



BLU 400

THE PACKAGING OF LIQUIDS
ATTAINS A NEW DIMENSION.

Anyone wishing to achieve top performance must focus passionately on a goal. True to this maxim, Uhlmann has concentrated for over 65 years on highly efficient packaging systems for the pharmaceutical industry – and that alone. An Uhlmann embodies not only outstanding technology, but also amalgamated knowledge of the needs and market requirements of the pharmaceutical sector. The outcome is the assurance of having a partner at your side who fully understands all aspects of your business. And who masters the pharmaceutical processes along the entire value-added chain like no other. Our leading position worldwide is largely due to one factor: the trust customers place in the excellence of our personnel. They have a special way of thinking and acting holistically in pharmaceutical dimensions. Strong, open-minded, reliable.

This difference is unmistakable. In more than 80 countries. On every day that machines and services made by Uhlmann help you to secure the crucial competitive edge in your markets.



AN UHLMANN IS UNMISTAKABLE.

SPECIALIZED IN PHARMACEUTICAL PACKAGING,
IT ALSO PROVIDES DISTINCTIVE ADDED VALUE
DAY IN, DAY OUT.



**CAN
LIQUID
PACKAGING
BE AS
FLEXIBLE AS
THE PRODUCT?**



In view of pharmaceutical product diversity and equally varied primary packaging, secondary packaging must be correspondingly flexible. At the same time, it must combine productive factors: gentle handling of the fragile products throughout the entire process, the perfect integration of all components, and modular design for optimum configuration in every case.

Uhlmann has applied these and other aspects, based on daily packaging experience, to a blister machine that is extremely flexible. It sets new standards in the packaging of liquid dose products – with multilane operation, fast format changeovers, and an innovative blister transfer.

Future-oriented in every respect and well designed down to the last detail: the BLU 400.



BLU 400. THE PACKAGING OF LIQUIDS IN A NEW DIMENSION.

Ampoules, syringes, vials, bottles, cartridges, or pens: the BLU 400 meets all needs when it comes to the packaging of liquids. The machine is based on a flexible modular design principle, which allows appropriate configuration depending on the product. Gentle product handling throughout the entire process, as well as the innovative transfer system, using product and blister rotation, ensure maximum productivity. Other features of the BLU 400 include the processing of a wide range of products and formats at a maximum output of 400 blisters per minute, the optimized use of forming materials with less wastage, and minimum time and personnel input for operation and retooling.

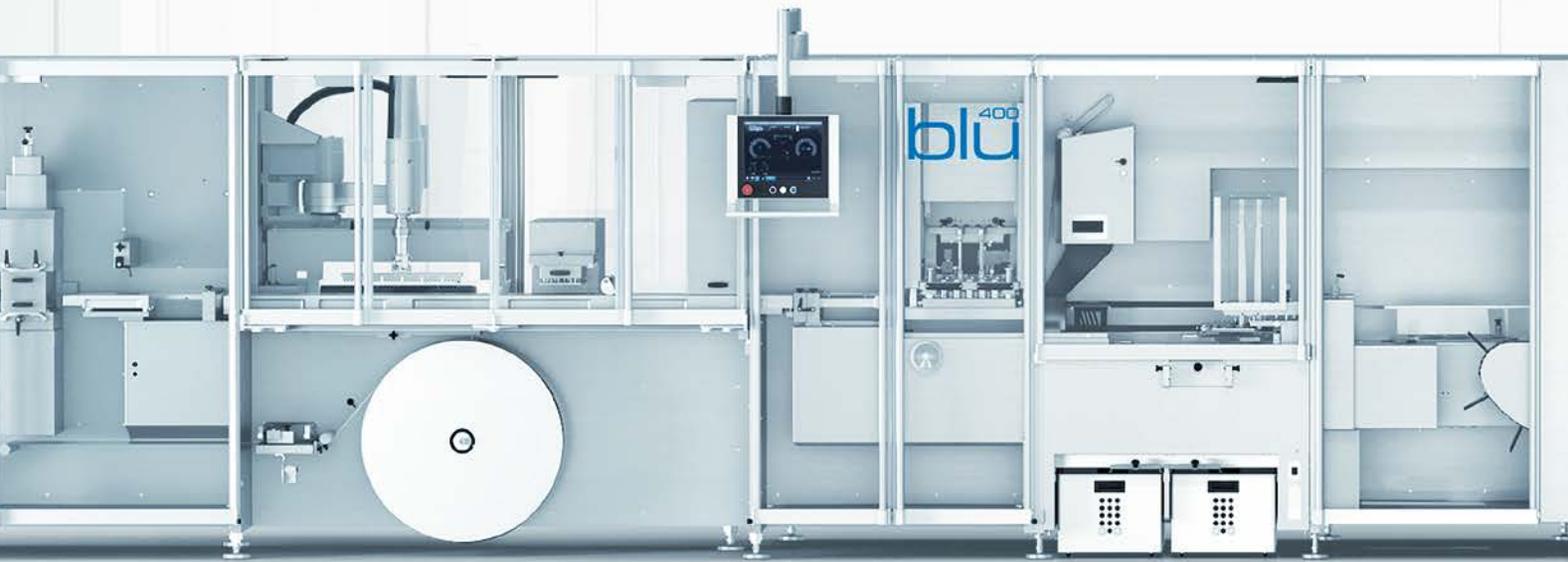


Unsurpassed in its flexibility.

- Integrated forming material unwind function with fast reel changeover from the operating side – option: positioning at the front end of the machine with double reel support to enable changeover preparation during ongoing production
- Modular, future-proof concept with diverse options for a tailored configuration
- Innovative transfer to the cartoner: alignment of the blisters using a rotary table, accurate stacking and insertion into the product chain

LiPro: the high-performance feeder for upright receptacles.

- Servo-regulated system for liquid products such as ampoules, vials, cartridges, bottles, and atomizers in all standard German (DIN) sizes
- Automatic “run empty” function
- Maximum output: 1,665 ampoules per minute
- BLU 400 with LiPro feeder and punching station (overall machine length 7,340 mm)



BLU 400 with LiPro feeder and punching station, plus C 2305 (overall machine length 12,898 mm)

Exceptional with its gentle product handling.

- Integrated position control in the press-in station – product damage, downtimes, and cleaning are reduced to a minimum
- Careful handling avoids product damage, e.g. minimum feed heights and alternating press-in function for secure placement in clamp packs
- Thermal product protection after blister sealing and in the event of a machine stop

Remarkable in its efficiency.

- Maximum machine output on account of optimum format utilization – both the products and the blisters can be rotated to ensure the best possible positioning to suit the forming material format
- Various punch settings for minimum forming material consumption and even better output
- Consistent processing times for top-quality forming and sealing at different machine speeds
- Proven, C-shaped stations for good accessibility and lightweight format parts for very fast format changeovers





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SyPro: the gentle feeder for syringes.

- Servo-regulated system for syringe products such as fragile glass or plastic syringes in all common sizes
- Fast format changeovers due to few format parts
- Maximum output: 350 syringes per minute



BLU 400 with SyPro feeder, sealing and punching station, plus C 2305
(overall machine length 14,997 mm)

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TOUCH & TEACH.

LINE COMMAND WITH SMARTCONTROL.

Uhlmann radically simplified the operation of packaging lines with the introduction of SmartControl. The convenient and functional SmartControl user interface leads the operator through processes using production assistants. They provide step-by-step assistance to ensure standardized procedures, as in the case of a product changeover, for example, so operation can be resumed quickly. The swivel-mounted panel allows the operation of all stations from various positions. This reduces walking distances and lends the entire process greater transparency.

Smart down to the last detail.

- Web-based technology for complete integration of machines and aggregates from other manufacturers
- Uhlmann apps for the simple integration of supporting operating functions
- Automatic generation of production and parameter records in compliance with FDA regulation 21 CFR Part 11



3D Visualization.

SmartControl visualizes the stations in a spatial dimension. Operating elements are directly assigned to their function. Consequently, variously qualified employees only require a short familiarization period to acquaint themselves with the machine.





reddot award 2014
winner industrial design



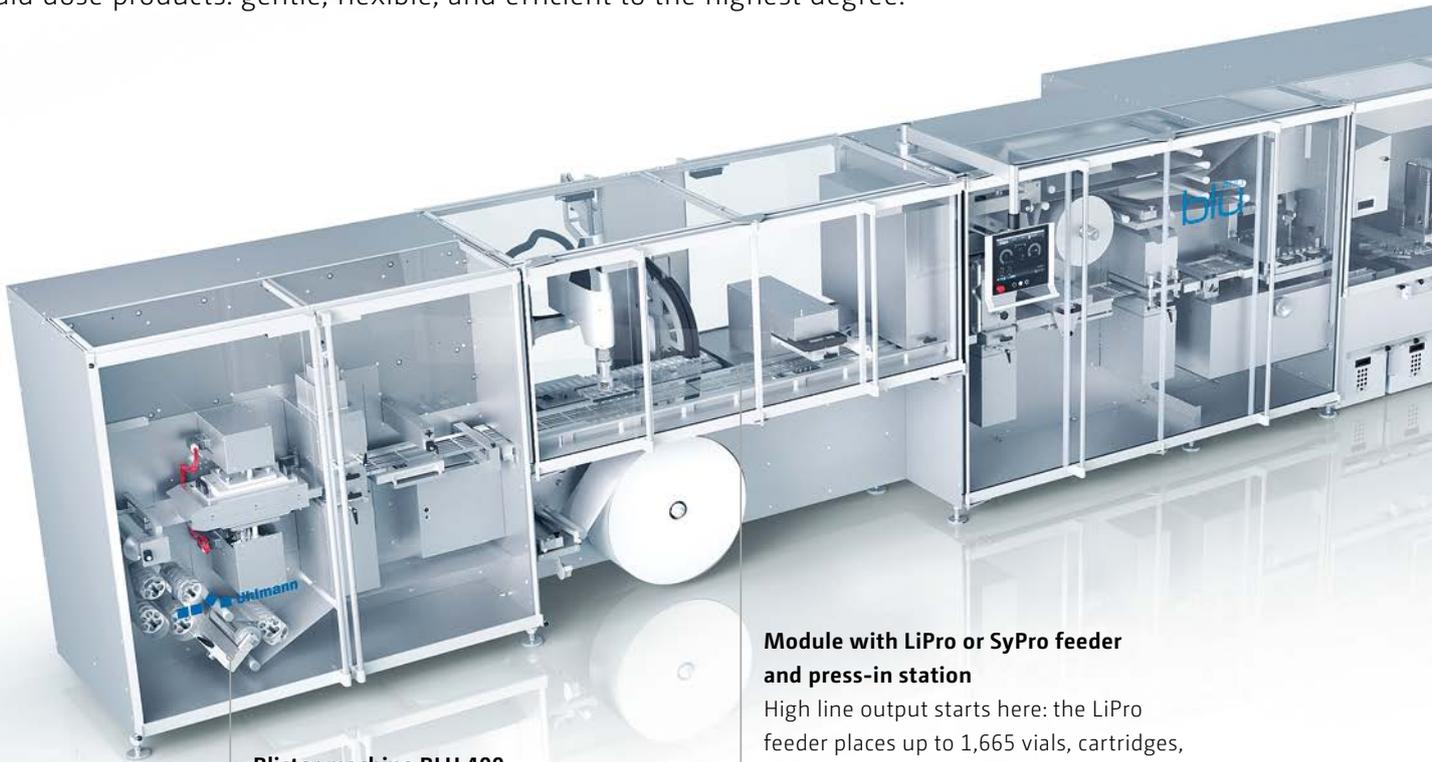
Everything at a Glance.

The intuitive operation of the BLU 400 via a SmartControl panel simplifies monitoring and operation of the entire line. Mounted on an adjustable support arm, the panel can be moved to suit the position of the operator.

MORE THAN READY FOR EVERY DEMAND.

A HIGHLY FLEXIBLE MODULAR PRINCIPLE – UNCOMPROMISINGLY GEARED TO LIQUID DOSE PRODUCTS.

Blister machine BLU 400, feeder, and cartoner: these three components form a perfect line for the cost-efficient secondary packaging of liquids. To ensure configuration of the right line to suit your products, formats, forming materials, and lid materials, you have the choice between cartoners of varying output categories and feeders for syringes, as well as vials, cartridges, and ampoules. Likewise variable are the fill section and the blister transfer. Consistent in all cases is the processing of your liquid dose products: gentle, flexible, and efficient to the highest degree.



Blister machine BLU 400

Central element of the line is the compact Blister machine BLU 400 – specifically designed for the packaging of susceptible liquid dose products in clamp packs or sealed blisters. Modular in design, it attains a maximum output of 400 blisters per minute.

Module with LiPro or SyPro feeder and press-in station

High line output starts here: the LiPro feeder places up to 1,665 vials, cartridges, or ampoules per minute in the blister pockets; the SyPro up to 350 syringes. Products in clamp packs are gently pushed into place in the press-in station.

The Cartoners

Continuous or intermittent mode of operation and capacities of 150 to 500 cartons per minute: other cartoners, as an alternative to the C 2305/C 2504, can be combined with the BLU 400 to suit the application. All models are equipped for the installation of Track & Trace options.



Cartoner C 2305/C 2504

The continuous motion cartoners are designed for a maximum output of 300/500 cartons per minute. The unparalleled, automated format adjustment of all stations allows a fast, faultless changeover within 15 minutes.



Cartoner C 2156/C 2206

The continuous motion, 6"-pitch cartoners are suitable for a wide range of products and all common carton qualities. They process cartons up to 130 x 100 x 250/200 mm in size at an output of 150/200 cartons per minute.

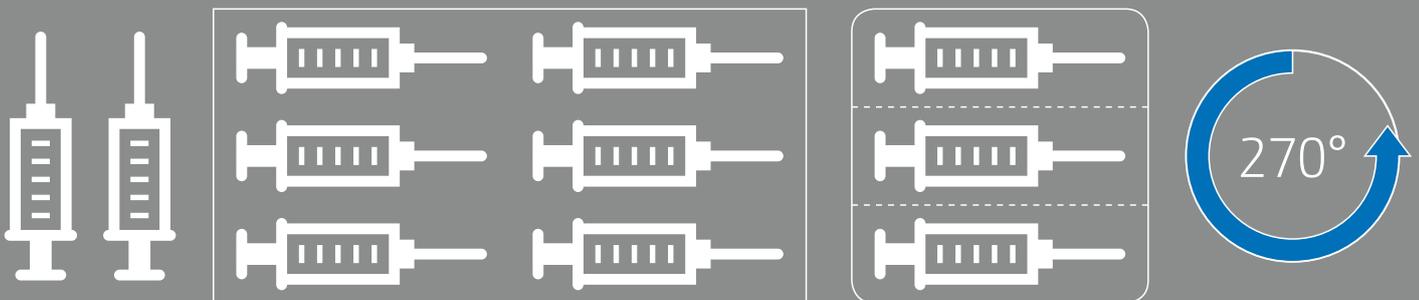
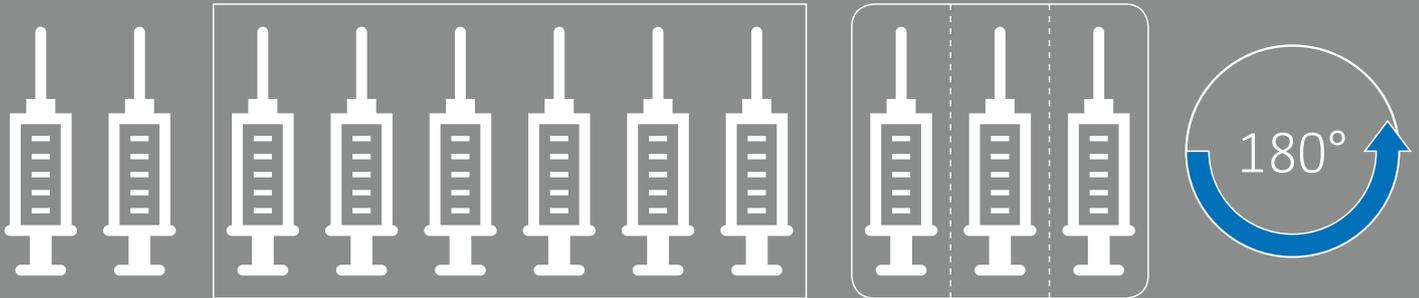


Cartoner C 2155

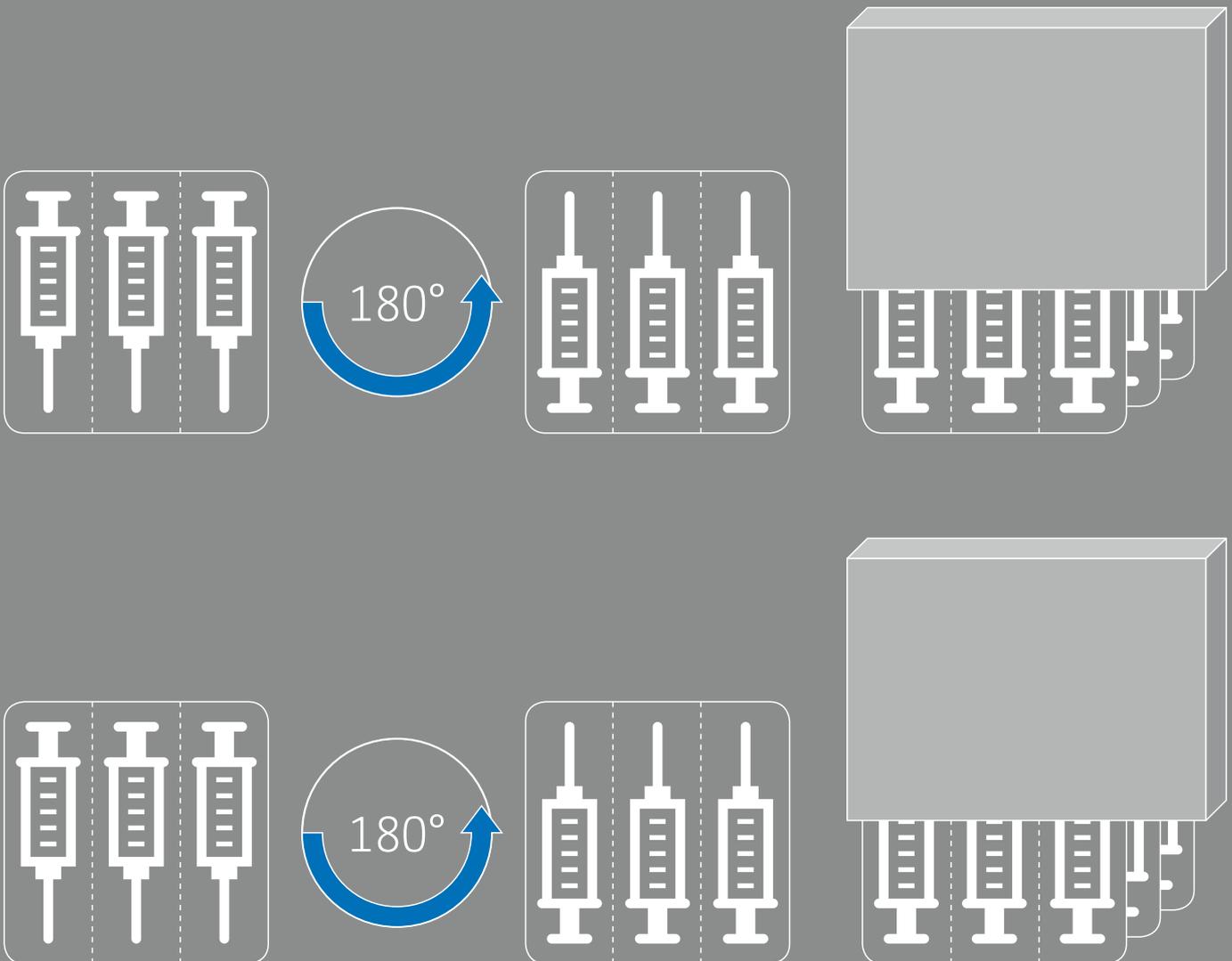
The intermittent motion cartoner, geared to small and medium-sized batches, is easy to operate. It handles cartons up to 115 x 100 x 150 mm in size at a maximum output of 150 cartons per minute.

ALL THE RIGHT MOVES.

UNRIVALED: INNOVATIVE BLISTER TRANSFER FOR MAXIMUM FLEXIBILITY AND EFFICIENCY.



The BLU 400 systematically meets the requirement to handle diverse liquid dose products and blister formats ranging from 20 x 60 mm to 195 x 284 mm. The machine functions with single- to eight-lane operation, without compensation loops, and with product rotation, which allows full utilization of the web width. The products can be positioned in the feeder lengthwise or crosswise to the web and are guided through the process. Rotation is also the productive element of the direct blister transfer to the cartoner: a transfer arm only places faultless blisters on a rotary table, which turns 180° or 270°. A stacking arm picks up the separate blisters and rotates them 180°. At the same time, it forms blister stacks as required. Only faultless blisters and complete stacks are transferred to the product chain of the cartoner. Empty or partially filled blisters are removed from the process. Other functions of the transfer include manual reloading for even higher output, a bulk discharge conveyor, and the removal of blisters for in-process control purposes.



**LiPro feeder**

This system handles ampoules, vials, cartridges, and bottles in all standard German (DIN) sizes at a maximum output of 1,665 receptacles per minute. A vibration plate gradually distributes the upright products evenly and moves them to the pickup position. A rake brings the products into lines, from which they move into the

separating roller. This turns the receptacles to a horizontal position. The vacuum grippers of a four-axle robot system take over the products and place them in the blister pockets. The roller continues to rotate and is emptied completely prior to the next filling cycle to avoid possible interruptions.

TREAT THE PRODUCTS WITH CARE.

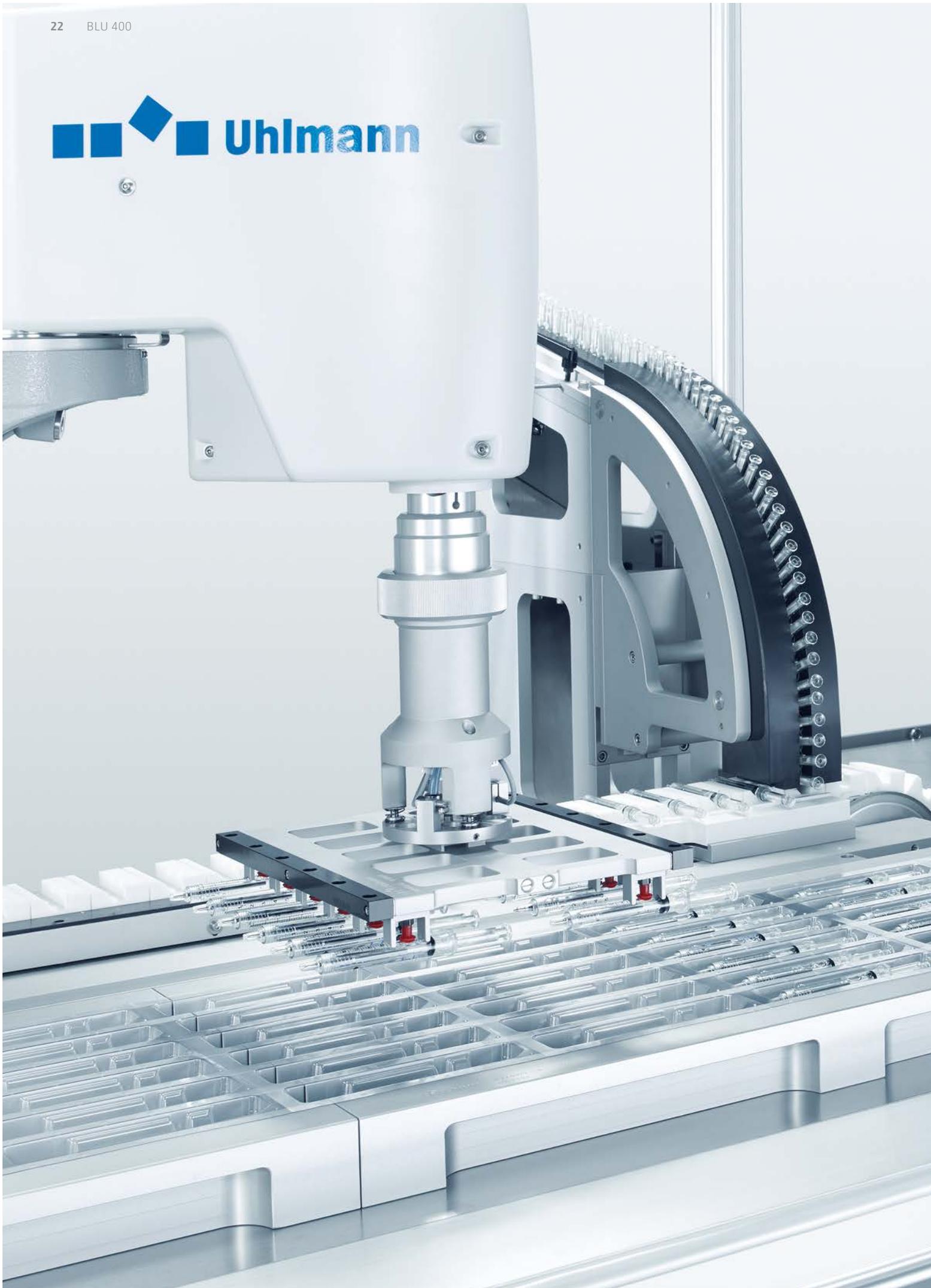
STARTING WITH WELL-MATCHED FEEDERS FOR GENTLE HANDLING THROUGHOUT THE PACKAGING PROCESS.

Exceedingly gentle feeding and correctly filled blisters are demanded of the systems LiPro (liquid products) and SyPro (syringe products). Both feeders are ideally geared to the BLU 400, fit in seamlessly with the line, and have all the qualities needed for a productive start to the packaging process: an ergonomic filling height, minimum drop heights should production be interrupted, fast format change-overs, easy-to-clean parts, and a user-friendly, low sound level below 75 dB(A).

Press-in station

The press-in station gently pushes the products alternately into place in clamp packs. The integrated position monitoring reduces product damage and thus machine downtimes.





SyPro feeder

This feeding system is suitable for all common syringe sizes ranging from 6.5 to 26 mm in diameter. The syringes are transferred to the feeder unit in a single lane. A guide elbow moves the syringes into a horizontal position and transfers them to a continuous motion prism conveyor. A four-axle, swivel-arm robot with vacuum suction cups takes the products from the conveyor and places them accurately in the blister pockets. The maximum feed capacity is 350 syringes per minute.

Camera inspection

A camera ensures 100 percent inline inspection of the products in real time. Inspection tasks such as the verification of product or label presence, or the recognition of color code rings can be selected. The system controls the removal of faulty blisters.



DETAILS THAT GIVE YOU A LEADING EDGE.

THERE IS MORE TO THE LINE THAN MEETS THE EYE.

Proficient handling of diverse products: large forming depth up to 42 mm.

Slim ampoules or cartridges, bulky bottles, sprays, or syringes: the forming depth of the BLU 400 ranges from 12 to 42 mm, which makes it suitable for all liquid dose formats. The web runs through the entire machine without compensation loops. This is necessary as very little flexion is possible with large blisters with deep pockets, and practical as it ensures reliable blister guidance throughout the process.

Accelerated and 100 percent reliable: the format changeover.

The changeover to other formats requires no special tools and involves few format parts. The heating, forming, sealing, and punching or perforating stations adjust automatically for 100 percent reliability. The integrated batch management function means that product-related format data only has to be entered once and is then directly available at the machine.

Fast and straightforward: line clearance.

Smooth surfaces ensure optimum cleaning and the cantilever design offers good visibility for reliable line clearance. Accessibility is easy from the operating side.

1 Heating and forming station

Gradual heating of the forming material in three stages. Format-free heating plates, each with three zones and separately adjustable temperatures. Automatic opening of the heating plates in the event of a machine stop. Forming station for consistent, high-quality blisters at various machine speeds. Fast format changeovers due to automated positioning of the station in the running direction of the web.

2 Platen sealing station

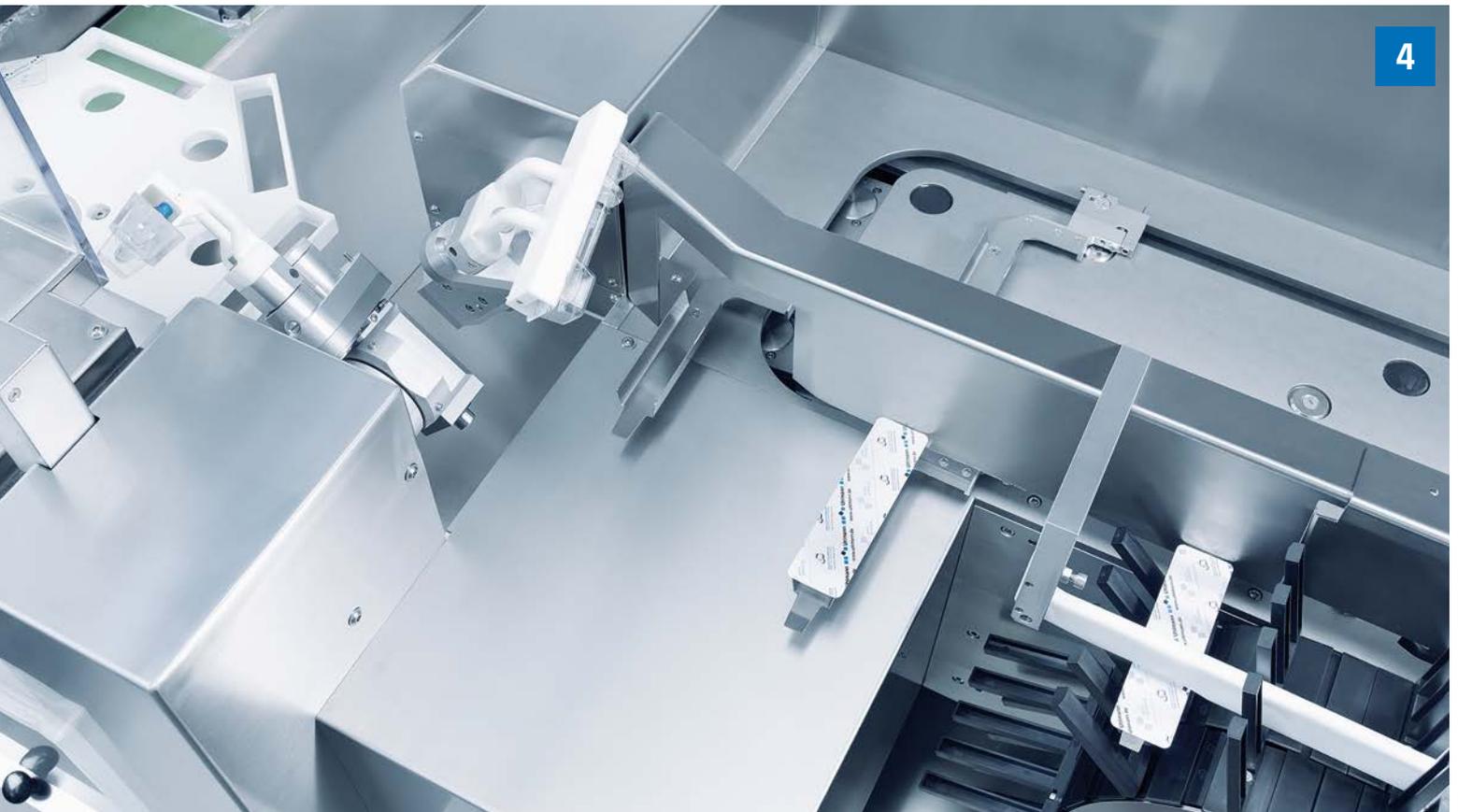
Consistent sealing times irrespective of the number of cycles. Immediate cooling of the sealed blisters to protect the contents. Automatic positioning of the cooling plate between the sealing tool and the product in the event of a machine stop. The modular design permits optional installation of the station. The overall machine length varies according to the specifications.

3 Even greater flexibility: various punching modes

Less waste and high output on account of three punching modes: single cycle, double cycle, and staggered punching accommodate all formats. Laser monitoring and automated index correction ensure precision positioning of the blister pockets. Careful lowering of the punched blisters onto the slide bar.

4 Innovative blister transfer to the cartoner

A rotary table accurately aligns the blisters with the cartons. Stacking arms take the blisters from the table and place them in the cassettes.





BE DISCERNING – 360° PHARMA PACKAGING.

EVERY MACHINE THAT LEAVES OUR PRODUCTION
HALLS EMBODIES AN UNRIVALED PLEDGE.

Best-in-class partner for pharmaceutical packaging. Uhlmann addresses this challenge day in, day out, all over the world. In every area, and from every viewpoint. After all, as far as maximum productivity is concerned, you cannot be too discerning. As a market leader in pharmaceutical packaging, Uhlmann does its utmost to meet the market demands of maximum efficiency in the packaging process – along the entire value-added chain and over the full life cycle. That is why Uhlmann offers machines and lines that have set standards in the sector for generations.

However, our pledge, 360° PHARMA PACKAGING, does not stop there. It includes an extensive range of competent services that secure maximum uptime and efficient production in the long term. Based on the foresight of a reliable partner, initiator, and adviser.



WE SHOW UP WHEN NEEDED.

AROUND THE CLOCK, AROUND THE WORLD:
DISCOVER UHLMANN CUSTOMER SERVICES.



Learn more about Uhlmann
Customer Services.



Best advice: the specialists in pharmaceutical packaging.

Efficient operation over the entire life cycle? A consistently high uptime level? No problem. You select your individual Uhlmann “no worries” service package. Professionally managed by some 420 service specialists worldwide.



Comprehensive support knows no compromises.

Anyone attaching great importance to a high level of machine availability must take various aspects into consideration. The best solution is to refer to us. We provide prompt support when things get tight. Either via our telephone hotline or our remote service using a secure data connection. Support tailored to your needs.



On-site services – worldwide.

From A, such as Angola, to Z, such as Zimbabwe. It makes no difference to us where your production facilities are located – we are at your disposal! Our 100 service technicians based worldwide are soon on hand when needed. The bottom line is minimum machine downtime and maximum production efficiency.



Spare parts – quickly available.

Straightforward ordering – prompt delivery. You receive all original spare and standard parts from Uhlmann within the shortest possible time. If required, we also complete professional installation. Implementation of our spare parts management options helps you to optimize your inventory and save costs.



Tools and format parts in original manufacturer quality.

Every detail plays a key role in high precision. The experts at our centers of excellence for tools and format parts in Germany, the USA, and Singapore are dedicated to their job: they design, draft, plan, produce, and test. The outcome speaks for itself: precision tools and format parts in top Uhlmann quality.



Always state of the art – upgrades and rebuilds.

You are always 100 percent up to date with our upgrades. Uhlmann specialists scrutinize your packaging machines and modernize them in compliance with latest technological standards. Or you decide in favor of one of our fully overhauled rebuilds.



Automation and software – made by Uhlmann.

Trust is good, control is a must. Production data acquisition (PDA) records the data of individual machines. SCADA increases transparency and allows the smooth coordination of all lines. Track & Trace solutions meet a wide range of serialization specifications – for reliable, traceable, and cost-optimized production.



Leading edge through knowledge – Uhlmann TopmanTraining.

Trained, tested, and ready for top performance: with our tailored, GMP-compliant TopmanTraining. State-of-the-art packaging machines are available at the certified training center based at Uhlmann's headquarters in Laupheim. The outcome is added routine and efficient production processes. Your operation reliability improves significantly.

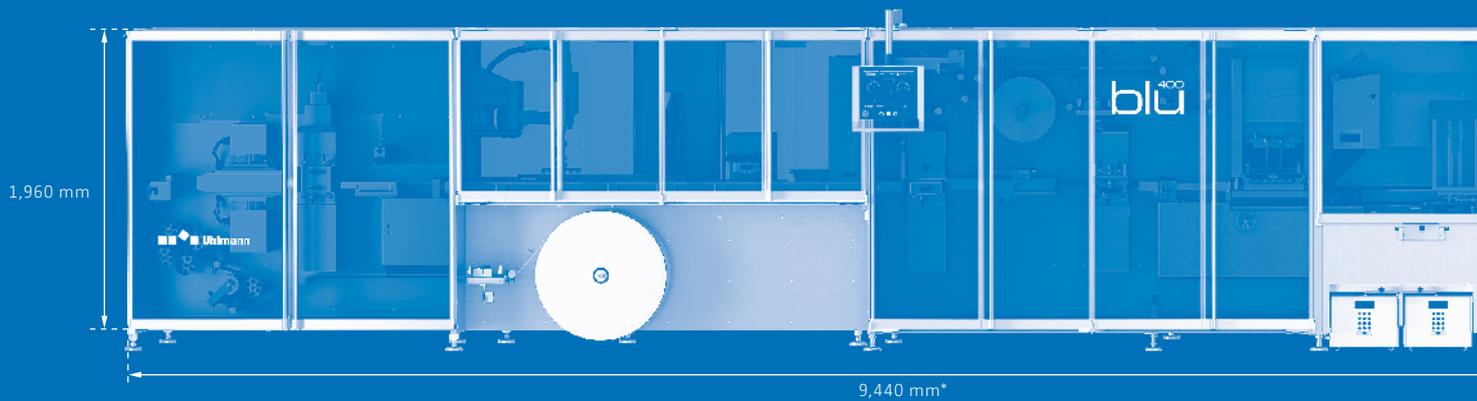


On the safe side – with validation and calibration.

Qualified and reliable processes, top production quality, and ideal reproducibility: validation provides documentary evidence that all URS requirements are met. Furthermore, the regular, professional calibration of all components operating with critical, quality-related measurements ensures long-term process reliability.

CLEAR FACTS. OBVIOUS BENEFITS.

THE TECHNICAL DATA OF THE BLU 400.

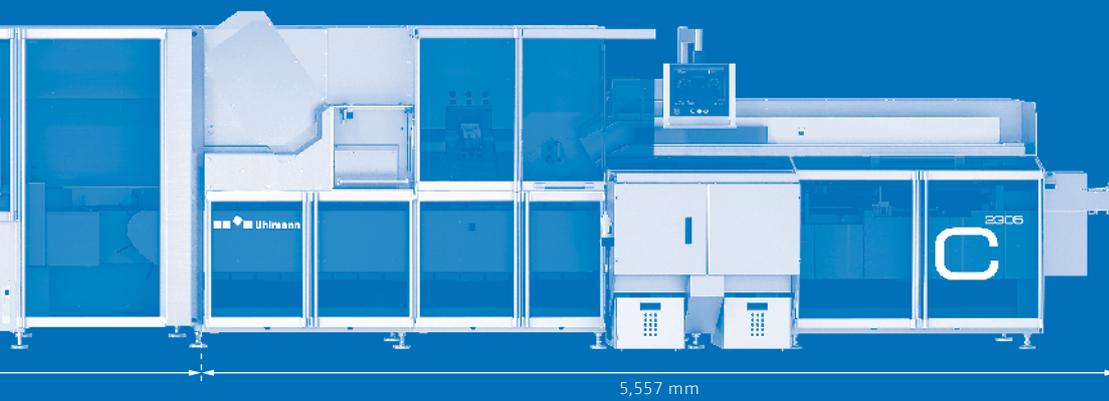


Blister machine BLU 400

Output	max. 400 blisters/min.
Mode of operation	single stroke, single- to eight-lane
Scope of application	liquid dose products
Sealing principle	platen sealing
Blister size	max. 195 x 284 mm
Forming depth	max. 42 mm
Reel diameter	forming material max. 800 mm lid material max. 400 mm
Processable forming materials	PET, PET/PP, PET-G, PVC
Processable lid materials	Al, PET, paper, Tyvek ^{®**}

* BLU 400 with SyPro feeder as well as sealing and punching station
BLU 400 with LiPro feeder and punching station: 7,341 mm

** Function available soon.



Cartoner C 2305

Output	max. 300 cartons/min.
Mode of operation	continuous
Carton size [A x B x H]	max. 105 x 105 x 155 mm
Pitch	5"
Blister stack height	max. 100 mm
Types of closure	tuck-in, hot-melt, fourth flap

To find your personal contact person and our locations worldwide please visit www.uhlmann.de



THE **HEARTBEAT** OF PHARMA PACKAGING

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