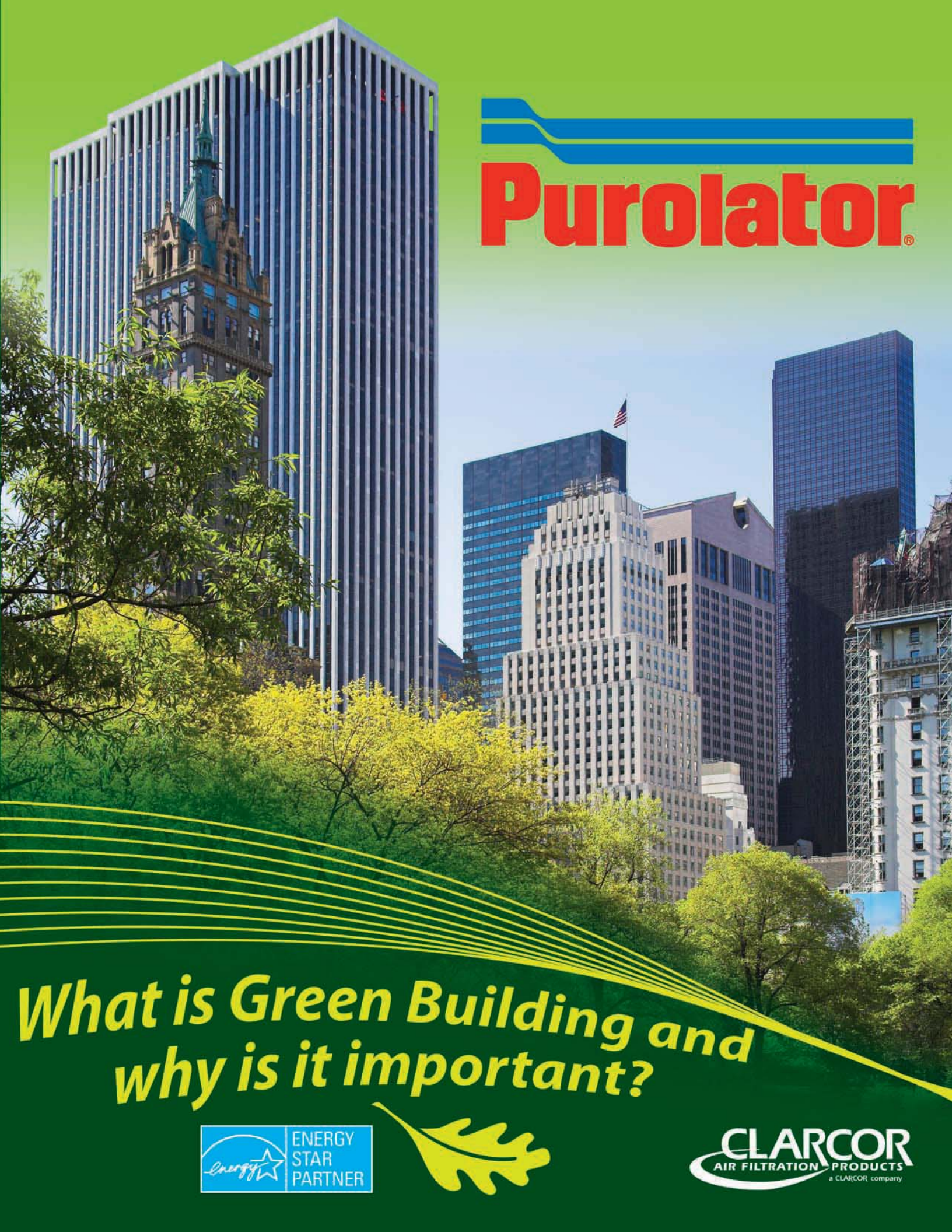

Purolator®
What is Green Building and why is it important?
ENERGY STAR PARTNER
CLARCOR AIR FILTRATION PRODUCTS
a CLARCOR company

Environmental Impact of Commercial Buildings

Buildings that protect us from natures extremes can also have a profound effect on the environment, which is why green building practices are so important to reduce these impacts and promote a healthier environment inside and out. According to the EPA, commercial buildings in the United States account for:

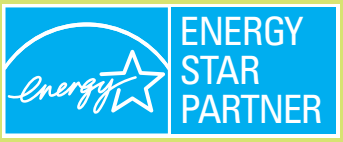
- 39% of total energy use
- 25% of total water consumption
- 68% of total electricity consumption
- 38% of the carbon dioxide emissions

Green Building Benefits:

- Environmental benefits
- Improve air and water quality
- Conserve and restore natural resources
- Enhance and protect biodiversity and ecosystems
- Reduce waste streams

Economic Benefits:

- Reduce operating costs
- Create and shape markets for green services
- Improve occupant productivity
- Optimize life-cycle economic performance



CLARCOR Air Filtration Products, Inc. and the PUROLATOR brand are committed to improving and protecting our environment for future generations. Because of our systematic approach to energy management, understanding of energy usage and greenhouse gas emissions, along with the Energy Savings tool provided to its customers, CLARCOR Air Filtration Products, Inc. was approved as an ENERGY STAR PARTNER. Go online to visit www.purolatorair.com and use the Energy Savings Program to see for yourself how PUROLATOR air filters can save you money while minimizing your impact on the environment.

What is Green Building and Why Is It Important?

A green or sustainable building is one where the practice of utilizing resources and techniques in a more ecological and resource-efficient manner is used to improve and provide a healthier environment. By using energy, water and other resources more efficiently, we reduce the overall impact to the environment and minimize excess pollution and waste.

Green building is not just a trend, but is a vital solution to the growing challenge of vanishing natural resources. Green building helps to improve our water supply and air quality, while addressing concerns of the "greenhouse" effect of climate change which is one of society's most pressing environmental issues.

Many countries have developed their own standards of energy efficiency for buildings. The United States Green Building Council (USGBC) has developed The Leadership in Energy and Environmental Design (LEED) green building rating system, which is the nationally accepted benchmark for the design, construction and operation of high performance green buildings. LEED is a framework for assessing building performance and meeting sustainability goals.

Purolator

DOMINATOR™

PUROLATOR is a leading brand of high quality, high efficiency filtration products designed to reduce energy consumption while maintaining high efficiency levels in commercial & industrial buildings. PUROLATOR features a broad selection of filters, such as the DOMINATOR, DEFIANT PLEAT, SERVA-CELL 2VS, ULTRA II and the Puro-g13een filter that will help you reach your sustainability goals.

DEFIANT PLEAT

SERVA-CELL 2VS

Puro-g13een

Ultra II

The U.S. Green Building Council

The U.S. Green Building Council (USGBC) is a non-profit organization committed to expanding sustainable building practices. USGBC is comprised of more than 13,500 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 and innovation & design. LEED is a practical rating tool for green building design and construction that provides immediate and measurable results for building owners and occupants.

Purolator

PUROLATOR is dedicated to improving the environment and offers the broadest line of filtration products in the industry designed to meet or exceed requirements for clean air and better indoor air quality. PUROLATOR products like the High Efficiency Rigid Cell Dominator™ exceed LEED/Green Building Initiative requirements of MERV 13 and offer an extremely-low and economical pressure drop.

Earning LEED 2.2 Certification

LEED v2.2 Certification of new building construction and major renovation projects measures 69 possible points and awards four levels of certification:

- **CERTIFIED** ~ 26 - 32 points
- **SILVER** ~ 33 - 38 points
- **GOLD** ~ 39 - 51 points
- **PLATINUM** ~ 52 - 69 points

Components relating to air filtration can account for up to 23 of the possible 69 points.

Reducing energy is the strongest credit component. 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 (ie. reducing from 500fpm to 300fpm) can reduce resistance as much as 2/3 and triple the life of filters.

In all, higher ratings achieved in the LEED v2.2 Certification process, result in a building that is more environmentally friendly, more healthy for its occupants and more cost-effective.

Purolator

PUROLATOR offers a full range of high-efficiency HVAC products with MERV 13 or higher ratings. Upgrading to Purolator high efficiency products can improve your overall certification points with the added benefit of reducing small- and large-particulate emission through outside-air exhausts, reducing indoor airborne irritants, and reducing microbial growth.

MERV 13+ FILTERS Clockwise from top: DOMINATOR, SERVA-CELL 2VS, SERVA-PAK S and Puro-gReen.

FILTRATION/LEED POINTS

Rating Category	Air-Filtration Strategy	Points Available
Energy & Atmosphere Prerequisite 2: Minimum Energy Performance	Use an energy-analysis tool to understand the impact of filter airflow resistance on HVAC-system energy costs.	**REQUIRED**
Energy & Atmosphere Credit 1: Optimize Energy Performance	Complete a life cycle and energy-cost analysis on the HVAC filter system and switch to a lower-resistance air filter.	**10**
Energy & Atmosphere Credit 3.1: Building Operations and Maintenance: Staff Education	Educate maintenance staff on filtration fundamentals and application of various air-filtration technologies by using programs offered by the National Air FIltration Association.	**1**
Energy & Atmosphere Credits 5.1 to 5.3: Performance Measurement: Enhanced Metering	Implement metering devices to measure air distribution, static pressure, and ventilation air volumes. Utilize pressure gauges to measure resistance to airflow to determine the appropriate changeout cycle for filters	**3**
Energy & Atmosphere Credit 5.4: Performance Measurent: Emissions Reduction Reporting	Use an energy-analysis tool to determine the amount of energy saved and greenhouse-gas emissions reduced by using low-resistance air filters. Utilize high-efficiency air filters (MERV 14 or 15) to reduce small- and large-particulate emission through outside-air exhausts.	**1**
Materials & Resources Prerequisite 1.1: Source Reduction and Waste Management: Waste Management Policy and Waste Stream Audit	Switch from standard-capacity filters and/or bag-style filters to minipleat V-bank final filters. This extends filter life to reduce changeouts and waste streams while minimizing resistance to airflow.	**REQUIRED**
Indoor Environmental Quality Credit 3: Construction IAQ Management Plan	Install MERV 8 Filters at each return air grille for air handlers used during construction. Conduct a two-week building flushout with new air filters and 100-percent outdoor air prior to occupancy.	**1**
Indoor Environment Quality Credit 4.1: Documenting Productivity Impacts: Absenteeism and Health Care Cost Impacts	Install MERV 14 or 15 air filters to help reduce airborne irritants that can lead to health problems. Document absenteeism after filter upgrades.	**1**
Indoor Environment Quality Credit 5.1: Indoor Chemical and Pollutant Source Control	Install MERV 13 air filters. Follow a regular schedule for air-filter maintenance to keep unfiltered bypass air from entering ductwork and breathing air. Utilize air filters made with synthetic media to minimize airflow resistance and eliminate chances of fiber shedding.	**1**
Indoor Environmental Quality Credit 9: Contemporary IAQ Practice	Upgrade from a MERV-13 to a MERV 14 or 15 air filter, or upgrade to filters made with synthetic media, which typically have lower airflow resistance and do not absorb moisture or promote microbrial growth.	**1**
Innovation in Upgrades, Operations and Maintenance Credit 1: Innovation in Upgrades, Operations and Maintenance	Document supplier source reductions, use air filters with recycled content, and utilize gaskets on all filters and holding frames.	**4**
		TOTAL: 23

Added Benefits of Being a Green Building

Often times we are not aware of what's in the air inside a building because contaminants such as carbon monoxide, radon and some molds are not as obvious as other potential hazards. Thus poor indoor air quality (IAQ) could have a more adverse affect on health and comfort of building occupants because it may go unnoticed.

Hospitals are a good example of where adherence to LEED guidelines can be very beneficial. The two largest operating expenses at hospitals are utilities and salaries and improved air filtration can dramatically affect both. LEED promotes the improvement of air filtration in terms of both higher efficiency and lower resistance to airflow. Virtually all buildings that follow the LEED guidelines can expect to save money, improve indoor air quality and become more environmentally responsible. Although this process may cost more up front, savings are derived from lower operating costs over the life of the building.

LEED®, the "Leadership in Energy & Environmental Design" Green Building Rating System, is the nationally accepted standard for green buildings developed by the USGBC membership. For more information visit **www.usgbc.org**.

Although the U.S.Green Building Council (USGBC) does not certify, promote, or endorse products and services of individual companies, products and services do play a role and can help projects with credit achievement. The specific products you use will directly effect your overall score. PUROLATOR's extensive line of High Efficiency Air Filters includes many varieties, like the ServaCell 2VS®, that are in line with LEED standards intent on bringing energy efficiency and improved indoor air quality to today's buildings.

P-GREEN-709

Purolator®

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