

# How People Are Using 3D Printing to Fight the COVID-19



As COVID-19 caseloads rise, higher number of companies and independent organizations worldwide who have in hand 3D printers are making a good use of them by diversifying their production to create PPE (Personal Protective Equipment) and masks using 3D printing to support medical personnel to fill the shortage of these items.

Across many organizations, 3D printing is being rapidly adopted to provide a relatively quick solution to produce 3D printed masks, face shields, and other protective equipment.

Federal Government areas, such as the Air Force Department are also joining efforts to supply protective masks using 3D printers. Like these Airmen from the 388th Maintenance Group's Air Force Repair and Enhancement Program at Hill Air Force base in Utah who are doing their best to start producing masks to support mission-essential work areas where the recommended 6-foot social distance is difficult to maintain. The masks are printed with a plastic material that can be repeatedly sanitized with alcohol. [In an article published by Micah Garbarino, 388th Fighter Wing Public Affairs](#), Col. Michael Miles, 388 Maintenance Group commander of 388th said: "Our Airmen have continued to impress me with their resourcefulness and ingenuity in developing innovative new ways to overcome obstacles and preserve our mission capabilities," "We're all focused on getting the mission done while following the guidelines of Air Combat Command and the Centers for Disease Control and Prevention."



Other organizations such as Kosta Grammatidis, a small team of researchers at the University of North Carolina have created a [face mask protocol](#) using a conventional FDM 3D printer from [Raise3D](#). These masks are cleanable and reusable and aim to be a last resource if N95 masks (or similar) are not available. This protocol uses easily sourced commercially available filters which have the capability to remove particles as small as 0.3 microns from air.



Image mask model for COVID-19 using 3D printing. Photo by: Kosta Grammatas. Published by Kosta Grammatas.

Conjointly, the Sheriff's office of the Sweetwater County, WY is collaborating with Sweetwater's County COVID-19 Emergency Operations Center to start manufacturing protective gear equipment for its employees and emergency first responders. Due to the noticeable nationwide shortage of personal protective equipment (PPE), [the Sheriff's office is using Raise3D Pro2' 3D printer to produce N95 masks](#) utilizing a template created by a group of Doctors that made this available free of charge.



The Sweetwater County Sheriff's Department now has the capability to manufacture respiratory personal protective equipment (PPE) for its employees and other emergency first responders. Photo by [sweetwaternow.com](#). Published by PRESS RELEASE.

Other individuals are also contributing with producing protective equipment, like Nicholas Busuito, a Mechanical Engineer who works at a local 3D printing company "**Geofabrica**" that now is deemed non-essential and was forced to close. Nicholas turned his living room into a mini mask making factory. In [this article](#) published by FOX2, Detroit, he shares his experience on how he was able to find a design for reusable masks, similar to N95s that medical health professionals could use as a backup.



In mainland Italy, Cristian Fracassi, CEO from Issinova a Research Institute in Rome is creating respirator valves using 3D printing. He and his team created these as Italian doctors could not get them fast enough from their manufacturers. After this, many people who have 3D printers, were reaching out to them to offer more help to create more equipment. [This video](#) provides more information about this news and several ideas of how to help the fight against COVID-19 with 3D printing.

In Tennessee, a Tech University is along responding to the call to make and supply masks for COVID-19 using 3D printers. [This video](#) shows how the University has plans to do hundreds of head bands for face masks to meet the needs of medical workers using 3D printing. According to University officials the goal is to print 10,000 units and they are in the way every day to accomplish this.

[Raise3D](#) is committed to help the battling against COVID-19. With many useful resources, [Raise3D](#) is proving support worldwide to empower individuals and organizations that are continuously fighting this pandemic with the creation of masks and protective equipment.

[This page](#) shows locations worldwide where Raise3D printer owners can provide support. Individuals, Companies, and Institutions are offering their equipment for the battling facing COVID-19. Please visit the following links below to access additional Raise3D's resources in COVID-19. [Visit here](#) COVID-19 related STL files.

## Connect with Raise3D

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