Nordson EFD Solutions
Applications for High Performance Dispensing in Food Manufacturing, Processing and Packaging
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About This Guide

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.

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 that have FDA approved wetted materials, 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.
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.

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.
### Filling solutions keep product levels consistent for sauces and condiments

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uniform fill volume</td>
<td>Reduces likelihood of product rejects</td>
</tr>
<tr>
<td>Accurate shot size</td>
<td>Reduces waste – minimal maintenance required</td>
</tr>
<tr>
<td>Clean, drip-free cutoff</td>
<td>Reduces spillage and associated cleanup costs</td>
</tr>
</tbody>
</table>

### Coating solutions improve consistency for bakery products

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Even, consistent coverage</td>
<td>More uniform quality and appearance</td>
</tr>
<tr>
<td>Controlled application</td>
<td>Minimizes cleanup, with no mist or overspray</td>
</tr>
<tr>
<td>Timed or steady operation</td>
<td>Easily adjustable settings to adapt to process changes</td>
</tr>
</tbody>
</table>
Jetting solutions provide uniform shots of flavors and additives into beverages

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>High speed, non-contact dispensing</td>
<td>Improves operational efficiency by reducing time to dispense</td>
</tr>
<tr>
<td>Consistent shots as small as 0.5 nanoliters</td>
<td>Reduces waste of expensive material</td>
</tr>
<tr>
<td>In-line or robot mountable</td>
<td>Easily adjustable settings to adapt to process changes and flexibility to use in an automated or semi-automated process</td>
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Lubrication solutions keep food from sticking to blades and conveyer belts

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleaner, safer work area</td>
<td>Reduces clean-up costs and liabilities</td>
</tr>
<tr>
<td>Reduction of lubricant use</td>
<td>Reduces manufacturing costs</td>
</tr>
<tr>
<td>No waste, overspray, or clogging</td>
<td>Minimizes residue while providing excellent lubrication consistency and manufacturing efficiency</td>
</tr>
</tbody>
</table>
Benchtop dispensing robots improve chocolate figurine and other manufacturing

- Semi-automated system can work 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

- 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
Where Nordson EFD Can Help

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.

Sample Food Applications

- 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

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.

Sample Food Materials

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

We hope you found this information helpful.

If you are interested in learning more or are not satisfied with the performance of your current dispensing process, we invite you to call or email us for a consultation with one of our experienced Application Specialists.

There is no cost or obligation for this service and your information will be treated as confidential.

For more information, please contact us at: 800.556.3484 or info@nordsonefd.com.