

## Industrial Cleaning Machine

Used Industrial Cleaning Machine United States - Commercial floor scrubbers provide an efficient, cost-effective and fast way to clean floor surfaces and are used for regular maintenance. Labor expenses make up about 90% of total expenses when it comes to maintaining floors. Commercial floor scrubbers provide a way to clean large areas quicker and with fewer workers. There are a variety of automated commercial floor scrubbing models available on the market. Technology has advanced and commercial floor scrubbers have robotic upgrades to simplify their design. These machines offer an automated system for evenly dispersing the cleaning compound at regular intervals. Behind the suction nozzle on the vacuum, a squeegee attachment can be located on automatic floor scrubbers to add to their cleaning capacity. There are separate recovery and collection tanks situated on the machine. There are two tanks on the machine; the cleaning mixture is situated in the dispersing tank and the collection tank is where the materials collected by the vacuum accumulate. This ensures that the clean water and dirty water are kept separate which makes floor scrubbers a more hygienic alternative to traditional cleaning methods such as a mop and bucket. First, the automatic scrubber dispenses the cleaning solution and the scrubbing system is activated to loosen stains and dirt which are next suctioned into the collection tank of the machine when it passes over a location.

### Automatic Floor Scrubber Head Types

There are three main types of floor scrubber heads including cylindrical, rotary (also known as disk), and square oscillating.

#### Rotary or Disk Floor Scrubber Head

The rotary or disk model of floor scrubber head is the most common type. These models operate in a circular movement and some of their brushes or pads spin a cleaning compound into the floor prior to suction.

#### Cylindrical Floor Scrubber Head

The cylindrical floor scrubber head uses counter rotating tube style brushes that rotate at a 90 degree angle to the floor. This type of design allows for better cleaning of irregular or uneven locations. The cylindrical floor scrubbing machines often have a collection tray found behind the scrubber head to enable easier pickup of small items such as pebbles or nails. The multiple brush types available make cleaning various types of flooring possible. Soft brushes can be utilized to clean synthetic floors, textured tile and rubber and harder bristles can be used for cleaning grouted tile, concrete and other harder surfaces.

#### Square Oscillating Floor Scrubber Head

There is a flat pad on square oscillating floor scrubbing models that vibrate at high speed to clean the floor. The square design makes it easier to clean close to walls and in corners. Square scrubbing heads can be used with a specific stripping pad to take the floor finish away. They also work well for cleaning vinyl tile floors. Due to the high-speed oscillation, the square pads deliver more agitation and floor cleaning power. Cleaning grouted tile is much easier when these oscillating pads are utilized.

### Floor Scrubber Categories

There are four categories of floor scrubbers: Robotic, Rider, Stand-on and Walk-behind.

#### Walk-Behind Floor Scrubbers

There is a forward assist feature on walk-behind floor scrubbing models that helps to propel the unit forward when the operator enables this mechanism. This forward assist feature helps the operator continue working for extended periods of time, helping to prevent fatigue by increasing efficiency compared to manual models.

#### Stand-On Floor Scrubbers

Stand-on floor scrubbers offer an increased efficiency for greater areas than a walk-behind machine, while being more affordable than a rider floor scrubber. These machines are also typically smaller than a rider machine so can fit into areas a rider floor scrubber could not and have increased maneuverability. Since the operator is standing, these units provide better line-of-sight compared to walk-behind and rider models.

#### Rider Floor Scrubbers

The rider units allow the operator to be seated while the machine is in operation. These machines clean in a similar manner and reduce operator fatigue due to their comfortable seating. This design facilitates up to sixty-five percent more efficiency in comparison to the walk-behind models and allows large areas of the floor to be covered more efficiently.

#### Robotic Floor Scrubbers

Advancements in technologies in the autonomous robotics field have produced a new niche of floor-scrubbing robots. These units were born by joining self-control robotic features with automatic floor scrubbing options. Commercial models are suitable for education, retail,

healthcare and manufacturing facilities. Some commercial robotic floor scrubbing machines are able to clean up to a 10,000-square-foot area in one hour. As exciting new developments in robotic continue to develop, it is expected that the capability of robotic floor scrubbers will increase over time. Areas of increased development are expected specifically with improved sensors and computing components. Mobile robotic sensors enable today's floor scrubbers to complete a wider detection range around objects and walls. This will allow the machine to determine its exact location in larger environments, such as shopping malls, convention centers and airports. Early models of residential cleaning robots followed a random pattern when cleaning. Updated models of commercial floor scrubbing units can complete their jobs much more accurately. These machines travel in a consistent and predictable manner every time they are in operation. Because of these advancing capabilities which allow these robotic floor scrubbers to know precisely where they have already cleaned and what areas they must still clean, they miss very few, if any, areas of the floor. These machines are capable of safely navigating around obstacles or people while they operate autonomously.

#### Additional Floor Scrubber Options and Considerations

##### Hard to Reach Areas

Many floor scrubbers are unable to reach edges, corners or under or around fixtures such as water fountains. This would normally necessitate mopping in these areas too small to fit an automatic floor scrubber. Some floor scrubbing manufacturers have created oscillating brushes that enable the machine to access tricky locations.

##### Pre-Sweeping and Vacuum System Maintenance

Advanced models feature a pre-sweep option and vacuum system to be used before the wet scrub. This feature allows for removal of debris before scrubbing without the need for a traditional broom or dry mop. Loose items and dust are collected by the pre-sweep brush head and placed into the collection chamber located in front of the vacuum system. This design helps to avoid any blockages occurring in the motor or vacuum hose. Previously, the cleaning crew was required to dry mop or sweep the location before employing the floor scrubber to collect any dust and debris that might harm the machine. If blockages in the vacuum system do occur, the vacuum hose might need to be removed to clear the blockage. Occasionally, the vacuum motor may need to be blown out with compressed air to clear away any debris.

##### Environmental Options

Some models of floor scrubbers have been designed with environmentally friendly options in mind. Features including water-saving systems, greywater reduction and safer soaps with fewer chemicals are available on some models. Certain floor scrubbers are available to clean without any water or chemicals.

##### Solution Dispensing System Maintenance and Considerations

Damage can occur to the solution dispensing system if stripping solutions are added to traditional floor scrubbers. Stripping solutions can be safely vacuumed up by the machine without causing damage. It is recommended maintenance to use a vinegar and water mixture to periodically flush out the solution system to remove any soap or calcium deposits.