

Advance defines Green Cleaning

ENVIRONMENTAL
Driving down the cost to clean.™



Smart cleaning.

A Nilfisk-Advance Brand

Making sense of green cleaning.

“Intent: Reduce exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological and particle contaminants, which adversely impact air quality, health, building finishes, building systems, the environment, and reduced deposition of contaminants in the buildings.”

LEED-EB IEQ Credit 10.6
Green Cleaning: Low Environmental
Impact Cleaning Equipment Policy

What does green cleaning really mean to your business, your employees, your budget and the environment? How do you stay on top of all the rules and regulations surrounding green cleaning? And how can floor-cleaning equipment help your business or facility “clean green?” Whether you’re considering LEED certification for your building or simply want to be sure your facility is the best it can be, you need green cleaning answers.

Advance defines green cleaning.

Introducing “green floor-cleaning” answers from Advance

As the leading manufacturer of “green” floor-cleaning equipment, Advance is committed to offering products that meet or exceed industry and government standards for green cleaning. Our products and expertise can help you translate today’s myriad of regulations regarding “green” into effective cleaning practices that:

- ***Maintain or enhance indoor air/environmental quality***
- ***Improve worker and occupant safety***
- ***Ensure sustainability***
- ***Reduce the cost of cleaning***

Indoor air/environmental quality:



CRI'S INDEPENDENT TESTING PROGRAM
certifies vacuum cleaner performance in soil removal, dust

containment and carpet appearance retention. The dust containment standard requires that the vacuum release no more than 100 micrograms of dust particles per cubic meter into the surrounding air, a protocol far more stringent than levels set by the National Ambient Air Quality standards.

Floor-cleaning equipment can contribute directly to indoor air quality/indoor environmental quality (IAQ/IEQ). For example, LEED-EB specifies that vacuum cleaners be capable of capturing 96% of particulates 0.3 microns in size and meet the requirements of the Carpet & Rug Institute Green Label Program. All of our newest vacuums are CRI-certified, from our comfortable Adgility™ 6XP and 10XP and our durable Spectrum™ 12P and 15P to the CarpeTrier™ 28 large-area vacuum.



WHISPER-QUIET OPERATION

on Advance automatic scrubbers, sweepers, burnishers and vacuums means better noise control and more available cleaning hours.

Carpet extractors cut drying time and help prevent mold

Advance extractors, such as the AquaPLUS™ and AquaRide® AXP™, feature the patented AXP™ Onboard Detergent Dispensing System that minimizes the use of water and detergent while cleaning. Advance has also introduced *LIFT™* low-moisture technology on the AquaPLUS™, AquaRide®, and Adphibian™ battery extractors. *LIFT™* technology (**L**ow-moisture, **I**ndirect spray, **F**ast dry times, **T**rue cleaning) utilizes a patented indirect spray feature that provides superior cleaning, while increasing per tank productivity and reducing water usage. As a result of *LIFT™* technology, operators will experience dry times of less than 30 minutes and the reduced risk of bacteria growth on lightly soiled carpets.

Advance extractor performance has been certified by the Carpet & Rug Institute through its “Seal of Approval” program for deep cleaning extractors. This includes the AquaClean® self-contained extractor, battery operated AquaPLUS™ and Adphibian™, and the AquaRide® rider extractor. The AquaPLUS™, Adphibian™, and AquaRide® have been certified in both *LIFT™* and deep-extraction cleaning mode.



Sealed gel batteries minimize toxic vapors

Almost all Advance scrubbers are available with environmentally friendly gel batteries or maintenance-free AGM batteries. And, the Micromatic™ M17B comes standard with gel batteries. These maintenance-free batteries are completely sealed to eliminate the acid spills that can occur with wet-acid batteries. The design also minimizes vapor emissions during charging. Combined with our onboard chargers, these battery-powered scrubbers allow non-hazardous charging anywhere in a facility.

Safety:

Green cleaning standards such as LEED-EB, ASTM E-1971 and NFSI address a wide range of topics — from noise control, machine vibration and user fatigue to chemical exposure and proper training in green product use. In fact, green standards address anything that concerns the safety of cleaning personnel, other building occupants and the building itself.



THE PATENTED “LIFT™ LOW-MOISTURE TECHNOLOGY”

feature on Advance carpet extractors means carpet cleaners use less water

and detergent.

In “LIFT™ mode”

(vs. restoration mode),

reduced moisture in

the carpet means faster drying times

and reduced risk of bacterial growth on lightly soiled carpets.



“...battery-powered equipment is equipped with environmentally preferable gel batteries.”

LEED-EB IEQ Credit 10.6
Green Cleaning



OPERATOR SAFETY

Advance floor-cleaning machines such as the Convertamatic® scrubber are designed to reduce operator fatigue from machine vibration and to eliminate potential repetitive-use symptoms.

THE ADVOLUTION™

Battery-powered rider burnisher operates at a sound level of 69 dB A, perfect for daytime cleaning.



Noise control features enhance operator safety

LEED-EB IEQ Credit 10.6 specifies that both vacuum cleaners and powered maintenance equipment such as sweepers, burnishers and scrubbers, operate with a sound level less than 70 dB A. You'll find quiet operation on a wide range of Advance equipment such as the Adfinity™ and Convertamatic® scrubbers, the Advolution™ rider burnisher and the Spectrum™ and CaniStar™ vacuums. Low noise means increased operator safety and the ability to clean during business hours — which in turn reduces costs for HVAC, lighting and security.

“...powered equipment is ergonomically designed to minimize vibration, noise and user fatigue.”

LEED-EB IEQ Credit 10.6
Green Cleaning

Ergonomic design lessens user fatigue

Excessive machine vibration and other inferior design elements can cause user fatigue and repetitive motor symptoms. Advance floor-cleaning machines such as the Advenger® and Adfinity™ automatic scrubbers, AquaRide® carpet sweeper/extractor, and Adgility™ and CarpeTrier™ vacuums were designed to reduce user fatigue from machine vibration and other factors. Controls on all Advance commercial floor-cleaning machines have been designed with ease of operation and safety in mind. Our unique One-Touch™ operator controls and soft-touch paddle found on many Advance models make operation safe, consistent and easy to learn.

THE PATENT-PENDING DETERGENT DISPENSING SYSTEM

on Advance AXP scrubbers and extractors reduces the amount of water and detergent used, minimizes operator exposure to concentrated chemicals, and reduces the need for equipment cleaning and maintenance.



Detergent dispensing system minimizes chemical exposure

LEED-EB guidelines call for “minimum exposure to concentrated cleaning chemicals.” They also specify “use of chemical concentrates and appropriate dilution systems.” Advance’s newest extractors and scrubbers feature a unique, proprietary AXP™ onboard detergent dispensing system that eliminates pre-mixing of detergent and water so operators aren’t exposed to potentially harmful chemicals. Onboard dispensing also means no waste of chemicals or water. The result? Minimized use of and exposure to chemicals, maximized “green clean.”

NFSI Certification:

All Advance AXP™ disc walk-behind and rider automatic floor scrubbers have been certified by the National Floor Safety Institute (NFSI) to meet the organization's standards for producing a high-traction surface consistent with slip-and-fall prevention.



Eliminate propane emissions with battery-powered burnishing

Advance's Advolution™ 2710 battery-powered rider burnisher is the ideal alternative to the noise and emissions of propane-powered equipment. Eliminating emissions means cleaner air for operators and building occupants alike. The operating sound level of the Advolution™ is 69 dB A, equal to the volume of standard conversation to allow burnishing during business hours.

"...cleaning provides well documented benefits in terms of creating cleaner, safer, healthier surroundings."

ASTM E-1971 - 05
7.2.3.4

Sustainability:

A combination of stewardship in cleaning and housekeeping operations plus adherence to the ASTM E-1971 standards promotes both eco-efficiency and sustainability. Advance demonstrates its commitment to providing durable, sustainable cleaning systems in the design of all of its floor-cleaning machines.

Minimize chemical use to minimize environmental impact

At the heart of a sustainable cleaning program is the idea of "less." Several of Advance's automatic scrubbers, like the Advenger rider scrubber, require fewer chemicals and less water because they scrub floors clean in one pass. Advance's patent-pending AXP™ onboard detergent dispensing system automatically calibrates solution flow to minimize cleaning solution use while maintaining cleaning performance (as mandated in LEED-EB guidelines). Since water and detergent don't combine until they reach the scrub deck, there's no wasted solution. All Advance automatic scrubbers feature the Smart Solutions™ conservation system to reduce water and detergent use.

Sustainable practices protect facilities along with the environment

Protecting your facility from damage means a longer useful life for hard floor surfaces, carpets and walls. For example, the new Adhancer™ One-Pass Floor Maintenance System minimizes aggressive scrubbing to

"...automated scrubbing machines are equipped with variable-speed feed pumps to optimize the use of cleaning fluids."

LEED-EB IEQ Credit 10.6
Green Cleaning

".....address appropriate cleaning activities and processes to promote eco-efficiency and sustainability...and avoid adverse impacts on the building occupants, cleaning personnel, the building structure itself, and the environment."

ASTM E-1971-05

ADVANCE EQUIPMENT

utilizes non-marking roller wheels to protect building surfaces from damage.



lengthen not only the life of your floor finish but the life of the flooring itself. Advance's CRI-certified carpet extractors are proven to retain carpet appearance, again increasing the carpet's useful life and reducing the environmental impact of discarded carpeting.

LEED-EB's IEQ Credit 10.6 specifies that "equipment has rubber bumpers to reduce potential damage to building surfaces." Advance equipment goes further by using non-marking rubber bumpers or roller wheels so not only are building surfaces protected from damage, but there are fewer marks on walls that require the use of cleaning chemicals and labor. Advance equipment also uses non-marking or mark-resistant wheels for the same reasons.

Reducing costs:

"HSC (healthy schools campaign) defines green cleaning programs as those that protect health without harming the environment."



You know that labor represents up to 95 percent of the cost to clean. This is why Advance focuses its product development on increasing productivity and reducing labor input. This is, in fact, a significant part of our contribution to green cleaning. By continually reducing the cost to clean, facilities will be able to afford to do more cleaning — automatically translating to a better, safer, cleaner and greener environment. As an example, Advance's Adhancer™ Maintenance System is a one-pass floor sweeper-washer-polisher that reduces labor input and equipment costs, chemical use and floor finish dust, while extending the life of hard floor finishes and surfaces. Advance extractors with DCM or LIFT technology also result in higher cleaning productivity. Using less water and detergent means fewer empty/refill operations and more actual cleaning time.

THE ADHANCER™ ONE-PASS FLOOR MAINTENANCE SYSTEM

dramatically reduces cleaning complexity by sweeping, washing and polishing all in one pass. This cuts labor costs by as much as 50%. And because the system doesn't degrade floor finish, it also extends strip-and-recoat cycles and reduces equipment needs.



Documenting productivity

Advance can also help you document cleaning productivity impacts as required by LEED-EB IEQ Credit 4.2. The unique Productivity Enhancement Program tool used by your Advance representative can quantify the labor, chemicals and total cost savings you can achieve — by comparing your current cleaning methods to various high-productivity machines available from Advance. The result is both a cleaning system recommendation that reduces your total cost to clean and the data you need to prove your productivity increase.

Who is defining “green?”:

Here are the major industry associations and government green cleaning standards and guidelines:

- **US Green Building Council/LEED**
The LEED Green Building Rating Systems were developed by the US Green Building Council. LEED-EB (for Existing Buildings) provides guidelines for how to develop, adopt and maintain a policy for the use of janitorial equipment that maximizes reduction of building contaminants with minimum environmental impact. Green cleaning can also contribute in the Innovation category in three other LEED systems: LEED-NC for New Construction; LEED-CI for Commercial Interiors; and LEED-CS for Core and Shell. www.usgbc.org/LEED
- **ASTM E-1971**
The American Society for Testing and Materials’ “Standard Guide on Stewardship for Cleaning Commercial and Institutional Buildings” covers procedures to assist owners and operators of commercial and institutional buildings in the stewardship of cleaning and housekeeping operations. www.astm.org
- **NIOSH/EPA**
The reference guide, “*Building Air Quality: A Guide for Building Owners and Facility Managers*” documents in Step 5 how to develop and implement a plan for facility operations and maintenance. www.cdc.gov/niosh
- **OSHA**
Section 5(a)(1) of the Occupational Safety and Health Act requires employers to “furnish to each employee a place of employment which is free from recognized hazards that are causing or are likely to cause death or serious physical harm to employees.” www.osha.gov
- **Environmentally Preferable Product Purchasing Policies**
Multiple industries and government organizations are developing recommendations for environmentally preferable purchasing, including ANSI (American National Standards Institute) and state and local governments. See examples at www.green-ca.gov/EPP.

There are market-specific green cleaning standards and guidelines, too:

- **Green Guide for Health Care**
This guide is a voluntary, self-certifying program of best practices for the health care industry. It includes a sustainable purchasing policy for cleaning products and materials. www.gghc.org
- **Healthy Schools Campaign**
A multi-pronged endeavor for improving education, this group promotes the use of safe and environmentally friendly cleaning products in K-12 schools. www.healthyschoolscampaign.org
- **EPA Executive Order 13101**
Even the Environmental Protection Agency itself has a policy in place for emphasizing and increasing the purchase and use of environmentally preferable products. www.epa.gov/epp

Green product certifications:

- **CRI**
The Carpet & Rug Institute’s Green Label Certification program tests and certifies equipment performance with its CRI Green Label certificate for vacuum cleaners and the Seal of Approval for carpet extractors. www.carpet-rug.org
- **Green Seal**
Green Seal is an independent, nonprofit organization that identifies and promotes products and services that cause less toxic pollution and waste. It sets environmental standards for product categories (such as floor care products) and certifies products that meet those standards. www.greenseal.org

Advance's commitment:



*"People are entitled
to a healthy and
productive life in
harmony with nature."*

United Nations Conference on
Environment and Development
(Rio, 1992)

Beyond compliance, to commitment

At Advance, we practice what we preach. We follow the ASTM E-1971 commercial cleaning stewardship guide and the NIOSHA/EPA guidelines in our product design and in the way we care for our own people and facilities. Our environmental management system is certified in compliance with ISO 140001 from Norske Veritas and has been since 1999. And our products are certified to VL, CSA and ETL standards as appropriate.

Our products are shipped in recycled/recyclable cartons and pallets, and we use shrink-wrapping to minimize cardboard use. In our plant, we reclaim scrap plastic, steel and brass. We reuse polyethylene in battery boxes and recycle printed circuit boards. Our powder-coating process reclaims 99% of powder from the air, we test our machines with water to minimize waste stream contribution, and we clean our facility with environmentally friendly cleaners. Our products meet all applicable certifications for performance — as well as for "green."

If you're committed to green cleaning or just want to know more, call Advance.

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