

# Case History Excelvision

Packaging Systems



**BOSCH**

Invented for life

**Handling and packaging  
of BFS vials with liquid eye drops**

# How an eye drop manufacturer accelerated production with help from Bosch

Specializing in sterile manufacturing, Excelvision, based in Annonay, France, provides contract manufacturing services for liquid eye drop plastic vials to numerous companies. However, to increase production and capitalize on additional contract manufacturing opportunities, Excelvision enlisted Bosch Packaging Systems AG, based in Beringen, Switzerland, to install a fully automated packaging line. With significantly higher output capabilities, Excelvision expects to increase production by nearly five-fold. The new line also gives the company greater flexibility to meet the diverse requirements of its customers.



## Keeping an eye on automation

Excelvision manufactures vial cards in bulk, each hold five blow-fill-sealed single-use vials. Because the company produces different product shapes and configurations for its customers, it faced a logistical challenge in rapidly packaging the diverse products.

Prior to working with Bosch, Excelvision relied on individual vertical form, fill and seal (VFFS) machines to package each vial card. However, this approach required vial cards to be manually fed into the system. At peak capacity, production only reached approximately 60 cards per minute, not fast enough to keep up with current demand, let alone plan for new market expansion.

«We found ourselves at a crossroads,» says Philippe Pensuet, head of engineering and EHS at Excelvision.

«Our operations were not flexible enough to react to our customers' demands, and it was taking too much time and effort to win new contracts.»

Purchasing multiple storage trays dedicated to each product format size would have been too costly. However, Bosch's complete line solution allowed the company to use one storage tray type for all product formats. The line provided the necessary flexibility to separate the vial cards and then package them appropriately for each customer.

«Also, as demand increases for single-dosage packaging, the new line gives us the flexibility to adapt production in the future, adds Philippe Pensuet.

## Two years and one trusted relationship

Having visited an automated Bosch line in operation in the United States, Excelvision was well aware of Bosch's expertise in the plastic vial market. Impressed with what they saw, Excelvision reached out to Bosch about automating operations for its eye drop line.

«This was a challenging project for us because we've always used stand-alone machines,» Pierre Laissy, project manager at Excelvision explains. «Bosch provided the consultation we needed for a successful upgrade to our first highly automated, complete line solution.»

The project also involved a lengthy approval process with Excelvision's customers as they needed to verify that the new packaging solution would meet market needs and regulations. During this vetting process, Bosch regu-

larly consulted with Excelvision about different packaging styles and materials. Because of the many parties involved, the project took two years to come to fruition, during which time the company developed a close partnership with Bosch.

Pierre Laissy notes that two advantages offered by Bosch were flexibility and modularity. To meet different customer needs, Excelvision required equipment that could be easily adapted to meet specific demands. This modular approach, allowing for quick and tool-less changeovers, was critical for Excelvision. In addition, the new line requires only three operators, letting Excelvision redirect labor to higher-skilled positions.

# Flexibility from primary to secondary



The bulk vial cards are first manually loaded into an intelligent feeding unit, which unscrambles and separates them equidistantly. It then aligns the individual vial cards before transferring them onto a conveyor. The intelligent feeding unit operates at adjustable speeds, with an output of up to 300 pieces per minute.

The vial cards then travel to the Sigpack **LDF** feed placer, which features delta robots that pick and place individual cards into an infeed wrapper chain. The Sigpack **LDF** is equipped with a vision detection system that ensures quality control of the products. It also communicates with the robot to ensure correct product orientation.

Products then move along to the Bosch Sigpack **HSL** horizontal flow wrapper, which features a long dwell sealing unit for extended sealing time. This ensures that the aluminum-laminated film is hermetically sealed, which is critical to protecting the blow-fill-sealed products against water evaporation and light effects. In addition to automatic film splicing, the flow wrapper features printing and vision inspection of various data.

«We decided to overwrap each vial card with PE plastic-aluminum laminated film. This material significantly extends product shelf life by providing the highest protection from oxygen and humidity,» remarks Philippe Pensuet. The longer shelf life benefits Excelvision's customers, as well as retailers and consumers. Bosch also subjected the wrapped cards to various tests, such as

vacuum pressure and under water submersion, to verify that packs have an air-tight seal.

For cartoning Excelvision installed Bosch's Sigpack **TTM** topload cartoner. The Sigpack **TTM** picks flow-wrapped products out of a grouping chain and places them into cartons via a robotic top loader arm with gripper unit. The unit operates at speeds up to 70 cartons per minute, and the topload carton former has up to four lanes available for production. A key advantage of the Sigpack **TTM** is the ability to make quick and tool-less changeovers for up to four different carton formats, giving Excelvision the flexibility to accommodate diverse customer needs.

«Depending on the market sector we are serving, the system allows us to produce different configurations, including four-, five-, and six-counts,» Philippe Laissey explains.



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