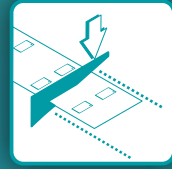


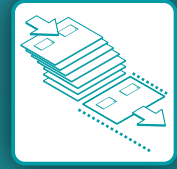
Handling



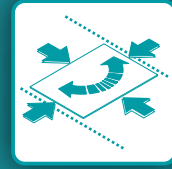
WEB INPUT AND TRANSPORT - LARGE FORMAT



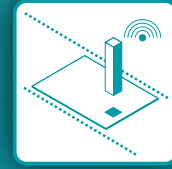
SHEET CUTTING - GUILLOTINE



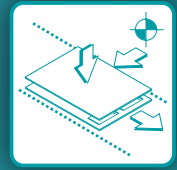
SHEET FEEDER - STACK / CONTINUOUS



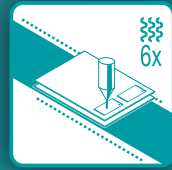
SHEET ALIGNMENT



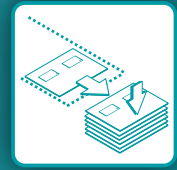
HOLE/HINGE PUNCHING - MECHANICAL / ULTRASONIC



SHEET PICK AND PLACE - HIGH PRECISION



SPOT WELDING - HOT SPOT/ULTRASONIC

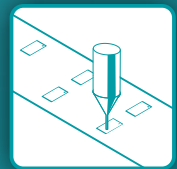


INLAY - STACKER BOX

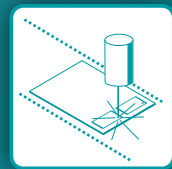


PILE OUTPUT CONVEYOR

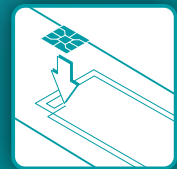
Process



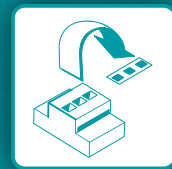
WIRE EMBEDDING - 2/4 / 8 HEADS



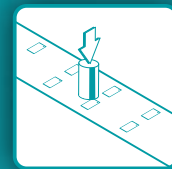
VANISH REMOVAL - ANTENNA WIRE



MODULE IMPLANTING



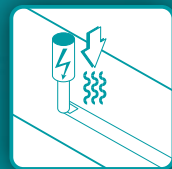
MODULE FLIPPING



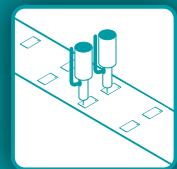
MODULE HOT PRE FIXING



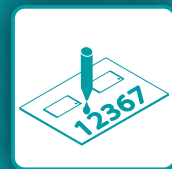
MODULE GLUING



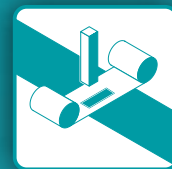
WELDING - 2 HEADS



SOLDERING - 2 HEADS

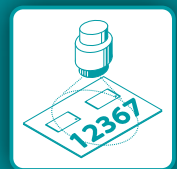


DOD PRINTING - MONOCHROME

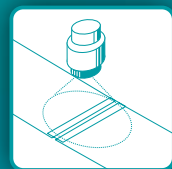


INLAY LABELLING - MODULE (ANTI-CRACK)

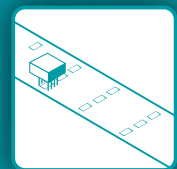
Testing / Measurement



OPTICAL VERIFICATION / MEASUREMENT



SPlicing DETECTION



MODULE PRE TESTING



RFID TESTING - 2 HEADS / 4 HEADS / 24 HEADS

High-quality RFID inlays - quickly and economically

Our reliable machine solutions offer great flexibility and productivity, enabling you to make both prototypes and mass products in an economical way and with consistently high quality. From antenna embedding to production of complete RFID inlays and eCovers, the options are versatile.

Wire embedded antennas produced on ruhlamat machines offer an excellent cost-to-benefit ratio and yet provide the best product characteristics compared to etched or plated antennas.

Our excellent sonotrode know-how for various substrate / wire combinations ensures highest precision at wire embedding. Optimised sonotrode geometries and materials guarantee best performing products with proven reliability even in the most demanding applications.

ruhlamat – customised machine solutions for

- > Chip Module Production
- > RFID Inlay Production
- > Card Personalisation
- > Card Quality Control
- > Passport Personalisation
- > Passport Quality Control
- > Special Machinery



ruhlamat MACK GROUP
solutions for your needs.

ruhlamat GmbH
Sonnenacker 2
99834 Gerstungen OT Marktsuhl
Germany

Tel.: +49 36925 - 929 0
Fax: +49 36925 - 929 111
info@ruhlamat.de
www.ruhlamat.com



ruhlamat® MACK GROUP
solutions for your needs.

RFID Inlay Production



ruhlamat - WCE150
Small production System



Highest quality, proven reliability and ease of use - for a minimal investment.

ruhlamat - WCE700
Semi-Automatic Production System



Very economical solution for antenna embedding and RFID inlay production.

ruhlamat - WCE2000
Automatic Production System



Flexible platform for antenna embedding and RFID inlay production.

The **WCE150** is designed to produce RFID inlays for ID documents in the ID-1 and ID-3 format. Based on a single-station concept with manual load and unload, it is a convenient solution for small production volumes.

The **WCE700** is a semi-automatic system designed to produce RFID inlays for ID documents (ID-1 and ID-3 format). Based on a 4-station roundtable concept with manual load and unload, this solution can handle both small jobs and high-volume runs with ease.

The **WCE2000** sets the standard for high-speed wire embedding and RFID inlay production: Superior quality, highest accuracy and unmatched productivity at an unbeatable price-performance ratio. The system can be designed to perfectly match your needs: sheet to sheet (**S2S**), reel to sheet (**R2S**), or reel to reel (**R2R**).

Benefits and features:

- › Affordable system for prototyping and small production runs with up to 40 inlay sheets/hour
- › Very precise and accurate antenna embedding on various substrates

- › Automated intermetallic bonding process
- › Inlay sheet fixing on vacuum table
- › Ultrasonic wire embedding with up to 8 wire embedding heads

Benefits and features:

- › Semi-automatic system for antenna embedding and RFID inlay production with up to 1,600 inlays/hour
- › Very precise and accurate antenna embedding on various substrates

- › Automated intermetallic bonding process
- › Modular system design, with the flexibility to choose the number of heads for wire embedding, thermo-compression and soldering

Benefits and features:

- › Highly modular and flexible, allows for the processing of web and sheet materials
- › Unmatched throughput up to 4,000 antennas/hour as antenna embedding machine and up to 2,000 finished RFID inlays/hour as inlay manufacturing line

- › Very precise and accurate antenna embedding on various substrates
- › Inline product testing (ATS)
- › Automatic inline quality control for each process unit ensures highest quality and yield