Working together to deliver protective equipment in record time

← Back to posts (https://www.k-zeitung.de)

May

Technology (https://www.k-zeitung.de/category/technik/)

Coronavirus (https://www.k-zeitung.de/tag/coronavirus/), joining technology (https://www.k-zeitung.de/tag/fuegetechnik/), ultrasonic welding (https://www.k- zeitung.de/tag/ultraschallschweissen/)

The Zender Group wins a major order for protective equipment from the Federal Ministry of Health. Technology supplier Herrmann Ultraschalltechnik.

Based in Osnabrück, Lower Saxony, automotive supplier Zender Group has been given a major order for protective equipment from the Federal Ministry of Health. Zender is supported in the implementation by technology supplier Herrmann Ultraschalltechnik from Karlsbad.

The need for protective equipment was seen early on

Zender actually specialises in carbon and textile products. However, the company has quickly seen the need for personal protective equipment and is beginning to set up mask production in record time. A visit by State Minister President Stephan Weil drives momentum further.

A completely new experience for the company, as Executive Vice President Lena Guth, who has been on the payroll since April to establish the new area of personal protective equipment (PPE), reveals:a "PP and PE nonwovens for virus filtration represents new ground for us."

The company benefits from the experience with textile automotive products, as Guth points out. 150 new employees have been hired since March to implement these ambitious plans. The announced medium-term goal is to automatically produce eight-hundred thousand to one million fold-up Duck masks with FFP2 protective filters per week. The company invested heavily in this area.

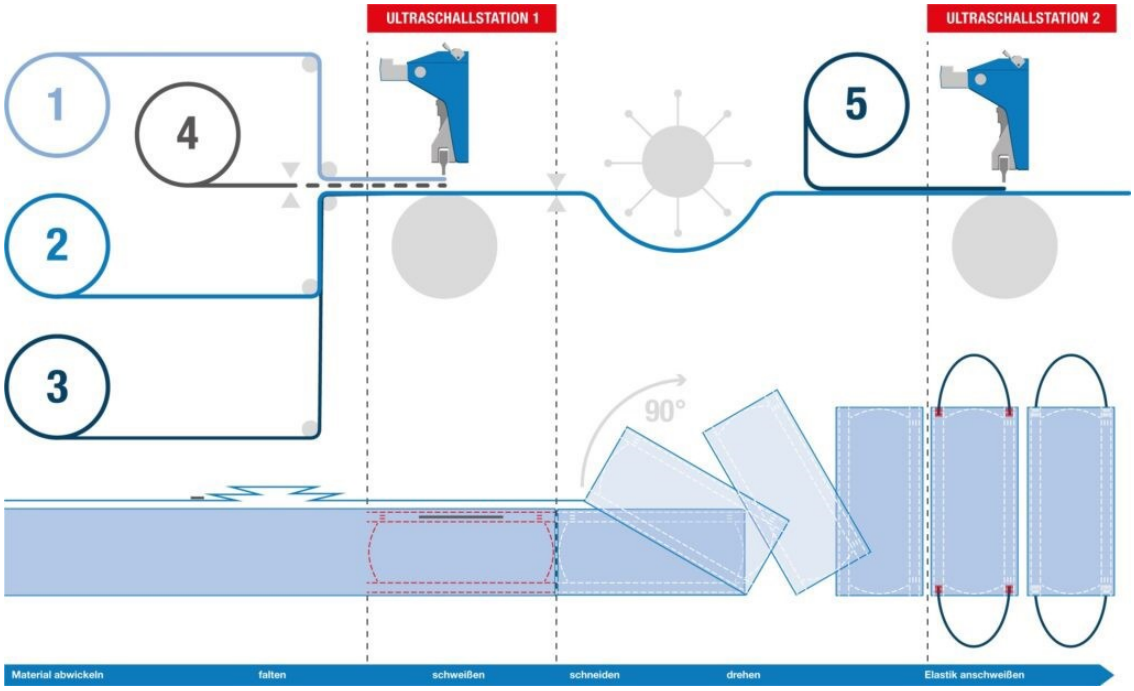
When Lower Saxony State Minister President Stephan Weil learned about the plans of the automotive company, he visited Zender on 6 April 2020. Weil explained that he was very grateful to the company for making a great contribution to improving the supply situation. The adaptation of production is a wonderful example of how positives are also possible during Corona. Zender intends to continue investing in order to be able to fulfil another medium-term major order from the Federal Ministry of Health for more than 4 million flat surgical masks per week in addition to FFP2 fold-out masks.

In-house design for FFP2 mask

To meet the high demand for FFP2 masks, Zender has designed its own model. After initial prototypes, the final design was quickly developed and approved. Due to the acute supply shortage, the Federal Ministry of Drugs and Medical Devices issued a special approval procedure for respiratory masks in accordance with Section 11 (1) of the Medical Devices Act.

All outer seams, centre seams and the welding of the elastic band are done ultrasonically in production. Zender's mask is designed with two horizontal cross seams so that you can open it up to get more space to breathe. In the medium term, the FFP2 respiratory masks will be produced in an automatic flow production system. This means that each individual process step, such as welding in several steps, transfer, assembly, gluing, assembly and marking "inline", is fully automated.

A step-by-step plan for full automation with ultrasonic technology



This is how a fully automated production line for flat surgical face masks works. Photo: Herrmann Ultraschalltechnik

In the first step, the masks were handmade on existing ultrasonic sewing machines. In the second stage, Herrmann supported ultrasound from Karlsbad after making contact shortly before Easter. With the help of four stand-alone ultrasonic welding machines, it was possible to set up a timed, semi-automated production facility. The two centre seams are now produced on these new machines. This significantly increases the accuracy of the seams and the speed.

Robin Mohr is Head of the North Technology Center at Herrmann Ultraschall in Walsrode. He spent almost a full day with Zender Managing Director Norbert Borner to demonstrate the fundamentals of ultrasound and create a design for faster production. “I was able to negotiate with another customer and get back a machine that had already been delivered to then supply it to Zender,” says Mohr, “and I removed a special welding tool, called a Sonotrode, from my laboratory.” After the adaptation, the output of the first week of May is 250,000 units, a tenfold increase in the number of units at the start of production.

In a third step, full automation is now starting in order to quickly get up to the final production figures. Zender is also carrying out this step together with Herrmann Ultrasound, which provides the necessary ultrasonic stations for this purpose.

db

← Back to posts (https://www.k-zeitung.de)

RELATED **POSTS**

During recycling,

19 foam is produced vapour-free

May

- Privacy Policy (German) (https://www.k-zeitung.de/datenschutz/)
- Legal notice (https://www.k-zeitung.de/impressum/)