

Prodigy Installation Focus: Czech Republic

The automotive component industry demands high quality products, cost-efficient manufacturing and timely deliveries. Every phase of the manufacturing process must be optimised for maximum efficiency and reliability.

One of the world's leading suppliers of automotive heat exchangers and condensers, located in the Czech Republic, recently asked Nordson to verify suitability of its new Prodigy application system, using HDLV technology (High Density Low Velocity) pumps and specially designed spray guns for its powder coating operation.

“Our company is focused on ongoing innovation and optimisation at every stage of our manufacturing process. Improvement of our powder coating operation was one of the major tasks we faced. A modern heat exchanger has a large surface area which is very difficult to coat. Our goal was to achieve complete coverage with precise control of the total powder quantity applied, without reducing the thermal performance of the heat exchanger” commented the plant project leader, then adding “shortly after hearing about Prodigy we visited Nordson’s demonstration facility, and after thorough trials we were convinced that it is the right solution for us”.



Prodigy dense-phase technology reduces the velocity of powder spray, which significantly improves coating of problematic products like an automotive heat exchanger. The unique pump technology and advanced iControl control system also provide a highly stable and finely controllable powder output. Both of these aspects were very important for this project.



“The service life of a condenser is secured by zinc surface treatment in conjunction with powder coating. The powder coating makes the product durable, improves the anticorrosion properties and is also important for its visual appearance. To ensure long service life and good appearance we need good coverage, and to control the costs we need tight process and applied coating control” stated the plant project leader. “The new system was installed in August 2009 and its performance exceeded our expectations. We improved the finish quality and significantly reduced powder consumption without reducing the thermal performance of our products. The accuracy that the new system applies powder coatings is astonishing. Systematic weighing of the parts confirmed there was just a small deviation of powder quantity applied, not more than +/- 2 grams per part. After more than one year of three-shift operations we can say our project expectations were fully met. It was also a success in monetary terms, the investment has already been returned due to powder and other operational cost savings” concluded the plant project leader.

The excellent functionality of the new Prodigy system is not only reflected in precise powder output control and effective coating capability. The system also provides a highly flexible colour change operation, allowing effective colour changing in seconds, and a notable reduction in spare parts costs.

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