



IR booster with electric hot air oven for efficient production of aircraft doors

For the construction of the aircraft doors for the new wide-bodied aircraft A 350 XWB, Airbus relies on a vötschoven system that was designed and built by Weiss Technik GmbH, Heating Technology Product Division. Airbus Helicopters hardens components made of carbon fibre reinforced plastic (CFRP) in the facility in Donauwörth. CFRP materials are very light and yet have a high degree of rigidity. This makes them ideal for aircraft, as lighter materials help to save paraffin and transport more people and loads.

The preforming of CFRP materials takes place on special molds. There, the so-called prepreg is draped, fixed over a vacuum bagging and then compacted. The new oven works in three phases: An IR booster system is used to warm up the component, which quickly heats the CFRP components to curing temperature. Then the component moves into the continuous oven and is cured at 140-180°C for about 30 minutes. Finally, the component travels through a cold air cooling zone and is cooled for removal.

"Our oven system with its automation and sophisticated control system works perfectly together with the well-controllable infrared emitters from Heraeus Noblelight. The combination of technologies allows short process times and energy-efficient working. This means that the most innovative technologies are available for the new Airbus!" says Stefan Betz of Weiss Technik GmbH, Heating Technology Product Division.



Features

- Innovative special vötschoven oven for building the aircraft doors of the wide-body aircraft A 350 XWB
- Infrared booster combined with electric hot-air oven

Technical Data

- Temperature in a continuous oven at 140-180 °C for about 30 minutes.
- Vacuum bagging ensures dimensional stability even at high temperature
- Complete automation of the curing cycle including cooling zone
- IR booster with 24 medium-wave emitters
- Total output 82 kW, area output 15 kW/m²

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