

COVID-19 Montana Mask Printing FAQ

The COVID-19 pandemic has caused a nationwide shortage of personal protective equipment (PPE) for hospital staff, one of the most used pieces of PPE is a mask. Safety is a priority at Billings Clinic, and we have been researching alternatives for masks that complied with Billings Clinic standards. An innovative way to supplement our surgical mask supplies using 3D printing has been developed by Dr. Dusty Richardson, M.D., a Billings Clinic neurosurgeon and Dr. Spencer Zaugg, D.D.S. Thank you for your interest in supporting this important project.

What kind of mask does this make?

This mask design supplements surgical masks used by health care providers. It is NOT a replacement for N95 respirators.

What are ways I can help?

We are asking individuals to produce and donate masks only, based on the specifications provided. A receipt for your donation will be mailed to you after the masks are delivered. Monetary donations can also be made here: www.billingsclinicfoundation.com

What materials and settings are needed?

- 3D printer
 - Recommended infill = 0.25
 - Layer Height = 0.1 mm or less
 - Different printer models and settings create variation in mask production times; therefore, we are unable to provide further detailed specifications for settings.
- PLA or ABS filament
 - All colors accepted
- Mask size
 - 100% scale is recommended and is a universal size

Is there a template and instructions?

Yes. www.billingsclinic.com/foundation

The link provides instructions, .STL files, and 3D source files. These are the only file formats available at this time.

Where can I get the filter material?

The material is Merv14 rated hospital grade material that is cut to fit this mask prototype. Inquiries about the filter material in bulk can be directed to Flowmark/HighTech 406-652-6200 or <https://www.flowmarkhightech.com/>

What is the gasket material around the edge?

Billings Clinic is trialing a variety of material.



There are other templates on the web, can I use those to print masks for Billings Clinic?

No, the template provided through Billings Clinic is one that has been trialed at Billings Clinic.

This template along with any other templates would need to be tested and approved for use within your own organization.

Will I be expected to assemble the masks?

No, Billings Clinic will complete the assembly once we receive the masks.

Where do I deliver the masks for Billings Clinic?

Drop off sites include the follow 360 Office Solutions locations from 7:30 am to 5:00 pm M-F.

- Billings, MT = 3676 Pierce Parkway
- Bozeman, MT = please contact craigb@360-os.com to make arrangements for pick-up
- Butte, MT = 206 W Granite St.
- Great Falls, MT = 401 9th Ave. S
- Helena, MT = 821 N Last Chance Gulch

Mail masks to this address only:

- 360 Office Solutions at 3676 Pierce Parkway, Billings MT 59106
 - Please include name and address so we can appropriately thank you and provide you a donation receipt.

Can the masks I make be given to smaller hospitals in Montana?

Billings Clinic is collecting masks to first meet its needs as an organization. Once our supply needs are met, we will expand the distribution.

Do you need any other supplies?

No, currently, we are still identifying our needs.

Is there contact information for other questions?

Phone: 406-435-MASK (6275) or Email: maskprinting@billingsclinic.org

Thank you for your interest, this is a rapidly changing project. Please continue to check www.billingsclinic.com/foundation for updates.