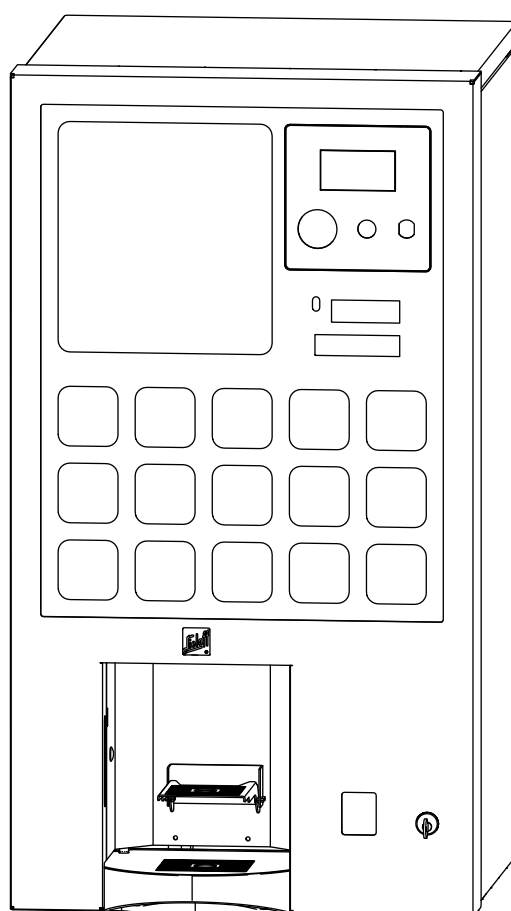




Technical Manual

HG SiVend 15 TT



en

26/08/2025

4206602000_041



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1. Variants and identification

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

These instructions apply to the following versions:

Type designation	Version	Variant
SiVend HG 15 TT	ES - Espresso	VA-4301
		VA-5304
		VA-3201
	IN - Instant	VA-7404

Identification

 The label contains the following information: Manufacturer: Sielaff GmbH & Co. KG, Automatenbau, D-91567 HERRIEDEN, www.sielaff.de; Year: 2020; Designation: Heißgetränkautomat/Hot drinks vending machines/Distributeur automatique de boissons chaudes; Model: HG SiVend 15 TT; Options: O - Espresso, O - Instant, VA-; Heating: Heizung/Heating/chauffe-eau 2800 W; Power: 2900 W, 230 V AC, 50 Hz; Max. Water Pressure: max. Wasserdruck/Water pressure/Pression eau 0.6 MPa (6 bar); Safety: CE, IP 20, N; Made in Germany; Vertical text: 420 00 902 00.	Manufacturer Type designation Version, variant Connection data
--	---

2. Safety information

2.1 Repairs

- The inside of the vending machine may have sharp edges and corners. Wear protective gloves when carrying out maintenance work.
- If the connection cable is damaged, it may only be replaced by the manufacturer, its customer service department or a similarly qualified person in order to avoid hazards.
- Only use original spare parts.
- Only products approved by SIELAFF may be used.
- Any modification or conversion of the vending machine is prohibited. SIELAFF does not accept any responsibility for any defect claims caused by failing to follow the aforementioned instructions.

2.2 Explanation of signs and symbols

The vending machine has been manufactured in line with current technological standards. Nevertheless, even the most expertly designed vending machine cannot be entirely without risks.

In order to ensure sufficient safety for the operator, additional safety instructions are provided. Attention is drawn to these using the conventions described below.

Observing this information is the only way to ensure adequate operational safety.

The wording and/or symbols carry different meanings:



DANGER

Immediate danger which could result in death or severe injury.



WARNING

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



CAUTION

Information about a dangerous situation which could result in minor injury or damage to the vending machine.



NOTE

Indicates information that must be observed to avoid damaging the vending machine.



TIP

Information to facilitate handling and use of the vending machine.

The following danger symbols are also used in some places:



WARNING! Electrical energy. Danger to life!

This symbol warns that electrically live components are installed in this area. Covers marked with this symbol may only be removed by a qualified electrician.



Observe handling regulations when dealing with electrostatically sensitive components and assemblies (ESD)

Covers marked with this symbol have electrostatically sensitive components and assemblies located behind them.

Contact with plug-in connections, conductor tracks and component pins must be avoided at all costs.

Only specialist personnel with ESD knowledge are authorised to carry out work.



CAUTION! Hot surfaces!

This symbol is attached to surfaces that become hot. There is a risk of scalding or serious burns. The surfaces may still be hot even after the vending machine is shut down. Only carry out work in the vicinity of these surfaces once they have cooled down.

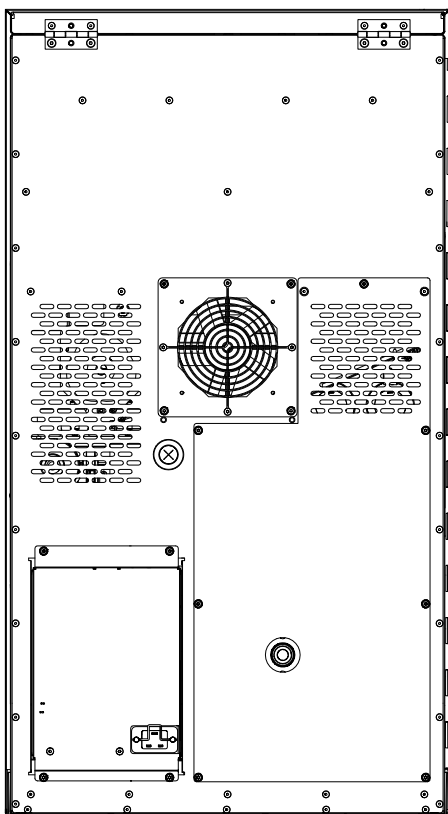
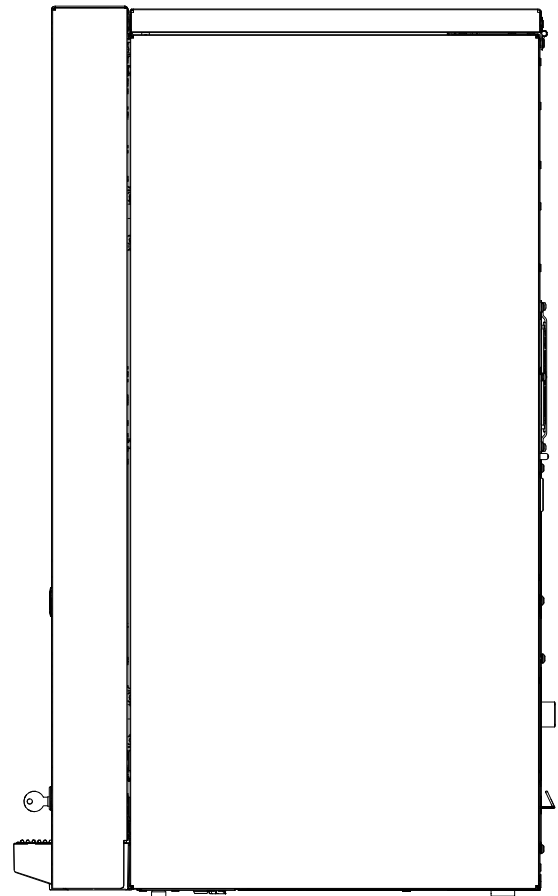
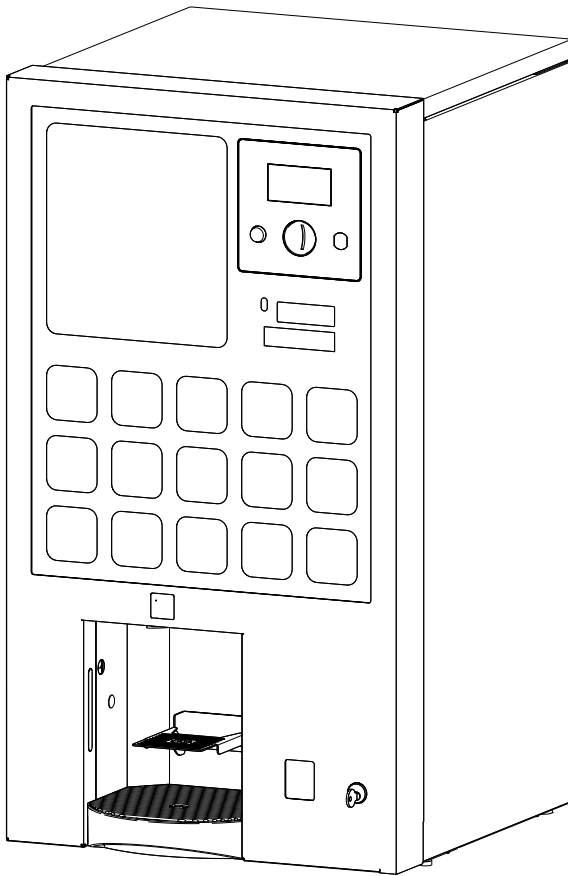


CAUTION! Danger of crushing!

When the service key is inserted, a protective device is bypassed. When the brewer closes, there is a crushing risk. Therefore fingers should always be kept well away from the brewer when the service key is inserted.

3. The vending machine

3.1 Exterior views



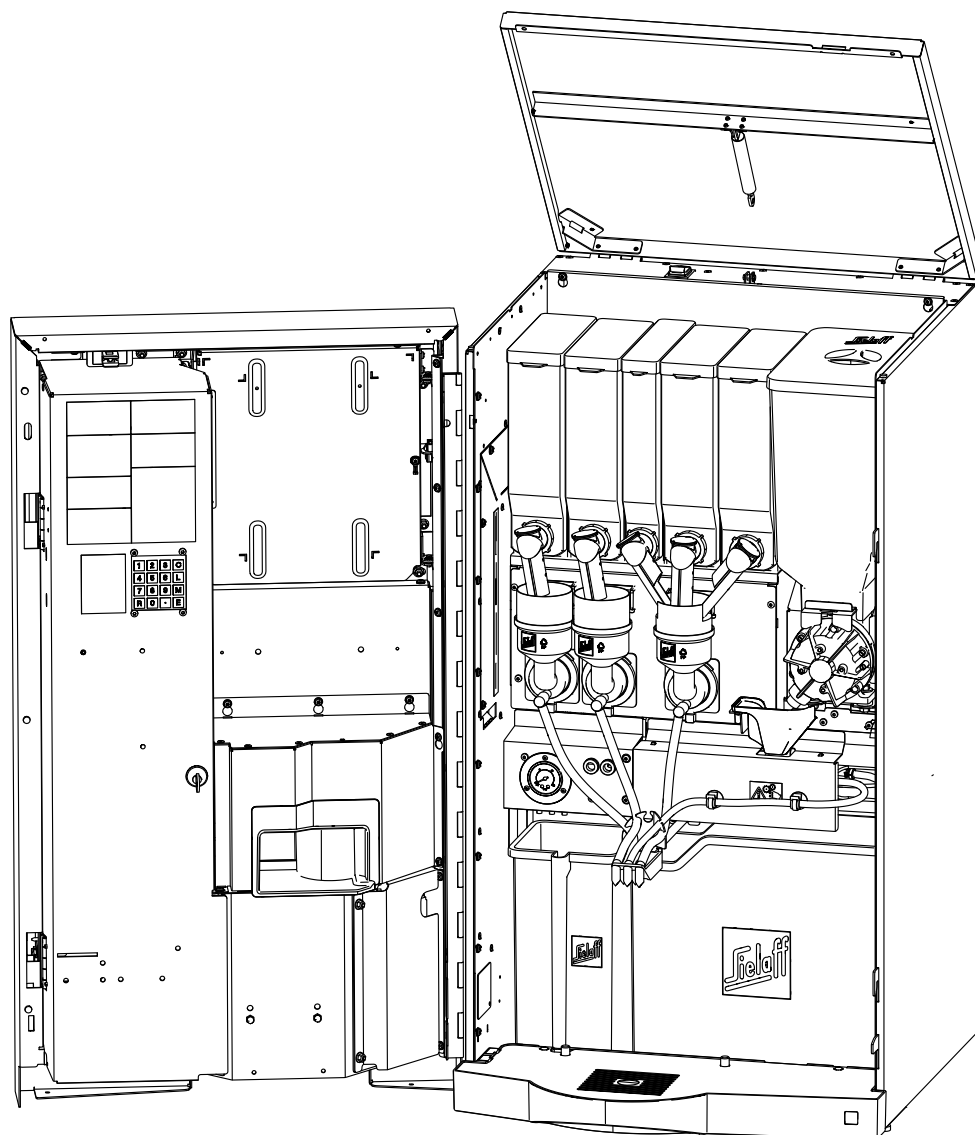
3.2 Internal view Espresso variant

Variant 5304

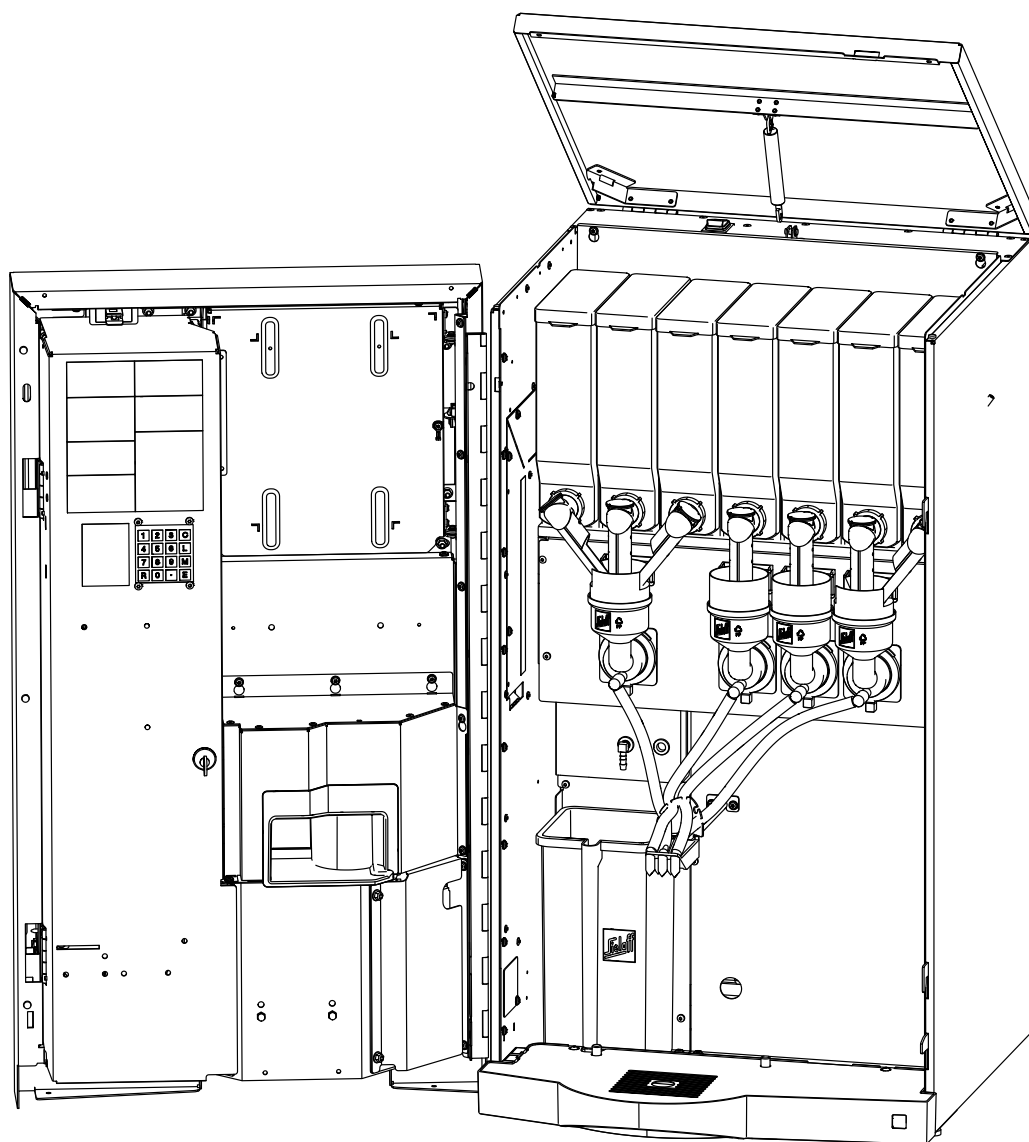
5 Instant product containers

3 mixer cups

Software version 4

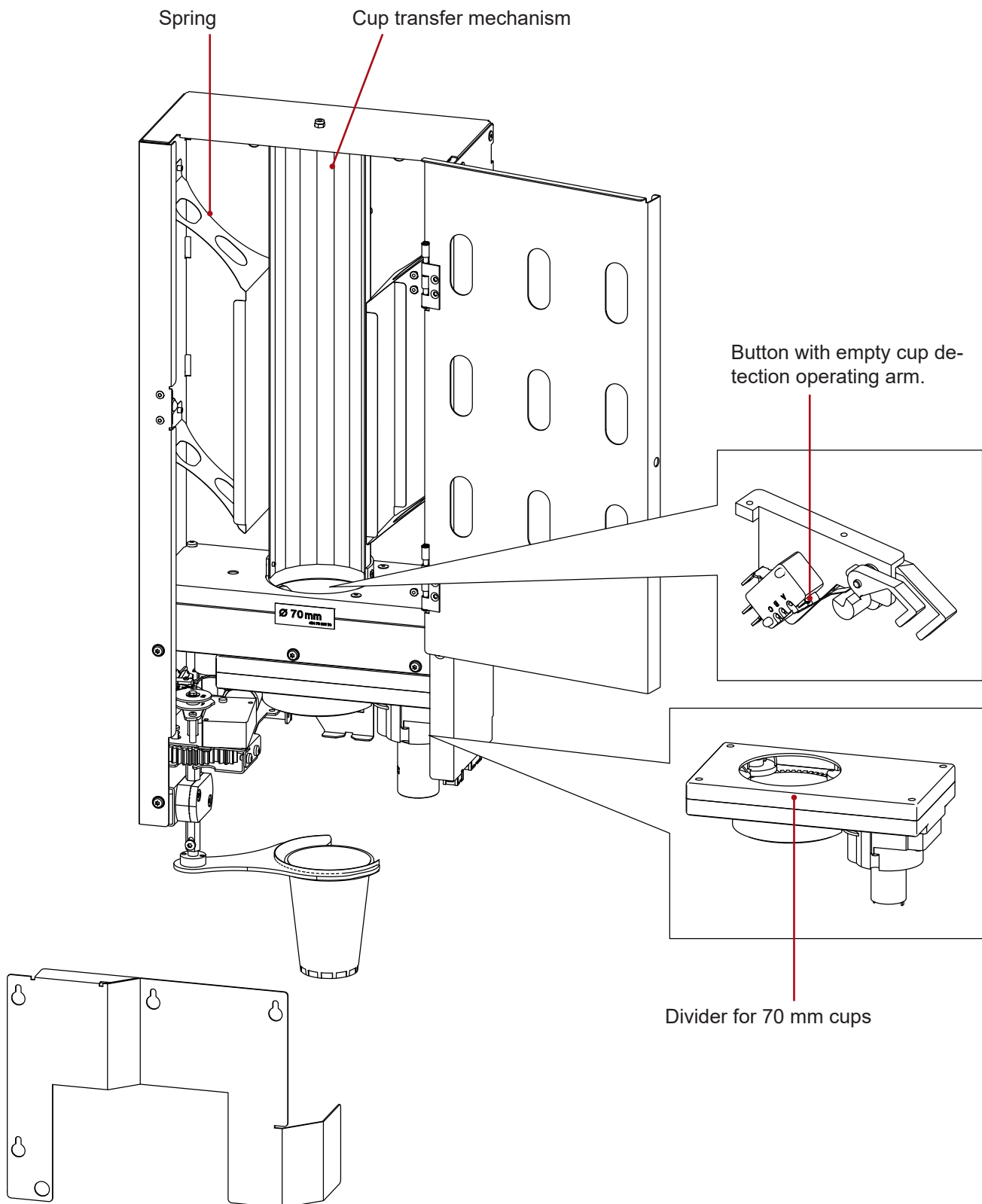


3.3 Internal view Instant variant

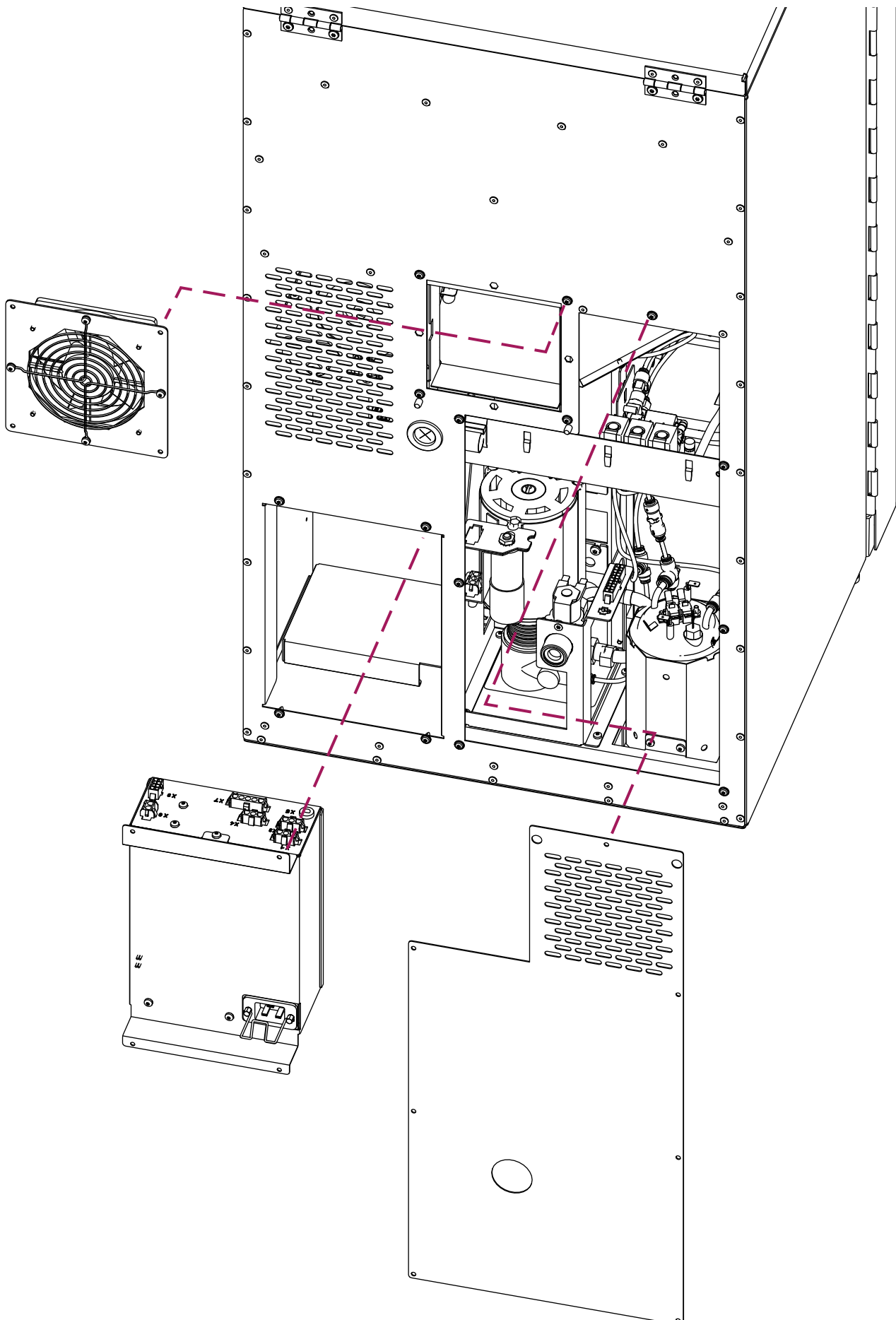


3.4 Cup dispense mechanism (optional)

3 stacks of cups are inserted. The springs push the stack of cups into the centre when the cup transfer mechanism clears the way.



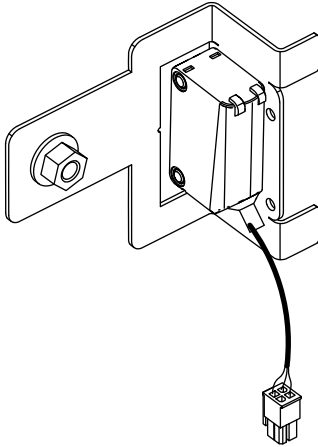
3.5 Ventilator, power supply



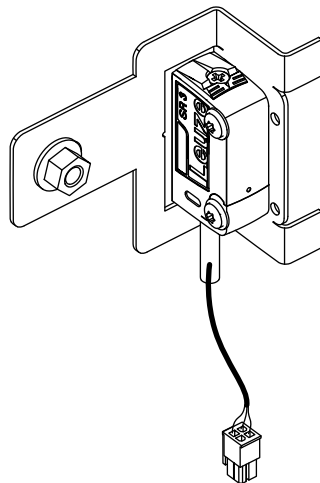
3.6 Light barriers (reflection light barrier)

3 different light barriers are used.

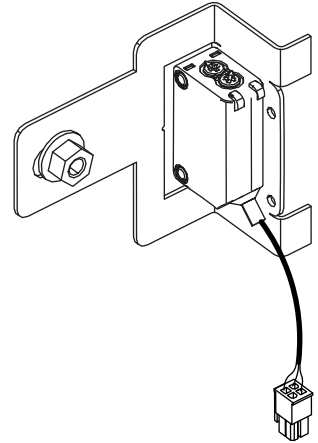
Pepperl&Fuchs
ML100-55/59/103/115a/154
(installed from mid-2023)



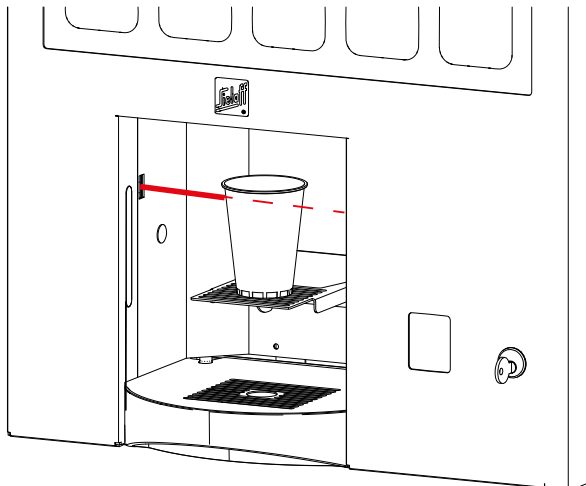
Leuze
PRK3C.TT3/PT-P1 50142354
(installed from mid-2023)



Pepperl&Fuchs
ML100-55-G-8523/103
(installed until 2023)



The light barrier should clearly detect the presence of a cup or glass.
Light barriers without control elements are not suitable for detecting clear glass.
Light barriers with control elements can detect clear glass.



4. Maintenance

4.1 Maintenance table

Housing

Component	Additional equipment Spare part number	Action 1 = replace 2 = clean 3 = adjust 4 = check					
		6 months or 20,000	12 months or 40,000	18 months or 60,000	24 months or 80,000	30 months or 100,000	36 months or 120,000
Housing	–	2, 4	2, 4	2, 4	2, 4	2, 4	2, 4
Connection cable	420 00 506 00	4	4	4	4	4	4
Vending machine status	–	4	4	4	4	4	4
Water supply line	403 00 858 00	4	1	4	1	4	1
Solenoid valve	403 00 951 00	4	4	4	4	4	4
Water circulation	Check for leakages	4	4	4	4	4	4
Outlet	402 00 050 00	4	4	4	4	4	4

Brewing unit (Espresso variant only)

Component	Additional equipment Spare part number	Action 1 = replace 2 = clean 3 = adjust 4 = check					
		6 months or 20,000	12 months or 40,000	18 months or 60,000	24 months or 80,000	30 months or 100,000	36 months or 120,000
Brewer filter	407 00 608 00 407 00 644 00	4	1	4	1	4	1
Clamping ring (replace if damaged)	407 00 609 00	4	1	4	1	4	1
Non-return valve at the brewer outlet	412 00 322 00	4	1	4	1	4	1
Flow meter	402 40 404 00	4	4	4	4	4	4
Silicone hose, brown (mixer outlet)	985 13 420 45	4	1	4	1	4	1
Silicone hose, black 6 x 2 (mixer outlet and brewer unit outlet)	985 13 420 31	4	1	4	1	4	
Grinder	408 00 393 00	2, 3	2, 3	2, 3	2, 3	2, 3	2, 3
Silicone flow regulating disc	406 00 348 01	4, 1	4, 1	4, 1	4, 1	4, 1	4, 1
Grinding discs for EK21	407 00 011 01	4, 1*	4, 1	4, 1	4, 1	4, 1	4, 1
Pressure relief valve (12 bar)	414 00 942 00	4	4	4	4	4	4
Non-return valve (boiler)	403 00 164 40	4	1	4	1	4	1
Bean container	–	4	4	4	4	4	4

* replace if worn

Instant section

Component	Additional equipment Spare part number	Action 1 = replace 2 = clean 3 = adjust 4 = check					
		6 months or 20,000	12 months or 40,000	18 months or 60,000	24 months or 80,000	30 months or 100,000	36 months or 120,000
Fan	Service number 33M	2, 4	2, 4	2, 4	2, 4	2, 4	2, 4
Mixer paddle	404 00 309 00	1	1	1	1	1	1
Flange: V-ring	404 00 331 01	1	1	1	1	1	1
Flange: O-ring	952 40 040 25	4	1	4	1	4	1
Silicone hose, black 6 x 2 (mixer housing outlet)	985 13 420 31	4	1	4	1	4	1
Angle piece for hose	417 00 332 00	4	1	4	1	4	1
Mixer housing	405 00 038 00	4	4	4	4	4	4
Mixer motor	404 00 330 00	4	4	4	4	4	4
Instant product containers including worms and stirring wheels	–	4	4	4	4	4	4
Reducer	420 00 151 00	4	1	4	1	4	1

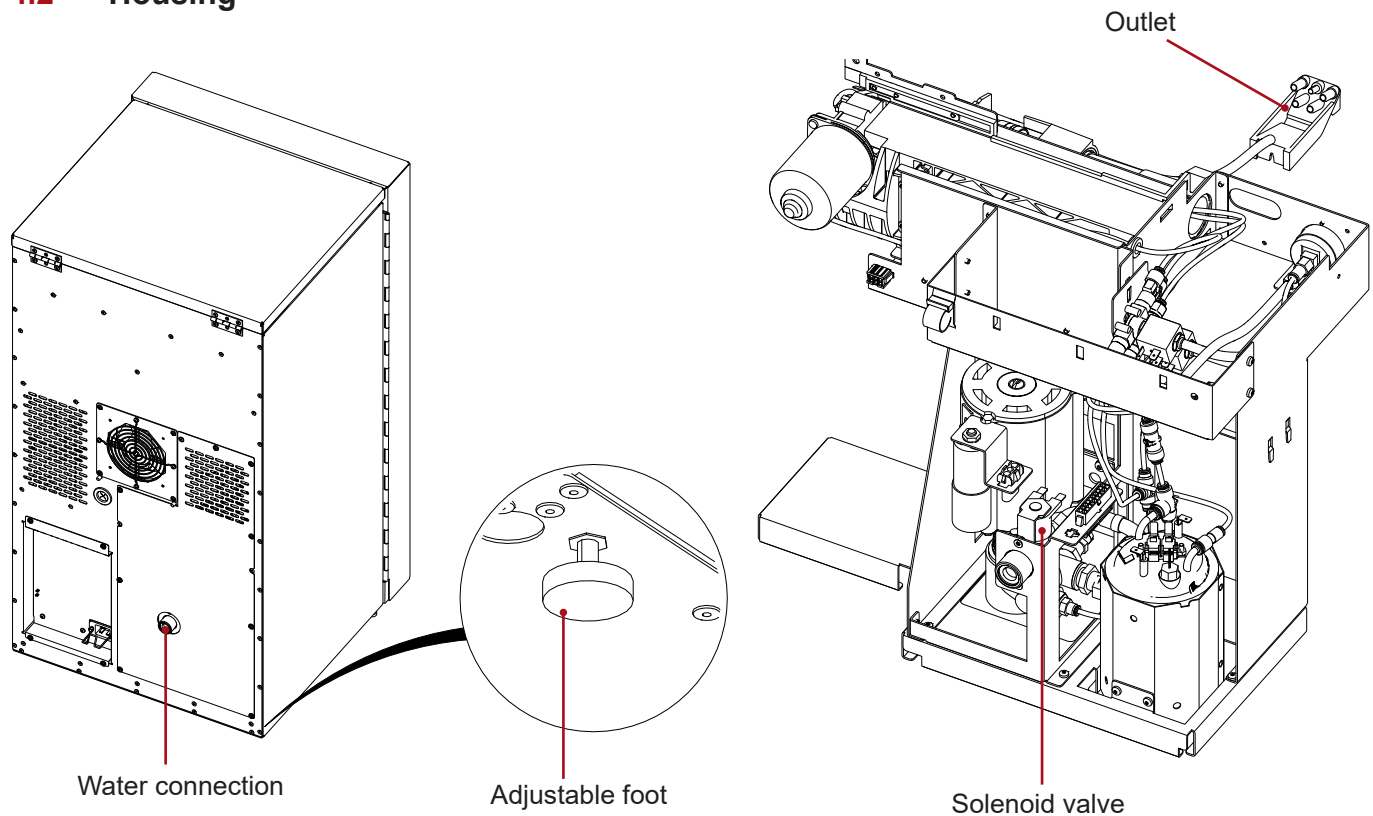
Electronics

Component	Additional equipment Spare part number	Action 1 = replace 2 = clean 3 = adjust 4 = check					
		6 months or 20,000	12 months or 40,000	18 months or 60,000	24 months or 80,000	30 months or 100,000	36 months or 120,000
Door contact switch	985 14 065 27	4	4	4	4	4	4
Drip bucket sensor (optional)	Service number 17L	4	4	4	4	4	4
Drip tray sensor (optional)	Service number 17L	4	4	4	4	4	4
Software version control board	Service number 21L	4	4	4	4	4	4
Keypad (manufacturer: Rafi)	Flashing green if all right red if fault	4	4	4	4	4	4
LED light	420 00 512 00	4	4	4	4	4	4
Illuminated dispenser outlet (optional)	420 01 071 00 420 02 071 00 Service number 47M	4	4	4	4	4	4

Settings

Component	Additional equipment Spare part number	Action 1 = replace 2 = clean 3 = adjust 4 = check					
		6 months or 20,000	12 months or 40,000	18 months or 60,000	24 months or 80,000	30 months or 100,000	36 months or 120,000
Water quantities	Measuring cup	3	3	3	3	3	3
Dosages, calibration, grind level	Measuring cup, scales accurate to 0.1 g	3	3	3	3	3	3
Brewing temperature	Thermometer	3	3	3	3	3	3

4.2 Housing



Testing the solenoid valve

Procedure

1. *Insert the service key*
 2. *Select [M] - [8] - [E]*
 3. *Select service function [19] - [M]*
- It must activate audibly



4.3 Brewing unit (Espresso variant only)

4.3.1 Changing the brewer filters

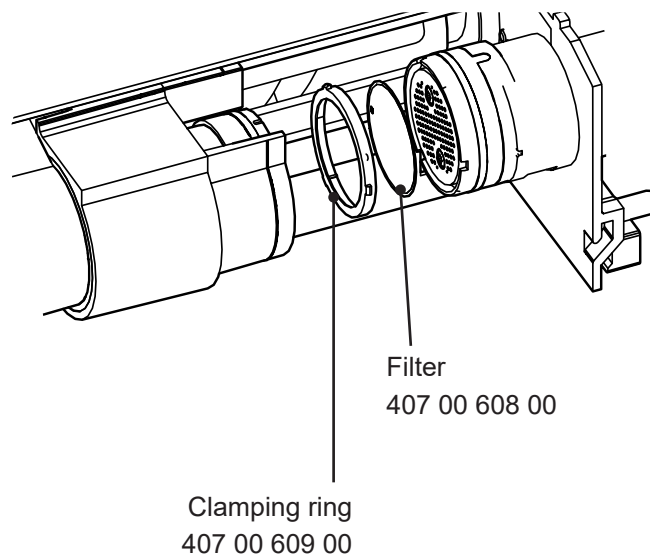
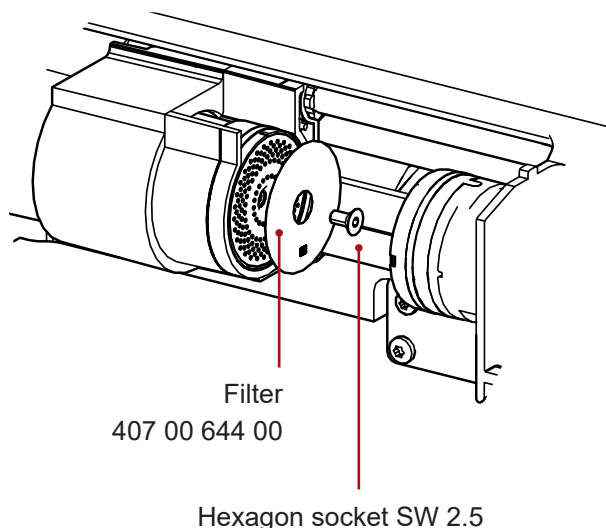


CAUTION! Danger of crushing!

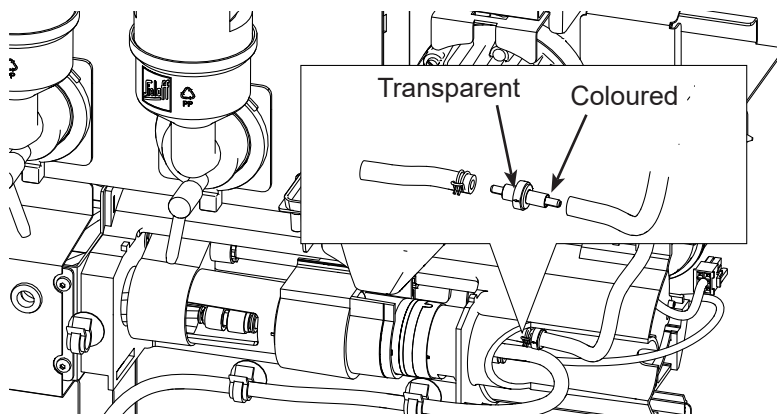
When the service key is inserted, a protective device is bypassed. When the brewer closes, there is a crushing risk. Therefore fingers should always be kept well away from the brewer when the service key is inserted.

Procedure

1. Insert the service key
 2. Repeat service function 58M until the brewer is in the service position (open)
 3. Remove service key
 4. Change the left-hand brewer filter using a hexagon socket wrench (tighten fixing screw by hand)
 5. Using a small, flat screwdriver, carefully free the clamping ring on the right-hand brewer filter.
 6. Replace the old brewer filter with a new one
 7. Fit the clamping ring so that the 3 locking catches engage with the slots on the piston
 8. Insert the service key
 9. Run service function 57M (close brewer)
 10. Remove service key
- ✓ The brewer filters have now been changed



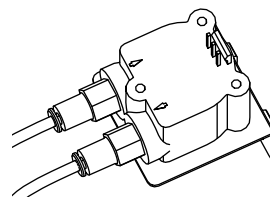
4.3.2 Non-return valve (brewer unit)



4.3.3 Flow meter

The flow meter is a flow rate sensor that measures the water quantity during the brewing process. A consistent drink quantity can only be guaranteed if the flow meter measures the water quantity accurately. It is therefore important to check the flow meter regularly for good working order.

Press service function 99M121M (show hidden times) once if no dispense quantities are displayed when filling the boiler.

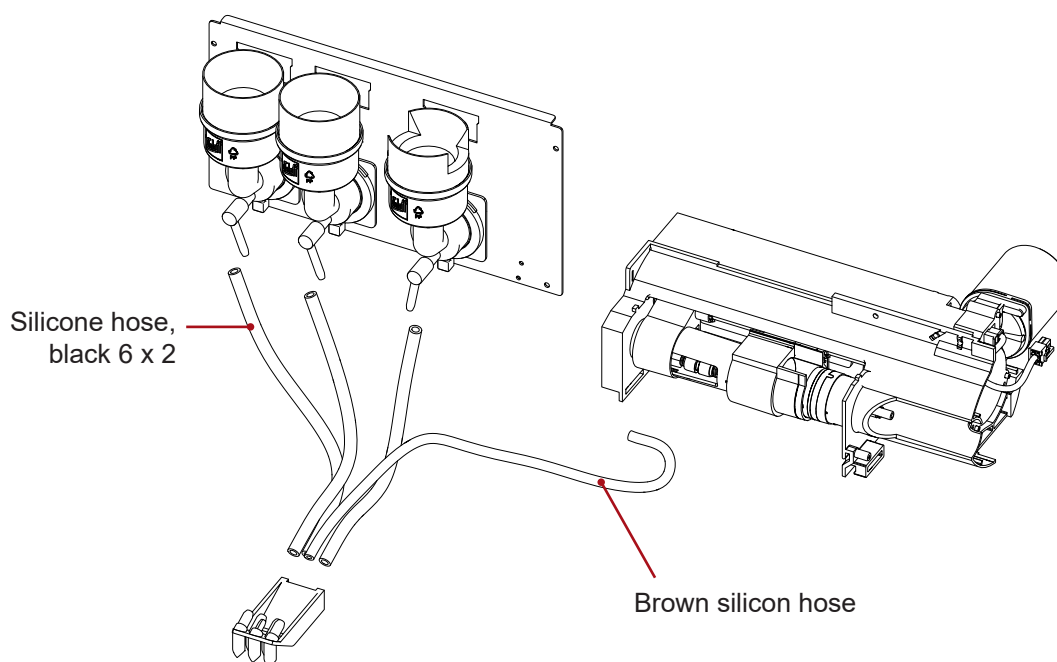


Procedure

1. *Insert the service key*
 2. *Hold a cup under the outlet*
 3. *Press service function 88M for approx. 5 seconds*
 4. *Empty the cup*
 5. *Tare the cup on the scales*
 6. *Hold the cup under the outlet once more*
 7. *Repeat service function 88M*
 8. *Determine the weight of the cup on the scales*
- ✓ The value shown on the display must correspond to the value on the scales (1 cc is equivalent to 1 ml)
 - ✓ A minor deviation is permissible
 - ✓ Replace the flow meter if there are significant deviations

4.3.4 Brown and black silicone hose

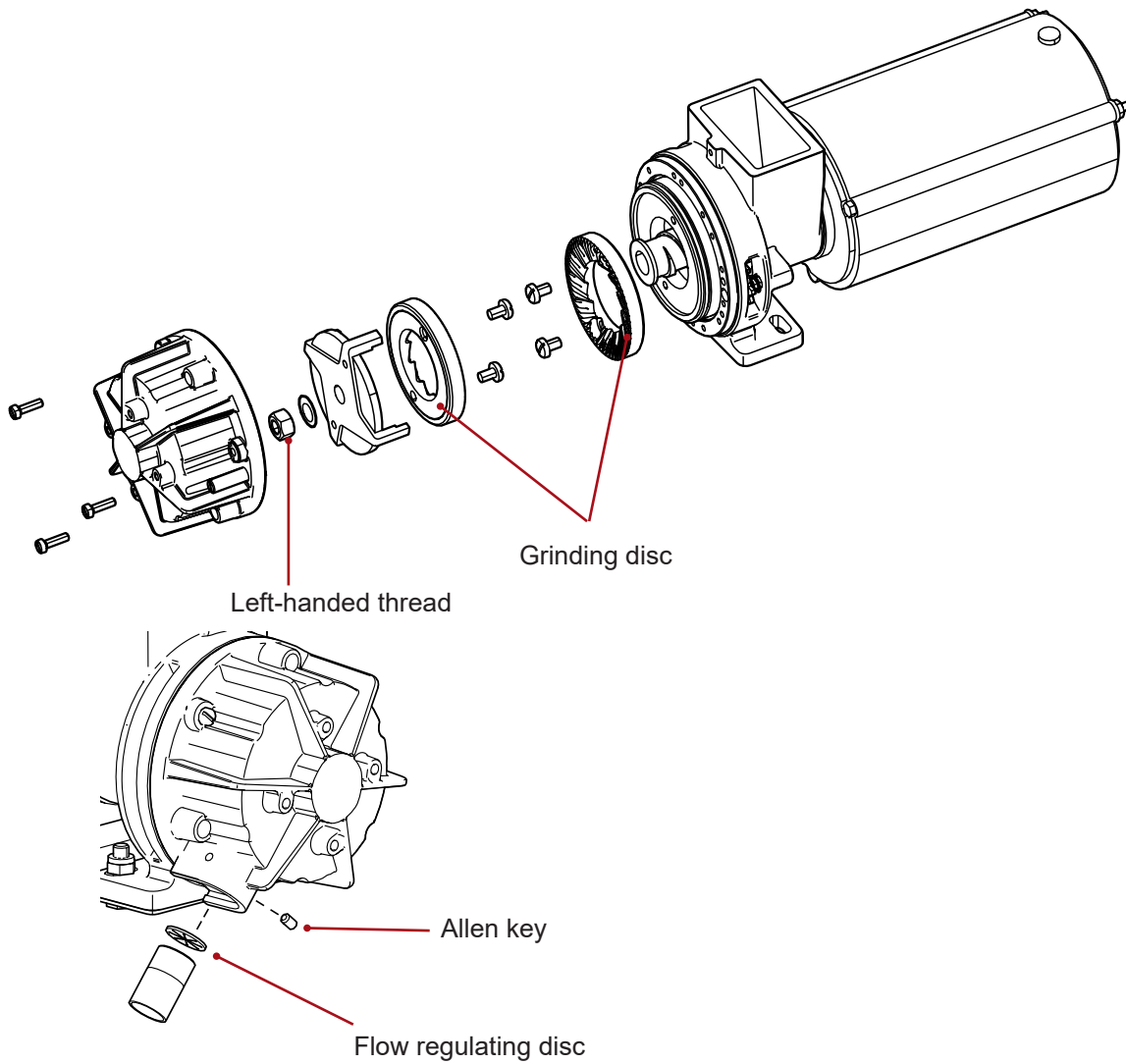
The hoses that come into contact with products are replaced according to the maintenance schedule for reasons of hygiene.



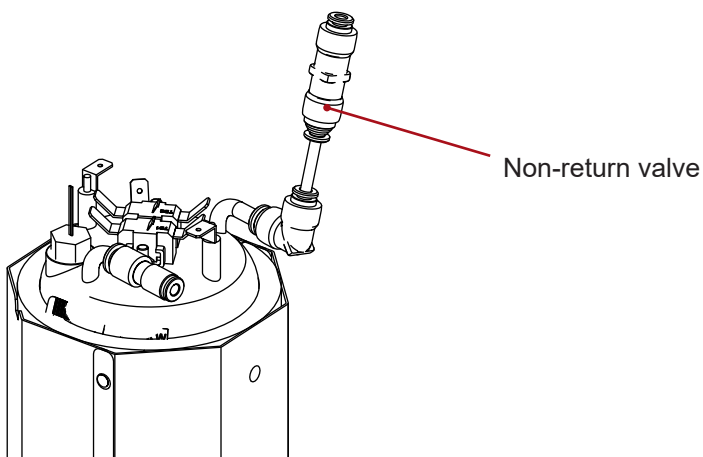
4.3.5 Grinder

The grinder can be dismantled in a few simple steps.

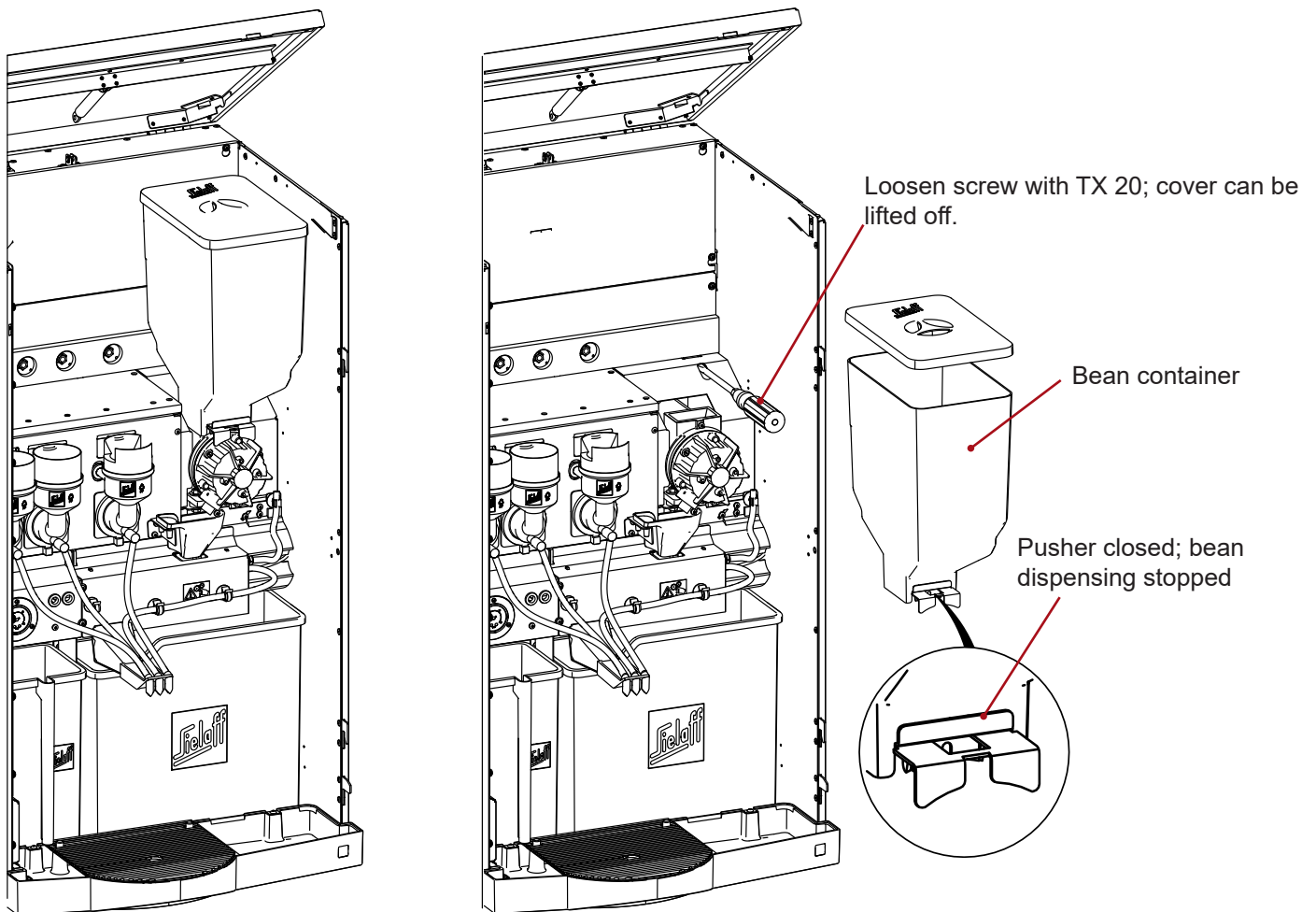
The silicone flow regulating disc must be undamaged to ensure that the ground coffee is retained.



4.3.6 Boiler

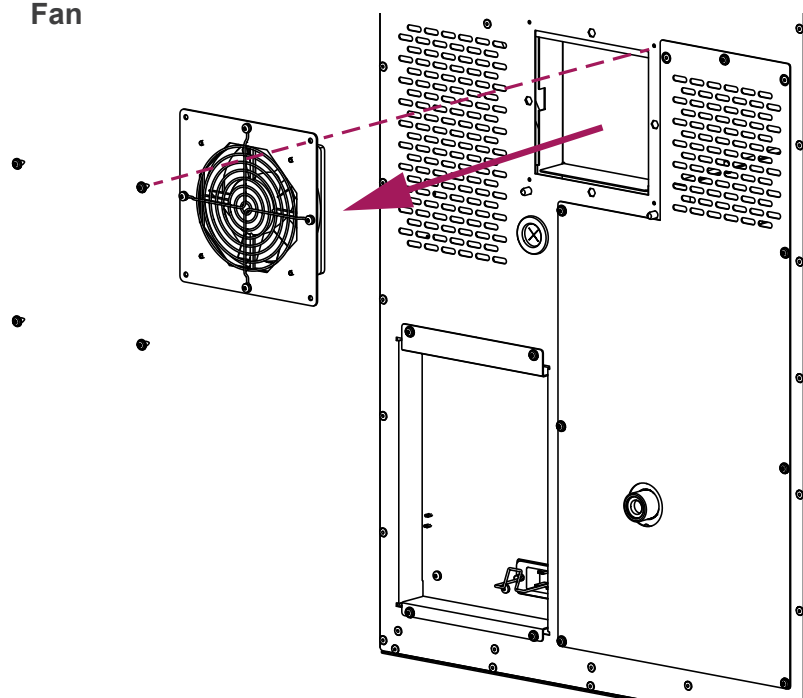


4.3.7 Bean container

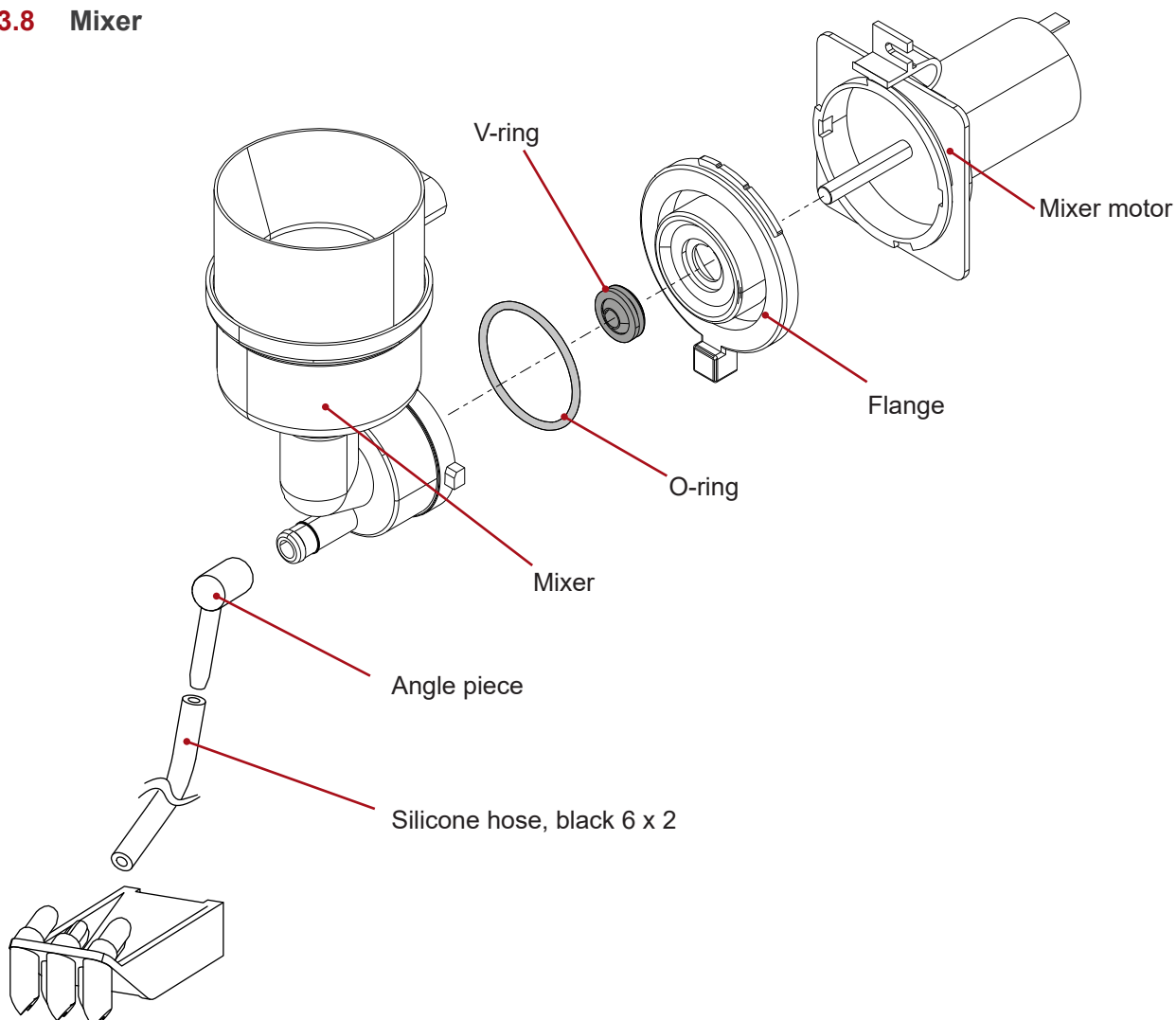


4.4 Instant section

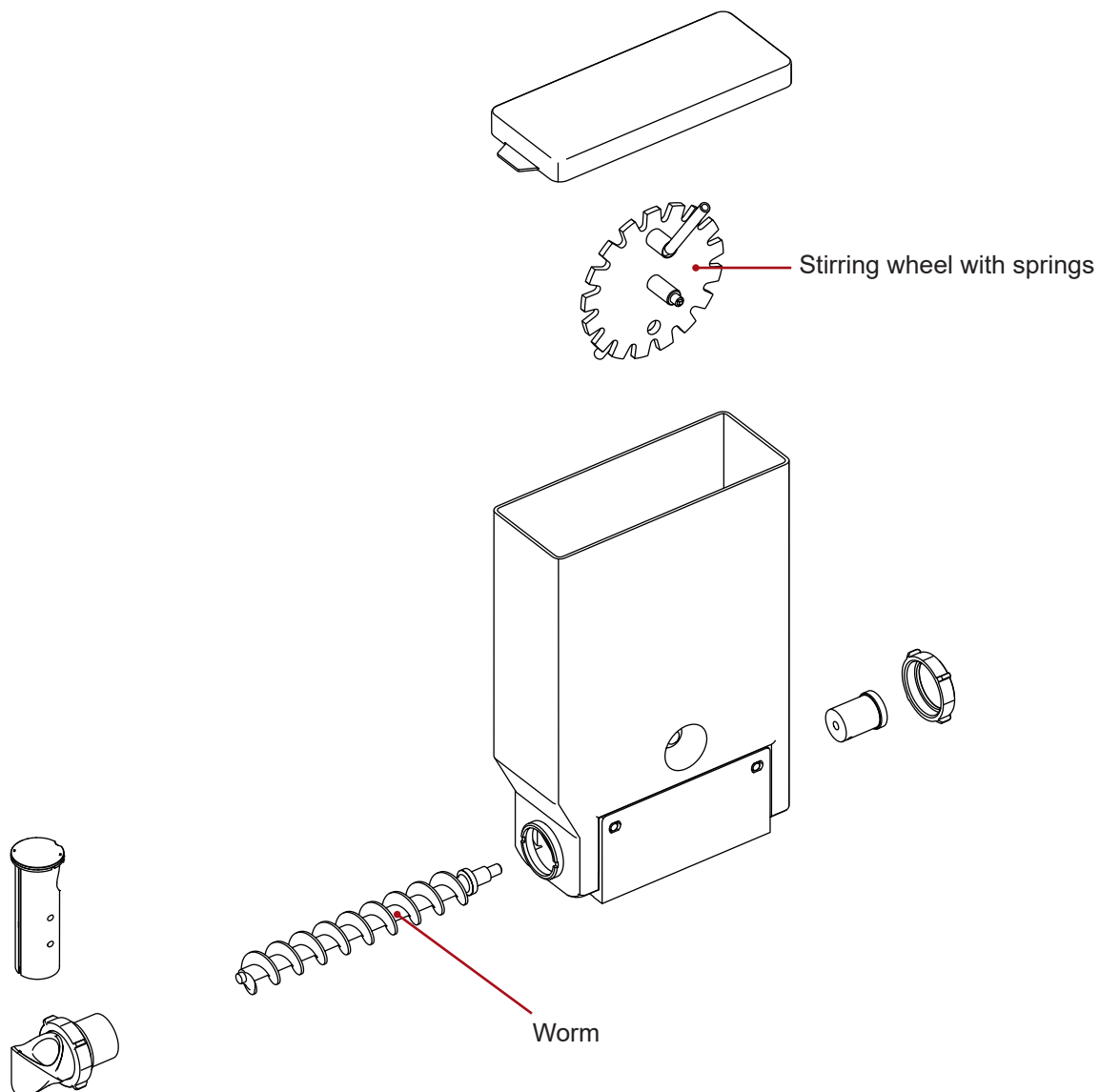
4.4.1 Fan



4.3.8 Mixer

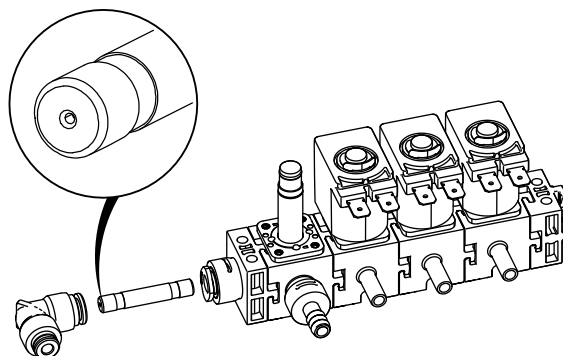


4.4.2 Instant product containers



4.4.3 Reducer

Part no. 420 00 151 00

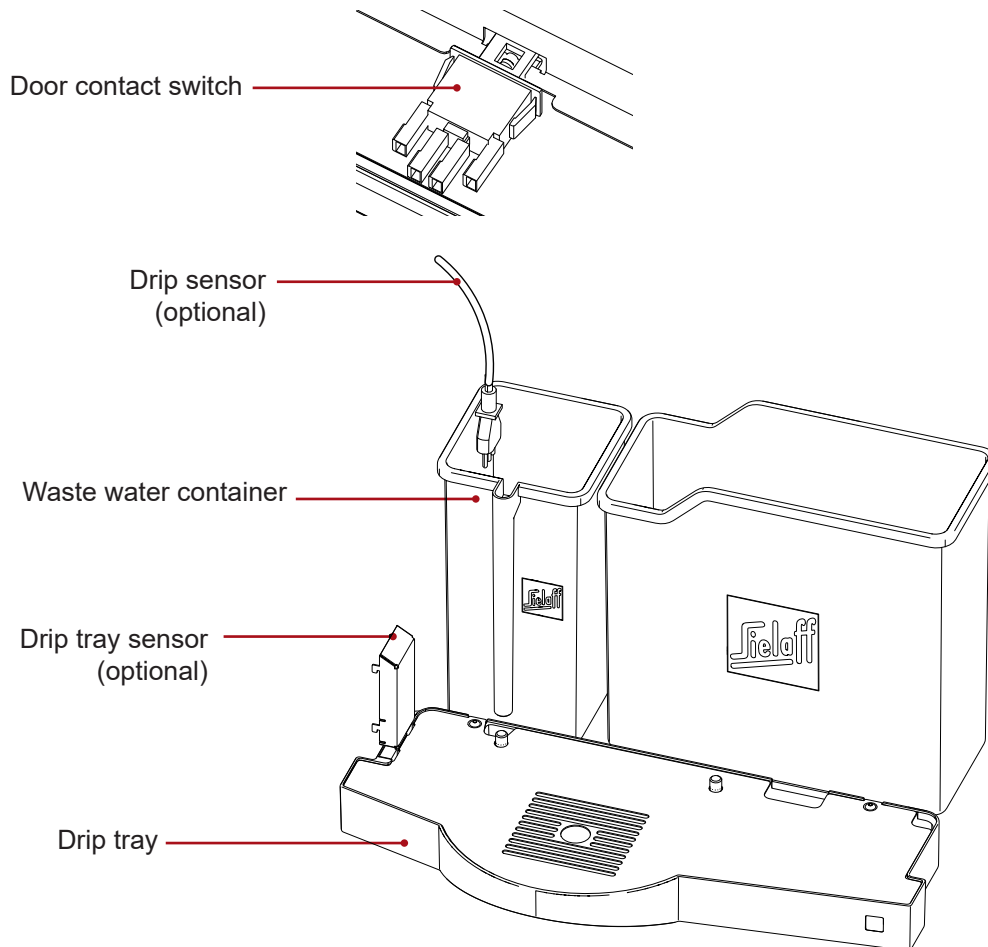


4.5 Electronics

4.5.1 Door contact switch, drip tray sensor, drip tray contact (optional)

Procedure

1. Select [M] - [8] - [E]
 2. Select service function [117] - [L]
- All contact positions are displayed
 - Use an object to actuate the switch; the change in switching status must be indicated



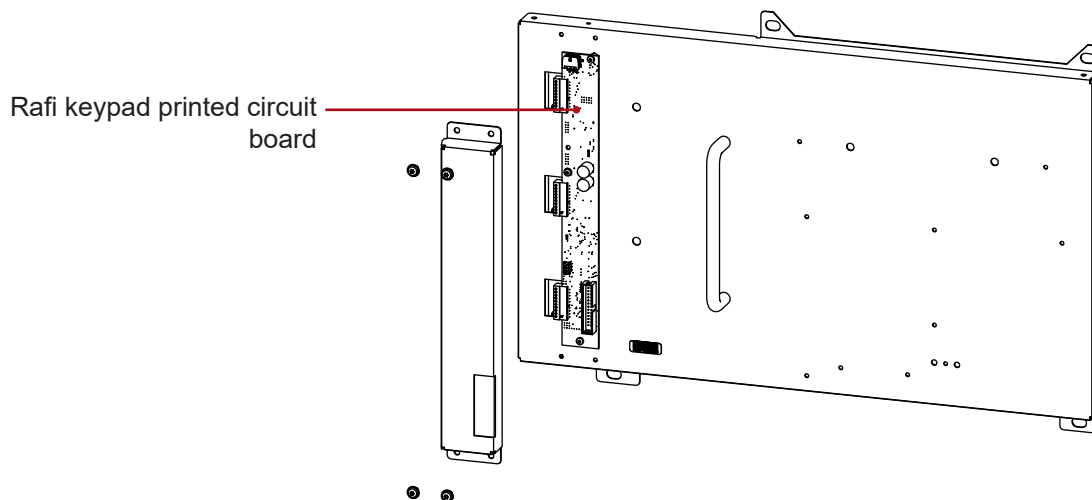
4.5.2 Keypad

Remove nuts, lift off cover, the printed circuit board is accessible.

A small LED on the printed circuit board for the Rafi keypad indicates the status:

flashes green – all right

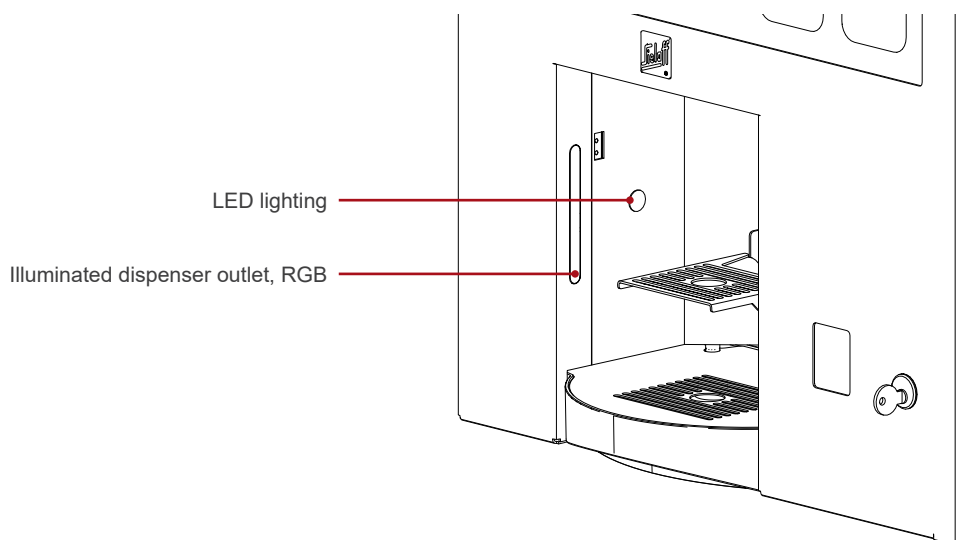
flashes red – error



4.5.3 LED light and illuminated dispenser outlet (optional)

Service code 47M for the LED lighting

Obtain a product: the illuminated dispenser outlet must light up in red and green.



4.6 Settings

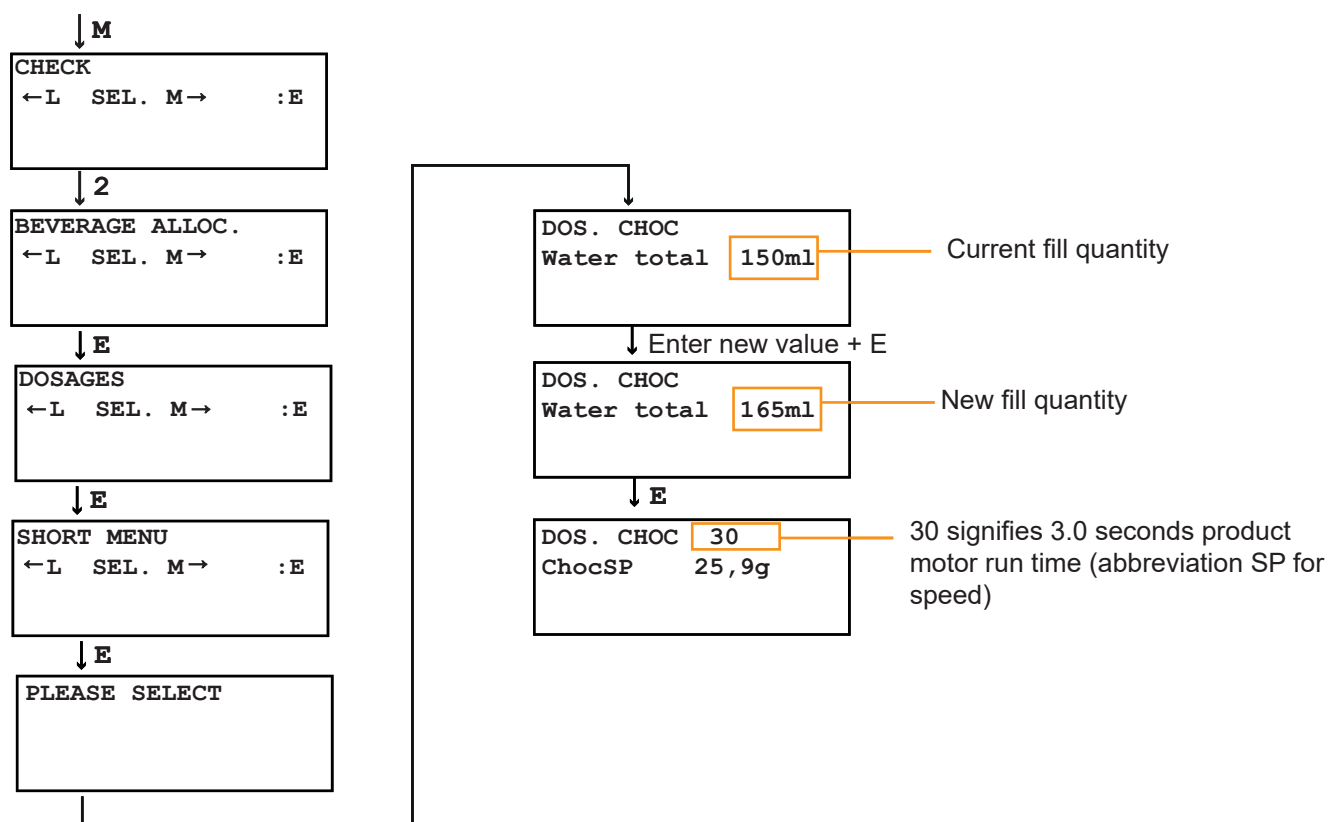
4.6.1 Dosing

The quantities dispensed can be adjusted for own cups. The filling quantity can be changed by approx. 20% here. This makes it possible to have slightly more or less in the cups.

The amount can be changed by 80 - 120%.

Procedure

1. Open the machine door
 2. Enter the key combination [M] - [2] - [E] - [E] - [E]
 3. Press the selection button for the drink you want to adjust
 4. Select a product ingredient in the menu by pressing [M] and [L].
 5. The value can be changed by using the number keys
 6. Press [E] to confirm your entry
- ✓ The cup fill quantity has been changed.



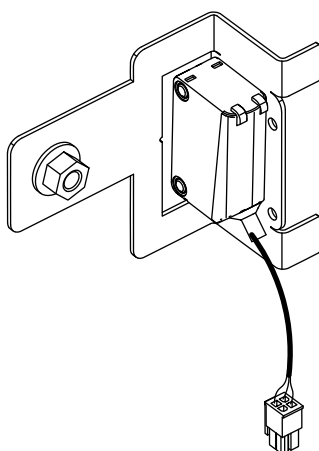
5. Components

5.1 Light barriers (reflection light barrier)

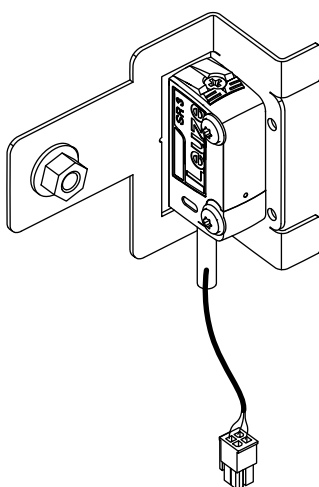
3 different light barriers are used.

- Pepperl&Fuchs ML100-55/59/103/115a/154 (no control elements)
- Leuze PRK3C.TT3/PT-P1 50142354 (with calibration button)
- Pepperl&Fuchs ML100-55-G-8523/103 (has 2 rotary dials)

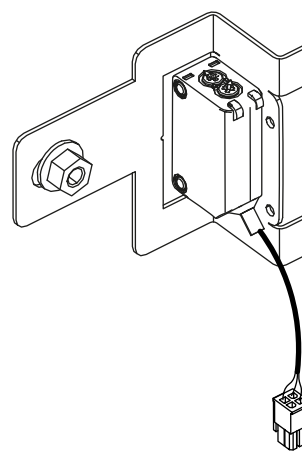
Pepperl&Fuchs
ML100-55/59/103/115a/154
(installed from mid-2023)



Leuze
PRK3C.TT3/PT-P1 50142354
(installed from mid-2023)

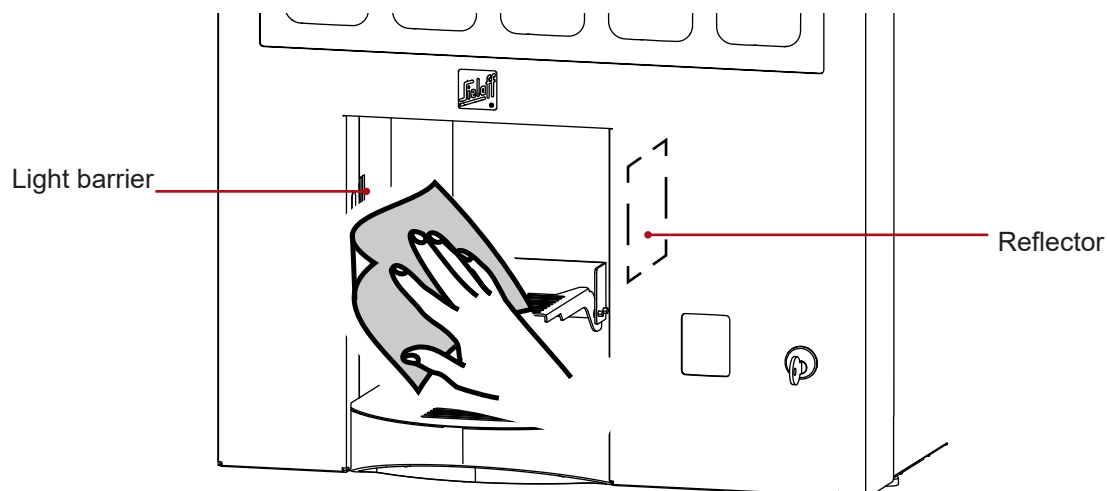


Pepperl&Fuchs
ML100-55-G-8523/103
(installed until 2023)

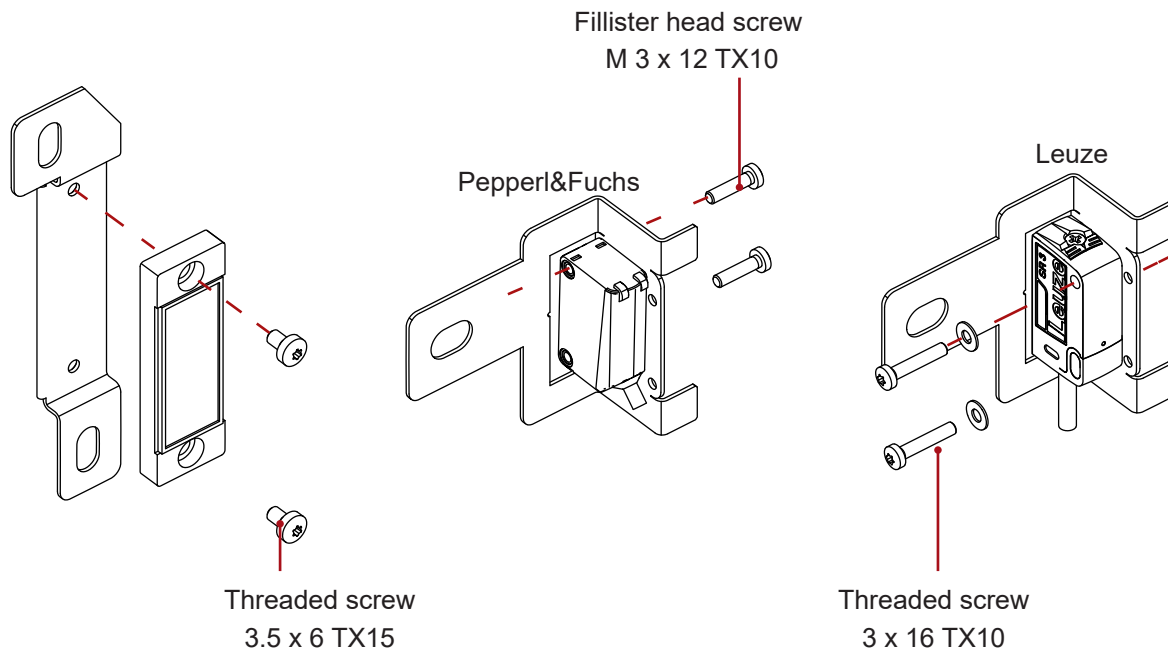


5.2 Cleaning and maintenance (Reflector and light barrier)

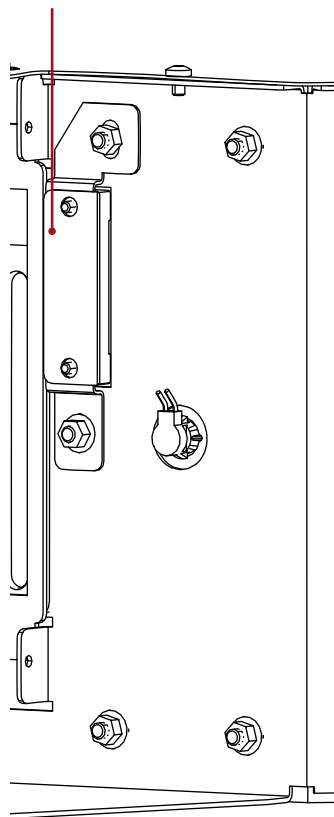
The light barrier and reflector must only be cleaned with a soft cloth and water.



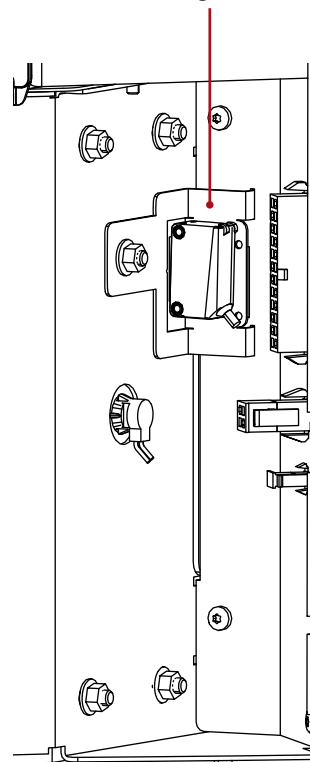
5.3 Mounting the reflector and light barrier



Reflector

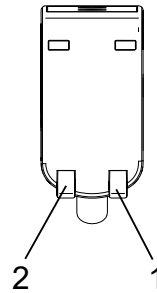
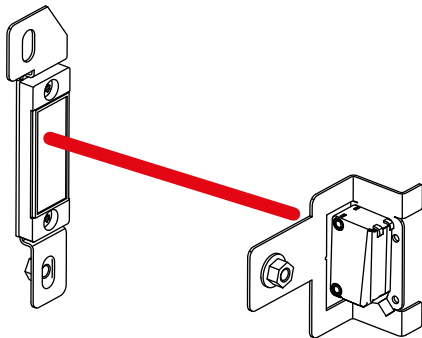


Carrier for light barrier



5.4 Pepperl&Fuchs ML100-55/59/103/115a/154 (no control elements)

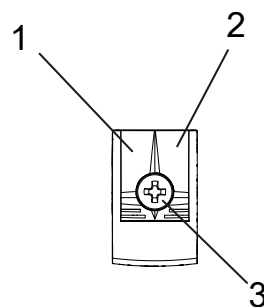
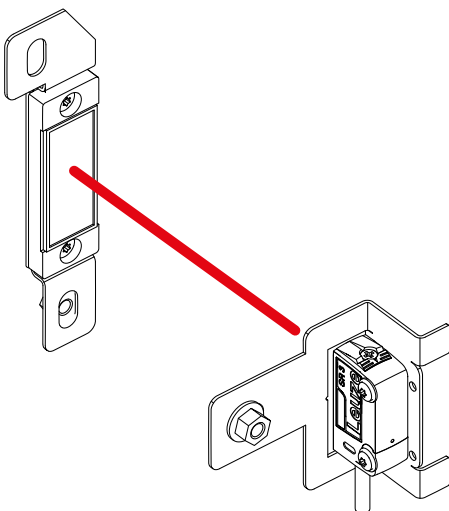
- Calibration unnecessary
- Sensitivity cannot be adjusted



- 1 - Yellow signal indicator
2 - Green power indicator

5.5 Leuze PRK3C.TT3/PT-P1 50142354 (with calibration button)

- Manual calibration unnecessary
- Calibration takes place automatically when the power supply is connected
- Sensitivity cannot be adjusted



- 1 - Yellow LED
2 - Green LED
3 - Calibration button

5.6 Pepperl&Fuchs ML100-55-G-8523/103 (has 2 rotary dials)

When is it necessary to teach the light barrier?

If any of the changes below are made it is necessary to re-teach the light barrier to recognise cups ("teach"):

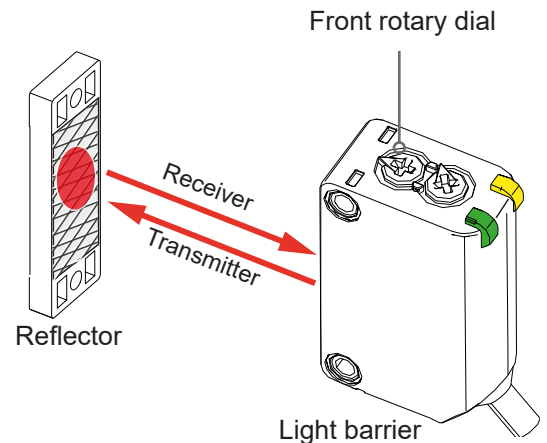
- The green and yellow LED flash quickly (approx. 8 Hz) alternately
- Mounting a new light barrier
- Mounting a new reflector

Additional equipment

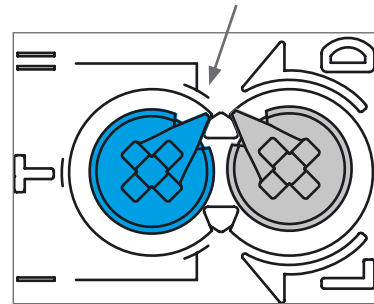
- Small Phillips screwdriver

Requirement

- The light barrier is operated in dimming mode in the vending machine. The rotary dial at the back must be set to "D" ("L" is for Light on and "D" for Dark on - dimming mode).
- The vending machine is switched on and the service key inserted.
- The light beam is unblocked, there is **no object** between the light barrier and reflector.
- If there is operating voltage the green LED is on.
- The light emission and the reflector are clean



The tip of the rotary dial is the indicator: here position II

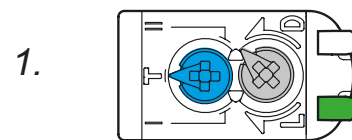


Procedure "teaching")

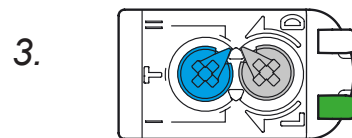
1. Turn the rotary dial at the front to "T" (T - "teach").
2. Wait at least 2 seconds until the green and yellow LEDs flash at the same time.
3. Turn the front rotary dial to "II".

→ The LEDs begin to flash slowly and alternately. The teaching process has started. After a few seconds the LED's should be lit permanently.

✓ The teaching process has been successful.



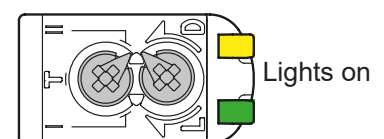
2. Approx. 2 seconds Flash simultaneously



Teaching was not successful?

- The green and yellow LEDs flash fast and alternately (approx. 8 Hz) for approx. 5 seconds
- The process must be repeated.

Result



Notes

- If an object (e. g. cup or glass) is recognised, the yellow LED goes out.
- If dirt or debris is present the yellow LED flashes quickly (approx. 4 Hz). To prevent dirt or debris build up the light emitter and reflector should be cleaned regularly. The sensor automatically re-adjusts itself.

5.7 Removing the grinder head (release mechanical blockage)

Foreign bodies in the coffee beans can cause mechanical blockages in the grinder. The grinder will no longer rotate. To rectify blockages, the grinder head must be removed.

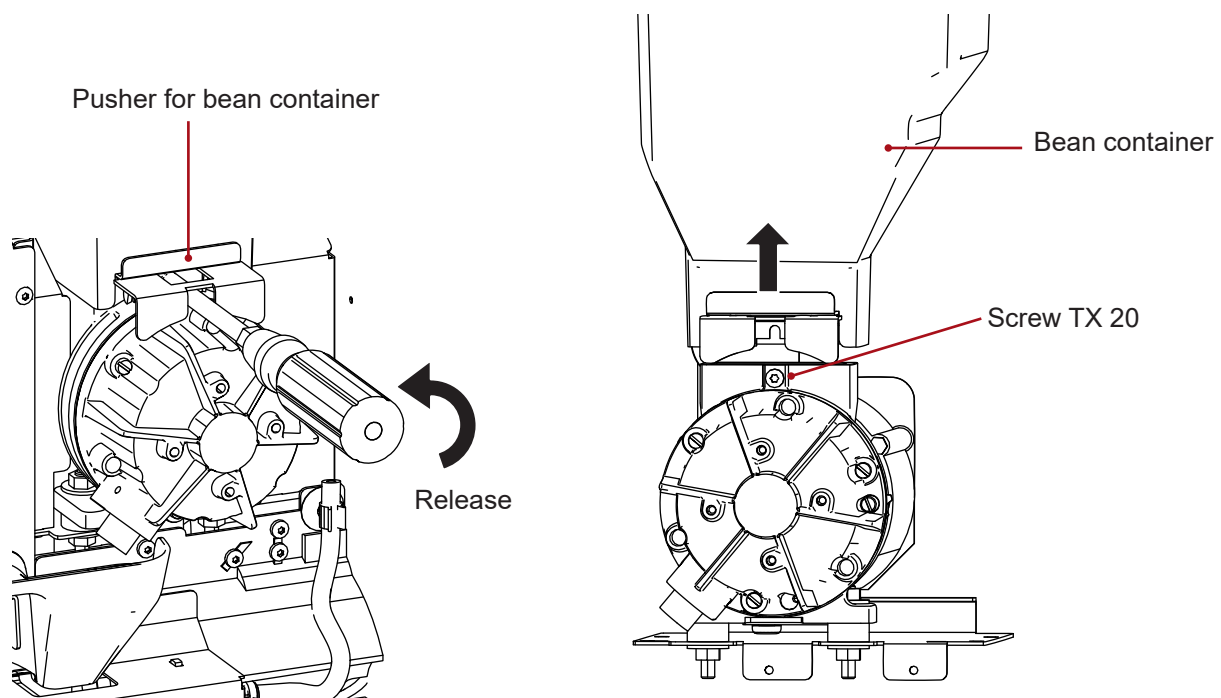
Additional equipment:

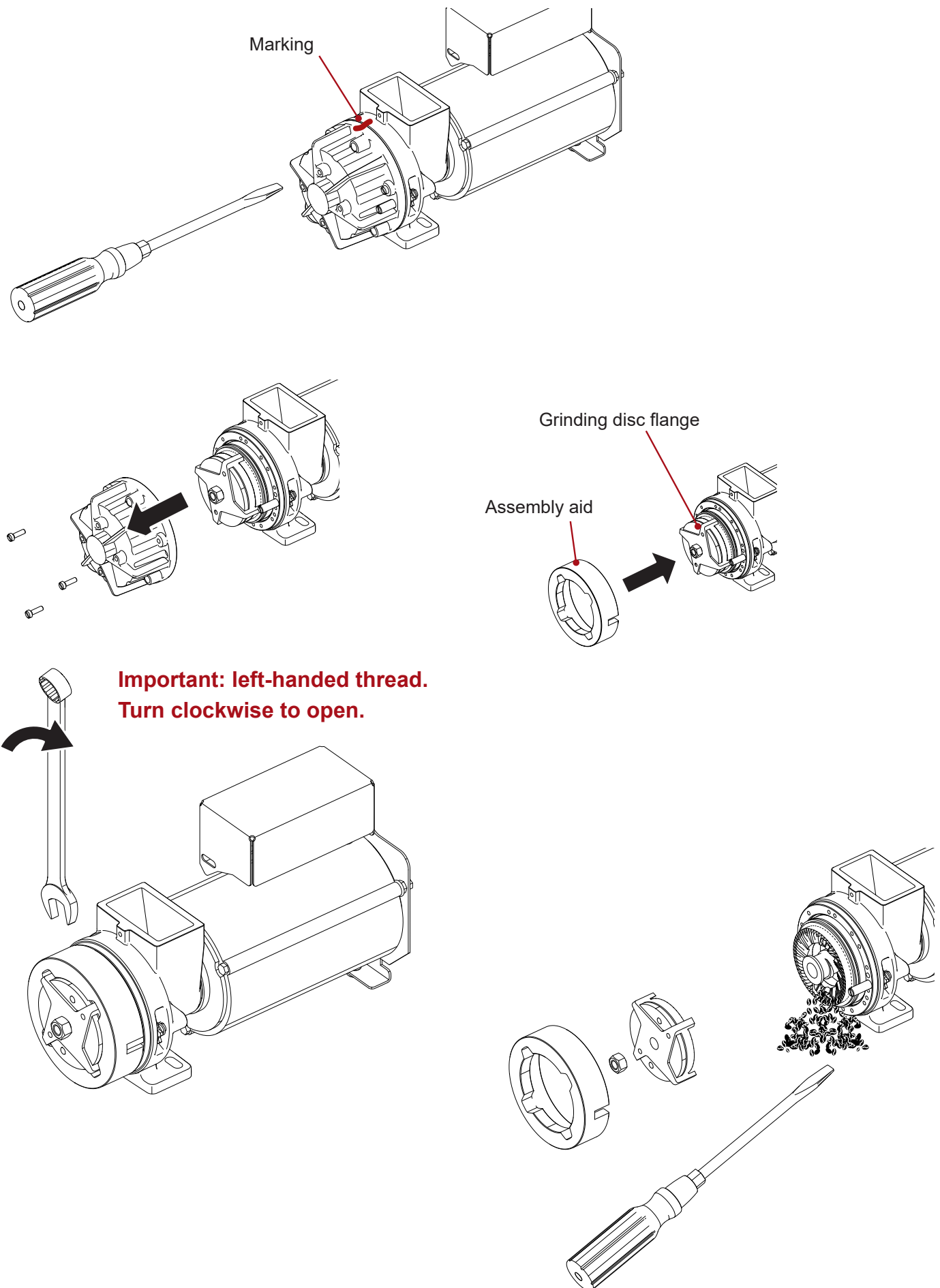
- Screwdriver TX20
- Assembly aid part. no. 407 00 011 11 (if available)
- Pipe wrench (alternative)
- Flat screwdriver
- Size 13 open-end spanner

Procedure:

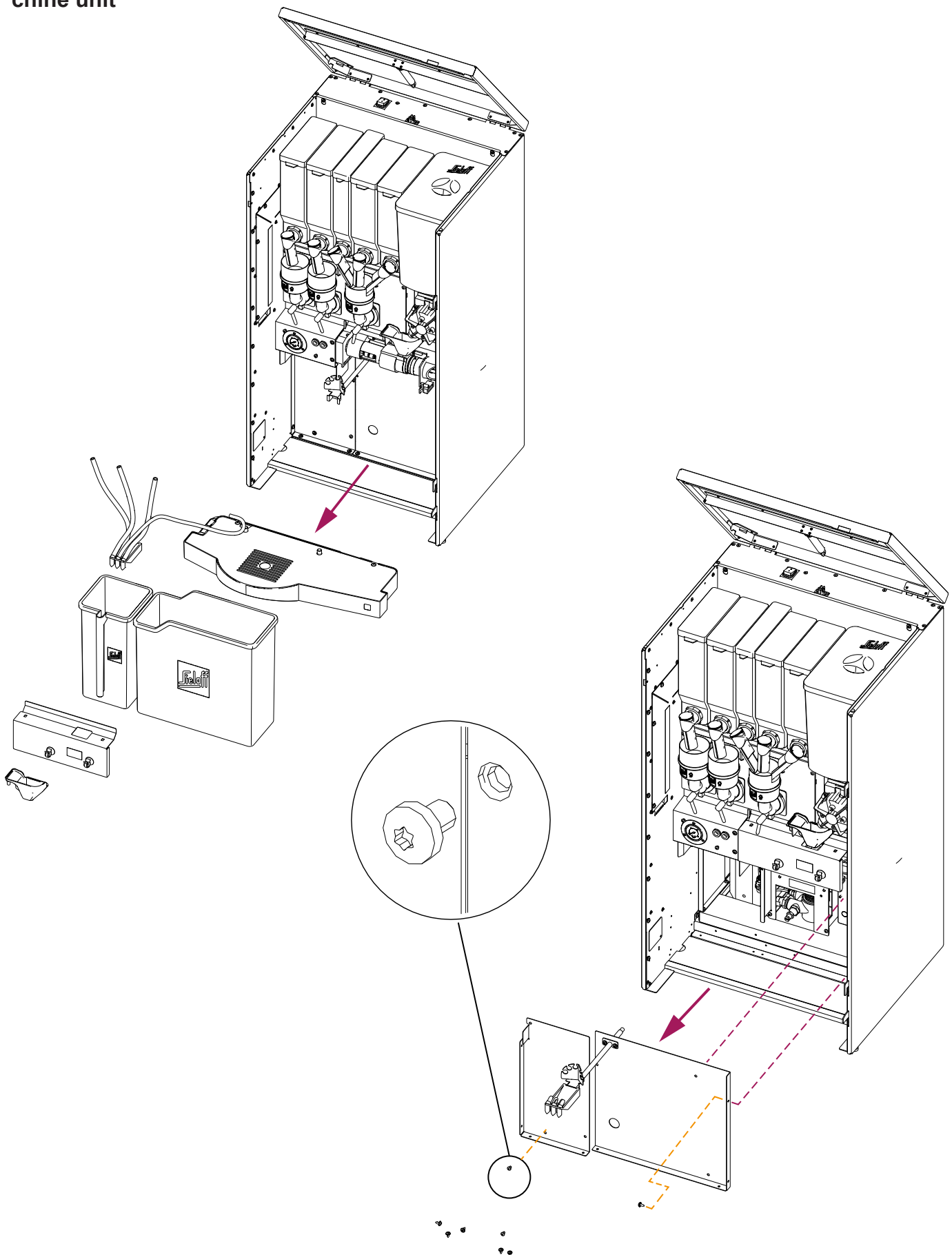
1. Move the bean container pusher to the back (stop outlet)
2. Slightly loosen the TX20 screw underneath the pusher
3. Remove the bean container upwards
4. Mark the installation position of the grinder head using a felt-tip pen
5. Use a flat screwdriver to remove 3 screws from the grinder head
6. Place the mounting aid (if available) on the grinding disc flange and hold it in place with one hand Alternatively, use a pipe wrench to hold the grinding disc flange in place
7. Loosen the nut with your other hand and a size 13 open-end spanner.
Important: left-handed thread. Turn clockwise to open.
8. Pull off the grinder head
9. Use the screwdriver to remove the foreign objects and beans until the axle can be turned by hand again

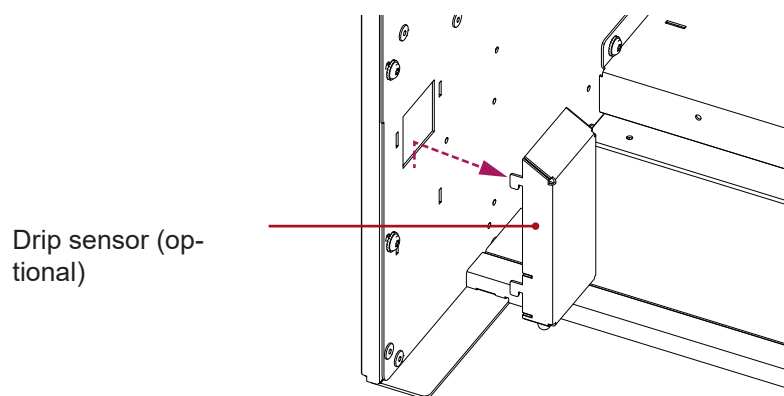
Mounting is performed in reverse order.



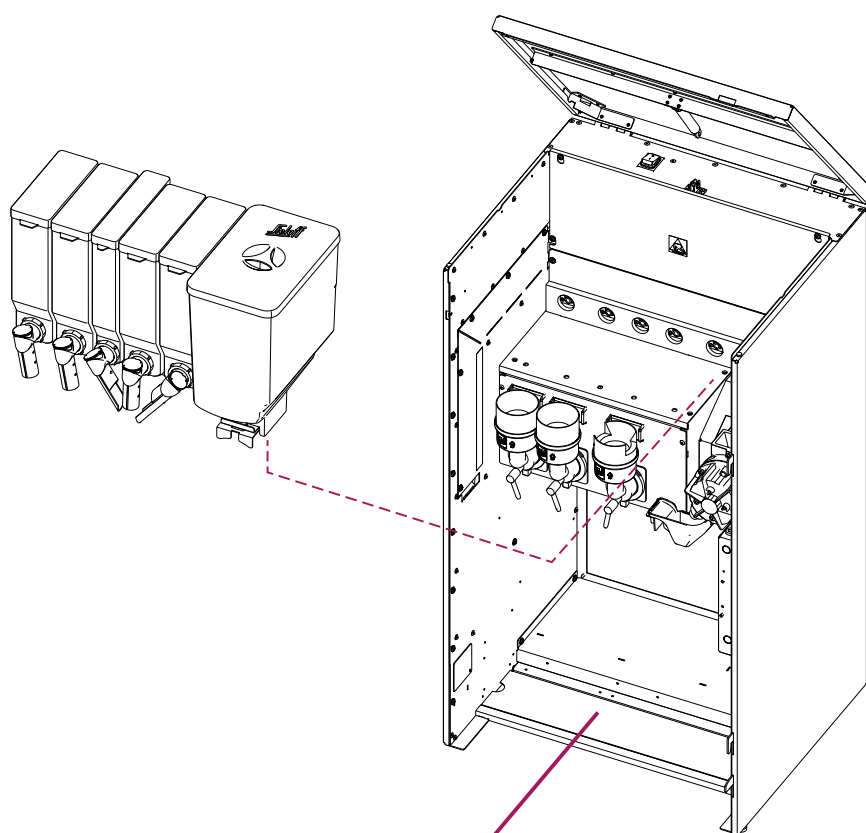
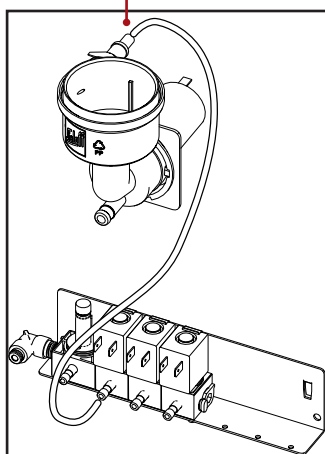


5.8 Dismantling complete coffee machine unit

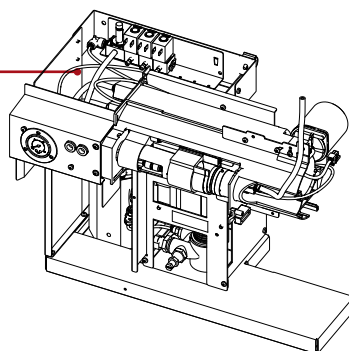




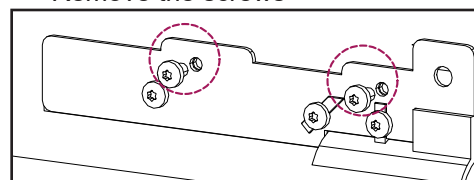
Remove hoses here



Coffee machine unit



Remove the screws



5.9 Removing the boiler



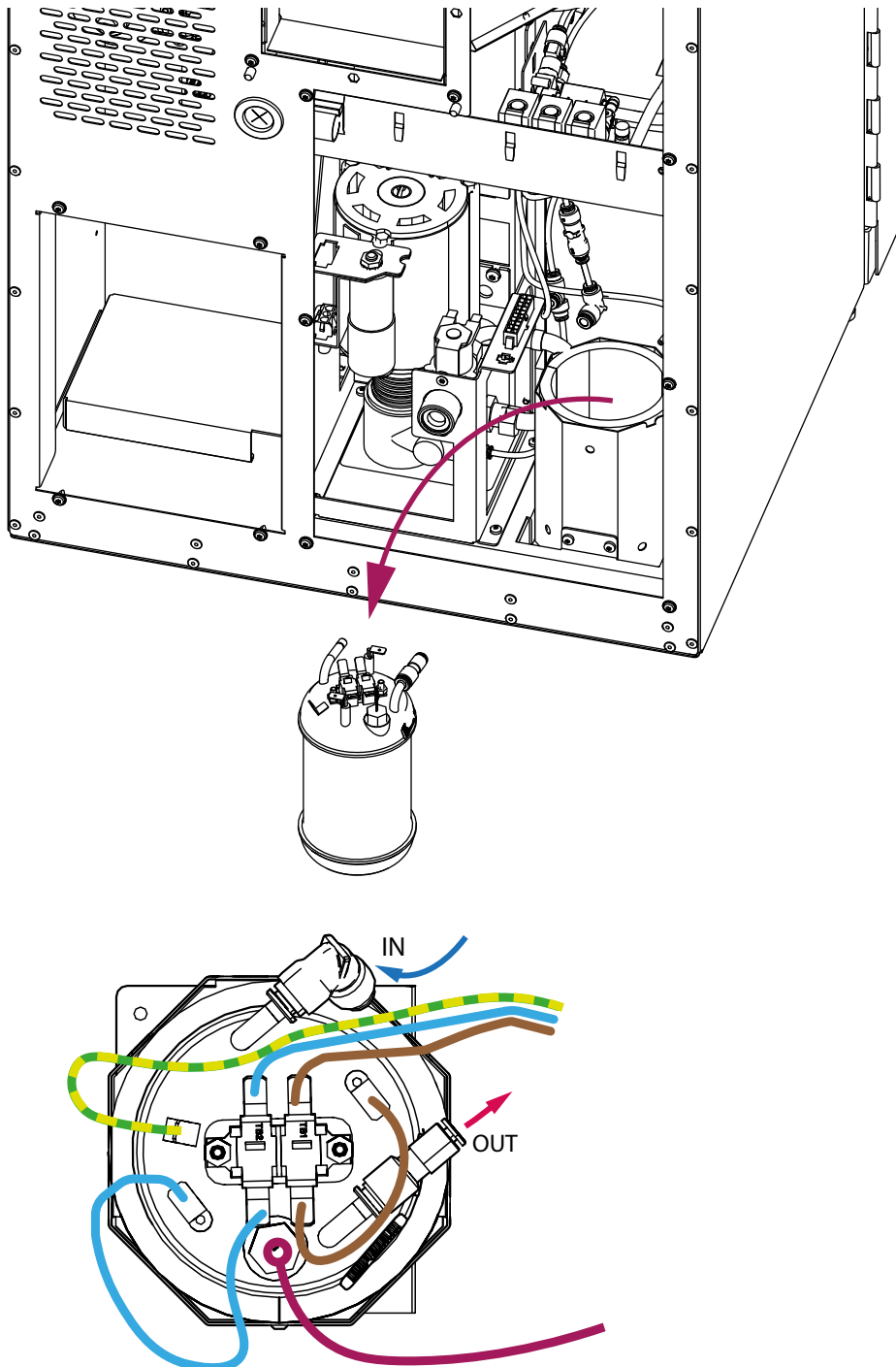
CAUTION! Hot surfaces!

Risk of burns!

- The boiler may be hot. Allow the boiler to cool down.

Procedure:

1. Disconnect the vending machine from the power supply
2. Disconnect the water connections on the boiler
3. Disconnect electrical connections
4. Remove the boiler upwards

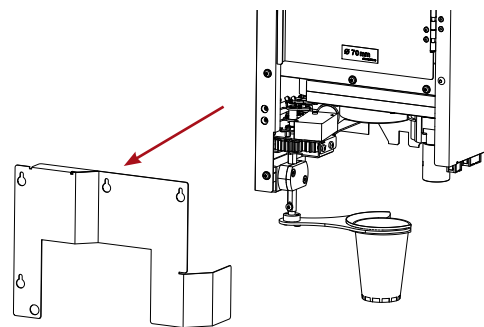


5.10 Adjusting the cup position

The cup catcher has 2 positions: Drop position (F) and output position (A).

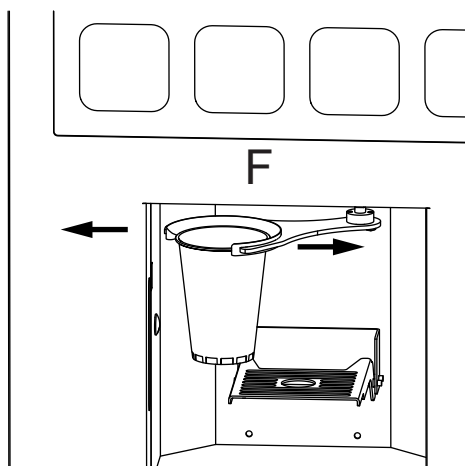
Procedure

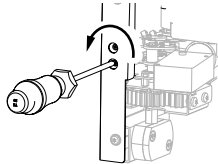
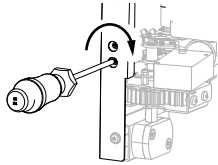
1. Remove cover
2. Use a TX10 screwdriver to adjust the stop to the buttons
3. The following service codes are required to check the setting:
56M Cup dispenser
59M Extend swivel arm
60M Retract swivel arm



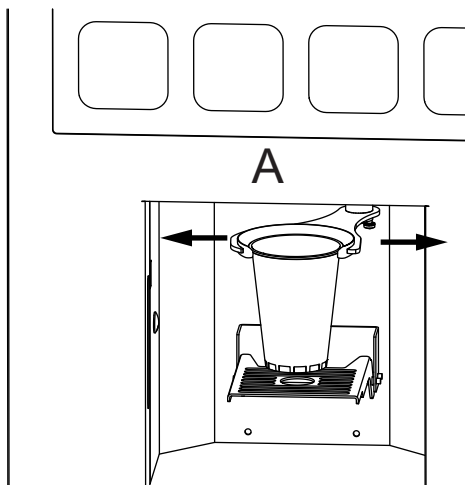
The cup is dispensed from the cup dispense mechanism and falls into the gripper:

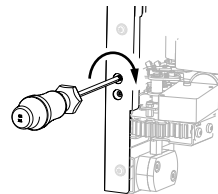
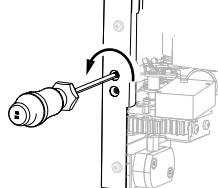
Drop position (F)



F		
The gripper should move further to the		
left		The lower adjusting screw must be turned to the left
right		The lower adjusting screw must be turned to the right

The cup in the gripper is rotated to the filling position (approx. 44°): Dispensing position (A)

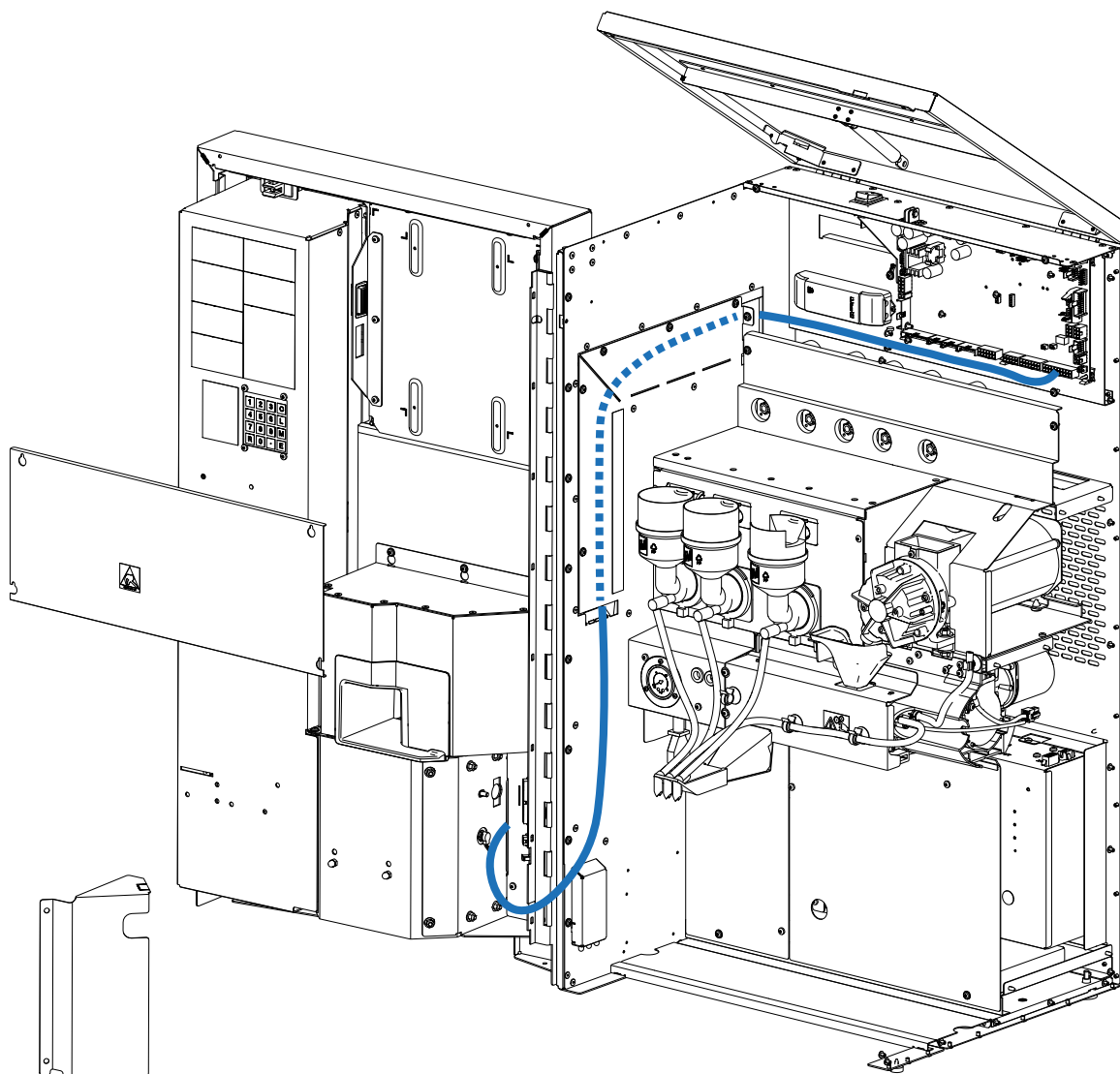
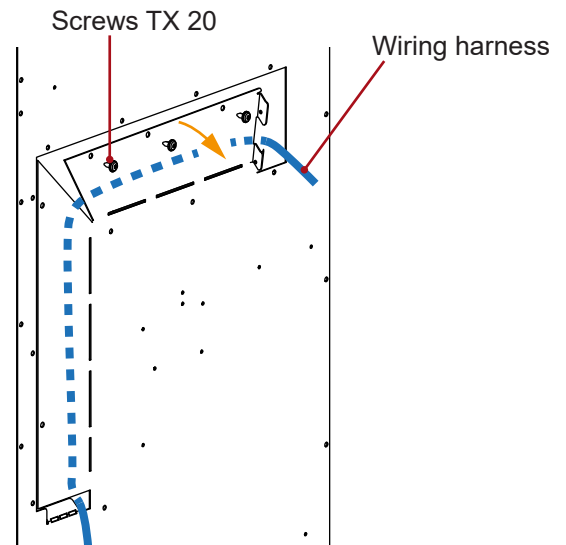


A		
The gripper should move further to the		Rotating direction
left		The upper adjusting screw must be turned to the right
right		The upper adjusting screw must be turned to the left

5.11 Wiring harness between control unit and door

Procedure:

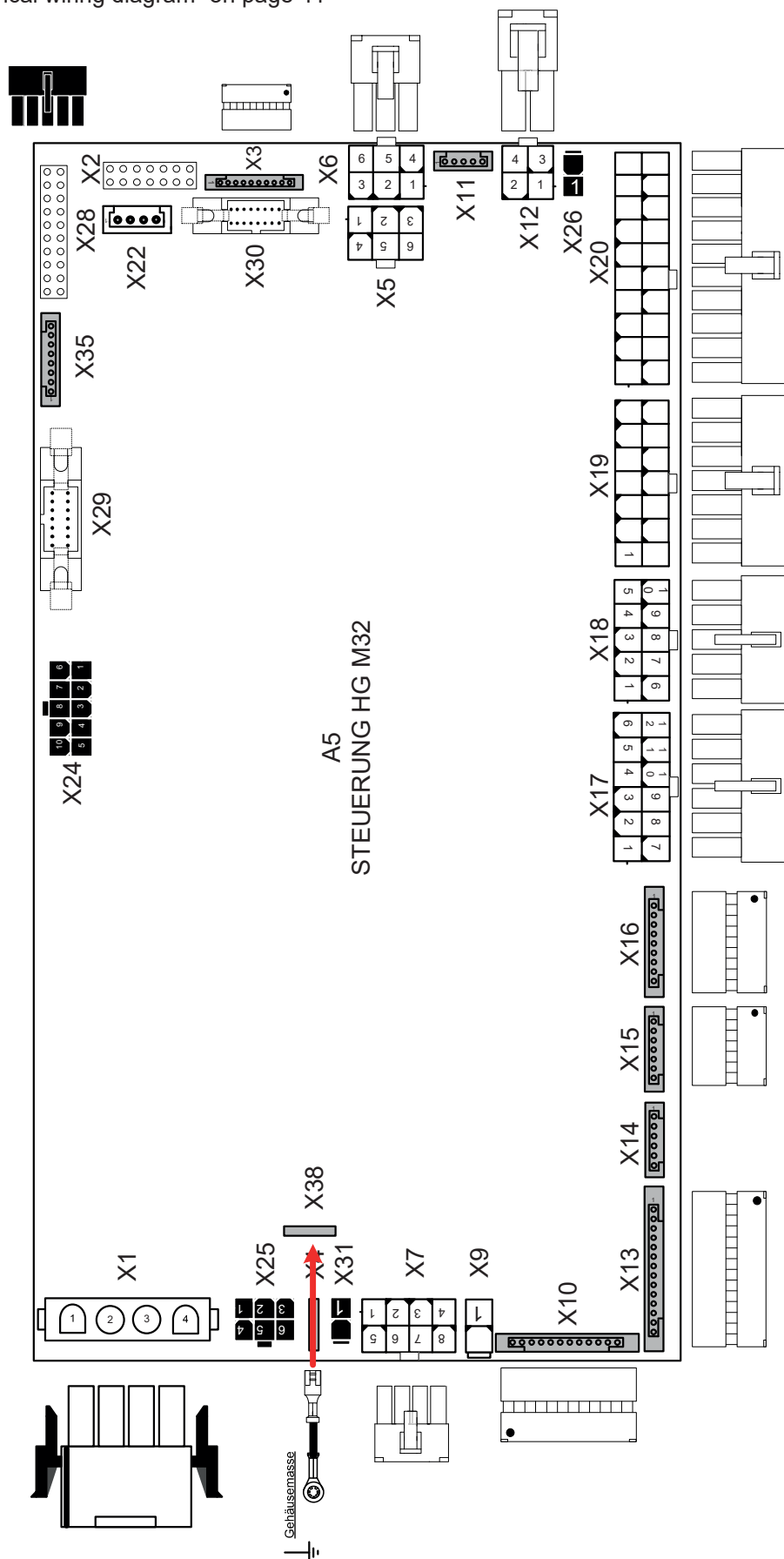
1. Remove the TX 20 screws on the inside left of the vending machine
 2. Slightly bend open the horizontal plate so that the wiring harness is accessible.
- ✓ The wiring harness can be replaced



5.12 HG M32 controller

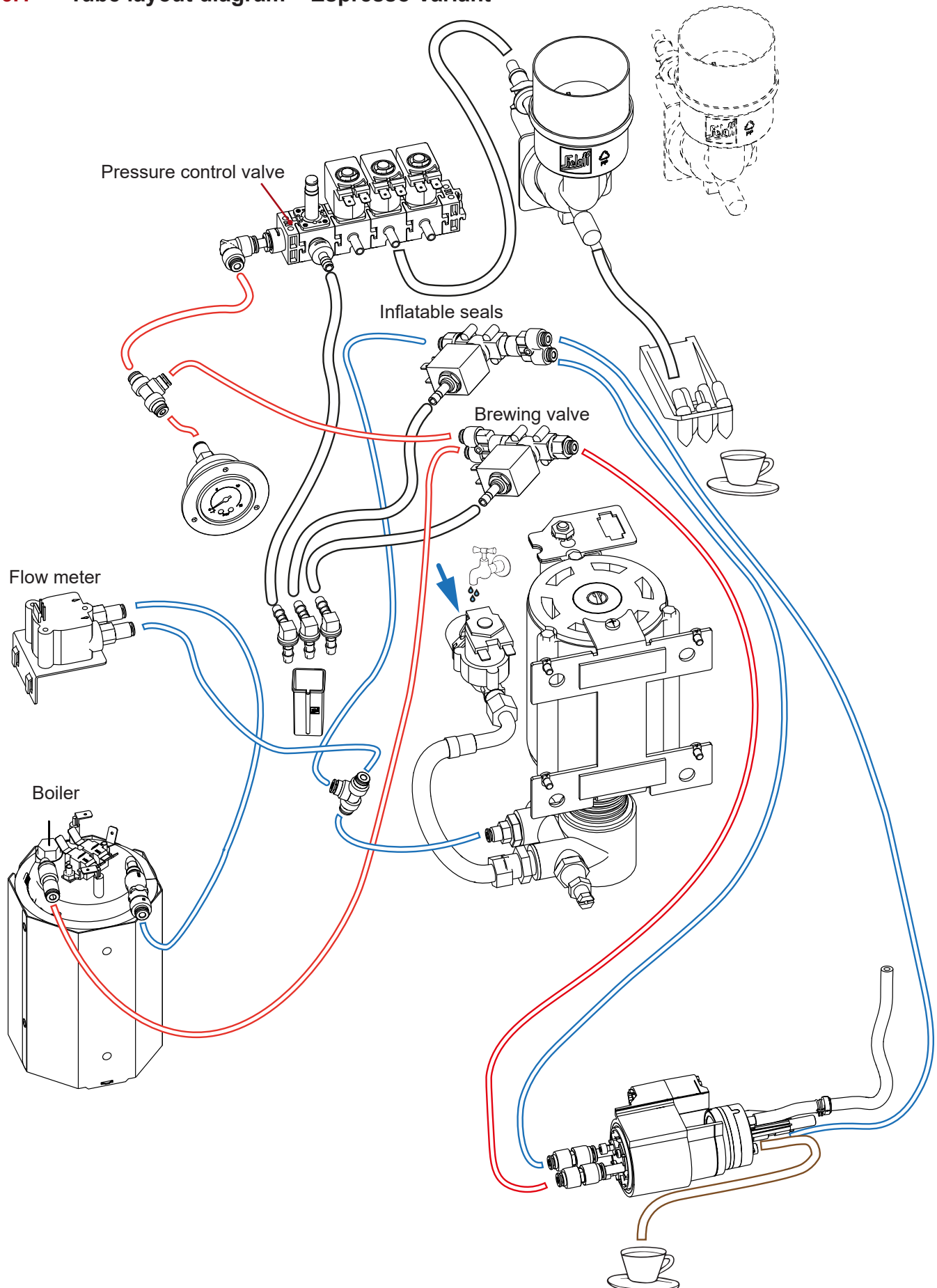
The controller has part no. 404 70 500 00

See also "6.7 Electrical wiring diagram" on page 41

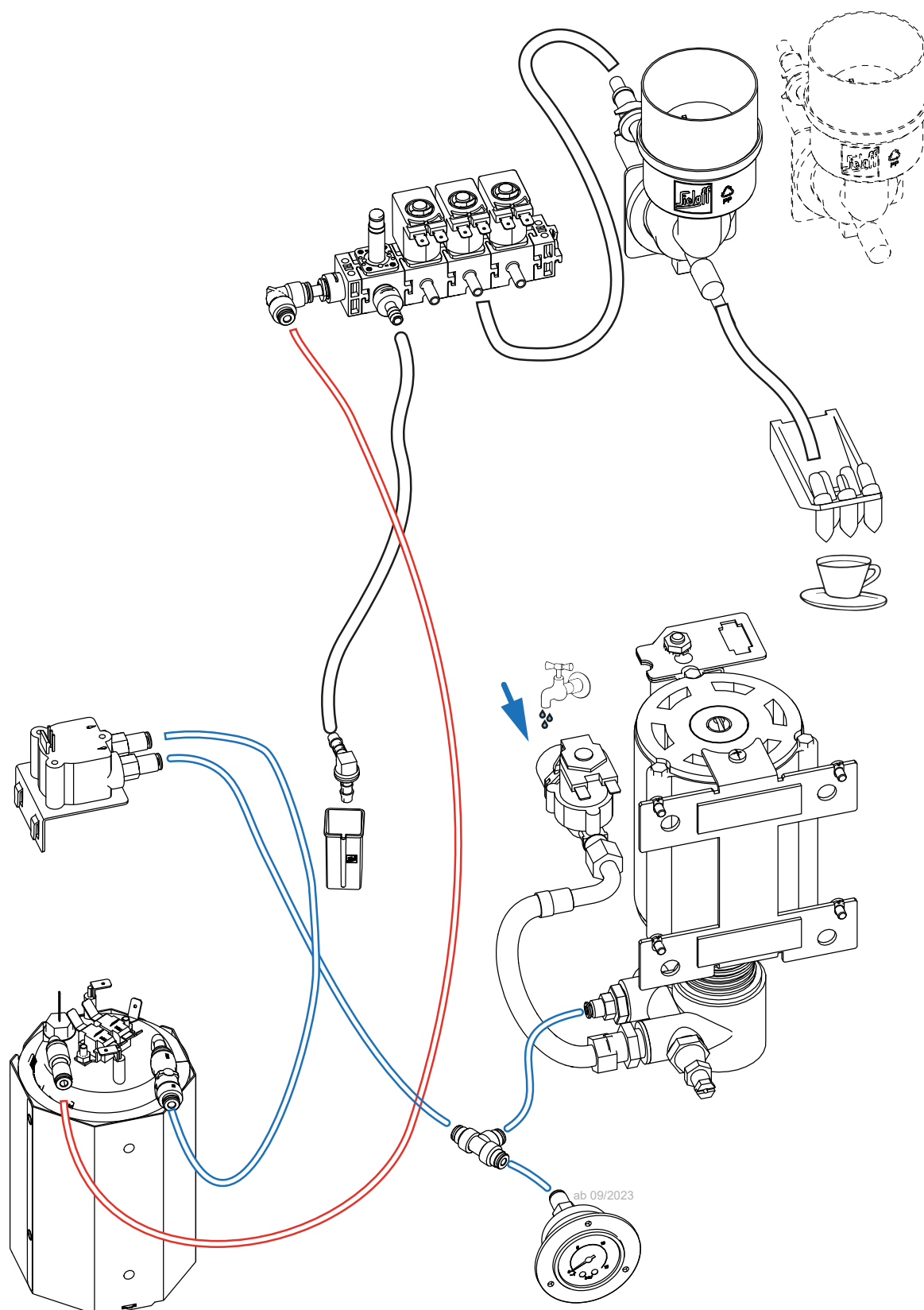


6. Drawings and plans

6.1 Tube layout diagram – Espresso Variant

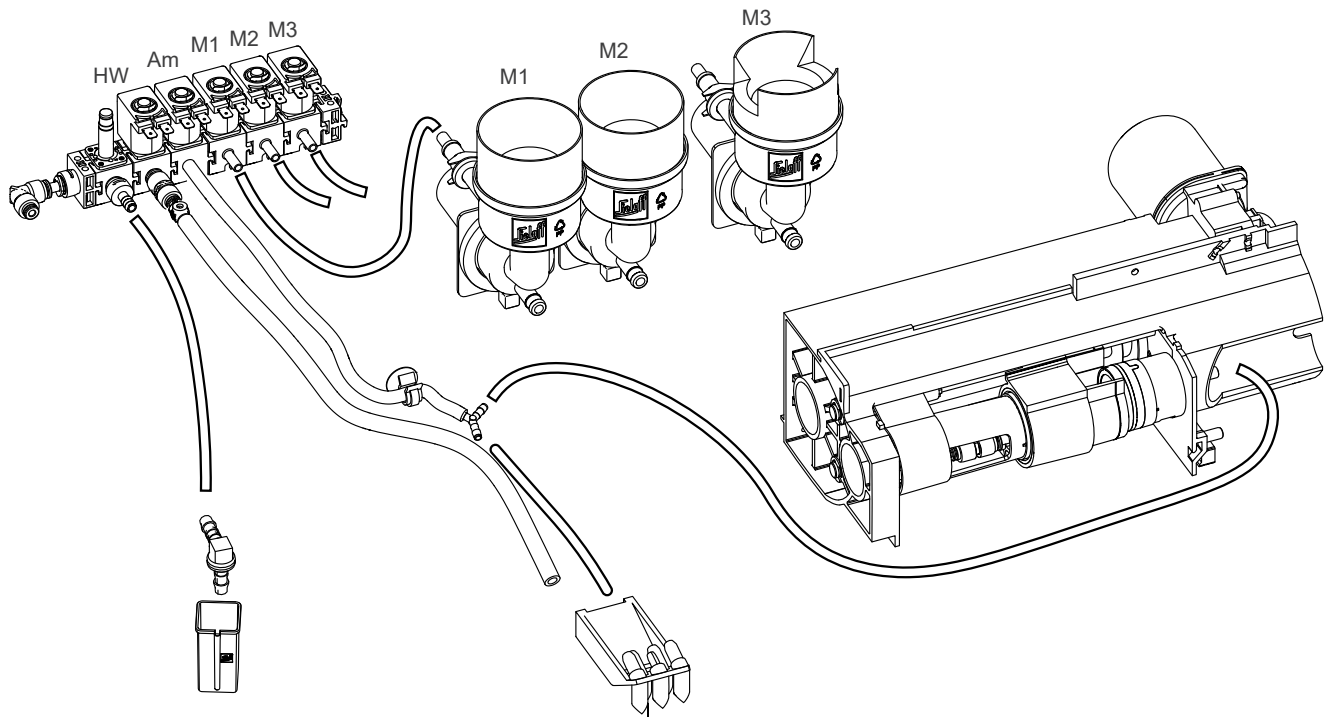


6.2 Tube layout diagram - Instant variant

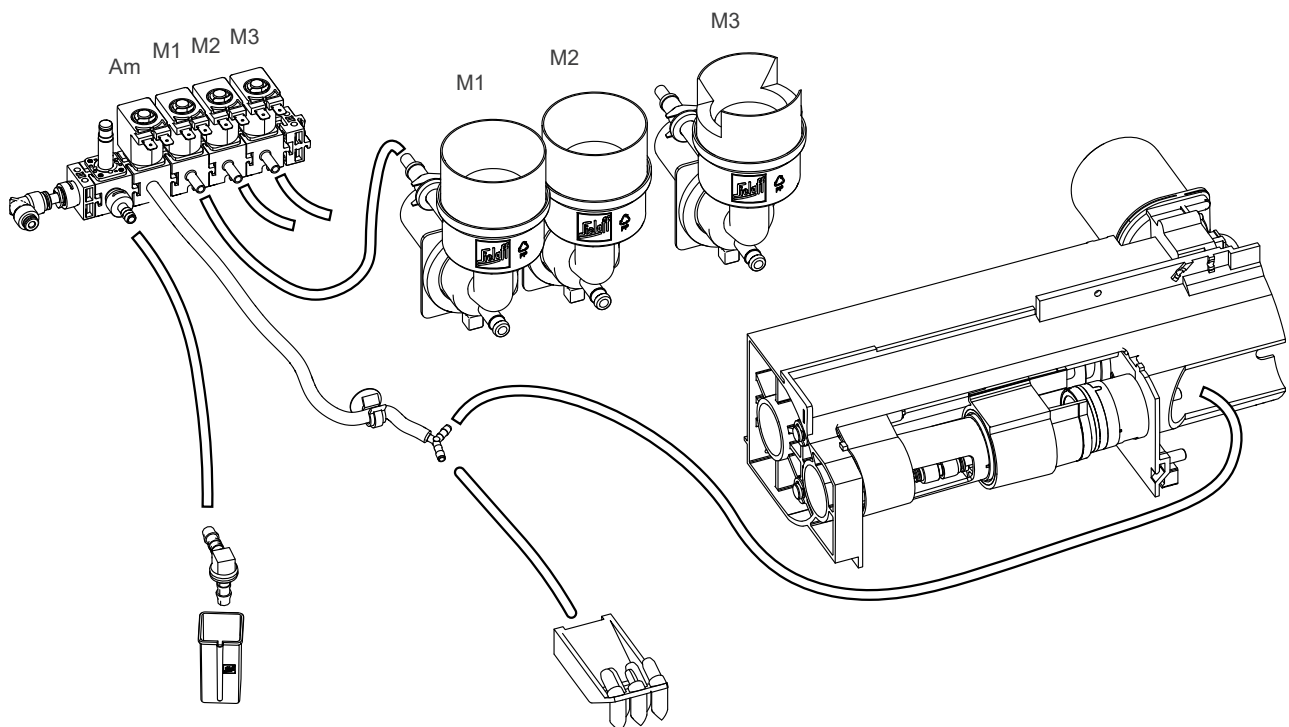


6.3 Valve carrier variants

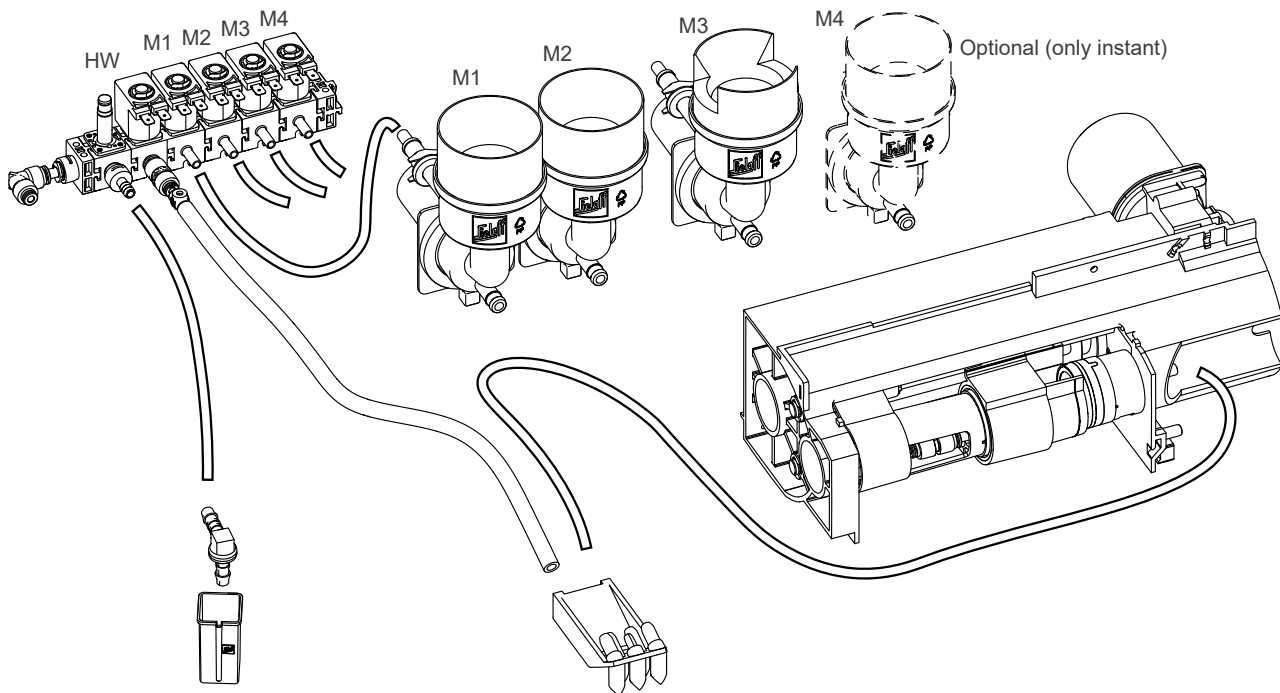
6.3.1 Hot water valve and Americano valve



6.3.2 Americano only, valve extra



6.3.3 Only hot water, valve extra



Pay attention to the valve sequence when plugging them together (from left to right):

Hot water - Americano - M1 (see chapter 6.3.1)

Americano - M1 - M2 (see chapter 6.3.2)

Hot water M1 - M2 (see chapter 6.3.3)

Pay attention to the wiring diagram part no. 420 00 911 00 (Espresso only):

- Hot water, yellow cable
- Americano, black cable
- Mixer M1, pink cable
- M2, orange cable
- M3, grey cable

Pay attention to the wiring diagram part no. 420 00 911 00 (instant only):

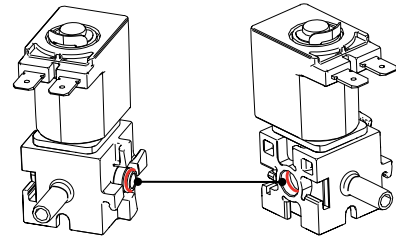
- Hot water, yellow cable
- Mixer M1, pink cable
- M2, orange cable
- M3, grey cable
- M4, black cable

6.4 Solenoid valve seals

The valves are connected to each other according to the principle of a bayonet lock. Start or end pieces and valves can be plugged together as required.

Two parts must form a seal to ensure that the valve block is tight.

The seal can be on the pipe socket or in the bore. The presence of a seal must be checked carefully with each joining!



6.5 Assembling solenoid valves

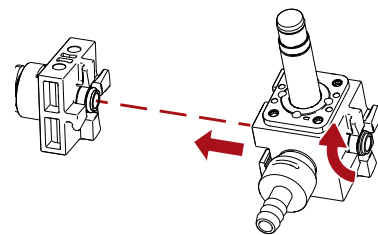
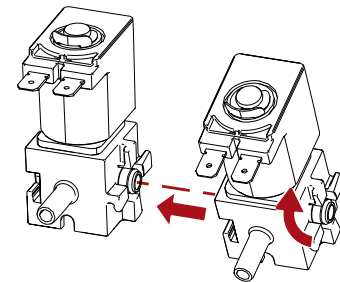
Requirement

There is a seal between two parts.

Procedure

1. *Insert the valves into each other with a slight angular offset to the longitudinal axis so that the pipe socket of one valve engages in the bore of the other valve*
2. *Rotate the valves in opposite directions until they are axially aligned.*

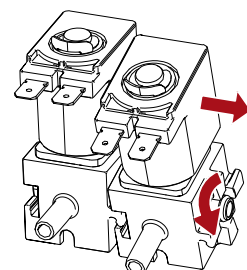
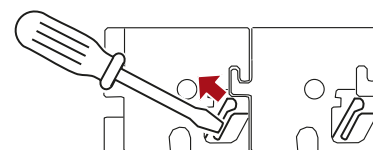
→ The mechanism engages audibly.



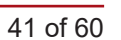
6.6 Separating solenoid valves

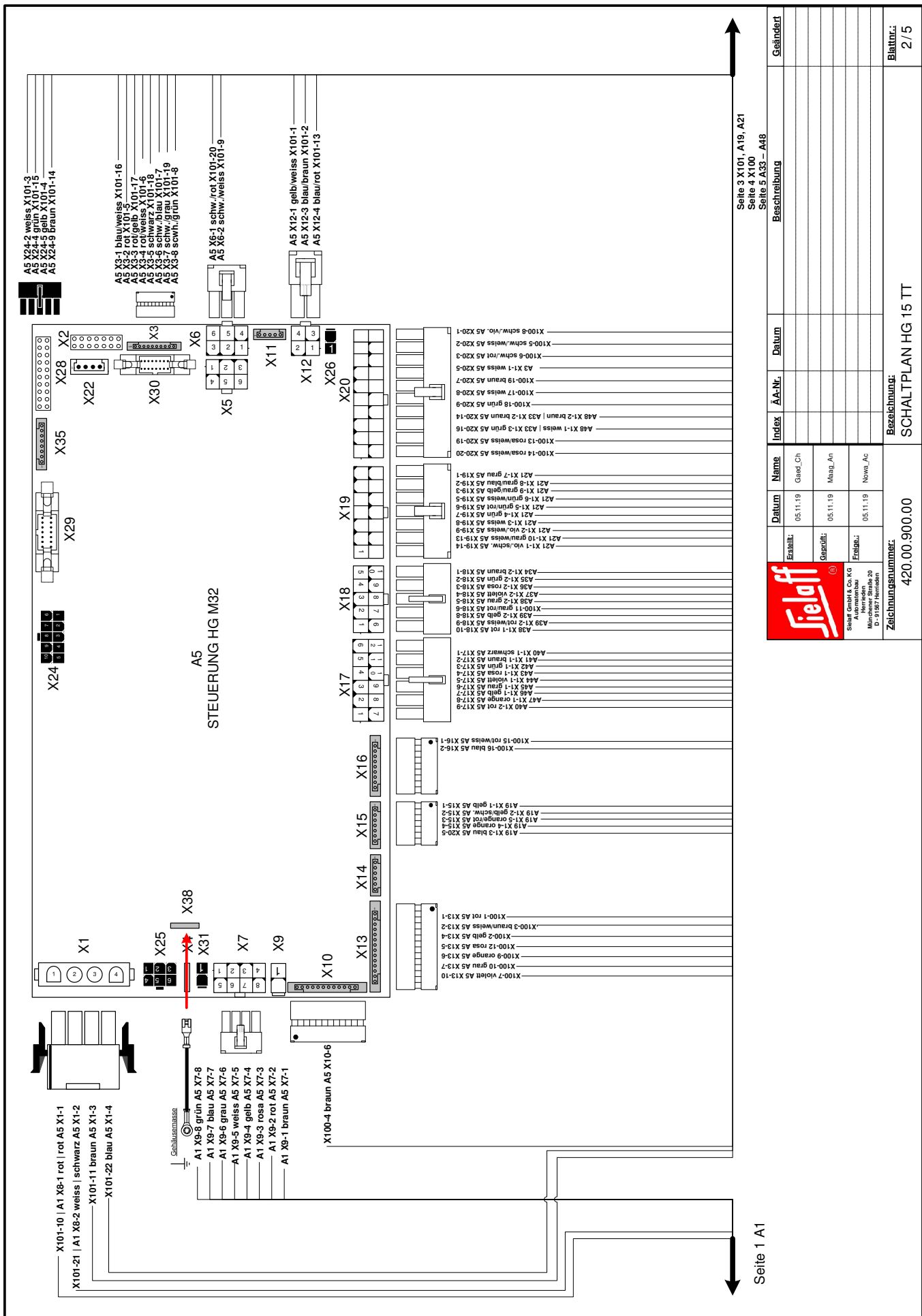
1. *Use a small flat screwdriver to actuate the locking mechanism on the back of the valves*
2. *Rotate one valve slightly relative to the other valve*

✓ The valves can be pulled apart

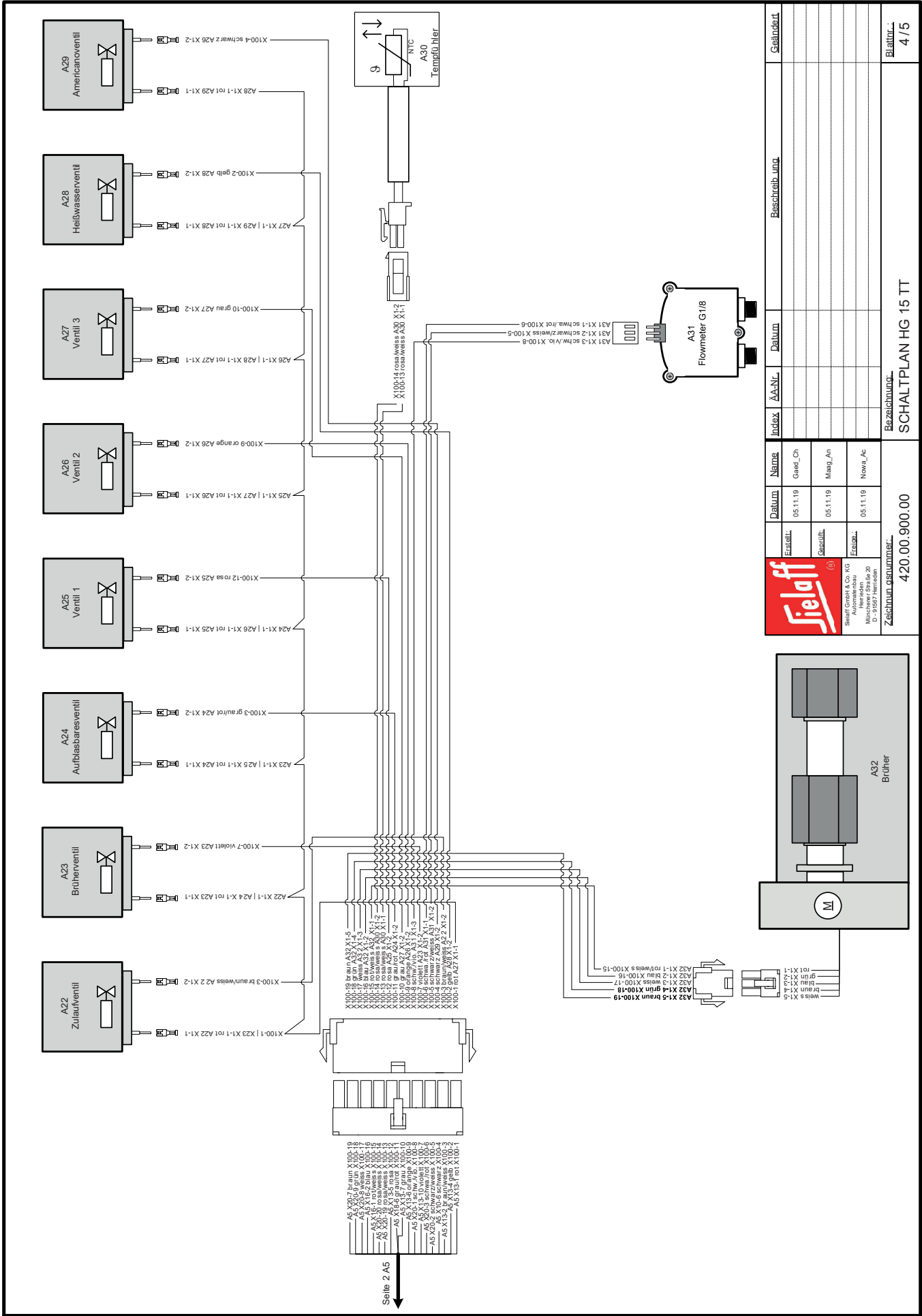


420 66 020 00_041

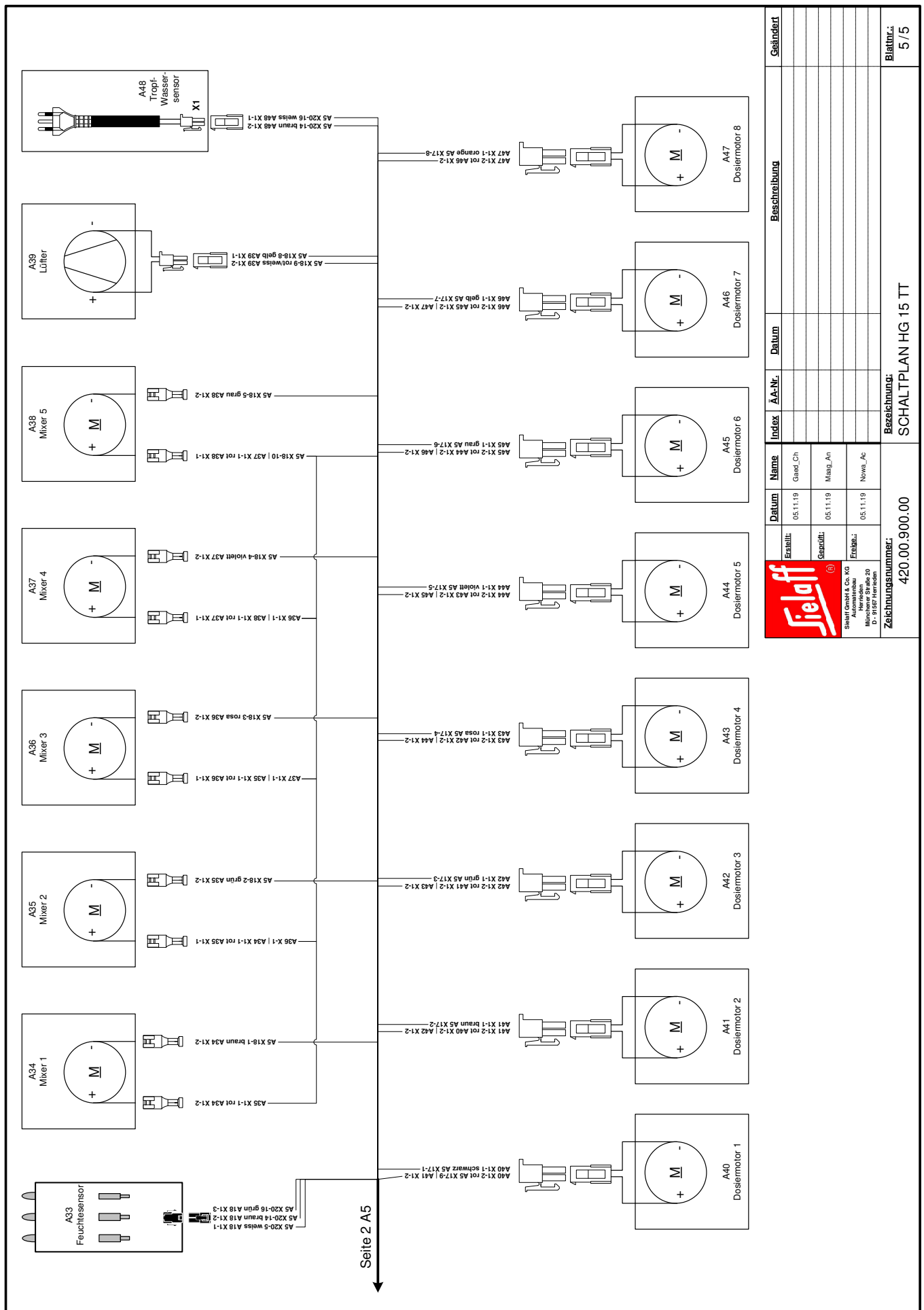




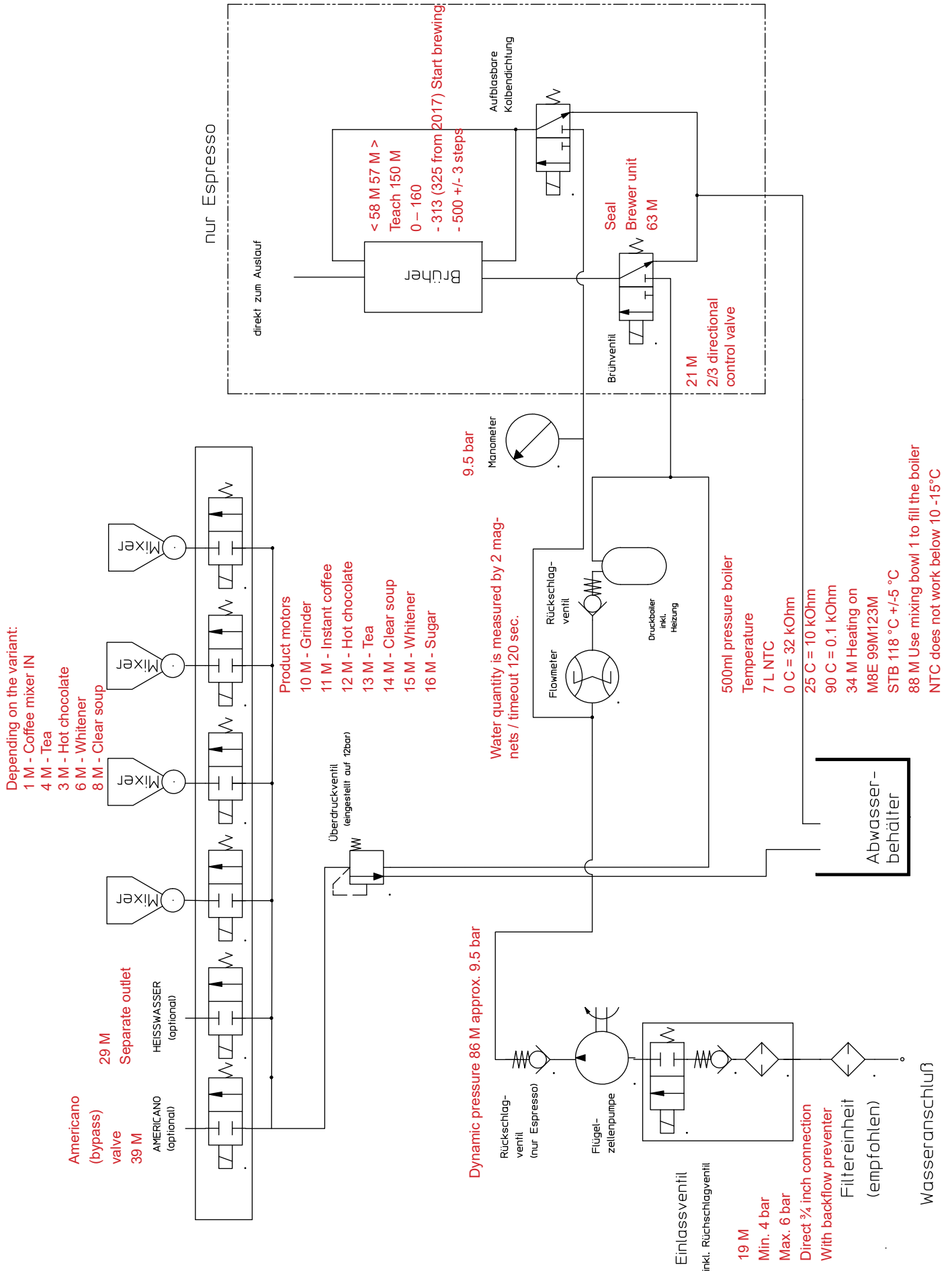




Seite 2 A5



6.8 Water flow diagram



7. Service mode

The [SERVICE MODE] menu displays all the important vending machine parameters. All vending machine components can be activated directly. Service mode provides you with support in troubleshooting and servicing the vending machine.

Servicing must be carried out with the machine door open. Service numbers are divided into categories: M, double M and L functions.

M functions are used for testing the control board outputs which communicate with a motor or similar actuators. L functions display a value.

7.1 M functions

1M	Coffee 1 mixer	
2M	Coffee 2 mixer	
3M	Hot chocolate mixer	
4M	Tea mixer	
5M	Soup mixer	
6M	Whitener/CSP 1 mixer	
7M	Sugar mixer	
8M	Whitener mixer	
10M	Product motor Coffee 1	Espresso variant: Grinder
11M	Product motor Coffee 2	Espresso variant: Grinder
12M	Hot chocolate product motor	
13M	Tea product motor	
14M	Soup product motor	
15M	Whitener/ CSP 1 product motor	
16M	Sugar product motor	
17M	Whitener product motor	
19M	Main inlet valve	
20M	Instant boiler inlet valve	
21M	Coffee 1 valve	Espresso variant: Brewing valve
22M	Coffee 2 valve	
23M	Hot chocolate valve	
24M	Tea valve	
25M	Soup valve	
26M	Whitener/CSP 1 valve	
27M	Sugar valve	
28M	Whitener valve	
29M	Hot water valve	
30M	Peristaltic pump forward	Only Instant variant
33M	Fan	
34M	Frost monitoring system	Espresso variant espresso boiler; Instant variant: Instant boiler
43M	Instant valve part	Only Espresso variant
44M	Peristaltic pump backwards	
45M	Pump	Only Espresso variant
47M	Lighting	
50M	Coin refund	

54M	Cup dispense mechanism turn to the right	
55M	Cup dispense mechanism turn to the left	
56M	Cup dispense	
57M	Close brewing chamber	Only Espresso variant
58M	Open brewing chamber	Only Espresso variant
59	Extend swivel arm	
60	Retract swivel arm	
66M	Circulation valve 1 (hot)	
76M	Delivery unit lock	
77M	Delivery unit lock	
86M	Pressure test (dynamic pressure) for pump	Only Espresso variant
87M	Empty boiler	
88M	Fill boiler	Only Espresso variant (espresso boiler): Filling is started by pressing [M] and runs as long as this button is pressed. Continue until water comes out of the outlet tube. After entering 99M121M the amount of water (in ccm) measured by the flow meter will be dispensed.
101 - 106M	Issue a coin from the tube	Take a note of the tube channels on the coin mechanism
111 - 116M	Empty all coins from the tube	Statistics deleted after one tube
150M	Teach brewer route (perform reference run)	only Espresso variant: Then press [R] to exit
152M	Open water supply valves 1 and 2 simultaneously	
153M	Decal illumination	
222M	Exhibition mode	

7.2 L functions

4L	Selection key brewer position error	(Offset value)
5L	Instant boiler temperature	255°C Sensor or supply line defective 0°C Temperature <15°C
6L	Duration of last brewing process	The run time of the pump is measured in seconds
7L	Boiler temperature espresso boiler	only for Espresso variant 255°C Sensor or supply line defective 0°C Temperature <15°C
8L	Motor operating voltages in mV	
10L	Flow meter	
14L	Light barrier output value	Cup recognition if value = 1
16L	Number of switch ons and watchdog procedures	
17L	Position of contacts and sensors	
18L	Display keypad status	Change display when pressing enter
21L	Display software version	MVEFs903
22L	Display operating days	

23L	Display operating hours	
25L	Number of cleaning operations and rinses	Total number of rinses
28L	Times of last 5 door opening operations and last 5 cleaning operations	Service key and cleaning programme for brewer, [0]
39L	Status of keyboard	
40L	Date of the last price modification	
69L	Set journal back to readable	Statistics can be read out again
85L		Brings vending machine into flash load state
91L	Status MDB equipment	[CO] - [MSG; [BI] - banknote reader; [CR] - card system; [OLM] - Online module Capital letters: Logged in and communication all right Small letters: no communication

7.3 99M functions

99M55M	Model patch menu	
99M78M	Delete error statistics	Watchdog interventions will also be deleted!
99M79M	HW test	
99M81M	Generate data error 81	
99M89M	Save all parameter settings as flash backup	Caution! Default values are overwritten
99M90M	Read out flash memory	e. g. water quantity for boiler filling [88M] is displayed
99M121M	Show hidden times	Clearance for additional entries, e. g. brewer speed Following boiler emptying or software upload, if not already switched on in the Installation menu
99M122M	"Permit debug transmission (only if hidden times have been activated)"	Service technicians only
99M123M	Turn on continuous frost monitoring system	Following boiler emptying or software upload, if not already switched on in the Installation menu
99M180M	Load standard dosing for all products	Product calibration is required

8. Special settings

A value may be entered here to activate one or several of the following special settings. The sum of the corresponding numbers must be entered in order to activate multiple special settings.

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.

Entering a new value deletes the previous value, therefore it should be determined before programming which special settings are to be activated.

Special settings	Value	Function (meaning)
A	04	For CIT: Without any current, open hose clamping valves
	08	No supply valve test at the end of the rinse programme
	16	No moisture sensor self-test (jumper)
	32	Do not set as an error, if it is refilled after a circulation of at least 3s
	64	Do not set as an error, in the standby leakage monitoring
	128	For a cup price of 0.00 and also for compulsory purchase, the money is returned by pressing the return button, if a cup is dispensed in error.
B	08	All 14 selection keys are enabled
	16	Use price B for "Happy Hour" (default = 0/ Cashless = 1)
	32	Complimentary drink
	64	No inverse leakage test
	128	Vends without cup dispense are reported to BDV and MDB card with product number +50. CAUTION: Patch can also activate this function.
C	02	IR readout/configuration only active if entered in the menu (no menu selected)
	04	All error messages are displayed externally as text
	08	Pressure measuring gauge old (0.5 - 4.5V)
	16	For the Espresso variant: Detection of insufficient water via flow meter disabled
	64	Shorten MDB polling rate to 100ms
	128	Reduce MDB polling rate to 50ms, has priority over 64
D	01	Disable frost monitoring system monitoring device
	02	HuPe PLUS module disabled
	04	Do not rinse with carbonated water
	08	When card system is in multi-vend no cancel session if credit remains
	32	For CVT: Leave brewer valve open between pre-infusion and brewing
	64	Payment required if there is a cup jam or error

Special settings	Value	Function (meaning)
E	01	Mixed payment card+coin not permitted
	02	Do not allow value token to be credited to card
	04	"Free vends" made when service key is inserted, do not count as key vends but as free vends.
	32	For the Espresso variant: Pressure valve for instant pre-rinse available
	64	Always send list 1 to modem after journal data
F	01	Do not issue debug information on display during steam boiler cleaning
	02	Without steam boiler rinsing
	04	Do not delete non-repayable remaining credit after 200s
	64	Brewer with Valeo encoder
	128	Automatic recognition (and switch over) Valeo motor disabled
G	02	Use counter strength per selection for sales token per selection
	04	If there are two grinders: Switch to second grinder when the first is recognised as empty
	16	Special handling of selection keys, debouncing for capacitive selection keypad
	128	Two-point calibration for instant motor enabled
H	02	Pot sales via MDB card system with the total amount debited at the beginning. No remaining credit if cancelled before sale completed.
	04	Manual deletion of short statistics in the statistics menu is inhibited
	08	Automatic rinsing of mixers
M	01	Alternative payout
	02	Tube count by coin mech
	04	Best practice
I	01	Card price list 1 = Price A
	02	Water tank opener/closer
	04	Two prices in the display when the button is pressed

9. Error codes

Text:	Telemetry memory full...please download	Group: 1	No.: 1
Cause:	Telemetry memory is full		
Action:	Read out telemetry memory (externally, cannot be deleted internally)		
Text:	Data error 81 Request service visit	Group: 1	No.: 81
Cause:	Flash restoration when vending machine activation fails		
Action:	Error while vending machine is running: Hardware/control board defective, should be replaced		
Text:	Data error 82 Request service visit	Group: 1	No.: 82
Cause:	Vending machine ready for test, no variant set, no data set installed		
Action:	Set variant and/or install complete data set		
Text:	Data error 83 No RAM scratch possible	Group: 1	No.: 83
Cause:	Data/Settings have been lost, possibly due to faulty hardware (control board)		
Action:	Replace the control board		
Text:	Remote maintenance active Please wait...	Group: 1	No.: 85
Cause:	Online module is active / transmission is running		
Action:	Wait until the transmission is finished / vending machine control is reinstated; If there is no reaction for a long period, turn vending machine on/off		
Text:	Check credit system settings (communication)	Group: 2	No.: 64
Cause:	Communication with credit system not correct		
Action:	Check credit system settings		
Text:	Note: Sales termination occurred	Group: 3	No.: 8
Cause:	A sales termination occurred, e.g. vending machine shut off as product was being dispensed		
Action:	Note, has no influence on the system, must be deleted manually with CECE		
Text:	Sticky key on keypad	Group: 4	No.: 8
Cause:	A key on the keypad is sticking		
Action:	Mechanical damage to the keypad; check cable or plug-in connection		
Text:	Vending machine is heating up...=> Please wait...	Group: 5	No.: 32
Cause:	Temperature in espresso boiler is too low		
Action:	Vending machine is in heating up phase; frost monitoring system not enabled or switched on; Service key not inserted or door open; STBs have triggered; faulty cable or triac in power supply unit		
Text:	Low water	Group: 6	No.: 32
Cause:	Too little or no pulse from flow meter		

Action:	Check water supply, flow meter is faulty, inlet valve blocked; Brewing time is too long, grind level may be too fine; Brewing valve is blocked; Hot water valve is blocked; Instant valve is blocked; Bypass valve is blocked; Check cable connections to valves; Water input pressure too high (max. 8 bar)		
Text:	Canister empty Please fill	Group: 6	No.: 128
Cause:	Canister detected as empty		
Action:	Check float switch and associated cables and plug connections; If unsure fill up canister		
Text:	[is not displayed, see repair]	Group: 7	No.: 1
Cause:	Is triggered when vending machine is switched on, target temperature reached or dry run protection		
Action:	Cannot remain as error; will be deleted after a reference run or be treated as brewer position error if an error during the reference run occurs		
Text:	Brewer position? Check dosages and mechanical clearance	Group: 7	No.: 2
Cause:	Brewer position error, reference run failed or set position during the drink preparation not achieved		
Action:	Correct by switching the vending machine on/off; If necessary, manually clean the brewer; If necessary check and adjust the grind and dosing; Damaged cable on the brewer motor/encoder; Faulty brewer motor/encoder Spacer not fitted on the brewer piston after the O-ring has been changed		
Text:	Temporarily out of service	Group: 7	No.: 32
Cause:	Brewer error has occurred		
Action:	Re-start vending machine; Carry out a brewer reference run; Check brewer for mechanical movement		
Text:	Cup dispense mechanism empty (if fitted)	Group: 9	No.: 1
Cause:	The control board recognises that the cup dispense mechanisms are empty. No cups, faulty light barrier / microswitch or a damaged cable; Motor for carousel rotation faulty		
Action:	Refill cups, switch vending machine on or off; Vending machine turns the carousel until a cup stack drops or the carousel rotates once		
Text:	Cups empty	Group: 9	No.: 2
Cause:	Light barrier/microswitch on the cup splitter shows "empty"; Cups not available; Light barrier/microswitch faulty or a damaged cable. Jamming and rotation process		
Action:	Refill with cups; switch machine on/off. Vending machine turns until a cup stack drops or the carousel rotates once.		

Text:	Cup time out	Group: 9	No.: 4
Cause:	Limit switch faulty; defective motor; Broken cable temperature too low; Jamming (even when door is closed)		
Action:	Change the motor; Change the limit switch; Replace cable; Check jam and rotation process with the door closed		
Text:	Cup time out	Group: 9	No.: 8
Cause:	Cup dispense jam (cup splitter), broken cable, defective motor, faulty limit switch		
Action:	Check and if necessary replace the motor; Check limit switch and if necessary replace; Replace cable		
Text:	Cups empty, when set to compulsory cup out of service	Group: 9	No.: 32
Cause:	See group 9, no. 2 Error with no. bigger than/same as 16 means that the vending machine is "out of order", however the same error appears again as the designated out of order error		
Action:	Refill cup Switch vending machine on/off		
Text:	Inverse leakage report, moisture in system (water loss)	Group: 10	No.: 16
Cause:	It is not necessary to refill even though water has been taken out via the peristaltic pump.		
Action:	Check inlet The inlet valve/s may not be closing properly => clean, change the inlet valve		
Text:	Moisture in system	Group: 10	No.: 32
Cause:	Following a circulation water has continued to run for more than 3 seconds; circulation hose is losing water		
Action:	Change circulation hose		
Text:	Moisture in system	Group: 10	No.: 64
Cause:	In standby mode the instant part has, on several occasions, been re-filled with water within a short time, boiler or tube is losing water		
Action:	Loss of water without active water dispense (product preparation, cleaning,...) => check boiler and hose		
Text:	Error moisture sensor	Group: 10	No.: 128
Cause:	Water sensor in the drip container/drip tray indicates moisture; Short-circuit in the sensor cable		
Action:	Empty drip container/drip tray; Dry sensor, check sensor cable		
Text:	Inlet valve faulty, indication 1	Group: 11	No.: 1
Cause:	Inlet valve 1 not closing correctly		
Action:	Check and replace inlet valve 1 if necessary		
Text:	Inlet valve faulty, indication 2	Group: 11	No.: 2
Cause:	Inlet valve 2 not closing correctly		
Action:	Check and replace inlet valve 2 if necessary		

Text:	Inlet valve faulty, indication 3	Group: 11	No.: 4
Cause:	Inlet valve 3 not closing correctly		
Action:	Check and replace inlet valve 3 if necessary		
Text:	Fill level sensor instant boiler	Group: 11	No.: 32
Cause:	Sequence of lower and upper fill level sensor in the instant boiler is incorrect; Connection reversed, short-circuit/interruption of sensor cables		
Action:	Change/renew sensor cables if necessary		
Text:	Moisture sensors faulty	Group: 11	No.: 64
Cause:	The fourth humidity sensor must have short-circuited in the cable harness. This is used as a function check of the moisture sensors. No short-circuit jumpers; control system input faulty		
Action:	Replace the control board		
Text:	Espresso boiler temperature monitoring faulty	Group: 12	No.: 32
Cause:	Temperature sensor for the espresso boiler malfunction, faulty temperature sensor, damaged cable,		
Action:	Exchange cable; replace temperature sensor; check cable connection		
Text:	Night-time temperature reduction active... Please wait until it is enabled...	Group: 13	No.: 32
Cause:	The night-time temperature reduction system is activated		
Action:	The vending machine is in standby-mode; Re-programme		
Text:	Cleaning interrupted Please restart with operational vending machine	Group: 15	No.: 32
Cause:	The cleaning operation was interrupted		
Action:	The cleaning operation was interrupted (e.g. because the vending machine was switched off or a fault occurred). Please re-start cleaning and clear errors (for example insufficient water)		
Text:	Light barrier	Group: 16	No.: 32
Cause:	The light barrier for mug / cup recognition is permanently on		
Action:	Remove cup/mug; clean light barrier and reflector		
Text:	It will take some time for the water to refill	Group: 17	No.: 1
Cause:	Water inlet provides insufficient water to refill the instant boiler		
Action:	Check water supply, open water inlet, check pump, check inlet valves If using a canister, refill the canister		
Text:	Motorized coin return malfunction	Group: 19	No.: 32
Cause:	Coin return faulty, timeout on eccentric motor, eccentric disc broken, switch or motor faulty, cable damaged		
Action:	Change eccentric disc, repair switch or motor, replace cable		
Text:	Brewer motor circuit open	Group: 22	No.: 1
Cause:	For fresh brew: Fresh brew unit not inserted or the contact is faulty; Damaged cable in the brewer motor circuit		

Action:	Insert fresh brew unit, check the cable		
Text:	Door open => please close	Group: 23	No.: 32
Cause:	Door contact switch not activated, switch may be faulty		
Action:	Close the door, insert service key, check cable; Check and adjust the position of the switch to the door		
Text:	Frost monitoring system monitoring device has registered an error	Group: 24	No.: 1
Cause:	Espresso boiler: the temperature in the espresso boiler does not increase despite the frost monitoring system being switched on, brew valve not correctly closing		
Action:	Check pressure relief valve for fault, check brew valve and if necessary replace		
Text:	Heating switched off	Group: 24	No.: 32
Cause:	"Heating off" in display; heating is switched off (in Installation menu)		
Action:	The heating is not enabled. Before enabling the heating in the Installation menu a sufficient level of water must be in the boiler (via boiler filling). When the vending machine is not in use the heating should be set to "not enabled" ("Heating off")		
Text:	Wrong software/ keypad	Group: 25	No.: 32
Cause:	Incorrect software downloaded or the wrong keypad connected Incorrect display connected to the control board for this type of vending machine (two line / four line display)		
Action:	Check the software in the service menu using 21L and if necessary update Connect the correct keypad and correct display with the correct display software		
Text:	Grounds container almost full	Group: 27	No.: 1
Cause:	The software monitoring says: "Warning: Grounds container full"		
Action:	The grounds container almost full, advance notice		
Text:	Errors: Grounds container full, please empty	Group: 27	No.: 32
Cause:	The software monitoring says: "Grounds container full"		
Action:	Empty grounds container and if necessary check the full notification setting in the Installation menu		
Text:	Warning: Bean container empty, please refill beans (Espresso variant)	Group: 28	No.: 1
Cause:	Brewer may travel too far; Probably insufficient ground coffee in the brewer; Beans empty		
Action:	Refill with beans, locking slider on the bean container is closed, grinder blocked		
Text:	Warning: Cleaning should be carried out	Group: 29	No.: 1
Cause:	When the product counter reaches zero, cleaning should be carried out (250)		
Action:	Start a vending machine clean		
Text:	Cleaning must be carried out	Group: 29	No.: 32
Cause:	Product counter has reached zero; Cleaning should be carried out (+50)		
Action:	Start a vending machine clean		
Text:	Replace water filter	Group: 30	No.: 1

Cause:	Filter counter (I) has run down to zero		
Action:	Replace water filter		
Text:	Warning: Service required	Group: 30	No.: 2
Cause:	Service counter advises service is due		
Action:	Carry out service; Re-set service counter in Installation menu		
Text:	Max. number of errors per day exceeded	Group: 31	No.: 1
Cause:	Too many errors and warnings have occurred		
Action:	Download errors and rectify causes		
Text:	No sales for approx. 24 hours	Group: 31	No.: 2
Cause:	No vend has taken place for 24 hours		
Action:	none		
Text:	Timeout delivery unit lock	Group: 32	No.: 32
Cause:	Dry sugar lock or delivery unit lock have not opened or closed within the required time Damaged cable, short-circuit, faulty motor		
Action:	Ensure free mechanical movement; Replace cable, change motor		
Text:	Motor error; Brewer motor timeout	Group: 63	No.: 0
Cause:	Damaged cable, short-circuit, faulty motor		
Action:	Ensure mechanical freedom of movement, replace cable, change motor		
Text:	MDB coin mech credit system error	Group: 65	No.: 0
Cause:	error from the credit system		
Action:	See credit system operating instructions		
Text:	MDB card reader credit system error	Group: 66	No.: 0
Cause:	error from the credit system		
Action:	See credit system operating instructions		
Text:	MDB bill validator credit system error	Group: 67	No.: 0
Cause:	error from the credit system		
Action:	See credit system operating instructions		
Text:	MDB slave machine credit system error	Group: 69	No.: 0
Cause:	error from the credit system		
Action:	See credit system operating instructions		



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