

Nordson Iso-Flo[®] HD Voltage Block System



Advanced voltage-blocking technology for the electrostatic application of waterborne coatings



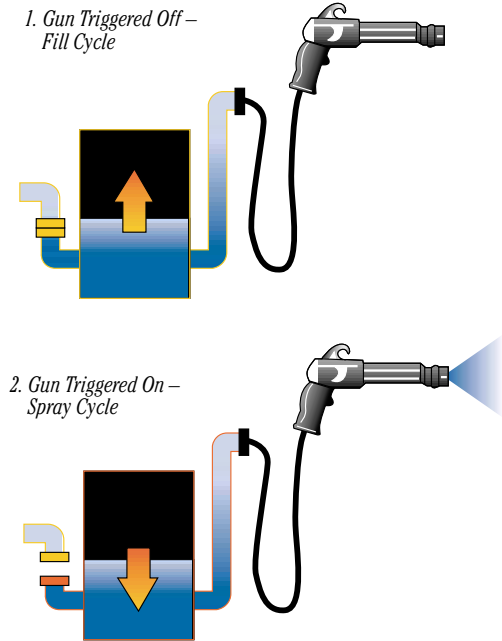
For many finishing operations, the most cost-effective way to reduce VOC emissions is to convert from solvent-based to waterborne coatings. But due to the higher electrical conductivity of waterborne coatings, it is necessary to isolate the charged paint-supply system from any ground source. These isolated systems are difficult to maintain and potentially dangerous to plant personnel.

The Nordson Iso-Flo HD voltage block offers an easier, safer and far more cost-effective way to spray electrostatically charged waterborne coatings. The system supplies charged coating to the spray devices while preventing the charge from conducting back through the paint-supply system.

Nordson Iso-Flo systems are built for the most demanding finishing requirements with high-capacity, field-repairable pumps that provide long life with minimal maintenance and an innovative arc-suppression feature that allows continuous coating without delay between cycles.

Iso-Flo HD Voltage Block System

Iso-Flo System For Manual Single Gun Spraying



Nordson Watermark® Technology

How the Iso-Flo HD system works

An Iso-Flo HD manual or automatic voltage block is installed near the spray booth, and is connected between the grounded paint-supply system and the spray devices. Coating is pumped from the paint-supply system to paint reservoirs inside the voltage blocks. Electrostatic isolation is maintained with a series of shuttle valves that alternately connect the reservoirs to the grounded paint supply and the spray devices. Standard Iso-Flo HD configurations are available for single-gun manual painting systems and single- and multiple-gun automatic painting systems.

Iso-Flo System For Manual Spraying

For single-gun manual operations, the Iso-Flo HD system includes a single paint reservoir. The reservoir fills from the grounded paint supply when the gun is triggered off between parts. When the gun is triggered on, the reservoir immediately disconnects from the grounded paint supply and connects to the spray gun. The electrostatic charge is applied within the Iso-Flo HD unit, between the paint reservoir and the spray gun.

Throughout the filling and spraying cycles, an air gap is maintained within the system to prevent the electrostatic charge from conducting back through the paint-supply system. Due to the speed of the shuttle, the operation of the Iso-Flo unit is virtually invisible to the operator.



Features of the Iso-Flo HD System

The patented field-proven features of the Iso-Flo HD system deliver superior performance for improved efficiency, productivity and safety of your finishing system.



■ No need for isolation fluids

The air gap that is maintained in the Iso-Flo HD system provides complete isolation between the charged paint and the grounded paint supply.

Extra valves, seals or pumps which can be difficult to maintain and troubleshoot are not necessary. Extra waste disposal of used isolation fluids is not required since the Iso-Flo system does not require isolation lubricants.

■ High-capacity, field-repairable pumps

High capacity pumps deliver excellent performance and optimal flow rates with virtually all paints. Features such as self-adjusting pistons provide a smooth flow rate and long service life. The only maintenance requirement is the weekly addition of one-half ounce of lubricant. Iso-Flo HD pumps are also field repairable. They contain few wear parts and can be rebuilt quickly and easily in your plant. A 2:1 version pump is available to meet varying production requirements.

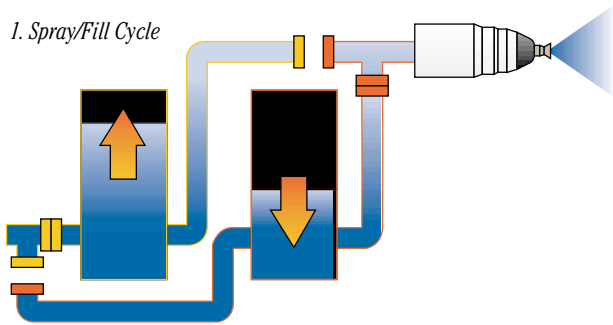
■ Immediate arc suppression for safe, productive operation

The arc suppression method of the manual Iso-Flo HD voltage block immediately discharges the electrostatic charge between fill cycles and when the cabinet door is opened. Some systems require a delay of as much as 30 seconds for the charge to dissipate between spray cycles. This can mean interruptions in production and a possible shock hazard to operators.

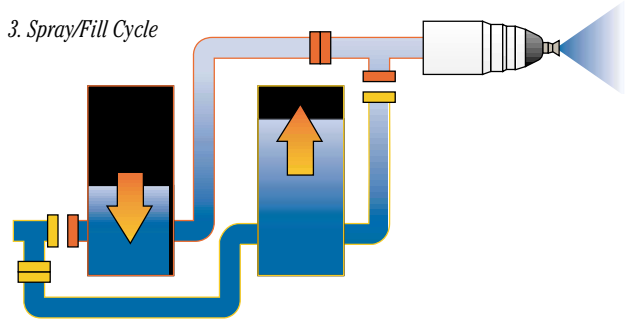
In Iso-Flo HD automatic units, the electrostatic charge is immediately discharged when the cabinet door is opened for enhanced operator safety.

Iso-Flo System For Automatic Spraying

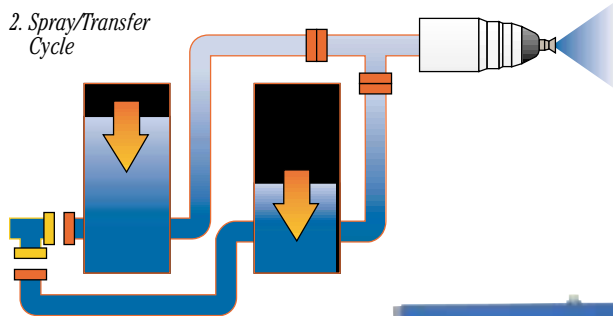
1. Spray/Fill Cycle



3. Spray/Fill Cycle



2. Spray/Transfer Cycle



Iso-Flo System For Automatic Spraying

The Iso-Flo unit for automatic spraying contains two paint reservoirs to provide a continuous uninterrupted flow of paint. One reservoir supplies charged coating to the spray devices while the second reservoir refills from the grounded paint supply. Once the second reservoir is filled, it disconnects from the spray devices, connects to the paint supply and refills.

The reservoirs hold enough paint to ensure a continuous supply of charged paint to the spray devices. And since air gaps are maintained between the shuttles, the electrostatic charge will not conduct back through the paint-supply system.



■ Paint reservoirs sized for productivity and paint savings

The capacity of the paint reservoirs is critical to the optimal performance of voltage blocks. Iso-Flo reservoirs are large enough to ensure a continuous paint supply, but small enough to minimize paint waste during color changes and routine maintenance and cleaning. A feature that allows you to easily save paint from the reservoir during color changes is available.

■ Simple, low-maintenance design

The Iso-Flo system requires less maintenance and has only one-half the replacement parts of some other systems. The only regular maintenance required is a routine cleaning of the shuttle couplings and the weekly addition of a small amount of lubricant to the pump.

■ Fast, efficient color changes

The ability to perform color changes quickly with minimal paint waste sets the Iso-Flo system apart from other voltage blocks on

the market. Standard Iso-Flo systems provide easy color changes and fast color-change configurations are available to accommodate the most demanding requirements.

■ Durable, easy-access steel enclosure

The steel cabinet is built for years of service in even the harshest of manufacturing environments. The inside of the cabinet is lined with non-conductive plastic to maintain the intrinsically safe operation of the system. Plus, the cabinets are sized to provide access to all components for ease of maintenance and service.

■ Documented quality and safety

All Nordson Iso-Flo HD voltage blocks are Factory Mutual and CE approved. Plus, the Nordson Liquid Systems Group is certified to the performance standards of ISO 9001, which is your assurance of documented quality.



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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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