3D Printed Mask-Wearing Connector

Recently, the Raise3D team received an urgent request for "mask-wearing connectors" from 36 hospitals, including Huashan and Ruijin hospitals in Shanghai. Even though there were only a handful of Raise3D employees on hand at the time, any available 3D printers were quickly put to work. By using the E2 printer, the average daily production of connectors can reach 1500 units, and these can be delivered on the very same day.


It's not an easy time for doctors and nurses. **Medical personnel on the frontline work day and night.** Due to long periods of having to wear medical masks, these can become uncomfortable, especially around the ears. Nasal congestion can set in and even wounds may appear. **The purpose of 3D-printed mask connectors is to ease the pressure on the ear and make the mask more comfortable, allowing medical personnel to keep their masks on longer and have better protection against the virus.**

After receiving the request from hospitals, the Raise3D printing team immediately started designing a solution, as well as select the filaments best suited for the job.

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The filament that was chosen, <u>TPU</u>, is a hot-melt flexible filament and is the most suitable due to its moderate softness, which not only ensures the required strength when wearing the mask but also fits the contours of the head very well, without causing marks or striations. It's also safe, environmentally-friendly and non-toxic to the human body. **Another notable benefit is that the material is a thermoplastic, and supports all disinfection methods except high temperature and high air pressure, and is readily usable after disinfection.**
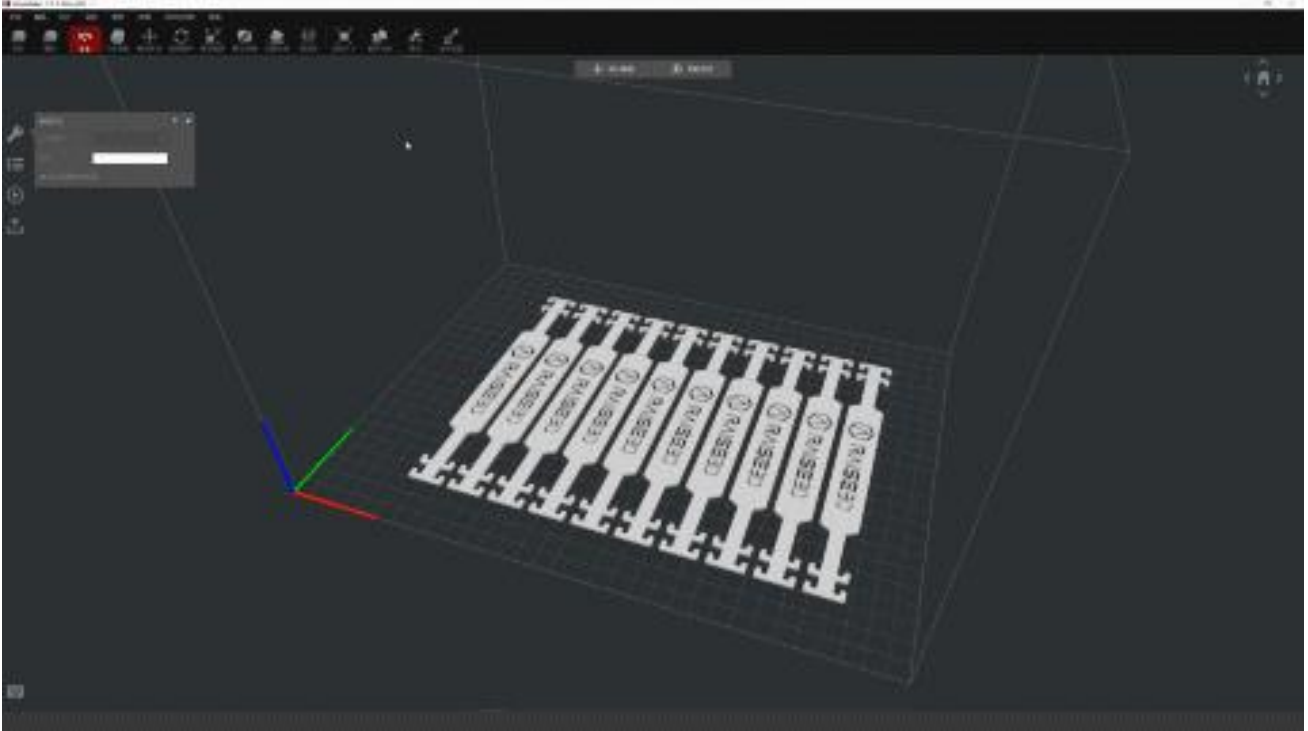
ideaMaker slicing software

The mask-wearing connector design file was imported into <u>ideaMaker</u> for slicing, and subsequently, the G-code file can be sent to the printer remotely.

3D printing mask parts in the various filament colors.

The E2 uses an independent dual extruder system. When printing in duplication mode, it doubles the production capacity. And it greatly shortens the feeding path and enhances performance when printing with TPU.

The factory deployed several printers and worked in sync. Workers can coordinate print tasks through RaiseCloud which allows them to monitor print progress remotely and manage each printer wirelessly.

Range of filament colors.

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Do you have a great 3D printing success story and think it would be cool to be featured on www.raise3d.com, we would love to learn more! Write to us at inquiry@raise3d.com

For more information about Raise3D printers and services, browse our website, or schedule a demo with one of our 3D printing experts.