Versa-Spray® II Automatic Spray System

Ultimate flexibility and control for automatic application of powder coatings.

The Versa-Spray II system includes a control unit and features either the standard gun with Shur-Lok® mount (top) or optional version (bottom) shown with gun diffuser, electrode air-wash extension, ion collector device, and in-line gun mount.

The new Nordson Versa-Spray II automatic powder system integrates advanced application features with sophisticated process control to provide the most efficient, versatile and operator-friendly powder system in the industry.

The Versa-Spray II system provides uniformity over a broad range of coating requirements to give powder coaters the ultimate flexibility to precisely control powder flow, air flow and electrostatic parameters in automatic coating applications. With the Versa-Spray II system, finishers can achieve the outstanding coating coverage, pattern uniformity and transfer efficiency needed to effectively coat parts with very complex geometries and deep recesses.

The new standard flat-spray nozzle provides better control of powder flow to deliver a more uniform pattern.

In addition to applying precise thin film build coatings, the Versa-Spray II system can apply thicker film build coatings where needed. The system also excels at recoats. It is easily retrofit to any existing Nordson or other powder application system.

Automatic Feedback Current (AFC) Control

Precise control of gun current is critical to ensure optimal powder charge and the quality and efficiency of any powder coating operation. The Versa-Spray II automatic system features user-adjustable Automatic Feedback Current control to deliver more operating flexibility and higher transfer efficiency than any other automatic powder coating system available.

AFC control, which is a standard feature of the Versa-Spray II controller, allows users to set the gun-current limit that will work best for their specific application. In the AFC mode the Versa-Spray II controller automatically adjusts electrostatic voltage output to maintain the optimal powder charge and external field strength regardless of the gun-to-part distance. This precise control is crucial for penetrating Faraday cage areas and for uniform powder deposition across the part. This provides the most consistent, overall coating coverage and highest finish quality possible.

AFC control is simple to operate. An easy-access control knob allows for variable setting of AFC control. This control feature optimizes overall efficiency and is particularly valuable in tough applications like coating interior corners and deep recesses, recoating parts, and any operation where consistent gun-to-part distances are difficult to maintain.

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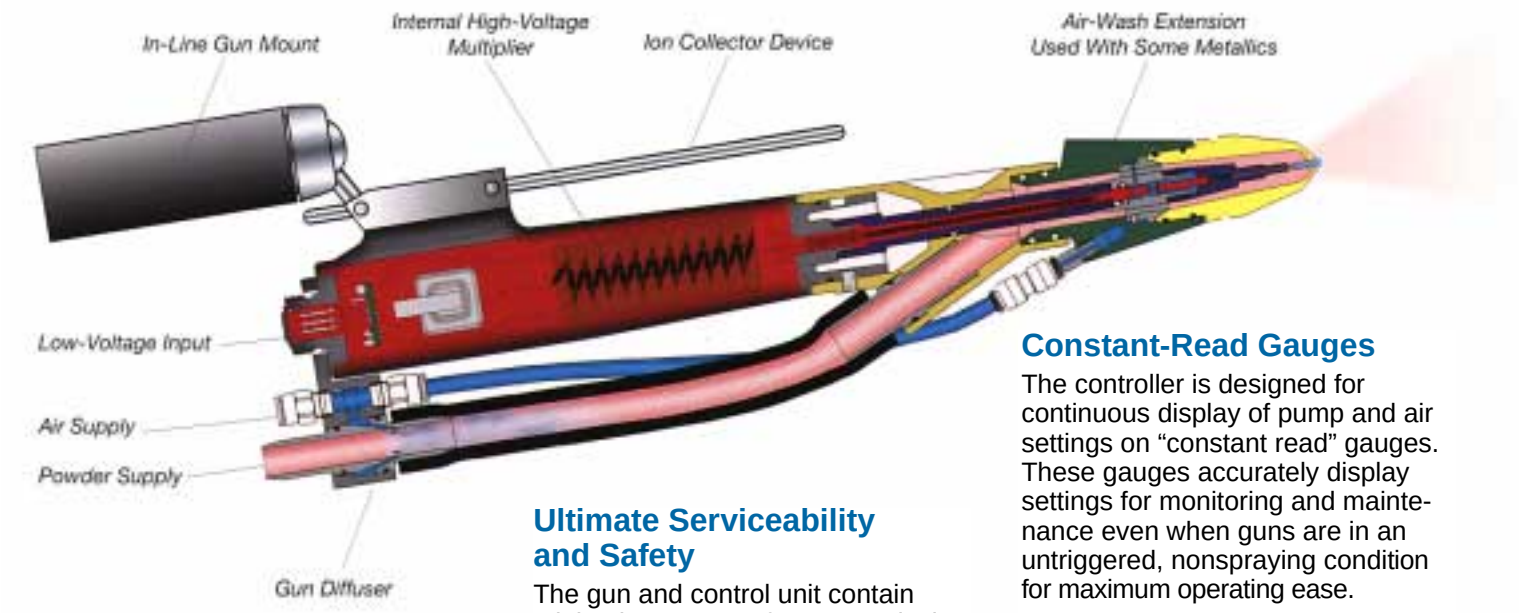

Integral-Power-Supply Cartridge Design

The advanced design of the automatic gun's 100 kV internal power supply provides higher output voltage and stronger field strength, under actual spraying conditions, than conventional electrostatic spray guns for maximum transfer efficiency. Modular construction ensures fast, easy disassembly for routine cleaning, color change and field service for minimal downtime and reduced maintenance costs.

Easy Access, Friction-Fit Powder Pathway Design

The easy-access, friction-fit powder pathway design ensures fast and easy disassembly and cleaning for multiple color changes and routine maintenance. Powder contact parts are made from specially engineered materials to minimize wear and impact fusion. Since the Versa-Spray II gun has no threaded parts to become damaged or caked with powder, maintenance is also reduced.

Ultimate Serviceability and Safety

The gun and control unit contain minimal wear parts for economical operation and easy maintenance. All Versa-Spray II equipment has FM, CSA and CE approval to assure your maximum operating safety.

Enhanced Monitoring and Control

The controller features a dual-mode switch that gives users flexibility to continuously monitor either kV output or gun current. These readings can assist users with diagnostics for verifying proper system operation.

Constant-read gauges accurately display settings even when guns are untriggered.

An easy-to-read, front-panel display indicates whether the unit is in the AFC or kV control mode.

Constant-Read Gauges

The controller is designed for continuous display of pump and air settings on "constant read" gauges. These gauges accurately display settings for monitoring and maintenance even when guns are in an untriggered, nonspraying condition for maximum operating ease.

Convenient Control Mounting

The Versa-Spray II control unit's compact, custom-fit enclosure protects internal components from contamination. The unit can be used independently, or mounted into a standard 19-inch rack instrument cabinet. Pneumatic quick-disconnects help facilitate routine cleaning and maintenance, reducing color-change time.

Easy Retrofit Design

The Versa-Spray II automatic system can be easily retrofit to any existing Nordson or other powder coating installation. All new Versa-Spray II features and components are compatible with original Versa-Spray technology and are available separately and in a number of convenient upgrade kits for easy, economical conversion of existing equipment for Versa-Spray II performance benefits.

Controller conveniently fits into half of a 19-inch rack instrument cabinet.

Additional Options and Accessories

Electrode Air-Wash Extension

Using air supplied by the Versa-Spray II control unit, the optional air-wash extension delivers a low-volume, low-pressure air flow to and around the electrode to keep it clean. Installed between the gun's powder pathway module and the nozzle, the air-wash extension prevents powder build-up on the gun tip and maximizes gun performance. It is particularly effective when using high-metallic-content, dry-blended powders, as well as powders with low melt temperatures which may tend to accumulate on the electrode.

Gun Diffuser

The optional gun diffuser used with the Versa-Spray II automatic gun delivers a measured amount of air to the powder pathway and, if the air-wash extension is used, to the charging electrode. The diffuser-air more evenly blends the powder-air mix before it enters the gun nozzle for greater spray pattern uniformity and coating efficiency.

Ion Collector (IC) Device

Use of the optional ion collector device with the Versa-Spray II gun dramatically reduces stray ion current to the part. Easily added to Versa-Spray II automatic guns, the IC device restricts back-ionization, improves finish quality and facilitates coating of recessed areas. It is also effective in recoating operations and when a thicker film build is desired.

In-Line, Multi-Position Gun Mount

The space-saving design of the new in-line, multi-position gun mount option requires half the booth opening space of conventional offset mounts. The mount provides virtually unlimited freedom in positioning the gun in any direction. Such gun positioning flexibility proves extremely valuable when coating three-dimensional parts of complex surface profiles. The gun can be easily disconnected and reconnected to the mount for faster servicing and more complete cleaning during color changes.

Largest Selection of Nozzles and Lance Extensions

Nordson has the equipment and technology finishers need to achieve the desired results in even the most difficult of coating applications. Nordson offers the largest selection of nozzles available in the industry which includes a full line of flat-spray, conical-deflector, x-cut and castle design nozzles.

The Versa-Spray II automatic gun features improved-geometry nozzles for maximum spray pattern uniformity and transfer efficiency. Enhanced gun nozzle designs deliver softer, yet highly directional spray patterns for easier, more efficient coating application.

In addition, Nordson's lightweight lance extensions are also available to help operators extend a gun's reach when coating large or complex-shaped parts or deep recesses.

Nordson offers the largest selection of nozzles available in the industry.

The effect of Automatic Feedback Current control on quality and efficiency of the powder coating process.

Gun current is one of the most critical parameters affecting the quality and efficiency of the powder coating process. Excessive gun current can result in lower transfer efficiency, reduced finish quality in the form of orange peel and back-ionization. Back-ionization limits attainable film thickness, inhibits recoating, and has a detrimental effect on the powder's ability to penetrate "Faraday cage" areas.

Automatic Feedback Current control allows users to set the gun current at a level that will provide optimal (not necessarily maximum) powder charge and field strength for each application. Control of the gun current ensures that the number of ions generated in the charge zone is sufficient to charge the powder effectively, but not high enough to create excessive free-ion current on the already-deposited powder layer.

When coating parts with varying contours and shapes it is difficult to maintain constant gun-to-part distances. With a conventional voltage-control spray system, gun current will increase as the gun-to-part distance decreases. Conversely, gun current decreases as the gun is moved farther from the part.

AFC control minimizes this problem, by allowing the operator to set the optimal gun current for his application. The system automatically maintains the current at no higher than the preset level, regardless of the gun-to-part distance.

AFC control results in maximum transfer efficiency, high finish quality and enhanced Faraday-cage penetration. It also enables finishers to apply thicker layers of powder, when desired, and improve the efficiency of the recoating process.

Versa-Spray II Automatic Spray System

Features and Benefits

■ Automatic Feedback Current control ensures consistent, optimum transfer efficiency.

■ Superior Faraday-cage penetration accommodates wide range of coating requirements.

■ Maximum electrostatic performance delivers highest transfer efficiency.

■ Integral-power-supply is designed to deliver optimal kV from automatic applications.

■ Dual-mode operation of gun current and voltage control provides greater flexibility.

■ Easy-to-read front-panel display assists with diagnostics to assure accurate operation.

■ Constant-read pneumatic gauge display even when guns are untriggered ensures maximum operating ease.

■ Specially engineered materials used in powder-contact parts minimize wear and impact fusion.

■ FM, CSA and CE approved for maximum operating safety.

■ Easy-access, friction-fit powder pathway design makes routine cleaning and maintenance fast and uncomplicated.

■ Compact, custom-fit enclosure protects internal components of controller from contamination. Can be used by itself or mounted in 19-inch rack instrument cabinet.

■ Pneumatic quick-disconnects help facilitate routine cleaning and maintenance for reduced color-change time.

■ Largest selection of nozzle choices available in the industry.

■ Optional nozzle extension with electrode cleaning air keeps charging electrode clean for consistent charging efficiency.

■ Optional ion collector device draws excess ions from spraying zone for enhanced coverage and better finishes.

Specifications

Automatic Gun:

Dimensions

Length (overall) 14 in (35.56 cm)

Height (with gun mount and tube bracket)
- Shur-Lok® mount 5.25 in (13.33 cm)
- In-line mount 5.90 in (14.98 cm)

Width
- Shur-Lok® mount 3.25 in (8.25 cm)
- In-line mount 1.50 in (3.81 cm)

Weight

(without cable) 26 oz (740 g)

Control Unit:

Dimensions

Height 7 in (17.78 cm)

Width 8.56 in (21.74 cm)

Depth 14.26 in (36.22 cm)

Input Air Pressure

100 psi

Electrical

Input Voltage
100, 120, 200, 240 VAC ± 10%

Output Voltage
7-21 VDC ± .1V

Power Consumption
maximum 50 watts
.42 Amps @ 120 VAC
.21 Amps @ 240 VAC

Filtration

Air must be clean and dry.

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

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