Nordson EFD Solutions:

High Performance Dispensing in Food Manufacturing, Processing, and Packaging



Nordson

EFD

Introduction



781 spray valve coating sugar on gum.

The purpose of this guide is to provide information about food manufacturing, processing, and packaging applications as well as the equipment that Nordson EFD recommends for a variety of applications and fluids.

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Why use Nordson EFD dispensing equipment?

Food and beverage manufacturers face increasing pressures to improve efficiency and control costs. Identifying opportunities to optimize production processes is critical. Specifying the right dispensing system can deliver positive results that impact product quality, throughput, and bottom-line cost savings.

- Nordson EFD offers a wide range of aseptic valves which are Clean-in-Place (CIP) and Sterilize-in-Place (SIP). Whether it is compliance with food regulations or producing the highest quality food products, Nordson EFD valves are well suited for the food and beverage industry.
- Nordson EFD's filling systems provide an automated solution for filling/topping off sauces, condiments, jams, and jellies utilizing our 725HF high-flow valves.
- Nordson EFD's coating products allow for the automation of coating and glazing of bakery products with the 781S-SS spray valve system.

Nordson EFD offers both benchtop and automated valve systems that dispense accurate, consistent amounts of food and beverage products and improve efficiency while reducing the reject rate of even the most challenging food manufacturing, processing, and packaging applications.

Backed by more than 50 years of expertise, Nordson EFD is the world's leading designer and manufacturer of precision fluid dispensing systems. This expertise, combined with EFD's world-class customer service guarantee, ensures your application needs are met each and every time.



Nordson EFD's precision filling systems provide an automated solution for filling and topping off applications.

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Higher Quality – reduced costs from rejects and rework

Nordson EFD fluid dispensing systems provide consistent, high quality output of fluids, cutting costs and reducing labor time for rejects and rework. The actual saved costs depend on the rework time or, more likely, the cost of the rejected product that will be discarded.

- High-quality through repeatable and reliable deposit sizes — even with different operators.
- Better product appearance through precise application and deposit control.
- The controlled, closed system prevents contamination of material and avoids messy workstations.



Improve food packaging quality and security.

Productivity gains

Controlled, precision fluid dispensing often increases output while maintaining — and even increasing — the quality of products.

- Due to faster and more consistent material dispensing, operators and production machines can typically produce more good quality products per hour.
- Cleaner application with Nordson EFD systems means less time and cost for cleanup.
- Rejects and associated rework due to misapplied material are eliminated.
- Consistency and reliability in deposit size reduces bottlenecks and speeds overall production.

Example Applications and Equipment

Following are common examples of fluid dispensing in the food industry, where Nordson EFD's precision dispensing systems have optimized production.

Depending on your needs, there is often an automated solution as well as a benchtop or semi-automated solution. Equipment may vary depending on specific application requirements and details.

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Filling solutions keep product levels consistent for sauces and condiments





Features

- Uniform fill volume
- Accurate shot size
- Clean, drip-free cutoff

Benefits

- Reduces likelihood of product rejects
- Reduces waste – minimal maintenance required
- Reduces spillage and associated cleanup costs

Coating solutions improve consistency for bakery products





Features

- Even, consistent coverage
- Controlled application
- Timed or steady operation

Benefits

- More uniform quality and appearance
- Minimizes cleanup, with no mist or overspray
- Easily adjustable settings to adapt to process changes

Jetting solutions provide uniform shots of flavors and additives into beverages





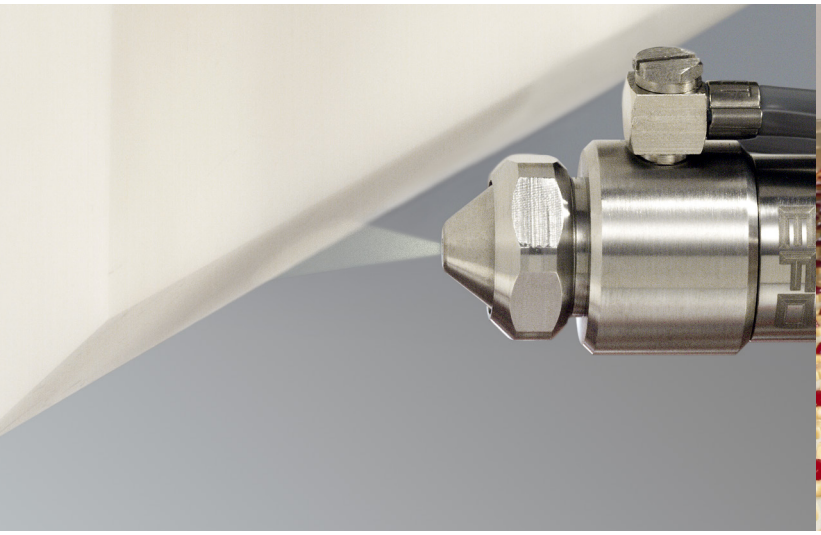
Features

- High speed, non-contact dispensing
- Consistent shots as small as 0.5 nanoliters
- In-line or robot mountable

Benefits

- Improves operational efficiency by reducing time to dispense
- Reduces waste of expensive material
- Easily adjustable settings to adapt to process changes and flexibility to use in an automated or semi-automated process

Lubrication solutions keep food from sticking to blades and conveyer belts





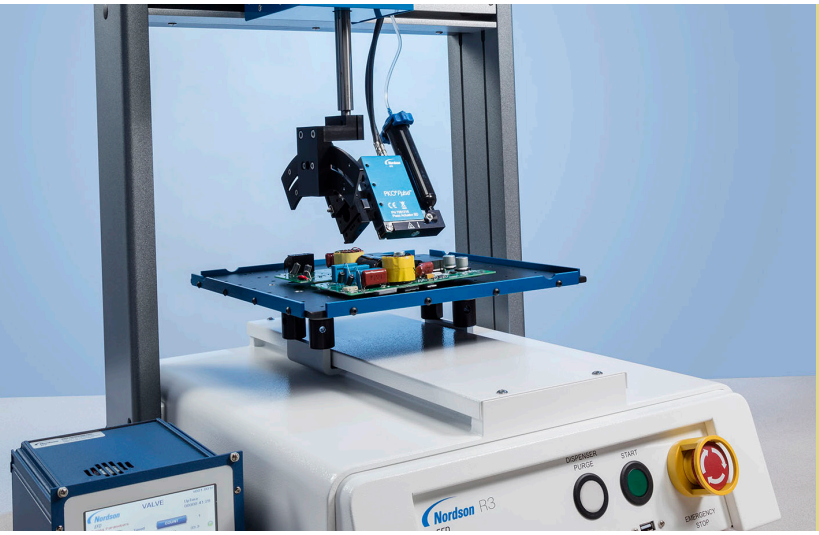
Features

- Cleaner, safer work area
- Reduction of lubricant use
- No waste, overspray, or clogging

Benefits

- Reduces clean-up costs and liabilities
- Reduces manufacturing costs
- Minimizes residue while providing excellent lubrication consistency and manufacturing efficiency

Benchtop dispensing robots improve chocolate figurine and other manufacturing





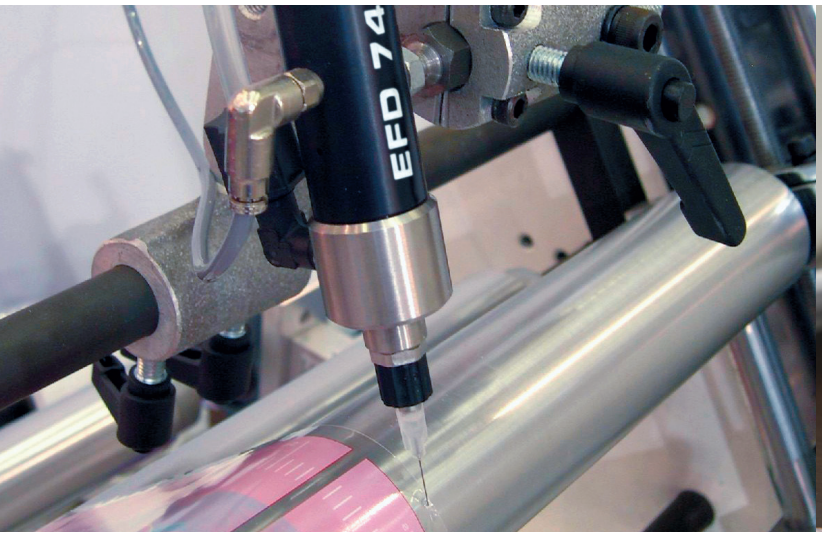
Features

- Semi-automated system works with multiple molds
- Easy to program
- Different patterns, different molds in shape and color

Benefits

- Higher production capacity
- Quick changeover for seasonal peaks in production
- Reduces labor costs, while providing high consistency and repeatability for small color details and complex chocolate figurines and decorations

Adhesive dispensing solutions improve food packaging quality and security





Features

- Precise adhesive application
- Automated, fast cycle rates
- Flexibility to use numerous glues and adhesives
- High-speed and easy to adjust dispensing parameters including shots as small as 0.5 nanoliters

Benefits

- Improves quality and reduces waste
- Improves operational efficiency by reducing time to dispense
- Reduces manufacturing time and costs
- Easily adjustable settings allow operators to adapt to process changes

Sample Food Applications

Innovative products, superior technical support, and decades of experience have made Nordson EFD a recognized leader in fluid dispensing. Below is a short list of specific applications our products have helped improve.

- Filling food material into small packages
- Coating flavorings on food
- Dispensing additives, colorings and concentrates on food and beverages
- Spraying oils to lubricate food
- Injecting liquors into chocolate figurines
- Dispensing adhesive to seal shrink sleeve/packaging



Consistent shot size reduces the waste of expensive food material in beverage containers.

Sample Food Materials

Nordson EFD's easy to integrate dispensing systems guarantee accurate fill volumes, uniform coatings, and precise deposits resulting in increased productivity, fewer rejects, and an overall higher quality of finished products. Below is a short list of fluids found in the food industry that could be paired with our equipment.

- Vegetable and food oils
- Coatings and glazes
- Flavorings and aromas
- Food additives and colorings
- Syrups
- Liquors
- Jams and jellies
- Releasing agents
- Packaging glues

Useful Resources

Choosing and implementing the best possible fluid packaging and dispensing solutions starts with access to the best possible resources. Here are some to get you started:



Application Videos

Visit our Video Gallery to access 150+ application, how-to, and product videos. See EFD solutions in action.

Watch Videos: videos.nordsonefd.com



Expert Recommendations

Knowledgeable Nordson EFD fluid application specialists have, on average, more than 10 years of experience helping customers find the right solutions.

Request Expert Advice: www.nordsonefd.com/Advice



Easy Part Number Search

It's easy to search our digital catalog to find products by part number or keywords. Plus, get links to product specs, videos, and more. With our app, you can even access the catalog from your smartphone.

Find Part Numbers: www.nordsonefd.com/Digital-Catalog



Valve Selection Guide

Quickly find valves by application and fluid type to get an idea of the breadth of dispensing solutions provided by Nordson EFD.

Download Valve Guide: www.nordsonefd.com/ValveGuide



CAD Models

When you partner with Nordson EFD, you benefit from a wide range of reliable, best-in-class precision fluid dispensing solutions.

Download CAD models: www.nordsonefd.com/CAD

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Request More Information

Nordson EFD's worldwide network of experienced product application specialists are available to discuss your dispensing project and recommend a system that meets your technical requirements and budget.

Call or email us for a consultation.

800-556-3484

info@nordsonefd.com

www.nordsonefd.com/advice

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For Nordson EFD sales and service in over 40 countries, contact Nordson EFD or go to www.nordsonefd.com.

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