

DPI BLISTER FILLING TECHNOLOGY



Advanced blister filling & assembly systems for Dry Powder Inhalers





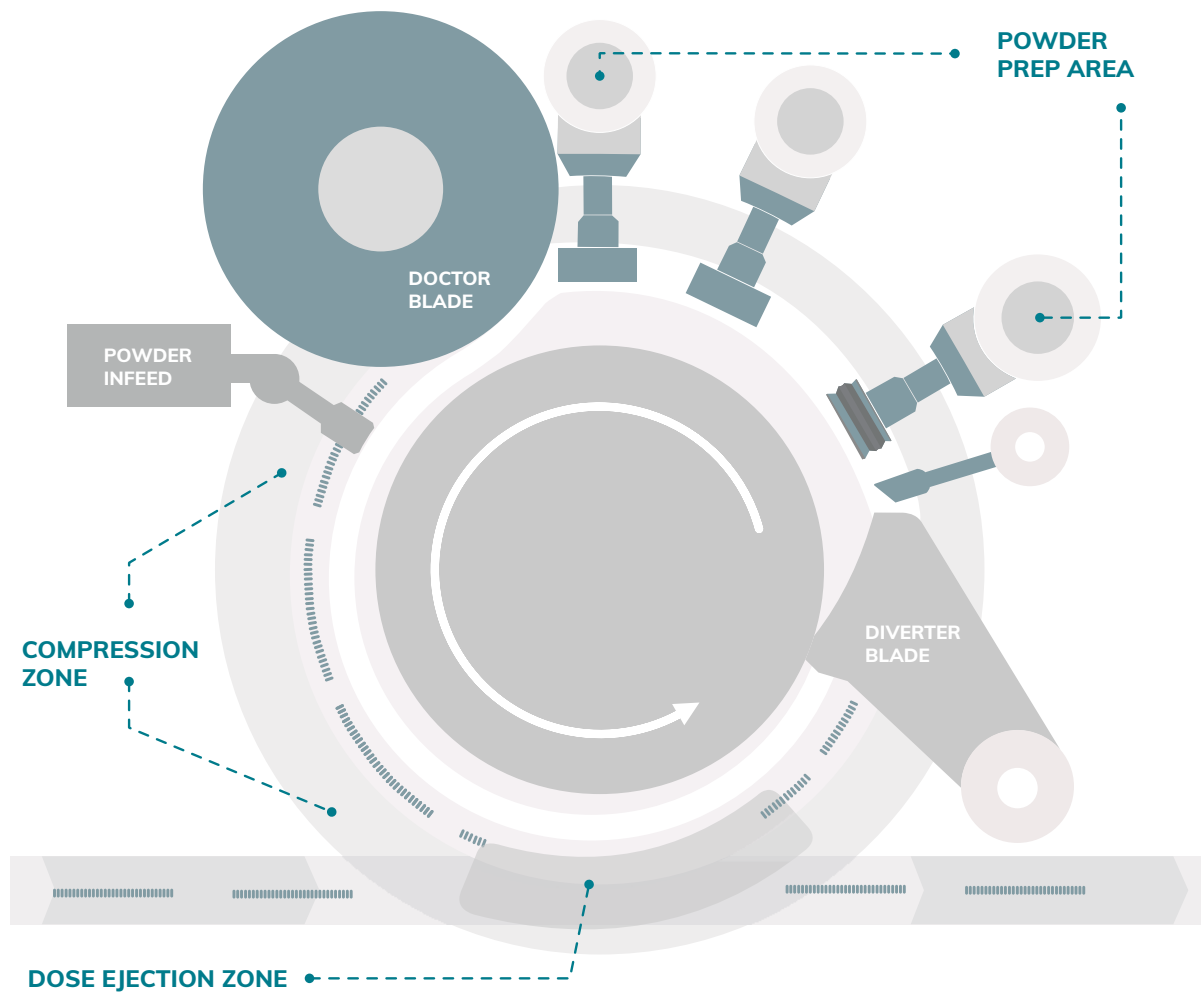
DPI BLISTER: FILL TECHNOLOGY

Introducing our blister fill technology. Scalable blister filling solutions from lab to commercial.

Engineered to meet the growing demand for respiratory therapies.

HOW DOES IT WORK?

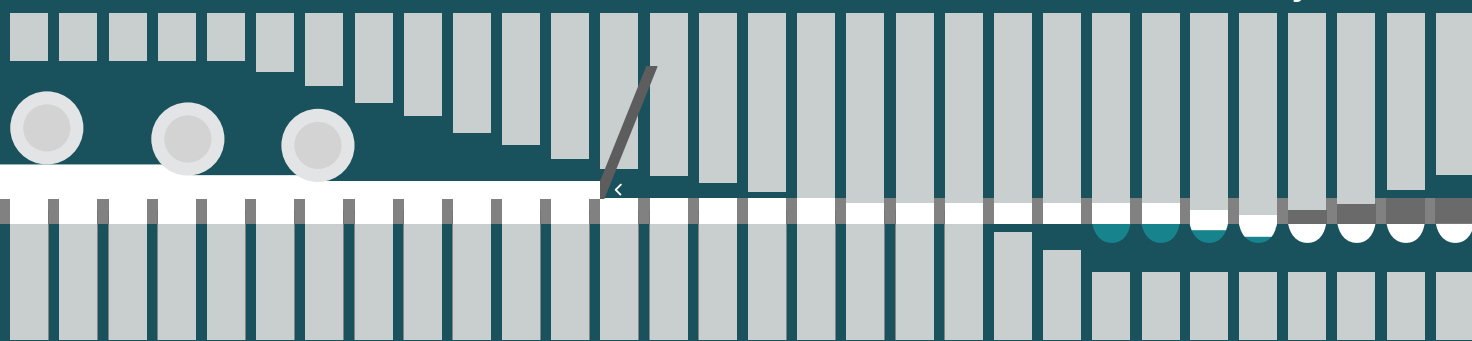
Our rotary turret uses proven, tablet-press-based principles. **It progressively compresses powder into small pockets on a continuously rotating disk** using a combination of rotors and pins. The resultant doses are then transferred to blister strip as it passes underneath the disk. The doses are only very **lightly compressed** and break up shortly after transfer and during the sealing process.



POWDER PREP

COMPRESSION

DOSE EJECTION



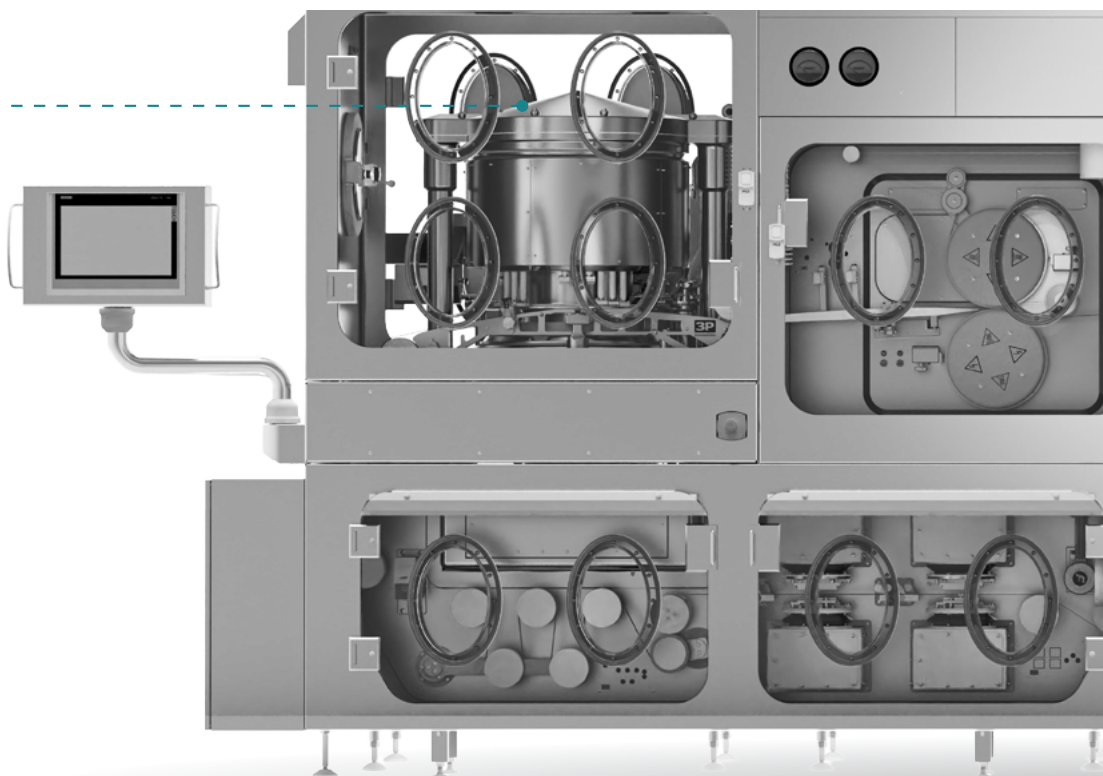
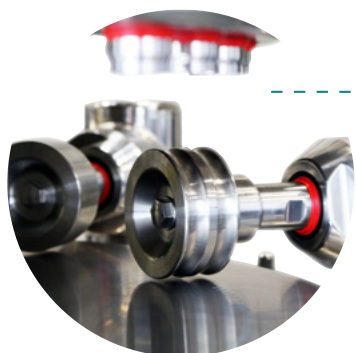
SCALABLE BY DESIGN

Our fundamental process has been designed with scalability in mind, each system shares the same filling core technology and is scalable from lab to high-speed commercial production.

This ensures that performance characteristics observed during early development can be directly replicated at larger scales, eliminating uncertainty often associated with scale-up.

- Intermittent forming, continuous filling and sealing, up to 30 strips per minute.
- Continuous forming, filling and sealing up to 240 strips per minute.

ROTARY TURRET





LAB SCALE OPTION

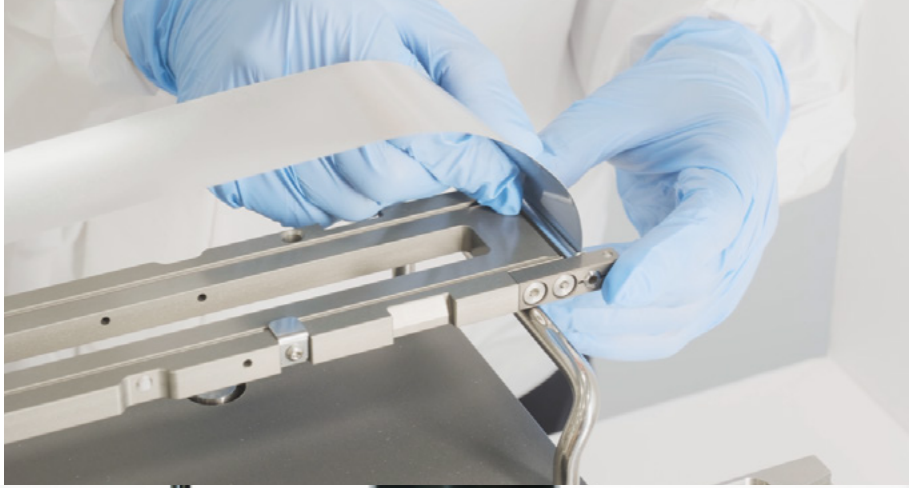
- **Precision-controlled dose weights** minimise product waste during clinical development process.
- **Accurate and consistent dose weights** throughout the strip.
- **Clean filling & ejection system** prevents web contamination, avoiding downstream issues with sealing and peel force.
- **Optimised dose compression** enhances aerosolisation and maximises the emitted dose, ensuring reliable production of products that meet the device's critical quality attributes (CQAs).
- Compatible with **magnesium stearate-based formulations**.
- **Best-in-class peel strength results** support consistent product quality and usability.

BENCHTOP BLISTER FILLER



BENCHTOP BLISTER FILLING PROCESS STEPS:

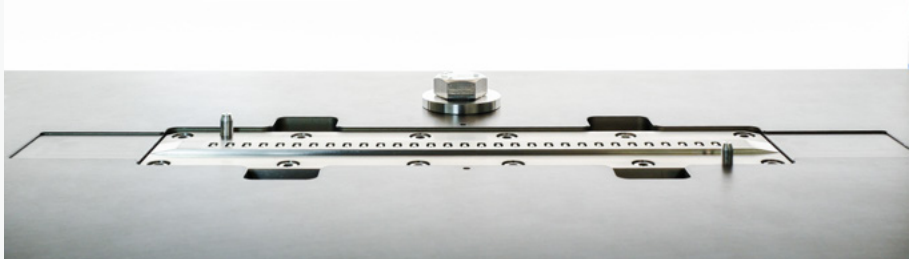
After cutting to length, base and lid foils are tensioned on a carrier plate.



FORM

Tensioned foil is placed in the forming module.

Pockets are pressed into the strip, shaped to the target dose size.



FILL

Compaction: Two sets of die punches partially compress powder into pellets and eject them into the strip pockets.



SEAL

Dosed strip is loaded into the sealing module.

Dosed strip carrier assembly sealing.



CUT

Length and width cutting of sealed blister strip.

Final blister strip product.





PRINCESS ROYAL
TRAINING AWARDS



SMART ENGINEERING. INNOVATION BEYOND AUTOMATION

3P innovation is the UK's leading supplier of aseptic fill-finish equipment, trusted by multinational clients to bring innovative products from concept to market. With over 1,000 years of combined engineering expertise, we provide end-to-end support for product development, production, and commercialisation.

pharma equipment

Pharma equipment is our unique portfolio designed to support you through the different phases of your product life cycle - from initial drug development, through clinical stage manufacturing and on to commercial scale production. With a focus on quality, our ranges have been developed to meet our core values of 'process understanding' and scalable methodology.

custom automation

Custom automation is our traditional area of business, working collaboratively with clients to support product and process innovation and development. We specialise in: liquid & powder fill-finish, aseptic manufacturing, device test & assembly and web-based material handling.

customer care

Our dedicated **customer care** department offers a comprehensive range of support services, backed by our machinery technicians and engineers. We provide ongoing support throughout the complete life-cycle of your machine.

BOOK A DISCOVERY CALL

Get in touch with one of our engineers to discuss your product, process or production needs.



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