

# Flat-Line Powder Coating System



*Automated system powder coats flat panels at line speeds of over 100 feet per minute.*

Flat-line coating is a method to power coat flat metal stock before products are formed. The system coats formed parts, coil stock and blanks.

Products that can be formed from coated blanks include large appliances, office furniture and HVAC equipment. Flat-line coating is also used for brake pads and a variety of other products.

The Nordson flat-line system can coat flat metal stock at line speeds over 100 feet per minute, which is several times faster than conventional finishing methods. First-pass transfer efficiency is typically in the range of 96 to 99 percent.

The system can be designed with either a downdraft or side draft spray booth. Booth canopies are typically constructed of powder-resistant materials to minimize attraction of paint particles to booth walls. However, for abrasive powders such as porcelain enamels, stainless steel canopies are available. Booth airflow is tailored to operating requirements with individual PLC-controlled fans.

Powder application equipment includes booth corona and tribomatic charging guns for various flat-line powder coating applications – depending on part configuration and coating requirements. Consistent airflow to either gun type is maintained through the used of closed-loop digital airflow which measures incoming pressure and compensates for any variation through the use of a proportional valve. This results in consistent airflow to the pump and consistent uniform powder deposition on the part.

All application parameters can be controlled and monitored through one icon-based color touch screen for easy configuration and operation of all application equipment. The single central processing unit configures and controls all application parameters such as atomizing, flow rate, KV and current, as well as all gun-triggering requirements. All of these features and more result in greater powder savings and increased productivity.

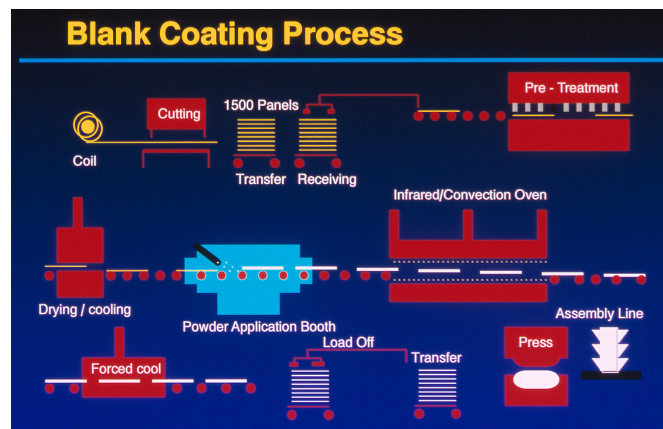


*Nordson® flat-line powder coating system.*

A part sensing system, which recognizes part length and width, automatically triggers the required guns on and off to minimize unnecessary recycling of powder.

Booth conveyors can be roller or belted, depending on the required application. Recommendations for transport systems are based on the need for underside coating and paint wrap.

Powder coatings are cured in-line with a combination infrared/convection oven. Oven temperatures typically reach 500 to 650 degrees Fahrenheit, which cures the coating in one-tenth to one-twentieth the time of conventional curing oven.



*A complete flat-line powder coating system includes a pretreatment system, spray booth, spray guns, curing oven, conveyor, controls and automated stack/destack equipment.*

## Flat-Line Powder Coating System

---

### Features and Benefits

- **Coats at line speeds over 100 feet per minute** for increased productivity.
- **Automated gun triggering provides first-pass transfer efficiency of 96 to 99 percent**, minimizing unnecessary recycling of oversprayed powder coatings.
- **Choice of booth styles, canopy materials and gun-charging systems** to tailor the flat-line system to your specific requirements.
- **Individual PLC-controlled fans** provide optimum airflow in the booth for complete part coverage and efficient system operation.
- **Closed-loop digital** maintains consistent airflow to the pump providing uniform coverage of the part.



*Nordson® Tribomatic® II automatic spray guns provide efficient part coverage at high line speeds.*

Nordson reserves the right to make design changes to products to improve their function. These changes may occur between printings.

---

*For more information, talk with your Nordson representative or contact your Nordson regional headquarters office.*

#### **United States**

Amherst, Ohio  
Telephone: 800.626.8303  
Facsimile: 888.229.4580  
Web: [www.nordson.com/powder](http://www.nordson.com/powder)  
Email: [powder@nordson.com](mailto:powder@nordson.com)  
[www.nordson.com](http://www.nordson.com)

#### **Canada**

Markham, Ontario  
Telephone: 800.463.3200  
905.475.6730  
Facsimile: 905.475.8821  
[www.nordson.ca](http://www.nordson.ca)

#### **Europe**

Erkrath, Germany  
Telephone: 49.211.9205.0  
Facsimile: 49.211.254658  
Email: [powder.systems@de.nordson.com](mailto:powder.systems@de.nordson.com)  
[www.nordson-finishing-eu.com](http://www.nordson-finishing-eu.com)

#### **Japan**

Tokyo, Japan  
Telephone: 81.3.5762.2700  
Facsimile: 81.3.5762.2701  
[www.nordson.co.jp](http://www.nordson.co.jp)

#### **Asia/Australia/Latin America**

Amherst, Ohio  
Telephone: 440.985.4000  
Facsimile: 440.985.1096  
24-hour message service:  
440.985.4797  
Email: [intcustomerservice@nordson.com](mailto:intcustomerservice@nordson.com)



Nordson Corporation • 300 Nordson Drive • Amherst, Ohio 44001