



ENGLISH

CARD SYSTEMS

DOCUMENT & PRODUCT IDENTITY

IMPACT NUMBERING



CREATING IDENTITY

Card systems from Atlantic Zeiser.

Unmistakable. And safe as well.

Whether it's customer cards, phone cards, gift cards, discount cards or SIM cards in your cell phone. Open your wallet or delve into your jacket pocket and you stand a good chance of coming across Atlantic Zeiser. From labeling, magnetic encoding, programming through to handling and packaging - whatever manufacturers want to do with blank cards, Atlantic Zeiser can supply them with the necessary tools and equipment. So that every card for every customer and every application is unique. And secure.

One system for all cards

The field of applications for cards is expanding all the time: SIM cards in cell phones that guarantee mobility and availability, or loyalty and gift cards as an incentive for retail customers to keep returning. Where for years simple plastic cards were enough, chip cards are now being used.

This is why Atlantic Zeiser is developing open systems in which single modules can be integrated within the field of card personalization and different functional processes incorporated into card packaging. A technological toolbox that is constantly being adapted to the ever-changing requirements.

Our card systems ensure low unit costs, high productivity and high availability. At the same time their modular structure is constantly open for innovation. This upgradeability – particularly the chip programming of cards – ensures a high level of investment security for our customers. Hence, in our company, new technologies are integrated into existing systems rather than displacing them.





Outstanding performance:

Depending on the programming time, the chip-programming module from Chipline can process up to 25,000 chip cards per hour. This represents the highest personalization speed and gives our customers the lowest production costs per card.

Revolution and precision

There was a revolution at the end of the 1990s when Atlantic Zeiser developed high-performance systems for card personalization. As a result, cards could be personalized in large numbers and at high speed for the first time. These are requirements that the card systems of Atlantic Zeiser still fulfill with unique performance features, now more than ever – both in card personalization and in card packaging.

This very high throughput not only leads to higher productivity but also to lower unit costs. And all of this with extremely high precision. In line with our principle of the linear process chain, we thus combine personalization and packaging processes on a common high performance level. To ensure that the various process steps are brought into line with each other, a uniform real-time controller platform manages the incorporation of all the necessary technologies.



Card Systems in use

Always bank on the right card.

They are now an indispensable part of our economic and social lives: cards that we use to collect bonus points, pay bills, keep track of members, grant our cell phones access to the GSM network – or literally open doors for us. The value of these cards is based on trust in their authenticity. To make sure that everybody plays their cards right, Atlantic Zeiser integrates a wide range of personalization technologies to achieve the maximum level of security.



Cards without a chip

Whether prepaid phone scratch card, membership card or loyalty card – the principle is generally the same. The cards bear the issuer's design and generally have a numeric code on the rear, which is sealed by hotfoil or label. Magnetic encoding strips are also used or more extensive user data can be marked on the card using various different printing technologies. In scratch card applications the end customer can scratch off this foil after acquiring the card and then use the numeric code, to top up the credit balance on a prepaid cell phone, for instance. On loyalty cards the customer is credited with the loyalty points generated through turnover by means of the user data stored in the magnetic strip.

Card systems from Atlantic Zeiser are capable of printing these chip-free cards, of laser marking, individualizing, magnetically encoding, PIN encoding and sealing the PIN by hotfoil or label. What is more, our systems also take care of the correct packaging and ensure precise and rapid finishing. To ensure that even a simple non-chip card arrives with the customer as a unique, high-quality item.

Smart cards

On the outside one card looks very much like any other. Only when equipped with a chip does any plastic card turn into a versatile tool that can be used for a number of purposes: the smart card. It contains a computer in miniature form that can store critical and secret information. Depending on the personalization, the card does not yield its full range of functions until the user's PIN number has been entered. It is thus an efficient and portable solution for authenticating identities or for validating transactions. Smart card personalization is a classic example of Atlantic Zeiser's systems integration.

After this, the card is printed and magnetically encoded if required. First the chip is initialized and personalized. This enables our customers to process different kinds of smart cards: from simple memory phone cards to high-value GSM (Global System for Mobile Communications) cards. Even contactless cards can be programmed without replacing the hardware.

Smart tickets

Major sporting and music events attract large crowds. To ensure that only those who have actually paid for their tickets can enter the stadium, conventional admission tickets are increasingly being replaced by smart tickets. Even in the busiest crowd, an RFID chip makes sure that the black sheep does not stand a chance.

Using Chipline you are in a position to program the RFID chip on the smart ticket quickly and efficiently and at the same time print the tickets with various data such as barcodes or numbers. Then the data on the admission ticket can be read at any time without any contact: communication with the chip takes place remotely as the data are read by means of radio transmission.

Bank cards

Today's money no longer has a physical presence. All that is required to transport and pay with it is a little piece of plastic: the personalized credit or debit card. To ensure that this is protected against misuse but still available for a transaction offline when required, it is fitted with an EMV chip. This is based on a specification shared by the companies Europay, Mastercard and Visa. After all, at the end of the day: "trust is good, but security is better."

With its performance potential, Chipline is ideally suited for initializing bank chips, because large lot quantities have to be processed during this operation. Corresponding encrypting devices (HSM, SAM server) can be applied.



Perfect packaging:

At Atlantic Zeiser card personalization and packaging evolve in tandem – at the highest level and according to the same criteria: efficiency, flexibility and security. Atlantic Zeiser offers precise card packaging for all applications with different finishing solutions, such as flow pack over-wrapping, marking and product labeling.

High-tech and high-performance.

Always flexible and open to the needs of the future. This is what distinguishes Atlantic Zeiser's high-performance card systems. They are composed of a wide range of technologies which can be combined inline to fit demand. This means that the optimum technology is available for every desired form of card personalization at all times. This, after all, is the integrated quality to which Atlantic Zeiser aspires: all technologies from a single source.

1. High-performance printing systems – Digital ink jet technology

Digital ink jet high-performance printing systems are among the most commonly used personalization technologies for cards. And of these, it is particularly the new high-resolution drop-on-demand print systems quality with a quality level that enables new fields of application to be accessed. As a result, customized solutions can be implemented ranging from the simple single-array jet to the high-resolution drop-on-demand technologies.

2. Laser marking

High-performance laser marking systems from Atlantic Zeiser are extremely precise and at the same time very fast. This technology particularly displays its full benefits for GSM cards. Here the ICC ID-number has to be applied in direct connection with the chip for long-term use. For specific customer needs, Atlantic Zeiser often combines the two marking technologies of print and laser so as to offer precision and speed in a single system by printing additional information (apart from the ICC ID) such as barcodes with ink jet systems.

3. Hotfoil and label

Application of hotfoil to cards at maximum speed is one of Atlantic Zeiser's special areas. Whether for covering PIN codes, for signature panels or for encoded magnetic strips: for all these applications high-quality and specially developed hotfoils and labels are used which have to fulfill the highest requirements – those of Atlantic Zeiser.

4. Chip programming

Chip programming at Atlantic Zeiser can definitely be regarded as a nicely rounded package. Depending on the programming time involved, up to 25,000 chip cards can be processed per hour. That is the highest output worldwide and gives our customers the lowest production costs per card. The application functions extremely reliably at maximum speed and integrates complex control mechanisms. In addition, RFID chip programming can easily be integrated into existing or new personalization systems. This represents another example of systems integration from Atlantic Zeiser because RFID applications are being increasingly employed whether for contactless cards or in smart tickets. And the demand is rising.



Our range of services:

- Chip programming
- Ink jet marking
- Laser marking
- Magnetic encoding
- Hotfoiling
- Labeling
- Camera verification
- Card packaging
- Flow pack over-wrapping
- Process and quality control
- Ink development

5. Magnetic encoding

Magnetic encoding makes the card into a multi-purpose tool. The Atlantic Zeiser magnetic encoding module has a three-track encoding and reading head, which is able to encode and check up to 30,000 cards per hour. By reading back the encoded data and comparing it with the real-time controller, the encoding operation is verified, and compliance with the applicable ISO standards is guaranteed. One further specialty from Atlantic Zeiser is flexible magnetic encoding which enables encoding from both below and above. Real-time control of the analog signals guarantees non-fluctuating quality of the magnetic encoding during the actual writing operation.

6. Camera verification

In order to monitor the individualization of documents from the very beginning, the printed information is read back by special cameras and compared with the stored data. Even under the most difficult conditions, such as reflective card surfaces, the cameras display excellent reading characteristics. Faulty cards are immediately discarded. Even the perfect positioning of applied labels and hotfoils can be guaranteed by means of Atlantic Zeiser camera technology.

7. Packaging

Atlantic Zeiser's Cardpack CP 40 packages up to 40,000 cards per hour – as single cards or in chains according to requirements. And all of this to very high quality criteria: the foil welding technology used means that in each case the distances between the weld seam and the edge of the card are very small so that the pouches cannot be torn open by accident. As the seal radius can be enlarged up to a given maximum, even multi-page information folders can be packaged together with the card. A central foil fold within the machine allows particularly inexpensive non-folded foil to be used.

8. Real-time controller platform

Technologies from Atlantic Zeiser have a modular character. They can be repeatedly integrated into the linear production process. Here a modular real-time controller platform serves as the basis for systems integration. After all, a complete card system needs effective management – both of the technologies involved and of all the individual data.





— DOCUMENT & PRODUCT IDENTITY

To ensure that documents of identification and branded products actually deliver on their promise, document & product identity systems turn every document and every mass-produced article into a unique item. Unmistakable, and verifiable. Atlantic Zeiser can produce this result by integrating a diverse range of technologies into variable and flexible systems – to suit your own individual requirements: from marking technologies right through to RFID encoding, detection and verification tools.

— 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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