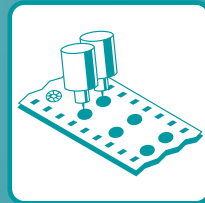
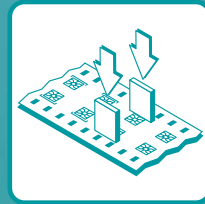


ruhlat smart card solutions –  
Equipment for module preparation and personalisation

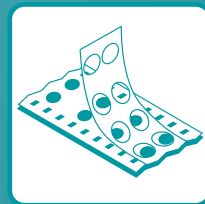
PowerSeal  
Encapsulation



PowerTest  
Module testing



GTL 700  
Glue tape lamination



## ruhlat – market-leading, innovative systems at affordable prices

The smart card market is characterised by strong competition and falling prices for components. This requires a higher level of automation and increased efficiency, without compromising quality and precision. Face these mounting challenges head-on with innovative machines and systems designed by ruhlat to perform in the most demanding production environments.

Our affordable and industry-proven machine solutions provide the speed, quality and economy that will help you to sustain and maximise profitability in the future. We offer sophisticated, high-quality machines for the chip module production, ranging from encapsulation, testing and encoding of IC modules to glue tape lamination of module tapes.

ruhlat – customised machine solutions for

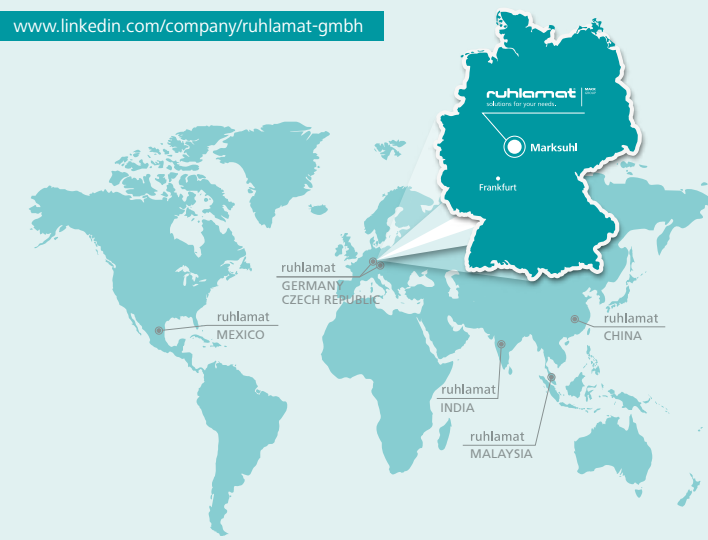
- > Chip Module Production
- > RFID Inlay Production
- > Card Personalisation
- > Card Quality Control
- > Passport Personalisation
- > Passport Quality Control
- > Special Machinery

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Chip Module Production



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Fax: +49 36925 - 929 111  
info@ruhlat.de  
www.ruhlat.com



**ruhlamat - PowerSeal**  
Chip Module Encapsulation



PowerSeal is the solution for encapsulation of ICs on 35 mm module tape. Extremely compact, extremely powerful.

**ruhlamat - PowerTest**  
Chip Module Testing/Initialisation



The PowerTest is a sophisticated chip module testing and encoding system for 35 mm module tapes.

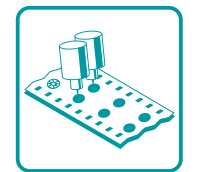
**ruhlamat - GTL 700**  
Glue Tape Lamination



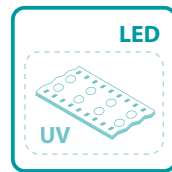
The GTL700 is a highly reliable and flexible solution for glue tape lamination of chip module tapes in preparation for the hot melt implanting process.

Benefits and features:

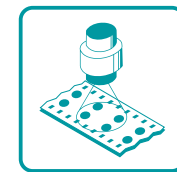
- > fill or dam & fill process
- > programmable movement of dosing heads
- > heating of module tape & dosing heads
- > visual process control
- > additional glob-top form inspection
- > competitiveness by combining a substantially increased throughput at a very attractive price level



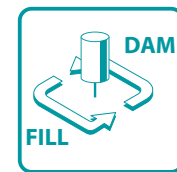
CAST RESIN DISPENSING – 12 / 16 FOLD 1 / 2 HEADS



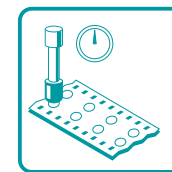
CURING UNIT – UV / UV-LED



OPTICAL INSPECTION – GLOBE TOP



CHANGEABILITY OF DAM HEAD FOR FILL



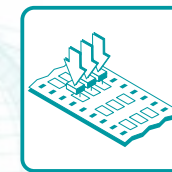
HEIGHT TEST – MECHANICAL RANDOM

Benefits and features:

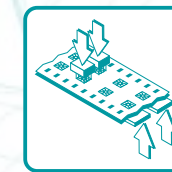
- > Reel to reel system for chip module test, initialisation and pre-personalisation
- > Contact, contactless and Dual Interface modules can be processed on one machine
- > High speed transport system, including reject hole detection at input and output
- > Reject hole punch for faulty chip modules
- > Modular design and graphic user interface
- > Open platform for integration of customer test hardware and software



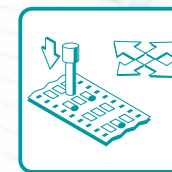
CONTACT UNIT & BASIC / PARAMETER TEST UP TO 128 HEADS



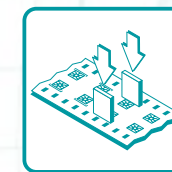
CONTACTLESS UNIT & BASIC / PARAMETER TEST UP TO 48 HEADS



DUAL INTERFACE UNIT & BASIC / PARAMETER TEST UP TO 32 / 32 HEADS



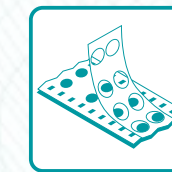
REJECT HOLE PUNCHING



DISCONNECT STATION

Benefits and features:

- > Highest yield, maximum machine uptime and short product changeover times lead to very low cost of ownership
- > High flexibility for all IC module types and sizes, including Dual Interface
- > In-house tool manufacturing, customized punching tool designs on request
- > Stand-alone system or integration into production line



GLUE TAPE LAMINATION