

Nordson® Ink-Dot I.D. System



Spray-machine identification system for container coating operations.

Every minute counts with today's high-speed container coating lines. When a spray machine is coating improperly, 300 or more reject cans per minute may be produced. Cans with unacceptable metal exposure must be recoated or scrapped. Production must be stopped to identify which spray machine is producing the rejects.

One way to reduce the downtime and costs associated with unacceptable coatings is to improve the process monitoring system. Faster identification of the malfunctioning spray machine can improve productivity, reduce labor requirements and save coating material by reducing resprays.

The Nordson Ink-Dot I.D. system identifies which spray machine coats each can on the line. The system applies a small, inconspicuous dot of ink on the bottom of each can as it enters the spray machine. A different ink color is used for each machine on the coating line, so the source of unacceptable coatings can be immediately identified. There is no need to shut down all machines on the line to determine which machine is producing the defect.

The modular Ink-Dot gun allows replacement of the valve module without removing the manifold from the spray machine.



Ink-Dot I.D. system controller with enhanced Series II driver.

In addition, enamel-rater and metal exposure tests can be performed on actual production cans. Production cans provide a more accurate indication of film builds than intermittent running of test cans. The procedure is faster and more efficient, so testing can be performed more often without increasing labor requirements.

The Ink-Dot I.D. system can be used for two- and three-piece container operations, and for aluminum and steel cans. The system can operate at the high line speeds of today's can manufacturing processes. The system easily applies colored and ultraviolet inks, and can be configured to apply thermal-sensitive inks to the outside of two- and three-piece food cans.

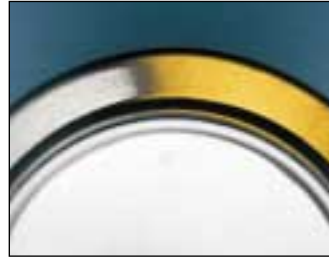
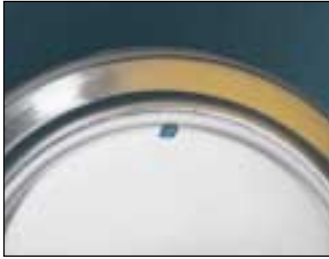
System Components

Major components of the Nordson Ink-Dot I.D. system include a modular electric spray gun, proximity sensor, controller and ink reservoir.

The Ink-Dot gun is mounted on the can infeed chute of the spray machine. The proximity sensor allows the gun to fire only when a can is located in front of the Ink-Dot gun.

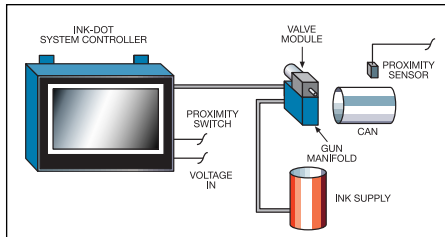
The modular electric Ink-Dot gun is designed for fast maintenance and reliable operation. The valve module can be easily replaced without removing the manifold from the spray machine.

Nordson® Ink-Dot I.D. System



A different color dot is applied by each spray machine for immediate identification of the malfunctioning spray machine.

Dots produced with ultraviolet inks are virtually invisible under normal lighting (left) but easily seen under ultraviolet light (right).



Ink-Dot I.D. System Controls

The Ink-Dot I.D. system controller can be configured to trigger one to two guns, three to four guns, or five to six guns. The controller supplies power to the system's inductive proximity sensor. The sensor then signals the driver to transmit a preset delay duration to the appropriate gun.



The Ink-Dot system controller features an enhanced Series II driver to regulate gun operation. The Series II

driver includes several timing features (not available on the original driver

module) to increase control over dot size and placement, including:

- Adjustable dot duration offers added flexibility in dot size.
- Adjustable delay provides more accurate dot placement.
- Double dot option allows two dots to be placed on one can for easier line differentiation.
- Extended masking time reduces unwanted double dots.

The Series II driver is standard on new Ink-Dot I.D. systems. The driver is also designed for easy retrofit into the existing controller enclosure.

Features and Benefits

- **Marks each can as it enters through the spray machine** for immediate identification of which spray machine coats each can.
- **Enamel-rater and metal exposure tests can be performed on production cans** eliminating the need to stop production to run test cans.
- **Enhanced Series II driver provides accurate dot placement** and more flexibility to adjust dot sizes.



The system can also be used with thermosensitive inks for 3-piece can marking operations and jar closures requiring retort as a process status indicator.

■ **Modular spray gun** allows replacement of the valve module for fast, cost-effective maintenance.

■ **Ball-and-seat design of spray gun** provides long life and positive shut-off.

■ **Fast, accurate operation** to accommodate high production-line speeds.

Specifications

Input Voltage: 100-240 VAC

Input Trigger: 12-24 VDC signal

Controller Output: Controlled DC signal to gun coil(s) at 1.4 x input voltage

Internal Power Supply Output: 24 volts DC, 1.2 amps

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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