

## Sweep or Scrub Basics – How to Determine Which Floor-cleaning Approach Fits Your Application

By Dave Ditty  
Training Manager  
Nilfisk-Advance

There are numerous reasons for sweeping or scrubbing floors in a plant or warehouse – increased productivity, worker safety, product contamination, protecting the floor surface and maintaining a quality image. On average, a manufacturing plant spends 931,850 hours per year maintaining floor surfaces – 551,984 of those hours are spent sweeping and 379,554 hours are spent scrubbing, with the remaining hours spent polishing or resurfacing. When you consider costs to clean, a manufacturing facility spends, on average, \$2.15 annually per square foot on maintenance – with labor accounting for over 90% of total floor-cleaning costs. That's why it's essential to find a floor-cleaning approach that not only meets your facility's cleaning requirements but also helps increase your productivity – both in time and labor. However, determining whether to sweep, scrub or both – and what type of equipment to use based on your cleaning needs is not the straightforward decision it might seem.

### SWEEP OR SCRUB?

Here are some initial factors to consider when determining whether sweeping, scrubbing or a combination of both is best for your plant or warehouse.

- *The size of dirt and debris particles generated*
- *The amount of dirt and debris generated*
- *The character of the dirt (fibrous, oily, dusty, wet)*
- *The type of floor surface (tile, bare concrete, coated concrete, outdoor, etc.)*
- *A definition of what constitutes “clean” for your facility*

“Clean” can mean anything from getting rid of chunks of dirt on the floor to creating a shiny, scuff-free surface. Your facility's cleanliness goal will be a factor in your equipment choice. For example, if “clean” means getting rid of forklift tire marks and other stains in addition to dust and debris, then your cleaning process will have to include scrubbing as well as sweeping.

	SWEEP	SCRUB	SWEEP/SCRUB
Light, bulky debris	✓		
Heavy or wet debris	✓		
Dust control	✓	✓	✓
Oil or grease		✓	
Floor marks		✓	
Light debris, plus oil or grease			✓

After you assess the size and amount of dirt and debris to be removed, your primary decision is “sweep or scrub.” This decision is not always straightforward. For example, if the material to be cleaned is mostly fine dust, it would seem that a sweeper would be the ideal tool to remove it. But the best way to handle dust is to “add water,” which in turn eliminates your dust problem; this means a scrubber may actually be the better equipment choice.

The type of dirt and debris you're cleaning is a factor in selecting the right floor-cleaning equipment.

*“Clean can mean anything from getting rid of chunks of dirt on the floor to creating a shiny, scuff-free surface. Your facility's cleanliness goal will be a factor in your equipment choice.”*

### FLOOR SWEEPERS 101

There are two types of sweepers: vacuum and broom. The type of sweeper you select depends on the type of debris in your facility.

*Vacuum sweeper* – This type of sweeper is ideal for picking up light, bulky debris such as leaves, paper cups or newspapers, and the shredded paper and packing materials found in shipping areas. Vacuum sweepers rely entirely on vacuum suction to pick up debris from surfaces and deposit it into large bags or dirt bins. Vacuum sweepers do an exceptional job of mulching and digesting large quantities with ease and efficiency. However, they are not efficient in picking up heavy, dense debris or any material that is matted to the ground. The majority of vacuum sweepers are walk-behind models.

*Broom sweeper* – This type of sweeper is ideal for applications where heavier debris and dust control are critical factors, such as food handling and processing facilities or electronics manufacturing. They are designed to pick up heavier, more dense debris, particularly when it's packed down and adhered to the floor surface. Most broom-type sweepers have vacuum and filter systems to control dust while sweeping, making them ideal for dusty jobs. However, this vacuum and filter system is not the same system used in vacuum sweepers; it is not designed to vacuum up debris.

Another factor when evaluating power sweepers is the type of sweeping system that the machine uses. There are three types of sweeping systems – dustpan, overthrow and dust control.

*Dustpan principle* – In the dustpan sweeping system, the main broom sweeps debris straightforward into a hopper in the front of the machine. This allows the hopper to be removed from the machine and debris to be dumped directly into a trash receptacle. Most walk-behind sweepers utilize the dustpan system.

*Overthrow principle* – Most large rider sweepers utilize “top-loading” or “over-the-top” sweeping systems. This type of sweeping system is ideal for sweeping and loading light, bulky debris. Debris is dropped into a rear loading hopper more easily than it is thrown into a dustpan. Top-loading sweeping systems utilize four-sided hoppers, which load more easily and allow larger debris loads to be swept and transported. Unlike the dustpan system which only fills to 60% of hopper capacity, top-loading systems fill to 100% of capacity.

*Dust control* – The degree to which dust interferes with production and the quality of finished goods varies from one application to another. Electronics manufacturers, for example, require dust-free environments because electronic components are extremely sensitive to dust and dirt. The latest refinement in dust filtration is the pleated paper-type filter cartridge. These filter cartridges extend the time between filter cleaning by as much as 40%. This type of filtration system, combined with a vacuum fan adequate to move the necessary air volume, provides the best filtration for controlling dust.



**There are various floor sweepers available for meeting different cleaning needs – from sweepers that control dust and pick up heavy debris, to sweepers that vacuum up light debris.**

*“Your outside consultant's goal should be to recommend the most productive equipment solution – that makes sense financially – for each of your different cleaning needs.”*

### HOW TO SELECT THE SIZE AND MODE OF SWEEPER

Once you have matched the general type of debris in your facility to the type of sweeper to handle the job, your next step is to determine the size and mode of equipment you need – the sweep path width and whether you need a walk-behind or ride-on machine. Size and mode are determined by looking at the size of your main aisles, total square footage, frequency of sweeping, traffic and quantity of debris. As a rule of thumb, if your aisles are eight feet wide or over and you have 100,000 square feet or more of sweeping, a rider sweeper will be most efficient and operator friendly. Smaller rider sweepers or walk-behinds are recommended for smaller areas and narrower aisles. Many facilities have both types of sweeping areas and use more than one sweeper, to fit specific areas' needs.

### AUTOMATIC SCRUBBERS 101

From walk-behind scrubbers that replace mop-and-bucket cleaning to high-productivity ride-on scrubbers, automatic scrubbers are designed to leave hard floor surfaces clean, dry and ready for foot or machine traffic. An automatic scrubber used on a daily or weekly basis will maintain the floor surface and prevent the buildup of oil, grease and other stains. It will also improve the appearance of the floors, removing forklift tire marks and make floors safer for people and machines.

### MATCHING THE RIGHT SCRUBBER BRUSH TO YOUR APPLICATION

The basic function of an automatic scrubber is to lay down a cleaning solution, agitate the solution with scrub brushes and recover the dirty solution with a squeegee. However, just as with sweepers, there are design and construction differences between various styles of scrubbers.

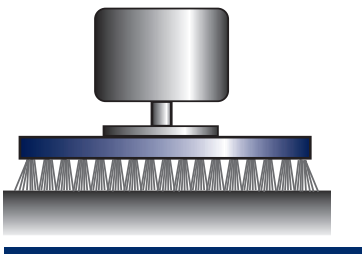
There are basically two scrub brush principles in operation today – disc and cylindrical. Some manufacturers offer scrubbers with both disc and cylindrical scrub decks that can be easily switched without tools.

*Disc brushes for aggressive cleaning of smooth surfaces* – These flat circular disc-type scrub brushes are intended for applications that require tough cleaning. Disc brushes follow dips and low spots in floors to provide a constant downward pressure – delivering more aggressive scrubbing. Disc brushes also allow you to use less cleaning solution. However, depending on the area to be cleaned, sweeping may be required first.

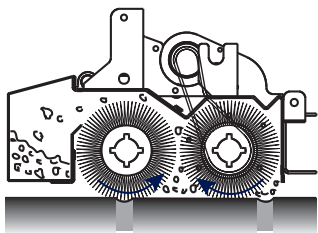
*Cylindrical brushes for rough, grouted floors* – These circular brushes are ideal for picking up light debris on rough, grouted surfaces – eliminating the need to pre-sweep prior to scrubbing. However, due to their length and design, cylindrical brushes do not follow contours and dips in the floor.

### SWEEPER-SCRUBBER COMBO MACHINES

If your facility requires both sweeping and scrubbing, there can be benefits to purchasing a dual-purpose sweeper-scrubber. The initial purchase cost of a sweeper-scrubber is less than purchasing each machine separately – and you only



**Disc brushes** provide aggressive scrubbing on smooth floors and can adjust to dips in the floor, providing a constant downward pressure.



**Cylindrical brushes** pick up light debris on grouted floors and eliminate the need for pre-sweeping prior to scrubbing.

## INDUSTRIAL-STRENGTH CLEANING SOLUTIONS

Advance floor-cleaning equipment increases your productivity and uptime, while simplifying your cleaning process. From walk-behind sweepers to rider scrubbers and sweeper-scrubbers for both indoor and outdoor use, all Advance equipment is easy to operate and designed to reduce your labor costs. Local Advance dealers help analyze your cleaning needs to match the right equipment to your cleaning demands. Plus, local dealers are your resource for training, service and maintenance. To learn more about how Advance industrial products can simplify your cleaning process and to find your local Advance dealer, visit [www.advance-us.com](http://www.advance-us.com) or call 800-214-7700.

own one machine instead of two. In smaller facilities where one person is performing floor-cleaning tasks, a sweeper-scrubber maximizes machine-in-use time – with two machines, one of them would always be sitting idle. There is also a labor savings factor with sweeper-scrubbers. Using a combination machine can reduce your maintenance costs by as much as 50% because both sweeping and scrubbing functions are handled by one machine and one operator.

### HOW TO SELECT THE PROPER SIZE OF SCRUBBER

As with sweepers, determining the size of scrubber you need depends on the size of main aisles, total square footage and the sizes of any auxiliary areas to be cleaned (shipping docks, stock bins, etc.). Automatic scrubbers are designed to clean large open areas where they can operate at their highest efficiency. Again, like sweepers, more than one size scrubber may be needed depending on the various areas to be cleaned.

### EXAMINING YOUR FLOOR MAINTENANCE NEEDS

Most cleaning-industry experts recommend that facility and maintenance managers work with a floor-cleaning professional, such as an equipment dealer, who can analyze your needs and then recommend the most productive and cost-effective solutions.

An experienced equipment dealer will begin by assessing your current cleaning program in terms of total square footage, surface types, time currently required to clean specific areas, number and width of aisles and doorways and the number of personnel involved in cleaning activities. Next, he should conduct a “productivity analysis” for you, weighing detailed information about your current cleaning system with facts on the performance of new equipment alternatives. Your outside consultant's goal should be to recommend the most productive equipment solution – that makes sense financially – for each of your different cleaning needs.

### CONCLUSION

In order to help ensure that a machine is the right match for your facility, many equipment dealers will offer in-plant trials of equipment and provide training. These in-plant trials will help you determine if your needs are best met by a sweeper, scrubber or combination machine. Whether your plant requires sweeping, scrubbing or both, you'll want to select floor-cleaning equipment that delivers the highest cleaning productivity, as well as the best cleaning performance for your requirements.

## Advance

USA

14600 21st Avenue North  
Plymouth, MN 55447-3408  
800-214-7700

Dealer Customer Service: 800-989-2235

[www.advance-us.com](http://www.advance-us.com)

Canada

396 Watline Avenue  
Mississauga, Ontario L4Z 1X2  
Phone: 800-668-8400

Fax: 800-263-5111

