

75 batches a month on one line

Synthon's mission is to make treatments more affordable
and to improve access to essential medicines through generic drugs.

But how will the company manage to remain
competitive in the future – despite ever smaller batches?

Albert Vallverdú, Manufacturing Director at Synthon Hispania, focuses on continuous optimization of processes and equipment in order to be able to package even small batches economically.

Synthon develops, produces and packages active ingredients, high-quality generics medicines for over 100 countries. The variety of dosages, package sizes, regional variants and special features such as wallet packaging continues to increase. The result: steadily decreasing batch sizes.

“We have been dealing with the trend toward smaller batches for a long time, both for packaged pharmaceuticals and bulk goods,” reports Albert Vallverdú, Manufacturing Director at Synthon Hispania. „In pharma packaging, we initially successfully optimized our format changeover process and production

schedules. But at some point, that wasn't enough to really produce efficiently.“

Those responsible asked themselves how a higher output could be achieved on the existing lines? How can a highly efficient system be designed for packaging small batches that is easy to operate and clean?

Blister line BEC 200 with customized blister transfer

Synthon decided to install an additional pharmaceutical packaging line specifically for small batches. For this, the project team identified three technical requirements:

- 1.** The blister transfer from the blister machine to the cartoner would need to be particularly flexible.
- 2.** Format changes would need to be quick and easy.
- 3.** The ability to use as many format parts as possible from the two existing BEC 300 blister lines.





The blister machine and cartoner are physically separated at Synthon. The sealed blisters reach the cartoner via a conveyor belt.



Depending on the format, the blisters are not directly forwarded to the cartoner but automatically buffered in trays and cartonized at a later point in time.

“ Our long-term goal is to provide simple, safe and reliable solutions for our operators to achieve production targets highly efficiently and with excellent quality. Uhlmann will always be one of the first contacts for us on this path.

Albert Vallverdú, Manufacturing Director at Synthon Hispania

Subsequently, a system was implemented together with Uhlmann that goes far beyond the line itself. It includes production planning, batch management, process optimization as well as training:

- Those responsible opted for a new BEC 200 blister line from Uhlmann which, with its fast format changes of less than 30 minutes, is ideally suited to small batches.
- As far as possible, all “small orders” are bundled on this line so that the other packaging machines can be efficiently utilized with medium and large batches.

- In addition, Synthon and Uhlmann jointly developed a special blister transfer system: the sealed blisters are either seamlessly transferred to the cartoner or temporarily stored in trays. The cartoner is able to transfer the blisters both directly from the blister machine and from the trays.
- This provides Synthon with the opportunity to produce a larger quantity of identical blisters, which can then be boxed in smaller portions for different markets.

The advantages are obvious: due to the fast format changes, the productivity of the



Albert Vallverdú, Manufacturing Director (left), and Francesc Vila, Engineering & Maintenance Manager, in front of the Sant Boi production site in Barcelona



Synthon is an international, science-centered pharmaceutical company specialized in developing and manufacturing high-quality generic and hybrid medicines for patients around the world. Synthon's innovative

R&D and proven ability to manufacture and distribute high-quality pharmaceuticals position the company well for the future. Through its strategic partners, the company markets its products in more than 100 countries worldwide. 1,600 employees work for Synthon – among others at the headquarters in Nijmegen (Netherlands) or at the two production sites in Santiago de Chile (Chile) and Sant Boi (Spain).

Key figures for the production site at Sant Boi near Barcelona

Employees:	approx. 500
Production and packaging lines:	7 packaging lines
Max. capacities per annum:	1.4 billion tablets 1.3 billion capsules 85 million blisters
Share of solid products in blister packs:	90%

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BEC 200 is relatively high despite many small batches. At the same time, OEE on the other packaging lines increases because fewer product changes are necessary. If required, blister packaging and cartoning can be planned independently of each other – for increased flexibility. Existing format parts from the BEC 300 lines can also be shared to some extent. And operation and maintenance were almost routine for the team due to the similar design.

75 batches a month on one line

The BEC 200 has been running at the Synthon plant in Sant Boi, Spain, since September 2021 – and with 75 batches being packed on the new BEC 200 per month, the figures show that the concept

is working. This means that the daily average in three-shift operation from Monday to Friday is 3.75 batches per day – that's quite something! At the same time, the average batch size on the previous lines was not affected and productivity was maintained.

But Synthon would not be Synthon if those responsible were satisfied with this improvement. The next step is to further optimize the workflows in order to increase efficiency even more. For the future, the company expects the trend to continue – towards an increasingly complex packaging process, including micro batches and even more variants.

“Our long-term goal is to provide simple, safe and reliable solutions for our operators to achieve production targets highly efficiently and with excellent quality. Uhlmann will always be one of the first contacts for us on this path,” says Albert Vallverdú.



More a partner than a supplier

Manufacturing Director Albert Vallverdú talks in an interview about the new pharmaceutical packaging concept at Synthón and the cooperation with Uhlmann.

How did your new pharmaceutical packaging concept come about at the Sant Boi plant?

Albert Vallverdú: We took a close look at the topic of “small batches” and systematically identified all the factors that could have an impact on productivity.

Then we decided on a path that was unusual but promising – bundling our “small orders” on an additional blister line that has a particularly flexible transfer between blister machine and cartoner. Instead of packing the blisters directly into folding boxes, we can also store them temporarily in trays if required and box them in portions at a later stage. This special design was developed by Uhlmann especially for us.

For what reasons did you choose Uhlmann for the project?

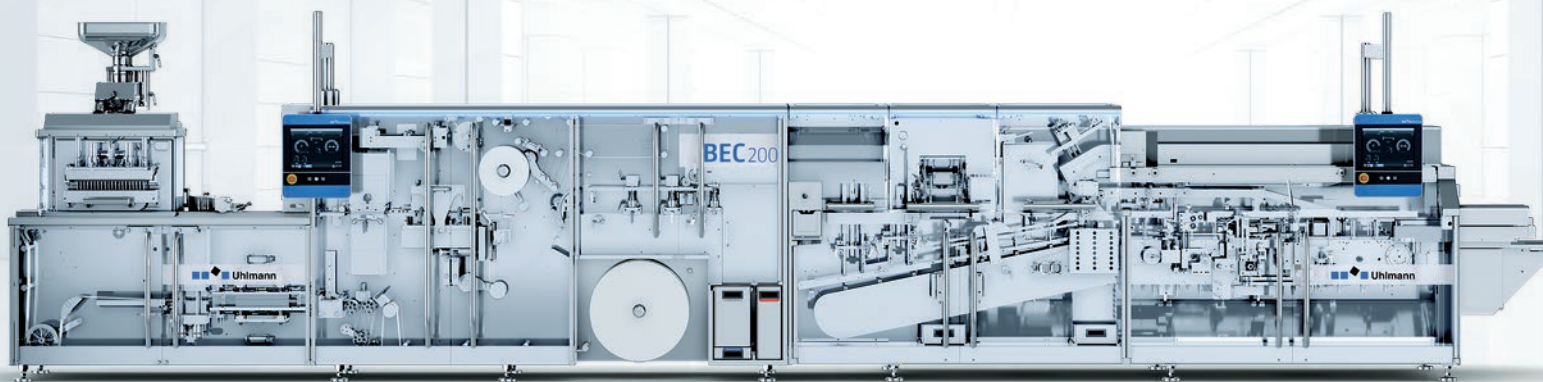
In Sant Boi, two BEC 300 blister lines from Uhlmann have already been in operation since October 2017. Both management and operators are convinced by the robust, reliable, precise machines. In addition, we were able to make partial use of the existing format and spare parts for another BEC. Due to the similar design, only a short training session was needed on-site during commissioning to allow our production and technical teams to start up safely and quickly.

How did the collaboration go from your point of view?

It was a very special project for both sides, based on the very good, trusting relationship between the two companies. We were in close contact with Uhlmann Ibérica, but also with the project team in Laupheim. The most interesting part for us was the joint development of the special solution, which we believe is crucial for the success of the project. Here, Uhlmann’s knowledge has helped us to solve some important challenges. Even before this, we viewed Uhlmann less as a supplier and more as a partner. This impression has been further reinforced.

Blister line BEC 200 – the best choice for small batches.

The compact complete system comprising feeder, blister machine and cartoner packs small batches of 2,000 to 50,000 packs with the highest quality and efficiency. It therefore offers pharmaceutical and nutraceutical producers entry into the top class of solid-state packaging at an attractive entry price.



close-up online

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FLEXIBLE

Processing of all common solid formats and time-saving format changes for greater flexibility in volatile markets

SAFE

Maximum performance and safety of the user-friendly, GMP-compliant complete system – even for inexperienced personnel

GENTLE

Panel sealing, also of large-format aluminum/aluminum blisters for unusual solid geometries

ECONOMICAL

High quality and efficiency at an attractive entry-level price

FUTURE-PROOF

Scalable blister line for packaging small batches of 2,000 to 50,000 packs

Blister module	
Sealing principle	platen sealing
Mode of operation	single-lane
Max. output	200 or 300* blisters/min.
Max. forming depth	12 mm
Max. format area [index x width]	200 x 145 mm
Max. blister size	95 x 145 mm

Cartoner module	
Max. output	150 or 300 cartons/min.
Max. carton size [A x B x H]	100 x 100 x 150 mm or 100 x 105 x 150 mm
Max. no. of blisters	14
Max. blister stack height	95 mm or 100 mm
Types of closure	tuck-in and hot-melt

*optional output upgrade

BLISTER LINE BEC 200
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Blister line on YouTube



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

