency
- Extended filter lifecycle
- Self-Seal headers eliminates overspray bypass
- Exceptional overspray collection for all types of coating materials

ASHRAE Test Standard 52.2 - 2007

CONSULT BULLETIN NO. K-798B, SS-SDP, SS-HCDP, SS-UCHE, SS-UCHC, SS-EP650, SS-EP950, PB-798-2

*NESHAP (National Emission Standards for Hazardous Air Pollutants-40CFR63)

About ASHRAE Standard 52.2-2007 and MERV

ASHRAE Standard 52.2-2007: Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size is intended to assist end-users and specifiers in their selection of appropriate air filtration products by defining anticipated performance throughout the useful life of a filter. (For more information visit www.ashrae.org).

ASHRAE 52.1 was used as the standard for several decades in the general ventilation air filter industry. A main component of 52.1 was the Average Dust Spot Efficiency Tests. The new standard, however, evaluates air filter efficiency as a function of particle size. The new test method determines the ability of an air filter to remove dust by specific particle sizes ranging from 0.30 microns to 10 microns. This advancement led to the creation of a Minimum Efficiency Reporting Value (MERV) to determine the performance of each filter tested. MERV is a central feature of ASHRAE 52.2.

One important characteristic of ASHRAE 52.2 is the required calculation of dust holding capacity and arrestance, explained in Addendum B. A key element of 52.2 is particle size efficiency, which has the most significant value when determining filter performance. Koch Filter Corporation's technical specialists are available to provide assistance to customers in understanding the latest standards.

MERV Performance

The Minimum Efficiency Reporting Value, or MERV, is a guideline to inform consumers how efficient a filter will be when installed. MERV 1-4 air filters are typically disposable panel filters or pads and are used primarily to protect equipment from particles no smaller than 10 microns.

MERV 5-8 air filters are a better choice and more commonly found in both residential and commercial applications. They are capable of effectively collecting particles as small as 3 microns. MERV 9-12 air filters are used in commercial and industrial settings, or in residential, where dust control is valued. These filters are capable of collecting particles in the 1 to 3 micron range. It is important to change these filters when recommended due to the negative impact they will have on air flow when they become dirty. MERV 13-16 are the most efficient air filters and can stop particles as small as .3 microns. These filters are typically used in hospitals or manufacturing facilities where super clean environments are necessary.

Appendix J Conditioning

ASHRAE 52.2-2007 also introduces a standard that insures air filter purchasers and users are aware of the filter's performance in specific applications. Appendix J is an optional test which replaces the non-mandatory filter-conditioning step of 30 grams of dust loading with a potassium-chloride (KCL) conditioning method which is intended to closely mimic the aerosol-particle size distribution normally seen when filters are operated under "real-life" conditions. This test provides an additional value, MERV A, which can be used to quantify a filter's performance.

In a few cases, the efficiency of a filter decreases after conditioning, some sufficient enough to decrease the MERV rating by several numbers. Although these measures are useful tools in selecting air filters, it is suggested that customers look at MERV numbers in terms of (+) or (-) 1. Be sure to purchase a better filter, rather than a better test result.

ASHRAE 52.2 CLASSIFICATION PARAMETERS

MERV Rating	Particle size efficiency			Average Arrestance (Addendum B)	ASHRAE 52.1 Reference	Koch Filter Product
	Range 1 (.3 to 1 µm)	Range 2 (1 to 3 µm)	Range 3 (3 to 10 µm)		Average Dust Spot Efficiency	
1	–	–	E3<20%	Aavg<65%	Eavg<20%	FG Pads, FG C&I Disposables
2	–	–	E3<20%	65≤Aavg<70%	Eavg<20%	FG Pads, FG C&I Disposables
3	–	–	E3<20%	70≤Aavg<75%	Eavg<20%	FG & Poly pads, Poly C&I Disposables
4	–	–	E3<20%	75%≤Aavg	Eavg<20%	FG & Poly pads, Poly C&I Disposables
5	–	–	20≤E3<35%	–	Eavg<20%	FG & Poly pads, Poly C&I Disposables
6	–	–	35≤E3<50%	–	20≤Eavg≤25%	Maxi-Grid
7	–	–	50≤E3<70%	–	25≤Eavg≤30%	Maxi-Grid
8	–	–	70≤E3	–	30≤Eavg≤35%	Multi-Pleat XL8, Multi-Pleat Elite, SprayStop Universal Cube HE
9	–	E2<50%	85%≤E3	–	40≤Eavg≤45%	Duo-Pak 40
10	–	50≤E2<65%	85%≤E3	–	50≤Eavg≤55%	Multi-Cell, Multi-Sak, Multi-Flo
11	–	65≤E2<80%	85%≤E3	–	60≤Eavg≤65%	Multi-Cell, Multi-Sak, Multi-Flo, Multi-Pleat XL11, MicroMAX, DuraMAX 2v, DuraMAX 4v
12	–	80≤E2	90%≤E3	–	70≤Eavg≤75%	Maxi-Cell, Multi-Sak, MicroMAX, DuraMAX 2v, DuraMAX 4v
13	E1<75%	90%≤E2	90%≤E3	–	80≤Eavg≤90%	Multi-Cell, Multi-Sak, Multi-Flo, Multi-Pleat Green 13, MicroMAX, DuraMAX 2v, DuraMAX 4v, SprayStop E-Pak 650
14	75≤E1<85%	90%≤E2	90%≤E3	–	90≤Eavg≤95%	Maxi-Cell, Multi-Sak, MicroMAX, DuraMAX 2v, DuraMAX 4v
15	85≤E1<95%	90%≤E2	90%≤E3	–	Eavg>95%	DuraMAX GT-98, BioMAX GT, MicroMAX, DuraMAX 2v, DuraMAX 4v, SprayStop E-Pak 950
16	95%≤E1	95%≤E2	95%≤E3	–		BioMAX GT, BioMAX 95, DuraMAX 2v, DuraMAX 4v

About USGBC & LEED Green Buildings

The **U.S. Green Building Council (USGBC)** is a nonprofit organization committed to a prosperous and sustainable future for our nation through cost-efficient and energy-saving green buildings. **USGBC** is comprised of more than 18,000 member companies and organizations from across the building industry that are working to advance structures that are environmentally



responsible, profitable, and healthy places to live and work. The **USGBC's** goal is to transform the way buildings and communities are designed, built and operated, enabling an environmentally and socially responsible, healthy, and prosperous environment that improves the quality of life. (For more information visit www.usgbc.org).

LEED is a voluntary, point-based rating system for developing high-performance, sustainable buildings. Developed by **USGBC**, **LEED** addresses all building types and emphasizes state-of-the-art strategies for sustainable site development, water savings, energy efficiency, materials & resources selection, indoor environmental quality, innovation & design and regional priority. **LEED** is a practical rating tool for Green Building design and construction that provides immediate and measurable results for building

owners and occupants.

LEED Certification of **new building** construction and major **renovation** projects measures 100 possible points and awards four levels of certification: **CERTIFIED** (40 - 49 points), **SILVER** (50 - 59 points), **GOLD** (60 - 79 points), and **PLATINUM** (80 points and above).

Components relating to air filtration can account for as many as **36 LEED points**. The allocation of points is based on strategies that will have greater positive impacts on what matters most — energy efficiency and CO₂ reductions. If an engineer utilizes MERV 13 filtration or higher while decreasing the energy used by the system, more **LEED** credits can be achieved. In a two-stage system, reducing prefiltration resistance can also garner **LEED** credit. Reducing the system velocity at the filter bank (i.e. reducing from 500 FPM to 300 FPM) can reduce resistance as much as 2/3 and triple the life of filters.

In all, higher ratings achieved in the **LEED** Certification process, result in a building that is more environmentally friendly, more healthy for its occupants and more cost-effective.

Rating System Category Description	Potential LEED Credit Points	LEED Requirement	Air Filtration Strategies to Meet LEED Requirements	
Energy and Atmosphere (EA)				
Minimum Energy Efficiency Performance	Required	A) Earn at least two points under Energy & Atmosphere Credit 1. B) Identify and implement energy-savings practice and retrofits to reduce energy use to the level required.	Implement energy savings practices to meet this prerequisite. Choose filters with low resistance to airflow, and use an energy measurement tool, such as Koch's Energy Savings and Life Cycle Calculator) to understand how a filter's resistance to airflow impacts energy costs.	Koch Filter's Energy Savings/ Life Cycle Calculator Filter Nos. 1, 2, 3, 4, 7, 9, 10 (see pages 4 and 5)
Optimize Energy Efficiency Performance	1 Mandatory, 18 Possible	Required to measure energy usage for 12 months to reduce environmental impacts associated with excessive energy usage. Receive an EPA /ENERGY STAR efficient performance rating of at least 69 and reduce building energy cost/waste.	Monitor energy consumption for 12 full months with a energy measurement tool such as Koch's Energy Savings and Life Cycle Calculator. Choose air filters with low resistance to airflow to help reduce energy cost.	Koch Filter's Energy Savings/ Life Cycle Calculator Filter Nos. 1, 2, 3, 4, 7, 9, 10 (see pages 4 and 5)
Building Automation System	1	Have in place a preventative maintenance and associate in training program to ensure system performance and identify investments opportunities to improve energy savings.	Train employees on preventive maintenance schedules and filtration fundamentals. Koch Filter Corporation and our distributors offer air filtration training classes on a regular basis.	Koch Filter's Energy Savings/ Life Cycle Calculator and participate in a Koch Filter Filtration Seminar
System-Level Metering	2 Possible	Permanent metering and recording are required and sub-metering is permitted. Develop a breakdown of energy uses in the building by using energy bills, spot metering or other metering to determine the energy consumption of major mechanical systems and other end use applications.	Implement a metering and recording system to measure air distribution, static pressure and ventilation air volumes. Use pressure gauges to determine appropriate air filter change-out cycles.	Koch Filter's Energy Savings/ Life Cycle Calculator and participate in a Koch Filter Filtration Seminar
Emissions Reduction Reporting	1	Identify building performance parameters that reduce conventional energy use and emissions, quantify those reductions and report them to a formal tracking program (e.g. EPA, Climate Leaders, ENERGY STAR or WRI/WBCSD protocols).	Use Koch's Energy Savings and Life Cycle Calculator to determine the appropriate air filters to select for energy and emission reductions. Utilize low resistance MERV 13, 14, or 15 air filters to reduce PH10 and PH2.5 particulate emission through outside air exhausts.	Koch Filter's Energy Savings/ Life Cycle Calculator Filter Nos. 1, 2, 3, 4, 7, 9, 10, 11 (see pages 4 and 5)
Materials and Resources (MR)				
Sustainable Purchasing Policy	Required	Have in place a sustainable purchasing program that introduces environmentally conscious purchasing as a practice. Policy must adhere to the LEED for existing Building: O&M policy model.	Air filters designated with the Koch Green Icon can help you achieve your sustainable purchasing policy goals in these areas: Earn LEED points, reduce energy cost, extend filter lifecycles, conserve resources, and improve Indoor Environmental Quality. (See pages 4 and 5).	Filter Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 (see pages 4 and 5)
Sustainable Purchasing - Ongoing Consumables	3 Possible	Maintain a sustainable purchasing program covering materials that are regularly used and replaced through the course of business that introduces environmentally conscious purchasing as a practice.	To reduce negative environmental impact and increase air quality (IAQ/IEQ), air filters designated with the Koch Green Icon can help you achieve your sustainable purchasing policy goals in these areas: Earn LEED points, reduce energy cost, extend filter lifecycles, conserve resources, and improve Indoor Environmental Quality. (See pages 4 and 5).	Filter Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 (see pages 4 and 5)
(SWM) Solid Waste Management Policy	Required	Have in place a solid waste management policy for the building and site. The policy must adhere to the LEED for existing Buildings: O&M policy model. At a minimum, the policy must cover the waste stream that are within the building and site management's control.	Convert to filters with lower resistance to airflow and longer lifecycles such as DuraMAX 2v or 4v final filters. This will decrease filter change frequency thus reducing waste streams while minimizing resistance to air flow (saving energy).	Filter Nos. 1, 2, 3, 4, 7, 9, 10 (see pages 4 and 5)
(SWM) Waste Stream Audit	1	Conduct a waste stream audit to understand waste patterns for consumables goods (not durable goods) so that reduction of waste can be achieved.	Convert to filters with lower resistance to airflow and longer lifecycles such as DuraMAX 2v or 4v final filters. This will decrease filter change frequency thus reducing waste streams while minimizing resistance to air flow (saving energy).	Filter Nos. 1, 2, 3, 4, 7, 9, 10 (see pages 4 and 5)
(SWM) Ongoing Consumables	1	Maintain a waste reduction and recycling program that addresses units that are regularly used and replaced through the course of business i.e. plastic, old corrugated cardboard, metal, etc. Conduct a waste stream audit to understand waste patterns for consumables goods (not durable goods) so that reduction of waste can be achieved.	Convert to filters with lower resistance to airflow and longer lifecycles such as DuraMAX 2v or 4v final filters. This will decrease filter change frequency thus reducing waste streams while minimizing resistance to air flow (saving energy).	Filter Nos. 3, 4, 7, 9, 10 (see pages 4 and 5)
Indoor Environmental Quality (EQ)				
Outdoor Air Introduction and Exhaust System	Required	Implement and maintain an HVAC system maintenance program. Ensure proper operations and maintenance of HVAC components as they relate to air quality and the health and well being of the occupants.	Install MERV 8 thru MERV 16 air filters and follow a regular schedule for air filter maintenance.	Filter Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 (see pages 4 and 5)
IAQ Best Management Practices IAQ Management Program, Outdoor Air Delivery Monitoring, Increased Ventilation, Reduce Particulates in Air Distribution	4 Possible	Install permanent , continuous monitoring systems that provide feedback on ventilation system performance. Have in place filtration media with minimum efficiency reporting value (MERV) greater than or equal to 13.	To determine the appropriate air filters to select for energy and emission reductions use the Koch's Energy Savings and Life Cycle Calculator. Install MERV 13, 14, 15 or 16 air filters with low resistance to airflow to reduce PH10 and PH2.5 particulate emission through outside air exhausts.	Filter Nos. 1, 2, 3, 5, 7, 9, 10, 11 (see pages 4 and 5)
IAQ Best Management Practices Management for Facility Alterations and Additions	1	Develop an IAQ plan, install new filtration media and flush out the affected area. Filtration media of MERV 8 must be used at each return air grille.	Install MERV 8 air filters such as Koch Multi-Pleat XL-8 at each return air grill for air handlers used during construction.	Filter Nos. 4, 6, 8, 9, 10, 11 (see pages 4 and 5)
Innovation in Operations (IO)				
Innovation in Operations	4 Possible	Achieve performance beyond those already addressed by the LEED for Existing Buildings: Operations & Maintenance Rating System. Provide added environmental benefits.	Install air filters with recycled content such as plastic, cardboard, beverage board, corrugated, etc. Utilize gaskets on all filters and holding frames.	Filter Nos. 1, 2, 3, 4, 5, 7, 8, 9, 10, 11 (see pages 4 and 5)

The chart above is intended as a general guideline. The LEED Green Building Rating System has been revised several times since its inception and will continue to evolve in the future. Please consult your Koch Filter representative to learn about the most current USGBC information and the corresponding Koch Filter strategies for implementation.



The Complete Line of Air Filtration Products for Commercial, Industrial, Hospital, Gas Turbine and Paint Filtration Applications.

Founded in 1966 by Joseph Koch and still managed by the Koch family, Koch Filter Corporation is a world class manufacturer of air filtration products. Koch Filter is recognized globally for its premier brand of high efficiency air filtration products and the industry's broadest range of air filters for any application. Our wide array of filtration products is currently installed in over 50,000 commercial, medical and industrial accounts worldwide.

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Headquarters, Manufacturing Plant,
and Regional Sales Office*



*East Greenville, PA
Manufacturing Plant
and Regional Sales Office*



*▲
Mira Loma, CA
Manufacturing Plant
and Regional Sales Office*

**Serving
The World**



*◀ Houston, TX
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