

ruhlamat[®] MACK
solutions for your needs. GROUP

Automation engineering for your needs.



As leading provider of innovative assembly process solutions we present our customers vital process expertise – optimised, to fit minimal spaces and to tightest deadlines.

The perfection and precision of the watch maker and fine engineering company “Uhren- und Maschinenfabrik Ruhla” is the tradition on which ruhlamat Automatisierungstechnik GmbH started out in 1991.

Our core competences are put to outstanding application combining mechanical engineering skills with the innovative cutting edge of continuously new developed and optimised technologies. These are applied in our assembly process engineering expertise and our smart card and passport processing solutions and the OEM area. Our customers get unrivalled professional support worldwide from the ruhlamat global system of branches and representations plus a fully cross-functional service network.

ruhlamat-machine concepts are implemented as customer specific individual solutions from innovative and tried-and-tested standard modules through to full turnkey solutions and complete plants. They find application in the automobile supply industry, the banknotes packaging and in the manufacture and processing of smart cards and passports.



CEO Karl Mack, CEO Thomas Mack

ruhlamat

ruhlamat / divisions

ruhlamat®

MACK
GROUP

Business divisions

Smart card & passport processing solutions

ruhlamat implements creative process solutions for smart cards and passports in high level standard solutions combined with individualised configurations.

Assembly process solutions

Your idea, your product and your vision are the basis of the work we do. ruhlamat develops and realises the concept as a customised solution.

A photograph of a modern building facade with large glass windows. The windows reflect the sky and clouds. A teal horizontal bar is positioned across the middle of the image. Below the bar, there is a dark red rectangular area containing text. The building has a white frame and a large rock is visible in the foreground on the right.

OEM solutions

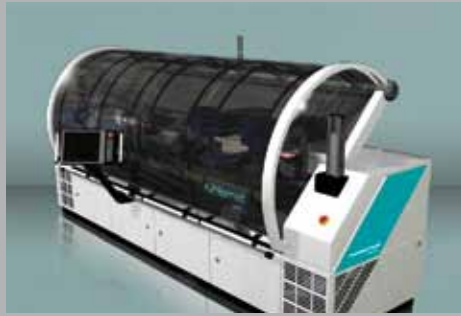
ruhlamat plans, develops and produces original equipment in variable quantities and high quality on behalf of our customers.

Smart card & passport processing solutions

Decades of experience have made ruhlat to the reliable engineering and machine building partner for the module, inlay, smart card and passport industry. With the development of state of the art equipment and machinery our standard to ourselves is to help our customers to meet growing requirements with regard to quality and efficiency.

For passports and (e-)PASSPORTS, our high end LP machine line is the revolutionary solution for centralised high security personalisation with adjustable configuration according to your project needs. Innovations like PERFLEX – our unique perforation feature – create additional security without any extra need for consumables.

Pathbreaking machine concepts like the PEARL for all kind of personalisation tasks in the ID-sector reflect our understanding that proven technology and innovative design do not contradict to flexible configurations whatever the detailed needs for respective ID-cards are.



Smart card solutions



(e-)PASSPORT solutions



Module solutions



Inlay/RFID solutions

Your products meet the highest specifications and quality standards with our precise and targeted machine concept combined with cutting-edge technology. Our customers use rühlomat machine solutions for the following areas and processes:

Applications:

Smart card solutions

- ID-cards
- Driver licenses
- Health cards
- (U)-SIM cards
- Telephone cards
- Bankcards
- Creditcards

(e-)PASSPORT solutions

- (electronic) passports

Module solutions

Inlay / RFID solutions

Processes:

- Cavity milling
- Module implanting
- Plug-in punching
- Card personalisation
- Contact / contactless chip loading
- HD DOD industrial printing (colour/black)
- Laser engraving / MLI / CLI
- Optical Inspection
- Magnetic stripe encoding
- Quality testing (bending, torsion)

- Booklet manufacturing
- Laser perforation / PERFLEX
- Numbering
- Personalisation
- Contactless chip loading
- HD DOD industrial printing (colour/black)
- Laser engraving
- Quality testing (bending, torsion, impact)

- Chip module encapsulating
- Chip module testing
- Glue tape lamination

- Wire embedding
- Thermo compression welding
- Soldering
- Inlay testing

ruhlamat / division assembly process solutions

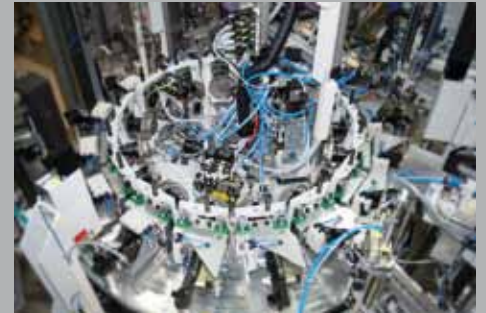
Assembly process solutions

The individual needs of our customers are our challenge. We provide a powerful base for your success with our fully automatic, partially automatic and manual process solutions. Everything from development through to production, installation, programming, commissioning and service from one source – ruhlamat!

Use our extensive experience in successful applications of innovative technologies, which we demonstrate in all our numerous complete solutions! The know-how of our employees, the best quality materials we use plus total precision in implementing customer requirements are the essentials of the work we do.



Linear transfer systems, e.g. ruhlamat Compact Carrier System (CCS) 140, allowing workpiece carrier change < 1 sec



Rotary transfer machine systems



Manual workplaces



Robot cells



Solution for dynamic 2D-processes: FILUS 1520, e.g. ultrasonic wire embedding, cutting, pick & place, soldering, dispensing, plotting



Testing systems (laboratory, series / EOL)

ruhlamat designs, manufactures and installs integrated solutions consisting of:

Transport systems

- ruhlamat Compact Carrier System (CSS): modular extendable linear Transfer system
- Rotary transfer machine systems
- Customised transport system

Handling systems

- Customised industrial robots
- Freely programmable axial systems
- Pneumatic pick & place systems
- Palletising systems

Technology systems

- O-ring assembly systems inside/outside
- Dosing systems
- Screwing systems
- Welding and soldering systems
- Labeling and marking systems
- Packaging systems
- Sorting and feeding systems
- Laser systems
- Integration of customised technologies
- Wire coil embedding systems

Testing systems

- Data traceability systems (data base systems / PDM)
- Image processing systems
- Tightness and flow inspection systems
- Electrical function testing systems
- Calibration systems
- Weighing systems
- Electromechanical measuring systems

Control systems

- PLC systems
- Robot control systems
- IPC control systems (high level programming languages)

ruhlamat / OEM solutions

OEM solutions

ruhlamat plans, develops and produces original equipment from component assemblies through to full modular machine systems exclusively for customers. Qualities and quantities are delivered to specification within the scope of our variable content call-order system.



Costumised systems



Automatic packing machines



Costumised modules



Transport and labeling units

We devise successful technical and commercial solutions in close cooperation with our OEM customers. Furthermore we ensure a delivery of serial components, modules and machines of the right quality and on schedule and offer full back-up services in the areas of:

- Planning and project management
- Development and design
- Construction and product management
- Production and assembly
- Service and training



ruhlamat
North America

ruhlamat
Europe

ruhlamat
China

Global, flexible and professional – that is the ruhlamat service network. Worldwide ruhlamat subsidiaries and service partners are the basis of our qualified service infrastructure. We assure individual attention according to your needs.

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