

## Turkish Aerospace, Producing Parts Used in Aviation Field with Stratasys FDM Technology

Turkey's leading Aerospace company <u>TUSAS</u>, uses the Stratasys<sup>®</sup> FDM<sup>®</sup> Fortus 450mc<sup>™</sup>, F770<sup>™</sup>, and F900<sup>™</sup> 3D Printers for composite molds, fixtures, certified end-use parts and final part production.

infoTRON, Stratasys Platinum reseller acted as a solution partner for TUSAŞ during the installation of the Stratasys FDM 3D printers. Using 3D printers effectively, the company produces high quality and cost-effective more than 5000 complex parts annually up to 3.5 meters long.



"We made our investments in TUSAŞ through Stratasys brand devices, as it is one of the companies recommended by the world's leading organizations and aviation authorities regarding FDM methodology in Additive Manufacturing.

The most important benefit of Stratasys Systems for us; It allows production in accordance with aviation standards from raw material to process. We can perform cost-effective production at high speed and quality in long-term and large-volume productions."

## PH.D. Remzi Ecmel Ece

TUSAŞ Additive Manufacturing Manager





\*Air Conditioning Tubes are 3D printed with high-performance thermoplastic ULTEM<sup>™</sup> 9085 Resin and ULTEM<sup>™</sup> 1010 resin. These materials have high heat resistance while exhibiting the lowest coefficient of thermal expansion among FDM materials.





\*The mold used in the production of composite parts with a length of 3.5 meters has a resistance of 8 hours in an environment of 1800 C temperature and 7 Bar pressure. It consists of 5 parts.





\*Composite part production mold: The mold with a lower diameter of 90 cm and an upper diameter of 60 cm has a resistance of 8 hours in an environment of 180°C temperature and 7 Bar pressure. It consists of 4 parts.





\*Aircraft cockpit structural parts are 3D printed with engineering thermoplastic PC, PC-ABS and Nylon-CF10 on the F900.

"Additive manufacturing offered the best results for us. Compared to the previous cost and time, we achieved a 50% cost-saving, and our production time was significantly reduced by 30%."

**PH.D. Remzi Ecmel Ece** TUSAŞ Additive Manufacturing Manager





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