

Arlington man fights COVID with 3D printer to create masks, shields for those in need

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Alejandro Moreno has made a career out of taking people's breath away with beautiful creations such as luxury vases, planters, and all sorts of accessories — and all created from a 3D printer.

Now, he's using that same technology to keep people breathing safer in the battle against COVID-19.

Moreno is using the 3D printer at his Arlington business, Casa Z, to create face shields and masks.

“I am a naturalized citizen of this country, and one of the things I love about here is how people come together to help when needed,” Moreno said. “As soon as I started hearing that there was not enough PPE (personal protection equipment), I knew the international community was going to respond, so I started to look for what was out there and found the Prusa designs. I had everything I needed — the printers, the design, some acrylic sheet, the time and the need to help where possible.”

When coronavirus began sweeping across the nation, Moreno said he was most concerned about first responders and a shortage of PPE. Several members of the 3D printing community had already gone to work creating designs for face shields and masks.

So, Moreno found the blueprints and went to work. The masks and shields take about four hours to print and can be reused. He got help with donations from a couple of friends, Mike Clark and William Hiller.

Moreno gave a batch of protective equipment to the Arlington Fire Department. The City of Arlington then distributed the masks to Dental Health Arlington and Mission Arlington.

“How appreciative we are of the masks provided by Mr. Moreno. He was one of the first to recognize that we had a need and to step forward to provide support,” said Tillie Burgin, the founder and executive director of Mission Arlington. “We are using the masks every day, and it not only provides a safe place for all of our volunteers and guests, but for our staff as well.

“We believe it is important that we be here to represent our community's generous care for people in need during these days. Mr. Moreno, and people like him, are making that possible. We are grateful.”

Moreno said printing the equipment is a global response to the need for PPE. Instead of making the masks/shields unique or different, the objective is to design them so anyone with a 3D printer can print them and get them to whoever needs them.

“Since this started, the organizations that designed them have been improving the designs,” he said.

Since his initial shipment to his fellow citizens in Arlington, Moreno has sent shipments of masks and shields all over, including five to a New York hospital; 11 to doctors in Mexico; 11 to an intensive care unit in Billings, Montana; 50 to Asbury Methodist Village in Maryland; 55 to Arlington Public Safety; and three to a United States Postal Service worker who heard of him on Facebook.

Moreno, who started his business in July, said the pandemic has had an impact but hasn't defeated him.

"In the big scheme of things, we consider ourselves lucky. The effect this virus outbreak has had in our case has been the drop of sales, but since it is a home-based business — at least until we outgrow our house — we have been able to stay in operation," he said.

And he does plan to continue helping where he can, but he admits he could use some help.

"I can print more pieces, but the acrylic sheets have become hard to find. I have some, but they may be too thin," he said. "If someone can help with the transparent shields part it would be useful. Also, being able to communicate with someone from the receiving end could expedite things and help choose from the options we have of what we can print.

"We are aware that in the big scheme of things, what we've done is a drop in the bucket — but a drop is better than no drop."