Encore® HD
Powder coating by robot
Consistently economical

Performance by design
Unsurpassed coating quality with the greatest possible flexibility and economy:
This is what your customers expect of you. Nordson’s fully automated powder coating systems combine dense phase technology with intelligent robots specifically developed for coating processes.

Whether for mass production or “Batch size = 1”: Powder coating systems attain the highest levels of productivity and the best possible, operator-independent, endless repeatable coating quality – along with huge savings in powder, energy and manual interventions – when combined with robots and an integrated control system. Incorporated into other highly automated and integrated production processes such as Nordson’s high-end solutions for conveying and powder recovery, robot-operated guns help reduce powder consumption by up to 45% while maximizing flexibility and profitability of production at the same time.
Dense-phase technology and robotics
The heart of highly efficient dense-phase technology is the HDLV® pump which pumps a large quantity of powder and very little air to the Encore® HD gun, forming a “soft powder cloud” that contacts the workpiece at low velocity. As a result, the discharge nozzle of the gun can approach the workpiece much, much closer than with other methods. This is exactly what robots do best – unlike hydraulically or pneumatically operated devices, and also with greater speed, precision and endurance than a human hand.

An unbeatable combination
Using a workpiece recognition system (Part Identification Information), the robot also “recognizes” the object, confirms that it is correctly positioned on the conveyor belt and tells the control system and the powder center the appropriate electrostatic, air and powder settings to make.

It follows the contours of the part and aims precisely at hard-to-reach areas, thereby optimizing the coating of surfaces, edges, corners and cavities with unsurpassed efficiency – and it does so always with equal perfection, endlessly repeating without the slightest deviation, absolutely free of human factors or error.

Consistent use of suitable robots in this way makes it possible to increase the quality and cost benefits associated with dense phase technology’s 100 % process control even further.

Such sophisticated powder coating systems are already equipped to handle the future needs of modern smart factory production.

Powder coating control system
The touchscreen control of the PowderPilot® HD is highly intuitive and requires no lengthy instruction – the process diagram on the display is practically self-explanatory.

Powder coating system with robots
When combined with a Spectrum® HD powder feed center and a ColorMax3 powder coating booth, robotic powder coating systems raise plant productivity and cut operating costs considerably through quick, contamination-free color changes (also Color-on-Demand), fully automated cleaning of booths and guns, and nearly 100 % powder recovery.
The benefits of fully automated robotic powder coating

Robotic powder coating with dense phase technology using intelligently networked modules boosts flexibility and productivity, produces optimal results with endless repeatability, and saves processing energy and material costs.

More productivity
• Faster production, up to 65% time savings
• Shorter downtimes and set-up times
• Lower post-production costs

Endless repeatability
• 100% process control
• Less quality variance
• Eliminates human error

Substantial savings
• High transfer efficiency
• Low overspray
• Minimization of manual activities

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.

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