



Case study: How with [Qwarm](#) we perform the production of several parts for [SnowWhite2](#) (part 2)

We decided to produce some Snow White components with Additive Manufacturing using [Sharebot Qwarm](#) FDM 3D printer at a temperature under 100° with PET-HTC (reinforced with Carbon Fiber)

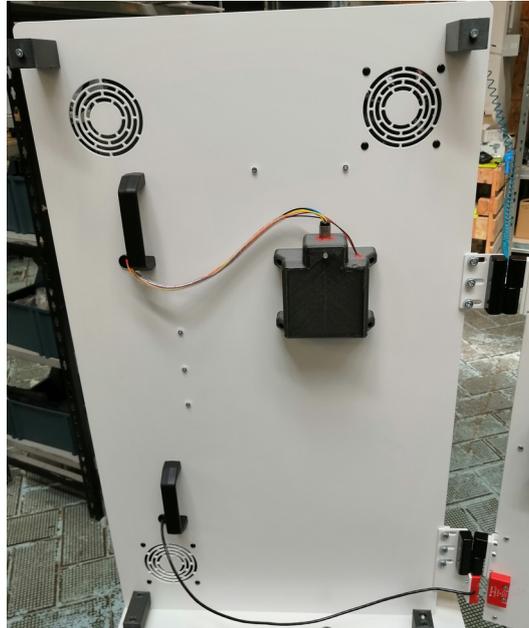


PET-HTC has a tensile strength of 111 MPa and a heat deflection temperature of 110°C. It is very versatile and quick to print. With [Qwarm](#) we are able to print full print bed size with optimal dimensional stability and mechanical properties using these settings:

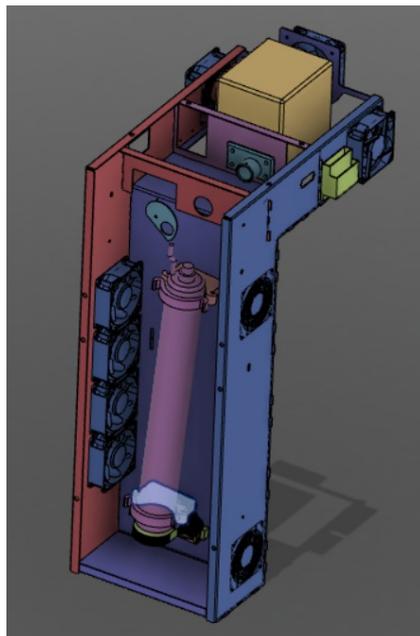
- Borosilicate glass with standard Magigoo primer
- Chamber internal temperature: 70°C
- Print bed temperature: 100°C
- Extruder temperature: 260°C
- Printing Speed: 5400 mm/min.



In the photo an example of the O₂ sensor housing and the external panel supports, all printed in PET-HTC.



Not all that glitters is gold, in fact after few hours of run we got a problem from a component printed with PET-HTC and we had to change it. The component is a support for the laser and is in contact with the electric shield of the laser tube.





The laser tube uses voltages over 5000V to generate the beam.

After printing the components we discovered that at the high voltage the carbon fiber inside the PET-HTC was conductive so this material can't be used. Problem was solved printing material without Carbon inside.

All these solutions helped us save costs and internalize the production of several components of one of our more technical machines.

This is the first time Sharebot decide to add so many 3d printed parts in one of our 3d printer, but we take this decision due to the advantage given from the quality and performance of the components.

Stay Tuned!

Sharebot R&D Team

For any question please ask to info@sharebot.it