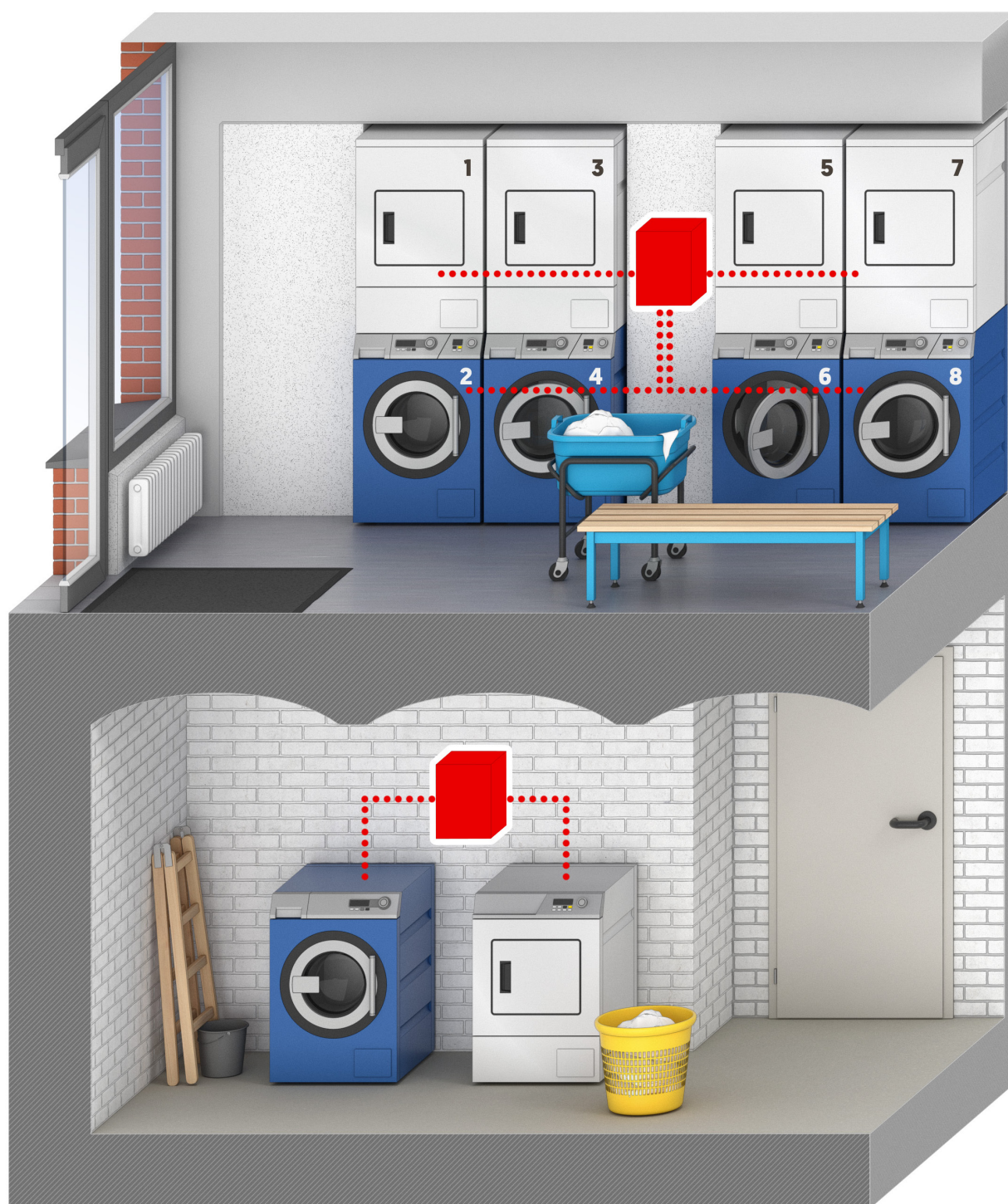
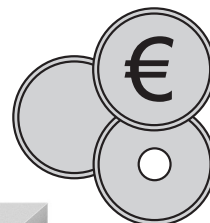


Solutions for **LAUNDRETTES & WASHROOMS**



Operation with cash **COINS & TOKENS**



EMS-1080 with coin validator



EMS-82 with coin validator

Operation with cash COINS & TOKENS

DESCRIPTION

The coin machines of the EMS-5x and EMS-8x series are used for the classic coin payment of one device - the machines of this series cover a broad range of coin validators, housing designs and functions.

The multi-device controls of the EMS-1040 and EMS-1080 series enable the coin payment of up to 8 devices.

HANDLING PROCEDURE

The individual status RGB-LEDs clearly indicate, which devices are occupied or free. After choosing a free device, the large display shows the individual minimum amount of insertion. After the payment is completed, the selected device is switched on for the stored time period. After the program time has elapsed, an optional door opening pulse is available.

With the EMS-5x and EMS-8x series of coin machines, any services can be easily time-controlled by coin or token. The bright and clear display informs concerning the inserted coins or the remaining time. For the optional use in outdoor / wet area, we offer a robust stainless steel housing, encapsulated electronics and 24V AC SELV. While the EMS 5x represents the entry-level model for simple applications, the EMS-8x shows its strengths through several settings and flexible applications.

SALE OF TOKENS

Optionally, the EMS-800 cash system can be used to sell tokens or to enable a coin exchange of banknotes.

BENEFITS

- existing infrastructure can be used
- familiar handling procedure for customers
- issued tokens can be used
- sale of tokens and exchange can be realized with optional cash system EMS-800



Figure 1:
Multi-device control EMS-1080 with coin validator



Figure 2:
Coin machine EMS-82 with door-opener

QUESTIONS?

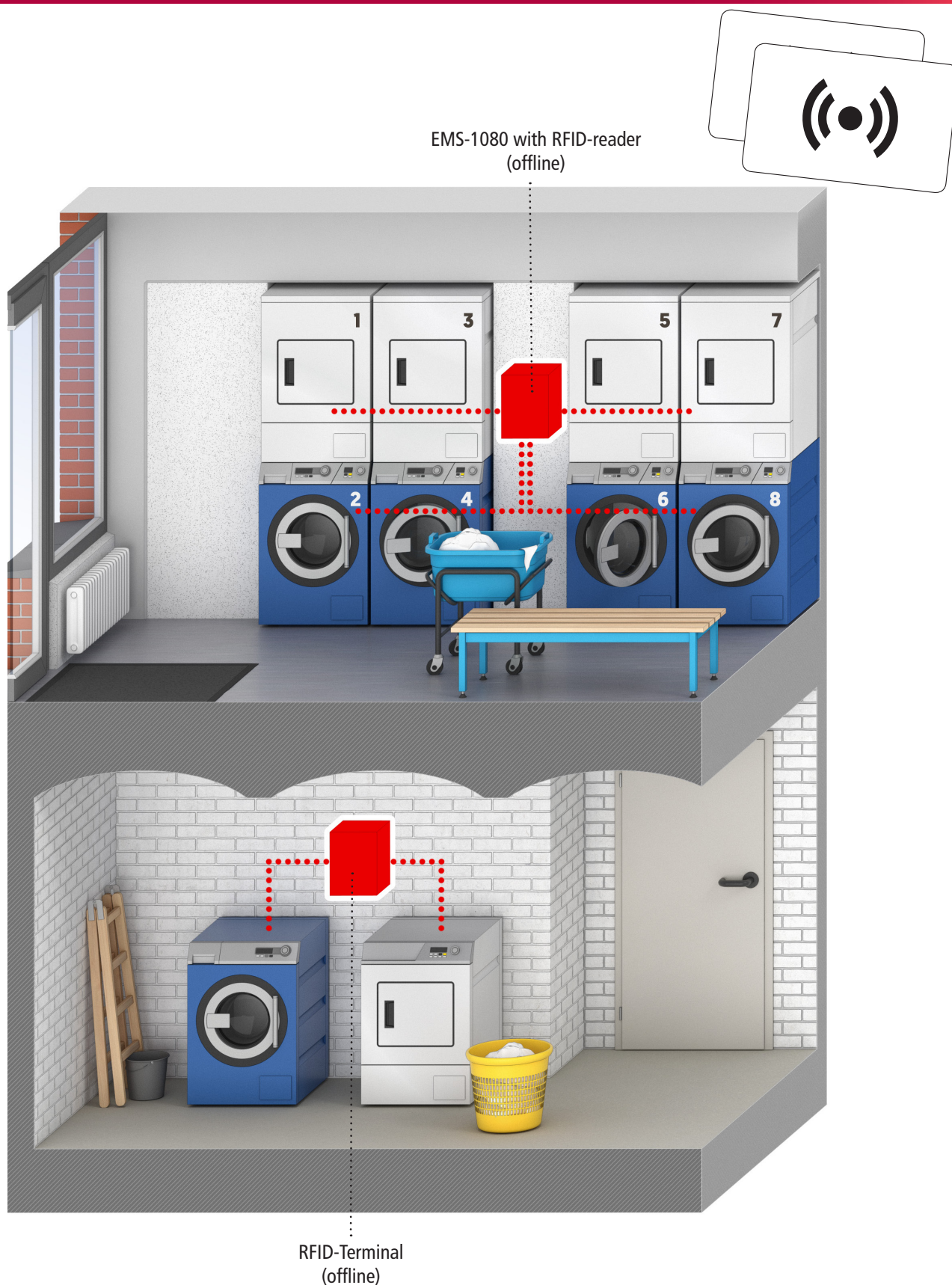
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Cashless operation with one-way tickets

RFID-PREPAID-TICKETS (OFFLINE)



Cashless operation with one-way tickets

RFID-PREPAID-TICKETS (OFFLINE)

DESCRIPTION

By using preloaded RFID-tickets, the effort for operators and customers can be minimized:

The operator hands out preloaded and preprinted RFID-paper-tickets to the user. The credit, e.g. an amount of Euros or a defined number of uses is stored locally on the ticket. This eliminates the need for complex internet or server connections, and no ongoing transaction fees are incurred for payment processing.

If the credit is expended, these tickets can be simply disposed of. This reduces the costs for handling (no card return and deposit repayment necessary) and purchase (no cash system necessary).

HANDLING PROCEDURE

With the multi-device control EMS-1080, up to eight devices can be controlled. The RFID-terminal allows the control of up to two terminals. After selecting a free device, the corresponding price is displayed. After holding an RFID-ticket to the terminal, credit is debited from the ticket and the connected washing machine or dryer is powered for the stored time period. After the program time has elapsed, an optional door opening pulse is available.

By using the RFID master card, settings (e.g. time and prices) can be programmed as well as counters can be read out at the RFID-terminal.

BENEFITS

- minimized administration costs by issuing / sending preloaded RFID-tickets and prepayment
- autarch offline operation by local storage of credit on encrypted RFID-tickets
- no network connection or server required
- no ongoing transaction fees
- tickets can be simply disposed of when credit is expended
- no cash system for card recharge and return necessary
- nonwearing contactless RFID technology
- simple, intuitive handling by applying ticket
- no emptying of coins and tokens necessary
- risk of break-up reduced due to cashless operation



Figure 1:
Multi-device control EMS-1080 with RFID-reader



Figure 2:
RFID-terminal



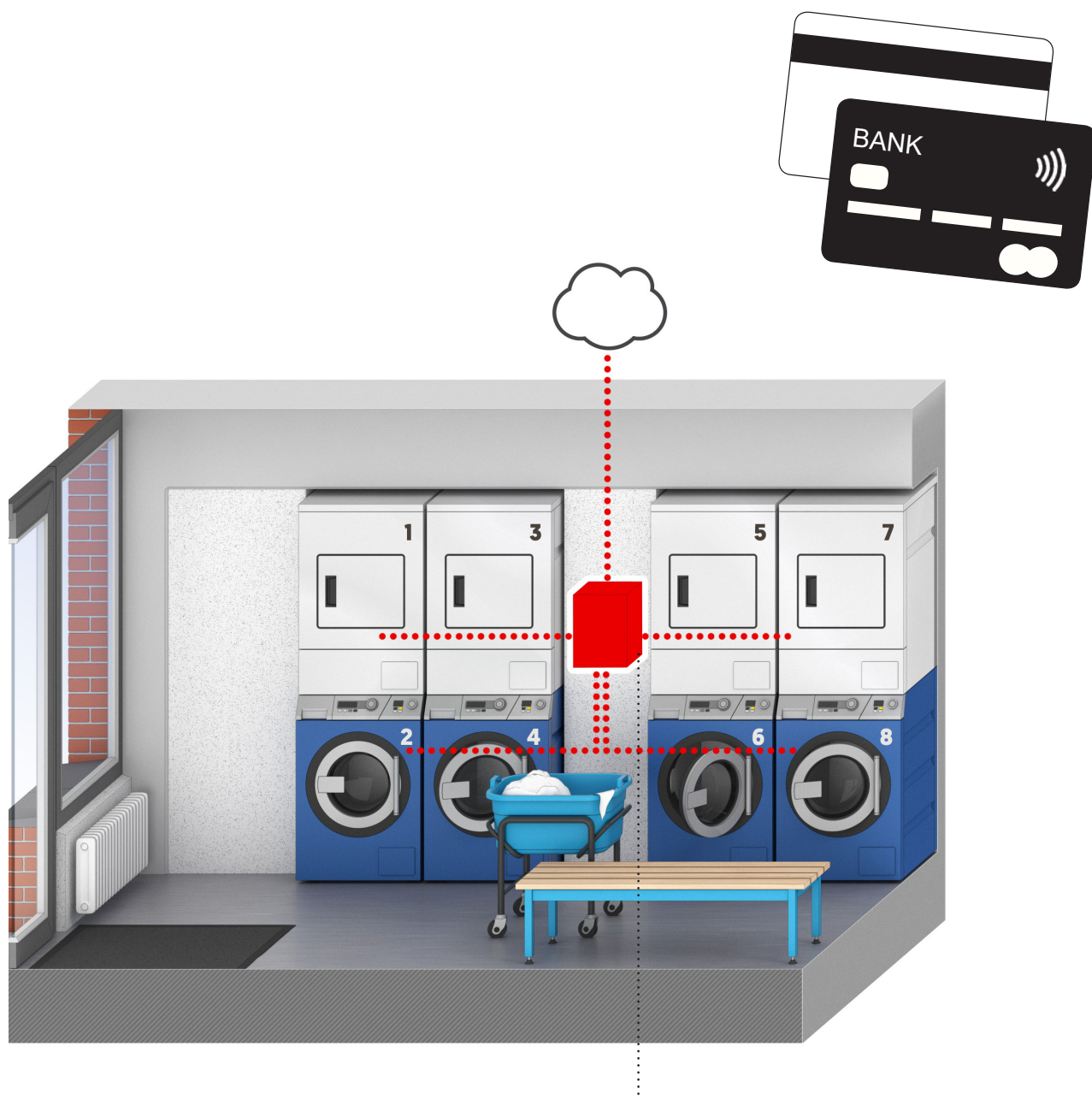
Figure 3:
Ex. RFID-paper tickets

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Operation with creditcards & coins **CREDITCARDS & COINS (ONLINE)**



EMS-1080 with terminal for micropayments
(Online)

Operation with creditcards & coins

CREDITCARDS & COINS (ONLINE)

DESCRIPTION

The system family EMS-1080 is developed for the central control of up to eight washing machines or dryers. In addition to the classic coin insertion, the payment can be transacted up to an amount of 25€ with bank- or credit cards at the micropayment-terminal.

REQUIREMENTS

The inexpensive card terminal handles contactless cashless payment by simply holding the card or smartphone in front of it without entering a PIN. The integrated SIM card ensures wireless data transmission. Alternatively, the terminal can also be connected to the internet via LAN if there is no sufficient mobile radio reception. Furthermore, the operator has the possibility to monitor sales and device status remotely.

HANDLING PROCEDURE

With the multi-device control EMS-1080, up to eight devices can be controlled. After selecting a free device, the corresponding price is displayed. After the credit card payment is accomplished with chip or NFC, the connected washing machine or dryer is powered for the stored time period. After the program time has elapsed, an optional door opening pulse is available.

In the authorized programming mode, the operator can set parameters (prices, free time, ...) and read out counters directly at the device.

BENEFITS

- acceptance of NFC credit cards
- hybrid payment options (NFC cards + coins)
maximizes customer acceptance and availability
- frontend for remote monitoring of cash & cashless transactions
- easy NFC card payment without entering the PIN
- robustness



Figure:
EMS-1080 with credit card terminal & coin selector

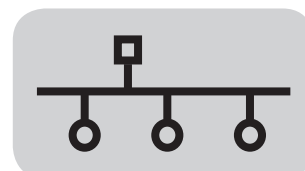
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Central payment and direct control Cash system EMS-4000



EMS-4000
with detergent tab dispenser

Central payment and direct control

Cash system EMS-4000

DESCRIPTION

A central payment can be realized with the cash system EMS-4000: By connecting up to 320 washing machines or dryers via relay boxes, the device-start can be activated directly at the EMS-4000 cash system. This eliminates any additional payment media and local payment technology at the devices. Extensive payment options and accessories are available, e.g. an integrated dispenser for detergent tabs or an external screen display for the visualization of the current machine occupancy and remaining time.

HANDLING PROCEDURE

After selecting a free device at the touch-screen, the corresponding price is displayed. The EMS-4000 accepts coins, tokens, banknotes and cashless payment via card or NFC-smartphone for payment. After the payment is accomplished, the connected washing machine or dryer is powered for the stored time period. On the touchscreen, the related icon will be locked, indicated with red color and the remaining time is displayed.

After the program time has elapsed, an optional door opening pulse is available. For the output of receipts or cash reports, the EMS-4000 is equipped with a thermal printer. Optional, RFID-value cards can be bought, loaded and dispensed. With the use of RFID-value cards, discounts and promotions can be realized to strengthen customer loyalty.

REMOTE & DATA ACCESS

By using an existing internet connection to the cash system, parameters can be configured via webinterface as well as remote maintenance can be processed (firmware updates and logfile download). Further, a detailed analysis of sales data is possible by using the optional software EMS-DATA. The software can automatically send system messages in order to signal service requirements at an early stage (e.g. receipt paper empty, other service and fault messages) to ensure a high system availability.

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BENEFITS

- centralization of payment technology
- direct control of up to 320 washing machines/ dryers with only one cash system
- local payment terminals at each washing machine/ dryer are not required
- extensive payment options
- touch-interface for simple, intuitive handling
- value-card sales, recharge and return at cash system
- targeted happy hour rates possible
- webinterface for configuration and remote-access
- thermal printer for receipts and cash reports
- integrated dispenser for detergent tabs (optional)
- external screen display for the visualization of the current machine occupancy and remaining time (optional)



Figure 1:

Cash system EMS-4000 with bank-/ credit card pin terminal

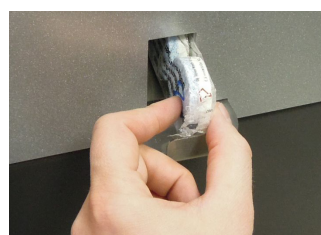


Figure 2:

Dispenser for detergent tabs

Sale of washing powder and fabric softener **DISPENSER FOR LAUNDRY DETERGENT**



Sale of washing powder and fabric softener DISPENSER FOR LAUNDRY DETERGENT

DESCRIPTION

In addition to the dispensing drawer for detergent tabs, it is also possible to extend the EMS-4000 cash system with a dispenser for washing powder and fabric softener:

After the required product is paid at the cash system, the respective button is activated at the dispenser - pressing the green illuminated button starts the dispensing process of the detergent. After the time-controlled output has been completed, the green LED illuminated arrow indicates to withdraw the filled cup. In addition to the reusable plastic cups, disposable cups can also be placed under the dispensing openings.

The sensory monitoring of the liquid canister and powder silo ensures, that the detergent can only be selected if the filling level is sufficient. In addition to the robust system operation, the dispenser was designed for a simple filling and cleaning access: the large powder silo and the powder slide can be simply pulled out to the front via telescopic rails for maintenance.

The high-quality housing of the dispenser is equipped with a safe lock. With the same outer dimensions and colors, the EMS-4000 and the dispenser appear optically as a symmetrical unit. The installation of the detergent dispenser can also be carried out in a spatial distance from the cash system. The dispenser is supplied with a data and power cable from the cash system and can be mounted on the wall, in the wall or free standing by using the optional pillar.



Figures:

Powder silo and canister for fabric softener

TECHNICAL DATA

- Capacities*: powder silo: 45 liters
canister: 10 liters
- *reference detergents see manual
- Multicoloured LEDs with status indication
- Activation via vandal-proof buttons
- Web-Interface for parameter settings via EMS-4000
- Service buttons for testrun of motors
- Supplied with 24V DC low voltage from EMS-4000
- Encapsulated control electronics
- Safe lock with a special locking mechanism
- Colour housing: Tiger P7
Colour stainless-steel front: Sparkling Silver New
- Dimensions (HxWxD): 1140 x 513 x 393 mm

OPTIONS

- Sensory monitoring of canister and powder silo
- Illuminated roof-top
- Pillar



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 **QUALITY**
MADE IN GERMANY
MADE IN GERMANY

Pay station **EMS-4000**



Pay station EMS-4000

DESCRIPTION

Intuitive and user-friendly operation, minimized operational and maintenance costs, simple and secure data management: these key features are realized with the performant and reliable EMS-4000 cash system which combines the experience of over 30 years cash processing with our know-how in software and hardware development. Beside its numerous hardware equipment options, the system can be individualized by its configurable software to meet the customer needs at its best. Based on this flexible architecture, further modifications can be realized to meet challenges of the future. The EMS-4000 accepts coins, tokens, banknotes and cashless payment via card for payment.

A combination of tube changer (with six individual definable coin tubes) and coin hopper (both self-refilling) guarantee a maximum period of time to refill to reduce service expenditures. For the output of barcode tickets, vouchers, receipts or cash reports, the EMS-4000 is equipped with a thermal printer. Optional, RFID-value cards can be bought, loaded and dispensed for a subsequent use as cashless payment and wear-free medium at BECKMANN components (e.g. RFID-Terminal, EMS-ENERGY etc.). With the use of RFID-value cards, discounts and promotions can be realized to strengthen customer loyalty. If the credit is expended, the RFID card can be recharged or returned at EMS-4000. Over and above that, the robust and secure steel housing and the use of high quality components (e.g. safe lock with special locking mechanism, stainless steel buttons,...) lead to a long product life, less service expenditure and very good weather resistance. The elegant EMS-4000 can be mounted on wall or detached on an optional pillar. All electronic modules are equipped with a powerful processor which is driven by an own developed, programmed and optimized operating system Beckmann OS. By eliminating additional PC components, the operating system convinces through reliability, serviceability and security. A webinterface provides status information and allows an intuitive parameter configuration via remote access. Further, a detailed analysis of sales data is possible by using the optional software EMS-DATA.

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Figure:

Self-refilling tube changer and coin hopper

TECHNICAL DATA

- 10" TFT-colour-display
- Multicoloured LEDs with status indication
- 8x robust vandal-proof buttons
- Self-refilling tube changer (6x coin tubes)
- Self-refilling coin dispenser with large capacity (e.g. 1€ hopper = 600 coins)
- Banknote reader (all directions)
- Thermal printer (e.g. for tickets, vouchers, receipts)
- Safe lock with a special locking mechanism
- Web-Interface for remote-access and parameter settings
- Surface galvanized and powder coated
- Colour housing: Tiger P7
 Colour stainless-steel front: Sparkling Silver New
- Dimensions (HxWxD): 1140 x 513 x 393 mm

OPTIONS

- Cashless payment cardterminal
- RFID-value card dispenser
- 2nd coin dispenser with large capacity
- GFG touchscreen
- Security coin-box (self-closing)
- Alarm contacts, intercom
- Pillar, illuminated roof-top, outdoor package
- Statistics software EMS-DATA

Cashless payment with customer-cards **RFID-TERMINAL**



Cashless payment with customer-cards

RFID-TERMINAL

DESCRIPTION

This splash-proof RFID terminal is designed for on-wall mounting in laundrettes and self-service washrooms, making it ideal for harsh environmental conditions. The rugged housing, the capacitive touch buttons and the contactless RFID-technology ensure a wear-free operation. Likewise, the cash-free operation reduces the risk of break up and theft. The terminal works offline and needs no cable- or wireless connection to a server, because the credit is stored locally on encrypted value cards.

MEDIA

The terminal processes RFID plastic cards, which can be dispensed, recharged or returned at the self-service cash systems EMS-800 or EMS-4000.

Alternatively, one-way RFID paper tickets can be used which are pre-printed and preloaded with a defined number of uses or credit. If the credit is expended, these tickets can be simply disposed of. This reduces the costs for handling (no card return and deposit repayment necessary) and purchase (no cash system necessary).

HANDLING PROCEDURE

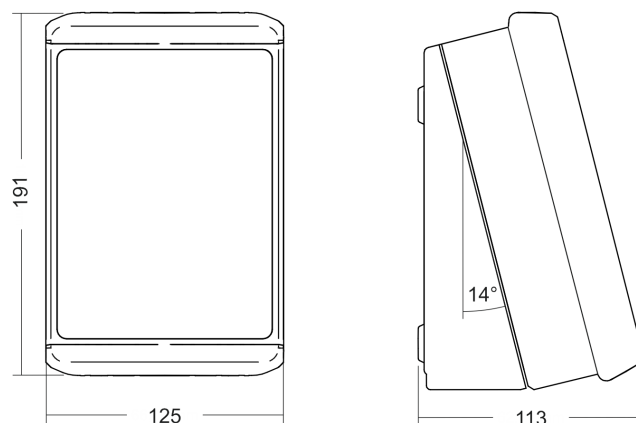
After holding an RFID card to the terminal, credit is debited from the card and the connected washing machine or dryer is powered for the stored time period. After the program time has elapsed, an optional door opening pulse is available. By using the RFID master card, settings (e.g. time and prices) can be programmed as well as counters can be read out.

TECHNICAL DATA

- Nonwearing contactless RFID technology
- High-contrast graphic display (H x W): 38 x 65 mm
- RGB-LEDs and acoustic feedback
- 4 capacitive touch-buttons beside the display
- Ergonomic inclination for comfortable operation
- Encapsulated housing for rough outdoor environment
- Cashless payment with RFID plastic cards and preloaded RFID paper tickets (one-way)
- Autarch offline operation by local storage of credit on encrypted RFID cards and tickets
- No network connection or server required
- Operating voltage 230V AC
- Control of up to 2 devices with one RFID-terminal
- Relay switching capacity 16A AC1 or potential-free, NC and NO contacts available
- Potential-free input for backpulses of devices available
- Transparent operating front (material PC-FR, impact resistant)
- Graphite gray plastic housing (material PC-FR, impact resistant)
- Wall bracket (material VA stainless steel, powdered RAL 7024)
- Weight: 1,1 kg

VARIANTS

- Control of one device (1x output relay)
- Control of two devices (2x output relay)



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Universal payment of up to 8 devices **EMS-1080**



EMS-1080 operating unit with RFID-card-terminal
(Payment with prepaid customer card credit)

EMS-1080 operating unit with card-terminal and coin selector
(ONLINE-payment up to 25€ per transaction)

Universal payment of up to 8 devices

EMS-1080

DESCRIPTION

The system family EMS-1080 is developed for the central control of up to eight devices (e.g. washing machines, dryers, showers, toilet doors,...). The payment can be transacted either with coins or credit cards or loaded RFID-customer-cards. The use of stainless steel, a robust construction and the use of high quality components lead to a long product life, less service expenditure and very good weather resistance.

HANDLING PROCEDURE

The individual status RGB-LEDs clearly indicate, which devices are occupied or free. After choosing a free device, the large display shows the individual minimum amount of insertion. After the payment is completed, the selected device is switched on for the stored time period. After the program time has elapsed, an optional door opening pulse is available.

An EMS-1080 system consists of two components:

- Operating unit (for selection, payment, configuration)
- PowerBox (power supply, relais I/Os)



Figure:
Separated PowerBox

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PAYMENT OPTIONS

- Electronic coin selector 0,10 EUR to 2,- EUR and tokens
- creditcard-terminal for cashless payment with chip/NFC up to 25€ w/o pin (Micropayment)
- RFID-customer-card-terminal

The inexpensive card terminal handles contactless cashless payment by simply holding the card or smartphone in front of it without entering a PIN. The integrated SIM card ensures wireless data transmission. Furthermore, the operator has the possibility to monitor sales and device status remotely.

RFID-CUSTOMER-CARDS

The customer card terminal processes Beckmann-RFID-plastic cards that can be issued, recharged or returned at the pay station EMS-4000. Alternatively, one-way RFID tickets can be used on the EMS-1080, which are pre-programmed with a defined number of uses.

TECHNICAL DATA - Operating unit

- Weatherproof stainless steel housing
- Robust stainless steel buttons and multicoloured status LEDs
- Access to cash and hour meters
- OS on exchangeable controller chip
- Supply voltage: supply with low voltage from powerbox
- Dimensions (HxWxD): 300 x 320 x 155mm

TECHNICAL DATA – PowerBox

- Supply voltage: 230VAC, 50 / 60Hz
- Number of relay outputs (NO): 4x (EMS-1040)
8x (EMS-1080)
- Switching capacity per relay: 16A, 250VAC
- Dimensions (HxWxD): 175 x 175 x 80mm (EMS-1040)
- Dimensions (HxWxD): 180 x 250 x 65mm (EMS-1080)

Coin machines
EMS-5x/EMS-8x



Coin machine EMS-57

Coin machines

EMS-5x/EMS-8x

DESCRIPTION

With the EMS-5x and EMS-8x series of coin machines, any services can be easily time-controlled by coin or token. The bright and clear display informs concerning the inserted coins or the remaining time. For the optional use in outdoor / wet area, we offer a robust stainless steel housing, encapsulated electronics and 24V AC SELV.

While the EMS 5x represents the entry-level model for simple applications, the EMS-8x shows its strengths through several settings and flexible applications.

BENEFITS EMS-8x

- Extensive settings, comfortable adjustable via display
- Integrated counters (cash counter, hour meter,...), easy accessible via display
- Electronic coin selector: 0,10 EUR to 2,- EUR and tokens (EMS 82)
- Application-specific versions (e.g. for washing machines, showers, toilet access, solarium, pulse counters, ...)
- Powerful microprocessor
- Modern SMD technology
- Software updates via optional SD-card module possible














EMS-57



EMS-81



EMS-82

Coin selector	MP = Mechanical coin selector EMP = Electronic coin selector	MP 1 type of coin	MP 1 type of coin	EMP several coin types
Display	LED-Display	3-digits, green Remaining time	3-digits, red Remaining time	3-digits, red Remaining time
Settings	Minimum insertion, price, timing	via DIP-switches	comfortable via display	comfortable via display
Integrated counters	Cash counter, hour meter, customer counter accessible via display	-		
Version	TE door unlocking - for washing machines and dryers - additional payment during operation			
	SO solarium - redundant switch-off reliability - switch-on delay - remote start	-		
	DU showers - start/stop-button - hygiene flushing	-		
	IM impulse (water/energy) - impulse counter for energy- and water - delivery with start/stop function	-	-	
	WC toilet access - potential-free contact - display FREE / OCCUPIED	-	-	
Housing		Steel metal	Steel metal, stainless steel optional	
Operating voltage (switching capacity)		230V (16 A/AC1)	230V (16 A/AC1), 24V AC SELV optional	
Dimensions (HxWxD)		260 x 160 x 110 mm		