

Covid-19: Malaysian 3D printing enthusiasts produce face shields to aid frontliners in fight against pandemic

FACEBOOK 

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By Qishin Tariq



Face shields for those fighting the Covid-19 pandemic are in short supply, prompting the Malaysian 3D printing and design communities to make DIY ones for frontliners. — AFP

Malaysian 3D printing and design communities are coming together to produce face shields for frontliners facing the Covid-19 pandemic.

MinNature Malaysia founder Wan Cheng Huat, who started the Facebook group 3D Printing Malaysia Community for Covid-19, said the self-funded group aimed to help frontliners by creating face shields using 3D printing, laser cutting or DIY builds.

On the FB [group](#)'s page, he noted that this production method had some limitations including cleanliness during fabrication and sterilisation after.

He said most makers did not have controlled environment settings, so all visors made would have to be sent to a centralised collection point where it would be disinfected using ultraviolet (UVC) light.

“Hospitals and medical personnel should come up with procedures to only accept items from verified sources that have conducted disinfecting procedures. We do not want to endanger them with unverified, contaminated items,” he said.

The group is in the process of getting feedback from the Malaysian Medical Device Authority and University Malaya Medical Centre (UMMC) on their production, and which hospital could use the face shields.

3D printing company Pebblereka's operation director Ahmad Hafez Mohd Shakoff said his company had 10 machines to contribute to the group, bringing the group's collective number of available machines up to approximately 80-plus units.

He said the teams were improvising the design as resources, especially the visor that forms the bulk of the face shield, is limited.

“Most of the community are getting A4 laminate paper from

supermarkets, while some are using laser cut polycarbonate board which can be sterilised and reused,” he said.

Local sustainability social enterprise Biji Biji Design Sdn Bhd group CEO Rashvin Pal Singh said there was a critical shortage of Personal Protective Equipment (PPE), with an estimated 40,000 units of face shields, N95 masks and surgical masks needed by each hospital every month.

He calculated that a small laser cutter was able to produce 100 face shields per day, while a large machine can produce 500 units a day.

“We are actively seeking other larger production partners that are able to mobilise immediately and increase the production volume,” he said.

Biji-biji Initiative said its education arm Me.reka and partner Taylor’s University was working with the 3D printing community, including 3D Printing Malaysia’s Nurfaiz Foat and Wan, plus Mak Kwan Wuey from Makerzone, to help meet the demand.

The group said it is printing masks based on open-source design files from DIY community [Instructables](#).

To help with production, the group is also seeking assistance from others with 3D printers, laser cutters or similar equipment, as well as those who can connect them with face shield manufacturers, plastic mould makers, suppliers of 0.2mm transparent A4 plastic sheets and 4mm-8mm acrylic sheets, and frontline organisations in need of face shields.

The group stated it would not currently supply private companies as it is prioritising hospitals and security personnel.

It also said it would not accept public donations until an escrow account is established, nor public volunteers for manufacturing, to ensure production is optimised with no further risk of spreading

the virus.

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