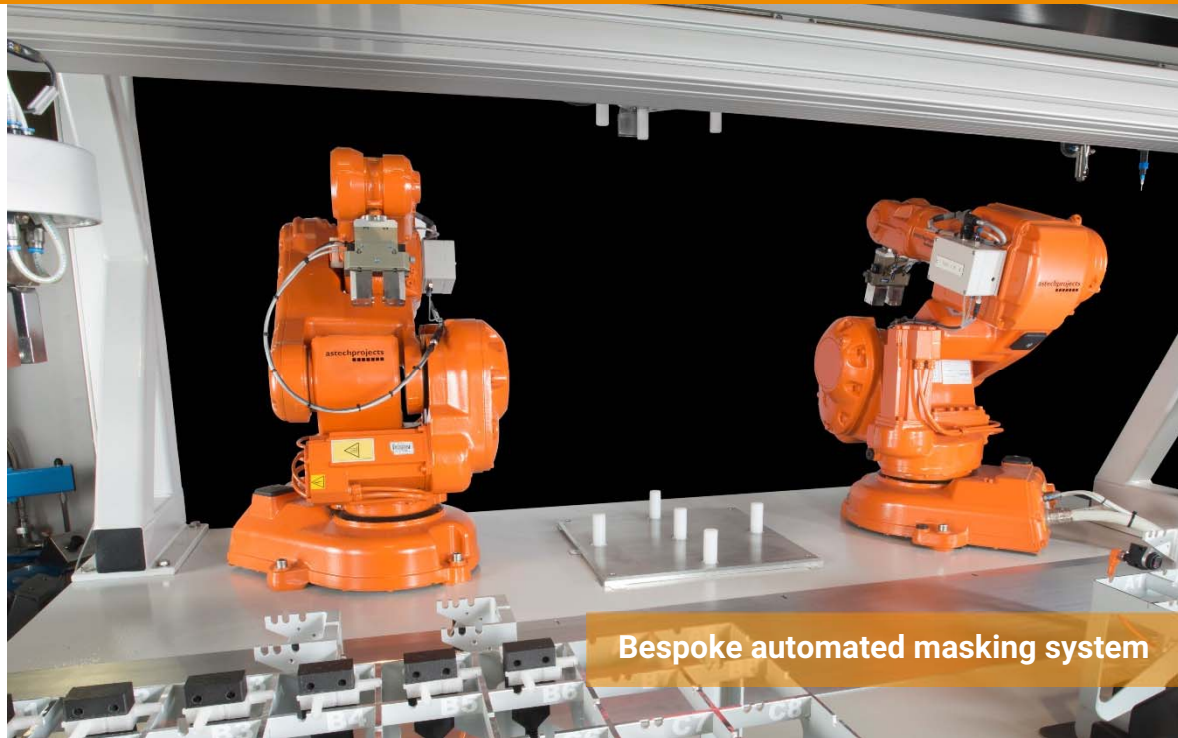


Preeflow eco-PEN450

Volumetric dispensing system

Dymax 717-R

SpeedMask masking resin



Our customer

Astech Projects

Customer benefits

- Increased throughput
- Improved accuracy
- Superior masking quality
- Flexibility for future proofing

Coatings expertise set to automate the aerospace industry

Astech Projects, part of Schauenburg International group of companies, is a supplier of robotics and automation solutions to the advanced manufacturing and regulated industries. The company builds systems from concept to completion on a custom basis, turning its hand to any application not currently available in the market.

“A leading UK aerospace company commissioned Astech Projects to build a bespoke Automated Masking System to mask complex areas of aircraft components in order to avoid precious metal coverage during the manufacturing process,” explained Craig Hamilton, business development manager at Astech Projects. “The system was required to have the capability to mask 14 component variants, while offering the functionality to add additional variants in the future.

“While masking and coating is a common application, automating it is not,” continued Hamilton. “Astech aimed to increase throughput, accuracy and masking quality by building the bespoke automated system, benefiting from the expertise of adhesive and coating specialist, Intertronics.”

Dymax 717-R SpeedMask would effectively protect the precious metal during the manufacturing process and was therefore an appropriate choice.

“Once the masking resin had been selected, we worked with Astech Projects to establish the success of the preeflow eco-PEN450 as a dispensing mechanism,” explained Matthew Baseley, Senior Internal Technical Sales at Intertronics. “The system was chosen because of its high accuracy – it gives a value greater than $\pm 1\%$, 99% of the time. “The system also has no fluctuation in the volume of resin dispensed with any change in viscosity.”

So that the curing process could be fully automated with a high throughput, Intertronics also supplied the appropriate curing equipment including high-intensity UV lamps. "This enables the resin to be cured quickly, in the range of 20 to 30 seconds," said Matthew.

Astech Projects was able to complete two further proof of concepts projects at their Cheshire facility, using Intertronic's dispensing and curing equipment available as part of their customer trial service. To support Astech, Intertronics' Baseley and Paul Whitehead visited the facility. Once the solution was tested and proven to be successful, Astech purchased the required coating, curing and dispensing equipment from Intertronics.

The fully-automated system incorporates a 3-axis Cartesian robot and two 6-axis robots working in synchrony according to one robot program. It also includes a high-definition vision system, masking dispensing system and UV curing station. On a batch-by-batch basis, the system can correctly identify and orientate 14 types of part against the preeflow eco-PEN450, which accurately dispenses the Dymax 717-R SpeedMask product. The part is then taken to a curing chamber, where it is illuminated with high intensity UV. Once the process is complete, the component is returned to its original input location. The process repeats itself until the entire batch of components has been processed.

"The main drivers behind the project were to accurately and repeatably mask the component," said Baseley. "The final result dispenses to an accuracy of 100µm, a great achievement. Astech Projects' bespoke system offers the client a significant labour saving and increases throughput with the client now channelling 60% of its components through the system."

"There is great potential in the market for Astech to build automated systems for masking and coating applications," explained Hamilton. "For example, medical devices, electronics and aerospace industries regularly use a masking process. We are now looking at other applications with the same client and its parent company, as well as with Intertronics.

"Intertronics is an extremely knowledgeable company, providing Astech with vital coatings expertise. They were a great partner for this project and we look forward to working together in the future," concluded Hamilton.

Preeflow eco-PEN450

- Genuine volumetric meter, mix and dispense dosing
- Viscosity independent
- Suck back effect
- Easy to clean
- Controllable dosing flow

Applications include: Electronics packaging, SMD/SMT, semiconductor, LCD/LED/OLED and medical

DYMAX 717-R SpeedMask Resin

- Apply and cure in seconds
- Reduce labour, rework and scrap
- Easy to automate
- Environmentally and worker friendly
- Metallurgically neutral

Applications include: Temporary masking for acid stripping, anodising, chemical milling, plating



**Contact us for more information on
our Dispensing or Masking products**

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