

# A Bright Future

By Robert Kravitz

It's estimated that commercial office space in the United States takes up some 70 billion square feet—much of it covered with hard surface flooring, such as tile, stone, rubber, etc. The appearance of all this square footage can be crucial to the success of a facility. After all, the floor provides most building occupants and visitors with their first



Courtesy of Tornado Industries

impression of a facility. It helps them determine whether or not they want to live, work, or do business in that building.

Yet proper floorcare is demanding. In most settings, it consumes more time and labor than carpet-care, which also means that maintaining floors can cost considerably more than maintaining carpets. It's estimated that floorcare costs can take up as much as 80 percent of a facility's cleaning budget with as much as 90 percent of the costs attributable to labor.

These facts mean that finding new floorcare technologies to keep floors well maintained—in less time

and with less labor—is bound to be foremost in the minds of most facility managers. And distributors that can guide and help their clients make wise floorcare decisions based on their specific needs will prove invaluable.

## Determining Needs

Although floor machines have changed little in decades, floorcare technology has advanced considerably in the past 10 years, especially in just the past five. New machines and floorcare-cleaning procedures have been introduced that make maintenance easier, more efficient, less labor intensive—thereby cutting costs—as well as “greener.” The right mix of cleaning equipment is often dependent on assessing the facility's specific needs.

The overriding concern among most facility service providers (FSPs) revolves around floorcare productivity—selecting equipment that helps cleaning professionals complete floorcare maintenance faster and more efficiently. “Productivity and performance remain the key factors when end users select floor cleaning equipment,” says Jim Hlavin, director of business development for Tornado Industries, a Chicago, IL-based manufacturer of a variety of floor and carpet equipment. “However, this is dependent on several issues, such as the type of floor and how and where the equipment is to be used.”

According to Hlavin, larger facilities usually require a combination of equipment—from buffers and burnishers to walk-behind scrubbers or ride-on machines. Some of the factors that affect the equipment decision include:

- The size of the area to be cleaned

- The amount of soiling and debris generated in different areas of the facility, such as lobbies, warehouse, kitchen, or factory/production areas

- The type of soiling on the floor,—oil, grease, heel marks, dust, moisture, etc.

- The type of hard surface floor

- Foot traffic

- Overall cleaning attention paid to the different areas of the facility

- The “value” of the floor's appearance to management, visitors, and occupants.

This last point is quite important because it will be a primary aspect in determining the type of equipment selected, the amount of time and money budgeted for floor maintenance, and the cleaning systems and processes used.

## The Machine to Fit the Job

With productivity such a prime concern and considering that, as mentioned above, 90 percent of the cost of floorcare is labor, the additional costs of a mechanized floor machine or ride-on can likely be recouped from labor savings in a relatively short time, as is demonstrated in Exhibit 1 on the following page. “Ride-on sweepers and scrubbers offer dramatic productivity gains over walk-behind machines,” says Hlavin. “In addition, ride-on equipment is usually easier to operate and less fatiguing, also improving productivity.”

Hlavin adds that one of the advances of newer ride-ons is their improved maneuverability: the ability to get into narrow spaces and their turning capabilities. “However, enhanced maneuverability is not restricted to some ride-ons,” says Hlavin. “Some newer walk-behind machines have

**Exhibit 1**

**Estimated Time Differences Between Manual and Automated Floorcare Methods**

Floor area (sq. ft.)	One person with mop & bucket	One person w/16" floor machine & vac	One person w/24" auto scrubber/ride-on
1,000	1.6 hours	1.1 hours	10 minutes
5,000	8.3 hours	5.5 hours	13 minutes
10,000	16.6 hours	10.0 hours	27 minutes
20,000	33.3 hours	22.0 hours	53 minutes
50,000	83.3 hours	55.0 hours	2.1 hours

*Courtesy of Tornado Industries*

been redesigned so that they are much more compact, which not only improves productivity, but also allows these units to get into, and more efficiently clean, areas often difficult or impossible for ride-on scrubbers to enter."

Some situations may require a ride-on machine to tackle large open areas and a smaller walk-behind—or even a traditional buffer-type floor machine—for narrow aisles or to get in and around smaller working areas. By matching the size of the machine to the facility's needs, costs are minimized and productivity maximized.

**Cylindrical Floor Machines**

"We are seeing cylindrical floor machines become increasingly popular," says Tom Sawyer of Mid-Michigan Supply Co., Jackson, MI. "And this applies to smaller floor machines as well as larger scrubbers and ride-on equipment."

In fact, one manufacturer of both rotary and cylindrical floor machines reports that five years ago, just 25 percent of its floor machine sales were cylindrical-type machines, with the majority being rotary. Today, those figures are reversed.

Cylindrical floorcare machines, originally introduced in Europe almost 20 years ago, are now manufactured by a few jansan manufacturers in Europe as well as the United States. These machines have counter-rotating brushes on each side of the unit, rotating at 1,000 to 1,500 rpm and at 3.5 psi. This is about six times the contact pressure provided by a rotary machine, which helps improve the cylindricals' cleaning capabilities.

Sawyer says that cylindrical machines were originally designed to maintain floors that have uneven surfaces, often found in older European buildings, or in facilities with newer floor coverings, such as rubber-studded floors. "These machines can adjust to these different surfaces better than a rotary machine, tend to be easier to operate, and use less chemical and water as well," he says.

Recently, there have been changes to the brushes used in cylindrical machines. Unlike rotary machines that have universally accepted color-coding systems for their pads—black for striping, white for polishing, for example—the manufacturers of cylindrical machines used a variety of incompatible color-coding schemes, causing considerable confusion. The new system stan-

dardizes brush colors, adopting the more widely used color-coding scheme used by rotary machines.

**Green Concerns**

Floor machines are also becoming greener. Some, such as the cylindrical machines mentioned above, use less chemical and water than their rotary counterparts. Also, more technologically advanced burnishers now have "active" or "passive" vacuum systems to help trap and capture the dust created in the burnishing process.

In many ways, when a high-speed floor machine is used to polish a floor, it "grinds" the top layer of the floor's finish, removing heel marks and stains and smoothing out the surface so that it produces a shine. However, this process makes a considerable amount of dust, which can harm indoor air quality and circulate throughout a facility via heating and air conditioning systems.

Active vacuum systems, found mostly in Europe, have a vacuum cleaner system built into the machine to collect dust and airborne particulates released in the burnishing process.

Passive machines, more common in the United States, have a shroud covering the base of the machine and a filtering system rather than a separate vacuum system. The "vacuum" is powered by the air generated by the spinning pad.

**Floorcare Product Technologies**

*By Ron Goerne*

Like floorcare equipment, floor coatings have long been mired in old technology. Concentrating on improved gloss and burnish response, the basic technology has remained the same for decades. But that is beginning to change. Several years ago, the first viable ultraviolet (UV) cured coatings became available. These coatings offered virtually instant dry and cure times combined with dramatic labor savings by reducing re-coating frequencies and eliminating the need for burnishing. Advances in the UV technology have led to new coatings that are strippable with conventional methods and more resistant to dirt embedment, further reducing maintenance costs.

UV technology was developed by the paint industry, and it is expected that more coatings and technologies will also come from areas outside the jansan industry. Some of these new products may help reduce burnishing needs and reduce strip/refinish cycles.

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Both of these systems collect and trap dust and particulates. Surprisingly, both systems work about equally well and can reduce airborne particulates by as much as 40 percent to 50 percent.

### Power for the Future

Traditional floor machines that run off power cords can trip fuses in older buildings and must be unplugged and re-plugged into new outlets as the work progresses. The cords also pose a tripping hazard to workers and other building occupants. These issues can hamper worker productivity as well as raise concerns about liability costs.

"We can expect to see more floorcare equipment in the future that is battery operated," says Hlavin. "Workers like to be untied from electrical outlets, especially when caring for floors."

According to Hlavin, wet and lead-based batteries are already being used in many floor machines and other jansan equipment. However, these batteries must be handled properly, as they can negatively impact the environment. In fact,

most communities now have regulations regarding the use and disposal of lead-acid batteries.

However, Hlavin says new types of batteries for jansan equipment are being tested or are under development which may be safer to use, less harmful to the environment, and longer lasting. Among them are:

- Dry cell batteries, commonly used to power flashlights, toys, cassette players, cameras, cell phones, and many other items
- Gel cell batteries, which are more expensive than dry or wet cells but considered maintenance-free and safer to use
- Absorbed Glass Mat (AGM) batteries, the latest in battery technology and most promising; however, they are even more expensive than gel cell batteries.

The good thing about all the advances in floorcare equipment technology is that these new machines can help cut costs and improve worker productivity while protecting the environment. A problem that remains, however, is that many FSPs are unaware of these advancements and

their benefits—a problem but also an opportunity for jansan distributors.

Education about these new technologies is essential for FSPs to operate their facilities in the most efficient ways possible. Manufacturers are beginning to use the Internet along with handheld multimedia devices to demonstrate their newer equipment as well as to train FSPs in the efficient use of the new technologies. And the process helps shift the distributor from salesperson to guide and consultant, a strong and enviable position for any distributor. **17**



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### Q & A With William Griffin

*William R. Griffin, a cleaning consultant based in Seattle, WA, is well known for spotting jansan industry trends. In a recent interview, Griffin pointed out what he believes will be the next big developments in floorcare equipment:*

**Q:** Overall, what do you see evolving with floorcare equipment?

**A:** The equipment is getting much simpler and easier to use. I also see repairs being simplified. And floor machines will be more versatile—they will clean carpets, floors, and perform more tasks just by changing a module, deck, or wand.

**Q:** Floorcare machines are already getting greener. Do you see this continuing?

**A:** Yes, very much so. HEPA filters, which effectively capture and trap dust and impurities, will be added to more machines. Additionally, some machines will be able to clean and reuse the water/solution in tanks, which will help conserve natural resources and be far less polluting.

**Q:** How about electronics?

**A:** We will see floorcare machines with Radio Frequency Identification (RFID) systems. They will be able to track where the equipment is or was and how often it has been used and even

who uses it. This will help managers and supervisors track worker productivity and maintenance schedules.

I also believe we will see floorcare equipment that will "test" floor areas and notify the user if an area is clean or needs attention. Currently, one vacuum cleaner manufacturer has a similar device for vacuuming carpets; it lets the user know when to move on by detecting little or no dust and debris. This could help establish and maintain cleanliness standards for a facility.

**Q:** What impact will all of this have on managers and FSPs?

**A:** Facility managers will demand that cleaning workers be certified in floorcare and other maintenance activities. It's already happening. Managers want professionals handling their cleaning needs; it helps reduce liability costs and assures quality work.

Additionally, as more facilities seek LEED [Leadership in Energy and Environmental Design] certification, I see more architects getting involved in building cleaning and maintenance. They will develop cleaning specs for facilities to make sure the cleaning products used will complement the building's construction to earn and maintain LEED design certification.

—Robert Kravitz