



## Face shields against coronavirus infection for mass production

Campus Schwarzwald and the University of Stuttgart initiate an alliance for the development of a certified

**A simple, crisis-relevant product to protect against coronavirus infection has been developed by Campus Schwarzwald, which is a partner of the University of Stuttgart, in cooperation with the Institute of Industrial Manufacturing and Management (IFF) at the University of Stuttgart, the Fraunhofer Institute for Manufacturing Engineering and Automation (IPA), the packaging expert Koch Pac-Systeme GmbH, and the vacuum specialist J. Schmalz GmbH. All materials come from Baden-Wuerttemberg. The face shield can be produced quickly and in large quantities.**

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The face shield is extremely lightweight and can easily be worn over glasses. Photo: Schwarzwald Campus

“It was intended to be a new product. A product that protects against coronavirus infection in a simple but effective way,” explains Stefan



Bogenrieder, Managing Director of Campus Schwarzwald, and emphasizes: "What is important in these times: Fast, low-cost production in large quantities." The idea for the product that fits this description was born and put into practice during lockdown. The IFF at the University of Stuttgart initiated the cooperation to produce the face shield and, together with the Fraunhofer IPA, continued to act as a source of ideas with the authority to certify the product. The coordination of the process took place entirely during leisure time and on holiday via virtual meetings.

As a symbiosis of very different companies, Campus Schwarzwald is directly concerned with topical issues that are of practical concern. It was obvious to approach companies with the idea of the face shield that have the appropriate expertise. J. Schmalz GmbH, competent at the production of plastic parts, and Koch Pac-Systeme GmbH, expert for packaging systems, were immediately impressed. In addition to their expertise, both companies also have the necessary machinery and sufficient capacity.

#### **Available in two versions**

The result: A face shield that offers the wearer protection against potential infection by viruses or bacteria. The face shield is extremely lightweight and can easily be worn over glasses. The small contact surface prevents sweating. The face shield can be mounted quickly and is available in two versions. If the face shields are produced for the local market, in cooperation with the company J. Schmalz GmbH, the strap will be made of plastic. If the company Koch Pac-Systeme is solely involved in the production, the face shields will be equipped with a wire strap. This strap is frugal, i.e. reduced to the absolute essentials, and therefore affordable even for people in poorer countries.

Both products are easy to manufacture, so that the production of large quantities of up to 100,000 items per week is guaranteed. All components are sorted according to type and can be recycled separately. The companies involved and the material used come from Baden-Wuerttemberg, which prevents delivery problems and guarantees sustainability. The connection of Campus Schwarzwald to the scientific institutions, i.e. the IFF at the University of Stuttgart and the Fraunhofer IPA, ensures its competence to certify the product.



Campus Schwarzwald came into being through an initiative of regional companies, the District and the City of Freudenstadt, and the Northern Black Forest Chamber of Industry and Commerce. Due to the cooperation with the University of Stuttgart and small and medium-sized enterprises as well as the hidden champions of the region, Campus Schwarzwald has become an important building block for an excellent university education and the development of cutting-edge technologies in the field of digitalization in mechanical engineering.

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