

Powder Application Case Study

Aesthetic Finishers (Piqua, Ohio)



Finishing Finesse

A quest for the ultimate in quality and collaboration leads this cutting-edge job shop to the latest in powder color-change technology.

s one of Ohio's largest powder and ceramic coating facilities, Aesthetic Finishers serves the needs of commercial clients—such as those in the automotive and appliance industries—as well as individual hot rod and motor sports clients. This keeps their 80,000 sq. ft. Piqua, Ohio, facility and its 40 employees busy each week, coating hundreds of different parts in more than 50 colors.

Aesthetic Finishers caters to industries that require the highest quality finishes. "We pride ourselves on the reputation we've earned as a Class A finisher," explains Bill Coomer, the facility's owner. "Our customers demand it. We can't send an Easter-egg looking stove back to one of our appliance customers, for example. Moreover, any color contamination costs us money in rejects and wasted powder. For a while, it seemed the only way to meet the high standards of Aesthetic Finishers' customers was to spray to waste instead of reclaiming powder."

Coomer turned to his colleagues at Nordson Corporation, Amherst, Ohio, for a better solution. In the process of developing the latest in its line of powder coating technologies, Nordson and Coomer worked togetherto devise a booth that would minimize powder contamination while accommodating a range of profiles.

The result of their collaboration was a customized version of the ColorMax[®]3 Powder Spray System. Designed to maximize powder usage and nearly eliminate any contamination, the booth is constructed of proprietary Apogee[®] canopy material, which offers the least



Aesthetic Finishers' owner, Bill Coomer, worked with Nordson Corporation to devise a booth that would minimize powder contamination while accommodating a range of profiles. The result of their collaboration was a customized version of the ColorMax[®] 3 Powder Spray System, which is designed to maximize powder usage and nearly eliminate any contamination.

amount of powder attraction. As a result, it enhances color change speed, eliminates the possibility of cross-contamination of colors, and makes routine booth cleaning quick and easy.

Other features that maximize powder efficiency include:

- Open-face canopy design and external manual touch-up stations improve first-pass transfer efficiency with full and easy access around part.
- Airwash that moves powder to the extraction plenum and ensures minimum powder-in-process. Single plenum along the center of the booth to reduce contamination risk.
- Access doors in cyclone and plenum for easy cleaning.
- HDLV[®] (high-density powder, low volume air) pumping technology continuously returns powder back to feed center for peak recovery efficiency.

"We were in the early stages of developing this product when Bill contacted us," says Frank Mohar, Nordson Powder Systems Specialist. "We spent a couple of months at his facility, working together to improve the 'if you can see it, then you can clean it' concept. His input was instrumental in achieving our proof of concept and color-change testing capabilities with the system in the Nordson customer test laboratory."

The booth designed for Aesthetic Finishers incorporates a specialized dual cyclone design to maximize cleaning efficiency. To accommodate more challenging powders used at Aesthetic Finishers, the cyclone's lower section can be unclamped and rolled out, allowing the cyclone's entire interior surface to be easily wiped clean from top to bottom. While the majority of powders come clean without this extra step, the breakaway version for tough powders takes "if you can see it, you can clean it" to the



As one of Ohio's largest powder and ceramic coating facilities, Aesthetic Finishers caters to industries that require the highest quality finishes. Here, appliance parts are being sprayed, just one job of the hundreds of parts that are coated each week in more than 50 different colors, at the shop's 80,000 sq.-ft. facility..



Aesthetic Finishers' newest powder coating system has a dual cyclone design that maximizes cleaning efficiency. To accommodate more challenging powders, the cyclone's lower section can be unclamped and rolled out, allowing the cyclone's entire interior surface to be easily wiped clean from top to bottom.

"you can see it, touch it and clean it" capability, according to Mohar.

Coomer agrees. "That's exactly what we have. You can physically touch all the powder-contact surfaces that your reclaim powder will encounter. So, you can see contamination and clean it before it gets introduced into your next powder coming through," he notes.

Aesthetic Finishers installed the first ColorMax3 system last October, in a line with an 800-ft. overhead conveyor, automatic guns, a six-stage wash and curing ovens. The line undergoes up to eight color changes a day and has allowed Coomer to exceed his goals for reclaim and quality as well as productivity.

"I love the performance," Coomer says. "We can even get contamination- free white to black. And our actual powder cost savings are phenomenal. We are reclaiming about 97 percent of all the powder we use in this booth right now."

The efficient use of material is also allowing Aesthetic Finishers to stay more competitive. The coater initiated a new pricing structure that they pass along to customers based on their ability now to reclaim and increase their line speeds.

The system also includes Nordson's iControl[®] integrated control system with 255 programmable recipes and Encore[®] and SureCoat[®] automatic spray guns. The system is modular in design to accommodate the various work heights and the company's ever-changing production requirements.

"Nordson has supplied all the support I needed but never got in the past," says Coomer. "Nordson and Aesthetic Finishers really came together and listened to each other. As a result, they improved their product and I improved my productivity. There are a lot of companies out there that don't have the manpower—or the desire—to do that."

For more information on Nordson ColorMax 3 system, contact Bob Allsop at 440-985-4459 or via email at bob.allsop@nordson.com, or visit www.nordson.com/powder. To learn more about services from Aesthetic Finishers, contact Bill Coomer at 937.778.8777 or visit www.afipowder.com.

For more information on powder coating technologies from Nordson, call 1.800.626.8303

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

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