

Mpac Lambert Dry Powder Inhaler (DPI) Blister Filling System

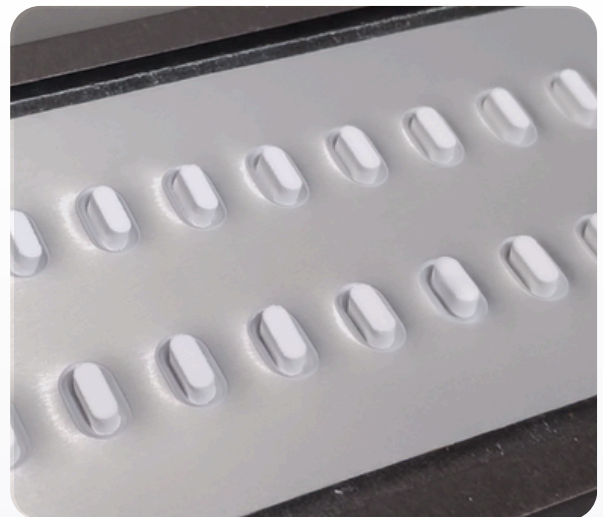


DPI Blister Filling System

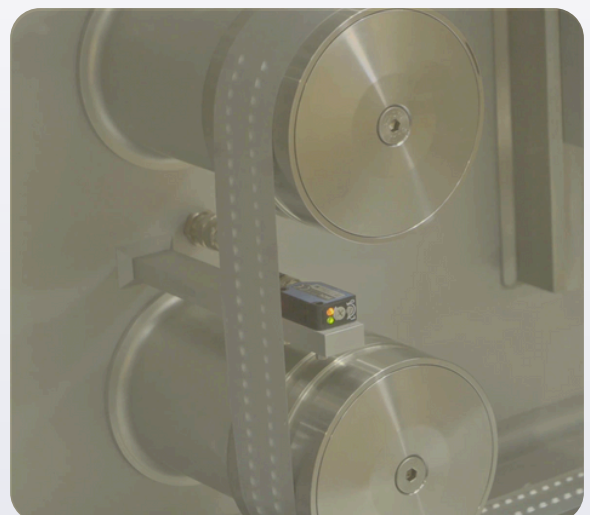
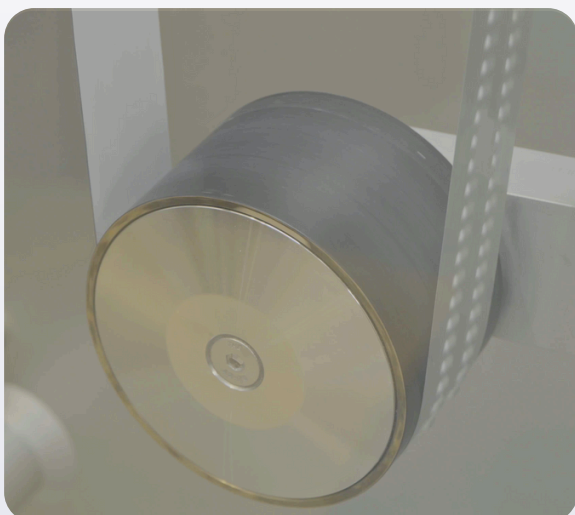
Mpac Lambert's Dry Powder Inhaler (DPI) Blister Filling System is a high-precision micro-dosing system, which also forms the pockets and seals the surface of blister strips that contain Active Pharmaceutical Ingredients (APIs) used to relieve symptoms of Chronic Obstructive Pulmonary Disease (COPD) & asthma.

Our system is specifically designed to handle API combinations using excipient blended powders such as lactose with a magnesium stearate additive, that assist powder flow, dispersion and stability, to improve delivery of medication to the lungs.

API combinations need controlled handling to prevent powder leakage into the automation environment. If the powders coat the surface of the blister strip they prevent effective sealing. Our filling process directly and precisely doses each individual pocket in the blister strip with powder, leaving the surface clean and ensuring the integrity of the seal.



The most popular DPI device on the market contains at least one strip produced by our system. A powerful real-world demonstration of our innovation, expertise and the longevity of our automation solutions.





DPI Blister Filling System

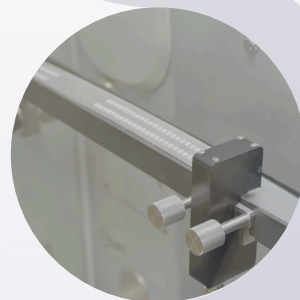
Controlled Forming, Filling, & Sealing

Our DPI Blister Filling System is engineered to ensure precision and control across the production line. The system is designed to maintain tension and accuracy of the strip position to ensure clean and correct dosing of powder into the blister strip, effective sealing against leakage and clear printing for batch tracking and quality control. We meet CE, UKCA, UL requirements & use GAMP to support pharmaceutical requirements.



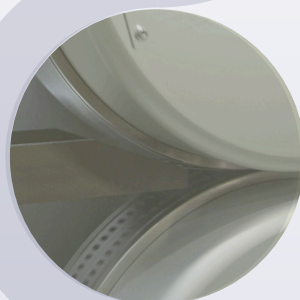
Forming Station

The base foil unwind provides precise tension control for the web and active web tracking alignment, whilst the web material is fed into the machine. These ensure accurate web positioning and tension throughout the forming process. Continuous cold forming accurately creates pockets in the required format and placement along the length of the foil reel. Format specific modules can be ordered for different strip dose configurations: 60, 30, 14 or 7. Pinhole and micro tear detection is completed prior to filling to confirm integrity of the material.



Filling Station

A powder feeder controls the flow of powder into our innovative rotary blade system. Effective web tension control maintains positioning of the blister strip for accurate depositing of powder. Registering is checked by sensors that ensure that each dose aligns exactly to the position of a pocket, then doses the powder precisely into each cavity. Fill verification checks confirm the dose has been deposited cleanly, without the powder contaminating the strip surface.



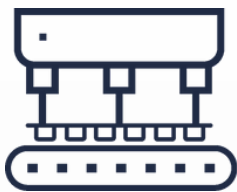
Sealing Station

The lid foil unwind maintains tension in the sealing process, with active web tracking facilitating alignment of the lid foil with the base foil. The lid foil is applied to the powder filled strip and heat sealed, preventing potential leakage or contamination, and preserving dose integrity. The strip is printed with clear and exactly positioned information, then print verified for effective batch tracking. After trimming to the correct width, the strip is rewound onto spools, ready for further processing into the DPI inhaler.



Precision Powder Processing

Mpac Lambert has decades of experience in supplying forming, filling and sealing automation to market-leading inhaler manufacturers. Our systems can be found in production lines for DPI inhalers across the world. Our long-term success in the industry has been achieved by offering consistently effective and scalable automation solutions. Our designs are adaptable as our customers evolve, from benchtop, to small batch to high volume production, paired with responsive and cutting-edge support to ensure long-term productivity and reliability.



High Precision Dosing

Precise dosing directly into formed pockets, ensures consistent drug delivery and minimum waste of powder.



Clean & Safe Processing

Direct dosing of powder into pre-formed pockets, avoids contamination of the strip surface and potential leakage of powder.



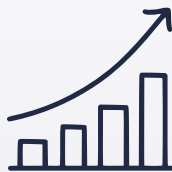
Effective Sealing

Ensuring the strip surface is free of powder removes the need for any secondary cleaning before effective sealing can take place.



Consistency & Control

Our established & proven inspection, tracking and verification process, provides alignment, control and consistency at every stage.



Flexible & Scalable

Adaptable for different strip formats, powder formulations, a range of dose weights, speeds & throughputs and scalable to your production needs.



Service & Support

We offer full-service plans to boost productivity and extend machine life with proactive maintenance and expert support.



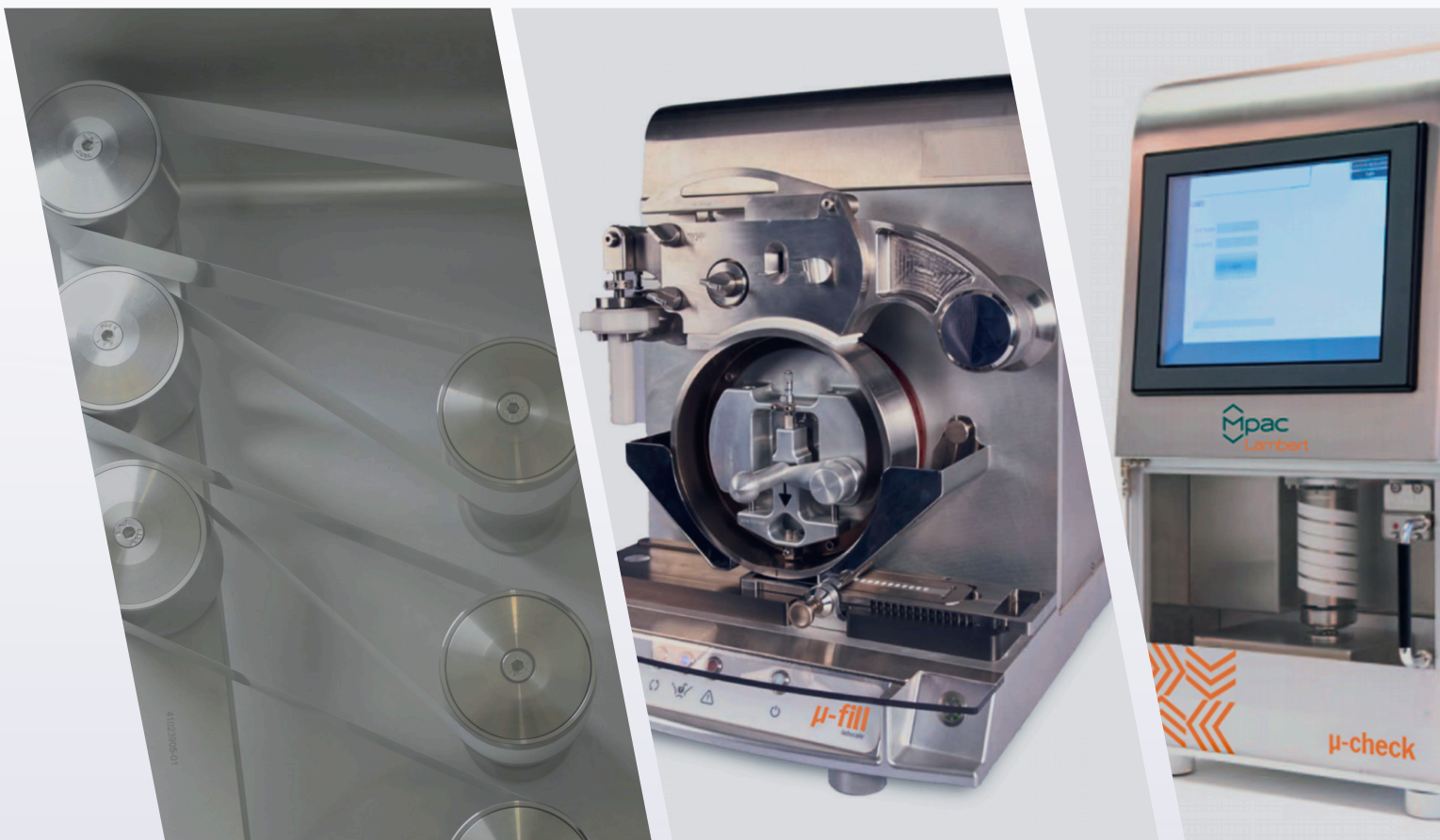
Scalable Solutions

Mpac Lambert provide supporting equipment and automation designs that complement the DPI Blister Filling System. From checkweighers, to low throughput machine designs - we cater for customers who are still validating their products all the way to commercial production scale.

The μ -fill lab scale is a cost-effective, semi-automated benchtop system, designed for the accurate filling of pharmaceutical powders into preformed blisters for Dry Powder Inhalers (DPIs). It delivers repeatable, consistent doses during R&D or pre-clinical stage product development activities and is a scalable solution for filling a range of powder cohesivities and dose weights (5mg to 20mg).

The μ -check system - an easy-to-use automatic system for weighing the contents of powder-filled blister packs or disks in a controlled and reliable manner (readability of 0.01mg).

Automation for R&D scale validation, micro testing & analysis, strip handling and cutting, coiling and inserting strips, up to full assembly of the DPI device, can all be designed to your production line specification. Alongside assembly automation, as part of the Mpac Group we can offer top-of-the-line packaging automation and full line manufacturing solutions.





About us

Mpac Lambert

Mpac Lambert are leaders in custom assembly and automation, for complex manufacturing processes. With over 50 years' experience in developing automation to meet customers' production challenges, our expertise ranges from 'first of a kind' automation solutions to repeating existing machine design and build-to-print - whatever the automation challenge, Mpac Lambert can provide a solution.



Mpac Group

The Mpac Group is made up of six market-leading companies with core capabilities including product assembly, converting, build to print, filling & dosing, cartoning, case packing, tray forming, palletizing and machine vision. Mpac has sites in Canada, the USA, LATAM, UK, EMEA & APAC, to support a global client base across the health and personal care, food & beverage, consumer goods and clean energy sectors.



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