Over the last decade, the trend toward converting from liquid to powder coating in finishing operations has increased dramatically. Many manufacturers – like WireCrafters, LLC, in Louisville, KY, have reaped the benefits of faster color change, higher quality finishes, cost reductions and environmental compliance that powder coating brings.

When WireCrafters decided to expand its operations to include a new powder coating system – it turned to Nordson Corporation (Amherst, OH) for its proven expertise. “Our customers wanted a more durable, better looking finish on their product. That was our biggest motivator to offer powder coating,” explains Rich Horn, WireCrafters plant manager. “Nordson worked with us to provide exactly what we needed and then backed it up with great support. It was a big process shift for us and they made it easier.”

A major player in the industry since 1967, WireCrafters manufacturers woven and welded wire partition products primarily used for security enclosures, tool cribs, and barriers around automated equipment. Prior to the conversion, the company used liquid coating on two lines, which did not meet the quality requirements of certain customers.

After extensive research, WireCrafters decided on the Nordson ColorMax® 3 powder coating system with an iControl® integrated controller. According to Horn, throughput speed, quick color change, flexibility in part profiles, and the twin cyclone system design were major factors in their final decision.

“Most every job we ship is custom made,” says Horn. “We have all different types of part sizes and customers require unique colors to suit their particular function. Nordson gave us everything we needed – the ability change colors quickly and change recipes for new part sizes and geometries. Essentially, we can coat most any product type with just the right color. That really met our needs operationally.”

New System Enhances Service and Quality

Together with Midwest Finishing Systems (Mishawaka, IN), who supplied the washer, ovens and conveyor system, the team designed a powder coating system that operates at 10 FPM and is capable of handling all of WireCrafters’ light and heavy-gauge wire products. The Nordson ColorMax 3 powder spray system incorporates a modular design to handle a variety of work heights and accommodate changing production requirements. Planned for maximum flexibility, system features include:

- Proprietary Nordson Apogee® canopy material, which has the least amount of powder attraction of any material on the market today, and resists powder attraction to further expedite color-change operations.
• Twin cyclone system design vs. monocyclone design; minimizes ducting which reduces powder build-up and allows faster, easier cleaning.

• Nordson HDLV® (high-density powder, low-volume air) pumping technology, as well as Sure Coat® automatic spray guns to enhance production flexibility with fast color change and excellent coating performance.

• An iControl® system that allows operators to input up to 255 different presets for changing part styles, including gun control parameters such as flow rate, atomizing, kV and current. All functions are easily monitored on a touch-screen display.

Since installing the system last December, WireCrafters has seen numerous benefits from powder coating – the biggest being product quality and delivery time. “We’ve been very successful in getting great color match, while meeting the specs for each product’s designated line speed and line spacing,” says Steve Diebold, WireCrafters president.

In addition, the powder coating process improved WireCrafters delivery to customers by three days. “With liquid, we had to let the paint cure and harden for three days before packaging and shipping. Now, we can ship off the line, speeding delivery of all our special jobs,” notes Diebold. When using powder for colors, WireCrafters has double its line speed and can pack more density on the line as well.

Due Diligence Pays Off

It took WireCrafters several months to select and install its new powder coating line. They still offer liquid coating to customers who choose it, but are extremely happy with their new system.

“The engineered solution and the amount of support we’ve received have been phenomenal,” says Horn. “When you try something as different as powder over liquid, we wanted suppliers who knew what they were doing. Both Nordson and Midwest provided the highest levels of service and professionalism. We’re happy and so are our customers.”