

PERFLEX® – the premium security feature for passports

PERFLEX® allows passport perforation with different character sizes using holes in different geometric shapes like squares and triangles (■▶◆◇).

Laser perforation (PERFLEX®) PC holder page



Visa pages with/without back cover



ruhlamat - LP2000 Pre-Personalisation

Fully automatic high-speed perforation and pre-personalisation of passports and e-passports.

ruhlamat - LP2100 Personalisation

Fully automatic high-speed machine for centralised personalisation of passports and e-passports.



HD DOD
Industrial colour printing
1.000 passports per hour

Different character sizes.

- > Basically unlimited character set (alphabetic letters, digits, symbols, limited by size only)
- > Mixed height and width of characters possible in different positions

Difficult to counterfeit.

- > Arrangement of shapes/sizes within a character (set) either random or by customised algorithm, thereby creating a unique, unforgeable feature

Different hole shapes.

- > Laser perforated characters from any visa page through all remaining pages including or without back cover
- > Extraordinary laser perforation quality in comparison to off-the-shelf components due to ruhlamat's sophisticated laser software



LASER PERFORATION



RFID CHIP ENCODING



NUMBER PRINTING (MECHANICAL/INKJET)



OPTICAL INSPECTION/ALIGNMENT



HD DOD INDUSTRIAL COLOUR PRINTING



INLINE SECURITY LAMINATION



LASER ENGRAVING



RFID CHIP ENCODING



OPTICAL INSPECTION/ALIGNMENT

Benefits and features:

- > State-of-the-art booklet perforation, numbering and RFID encoding
- > PERFLEX® as unique, unforgeable security feature – a „DNA“ for each passport without additional costs
- > Patented laser perforation method allowing creation of different hole shapes and character sizes
- > Inkjet printing, mechanical numbering and laser engraving as options

- > Patented, space-saving RFID encoding tower for simultaneous chip initialisation and / or encoding of e-passports
- > Multiple UID control
- > Inline quality control (optical and electronic)
- > Universal personalisation software with Data Mastery as open platform
- > Can be easily configured according to customer and project demand

Benefits and features:

- > Inkjet printing and / or laser engraving
- > Highly secure laser engraving of polycarbonate holder page. Scalable number of lasers for maximum speed
- > High Definition Drop-on-Demand (HD DOD) colour printing of paper holder page with UV curing inks
- > Printing of UV reflecting elements
- > Inline security lamination at high speed

- > Patented, space-saving RFID encoding tower for simultaneous encoding of e-passports
- > Inline quality control (optical and electronic)
- > Universal personalisation software with Data Mastery as open platform
- > Production Data Management System optionally available
- > Customised configuration with high level of flexibility and standardisation

State-of-the-art ePassport processing solutions worldwide.



ePASSPORT

PASSPORT LABELLING



INLINE SECURITY LAMINATION



RFID CHIP ENCODING



PERSONALISATION (LASER, HD DOD COLOUR - INKJET)



ruhlamat – the leading supplier of advanced solutions for passport personalisation

ruhlamat is a leading supplier of advanced solutions for the personalisation and quality control of passports and e-passports.

As experienced machine manufacturer, we do our very best to meet every customer requirement, no matter how unique or challenging. We develop and produce functional, affordable and scalable solutions, which ensure full compliance with the ICAO and ISO standards surrounding the issuance and security of MRTDs.

Our reliable, state-of-the-art solutions, as well as our unrivalled expertise, has resulted in various successful project installations around the world.

Passport Pre-Personalisation

- > Laser Perforation
- > Number Printing (Inkjet/mechanical)
- > Inline Quality Control (optical/electronic)
- > RFID Encoding

Passport Personalisation

- > Laser Engraving
- > HD DOD Colour Inkjet Printing
- > Security Lamination
- > Inline Quality Control (optical/electronic)
- > RFID Encoding

Passport Quality Control

- > Bending Test
- > Torsion Test
- > Impact Test

ePassport Personalisation



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ruhlamat | MACK GROUP
solutions for your needs.

ruhlamat GmbH
Sonnenacker 2
99819 Marksuhl
Germany

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

