

Valentine Decathlon face mask adapters



Mimosa

VIEW IN BROWSER

updated 21. 4. 2021 | published 19. 4. 2020

Summary

The Valentine adapter for Decathlon face masks can be used by medical staff to protect from the COVID-19 disease.

[Healthcare](#) > [Medical Tools](#)

Tags: [mask](#) [face](#) [medical](#) [adapters](#)

The Valentine adapter for Decathlon face masks can be used by medical staff to protect from the COVID-19 disease. The functional design is inspired on Silvana valve from Vincent Groenhuis, inspired itself on Charlotte valve from Italy, redesigned from version Silvana_v1.0 with the principle to keep the philosophy to making it directly printable as clean as possible on commonday 3D printers.

The Valentine adaptater is a single connexion ready to receive an Hydro-Guard Mini Filter from Intersurgical. (Details on <https://www.intersurgical.com/products/airway-management/hydroguard-range-pleated-membrane-filter>)

Project information: <http://help4corona.eu/>

Specific names extensions:

- "F" indicates 22F output port.

- "C" indicates a curve output with an angle of 135°.
- "S" indicates a straight output.
- "L" indicates loose fit, to be used if the normal version is too tight due to dimensional variations.

The following configuration combinations are available for direct download:

FC, FCL, FS, FSL

Changelog:

v1 April 20, First version with FS and FC options.

Print instructions

NO supports needed. Print 100% solid to avoid creation of internal cavities which may trap liquids.

After printings, carefully inspect the intake airway for loose strands of filament (if any) and remove them with pliers. (The part is carefully designed to limit overhangs to 45° and minimize difficult bridging features in the intake pathway; further improvements ongoing).

Some very thin hairs of filament may still be present which are difficult to observe by the human eye. These can be eliminated with a heat gun, blowing hot air through the intake airway in both directions for a short time (2 seconds). After this step carefully inspect the airway again.

The exhaust airway cannot be inspected entirely due to the hidden structures, but this aspect is less critical as air only flows away from the patient. Still, try to detect and eliminate loose strands of filament (if any) and use a heat gun to eliminate thin hairs.

Sterilization (not recommended for porous materials):

PLA adapters withstand up to 65°.

PETG/CPE at least 80°.

CPE+ and exotic materials even higher.

You can try elevated temperatures (e.g. 80° for PLA) as long as the part is not under stress. It will retain its shape and return to normal strength after cooling.

Chemical sterilization: should be possible; experiment

UV sterilization: not recommended as parts are opaque which blocks UV.

Please let me know if anything is incorrect and should be updated.

This remix is based on



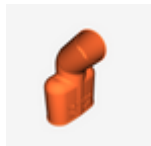
Silvana Decathlon face mask adapters

by Vincent Groenhuis

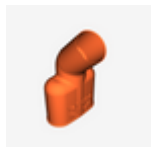
Model files



valentine_fsl_v1.stl



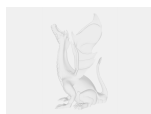
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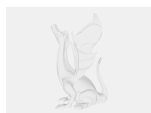
valentine_fcl_v1.stl



valentine_fs_v1.stl



valentine_fs_v1.stp



valentine_fc_v1.stp

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