

trends in automation

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FESTO

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Process optimisation in campervan and caravan construction

On the move

Manufacturers of production plants for lightweight composite materials are under pressure. The quicker they get machines to customers and up and running, the better their competitive edge. This demands precise procedures for efficient and therefore environmentally-friendly use of raw materials. This can be accomplished through innovative system components and good advice, both for the manufacturers and the customer. With the new solution from Festo, Technicon is expanding its innovative lead with large-area adhesive application systems.



The new unit comprising coating table and spray nozzle gantry simplifies transport and reduces the assembly involved in Technicon's 1C PUR adhesive application system.



(A)



(B)



(C)

(A) 26 ball valve actuator units controlled by a valve terminal CPX-MPA ensure an extremely even adhesive application.

(B) A servo motor EMMS-AS drives the two 8500 mm long axes EGC.

(C) Two 8500 mm long axes EGC move the gantry safely and precisely over the 2500 mm wide coating table.

The campervan industry is booming, and this is having positive knock-on effects for machine builders specialising in production plants for composite materials. In addition to precise and therefore resource-efficient production, speed in the production and assembly of plants is an important cost factor. Technicon – Technik mit System GmbH, one of the top companies in the field of process automation for sandwich panel production with large-area adhesive application systems, has now, in conjunction with Festo, developed a new system for applying 1C adhesives. The combination of a coating table and gantry system produces an efficient unit that sets new standards in terms of transport, setup and

commissioning as well as seamless integration into existing production lines. One company that is reaping the benefits is the caravan manufacturer and plant operator Swift Group Limited, based in Cottingham in England.

Long-term sealing and insulating

High-quality adhesives play a crucial role in the construction of campervans and caravans. These adhesives are light, effective and seal the composite framework made up of an outer shell, insulation and interior wall for many years. In order to achieve this, the Technicon system bonds the side walls, front and rear walls as well as the roofs and floors of caravans. The system consists of a coating conveyor on



“For us, the integration of a coating table and gantry using 8.5 m axes EGC from Festo means greater efficiency in logistics and during commissioning. We want to go a step further with the next project with a 15 m long axis system.”

Robert Vedder, Managing Director of Technicon

which the various layers of the composite material are laid, and a nozzle gantry that moves over it to apply the adhesive and water evenly. The nozzles are actuated by 26 ball valve actuator units VZBA and the valve terminal CPX-MPA, both from Festo. Technicon uses a laser-assisted application technique based on CAD data that applies adhesive with pinpoint accuracy using individually 3D printed nozzles to ensure both an economical and perfect gluing result. This eliminates overspray, which is harmful to health and causes soiling. The system can apply up to a tonne of adhesive per day.

Integration speeds up commissioning

The predecessor model of the 1C PUR adhesive application system featured a solid steel frame installed around the coating conveyor of the application system. During assembly at the customer's site, the adhesive nozzle gantry had to be moved over the coating table using a motorised carriage in a cumbersome and time-intensive process. Just measuring the steel beams and aligning them with existing machines took up to two days, depending on how much space was available on the caravan manufacturer's shop floor. With the new generation of 1C PUR adhesive application systems, this is now much easier and faster. In these systems, the coating table and gantry have been integrated through the use of two 8500 mm long axes EGC

from Festo. The system can now be supplied and installed as a compact unit. This means no more time-consuming assembly and measuring. The new system is therefore not only extremely efficient and reliable thanks to Festo automation know-how and products, but also reduces transport and assembly costs in the long term. ■

- www.festo.com/cpx
- www.festo.com/egc
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Photo: © Swift Group

On the move: Technicon's systems are used by Swift in England. The British company manufactures caravans, campervans and mobile holiday homes.

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Area of business:
Development, consulting, design
and manufacture of production
plants for process automation



Communication at full speed

Data centres work at full speed to keep the digital world connected. Billions of bytes of information are exchanged over the Internet every day in modern server farms. Around the clock. Google is at the forefront of this. This search engine provider's website is the most visited in the world. According to a statement from the company, three billion search queries were processed per day in data centres in 2012.

The cover picture is of the data centre in Council Bluffs, in the American state of Iowa. On an area measuring 10,000 square metres there are rows and rows of servers all connected to one another. All of the company's data centres can also communicate globally with one another.

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