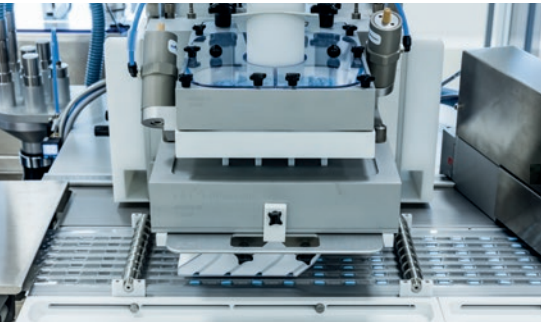
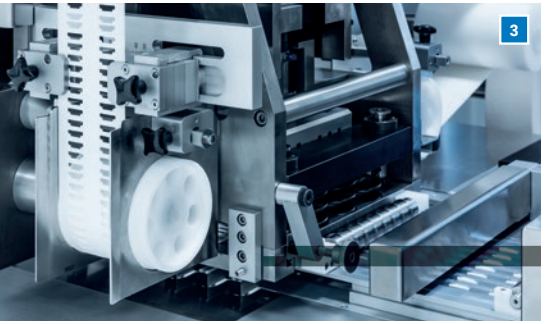
Expertise and inventiveness go hand in hand

The Swiss, similar to Swabians, are champions in inventing and puzzling out new answers. They are so successful that it is difficult to imagine what it would be like without velcro, cellophane, aluminum foil, or coffee in individual capsules. An innovative blister is a recent invention, in which adhesion plays a role just as foils and a new form of desiccant. It is the outcome of a Swiss cooperation between Ivers-Lee and Uhlmann Höfliger Schweiz, which also led to the corresponding machine solution from the Uhlmann Customized Packaging Systems business unit.





> **We o□er 'The complete pharmaceutical partnership' and also expect this broad undertaking from our partners. Uhlmann meets this demand more than convincingly.**
>
> **Walter Murbach, Head of Business Development, Ivers-Lee**

Innovative and productive packaging process for the desiccant blister:

1 Feeding and dedicated tablet placement via a SimTap feeder

2 Tablet inspection to check shape, breakage, and color

3 Feeding of the desiccant band, punching of the individual strips, positioning on the tablets

4 Verification of the presence of the desiccant strip

5 Print inspection of the lid foil

6 Blister sealing in the four-column platen sealing station with uniform pressure applied to the whole area

7 Accurate perforation and punching of the printed blisters

"The complete pharmaceutical packaging partnership" is the principle on which the Swiss pharmaceutical packaging service provider Ivers-Lee works. The company is based in Burgdorf in the Emmental region. Its services are particularly in demand when customers have complex speci□cations, as was the case of a global pharmaceutical and biotechnical leader headquartered in California. In the future, tablets should be packaged in blisters instead of bottles – with desiccant in every blister pocket.

To solve this requirement, Ivers-Lee and Uhlmann developed a special desiccant feeder incorporating a punch and came up with an appropriate forming process. The desiccant, loosely placed on each tablet, adheres to the lid foil and remains there when the blister is opened. This ensures easy removal of the medicine. The two solutions for the desiccant blister, for which patents are pending, are integrated into an Uhlmann Blister machine B 1240.

The packaging of tablets in bottles is standard in many countries. Always included

Mr. Murbach, Ivers-Lee has been working together with Uhlmann Hö□iger Schweiz for years. What do you particularly value?
Well, firstly, the quality of the machines. We have a wide selection in operation: compact blister machines such as the B 1240, larger UPS 3 and UPS 4 machines, and various cartoners. The oldest machine is about 30 years "young" – this fact speaks for itself. On the other hand, we value Uhlmann for its proficiency when it comes to finding solutions to really trick tasks, as in this case. Of course, short distances also play a role. A service technician is soon here should it be necessary.

For which products in particular is it worth considering the new desiccant blister?
The desiccant blister solution and corresponding blister machine configuration were developed on behalf of a customer – and we will only use this B 1240 to package products for this customer. Naturally, this form of packaging with a customized machine solution is also of interest to other pharmaceutical manufacturers.

What is the current status2 Tw 1.2mt0 Tdo<r3? Islity of the tiothe cur yer?Un, ttunateNatuCOVID-is B

is desiccant to protect the products from humidity, oxygen, and reactive contamination. However, this protection is only effective prior to first opening. Even if the patient does not remove the desiccant, the solids are exposed every time the bottle is opened and the shelf life decreases. This is not an issue with low-priced medicines, but certainly when it comes to high-priced, high-potency drugs, such as offered by the Ivers-Lee customer: HIV prophylaxis and cancer therapy drugs, or medicines for the treatment of AIDS and hepatitis. Shelf life and patient safety are key criteria here.

It is imperative that the products are taken correctly, which is not easy to track with loose tablets. Individual tablets in blisters, on the other hand, help to ensure compliance. But how is desiccant inserted into the blister pocket? How well is the blister sealed? How is an efficient packaging process achieved? A whole series of questions that Ivers-Lee and the specialists

for customized projects in Laupheim have answered convincingly.

Well thought out in every detail: A SimTap feeder at the beginning of the process is responsible for the dedicated placement of the tablets in the blister pockets. The next station is new. It feeds a band with desiccant, from which the smallest of strips are punched. These are positioned directly on the tablets. To prevent slipping of the desiccant, the experts deepened and shaped the blister pockets appropriately. Patents are pending for this innovative pocket shaping, as well as the SimTap feeder and punch combination. Also integrated into the Blister machine B 1240 are three VisioRead inspection cameras. The first checks the tablets regarding shape, breakage, and color, and also verifies correct positioning in the blister. The second camera monitors the presence and position of the desiccant strip, and the third the printing applied inline to the lid foil. Is the blister correctly marked, sealed, and punched, it is transferred to the downstream process. Faulty blisters are removed from the process.

Top blister quality through innovation: Similar processes apply desiccant to the lid foil in advance. It can then be that this fails to align accurately with the forming film, which leads to sealing problems, faulty blisters, and rejects. This is not the case with the new desiccant blister from Ivers-Lee and Uhlmann. It is the sealing heat that bonds the desiccant to the lid

> **Greater patient safety and a longer shelf life: By developing the desiccant blister and the corresponding machine solution, we have initiated an innovation with great potential particularly for high-priced, high-potency products.**
>
> **Roberto Zürcher, Managing Director, Uhlmann Höiger Schweiz**

Perfect product protection and high patient safety: The child-resistant blister is based on the peel-push principle to prevent tablet removal and danger in the hands of children. The patient first peels back the top layer of the lid foil and then pushes the medicine through the second layer of foil in the customary manner. The desiccant remains adhered to the lid foil when the blister is opened, allowing easy removal of the product.

foil in exactly the right position. Nothing moves or warps, and the sealing process runs smoothly at an output of 70 blisters per minute. Equally accurate and productive are the following blister perforating and punching steps.

Another benefit of the Uhlmann patent-pending solution becomes apparent when opening the child-resistant blister. The desiccant remains adhered to the lid foil when the blister is opened. The tablet can easily be removed and compliance is easy to track.

Win-win the Swiss way: The innovative desiccant blisters can be realized for a variety of solid dose products as well as a number of blister formats. Ideal, consistent product protection and high patient safety make them a convincing alternative to tablets in bottles.

Innovation for desiccant blisters of consistently high quality: First dedicated placement, then sealing

The innovative desiccant blister is packaged on an appropriately modified Blister machine B 1240 from Uhlmann.

close-up online

Issued by:
Uhlmann Pac-Systeme GmbH & Co. KG

Chief editor:
Marion Neubrand
Phone: +49 7392 702-8648
neubrand.m@uhlmann.de

Concept and realization:
Volker Laucher Grafik Design,
Stuttgart, Germany

Text:
Marisa Arzt, Stuttgart, Germany

Translation:
Rosemary Sack, Stuttgart, Germany

Photos:
Merlin Photography Ltd.,
Münchenbuchsee, Switzerland;
dreiM, Munderkingen, Germany

EXPERTISE
Video showing the packaging process »

CLOSE BY THROUGHOUT THE WORLD
Your contact person around the globe »