LAMBERT
INGENIOUS AUTOMATION
An Mpac Group Company

DPI Blister Filling System

Our DPI Blister Filling System features a unique rotary blade system—combined with a precision powder feeder—to precisely control powder flow, ensuring every dose aligns perfectly with the blister pocket. The system ensures clean deposition of the powder with minimal surface contamination.

Forming Module

- Base foil unwind for tension control
- Consistent web positioning and tension throughout the forming process
- Modular configuration supports different strip format options.
- Pinhole and micro-tear detection confirms material integrity.

Filling Module

- Powder feeder regulates the flow of powder into the rotary blade system.
- Registration sensors verify dose to pocket alignment
- Metered powder dosing deposits the target amount of powder into each pocket.
- Fill verification confirms each dose deposit into the pockets for minimal contamination of the strip surface.

Sealing Module

- Active web tracking ensures precise alignment between the lid and base foil.

Specifications

- **Nominal Dose Size** = 13mg - depending on powder properties this can be adjusted between 11-15mg
- **Dose Accuracy: Mean accuracy** = 30 doses +/- 0.5mg (Standard deviation = <0.5mg)
- **Powders Supported:** Lactose excipient (could support other powder blends). Optional component of magnesium stearate
- **Strip width:** Dual width strip = 28mm containing two products. Final product width = 12.5mm after downstream processing (could support different sizes)
- **Footprint:** Length: 10.5m (Production Line), 6.9m (Pilot Line); Width: 3.5m; Height: 2.6m

Production Line:

- Printing adds clear identification and batch information to each strip, with print verification to confirm accuracy.
- Trimming the waste edges achieves dual product width strip.
- Rewinding the finished strip onto spools, ready for further processing into the DPI inhaler.
- Heat sealing the lid foil to the powder-filled strip, preventing leakage or contamination.

Pilot Line:

- Contains embossing station with optional alternative printing module for identification.
- Print verification optional on Pilot Line.
- Single spool rewinding station.

Throughput:

- 60 dose product = 125 ppm*
- 30 dose product = 210 ppm*
- 14 dose product = 330 ppm*
- 7 dose product = 440 ppm*

*maximum design speed, dependant on powder

- CE, or UL / CSA certified, 21 CFR Part 11 compliant
- Meets category 3 safety standards
- ISO 7 clean room compatible
- Containment barrier for operator protection
- Product quality tracking & on-machine verification systems
- Enhanced operator training
- Post-delivery support with the Mpac Group Lifecycle Services

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