



# Maximum efficiency and economy

Powder coating and dense-phase technology

*Performance by design*

 **Nordson**

# Technology for the markets of the future – as versatile as your customers' needs

## Your start in smart factory technology

For many companies in the powder coating sector, Germany's "Industrie 4.0" smart factory initiative poses serious challenges: Extremely demanding surface quality specifications, broad product variety and lean management all require maximum flexibility and productivity.



With the Industrie 4.0 initiative, the demands placed on powder coating systems are now greater than ever. Major investments in a modern system are amortized relatively quickly, however, by the following gains:

- Fast coating processes and high output
- Uniformly high coating quality and film thickness without reworking
- A high degree of automation requiring minimal intervention by operating personnel
- Economical operation which consumes a minimum of resources
- Careful application of materials
- The ability to change colors rapidly – even more than once during a shift
- Fast and thorough cleaning of the equipment
- Easy maintenance
- Extremely durable components

Perfectly harmonized components with Nordson's highly efficient dense-phase technology offer a future-oriented solution. Extremely uniform HDLV pump flow enables full process control and highly reproducible precision.

That is essential to achieving consistently excellent coating quality at extraordinarily high speeds – coat after coat, day after day. Innovative booth technology, virtually fully automated cleaning cycles and intelligent powder management allow coating operations to complete color changes in matter of minutes.

Significant savings in both powder and energy, minimized downtimes and maintenance costs, and a powder recycling rate of up to 100% maximize profitability.

## Dense-phase technology from Nordson – everything under control

Whether manual, semi-automated or fully automated: Nordson's intelligent dense-phase components guarantee uncompromising coating quality with maximum economy.

## Better coating – superior quality

HDLV pumps work without Venturis, and powder delivery remains absolutely constant as a result. This enables full process control, a high transfer efficiency and perfectly defined, precise powder application with unsurpassed coating thickness uniformity, even in recesses and on complex surfaces – for coatings in reliably outstanding quality that our Encore HD guns reproducibly hold to extremely tight tolerances.

## Flexible coating – fast color changes

The key to flexible production is speed. That's why the automated processing sequences for equipment cleaning and powder recovery are consistently designed to achieve the cleanest conditions in the shortest possible time. Innovative materials – for our booths, lines and guns, for example – support those efforts and enable operators to complete color changes in just minutes.

## Economical coating – substantial savings

Efficient coatings, short set-up and cleaning times, and fast, contamination-free color changes help our customers achieve up to 65% greater productivity along with tremendous savings in energy and powder (up to 45%). Durable components, such as HDLV pumps designed for up to 4,000 hours of maintenance-free operation, and the outstanding accessibility of our systems also minimize downtime and maintenance costs. And those low operating costs shorten amortization times.

## Nordson dense-phase technology – a safe investment in the future



### Encore HD Pump

Simple inspection, accessibility (just one screw) and maintenance in combination with very long service intervals minimize downtime and operating costs.

### HDLV Transfer Pump

Extremely uniform pump output is the basis for 100% process control and ensures consistent, repeatable quality.



### HDLV Gun Range

Outstanding coverage and reliable color changes increase productivity and reduce costs.



## Faster coating

Nordson's HDLV pumps are the core of dense-phase technology. At low velocity and with little air, our pumps deliver a high volume of powder to guns designed specifically for this process.

As a result, a precisely defined "soft cloud" contacts the material being coated. This yields an exact powder coating of unsurpassed quality with hardly any overspray – the most efficient and fastest powder coating possible.

**Nordson's dense-phase technology is available from manual application to fully automated, robot-controlled coating systems – and gets you in top form for smart factory production.**

## Why choose Nordson

In highly competitive manufacturing markets, productivity is vital and performance is essential. That's why we apply both to everything we do, whether it's our products, expertise or outstanding customer service. We'll always be there to help maintain the new standards you've set, with expert service and support delivered through our teams working across the globe.

This unique Nordson approach helps you reach new levels of production, while working more accurately, efficiently and competitively than ever. Precisely why manufacturers who demand quality, can rely on Nordson.

*Performance by design*

## Proven to perform in over 1,000 installations

The best accolades for our dense-phase technology are not written by us; they come from manufacturers striving for even better production standards and improved efficiency:



Our Nordson Encore HD system operates for 10 hours per day, 5 days per week. Since installation we have only had to maintain one pinch valve in one of the HD pumps. That's over 4,000 hours of maintenance free pump operation.

*Andrew Emmerson, Salop Powder Coating Ltd.*



In 23 months since our installation, the system has never missed a beat, with no maintenance time required and no replacement pump parts such as pinch valves necessary. Altogether, the Nordson Encore HD equipment saves us money, makes us more productive and gives us complete production confidence.

*Karolina Szwugier, Quality Engineer, Secal Ltd.*





We took a look at several systems, conducted tests, and decided on dense phase technology from Nordson. It impressed us with its high performance and its coating quality.

*Markus Pape, General Manager, Oberflächentechnik Lönningen GmbH*

### Nordson Industrial Coating Systems

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