

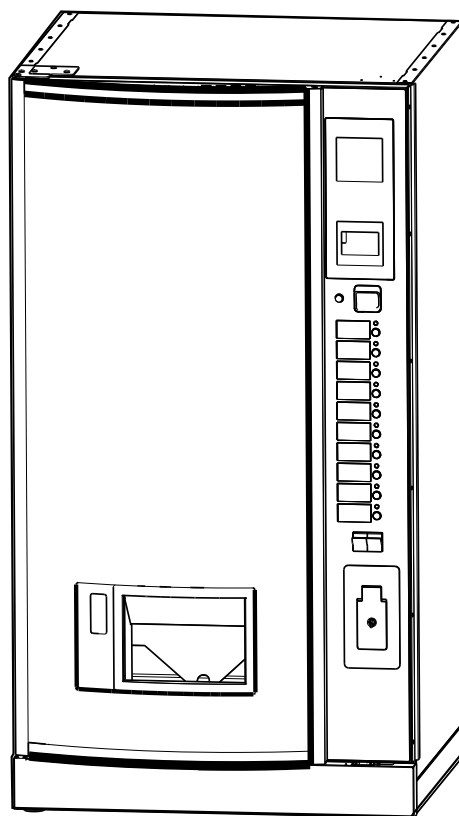
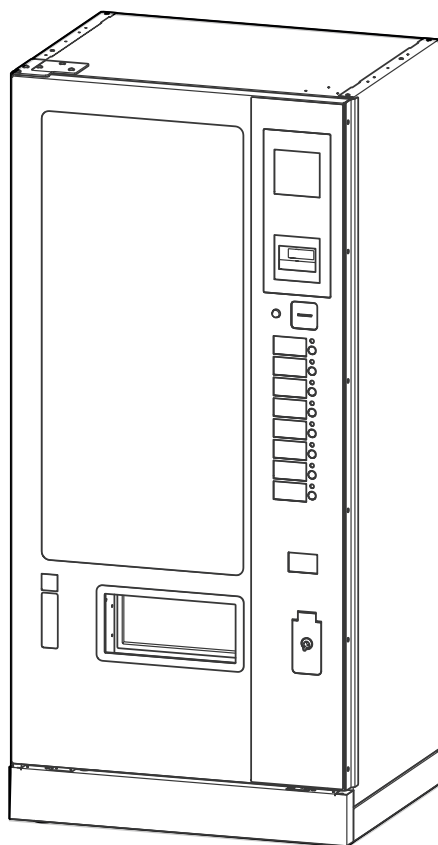


Original Operating Instructions

Technical Handbook

FK 185/ FK 220/ FK 230/ FK 280/ FK 320

Version 03



de

14.03.2023

641 00 505 01 _ 191



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1. General

Modifications

The texts, pictures and data in this manual reflect the technical status of the machine at the time of printing. We reserve the right to make changes in order to make further developments.

Complete document

This document consists of 80 pages. If all the pages are in consecutive order, your document is complete.

Availability of instructions

In order to ensure safe use, the operating instructions must always be accessible to the operator. These should be readily available for referral at all times.

This operating guide can also be accessed via the Internet from our secure download centre: (<http://www.sielaff.de/download-center/>).

Third party documentation

Payment systems such as coin mechanism, bill validator or cashless payment systems can be fitted to this machine.

We would like to point out that special accessories may be required and special settings may need changing in the machine software in order to ensure error-free operation of the payment system being used. Please refer to the additional third-part documentation from the relevant manufacturer.

Manufacturer

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	+49 9825 18-315299	Spare parts ordering
		export@sielaff.de ; www.sielaff.com

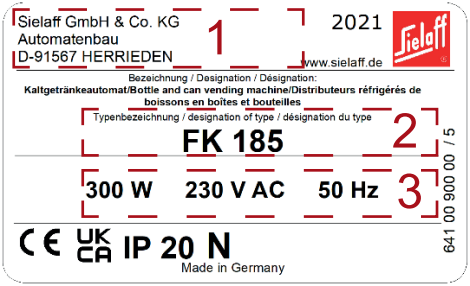
Variants

Please note that these operating instructions cover different machine versions. For this reason some information may not apply to your machine.

This manual covers the following versions:

Model	Part No.	
FK 185 (RB03)	641 00 000 63	
FK 185 (RS03)	641 00 000 43	
FK 220 (EC03)	661 00 000 23	
FK 220 (EB03)	661 00 000 33	
FK 230 (CV03)	638 00 000 33	
FK 230 (EC03)	638 00 000 13	
FK 230 (EB03)	638 00 000 03	RB - RAL panel
FK 230 (RB03)	638 00 000 43	RS - RAL panel SiLine
FK 280 (EC03)	663 00 000 03	EB - Stainless steel panel
FK 320 (EB03)	652 00 000 03	EC - semi-circular advertising panel
FK 320 (RB03)	652 00 000 13	CV - Flat door, non-illuminated

Identification

	Manufacturer Machine type Electrical supply ratings
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SIELAFF does not accept responsibility in respect of the contents of this operating manual and cannot be held liable for any claims made based on information not contained therein. In addition SIELAFF reserves the right to update this publication and make changes to it, without being obliged to inform any person of these changes.

Features

The FK-range of vending machines uses chutes for dispensing chilled drinks in bottles or cans.

A two-line (LCD) display provides selection and system information.

All machine functions are managed and checked via a microprocessor module. Sales and error data is stored on the machine control board.

The selection keypad is also used for programming the vending machine control board during servicing.

The vending machine is prepared for operation with a coin mechanism as standard.

SIELECTOR software for PC-supported programming, based on Windows, can be used to configure the machine. The software supports the duplication, creation, saving and printing out of all parameters.

1.1 Safety information

General

- Before commissioning the unit, the operating instructions should be read and understood.
- The operating instructions should be readily available where the machine is operated so that it can be easily referred to at any time.
- When transporting, setting up, servicing and repairing the vending machine, strict adherence to the following rules and guidelines - in their latest version - is essential: Standards set by the appropriate electricity company, UVV-accident prevention regulations, trade association guidelines, industrial code, EC-guidelines, VDE regulations, observance of the current hygiene regulations, country-specific regulations, Industrial Safety Regulation -BetrSichV, Workplace regulations - ArbStättV.

Transportation, installation

- Due to its high centre of gravity, there is a risk of the machine tipping over. Therefore caution must be exercised. Do not jerk the machine when lowering.
- The machine must be positioned on a horizontal, stable base. It must be attached to the wall or floor.
- Only install the machine in locations which correspond to the protection class of the machine. The machine's protection class is shown on the machine's type plate.
 - IP20 The machine is suitable for installation in dry areas and within the limits specified for permitted environmental conditions (refer to technical data).
 - IP24 The machine is suitable for installation outdoors in accordance with the specified, permissible environmental conditions (see technical data).
- Machine installation and repairs should only be carried out by trained service engineers.
- The venting clearance between the back of the vending machine and the wall on site must be observed.
- Do not locate machines with R290 chiller unit directly alongside an indentation in the floor (basement entrance, drain, hollow, recess etc.).

Operating

- This machine can be used by children from 8 years and older and by people with limited physical, sensory or mental abilities or lack of experience and/or knowledge, provided they are looked after by another person responsible for their safety or if they have received instructions how to use the machine and are able to comprehend the dangers resulting thereof. Cleaning and maintenance work should not be carried out by children without supervision.
- Children should be supervised to ensure that they do not play with the machine. The vending machine is not suitable for use by children under 3 years old.
- The mains plug must be easily accessible. Appliance plugs should never be touched with wet hands or inserted into sockets when damp.
- In addition to the standard cleaning procedures maintenance work should also be carried out on the machine.
- Do not reset the machine while filling.

Cleaning

- Do not clean the machine with a water hose or a high-pressure cleaner.

Repairs

- The inside of the machine may have sharp edges and corners. Always wear protective gloves when carrying out maintenance work.
- Use original spare parts only.
- Only products approved by SIELAFF should be used.
- The machine must not be converted or modified in any way. SIELAFF disclaims any liability for any defect claims resulting from the afore-mentioned not being adhered to!

Intended use

- The machine should only be used for dispensing beverages in cans and bottles.
- Inflammable or explosive goods must not be vended.

Chiller unit with R-290 refrigerant (propane)

- After inserting the mains plug or switching on the circuit breaker the switch-off device requires approx.2 minutes for the safety shutdown to be activated.
During this time the machine cannot be used.
Should the machine however not start, the switch-off device may have turned the machine off on account of a faulty chiller unit.
In this case any open flames and incandescent materials must be removed to a 5m range from the machine.
- The gas sensor installed in the chilled area must not be tampered with as this can endanger persons and the surrounding area.
- Once the safety shutdown has been activated the machine should only be put back into operation by a qualified person.
- Do not damage the refrigerant circuit.

Identifying a chiller unit with R-290 refrigerant

- For safety reasons machines with chillers containing R-290 refrigerant (propane gas, C₃H₈) are fitted with a gas sensor in conjunction with a switch-off device. In adverse circumstances should refrigerant escape from the chilling system due to leakage this could result in an explosive mixture inside the machine. The switch-off device ensures that should this occur the machine is disconnected in time from the mains supply to prevent any source of internal ignition.
- Information regarding the chiller unit fitted can be found on the machine identification plate.
- The identification plate is generally located inside the machine top right. In addition the warning symbol shown below can be seen (Warning flammable materials, DIN 4844-21).

Identification



If chiller unit uses R290: "Warning flammable substances" symbol is displayed

1.2 Explanation of signs and symbols

The machine was manufactured in accordance with the latest technical standards. Nevertheless, even the most expertly designed machine, cannot be without risks.

In order to ensure the machine operator a sufficient level of safety, additional safety tips are detailed below.

Adequate safety during operation is ensured only when these safety precautions are observed.

Text highlighted below symbolises the following:



Danger

Immediate danger which could result in death or severe injury.



WARNING

Possible dangerous situation which could result in death or severe injury.



CAUTION

Dangerous situation which could result in injury or damage to the vending machine.



NOTE

Information to avoid causing damage to the machine.



TIP

Information to facilitate handling and use of the vending machine.

The following danger symbols may also be used in certain instances:



WARNING electrical energy! Danger to life!

This symbol warns that electrically live components are installed in this area. Covers marked with these symbols should only be removed by authorised electricians.



Observe handling regulations when dealing with electro-statically sensitive components and modules (ESD)

Behind covers marked with this symbol are parts and components that are susceptible to electrical discharge.

It is imperative that plug connections, electrical leads and component pins are not touched. Only specialist personnel with ESD knowledge are authorised to work on the machine!



WARNING Crush risk!

When reaching into the chute there is a risk of damage to hands. Take care when placing products into the chute.



DANGER! Flammable materials!

This symbol warns about flammable materials. May cause serious injury or death. Sources of ignition such as burning cigarettes or lighters must be distanced before opening the machine door.



A product displaying this symbol must not be put into house waste at the end of life, but disposed of separately. The regulations may vary depending on the country.

2. Technical data

The identification plate is located inside the cabinet - top right - and is visible when the door is open.

Dimensions (H x W x D)	refer to the following table
Weight	refer to the following table
Number of chutes	6, 8, 10
Selections	refer to the following table
Electrical connection	refer to identification plate
Power consumption	refer to identification plate
On site fuse protection	10A (Characteristic B)
Electrical connection on site	Protective earthed sockets (installed in accordance with VDE)
Operating temperature	refer to the following table
Ambient temperature (standard)	+16°C to +32°C
Ambient temperature (outdoor with heater)	-20°C to +32°C

A-rated sound-pressure level emission in the workplace

$$L_{pA} < 65 \text{ dB}$$

Variation factor

$$K_{pA} = 6 \text{ dB}$$

The values were determined in accordance with EN 60335-2-75:2004+A1:2005+A11:2006+A2:2008+A12:2010 i.V. with EN ISO 11202:2010.

NOTE: The sum of noise emission and associated variation factor represents an upper limit of values which might occur when measurements are taken.

		Machine					
Type		Selections	Chutes max.	Height [mm]	Width [mm]	Depth [mm]	Empty weight approx. [kg]
FK 320	RB03 RB03	10	10	1830	1120	880	470
FK 280	EC03	10	10	1830	990	970	420
FK 230	CV03 EC03 EB03 RB03	10	10	1830	1120	670	344
FK 220	EC03 EB03	8	8	1830	850	880	359
FK 185	RB03 RS03	8	8	1830	850	670	254

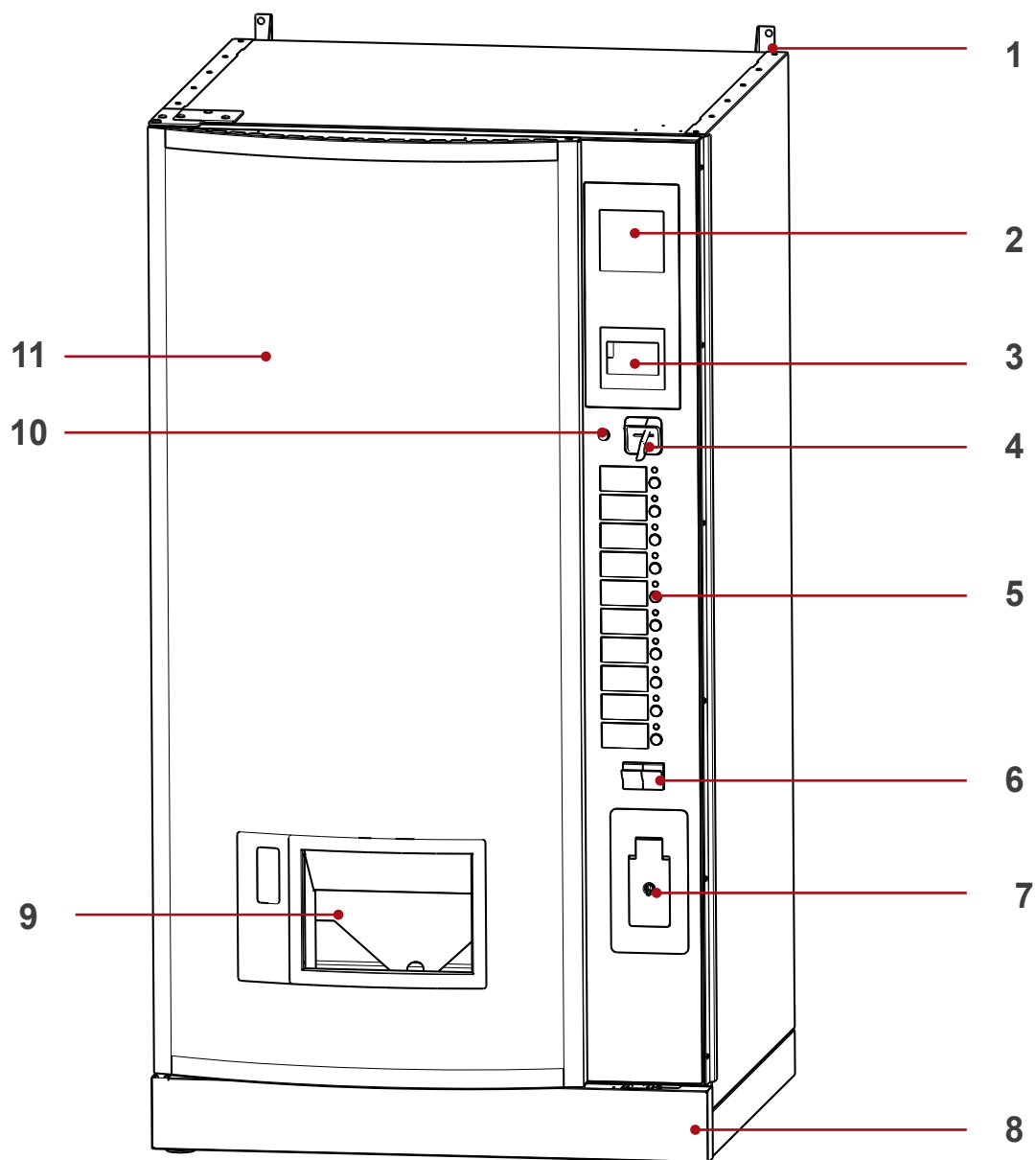
Information regarding regulation (EU) no. 517/2014

Chiller unit	Power	Cooling agent	Filling quantity	GWP	CO2-equivalent
SKA 415 ¹	400 W	R290	130 g	3	0.00039 t
SKA 705 ¹	650 W	R290	150 g	3	0.00045 t

1) contains propane gas, C3H8 in hermetically sealed equipment.

3. Machine diagrams

FK 280 EC03



1 Mounting bracket

2 POS

3 Display

4 Coin insert

5 Selection keypad

6 Coin return box

7 Locking lever

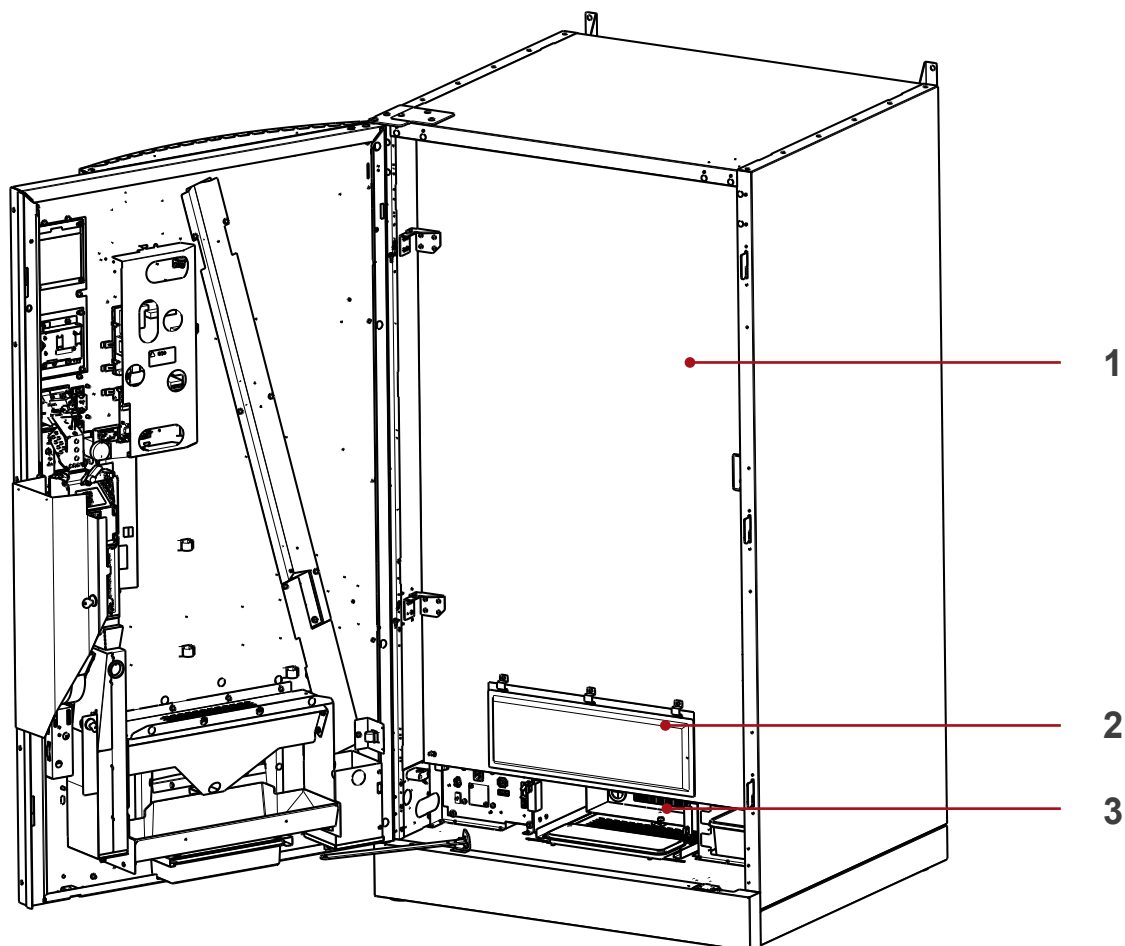
8 Kickplate

9 Theft protection

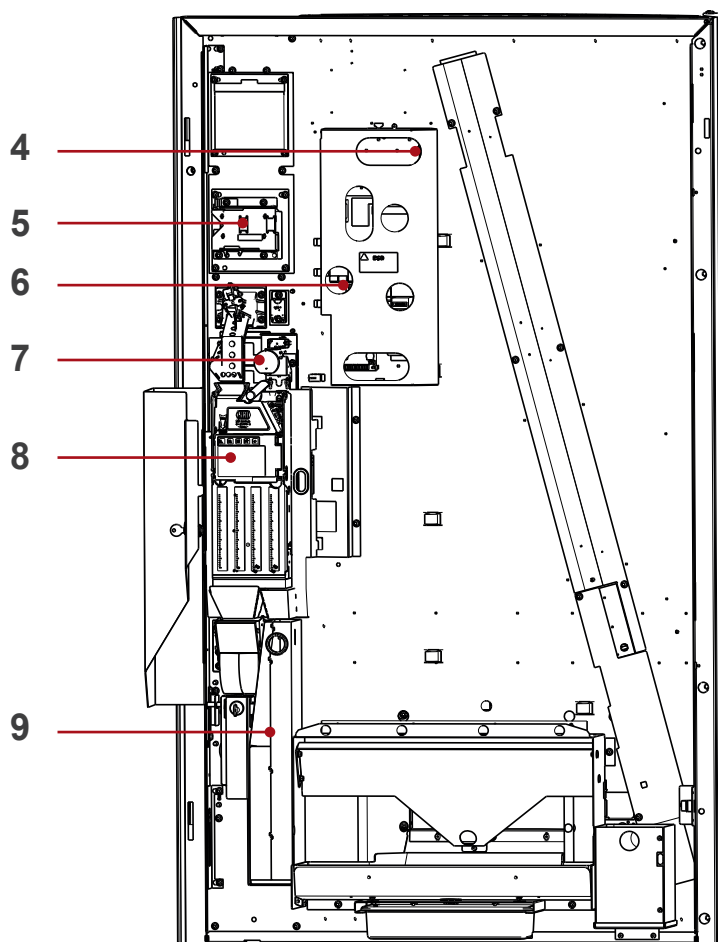
10 Refund button R

11 Polycarbonate panel

FK 280 EC03

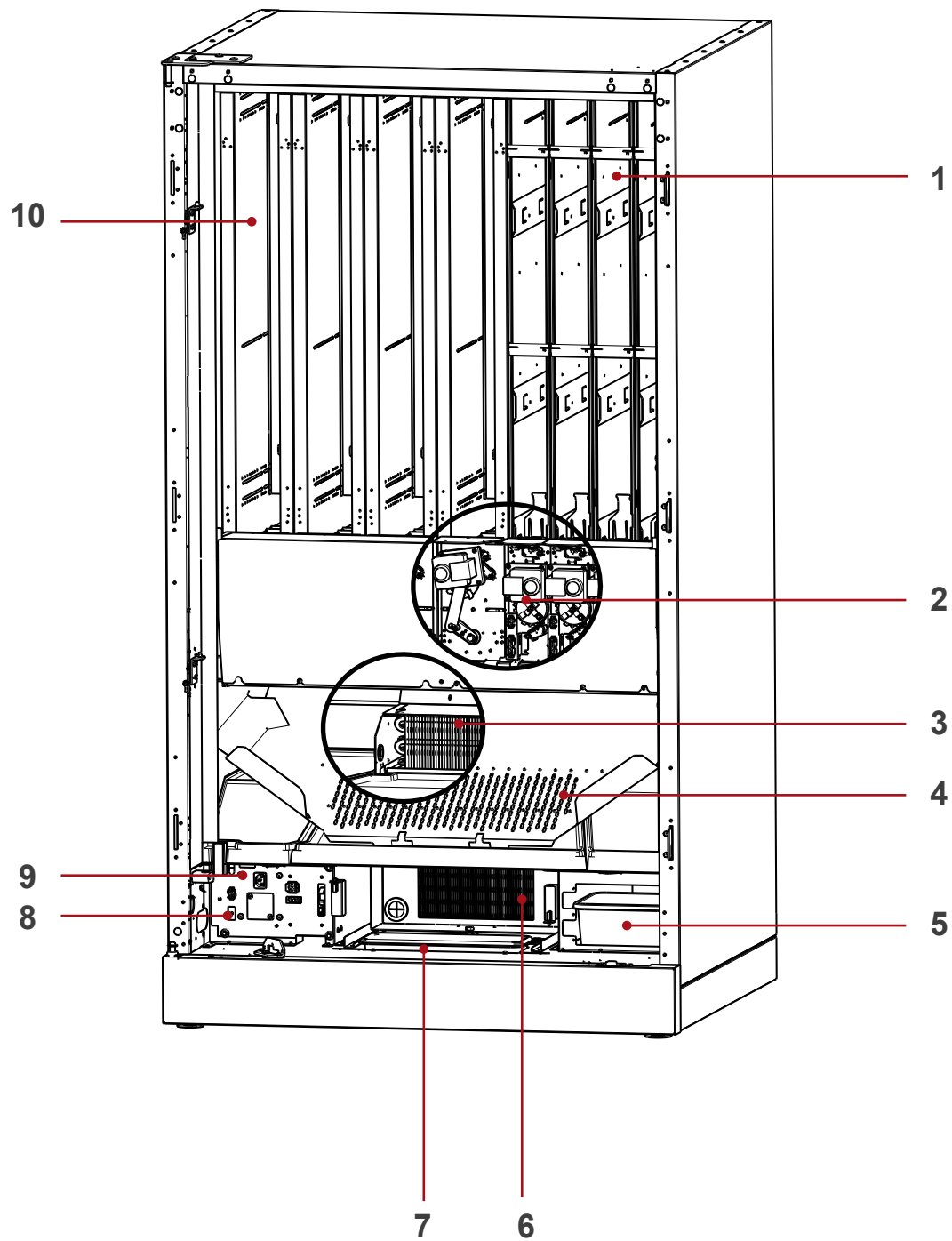


FK 280 EC03

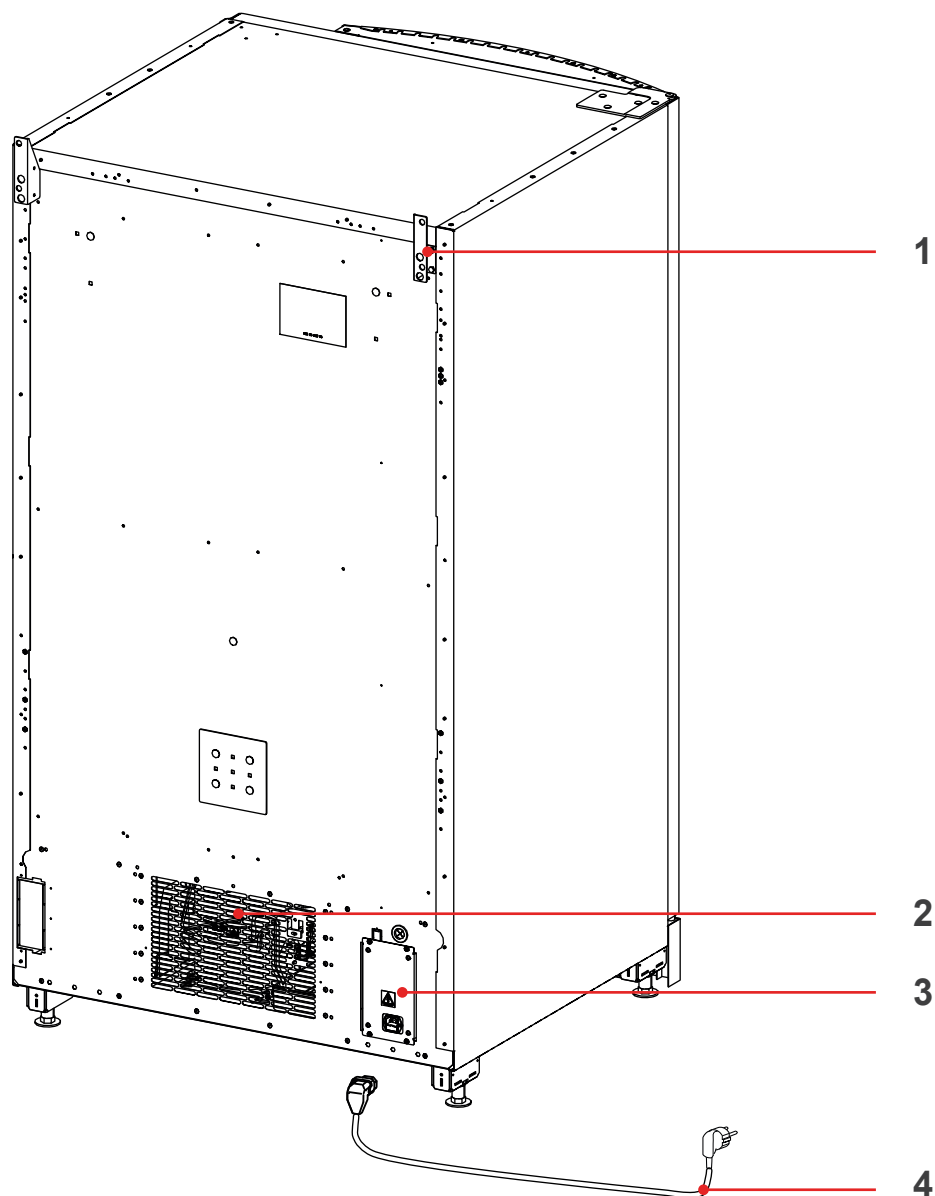


- 1 Door covering cooling chamber
- 2 Delivery unit flap
- 3 Air inlet for chiller unit
- 4 Reset button
- 5 Fold-out display
- 6 Protective cover plate for control board
- 7 Coin refund motor
- 8 Coin mechanism
- 9 Cashbox

FK 280 EC03

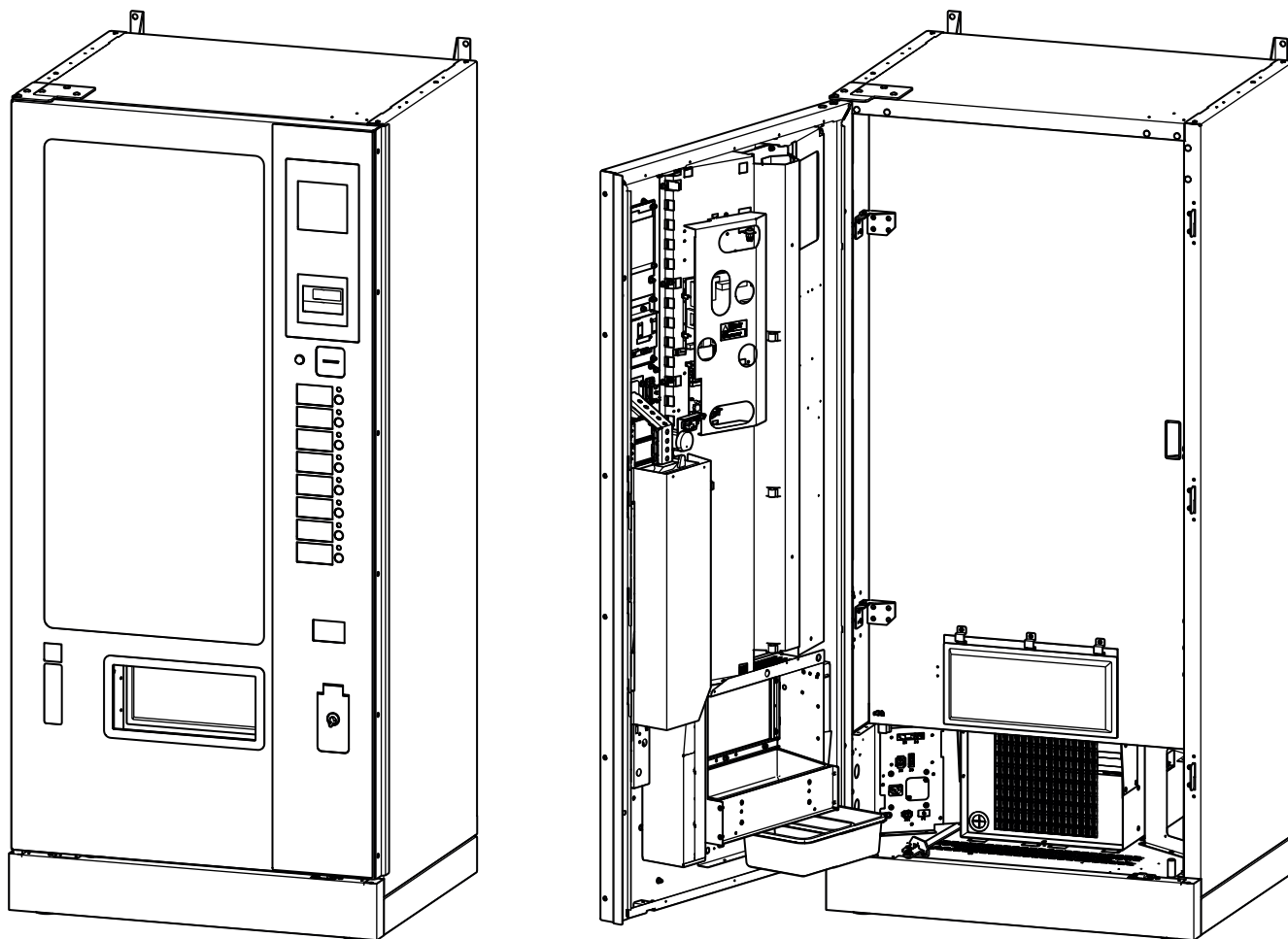


- | | | | |
|---|--------------------------------------|----|----------------------------|
| 1 | Narrow chute | 7 | Air inlet for chiller unit |
| 2 | Delivery motor (alternating current) | 8 | Thermal fuse |
| 3 | Evaporator | 9 | Power supply |
| 4 | Delivery slide | 10 | Standard chute |
| 5 | Condensation tray | | |
| 6 | Condenser | | |

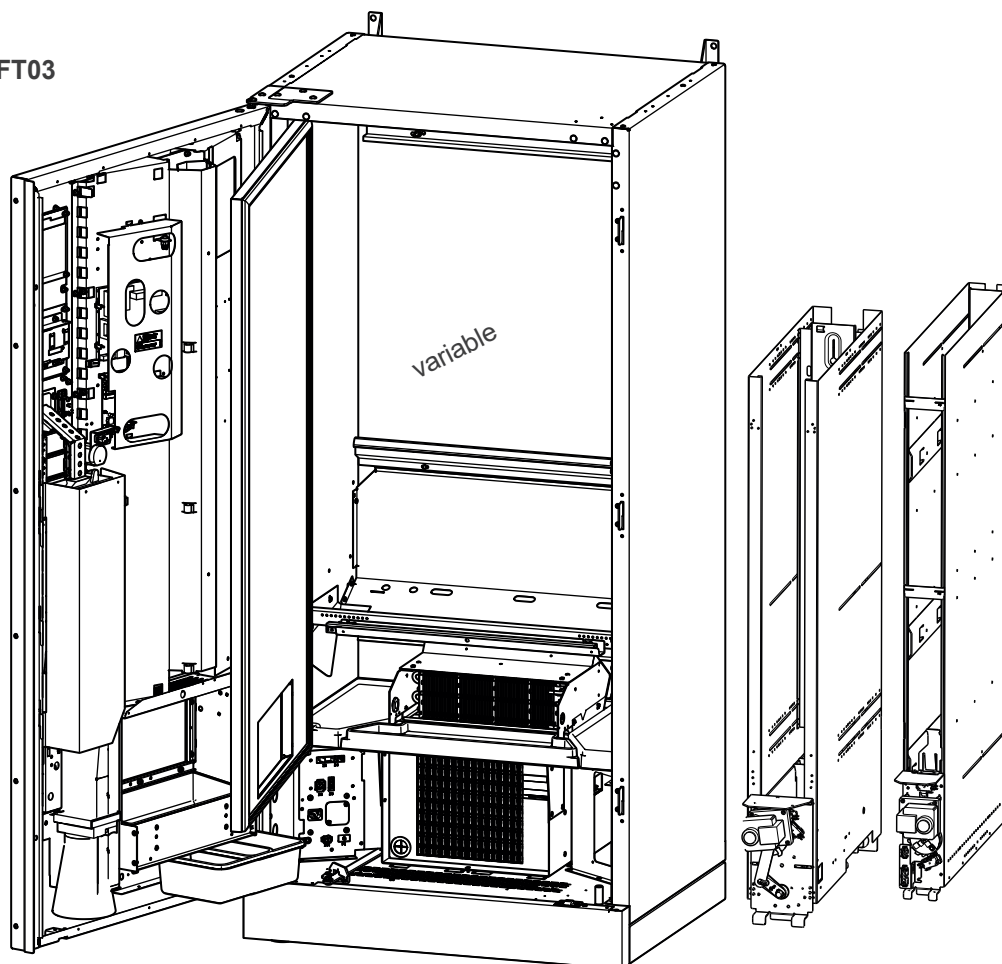
FK 280 EC03

- 1 Wall spacer/ Wall fixing bracket (optional)
- 2 Warm air ventilation grid
- 3 Power supply board
- 4 Cold drinks machine connection cable

FK 185 FT03

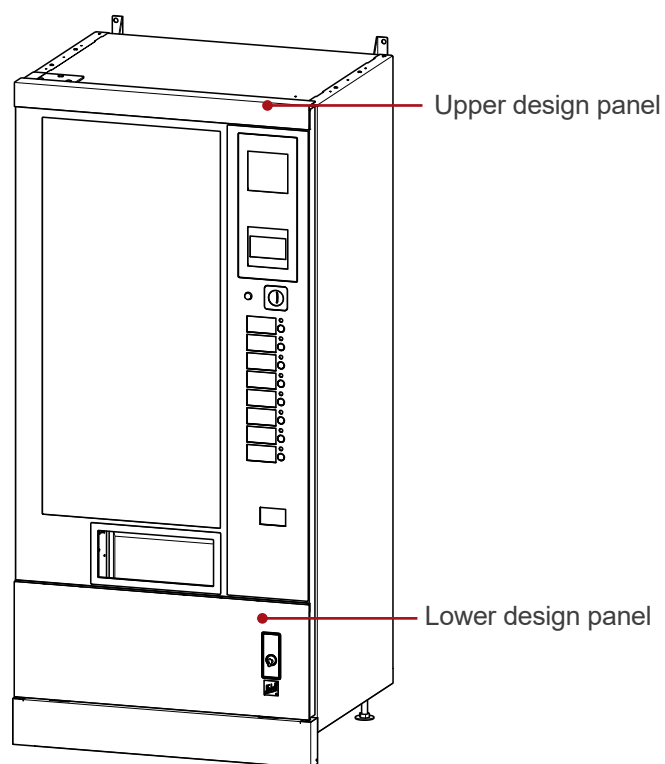


FK 185 FT03

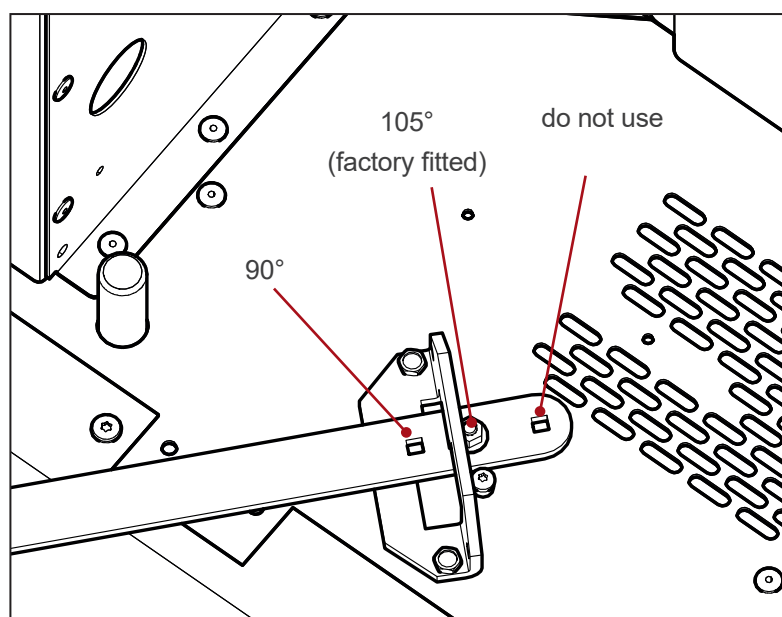
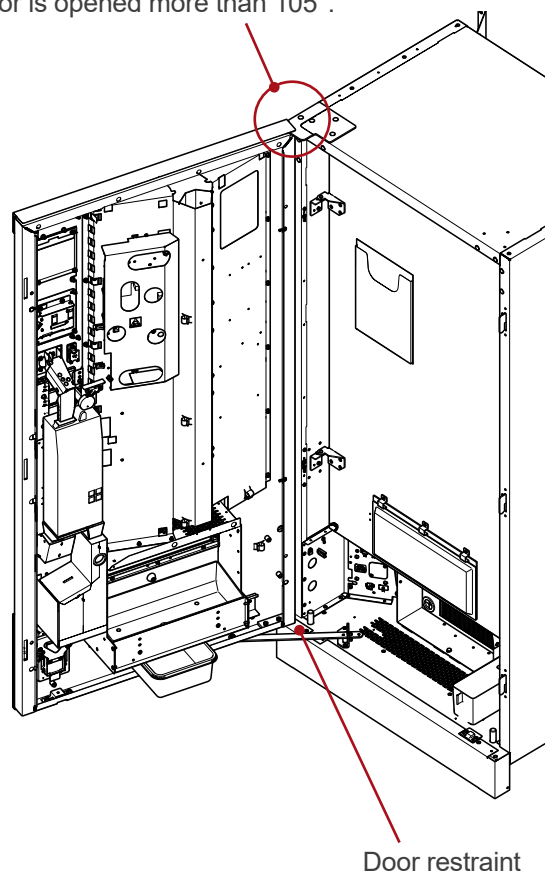


FK 185 RS03

The FK 185 RS03 is fitted with a design panel on top of the door, which may be damaged if the door is opened to far. To prevent this from happening a door restraint, part number 621.01.200.00 is fitted as standard and cannot be removed.



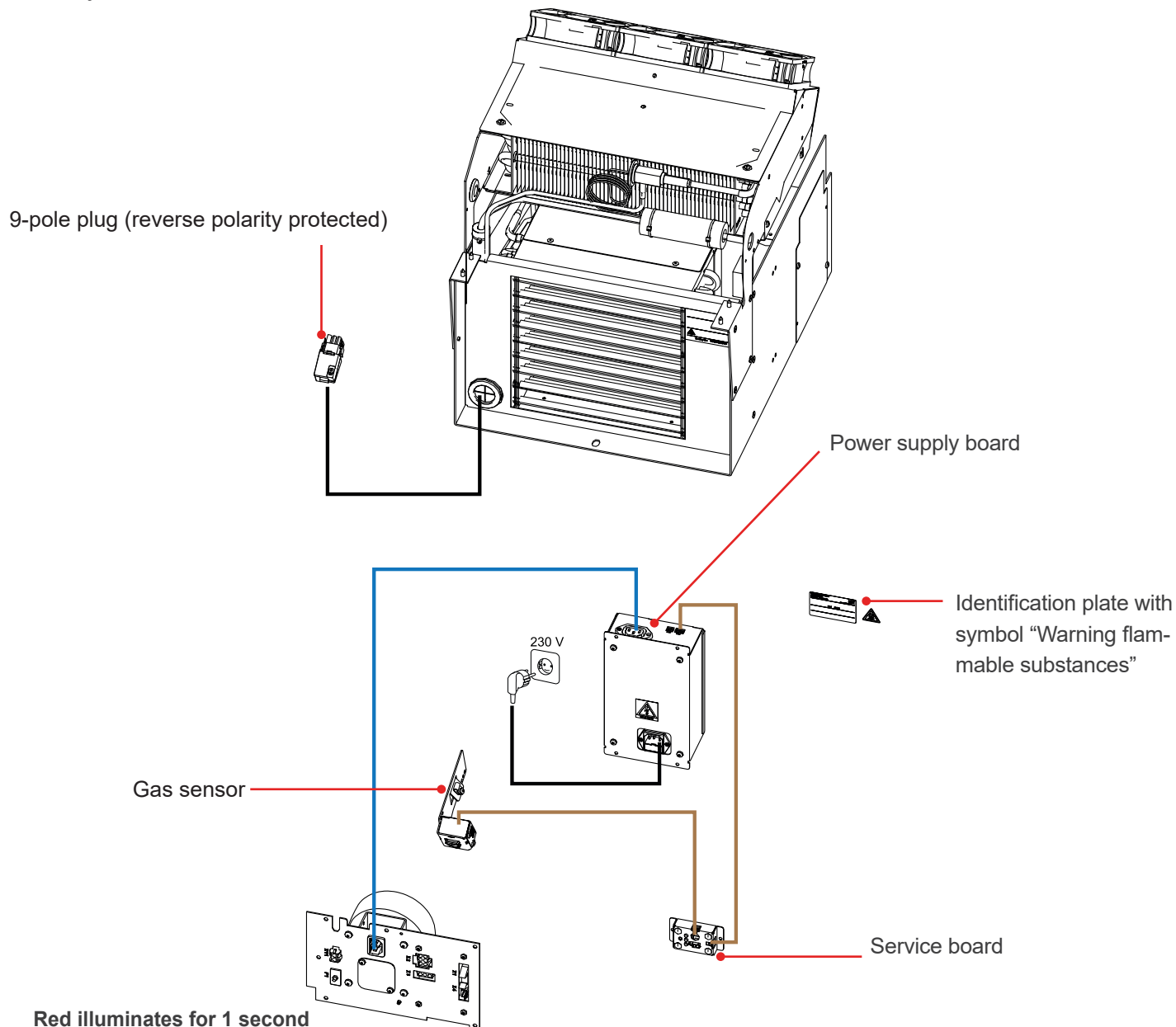
The design panel can be damaged here when the door is opened more than 105°.



When the machine is delivered the adjusting screw is in the central position. In this position the opening angle is 105°.

R290 chiller unit

For safety reasons machines with chillers containing R-290 refrigerant (propane gas, C₃H₈) are fitted with a gas sensor in conjunction with a switch-off device.

**Red illuminates for 1 second**

Self-test takes place.

Red is on permanently

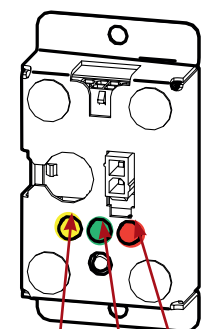
Self-test has failed.

Green is on permanently.

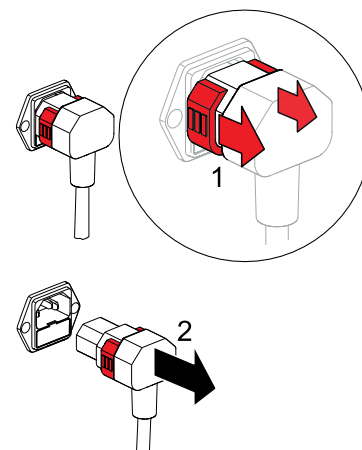
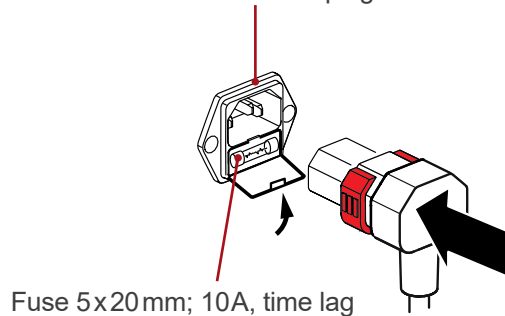
Self-test successful.

Yellow is on permanently

Mains voltage for the machine has been enabled.

Service board

Yellow - green - red

Device plug with C14 fuse

4. Transport



WARNING Crush risk!

The vending machine can tip over during transportation. There is crushing risk. Only move the machine using the appropriate means of transport.

Observe the following instructions

- Move the machine only with a pallet truck or a fork lift. Remove the kickplates first.
- Do not transport the machine in the air.
- Always move the machine with care.
- Prevent it from sliding sideways.
- Do not move the machine on inclined ramps, use stair-walkers.
- Observe the machine's centre of gravity. Due to its design the centre of gravity can be high. Risk of tipping over.

Suitable means of transport

- Forklift truck
- Pallet truck
- Stairclimber for vending machines

Storage

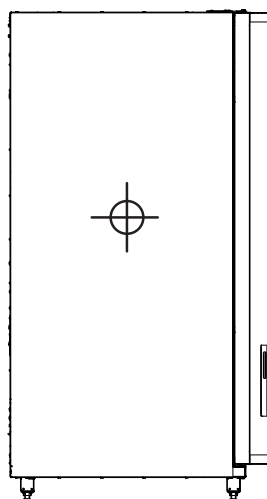
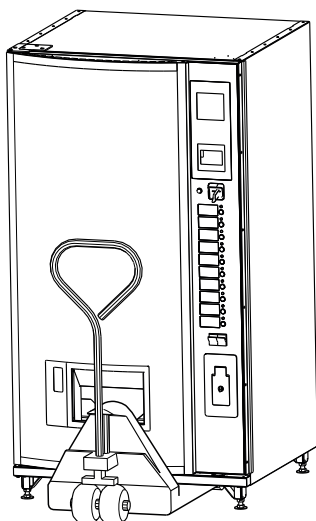
- The vending machine should be stored in a clean and dry location. Use a suitable cover to protect it from dirt, humidity and damage.
- Remove the products and leave the machine door slightly ajar to allow the humidity to escape.

Temporary shutdown

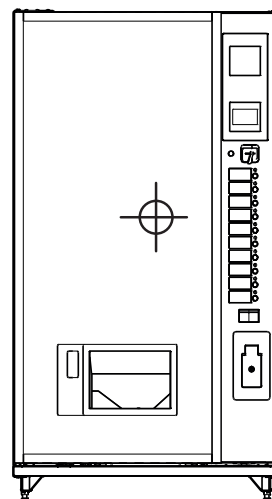
The machine may be shut down temporarily.

How to proceed

- Remove the mains plug.
- Remove all products.
- Leave the machine door ajar.
- To re-commission refer to the relevant section.



Centre of gravity



5. Installing the machine

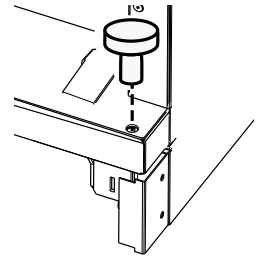
5.1 Requirements on site

- The floor must have an adequate load bearing capacity. Note the weight (refer to technical data).
- The machine must not be installed in air containing salt or chlorine, such as in an indoor swimming pool.
- Do not install the machine in places where water hoses or a high-pressure cleaner is used.
- The machine must be in a level position.
- The machine is supplied with a connection cable for a cold drinks unit and must be connected to a correctly installed shockproof socket.
- Do not use an extension lead and multiple sockets.
- A permanent installation should only be carried out by a qualified electrician.
- The plug must be easily accessible after installation.

5.2 Removing the transportation safety device

The transportation safety device prevents the machine door dropping during transportation. It has to be removed on machine installation, otherwise the door will not close properly.

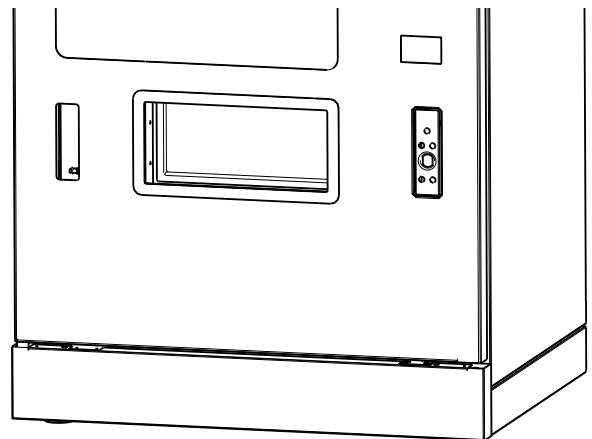
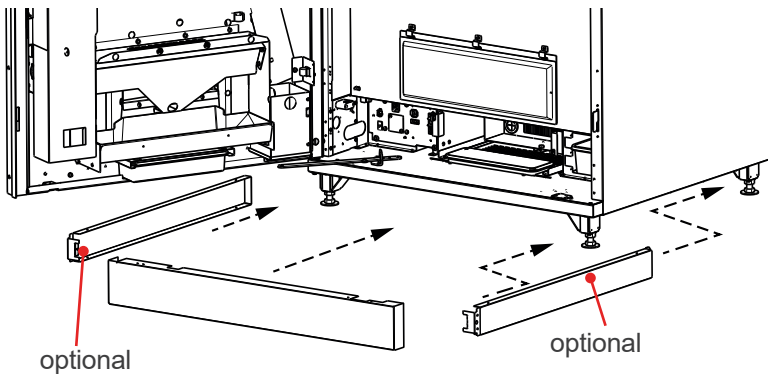
The transportation safety device is located on the right hand side below the door. With the door open it can be easily removed from the top.



5.3 Kickplate

Only when the machine is free-standing:

- Fit the side kickplates first (optional).
- Finally fit the front kickplate and secure with screws.



5.4 Levelling the machine

The vending machine must be levelled, and it is essential that the following criteria is adhered to:

- Horizontal, stable position.
- Correct height adjustment if part of a vending machine line.
- The machine door can be opened and closed without it dragging.

How to proceed

Place the machine in its designated location.

Lift the machine if a pallet truck is available.

Screw the four feet out evenly. Distance from the lower edge on the side to the floor approx. 9 cm.

Remove the pallet truck.

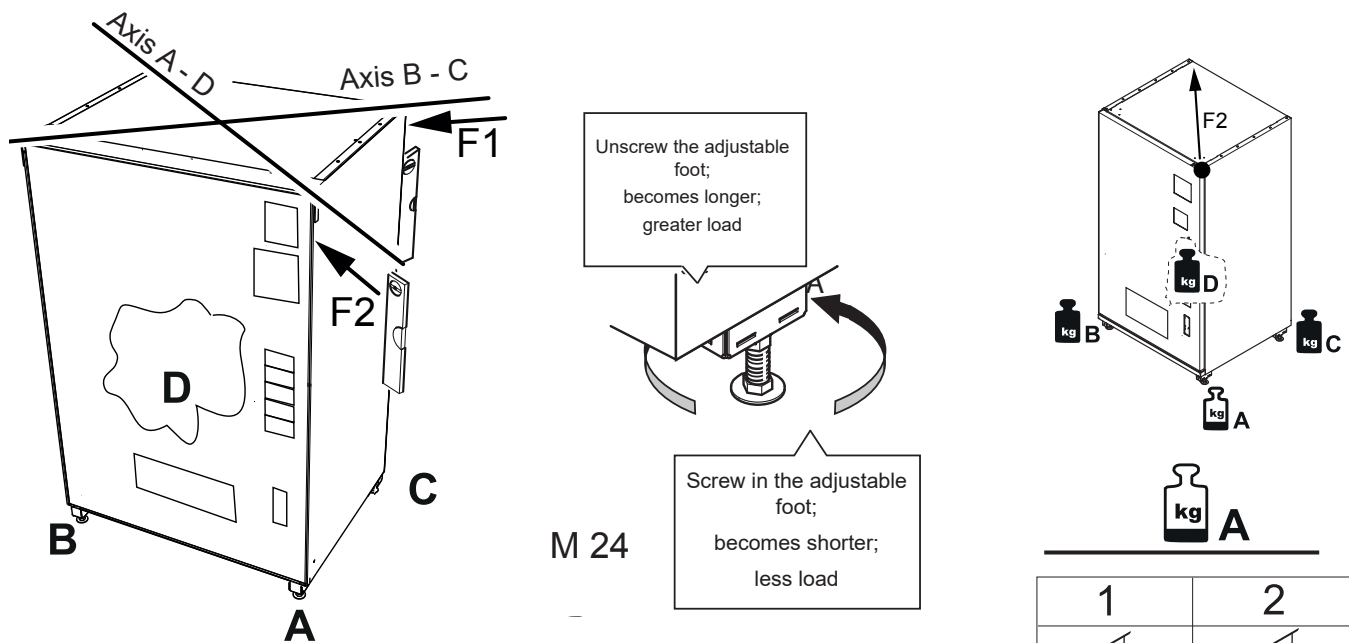
Check if the machine rocks over the axis B - C when the corner at F2 is pressed down. If it rocks, screw in foot B until it stops.

Check if the machine rocks over the axis A - D when the corner F1 is pressed down. If it rocks, screw in foot A until it stops.

Place the spirit level on the rear wall and level by adjusting foot A.

Check if the machine rocks over the axis B - C when the corner at F2 is pressed down. If it rocks, screw in foot B until it stops.

Place the spirit level on the side wall and level by adjusting foot C.



The following **fine adjustment** must still be made once the machine has been fully levelled:

Screw adjustable foot A inwards until the machine rocks over axis B - C. Press several times on the corner at F2 to check if the machine rocks.

Exert strong pressure on the corner at F2 while manually unscrewing foot A until it touches the floor.

Finally, using a size 24 spanner, make a $\frac{1}{4}$ to $\frac{1}{2}$ turn to foot A. This results in less weight load on foot A than on the other feet.

Consequently, the machine will not swing over the corner and the machine door does not drag.

5.5 Wall fixing brackets and spacers



WARNING: Risk of tipping over!

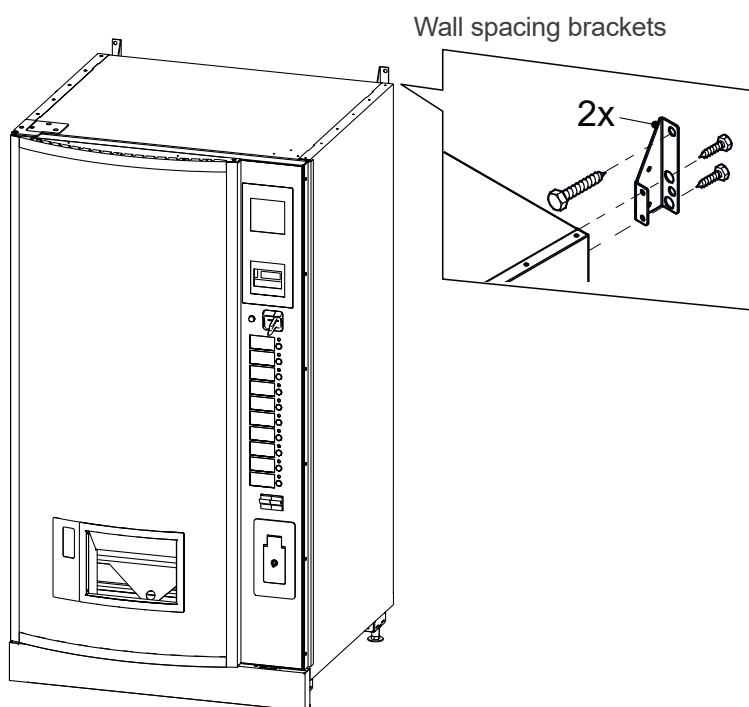
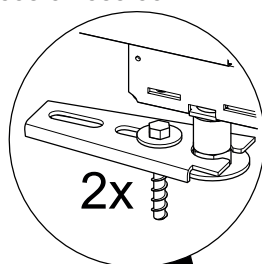
The vending machine can tip over on site. There is crushing risk. Fix vending machine to the wall or floor:

- The vending machine must be installed at a distance of 50 mm from the wall in order to ensure adequate air circulation. The wall brackets supplied should therefore be fitted to ensure that this distance is complied with.
- If it is not possible to secure the machine to the wall, it must be anchored to the floor.
- The wall brackets supplied must be used to fix the machine to the wall. They must be fastened to the machine using the screws provided. Use appropriate screws and dowels for the wall.

optional:

Floor fixing kit

Part-No. 603 02 639 00

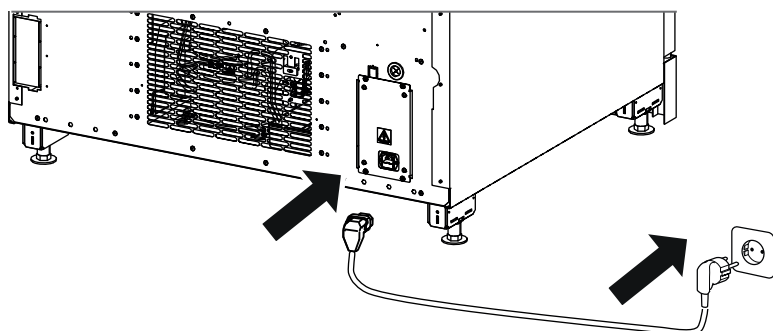


5.6 Electrical connection

1. Open the machine door (good ventilation).
2. Insert the mains plug.
3. Switch the machine on at main switch.

→ The switch-off device requires approx. 2 minutes for the safety shutdown to be operational.

→ The machine is operational when the Start Menu is displayed.



5.7 Fitting a coin mechanism (optional)

The machine is prepared to operate with a coin mechanism. Due to the variety of coin mechanisms, the relevant adapter kit for connecting to the machine control board must be available for the installation.

Special accessory kit Executive 640 01 522 00.

The machine software must also be set accordingly.

Before fitting the coin mechanism the manufacturer's operating instructions should be ready to hand. The installation instructions must be adhered to. Fit the coin mechanism into the space provided.

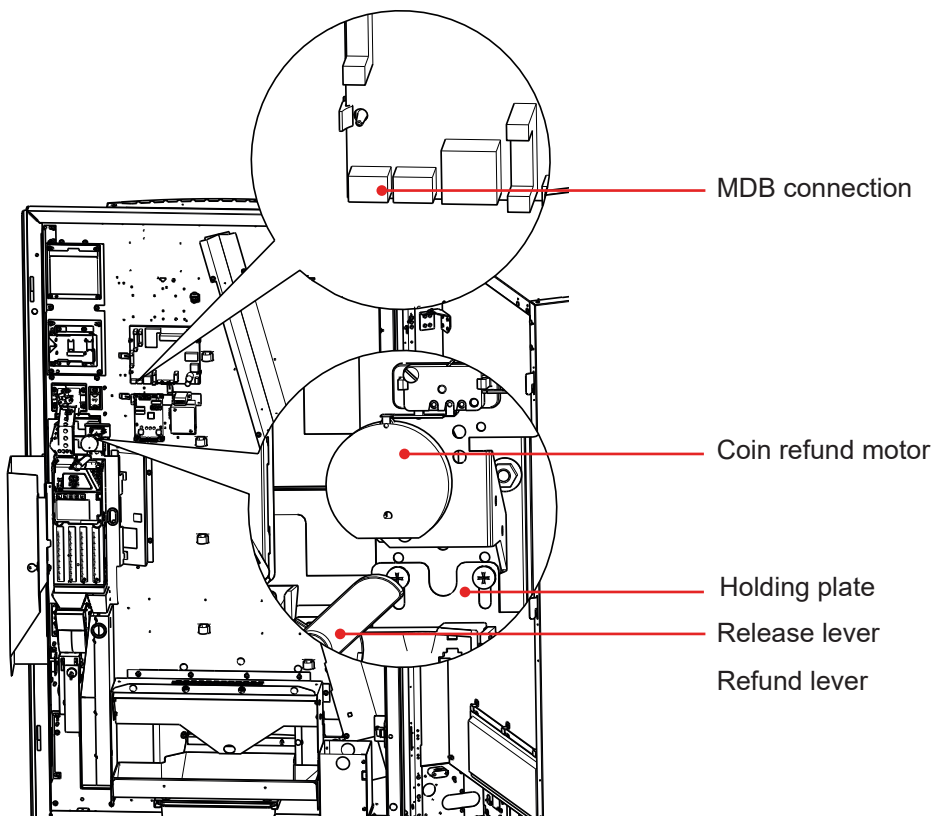
The coin mechanism connectors are plugged into the appropriate sockets on the control board, adapter or junction boxes. Pay attention to the contacts and ensure that cables are properly positioned.

Setting the machine protocol

- Open the machine door.
- Open the main menu M7 [INSTALLATION] : [M] [7] [E].
- Open sub-menu [MACHINE] by pressing E.
- Press [M] once to access the [CREDIT SYSTEM].
- Press [1] to make the required selection:
[Free Vend] - [BDV] - [Executive] - [BDV dual] - [MDB] - [Key system] - [MDB+EXEC] - [MDB+BDV]
- Press [E] to enter.
- Return to the main menu by pressing [M + L]

Adjust motorised coin return and insert channel

- Adjust the motorised coin return so that the return lever on the coin mechanism is firmly activated when pressing the refund button. When the customer presses the refund button, the eccentric disk must make a full rotation in order to operate the return lever sufficiently so that any inserted coins are refunded.
- Position the coin insert chute so that the coins can fall properly into the entry funnel on the coin mechanism.

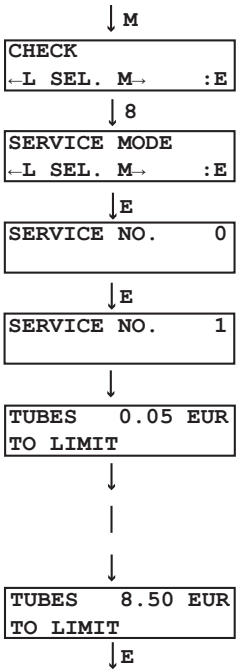


5.8 Filling the coin mechanism

On first-time filling approx. 10 coins should be inserted into each coin tube (sleeping coins). The number of coins required depends on the coin mechanism that is used and the settings in the [INSTALLING MODE] menu.

Enter [M] - [8] - [E] on the service keypad

Now, fill each tube with 10 coins. The coin mechanism counts the value of the coins inserted. As soon as the coin mechanism reaches the minimum number of coins, the machine goes into vend mode.



TIP

When using a banknote reader the amount of coins in the coin mechanism must be checked and, if necessary, filled up so that there is always sufficient change.

5.9 Product specifications



WARNING: Risk of explosion!

Do not fill with flammable or explosive products

Products must comply with the specifications stated in the following table.

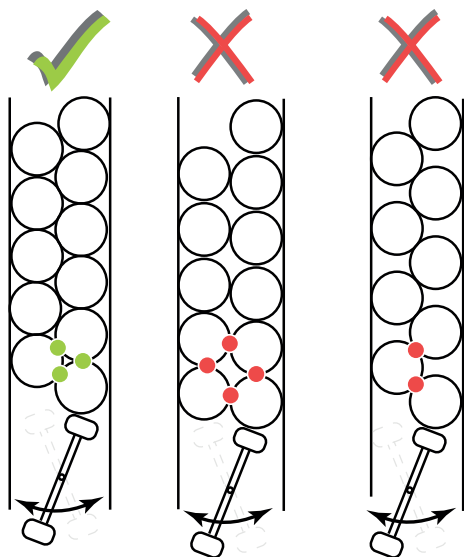
The machine should only be filled with cans, glass and PET bottles.

A product with dimensions that do not correspond to these requirements may cause malfunctions. In addition, suitability also depends on shape and product stability. For this reason, please always check that a particular product vends correctly.

To keep up with market trends and new products, Sielaff continually tests new packaging shapes for their suitability to vend. **Please contact our Customer Service Department for assistance.** Keyword: Spacer list. See also sec. 10.4 on page 64.

Model	Standard chute			Narrow chute		
	Diameter		Length	Diameter		Length
	min	max	max	min	max	max
FK 185	53	83	295	53	73	295
FK 230	53	83	295	53	73	295
FK 280	53	100	498*	53	86	498
FK 320	53	100	498*	53	86	498

* for multi-depth chutes this is the total bottle depth available



The diagram shows the position of the bottles for different chute widths.

Left

The bottles are correctly positioned! They touch at three pressure points, marked in green, forming a symmetrical triangle

Middle

Incorrect. The chute walls are too far apart, the pressure on the chute wall from the side is too great, bottle jams will occur as a consequence.

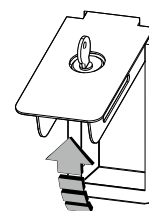
Right

Incorrect. The chute wall is too narrow, the bottles touch at the two pressure points marked red. The pressure on the chute wall from the side is too great, bottle jams will occur as a consequence.

6. Daily use

6.1 Open the machine door

Open the lock and lift the locking mechanism 90°. The machine door is now unlocked. The machine door can now be opened by pulling the lock handle forwards.



ATTENTION, danger of injury!

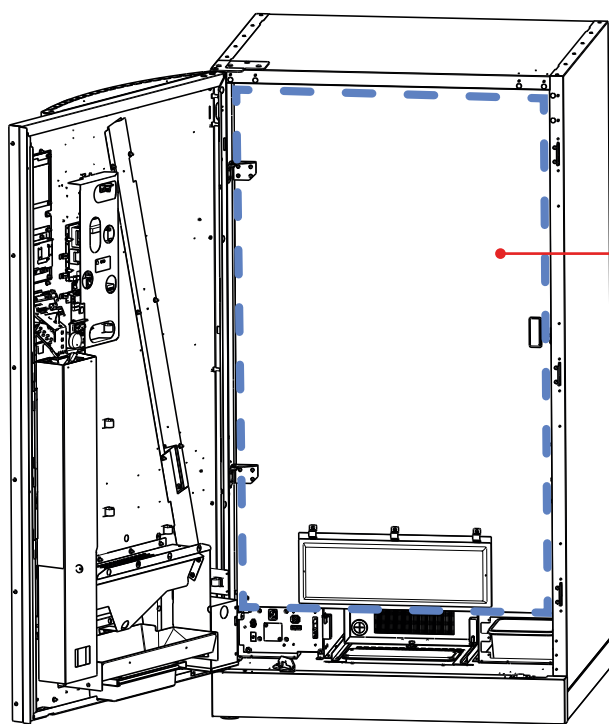
Edges can be sharp. For this reason, wear protective gloves when working on the machine.

6.2 Opening the door to the refrigerated area

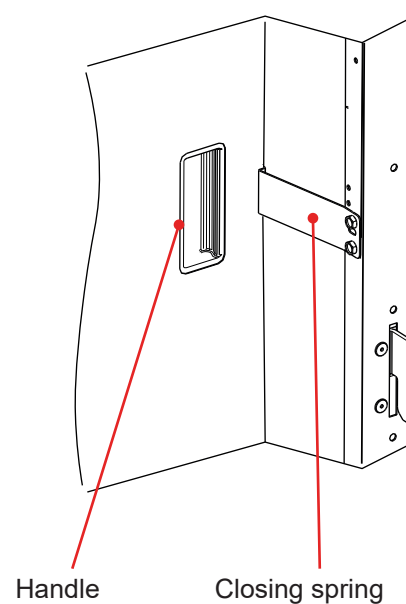
When loading the products, the door to the refrigerated area should only be opened briefly to protect the chilling performance.

In order to open the door the closing spring must be pressed before pulling the handle.

Close the door by simply pushing it to, until the closing spring clicks into place.



Door covering
cooling chamber



Handle

Closing spring

6.3 First fill (the chute is empty)



WARNING Crush risk!

When reaching into the chute there is a risk of damage to hands. Take care when placing products into the chute.



TIP

Please ensure that the chutes are filled with the correct bottles or cans, as indicated on the chute labels. **Only then can flawless product delivery be guaranteed!**

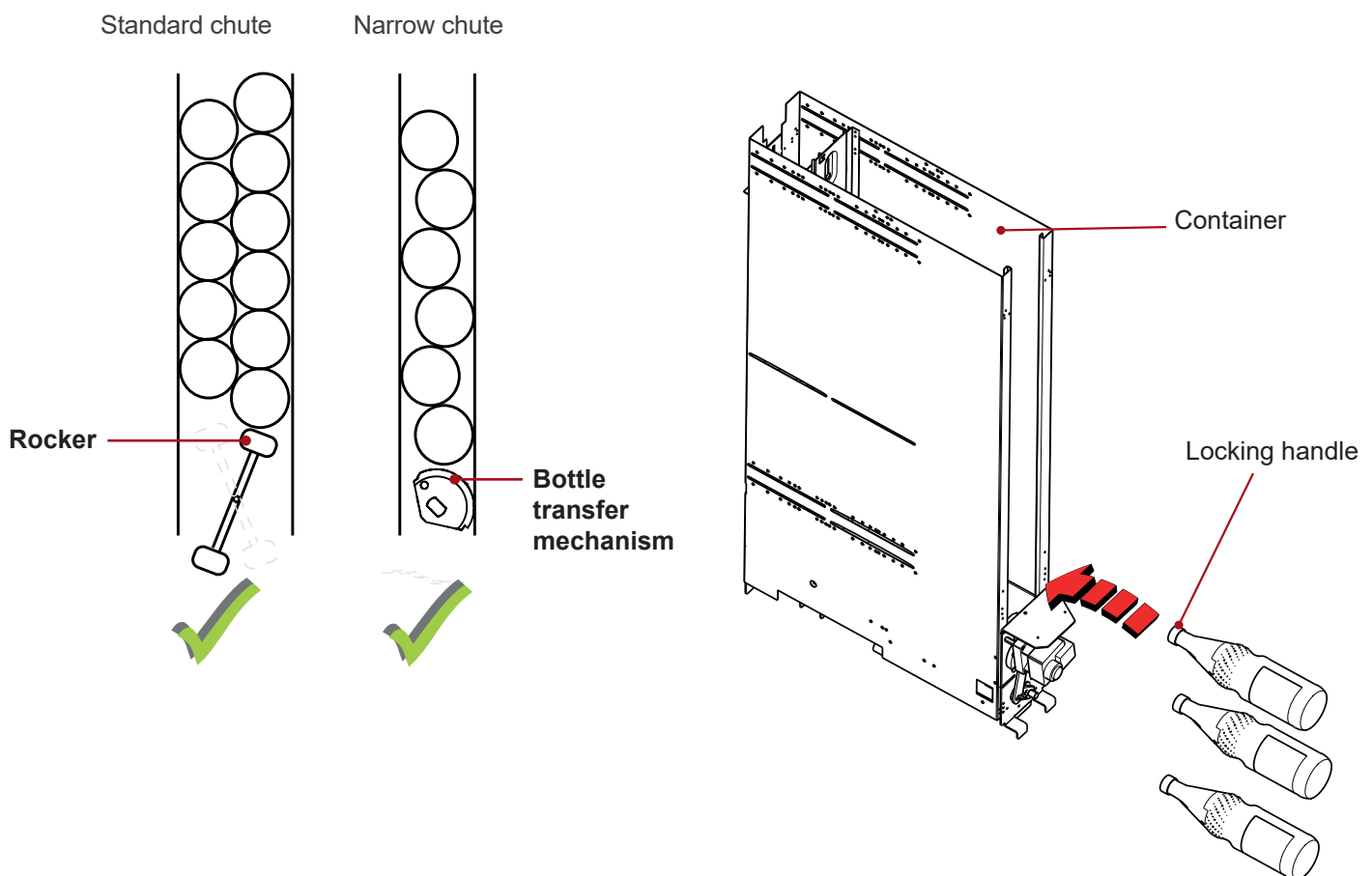
On first-time filling the first bottle must always be placed **on the rocker**! For this purpose the rocker must be in outermost right (or left) home position.

Home rocker position is set for each chute by pressing the red reset button on the inner side of the door.

When filling with bottles/cans, the top must always face forwards.

Bottles/cans must always lie against the chute wall.

When filling the chutes for the first time, test vends with coins are to be carried out until a bottle/can is dispensed.



6.4 Daily operation

Two bottles and up to eight cans remain in each “empty” chute. This is necessary to ensure a continuous supply of chilled bottles and cans. This also makes it easier for the filler to load the correct bottles/cans.

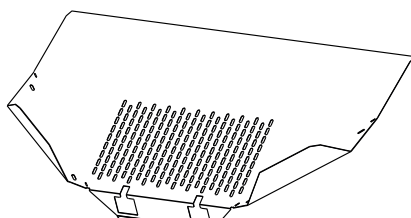
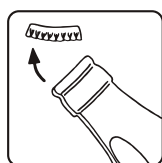
If there are no bottles/cans left in the chute, proceed as if filling for the first time.

Insert bottles and cans **with the cap towards the rear of the chute**. The first two bottles must be laid against the right and left-hand walls, in order to avoid jamming. Fill the chute completely. Close the door and carry out test vend by inserting coins.

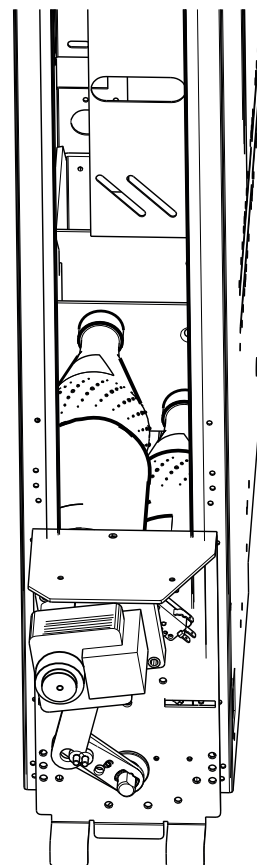
Proceed in the same way for cans.

Empty the bottle top container (if fitted) every time the machine is filled.

Clean soiled delivery chutes, so that the bottles or cans slide out easily.



Delivery slide



6.5 What the status lamp signifies

The lamp next to the button for drink selection has several meanings:

Lamp is off:

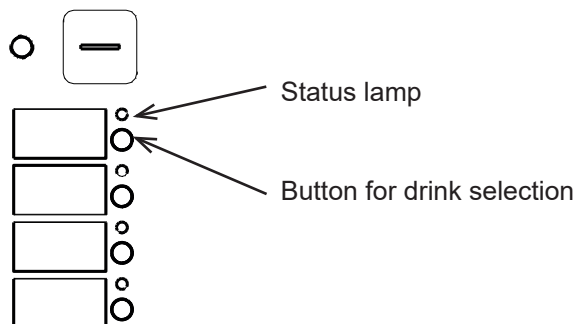
Normal operation.

Lamp is on:

The corresponding chute is sold out (actually there are always bottles/cans left in the chute); the customer must select another chute.

Lamp is on:

There is a fault; [CHECK] menu



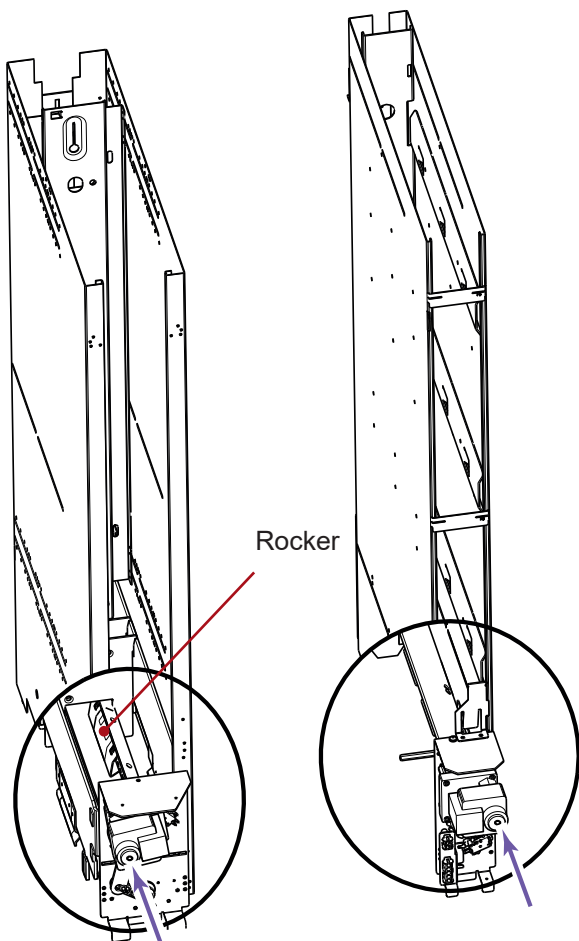
6.6 Clear bottle jams

To clear bottle jams proceed as follows:

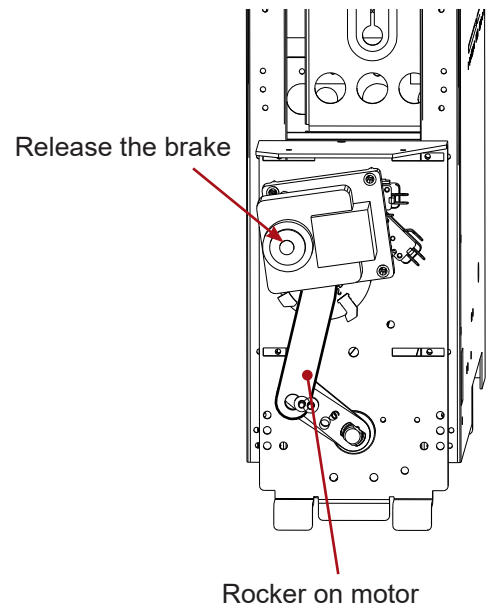
- 1 Remove bottles/cans from the chute
- 2 If the jammed bottle/can cannot be removed, the brake on the AC-motor must be pressed down with a suitable object (e. g. a ballpoint pen). This releases the brake, the rocker moves slightly and releases the jammed bottle/can.
- 3 Press on the red reset button in the machine door.
The chutes operate systematically from left to right before returning to home position.
The filler can be sure that home position has been reached when all rockers are evenly positioned under the motors on the external gear.
- 4 Fill the chutes - as normal- with bottles/cans.
- 5 Check the operating panel after filling: All status lights should have gone out.
- 6 Close chilling cabinet and machine doors and carry out vend tests.

Standard chute

Narrow chute



Release the brake (press in the centre)



7. Cleaning and maintenance



ATTENTION, danger of injury!

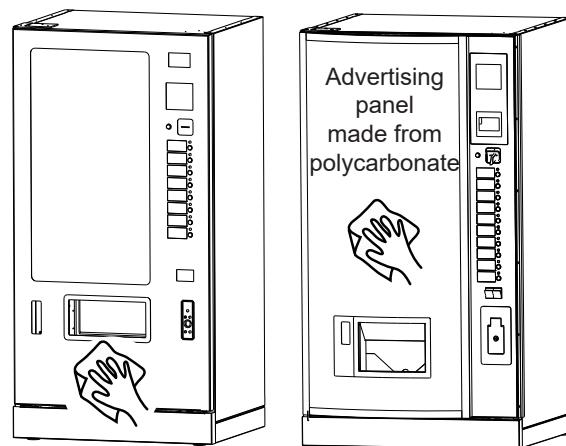
The edges inside the machine may be sharp. Wear protective gloves when cleaning the machine.

7.1 Caring for the external surfaces

Clean the outer surfaces and the delivery compartment regularly with a mild cleaning agent.

Only use a **non-abrasive, pH-neutral detergent and hot water** to clean the polycarbonate panel. Do not use aggressive or abrasive cleaning agents.

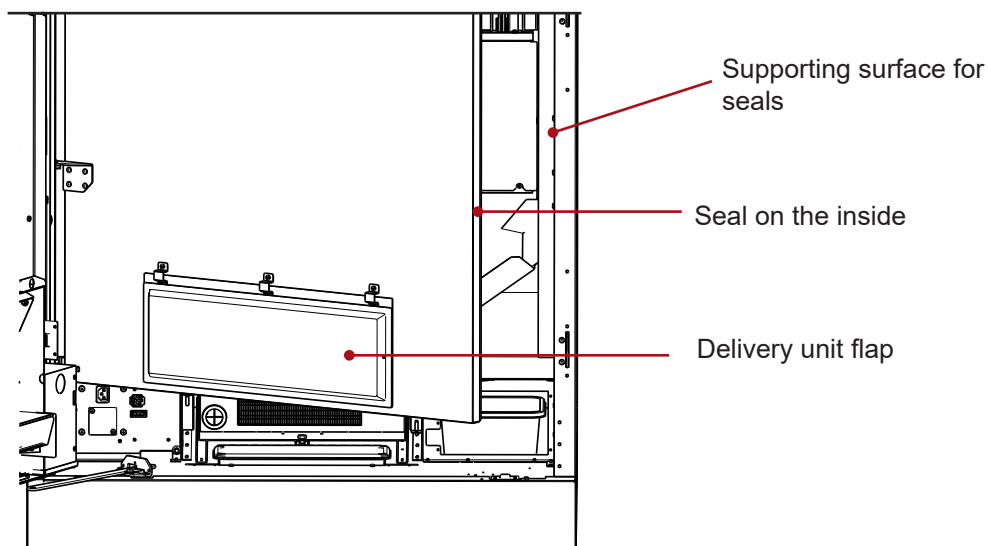
Incorrect cleaning can damage the polycarbonate panel! The use of abrasive, acidic or alkaline cleaning agents may cause stress cracks.



7.2 Cleaning the door seal and delivery unit flap

The door to the refrigerated area has a continuous seal, which thermally separates the refrigerated area from ambient. The seal and the supporting surface must be undamaged and clean. Clean and maintain them with a mild cleaning agent.

The delivery flap must be smooth-running and close automatically.



7.3 Cleaning the chilling cabinet, bottle slide, and drip container



NOTE

Insufficient cleaning of the air inlet grid may cause the chiller unit to fail! For this reason make sure to check and clean the air inlet grid regularly.

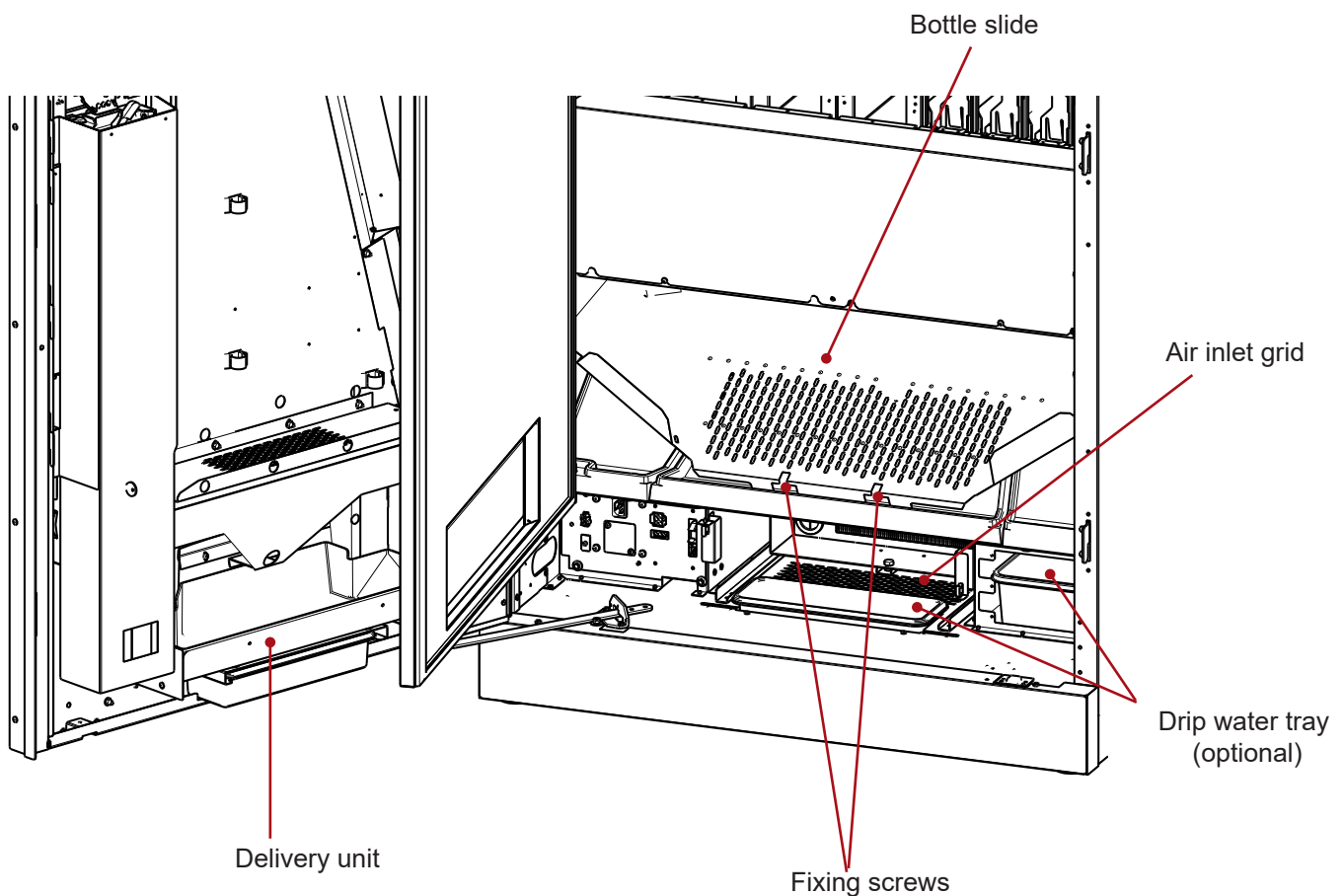
For cleaning, use lukewarm water with a little liquid detergent (washing-up liquid). On no account use cleaning agents containing abrasives, soda, acid, or solvent-based cleaning agents.

It is best to remove coarse dirt with a vacuum cleaner, brush, bottle brush, or broom.

If a bottle breaks, or when liquid leaks, the chute and the delivery unit must be cleaned thoroughly. The chute has to be removed to clean it on both sides. The components under the chute have to be checked and, if necessary, cleaned thoroughly.

The drip containers collect condensed water from the chiller unit and liquids from burst products. They must be emptied and cleaned.

The air inlet grid on the machine floor must be free from debris. The chiller unit cannot function properly if it is blocked with fluff. For this reason make sure to clean the air inlet grid thoroughly.

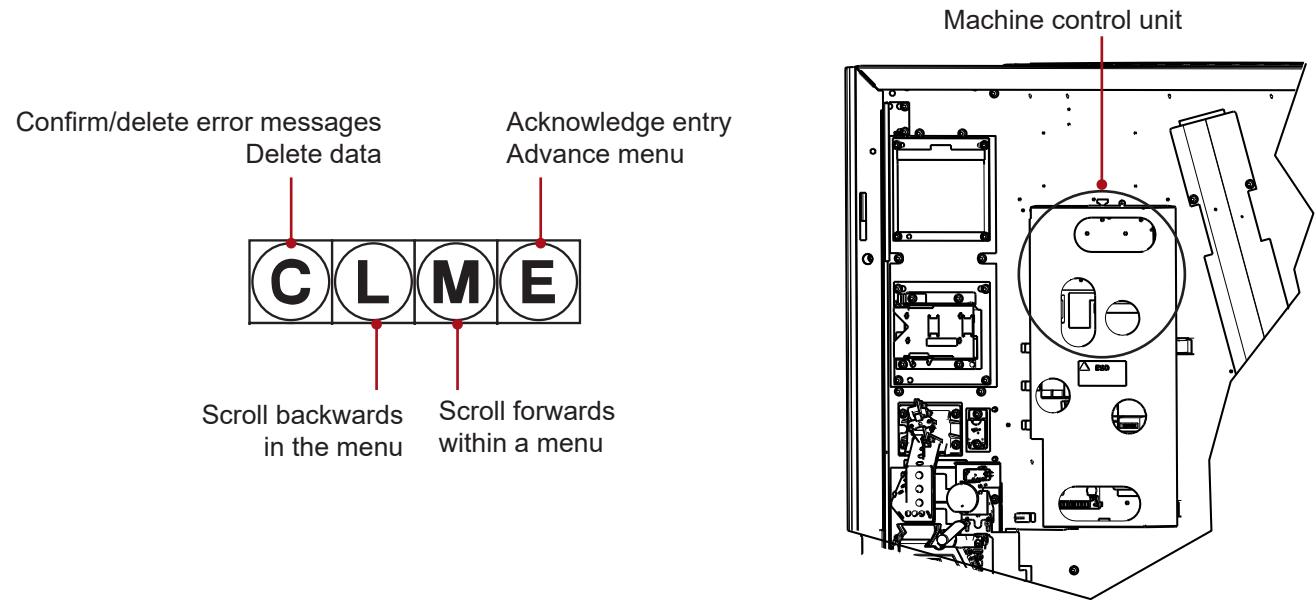


8. Machine control board, Software

8.1 Programming keys

The VMC is located on the inside of the machine door and easily accessible after opening the door. The buttons [C] , [L] , [M] and [E] are on the top of the control board. The machine is programmed using these keys and the selection keypad.

The programming keys have the following functions:



8.2 Menu selection

Values may be programmed and changed using the menu selection, which appears by pressing [M].

The following information is displayed after pressing [M]:



[CHECK]	Name of the menu you are in
L	[L] allows you to scroll back to the previous menu
M	[M] allows you to step forward to the next menu
E	Pressing E allows you to enter a menu and to access its functions

Each menu can be accessed directly from the menu selection by pressing the corresponding code number for this menu.

To exit a menu press [L] and [M] together. If both keys are pressed again, the machine reverts to normal vend mode. You can exit any menu by pressing the refund button [R].

If no button is pressed for one minute, the machine returns automatically to vend mode.

8.3 Structure of the main menu

If inhibit codes A and B have been installed in the [INSTALLING MODE] menu, the menus specified are locked and can only be accessed once the corresponding code is entered.

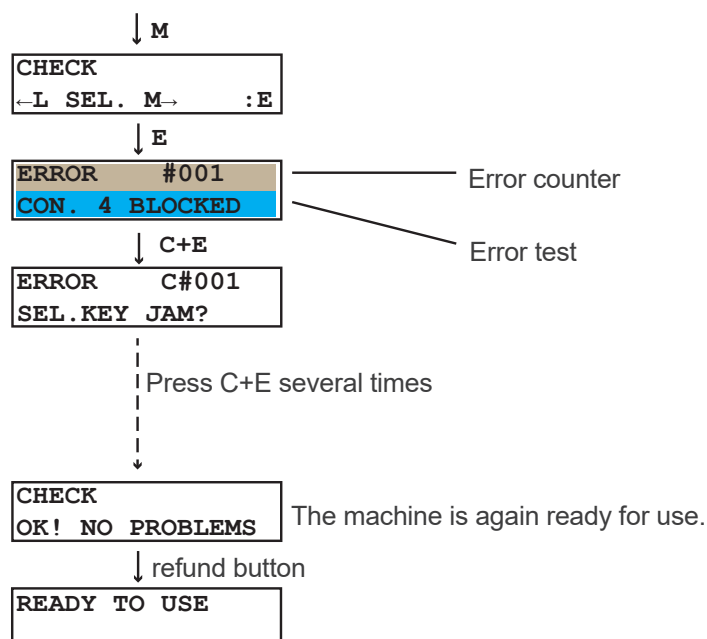
M	Display message	Code	Function
0	CHECK ←L SEL. M→ :E	-	Error display, Deletion of error messages
1	PROGRAMMING MODE ←L SEL. M→ :E	B	Assigning selling prices Entering product names for each selection key
2	COOLING PROGR. ←L SEL. M→ :E	A	Electronic chiller regulating. Chilling temperature and times.
3	TEST SALE MODE ←L SEL. M→ :E	A	Checking the allocations Checking the vend process
4	SHOW STATISTIC ←L SEL. M→ :E	A	Display sales statistics. Deletion of short-term statistics
5	SHOW FULL STAT ←L SEL. M→ :E	B	Display sales statistics. The entire statistics may only be deleted by the manufacturer.
6	PROG. TIME/LOCKS ←L SEL. M→ :E	B	Setting time, Date, Locking times
7	INSTALLING MODE ←L SEL. M→ :E	B	Setting country, currency, machine type, machine number, security codes, pre-selection times, credit system, vending mode, coin change parameters, machine options, service telephone number
8	SERVICE MODE ←L SEL. M→ :E	B	Testing machine components Reading out machine parameters;
9	TUBE INVENT. ←L SEL. M→ :E	-	Filling and emptying coin mechanisms

Sub-menus

[CHECK] M0

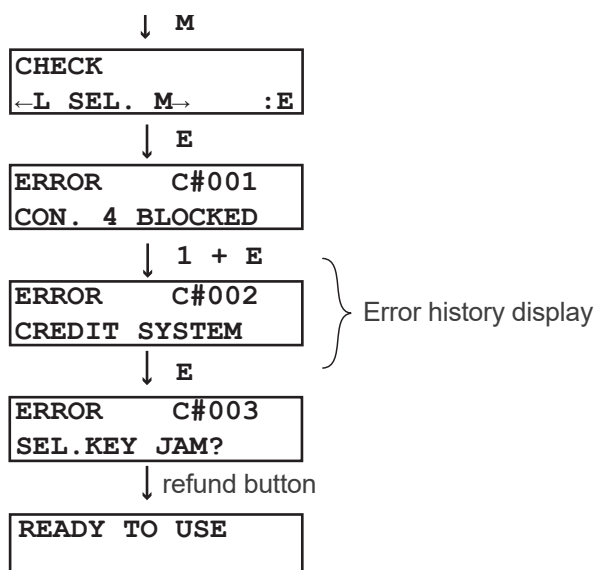
Deleting errors

Current machine errors are displayed as text in the [CHECK] menu. An actual counter reading is displayed with each malfunction.



- Press [E] to acknowledge the error messages.
- Button [C] deletes the error messages.
If several faults occur at the same time, the next message will be displayed once the previous error has been acknowledged.
- Press refund button [R] to revert to vend mode.
- If no button is pressed for a certain time, the control board automatically reverts to vending mode.

Display error history



- Pressing [M] + [1] + [E] in sequence will display the error history
- Press [E] to scroll through the error history.
- Press refund button [R] to revert to vend mode.
- If no button is pressed for a certain time, the control board automatically reverts to vending mode.

8.3.1 [PROGRAMMING MODE] M1

You can assign up to three different prices to each selection:

[PRICE CASH]

The cash price for the product.

[HAPPY HOUR] Price:

to use this price [HAPPY HOUR] in the [INSTALLATION] MENU, sub-menu[CREDIT SYSTEM] must be switched to [on].

Additional settings must be made in the [PROG. TIME/LOCKS] menu.

[PRICELISTS]

One price can be registered for both [PRICELIST 1] and [PRICELIST 2] .

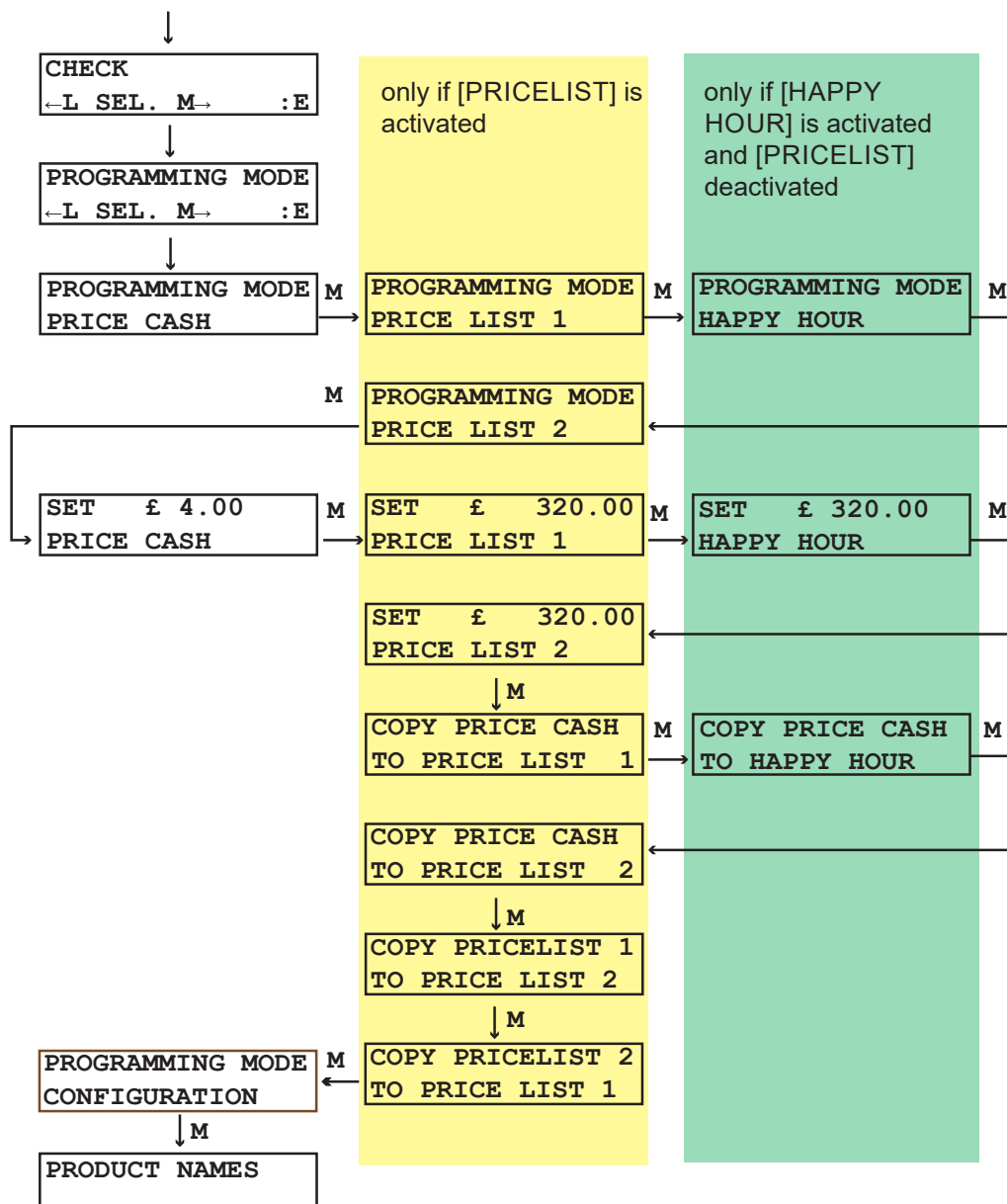
This function depends on the card reader being used. To use this price, the [PRICELISTS] function in the [INSTALLING MODE], sub-menu [CARD SYSTEM] must be set to [on].

Please note

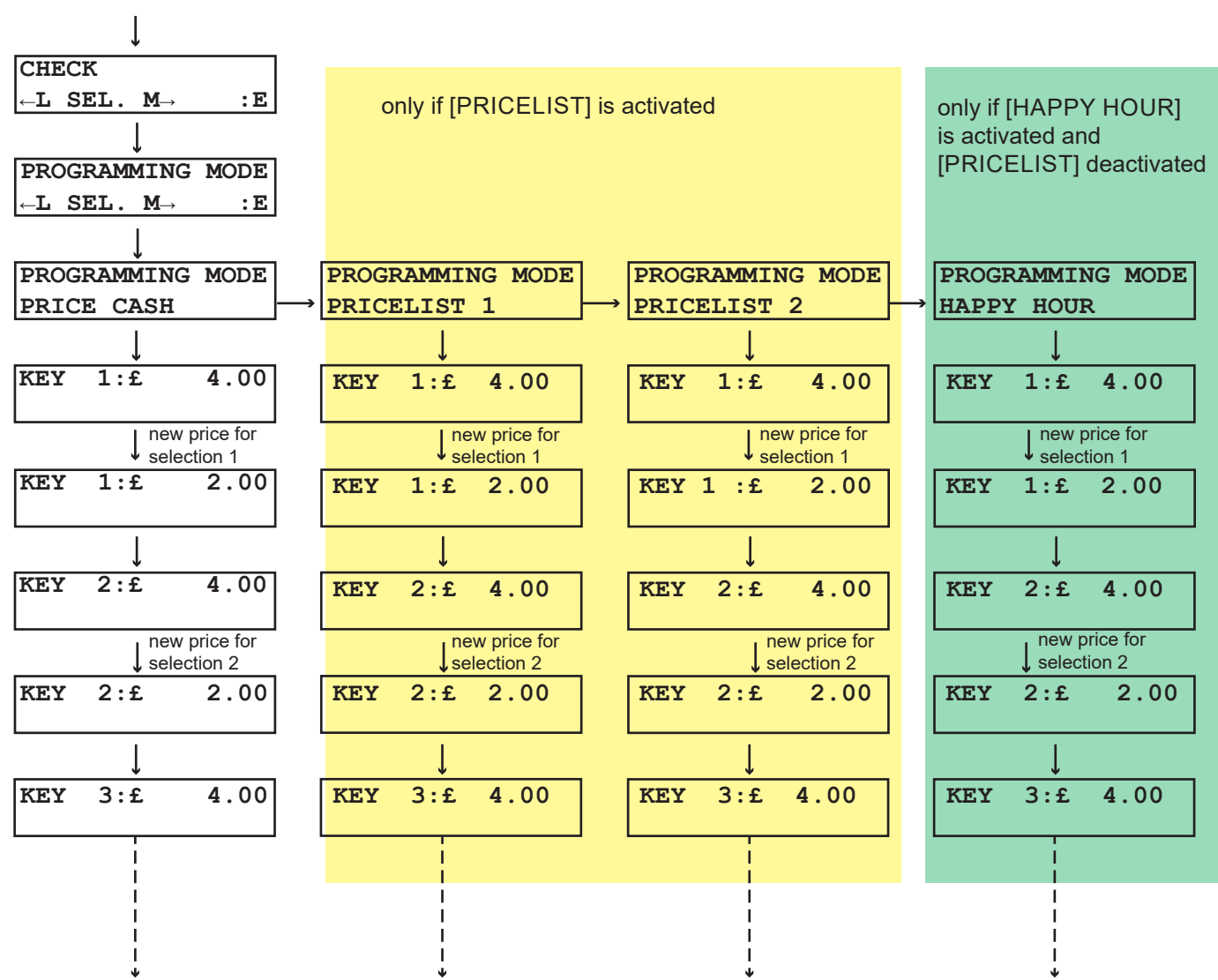
The [PRICELISTS] and [HAPPYHOUR] functions cannot be used at the same time.

To use [HAPPYHOUR] the [PRICELISTS] function must be set to [off].

Overview



Setting prices

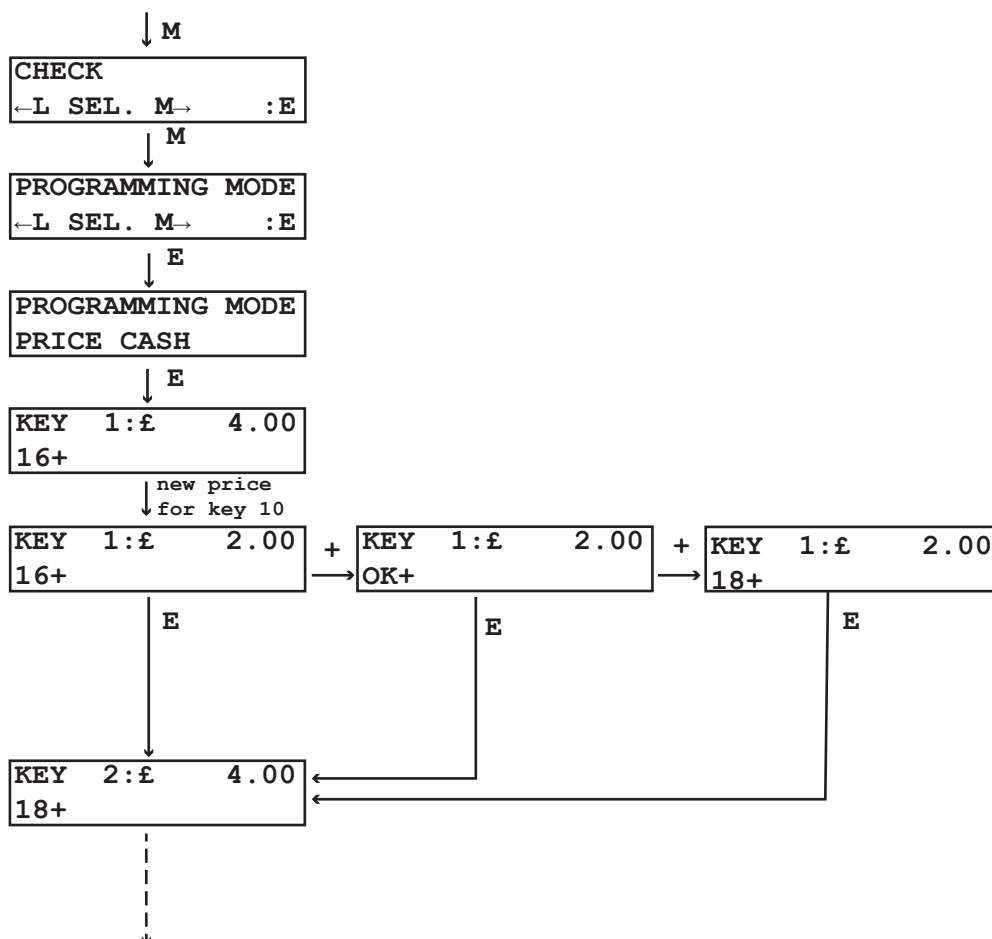


Age verification

If the [AGE VERIFICATION] function is set to [active] in the [INSTALLING MODE] - [MACHINE] menu, you can additionally assign one of the following settings to each selection.

The actual setting is changed by pressing [+].

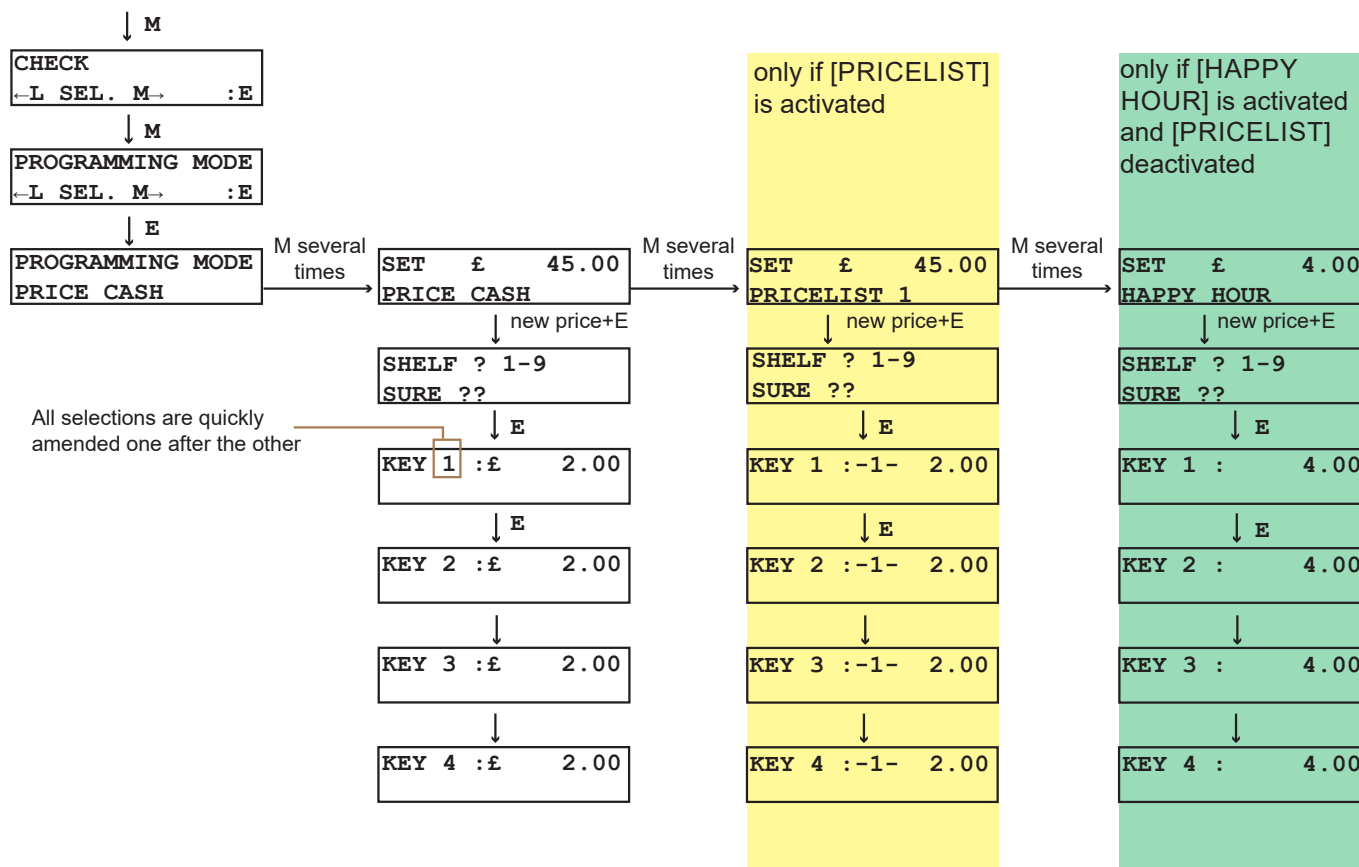
Age verification		
[OK+]	No age verification: The product is sold without age verification.	WAHL 1:EUR 2.00 OK+
[18+]	Age verification from 18: The product is sold after age verification of minimum age 18 years.	WAHL 1:EUR 2.00 18+
[16+]	Age verification from 16: The product is sold after age verification of minimum age 16 years. This function depends on the document reader in use.	WAHL 1:EUR 2.00 16+



Copy one price for all selections

With this function the price of [SELECTION 1] can easily be copied for all other selections. By doing so, all products can be sold at the same price.

In addition all selections can be programmed with the most frequently occurring price.



Copy all prices

With this function all prices entered can be copied. Here you have the following options:

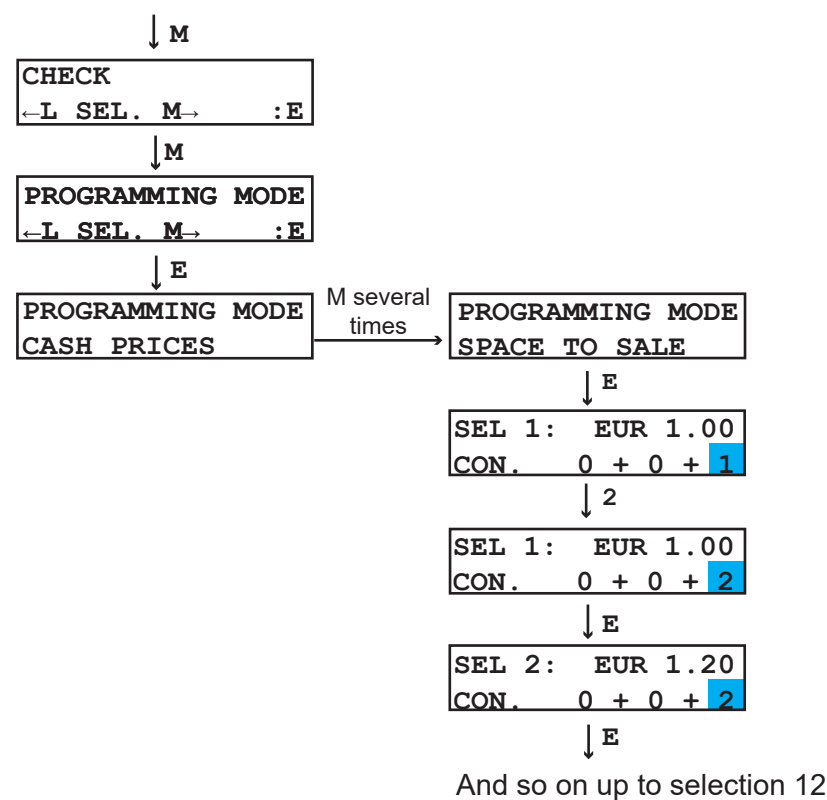
- Copy [PRICE CASH] to [PRICELIST 1]
- Copy [PRICE CASH] to [PRICELIST 2]
- Copy [PRICE CASH] to [HAPPY HOUR]
- Copy [PRICELIST 1] to [PRICELIST 2]
- Copy [PRICELIST 2] to [PRICELIST 1]

The availability of the individual functions depends on the settings in the Installation Mode menu [INSTALLATION].

Assigning selection button to chute

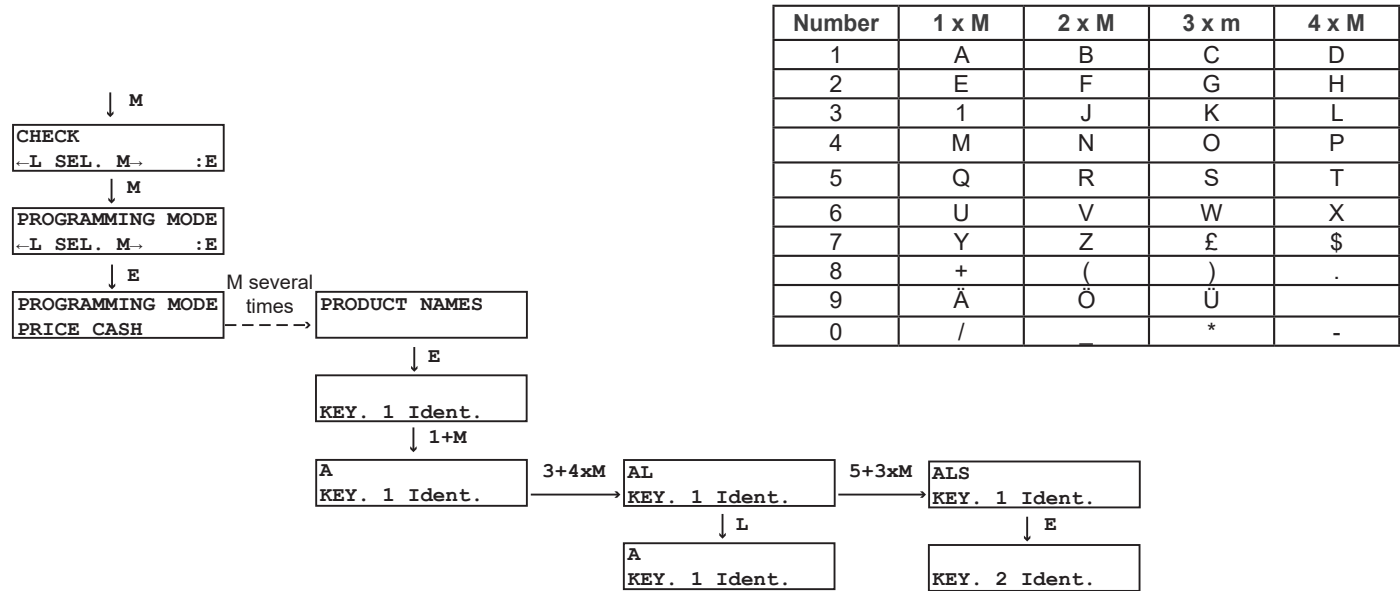
You can programme more than one chute to each selection button. In this case delivery alternates between the assigned column.

In the following example chutes 1 and 2 are programmed to selection button 1.

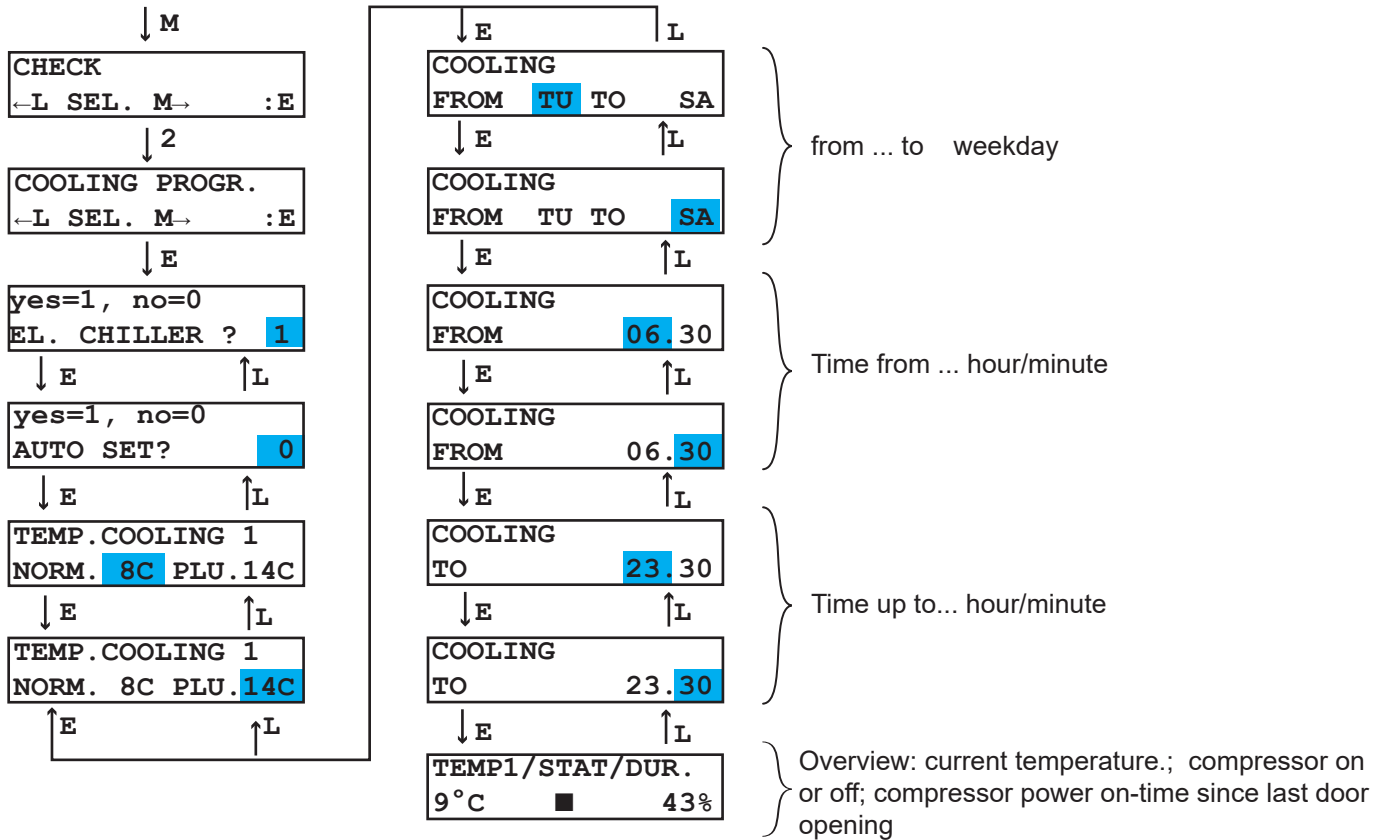


Product names

A product name can be assigned to every selection button. This will be displayed whilst a vend is being made. The numeric keypad is used to enter the product name. Alternatively Sselector can be used (more convenient). Press the appropriate digit key and scroll using the [M] button to the next character required. Repeat this process until your desired text appears in the display. Confirm the whole text by pressing [E]. The [L] button deletes the character in front of the current cursor position. The [C] button deletes the entire row of characters.



8.3.2 [COOLING] M2



[EL. CHILLER ?]	
1 (default)	with electronically controlled chilling
0	without electronically controlled chilling (with thermostat)

[AUTO SET?]	
1 (default)	electronically controlled chiller with the following fixed standard settings: Cooling temperature 8°C, boosted temperature 8°C. These settings cannot be altered.
0	electronically regulated chilling with adjustable temperatures

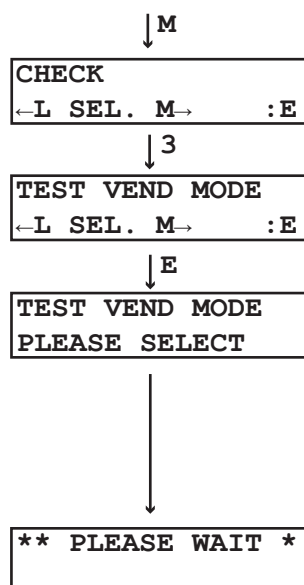
[TEMP. COOLING]	
[NORM.]	Enter the desired chilling temperature using the numerical keys.
[PLU]	Increased temperature indicates which temperature is held outside the chilling time (energy saving effect).

[TEMP1/ STAT/ DUR.]	STAT = Status; Dur. = duration (compressor run time)	
[TEMP1]	11 °C current sensor temperature in the chilling cabinet	TEMP1/STAT/DUR. 9°C ■ 43%
[STAT]	□ : → empty square, chiller off; ■ : → full square, chiller on	
[DUR.]	86 % : Duty cycle of compressor since last switched on (Reset): 99 % is an indication that the compressor has been on permanently. In everyday operation that is an error.	

8.3.3 [TEST SALE MODE] M3

In [TEST SALE MODE] the vending process can be checked.

The selected product is dispensed free of charge and recorded in the statistics memory as a test vend.



TIP

If the machine is full, the selected product will be supplied.

If several chutes are assigned to the selection button, goods are supplied from each in turn (unless empty).

If the chute selected is empty, the motor will not run. The chute number is indicated on the display.

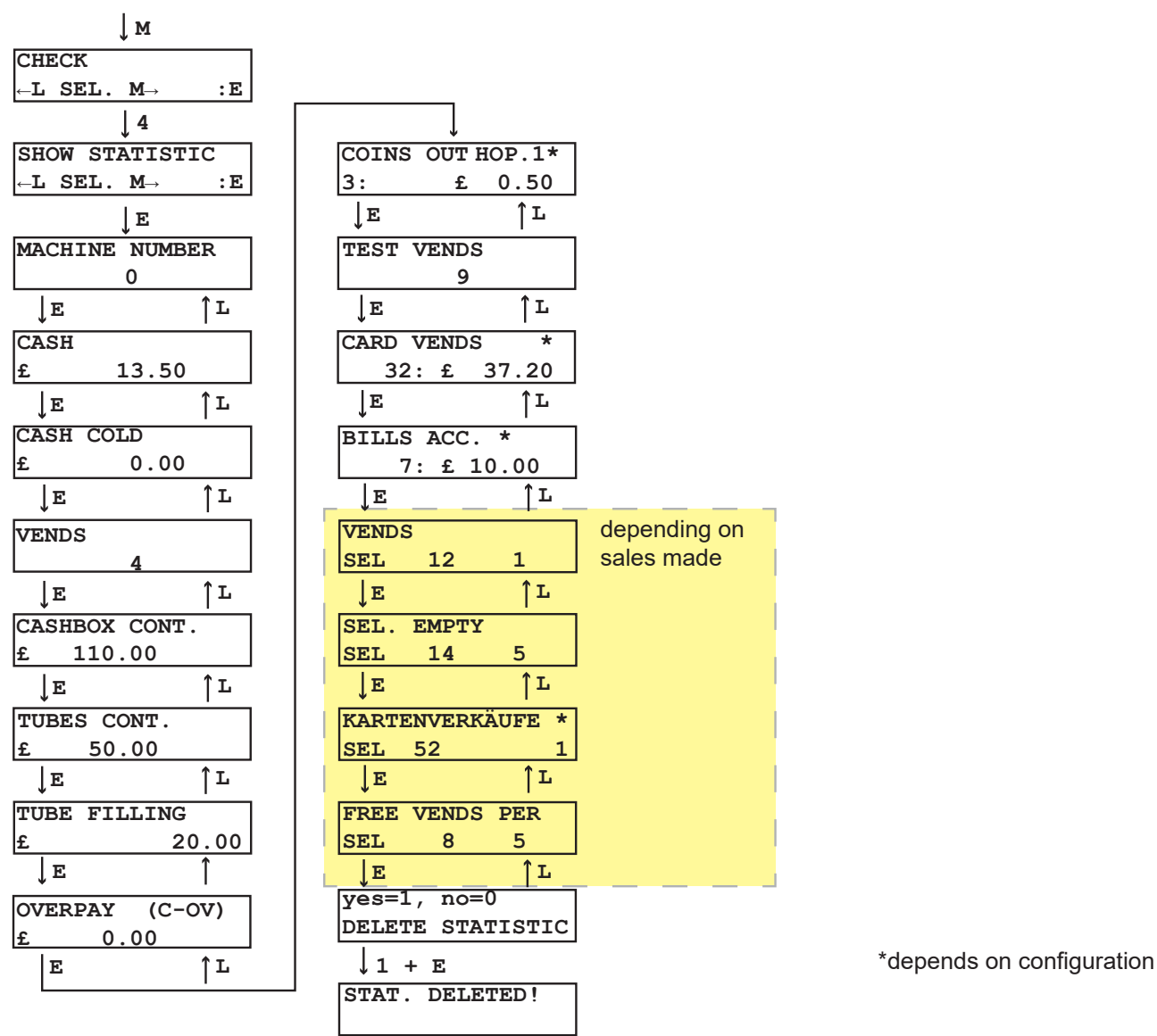
If a test vend is performed with a money card, the amount will not be debited from the card.

8.3.4 [SHOW STATISTICS] M4

Short-term statistics

In the menu [SHOW STATISTICS] the sales statistics are displayed. Specific product stock information can be accessed via the sales statistics.

If a [SECURITY CODE] has been entered, the statistics may be deleted by the operator via [CODE A].



Fields highlighted show the individual types of sale per selection button. All non-zero values are displayed. The display in the vending machine may therefore be different to the diagram above.

The statistics are not actually deleted until the next vend. The statistics can still be viewed therefore until the next vend.

8.3.5 [SHOW FULL STAT] M5

Full statistics

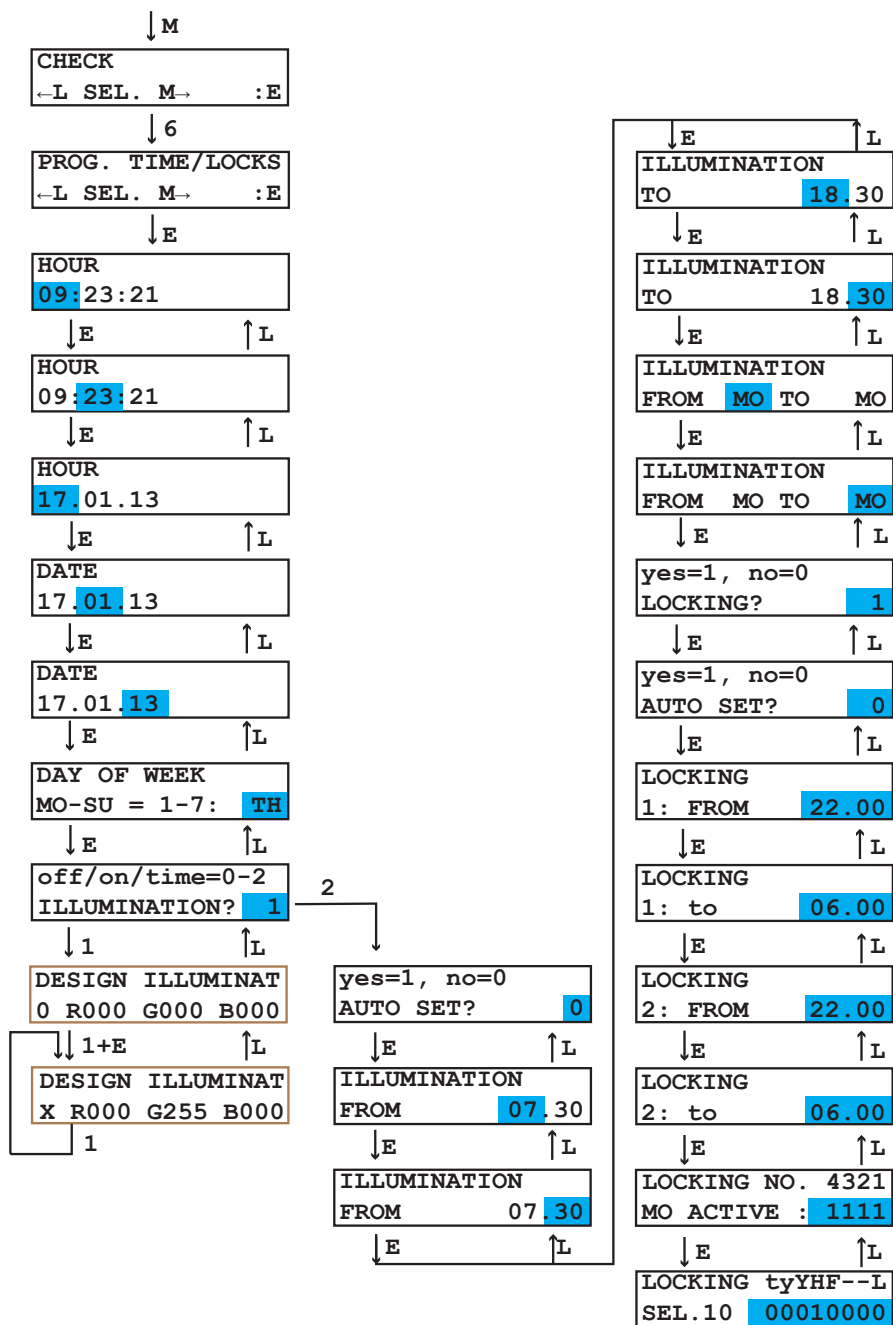
In the [SHOW FULL STAT] menu sales since the machine was first commissioned are displayed. Full statistics cannot be cleared.

8.3.6 [PROG./TIME LOCKS] M6

In the [PROG.TIME/LOCKS] menu the [HOUR] as well as the [DATE] is entered. This information is entered in the current input field using the selection keypad.

The control board automatically calculates the [DAY OF WEEK].

In addition, [LOCKING] can be programmed in this menu. During programmed locking times vends cannot be made.



[ILLUMINATION]		
0	Illumination off	
1	Illumination always on	off/on/time=0-2 ILLUMINATION? 2
2	Illumination controlled by timer. The times when the illumination is switched on is programmed here. The days when the illumination is switched on is programmed here. Weekdays are entered using the numeric keypad (1=Mo, 2=Tu, 3=We, 4=Th, 5=Fr, 6=Sa, 7=Su).	ILLUMINATION FROM 07:30 ILLUMINATION FROM MO TO MO

[DESIGN ILLUMINATION]	This illumination is only available for the FK185 RB.
0 R000 G000 B000	A fixed RGB-colour value is assigned to the first digits 0 to 8 R-red, G-green, B-blue. 000 Colour value off, 255 colour value on. Press E to activate the arrow >, then by pressing 1 assign another fixed colour to the number. Press L to exit the menu. R255 G000 B000 is red R000 G255 B000 is green R000 G000 B255 is blue Colour no. 8 can only be programmed via EVA-DTS protocol. Colour change and lighting duration can be programmed.
1 R000 G000 B255	
x R000 G255 B000	

Locking times

Locking times are flexible. The whole machine can be in operation or just individual selections. In total 4 locking times can be set.

[LOCKING 1]	
[no=0]	Locking times not activated, machine is always operational.
[yes=1]	Locking times activated, machine is locked during set times.

[AUTO SET?]	
[no=0]	Locking times may be individually programmed.
[yes=1]	Useful factory settings are programmed

[LOCKING 4321]		
0	Locking deactivated.	LOCKING NO. 4321 MO ACTIVE : 1111
1	Locking activated.	

You can interface the selection key function with the locking times here. For this purpose an 8-digit number must be entered using number keys 0 and 1. The individual symbols mean the following:

[LOCKING zjYHF--S]	0=Locking time invalid.	
	1=Locking time valid; activated, is in use.	
z interfaced with 1	Deactivates age verification for this selection during inhibit time 1.	LOCK tyYHF--L SEL.1 01000000
z interfaced with 0	Age verification is not time-dependent.	
j interfaced with 1	When the age verification function* is enabled, this selection checks that the user is of the minimum age (normally 16 years)	LOCK tyYHF--L SEL.1 01000000
j interfaced with 0	When the age verification function is enabled, this selection checks that the user is of the higher age (normally 18 years)	
J interfaced with 1	Age verification is deactivated for this selection	LOCK tyYHF--L SEL.1 01000000
J interfaced with 0	Age verification is activated for this selection	
H interfaced with 1	During locking time this selection is sold at Happy-Hour price**.	
F interfaced with 1	During inhibit time this selection is set to free vend.	
S interfaced with 1	During inhibit time this selection is inhibited.	

*Age verification function only applies, if in the [INSTALLING MODE] - [MACHINE] menu [AGE VERIFICATION] is set to [active].

**The Happy Hour Price only works if [HAPPY HOUR] is turned [on] in the [INSTALLING MODE] - [CREDIT SYSTEM] menu.

8.3.7 [INSTALLING MODE] M7

Machine parameters are programmed in the [INSTALLING MODE] menu. There are 6 sub-menus.

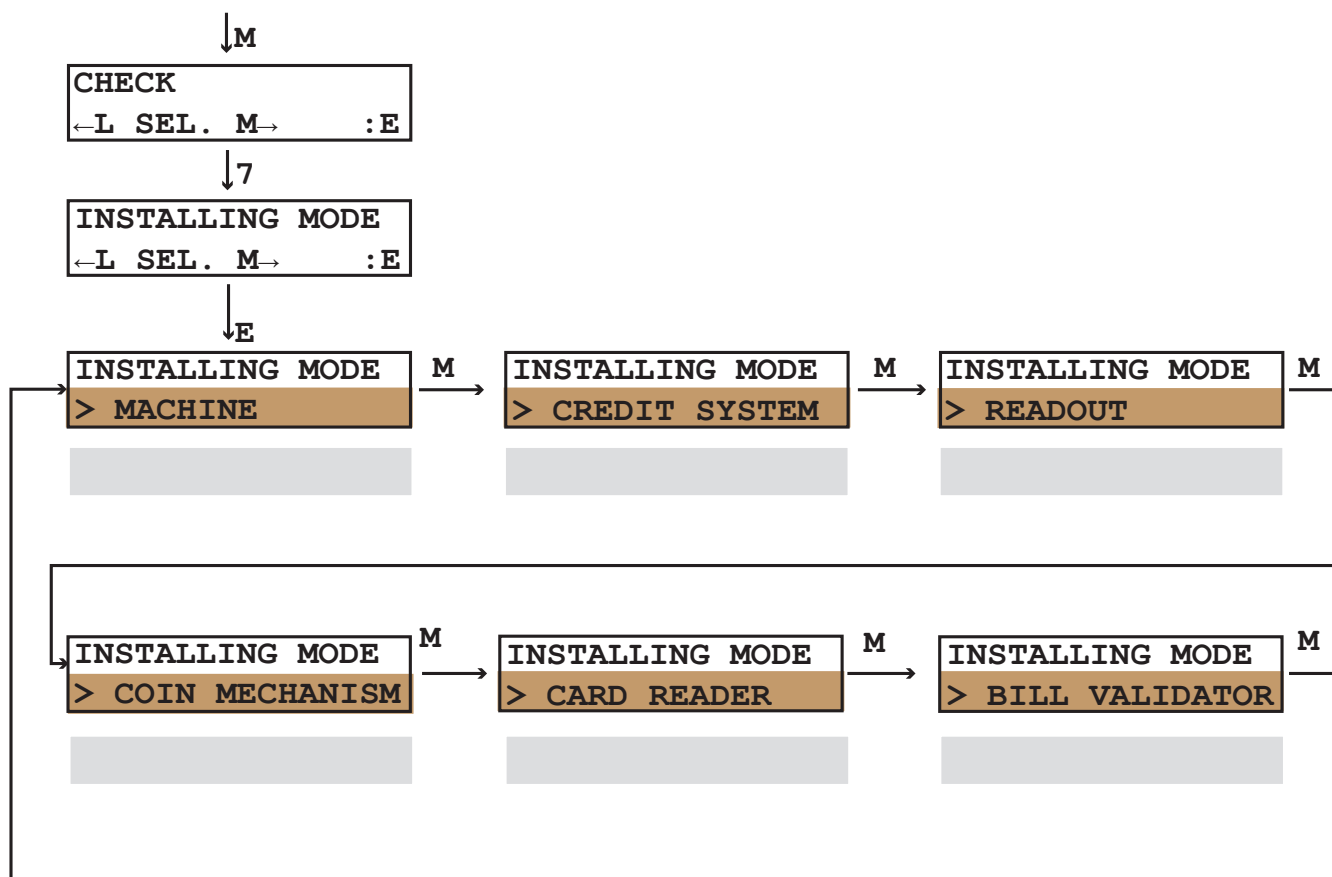
no.	Sub-menu	Note
1	[MACHINE]	Basic machine settings, which affect the dialogue with the user, e.g. language, age verification, security codes etc.
2	[CREDIT SYSTEM]	General settings for coin mechanisms, card systems and banknote readers.
3	[DOWNLOAD]	Configuration and statistical data readout
4	[COIN MECHANISM]	Refers to the coin mechanism settings (coin changer).
5	[CARDREADER]	Settings for payment systems such as microtronic®, fage® coges®.
6	[BANKNOTES]	Refers to banknote reader settings.

Navigating the sub-menus

Select a sub-menu using the [M] button. Press [E] to open a sub-menu.

The availability of individual functions in the sub-menus depends on the credit systems connected.

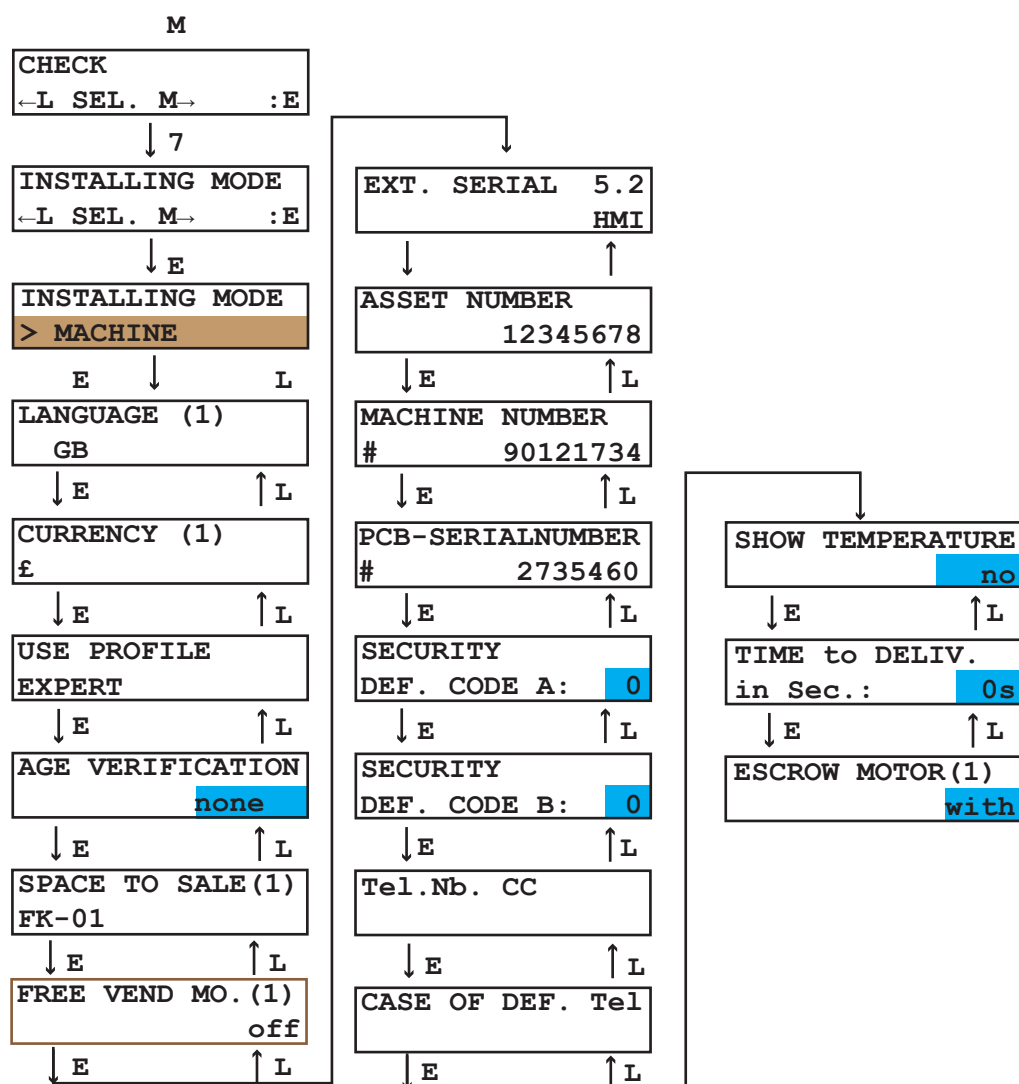
The next selection field in the sub-menu can be selected by pressing [1.]. Confirm your selection by pressing [E].



[INSTALLING MODE] M7 > [MACHINE]

MACHINE

In the sub-menu [MACHINE] you can set the required [LANGUAGE], [CURRENCY], [SECURITY CODE]s etc. The security code requires a password to enter the main menus.



[LANGUAGE]	D/+49 - GB/+44 - F/+33 ...
D / + 49	Change language: Text messages (faults, information, menu ...) are now shown in the relevant language, press [1] to select, [E] to save
[CURRENCY]	The numerical code for the relevant currency is shown in brackets. EUR (978); no currency (0); P (643); CHF (756) etc.
EUR (978)	Currency belonging to the country
[USE PROFILE]	It is determined here which profile should be used.
[EXPERT]	This can only be configured by the manufacturer.
[USER 0]	
[USER 1]	
[AGE VERIFICATION]	
[no] (default)	Age verification is switched off.
[active]	Age verification is switched on and must be set in [PROGRAMMING MODE] menu M1.
[VARIANT]	Setting the machine type.
[FK-01](default)	[FK-01] stands for FK.

[INSTALLING MODE] M7 > [MACHINE]

[EXT. SERIAL 5.2]	Programme machine data read out function.
[HMI]	Read out using HMI-protocol
[READ OUT]	Read out using downloading devices.

[FREE VEND MODE(1)]	If the sale is only to be accessible to specific customers (e.g. hotel foyer), the free vend mode can be switched on. Before making a selection the four-digit [FREE VEND CODE] must be entered.
[FREE VEND DURAT.]	To programme the time for goods to be dispensed once the free vend code has been entered.
[FREE VEND CODE]	Four digit code to activate the vend

[MACHINE NUMBER]	
[0] bis [9]	The number assigned by the factory may be replaced by an internal number selected by the customer as part of an in-house control system.

[MACHINE NUMBER]	
[0] bis [9]	The number assigned by the factory may be replaced by an internal number selected by the customer as part of an in-house control system. The serial number is located on the machine identification plate.

[PCB-SERIAL NUMBER]	PCB = <u>P</u> rinted <u>C</u> ircuit <u>B</u> oard.
-	The circuit board serial number is displayed. You are unable to make any changes here.

[SECURITY CODE A] [SECURITY CODE B]	Managing the access to menus / access rights; password protection	
[DEF. CODE A:] [DEF. CODE B:]	In order to avoid unauthorised programming the menus can be assigned a locking code. The locking codes are structured hierarchically. [CODE A] provides the lowest access level. It unlocks the [COOLING], [TEST VENDS] [SHOW STATISTICS] and [SHOW FULL STAT] menus. Code A is intended for the machine filler. [CODE B] unlocks the [PROGRAMMING MODE], [SHOW FULL STAT], [PROG.TIME/LOCKS], [INSTALLING MODE] and [SERVICE MODE] menus. If you enter [CODE B], even if [CODE A] is requested, all menus can be accessed. The security codes can be freely selected from 0 to 9999. If [CODE A] is entered, [CODE B] has to also be entered. Both codes can be the same. A menu locked using [CODE A] or [CODE B] requires the relevant code to be entered to obtain access. The digits are not displayed. After entering the code press [E] to confirm!	SECURITY DEF. CODE A: 0 Security code is set here CODE A ---- Code A must be entered CODE B ---- Code B must be entered

[INSTALLING MODE] M7 > [MACHINE]

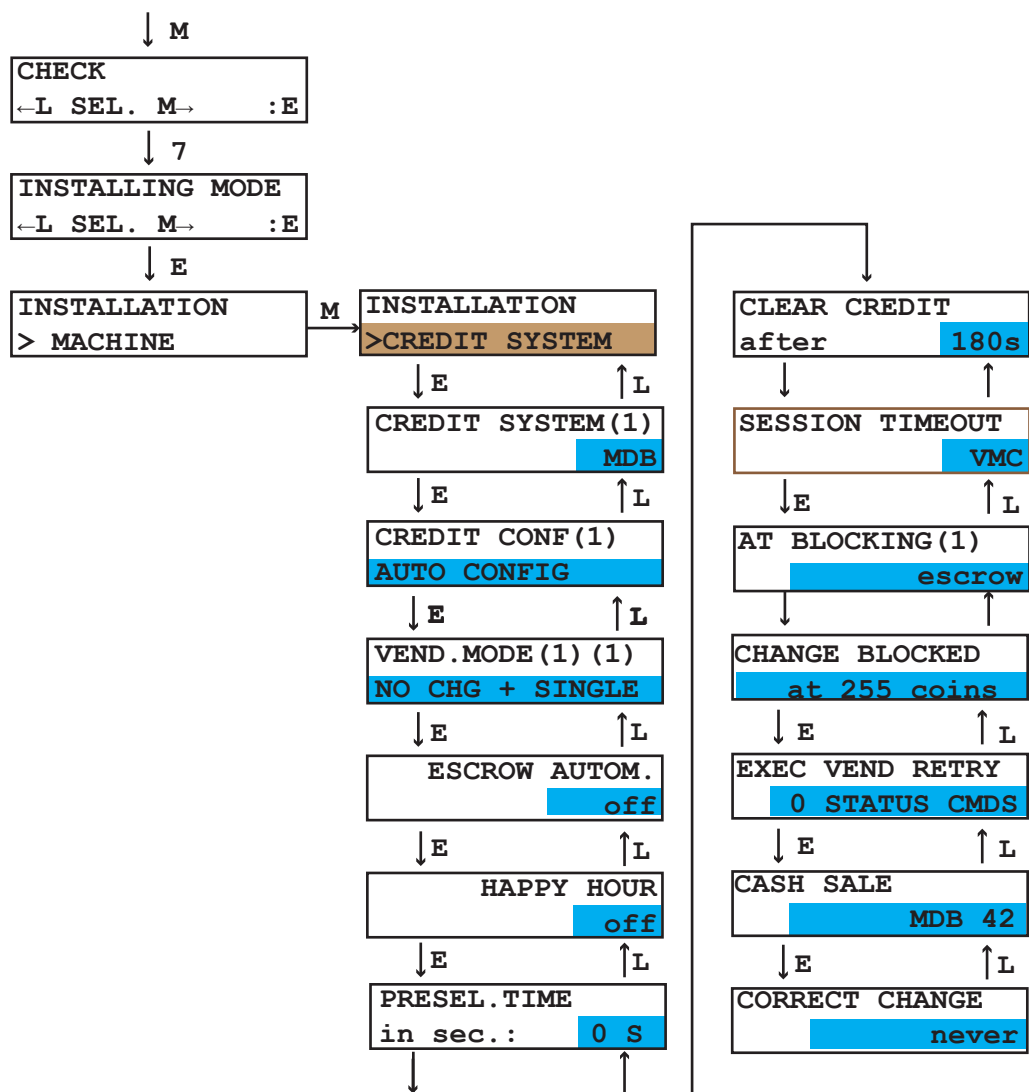
[TEL.NO. DC]	DC stands for Data Centre.
+49 xxxxx	If the machine is connected by telemetry, the Data Centre phone number can be entered using the number keys. The machine automatically dials this number. Telemetry connection is required for this.

[IN CASE OF DEF. TEL.]	
+49 xxxxx	The number keys can be used to enter a telephone number. This phone number is displayed in the event of malfunction, recommending that this number is called. CASE OF DEF. TEL.

[SHOW TEMPERATURE]	
[no]	In the vend mode the chilled area temperature is not shown in the display.
[yes]	In the vend mode the chilled area temperature is shown in the display.

[TIME to DELIV.]	
100 s	This is the time that the delivery pocket is open for the customer to remove the product.

[ESCROW MOTOR(1)]	Refers to the motorised refund and the coin mechanism.
[with] (default)	Any coins inserted are refunded if the customer presses the refund button. The refund motor turns, a possible jam is prevented.
[without]	This setting must be selected if the machine does not have a motorised return/coin mechanism.

[CREDIT SYSTEM]**[INSTALLING MODE] M7 > [CREDIT SYSTEM]**

[CREDIT SYSTEM]	[Free Vend] - [BDV] - [Executive] - [BDV dual] - [MDB] - [Key system] - [MDB+EXEC] - [MDB+BDV]
[MDB] (default)	The communication protocol is entered here.

[CRED. CONFIG.]	
[AUTO CONFIG.]	Setting the configuration for the coin mechanism automatically or manually.
[MAN.CONFIG.]	Some of the following fields appear only if you enter [MAN. CONFIG.] here. Refer to the coin mechanism manual for further information.

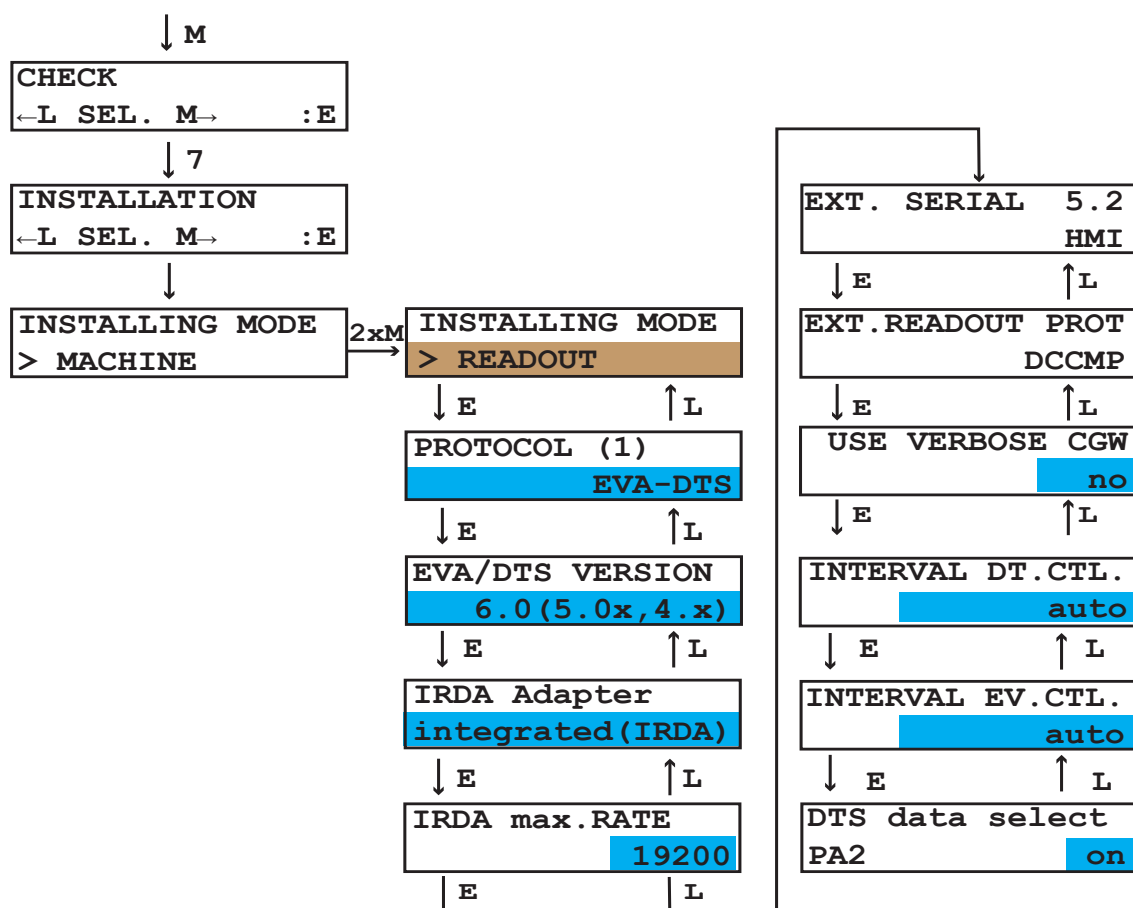
[VEND. MODE]	Setting the required vend mode.
[NO CHG + SINGLE]	Compulsory purchase: After a coin has been inserted, at least one product must be purchased before coins are refunded.
[NO CHG + MULTI]	Compulsory vend/multi-vend
[CHANGE + SINGLE]	In the case of over-payment refunding is automatic following product selection.
[CHANGE + MULTI]	Refund: No product has to be purchased; coins are refunded if the process is aborted. With this setting the machine may be misused as a coin changer.

[INSTALLING MODE] M7 > [CREDIT SYSTEM]

[ESCROW AUTOM.]	Refers to change given in coins
[on]	Requirement: [CHANGE + MULTI] or [NO CHANGE + MULTI] is set in [VEND MODE]. Change is automatically dispensed (without pressing the refund button) as soon as the credit is lower than the amount set under [max. RETURN].
[off] (default)	The function is deactivated.
[HAPPY HOUR]	
[on]	If you set [HAPPY HOUR] to [on], various selections can be sold at a different price during a specified time.
	The cash price and the Happy-Hour price are entered in the [PROGRAMMING MODE] menu [M1]. The Happy-Hour time and the selections it applies to are set in the [PROG. TIME/LOCKS] menu [M6].
[off] (default)	The function is deactivated.
[PRE-SELECTION TIME]	
[in Sec.]	During the time specified it is possible to make a selection before inserting coins. The selection remains until money is inserted. If 0 is programmed, money must first of all be inserted, then a selection made so that a vend can take place.
[CLEAR CREDIT]	
[in Sec.] 180 s (default) 0 s (Remaining amount is not deleted)	This function enables an additional waiting time to be entered whilst non-returnable change is still displayed, before it is finally deleted. This might be required for contactless card payment systems, where the card is debited with the amount and it only turns out afterwards that the product requested cannot be dispensed. The time entered here gives the customer the option of reversing the amount by re-presenting the contactless card to the machine.
[SESSION TIMEOUT]	
[VMV]	Ending a session via the machine control board.
[Credit system]	Ending a session via the credit system.
[AT BLOCKING]	
[ESCROW MOTOR] (default)	In the event of a failure the amount is refunded.
[CHANGE BLOCKED]	
[at 255 coins]	[CHANGE BLOCKED] can be set to prevent the vending machine being used as a coin changer. The limit for changing can be set from 0 to 255 coins, where only the number of coins inserted are counted and not their value. Even if the [VEND MODE] is set to no change, the machine will change inserted coins up to the lowest sales price.
[EXEC VEND RETRY]	
[STATUS CMDS]	This value defines the number of retries for sales requests if the EXEC-changer does not respond.
[CASH SALE]	
[MDB 42] (default)	The Cash Sale command operates in accordance with MDB 4.2 version.
[MDB 41]	This Cash Sale command is used specifically and requires special knowledge in MDB programming.
[CORRECT CHANGE]	
[auto] (default)	[CORRECT CHANGE] is shown in the display if there are insufficient or no coins available.
[never]	The [CORRECT CHANGE] indicator is inhibited. This setting is necessary if it is not possible to give change

[READOUT]

[INSTALLING MODE] M7 > [READOUT]



[PROTOCOL]	
[EVA-DTS] (default)	Data transfer protocol between vending machine controller and payment system.
[DEX/UCS]	This protocol is only required if a display with DEX/UCS interface is connected.

[EVA-DTS VERSION]	
[6.0 (5.x, 4.x)]	Programming EVA-DTS Version.
[6.1 or newer]	This version contains additional information. It is required for future applications.

[IRDA Adapter]	IRDA = Infrared-interface
[Cable]	This setting is necessary if, for example, a DEX/UCS interface can be connected to the display and EVA-DTS data is to be read out from it.
[IRDA]	This is the standard setting and means that EVA-DTS data can be read out via the integrated IRDA interface.

[INSTALLING MODE] M7 > [READOUT]

[IRDA max. RATE]	IRDA = Infrared-interface
[19,200] (default)	Data transfer rate of IRDA interface (IRDA) is between 19,200 Bit/s and 57,600 Bit/s. The display installed as standard has a data transfer rate of 19,200 Bit/s.

[EXT. SERIAL 5.2]	Programme machine data read out function.
[HMI]	Read out using HMI-protocol
[READ OUT]	Read out using downloading devices.

[EXT.READOUT PROT]	External readout possibility using corresponding equipment.
[DDCMP]	Readout using DDCMP
[DEX/UCS]	This protocol is only required if a display with DEX/UCS interface is connected. The machine must subsequently be restarted.

[CGW REPORTS]	
[no] (default)	Is only necessary if online modules compatible to "Verbose" are to be installed. Sielaff uses the FTL mode for data transfer which includes additional information to NAMA standard Verbose.

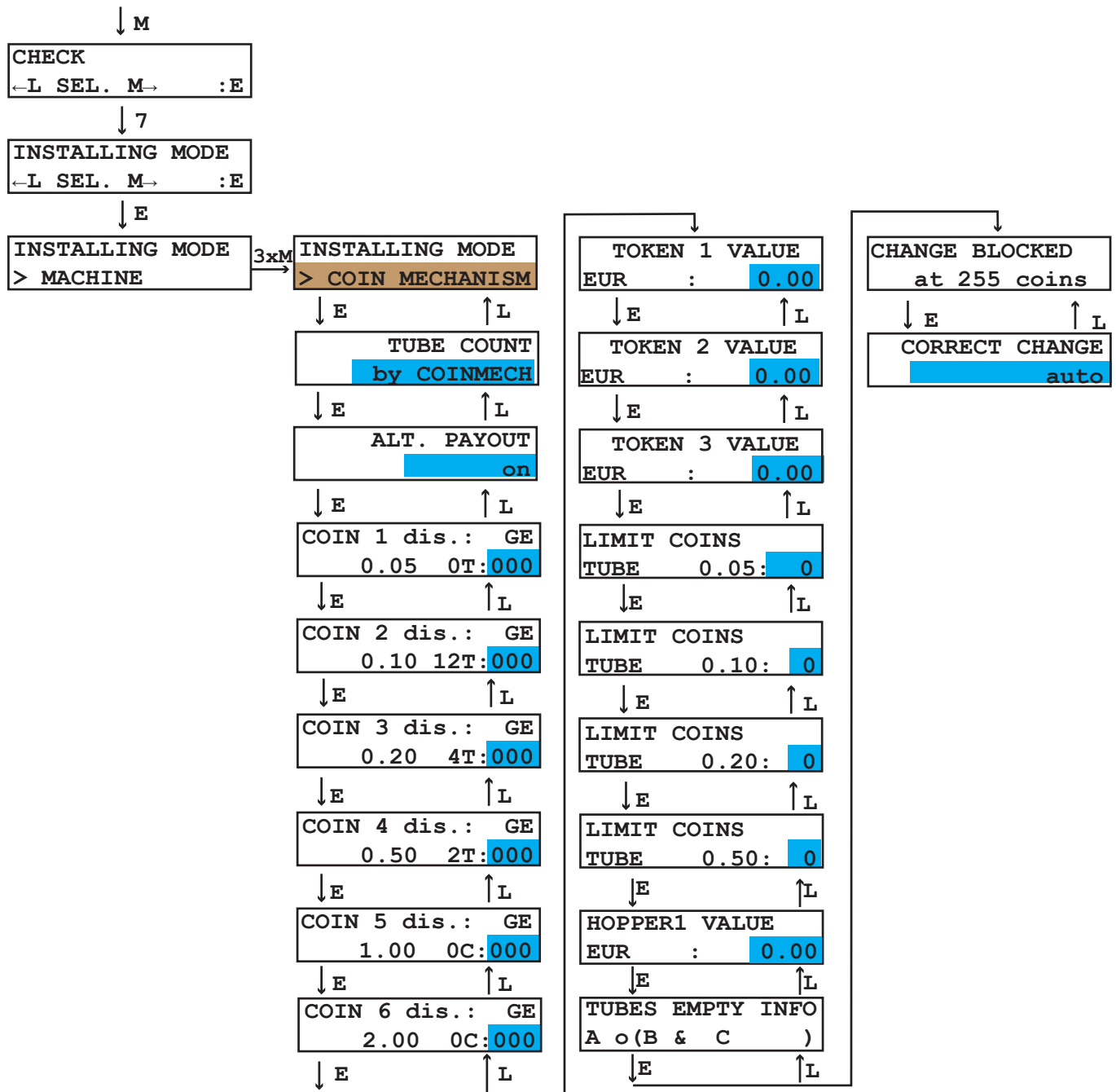
[INTERVAL DT. CONF(1)]	only for EVA-DTS 6.1 Standard.
[auto]	Once the statistics have been downloaded, they are deleted when the next vend is made (as before).
[save]	The statistics are not deleted after downloading. Deletion must be started via IR.

[INTERVAL EV. CTL.]	only for EVA-DTS 6.1 Standard.
[auto]	The errors are deleted once they have been read out and when the next vend is made (as before).
[save]	The errors are not deleted after having been read out; deletion must be started via IR.

[DTS data select]	Fields can be switched on and off individually. The definition of the fields is described in the EVA-DTS specification. Fields: PA2 - PA3 - PA4 - PA5 - PA6 - PA7 - PA8.
[on]	Transfer is enabled.
[off]	Transfer of corresponding fields (e.g. PA8) is inhibited.

[COIN MECHANISM]

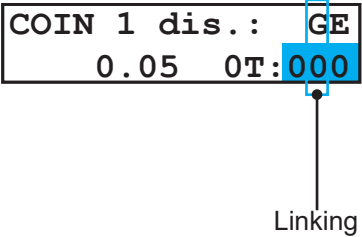
[INSTALLING MODE] M7 > [COIN MECHANISM]



[TUBE FILL LEVEL]	
[COIN MECHANISM] (default)	Tube fill level is not counted by the machine control board, but by the coin mechanism. The tube level transmitted by the coin mechanism is what should be available for coin return. Please note that transmitting the tube level from the coin mechanism to the control board can take up to one minute.
[Control board]	The control board counts the tube level.

[ALT. PAYOUT]	
[on]	The coin mechanism decides how the change is returned. For example, 20 cents can be returned as 2 x 0.10 € or 1 x 0.20 € or 4 x 0.05 €
[off]	The machine control board determines how the change is returned. The number of coins dispensed is kept to a minimum.

[INSTALLING MODE] M7 > [COIN MECHANISM]

[COIN 1 dis.: GA] [COIN 16 dis.: GA]	The coin can be disabled by interfacing keys 0 and 1. Its value (0.05 corresponds to 5 cents) and the number of coins in the tube or in the cashbox is displayed. Meaning of the letters: G - disabled, A - paid. 0T - no coins in the tube. 0C - no coins in the cashbox.	
0	The coin is always accepted.	
10	The coin is generally not accepted.	
01	The coin will not be accepted if [EXACT MONEY ONLY] is displayed. Press button [E] to display step by step all the coins that the coin mechanism accepts.	

[TOKEN 1 VALUE]	Enter the value of the token
EUR : 0.00	If the coin mechanism accepts tokens, you can programme the values for up to three different tokens here.

[LIMIT COINS]	Coins remaining in coin mechanism
TUBE 0:05: 9	The minimum number of coins for the value shown that must remain in the coin mechanism is entered using the number keys. Using these settings the coin mechanism is filled or emptied in M9 [TUBE INVENT.] menu.

[CHANGE BLOCKED]	
[from 255 coins]	[CHANGE BLOCKED] can be set to prevent the vending machine being used as a coin changer. The limit for changing can be set from 0 to 255 coins, where only the number of coins inserted are counted and not their value. Even if the [VEND. MODE] is set to no change, the machine will change inserted coins up to the lowest sales price.

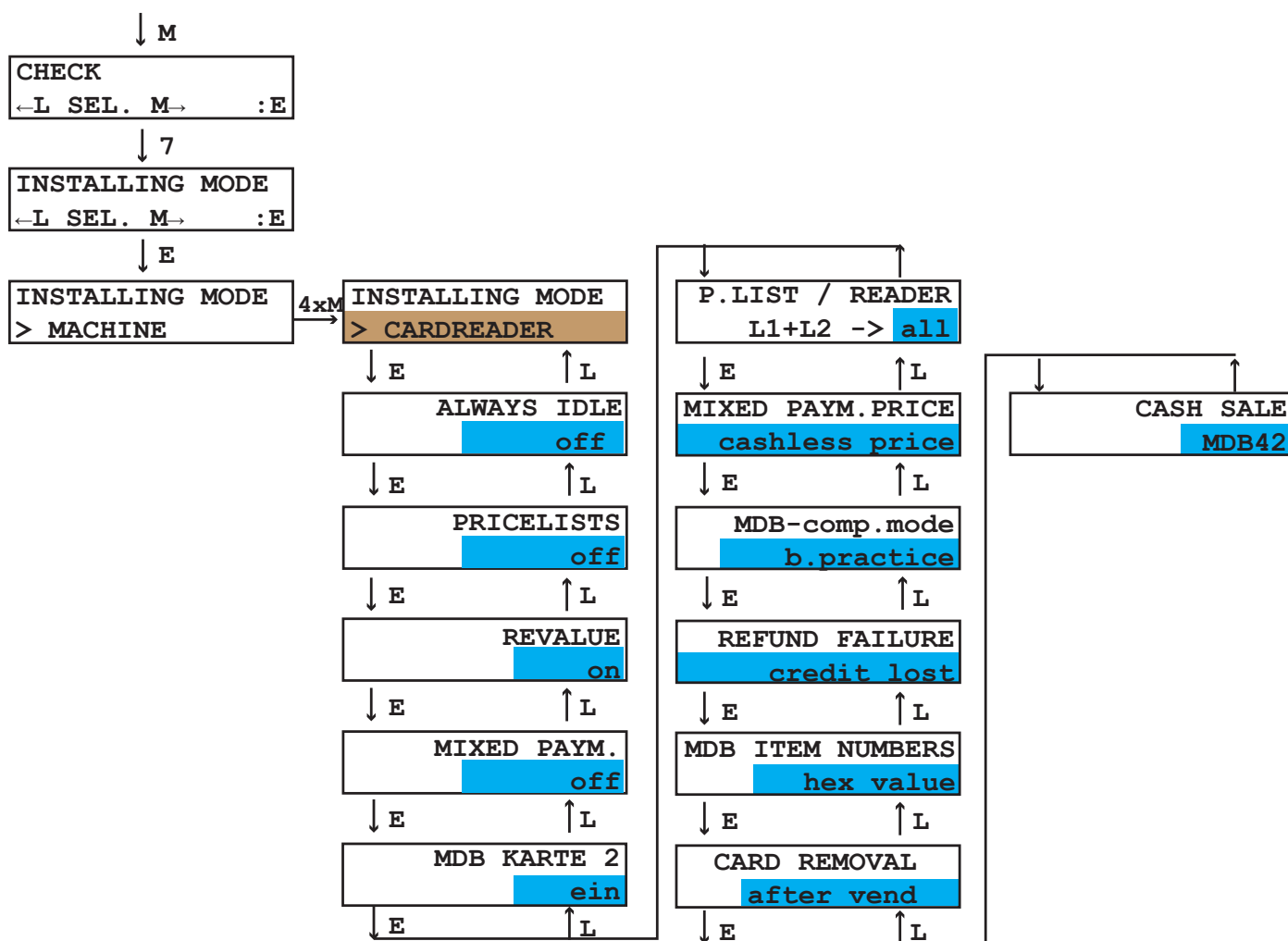
[CORRECT CHANGE]	
[auto] (default)	[CORRECT CHANGE] is shown in the display if there are insufficient or no coins available.
[never]	The [CORRECT CHANGE] indicator is inhibited. This setting is necessary if it is not possible to give change

**TIP**

Menu options [BLOCK CHANGE] AND [CORRECT CHANGE] are also in the [CREDIT SYSTEM] menu; they interact with each other and are analogue.

[CARD READER]**[INSTALLING MODE] M7 > [CARD READER]**

Settings in this sub-menu are only valid if a cashless credit system is fitted.



[ALWAYS IDLE]	For contactless card readers.
[on]	Pre-selection of a product using contactless card readers is possible.
[off]	The card must be held against the contactless card reader at the same time as the product selection is being made.

[PRICE LISTS]	This function depends on the card reader being used.
[on]	Two different prices for one selection can be entered here. The two prices are set in the [PROGRAMMING MODE] menu. In addition this function can be used for price lines in BDV/Executive. With this function the prices are stored in the coin mechanism and the price line corresponding to the selection must be programmed on the control board.
[off]	Price lists are disabled.

[REVALUE]	Revalue = top up onto a card. This function depends on the card reader being used.
[on]	The amount inserted is credited onto the card. In this case the card must be inserted before the money.
[off]	The value of the coins inserted is not credited onto the card.

[INSTALLING MODE] M7 > [CARD READER]

[MIXED PAYMENT]	
[on]	Mixed payment, e. g. with coins and card, is possible.
[off]	Mixed payment is not possible.

[P.LIST/READER.]	
[L1+L2 -> all]	Both price lists are valid for card 1 and card 2.
[L1->R1/L2 ->R]	Price list 1 is valid for card 1, price list 2 is valid for card 2.

[MIXED PAYMENT]	Which price is to be used for [MIXED PAYM.] can be selected here.
[cash price]	The [CASH PRICE] entered in the [PROGRAMMING MODE] menu M1 is used.
[cashless price]	The price entered in the [PROGRAMMING MODE] menu [M1] is used for the corresponding [PRICELIST 1] or [PRICELIST 2].

[MDB CARD 2]	
[off] (default)	If no second card reader is connected.

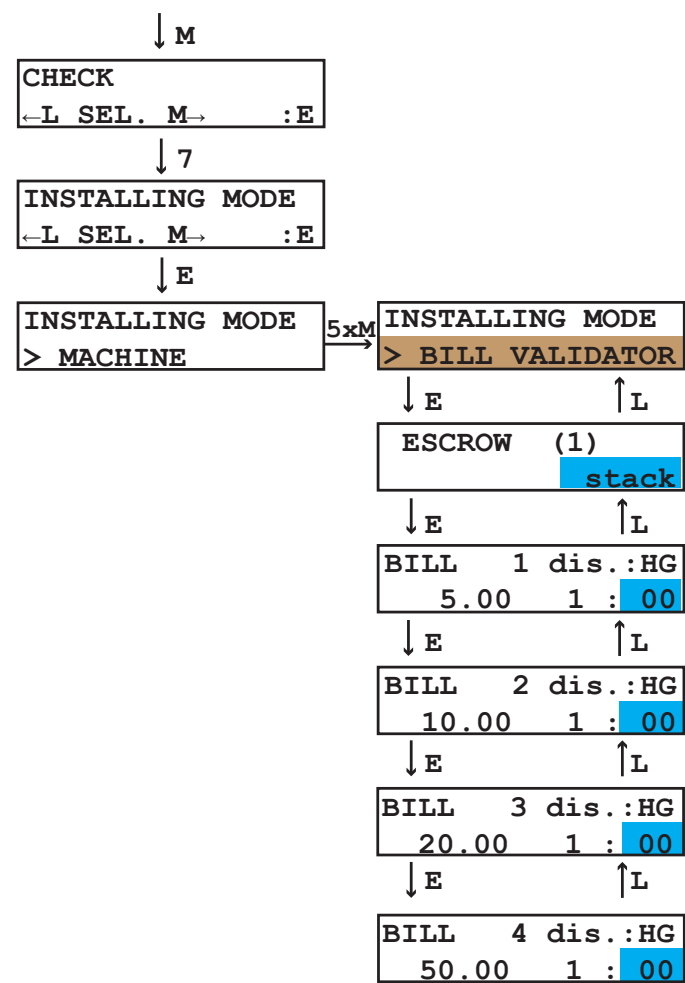
[MDB-comp.mode]	b. practice = best practice.
[standard]	This is the standard setting. Most credit systems work in this mode.
[b.practice]	Additional information is transmitted in this mode. It is required mainly for future applications. Some credit systems already work in this mode.

[REFUND FAILURE]	How the vending machine is to react if an error occurs during product delivery is programmed here.
[CLEAR CREDIT]	This is the standard setting. The credit is deleted.
[USE AS CASH]	The amount is topped up on a card or key when it is allowed to do so by the card reader and [REVALUE] is set to [on]. If no card reader is connected, the amount is converted into cash. The credit remains for the amount of time programmed in [CREDIT LOST] in sub-menu [CREDIT SYSTEM].

[MDB ITEM NUMBERS]	Defines how selection number data is transmitted in Vend Request and other MDB commands.
[HEX VALUE]	Standard setting
[BCD VALUE]	Selection numbers are transmitted BCD-coded. Some card systems require this coding.

[CARD REMOVAL]	
[before vend]	The card can be removed before product delivery.
[after vend]	The card can only be removed after product delivery.

[CASH SALE]	
MDB42 (default)	The Cash Sale command operates in accordance with MDB 4.2 version.
MDB41	This Cash Sale command is used specifically and requires special knowledge in MDB programming.



[ESCROW]	This function only appears if a banknote reader is installed. Held in escrow means that the banknote is stored so that it can still be returned if necessary.
[hold]	The last banknote is retained.
[stack]	The banknote is stacked.

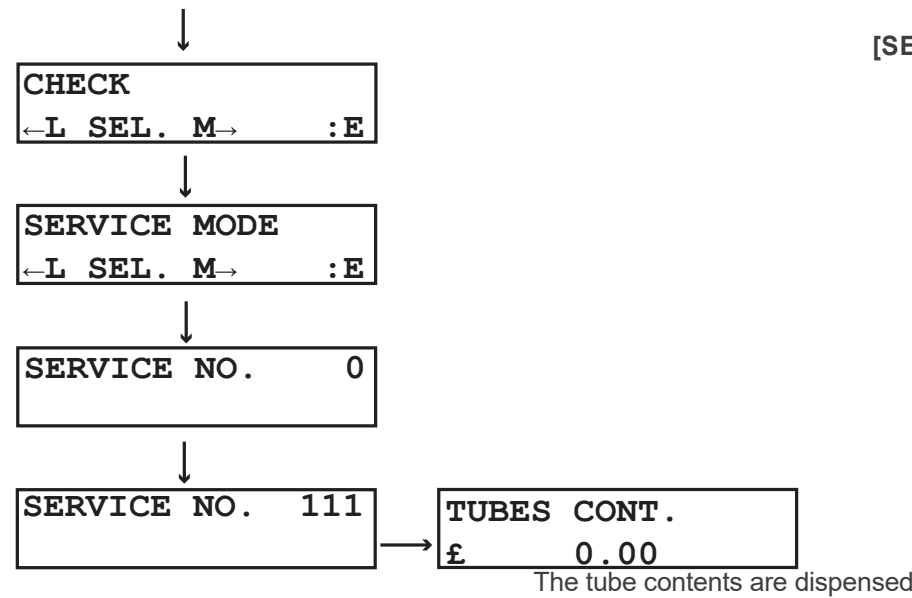
[BANKNOTE 1 dis.:HG]	The banknote can be blocked by linking keys 0 and 1. Its value (5.00 corresponds to 5 Euro) and the number of notes is displayed. [H] high security (high accuracy); [G] inhibited.
[00]	The banknote is always accepted.
[10]	The banknote is checked with a higher level of accuracy.
[01]	The banknote is not accepted.

8.3.8 [SERVICE MODE] M8

[SERVICE MODE] provides support for locating errors and machine maintenance.
Various functions can be tested and the coin mechanism emptied.

Empty the tubes (when supported by the coin mechanism).

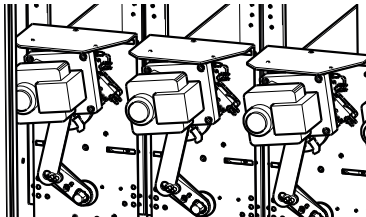
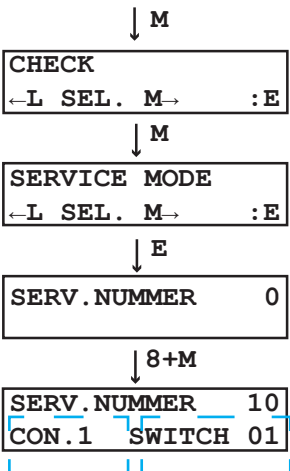
[SERVICE MODE [M8] > EMPTY TUBES



	all coins	one coin
Tube 1	111M	101M
Tube 2	112M	102M
Tube 3	113M	103M
Tube 4	114M	104M
Tube 5	115M	105M
Tube 6	116M	106M

Check chute motors

Container Container Container
No. 1 No. 2 No. 3



Display	Empty switch	Container	Limit switch
CONT. The deposit receipt	not activated	empty	not activated
CONT. 11	activated	full	activated
CONT. 01	not activated	empty	activated
CONT. 10	activated	full	not activated

CONT. 00>Motor switch in mid-position, chute empty.
CONT. 01>Motor switch in end position, chute full.

Chute no. 1

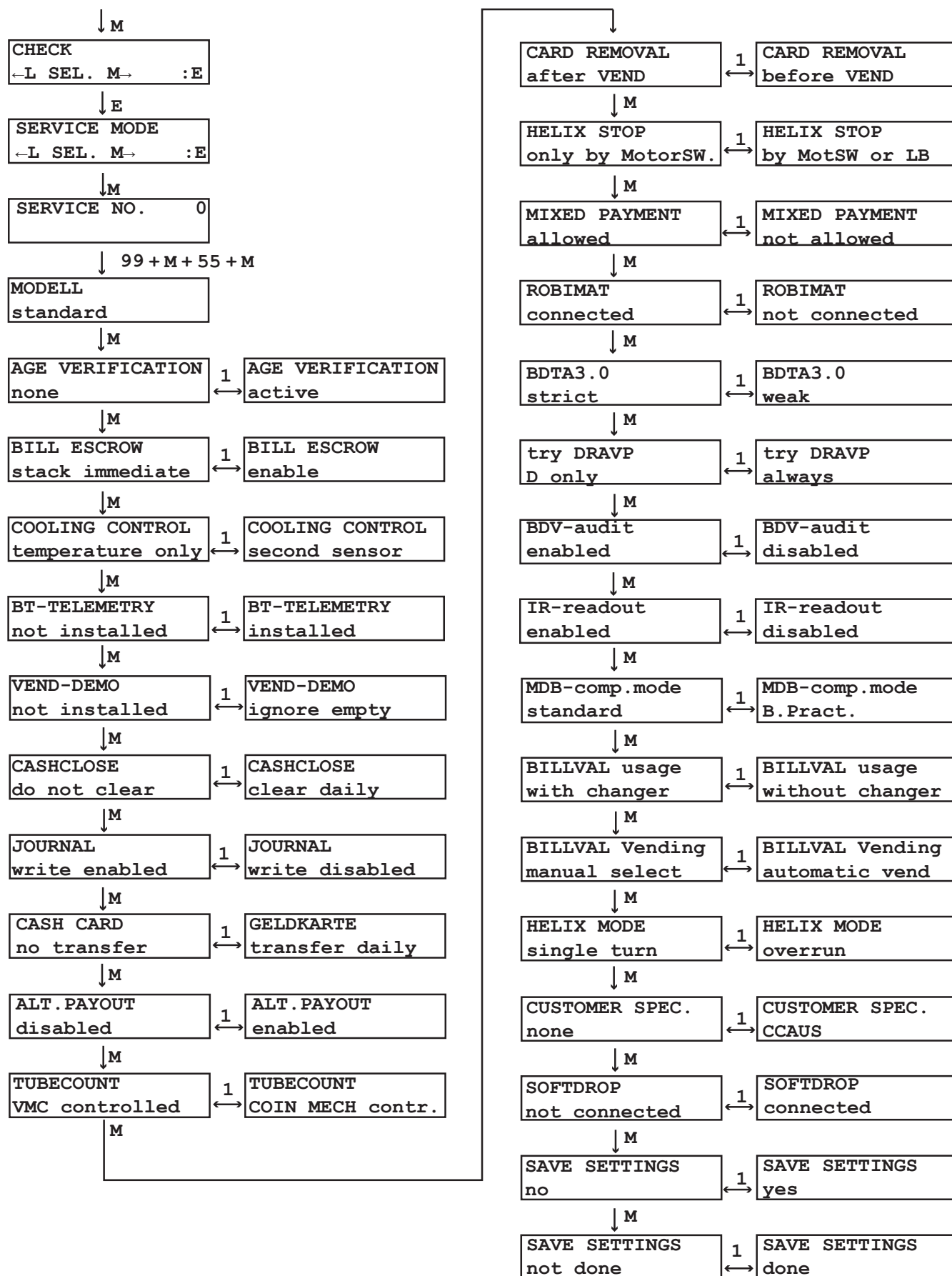
Service functions

Service numbers are divided into functional categories M, double M and L.

Number	Display	Comments
1 – 12M	Checking the chute motors	
101 - 103M	Empty all coins from the tubes of a 3-tube coin mechanism.	If coins remain in the tubes, they must be emptied via the service keypad on the coin mechanism. The information about which coin is assigned to which tube is shown by the manufacturer on the identification plate on the coin mechanism.
105 - 109M	Empty single coins from the tubes of a 4- or 5-tube coin mechanism.	
111 – 113M	Empty all coins from the tubes of a 3-tube coin mechanism.	
115 – 119M	Empty all coins from the tubes of a 4- or 5-tube coin mechanism.	
201M	Check chiller unit.	Do not carry out this test several times in succession, because the compressor will no longer start against the pressure build-up.
202M	Check heater.	
203M	Check illumination.	
204M	Check vaporiser fan.	
214M	Configuration reset.	The containers are assigned to the motors in accordance with the machine type entered.
1L	Processor voltage display.	
5L	Check temperature and temperature sensor	If a temperature of 99°C is displayed, the sensor or the lead from the control board is faulty. The reason could be a short-circuit or break.
21L	Software version display.	
22L	Display control board run time.	
24L	The run time of the compressor is displayed in hours and minutes	
29L	Display shows password entered.	
91L	Display shows all active MDB-equipment.	
99M57M	All products are sold in accordance with age verification for the minimum age of 16 years.	This function depends on the document reader in use.
99M58M	All products are sold in accordance with age verification for the minimum age of 18 years.	
99M59M	All products are sold without age verification.	
99M81M	Generates a data reset.	CAUTION: Clear this manually caused error and re-programme the control board.
99M91M	Restore to factory settings.	Same as data error 81, but the serial flash is also deleted. This means all changes on the machine are reset, including patches and manual flash backups. Only the patches and default values set in the software at the factory, including customer specific settings will remain.

Patch Menu

[SERVICE MODE] M8 > PATCH MENU

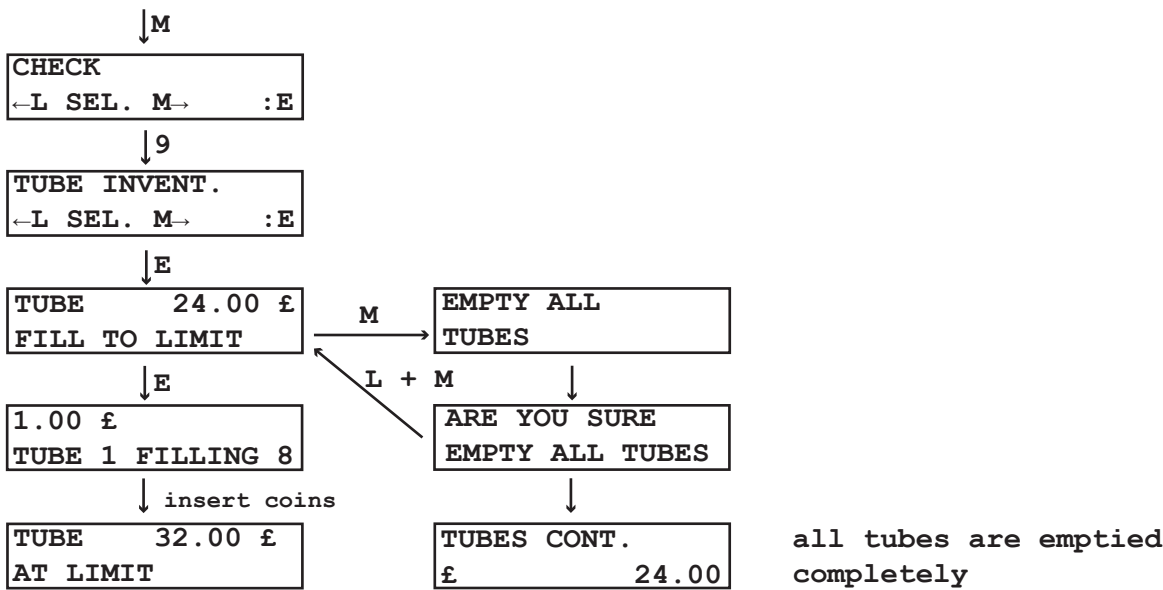


[SERVICE MODE] M8 > PATCH MENU

Menu text	Explanation	Possible settings
[MODEL]		[standard]
[AGE VERIFICATION]	See Menu M7/ [MACHINE].	[none], [active]
[BILL ESCROW]	See Menu M7/ [BANKNOTES].	[stack immediate] [enabled]
[COOLING CONTROL]	activates 2nd Temperature sensor in FK 178 GB.	[temperature only] [second sensor]
[BT-TELEMETRY]	Activates special handling of BT telemetry.	[not installed][installed]
[VEND-DEMO]	Only for demonstration purposes! Do not activate!	[not installed] [ignore empty]
[CASH CLOSE]	Activates deletion of statistics when cashing-up at midnight.	[do not clear] [clear daily]
[JOURNAL]	Deactivates journal writing with Executive and BDV.	[write enabled] [write disabled]
[CASH CARD]	Activates transmission of sales using pay cards when cashing-up at midnight.	[no transfer] [transfer daily]
[ALT. PAYOUT]	See Menu M7/ [COIN MECHANISM].	[Disabled] [enabled]
[TUBECOUNT]	See Menu M7/ [COIN MECHANISM].	[VMC controlled] [COIN MECH contr.]
[CARD REMOVAL]	See Menu M7/ [COIN MECHANISM].	[after VEND] [before VEND]
[HELIX STOP]	-	[only by MotorSW] [by MotSW or LB]
[MIXED PAYMENT]	see Menu M7/ [CARD READER].	[allowed] [not allowed]
[ROBIMAT]	Robimat lift control board is recognised automatically.	[not connected] [connected]
[BDTA3.0]	Display texts do not strictly follow BDTA 3.0 any longer	[strict] [weak]
[try DRAVP]	Age verification is performed in accordance with DRAVP protocol.	[D only] [always]
[BDV-audit]	Deactivates audit function in BDV.	[enabled] [disabled]
[IR-readout]	Deactivates IR data transmission.	[enabled] [disabled]
[MDB-comp.mode]	See Menu M7/ [CARD READER].	[standard] [B.Pract.]
[BANKNOTE usage]	No function.	-
[BANKNOTE Vending]	No function.	-
[HELIX MODE]	No function	-
[CUSTOMER SPEC.]	Activates customer-specific settings or customer-specific software behaviour.	[none] [CCAUS]
[SOFTDROP]	Activate / deactivate Softdrop.	[not connected] [connected]

8.3.9 [TUBE INVENTORY] M9

In the [TUBE INVENT.] menu the individual tubes in the coin mechanism can be filled in accordance with number of coins set in [M7] [LIMIT COINS]. The coin mechanism can also be completely emptied.



The surplus coins are ejected.
Display showing coin value in tube 1 and the coins to be filled.

1.00 £

TUBE 1 FILLING 8

The current tube status is displayed.

TUBES 32.00 £

AT LIMIT

[TUBES CONT.] is displayed and all tubes are completely emptied.

TUBES CONT.

£ 24.00

9. Storage, Shutdown, Decommissioning and Disposal

Storage

The vending machine should be stored in a clean and dry location. Use a suitable cover to protect it from dirt, humidity and damage.

Remove the products and leave the machine door slightly ajar to allow the humidity to escape.

Decommissioning

The machine may be shut down temporarily.

- Remove the mains plug
- Remove the products
- Leave the machine door ajar
- For recommissioning refer to the chapter entitled "Commissioning".

Shut-down

If the machine cannot be operated any longer, it must be decommissioned:

- If necessary delete any personal data from the machine
- Remove the mains plug
- Remove the mains cable
- Remove and dispose of batteries correctly

Disposal

For correct disposal of the vending machine please contact our Customer Service on +49 9825 - 18 31 5102.

The machine can be sent at your own expense to the manufacturer (headquarters in Herrieden, Germany), The manufacturer will then make arrangements for proper disposal.

If required, you can ask the manufacturer to provide details on appropriate waste management companies to take care of the complete machine disposal process on your behalf.



A product displaying this symbol must not be put into house waste at the end of life, but disposed of separately. The regulations may vary depending on the country.

Chapters 10 to 12

Technical handbook

Please note that this part of the manual is intended for service engineers or trained specialists only.

10. Maintenance

10.1 Repairs

- The inside of the machine may have sharp edges and corners. Always wear protective gloves when carrying out maintenance work.
- Use original spare parts only.
- Only products approved by SIELAFF should be used.

10.2 Requirements for maintenance and repairs

- Before carrying out any repairs on the machine the mains plug must always be removed from the mains power supply. The mains plug must be so positioned that it can be monitored during the repair to ensure that no one inadvertently puts it back into the socket.

10.3 Maintenance schedule

Machine: FK Housing	Solution Spare part reference number	Action/operation 1 = clean 2 = test/ check 3 = lubricate 4 = replace/ exchange			OK
		12 months	24 months	36 months	
Is the machine standing safely, no tilting, firmly secured?		2	2	2	
Does the machine door close without any resistance?		2	2	2	
Housing exterior		1	1	1	
Bearing studs at door top and bottom	Special grease e.g. Microlube GL 261 Part. no. 998 90 037 01	2+3	2+3	2+3	
Locking hook	Special grease e.g. Microlube GL 261 Part. no. 998 90 037 01	3	3	3	

Cooling unit, chilled area, delivery unit	Solution Spare part reference number	Action/operation 1 = clean 2 = test/ check 3 = lubricate 4 = replace/ exchange			OK
		12 months	24 months	36 months	
Seals and contact surface of door to refrigerated area	Rinsing water	1	1	1	
Air inlet grid	Rinsing water	1	1	1	
Compressor	Brush, air	1	1	1	

Cooling unit, chilled area, delivery unit	Solution Spare part reference number	Action/operation 1 = clean 2 = test/ check 3 = lubricate 4 = replace/ exchange			OK
		12 months	24 months	36 months	
Evaporation tray, drip tray (if available)	Rinsing water	1	1	1	
Sealings of intermediate bottom	Vaseline, rubber care	1+2+3	1+2+3	1+2+3	
Product delivery	Clean delivery unit	1+2	1+2	1+2	
Interior	Lukewarm water with washing-up liquid, cloth	1+2	1+2	1+2	
Status lamps at the selection buttons	Visual inspection	2	2	2	
Gas sensor (no visible damage)		2	2	2	
Gas inlet on gas sensor: Dust, dirt, moisture deposits	Brush, cloth	1	1	1	
Initiate self test		2	2	2	
Test gas sensor using test gas	Test gas	2	2	2	
Machine door, advertising panel (EC only)	Solution Spare part reference number	Action/operation 1 = clean 2 = test/ check 3 = lubricate 4 = replace/ exchange			OK
		12 months	24 months	36 months	
Safety glass	Rinsing water	1+2	1+2	1+2	
Door gasket	Vaseline, rubber care	2+3	2+3	2+3	
Lock bearing studs	Special grease e.g. Microlube GL 261 Part. no. 998 90 037 01	2+3	2+3	2+3	
Lock	According to manufacturer's specifications	2+3	2+3	2+3	
Payment systems	Solution Spare part reference number	Action/operation 1 = clean 2 = test/ check 3 = lubricate 4 = replace/ exchange			OK
		12 months	24 months	36 months	
Coin mechanism	According to manufacturer's specifications	1 + 2	1 + 2	1 + 2	
Card reader		1 + 2	1 + 2	1 + 2	
Banknote reader		1 + 2	1 + 2	1 + 2	
Electrical check	Solution Spare part reference number	Action/operation 1 = clean 2 = test/ check 3 = lubricate 4 = replace/ exchange			OK
		12 months	24 months	36 months	
Electrical routine check	Checking according to VDE 0701 (every 2 years)	-	2	-	

10.4 Removing the chute



ATTENTION! Risk of injury!

When working on the equipment suitable cut-prevention safety gloves should always be worn, as the metal edges inside the machine may be sharp.

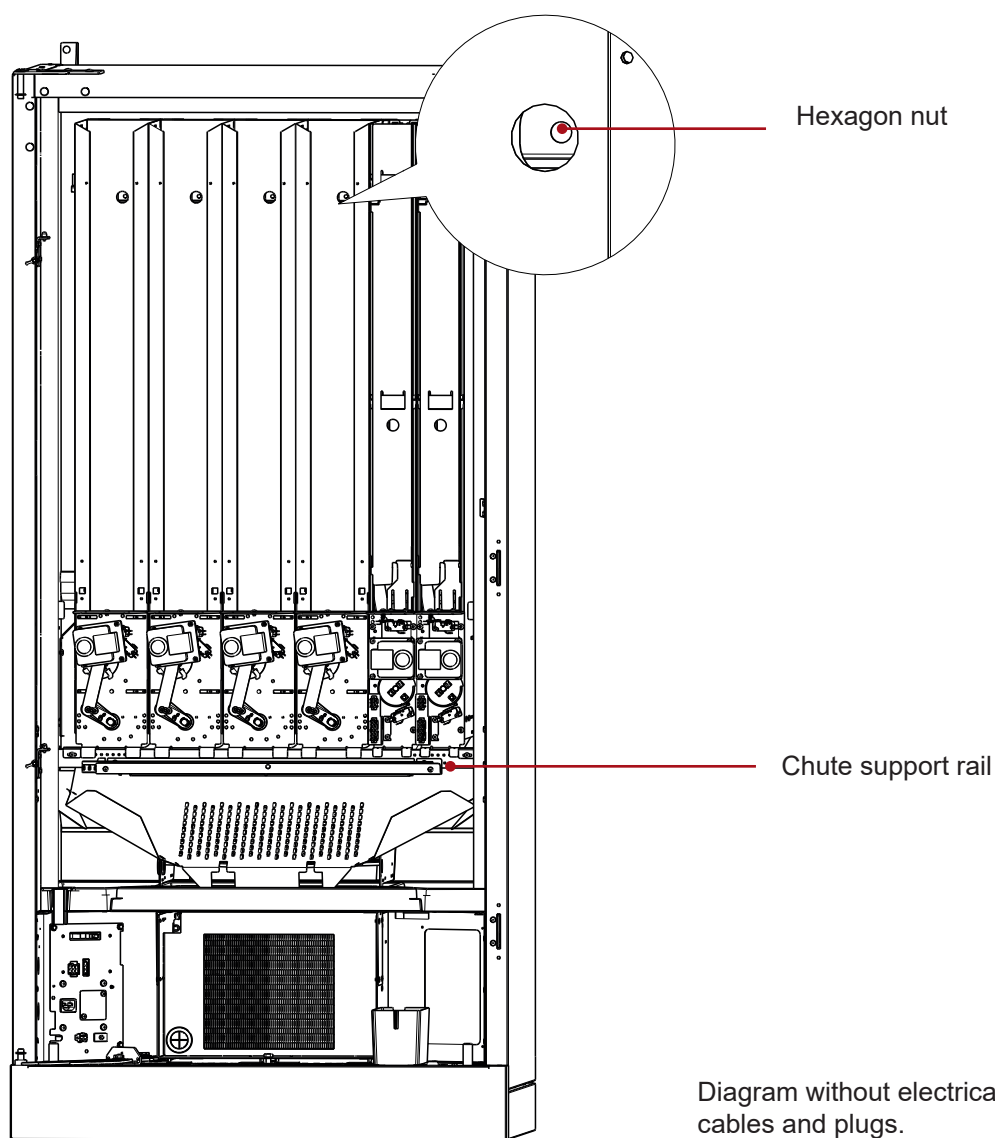


1. Remove the motor cover.
2. Disconnect the 5-pin plug from the chute.
3. Using a socket spanner, loosen the hexagonal nut SW 10 at the top of the chute rear wall.
4. Tilt the upper end of the chute forward slightly.
5. Lift the chute out of its lower mounting and lower it until the rocker arm rests on the chute support rail.
6. Pull the chute forward until the rear bearing plate touches the chute support rail.
7. Lift the chute out over the chute support rail.
8. To install a chute, proceed as above, but in reverse order. Before starting, make sure that the clamping piece is horizontal at the back of the chute, at the top.



TIP

The parts required for modifying or changing chutes are listed in a separate spacer list, part no. 652 00 306 00.



10.5 Chiller unit



TIP

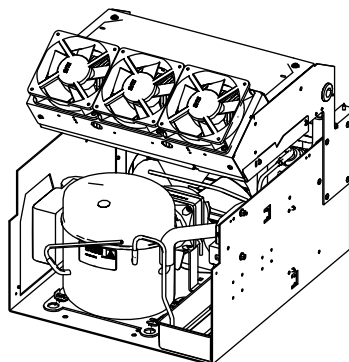
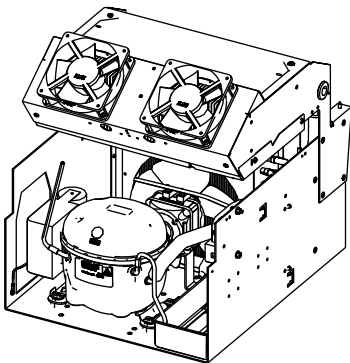
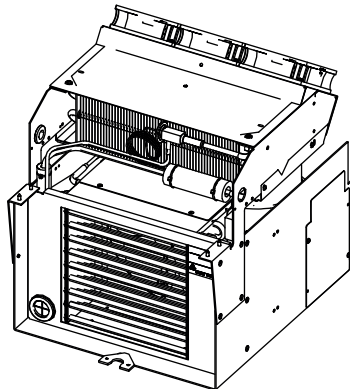
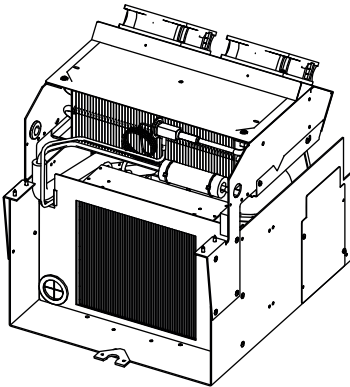
Damage may be caused to the compressor. Do not start the compressor more than 5 times per hour! Do not reduce the 5 minute minimum period of idleness for the compressor!

10.5.1 Cleaning the chiller unit

- If the chiller unit is not cleaned properly damage and break-downs may result.
- Do not use sharp-edged tools.
- Use lukewarm water to remove ice and frost on the evaporator.
- Do not use cleaning agents containing abrasives or acids.

The heat exchanger matrix must be thoroughly cleaned with a vacuum cleaner or brush every six months. For cleaning the evaporator (heat exchanger in the chiller unit) use luke-warm water with washing-up liquid.

The drip tray should also be cleaned with a damp cloth.



10.5.2 Removing the chiller unit



DANGER Electric shock risk!

Live electrical components. Severe or fatal injuries. Always switch the machine off before starting work e.g. by pulling out the plug.



ATTENTION, danger of injury!

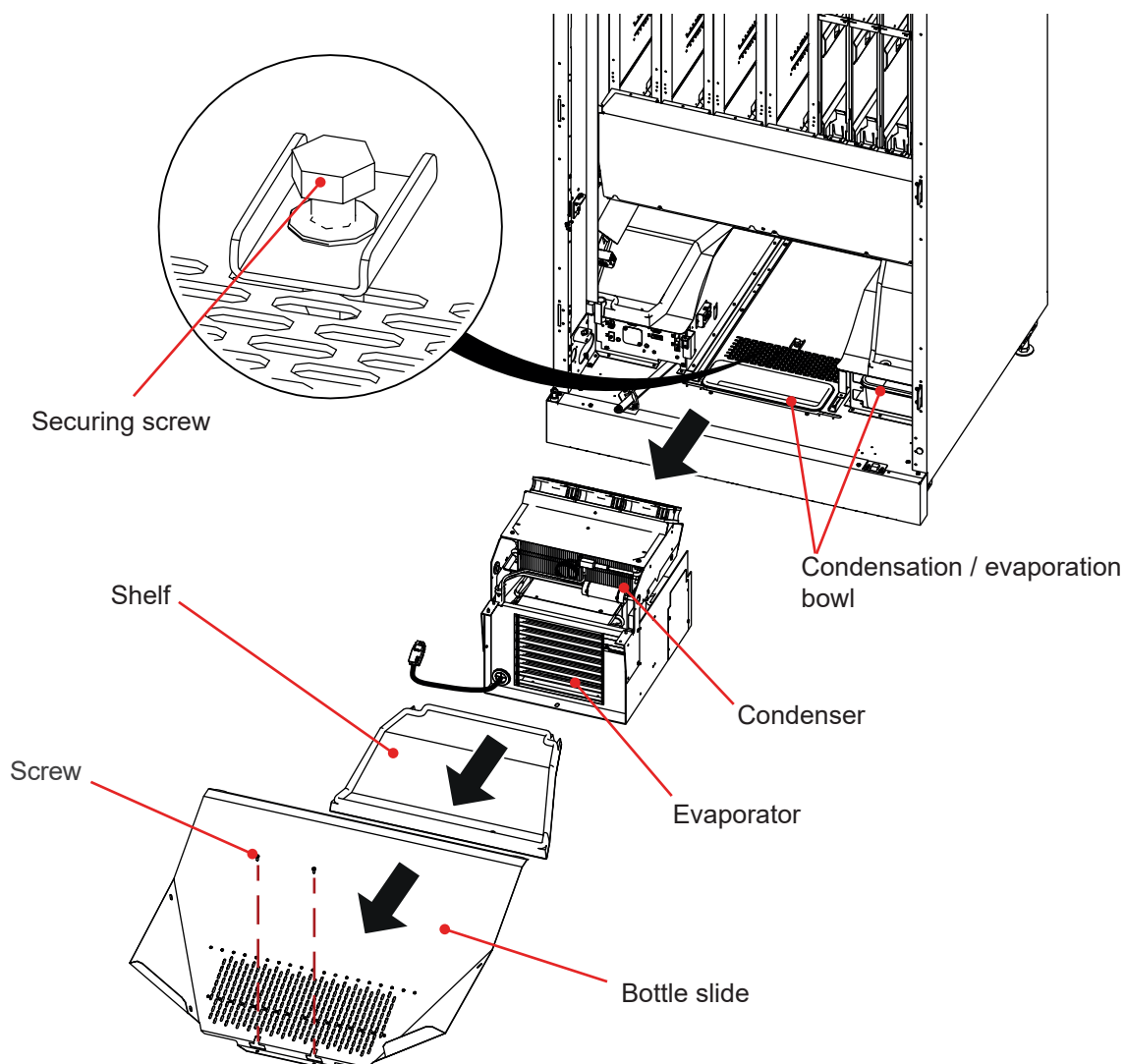
When working on the equipment suitable cut-prevention safety gloves should always be worn, as the metal edges inside the machine may be sharp.



Proceed as follows

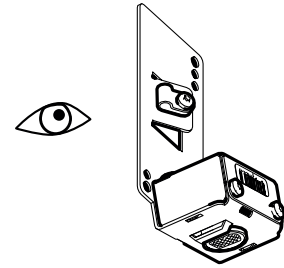
1. Remove the screws on the bottle slide.
2. Pull the bottle slide forwards to remove.
3. Unplug the chiller unit.
4. Remove the retaining screws on the chiller carrier located on the machine floor.
5. Pull the complete chiller unit forwards to remove.

To re-install follow the instructions above in reverse order.



10.5.3 Checking the gas sensor

Check the gas sensor visually for possible damage.



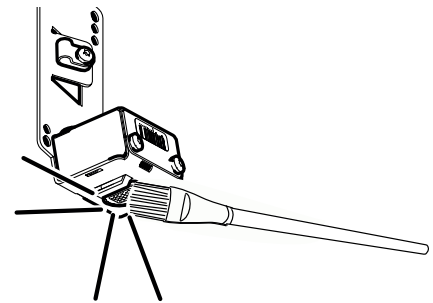
10.5.4 Cleaning the gas sensor

Clean the glass inlet only using a brush. The gas inlet must never be obstructed.



NOTE

Never clean the gas sensor with compressed air.
Compressed air damages the sensor



10.5.5 Initiate self test

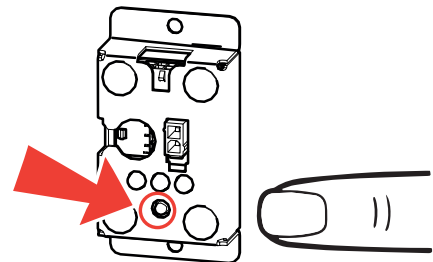
To carry out the test the machine must be switched on and operational.

Press the button on the service board for at least 2 seconds. When the button is pressed the machine is disconnected from the mains supply, the **yellow LED** goes out and a self-test is activated.

→ During this test the machine is checked for dual pole mains disconnection via both cut-off relays. If the self test is successful the **green LED** lights up.

If the **red LED** is permanently on, repeat the test. If the **red LED** is permanently on, the switch-off device must be replaced.

→ When the button is released there is still voltage for operating the machine in the power supply and the **yellow LED** is on. The machine goes into operation.



10.5.6 Testing the sensor

Requirements

- The gas sensor must be accessible (gas inlet).
- Handheld universal lighter.

How to proceed

1. *Switch the machine on.*
2. *Ignite the lighter outside the machine (flameheight 2 cm)*
3. *Extinguish the lighter flame, whilst holding down the actuator on the lighter.*
4. *Hold the opening of the lighter for approx. 20 seconds in front of the gas inlet opening on the gas sensor.*
5. *Put the lighter to one side and wait a few seconds.*

→ Safety switch-off device disconnects the machine from mains power. Display, machine illumination etc. goes out.

✓ Safety switch-off device is working.

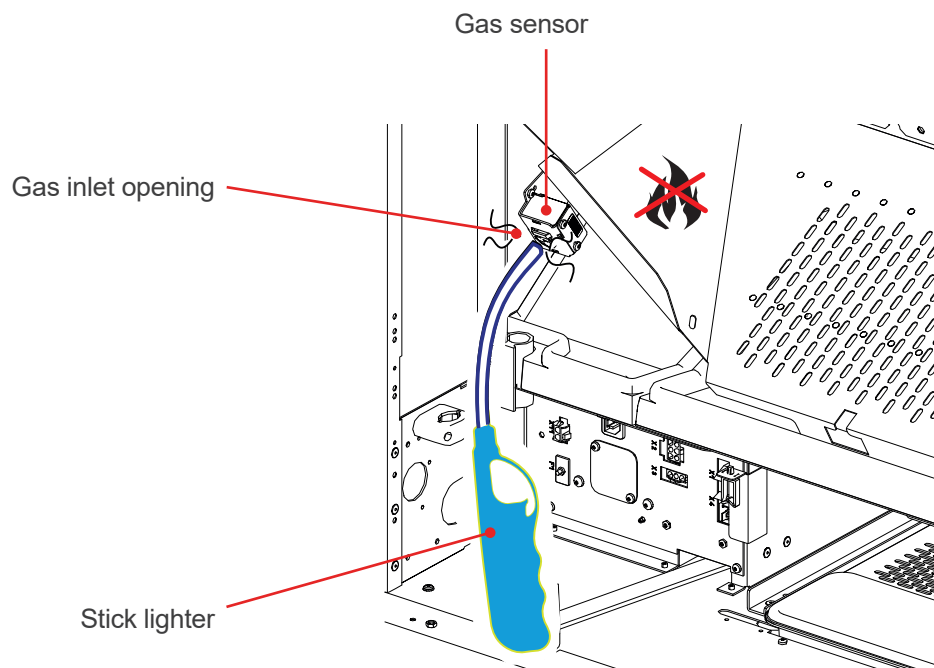
If the machine does not switch off automatically, proceed as follows:

- Check the contents of the lighter as well as the flame height (2cm). Repeat the sensor test.
- If the test does not work again the gas sensor must be replaced.
The machine must be put out of operation. The switch-off device and chiller unit must be tested.

After testing

It can take several minutes for the gas to escape from the sensor head and for the concentration in the sensor to be below the maximum permitted. The process can be accelerated by adding air to the sensor.

The machine switches back on.

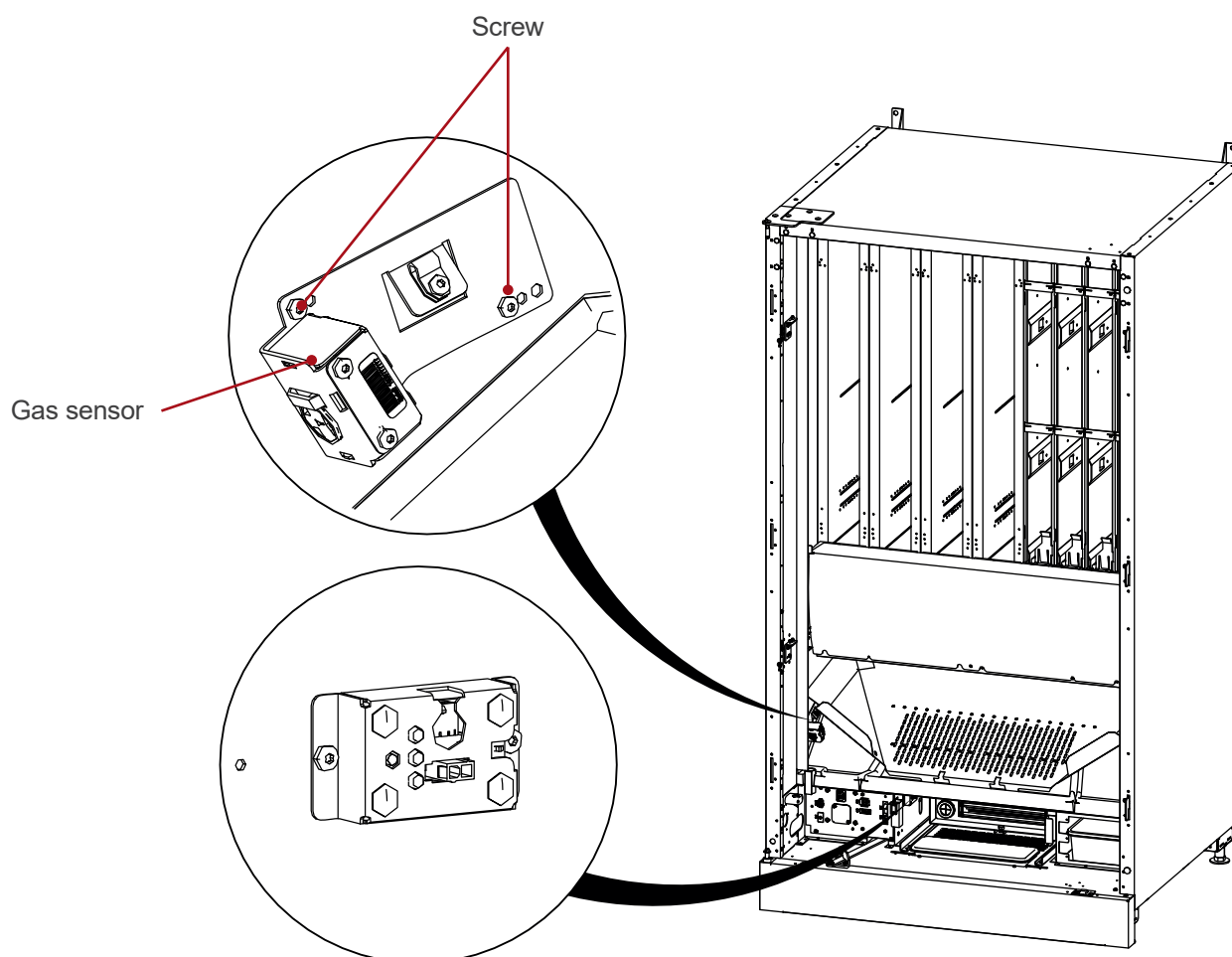


10.5.7 Change the gas sensor

1. Remove the screw on the mounting and unhook the gas sensor.
2. Disconnect flat plug-in connector at the back.
3. Remove the electric cable to the gas sensor from the cable duct.

✓ The existing gas sensor has been removed.

To install a new gas sensor follow the instructions in reverse order.



10.6 Back-up battery

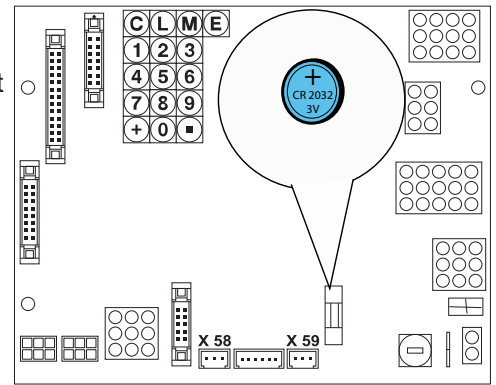
There is a lithium back-up battery on the control board. Its function is to retain data while the vending machine is being transported, or in case of a power failure. Fault-free operation is only possible if this battery has sufficient capacity for storing programming and statistical data.

Check the battery's voltage if a data error occurs after a long power failure. If this is less than 2.8V, fit a new CR 2032 lithium battery (part no. 985 26 436 02).

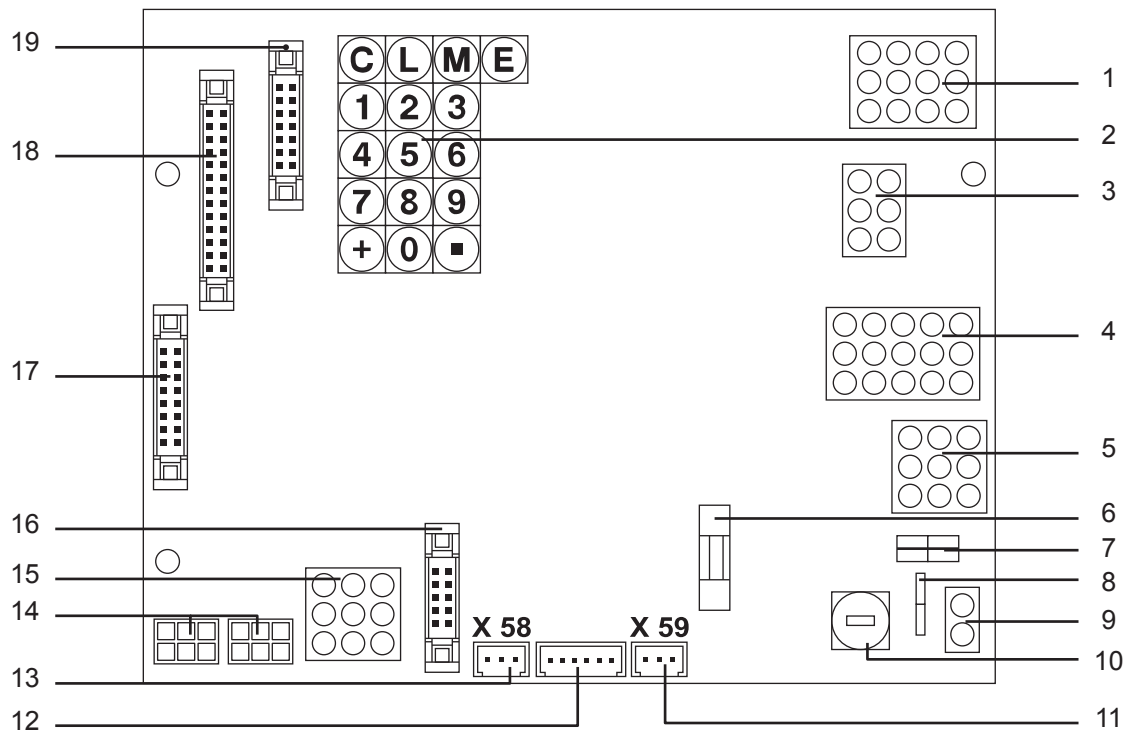


Battery disposal information

The cross-out dustbin symbol means that the battery/accumulator must not be placed in general waste. Make sure to dispose of drained batteries properly.



10.7 Overview of the slots (FK AC M32 control board)



- | | |
|--|--|
| 1 Delivery motors 1 – 10 | 10 Fuse 6.3 A |
| 2 Service keyboard and programming keys | 11 Refund button |
| 3 Vend motors, motor and sold out switches 11 and 12 | 12 Mechanical vend counter |
| 4 Motor and sold out switches 1 – 6 | 13 Refund motor and position switch for refund motor |
| 5 Motor and sold out switches 7 - 10 | 14 MDB-interface |
| 6 Lithium battery CR 2032 | 15 MDB-interface |
| 7 Door contact switch
A cable link must be plugged in here! | 16 Triac board (chiller unit) |
| 8 Earth | 17 Display |
| 9 Power supply | 18 Keypad |
| | 19 Miscellaneous / service key |

10.8 Software update

10.8.1 With programming box

Data is stored automatically in the flash memory before the update and reloaded afterwards [Loading Config]. This backup cannot be guaranteed for every software, therefore you must check the data and configuration afterwards, and if necessary make corrections.

Switch off main switch.

- 1 Unplug all credit systems connected to the MDB.
- 2 Plug the programming unit into the MDB on the control board.
- 3 Switch on the machine.
- 4 Press [E] on the programming unit.
[PLEASE WAIT [SW-UPLOAD ACTIVE] appears in the display. After about 2 to 3 minutes the software is uploaded and the message "load complete do not power off" is displayed. After a short time the current software version is displayed; previously saved data is restored [Loading Config]. Then the machine is operational or indicates a malfunction, because no credit system is connected.
- 5 Switch off main switch.
- 6 Disconnect the programming unit.
- 7 Plug credit system back in.
- 8 Switch on the machine.
- 9 Check the configuration / re-calibrate the machine.

10.8.2 Using programming equipment (Red Box)

The Red Box is a hand-held programming device which can be used to carry out the following tasks:

- Software upload via MDB.

- Trace MDB-Bus and serial port.

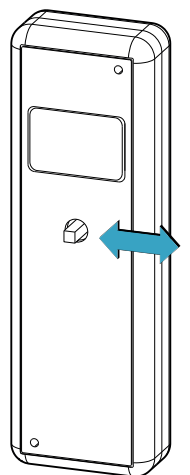
- Data read-out via mini-MDB port (EVA-DTS).

- Data read-out via IR interface (EVA-DTS).

- Entering and overwriting security codes.

- Data storage in an internal memory.

The Red Box can be connected via a mini-USB-port to a computer/laptop. It behaves like a USB flash drive and requires no special administrator rights for installation and usage.



10.8.3 With PC



TIP

To download software onto the machine control board a PC or laptop is required with the "serwin.exe" programme loaded (version 2.20 or higher), a USB-dongle and an MDB-cable.



Switch off the machine.

Unplug the MDB plug on the control board.

Connect the MDB-cable to the control board and the USB-dongle.

Insert service key.

Switch on the machine.

Connect the USB-dongle to a free USB-interface on the PC.

Start the programme "serwin.exe" on the PC.

Click on "Select data".

Select the directory where the new software is stored. Select software version and click on "open".

In the "Interface" selection box a list of all COM-interfaces available are listed. The virtual interface to which the dongle is connected, has the appendix "USB".

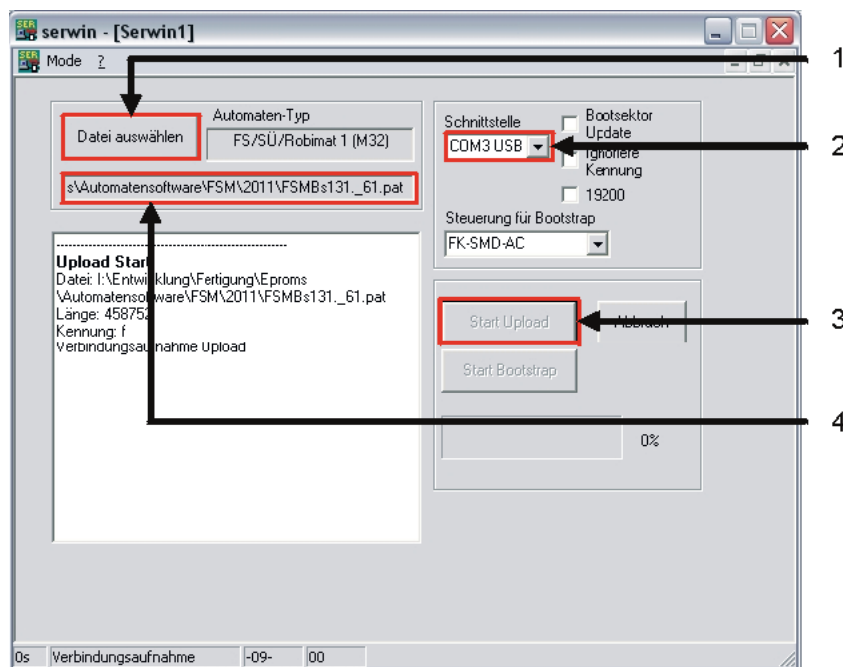
After all settings have been completed, click on "Start upload" in order to start the software upload.

When the upload is finished, a message is displayed accordingly.

Switch off the machine.

Remove the MDB-cable and re-connect the MDB-plug to the control board.

Switch on the machine.



Select software version.

Select COM-interface.

Start upload.

Display selected software version.

11. Malfunctions

11.1 Error messages

Display	Cause	Troubleshooting
FAULT C#001 CON. 2 EMPTY	Chute no. 2 Limit switch defective Cable connection defective Faulty motor switch or cable	
FAULT C#001 CON. 4 BLOCKED	The chute has not reached its end position. Money can be refunded. The chute is blocked for further sales. Bottle jams Motor switch Gear motor Cable connection	Check chute Clearing a product jam: Empty chute completely. Press red reset key on the VMC (the display reads [Please wait]). Then [RESET CON. 1] appears; the chute motor moves to end position. Refill chute and carry out a test vend.
FAULT C#001 CON. 3 STAART	Contact unable to leave cam.	
FAULT C#001 DATA LOST? 81	An artificially-created error, which is generated in order to block a control board that has not been programmed. This prevents products from being sold at a wrong price.	
FAULT C#001 DATA LOST? 82	Faulty data storage on the machine control board.	
FAULT C#001 DATA LOST? 83	Prices and chute assignments have been changed or deleted. The machine is put out of operation until this error has been cleared.	Re-programme prices and chute assignments.
FAULT C#001 DATA LOST? 84	Data error 83 has been recognised, but the controller was able to reconstruct the data.	Check all data before clearing this error.
FAULT C#001 DATA LOST? 85	Operation of the machine has been suspended by an MDE. The display reads [OUT OF SERVICE]. The MDE has simultaneously set a Code A and B.	This error can only be cleared and the machine restarted via MDE.
FAULT C#001 TEMP. SENSOR?	Short circuit or bad connection between temperature sensor and control board.	
FAULT C#001 CREDIT SYSTEMS ?	The serial data interchange between the control board and the coin mechanism is faulty. No coins are accepted. No coin mechanism connected. Cable between coin validator and circuit board in coin mechanism is faulty or detached. Faulty control board interface	
FAULT C#001 SEL.KEY JAM	One or more selection buttons are permanently activated. Only the jammed selection button does not function, all the others are working.	Check selection buttons and fix as necessary. This message disappears as soon as the fault has been fixed.

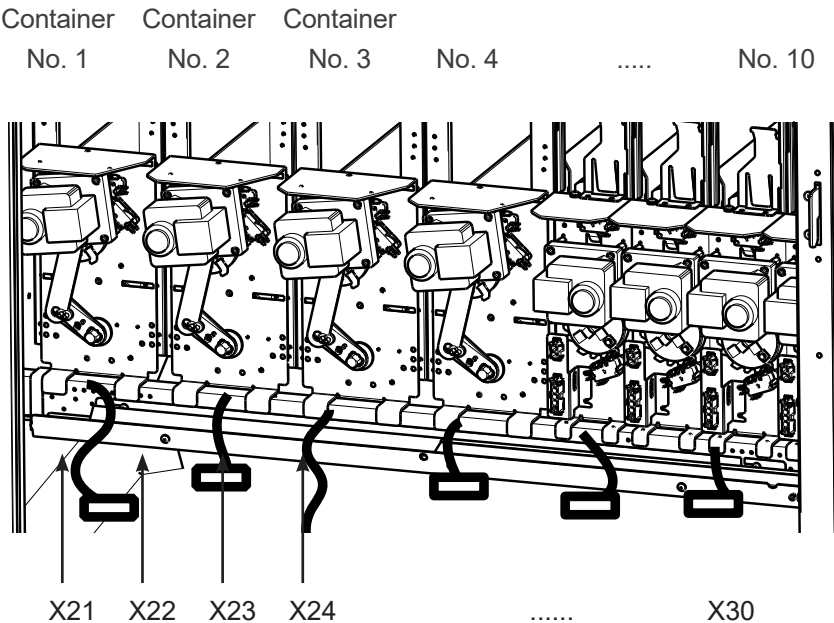
12. Diagrams and additional information

12.1 Container numbering

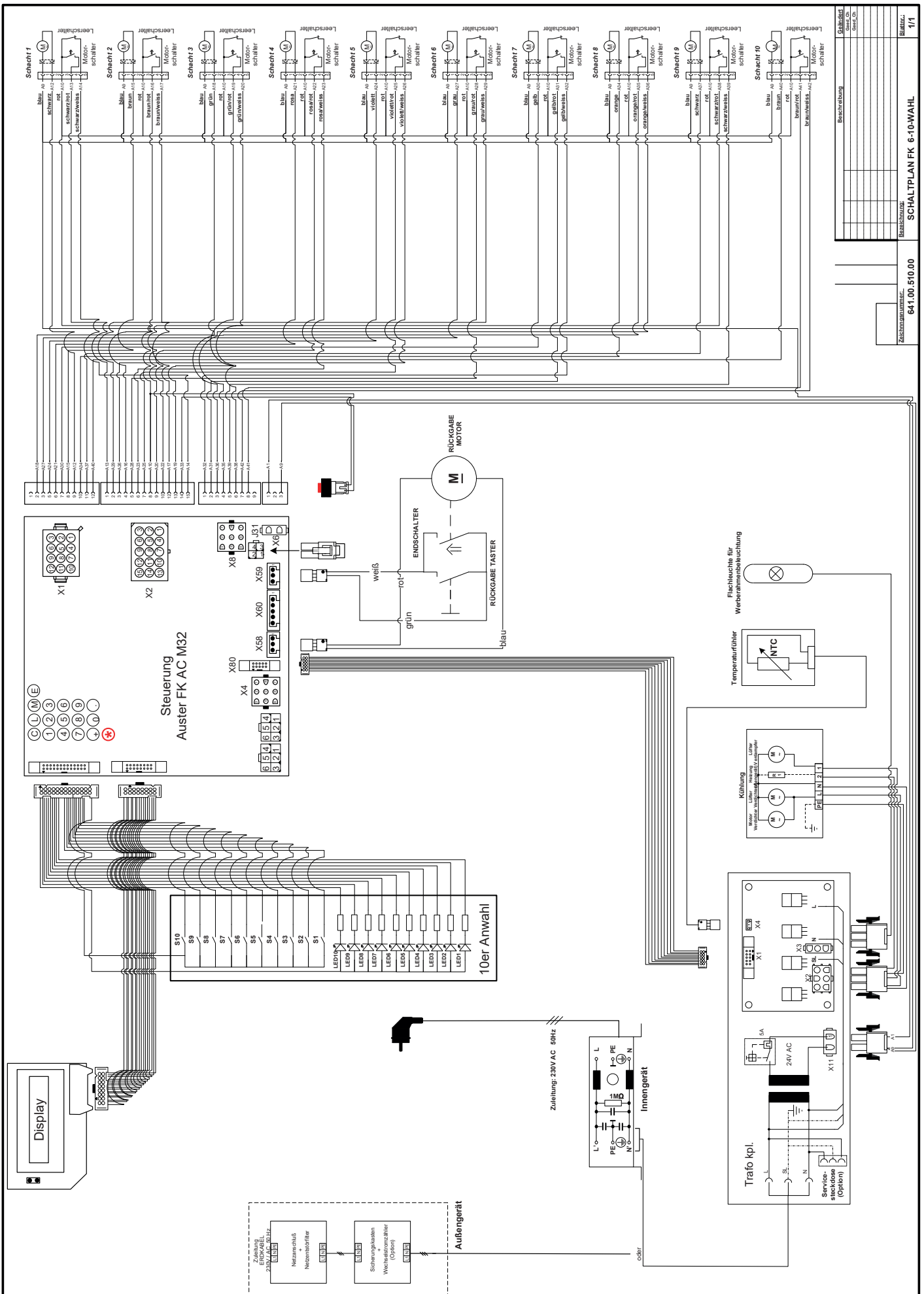
The number of chutes fitted varies and is specific to the customer. A maximum of ten chutes can be installed. Therefore, as a rule, 10 connection cables with plugs for chute motors are provided.

Please note that the numbering of the connection cables with plugs starts from the left with 1.

An overview of the slots (FK AC 32 control board) is shown in section 8.5 of the manual.

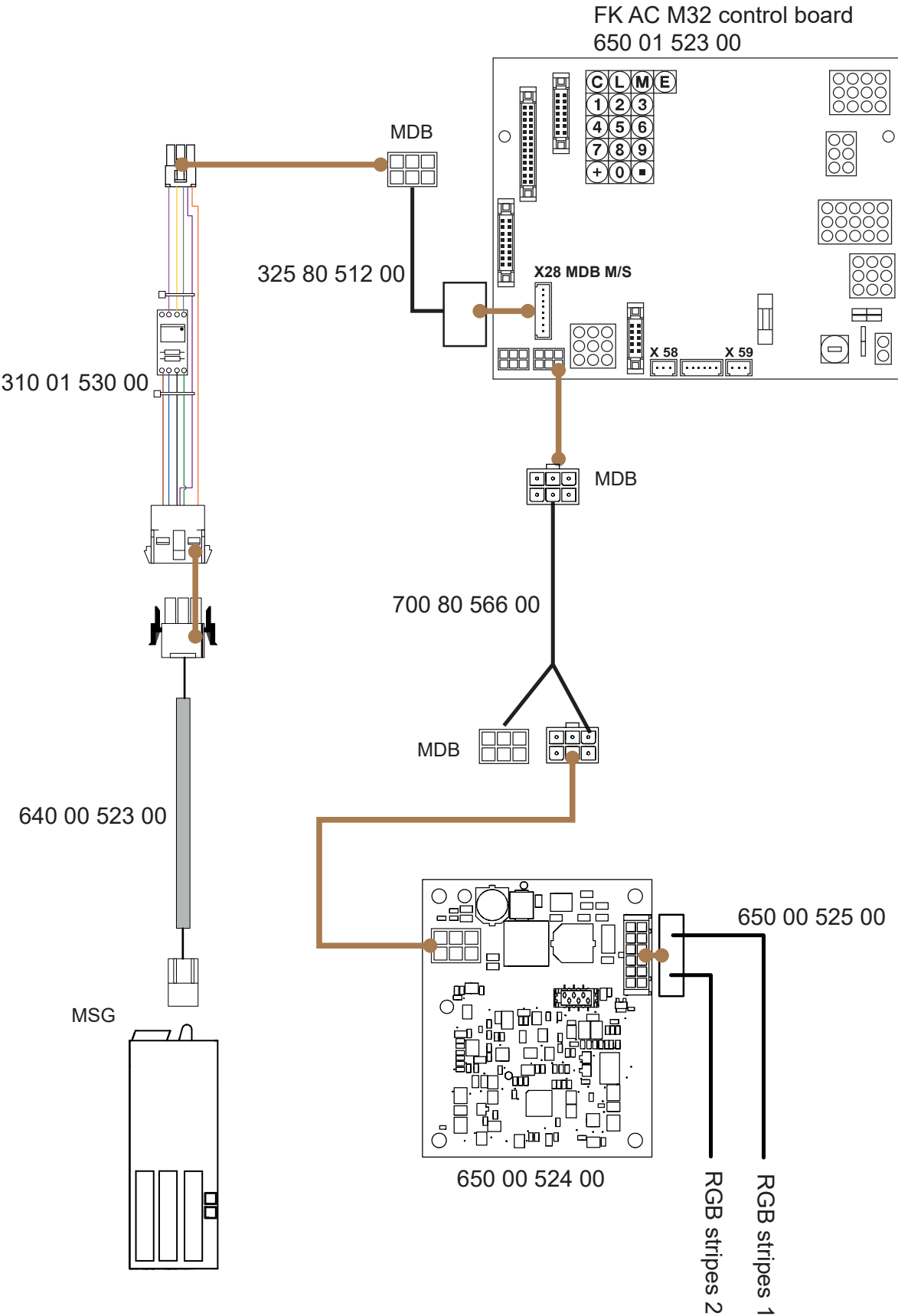


12.2 FK control board wiring diagram 6-10-selections



12.3 Only FK 185 RS: Connect design illumination with Executive protocol.

The protocol must be MDB + Executive.



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EU/EC Declaration of Conformity for Machines

Sielaff GmbH & Co. KG
Automatenbau Herrieden
Münchener Str. 20
D-91567 Herrieden

We, the manufacturer, hereby confirm that the vending machine type specified below complies to the EC directive for machinery and the EU directive to electromagnetic compatibility in its design and manufacture relating to health and safety requirements as well as in conformity on the ecodesign requirements for energy-related products and on restriction of the use of certain hazardous substances in electrical and electronic equipment.

Any modification without our prior written consent to the machine specified herein, will automatically invalidate this Declaration.

Description: Can & Bottle vending machine

Machine Type: FK ...

EU/EC directives applicable:

EC machinery directive: 2006/42/EC

The following standards also apply:

EN 60335-1:2012

EU directive to electromagnetic compatibility: 2014/30/EU

The following standards also apply:

EN 55011:2016

EN 55014-1:2006 + A1:2009 + A2:2011

EN 55014-2:2015

EN 61000-3-2:2014

EN 61000-3-3:2013

EN 62233:2008

EC directive ecodesign: 2009/125/EC

EU directive RoHS: 2011/65/EU

The objectives of the low voltage directive 2014/35/EU will be fulfilled in accordance with Appendix I, no. 1.5.1 of machine directive 2006/42/EC.

Authorised representative responsible for the documentation:

Mr. Dipl.-Ing. Manfred Murr, Head of Development, Sielaff GmbH & Co. KG, Münchener Str. 20, D-91567 Herrieden.

Aufkleber für Seriennummer

Aufkleber für Typenschild

Herrieden, 01.03.2021

Place, Date

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