

CanWorks® iTrax™ Spray Monitor System



Embedded real-time process monitoring with PC-based graphical user interface and data logging automatically monitors inside spray process for easy identification of improperly coated cans.



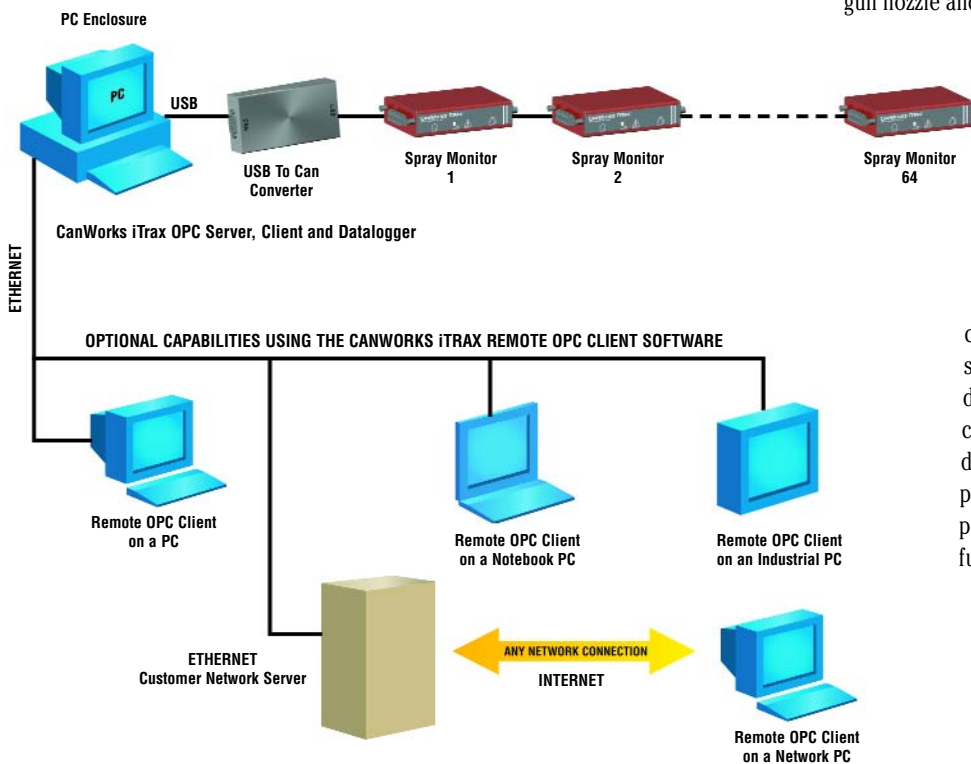
Variations in spray pressures, worn nozzles or partially clogged nozzles often cause inconsistent quality and variable spray weights. These problems can be difficult to identify during production. By the time problems are discovered in quality control, hundreds or even thousands of improperly coated cans may have been produced.

Automatic, Immediate Spray Monitoring

The CanWorks® iTrax™ System* is the new generation of Nordson spray monitoring systems for two- and three-piece can coating operations. The CanWorks iTrax Spray Monitor uses an embedded Digital Signal Processor (DSP) for high-speed monitoring of the

spray process. By sampling data at up to 500,000 times per second, the CanWorks iTrax Spray Monitor closely monitors the spray system to keep a virtual eye on production quality. The CanWorks iTrax system monitors the flow of coating material through the gun nozzle and automatically alerts users to changes in flow. Utilizing the latest DSP technology, the system provides fast and precise spray pressure analysis to optimize product quality and production line efficiency.

The CanWorks iTrax system identifies guns spraying too much or too little coating to ensure the proper amount of coating is applied. Improperly coated cans are recognized as they are sprayed so problems can be immediately detected and addressed. Operations can continue running with little or no downtime. Capturing near real-time performance data also enhances preventive maintenance programs to further prevent unscheduled downtime.



Typical Network Configuration

**patent applied for*

Easy-to-Use Interface

The CanWorks iTrax system's graphical user interface and optional data-logger software are designed to run on a standard PC using Microsoft® Windows® 2000 or above. By running on a standard PC, the system provides an easy-to-use interface with color graphics and enhanced data logging. The operator is able to monitor each individual dispensing module on the coating line from just one centralized location. The system provides support for multiple languages and features an intuitive icon-based operator interface, making it easy to setup and use, with the flexibility to configure it to local plant requirements virtually anywhere in the world. It is also compatible with touch-screen computers for further ease of use.

The PC-interface can display up to 12 dispensing modules per computer screen at a single time. Additional dispensing modules can be viewed by simply scrolling down. Each dispensing module is represented on the screen with a colored display box. At a glance, the operator can differentiate between dispensing modules and determine the operating status of each module by the color and text of its display box. Green indicates correct operation. Yellow warns that the system is moving out of desired operating parameters. Red is an alarm condition that occurs when the system is operating significantly beyond the desired tolerances.

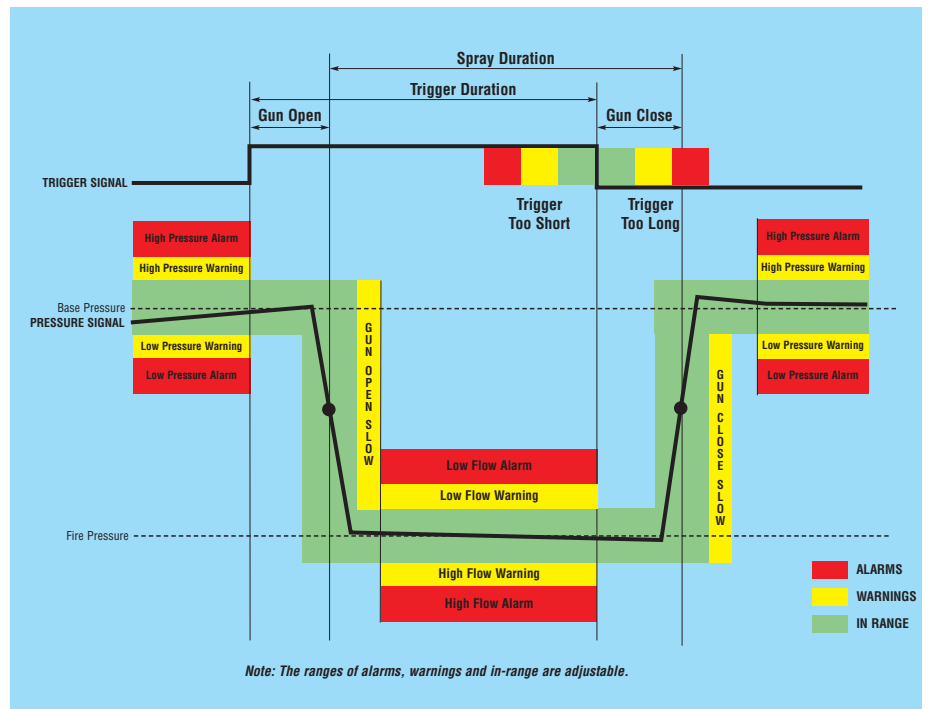
Real-Time Performance Data

Up to 64 spray monitors can be supported on the same network, with each providing spray system data through the easy-to-use operator interface. The PC-interface allows the operator to view a number of performance measurements, including:

- Actual and calibrated base pressures
- Actual and calibrated gun-triggered pressures
- Pressure changes
- Gun opening and closing times
- Spray duration

Faults are indicated at either a warning level or an alarm level, depending upon the severity. These include:

- Low and high spray pressures
- Low and high pump pressures
- Fast and slow opening/closing times for each dispensing module



Simple Retrofit

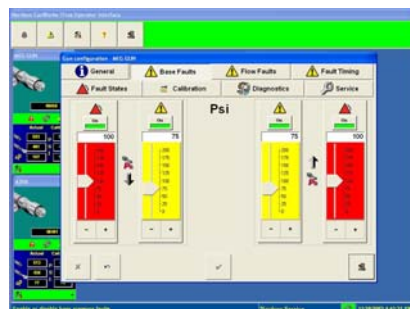
The CanWorks iTrax system is designed for easy retrofit into existing CanWorks spray monitoring systems. Because the system supports all of the features of previous spray monitors, existing systems are easily upgraded simply by replacing modules and adding a PC. The CanWorks iTrax system also consolidates previously separate modules – SM-1 (two-piece) or SM-2 (three-piece) – into a single spray monitor.

System Operation

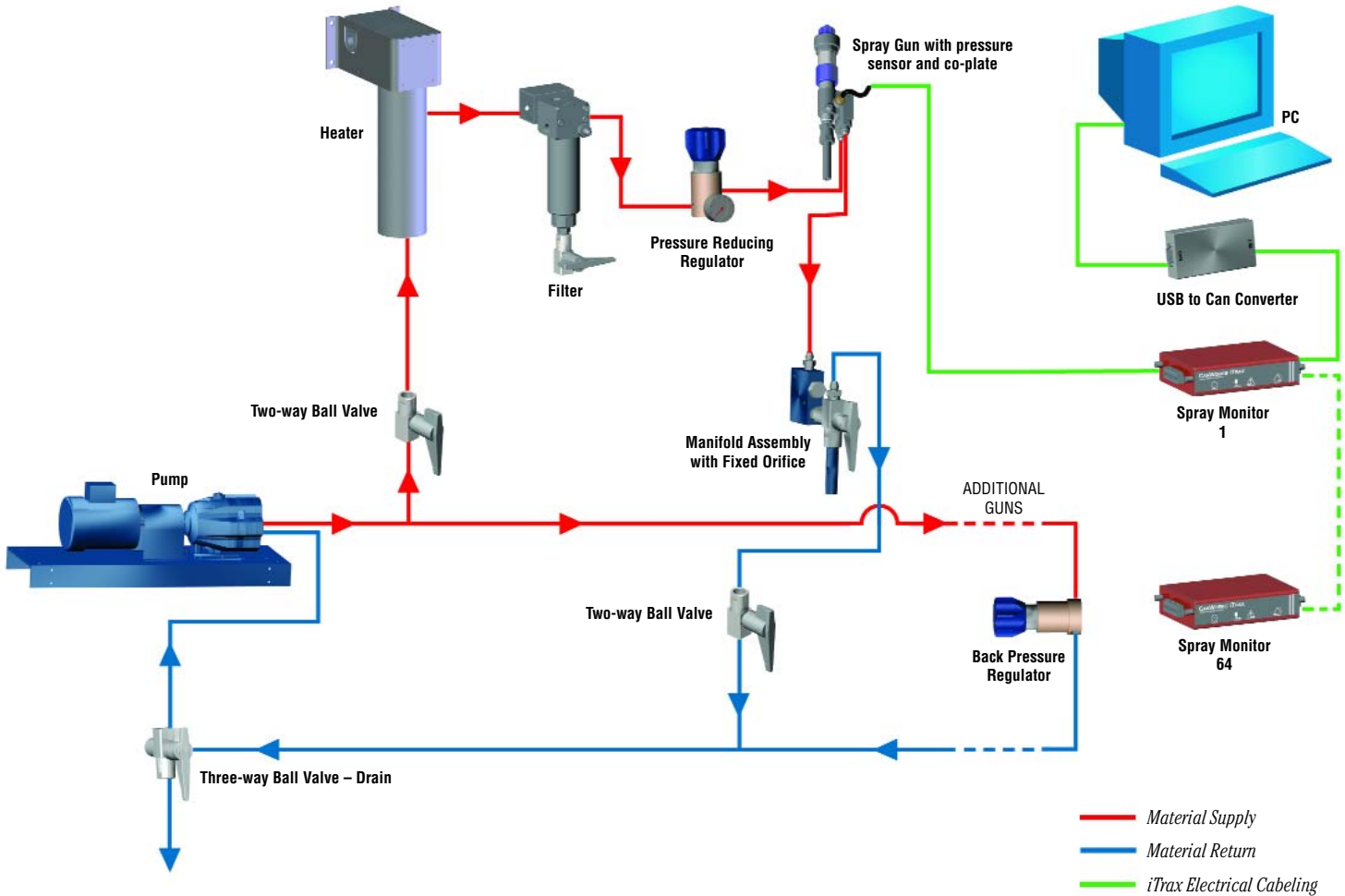
The CanWorks iTrax system monitors spray pressure inside the dispensing module. When pressures increase or decrease beyond a preset limit, a warning signal is initiated. An alarm is issued if pressures are significantly higher or lower than the preset level. The system's precision and speed allow it to detect and identify even a single bad can, providing sufficient time to stop coating and eject the can.

When a problem is detected, the operator is alerted and action must be taken to correct the problem. The action or task taken to resolve the problem is recorded and logged for future reference and to assist in future troubleshooting activities.

For inside spray applications in two-piece coating operations, the system uses a Nordson® MEG®, MEG II or A20A spray gun. For inside-stripe applications on three-piece lines, the system uses a Nordson® A9A, A16A or MEG I-S Inside-Stripe Applicator.



Typical Spray Pressure Control Plumbing Configuration With EP Pumping System



Features and Benefits

New generation spray monitor system immediately detects spray malfunctions, helping to improve product quality and productivity.

- Detects improperly coated cans as they are sprayed for reduced rejects and increased production quality and productivity.
- PC-interface software allows the operator to view the performance of multiple dispensing modules from a centralized location.
- Two preset levels for fault conditions indicate potential problems (warning messages) and gross errors (alarm messages).
- Optional data logging records alarm occurrences for predictive maintenance and statistical process control programs.
- Seamlessly links to existing quality control systems, the CanWorks iTrax OPC Server can provide data updates as fast as one second.
- A can counter maintains an ongoing record of the number of cycles (sprays) per gun.
- Icon-based operator interface makes the system easy to setup and use.
- Single unit for all versions and languages for easy installation and setup.

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Technical Specifications

CanWorks iTrax Spray Monitor

User Interface

LED Indicators: Green for timer input status
Yellow for warning
Red for alarm

Switch: Power On/Off

Input/Output

Input Voltage: 24 VDC +/-4V, 200mA max

Alarm/Warning Relays: 5A, 250 VAC
5A, 30 VDC

Timer Input: 4-50 VDC, high true signal, optically isolated to 600 V peak

Network: CAN network interface, RS-485, 500Kbps

Pressure Sensor

Input: 1 to 4VDC with 2.5V common-mode voltage

Output: 24VDC +/-6V sensor excitation

Environmental Specifications

Operating Temperature: 32° to 122°F (0° to 50°C)

Operating Humidity
Non-condensing: 5% to 95%

Storage Temperature: -4° to 140°F (-20° to 60°C)

Mechanical

Mounting: Panel or DIN rail

Dimensions

Height: 1.5 in (3.81 cm)

Length: 7.25 in (18.42 cm)

Width: 4 in. (10.16 cm)

Weight

18 oz (.510 kg)

PC Operator Interface Computer

Minimum System Requirements

Type: IBM®-compatible personal or industrial computer

Processor: Pentium® 4 1.2GHz minimum

Operating System: Windows® 2000 with Service Pack 2 or Windows® XP

RAM: 512MB minimum

Video: SVGA, 2MB minimum, 1024 x 768, 16-bit color depth

Free Hard Drive Space: 10MB for program software
10GB for data storage

CD-ROM Drive

Ports: USB port version 1.0 or 2.0, Ethernet

Input Device: Touch Screen or Keyboard and Mouse

Recommended Panel Computer

Allen-Bradley
VersaView™ 1500P (6181P-15TP2KH)

Processor: Pentium® 4 1.2GHz

Operating System: Windows® 2000

RAM: 512MB minimum

Video: 15" Flat Panel Touch Screen

Hard Drive: 20GB CD-ROM Drive

Ports: USB V2.0, Ethernet

Power: 100 – 240VAC 1.0 – 0.42A 50/60Hz 100VA

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