



BOTTLE LINES FOR SOLID DOSE PRODUCTS

INTEGRATED SYSTEMS FOR
EFFICIENT PACKAGING.

Those wishing to achieve top performance must focus passionately on a goal. True to this maxim, Uhlmann has concentrated for 70 years on one issue: pharmaceutical packaging. Every Uhlmann packaging solution unites excellent technology and sound knowledge of current and future needs of the pharmaceutical sector. Markets and demands undergo constant change – we offer you a holistic range of machines, services, and digitalization solutions aligned to your specifications. Uhlmann promises you 360° PHARMA PACKAGING. And assures you 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 international position is chiefly ascribed to one factor: your trust in the excellence of our global team – a team that stands out by thinking and acting holistically in pharmaceutical dimensions. Strong, open-minded, and reliable.



UHLMANN. PARTNER FOR 360° PHARMA PACKAGING.

WE HONOR THIS PLEDGE ALL OVER THE WORLD AND COMPLEMENT IT WITH SPECIAL ADDED VALUE DAY AFTER DAY. WITH TAILORED MACHINES, COMPREHENSIVE SERVICES, AND FUTURE-ORIENTED DIGITALIZATION SOLUTIONS.

CAN SOLID DOSE PRODUCTS BE PACKAGED IN BOTTLES WITH 20 PERCENT GREATER EFFICIENCY?

Yes, definitely, providing a variety of bottle shapes can be processed at a consistently high speed. A format changeover takes only a matter of minutes. The bottle transport is guided and gentle to the products. Tablet or capsule feeding and counting is 100 percent accurate. The individual steps are highly automated. The control of all stations is central and operation intuitive.

We have taken all these productive features into account and designed a compact, monoblock machine that optimally coordinates the individual process steps. The outcome, on average, is 20 percent* greater efficiency in the packaging of solid dose products in bottles. Using the Bottle lines IBC 150 and IBC 240.

*Based on the following: Output IBC 150: 150 bottles per minute, IBC 240: 240 bottles per minute; two-shift operation with three different formats; one format changeover and one cleaning process per day.

IBC 150, IBC 240. ONE CONCEPT. TWO OPTIONS FOR EFFICIENCY IN BOTTLES.

Two bottle lines – one integrated, flexible, and productive machine concept. A process structure with guided bottle transport and a shift register that follows each individual process step. A GMP-compliant, modular table-top design that allows the integration of additional functions.



Two options that package tablets and capsules in bottles far more efficiently than previously. The Bottle line IBC 150 is for small to medium-sized batches and the IBC 240 for non-stop counting and packaging. Both lines can be combined perfectly with other machines from our portfolio, such as the Labeler L 180, a cartoner, or an end-of-line machine, and fitted with Track & Trace by Uhlmann.



The Bottle line IBC 240: integrated and pharmaceutically compliant.

A continuous-motion, high-performance bottle line that integrates all stations for the end-to-end packaging of solid dose products. The forcibly guided bottle transport maintains consistent and reliable operation at maximum speed.

Max. output: 240 bottles/min.
Max. counting capacity: 42,000 products/min.

The Bottle line IBC 150: compact and flexible.

The format-free bottle transport of the IBC 150 makes it ideal for the packaging of small to medium-sized batches of solid dose products. The line processes a variety of bottle shapes, heights, and diameters. As few format parts are used, a format changeover is completed quickly. The touch of a button suffices to adjust many of the stations. Resetting to a new bottle height, for example, is automated.

Max. output: 150 bottles/min.
Max. counting capacity: 24,000 products/min.

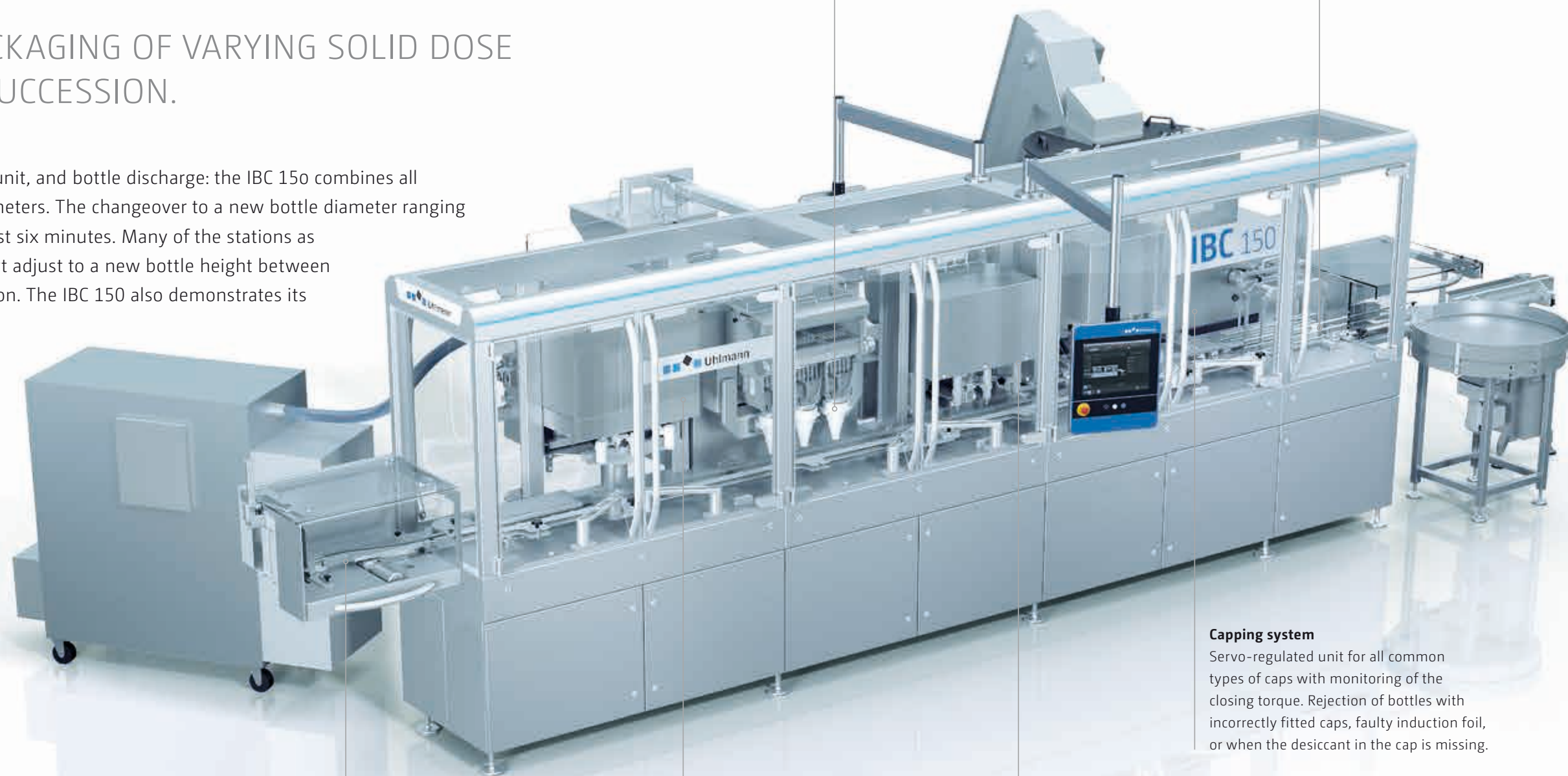
THE IBC 150. ABSOLUTELY FLEXIBLE.

THE PROFITABLE PACKAGING OF VARYING SOLID DOSE BATCHES IN QUICK SUCCESSION.

Bottle infeed, tablet counter, capping unit, and bottle discharge: the IBC 150 combines all stations over a length of around five meters. The changeover to a new bottle diameter ranging from 25 to 125 mm is completed in just six minutes. Many of the stations as well as the format-free bottle transport adjust to a new bottle height between 45 and 200 mm at the touch of a button. The IBC 150 also demonstrates its flexibility when it comes to tailored extension options to incorporate additional functions, integrate Track & Trace applications, or make an Uhlmann SCADA connection.

Optional Additions:

- Extraction system when handling dusty products
- Integration of dry-air or nitrogen flushing
- Camera system for tablet inspection
- Vibration module for full bottles and angular products
- Tare/gross weight weighing system



Tablet counting and feeding system

Counting unit with infrared technology for 100 percent counting accuracy, scalable performance for a higher bottle output or counting capacity – or a combination of both.

Bottle discharge

Monitored transfer of saleable bottles to the next process step. IPC products leave the line via a special conveyor.

Bottle infeed

Guided, intermittent-motion transport throughout the entire packaging process using a rake system. No micro-stops or ramp-up phases.

Desiccant feeding

Optional: an enclosed system for up to three desiccant portions per bottle, monitored by light barriers. Modular option for the handling of canisters.

Capping system

Servo-regulated unit for all common types of caps with monitoring of the closing torque. Rejection of bottles with incorrectly fitted caps, faulty induction foil, or when the desiccant in the cap is missing.

Cotton wad feeding

Optional: for wads made of all commonly used materials. Monitoring of presence and insertion.

Don't let go: bottle transport.

Responsible for the guided, intermittent, uninterrupted transportation of the bottles is a format-free rake that governs the process from the infeed, during desiccant and tablet feeding, through to the end of the machine. No congestion, no jams, no micro-stop, nor ramp-up phases. The master shift register recognizes the position of every single bottle and thus allows 100 percent monitoring. At the discharge, only saleable bottles are forwarded for further processing, e.g., labeling using the Labeler L 180.



DETAILS OF THE IBC 150 – YOUR LEADING EDGE.

ATTRIBUTES THAT GIVE YOU ADDED VALUE.

Format changeover in around 40 minutes.

Format data logged in the SmartControl operating system assists fast resetting of the IBC 150. The job of running the line empty, removing format parts, inserting format sets, and filling with products and caps is completed in approximately 40 minutes. The changeover to a different bottle diameter takes only six minutes. Many of the stations and the bottle transport adjust automatically to new bottle heights at the touch of a button.

Fast and simple line clearance.

The smooth stainless steel surfaces and the conveyor-free transport system are easy to clean. The good visibility afforded by the cGMP-compliant, table-top design permits reliable line clearance, while the protective, shatterproof doors allow easy access from the operating side and the rear of the machine.

Smart down to the last detail.

- Web technology for the full integration of machines and aggregates from other manufacturers
- Uhlmann apps for the easy integration of supportive operator functions
- Automated generation of production and parameter records in compliance with FDA regulation 21 CFR Part 11

Everything at a Glance

The intuitive operation of the IBC 150 via a SmartControl panel simplifies monitoring and operation of the line. Mounted on an adjustable arm, the panel can be set to the respective position of the operator. A second, optional panel on the rear side of the line further reduces walking distances.



THE IBC 240. PURE EFFICIENCY.

NON-STOP COUNTING AND PACKAGING: WITH AN END-TO-END SYSTEM THAT MEETS YOUR REQUIREMENTS.

The transportation of round, oval, or rectangular bottles, the filling of an accurately counted number of tablets, capping, monitoring, and the releasing of only saleable bottles are the process steps integrated into a productive unit measuring 6.75 m in length: the IBC 240. To ensure that this unit suits your specifications, you have the choice between five, six, or seven counting modules for 30,000, 36,000, or 42,000 tablets per minute at the respective maximum bottle output. Supplementary modules such as an extraction system for products, a camera system for tablet inspection, a metal detector, and a station for induction sealing are also available.

Tablet counting and feeding system

Counting unit with infrared technology for 100 percent counting accuracy and a scalable output for a higher bottle output or counting capacity – or a combination of both.

Bottle infeed

End-to-end, guided transport through the packaging process using feed screws. No micro-stops or ramp-up phases.

Desiccant feeding

Optional: an enclosed system for up to three desiccant portions per bottle, monitored by light barriers. Modular option for the handling of canisters and sachets.

Tare/gross weight weighing system

Weighing cells before and after tablet filling. The master shift register records the weight of every bottle and controls their release to downstream processes.

Capping system

Servo-regulated unit for all common types of caps with monitoring of the closing torque. Rejection of bottles with incorrectly fitted caps, faulty induction foil, or when the desiccant in the cap is missing.

Station for induction sealing

Module with an integrated sealing unit ensuring consistent sealing quality based on speed-related regulation. Automatic adjustment to new bottle heights.

Bottle discharge

Monitored transfer of saleable bottles to the next process step. IPC products leave the line via a special conveyor.

Metal detector

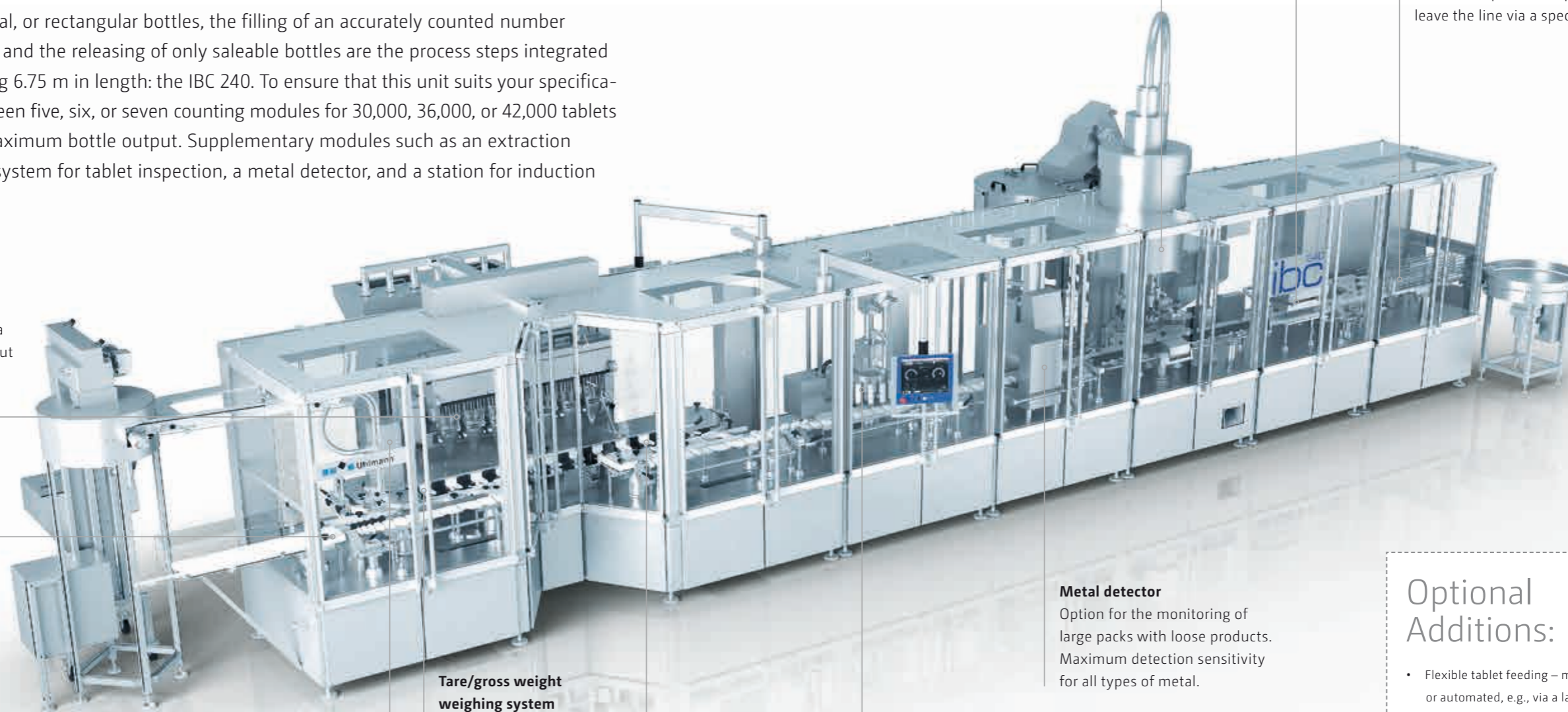
Option for the monitoring of large packs with loose products. Maximum detection sensitivity for all types of metal.

Cotton wad feeding

Optional: for wads made of all commonly used materials. Monitoring of presence in the feeding unit before and after bottle transport.

Optional Additions:

- Flexible tablet feeding – manual or automated, e.g., via a large bulk container or tablet lifts
- Integration of dry-air or nitrogen flushing
- Vibration module for full bottles and angular products



DETAILS OF THE IBC 240 THAT CATCH THE EYE.

ATTRIBUTES THAT GIVE YOU ADDED VALUE.

Diversity competently processed.

Whether round, oval, or rectangular bottles out of plastic or glass: the IBC 240 processes all shapes and both materials equally fast. Bottle heights range from 48 to 193 mm, diameters from 35 to 100 mm. Furthermore, the range of tablet and capsule sizes is wide: solid dose products may be 2 x 2 mm to 30 x 20 mm in size.

Adaptable to future needs.

The modular concept allows adaptation of the line to suit the application. The addition of other functions to meet changed specifications is possible at all times. Moreover, the IBC 240 fits perfectly in the process chain. It can be combined with the Labeler L 180, cartoners, or end-of-line packaging machines, and Track & Trace by Uhlmann.

Fast and easy line clearance.

Smooth, stainless steel surfaces and a transport system without conveyor belts allow optimum cleaning. The cGMP-compliant, table-top design gives a clear view for reliable line clearance, while the protective, safety-glass doors permit easy access from the operating side and the rear of the machine.

- 1 Capping unit**
The servo-regulated unit incorporates monitoring of the closing torque, and the adjustment to new bottle heights is automatic.
- 2 Gripper units**
A quick-release system permits easy opening of the cap grippers for adjustment to a new cap diameter.
- 3 Format changeovers**
These are foolproof and completed in a matter of minutes. The feed screws are easily accessible and the plug-in system allows a tool-free changeover involving just a few steps. All format data is stored in the central operating system and can be accessed at all times.
- 4 Bottle transport**
Coordinated feed screws gently guide the bottles through the process with no congestion or jamming. As no ramp-up phase is needed after a product changeover, full capacity transport from the beginning enhances efficiency. Another feature contributing to maximum uptime: the bottle infeed matches the counting capacity – should a counting module be out of operation, the speed automatically adjusts.





NONE TOO MANY, NONE TOO FEW

ACCURATE, TOP PERFORMANCE:
COUNTING MODULES FOR ONE HUNDRED PERCENT
CORRECTLY FILLED BOTTLES.

Tablets, coated tablets, caplets, capsules, or special rhombus-shaped or octagonal products, for example: Cremer counting modules in the IBC 150 and IBC 240 work with infrared technology to ensure consistent accuracy so, whatever the product, the correct number is filled into each bottle. What is more, the six feed tracks allow a 40 percent higher output compared to similar machines. Optional additions include the integration of an extraction system when handling very dusty products, dry-air or nitrogen flushing, or a camera inspection system to verify the correct shape, color, and type of product.

Proven mode of operation.

From the product reservoir to the bottle: all steps take place in a closed process. A second separating flap in the tablet counter increases the counting capacity and decreases the feed height. The tablets reach the bottle safely. By adding a bulk container or tablet lifts, for example, automated filling of the tablet counter reservoir is possible. Alternatively, the low height of the hopper permits manual feeding.

Scalable output.

The basic version of the IBC 150 is fitted with two counting modules. Up to four can be integrated for higher counting capacities. The IBC 240 tablet counter is available with five, six, or seven counting modules and can count up to 42,000 tablets per minute for bottle filling.

Left: Cremer feeding and counting unit in the IBC 150 with three counting modules for a capacity of 18,000 tablets per minute.



THE L 180. COST-EFFICIENT AND FLEXIBLE.

CONTINUOUS LABELING, MARKING, AND INSPECTION OF DIFFERENT CONTAINER SHAPES.

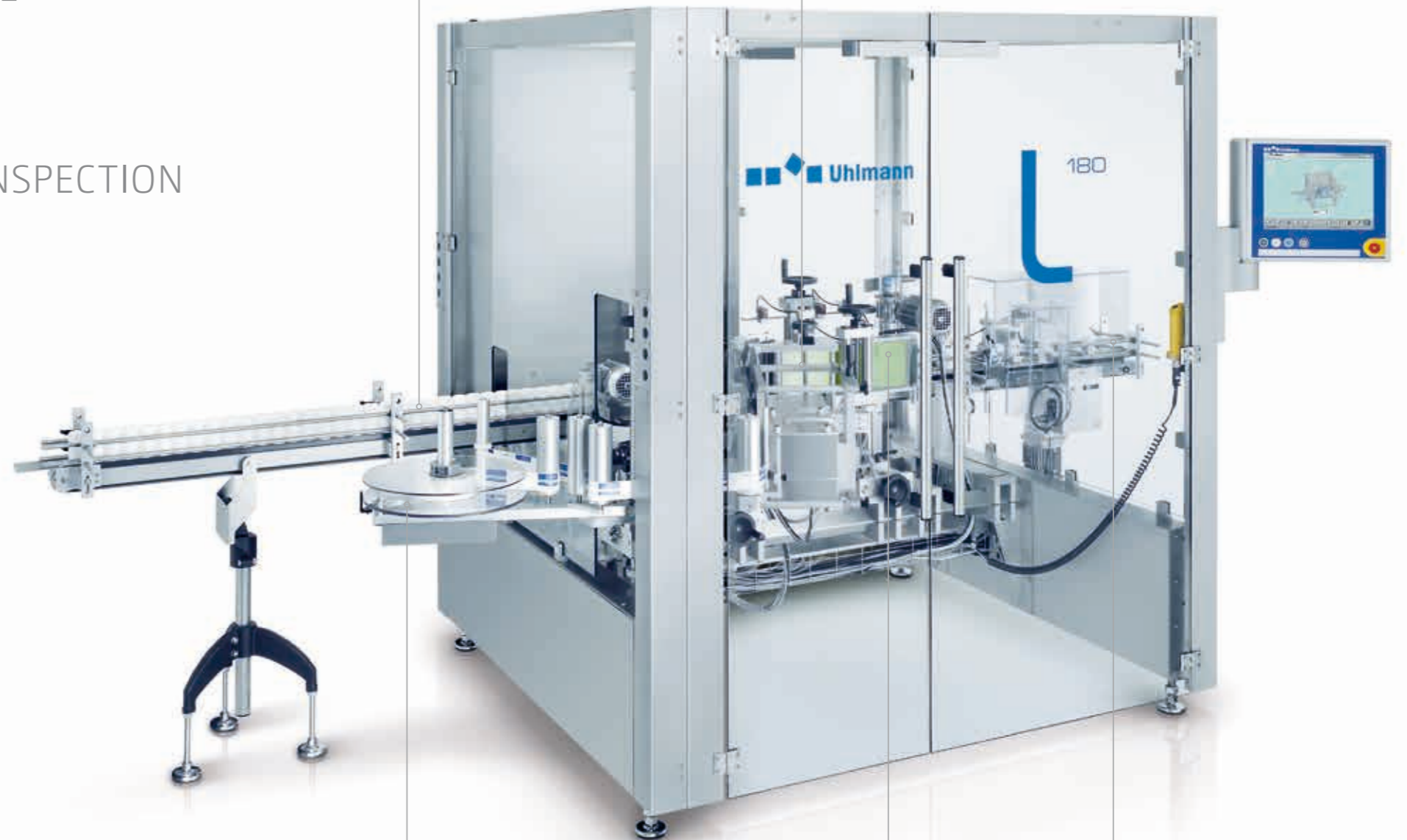
The Labeler L 180 is a continuous-motion system ideally suited to the Bottle lines IBC 150 and IBC 240. It accurately labels up to 180 round and up to 165 rectangular or oval bottles per minute. It is capable of various forms of application: full wrap-around, three-sided, or front and back labeling. No tools are required to change to different bottle heights and diameters, while all format settings can be stored and reproduced. Bottles without labels are removed from the process and the optional "label sort out" function also rejects labels with faulty printing.

Maximum pharmaceutical reliability with Track & Trace by Uhlmann

Whether machine-readable codes, serialization, or tracking and tracing: the appropriate systems can be integrated into the L 180 to meet the respective specifications. Hot-stamping units and thermal transfer, inkjet, or laser printers are available for marking, in addition to cameras, scanners, sensors, and code readers for inspection. Systems to check print integrity and label presence are further options.

Learn more about
Track & Trace by Uhlmann.

www.track-and-trace-by-Uhlmann.com



Bottle infeed

Guided and intermittent with a separating wheel for systematic infeed. Optional verification of the 2D code on the base of each bottle.

Label unwind

Tool-free, quick exchange of the label and backing paper reels up to 400 mm in diameter. Optional: double label dispenser unit with splice function.

Label dispenser

Adjustable in height for accurate application at a maximum speed of 75 m/min. Large format area for round, oval, and rectangular bottles. Optional station to turn the bottles for labeling on the narrow side.

Pressing station

Labeling on more than one side possible by way of a side station with pressure rollers. Monitoring of label presence.

Bottle discharge

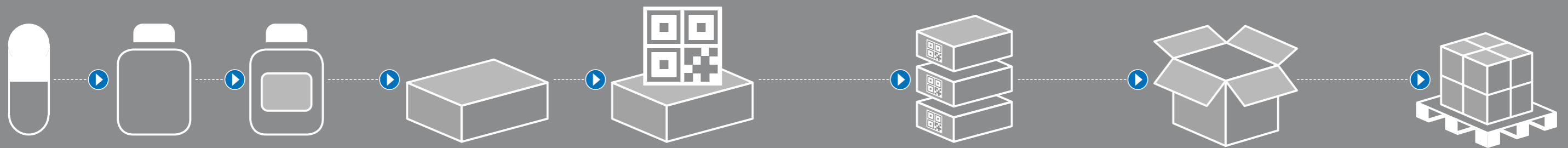
100 percent "good product" philosophy: only saleable bottles are transferred to the next process. Faulty bottles are selectively discharged, including ejection counter-check.

ALL ALONG THE LINE: PRODUCTIVE AND RELIABLE.

COUNTING OF SOLIDS AND PACKAGING IN BOTTLES, CARTONS, BUNDLES, CASES, AND ON PALLETS. IN AN INTEGRATED LINE, INCLUDING SERIALIZATION.

The ideal process chain for the end-to-end packaging of solid dose products in bottles starts with the Bottle line IBC 150 or IBC 240, followed by the Labeler L 180, and continues with cartoners and end-of-line packaging machines from the Uhlmann portfolio. These are configured in compliance with the specifications to form a productive line for primary and secondary packaging.

Various solutions are available for the integration of Track & Trace by Uhlmann: these may be inline with tailored printing and inspection systems, or make use of the individually configurable options of the Uhlmann Serialization Platform USP.



Bottle lines

IBC 150
max. 150 bottles/min.
max. 24,000 products/min.

IBC 240
max. 240 bottles/min.
max. 42,000 products/min.

Labeler

L 180
max. 180 bottles/min.
(round)
max. 165 bottles/min.
(rectangular, oval)

Cartoners

C 2155
max. 150 cartons/min.

C 2156
max. 150 cartons/min.

C 2206
max. 200 cartons/min.

C 2305
max. 300 cartons/min.

Track & Trace

USP
max. 300 cartons/min.

ULP
max. 300 cartons/min.

UAP

Stretch-banding machines, overwrapper

S 3015, S 3025, S 3040
max. 150/300/400 (500*) cartons/
min. or 15/30/40 (50*) bundles/
min.

E 3040
max. 400 (500*) cartons/min.
or 40 (50*) bundles/min.

E 3060
max. 500 cartons/min.
or 60 bundles/min.

Case packer

E 4004, E 4012
max. 300/500 cartons/min.
in 4/12 cases

E 4010t
max. 300 cartons/min.
max. 265 bottles/min. in 10 cases

Case Packaging Center 10 with Case packer ...

E 4010t
max. 300 cartons/min.
max. 265 bottles/min. in 10 cases


Palletizer

P 5010
20 movements/min.
10 palletizing cycles/min.

... and Palletizer

P 5010
20 movements/min.
10 palletizing cycles/min.

*optional output upgrade

A photograph of two men in dark suits shaking hands. The man on the left is in the foreground, looking towards the right. The man on the right is in the background, looking towards the left. The background is a bright, slightly blurred office or industrial setting.

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.

UHLMANN CUSTOMER SERVICES.

AROUND THE CLOCK, AROUND THE WORLD,
ALL-AROUND SUPPORT.

It makes no difference which bottle line for solid dose products you have in operation: top machine quality is just one factor governing a successful production process. Uncompromisingly good, perfectly coordinated human-machine interaction is just as important. Our Uhlmann Customer Services division exists for this reason. Five areas offer you all-around support:

- **Support services** for your operations
- **Maintenance services** for your machines
- **Productivity services** for your company
- **Training services** for your employees
- **Format parts** for your production process

Over 400 service experts at 15 locations worldwide are at your disposal!



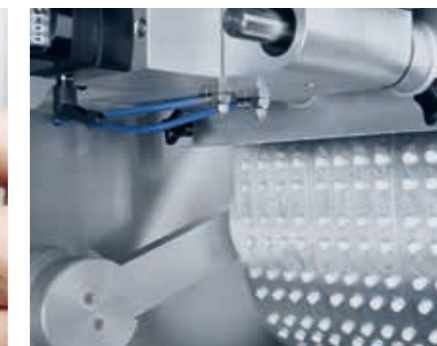
Always at your disposal: Support services

You require a spare part? A software performance upgrade? Assistance when understaffed? Whatever the case may be, our services offer a clever solution to meet every need. Support that is prompt, straightforward, and personal. Via telephone, online, or on site. Modular service packages provide the right amount of assistance needed for your production process. And should you wish to relocate a machine or validation is required, we can take the pressure off you.



Always in top form: Maintenance services

You want flawlessly maintained equipment to ensure long-term operational reliability? You can keep the mechanics, electrics, and software in perfect condition with our maintenance services, and the know-how of your machine personnel is always up to date. Our range of options is as varied as your requirements: in addition to inspection and maintenance packages, these services include preventive measures on the basis of FMECA, repairs, and calibration.



Always efficient: Productivity services

Are you faced with ever-increasing productivity and flexibility demands? You regularly need to respond to new standards and legislation? Rest assured that our productivity services can help. You are updated at all times. In addition to mechanical and electrical upgrades, we offer a modular package of options to increase your production efficiency.



Always a good idea: Training services

You wish to enhance the motivation and competence of personnel operating your machines? We offer effective training and qualification options covering all areas of work. Suitably instructed, your employees are able to carry out maintenance jobs independently or perform format changeovers professionally. Whether in the form of open training courses or as part of an on-going training program, whether at your premises or at our training center – we tailor the courses to your individual needs.



Always OEM quality: Tools and format parts

You expect top quality down to the last detail? We also offer best-in-class quality tools and format parts for bottle lines for solid dose products. Such parts are much more than mere machine components: they are productivity factors. Their performance impacts on your operational success. That is why we tailor them to the product you wish to package, the materials you use, your packaging process, and your ongoing operation. Testing takes place on Uhlmann machines. All in all, an unmatched, all-inclusive package.



Learn more about
Uhlmann Customer Services

Your Benefits:

- You save time and money
- Your bottle line retains its value and is reliable
- You benefit from up to 20 percent added productivity
- You are assured of maximum machine availability and efficiency
- You receive format parts and tools in unique, OEM quality

CLEAR FACTS. OBVIOUS BENEFITS.

THE TECHNICAL DATA OF THE IBC 150, IBC 240,
AND L 180.

	Bottle line IBC 150	Bottle line IBC 240
Output	max. 150 bottles/min.	max. 240 bottles/min.
Counting capacity	max. 24,000 products/min.	max. 42,000 products/min.
Counting accuracy	100%	100%
Bottle transport	intermittent	continuous
Solid dose products	tablets, capsules	tablets, capsules
Tablet length	3–30 mm	2–30 mm
Tablet width/ diameter	3–20 mm	2–20 mm
Bottle volume	30–1,500 cc	30–950 cc
Bottle material	HDPE, glass	HDPE, glass
Bottle shape	round, rectangular, oval	round, rectangular, oval
Bottle diameter	25–125 mm	35–100 mm
Bottle height	45–200 mm	48–193 mm
Types of closure	screw and snap caps, child-resistant caps	screw and snap caps, child-resistant caps

Labeler L 180	
Output	max. 180 bottles/min. (round) max. 165 bottles/min. (rectangular, oval)
Operating mode	continuous
Bottle material	plastic, glass
Bottle shape	round, rectangular, oval
Bottle diameter	25–125 mm
Bottle edge length	30–60 mm
Bottle height	45–200 mm
Label dispensing head speed	max. 75 m/min.
Label backing paper width	max. 170 mm

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



THE **HEARTBEAT** OF PHARMA PACKAGING

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