



DPI BLISTER FILLING TECHNOLOGY

Experience seamless blister fill and assembly for Dry Powder Inhaler products with our advanced blister strip solutions, in partnership with **MIKRON AUTOMATION**

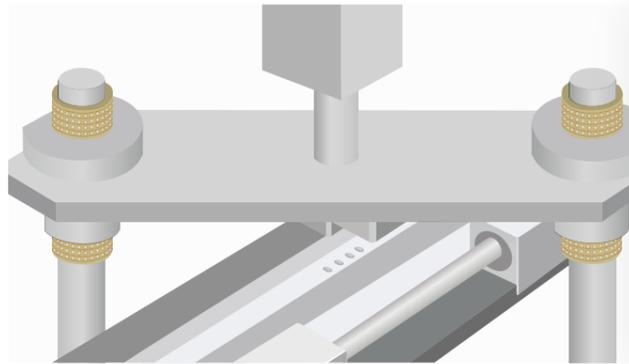


SCALABLE TECHNOLOGY

Scale from 1 to 40 strips/minute.

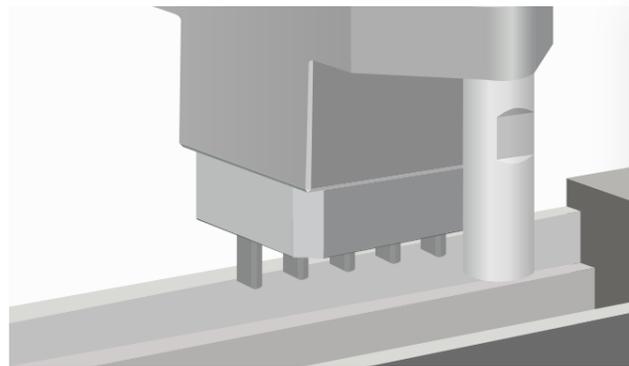
DISCOVER | EXPLORE | EVOLVE

Forming, Filling and Sealing your Blister Strip



FORM

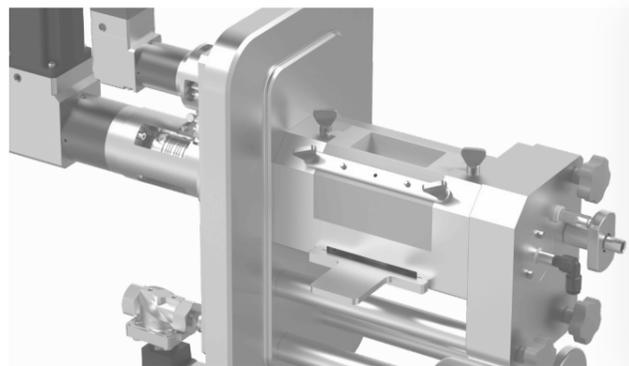
Forming the pockets to house the dose. The pockets play a key role in dose delivery and must be shaped to fit the target dose size. Tooling can be interchanged to suit your device requirements.



FILL: LOW COMPACTION FILLING

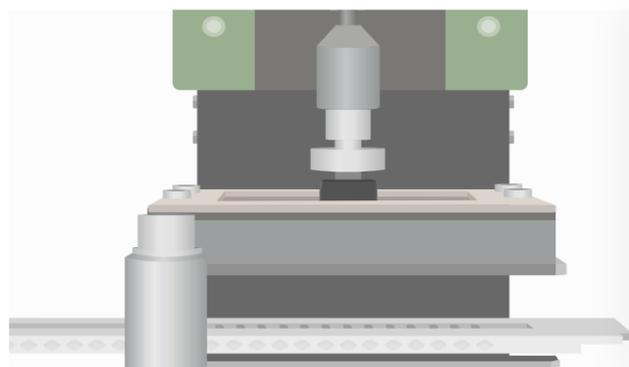
Two sets of die punches compress powder into pellets and eject the pellets into the strip pocket. This highly scalable process delivers a very clean dose with minimal strip contamination, improving key quality attributes such as peel strength.

OR



FILL: VACUUM DRUM FILLING

A proven technology, capable of dosing a wide variety of powders - including compression sensitive powders. This adjustable process allows users to identify optimal process parameters for strip filling.



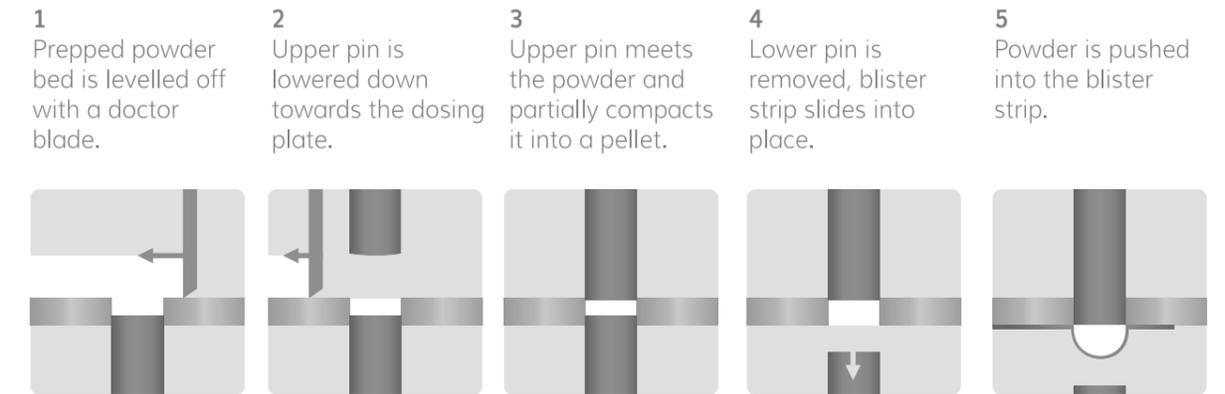
SEAL

Required to fully seal the pocket from the environment and to ensure the dose reaches the patient in its intended form. Fine adjustment of time, temperature and pressure ensures strip integrity.

Low Compaction Blister Filling

Fill dry powder inhalers (DPIs) with precision using our **low-compaction** blister filling technology. Engineered for high-speed operation, ensuring clean dosing while enhancing seal integrity.

How does it work?

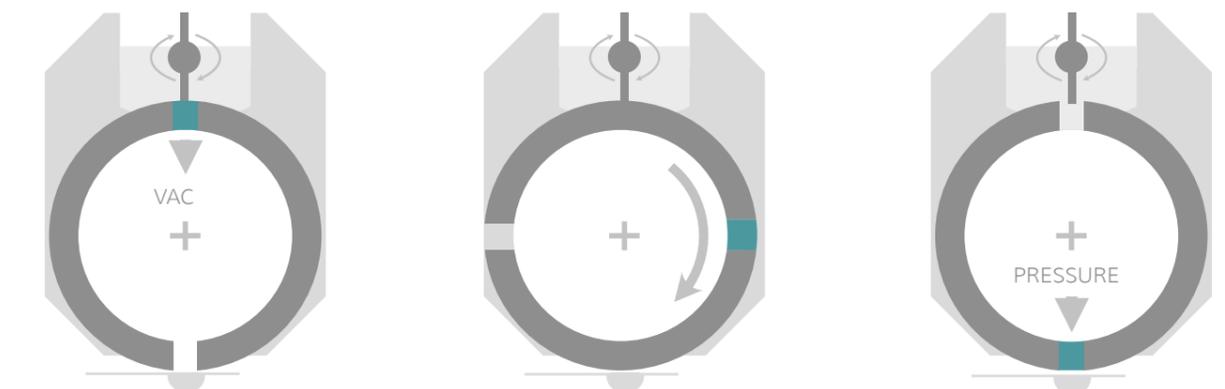
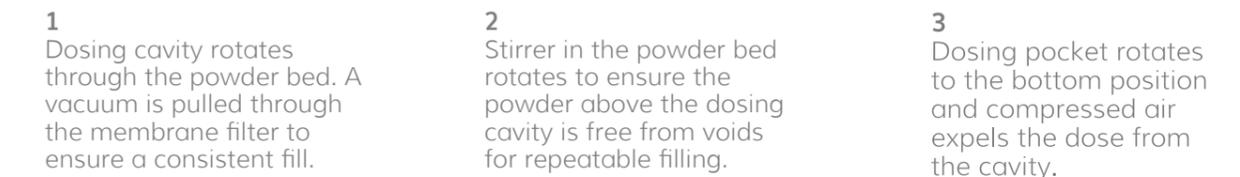


All of our core technology is scalable, ensuring that early-stage clinical processes can be scaled up for commercial production - up to **1200 doses/minute**. This eliminates the need to develop and validate costly new technologies with each scale-up.

Vacuum Drum Filling

Our **vacuum drum** technology provides an alternative, **cost-competitive** solution for filling certain formulations. The self-contained unit only requires compressed air and electricity to run, and can produce up to **20 doses/minute** per pocket.

How does it work?

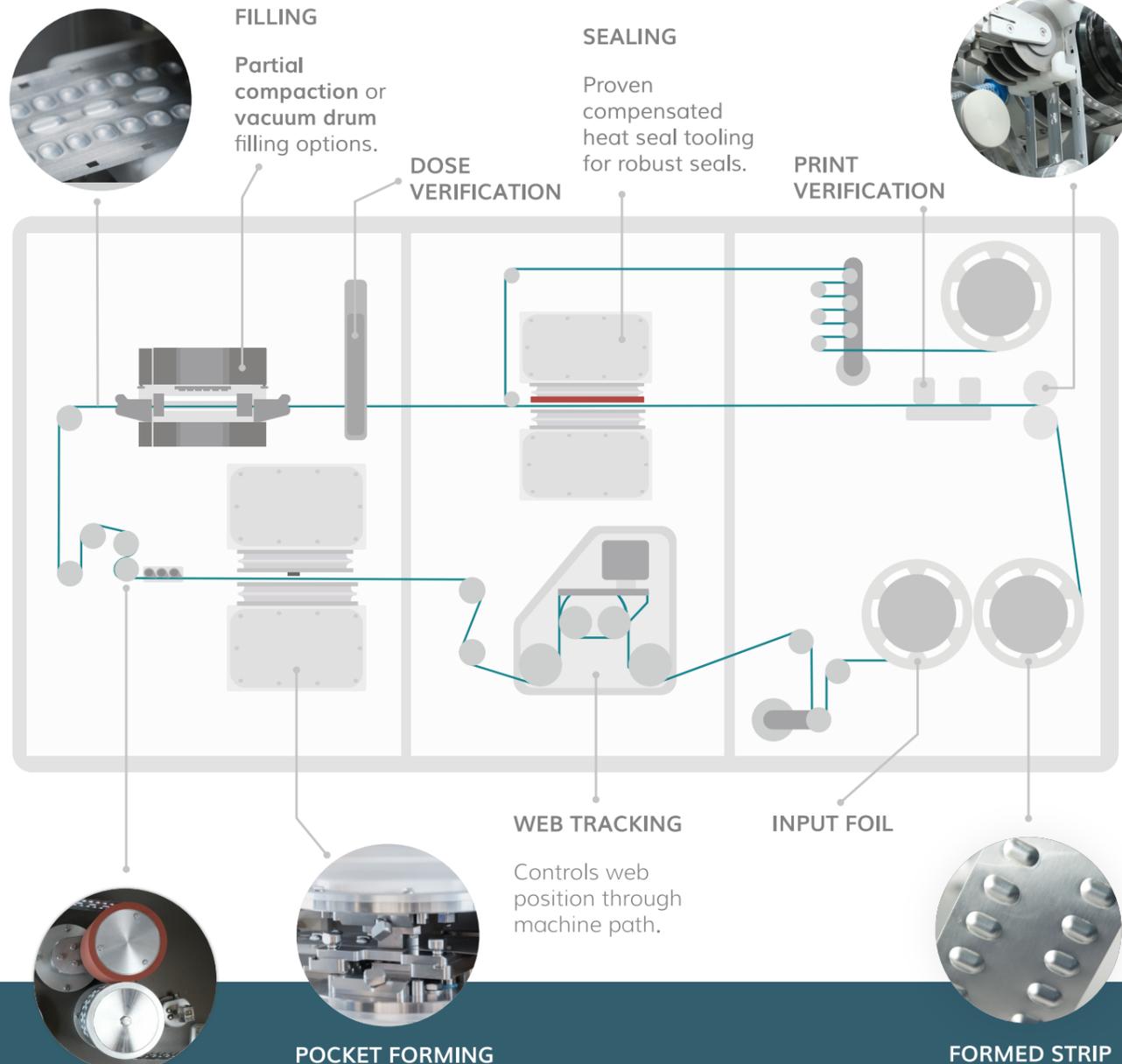


Clinical Scale: Blister form, fill & seal

The **Blister Strip Development Platform** is designed to form blister strips from laminate web material, dose powders into pre-formed blister pockets and ensure precision sealing for reliable product protection.

Suitable for clinical trials, this system is designed to produce up to **3 strips/minute**.

EDGE SLITTING



NIP DRIVE
Ensures accurate positioning and transport of the blister.

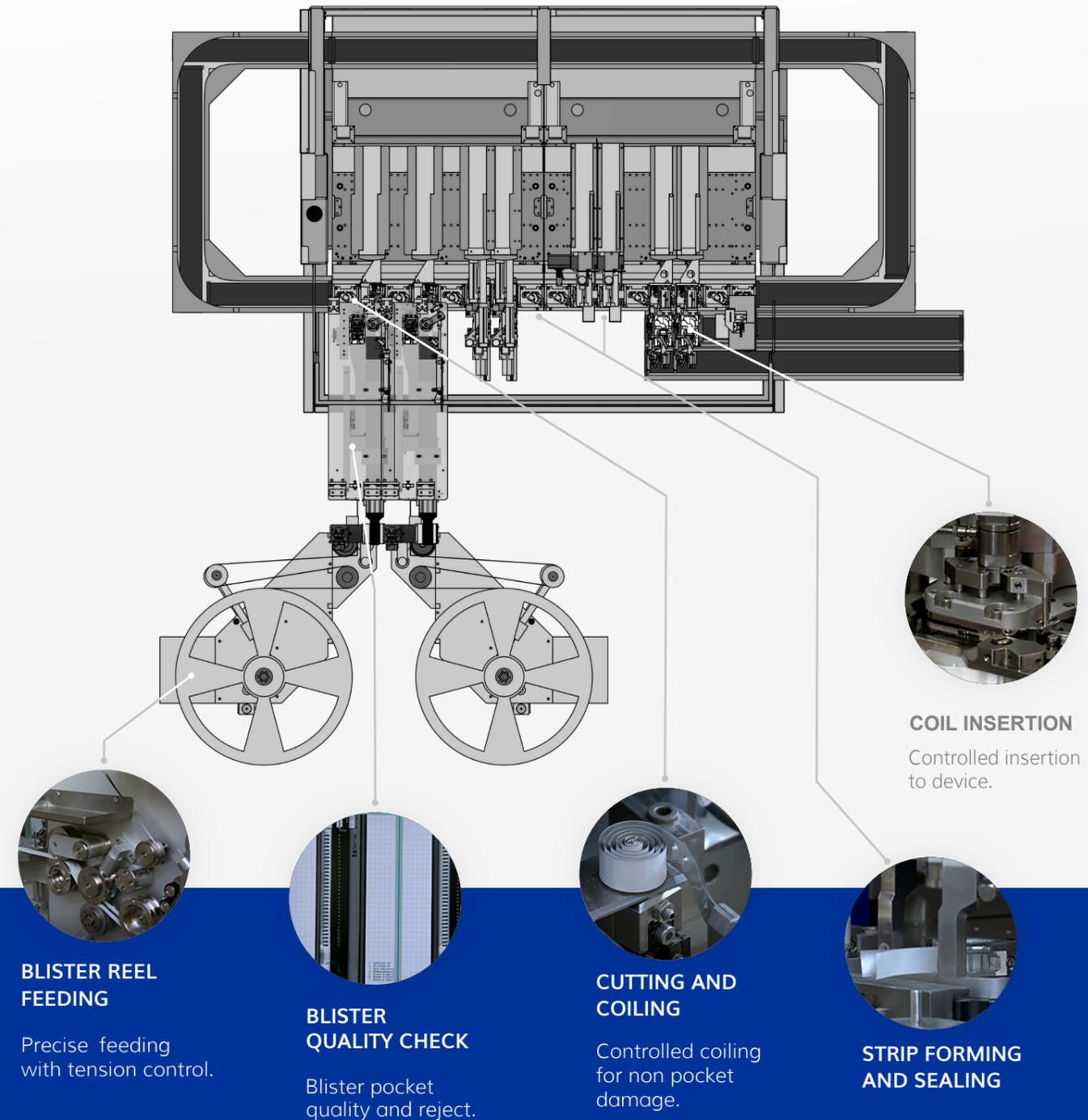
POCKET FORMING
Robust and highly precise cold blister forming.

- Optional features**
- Final strip cut to width
 - Printing

Clinical scale: Blister strip coil & assemble

Mikron's **G05 solution** uses proven processes for blister strip handling, coiling, forming and assembly. The processes used at clinical scale are also employed for high volume assembly lines, giving robust and reliable solutions.

This system is ideal for up to **12 devices/minute**.



BLISTER REEL FEEDING
Precise feeding with tension control.

BLISTER QUALITY CHECK
Blister pocket quality and reject.

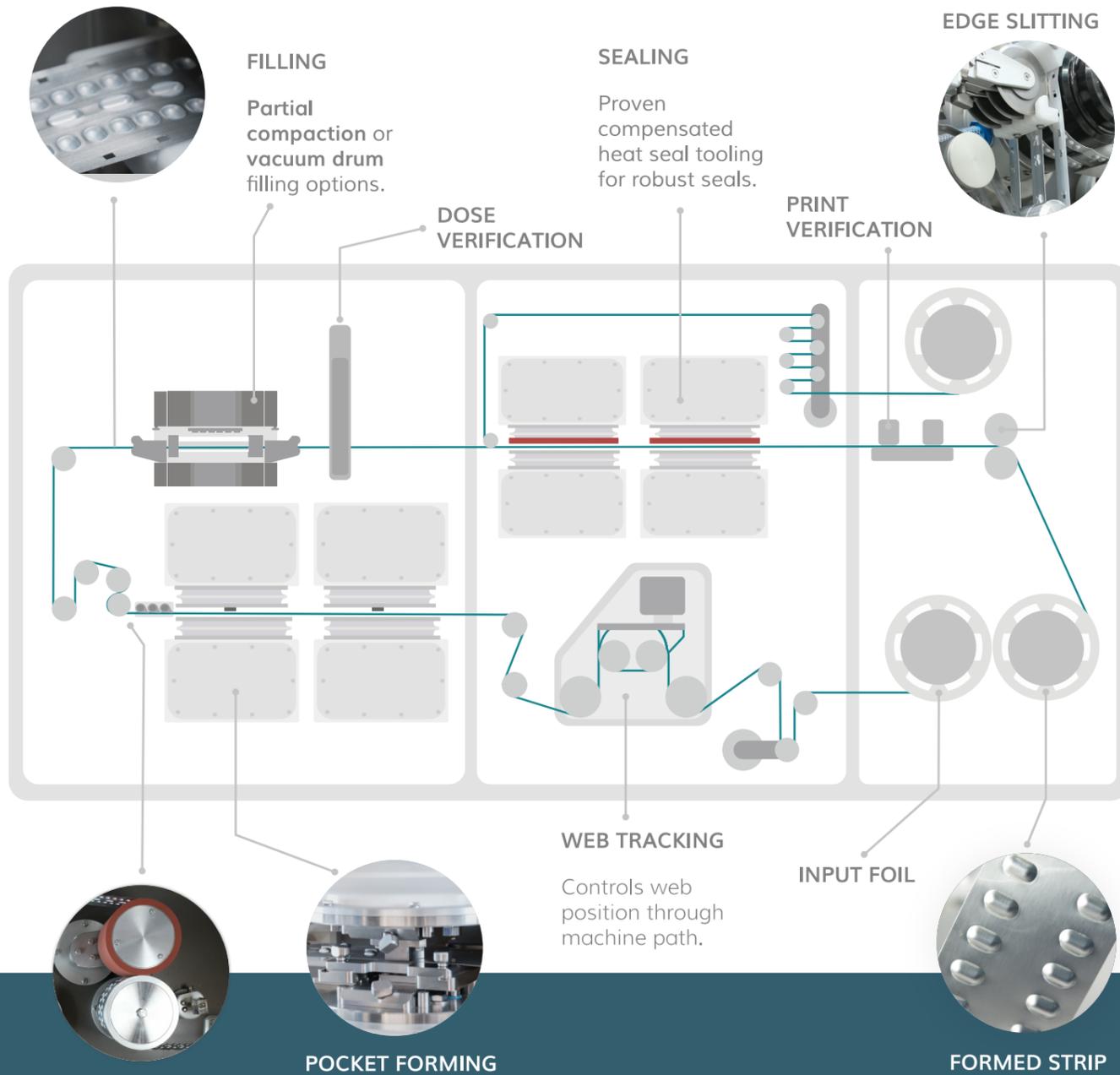
CUTTING AND COILING
Controlled coiling for non-pocket damage.

STRIP FORMING AND SEALING

COIL INSERTION
Controlled insertion to device.

Commercial Scale: Blister form, fill & seal

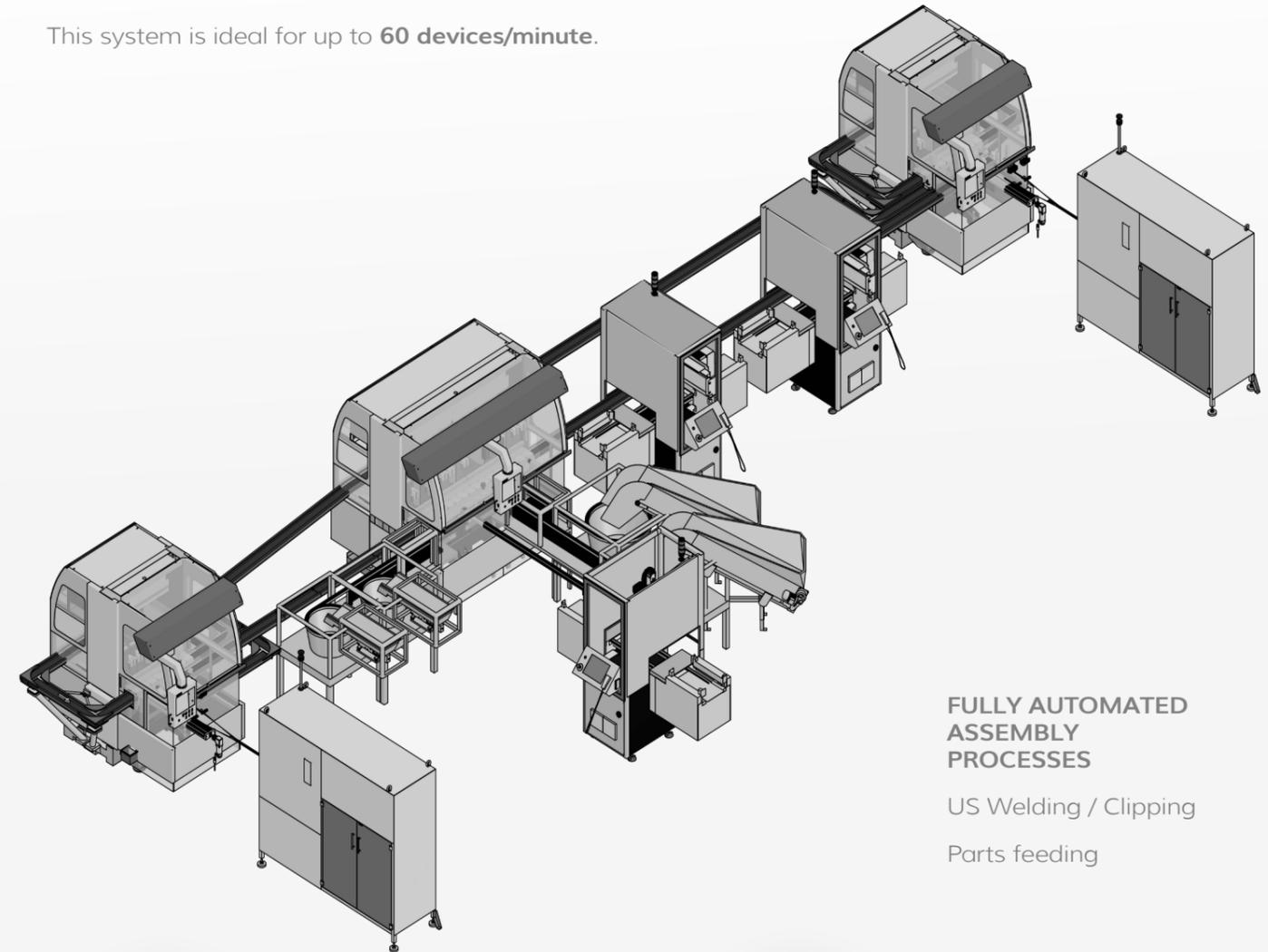
The **Blister Strip Commercial Platform** forms blister strips from laminate web material, accurately doses powder into the pre-formed blister pockets and ensures precision sealing for reliable product protection. Ideal for commercial scale production, and capable of producing **40 strips/minute**.



- Optional features**
- Final strip cut to width
 - Printing

Commercial Scale: Strip coil & assemble

Mikron's solutions use proven processes for blister strip handling, coiling, forming and assembly. The processes used at clinical scale are also employed for high volume assembly lines giving robust and reliable solutions. This system is ideal for up to **60 devices/minute**.



FULLY AUTOMATED ASSEMBLY PROCESSES
US Welding / Clipping
Parts feeding



STRIP FEEDING AND SPLITTING FROM REEL
Fully automatic reel changeover.

FUNCTIONAL CHECK
Torque monitoring.

FUNCTIONAL CHECK
Counter actuation.

UID TRACEABILITY

 **BASED IN
WARWICK, UK**



Smart Engineering. Innovation Beyond Automation.

As a forward-thinking engineering and automation leader, we empower multinational clients to advance from concept to market. With over 1000 years of combined engineering expertise, we provide comprehensive support for the development, production and commercialisation of innovative products.

Our expertise falls across two core specialities, both underpinned by our after-sales team:

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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