

ColorMax[®] Powder Spray System



Efficient, complete and quick color-change powder application and recovery system.

The limited color-change flexibility of conventional powder coating systems has constrained manufacturing flexibility and efficiency of powder coating operations. The fully automatic Nordson ColorMax powder spray system* is designed for quick 10-to-15-minute color change with high system efficiency, optimum airflow and maximum powder usage to meet today's flexible manufacturing system environments.

Several system features minimize powder-in-process, promote easy booth cleaning, and provide fast powder-supply-system changes. The fully integrated approach of the ColorMax system substantially reduces labor cost, downtime and material waste in multi-color powder coating applications. With this enhanced operating flexibility, powder coaters are able to manage smaller batches and a wider range of colors to fit just-in-time production schedules.



Twin cyclones facilitate complete cleaning without cross-contamination.

Contamination-free Color Change.

The ColorMax booth's unique design and easy-to-clean, steel twin cyclones facilitate complete cleaning without cross-contamination of colors and reduce color-change time.

The ColorMax booth has no inlet ductwork that must be inspected and cleaned for no doubt that the system is clean. This streamlined design provides easy visual inspection of areas of the system that could cause contamination



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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.

Precision Engineering for Optimum Performance.

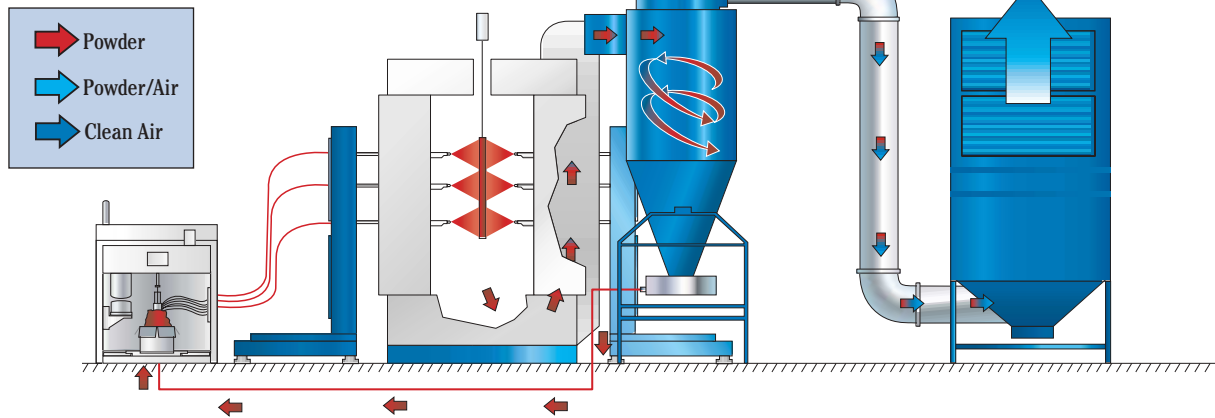
Efficient separation of powder particles from the air stream inside the cyclones depends on precise booth sizing and consistent, optimal airflow.

The ColorMax powder spray booth is available with up to six automatic gun slots and two manual openings. It allows for the shortest spray-to-waste time after color change to accommodate varying production requirements and deliver maximum efficiency of the reclaim system.



**Patent applied for*

Flow Schematic



Improved Powder Recovery/Recycling.

Powder recovery and recycling capability is greatly enhanced with several ColorMax booth features and options. The optional Sure-Max™ Powder Transfer System* provides complete contamination-free recycling of powder from the cyclones. 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.

For powder coating operations that can accommodate longer color-change time, the transfer pump and surge hopper assembly option ensures less powder loss and delivers powder to the sieve and feed hopper.

Streamlined Canopy and Booth Design.

The ColorMax booth requires less floor space and less surface area to clean. The booth's streamlined canopy is constructed with Apogee™, a patented non-conductive material for higher powder application efficiency, structural strength, and minimal powder retention and attraction to the booth. This provides for rapid powder recycling, easy cleaning and improved color-change time. By reducing the amount of powder in the booth, virtually all booth walls and floor surfaces are easily cleaned with compressed air, rather than the typical squeegee method.

The stainless steel floor of the ColorMax booth provides improved durability and cleanability to further reduce color-change time. In addition, it discharges electrostatic energy from the powder and provides grounding of operators during cleaning, for improved safety.



AeroDeck™ Air Distribution System.

The AeroDeck air distribution system complements the ColorMax booth's design for minimal powder retention and waste within the system for rapid powder recycling and decreased color-change time. Doors on manual openings and exit openings to the booth ensure higher air face velocities for color change. The ColorMax

booth base uses the AeroDeck air distribution system and high air face velocities over 0.7 m/sec (140 ft/min) to ensure improved powder containment in the air stream, minimizing build-up on the booth floor. In addition, AeroWash™ air knives reduce powder-in-process for maximum powder utilization with minimal color-change time.

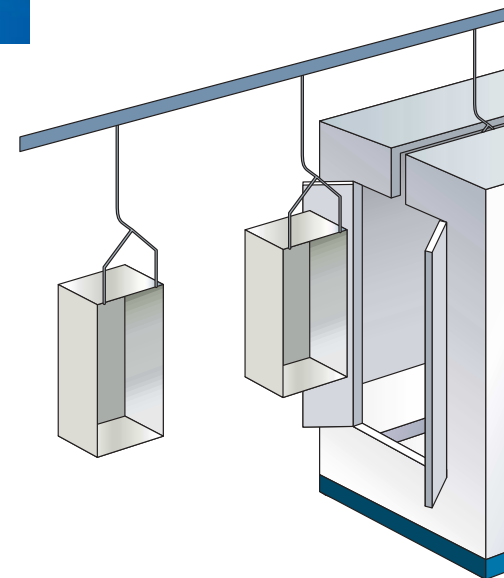


Built-in Safety.

Nordson powder coating systems are designed and sized for safe, highly efficient operation. The ColorMax booth meets applicable NFPA requirements to assure maximum operating safety.

Use with Nordson Spray Technology.

The ColorMax booth can be configured with a variety of Nordson powder spray application technology, including Versa-Spray® II, Tribomatic® and Sure Coat® automatic and manual spray guns.



Wide Range of Booth Control Options.

A broad range of patented Nordson application and booth controllers including the iControl® Integrated Control System, Smart-Coat SC and Sure Coat Triggering Controller are available to closely fit any application and system requirements. All of these controllers can be easily integrated with customer supplied PLC's if required.

Standard features of the iControl® Integrated Control system include closed loop digital flow control for atomizing and flowrate to the pump, single 12" LCD color touch screen with icon based graphics for easy operation and 128MB compact flash memory for operating system and program storage allowing operators to store up to 255 presets per memory card for all application parameters.



iControl® Integrated Control System

center. The pumps feature an in-line design to enhance quick and thorough cleaning. 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 quick-disconnect powder pump manifold is designed for easy disassembly for thorough cleaning between high-contrast, distinctly different colors.

Automatic Gun Cleaning

The optional automated gun-cleaning feature minimizes manual cleaning procedures beyond general cleaning of the booth interior. This ensures that exchange of powder containers for additional colors is kept to a minimum for fast color changes.

AeroWash™ Base Cleaning System



Powder collection in the ColorMax booth base may be minimized by the optional AeroWash base cleaning system that uses a pulsed air wash to periodically wash the settled powder into the AeroDeck air stream. Retained powder may be further reduced by the AeroWash system for the inclined base sections.

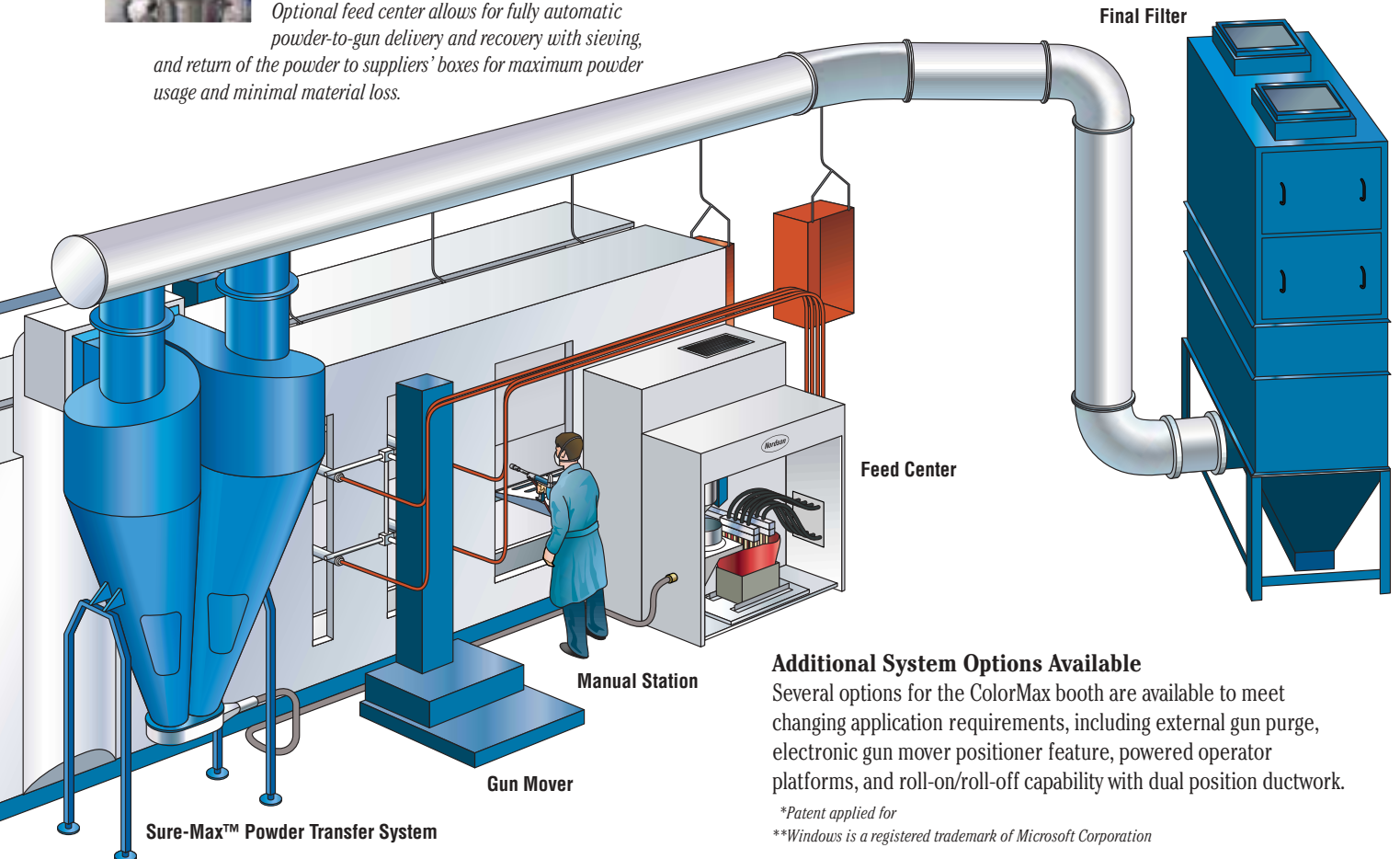
System Options

Powder Feed Center

The optional ColorMax powder feed center is designed for fully automatic recovery, sieving and recycling of powder suppliers' boxes to the spray guns for maximum powder usage and minimal material loss. It can accommodate up to 27 guns, and up to 27 pumps in one feed



Optional 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.



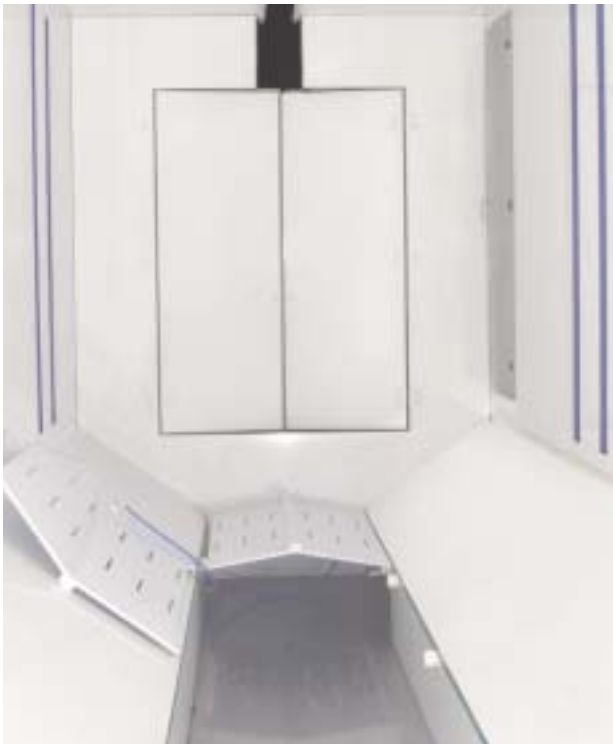
Additional System Options Available

Several options for the ColorMax booth are available to meet changing application requirements, including external gun purge, electronic gun mover positioner feature, powered operator platforms, and roll-on/roll-off capability with dual position ductwork.

**Patent applied for
**Windows is a registered trademark of Microsoft Corporation*

Features and Benefits

- Unique booth design and easy-to-clean, steel twin cyclones facilitate complete cleaning without cross-contamination of colors.
- AeroDeck air distribution system uses high air velocities over 0.7 m/sec (140 ft/min) to ensure improved powder containment in the air stream, minimizing build-up on the booth floor during spraying.
- AeroWash air knives reduce powder-in-process for maximum powder utilization with minimal color-change time.
- ColorMax powder feed center for fully automatic recovery, sieving and recycling of powder suppliers' boxes to guns delivers maximum powder usage and minimal material loss.
- No duct for no doubt that the system is clean. No inlet ductwork ensures easy visual inspection of areas of the system that could cause contamination between colors.
- iControl gun control system with patented Select Charge® technology provides application-specific coating modes for unmatched application efficiency.
- Feed system provides powerful bursts of air through the in-line pumps, powder feed tubing and spray guns for fast cleaning.
- Nordson in-line powder pumps provide improved efficiency and enhance quick and thorough cleaning.
- Non-conductive Apogee canopy minimizes powder retention inside system during operation for maximum application efficiency and faster color change.



- Hinged cyclone sections provide easy operator access to powder contact surfaces for inspection and easy cleaning during color change.
- Fully integrated system with each component optimized for fast color change in 10 to 15 minutes.
- AeroWash base cleaning system uses a pulsed air wash to periodically wash settled powder into the AeroDeck air stream inside the booth to minimize powder retention and faster cleaning.
- Stainless steel floor provides improved durability and cleanability to reduce color-change time with greater operator safety.
- Wide range of booth control options 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.
- Roll-on/roll-off capability with dual position ductwork allows cleaning in an off-line position while a clean boot with a different color is positioned in-line and operated.
- Meets applicable NFPA safety requirements to assure safe, highly efficient operation.
- Automated external gun cleaning feature minimizes manual cleaning beyond cleaning of the booth interior for faster color change.
- Electronic gun mover positioner allows guns to automatically position based on part size, and also home position for automatic external gun cleaning.



COLORMAX BOOTH SPECIFICATIONS

BOOTH	FEED HOPPER VERSION	FEED CENTER VERSION
Booth Base	Rectangular	Rectangular
Booth Base Width	6 ft., 7 ft., 8 ft., 9 ft.	6 ft., 7 ft., 8 ft., 9 ft.
Booth Base Length	10 ft., 15 ft., 20 ft., 25 ft., 30 ft.	10 ft., 15 ft., 20 ft., 25 ft., 30 ft.
Booth Roller Base	Yes	Yes
Booth Canopy	Apogee	Apogee
Booth Cleaning Blowoff Gun	Standard	Standard
Feed Center	Not Available	Standard
Gun Cleaning Purge	Not Available	Standard
Gun Outside Blowoff	Optional	Standard
Fire Detection (FS-10R [†])	Standard	Standard
POWDER DELIVERY		
Feed Center Sieve	Not Available	Standard
Vibratory Sieve 600 18/Guns	Available	Not Available
Nordson Sieve	Available	Not Available
AZO Sieve	Available	Not Available
150 lb. Hopper w/Cart	Available	Not Available
HTM Hopper	Available	Not Available
Automatic Guns (Versa Spray [®] II)	Optional	Not Available
Automatic Guns (Sure Coat [®])	Optional	Standard
Cyclone Transfer	Transfer Pumps	Optional Sure-Max [™] Powder Transfer System*
GUN CONTROL / POSITIONER		
Auto Gun Console	Standard	Standard
Auto Gun Purge	Optional	With Feed Center
Oscillator Standard	Optional	Optional
Fixed Gun Stand	Yes	Yes
In/Out Gun Positioner**	30 in., 48 in.	30 in., 48 in.
CONTROLS		
iControl [®] Integrated Control System	Optional	Optional
Smart-Coat SC	Optional	Optional
Versa-Screen [®] 10C Gun Triggering In/Out	Optional	Optional
Versa-Screen [®] 6C Gun Triggering	Optional	Optional
Sure Coat [®] Application Control	Optional	Optional
Encoder Assembly	Standard	Standard
Part ID Stand	Standard	Standard
Photo Eyes (ATC)	Standard	Standard
Light Curtain (Vertical)	Optional	Optional
Light Curtain (Horizontal)	Optional	Optional

*Patent applied for

[†]FS-10R is a trademark of Fire Sentry Corporation

**Varies with booth width and gun length

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

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