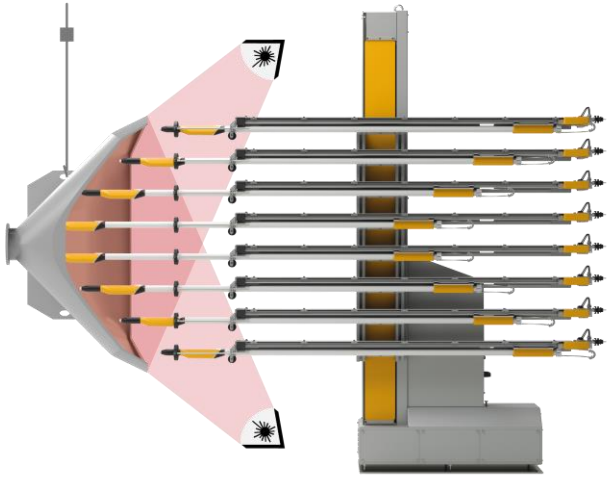
Application Success Stories

FP ADVANCED COATINGS LTD



Increased Production Capacity

Improved Finish Quality and Process Control

Advanced Automation

Application Success Stories

Installation Key Data

Parts: Electrical Enclosures

Parts size: 1'800mm high
900mm wide

Conveyor speed: 2 metre per min

Scope of delivery:
1 x OptiCenter® OC07 with
14x OptiSpray AP01
12 x OptiGun® GA03 Automatic guns
2 x OptiSelect Pro GM04 manual guns
1 x Ultrasonic Sieve
1 x MagicControl 4.0 (CM40) control system
1 x GemaConnect Dashboard
2 x reciprocating axis with 6 gun axis UA05
1 x Dynamic Contour Detection

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FP Advanced, formerly known as Foleshill Plating, are a Coventry-based company offering powder coating and E-coating services to some big OEM's including some prestigious automotive brands. A longstanding Gema customer, they had reached a point where they were at maximum capacity, and it was time to upgrade their powder coating facility to increase throughput and position them for their next stage of growth.

The latest installation comprises an OptiCenter OC07 complete with SIT pump technology, a product which is respected as the market leading solution for producing optimised powder application combined with stable and repeatable results with minimum operator intervention. Trying to produce an optimum powder spray pattern using an older high density, multi-channel pump is a challenge. "Puffing" and "surging" powder clouds must be constantly monitored and controls adjusted. OptiSpray and its Smart Inline Technology (SIT) design uses a revolutionary single channel powder path to accurately deliver powder and provide you with broader spray pattern management at the gun tip. This control offers the highest quality appearance for all types of powder coating material, even challenging special effect metallic and textured powders.

Customer Benefits

- Smart Inline Technology (SIT) can save you up to 15 percent in powder consumption
- Improved penetration in recesses
- Broad powder spray pattern control
- Individual cloud control for each powder coating gun
- Most compact application powder pump on the market
- Inline design provides simple and ergonomic systems integration
- Unique single chamber design means up to 50% percent less wear parts
- Automatic colour change capabilities saves time
- Automated cleaning for normal maintenance and colour change applications
- Superior application performance from Gema's patent* protected technology

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As part of the project the existing application guns were updated to the latest version, the gun quantity was increased to support a higher line speed. The automatic guns are mounted on Gema's second-generation dynamic contouring detection system, a proven innovation which is re-shaping the industry when it comes to automatic coating of complex geometries. Contouring supports independent movement of each gun on its own dedicated axis, coupled with a laser scanner this enables the guns to track product geometries and optimize the coating distance accordingly to deliver the coating result. Contouring is a truly game changing technology within the automatic powder coating space and facilitates customers to achieve automatic coating where it would have been previously impossible.

Chris Waterhouse of FP Advanced said 'We are delighted with the recent installation, it made sense with our initial calculations based on a 30% increase in productivity, we were running at full capacity working 24 hours a day. With the additional guns and contouring system we have been able to increase the line speed, as well as reducing our colour change time with the OptiCenter, and these aspects combined have meant our productivity has increased by considerably more than 30%. The automation and component tracking from the contouring guns has been a game changer for our business, the operator manual coating intervention has been eliminated completely in many cases which is supporting a fully automated process for significant portions of the work which would traditionally have required two operators.

Leon Hogg of Gema said 'We were delighted to have secured this prestigious project and play a role in FP Advanced growth strategy. This contouring Technology is a fantastic innovation, and we are pleased to have many other installations planned for this year.'

The Dynamic Contour Detection process is carried out in two steps;

1. Scan: The laser scanners operate in a two-dimensional area. They measure distances to the obstacle and calculate the outline of the object. This data is tracked to the MagicControl 4.0 unit.
2. Spray: The scanned object shape is segmented and translated in an accurate axis position and individual gun adjustments. Each axis is independently positioned from each other.