



# Container

## 2 piece inside spray case study

Ball Corporation puts a tight lid on quality and cost savings

*Performance by design*



# Ball Corporation puts a tight lid on quality and cost savings

**Installation of Nordson systems saves this can manufacturer more than 10% in coating material and provides fast, efficient quality assurance.**

**Any container manufacturer will tell you that their top priorities on the line are to minimize material usage and put out a quality product. So, when one of Ball Corporation's plants sought to improve their metal food and beverage can operations, they knew exactly where to turn.**

"We've had a relationship with Nordson for at least 25 years," explains plant's Department Manager of Can Production. "They understand the process better than anyone and are leaders in all the newest technologies. When we need to improve quality, productivity or coating weight, we talk to Nordson."

The facility produces more than 7.5 million steel and aluminum cans each day. Its customers include major players like Coke, Pepsi and Abbott Laboratories, and the plant is uniquely capable of producing food and beverage cans and ends all under one roof. As a result, they run 24 hours, 7 days a week, with line specifications that change to meet varying can sizes.

"We just can't afford to have equipment that doesn't work really well," says the Department Manager. "You'll find Nordson equipment everywhere in our plant – DR pumps, EP pumps, Ink-Dot I.D. systems and A20A guns. But, our newer installations are of the MEG® guns and iTrax® spray monitoring system."

## **MEG Guns Significantly Reduce Coating Weights**

At the plant, Ball Corporation has 32 MEG guns installed on two lines. The first 16 MEG guns were put into production on the line that manufactures food cans for nutritional drinks. According to the Department Manager, this line required guns that could withstand an abrasive coating and still meet the customer's stringent requirements.

The Nordson MEG gun is a compact electric spray gun for solventborne or waterbased container coatings. It is designed for



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easy maintenance, and provides consistent, repeatable fast open and close times for more full-open time during each spray cycle. This allows for faster operating speeds when desired and can allow lower operating pressures for less bounceback of applied coating. Repeatability provides more consistent spray weights, reduced material waste and cleaner operation.

“Being nutritional products on this line, the customer has very strict manufacturing criteria,” the Department Manager explains. “The MEG guns have extremely consistent reaction times and excellent control. So, we get a far more reliable coating. Plus, we have significantly reduced maintenance costs on this line because MEGs have hardly any wear items. They are so easy to rebuild. We just replace the ball and seat – which we can do here in-house – and it’s ready to go.”

With the success of the MEG guns on their food can line, the plant extended their use to the two piece beverage can line as well. Sixteen additional guns were installed there, with the goal of controlling coating weights on multiple size cans to reduce material usage. The company is experiencing successful results, reducing overall coating weights by more than 10 percent.

“We’re saving about 20 milligrams per can on our larger line and about 10 milligrams per can on the two smaller ones,” says the Department Manager. “We threw away a lot of coating before because the old guns had slower reaction times. We’re getting a huge savings in material costs with the MEGs.”

### Keeping an Eye on Quality with the iTrax System

Although quality coating is always of key importance for both cost and safety reasons, it is of extreme importance on the plant’s line where cans for nutritional drinks are manufactured. If a can goes uncoated or partially coated, the contents could become contaminated.

“We have a commitment to send our customer good product and our iTrax system provides the assurance we need on every shift,” says the Department Manager.

Nordson’s iTrax Spray Monitor automatically monitors important



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operating parameters inside the spray gun as each and every can passes through. These include base pressure, spray pressure, actual timer duration, spray count, spray rate, gun open and close time, and actual gun spray time. The unit also identifies guns spraying too much or too little coating to ensure the proper amount of coating is applied.

If any of these parameters fall outside a pre-selected operating range, the iTrax system alerts the operator. Because a single bad product is detected immediately at the spray machine, the manufacturer achieves many benefits, including:

- Effects of wearing parts are detected as they occur, before bad product is made
- Scrap production is greatly limited
- Reminder messages can be coordinated with a cycle counter to notify personnel of required maintenance
- Material usage is maximized

“If there’s a problem, the iTrax unit shuts the gun down immediately and lets us know,” says the Department Manager. “It stops bad cans from being produced and makes troubleshooting so much easier. Yesterday, we had regulator issues and the iTrax system helped us work through it until we had it corrected. It’s a fantastic tool.”

The iTrax system also offers remote monitoring capability, so that plant management can keep an eye on the lines from their offices. They can watch calibration, flow rates, open/close times as well as alarms, and work with the operator quickly and easily if any issues arise.

“Just like all of Nordson’s equipment, it works exactly the way they promised it would,” notes the Department Manager. “I trust their technology 100 percent and when we need them, they always have the answers. We have a great relationship and I would recommend Nordson to anyone.”



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CNR-17-5634  
Revised 12/17