

COVID-19

DIY **Protective mask*** for medical staff

By applying the principle of obtaining a lot with very little effort, it is possible to build a protective mask for medical staff just using already existing simple objects.



In order to built it you will need:

- A A **snorkelling mask** mod. easybreath (Decathlon).
- B The **filter of a breathing machine**. They come in two sizes. We used the adult ones (Iso-Gard HEPA Light). In case these are out of stock it is also possible to use the children's ones (Iso-Gard HEPA Small); in this case an additional connecting hose must be added to combine the two different diameters.

C Two **Silicone rubber hoses** to be used as connection between the mask and the filter. These hoses are available from shops specialised in the supply of plastic products for industrial purposes:

c1 **Reinforced silicone hose** ((blue)

- internal diameter 32mm
- wall thickness 5mm
- 70mm length

c2 **Silicone hose** (transparent opaque)

- internal diameter 25mm
- wall thickness 4mm
- 25mm length

This hose acts as a reducer of the blue hose where the filter of the breathing machine is inserted.

D To secure the blue connection sleeve to the mask more securely, a simple **cable tie** (a so called electrician's cable tie) can be used.

*** This is not a homologated product, so everyone is called to assess it personally and then, if found convincing, to use it, but always at his/her own risk.**



This simple project is the result of an idea of Marco Benvenuti (entrepreneur from Bosco Mesola, FE), the initiative of dr. Alessandro Zanforlin (pneumologist at the hospital of Bolzano) and of arch. Alessandra Galletti Bolzano, and the technical advice of prof. Kuno Prey (designer – unibz) and Alfred Mitterdorfer (Tecnomag - Bolzano).