

Automated Honeycomb Potting

Airborne automated solutions | 2020

- High accuracy: less waste, lower weight
- No machine programming needed
- Reduced production cost
- Very clean process



Airborne

Automating Honeycomb Potting

Why automate

Airborne's Automated Honeycomb Potting solutions automatically apply potting resins for local reinforcements in honeycomb cores.

Compared to the manual approach, an automated solution is easily repeatable, more accurate and faster, thereby boosting the production output. Our smart integral solutions enable a safe and clean work environment, decreasing contact with hazardous substances significantly.

- No work preparation needed
- Save processing time
- Reduce material consumption
- Eliminate manual work
- Work in a cleaner and safer way
- Reduce the cost of non-quality
- Redeploy skilled workers

How it works

Our Automated Honeycomb Potting solutions are designed to efficiently and accurately fill honeycomb blanks with potting resins via an automated platform.

The workflow is automated from design to manufacturing. Any shape of potting geometry can be realised and the machine code is automatically generated by our smart software.

We offer solutions for continuous production for high rate manufacturing as well as more flexible and affordable technologies for different requirements.



Specifications

Airborne's Automated Honeycomb Potting solutions are designed around a core module with the following capabilities and performance parameters:

Materials Honeycomb blanks (e.g. Nomex)

Resins Dosing of one-part resins or two-part resins (with mixer head)

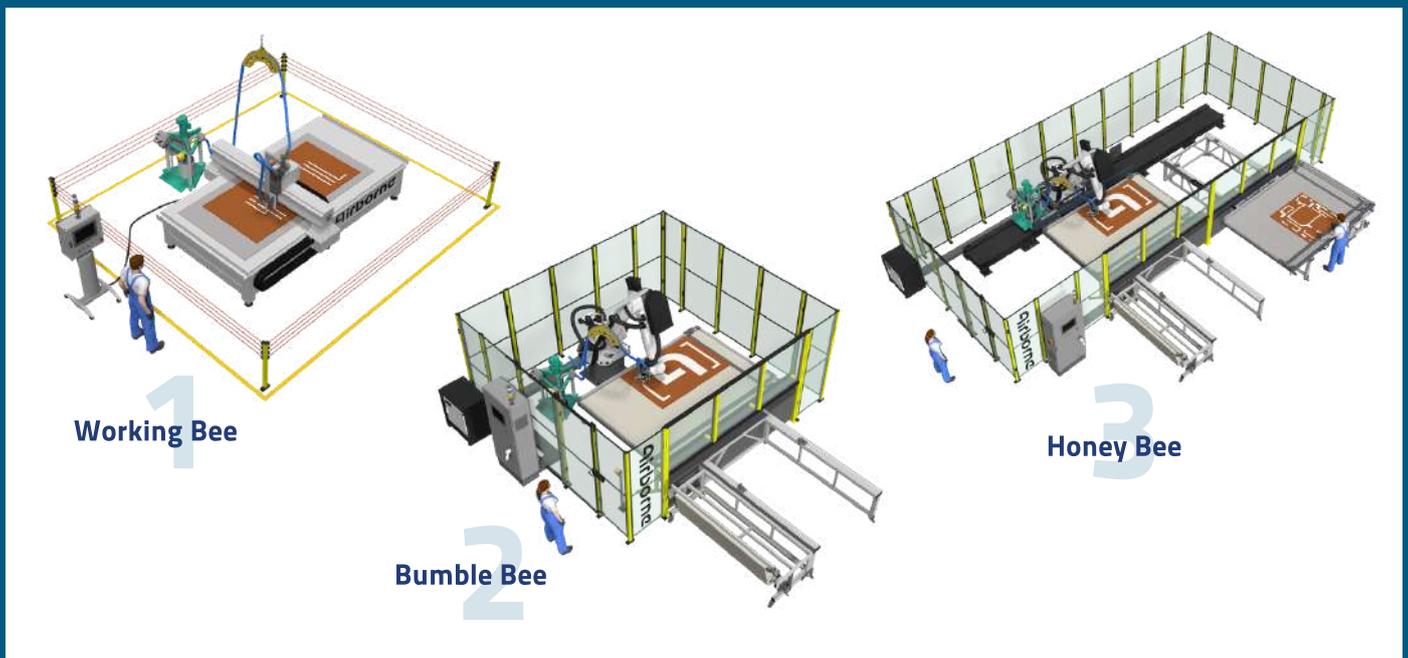
Main properties

- Filling program based on CAD-data
- Honeycomb blanks up to 3 m x 2 m
- Blank thicknesses tested up to 60 mm

Benefits

- Save preparation and process time
- Save time in work preparation
- Optimise the material consumption
- Reduce the cost of non-quality
- Increase efficiency
- Safer and cleaner
- Flexible and easy to upgrade

Automated Honeycomb Potting portfolio



Working Bee

- 11 m² (excl. safety system) required floor area
- Type: Gantry
- Flat Honeycomb panels for 2D potting

Bumble Bee

- 45 m² required floor area
- Type: Robot
- 2D and 3D potting

Honey Bee

- 84 m² required floor area
- Type: Robot on a track
- 2D and 3D potting
- Position two or more parts for a high production rate

Airborne's Digital Automation Portfolio

Production volumes in the composites industry are increasing, while unit prices are reducing and cycle times are shrinking. Companies therefore look for ways to radically reduce touch labour and takt time, minimise footprint, improve material utilisation and reduce time to market of new, complex, engineered composites products. To meet these needs, Airborne developed a suite of digital manufacturing solutions for composites manufacturing. Automated Honeycomb Potting is one of the building blocks in Airborne's digital offering.



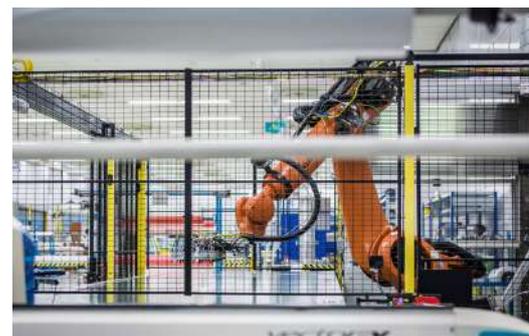
Automated Kitting

Our Kitting solution delivers fully sorted and sequenced composite ply kits to increase productivity, improve material utilisation and reduce work preparation.



Automated Laminating

Our Laminating solution makes the layup of tailored thermoset prepreg preforms effortless, by combining tape laying, cutting, and pick & place in a single cell.



Automated Preforming

Our Preforming solution is the solution to manufacture tailored blanks or preforms, 100% net-shape, and for all composite materials: thermoset prepreg, dry fibre or thermoplastic composites.

About Airborne

At Airborne we know that innovation in manufacturing through automation, digitalisation and advanced analytics is the catalyst for the significant increase in productivity that companies need to stay competitive. We understand the complexity and cost involved in producing composite products for demanding applications in highly regulated industries. Our legacy in advanced composites manufacturing makes us experts in developing and delivering automated solutions that enable our customers to achieve high production rates and radically low conversion costs.

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Publication date: March 2020 | All rights reserved