Cold as ice in the fight against Corona

The storage of Corona vaccine is tricky. That's why the family-owned company Binder builds ultra-low temperature freezers. They safeguard the vaccine at an icy cold of up to minus 90 degrees. Without TRUMPF, this would not be possible.

When Corona infections increased internationally last spring, Thomas Luippold took notice. "It was clear to us that something could be coming," recalls the head of BINDER's Competence Factory. "At the time, we were only building a few hundred of our 'freezers,' as we call them, each year." But then things took off: month after month, more orders started coming in from all over the world. "This year we're more than booked out, but we're getting the demand we have from Corona," says Luippold. The fact that BINDER is able to meet customer demands is primarily due to the new Tuttlingen plant, which opened its doors in August 2017.

An associate of Binder GmbH works on a part for the ultra-low temperature freezer. Due to Corona BINDER is currently producing four to five times as many ultra-low temperature refrigerators as it normally does.
© Dirk Kittelberger

Goal: Best sheet metal production in Europe

Luippold is more than proud of this plant, because he and his team planned the approximately twelve-million-euro Competence Factory going from a farmer's field through to a complete production site. Just one year after opening, BINDER was able to achieve over 30 percent more plant output as a result. "We put an awful lot of thinking into it," says Luippold. The bar was set high: The goal was to build a benchmark plant in Germany and Europe with state-of-the-art sheet metal production, fully digital and with maximum automation. The "Wirtschaftswoche" magazine rewarded the result with an award for BINDER as one of the most innovative companies in Germany.

The investment is paying off, says Luippold. Because freezers are by no means BINDER's only specialty. More than 22,000 units leave the factory each year, including incubators, heating and dynamic climate chambers. They go to laboratories, clinics and research centers worldwide. Chemists, biologists and physicians use the chambers for scientific tests; industrial groups simulate extreme conditions in them for material testing.

Founder and owner Peter M. Binder in front of an ultra-low temperature freezer. Those ultra-low temperature freezers safeguard the vaccine at an icy cold of up to minus 90 degrees. They are also secure - special locks protect the contents from unauthorized access.
© Dirk Kittelberger

Special locks secure access

Regardless of whether it is sub-zero temperatures, heat or both in alternation, whether it is vacuum, humidity or light, the BINDER chambers maintain the desired conditions constantly and accurately. With the "freezer", for example, the temperature can be set and controlled precisely to a tenth of a degree. The refrigerators are also secure - special locks protect the contents from unauthorized access, for example, the much sought-after Corona vaccine.

However, the wide product range demands the highest possible flexibility from the Competence Factory. "The variance is very large, especially since we manufacture all cabinets in different sizes," says Luippold. In the approximately 8,200 square meters of the production hall, this is helped by a 50-meter Stopa store that is connected to punching and bending machines and feeds them the material.

We are at the forefront of modern sheet metal production.

Thomas Luippold, head of BINDER's Competence Factory

However, the wide product range demands the highest possible flexibility from the Competence Factory. "The variance is very large, especially since we manufacture all cabinets in different sizes," says Luippold. In the approximately 8,200 square meters of the production hall, this is helped by a 50-meter Stopa store that is connected to punching and bending machines and feeds them the material.

When Corona infections increased internationally last spring, Thomas Luippold, the head of BINDER's Competence Factory took notice that something could be coming. "At the time, we were only building a few hundred of our 'freezers', each year." But then things took off: month after month, more orders started coming in from all over the world.
© Dirk Kittelberger

Production increased fivefold

TRUMPF is pleased with its state-of-the-art factory. "There are two fully automatic TruPunch 5000 punching machines there - our S-Class, they run 24 hours, five days a week," says Michael Sellner, head of TRUMPF's Reutlingen sales office. The only downer is that a competitor's punching and bending machine are also integrated. "They were simply better back then," Sellner speculates.

Today, however, BINDER does not want to do without TRUMPF. "For certain parts and geometries, TRUMPF simply has its strengths. And, of course, when it comes to connecting the machines to the storage system," says Thomas Luippold. The fully automated sheet metal storage system was planned together with TRUMPF. In addition to the machines, BINDER uses various software solutions from TRUMPF, first and foremost the Tru Tops Fab production software. "We are at the forefront of modern sheet metal production," Luippold sums up.

The Corona-ridden world thanks him. BINDER is currently producing four to five times as many ultra-low temperature refrigerators as it normally does. And TRUMPF is in on the action.

The wide product range demands the highest possible flexibility from the Competence Factory. In the approximately 8,200 square meters of the production hall, this is helped by a 50-meter Stopa store that is connected to punching and bending machines and feeds them the material.
© Dirk Kittelberger