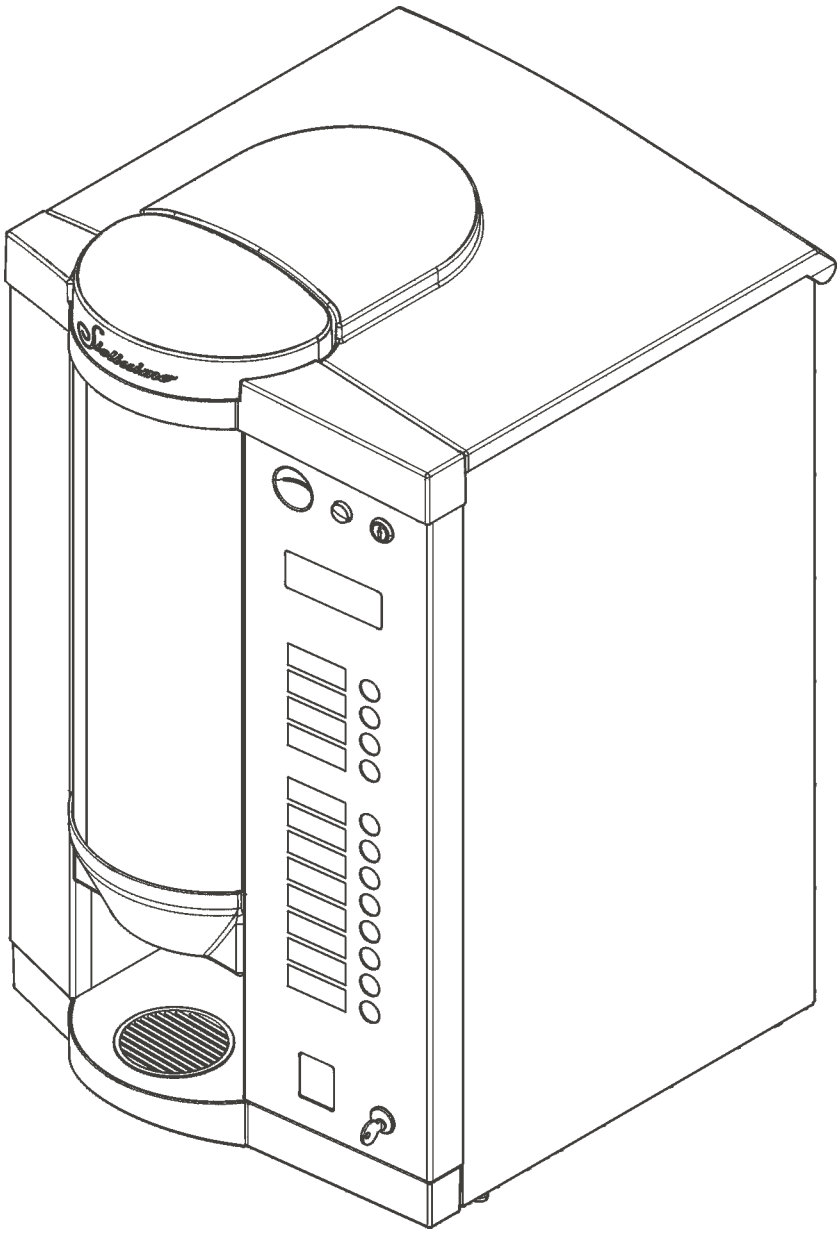

Hot drinks vending machine CVT

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Index 01
As at: 29.05.06

Technical manual

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Sielaff®

Changes

Index	Date	Short description	Pages
00	03.11.05	New manual	
01	29.05.06	Adaptation to CVT-01	all

Technical manual CVT

Contents

Contents

Contents

1 GENERAL INFORMATION

The CVT vending machine dispenses instant hot beverages, which can be prepared to suit individual tastes. A selection of coffees and chocolate drinks are available along with tea and soup as options. The coffee is brewed using fresh beans.

Three variants of the CVT vending machine can be supplied (4301, 5303 and 5304). The standard external design is consistent throughout the range. The difference between the four variants is the number of product containers and mixers inside the machine. Refer to chapter 13.2 for additional information. Your particular model number can be found inside the machine.
This manual is based on model 4301. Other variants are covered where applicable.

Drink selection is made by illuminated keypad. Once the selection button is pressed, the machine operates automatically.

A four-line LCD provides selection and system information.

Data can be entered and retrieved via an infrared interface located next to the display, using a hand-held data transfer unit.
The machine can operated by using SIELECTOR software (a Windows-supported PC-program), which enables the duplication, creation, saving and printing out of all parameters.

To access machine functions a service keypad is located inside the door.

All machine functions are controlled and checked via a microprocessor module. This unit records and saves sales and error statistics.

The dry ingredients are transferred from the product containers to the mixer bowl, where they are blended before the addition of hot water.

An integrated rinse program facilitates daily machine cleaning.

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

1 Technical manual CVT

General information

1.1 Hotline

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Sielaff UK Limited
Unit 1 Westgate Trading Estate
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Aldridge
GB - Walsall, WS9 8EX

Telephone: **(01922) 743010**
Telefax: **(01922) 743659**

E-Mail: **info@sielaff.co.uk**

WWW: **www.sielaff.de**

This vending machine was installed on your premises by:

2 TECHNICAL DATA

Dimensions W x H x D	510 x 830 x 550 mm
Weight	Approx. 95 kg
Product quantity	12 selections max.
Dosing	Freely programmable or can be set automatically depending on cup size
Drink volume	May be set freely between 50 ml and 200 ml max. per vend Hot water max. 1.5 l
Water temperature	May be set from 70 – 100°C, standard setting 85°C
Mixer speed	May be freely set between 0 – 17,000 rpm.
Cup unit	Holder for cups of 70 mm Ø (150 ml and 180 ml cups)
Cup unit capacity	175 cups max.

Product container

Container width **Container volume**	**43 mm** **1600 ccm**	**67 mm** **2100 ccm**	**137 mm** **4500 ccm**
Instant coffee	---	500 g	---
Sugar	1,200 g	1,700 g	---
Whitener/ topping	750 g	1,000 g	---
Cocoa	---	1,500 g	2,700 g
Tea	---	2,000 g	---
Soup	---	1,500 g	---
Instant cappuccino	---	1,000 g	---

Bean container	1,500 g

2 Technical manual CVT

Technical data

Electrical connection	230 V – 50 Hz
Power input	2.3 kW max.
Water connection	R $^{3}/_{8}$“ internal screw thread, flexible water hose with protective outer layer, max. 600,000 Pa (6 bar)
Ambient temperature	0-32°C
Infra-red interface for data transmission	to EVA-DTS
On-site electrical connection	Socket outlet with earthing contact (installed to VDE)
On-site fusing	Miniature circuit breaker L16A
On-site water pressure	min. 200,000 Pa; max. 600,000 Pa (2-6 bar), otherwise a pressure reducer must be used
On-site water hardness	max. 8°dH, otherwise water must be pre-filtered
Residual current circuit breaker	$I_{\Delta N}$ = 30 mA is recommended
Max. sound pressure level	< 70 dB (A)

3 SAFETY

The operating manual should be kept in an easily accessible place.

- The vending machine must only be used to supply hot drinks.
- Prior to machine commissioning the operating manual should be read and understood.
- During vending machine transportation, installation, maintenance and repair it is recommended that the following regulations and guidelines - in their latest version - be adhered to:
    - Regulations of the responsible utility company
    - Accident prevention regulations
    - Trade association guidelines
    - Industrial code
    - EU guidelines
    - VDE regulations (Association of German Electrotechnical Engineers)
    - Observance of the current hygiene regulations
    - Country-specific regulations
- To assure perfect machine function it must stand exactly horizontally.
- Machine installation and repair may only be performed by trained service engineers.
- If the connection cable is damaged, it may only be replaced by a service engineer of the manufacturer or an equally qualified person.
- The machine connection socket must be easily accessible.
- Appliance plugs should never be inserted in sockets when damp or touched with wet hands
- Liquids dispensed from the machine are hot. To protect against scalding following the start of the vending process do not reach under the drink dispenser.
- When the main switch is switched off voltage is still supplied up to the main switch (see wiring diagram). Ensure that mains plug is disconnected when servicing the vending machine.
- During all work on the machine with the door open and inserted service key please ensure that the selection keypad is not pressed inadvertently.
- Switch off the main switch prior to cleaning jobs
- Use only approved agents, compatible with foodstuffs for cleaning purposes
- The venting clearance between the vending machine rear wall and mounting site must be observed
- The vending machine is only suitable for installation indoors in dry, heated rooms.
- Use only original spare parts
- Only products approved by SIELAFF may be used. The manufacturer is not liable for damage resulting from the use of non-approved products. The sole risk is borne by the operator.

NOTE
Any vending machine modification or conversion will invalidate all claims for material defects.

3 Technical manual CVT

Safety

3.1 Explanation of symbols and signs

This vending machine was manufactured in accordance with state-of-the-art technology standards. Nevertheless, the design of the machine necessitates that due care and attention must be observed at all times.

In order to assure sufficient protection for the operator, additional safety instructions are supplied as detailed below:
Only if these are observed is sufficient safety during operation assured.

The marked text sections differ in meaning:

DANGER!
Indicates imminent danger possibly resulting in death or serious injury

WARNING!
Indicates a potentially dangerous situation, which may result in death or serious injury.

CAUTION!
Indicates a dangerous situation possibly resulting in slight injury or machine damage.

NOTE
Guidelines to facilitate machine operation

IMPORTANT!
Guidelines to facilitate machine operation. Non-compliance may damage the machine or its immediate environment

In some places the following warning symbols will be used additionally:

WARNING! Electrical power! Risk to life!
Live parts are mounted near this symbol. Covers labelled as such may only be removed by a qualified electrician.

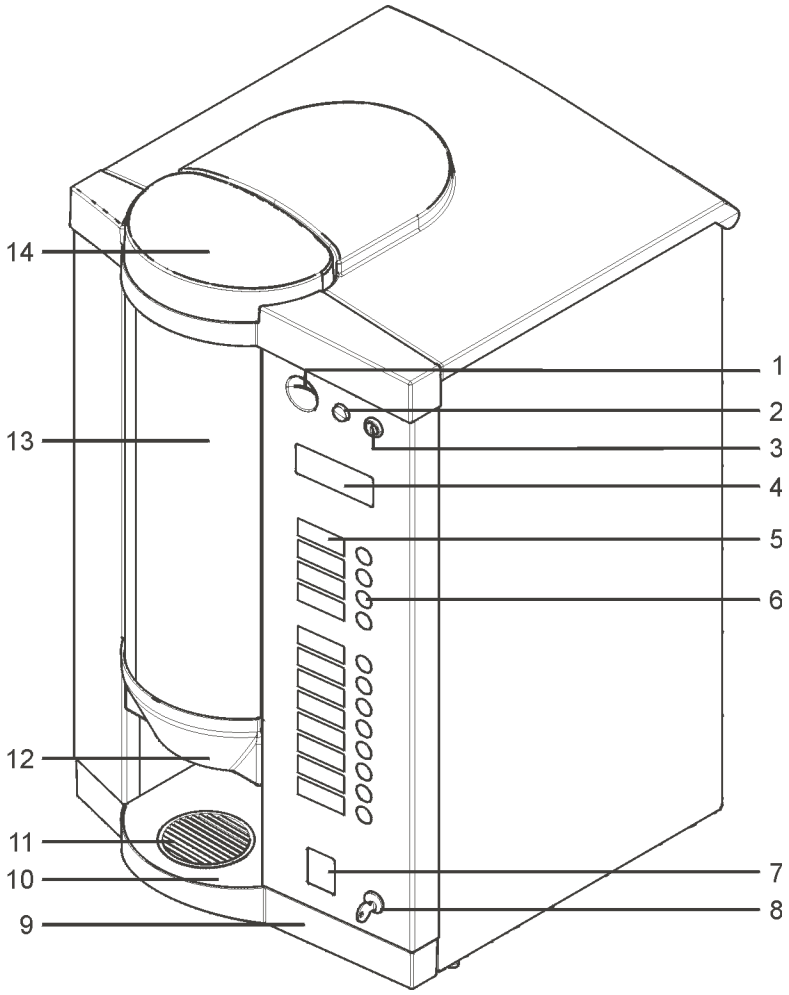
WARNING! Hot surfaces!
This symbol is attached to surfaces that become hot.
Risk of serious burning or scalding.
The surfaces may remain hot once the machine is switched off. Work near these surfaces should only be performed once they have cooled down.

WARNING! Risk of bruising!
When the safety device are overridden for service jobs a danger of bruising exists on the brewer and brewing chamber.

Handling regulations for dealing with electrostatically sensitive components and modules (ESD)
Covers labelled with the symbol opposite conceal dangerous electrical voltages. Touching plug connections, printed conductors and component pins should be avoided at all times.
Only qualified personnel with ESD knowledge are authorised to remove covers.

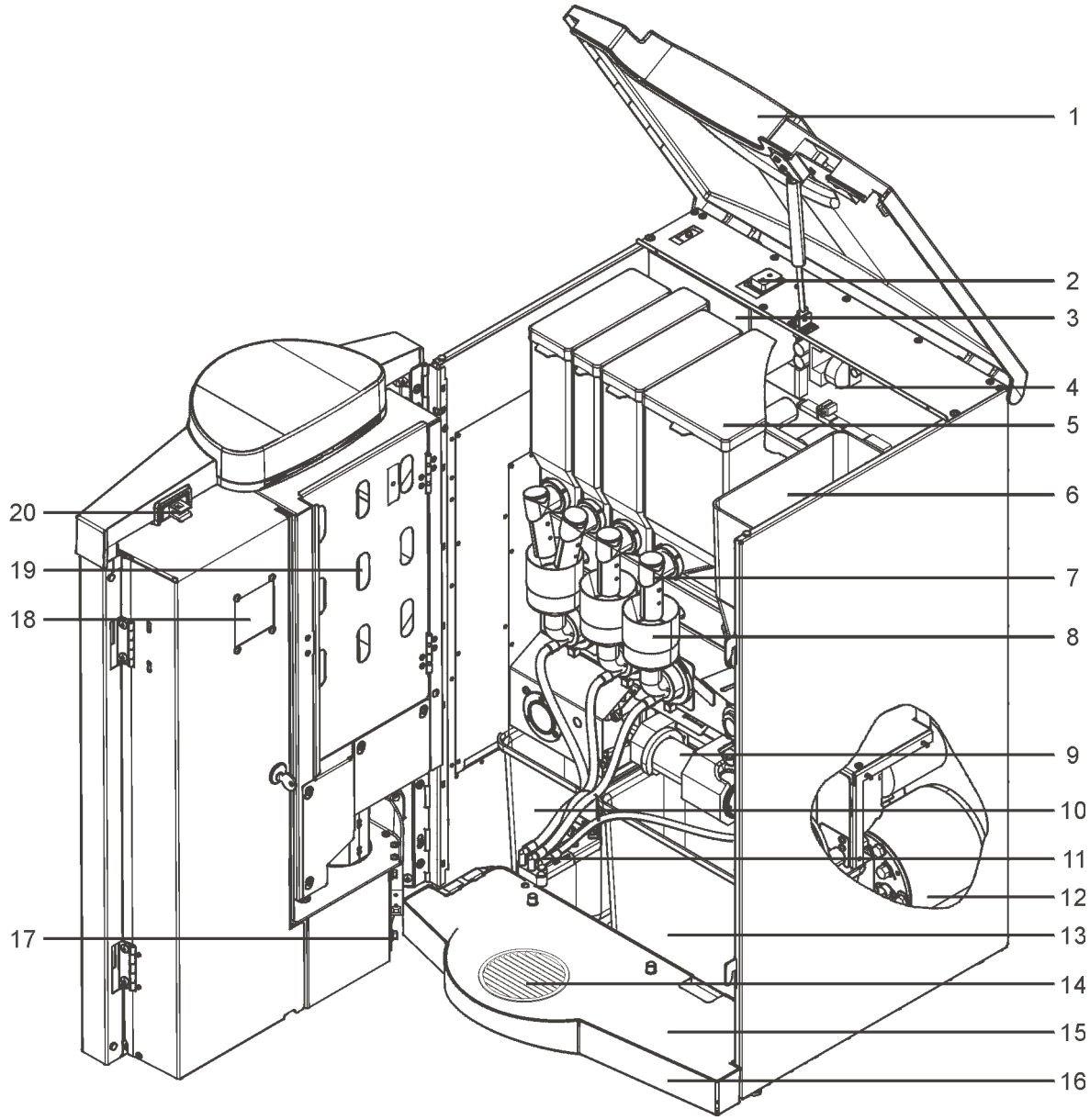
4 MACHINE DESCRIPTION

4.1 Exterior view



1	Coin slot (optional)
2	Refund button
3	Key-operated switch (optional)
4	Display with infrared interface
5	Product signs
6	Selection buttons
7	Coin refund (optional)
8	Lock
9	Drip container
10	Drip tray
11	Drip grid
12	Drink dispenser
13	Illuminated advertising panel
14	Exterior bean container (optional)

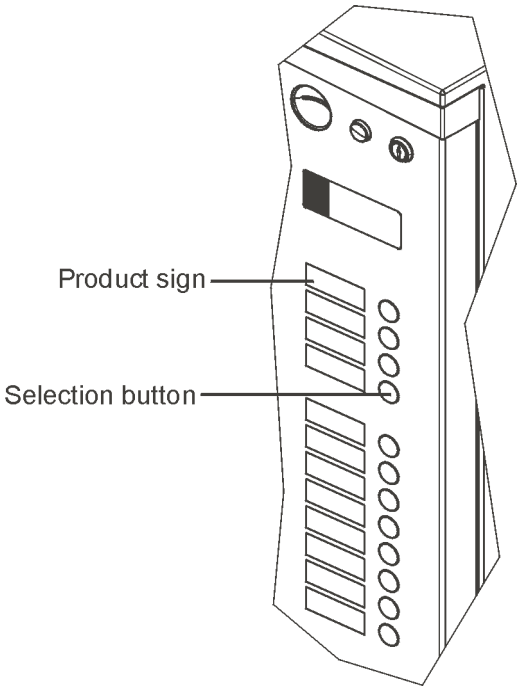
4.2 Interior view



1	Cover	11	Product outlet
2	Main switch	12	Boiler
3	Power supply unit	13	Grounds container
4	Control (without cover)	14	Drip grid
5	Product container	15	Drip plate
6	Bean hopper	16	Drip tray
7	Product chute	17	Light barrier (optional)
8	Mixer unit	18	Service keypad
9	Brewer	19	Cup holder (optional)
10	Water container	20	Door contact switch

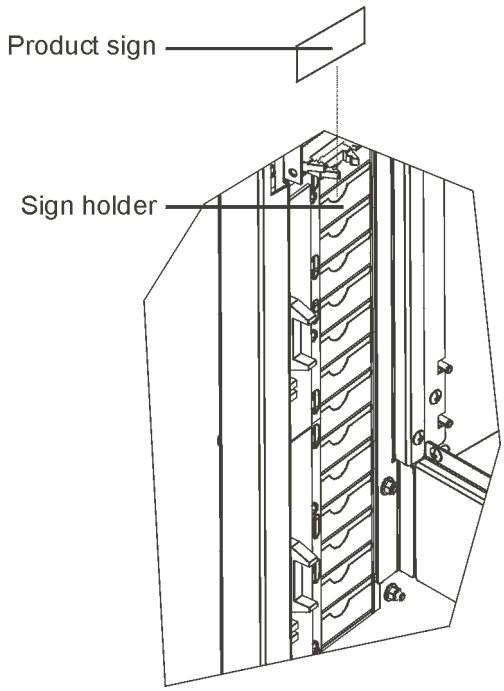
4.3 Selection keypad

The selection keypad is located to the right hand side of the door. Drink dispensing is performed immediately after the requested drink is chosen via the selection keypad.



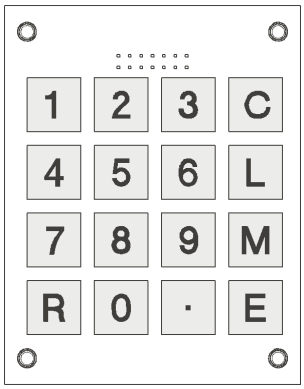
4.4 Product signs

The product signs are inserted in the sign holders on the door interior. They may be pulled out upward for replacement purposes.



4.5 Service keypad

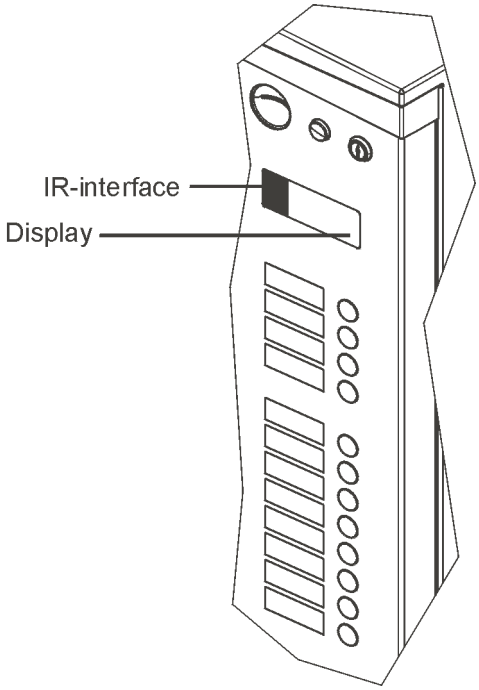
The service keypad is located on the machine door interior.
For service purposes, the keypad may be lifted up and swivelled into the holder. This permits a simultaneous view of the display and keypad.



Button	Meaning
C	• Acknowledge/ delete error messages • Data deletion
L	• Menu selection • Backward step in menu • Displaying of machine values in the menu Service
M	• Menu selection • Forward step within a menu • Execution during test functions in the menu Service
E	• Entry acknowledgement • Progressing in the menu • Acknowledgement of a menu selection
R	• Return to vending mode
1	• Progress selection or scroll within a menu

4.6 Display

The display is located at the top right hand side of the machine door. A key-operated switch (optional) is located beneath the display.
The four-line LCD display indicates drink selection, system information, product prices and the current operating status.



4.7 Infra-red interface

The machine is fitted with an infrared interface on the left side on the display. Via it, you may enter and read out data for the machine control. A mobile data capture device (MDC) is required for this process.

Machine programming may be prepared on the PC and entered quickly and easily with the help of the on-site MDE.
In this way, it is also possible to copy a specific customer configuration from one machine to another.
(Further information on the infrared interface may be obtained directly from SIELAFF).

4.8 Product container

NOTE
The product containers are numbered throughout and labelled with the appropriate product name.
The respective container positions in the machine are labelled identically.

NOTE Please observe hygiene regulations!
General hygiene requirements must be observed, e.g.:

- Wash hands before filling the product containers
- Avoid direct contact with the product
- Do not sneeze or cough into the product/container
- Following cleaning do not touch the container interior again

4.9 Main switch

The machine features a main switch. It is accessible after opening the machine cover. The machine may be powered down via this main switch.

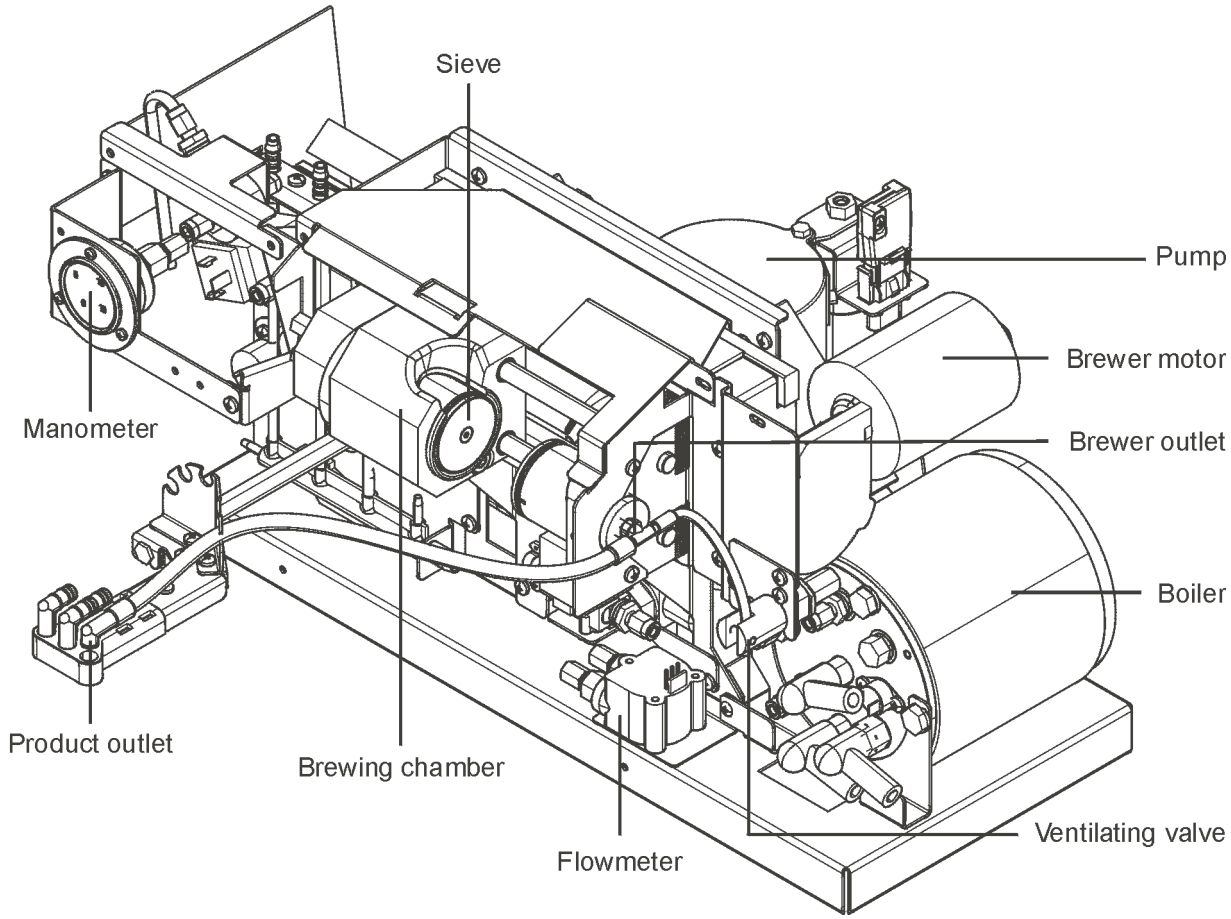
DANGER Electrical power
Risk to life!
When the door is open, the filter and interior light will continue to be supplied with power when the main switch is switched off.

- Disconnect the mains plug when working on these parts

4.10 Brewing unit

The freshly ground coffee powder drops via the coffee slide into the open brewer unit, where it is compacted.
The hot water is pressed through the compacted coffee powder. The brewed coffee flows through the brewer outlet to the drink dispenser.
The remaining water is pressed out of the compacted coffee powder. Then the brewer opens and the coffee powder drops into the grounds container.

The brewing unit is illustrated without covers.



5 CLEANLINESS/ HYGIENE

Machine cleanliness is the responsibility of the operator.

When handling the vending machines general hygiene requirements must be observed.

- Wash and disinfect hands prior to handling foodstuffs
- Use only cleaning agents compatible with foodstuffs for machine cleaning
- Remove mixing bowls, hoses and mixer housing and rinse under running water
- Following cleaning parts that come into contact with foodstuffs should no longer be touched.
- Avoid sneezing and coughing when handling exposed foodstuffs.
- Opened products must be properly closed and stored safely.
- Product residue must be removed
- Store products separately, in a cool dry place
- Direct contact with the product should be avoided

5.1 Perishable foodstuffs

WARNING! Perishable foodstuffs
Risk of food poisoning and illness!

- Please adhere to the expiry date of products specified by the manufacturer
- Promptly replace products past their sell-by date by products with a valid expiry date
- Do no use products the expiry date of which has elapsed
- Do not use products that are about to reach their expiry date
- Only fill with products suitable for vending machines

6 FIRST-TIME COMMISSIONING

NOTE
Prior to mounting and commissioning the machine, the attached operating manual must be read fully and understood.

6.1 Checklist first-time commissioning

	Measure	Notes	Page	Done
1	Erect machine on its final mounting site	Venting clearance? Machine horizontally?	21	
2	Adjust door		22	
3	Rinse on-site water line			
4	Connect machine with pre-mounted water hose to the cold water supply, connect water filter if necessary	Water pressure max. 6bar!	21	
5	Insert mains plug			
6	Insert coin mechanism	Adjust change return motor	21	
7	Check all components to ensure they are complete and positioned securely			
8	Switch on machine on main switch		17	
9	Fill boiler	Service menu (M8E88M)	21, 69	
10	Switch on boiler heater	Installation menu	64	
11	Check prices and assignment of selection buttons, insert product signs	M1	40	
12	Fill refund tubes		69	
13	Fill cup unit		102	
14	Fill product containers		25	
15	Calibrate all containers		47	
16	Enter desired amounts of water and products	Short menu	53	
17	Carry out rinse program, rinse mixer units	use receptacle	30	
18	Program the machine-specific settings	M6 and M7	60, 64	
19	Carry out test vends	door closed		

6.2 Mounting

WARNING! Short circuit due to water
Risk to life! Machine damage!

- Do not erect the machine on a surface that is cleaned with a water spray
- Do not clean the machine with water from a hose

NOTE
The machine may only be erected and commissioned by trained personnel!

NOTE
For safety reasons the machine connection socket must be easily accessible.

- The machine may only be operated in dry, heated and well-ventilated rooms. The machine may be optionally retrofitted with a winter package
- On selecting the mounting site, please ensure that the machine may be easily accessed for operation, filling, cleaning and maintenance purposes.
- To assure perfect machine function it must stand exactly horizontally.
- In order to guarantee a free circulation of air, there must be a gap of 50 mm (2 inches) behind the vending machine.

Sequence

- Erect machine at its final mounting site.
- Prior to machine connection rinse on-site water line thoroughly
- Connect machine with pre-mounted water hose to the cold water supply.
  The maximum permissible water supply pressure must not exceed 600,000 Pa (6 bar). If the supply has a higher water pressure then a pressure reducer must be used.

CAUTION! Insufficient power supply
Machine damage!

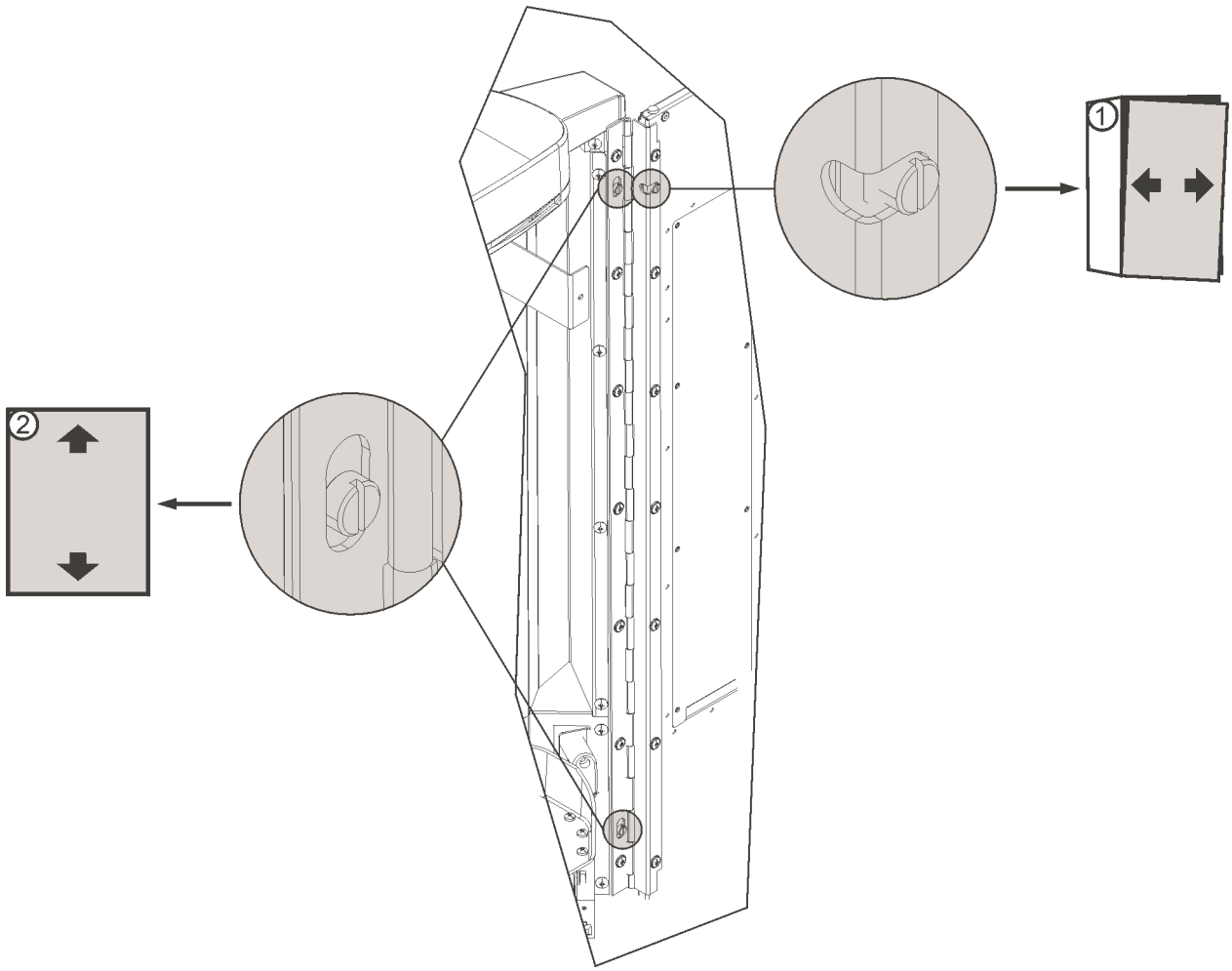
- The existing electrical network must match the specifications on the type plate.
- Protect the appropriate power circuit on-site with maximum 16 A
- Only operate the machine on an earthed socket outlet installed according to regulations

NOTE
The water line connection must not be kinked. Please ensure that the connection lines are firmly secured.
The prescribed water hardness (8°dH) must not be exceeded.
Use only approved pipes suitable for drinking water for connection purposes.

6.3 Door adjustment

The door on the CVT may be adjusted in height and inclination using the hinge screws.
The following diagram indicates the order in which you should proceed when adjusting the door.

1. Loosen the 7 screws at the housing side of the hinge.
2. Adjust the inclining position of the door with the marked screw. Take the left front edge of the machine as an orientation. The left edge of the door must be parallel to it.
3. Drive in the screws again.
4. Loosen the 7 screws at the door side of the hinge.
5. Adjust the vertical position of the door with the two marked screws.
6. Drive in the screws again.

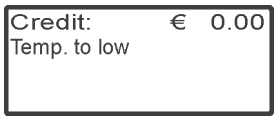


6.4 Commissioning

When commissioning your vending machine you should proceed as follows:

- Once the coin mech. is inserted or exchanged for a different make, the change return motor must be adjusted to the new coin mech. by using the slots provided. The motor must not block, on the other hand, the coin validator arm should be opened as far as possible.
- check all components to ensure they are positioned securely
- Switch on the machine by actuating the main switch.
  The vending machine switches on automatically once the machine door is closed. The filling of the boiler has to be started manually. Therefore press 88M in service menu (→ page 69)
- Switch on boiler heater
  For safety reasons the control switches off the boiler heater as soon as the boiler is emptied. For commissioning purposes the boiler heater must be switched on in the Installation menu (see chapter 10.10)

  Until the operating temperature is reached, the corresponding menu is indicated on the display. No drinks may be dispensed.



  Following a brief heating-up period the vending machine is operational. The message is displayed:

- Once the connections are made fill the product containers and correctly position in the machines (see chapter 13.2)

The machine operates with the saved factory pre-settings.

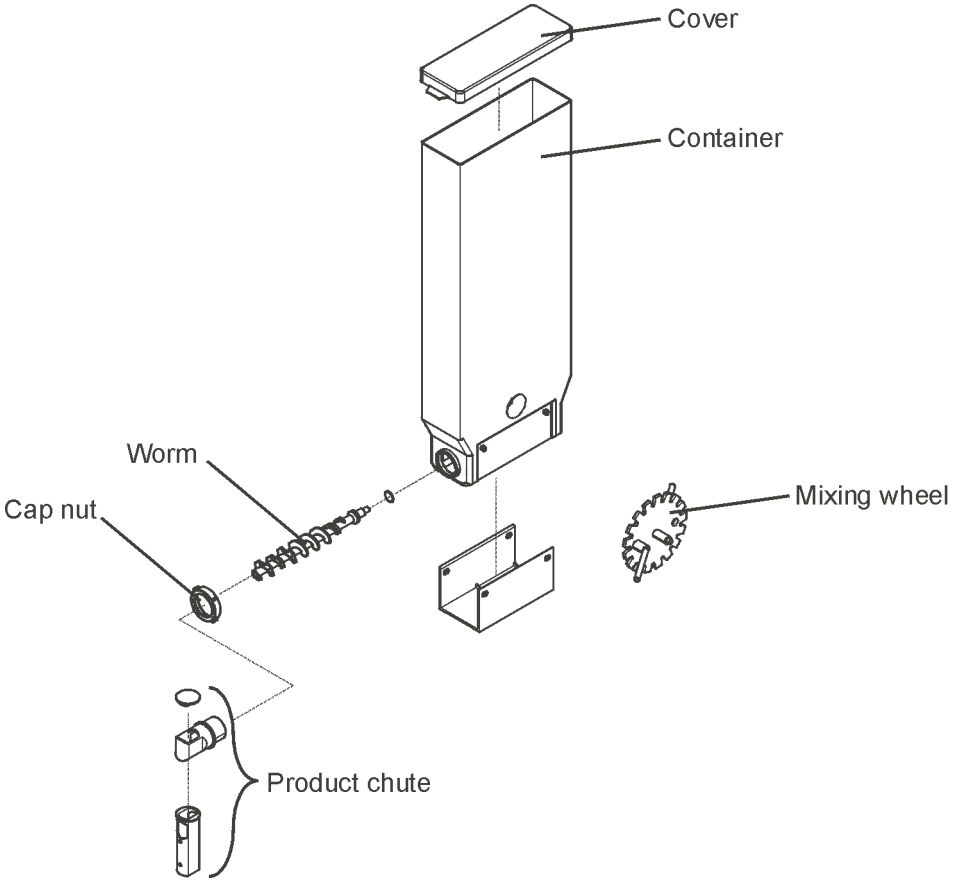
6.5 Product containers

6.5.1 Configuring the containers

Product containers come in sizes 43 mm, 67 mm und 137 mm. Container capacities are detailed in chapter 2 of this manual.
In order to achieve consistent dispensing of all products, the following parts can be fitted in the product containers:

- Plastic worm
- Stainless steel worm
- Wire worm
- Mixing wheel

As standard, except for the instant coffee container, all containers are fitted with a plastic worm and a mixing wheel. The only exception is the 137 mm wide container, in which a bevelled mixer is always fitted.
If you wish to dispense spray-dried coffee from your machine, it is recommended that you retrofit a mixing wheel. On the other hand, however, if freeze-dried coffee is being dispensed, no mixing wheel should be fitted, as this will damage the coffee.
If particularly coarse sugar is being vended, it is recommended that a stainless steel worm is fitted into the container.



6.5.2 Filling

NOTE
Check that containers are clean and dry before filling.
If necessary clean and dry thoroughly.

6.5.2.1 Bean hopper

For filling the bean hopper can remain in the machine.

- Open machine door
- Open machine cover
- Lift off cover of bean hopper
- Fill with coffee beans
- Close machine cover
  Please ensure that the interlocking bar is opened.
- Close machine door

6.5.2.2 Product containers

NOTE
Only products suitable for machines may be used.
Only fill with loose product. Products must not be compacted!
Please observe the product life specifications of the manufacturer.

- Open machine door
- Open machine cover
- Push up product chute
- Raise front container a little so that the locking pins are free and remove from front
- Remove container cover and fill with product (loosen products prior to filling to avoid lumps)
- Ensure each designated product container is filled with the correct product.
  Please ensure that each container is inserted on the driving pinion and the locating pin at the front is secure.
- Push down product chute
- Close door

NOTE
After filling of the containers for the first time, or filling after the entire container has been emptied, (e.g. for cleaning) a few test vends must be performed first so that the feed screws are filled again completely with product in the containers.

6.6 Drink volume setting

The machine features an automatic drink volume adjustment facility. It permits all machine parameters to be adjusted based on standard values to variable drink quantities.
Preset is a drink volume for cup size 150ml.
An exact description of the drink quantity setting may be found in chapter 10.5.1.

6.7 Set degree of grinding

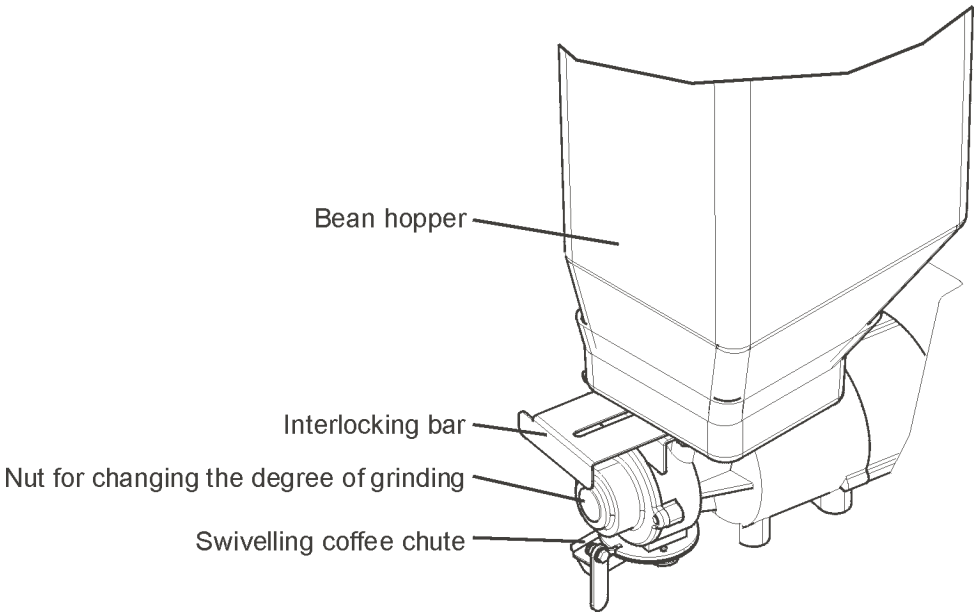
To adjust the grind setting, it is necessary to turn the nut on the face of the mill. For collecting the coffee powder, the coffee chute can be swivelled forward.

Turn to the right → finer powder → longer brewing time

Turn to the left → coarser powder → shorter brewing time

Subsequently then test grind approx. 4 portions of coffee in the Service menu (→ page 69) using service function 10M and check the degree of grinding. If necessary, process of setting the grind will need to be repeated.

Once the desired grind setting is achieved, adjust the required dosing quantity in the drink adjustment menu (→ page 46) .



NOTE
If a different type of coffee is used, the grind setting must be re-adjusted.
After setting the grind level the dosing must be adjusted.

6.8 Final check

Once the machine has been mounted accordingly and is operational, it must again be checked to ensure that it is sealed tight.

- Open machine door and check the interior connections, mixer water connections and discharge hoses for any leakages
- Check water connection on the machine rear
- Close machine door and remove key

After a brief heating-up period the vending machine is operational

7 DAILY OPERATION

7.1 Switch on machine

- Ensure external water supply is turned on.
- Open machine door
- Switch on main switch
- Close machine door and remove key

The vending machine is operational after a short heating-up period.
The message is displayed:

7.2 Operation

WARNING! Hot liquids
Risk of scalding!

- Remove dispensed drinks carefully
- Do not spill drinks

Operation of the vending machine is performed in vending mode exclusively via the selection buttons. Authorised personnel may switch the machine into the dispensing modes „free vending“ and „pot“ via an optional key-operated switch (see chapter 14.1).

- Place a suitable container beneath the drink dispenser otherwise the cup unit will supply a cup.
- Select additional option button if available (e.g. extra whitener, extra sugar)
  The quantity of additional option may be graduated in three stages.
- Insert coins to reach the required drink price
  Following drink selection the appropriate price will be indicated on the display
- Press the drink selection button and start button if applicable depending on model
- The drink will be prepared and dispensed.

Upon correct payment the selected drink will be dispensed.
Depending on the set vending mode change will be given or a new drink selection expected. In the case of credit card systems the amount will be deducted from the card.
Change is dispensed via the coin refund.

7 Technical manual CVT

Daily operation

Operational

- If the machine is operational the selection buttons will light up.
- One of the three messages opposite will appear in the display:

No change

If „Exact money only“ is indicated in the display, the correct money must be inserted.
In the case of over-payment no change is given (see chapter 10.10).

Vending mode

If the machine set to „Multi-Vend“, the remaining change will not be returned following drink selection. Until the remaining credit is used up further drinks may be dispensed.
The process is aborted via the coin refund button and the remaining change refunded.
If the machine is set to compulsory vend a drink must be selected before coins are refunded (see chapter 10.10).

Switched off until

If the flashing message „switched off until 07.00“ is indicated in the display, no drinks may be dispensed. The machine is in an economy mode during which the boiler temperature is reduced to a lower level (60°C) outside of the operating periods (see chapter 10.9).

Vending from

If the message „Vending from 13.00“ is indicated in the display no drinks may be dispensed. The machine is in an inhibit period. This means that during this inhibit period no drinks are dispensed. Vending is only possible from the displayed time onwards (see chapter 10.9).

8 CLEANING

For hygienically perfect drink quality thorough cleaning at the recommended intervals is essential.
Thorough, regular cleaning or maintenance may be performed with relatively little time and cost outlay.

CAUTION! Cleaning temperature too high
Plastic parts damage!

- When cleaning plastic machine parts in the dishwasher the temperature of 65°C must not be exceeded

Machine cleaning should be performed in the following sequence:

- Dismantle interior parts and clean
- Dry interior parts thoroughly and reassemble
- Call up automatic rinse program
- Clean housing

NOTE
We recommend recording of the cleaning and maintenance jobs performed in a machine log-book.

8.1 Cleaning list

Component	Measure	Frequency	Auxiliary medium
Housing exterior: drink dispenser, light barrier, display	clean	daily	damp cloth
Grounds container, water container, drip tray	empty, clean	daily	cleaning agent, cloth
Brewing unit	Remove coffee powder out-side	daily	Brush
Mixer unit	clean all individual parts	daily	cleaning agent, cloth
Product chutes	clean	daily	cleaning agent, cloth
Brewing unit	Rinse program	weekly	Cleaning tablet
Suction extraction	clean all individual parts	weekly	cleaning agent, cloth
Product container	clean	weekly	dishwasher
Coin changer	cleaning according to manufacturer's specifications		

8.2 Cleaning programs

ATTENTION! Hot rinse water
Risk of scalding!

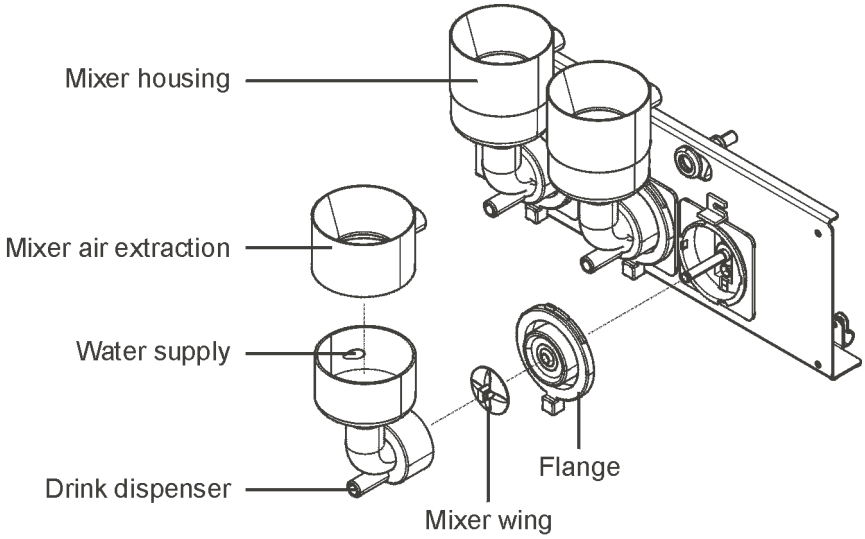
- Do not place hand into rinse water
- Do not spill rinse water
- Use suitable receptacle (approx. 1.5l)

For carrying out cleaning programs, no safety code is required.

Button	Display	Function
0	Clean/ rinse	Start complete cleaning program/ clean the brewing unit
1	Mixer 1 rinses	Cleaning program mixer 1 is performed as long as the button is held down
2	Mixer 2 rinses	Cleaning program mixer 2 is performed as long as the button is held down
3	Mixer 3 rinses	Cleaning program mixer 3 is performed as long as the button is held down
5	Clean/ rinse	Start cleaning program/ clean the mixing bowls

8.3 Daily cleaning

8.3.1 Clean mixer unit



- Push up product container chutes and remove product container
- Remove the dispenser hose from the mixing bowl.
- Turn the flange anti-clockwise to its ‘unlatching’ position
- Twist the mixer air extraction unit so that the vent faces towards the front of the machine.
- Lift outlet out of holder and remove
- Clean mixer housing, mixer air extraction, flange and mixer wing thoroughly with hot water and commercially available washing-up liquid. Then rinse under hot running water and dry well with a clean dishcloth.
- Re-attach all individual parts in reverse order
- Refill product container as required.
  Observe general hygiene requirements during filling.
- Insert product container and push down product chute

CAUTION! Incorrect water connection
Flooding danger!
- Assure firm and correct fitting of all water connections

8.3.2 Exterior cleaning

Clean the machine exterior with a damp cloth:

- Machine housing
- Drink dispense area
- Light barrier

8.4 Clean weekly

Hygiene/ cleanliness
General hygiene requirements must be observed (see chapter 5)

The following cleaning jobs must be additionally performed every week:

8.4.1 Clean product container

- Push up product chute
- Lift container slightly at the front so that the locking pins are exposed and remove from front
- Empty product container, tap out dry residue
- Clean container with hot water and washing-up liquid, rinse with hot running water.
- Dry well with a clean dish cloth/disposable cloth. The product container must be completely dry again.
- Before inserting the cleaned product container clean and dry the container base plate
- Refill products
  Wash hands before filling. Direct contact with the product powder should be avoided.
  Observe general hygiene requirements during filling (see chapter 5 and chapter 6.5)
- Insert product container
  It is essential that the containers are correctly inserted (according to the labelling)
- Push down the product chute and align with the centre of the mixer bowl

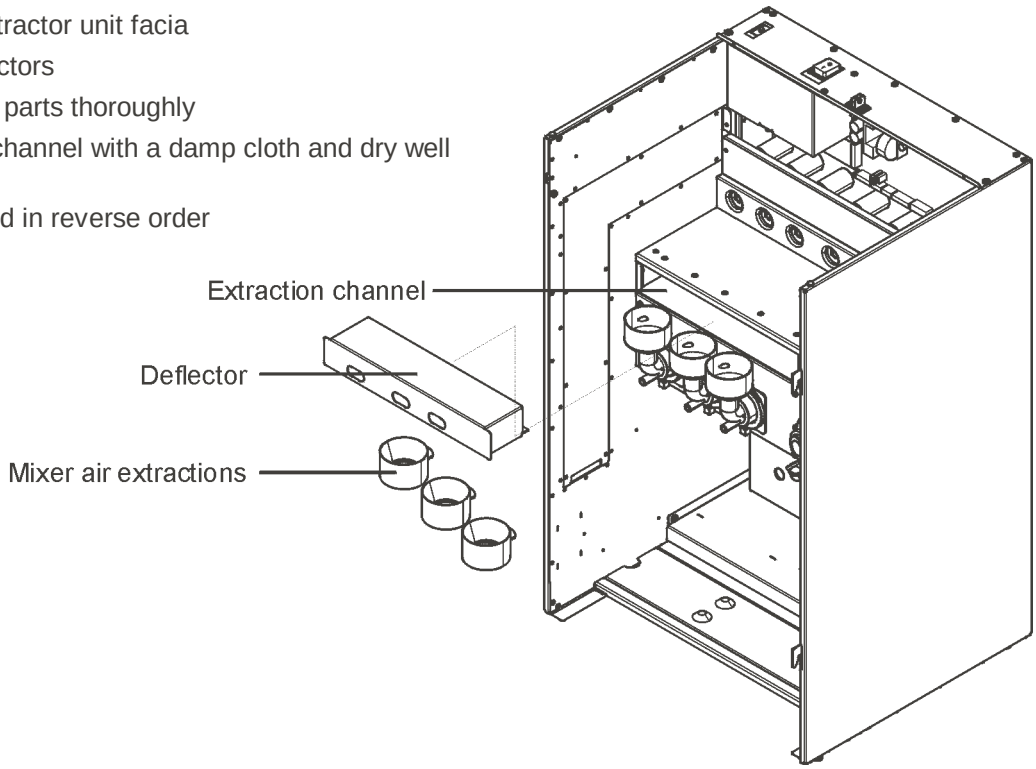
NOTE
Check generally prior to re-commissioning:

- That the product chutes are aligned with the centre of the mixer bowls
- The mixer bowels are correctly inserted
- The mixer water couplings are correctly connected to the water connections
- The discharge hoses are firmly connected

8.4.2 Suction extraction

- Dismantle the extractor unit facia
- Pull out the deflectors
- Clean and dry all parts thoroughly
- Wipe extraction channel with a damp cloth and dry well

Mounting is performed in reverse order



WARNING! Sharp-edged plates
Risk of cutting!

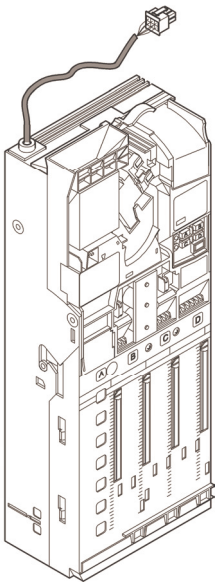
- Caution when cleaning the extraction unit

8.4.3 Clean coin changer

Depending on the credit system used cleaning instructions may differ.

In the case of the MDB credit system used customarily the coin changer need simply be wiped with a damp cloth from time to time.

NOTE
Please observe the documentation and safety instructions of the manufacturer of your credit system.



8.4.4 Clean brewing unit

A rinse program is available for the cleaning of the brewing unit. This must be done every week.

ATTENTION! Hot rinse water
Danger of scalding!

- Do not place hand into rinse water
- Do not spill rinse water
- Use suitable receptacle (approx. 1.5l)

NOTE
Before starting the cleaning program it must be sure that all parts are correctly fitted into the machine.
The program should be executed when the door is open and the service key installed.

The automatic cleaning program is started as follows:

- Open the door
- Press button 0
- Press any button
  pre-rinsing starts,
  approx. 200 – 300ml of hot water are rinsed out
- Machine stops
- Insert cleaning tablet
- Press E
- Press any selection button
  Cleaning program of brewing unit is started. Display shows „M/ C cleaning“

After completion the machine is ready to use

NOTE
If the cleaning program has been interrupted, “Restart the program” will be displayed

NOTE
With the buttons 1 to 3 you can clean single mixing bowls. As long as the button is pressed the water rinses.
The cleaning of the single mixing bowls does not replace the complete rinsing program!

9 DECOMMISSIONING

9.1 Switch off machine

NOTE
The vending machine must be decommissioned at the end of service.

- Switch off the machine at the main switch
- Shut off external water supply

9.2 Emptying the boiler

When changing the erection site and during an extended period of non-usage, empty the boiler. This prevents the boiler leaking or freezing.

WARNING! Hot boiler and hot water
Risk of scalding!

- Allow boiler to cool down first
- Do not place hand into rinse water
- Do not spill rinse water

1. Shut off external water supply.
2. Disconnect external water supply.
3. Switch on machine at the main switch and insert the service key.
4. Place receptacle under the drink dispenser.
5. Call up the Service menu with the M and 7 buttons and switch of the boiler heater.
6. Call up the Service menu with the M and 8 buttons.
7. Fill the instant-boiler via service number 88M and blow compressed air (max. 2 bar) for approx. 1 minute into the machine's water connection.
   Water from the espresso boiler runs out of the drink dispenser.
8. Switch off main switch and disconnect mains plug
9. Pack machine securely for transport.

10 MACHINE CONTROL

10.1 Code selection

Various functions may be performed via the code numbers on the service keypad. No safety code is required.

Procedure

- The door must be open so that the service keypad is accessible.
- The service key must be inserted
- The display must indicate that the machine is operational
- Press the digit button of the required function

NOTE
The requested function is performed immediately.
During test vending a suitable container must be held under the dispenser position of the swivel arm. Alternatively the service key may be removed before requesting the test vend function and then the machine door closed.

Button	Display	Function
0	Clean/ rinse	Start complete cleaning program/ Clean brewer unit
1	Mixer 1 rinses	Cleaning program mixer 1 is performed as long as the button is held down
2	Mixer 2 rinses	Cleaning program mixer 2 is performed as long as the button is held down
3	Mixer 3 rinses	Cleaning program mixer 3 is performed as long as the button is held down
4	No function	
5	Clean/ rinse	Start cleaning program/ Clean mixing bowls
6	Filter counter	Display filter scope counter status (optional)
7	Test vend	A test vend is performed
8	Cup dispensing	A cup is dispensed
9	Total vends	Display total vends statistics

NOTE
The availability of the individual functions depends on the machine variant. Please refer to the sticker on the machine interior for your vending machine variant (see chapter 13.2).

10 Technical manual CVT

Machine control

The control features nine menus in which the machine functions are systematically ordered.
A menu is selected via the button sequence M and the menu digit (0 – 8). Button E activates a selected menu.

A menu may also be selected by pressing buttons L or M several times.
In the Drink Setting menu this procedure leads to further sub-menus.

- Button C deletes an entry
- Button E acknowledges an entry
- Button L return to the previous entry field
- Button M switches to the next menu item
- Button R switches back to vend mode

If no button is pressed for a period of time the control automatically switches to vend mode.
Exception: In the Service menu no automatic return to the vend menu takes place.

In order to avoid unwanted programming by unauthorised persons menus may be provided with an inhibit code.
The control features tiered inhibit codes.

- Code A features the lowest access level.
- Code B also permits access to code A protected menus.

NOTE
Please note that program modifications cause basic parameter changes that have a major influence on the machine function.
The set values should be noted down before changing, as such old values may be re-entered as required. Alternatively SIELECTOR PC software (see chapter 14.1) may be implemented.

Overview of the HG2540 control memory

The control features a reprogrammable flash memory in which mainly program data are stored, and a user memory (RAM).
The program data contains all default values (factory settings) required for machine operation. Variable data such as dosing, prices, selection button assignment, product texts, statistics data etc. are saved in the RAM. This is battery-buffered so that data remain unchanged after the machine is switched off and on again. Additionally a flash back up of these setting values is kept as a backup copy in a free flash sector. These are triggered manually in the Service menu via the service number 99+M+89+M or automatically on every 100th vend. By entering service number 99+M+90+M the flash memory is read out.

10.1.1 Buffer battery

There is a Lithium-buffer battery on the VMC. This ensures that data is retained during transportation or in cases of power failure. Faultless operation is only possible if this battery has sufficient capacity to store programming and statistical data.
Should a data error occur after a lengthy voltage interruption, check the battery. If this is less than 2.8V, install a new battery CR 2032 (Part No. 985 26 436 02).

NOTICE
Batteries are consumable parts. Defective batteries must be disposed of correctly.

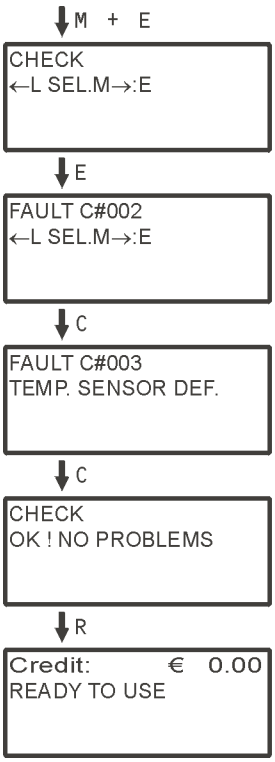
10.2 Menu – quick overview

NOTE
When codes A and B were installed in the installation menu, the marked menus are locked and can only be accessed after the corresponding code is entered.

No.	Display	Code	Function
0	CHECK ←L SEL.M→:E	-	Error display, deletion of error messages
1	PROGRAMMING MODE ←L SEL.M→:E	B	Entry of vend prices, assignment of products to a selection button
2	BEVERAGE ALLOC. ←L SEL.M→:E	B	Entry or change of dosing parameters and cup adjustment
3	TEST VENDS ←L SEL.M→:E	A	Check vend procedure
4	SHOW STATISTICS ←L SEL.M→:E	A	Display of vend statistics
5	SHOW FULL STAT. ←L SEL.M→:E	B	Display of vend statistics the entire statistics may only be deleted by the manufacturer
6	PROG. TIME/LOCKS ←L SEL.M→:E	B	Setting of local time, boiler temperature, heating periods, heating days, prices and illumination times
7	INSTALLATION ←L SEL.M→:E	B	Setting of country, currency, machine type, machine number, inhibit codes, pre-selection times, credit system, vend mode, coin change parameters, machine options, service telephone number
8	SERVICE MODE ←L SEL.M→:E	B	Machine component test Reading of machine parameters Filling and emptying of the coin changer.

10.3 Menu Check (M0)

The current machine errors are displayed in words in the Check menu. A current counter status is overlaid for each malfunction.



The machine is operational again.

- Button E acknowledges the error messages
- Button C deletes the error messages.
  If several malfunctions occur at the same time the next message is displayed following acknowledgement.
- Button 1 indicates the error statistics
- Button E switches through the error statistics list
- Button R switches back to vend mode

If no button is pressed for a period of time the control automatically switches back into vend mode.

On page 86 of this operating manual you will find a table listing all error numbers and corresponding errors.

10.4 Menu Prices/ Assignment (M1)

In the Prices/ Assignment menu various functions are assigned to the selection buttons.

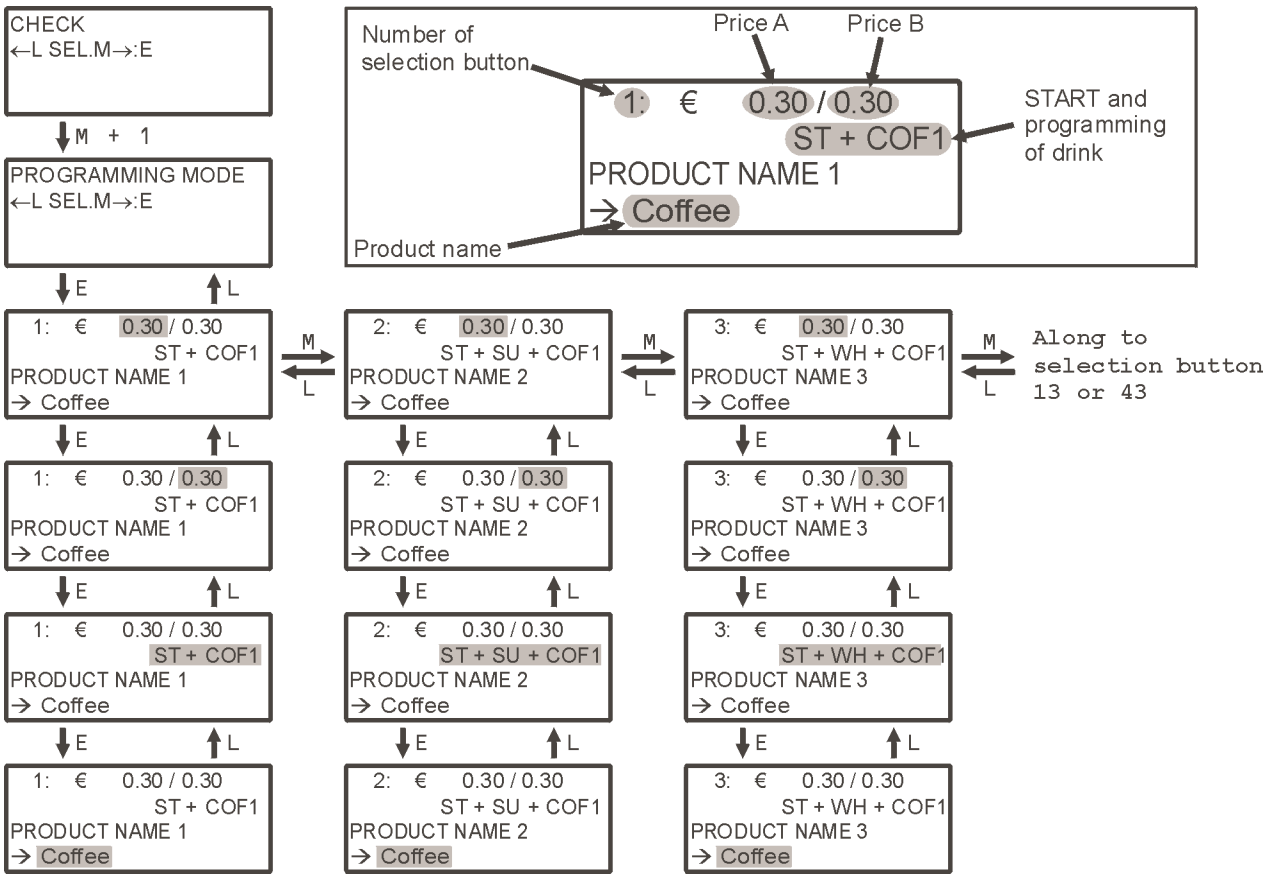
All 12 selection buttons of the machine may be assigned and programmed with full freedom of choice.
Any drink, drink combination, drink and function combination or only a pre-selection and additional selection function may be assigned to each selection button.
An overview of all programmable drinks and pre-selection/ additional functions may be found in the chapter 10.4.2.

Prices A and B are related to the validity period entered in the Clock/ Inhibit menu.

Press digit buttons 1 (forwards) or 2 (backwards) until the required drink code is displayed for drink programming (Factory setting see chapter 13.2)

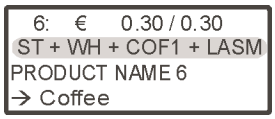
The flashing cursor indicates the current entry field.

- Button C deletes the entry field of the current cursor position
- Button 0-9 enters the required value
- Button E saves the displayed value and jumps to the next entry field
- Button M switches to the next selection button
- Button L returns to the previous entry field



NOTE

When programming for dispensing into a “MUG”, it is essential that the large drink uses the prefix of the small drink (+30) i.e. drink option 2 becomes 32.
With pre-selection <LASM> (large/ small) the selection button (+30) is set (refer to chapter 10.4.2).
As an alternative to <LASM> the optional key-operated switch may be used.



NOTE Manufacturer recommendation

For correct statistical evaluation a price A and B must be assigned to each selection button. To dispense free drinks set the machine to “free vend” in the Installation menu

NOTE

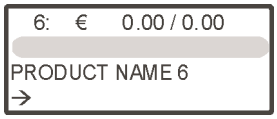
The vend prices may also be set via the corresponding coin slot.

- Select menu M1 and acknowledge via ENTER
- Insert coins to the value of the lowest vend price and press the required selection buttons
- Insert more coins and press the selection button for the new amount
- Repeat until a price is programmed for each selection button

Please note the set time (price A and B) as well as the key position (MUG – CUP).

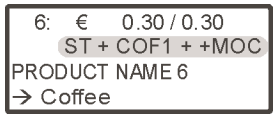
Deactivate the selection button

Should a selection button be purposely deactivated all button commands must be deleted via the button combination C + E.
The second option for deactivating a selection button is located in the Clock/ Inhibit menu. Here individual buttons may be completely inhibited or only at certain times.



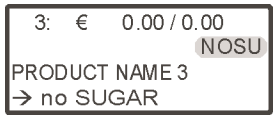
Mocca pre-selection (+MOC)

Mocca pre-selection <+MOC> is not a drink but a possible pre-selection option.
The mocca pre-selection reduces the amount of water added by up to 50%. The powder quantity remains the same, which makes the drink stronger and the drink size is reduced.
Pre-selection may be programmed to a separate selection button or in combination with a drink selection.



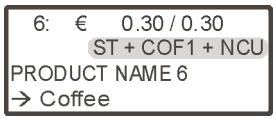
Sugar selection (NOSU)

The <NOSU> function is a pre-selection, which determines whether a drink is automatically dispensed with a set amount of sugar or without sugar.



No cup (NCU)

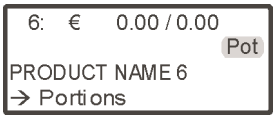
In the programming example opposite a coffee portion is sold at selection button 6. Additionally, the functions direct start <ST> and no cup <NCU> are programmed.
On pressing selection button 6 a light barrier checks whether a container is positioned in the drink dispenser.
If no container is featured no drink will be dispensed and “cup/ mug?” will be indicated in the display.
If a container is detected, the coffee will be sold immediately at a reduced price (see below: programmed cup price 10 cents).
The function <NCU> is permanently programmed to option 30. Only the price may be changed.



NOTE
The function <NCU> is a credit note.
The amount programmed at this point will be deducted from the price of a drink.
The function <NCU> only works, if a cup unit and a light barrier are installed in your vending machine.

Pot

A pot portion is the equivalent of X-fold cups.
Factor X is programmed in the Installation menu (see chapter 10.10)
By pressing the pot button you can step to the desired number of portions. Afterwards the drink is selected.



NOTE
No price may be assigned to the „POT“-preselection.

10.4.1 Assignment of selection buttons

NOTE
The selection button assignment of other machine variants may be found in chapter 13.2.

In the default setting selection buttons of variant 4301 are assigned as follows:

Selection button			Programming	Price (EUR)	
				A	B
1	**(31)**	Extra Sugar	SU>>		
2	**(32)**	Extra Whitener	WH>>		
3	**(33)**	Espresso	ST + EXP	0,50	0,50
4	**(34)**	Coffee	ST + COF1	0,50	0,50
6	**(36)**	Coffee with Sugar	ST + COF1 + SU	0,50	0,50
7	**(37)**	Coffee with Whitener	ST + COF1 + WH	0,50	0,50
8	**(38)**	Cappuccino	ST + CAP1	0,50	0,50
9	**(39)**	EspressoChoc	ST + EXCO	0,50	0,50
10	**(40)**	Café au lait	ST + CAL	0,50	0,50
11	**(41)**	Chocolate	ST + CHOC	0,50	0,50
12	**(42)**	ChocoCreme	ST + COM	0,50	0,50
13	**(43)**	Tea	ST + TEA	0,50	0,50

NOTE
In the factory setting selection buttons are assigned direct selection. Dispensing is performed immediately on selection of a drink. The start command <ST> is contained in the drink programming.
A possibly desired pre-selection must be performed before the drink selection.
Without direct selection a separate selection button must be reserved with the start command <ST> and assigned.

10.4.2 Abbreviations

Drink	Drinks-abbreviation
Americano	AMI/ AMIl
Cafe au lait	CAL/ CALl
Cappuccino	CAP1/ CP1l
Cappuccino	CAP2/ CP2l
Cappuccino	CAP3/ CP3l
Instant Cappuccino	CSP1/ CP1l
Instant Cappuccino	CSP2/ CP2l
Espresso	EXP/ EXPl
EspressoChoc	EXCO/ EXCl
EspressoChoc	EXC2/ EX2l
Hot water	HW
Coffee	COF1/ CO1l
Coffee	COF2/ CO2l
Coffee	COF3/ CA3l
Latte Macchiato	MAC/ MACl
Milk	MIL/ MILl
Chocolate	CHOC/ CHOl
Choco Milk	COM/ COMl
Soup	SOUP/ SOUl
Tea	TEA1/ TE1l

The ingredients of the individual drinks and their dosing are listed in chapter 13.3.

Pre-selection/ option-Abbreviation	Function
SU	Sugar (one stage)
WH	Whitener (one stage)
>>	Stronger
<<	Weaker
ST	Start of drink dispensing
NCU	No cup
+MOC	Mocca pre-selection
SU>>	Sugar (three stages)
WH>>	Whitener (three stages)
LASM	Large/ small
NOSU	no Sugar
Pot	Set to ‘X’ x desired cup portion

10.4.3 Enter product names

A product name may be assigned to each product abbreviation that is indicated in the display on vending. Product names are entered via the digit keypad.

- Press the appropriate digit button and step via button M to the required character (see below).
- Repeat process until the required text is indicated in the display
- Acknowledge entire text via button E
- Button L deletes the character in front of the current cursor position
- Button C deletes the entire character string

The following characters are assigned to the digits:

Digit	Character	Digit	Character
1	1, A, B, C, D, a, b, c, d	**6**	6, U, V, W, X, u, v, w, x
2	2, E, F, G, H, e, f, g, h	**7**	7, Y, Z, y, z, $
3	3, I, J, K, L, i, j, k, l	**8**	8, +, (,), .
4	4, M, N, O, P, m, n, o, p	**9**	9, ä, ö, ü
5	5, Q, R, S, T, q, r, s, t	**0**	0, /, _, *, -

10.5 Drink setting menu (M2)

NOTE
Dose testing must take place with the door open.
The service key must be inserted in the door switch and the machine must be operational.

In the Drink setting menu all drink preparation parameters may be set.
It is divided into the categories calibration, dosing and cup adjustment.

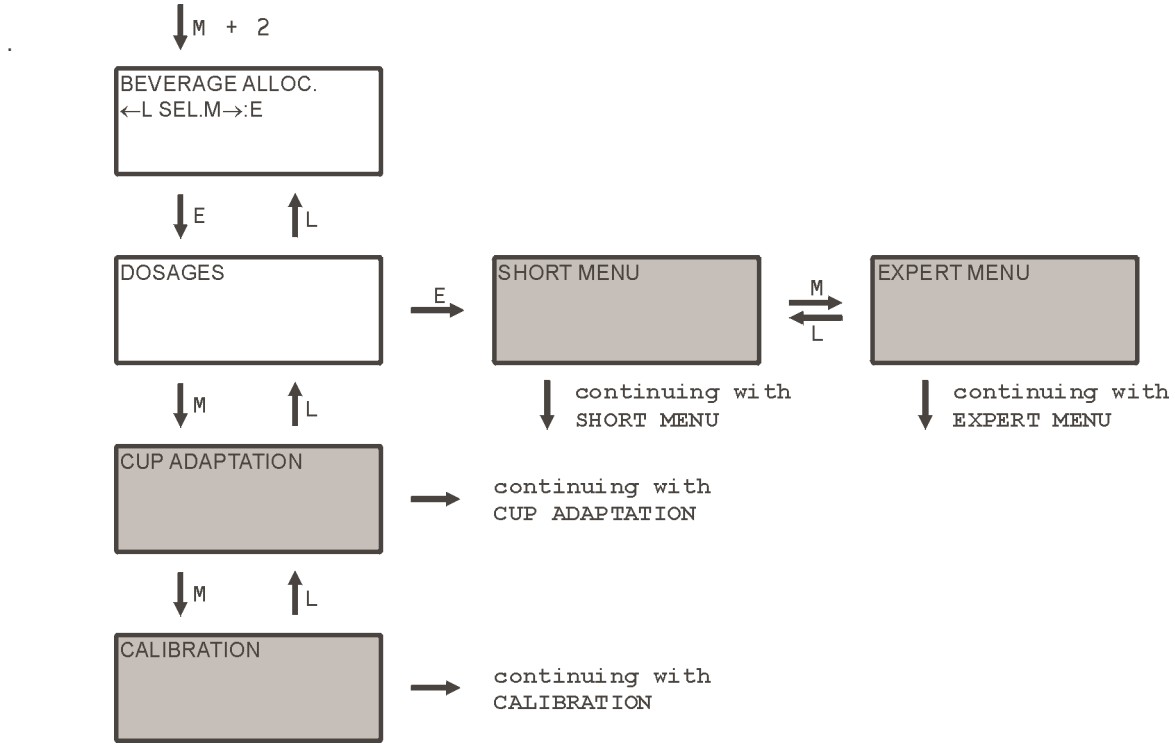
- In calibration menu, delivered amounts of the single product containers are calibrated. This must be carried out only once for every container.
- Dosing is used for the flavour setting of the drink.
  A differentiation is made between a simple short menu and a very extensive expert menu. The required powder quantities can be entered in grams. The water quantities are entered in cubic centimetres (ccm). The dosing settings are displayed by means of the respective drink examples.
- Cup adjustment is used for quick modification of the filling quantity.
  Two different modes may be selected.

Required accessories for drink setting

→ Product scale with 0.1g precision (TARE function)
→ Measuring jug with ml-scale
→ Suitable receptacle

NOTE
A convenient solution for entering drink settings and all other machine parameters is offered by the SIELECTOR PC software.

Accessing drink setting is via M + 2 as illustrated below.



10.5.1 Calibration

NOTE
After a product has been changed the respective container must be re-calibrated.

Procedure

NOTE
Before calibrating the product containers every product motor in the service menu should be run for a few seconds (→ from 69), so that the worm in the container is completely filled with product. Otherwise the calibration gives incorrect values.
Before testing, the mixer bowl for the powder to be checked must be removed and a suitable collection receptacle be placed under the product outlet on the container.
The amount of water produced should not be measured using the measuring jug but weighed for greater accuracy.

→ Open machine and call up the short menu via the key combination M+2+E+L

→ Select the desired container using the number keypad and confirm selection by pressing E:

Container	4301	5303	5304
1	Sugar	Whitener	Sugar
2	Whitener	Topping/ CSP1	Whitener
3	Tea	Cocoa	Cocoa
4	Cocoa	Soup	Soup
5	-	Coffee 2	Coffee 2
9	Coffee grinder	Coffee grinder	Coffee grinder

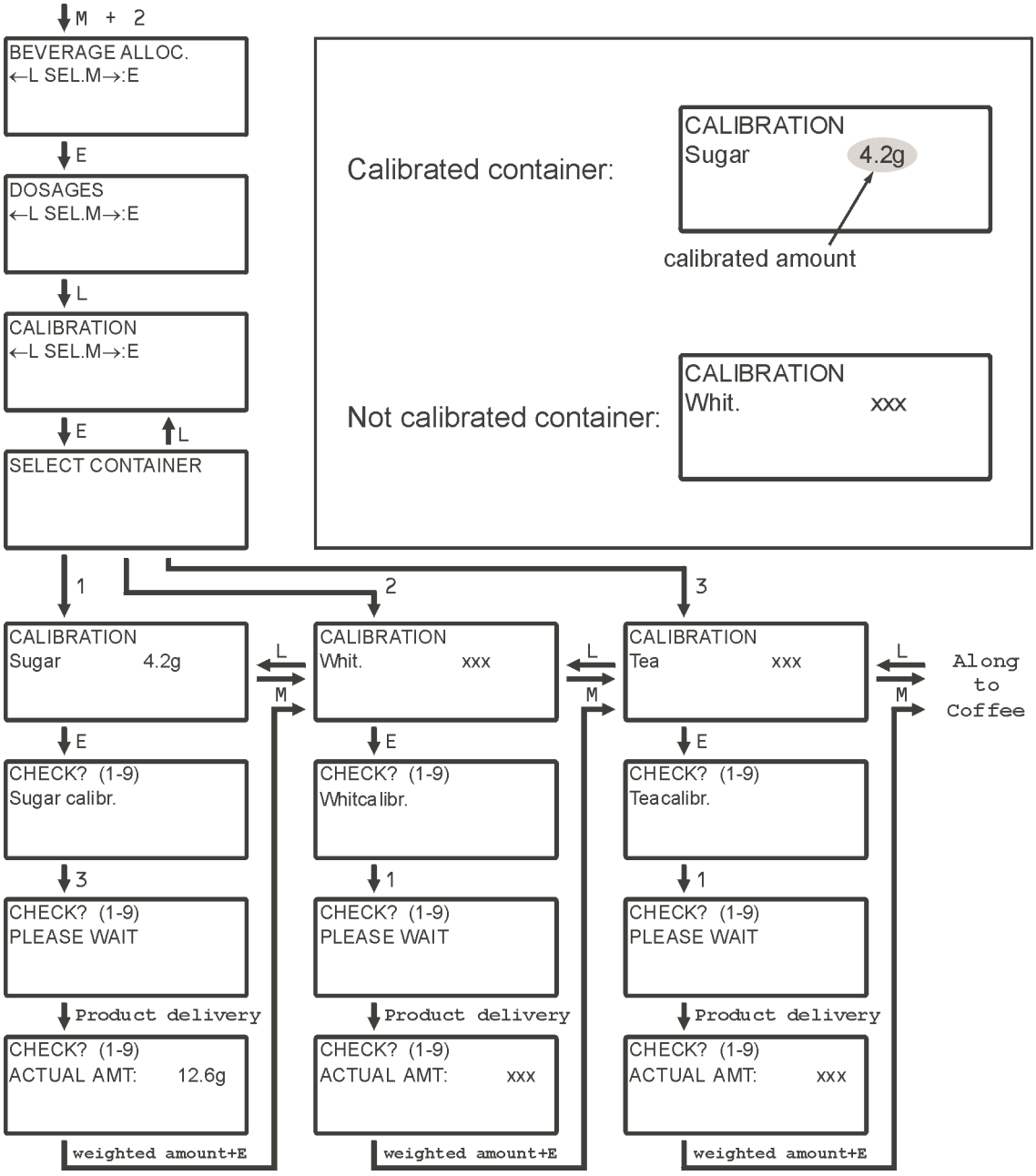
→ On entering digit 1 in the entry field the selected product component will be dispensed from the container into the receptacle provided.
On entering of another digit this will be used as a multiplier. Product dispensing is performed in the correspondingly multiplied quantity. Precision may thus be increased in the case of very small dispensing quantities.

→ Weigh the quantity delivered, enter the reading taken and press E to enter.

→ The procedure may be repeated for checking purposes

→ Once all containers have been calibrated, it is necessary to enter the quantities for the individual drinks into the Short Menu.

Calibration menu overview



10.5.2 Cup adjustment

In the cup adjustment sub-menu the total dispensed volume of the individual selection buttons may be checked and set.
On entering the dispensed ACTUAL quantity and the required SET quantity the control automatically calculates the required water quantity and product quantities of the individual mixer bowls.
An individual adjustment of dispensing quantities is performed in the expert menu.

The following modes are available:

1. Water with product

A complete drink is dispensed. By changing the “SET quantity“ the water quantity is changed.

2. Complete cup

A complete drink is dispensed. By changing the „SET quantity“ the water quantity and the quantities of the drink ingredients are changed.

Procedure

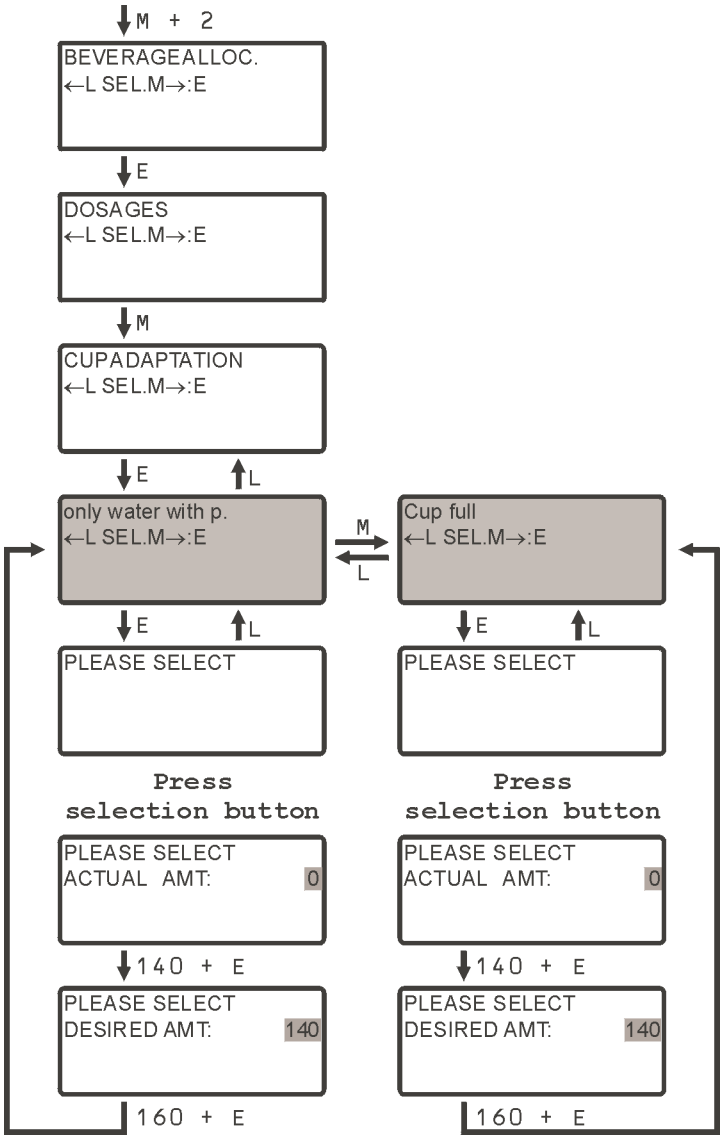
- → Open machine and call up the cup adjustment menu via the button combination M + 2 + E + M
- → Call up the required setting mode (only water or complete)
- → Hold the measuring jug under the drink dispenser and press the selection button of the drink to be adjusted
- → Read off dispensed quantity in ml on the measuring jug and enter the „ACTUAL quantity“ via the keypad
  Save entry via button E
- → Enter required quantity as „SET quantity“
  Save entry via button E.

NOTE
If the dispensed “ACTUAL quantity” corresponds to the required “SET quantity” the saved values need only be acknowledged by pressing button E twice.

- → The procedure may be repeated for checking purposes

Cup adjustment overview

NOTE
In the following example a dispensed quantity of 140ml and a required quantity of 160ml are assumed.



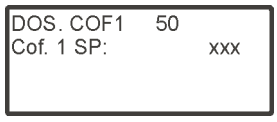
10.5.3 Short menu

In the short menu only the total amount of water and the powder quantities of products relating to the drink selected are called up. They can be adjusted. Single water quantities are set in the expert menu.

Therefore simple modification of the drink strength and thus flavour may be achieved.

More product	→	Flavour stronger
Less water	→	Flavour stronger
Less product	→	Flavour weaker
More water	→	Flavour weaker

NOTE
Before you can enter powder quantities in the short menu, you have to calibrate all containers in the Calibration menu (→ page 47).
If a container has not been calibrated, the display shows:

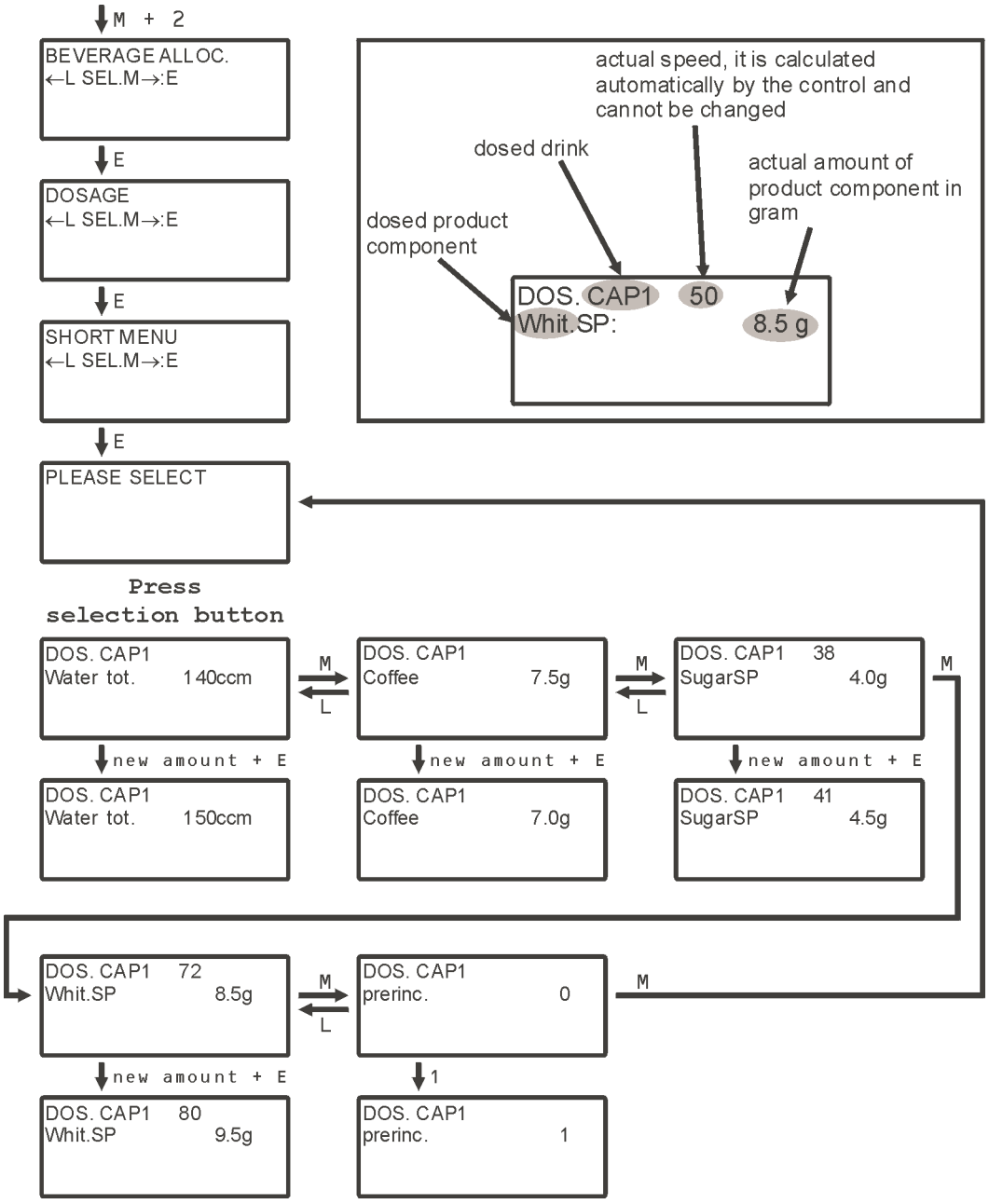


Procedure

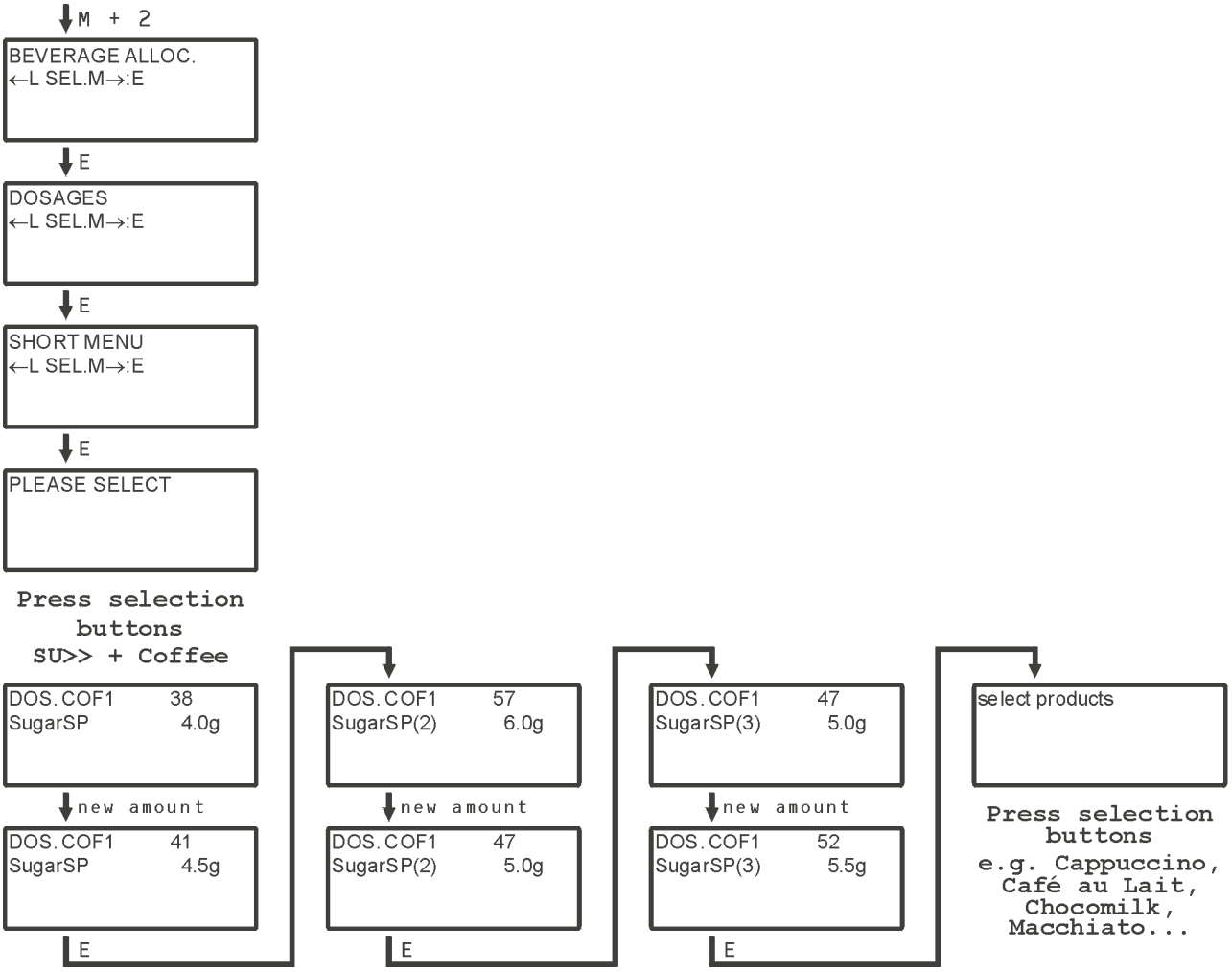
- → Open machine and call up the short menu via the key combination M+2+E+E
- → Press the selection button of the drink to be checked
- → Select a product component with the M and L buttons in the menu, acknowledge selection via button E or change the displayed value via the digit buttons

Short menu overview

Example: Cappuccino (CAP1)



Example: Dosing of sugar pre-selection (SU>>)



NOTE
After setting these values once they can be taken for all other drinks provided the option of extra sugar or extra whitener is possible with those (→ Factory settings, page 88).
The dosing for the button for extra whitener and the button Stronger-Weaker may also be set.

10.5.4 Expert menu

In the expert menu all water, product and mixer parameters may be set. These parameters are waiting time, run time and speed respectively. In the menu each sub-product and each mixer required is listed.
Basic procedure is the same as for the short menu, however greatly extended in scope.

Abbreviations overview

Due to the limited display parameters must be indicated by abbreviations. The following table shows the abbreviations used. For some parameters a test vend follows their modification. The table also specifies for which parameters this is the case.

NOTE
When changing water values all parts must be completely mounted as a complete drink is dispensed.
If only product values are to be changed the mixer bowls must first be dismantled and a suitable container placed underneath as only the product is dispensed.

Abbreviation	Description	Test dispensing
... mix DT	... Mixer motor waiting time	no
... mix RT	... Mixer motor run time	no
... mix SP	... Mixer motor speed	no
... was DT	... Water pump waiting time	yes
... was RT	... Water pump run time	yes
... DT	... Product motor waiting time	no
... RT	... Product motor run time	yes
... SP	... Product motor speed	yes
… SP(2)	2nd step of pre-selection	no
... SP(3)	3rd step of pre-selection	no
CoffeeSP(>)	amount for “stronger”	no
CoffeeSP(<)	amount for “weaker”	no
Swivel. DT	Swivel arm waiting time	no
PressSP		no
Press again		no

Procedure

NOTE
Before testing a powder quantity the mixer bowl of the powder to be tested must be dismantled and a suitable container placed under the product dispenser.
Before the test vend all mixer bowls must be mounted again.

→ Open machine and call up the Expert menu via the button combination M + 2 + E + E + M and acknowledge via button E
→ Press the selection button of the drink to be checked
→ Select a component via buttons M and L in the menu and acknowledge via button E
→ Check the waiting time (WT)
→ Check the run time (RT)
→ Check the speed (SP)
Powder is ready to dispense. Remove mixer bowl and place container underneath

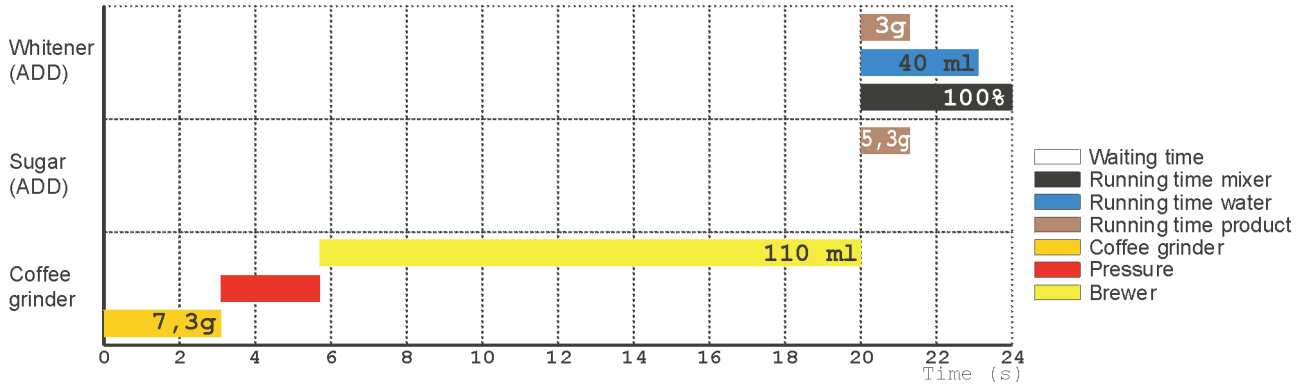
On entering digit 1 in the entry field the selected product component will be dispensed into the container provided.
When another digit is entered, this works as a multiplier. The product is dispensed in the respective quantity multiple. This increases the accuracy when very small quantities are being dispensed.
→ Read off dispensed „ACTUAL quantity“ and enter required „SET quantity“ (see example)
→ The procedure may be repeated for checking purposes

NOTE
- For safety reasons water quantities cannot be dispensed in multiplied form
- Regardless of the checked partial water quantity the full drink water quantity will always be dispensed

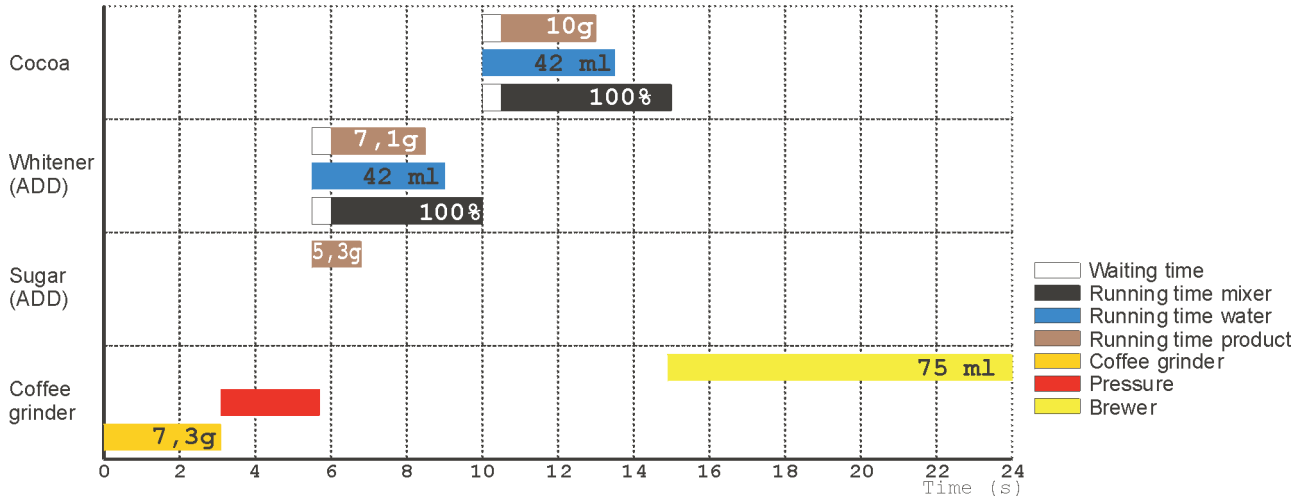
NOTE
The diagrams on the next page only show the time sequences of all triggered motors and valves. It can be seen which motors run simultaneously and which follow on from one another. The speeds (dispensing quantities) are not displayed.

Expert menu diagrams

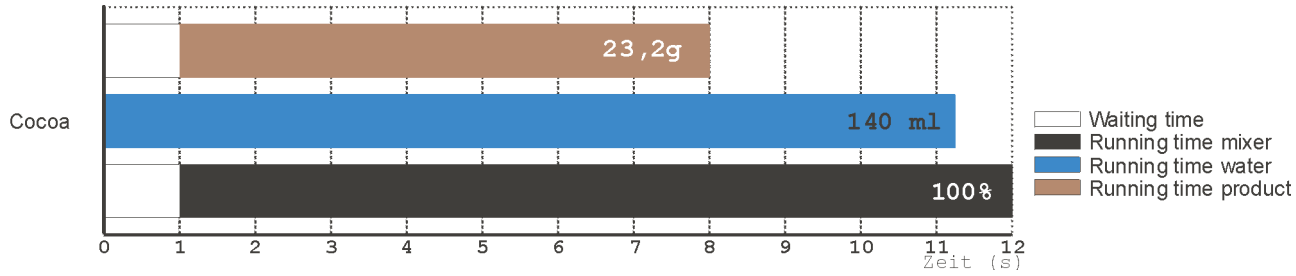
Example: Coffee (COF1)



Example: Cappuccino Choc (CAP2)

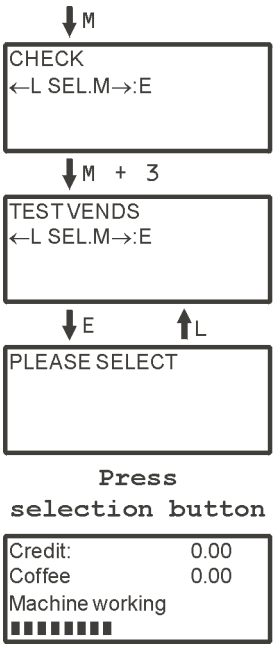


Example: Chocolate (CHOC)



10.6 Test vends menu (M3)

In the Test Vends menu drink preparation may be checked.
The selected drink is dispensed free and recorded as test vend in the statistics.

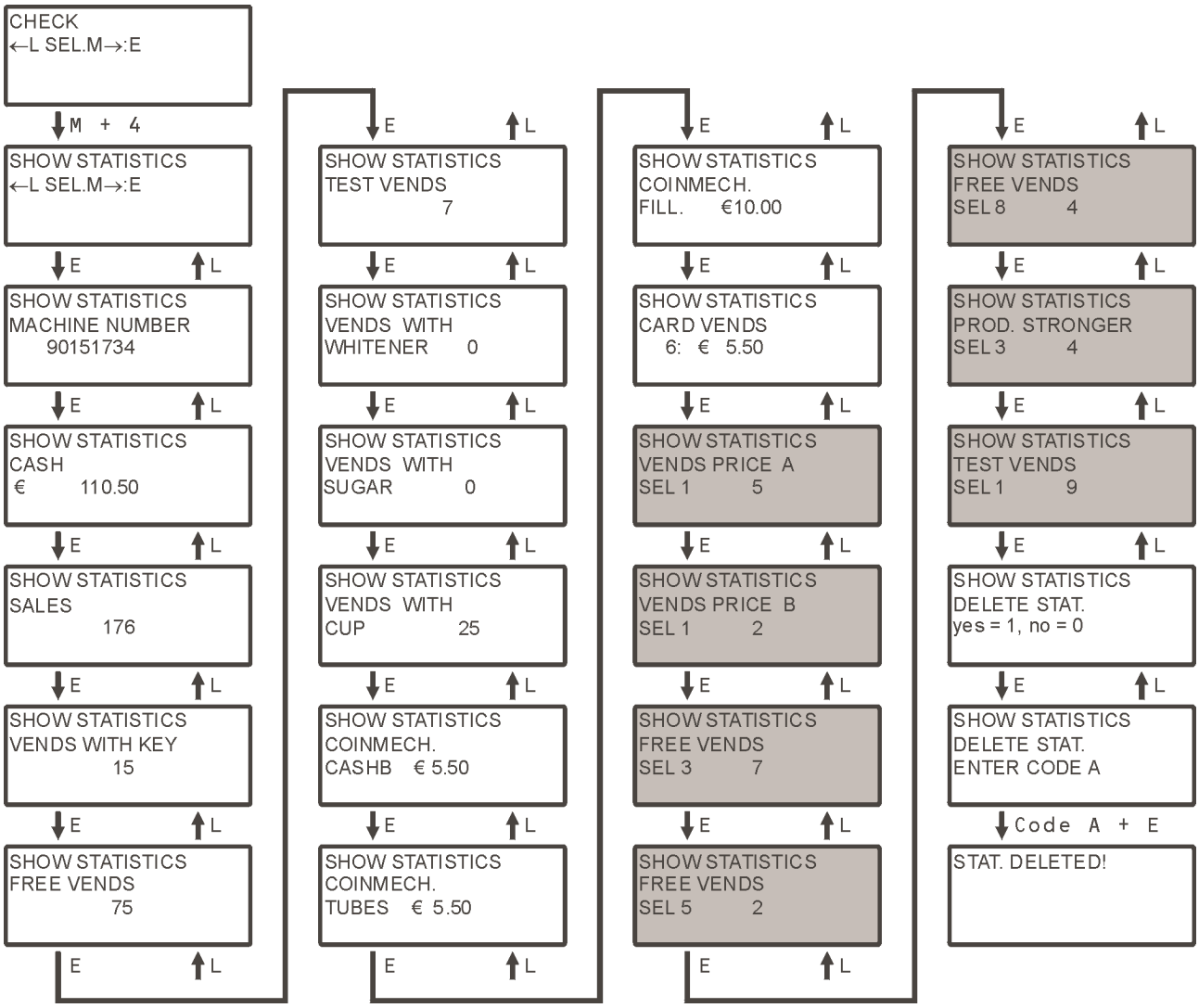


CAUTION! The drink is dispensed immediately.
Risk of scalding!

- hold suitable receptacle under the drink dispenser

10.7 Statistics menu (M4)

Vend statistics are displayed in the Statistics menu. Targeted product supply may be performed via the vend statistics.
If inhibit codes have been entered the statistics may be deleted by the operator via code A.

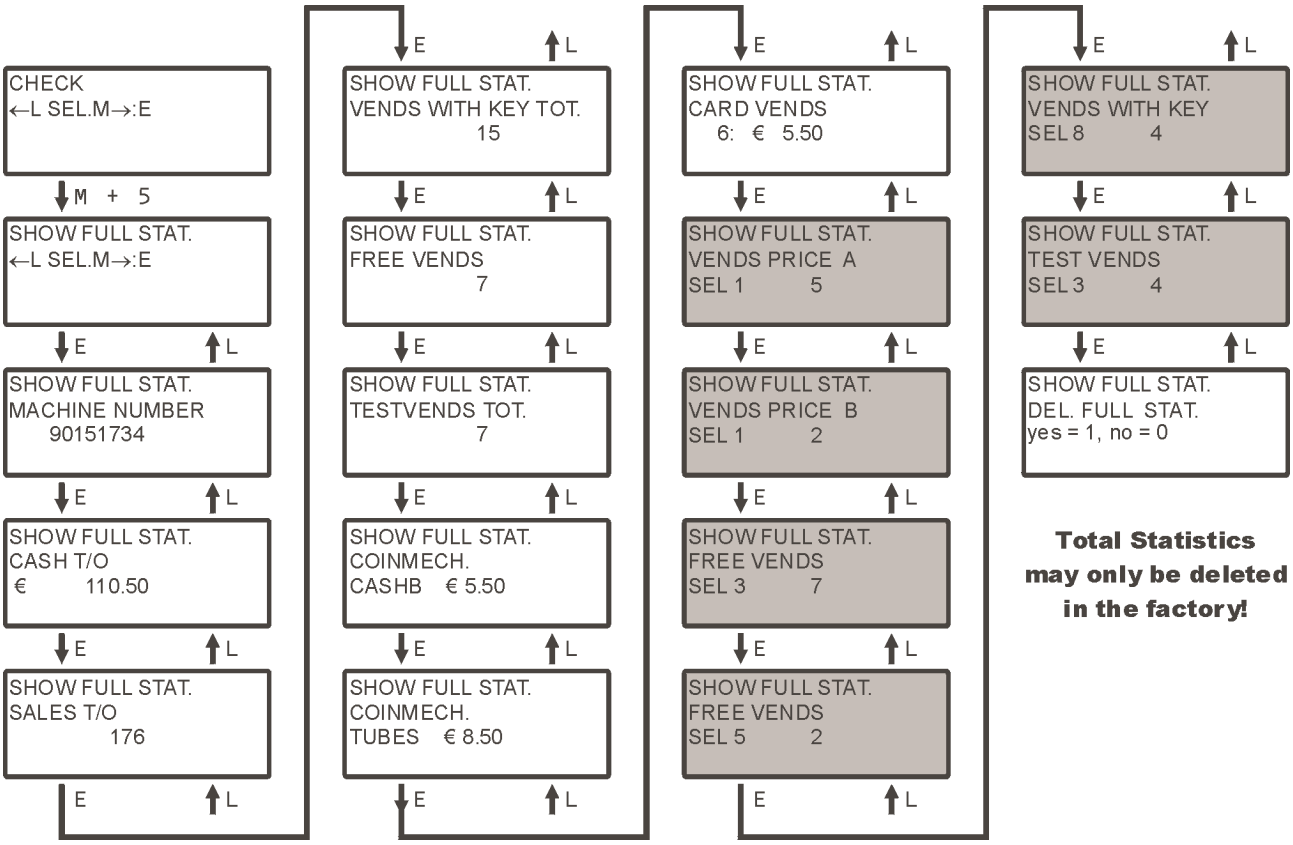


NOTE
The marked fields indicate the individual vend types per selection button.
All values not equal to zero are displayed. As such the display in the vending machine may deviate from the above illustration.

NOTE
The actual deletion of statistics is performed only once the next drink is dispensed.
In the meantime statistics data may be viewed again.

10.8 Total statistics menu (M5)

In the Total Statistics menu vend values from the first commissioning of the machine or since its last deletion are displayed.
The total statistics may only be deleted in the factory.

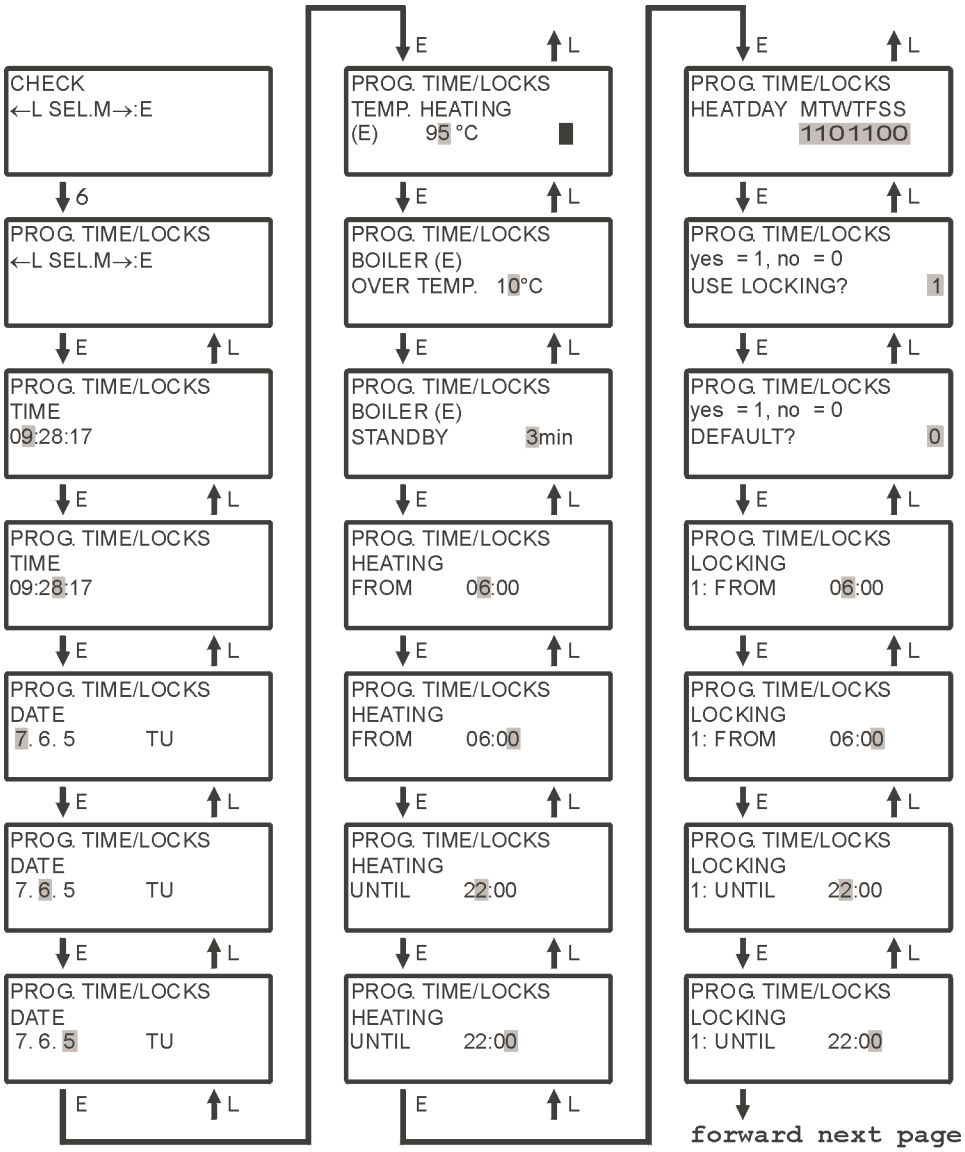


NOTE
The marked fields indicate the individual vend types per selection button.
All values not equal to zero are displayed. As such the display in the vending machine may deviate from the above illustration.

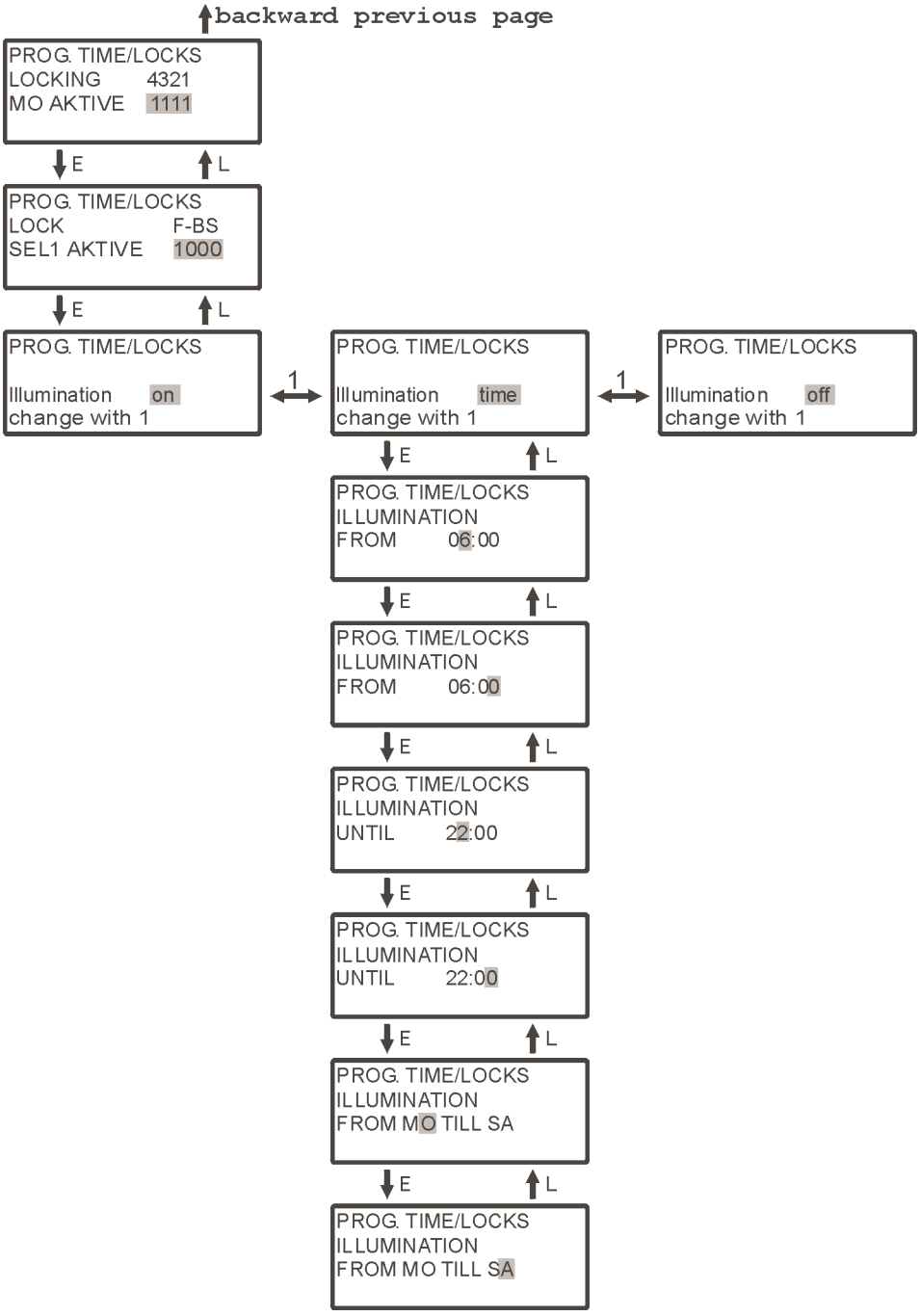
IMPORTANT!
In the case of control replacement the statistics remain on the old control. The SIELECTOR PC software may be used to transfer them to the new control.

10.9 Clock/ Inhibit menu (M6)

The system clock is set to local time in the Clock/ Inhibit menu.
Boiler temperature and operating times (heating times, vend days, price change and illumination times) may be adjusted to the operator's requirements.



NOTE
Boiler temperature
Even entries not acknowledged by button E are stored!


backward previous page
PROG. TIME/LOCKS
LOCKING 4321
MO AKTIVE 1111
E
L
PROG. TIME/LOCKS
LOCK F-BS
SEL1 AKTIVE 1000
E
L
PROG. TIME/LOCKS
Illumination on
change with 1
1
PROG. TIME/LOCKS
Illumination time
change with 1
1
PROG. TIME/LOCKS
Illumination off
change with 1
E
L
PROG. TIME/LOCKS
ILLUMINATION
FROM 06:00
E
L
PROG. TIME/LOCKS
ILLUMINATION
FROM 06:00
E
L
PROG. TIME/LOCKS
ILLUMINATION
UNTIL 22:00
E
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PROG. TIME/LOCKS
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PROG. TIME/LOCKS
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PROG. TIME/LOCKS
ILLUMINATION
FROM MO TILL SA

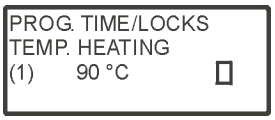
Clock/ date

Set system clock to the time at the installation site. Entering is performed via the digit keypad in the appropriate entry field.
The weekday is automatically calculated by the control.

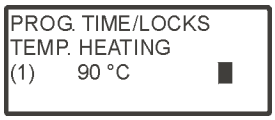
Boiler temperature

NOTE
The boiler is under pressure. Therefore without any problem a temperature in excess of 100°C (Boiler temperature + over-temperature) can be set, without achieving water boiling point.

Set the boiler heater switch-off temperature (limited to 98°C).
The display after °C indicates the boiler heater status.



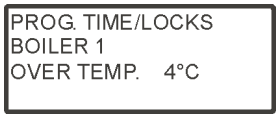
= Boiler heater **OFF**



= Boiler heater **ON**

Boiler over-temperature

The boiler temperature will be increased by the programmed no. of degrees five minutes after the last drink is dispensed. By means of this temperature increase the temperature loss of the drink is compensated by the cooled hoses. The boiler temperature is reduced again to the programmed boiler temperature.



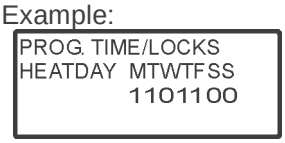
Heating time

Period during which the boiler is heated up on heating days. Entering is performed via the digit keypad in the respectively current entry field.
Operation time (vending time) is limited by this setting. Outwith the heating time the message is indicated on the display:

Heating day

Days on which the boiler is heated. Thus, for instance, switching-off of the boiler may be achieved for the weekend.
A whole week must always be entered (7 digits).
1 = heating day, 0 = no heating day
(in the example heating is on the days Monday, Tuesday, Thursday and Friday only)

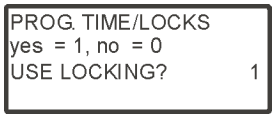
Example:



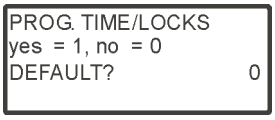
Inhibit times

The operation of the entire machine or only individual selection buttons may be very flexibly set via the inhibit times. A total of 4 inhibit times may be set.

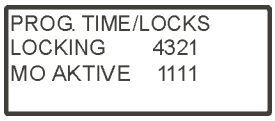
Switch inhibit times on/ off
0 = inhibit times not active, machine is always operational
1 = inhibit times active, machine only operational during the set times



Switch basic values on/ off
0 = inhibit times may be set individually
1 = basic values

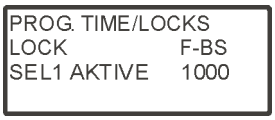


Assign validity of the 4 optional times for each week day individually
0 = not valid
1 = valid, inhibit time active
Select button E = week days (Mon - Sun)



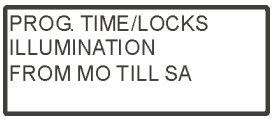
Couple selection button function with the inhibit times

F = free vend	B = price B	I = inhibit
Selection xx: 0000		No inhibiting
Selection xx: 0001		Inhibited during the inhibit time
Selection xx: 1000		Set to free vend during the inhibit time
Selection xx: 0010		Set to price B during the inhibit time



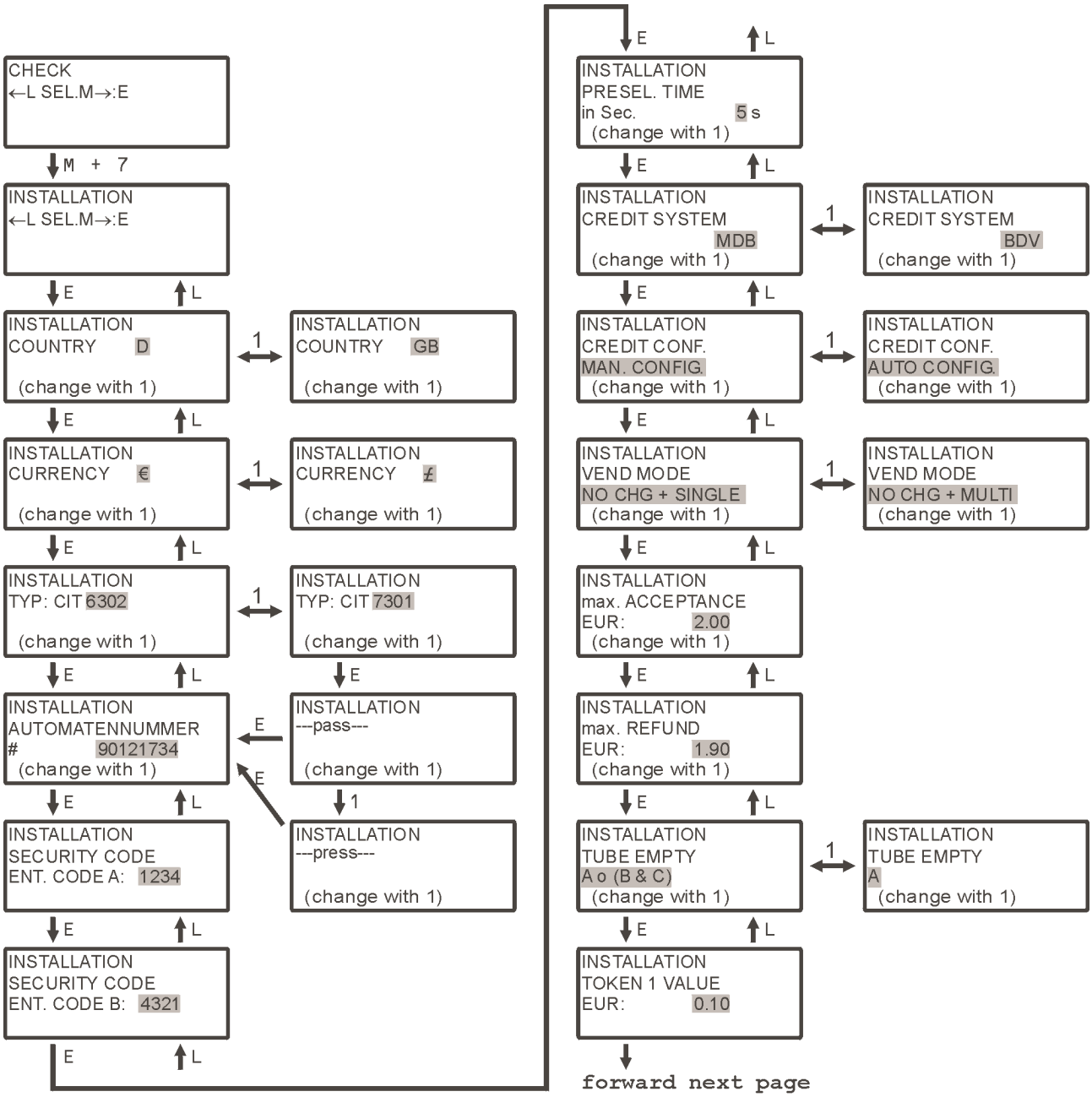
Illumination

Set the period and days on which the advertising illumination is switched on.
Entering of the weekdays is via the digit keypad.
(1 = Mon, 2 = Tues, 3 = Wed, 4 = Thurs, 5 = Fri, 6 = Sat, 7 = Sun)



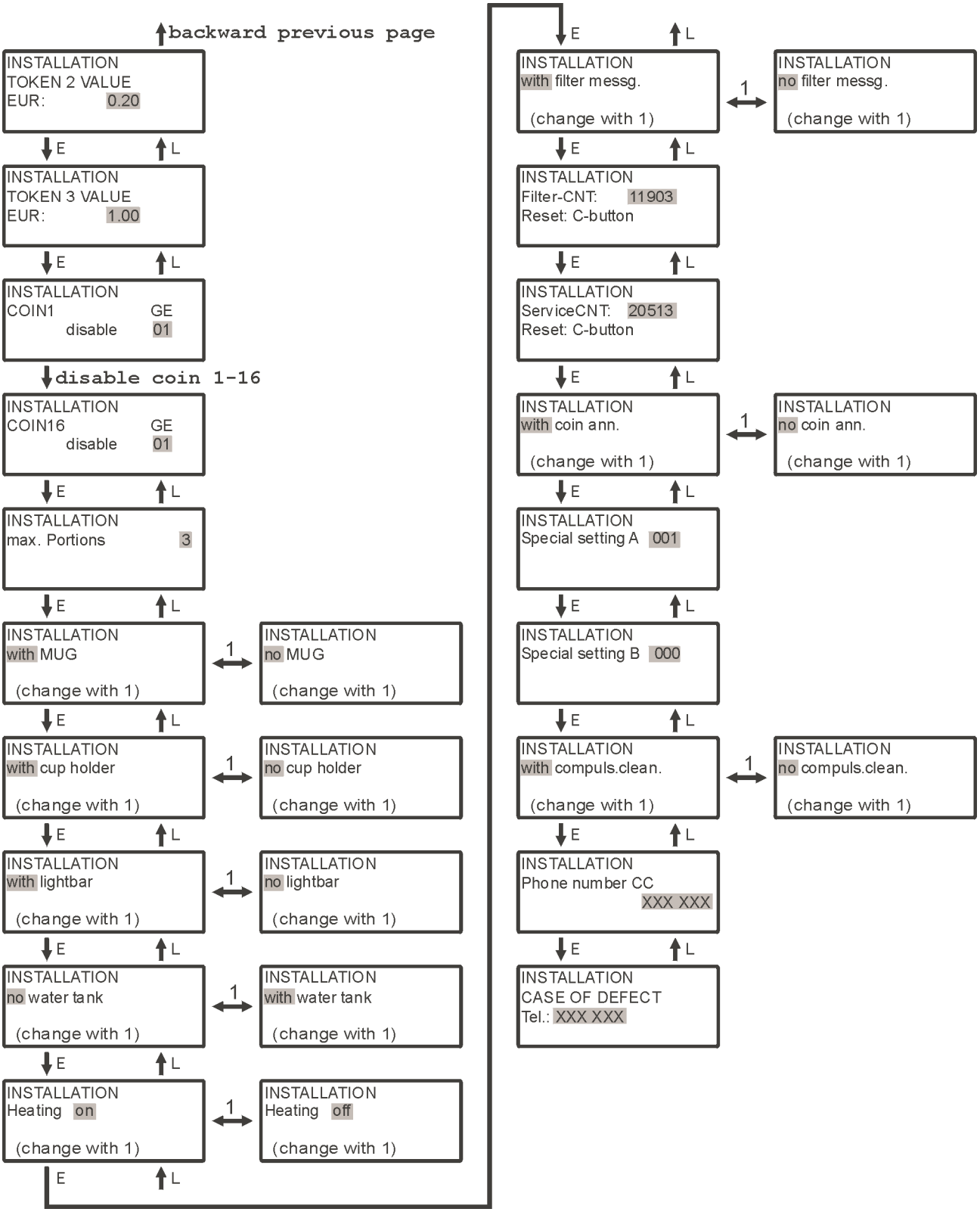
10.10 Installation menu (M7)

In the Installation menu the machine parameters country, currency, machine type, machine number (see type plate), inhibit codes, credit system, vend mode, coin changer parameters, appliance options and service telephone number are set.
Move through the menu stages using selection key 1. Acknowledge required option via button E.



NOTE
Machine type
The set machine type must correspond to your machine variant (see chapter 13.2).

Machine control



Language change

When changing language the following values are set from the program data:

- Currency of the country
- Code selection texts
- Motor texts
- Displayed messages (errors, instructions, menu...) are displayed from the change into the respective language from then on.

Machine type

The machine type must be set according to its machine variant (see sticker on the machine interior or chapter 13.2).

Variant change

When changing selected variants the new data is loaded from the programming data (factory settings). The data comprises the following:

- Temperature values
- Display texts (in the current language)
- Definitions for container, mixer, fan arrangement
- Products (dosing) featured in this variant
- Option assignments
- Product default prices

Pre-selection times

The pre-selection time describes the maximum waiting time in seconds (selection buttons light up) for automatic drink dispensing following coin insertion.

Credit system

Selection of the credit system used (see chapter 14.4).

Cred. Config.

Automatic or manual setting of the coin switching device configuration
(see separate coin switching device manual for further information).

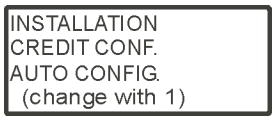
Vending mode

Setting of the required vend mode

NO CHG	Compulsory vending:	After coin insertion at least one drink must be bought before coins are refunded
CHANGE	Coin return:	No drink need be bought, on aborting coins are refunded (with this setting the machine may be misused as a coin changer)
MULTI	Multi vend:	In the case of over-payment the machine expects further drink selection Aborting and refunding is possible
SINGLE	Single vend:	In the case of over-payment refunding is automatic following drink selection

Max. acceptance

Setting the maximum acceptance of coins
Is not displayed with AUTO CONFIG.



Max. refund

Setting the maximum refund of coins
Is not displayed with AUTO CONFIG.

With/ without MUG

If a cup holder is installed it can be switched on here.

With/ without cup holder

This function only appears if the cup holder is switched on. If it is set to “cup not compulsory” the machine will still be operational even if the cup holder is empty, provided that the customer uses his/ her own cup/ mug.

Light barrier on/ off

If a light barrier is installed it can be switched on here. Only if the light barrier detects a cup, a drink will be delivered.

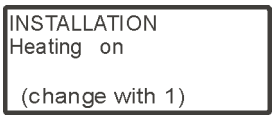
Boiler heater on/off

This point switches on the boiler heater.

NOTE

Only once the boiler heater is switched on in the Installation menu may the water be heated at the times set in the Clock/ Inhibit menu.
The heater is switched off automatically:

- During software updating
- Following data error



max. Portions

Setting the maximum number of portions for the selection button "Pot". The maximum number that can be set is 9.

With/ no compuls. clean.

If the option for essential cleaning is set, a warning is displayed after 300 vends that cleaning should be done. After another 20 vends the machine stops operating.

Special settings

Here a value may be entered in order to activate one or several of the following special settings. If several of these functions are to be set the sum of the corresponding numbers must be entered. If, for example, refilling of the boiler during product dispensing is to be permitted (01) and no supply valve test performed (08), 09 must be entered.
The entering of a new value deletes the previous value, therefore before programming is should be determined which special settings are to be set.

Special settings A:

01	That permit refilling of the boiler during product dispensing
02	Prohibit return pumping after water dispensing
08	No supply valve test at the end of the rinse program
64	No error set for standby-leakage monitoring.
128	For vend price 0.00, after incorrect cup dispense money is refunded by pressing the refund button even if product has been dispensed.

Special settings B:

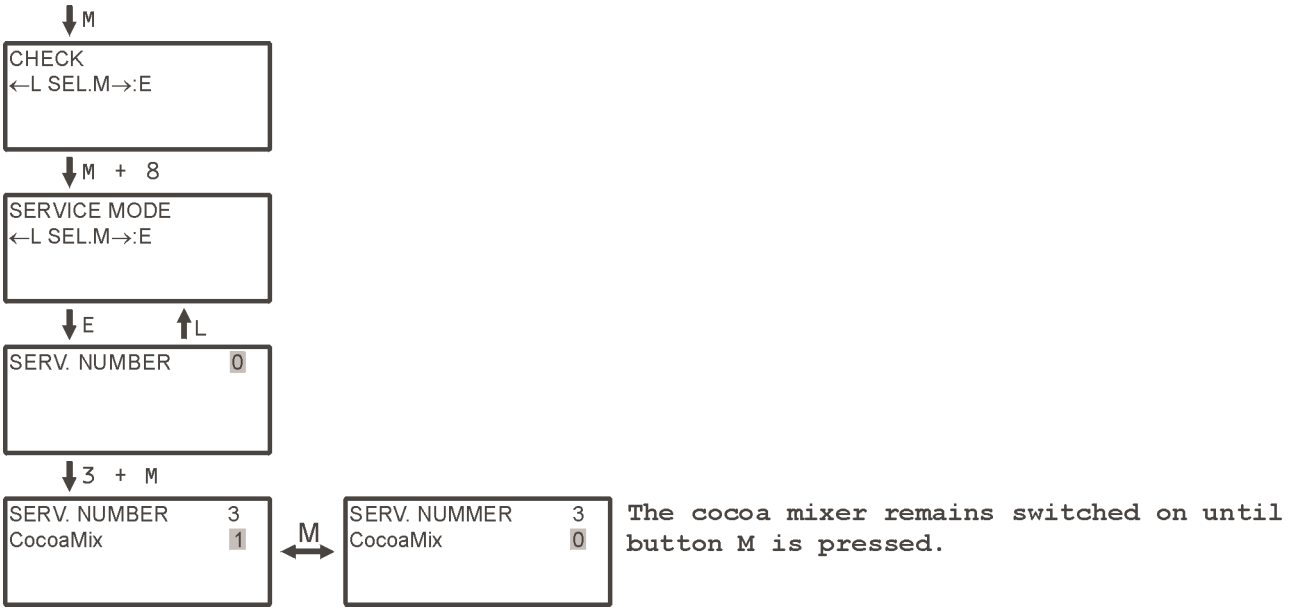
01	No water spray when the brewer is referencing
02	No water spray when the coffee dregs are being discarded (end of the brewing process)
08	Switch from 12 selections to 14 selections

10.11 Service menu (M8)

In the Service menu, all important machine parameters are displayed. Service mode provides support during error location and machine maintenance.
Various functions may be tested and the coin changer may be emptied.

NOTE
Service jobs must be performed with the machine door open.
The service key must be inserted in the door switch.
Machine components are triggered directly.

Example: Test cocoa mixer



NOTE
Button E increases the service number.
Button M changes the function status.

10.11.1 Service numbers

The service numbers are divided into categories M, double M and L functions.
The M functions are suitable for testing control outputs that are to respond to a motor or similar actors. L functions display a value

No.	Button	Display	Note
1	M	Valve coffee grinder	
2	M	Mixer coffee 2	
3	M	Mixer cocoa	
4	M	Mixer tea	
5	M	Mixer soup	
6	M	Mixer topping/ CSP1	
7	M	Mixer sugar	
8	M	Mixer whitener	
10	M	Coffee grinder	→ as long as M is pressed, the grinder works
11	M	Dosing motor coffee 2	
12	M	Dosing motor cocoa	
13	M	Dosing motor tea	
14	M	Dosing motor soup	
15	M	Dosing motor topping/ CSP1	
16	M	Dosing motor sugar	
17	M	Dosing motor whitener	
19	M	Valve supply 1	
20	M	Valve supply 2	
21	M	Brewing valve	
22	M	Valve coffee 2	
23	M	Valve cocoa	
24	M	Valve tea	
25	M	Valve soup	
26	M	Valve topping/ CSP1	
27	M	Valve sugar	
28	M	Valve whitener	
29	M	Valve hot water	
33	M	Fan	
34	M	Heater	**CAUTION!** The heater can burn out
47	M	Illumination	
50	M	Coin return	
54	M	Turn cup unit	
56	M	Cup	
57	M	Close brewing chamber	
58	M	Open brewing chamber	
59	M	Advance swivel arm	

No.	Button	Display	Note
60	M	Retract swivel arm	
86	M	Pressure test	
87	M	Empty boiler	Shut off water supply
88	M	Refill boiler	
7	L	Boiler temperature	At 255 °C the sensor or supply line is defective Short circuit or interruption Water too cold
8	L	Operating voltage of motors in mV	
14	L	Output value light barrier	Cup detection if value = 1
17	L	Position contact and sensors	Explanation of displayed values on page 109
18	L	Display keyboard status	Display change on actuation
21	L	Display software version	E.g.: HVI5S708
22	L	Display operating days	
23	L	Display operating hours	
25	L	No. of rinses	Sum of rinses
69	L	Statistics can be read out once more	
85	L	Set machine in a flash load status	see chapter 11.14 Software upload with programming device

Double M functions

No.	Display	Note
99 M 81 M	Generate data error 81	
99 M 89 M	Save all parameter settings as flash back-up	
99 M 90 M	Read out flash memory	
99 M 123 M	Switch on heater	Following boiler emptying or software upload if not already switched on in the Installation menu

Display software version

Enter the number 21 + L in the Service menu. The software version is indicated on the display.

Data errors

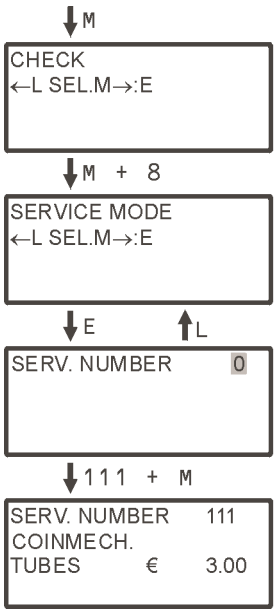
Data errors mean that special data in the RAM reveal a check sum error. This indicates that the data is no longer valid and must be restored so that the machine may continue to operate. A data error is triggered if:

- when switched off the battery can no longer supply the RAM (under 2V)
- 99+M+81+M is initiated in the Service menu

In these cases on restarting the control the invalid operating data must be overwritten by valid data. If a *flash back-up data* record exists it will be written into the RAM as new operating data. As a rule the user does not notice this process, only the heater must be re-enabled (for safety reasons). If no flash back-up data exist, the factory settings from the program data will become the operating data.

Empty refund tubes

On replacing the coin switching device or control the tube summator must be reset.
The refund tubes must be completely emptied for this purpose.
Enter the corresponding service number and execute via button M.



The tube contents are emptied.

Service numbers for emptying coin tubes:

	3-Tube changer		4-/ 5-Tube changer	
	all coins	single coins	all coins	single coins
Tube 1	111	101	115	105
Tube 2	112	102	116	106
Tube 3	113	103	117	107
Tube 4			118	108
Tube 5			119	109

If coins remain in the tubes, they must be removed via the coin switching device (MSD) service keypad.
The assignment of the coins to the tubes is specified on the MSD manufacturer's type plate.

Fill refund tubes

- Insert coins in the coin switching device (In the case of acceptance limitation of the max. set amount)
- Press button E
- Actuate button R

On first-time filling approx. 20 coins should be inserted per coin tube. The machine is thus operational.

NOTE
If the Service menu is active the tubes may also be filled directly via the coin slot. The control then counts the inserted coins.

11 MAINTENANCE

During all repair and maintenance work the greatest care and attention must be exercised.

The safety instructions must be observed.

Only original SIELAFF spare parts may be used and mounted.

DANGER live electrical components
Risk to life!

- Switch off machine and disconnect mains plug prior to maintenance and repair work

WARNING! Risk of bruising!
When the safety device are overridden for service jobs a danger of bruising exists on the brewer and brewing chamber.

WARNING! Hot surfaces
Danger of burning!

- Allow the machine to cool down prior to maintenance and repair work

CAUTION!
Hoses and water lines must not be kinked

ESD-sensitive components
In the event of improper handling destruction of components!

- Only qualified personnel with ESD knowledge are authorised to intervene

NOTE
Maintenance and repair jobs may only be performed by trained and qualified personnel!
Maintenance and repair jobs to electrical machine equipment may only be performed by an authorised electrician!

11 Technical manual CVT

Maintenance

11.1 Maintenance list

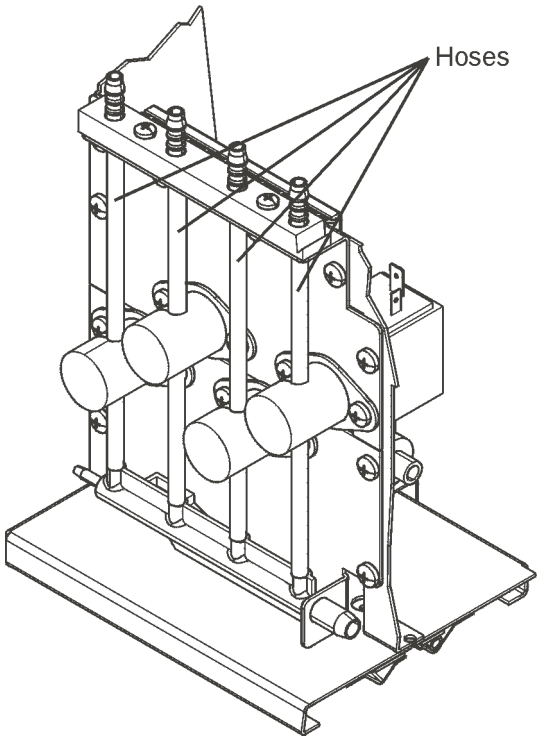
Component	Measure	Frequency	Auxiliary medium	Chapter
Fan	Check function and clean	Half-yearly	Service number 33M	11.11
Water circulation system	Check for leakages and scale	Half-yearly		
Boiler	Decalcify	Depending on the water quality, at least half-yearly		11.3
Mixer water coupling and nozzle	Clean and replace	Depending on the water quality, at least half-yearly	402 00 326 00	
Mixer wing	Replace	Yearly or after 25,000 vends *	404 00 309 00	11.10
Flange (V-ring and O-ring)	Replace	Yearly or after 25,000 vends *	V-ring: 404 00 331 01 O-ring: 952 40 040 25	11.3
Brewer (O-ring)	replace	yearly or after 25,000 vends*	952 10 031 35	11.4
Discharge hoses	Replace	Yearly	985 13 420 31	
Discharge hose of brewer	Replace	Yearly	985 13 420 16	
Silicon hoses (boiler, distributor, mixer)	Check for leakages	Replace annually if necessary	985 13 420 31	
Valve hoses	Replace	Yearly or after 25,000 vends *	404 00 434 00	11.2
Hose clamping valves	Check	Yearly or after 25,000 vends *		
Mixer housing and mixer motor	Check	Yearly or after 25,000 vends *		
Water inlet valves	Function check	Yearly	Service numbers 19M and 20M	
Product container	Check, if necessary replace	Yearly		
Water quantities	Check, if necessary set	Yearly	Measuring jug	10.5
Dosing	Check, if necessary set	Yearly	Measuring jug, scale with 0.1g precision	10.5
Brewing temperature	Check, if necessary set	Yearly	Thermometer	
Checking to VDE 0701		Every 2 years		

* Depending which occurs first!

11.2 Replace valve hoses

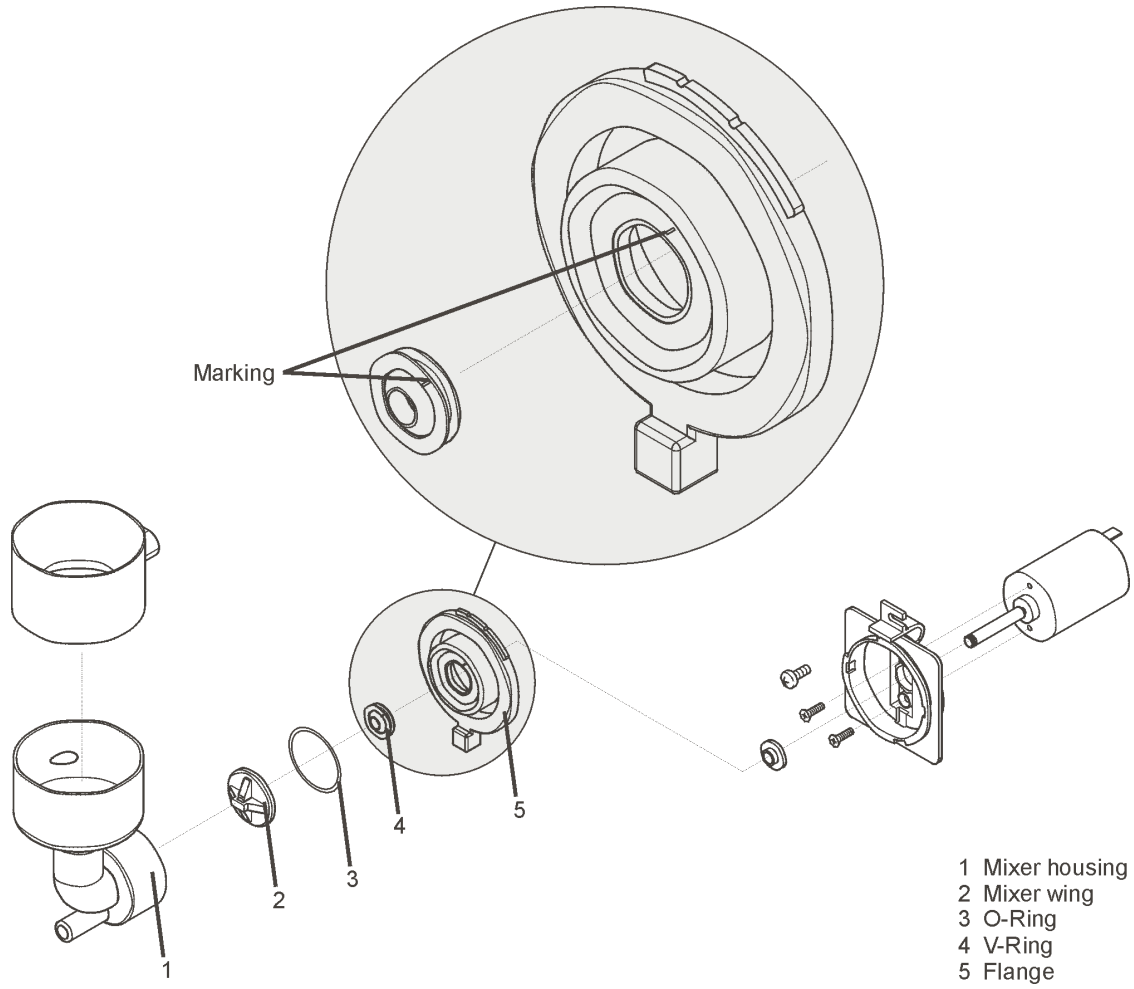
CAUTION!
To prevent leakages during operation the hoses must be replaced annually.
Only platinum-linked silicon hoses may be used. Article reference: 404 00 434 00.

- Shut off on-site water connection
- Switch off machine and disconnect mains plug
- Remove boiler cover (2 screws)
- Renew silicon hoses. Insert the new hoses in the valves.
  The silicon hoses must not be kinked.



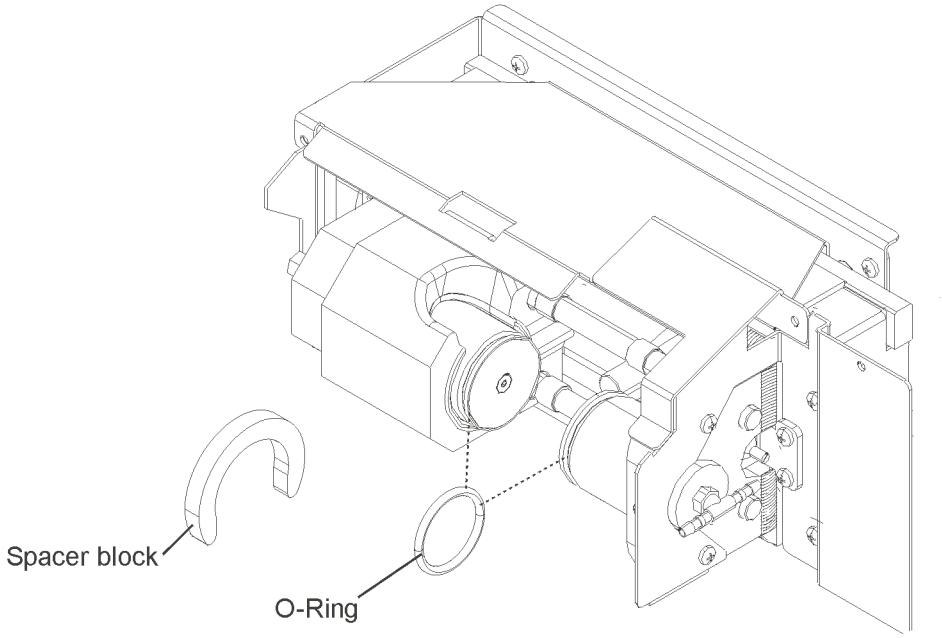
11.3 Replace washers on the flange

- Turn the flange to the right
- Remove mixer housing with air extraction (1) at the front
- Remove mixer wing (2)
- Turn the flange (5) to the left and remove
- Replace both washers (O-ring (3) and V-ring (4))
  The mixer wing may also be replaced
- On inserting the V-ring ensure that the marking on the flange and the marking on the washer match
- Reinsert all parts in reverse order



11.4 Renewing brewer seal

WARNING! Risk of bruising!
When the safety device are overridden a danger of bruising exists on the brewer
- remove service key before removing the brewer seals

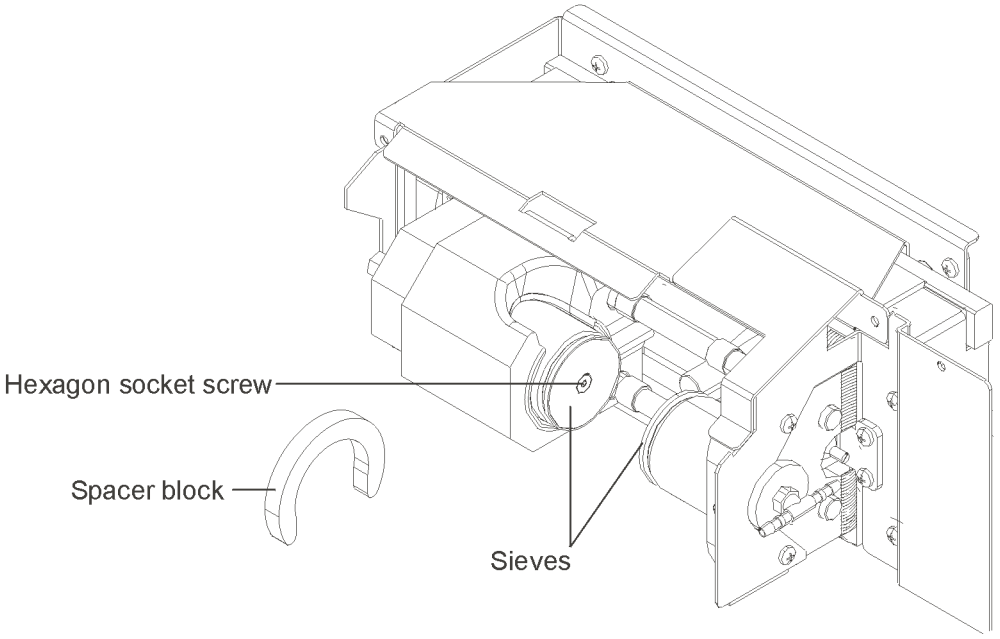


- Open the door, insert service key
- Remove brewer cover
- Take out spacer block
- Enter 58 M in the service menu to open the brewing chamber
- Remove service key
- Remove O-rings
- Place new O-rings
- Insert service key
- Enter 57 M in the service menu to close the brewing chamber
- Remove service key
- Replace spacer block
- Put on brewer cover
- Close machine door

NOTE
Discard the old O-ring.

11.5 Renewing brewer sieves

WARNING! Risk of bruising!
When the safety device are overridden a danger of bruising exists on the brewer
- remove service key before removing the brewer sieves



- Open the door, insert service key
- Remove brewer cover
- Take out spacer block
- Enter 58 M in the service menu to open the brewing chamber
- Remove service key
- Remove sieves by removing the hexagon socket screw in the centre of the sieve.
- Insert new sieves and fix with hexagon socket screw
- Insert service key
- Enter 57 M in the service menu to close the brewing chamber
- Remove service key
- Replace spacer block
- Put on brewer cover
- Close machine door

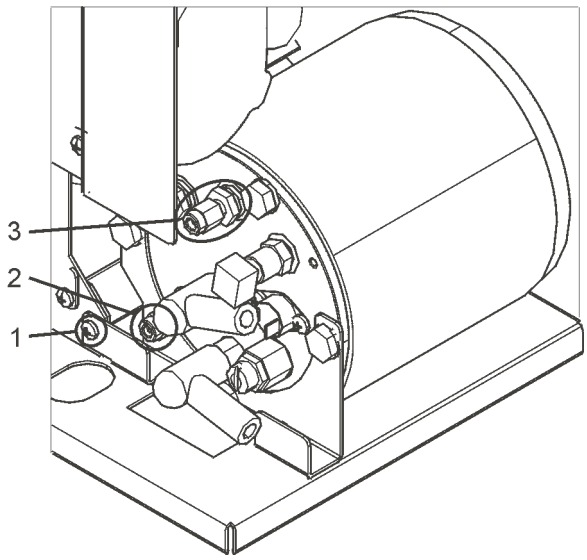
NOTE
After cleaning the removed sieves can be used again.

11.6 Boiler dismantling

DANGER! Live electrical components
Risk to life!

- Prior to dismantling the boiler switch off the machine and disconnect the mains plug

1. Open the door and insert the service key.
2. Switch off boiler heater in service menu.
3. Fill the espresso boiler in service menu (M 8 E, service number 88M).
   This has to be done possibly twice to cool down the boiler
4. Switch off the machine
5. Remove boiler cover
6. Separate the boiler heater
7. Loosen the retaining screws at the bottom of the boiler (Pos 1).
8. Pull out the boiler to the front.
9. Remove the hose on Pos. 2 at first, then the hose on Pos. 3.
   Water runs out of the boiler into the drip container.
10. Separate all hoses and electronic connections to the boiler.
11. Take out the boiler frontwards



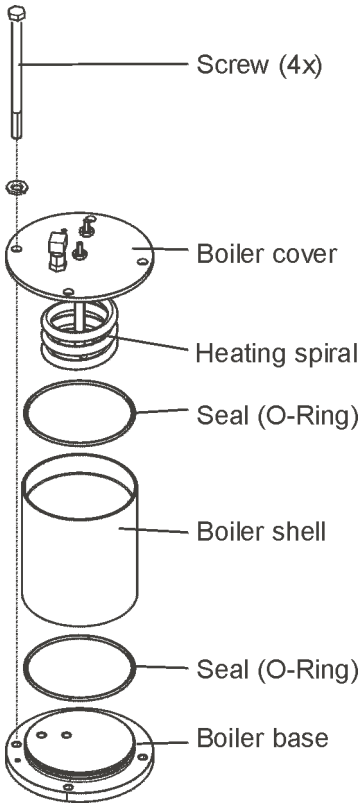
11.7 Descale the boiler

Depending on the local water quality the boiler must be descaled regularly.
A commercially available de-scale agent may be used for descaling purposes. The latter must be compatible with foodstuffs.

NOTE
To assure fast drink preparation the boiler should be de-scaled at least every six months.

NOTE
Manufacturer recommendation
From a water hardness of 8°dH onwards a water filter should be fitted upstream.

- Remove the espresso boiler as described above.
- Remove insulation
- Remove the 4 screws. Dismantle the boiler as shown here in the picture
- Decalcify the single parts of the boiler except the seals.
- Re-build the boiler in reverse order. Pay attention to the correct positioning of the seal rings on the boiler.
- Install the insulation on the boiler.
- Re-install the boiler and secure it with the screw
- Install all cables and hoses.
- Switch on the machine.
- Fill the boiler in service menu (service number 88M).
- Switch on the boiler heater in the installation menu

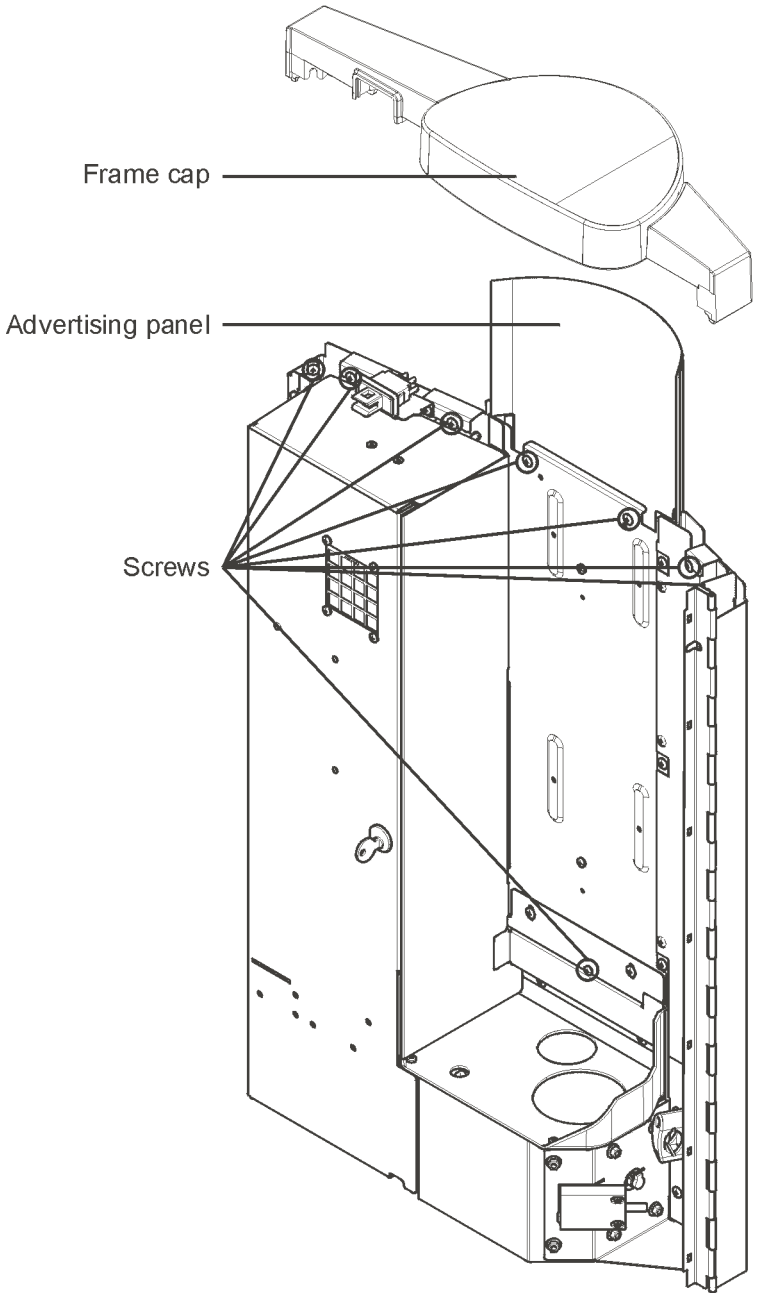


11.8 Replace advertising panel and illumination

- Remove frame cap
  after loosening 7 screws you can lift up the frame cap.
- Remove the lower screw
- Remove the advertising panel upwards

Mounting is performed in reverse order.

NOTE
To replace the advertising illumination the advertising panel must also be removed.



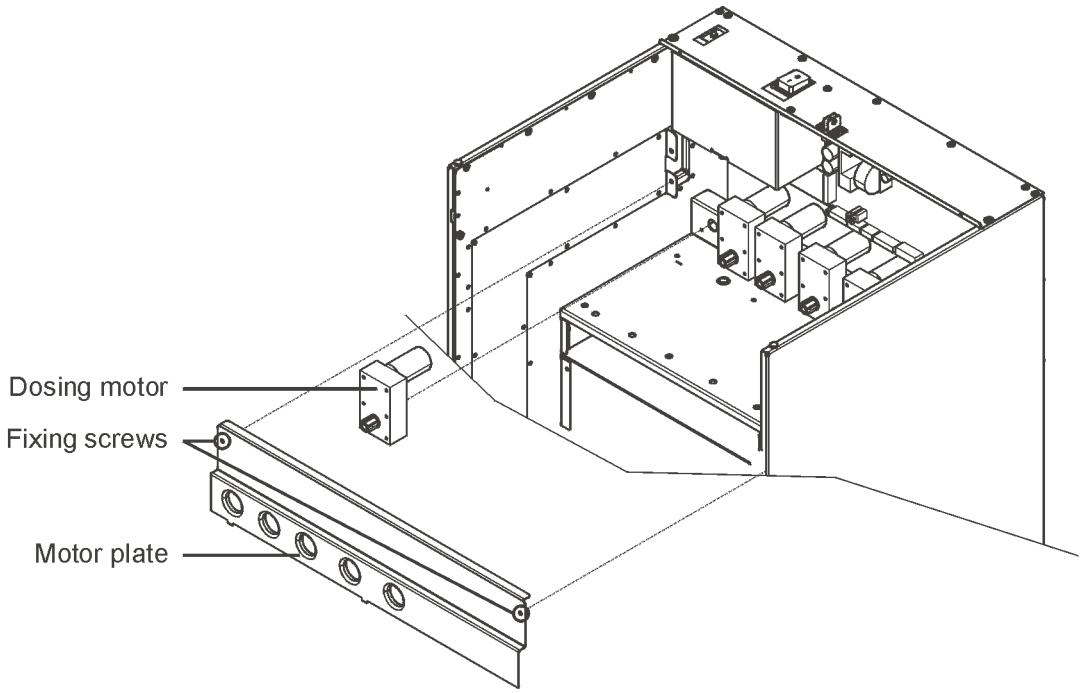
11.9 Dosing motor dismantling

DANGER! Live electrical components
Risk to life!

- Prior to dismantling the dosing motors switch off the machine and disconnect the mains plug

- Close product chutes und bean container
- Remove product containers and bean container
- Remove two fixing screws on the motor plate
- Remove motor plate at front
- Loosen motor plug connection
- Remove two motor fixing screws and remove motor

Mounting is performed in reverse order.

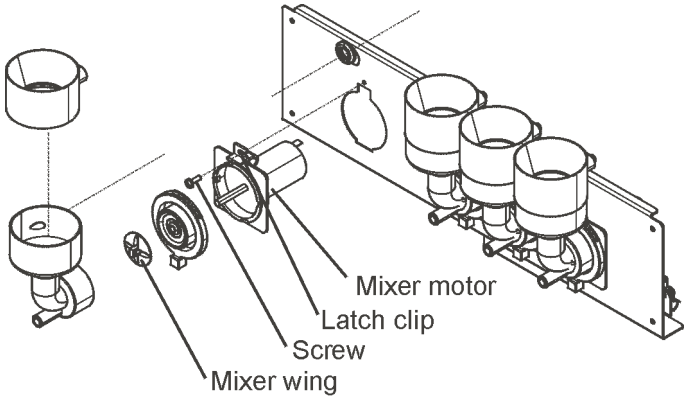


11.10 Mixer motor dismantling

DANGER! Live electrical components
Risk to life!

- Prior to dismantling the mixer motors switch off the machine and disconnect the mains plug

- Close product chutes
- Remove product container
- Remove the top centre screw
- Push the mixer plate up and out and disconnect the power supply line
- Pull off the mixer wing at the front
- Turn bayonet lock ring in anti-clockwise direction to stop and pull off at front
- Press latch clip downwards and remove motor with plastic flange from the mixer plate
- Insert new motor accordingly



Mounting is performed in reverse order.

NOTE
When mounting the mixer wing the marking must point towards the axle surface.

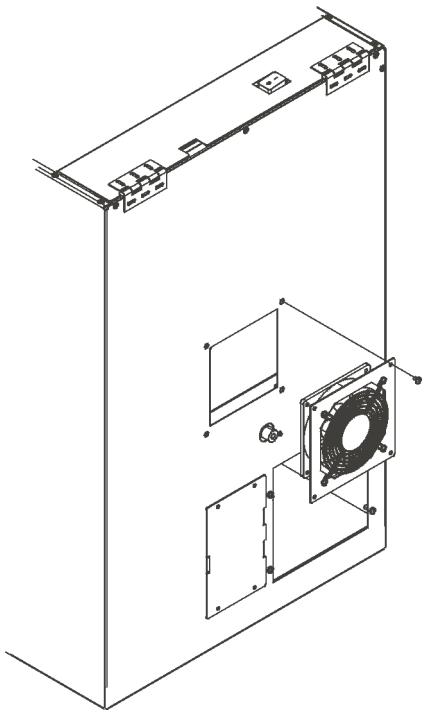
11.11 Fan dismantling

DANGER live electrical components
Risk to life!

- Switch off the machine and disconnect the mains plug prior to dismantling the fan

The fan is accessible from the back of the vending machine. After removing four screws, you can take out the holding plate and exchange the fan.

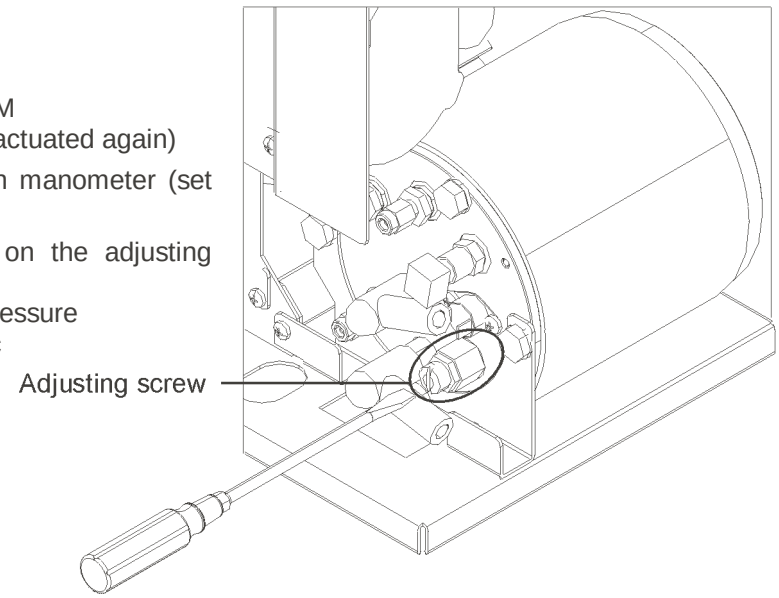
NOTE
On inserting the fan, please ensure that the arrow on the fan housing points towards the machine rear.

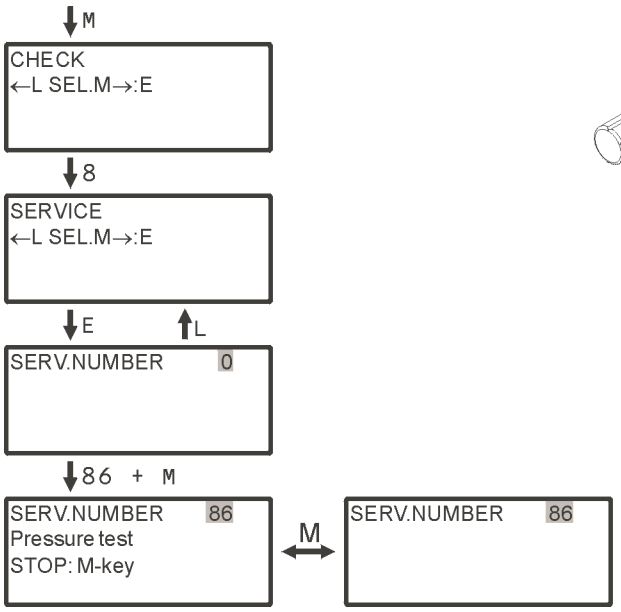


11.12 Pump pressure test

n the Service menu a pump pressure test may be performed via a service function.
The dynamic pressure is displayed on the manometer during the test. The set value is 10 bar.

- Call up Service menu
- Enter function 86
- Switch on the pressure test via button M
  (remains switched on until button M is actuated again)
- Read off current dynamic pressure on manometer (set value: 10 bar)
- If necessary, set dynamic pressure on the adjusting screw
  turn to the right → increase dynamic pressure
  turn to the left → decrease dynamic pressure





The pressure test must be stopped via button M.

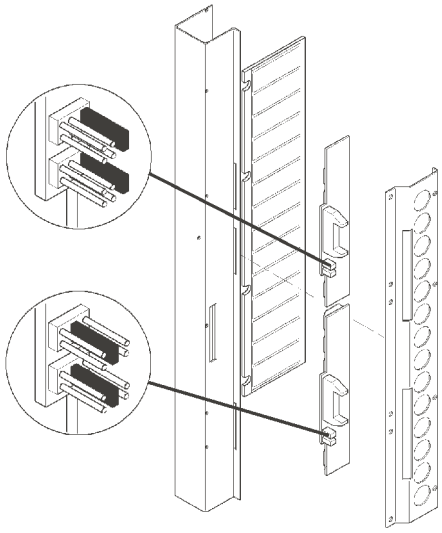
11.13 Selection keypad jumper field

When replacing the selection keypad the position of the jumpers must be checked. The jumpers address the selection buttons.

NOTE
Only correctly connected jumpers ensure correct drink dispensing on drink selection.
If jumpers are incorrectly connected either not the selected drink or no drink at all will be dispensed.

The jumpers in the top jumper field must be connected vertically in the right hand side position.

The jumpers in the bottom jumper field must be connected vertically in the centre position.



11.14 Software upload with programming device

The programming device is a small electronic unit in which the most up-to-date current software version is saved. Article reference: **Complete programming device 890 11 502 00**

- Open door
- Switch off machine at main switch
- Insert programming device in MBD socket on the display.
- Switch on main switch
- Insert service key
- Call up Service menu and switch control via service number 85 + L to flash load status (LED on the programming box lights up green)
- Press button E on the programming box during transmission the green LED flashes on the programming box.
  In the display „Flash load“ (approx. 3min) is indicated
- Once transmission is complete „LOAD OK VERS....." is indicated on the display.
- Switch off main switch and remove service key
- Disconnect programming device (possibly re-insert existing credit system)
- Switch on main switch
- Switch on the heater in the Installation menu and check that all machine constants (e.g. machine type, credit system etc.) are correct
- Check machine functions in the Test vend menu

12 ERROR MESSAGES

Error messages are divided into three groups. Affiliation to a group decides on whether the message is indicated on the display or not.

Group	Meaning
No external display	Messages from this group are not indicated on the display. They may be called up in the Check menu.
External error number	Messages from this group indicate an error number on the display. The meaning of the error numbers may be found in the following list.
Clear wording	Messages from this group are indicated on the display. Based on this message appropriate measures may be performed immediately.

NOTE
Errors within a group may be added together! It is thus possible that an error number is displayed that is not featured in the table.
Example: An error 9.5 is displayed. This means that errors 9.4 and 9.1 have occurred.

Error number (group)	Error number	Event/ error (description)	External display			out of service
			Error number	No display	Clear wording	
1	81	Data error 81	X			X
1	82	Data error 82	X			X
1	83	Data error 83	X			X
1	85	Remote maintenance			X	X
1	11	Procedure error, division by zero		X		
2	64	Credit system communication			X	X
3	8	Switched off during vending (Timing error)		X		
4	8	Button jammed			X	
5	32	Temperature too low			X	X
6	64	Lack of water (manometric switch)				X
7	1	Brewer stance incorrect, reference run		X		
7	2	Brewer cannot be positioned	X			
7	32	Brewer error, temporary out of service				X
9	1	Cup carousel empty			X	
9	2	Cup empty			X	
9	4	Cup unit (e.g. timeout)	X			
9	8	Cup dispensing timeout	X			
9	32	Cup empty, “with MUG“ → out of service			X	X
10	32	Moisture in system, no sensor	X			X
10	64	Moisture in system, no sensor	X			X
11	1	Inlet valve defective	X			
11	2	Inlet valve defective	X			
11	4	Inlet valve defective	X			
11	32	Water level sequence wrong	X			X
11	64	Water sensors defective				X
12	32	Temperature sensor defective	X			X
13	32	Out of commission, night time reduction			X	X
15	32	Cleaning interrupted	X			X
16	32	Light barrier continually set			X	X
17	1	Water must be refilled for a long time			X	

Error messages

Error number (group)	Error number	Event/ error (description)	External display			out of service
			Error number	No display	Clear wording	
18	32	Pressure sensor defective	X			X
19	32	Coin refund def.	X			X
22	1	Brewing motor lines open	X			
23	32	Door open			X	X
24	32	Heater not enabled			X	X
25	32	Wrong software/ keypad			X	X
26	32	Swivel arm defective			X	X
26	64	Swivel arm timeout			X	X
28	1	Warning bean hopper empty			X	
29	16	Warning: Cleaning should be performed	X			
29	32	It is essential that cleaning be performed	X			X
30	1	Warning: Replace filter		X		
30	2	Max. no. of errors per day exceeded		X		
31	1	No vending for approx. 24 hrs		X		
31	2	no vend for 24 hours		X		
63	0	Motor error: Brewing motor Timeout				
65	0	Error: MDB coin mech			X	
66	0	Error: MDB card reader			X	
67	0	Error: MDB bill validator			X	
69	0	Error: MDB slave machine			X	

13 FACTORY SETTINGS

13.1 Abbreviations

Display (standard values)	Drink abbreviation	
Americano	AMI/ AMIl	
Cafe au lait	CAL/ CALl	
Cappuccino	CAP1/ CP1l	(Cof 1, SU, WH)
Cappuccino	CAP2/ CP2l	(Cof 1, SU, WH, Cocoa)
Cappuccino	CAP3/ CP3l	(Cof 2, SU, WH, Cocoa)
Cap. Spec.	CSP1/ CP1l	Cappuccino special (InCap)
Espresso	EXP/ EXPl	
EspressoChoc	EXCO/ EXCl	(Cof 1, SU, WH, Cocoa)
EspressoChoc	ESC2/ ES2l	(Cof 2, SU, WH, Cocoa)
Hot water	HW	
Coffee	COF1/ CO1l	(Cof 1)
Coffee	COF2/ CO2l	(Cof 2)
Macchiato	MAC/ MACl	
Milk	MIL/ MILl	
Chocolate	CHOC/ CHOl	
Chocomilk	COM/ COMl	
Soup	SOUP/ SOUl	
Tea	TEA1/ TE1l	

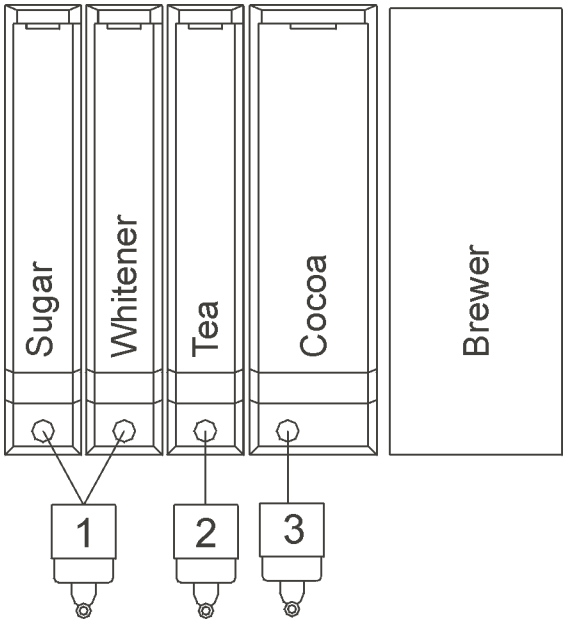
Preselection/ option-Abbreviation	Function
ST	Start of drink dispensing
NCU	No Cup
SU	Sugar (one stage)
SU>>	Sugar (three stages)
NOSU	no Sugar
WH	Whitener (one stage)
WH>>	Whitener (three stages)
>>	Stronger
<<	Weaker
LASM	Larger/ smaller
+MOC	Mocca pre-selection (water reduction)
Pot	X-fold cup portion

13.2 Machine variants

13.2.1 Variant 4301

The variant features 3 mixers and 4 product containers.

	Sub-products							
Drinks abbrev.	Coffee1	Tea	Sugar	Whitener	Cocoa			
COF1	X		Z	Z				
EXP	X		Z	Z				
CAL	X			X				
CAP1	X		Z	X				
CAP2	X		Z	X	X			
ESCO	X		Z	X	X			
AMI	X		Z	X				
MAC	X		Z	X				
CHOC					X			
COM			Z	X	X			
MIL			Z	X				
TEA		X						
HW	HW valve available as special accessory							



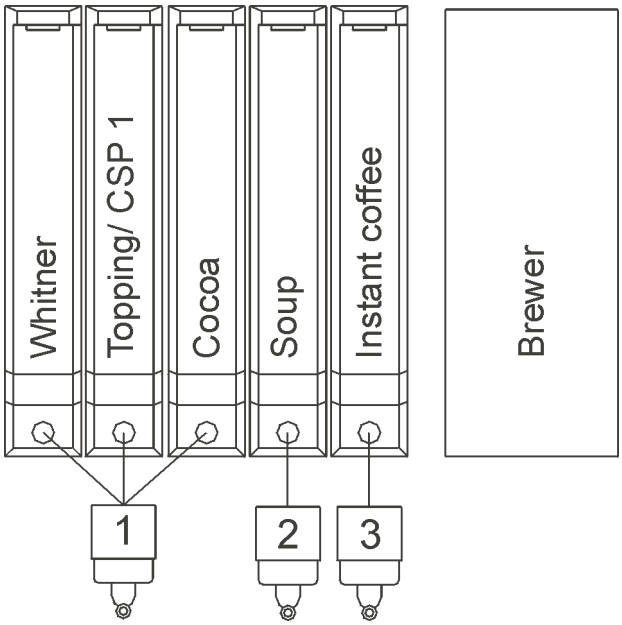
Selection buttons			Programming	Price (EUR)	
				A	B
1	**(31)**	Extra Sugar	SU>>		
2	**(32)**	Extra Whitener	WH>>		
3	**(33)**	Espresso	ST + EXP	0,50	0,50
4	**(34)**	Coffee	ST + COF1	0,50	0,50
6	**(36)**	Coffee with Sugar	ST + COF1 + SU	0,50	0,50
7	**(37)**	Coffee with Whitener	ST + COF1 + WH	0,50	0,50
8	**(38)**	Cappuccino	ST + CAP1	0,50	0,50
9	**(39)**	EspressoChoc	ST + EXCO	0,50	0,50
10	**(40)**	Café au lait	ST + CAL	0,50	0,50
11	**(41)**	Chocolate	ST + CHOC	0,50	0,50
12	**(42)**	ChocoCreme	ST + COM	0,50	0,50
13	**(43)**	Tea	ST + TEA	0,50	0,50

Z = Pre-selection

13.2.2 Variant 5303

The variant features 3 mixers and 5 product containers.

	Sub-products							
Drink abbrev.	Coffee1	Instant Coffee	Soup	Topping	Whitener	Cocoa		
COF1	X				Z			
COF2		X			Z			
COF3	X			Z				
EXP	X				Z			
CAL	X				X			
CAP1	X				X			
CAP2	X				X	X		
CAP3		X			X	X		
EXCO	X				X	X		
EXC2		X			X	X		
AMI	X				X			
MAC	X				X			
CHOC				X		X		
COM					X	X		
MIL					X			
SOUP			X					
CSP1				a1				
HW	HW valve available as special accessory							



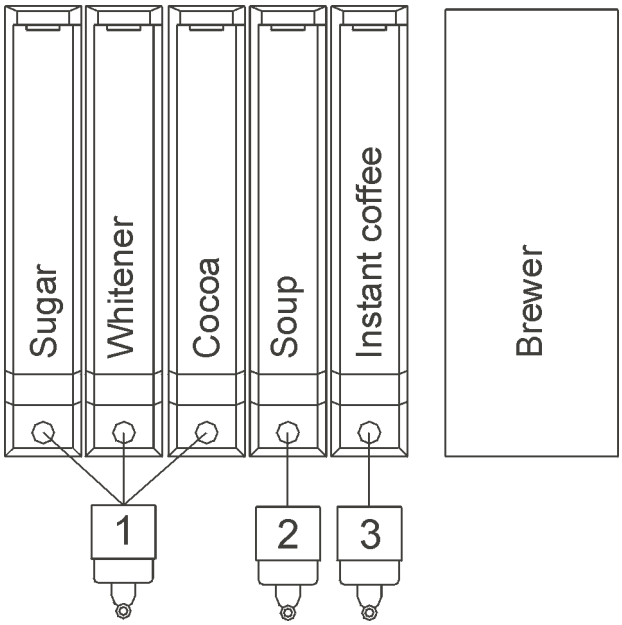
Selection buttons			Programming	Price (EUR)	
				A	B
1	(31)	Espresso	ST + EXP	0,50	0,50
2	(32)	Coffee	ST + COF1	0,50	0,50
3	(33)	Cappuccino Choco	ST + CAP2	0,50	0,50
4	(34)	Café au lait	ST + CAL	0,50	0,50
6	(36)	Americano	ST + AMI	0,50	0,50
7	(37)	Coffee Vanilla	ST + COF1 + TOP	0,50	0,50
8	(38)	Chocolate	ST + CHOC	0,50	0,50
9	(39)	ChocoCreme	ST + COM	0,50	0,50
10	(40)	Instant Coffee	ST + COF2	0,50	0,50
11	(41)	Soup	ST + SOUP	0,50	0,50
12	(42)	Coffee with Milk	ST + COF1 + WH	0,50	0,50
13	(43)	Hot Water	ST + HW	0,50	0,50

Z = Pre-selection
a1 = Alternative instead of topping

13.2.3 Variant 5304

The variant features 3 mixers and 5 product containers.

	Sub-products							
Drink abbrev.	Coffee1	Instant Coffee	Soup	Sugar	Whitener	Cocoa		
COF1	X			Z	Z			
COF2		X		Z	Z			
EXP	X			Z	Z			
CAL	X				X			
CAP1	X			Z	X			
CAP2	X			Z	X	X		
CAP3		X		Z	X	X		
EXCO	X			Z	X	X		
EXC2		X		Z	X	X		
AMI	X			Z	X			
MAC	X			Z	X			
CHOC						X		
COM				Z	X	X		
MIL				Z	X			
SOUP			X					
HW	HW valve available as special accessory							



Selection buttons			Programming	Price (EUR)	
				A	B
1	**(31)**	Extra Sugar	SU>>		
2	**(32)**	Extra Whitener	WH>>		
3	**(33)**	Drink strength	>> + <<		
4	**(34)**	Mocca preselection	+MOC		
6	**(36)**	Espresso	ST + EXP	0,50	0,50
7	**(37)**	Coffee	ST + COF1	0,50	0,50
8	**(38)**	Cappuccino Choco	ST + CAP2	0,50	0,50
9	**(39)**	EspressoChoc	ST + ESCO	0,50	0,50
10	**(40)**	Soup	ST + SOUP	0,50	0,50
11	**(41)**	ChocoCreme	ST + COM	0,50	0,50
12	**(42)**	Instant Coffee	ST + COF2	0,50	0,50
13	**(43)**	Hot Water	ST + HW	0,50	0,50

Z = Pre-selection

13.3 Drink dosing (standard values)

NOTE
The drink dosing standard values may be reloaded by changing the machine variant in the Installation menu. All values are exceeded.
Alternatively, our free SIELECTOR software may be used.

13.3.1 Coffee

COF1/ CO1I	4301	5303	5304
	X		X

		DT [s]		RT [s]		SP [%]	
		COF1	CO1I	COF1	CO1I	COF1	CO1I
Valve coffee grinder	110ml	0.0	0.0	---	---	---	---
Coffee grinder	ca. 8g	0.0	0.0	3.7	3.7	---	---
Brewer press		---	---	---	---	80	80
Brewer press again		---	---	---	---	80	80
Sugar	ca. 4g	0.0	0.0	1.0	1.0	50	50
Mixer Whitener		0.0	0.0	4.0	4.0	100	100
Valve Whitener	40ml	0.0	0.0	---	---	---	---
Whitener	ca. 2.5g	0.0	0.0	1.0	1.0	60	60
Total amount of water	**150ml**						

COF1/ CO1I	4301	5303	5304
		X	

		DT [s]		RT [s]		SP [%]	
		COF1	CO1I	COF1	CO1I	COF1	CO1I
Valve coffee grinder	110ml	0.0	0.0	---	---	---	---
Coffee grinder	ca. 8g	0.0	0.0	3.7	3.7	---	---
Brewer press		---	---	---	---	80	80
Brewer press again		---	---	---	---	80	80
Mixer Whitener		0.0	0.0	4.0	4.0	100	100
Valve Whitener	40ml	0.0	0.0	---	---	---	---
Whitener	ca. 2.5g	0.0	0.0	1.0	1.0	60	60
Total amount of water	**150ml**						

COF2/ CO2I Instant Coffee	4301	5303	5304
		X	

		DT [s]		RT [s]		SP [%]	
		COF2	CO2I	COF2	CO2I	COF2	CO2I
Mixer Coffee 2		1.0	1.0	13.0	13.0	100	100
Valve Coffee 2	140ml	0.0	0.0	---	---	---	---
Coffee 2	ca. 2g	1.0	1.0	1.5	1.5	59	59
Mixer Whitener		1.0	1.0	13.0	13.0	100	100
Valve Whitener	140ml	0.0	0.0	---	---	---	---
Whitener	ca. 2.5g	1.0	1.0	1.0	1.0	60	60
Total amount of water	**140ml**						

COF2/ CO2I Instant coffee	4301	5303	5304 X

		DT [s]		RT [s]		SP [%]	
		COF2	CO2I	COF2	CO2I	COF2	CO2I
Mixer Coffee 2		1.0	1.0	13.0	13.0	100	100
Valve Coffee 2	140ml	0.0	0.0	---	---	---	---
Coffee 2	ca. 2g	1.0	1.0	1.5	1.5	59	59
Mixer Sugar		2.0	2.0	3.7	3.7	100	100
Valve Sugar	64ml	1.0	1.0	---	---	---	---
Sugar	ca. 4g	2.0	2.0	1.0	1.0	50	50
Mixer Whitener		1.0	1.0	13.0	13.0	100	100
Valve Whitener	140ml	0.0	0.0	---	---	---	---
Whitener	ca. 2.5g	1.0	1.0	1.0	1.0	60	60
Total amount of water	**140ml**						

COF3/ CO3I (Cof1, TOP)	4301	5303 X	5304

		DT [s]		RT [s]		SP [%]	
		COF3	CO3I	COF3	CO3I	COF3	CO3I
Valve coffee grinder	110ml	0.0	0.0	---	---	---	---
Coffee grinder	ca. 8g	0.0	0.0	3.7	3.7	---	---
Brewer press		---	---	---	---	80	80
Brewer press again		---	---	---	---	80	80
Mixer Topping		0.0	0.0	4.0	4.0	100	100
Valve Topping	40ml	0.0	0.0	---	---	---	---
Topping	ca. 2.5g	0.0	0.0	1.0	1.0	60	60
Total amount of water	**150ml**						

13.3.2 Espresso

EXP/ EXPI	4301	5303	5304
	X		X

		DT [s]		RT [s]		SP [%]	
		EXP	EXPI	EXP	EXPI	EXP	EXPI
Valve coffee grinder	50ml	0.0	0.0	---	---	---	---
Coffee grinder	ca. 8g	0.0	0.0	3.7	3.7	---	---
Brewer press		---	---	---	---	80	80
Brewer press again		---	---	---	---	80	80
Sugar	ca. 4g	0.0	0.0	1.0	1.0	50	50
Mixer Whitener		0.0	0.0	2.0	2.0	100	100
Valve Whitener	20ml	0.0	0.0	---	---	---	---
Whitener	ca. 2.5g	0.0	0.0	1.0	1.0	60	60
Total amount of water	**70ml**						

EXP/ EXPl	4301	5303	5304
		X	

		DT [s]		RT [s]		SP [%]	
		EXP	EXPl	EXP	EXPl	EXP	EXPl
Valve coffee grinder	50ml	0.0	0.0	---	---	---	---
Coffee grinder	ca. 8g	0.0	0.0	3.7	3.7	---	---
Brewer press		---	---	---	---	80	80
Brewer press again		---	---	---	---	80	80
Mixer Whitener		0.0	0.0	2.0	2.0	100	100
Valve Whitener	20ml	0.0	0.0	---	---	---	---
Whitener	ca. 2.5g	0.0	0.0	1.0	1.0	60	60
Total amount of water	**70ml**						

13.3.3 EspressoChoc

ESCO/ ESCg (Cof1, Cocoa, SU, WH)	4301	5303	5304
	X		X

		DT [s]		RT [s]		SP [%]	
		ESCO	ESCg	ESCO	ESCg	ESCO	ESCg
Valve coffee grinder	74ml	0.0	0.0	---	---	---	---
Coffee grinder	ca. 8g	0.0	0.0	3.7	3.7	---	---
Brewer press		---	---	---	---	80	80
Brewer press again		---	---	---	---	80	80
Sugar	ca. 4g	0.0	0.0	1.0	1.0	50	50
Mixer Sugar		0.0	0.0	4.0	4.0	100	100
Mixer Whitener		0.5	0.5	4.0	4.0	100	100
Valve Whitener	42ml	0.0	0.0	---	---	---	---
Whitener	ca. 6.5g	0.5	0.5	2.5	2.5	58	58
Mixer Cocoa		0.5	0.5	4.0	4.0	100	100
Valve Cocoa	42ml	0.0	0.0	---	---	---	---
Cocoa	ca.8.5g	0.5	0.5	2.5	2.5	58	58
Total amount of water	**158ml**						

ESCO/ ESCg (Cof1, Cocoa, WH)	4301	5303	5304
		X	

		DT [s]		RT [s]		SP [%]	
		ESCO	ESCg	ESCO	ESCg	ESCO	ESCg
Valve coffee grinder	74ml	0.0	0.0	---	---	---	---
Coffee grinder	ca. 8g	0.0	0.0	3.7	3.7	---	---
Brewer press		---	---	---	---	80	80
Brewer press again		---	---	---	---	80	80
Mixer Whitener		0.5	0.5	4.0	4.0	100	100
Valve Whitener	42ml	0.0	0.0	---	---	---	---
Whitener	ca. 6.5g	0.5	0.5	2.5	2.5	58	58
Mixer Cocoa		0.5	0.5	4.0	4.0	100	100
Valve Cocoa	42ml	0.0	0.0	---	---	---	---
Cocoa	ca. 8.5g	0.5	0.5	2.5	2.5	58	58
Total amount of water	**158ml**						

ESC2/ ES2g (Cof2, WH, Cocoa)	4301	5303	5304
		X	

		DT [s]		RT [s]		SP [%]	
		ESCO	ESCg	ESCO	ESCg	ESCO	ESCg
Mixer Coffee 2		1.0	1.0	7.0	7.0	100	100
Valve Coffee 2	70ml	0.0	0.0	---	---	---	---
Coffee 2	ca. 1.5g	1.0	1.0	2.2	2.2	28	28
Mixer Whitener		1.0	1.0	7.0	7.0	100	100
Valve Whitener	70ml	0.0	0.0	---	---	---	---
Whitener	ca. 11g	1.0	1.0	4.5	4.5	60	60
Mixer Cocoa		1.0	1.0	7.0	7.0	100	100
Valve Cocoa	70ml	0.0	0.0	---	---	---	---
Cocoa	ca. 9.5g	1.0	1.0	4.5	4.5	40	40
Total amount of water	**140ml**						

ESC2/ ES2l (Cof2, WH, SU, Cocoa)	4301	5303	5304
			X

		DT [s]		RT [s]		SP [%]	
		ESCO	ESCl	ESCO	ESCl	ESCO	ESCl
Mixer Coffee 2		1.0	1.0	7.0	7.0	100	100
Valve Coffee 2	70ml	0.0	0.0	---	---	---	---
Coffee 2	ca. 1.5g	1.0	1.0	2.2	2.2	28	28
Sugar	ca. 4g	2.0	2.0	1.0	1.0	50	50
Mixer Sugar		2.0	2.0	3.7	3.7	100	100
Valve Sugar	64ml	1.0	1.0	---	---	---	---
Mixer Whitener		1.0	1.0	7.0	7.0	100	100
Valve Whitener	70ml	0.0	0.0	---	---	---	---
Whitener	ca. 11g	1.0	1.0	4.5	4.5	60	60
Mixer Cocoa		1.0	1.0	7.0	7.0	100	100
Valve Cocoa	70ml	0.0	0.0	---	---	---	---
Cocoa	ca. 9.5g	1.0	1.0	4.5	4.5	40	40
Total amount of water	**140ml**						

13.3.4 Cafe au Lait

CAL/ CALI	4301	5303	5304
	X		X

		DT [s]		RT [s]		SP [%]	
		CAL	CALI	CAL	CALI	CAL	CALI
Valve coffee grinder	74ml	0.0	0.0	---	---	---	---
Coffee grinder	ca. 8g	0.0	0.0	3.7	3.7	---	---
Brewer press		---	---	---	---	80	80
Brewer press again		---	---	---	---	80	80
Sugar	ca. 4g	0.0	0.0	1.0	1.0	50	50
Mixer Sugar		0.0	0.0	3.0	3.0	100	100
Mixer Whitener		0.5	0.5	2.6	2.6	100	100
Valve Whitener	42ml	0.0	0.0	---	---	---	---
Whitener	ca. 3.5g	0.5	0.5	1.7	1.7	43	43
Total amount of water	**116ml**						

CAL/ CALI	4301	5303	5304
		X	

		DT [s]		RT [s]		SP [%]	
		CAL	CALI	CAL	CALI	CAL	CALI
Valve coffee grinder	74ml	0.0	0.0	---	---	---	---
Coffee grinder	ca. 8g	0.0	0.0	3.7	3.7	---	---
Brewer press		---	---	---	---	80	80
Brewer press again		---	---	---	---	80	80
Mixer Whitener		0.5	0.5	2.6	2.6	100	100
Valve Whitener	42ml	0.0	0.0	---	---	---	---
Whitener	ca. 3.5g	0.5	0.5	1.7	1.7	43	43
Total amount of water	**116ml**						

13.3.5 Cappuccino

CAP1/ CP1I (Cof1, WH, SU)	4301	5303	5304
	X		X

		DT [s]		RT [s]		SP [%]	
		CAP1	CP1I	CAP1	CP1I	CAP1	CP1I
Valve coffee grinder	74ml	0.0	0.0	---	---	---	---
Coffee grinder	ca. 8g	0.0	0.0	3.7	3.7	---	---
Brewer press		---	---	---	---	80	80
Brewer press again		---	---	---	---	80	80
Sugar	ca. 4g	0.0	0.0	1.0	1.0	50	50
Mixer Sugar		0.0	0.0	4.0	4.0	100	100
Mixer Whitener		0.5	0.5	7.0	7.0	100	100
Valve Whitener	74ml	0.0	0.0	---	---	---	---
Whitener	ca. 9g	0.5	0.5	3.5	3.5	58	58
Total amount of water	**148ml**						

CAP1/ CP1I (Cof1, WH)	4301	5303	5304
		X	

		DT [s]		RT [s]		SP [%]	
		CAP1	CP1I	CAP1	CP1I	CAP1	CP1I
Valve coffee grinder	74ml	0.0	0.0	---	---	---	---
Coffee grinder	ca. 8g	0.0	0.0	3.7	3.7	---	---
Brewer press		---	---	---	---	80	80
Brewer press again		---	---	---	---	80	80
Mixer Whitener		0.5	0.5	7.0	7.0	100	100
Valve Whitener	74ml	0.0	0.0	---	---	---	---
Whitener	ca. 9g	0.5	0.5	3.5	3.5	58	58
Total amount of water	**148ml**						

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Factory settings

CAP2/ CP2I (Cof1, WH, SU, Cocoa)	4301	5303	5304
	X		X

		DT [s]		RT [s]		SP [%]	
		CAP2	CP2I	CAP2	CP2I	CAP2	CP2I
Valve coffee grinder	74ml	0.0	0.0	---	---	---	---
Coffee grinder	ca. 8g	0.0	0.0	3.7	3.7	---	---
Brewer press		---	---	---	---	80	80
Brewer press again		---	---	---	---	80	80
Sugar	ca. 4g	0.0	0.0	1.0	1.0	50	50
Mixer Sugar		0.0	0.0	4.0	4.0	100	100
Mixer Whitener		0.5	0.5	4.0	4.0	100	100
Valve Whitener	42ml	0.0	0.0	---	---	---	---
Whitener	ca. 6.5g	0.5	0.5	2.5	2.5	58	58
Mixer Cocoa		0.5	0.5	4.5	4.5	100	100
Valve Cocoa	42ml	0.0	0.0	---	---	---	---
Cocoa	ca. 8.5g	0.5	0.5	2.5	2.5	58	58
Total amount of water	**158ml**						

CAP2/ CP2I (Cof1, WH, Cocoa)	4301	5303	5304
		x	

		DT [s]		RT [s]		SP [%]	
		CAP2	CP2I	CAP2	CP2I	CAP2	CP2I
Valve coffee grinder	74ml	0.0	0.0	---	---	---	---
Coffee grinder	ca. 8g	0.0	0.0	3.7	3.7	---	---
Brewer press		---	---	---	---	80	80
Brewer press again		---	---	---	---	80	80
Mixer Whitener		0.5	0.5	4.0	4.0	100	100
Valve Whitener	42ml	0.0	0.0	---	---	---	---
Whitener	ca. 6.5g	0.5	0.5	2.5	2.5	58	58
Mixer Cocoa		0.5	0.5	4.5	4.5	100	100
Valve Cocoa	42ml	0.0	0.0	---	---	---	---
Cocoa	ca. 8.5g	0.5	0.5	2.5	2.5	58	58
Total amount of water	**158ml**						

CAP3/ CP3I (Cof2, WH, Cocoa)	4301	5303	5304
		X	

		DT [s]		RT [s]		SP [%]	
		CAP3	CP3I	CAP3	CP3I	CAP3	CP3I
Mixer Coffee 2		1.0	1.0	7.0	7.0	100	100
Valve Coffee 2	70ml	0.0	0.0	---	---	---	---
Coffee 2	ca. 1.5g	1.0	1.0	2.2	2.2	28	28
Mixer Whitener		1.0	1.0	7.0	7.0	100	100
Valve Whitener	70ml	0.0	0.0	---	---	---	---
Whitener	ca. 11g	1.0	1.0	4.5	4.5	60	60
Mixer Cocoa		1.0	1.0	7.0	7.0	100	100
Valve Cocoa	70ml	0.0	0.0	---	---	---	---
Cocoa	ca. 9.5g	1.0	1.0	4.5	4.5	40	40
Total amount of water	**140ml**						

CAP3/ CP3I (Cof2, WH, SU, Cocoa)	4301	5303	5304
			X

		DT [s]		RT [s]		SP [%]	
		CAP3	CP3I	CAP3	CP3I	CAP3	CP3I
Mixer Coffee 2		1.0	1.0	7.0	7.0	100	100
Valve Coffee 2	70ml	0.0	0.0	---	---	---	---
Coffee 2	ca. 1.5g	1.0	1.0	2.2	2.2	28	28
Sugar	ca. 4g	2.0	2.0	1.0	1.0	50	50
Mixer Sugar		2.0	2.0	3.7	3.7	100	100
Valve Sugar	64ml	1.0	1.0	---	---	---	---
Mixer Whitener		1.0	1.0	7.0	7.0	100	100
Valve Whitener	70ml	0.0	0.0	---	---	---	---
Whitener	ca. 11g	1.0	1.0	4.5	4.5	60	60
Mixer Cocoa		1.0	1.0	7.0	7.0	100	100
Valve Cocoa	70ml	0.0	0.0	---	---	---	---
Cocoa	ca. 9.5g	1.0	1.0	4.5	4.5	40	40
Total amount of water	**140ml**						

13.3.6 Chocolate

CHOC/ CHOI	4301	5303	5304
	X	X	X

		DT [s]		RT [s]		SP [%]	
		CHOC	CHOI	CHOC	CHOI	CHOC	CHOI
Mixer Cocoa		1.0	1.0	13.0	13.0	100	100
Valve Cocoa	140ml	0.0	0.0	---	---	---	---
Cocoa	ca. 19,5g	1.0	1.0	7.0	7.0	48	48
Total amount of water	**140ml**						

13.3.7 Cappuccino Special

CSP1/ CS1g	4301	5303	5304
		X	

		DT [s]		RT [s]		SP [%]	
		CSP1	CS1g	CSP1	CS1g	CSP1	CS1g
Mixer Cap. Spec.		1.0	1.0	13.0	13.0	100	100
Valve Cap. Spec.	140ml	0.0	0.0	---	---	---	---
Cap. Spec.	ca. 19,5g	1.0	1.0	7.0	7.0	48	48
Total amount of water	**140ml**						

13.3.8 Chocomilk

COM/ COMI	4301	5303	5304
	X		X

		DT [s]		RT [s]		SP [%]	
		COM	COMI	COM	COMI	COM	COMI
Mixer Cocoa		1.0	1.0	13.0	13.0	100	100
Valve Cocoa	140ml	0.0	0.0	---	---	---	---
Cocoa	ca. 18,2g	1.0	1.0	7.0	7.0	45	45
Mixer Sugar		2.0	2.0	3.7	3.7	100	100
Valve Sugar	64ml	1.0	1.0	---	---	---	---
Sugar	ca. 4g	2.0	2.0	1.0	1.0	50	50
Mixer Whitener		1.0	1.0	13.0	13.0	100	100
Valve Whitener	140ml	0.0	0.0	---	---	---	---
Whitener	ca. 2.5 g	1.0	1.0	1.0	1.0	60	60
Total amount of water	**140ml**						

COM/ COMI	4301	5303	5304
		X	

		DT [s]		RT [s]		SP [%]	
		COM	COMI	COM	COMI	COM	COMI
Mixer Cocoa		1.0	1.0	13.0	13.0	100	100
Valve Cocoa	140ml	0.0	0.0	---	---	---	---
Cocoa	ca. 18,2g	1.0	1.0	7.0	7.0	45	45
Mixer Whitener		1.0	1.0	13.0	13.0	100	100
Valve Whitener	140ml	0.0	0.0	---	---	---	---
Whitener	ca. 2.5 g	1.0	1.0	1.0	1.0	60	60
Total amount of water	**140ml**						

13.3.9 Tea

TEA1/ TE1I	4301	5303	5304
	X		

		DT [s]		RT [s]		SP [%]	
		TEA1	TE1I	TEA1	TE1I	TEA1	TE1I
Mixer Tea		1.0	1.0	13.0	13.0	100	100
Valve Tea	140ml	0.0	0.0	---	---	---	---
Tea	ca. 13g	3.0	3.0	5.0	5.0	34	34
Total amount of water	**140ml**						

13.3.10 Soup

SOU/ SOUI	4301	5303	5304
		X	X

		DT [s]		RT [s]		SP [%]	
		SOU	SOUI	SOU	SOUI	SOU	SOUI
Mixer Soup		1.0	1.0	13.0	13.0	100	100
Valve Soup	140ml	0.0	0.0	---	---	---	---
Soup	ca. 8g	3.0	3.0	5.0	5.0	35	35
Total amount of water	**140ml**						

13.3.11 Americano

AMI/ AMII (Cof1, WH, SU)	4301	5303	5304
	X		X

		DT [s]		RT [s]		SP [%]	
		AMI	AMII	AMI	AMII	AMI	AMII
Valve coffee grinder	80ml	0.0	0.0	---	---	---	---
Coffee grinder	ca. 8g	0.0	0.0	3.7	3.7	---	---
Brewer press		---	---	---	---	80	80
Brewer press again		---	---	---	---	80	80
Sugar	ca. 4g	0.0	0.0	1.0	1.0	50	50
Mixer Whitener		0.0	0.0	3.0	3.0	100	100
Valve Whitener	30ml	0.0	0.0	---	---	---	---
Whitener	ca. 2.5g	0.0	0.0	1.0	1.0	60	60
Valve Whitener	50ml	0.0	0.0	---	---	---	---
Total amount of water	**160ml**						

AMI/ AMII (Cof1, WH)	4301	5303	5304
		X	

		DT [s]		RT [s]		SP [%]	
		AMI	AMII	AMI	AMII	AMI	AMII
Valve coffee grinder	80ml	0.0	0.0	---	---	---	---
Coffee grinder	ca. 8g	0.0	0.0	3.7	3.7	---	---
Brewer press		---	---	---	---	80	80
Brewer press again		---	---	---	---	80	80
Mixer Whitener		0.0	0.0	3.0	3.0	100	100
Valve Whitener	30ml	0.0	0.0	---	---	---	---
Whitener	ca. 2.5g	0.0	0.0	1.0	1.0	60	60
Valve Whitener	50ml	0.0	0.0	---	---	---	---
Total amount of water	**160ml**						

13.3.12 Latte Macchiato

MAC/ MACI (Cof1, WH, SU)	4301	5303	5304
	X		X

		DT [s]		RT [s]		SP [%]	
		MAC	MACI	MAC	MACI	MAC	MACI
Valve coffee grinder	50ml	15.0	0.0	90ml	90ml	---	---
Coffee grinder	ca. 8g	0.0	0.0	3.7	3.7	---	---
Brewer press		---	---	---	---	80	80
Brewer press again		---	---	---	---	80	80
Sugar	ca. 4g	0.0	0.0	1.0	1.0	50	50
Mixer Whitener		1.5	1.5	5.0	5.0	30	30
Valve Whitener	130ml	0.0	0.0	1.6	1.6	---	---
Whitener	ca. 16,5g	0.0	0.0	5.0	5.0	80	90
Total amount of water	**180ml**						

MAC/ MACI (Cof1, WH)	4301	5303	5304
		X	

		DT [s]		RT [s]		SP [%]	
		MAC	MACI	MAC	MACI	MAC	MACI
Valve coffee grinder	50ml	15.0	0.0	90ml	90ml	---	---
Coffee grinder	ca. 8g	0.0	0.0	3.7	3.7	---	---
Brewer press		---	---	---	---	80	80
Brewer press again		---	---	---	---	80	80
Mixer Whitener		1.5	1.5	5.0	5.0	30	30
Valve Whitener	130ml	0.0	0.0	1.6	1.6	---	---
Whitener	ca. 16,5g	0.0	0.0	5.0	5.0	80	90
Total amount of water	**180ml**						

13.3.13 Milk

MIL/ MILI	4301	5303	5304
	X		X

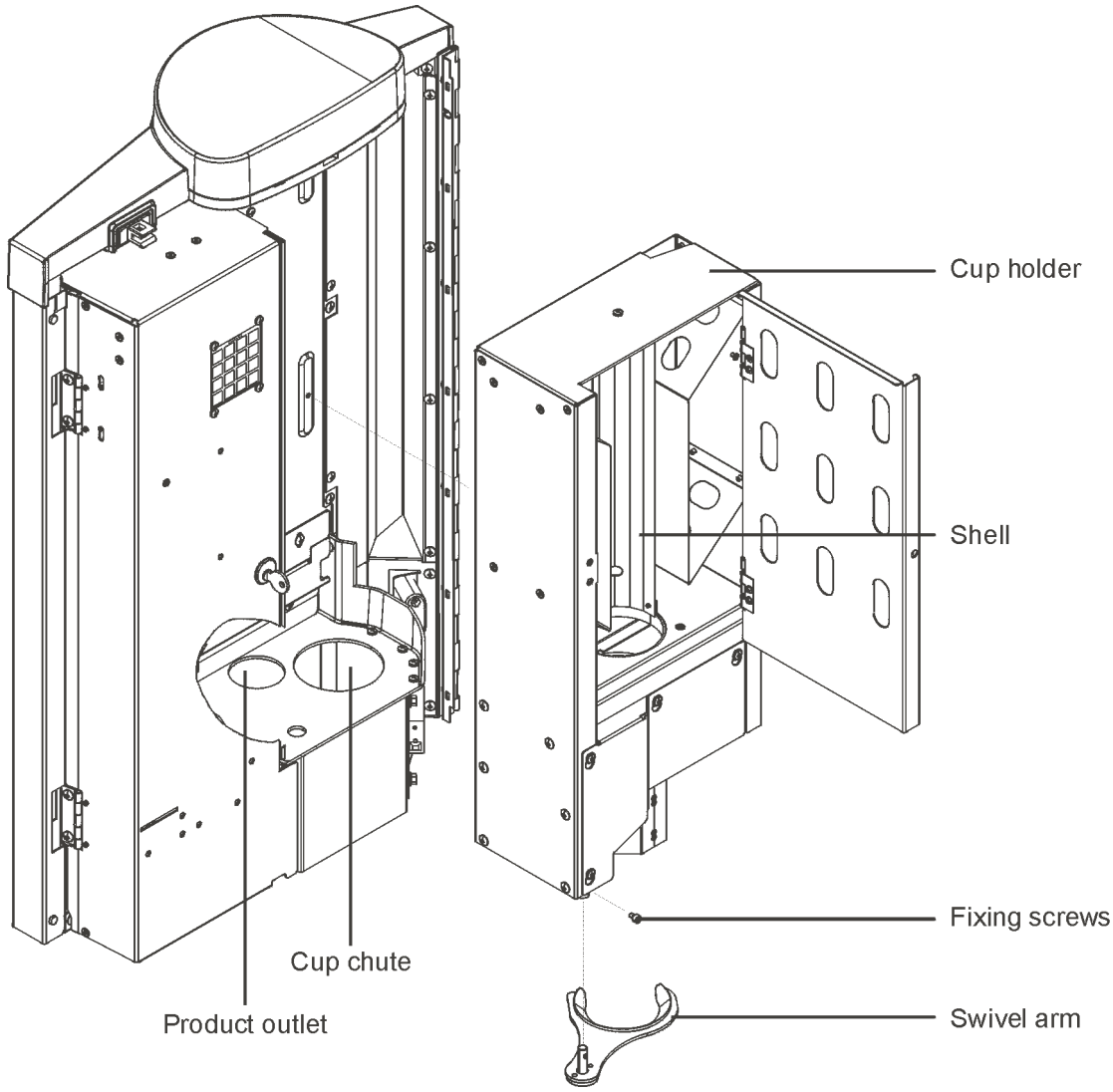
		DT [s]		RT [s]		SP [%]	
		MIL	MILI	MIL	MILI	MIL	MILI
Mixer Whitener		1.0	1.0	13.0	13.0	100	100
Valve Whitener	140ml	0.0	0.0	---	---	---	---
Whitener	ca. 9g	1.0	1.0	5.0	5.0	40	40
Mixer Sugar		2.0	2.0	8.0	8.0	100	100
Valve Sugar	86ml	1.0	1.0	---	---	---	---
Sugar	ca. 7.5g	2.0	2.0	2.5	2.5	38	38
Total amount of water	**140ml**						

MIL/ MILI	4301	5303	5304
	X		X

		DT [s]		RT [s]		SP [%]	
		MIL	MILI	MIL	MILI	MIL	MILI
Mixer Whitener		1.0	1.0	13.0	13.0	100	100
Valve Whitener	140ml	0.0	0.0	---	---	---	---
Whitener	ca. 9g	1.0	1.0	5.0	5.0	40	40
Total amount of water	**140ml**						

14 SPECIAL ACCESSORY

14.1 Cup unit



14.1.1 Filling

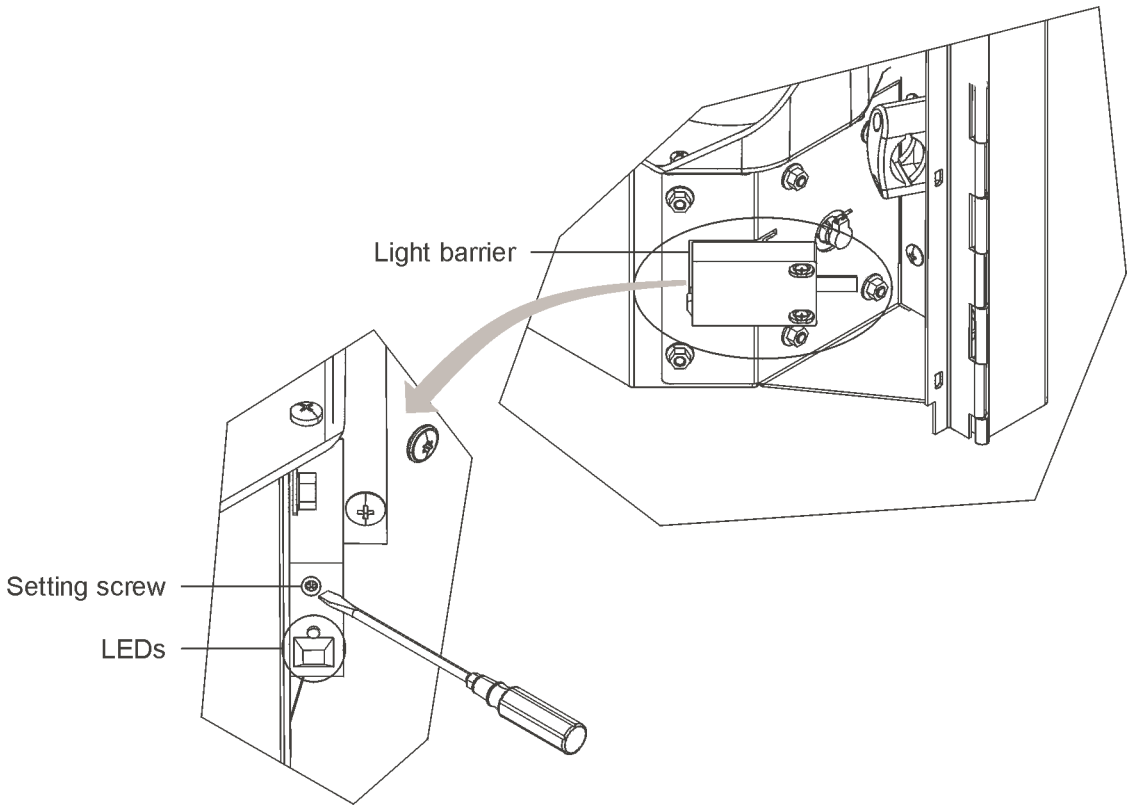
- Open machine door
- Open cup unit
- Insert two cup stacks on the left and on the right side of the cup unit
- Insert one cup stack in the middle of the cup unit

NOTE
Fill the cup unit up to the top edge. The cups must not be pressed together.

14.2 Light barrier

A light barrier monitors the drink dispensing area.
If the light barrier detects an object under the drinks dispenser, the hot drink will be delivered instantly the selection button is pressed. Otherwise, a cup will first be supplied from the cup unit. If no cup unit is installed on the machine, a cup has to be placed on the cup table.

NOTE
The sensitivity of the light barrier must be adjusted to the light conditions of the machine position.



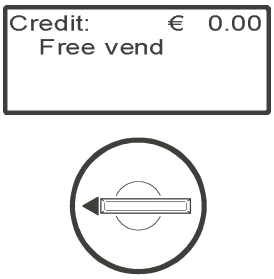
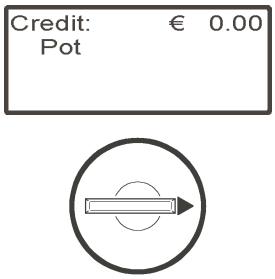
14.2.1 Set light barrier

The light barrier setting screw is located on the door interior. Beside the setting screw are two LEDs that light up when an object is detected.

- Place cup on table
- Adjust setting screw until both LEDs light up
- Remove and position cup several times to assure that the cup is always detected. Check LEDs.

14.3 Key-operated switch

The key-operated switch has the following functions:

Left	Basic setting	Right
		
Free drink dispensing **(Free vend cups – volumes)** Standard free drink dispensing is performed	**Drink vending** **(Cups - volumes)** Vending of drinks is performed according to the prices set in the Prices menu as well as the coin system options set in the Installation menu.	**Free drink dispensing** **(Free vending pots – volumes)** Free drink dispensing is performed in pot portions. A pot portion is the equivalent of X-fold cups. Factor X is programmed in the Installation menu.

NOTE
The key may only be removed in the home position.

14.4 Credit system

The machine may be fitted with credit systems according to the following interface standards:

- MDB
- BDV
- Executive

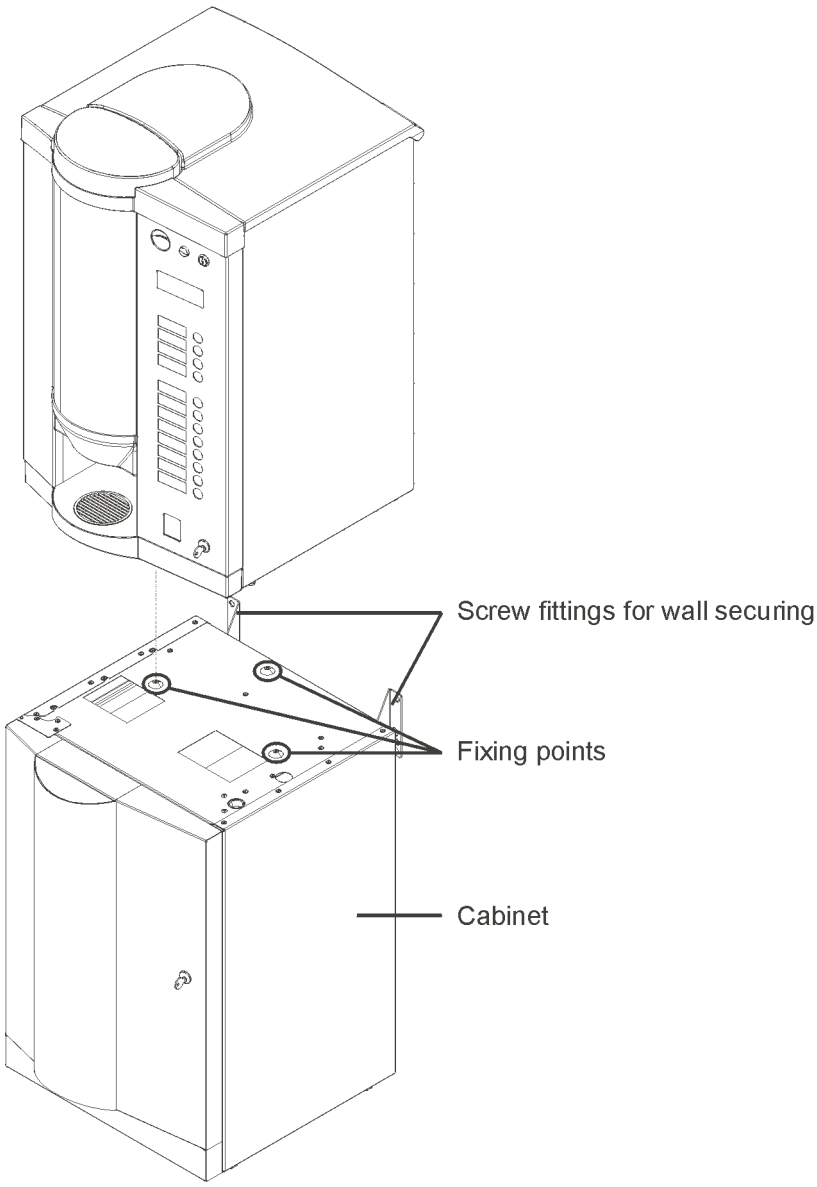
The credit system with MDB is used by preference.
Please refer to the credit system manual for detailed information on the credit system or apply directly to SIELAFF.

NOTE
For BDV-systems under no circumstances should an MDB-BDV-adapter cable be utilised. A special extension is required, part no. 306 00 511 00
A special adapter, article reference 404 01 541 00, is required for connection of the Executive system.

14.5 Cabinet

WARNING! Danger of injury
The Cabinet with vending machine can tip over very easily.
- Secure cabinet to the wall
- Fix machine to cabinet

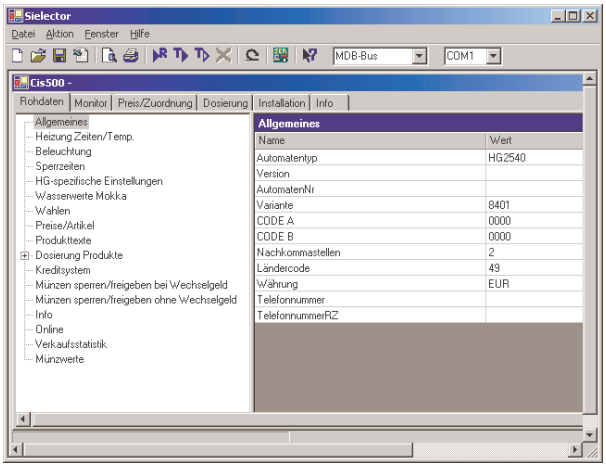
1. Secure the base cabinet to the wall with the attached components.
   Make sure that the cabinet is in a level position.
2. Position the vending machine on top of the base cabinet.
3. Fix the machine from below with three screws at the marked fixing points.



14.6 SIELECTOR PC software

Machine controlling may be performed by SIELECTOR software for PC-supported programming on Windows basis.
The software supports the duplication, creation, saving and printing out of all parameters.

Please refer to the separate SIELECTOR manual for detailed description of SIELECTOR software.



15 MACHINE LOG BOOK

In the event of malfunctions arising, please contact our customer care service.

Please note down the machine number and software version of the coffee machine.
The machine number is located on the type plate.
Establishing the software version is described in chapter 10.11.1.
This information is important to assure swift aid from the customer care service!

Machine number: _____

Software version: _____

Machine log book

Date	Cleaning daily/ weekly	Maintenance	Performed by Name/ signature	Notes

15.1 Position contacts/ sensors

An 8-digit hexadecimal number is displayed, e.g. 0F000000. The individual digits of this number have the following significance:

first byte	second byte	third byte	fourth byte
0F	00	00	00

Contacts		Moisture sensors	
open	closed	open	closed
0	1	1	0

First byte:

Value	Name	Function
0x80		
0x40		
0x20		
0x10		
0x08	E_ST[27]	Moisture sensor reserve
0x04	E_ST[26]	Moisture sensor drip container
0x02	E_ST[25]	Boiler level high
0x01	E_ST[24]	Boiler level low

Second byte:

Value	Name	Function
0x80	E_ST[23]	Limit switch cup carousel (cup unit II)
0x40	E_ST[22]	Cups empty (cup unit II)
0x20	E_ST[21]	Cup carousel empty (cup unit II)
0x10	E_ST[20]	Limit switch cup dispenser (cup unit II)
0x08	E_ST[19]	Limit switch cup carousel (cup unit I)
0x04	E_ST[18]	Cups empty (cup unit I)
0x02	E_ST[17]	Cup carousel empty (cup unit I)
0x01	E_ST[16]	Limit switch cup dispenser (cup unit I)

Third byte:

Value	Name	Function
0x80	E_ST[15]	Res. D
0x40	E_ST[14]	Brewer pulse 2
0x20	E_ST[13]	Brewer pulse 1
0x10	E_ST[12]	Res. C
0x08	E_ST[11]	Brewer contact 4
0x04	E_ST[10]	Brewer contact 3
0x02	E_ST[9]	Brewer contact 2
0x01	E_ST[8]	Brewer contact 1

Fourth byte:

Value	Name	Function
0x80	E_ST[7]	Res. B
0x40	E_ST[6]	Refund button
0x20	E_ST[5]	Limit switch coin refund
0x10	E_ST[4]	
0x08	E_ST[3]	Res. A
0x04	E_ST[2]	Swivel arm extended
0x02	E_ST[1]	Swivel arm retracted
0x01	E_ST[0]	Grounds container

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