



## Providing a Free 3D Printing Solution for Respirator Masks and Critical Medical Supplies

Enabling communities to create PPE locally and quickly to decrease the spread of infection, protect people, and reduce burdens on medical facilities. We give citizens and organizations a way to participate in solutions to the COVID-19 pandemic, while building and training for a wider future capability.

To cooperate with government and private response efforts, engineer Rory Larson is offering *the first National Institute of Health (NIH) approved* Computer Aided Design (CAD) for 3D printed masks. The **Maker Mask** respirator mask is available to the government and the public free-of-charge through an open-source model.



Maker Mask heat molds to a wearer for an airtight fit



Dr. Qin using Maker Mask at Seattle Children's Hospital

- Design allows CAD-based 3D mask printing to be combined with readily available, replaceable components such as weather stripping, elastic, and vacuum cleaner bags. Cost: \$2.00 - \$3.00 per unit.
- Replaceable filters make one Maker Mask *the equivalent of 300 disposable masks over two months*.
- **NIH approved for all general community applications including Police/Law Enforcement, Fire and Rescue and other Emergency Response service providers. See:**  
<https://3dprint.nih.gov/discover/3dpx-013607>
- Fast-tracked for further approval for medical use.
- The Seattle Children's Hospital approved using Maker Mask by laboratorians after testing fit, breathability, comfort, and other factors. Dr. Xuan Qin, D(ABMM), professor of Laboratory Medicine, endorsed Maker Mask for laboratorians. Seattle Children's continues to use additional masks.
- The University of Southern California is using Maker Mask design on 90 3D printers for University use.
- A Seattle pilot franchise proved community-based production with 40 20 3D printers and supplies, making nearly 1,000 masks per week.
- Small batch production sites in over 112 countries have visited the Maker Mask website.
- Over 30,000 people from maker/hobbyist communities, healthcare organizations, universities, companies, and the government have downloaded the designs and specifications for Maker Mask.
- See a demonstration from March 23, 2020 here: <https://youtu.be/MgBNaB5LTh4>
- Maker Mask is collaborating with the America Makes, [getusppe.org](http://getusppe.org), Matter Hackers, Nation of Makers, MITRE, Teach for America, the U.S. Department of Veterans Affairs, the U.S. Military, Whiteford Taylor & Preston, and more partners to address shortages of personal protective equipment.

Visit the *Maker Mask Distribution Website* for information on how to access the Maker Mask CAD, training, and instructions on how to be part of this innovative solution: [www.makermask.com](http://www.makermask.com)

