

Less Water/More Green

By Stephen Hanig

For years, many retailers have had a love/hate relationship with carpeted floors. Although highly polished marble and stone floors can add elegance and sophistication to a retail setting—and, some new terrazzo floor designs provide a dash of pizzazz—nothing says quiet luxury and sophistication quite like carpet.

However in order to keep them looking their best, carpets must be regularly cleaned and maintained. As much as they can add to a store's—or any facility's—style and refinement, a soiled or poorly maintained carpet is usually very unsightly and can result in a negative public impression. Luckily, new Greener, low-moisture carpet extractors are being introduced that not only make carpet cleaning more efficient, but healthier as well.

It's All About Green

“Green” cleaning is sweeping away (excuse the pun) the North American cleaning industry and many of its global counterparts. According to Executive Order 12873, issued in 1993 by former U.S. President Bill Clinton, Green or environmentally preferable cleaning involves using “products and services that have a lesser or reduced effect on human health and the environment when compared to other products and services that serve the same purpose.”

In fact, the use of Green cleaning products is probably the most widespread trend to hit the cleaning industry in more than a decade. And, we are now seeing it become popular in the retail store setting as well.

As facilities transfer to using Green cleaning products, many are reporting water, energy, and money savings as well as improved employee health, reduced absenteeism, and increased productivity.

Some facilities are also reporting fewer complaints of malodors, allergic reactions, and respiratory ailments when more environmentally preferable cleaning products and procedures are used.

Green Carpet Cleaning Solutions

As part of an ongoing maintenance program, most retail stores have deep cleaning carpet extraction schedules that call for most carpeted areas to be cleaned throughout the year at a regular frequency. This deep cleaning helps remove embedded dust and soil, which can otherwise harm carpet fibers and, if they become airborne, affect the health of building's occupants. Furthermore, most experts agree that extraction is the most thorough way to remove these soils and clean carpets. The problem: a large amount of water and chemicals are used in traditional carpet extraction.

Green cleaning chemicals are now available and can be incorporated into retail store carpet cleaning and extraction programs. For example, innovative cleaning chemicals and spotters have been developed that are Green Seal® certified—a designation verifying that the product is not only environmentally preferable, but also as effective as similar traditional cleaning products and cost competitive as well.

Despite all the progress, however, one problem remains with carpet cleaning whether environmentally preferable products and procedures are used or not. Excessive moisture and slow drying times after carpet extraction can negatively impact indoor air quality since harmful bacteria find an ideal breeding environment within the carpet's fibers.

Traditional Extractors

Some extractors, especially older models, can actually cause more health-related problems than they solve because they may over wet carpets. Over wetting often occurs when these types of extractors

use too much water or have poor vacuum capability—vacuuming up the excess liquid during the course of cleaning. This can cause a carpet’s backing to separate, the coloring or dye to bleed, and can even shrink the carpet.

In retail stores, the problems associated with over wetting are intensified. Very simply, carpets can take too long to dry and may be wet when the store opens its doors for business the next day. Additionally, wet carpets may retain more chemical residue, which can act like a magnet by pulling and trapping new soil and grime into the carpet fibers.

According to the U. S. Environmental Protection Agency (EPA), carpets should be completely dry within 48 hours of extraction to prevent mold and mildew. However, LEED-EB (Leadership in Energy and Environmental Design – Existing Buildings) feels 48 hours is extensive and believes carpets should dry in less than 24 hours; still, some experts say even this is too long.

Additionally, long drying times can cause some areas in a retail facility to be “blocked-off” for extended periods of time while the carpets dry. While this potentially causes serious safety issues, mold and mildew can also develop marring indoor air quality and harming employee and customer health. Furthermore, when traditional carpet cleaning chemicals are used, gases and VOCs (volatile organic chemicals)—which can cause allergic reactions and respiratory problems—can be emitted when the chemicals are wet.

One way retail store managers can reduce drying times—as well as the amount of chemicals used—is through the use of new, low-moisture carpet extractors.

Low-Moisture Extractors

Some low moisture carpet extractors place a greater emphasis on “agitation” to clean carpets, instead of more water and cleaning

solution. The result, carpets can dry in as little as 30 minutes when using a low-moisture system. This is ideal for retail stores because carpets can be cleaned early in the morning, before the store opens, instead of being done late at night.

Some low-moisture portable machines are also tankless, which means they have an automatic fill and dump system. Without having to fill or empty a tank, custodial productivity is improved since it is estimated that it takes a cleaning worker 15 minutes each time they must go to a janitorial closet to add or dump cleaning solution. Low-moisture machines also reduce the time used to place and gather air movers and fans, which are often used to expedite drying time. (see sidebar)

Besides reduced water usage, the vacuuming systems on tankless, low-moisture extractors have also been improved. Some low-moisture extractors have the vacuum's motor placed very close to the unit's base. This means that water is moved inches—not feet—from the carpet area being cleaned, resulting in faster dry times.

Another “Green” component of some low-moisture portable extractors is their heating ability. Heat improves carpet cleaning by increasing the chemical's cleaning action and high-temperature cleaning has also been found to considerably improve drying times in both traditional and low-moisture extractors.

Low-moisture systems are not only proving to be Greener and healthier, but many experts believe they actually enhance the carpet's appearance after cleaning because fewer chemicals are used, allowing the cleaning solution to dry forming a crystallized residue easily removed with vacuuming.

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Possible Sidebar:

Spotlight on Air Movers

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In addition to low moisture carpet extractors, air movers can be incorporated to help reduce drying times. Air movers lift moisture from carpets and fabrics, which speeds up evaporation. Airflow also adds energy to the water in fabrics, carpets, and upholstery, which facilitates evaporation and brings “dry” air to wet material.

There are different types of air movers available on the market, including:

The Squirrel-Cage

Among the most common type of air mover is the “squirrel-cage” blowers. These are most often used for high-volume, focused airflow and can be directly placed on carpets to “float” air over the carpet surface or aimed at specific areas where air is needed. Some models have duct-able snouts that further help direct airflow and some machines can be used at a variety of angles—0, 45, and 90 degrees. Units that are more powerful may have two-speed motors, which can produce up to 2,000 (rated) cfm. Selecting a “stackable” air mover helps minimize storage requirements and transport problems.

Axial Fan

Axial fan, another type of air mover, can be used as room ventilators since they move a significant volume of air through an indoor area.

They are versatile and can be used for both positive and negative air filtration.

When used for positive air filtration, air is blown *into* a structure, escaping through doors and windows, taking moisture with it. Negative air filtration draws air and moisture *out* of a structure. Positive air pressure displaces more energy and will create greater evaporation rates.

Propeller Fans

Propeller fan–type air movers can be used: face down for spot drying; face up for ceiling drying; stacked for wall drying; or in doorways for ventilation. Some models can be tilted forward for drying baseboards, carpets, and pads or tilted back to direct air at elevated objects, such as furniture, draperies, and walls. Look for tested and approved machines that feature 2,000 cfm to provide excellent airflow to reduce drying times. Additionally, machines that draw low amperage (1.5 amps) allow the carpet cleaning professional to use up to eight air movers on the same 15 amp circuit, for more efficient drying without “blowing” circuits.

Air Mover Placement

Depending on outdoor humidity, temperature, and other variables, air movers can be placed in front of open windows and doors to move fresh air into a room. Based on the air mover’s size, weather, and the dampness of the area, one unit is usually necessary for approximately every 10-14 lineal feet. The air movers should be placed at 45-degree angles in a clockwise rotation with the unit actually touching the wall. This creates air turbulence within the room and circular airflow to help reduce drying time.

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