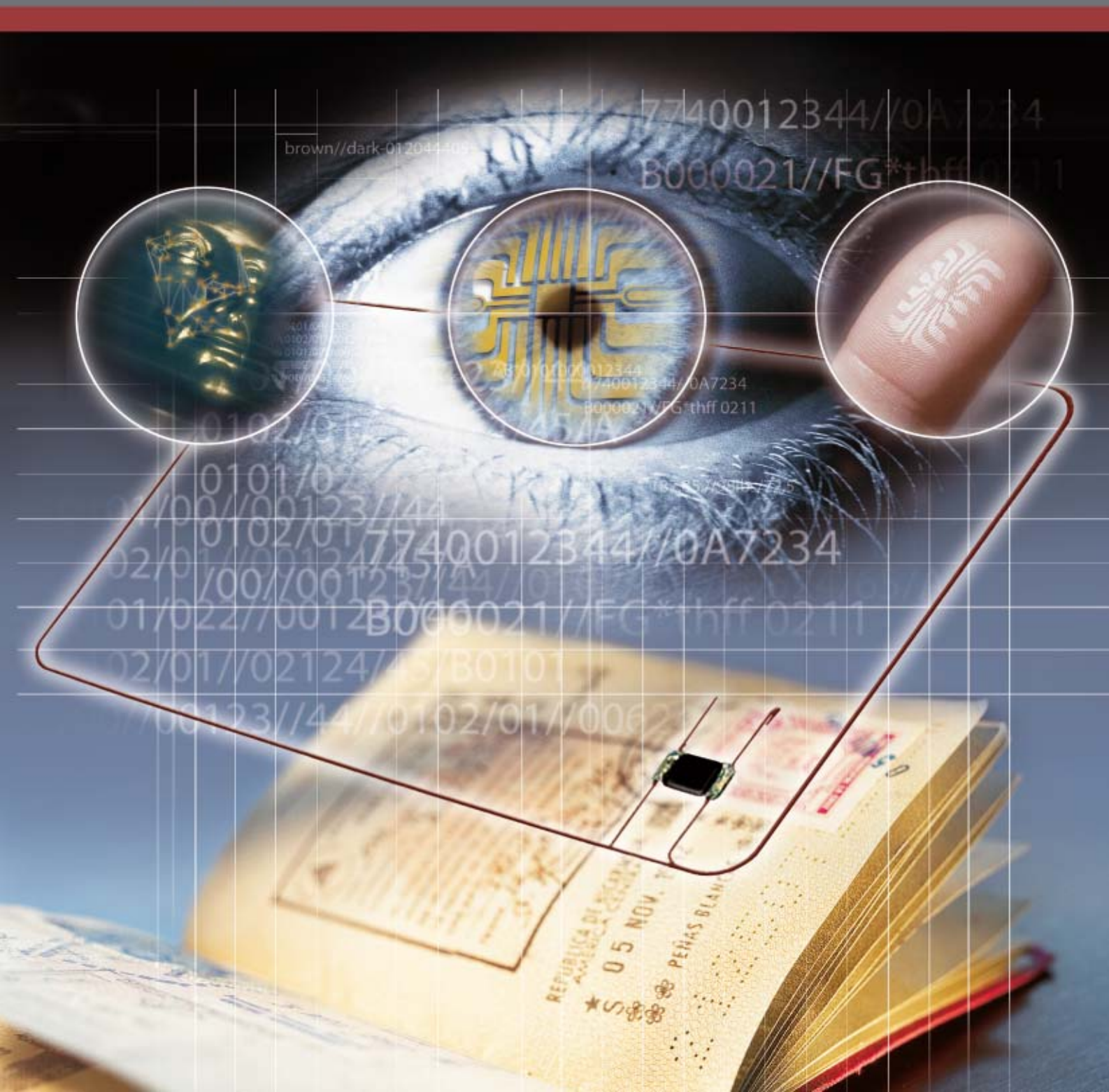


PM 25/50

High-performance Passport Personalization Systems



- CARD SYSTEMS ○
- DOCUMENT & PRODUCT IDENTITY ○
- IMPACT NUMBERING ○



New challenges raised by new generation of passports

The e-passport

A massive drive is under way around the world to develop and introduce the new electronic passport. Efforts to store biometric data on a contact-less microchip embedded in identity documents are not confined to the U.S. and the EU.

Regulations and standards enabling secure and effective data exchange have already been the subject of international discussions for years. Security considerations debated around the world have led to the decision to make the storage of biometric data on passports mandatory as of 2006. The ICAO (International Civil Aviation Organization) prescribes the

use of facial recognition, but also allows the implementation of additional biometric data, such as fingerprints and iris scans.

Reorganization of the personalization process

The field of passport personalization is directly affected by the addition of biometric data, due to the requirement to combine conventional personalization technologies such as laser perforation or impact numbering with chip programming. This increases the complexity of the data to be processed, and raises the issue of how these new technologies can be integrated into existing manufacturing processes. Measures to enhance

the security of the process as well as quality assurance throughout the passport personalization process are therefore gaining additional importance.

New security standards

The introduction of the new generation of passports presents new challenges - both to passport manufacturers and solutions providers. Data security and data consistency are suddenly key issues, and this calls for a re-appraisal of existing workflow and production procedures. Material flow and logistical processes need to be redefined, and this also affects the important function of passport personalization.

Customized system solutions made by Atlantic Zeiser

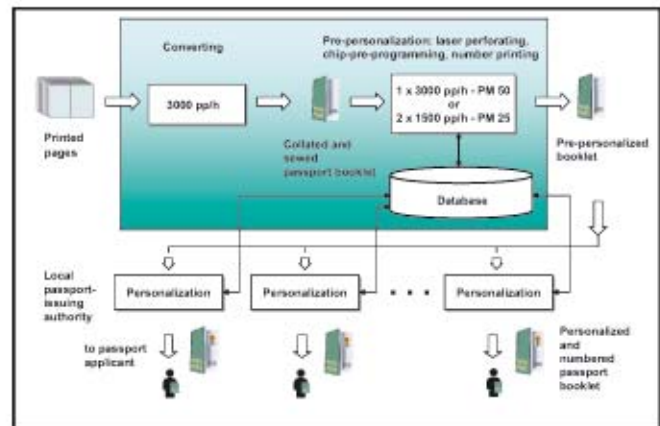
For both centralized and decentralized passport manufacturing, Atlantic Zeiser can provide the passport personalization system the market demands and which fully covers international requirements.

Two solutions with different production capacities, for medium-size and large production volumes, are equally sound in terms of their efficiency and high throughput, and both conform to the highest security standards.

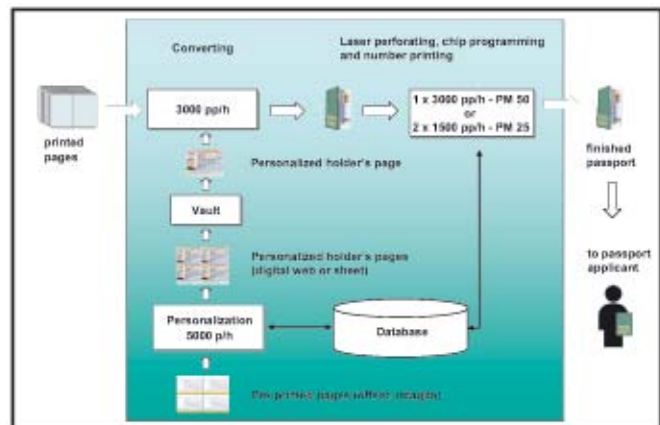
Centralized and de-centralized passport personalization

In medium-sized and large countries, passports have traditionally been manufactured in centralized facilities, with personalization being the responsibility of local agencies issuing passports. To safeguard the unpersonalized passports in transit, they are individually marked with passport numbers (pre-personalization). In accordance with ICAO recommendations, this process is carried out using laser perforation. A newly introduced, additional security measure to prevent unauthorized manipulation of the microchip involves programming the chip with the passport number and a special transport key. To ensure data consistency, this step ideally is carried out simultaneously during the laser perforation process (Flowchart 1).

The latest requirements relating to data security and quality control of the e-passport stress the importance of a centralized personalization process for passports. Programming the microchip with biometrical data again is best done in the same process as the rest of the personalization, and for medium to large production volumes, this occurs at the same time as the laser perforation (Flowchart 2). This requires much longer microchip programming times compared with the simple pre-personalization process, and it also calls for the integration of a number of programming stations into the production line.



Flowchart 1: de-centralized passport personalization



Flowchart 2: example centralized passport personalization

Atlantic Zeiser - passport personalization system solutions

Systems 25 new and 50 - Two inline system solutions for efficient pass personalization

For over 50 years now, Atlantic Zeiser has been an acknowledged leader in the personalization of security documents. The company, located in southern Germany, is geared up for handling the stricter requirements emerging in connection with tighter security standards and the associated innovative processes of personalization. The vast experience gained in chip and RFID technologies used in the card personalization sector is being harnessed for the production of the new generation of passports. In combining traditional and state-of-the-art personalization technologies, we already have in place all the preconditions for meeting the requirement profiles recommended by the ICOA. Atlantic Zeiser passport personalization systems are already installed in over 20 countries worldwide. They represent the ideal combination of performance and functionality in a single system.

Performance-oriented

In line with the various volume categories in the personalization of passports, Atlantic Zeiser offers systems of varying capacities to suit specific customer requirements.

The system 25 is designed for medium-size production volumes. It is capable of personalizing up to 25 passports a minute (1'500 passports/h).

The type 50 is Atlantic Zeiser's high-performance personalization system: it can process up to 50 passports a minute (3'000 passports/h).

Application-oriented

Atlantic Zeiser integrates and combines all the required personalization technologies in a single system. System functions are configurable to suit each specific customer requirement, and the Atlantic Zeiser Controller Platform coordinates the various functions in real-time during the personalization process. Thanks to its modular equipment design, the system can be upgraded and expanded at any time.

Automated procedures and inline product tracking guarantee smooth and trouble-free production runs. Control mechanisms, such as the optional camera monitoring facility, can be installed flexibly in the production line, thus ensuring that quality standards are reliably met.



Passport personalization systems in two performance levels

PM 25: up to 1'500 passports/h

25

PM 50: up to 3'000 passports/h

50

Configure your tailored solution

Personalization technologies

- Chip programming
- Laser perforation
- Laser engraving (numbering)
- Ink-jet marking
- Gothic numbering either fully computer controlled (CRN) or sequential

Document handling/finishing:

- Opening/closing documents
- Turning documents into alternative positions
- Parallel positioning of documents
- Vertical/horizontal positioning of documents
- Shingle/magazine or bundle delivery with label printing

Fully automated process and quality control:

- AZ system controller platform (real-time) providing inline product tracking and integration of all relevant processes
- Verification options using the Unique Vision multifunction camera inspection system, providing read-back of ID numbers and checking of printed numbers as well as laser perforation
- Document tracking, including rejection of waste products
- Chip verification
- Collection of production data, with feedback to workflow systems

PM 25/50
Pass personalization system
with chip programming

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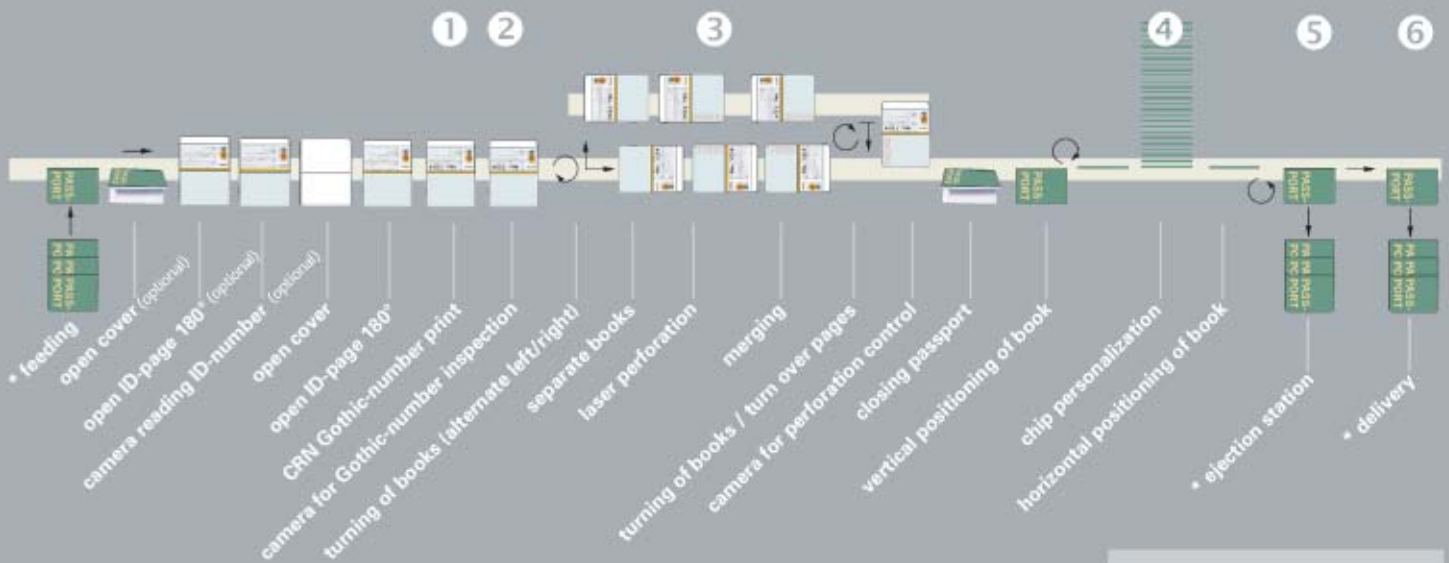
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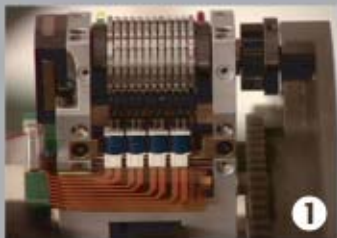
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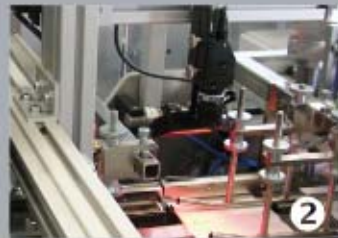
PM 25/50 - Modular concept for tailored solutions



*) optional equipment available - customized solutions for magazine/belt feeding or delivery and ejection station



CRN numbering



Unique Vision camera control



Laser perforation



Programming of biometric data

The standard version of the personalization system is designed for 30 seconds programming time (ISO 14443 A/B, Level 3&4, ICAO compliant). The system can be adapted to provide programming time of up to 60 seconds.

Both system options are capable of programming up to 3,000 passports per hour.

If required, an UID reader can be integrated after the feeder in order to verify the chip and trigger software functions.



Chip programming



Passport ejection



Finishing and delivery