

nVest for Success
with Nordson Solutions
Packaging Industry





Maximize throughput and minimize downtime with Nordson's innovations, including:

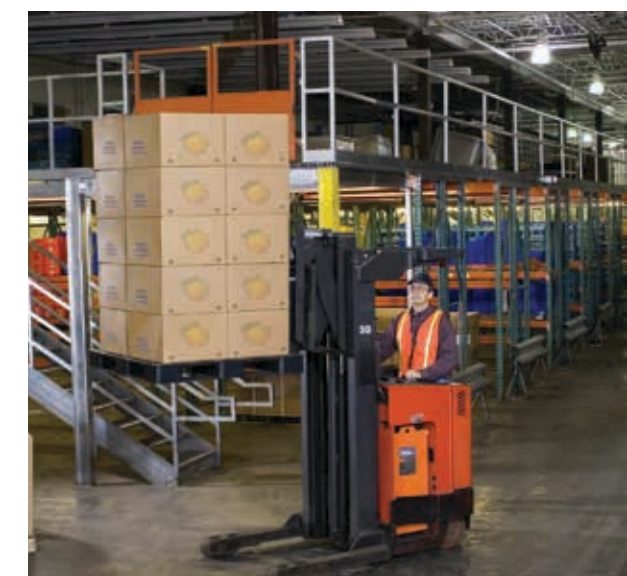
- **self-cleaning applicators that set the industry standard for trouble-free performance;**
- **Melters designed to reduce char and save energy;**
- **a groundbreaking pattern generator that can reduce glue usage by up to 50% or more;**
- **intuitive touch-screen diagnostics that make troubleshooting nearly fool-proof for the operator;**
- **a level of direct service and 24/7 technical support unavailable anywhere else.**

Get the Complete Package: Smarter Systems, Stronger Support



Nordson—the leader in hot melt application products for more than 50 years—is proud to offer a diverse portfolio of value-added solutions designed to help users increase uptime, increase speed and reduce operating costs, while helping OEMs stand out from competitors by offering even more efficient and effective equipment than ever before.

Nordson is unmatched in its combined investment in R&D and Voice of Customer research, spurring significant technological advances that best benefit the success of your operation. Our products are the best on the market, working to give you maximum uptime on your packaging line. But if something does go wrong, we're there for you no matter the day, time or location—with a wide inventory of ready-made spare parts available to ship at a moment's notice.





The Freedom[®] tankless hot melt system offers the best value in total cost of ownership, typically paying for itself in 12 months or less.

The ROI for a typical Freedom system is 11.92 months and the average annual savings is \$17,755 (see charts below)*

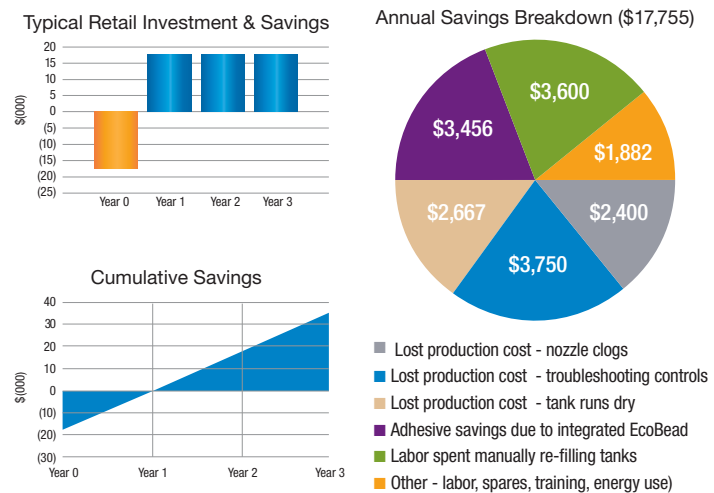
Not only is the Freedom system the world's best tankless hot melt system, but it was built using customer input to address common issues with adhesive dispensing. The Freedom tankless melter is the anchor of a complete Freedom Hot Melt Packaging System that includes an innovative automatic clog removing applicator, smart controllers that can reduce adhesive use by up to 50%, specialized high efficiency hoses and other powerful, next-generation products.

No more adhesive tanks means:

- You melt what you need, when you need it
- No more wasted energy keeping large volumes of adhesive melted
- Significantly less char
- A closed system free of debris
- Improved safety—operators are not exposed to hot adhesive during normal operation

Through advanced technology, the Freedom system offers:

- **New, enhanced touch-screen control panel** with the look and feel of a cell phone or tablet, making it easy for operators to master the system quickly with minimal training
- **Increased efficiency**—reaches 'ready state' 50% faster than a tank melter



*Actual rates will vary depending on adhesive type, application parameters and input voltage

Are the benefits of an “interim” tankless solution right for you?

ProBlue Liberty™ Tankless Systems

Nordson's new ProBlue Liberty tankless melter offers many of the advantages of Freedom tankless melters, but necessarily trades some key features in return for outstanding speed of implementation. In fact, ProBlue Liberty melters were designed starting with the industry-standard Nordson ProBlue[®] tank and integrate advanced tankless technology, allowing the fast swap-out of your current ProBlue system. It utilizes all of the same hoses, applicators, connectors, electrical wiring and other infrastructure used on a ProBlue melter, and plugs into the same footprint. Available in 7 and 14 kg/hr melt rates, it is a fast and effective way to put the benefits of tankless to work in your operation right away.

Fulfill[®] Retrofit Kits

For those looking for an even faster transition to some of the benefits of tankless technology, Nordson offers Fulfill Retrofit Kits. Using a vacuum feeding process, the Fulfill Retrofit kits make it possible to retrofit tankless-like auto-filling performance without replacing your current melter—whether it's from Nordson or another manufacturer. The kit includes a level sensor, replacement lid with adhesive transfer hose attachment, and an adhesive storage bin.



ProBlue tank melters—still the best of its kind on the market

If you are not a candidate for stepping up to the benefits of tankless technology due to the type of adhesives used in your operation, you should know that Nordson continues to fully support its flagship ProBlue tank melter. Delivering reliable piston-pump technology, ProBlue melters were also the first to offer innovative ease-of-use features that allow for easier filling and easier access. No wonder ProBlue melters are the current standard for hot melt efficiency and performance, true workhorses with tens of thousands of units in operation right now, all around the world.



ProBlue Liberty Melter

Fulfill Retrofit Kit Installed on a ProBlue Melter

Superior bead cutoff with less tailing

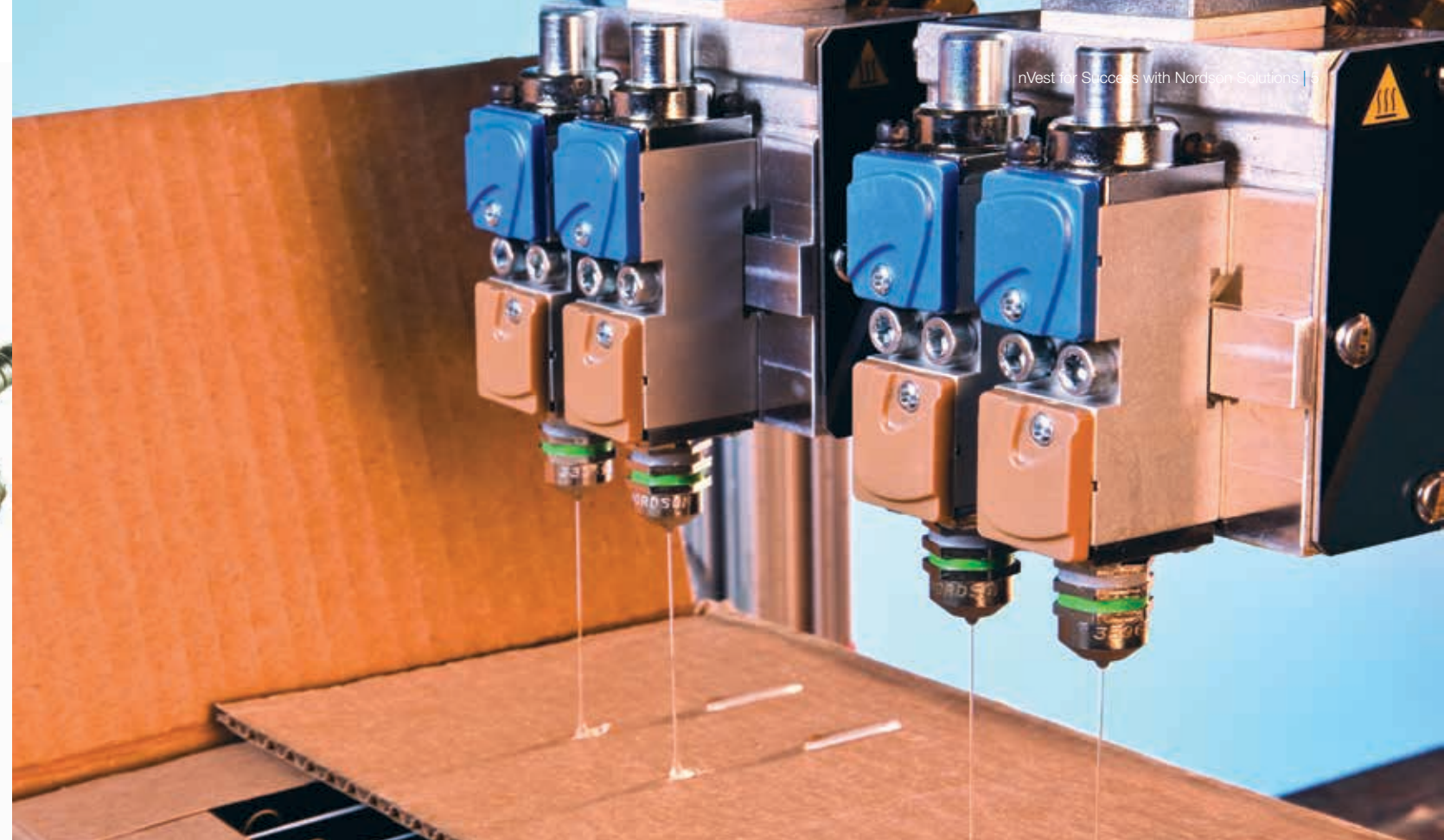
MiniBlue® II long-life applicators

Designed to be the fastest, most reliable and most robust pneumatic applicator produced, MiniBlue II guns are available in two configurations:

- With an enhanced ball-and-seat design that drives highly accurate adhesive dispensing times as low as 2 milliseconds and a patented flexing seal that lasts up to four times longer than traditional seals, the MiniBlue II gun provides superior bead cutoff with less tailing, angel hair and line pollution than other applicators.
- Combined with the SureBead gun for a patented self-cleaning gun with an integrated needle and reduced cavity. This configuration combines the high-speed long-life benefits of the MiniBlue II applicator with the non-clogging benefits of the SureBead technology.



MiniBlue II standard body applicator



Say goodbye to clogged applicators

Savings Example

Shifts per day	1
Operating days per year	300
Operating hours per year	2,400
Labor cost per hour	\$60
Downtime cost per minute	\$40
Downtime cost per hour	\$2,400
Cost of lost production – Nozzle clogs dirt, debris in adhesive (4 per month, 8 min. per)	\$15,360
Cost of replacement nozzles and filters (8 nozzles, 2 tank filters per year)	\$440
Cost of labor to replace modules (6.4 hours yearly)	\$384
Total first year savings	\$16,184



SureBead® non-clogging applicators

The world's most unique, self-cleaning applicator that minimizes downtime, the new SureBead applicator saves thousands of dollars a year in lost productivity, manual labor and damaged materials.

The applicator uses needle-and-seat technology to clear the exit aperture with every firing, ensuring near-immediate removal of char or factory debris before it can build up into a large problem that brings your line to an expensive halt.

And, due to removable, reduced cavity nozzles, SureBead applicators can change bead sizes quickly and efficiently.



Reduce your glue consumption by 50%—or more

EcoBead™ Pattern Generator

Customers told us that the high cost of adhesives is a key concern, and Nordson worked hard to develop an innovative way to lessen their impact.

The Nordson EcoBead pattern generator is a small, cost-effective device easily installed between the applicators and the PLC.

With a twist of a screwdriver, the EcoBead pattern generator allows you to apply short, intermittent “stitched” beads of adhesive as opposed to a long single line.

Does less glue in a stitched pattern result in less bonding strength? Perhaps counterintuitively, it can often provide greater bonding strength—up to 30% more—due primarily to the increased strength at the head and tail of each bead. In fact, new users of EcoBead pattern generators often find that they have to shorten their stitch patterns—reducing their glue use even further—to avoid creating packages that are too hard to tear open.

But the bottom line is that EcoBead pattern generators give you complete control to find the right amount of glue to provide the perfect seal you need in every application—no more and no less—for the most cost-effective operation possible.

Spectra® controllers—superior system management, superior troubleshooting

Optimize your packaging application with the new Spectra 30 controller, an advanced system that gives you detailed control for precise glue placement. The modern touch screen, modeled after typical mobile phones, provides intuitive, graphical pattern programming and real time status of the whole system.

In the unlikely event of a failure, the Spectra controller immediately tells the operator exactly where the issue is and what to do—step-by-step—to get back online. That means less time wasted on diagnosing problems and no more searching for repair protocols.

Like the EcoBead pattern generator, Spectra controllers can deliver glue savings of 50% or more. The Spectra controller can also work with any melter system, tank or tankless, from any manufacturer.



EcoBead pattern generator with a MiniBlue II applicator



Spectra controllers have an intuitive graphical user interface that minimizes training



High-speed electric applicators
Nordson's electric applicators, the e.dot+™ and E-400, accurately dispense adhesive at cycles lower than 6 ms with dispense times under 2 ms. Operating quieter than a pneumatic applicator, electric applicators deliver accurate dot and bead placement as well as lower operational costs by eliminating the need for compressed air. With plug and play installation as well as a service life of four times that of a pneumatic gun, it's easy to see why electric applicators are appealing to packaging lines where downtime needs to be minimal.



Little improvements give big returns



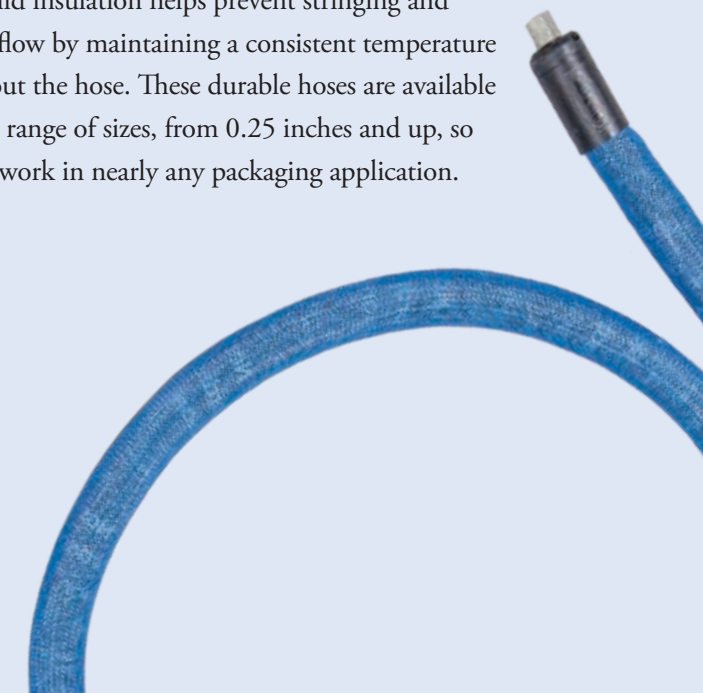
Saturn® nozzles and in-line filters

Never underestimate the importance of something as simple as a nozzle and filters in minimizing downtime in your operation. Unlike competitors, Nordson Saturn nozzles are precision-machined from tubing and installed into the housing, as opposed to many others which are simply drilled brass. The result is a rounder and smoother orifice that ensures more accurate and even bead placement every time.

Saturn filters are easy to install and effective at catching contaminants that can affect adhesive performance. The easy-to-read color-coded rings are a registered Trademark of Nordson Corporation.

Blue Series™ hoses with RediFlex™ II mounting system

Unique in the industry, Nordson Blue Series hoses feature patented, snap-in RediFlex II mounts to prolong the life of the hose by enabling optimal machine mounting. The aramid insulation helps prevent stringing and improve flow by maintaining a consistent temperature throughout the hose. These durable hoses are available in a wide range of sizes, from 0.25 inches and up, so they can work in nearly any packaging application.



nVest for Success - get the complete package with industry-best total cost of ownership

When you buy from Nordson, you're not just getting a piece of equipment—you're getting design and technology that make your purchase the best product on the market, plus a lifetime of support to keep your downtime to a minimum.

Worry less with our advanced technology

Nordson uses feedback from its customers to develop new technology targeting real-life issues in packaging. Our products will maximize uptime and efficiency by keeping maintenance and human error to a minimum. We're proud to offer:

- A cleaner, non-clogging applicator
- Intuitive touch-screen technology that gives you full control of the adhesive dispensing process, allowing pre-stored patterns to be quickly selected using visual depictions
- Automatic fill systems that require minimal operator interaction
- A new generation of melters, controls and applicators designed to reduce maintenance and spare parts costs—meaning less filter and nozzle changes as well as less system flushing.
- Pattern controls that troubleshoot problems and walk operators through steps to solution
- Password protection and USB system backups to keep your line safe from tampering
- Tankless melters that allow you to melt what you need, when you need it



Save money by conserving energy and resources

In addition to reducing downtime and maximizing throughput, Nordson packaging solutions are built to reduce energy consumption, further saving you money and improving your sustainability performance.

For example:

- Our MiniBlue II applicators are built with added insulation to maintain temperature even in cold plant environments.
- Our flagship Freedom tankless melter uses 38% less energy than tanked solutions.
- Our tankless melters offer a temperature set-back feature, saving thousands of dollars in energy and maintaining adhesive purity.
- We created smaller diameter hoses with precisely constructed insulation to save energy.

Overall, you will be using and wasting less adhesive, a petroleum-derived material, improving your sustainability picture as well as significantly reducing your operating costs.



Nordson offers unrivaled global support

Backing our industry-leading technology solutions, Nordson offers the Package of Values®, a level of direct sales and field service support that is unmatched in the industry. You can get service directly from Nordson-employed technicians, experts trained specifically in Nordson equipment.

Nordson offers 24/7/365 technical support directly from Nordson-employed technicians, experts trained specifically in Nordson equipment. No matter where your operation is located, or what time of the day or night, expert assistance is just seconds away.

- U.S. based technical support and customer service center
- More local representatives around the globe than any other adhesive equipment supplier
- Online product manuals, drawings and software downloads
- Online ordering in the U.S.

- Equipment training programs—on our site or yours
- Fully equipped application and technical support laboratories
- Service and preventive maintenance programs
- The largest spare parts inventory of any adhesive equipment supplier—ready to quickly ship to you when you need it the most

“But how much can I really save?”

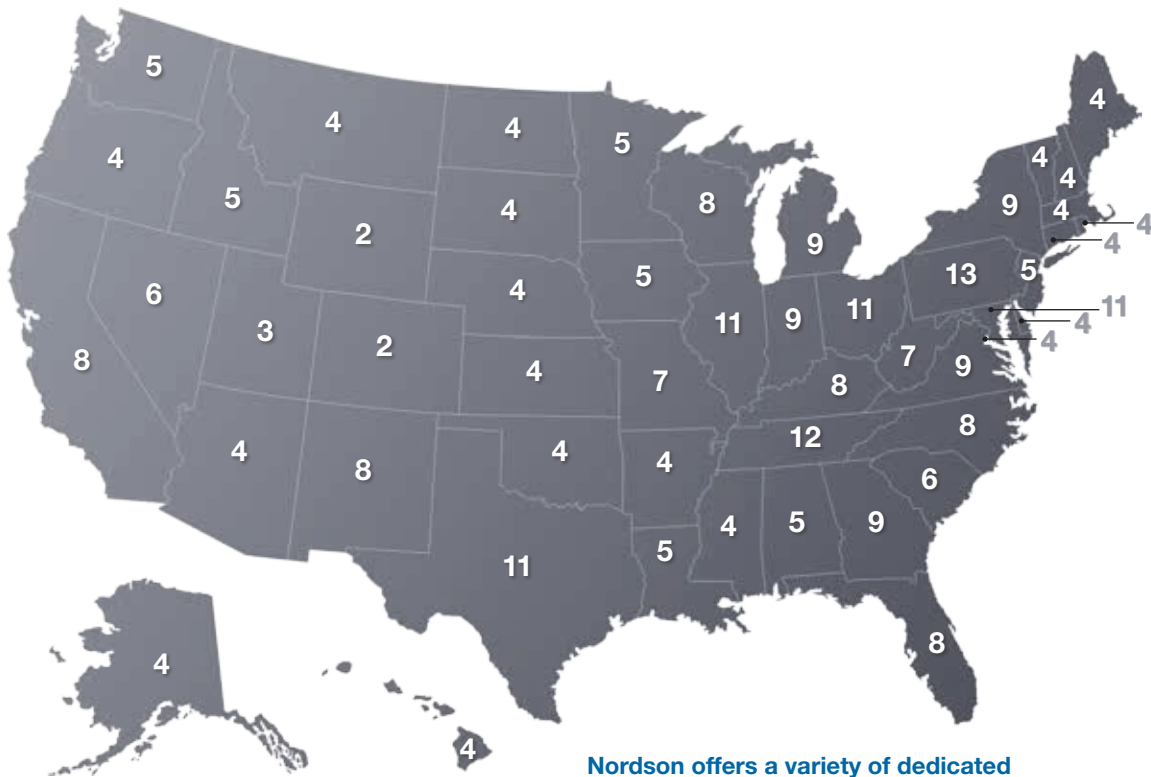
We've developed a questionnaire that can help you quickly estimate what your specific savings could be, and how fast you'll see a return on your investment. We'll help you plug in a handful of specific metrics from your operation, and you'll see immediately if a Nordson system is right for you.

Call us any time for a no-obligation consultation at (800) 683-2314 or visit www.nordson.com/hotmelt

Why Nordson?

For more than 50 years, Nordson has been at the forefront of designing and manufacturing adhesive dispensing systems for packaging operations worldwide. Our vast network of direct sales and service reps can create a customized solution for your operation.

All Nordson products and systems are backed by a Package of Values®, including TrueBlue™ Service and Preventative Maintenance plans, in addition to our Equipment Services and Rebuilt Exchange Programs®.



Nordson offers a variety of dedicated sales reps and specialists in every state.

For more information, talk with your Nordson representative or contact your Nordson regional office.

United States

Duluth, Georgia
Telephone: 800.683.2314
Facsimile: 866.667.3329

Canada

Markham, Ontario
Telephone: 800.463.3200
Facsimile: 905.475.8821

Europe

Erkrath, Germany
Telephone: 49.211.9205.0
Facsimile: 49.211.254.658

Japan

Tokyo, Japan
Telephone: 81.3.5762.2700
Facsimile: 81.3.5762.2701

Asia/Australia/Latin America

Amherst, Ohio
Telephone: 440.985.4797
Facsimile: 440.985.1096

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Nordson Corporation

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