

3D PRINTING IN THE VEHICLE INTERIOR

SYSTEMS ENGINEER 3CON USES THE HAGE3D 140L

Systems engineer 3CON is a global leader in systems and tool construction for the automotive industry. 3CON uses the 140L model 3D printer to create high-performance systems for customers such as BMW, Mercedes and Audi.

If you've always been interested in how car interiors come about, 3CON is the place to be. The company, which has its origins in Germany, has had its headquarters in Ebbs bei Kufstein, located between Salzburg and Innsbruck, since 2001. The systems manufacturer produces machinery to laminate car doors, centre consoles and other car interior surfaces. Systems produce up to 2000 parts per day, applying coatings made of plastic, leather and other materials. The company is now the market leader and counts BMW, Mercedes, Audi, Porsche and many others amongst its customers. Alongside its headquarters in Ebbs, 3CON has subsidiaries in Germany, Mexico, China and the USA and supplies to the global market. 3CON uses three HAGE3D 140L models to create high-performance systems for its customers.

'We are fully satisfied with the HAGE3D 140L as it meets our every requirement and we have been able to reliably manufacture prototypes with the device for around one and a half years.'

Martin Payr, Head of New Developments at 3CON.

HAGE3D 140L

The HAGE3D 140L model 3D printer and its output are blazing a trail for future vehicles, their appearance and interiors. It is important that the parts printed by a 3D printer are extremely accurate in order to cleanly bond car doors and other interior parts. Additionally, the parts must correspond exactly to the properties that the real parts will ultimately have. 3CON's requirements of the 3D printer are:

- ▶ Flawless, reliable printing of components/prototypes made using ABS
- ▶ Manufacture capability of especially thin-walled components
- ▶ Stability and accuracy in everyday use
- ▶ Uncomplicated, easy operation
- ▶ Expandable material range, if required
- ▶ Prompt and competent support



FOUR STEPS TO THE FINISHED CAR INTERIOR

STEP 1

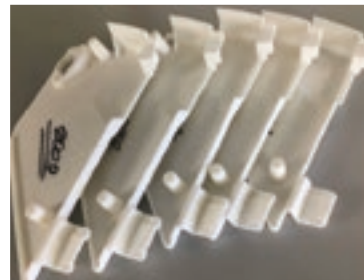
The HAGE3D printer is used at the outset of the system construction process. The car manufacturer sends the design of the component. The CAD data are then used to produce a 3D model. The model is then printed using ABS with the HAGE3D 140L.



The CAD data of the design components are used to produce a 3d model.

STEP 2

These prototypes are used for adjustment and materials testing. The printed prototypes are inserted into the 'test systems' and bonded with the respective fabric pattern of the car part. To activate the adhesive, the printed part and the respective fabric are heated and then bonded and pressed.



Printed prototypes



Fabric pattern

STEP 3

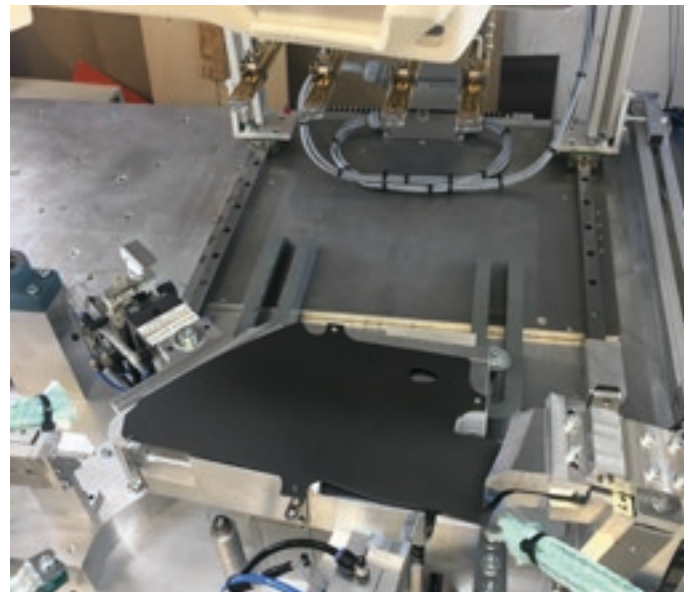
A series machine is then built based on these test specimens and the results of the tests of correct calibration and setting. Components printed with the HAGE3D 140L are also processed in the systems.



Printed part



The respective fabric and the printed part are heated to activate the adhesive.



STEP 4

The finished system leaves 3CON and enters into operation with the respective car manufacturer. Once there, the system bonds up to 2000 parts every day, these are then processed into cars.



finished part

