

# BANKNOTE NUMBERING

Numbering Boxes  
for Banknote Applications



1  
2  
3  
4  
5  
6  
7  
A1234567A

1 0 9 2 3 8 4  
AB12345678

1 2 3 4 5 6 7  
A B  
AB1234567

## ZEISER numbering boxes

Security numbering demands a high degree of precision and the absolute maintenance of specified tolerances. ZEISER offers with its wide range of numbering equipment a solution, from mechanical numbering boxes up to computer controlled and motor driven numbering boxes.

Billions of banknotes around the world are numbered with ZEISER numbering equipment each year. If you are looking for sequential numbering with or without tracking frames, or, non-sequential or random numbering, which is based on specific internal logistic or process reasons, ZEISER has the solution.

### NBX® – Numbering Box X-Change

Computer controlled, fully motor driven numbering

NBX is designed by and developed together with our partner Koenig & Bauer Banknote Solutions. It is available in several horizontal and vertical variants and offers with its motor driven design a new approach to high quality banknote numbering.

#### Key features:

- Supports both sequential and non-sequential numbering for more flexibility in finishing
- Suitable for various fonts and sizes
- Only wheel set needs to be changed for a new job
- No cams needed
- Fully motor driven, no manual wheel/prefix adjustment required on production start or during series change over



### CRN/Direct Drive

Computer controlled fully flexible numbering

For jobs that demand serial numbers with more than 12 characters CRN/Direct Drive should be considered. With up to 53 fully automatic wheels, CRN offers a wide range of possibilities, and is used in applications like banknote, passport, lottery tickets, cheques and other security printing applications.

Direct Drive boxes offer non-motor driven actuation with all wheels computer controlled and operated.

#### Key features:

- Fully flexible numbering
- Up to 53 wheels
- Horizontal and vertical design
- Computer controlled numbering and tracking



## K20/K21

New generation for sequential numbering

With it's new design the K20/K21 improves the productivity in several ways:

Cleaning and maintenance is now possible without losing the position, or unplugging a cable, due to the removable upper part. Setup for a new job is quicker as the integrated LED's directly indicate correct (green) or false (red) settings. State-of-the-art RISEC include hardened electronics with improved fault tolerance. Great care was taken to improve and ease the fault finding in case of an error. It is possible to use the box with or without tracking frames.

### Key features:

- Sequential numbering
- Horizontal and vertical design
- Absolute tracking frames
- No loss of registered position on maintenance
- LEDs indicate correct wheel position
- 3 or 4 sensor techniques available
- CAN-bus (central – or standard parallel bus)



## K01/K04

Sequential numbering with impulse tracking technology monitored with the Electronic Numbering Control (ENC)

### Key features:

- Horizontal and vertical design
- Impulse tracking frames



## K01/200K

Classic mechanical design for sequential numbering

### Key features:

- Vertical and horizontal numbering
- Robust design



## Type Faces (Examples)

$\frac{B}{261}$  123456       $\frac{1}{56}$  . 123456  
π 092384      AB12345678  
A      ॐ ४ 0520846      A B  
B      789/5 . 1234567      1 2 3 4 5 6 7 C  
1      A1234567A  
2  
3  
4  
5  
6  
7      AB1234567



## ENC – CAN

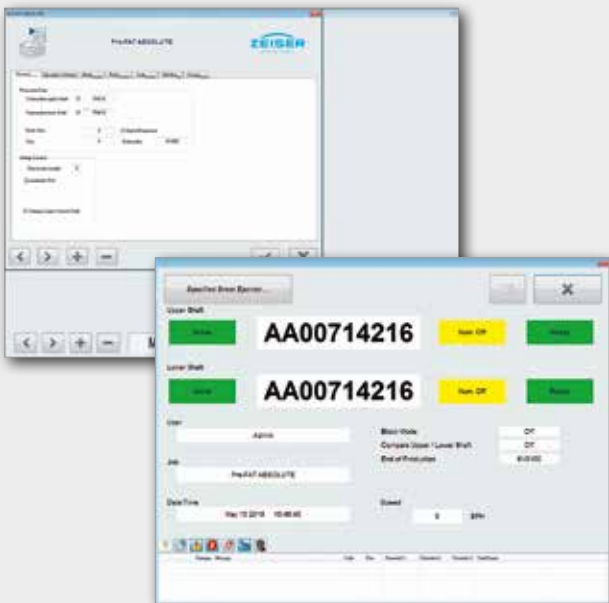
Electronic Numbering Control based on CAN-Bus

ENC-CAN is a controller system with interfaces to numbering boxes with absolute and impulse tracking frames.

The ENC-CAN is used to check the correct setting of the numbering boxes for both impulse and absolute tracking system. This is done at full machine speed and allows the machine to switch off the impression cylinder before the number is printed in case of any incorrect number setting. With absolute tracking mis-alignment is additionally monitored.

### Key features:

- Reduced setup time
- Inspection at full speed
- Robust hardware concept
- Easy and quick diagnostics
- Support for absolute and impulse tracking



## DataScan ST-SCB

Banknote numbering inspection

To ensure the high quality standards in the banknote manufacturing process, ZEISER offers camera systems that are capable of inline sequence and quality inspection of the complete sheet at full machine speed. The **NEW DataScan ST-SCB** offers inspection at 300 dpi for OCR and image processing features specifically developed for the banknote printing industry.

### Key features:

- Significantly reduced setup time
- Up to 9 ROI's per banknote
- Sequence and quality check of numbering at full speed
- Pattern inspection (i.e. seals and signatures)
- Register measurement
- Live image display (complete banknote)
- Wizard, online help and history function
- Improved image processing functions

DataScan ST-SCB is an exclusive joint development with Koenig & Bauer Banknote Solutions for Super Numerota III and 212 machines.

