

Speedking™ Self-Cleaning Powder Spray Booth



Original, most widely used, self-cleaning powder recovery system for fast, automatic color changes.

The Nordson Speedking self-cleaning powder spray booth is the ultimate in Nordson's family of fast color-change systems. Why ultimate? Because Speedking system features let powder coaters change colors automatically at the push of a button, with significant savings in both time and operating costs. The Nordson Speedking booth design integrates several engineering and technology innovations that minimize powder-in-process and provide automatic booth cleaning to ensure fast powder-supply-system changes in less than 10 minutes.

Maximum Electrostatics, Minimum Powder Usage

The Nordson Speedking system is designed to maximize electrostatic operation, for optimal operating efficiency. The booth walls are engineered of a special non-conductive material that uses sandwich construction technology. The special material and unique construction provide higher powder application efficiency, structural strength and minimal powder retention. This reduces overspray and the amount of powder-in-process inside the booth, allowing for easy cleaning of virtually all booth walls and floor surfaces with the patented, fully automatic booth cleaning system.



Contamination-free Color Change

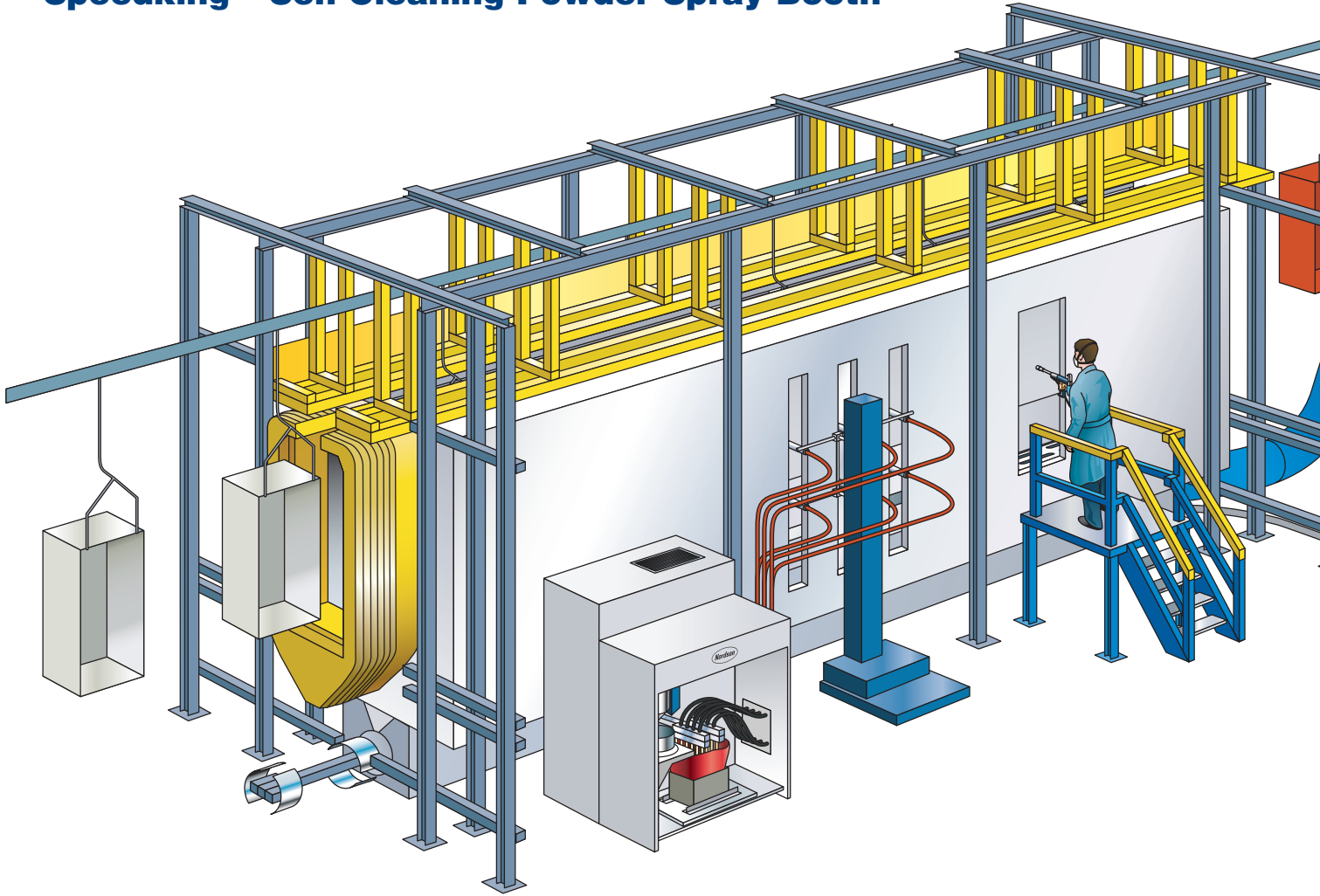
The easy-to-clean, steel twin cyclones of the Speedking booth facilitate complete cleaning without cross-contamination of colors to significantly improve overall efficiency up to 95 percent and reduce color-change time.

The Speedking booth is designed to allow for complete inspection and cleaning of powder contact areas. This streamlined design provides easy visual inspection of areas of the system that could cause contamination between colors. The dual cyclones feature hinged sections that swing open for easy access. During the color-change process, the guns and spray booth are cleaned as with a conventional cartridge system. The cyclones are then opened for inspection and cleaning. Once clean, and the next color is connected, the system is ready to spray.



Hinged sections of the dual cyclones swing open for easy access.

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Enhanced Operating Flexibility For J-I-T Production

The fully integrated system approach of the Nordson Speedking booth substantially reduces downtime, labor cost and material waste in multi-color powder coating applications. With this increase in operating flexibility, powder coaters are now able to handle smaller batches and a wide range of colors to fit just-in-time production schedules. Order size is no longer a relevant factor, since small runs can be handled quickly and economically for even greater operating efficiency.

Precision Engineering for Optimum Performance

Efficient separation of powder particles from the air stream inside the cyclones depends on precise booth sizing and consistent, optimal airflow. The Speedking powder spray booth is available with up to four automatic gun slots and two manual gun openings.

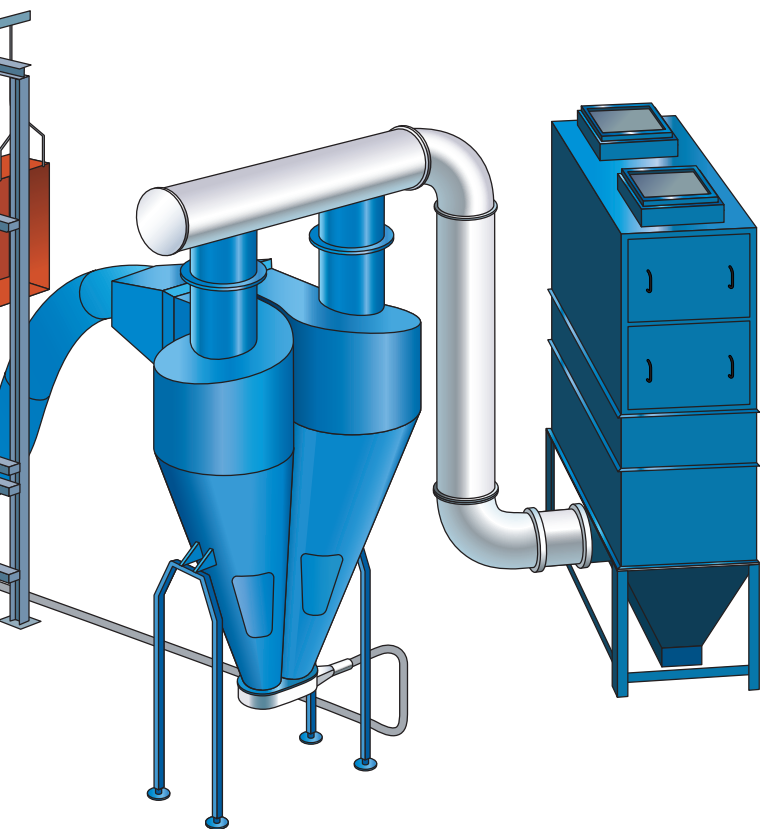
Built-in Safety

Nordson powder coating systems are designed and sized for safe, highly efficient operation. The Speedking booth meets applicable NFPA requirements to assure maximum operating safety. A Factory Mutual approved flame detection package declares a fire condition and shuts down the powder coating system within one-half second when a fire is detected. Advanced microprocessor controlled IR flame detectors eliminate false shutdowns.



Improved Powder Recovery/Recycling

Powder recovery and recycling capability is greatly enhanced with several Speedking booth features and options. The powder transfer system contributes to complete contamination-free cleaning and recycling of powder from the cyclones in under 10 minutes. It continuously removes powder from the cyclones and returns it to the feed system, eliminating the potential of powder being re-introduced into the cyclone air stream for maximum overall operating efficiency.



Use with Nordson Spray Technology

The Speedking powder spray booth can be configured with the most advanced Nordson powder spray application technology, including up to 25 Sure Coat® automatic and two manual spray guns.



Nordson Sure Coat automatic and manual spray application technology.



Powder Feed Center

The Speedking powder feed center is designed for fully automatic powder delivery to the spray guns, recovery, and sieving and recycling of the powder to the suppliers' boxes or optional fluidized box feed for maximum powder usage and minimal material loss. It can accommodate up to 27 guns, and up to 27 pumps in one feed center. A pulse-cleaning manifold sends powerful bursts of air through the siphon tubes, pumps, powder hoses and spray guns for quick, effective automatic cleaning of the system between like colors in less than three minutes. The pumps have unique in-line design to ensure quick and thorough cleaning. The quick-disconnect powder pump manifold is designed for easy disassembly for thorough cleaning between high-contrast, distinctly different colors.

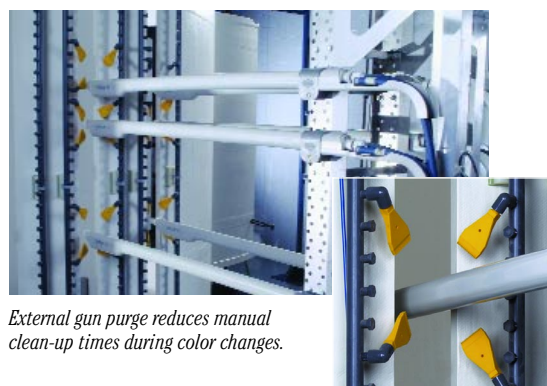
Sure Clean powder feed center allows for fully automatic powder-to-gun delivery and recovery with sieving, and return of the powder to suppliers' boxes for maximum powder usage and material loss.



Automatic, Internal Booth Cleaning

The Nordson Speedking system design incorporates an automatic cleaning device that, with a simple push of a button, removes what little powder accumulates on the booth walls, in a matter of minutes. With Nordson's automatic cleaning system, no mechanical parts are ever in the spray booth during the coating process; the operator simply pushes a button to initiate the cleaning process and is never required to enter the booth.

In the two-pass process, the cleaning device performs a quick, coarse cleaning, with the return stroke removing microfine powder particles. The automated process takes only five minutes, regardless of booth inside height, significantly reducing overall color-change time associated with conventional cleaning operations. With the Nordson Speedking system, downtime between color changes is virtually eliminated.



External gun purge reduces manual clean-up times during color changes.

Automatic External Gun Cleaning

The standard automated gun-cleaning feature of the Speedking system eliminates manual cleaning procedures beyond general cleaning of the booth interior. While the guns are inside the booth and before the booth is automatically cleaned, guns are purged internally. Then, as the automatic guns retract from the booth, they are cleaned with high-pressure compressed air that blows excess powder from the guns into the spray booth.

Wide Range of Booth Control Options

A broad range of Nordson application, Versa-Screen® and patented Smart-Coat® PLC controllers are available to closely fit any system requirements. Nordson PLC controllers will reduce operating costs and downtime while increasing powder material savings and the quality of the finishing process.

User-friendly function-key or Windows®-based operator interfaces of PLC controllers provide on-screen diagnostics and alarm indications for vital components of the powder coating system. Use of the Nordson process monitoring and control options results in optimum transfer efficiency, consistent booth airflow, minimum powder overspray and uniform coating thickness.

Several control systems can be used with the Sure Clean booth including the Sure Coat modular gun control system with application controller (shown at right).



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Speedking Self-Cleaning Booth Features

- **Easy-to-clean, steel twin cyclones** facilitate complete cleaning without cross-contamination of colors.
- **Powder feed center allows for fully automatic powder-to-gun delivery and recovery** with sieving and return of the powder to suppliers' boxes for maximum powder usage and minimal material loss.
- **Nordson in-line powder pumps** enhance quick color change and assure complete cleaning.
- **Sure Coat gun control system with patented Select Charge® technology** provides application-specific coating modes for unmatched application efficiency.
- **Engineered, electrostatically neutral booth canopy and floor material** minimize powder retention inside system during operation for maximum application efficiency and faster color change.
- **Feed system provides powerful bursts of air** through the pumps, powder feed tubing and spray guns for fast cleaning.
- **Automated external gun cleaning feature** eliminates manual cleaning for faster color change.
- **Patented powder transfer system improves cyclone efficiency** by greatly reducing powder re-entrainment while speeding a contamination-free color change in the powder feed center reclaim return circuit.
- **Fully integrated system** with each component optimized for fast color change in 10 minutes or less.
- **Hinged cyclone sections provide easy operator access** to powder contact surfaces for inspection and easy cleaning during color change.
- **A wide range of booth control options** is available to enhance operating efficiency of powder system for reduced operating costs and downtime.
- **Internal gun purge** reduces manual clean-up time during color changes.
- **Electronic gun mover positioner** allows guns to automatically position based on part size, and also home position for automatic external gun cleaning.
- **Meets applicable NFPA safety requirements** to assure safe, highly efficient operation.

Specifications

Workpiece Dimensions (system specific)

[Openings for the workpiece entrance and manual coating are adjusted to the geometry of the customer's workpieces.]

Length

Up to 394 inches (10,000 mm)

Height

20 to 177 inches (500 to 4,500 mm)

Width

Up to 49 inches (1,250 mm)

Booth Specifications

Booth Canopy	Engineered E-STAT Neutral Material
Booth Blow Off Gun	Standard
Feed Center w/Sieve	Standard
Gun Purge	Standard
Gun Outside Blow Off	Standard
Sure Coat Automatic Guns	
In/Out Gun Positioner	Standard
Fire Detection	Standard
Cyclone/Recovery	Standard
Patented Powder Transfer System	Standard
Controls	
Application Controller	Standard
Encoder	Standard
Part ID Stand/Photo Eyes	Standard
Color-Change Time	10 minutes or less

Nordson reserves the right to make design changes to products to improve their function.
These changes may occur between printings.

For more information, talk with your Nordson representative or contact your Nordson regional headquarters office.

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