

ENGLISH

DOCUMENT & PRODUCT IDENTITY

CARD SYSTEMS

IMPACT NUMBERING



CREATING IDENTITY

Create trust, prevent loss.

Trust is a sensitive commodity: hard to gain, easily lost. This is especially true where the authenticity of official documents cannot be guaranteed beyond any doubt. Or where the value of brand products is undermined by counterfeit goods and grey market activities. Such cases call for a special level of protection: document & product identity systems from Atlantic Zeiser turn every document and every mass-produced article into a unique, individual item. Unmistakable, and verifiable. To create trust, and so prevent loss.

Security based on tradition

Document & Product Identity is one of three corporate divisions of Atlantic Zeiser, a company with a proven track record in the fields of impact numbering and card systems. For many decades now, the individualization of banknotes and checks has provided maximum levels of protection against counterfeiting – thanks to numbering systems made by Atlantic Zeiser. Atlantic Zeiser has also developed high-performance systems for the individualization of chip cards and other types of cards. These systems have the capacity to program, encode, print and verify large numbers of mass-produced cards at very high speeds.

The systems are designed so that the authenticity of each individual security document or branded product can be verified. In this way, brand protection is the result of a natural, organic development based on our existing competences: our document and product individualization systems feature and benefit from our proven technological know-how. And they all meet the same standards of quality Atlantic Zeiser has always insisted on in the company's other business divisions: combining maximum security with the highest level of performance.



Single-source systems integration

Every type of document and product calls for its own individual solution. For this reason, Atlantic Zeiser has developed systems that feature an open architecture, where individual modules – such as digital marking, laser perforation or RFID chip programming – can be integrated into a variable structure. Thanks to this construction set made up of different technologies, each system can be modified and so be adapted to changing requirements at any time, even at a later stage.

Our personalization systems not only integrate the tools for carrying out all the necessary processing steps; the systems themselves can in turn be integrated into the customer's production environment, working seamlessly as part of overall system solutions of partners with operations across the globe. Control and data handling uses hardware and software resources already in place on customers' premises, and these can also be supplemented and upgraded as required. To ensure that this process is implemented smoothly, a central controller platform coordinates all the various technologies involved.



Unmistakable and cost-effective.

It forms the basis of our economic and social communities. Trust in the authenticity of documents and products. To ensure that documents of identification and high-value branded products actually deliver on their promise, Atlantic Zeiser integrates a range of diverse technologies to build flexible systems – solutions capable of giving every single product a unique, verifiable identity. Forgery-proof and cost-effective.

Personalization of passports

In the uncertain times we live in, the need for security is heightened – and this also applies to the personalization of passports. Proven technologies, such as Computer Random Numbering (CRN), digital marking or laser perforation, are now being augmented by the programming of biometric data onto RFID microchips. Atlantic Zeiser already is well prepared for this trend. Its in-house systems can do more than merely print information on, number, laser-mark and laser-perforate passports; we can also program the RFID chips contained in E-passports. Our experience gained in the field of card systems is generating synergy effects in this field of activity as well.

Individualization of packaging

Whether the objective is a temporary marketing promotion or regional diversification – identical products often require packaging in limited numbers that is individualized in different ways to suit a range of market situations. High-resolution ink-jet individualization systems from Atlantic Zeiser feature high-resolution drop-on-demand print heads and monitor the print quality using camera systems. Because the variable

information can only be printed just prior to packaging, these printing systems represent the ideal solution for pre-printed product packaging. The results: greater flexibility at lower costs.

Protection of distribution channels (product tracking)

Manufacturers of branded goods face two extremely costly challenges: grey market activities and product piracy. To ensure protection against counterfeit goods, distribution channels must be made transparent. Every single article must be capable of being identified individually along every step of the distribution channel. Atlantic Zeiser supplies customers with efficient product tracking systems, built around invisible, forgery-proof and individual product codes. These codes are applied using newly developed security inks, and combined with flexible marking and read-back systems, they can be applied easily and then read back at any time – a method that is simple and very cost-effective.



RFID smart label encoding

The role RFID technology (Radio Frequency Identification) is going to play in the logistics sector in future can hardly be overestimated. Especially in critical industry sectors such as pharmaceuticals. Single-item tagging is the magic formula: with this new technology, it is not only packaging units that are marked with individual information: every single product is marked and becomes unique. RFID labeling can mark every single item of medication individually, allowing seamless tracking and verification of its origins. Atlantic Zeiser offers the right technical solution for this purpose: using 8 read/write heads simultaneously, the high-speed RFID smart label personalization system from Atlantic Zeiser is capable of carrying out full quality control at the same time as the encoding of the tags. Optimum quality, at optimum speed.

Tax labels / Tax strips

The cross-border transport of goods is booming. To ensure that there will be no tampering with goods destined for export, forgery-proof tax labels are applied to them. Manufacturing these labels represents a greater challenge than is generally assumed: the tax labels

must be individualized at high speeds while they are still in sheet form. Ink-jet systems featuring multiple heads apply an individual barcode and/or a number to each label. In the same process step, camera systems read the printed information back, thus ensuring that the individualization process has been carried out correctly – and all this with a production capacity of more than a million strips per hour.

Personalized mailings

The mailing sector is a fast-growing, yet fiercely contested market. A market that is characterized by great pressure in pricing and short production times. For this reason, companies are constantly on the look-out for potential savings both in the production and personalization processes. As a successful supplier of document and product personalization systems, Atlantic Zeiser has a long track record of finding solutions for these kinds of problems. User-oriented, flexible systems based on digital ink-jet printers, camera-monitoring units and the Jetline transport system will increase the efficiency of the entire mailing process.



Multiple combinations, unparalleled security.

All system solutions from Atlantic Zeiser are built with an open architecture and can therefore be modified at any time. They combine a range of technologies within them and can be upgraded and expanded as required. All the technologies deployed by Atlantic Zeiser, for example in impact numbering applications or card systems, have a proven, successful track record. Yet in addition to using established technologies, the company is constantly developing new and innovative solutions – so as to be prepared for any new field of application.

1. Ink-jet printing systems

Atlantic Zeiser high-performance printing systems incorporating ink-jet technology are extremely flexible: they are capable of individualizing documents at high speed and high resolution. The entire range of available printing processes, such as DOD and continuous-ink, can be deployed as well as various drying methods. The ink jet modules from Atlantic Zeiser can handle a great many different substrates and inks due to the fact that print heads even from different manufacturers can be integrated into a module.

2. In-house ink development

Atlantic Zeiser also develop and manufacture new ink suitable for printing onto difficult substrates, such as cotton, other kinds of textiles, plastic, varnished or laminated media. In security printing applications in particular, special inks are used alongside ordinary ink types. Such specially developed security inks are the basis of virtually every complex security package. In addition, special inks that are invisible to the naked eye and can only be scanned by special cameras using a certain type of illumination are used in many applications.

3. Laser perforation and laser marking

Document individualization also employs other technologies, apart from ink-jet printing. For example, individual numbers can be burned into paper or polycarbonate surfaces on passports using lasers. Laser perforation represents a recognized security characteristic. Since such perforations are conical in shape, the removal of pages would be easy to spot. Laser perforation is a security feature recommended by the International Civil Aviation Organization (ICAO).

4. RFID smart label encoding

The use of the new RFID technology is set to increase in future. Codes and product-specific characteristics are stored on a chip that is integrated into the label. A transmitter-receiver system allows the code to be read back without the need for direct visual contact between the scanning device and the product label. In this way, Atlantic Zeiser combines traditional identification elements with modern information technology. The Atlantic Zeiser module performing RFID chip programming can easily be integrated into existing or new systems.



5. Magnetic encoding

Magnetic strip encoding for tickets has been in use at Atlantic Zeiser for a long time. The applications are extremely reliable, work at high speed and feature complex, integrated control mechanisms.

6. Data verification / camera and scanner systems

In order to monitor the individualization of documents and products immediately during the production process, the printed information is read back by specially developed cameras or scanners and compared to the data stored previously. Faulty specimens are immediately discarded. This ensures that every single specimen carries the correct code or the correct address.

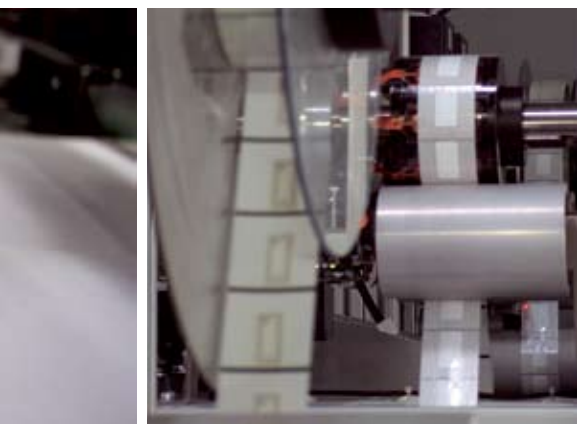
7. Special hand scanners

These devices are used in conjunction with Atlantic Zeiser special inks. They permit the collection and verification of invisible data-matrix codes at any point within the logistics chain by mobile personnel.

8. Data handling / database management

A complete personalization system requires an effective management of the individualization data. Only in this way is it possible to ensure that a code is generated correctly, that it is transferred accurately and that it can be audited at a later stage. To achieve this, Atlantic Zeiser systems make use of the infrastructure in the form of existing computers: for instance, if a company has a merchandise management system in place, the newly generated data can be integrated into that system and made available to other applications as well.

The data is available not only within the company but can be transferred anywhere in the world – using the highest level of data security, of course. If a company does not have its own computer system, or if it is preferable not to link the personalization application with the company system, there is always the option of using a database developed by Atlantic Zeiser.





—○ CARD SYSTEMS

Atlantic Zeiser personalization systems give customer cards, phone cards and all the other types of cards their particular shape and functionality and, hence, their value. Atlantic Zeiser provides card manufacturers with modular systems that allow them to individualize and package each card in any way they like. No matter what the technological requirements for a particular order – our systems are at the leading edge of what is technically feasible at every step in the process..

—○ IMPACT NUMBERING

Atlantic Zeiser manufactures high-precision, high-speed and intelligent numbering systems. Millions of banknotes, checks and other security documents are numbered using our equipment every day – around the world. A manufacturer of numbering systems since 1955, today Atlantic Zeiser is the world leader in this market. Because systems made by Atlantic Zeiser are constantly being refined and developed further – to keep them at the leading edge of what is technically feasible..

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