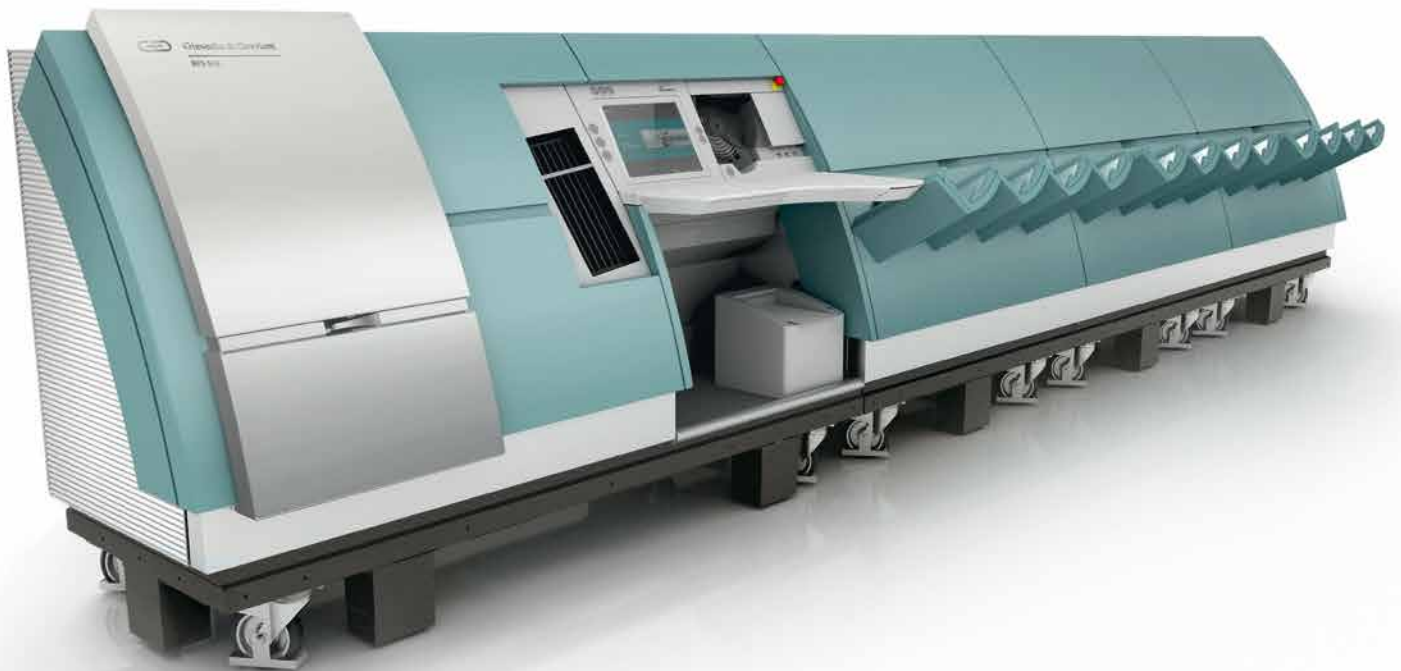


# BPS® M5

Unsurpassed productivity for commercial cash centers



Giesecke & Devrient  
Creating Confidence.

# Banknote processing: 40 years of experience

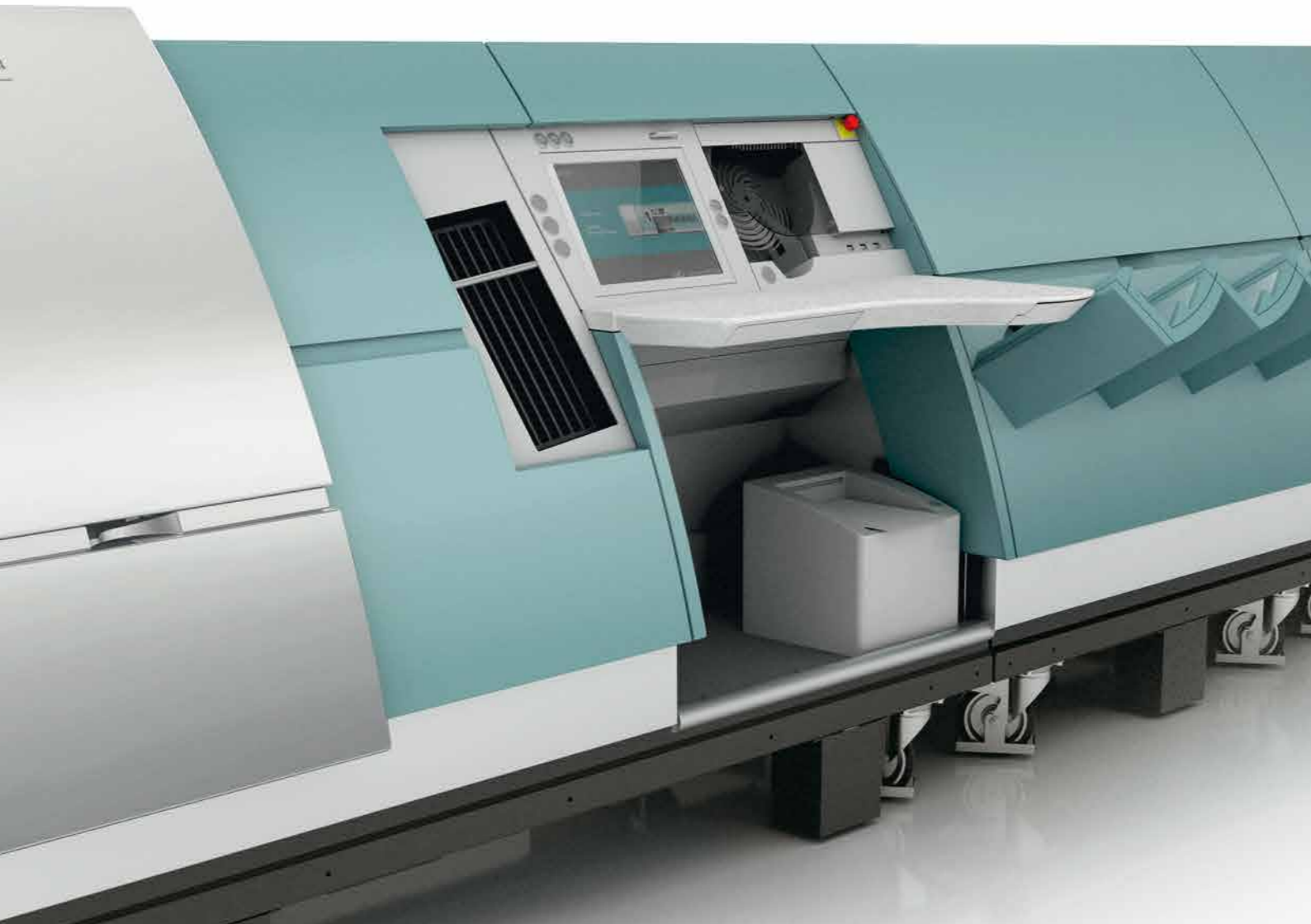
Giesecke & Devrient (G&D) offers high product quality based on 40 years of experience in banknote processing, and continuously transfers technology, ranging from high-performance applications to cost-efficient commercial solutions. BPS M5 is the successor to BPS 1000, the undisputed global market leader in the high-speed banknote processing sector with over 1,400 systems sold.

Like many other BPS products, it has been extremely successful and is a viable and profitable investment for efficient banknote processing.

## **Our competence put to your advantage with the BPS M5**

The BPS M5 is a dedicated version for cash centers operated by commercial banks,

cash-in-transit (CIT) companies, and casinos. Based on the modular design of the BPS 1000 and BPS M7, it constitutes a unique solution for reliable operation and unsurpassed productivity to provide you with a competitive edge.



# Benefits of the BPS M5 at a glance

- German standards for reliable and durable engineering
- The rugged components of the BPS M5 are designed for continuous 24/7 operation
- Featuring a narrow footprint, integrated operator working table, and display
- The caster platform makes it easy to relocate the BPS in case of process changes or system servicing. There is no need to disassemble and reassemble the system to move it
- Low power consumption – and relaxed ambient requirements reduce the amount of infrastructure needed as well as operating costs
- The BPS M5 boots up quickly, taking less than 5 minutes to run the first banknotes – there is no need to first calibrate the sensors by means of a test deck
- Counterfeits are reliably detected at the lowest possible reject rates, while fit banknotes are dependably identified
- Robust design and automatic sensor self-testing ensure repeatable fitness detection based on our in-depth experience as a leading central bank supplier. Extremely accurate defect detection results in proven banknote quality for reliable ATM performance
- Ease of use, optimum ergonomic design, and standing operation help maintain operator productivity, performance, and health
- Operator interface
  - Brilliant 15" TFT touchscreen
  - Electrically adjustable for optimum viewing angle
  - Graphical user interface
- Dust vacuuming (optional) The suction unit removes and filters dust from the system
  - Dust is vacuumed directly where it accumulates during processing so less dust is released, adverse health effects are minimized, and the machine and the sensors stay clean
  - Integrated vacuum hose simplifies cleaning of the sensor section
- Configurations and operation modes optimized for seamless material and data flow to suit the specific needs of your process
  - Processing modes with on-line and off-line reconciliation are supported
  - Processing results are immediately transferred to the vault management system for quick balancing of customer deposits
  - Optional compact and smart packing solutions increase security and reduce labor costs
- Speed option of 22 or 33 banknotes per second, with an actual rate of up to 75,000 or 105,000 banknotes per hour

## **Banknote feeding**

- Up to 4,000 banknotes of any substrate, quality, or format can be placed in the singler – the pneumatic singler unit feeds and aligns fully automatically
- Continuous feeding without singling gap and automatic reloading at the press of a button for optimum operator ergonomics and consistently high processing performance
- Automatic opening and closing of singler cover for noise and dust reduction
- The use of header cards\* enables nonstop processing of customer deposits
- Re-running rejected banknotes reduces the time required for manual inspection and minimizes the risk of missing counterfeits rejected by the BPS

\* The separator card technology used in this product is licensed under U.S. Patent No. 5.917.930 and other foreign patents, all assigned to Currency Systems International, Inc. of Irving, Texas.

# Operation modes

A variety of operation modes can be selected for the efficient processing of small, medium, or large deposits

## Header card deposit processing (HDP):



The BPS operator loads the singler tray with stacks of banknotes. Then this stack is automatically added to the banknotes already in singling position with a simple push of a button for uninterrupted singling. The BPS identifies the header cards, and separately records and balances the stacked banknotes. The HCs are stacked in the reject compartment along with the rejects to identify which rejected banknotes belong to each deposit. As the magnetic detector is capable of detecting any HC, even if there are multiple items, there is no need for an additional trailer card.

HDP is the preferred operation mode when the priority is machine utilization and processing costs for small deposits.

In a special preparation area, the banknotes making up a deposit are assigned to a machine-readable header card (HC) with a unique identification number (HC ID).

Several deposits are combined in one continuous banknote flow, starting with the HC as the leading item.

Reconciliation is then performed off-line. The reconciler scans the HC ID, checks for counterfeits, and then enters the number of verified genuine banknotes per denomination for each deposit.

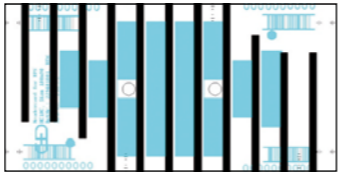
The HDP application is supported by the following software, hardware, and material:

- Handheld barcode reader to recover the HC ID number in the event of a machine misread
- Work area(s) with PC for preparation (i.e. assigning the HC IDs to the deposit data)
- Work area(s) with PC for off-line reconciliation (can be shared with preparation)
- Vault management system (e.g. Compass VMS®) or another tool supporting HDP (e.g. BPS Connect)

The BPS M5 supports the use of HC05 or HC10 header cards.

HC10 is compatible with the BPS 200 and BPS C4. Each HC includes:

- Magnetic bars (black) to allow detection of header cards by the M10 sensor
- A barcode to read the HC ID with a standard scanner
- Machine-readable ID number by OCR ID (HC05) or blue pattern (HC10)
- Holes to instantly identify any remaining banknotes within a stack of HCs (HC 10)



HC types: HC05 (left) and HC10 (right)

## Fast deposit processing (FDP):

FDP is the preferred operation mode when the priority is on operator efficiency, maximum deposit integrity, and process security. The operator work area is ergonomically designed: it is located near the singler

and reject compartment and features an auto-positioning singling fork. Re-running rejected banknotes ensures the greatest reliability in detecting counterfeits and minimizing the number of rejected

banknotes. The singling fork is set to the default position to receive the rejected banknotes for a re-run while another stack of banknotes (the next deposit) is already in the singler tray.

### FDP with on-line reconciliation



\* Optional processing step

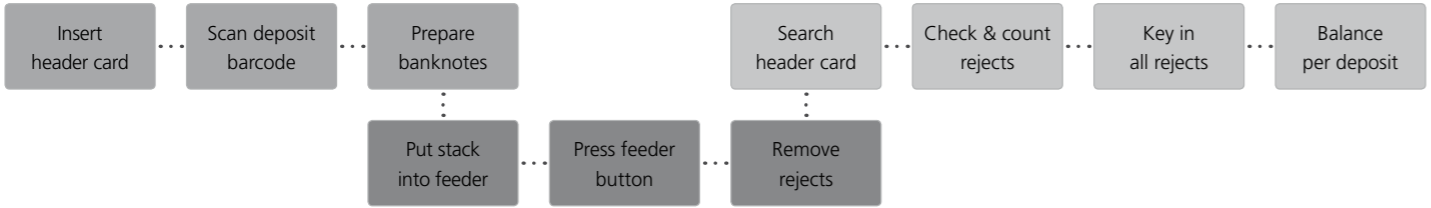
### FDP with off-line reconciliation

FDP with off-line reconciliation uses original deposit documents and HDP features and is the preferred operation mode when the priority is on balancing high deposit integrity and machine utilization, offering case-by-case flexibility for each deposit.

The deposits are identified using the HC and/or the original deposit documents with a barcode. The BPS operator uses a handheld scanner to read the barcode, and then loads the deposit into the singler; banknotes can also be re-run

if desired. The remaining rejected banknotes are physically assigned to the HC and/or deposit document and then passed on to the off-line reconciliation station, using the same procedure as HDP.

## G&D header card process



# Standard delivery modules

Up to 20 delivery stackers are possible, in the following combinations:

- Modules with 4 stackers with:
  - Reliable automatic on-line banding
  - Configurable band printing for customer identification and tracking data

- Large delivery module (LDM) with 2 stackers, each holding up to 2,000 loose banknotes, with removable cassettes for fast and safe banknote removal. The stacked banknotes can be directly filled into ATM cassettes

Stackers may be assigned to work in tandem (for high volumes up to the maximum speed) or on their own (for low volumes). This saves on the number of stackers required and provides maximum flexibility for sorting multiple currencies, denominations, orientations, and fitness

classes in one pass. Thanks to its modular design, the BPS M5 can be easily retrofitted with additional stackers and bundlers or upgraded for increased speed within one day. This allows for agility in terms of process flow and banknote volumes.

# Bundling and packing solutions (optional)

- Automatic on-line bundling of 10 packages or optionally 5 packages
- Number of categories (e.g. by denomination and/or fitness) for bundling, only limited by the number of stackers
- NotaPack® for fully automatic packing with tamperproof shrink-wrapping of bundles of 5 or 10 packages
- Up to 4 BPS M5 systems may be connected to one NotaPack® – saving space and investment costs
- Different banknote formats and substrates may be processed together, without any adjustments to the bundling or packing systems
- Intuitive operation and simple replenishment of consumables



# Solution components



In addition to bundling and packing solutions, customers can choose from various hardware and software components and related services. Every solution focuses on the highest possible productivity with seamless flow of material and data.

For example, the optimal organization of cash center processes is supported by two different software solutions:

- **The Compass VMS®** vault management system supports the management of

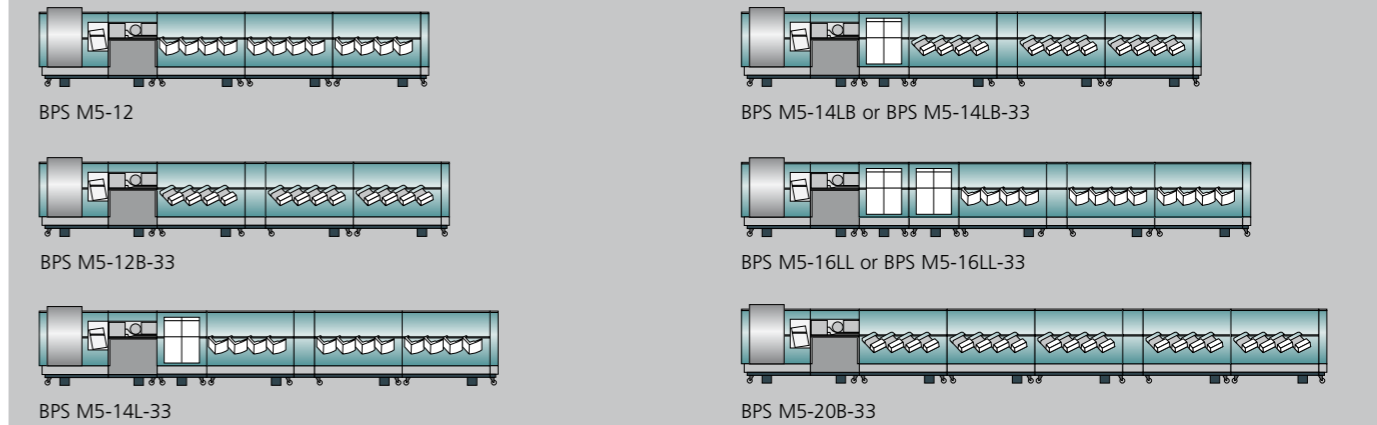
vault stocks and customer accounts, deposit processing and balancing, and header card processing

- **The BPS Connect** software supports processing and reporting, e.g. balancing

of deposits including preparation and reconciliation with header card processing. It also provides dashboard displays for accumulated processing volumes



## BPS M5 configuration examples





## Technical Data

### Dimensions in mm (L/W/H)

- BPS M5-12: 6,518 x 1,063 x 1,488
  - BPS M5-14LB-33: 7,588 x 1,010 x 1,488
- (Can be dismantled for transport purposes)

### Weight (including caster platform)

- BPS M5-12: Approx. 1,859 kg
- BPS M5-14LB-33: Approx. 2,593 kg

### BN sizes accepted

- Length: 100–180 mm
- Width: 60–90 mm

### Effective throughput

- BPS M5-22: Up to 75,000 BN/h
- BPS M5-33: Up to 105,000 BN/h

### Ambient conditions (continuous operation)

- Ambient temperature: 15–30°C
- Relative humidity: 30–80%

### Power consumption

- BPS M5-12: Approx. 3.0 kW
  - BPS M5-14LB-33: Approx. 5.3 kW
  - LVM pneumatic module: 3.3 kW
- (Can be located outside processing room)

### Power supply options

- 230 V/400 V, 50/60 Hz
  - 120 V/208 V, 50/60 Hz
- Direct mains connection, without transformer

### Noise level

- BPS M5-22: 64–71 dB(A)
- BPS M5-33: 64–75 dB(A)

### Certifications

- CE mark
- GS certificate for approved safety
- UL on request

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