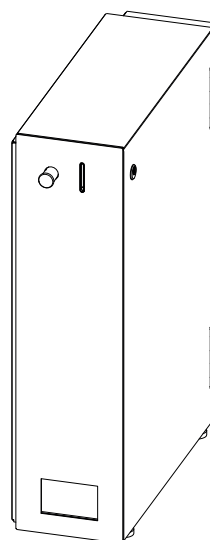
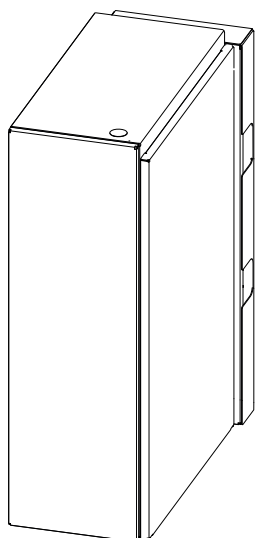
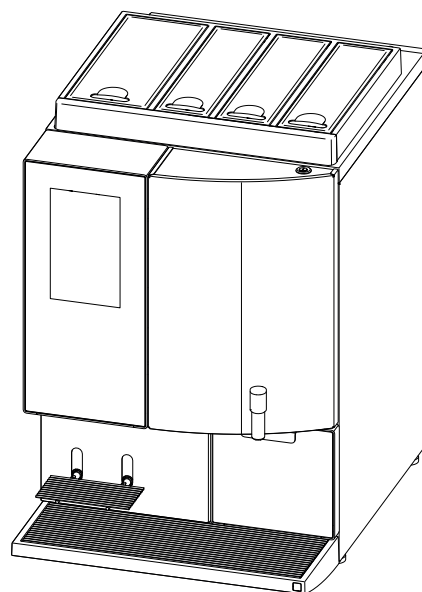
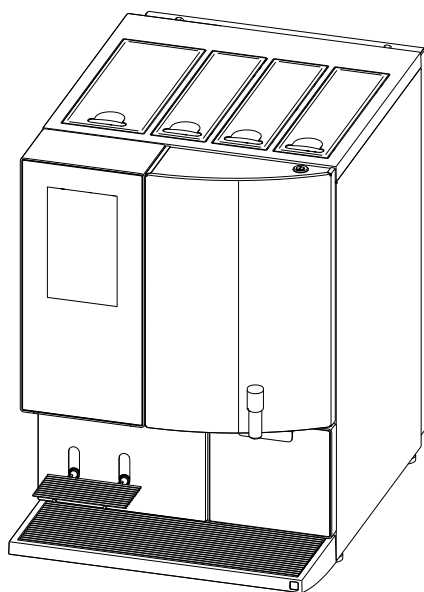




Technical manual

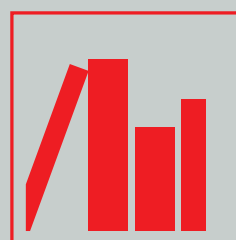
HO Siamonie Smart



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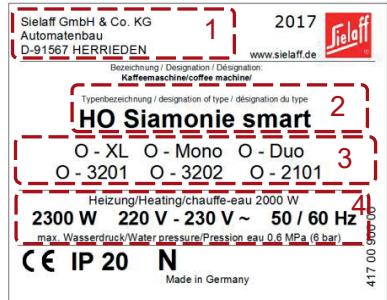
1. Variants and identification

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

This manual covers the following versions:

Machine type	Variant	Sielaff Part No.
HO Siamonie Smart	Mono 3201	417 00 000 00
HO Siamonie Smart	Mono 3202	
HO Siamonie Smart	Duo 2101	
HO Siamonie Smart XL	Mono 3201	417 00 000 10
HO Siamonie Smart XL	Mono 3202	
HO Siamonie Smart XL	Duo 2101	
VS Module for payment systems SI Smart		417 00 000 20
VS Milk module SI Smart		417 00 000 30

Identification

	1 Manufacturer 2 Machine type 3 Variant (marked with an x) 4 Electrical supply ratings The cross on the machine type plate identifies the machine variant.
--	--

2. Notes

Requirements for maintenance and repairs

- Before carrying out any repairs on the machine the mains plug must always be removed from the mains power supply. The plug is positioned so that during repair work it cannot be plugged back in by mistake by a third party.

Intended users

- This manual is designed for use by trained personnel and service technicians. It is assumed that target users have received training on the machine.

3. Safety information

Repairs

- Prior to all work on electric parts the machine must be unplugged from the mains supply.
- The inside of the machine may have sharp edges and corners. Always wear protective gloves when carrying out maintenance work.
- The use of the service key is reserved exclusively for trained service technicians. By inserting the service key, a protection device is de-activated!
- Use only genuine replacement parts.
- Only products approved by SIELAFF should be used.
- The machine must not be converted or modified in any way. SIELAFF disclaims any liability for any defect claims resulting from the afore-mentioned not being adhered to!

3.1 Explanation of signs and symbols

This vending machine was manufactured in accordance with state-of-the-art technology standards. Nevertheless, even the most expertly designed machine, cannot be without risks.

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

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

Text highlighted below symbolises the following:



Danger
Immediate danger which could result in death or severe injury.



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



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



NOTE
Information to avoid causing damage to the machine.



TIP
Information to facilitate handling and use of the vending machine.

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



WARNING electrical energy! Danger to life!

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



CAUTION! Hot surfaces!

This symbol is found on surfaces that become hot.

There is a risk of scalding or serious burns.

The surfaces can also 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.



Observe the handling instructions for contact with electro-statically-sensitive components and assemblies (ESD)

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

It is imperative that plug connections, electrical leads and component pins are not touched.

Only specialist personnel with ESD knowledge are authorised to work on the machine!



CAUTION! Danger of crushing!

By inserting the service key, a protection device is de-activated. The brewer poses a crushing risk. The use of the service key is reserved exclusively for trained service technicians.

4. Maintenance list

4.1 Housing

Component	Cleaning aids Spare part number	Procedure 1 = change 2 = clean 3 = adjust 4 = check				
	Months or Vends	12 15,000	24 30,000	36 45,000	48 60,000	60 75,000
Water supply pipe	403.00.858.00	1	1	1	1	1
Waste water pipe*	408.00.151.00	1	1	1	1	1
Main water filter		3.4	3.4	3.4	3.4	3.4
Only milk module Brita Purity C50	404.70.278.00	3.4	3.4	3.4	3.4	3.4
Cylinder lock	408.00.113.00	3.4	3.4	3.4	3.4	3.4

* if fitted

4.2 Instant section

Component	Cleaning aids Spare part number	Procedure 1 = change 2 = clean 3 = adjust 4 = check				
	Months or Vends	12 15,000	24 30,000	36 45,000	48 60,000	60 75,000
Mixer paddle	404.00.309.00	1	1	1	1	1
Flange compl.	404.00.331.00	1	1	1	1	1
Mixer water coupling	402.00.326.00	1	1	1	1	1
Silicone hose Mixer housing - Outlet	985.13.420.31	1	1	1	1	1
Silicone tube Instant valve - Water coupling	985.13.420.16	1	1	1	1	1
Mixer housing	405.00.038.00	4	4	4	4	4
Mixer motor	404.00.330.00 Service number 3M Service number 6M	4	4	4	4	4
Product containers	Service number 12M Service number 15M Service number 16M	4	4	4	4	4
Fan	417.00.526.00 Service number 33M	2.4	2.4	2.4	2.4	2.4

4.3 Brewer unit

Component	Cleaning aids Spare part number	Procedure 1 = change 2 = clean 3 = adjust 4 = check				
	Months or Vends	12 15,000	24 30,000	36 45,000	48 60,000	60 75,000
Guide rails	Vaseline 998.90.009.00	2	2	2	2	2
Brewer filters	407.00.644.00 417.00.118.00	1	1	1	1	1
O-Ring for brewer	952.40.03.135 2 off	1	1	1	1	1

Brown silicone hose Brewer - Outlet	985.13.420.45	1	1	1	1	1
Grinder left Grinder right *	417.01.010.00 417.01.011.00	2.3	2.3	2.3	2.3	2.3
Grinding disc with adjusting ring	417.00.010.01	4.2	4.2	1	4.2	4.2
Espresso boiler pressure relief valve	417.00.202.00	1	1	1	1	1
PTFE-hoses	985.13.430.10 985.13.434.04	4	4	4	4	4
Non-return valve	403.00.164.40	1	1	1	1	1
Black silicone hose 6x2 (complete water system)	985.13.420.31	4	1	4	1	4
Black silicone hose 7x2,5 Inlet valve - Flowmeter	985.13.420.39	4	1	4	1	4
Pump	985.27.936.00	4	1	4	1	4
Flowmeter	414.00.946.00	2.4	2.4	2.4	2.4	2.4
Inlet valve with pressure reducer	Service number 19M	4	4	4	4	4

* if fitted

4.4 Electronics

Component	Cleaning aids Spare part number	Procedure 1 = change 2 = clean 3 = adjust 4 = check				
		12 Months or Vends	24 30,000	36 45,000	48 60,000	60 75,000
Grounds container switch	985.14.065.48	4	4	4	4	4
Door contact switch	985.14.065.48	4	4	4	4	4
Drip tray sensor	Service number 17L	4	4	4	4	4
Brewer switch		4	4	4	4	4
Grinder control board		4	4	4	4	4
Software version control board	Service number 21L	4	4	4	4	4
Online module *		4	4	4	4	4
LED lighting		4	4	4	4	4

4.5 Settings

Component	Cleaning aids Spare part number	Procedure 1 = change 2 = clean 3 = adjust 4 = check				
		12 Months or Vends	24 30,000	36 45,000	48 60,000	60 75,000
Water quantities	Measuring cup	3	3	3	3	3
Dosages, calibration, grind	Measuring cup,scales to 0.1 g accuracy	3	3	3	3	3
Brewing temperature	Thermometer	3	3	3	3	3

4.6 Milk system (add-on module)

The numbering refers to the numbers in the tube layout plan marked *

Component	Cleaning aids	Procedure			
	Spare part number	1 = change 2 = clean 3 = adjust 4 = check			
	Months	6	12	18	24
		30	36	42	48
Kit for peristaltic pump tube	415.50.932.00	1	1	1	1
Throttle valve kit	407.50.944.00	4	1	4	1
Non-return valve kit	412.50.322.00	4	1	4	1
Milk tube Milk nozzle - Outlet	985.13.420.35	1	1	1	1
Milk tube Peristaltic pump - Mixing nozzle	958.13.420.33	1	1	1	1
Milk hose intake tube - peristaltic pump	958.13.420.33	1	1	1	1
Mixing nozzle: O-rings small	952.40.006.26 (2x)	1	1	1	1
Mixing nozzle: O-ring large	952.40.030.18 (1x)	1	1	1	1
Extension mixer nozzle O-ring	952.40.015.02	1	1	1	1
Steam hose Steam boiler - Milk system	985.13.430.05	1	1	1	1
Peristaltic pump	407.01.037.00 Service number 30M	3.4	3.4	3.4	3.4
Solenoid valve 2/2	409.00.947.00 Service number 73M	4	4	4	4
Hose pinching valve 2/2	404.00.949.00 Service number 75M	4	4	4	4
Pressure control valve steam boiler	408.00.955.01	4	4	4	4
Solenoid valve 2/2 (steam large)	408.00.946.01 Service number 37M	4	4	4	4
Solenoid valve 2/2 (steam small)	408.00.946.01 Service number 74M	4	4	4	4
Tube insert	408.00.074.00	2.4	2.4	2.4	2.4



TIP

The following maintenance kits are available to order:

417 50 000 00 Maintenance kit Siamonie Smart 12 months / 15000 vends

417 50 000 01 Maintenance kit Siamonie Smart 12 months / 15000 vends

417 50 000 02 Maintenance kit milk module 6 months

417 50 000 00 Maintenance kit Siamonie Smart 12 months / 15000 vends				
Item	Gross quantity	Part	Description 1	Note
10	1	4070064400	Filter compl. Espresso	„5.3 Changing the brewer filter“ at page 12
20	1	4170011800	Filter compl. Espresso outlet	„5.3 Changing the brewer filter“ at page 12
30	2	9524003135	O-ring for brewer 31,34 x 3,53mm, red, silicone 70	„5.4 Changing the O-rings“ at page 12
40	1	4030016440	Non-return valve	between hot water boiler and pump, „5.9 Non-return valve“ at page 15
50	2	4040030900	Mixer paddle	„6.5 Dismantling the mixer motor“ at page 23
60	2	4020032600	Mixer - Water coupling, black	„5.7 Teflon tubes, non-return valve, silicon tube black“ at page 14
70	2	4040033100	Flange complete green	„6.5 Dismantling the mixer motor“ at page 23
80	1	4170020200	Pressure control valve set to 16 bar	„5.6 Espresso boiler pressure relief valve“ at page 13
90	1	9851342045	Silicone hose, brown, 4 x 2 mm	Outlet - brewer, „5.7 Teflon tubes, non-return valve, silicon tube black“ at page 14
100	1	9851342031	Silicone hose, black, 6 x 2 mm - by the metre	Outlet - mixer, „5.7 Teflon tubes, non-return valve, silicon tube black“ at page 14
110	1	9851342016	Silicone hose, black, 4 x 2 mm - by the metre	„5.7 Teflon tubes, non-return valve, silicon tube black“ at page 14

417 50 000 01 Maintenance kit Siamonie Smart 12 months / 15000 vends				
Item	Gross quantity	Part	Description 1	Note
10	1	4070064400	Filter compl. Espresso	„5.3 Changing the brewer filter“ at page 12
20	1	4170011800	Filter compl. Espresso outlet	„5.3 Changing the brewer filter“ at page 12
30	2	9524003135	O-ring for brewer 31,34 x 3,53mm, red, silicone 70	„5.4 Changing the O-rings“ at page 12
40	1	4030016440	Non-return valve	between hot water boiler and pump, „5.8 Removing the pump“ at page 15
50	2	4040030900	Mixer paddle	„6.5 Dismantling the mixer motor“ at page 23
60	2	4020032600	Mixer - water coupling	
70	2	4040033100	Flange compl.	„6.5 Dismantling the mixer motor“ at page 23

80	1	4170020200	Pressure control valve set to 16 bar	„5.6 Espresso boiler pressure relief valve“ at page 13
90	1	9851342045	Silicone hose, brown, 4 x 2 mm	Outlet - brewer, „5.7 Teflon tubes, non-return valve, silicon tube black“ at page 14
100	1	9851342031	Silicone hose, black, 6 x 2 mm - by the metre	Outlet - mixer, „5.7 Teflon tubes, non-return valve, silicon tube black“ at page 14
110	1	9851342016	Silicone hose, black, 4 x 2 mm - by the metre	„5.7 Teflon tubes, non-return valve, silicon tube black“ at page 14
120	1	4155093200	Conversion kit : hose for peristaltic pump DSP9911	„5.13 Conversion kit : hose for peristaltic pump DSP9911 (milk module)“ at page 17
130	1	4075094400	Conversion kit fixed throttle, milk foaming	„5.14 Throttle valve kit“ at page 17
140	1	4125032200	Conversion kit non-return valve, milk foaming	„5.15 Non-return valve kit“ at page 17
150	0.5	9851342035	Silicone hose, red transparent 6 x 3 mm - by the metre	„5.16 O-rings and tubes“ at page 18
160	1	9851342033	Silicone hose, red transparent 4 x 2 mm - by the metre	„5.16 O-rings and tubes“ at page 18
170	2	9524000626	O-ring 6.75 x 1.78	„5.16 O-rings and tubes“ at page 18
180	1	9524003018	O-ring 30,00 * 1,80	„5.16 O-rings and tubes“ at page 18
190	1	9524001502	O-ring 15.0 x 2.00	„5.16 O-rings and tubes“ at page 18
200	1	9851343005	Silicone tube platinum-plated 5 x 1.5 mm - by the metre	„5.17 Tube layout diagram for milk module“ at page 19

417 50 000 02 Maintenance kit milk module 6 months				
Item	Gross quantity	Part	Description 1	Note
10	1	4155093200	Conversion kit : hose for peristaltic pump DSP9911	„5.13 Conversion kit : hose for peristaltic pump DSP9911 (milk module)“ at page 17
20	0.5	9851342035	Silicone hose, red transparent 6 x 3 mm - by the metre	„5.16 O-rings and tubes“ at page 18
30	1	9851342033	Silicone hose, red transparent 4 x 2 mm - by the metre	„5.16 O-rings and tubes“ at page 18
40	2	9524000626	O-ring 6.75 x 1.78	„5.16 O-rings and tubes“ at page 18
50	1	9524003018	O-ring 30,00 * 1,80	„5.16 O-rings and tubes“ at page 18
60	1	9524001502	O-ring 15.0 x 2.00	„5.16 O-rings and tubes“ at page 18
70	1	9851343005	Silicone tube platinum-plated 5 x 1.5 mm - by the metre	„5.17 Tube layout diagram for milk module“ at page 19

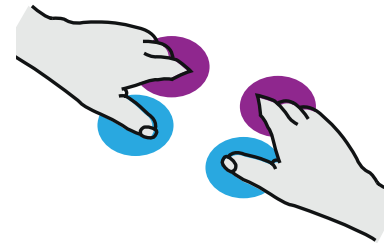
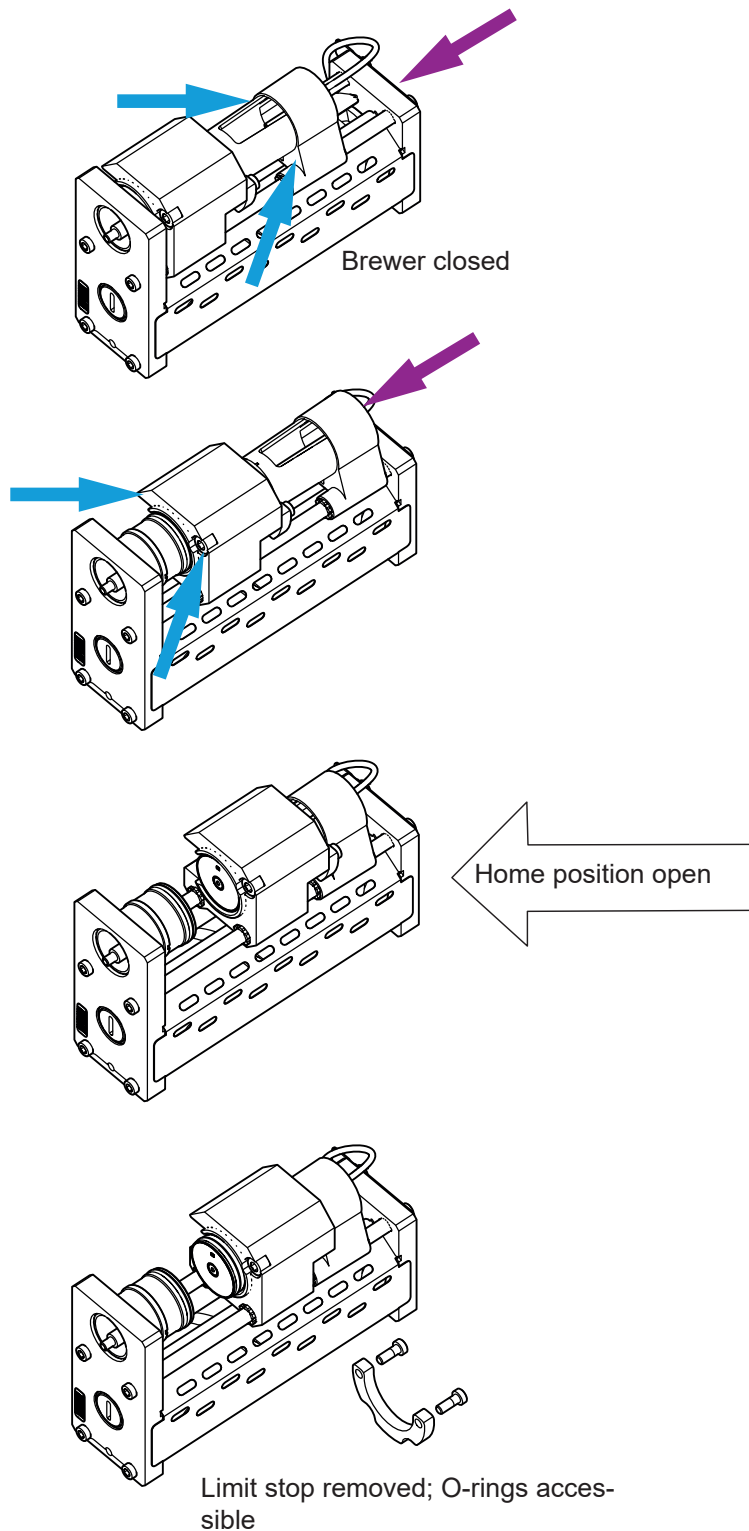
5. Maintenance components

5.1 Moving the brewing chamber

The brewing chamber can be moved by hand, e.g. for changing the O-rings or the filter.

If the brewer is not inserted in the machine, the brewing chamber must be moved to home position "open".

If the machine is ready for use, service number 57M [Close brewing chamber] and 58M [Open brewing chamber] can be used.

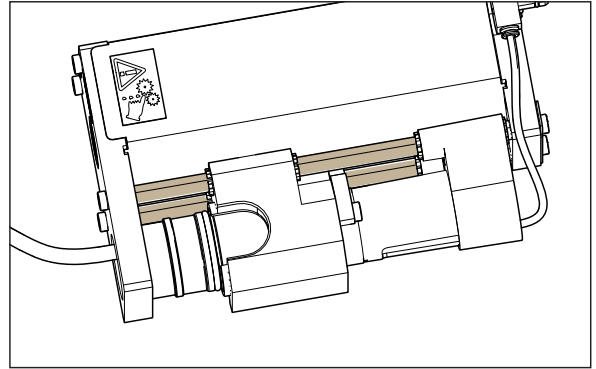


Apply force using thumb and index finger to move.

A lot of force may be required.

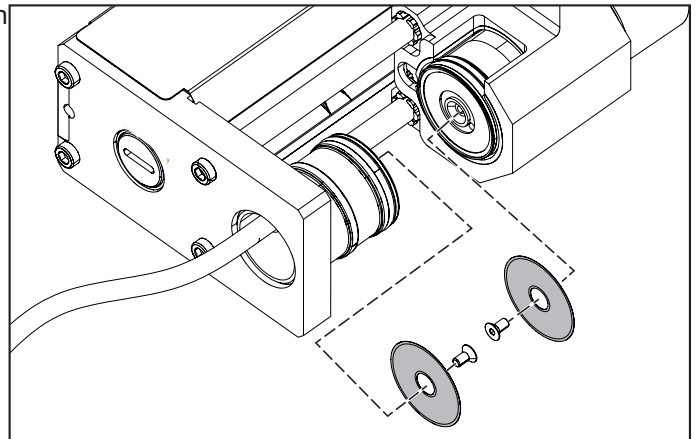
5.2 Lubricating the guide rails

- Remove the tubes on the brewer cover
- Remove the drinks dispense head and brewer cover
- Remove the waste water and grounds container



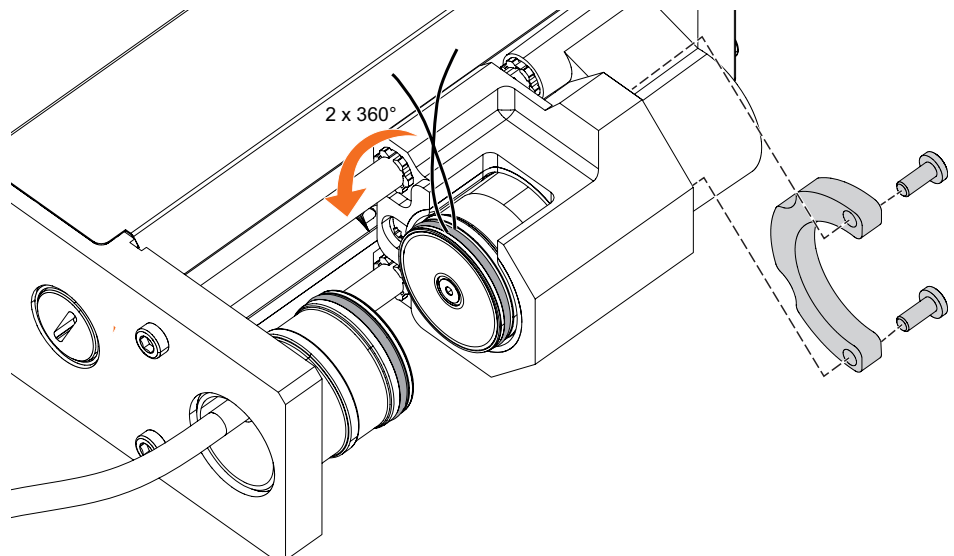
5.3 Changing the brewer filter

1. Remove the brewer.
2. Open the brewing chamber (see „5.1 Moving the brewing chamber“ at page 11)
3. Remove the fixing screws on the brewer filter using an Allen key.
4. Change the filter and hand tighten the fixing screw.
5. Close the brewing chamber (see „5.1 Moving the brewing chamber“ at page 11)
6. Refit the brewer.



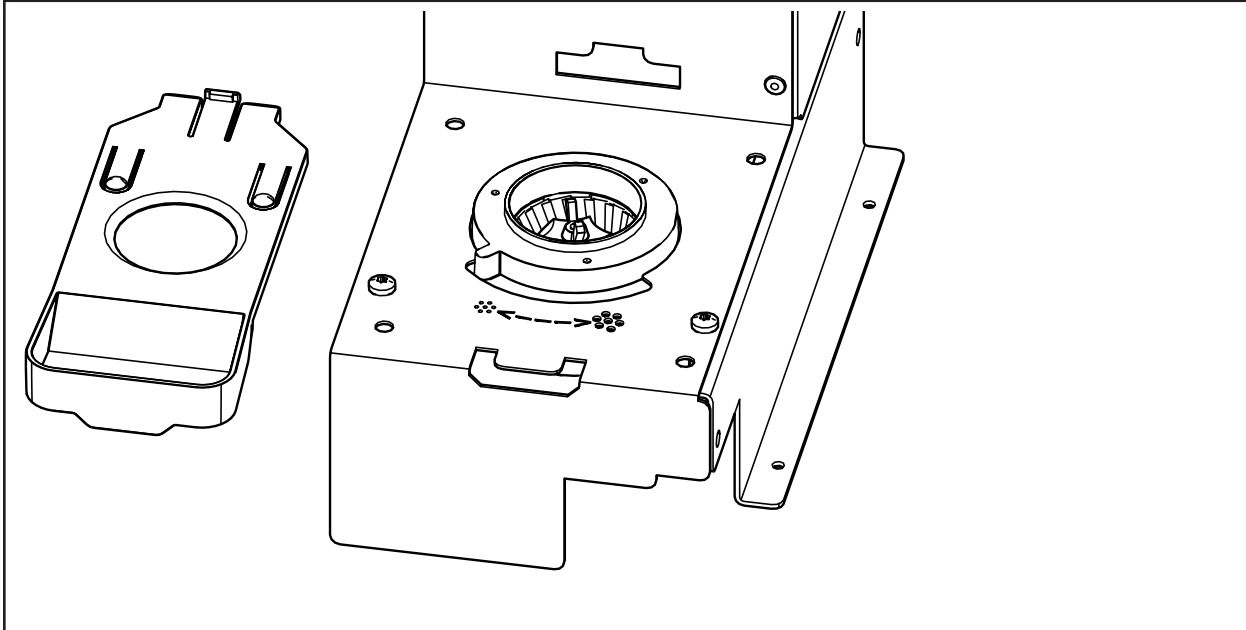
5.4 Changing the O-rings

1. Remove the brewer.
2. Remove the two screws and spacer.
3. Open the brewing chamber (see „5.1 Moving the brewing chamber“ at page 11)
4. Remove the O-rings on both brewing pistons.
5. Put a piece of thread (approx. 20 cm) through the O-ring.
6. Pull the O-Ring over the brewing piston until it is in the groove.
7. Hold both ends of the cord and coil it all around the O-ring twice. This prevents the O-ring twisting.
8. Carefully remove the cord.
9. Press the O-Ring completely into the groove.
10. Close the brewing chamber (see „5.1 Moving the brewing chamber“ at page 11)
11. Insert the spacer and secure with screws.
Ensure that the spacer is mounted correctly: the opening must point to the right (see diagram).
12. Refit the brewer.



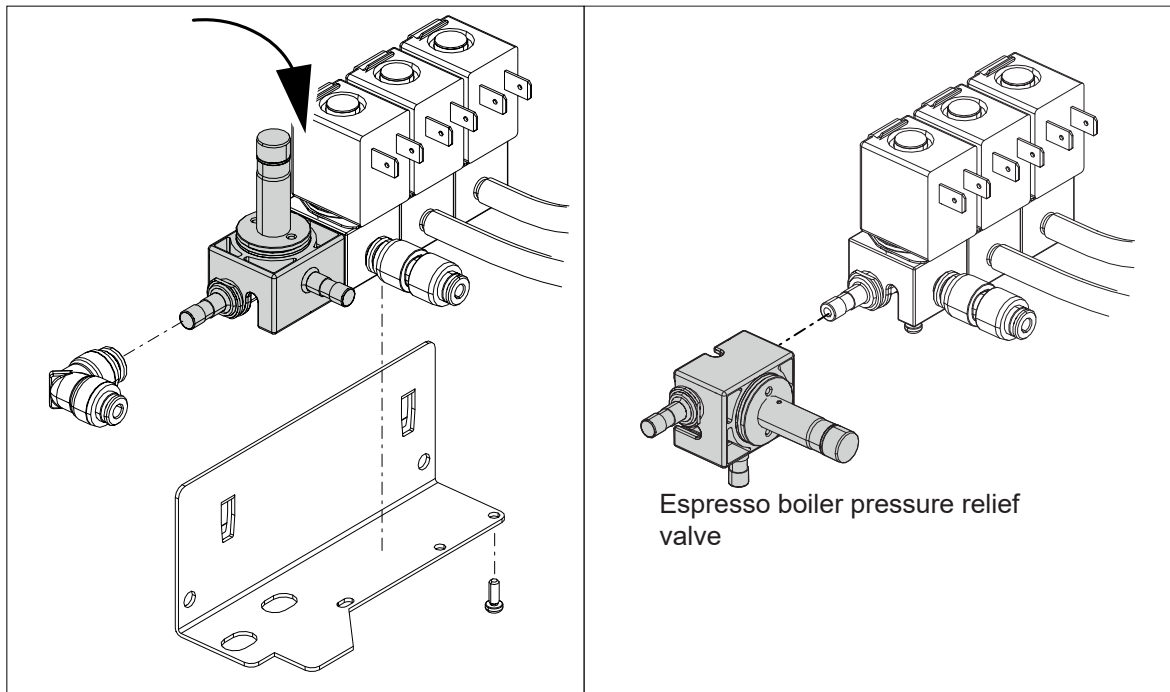
5.5 Grinder left/right

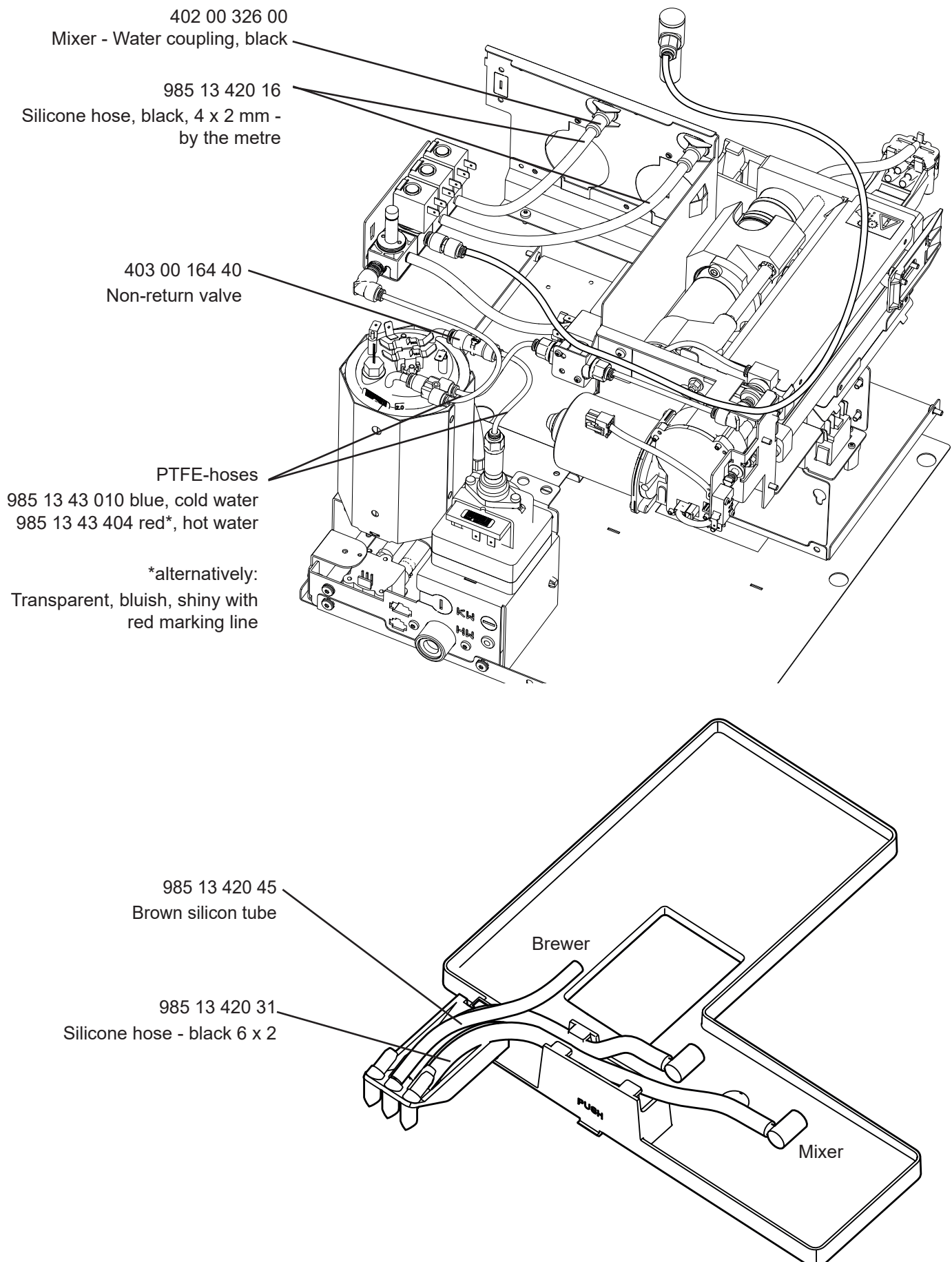
Check the grind level of both grinders. If the result is not satisfactory, the grinders must be adjusted. After adjusting, calibration must be carried out.



5.6 Espresso boiler pressure relief valve

1. Remove the outlet valve block (refer to „6.11 Removing the outlet block“ at page 26).
2. Remove the espresso boiler pressure relief valve as shown in the diagram.

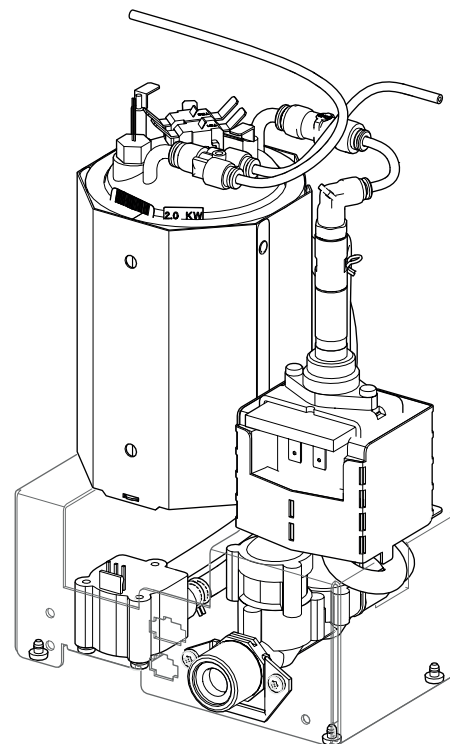
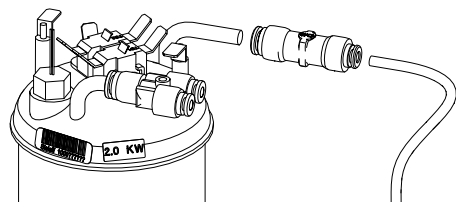


5.7 Teflon tubes, non-return valve, silicon tube black

5.8 Removing the pump

1. Switch the machine off.
 2. Remove the machine rear panel.
 3. Remove all water connections and electrical leads.
 4. Remove the two screws.
 5. Take the pump out.
- To re-install follow the instructions above in reverse order.

5.9 Non-return valve



5.10 Checking the 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. For this reason the flowmeter has to be checked from time to time to ensure it is functioning correctly
- If no dispense quantities are displayed when filling the boiler, press service function 99M121M once.

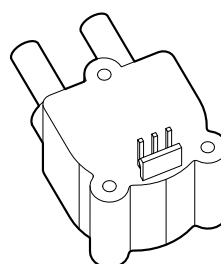
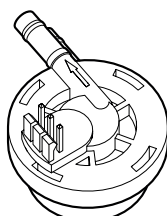
1. Open the machine door.
2. Go to [Technician] - [Service functions] - [Direct input] - [88M]
3. Put the service key into the door contact switch.
4. Hold a cup under the drinks dispense head
5. Press [Send] and then carry out service function 88M once for approx. 5 seconds.
6. Empty the cup.
7. Place the cup on the scales and press the tare button.
8. Hold the cup under the drinks dispense head
9. Re-enter the service function and catch the quantity dispensed in the cup
10. Then place the cup on the scales and read off the weight.

The value on the scale must agree with the value in the display (1g corresponds to 1 ml). A slight deviation is permissible.

However if there is a significant difference in the water quantity weighed to that shown in the display, check the direction of flow on the flow meter first.

The flow meter may be faulty. Replace the flow meter and repeat the process.

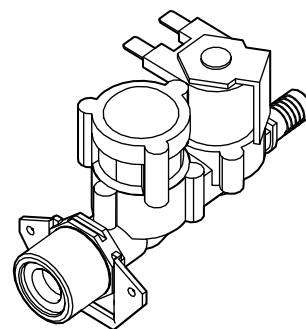
WT for water tank



FW for mains water supply

5.11 Inlet valve with pressure reducer

1. Open the machine door.
2. Go to menu [Technician] - [Service functions]
3. Put the service key into the door contact switch.
4. [Direct input] - [19M].



5.12 Checking the contact switch, sensor position

The sensors can be checked by using service number 17L. Enter this service number and an 8-digit number (in 4 blocks of 2 digits) will be displayed.

Drip tray

xxxxxx01 - Drip tray fitted; switch activated

xxxxxx00 - Drip tray missing; switch open

Door

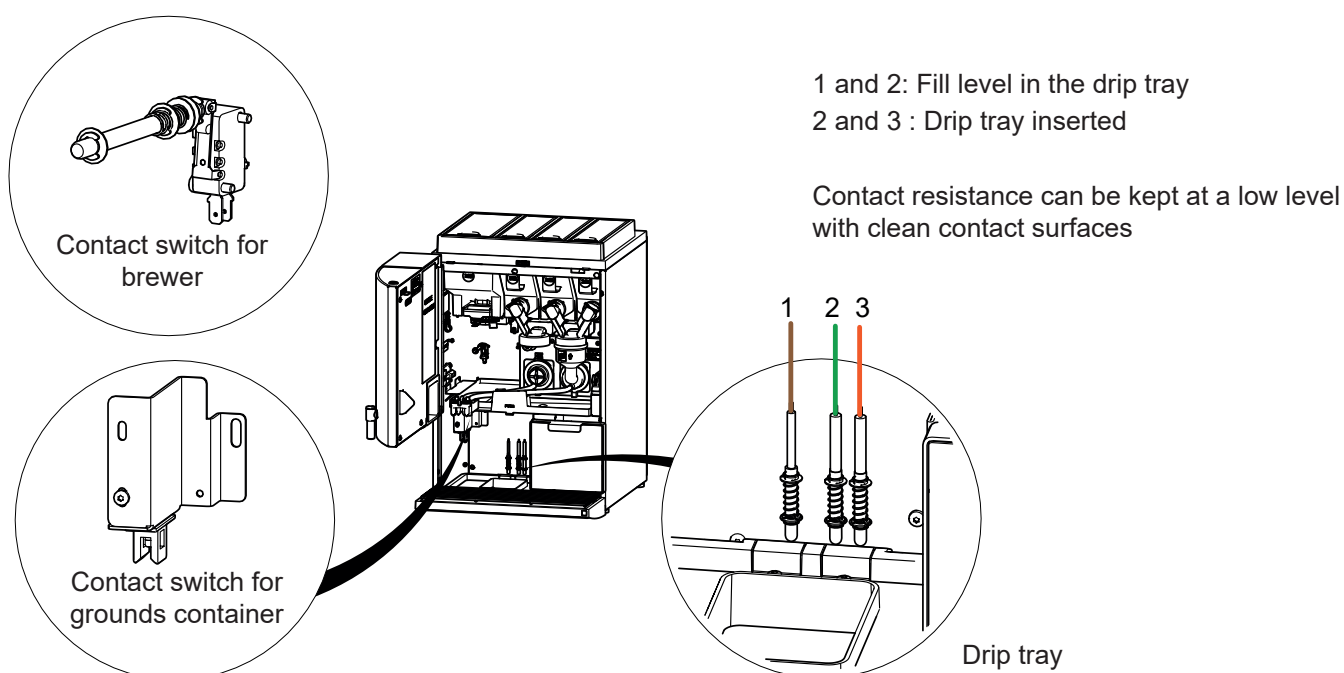
Open the machine door. The machine must now change to the service menu. The switch is working.

Grounds container

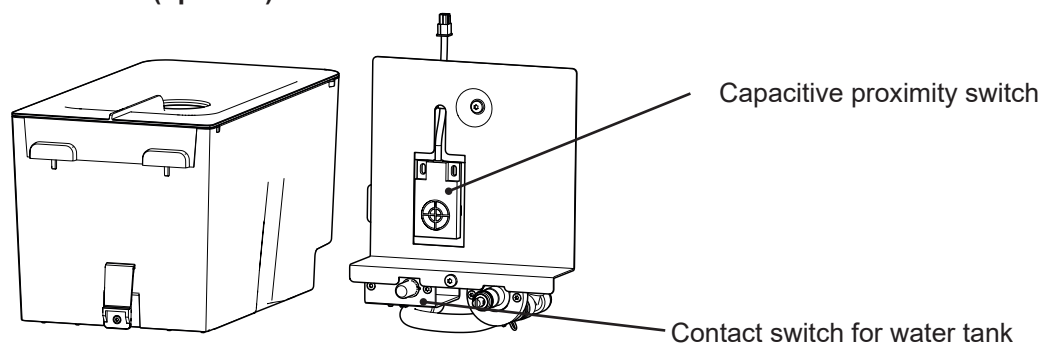
Pull out the grounds container. The machine must display the error message "please insert grounds container" The switch is working.

Brewer

Remove the brewer. The machine must display the error message "please insert brewer" The switch is working.



Water tank (optional)

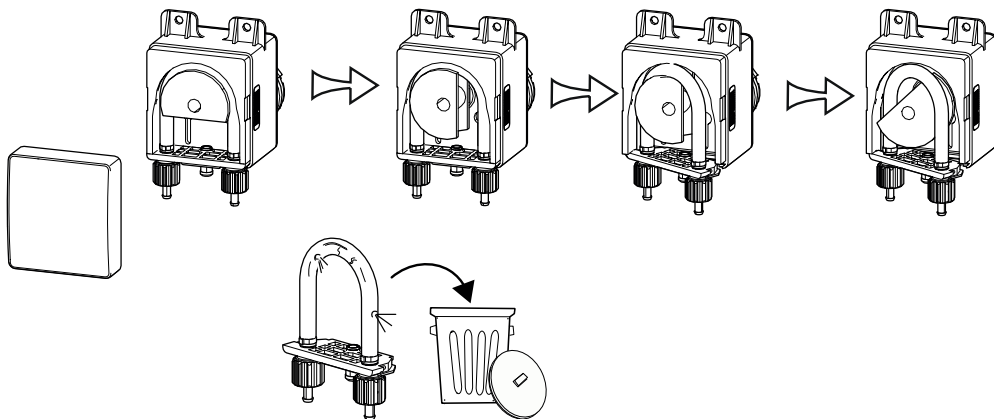


5.13 Conversion kit : hose for peristaltic pump DSP9911 (milk module)

Always empty the pump tube and supply lines first. Take care when fitting the new tube not to damage it by allowing it to catch on the sharp edges of the spring/bracket!

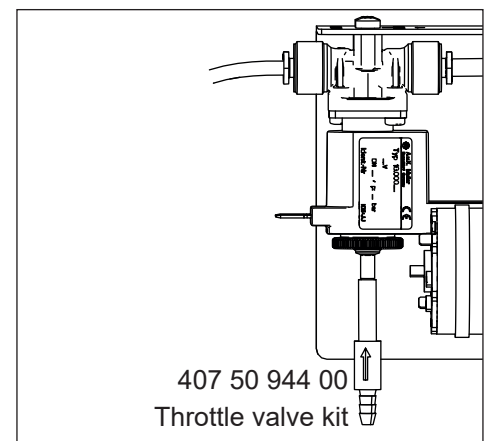
Proceed as follows

1. Remove the cover.
2. Turn the rotor to the position indicated.
3. Pull the tube off on the right hand side.
4. Turn the rotor 90 ° clockwise.
5. Pull the tube off on the underside.
6. Turn the rotor again 90 ° clockwise.
7. Pull the tube off on the left hand side.



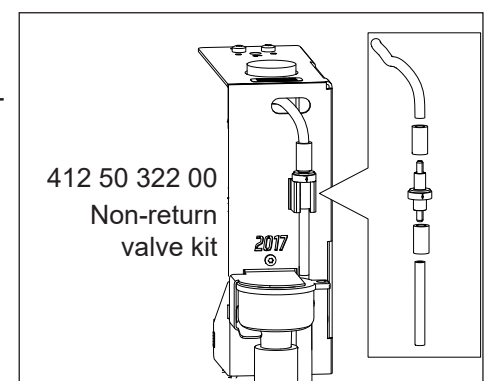
5.14 Throttle valve kit

Pull the throttle and tube out of the solenoid valve and replace with a new throttle.



5.15 Non-return valve kit

Replace the non return valve: Ensure that the non-return valve is fitted correctly (the arrow on the non-return valve must point downwards).



5.16 O-rings and tubes

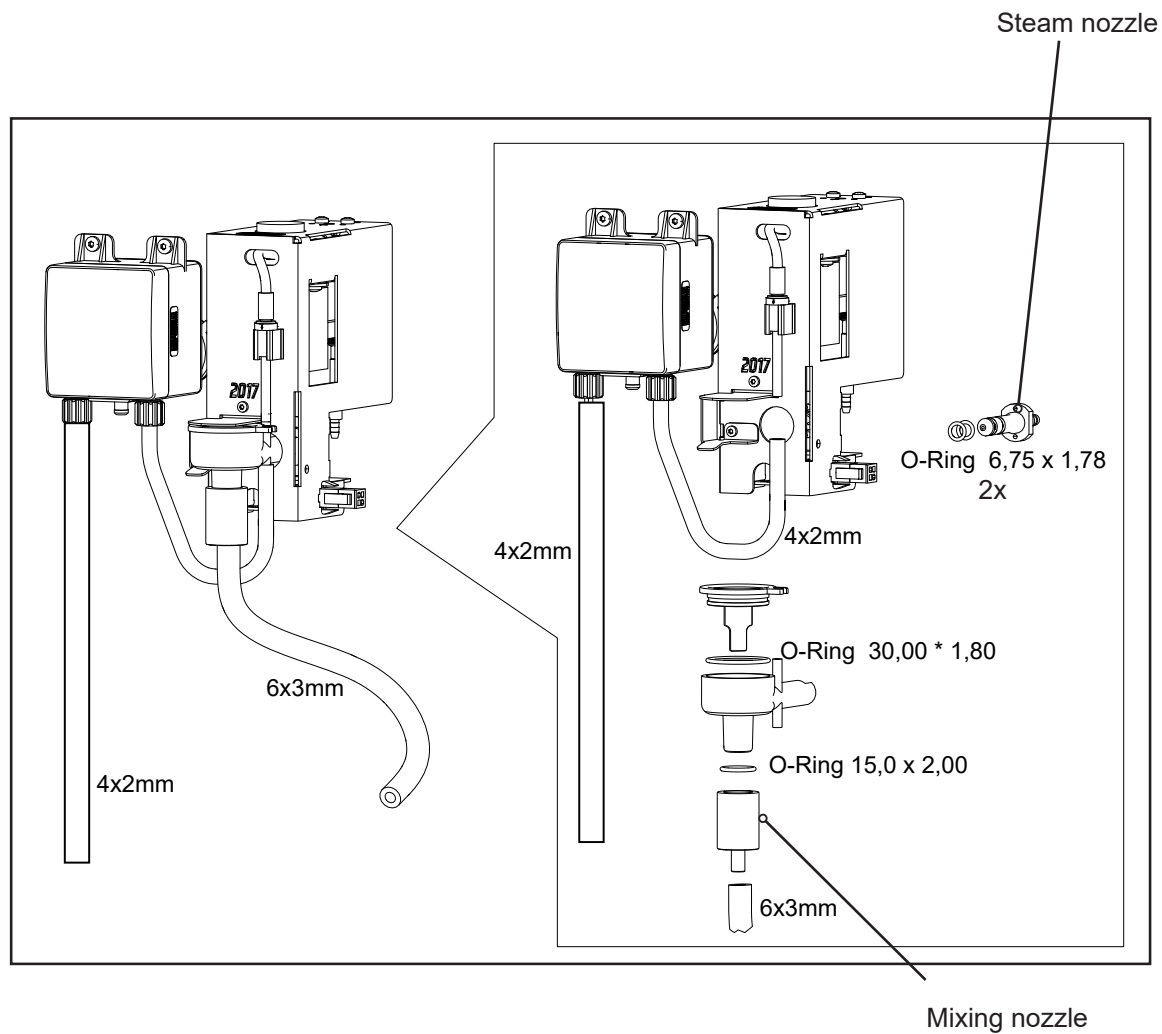
Replace the O-rings and the tubes.

Steam nozzle :

1. Use a pointed object to lever the O-rings out from the steam nozzle.
2. Cut up the O-Rings
3. Insert new O-rings, taking care not to twist them.

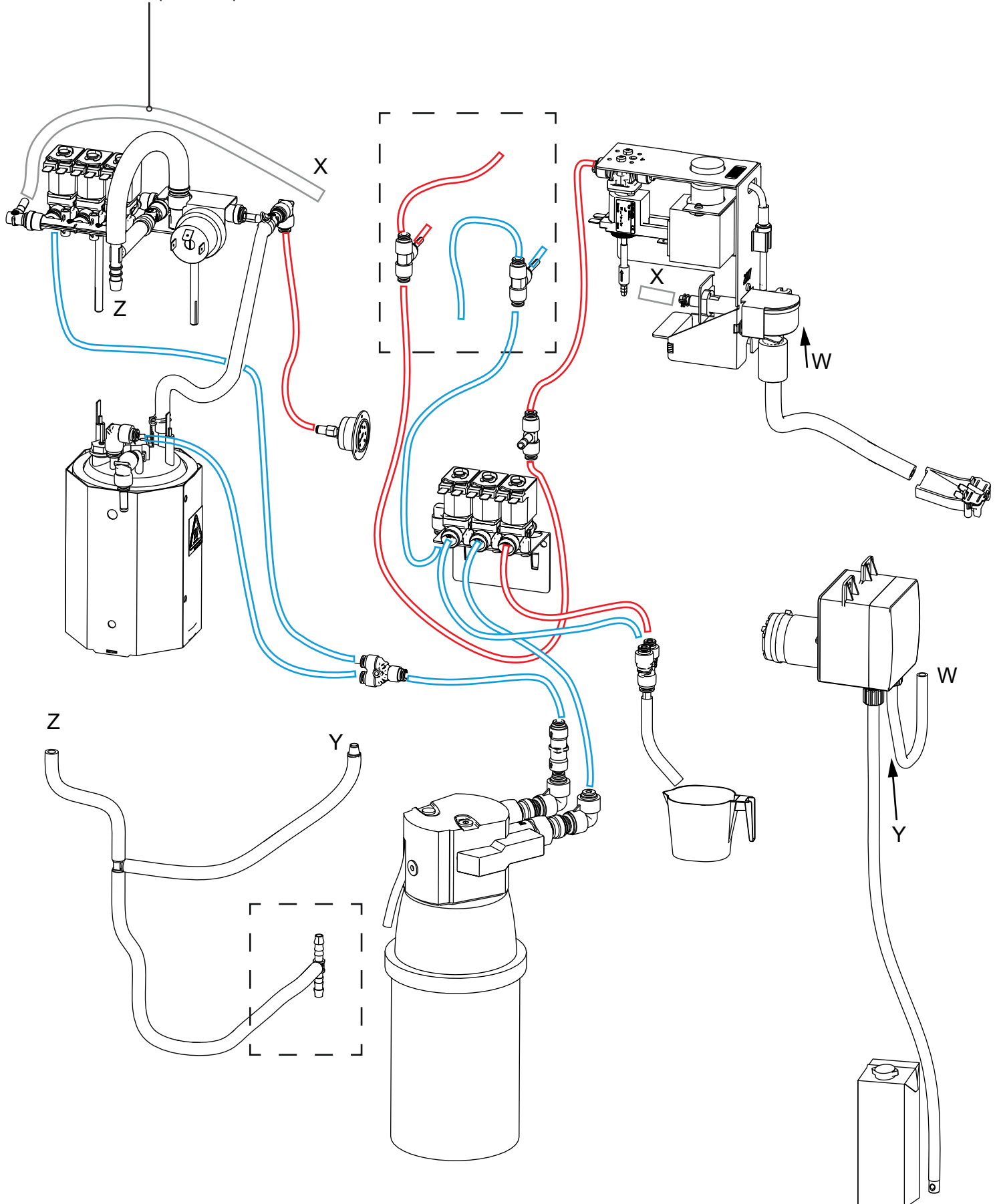
Cover / Mixing nozzle

1. Pull out the mixing nozzle.
2. Remove the tubes.
3. Lift off the cover
4. Replace both O-rings.
5. Reassemble the mixing nozzle.
6. Make sure it works properly by doing a trial sale.



5.17 Tube layout diagram for milk module

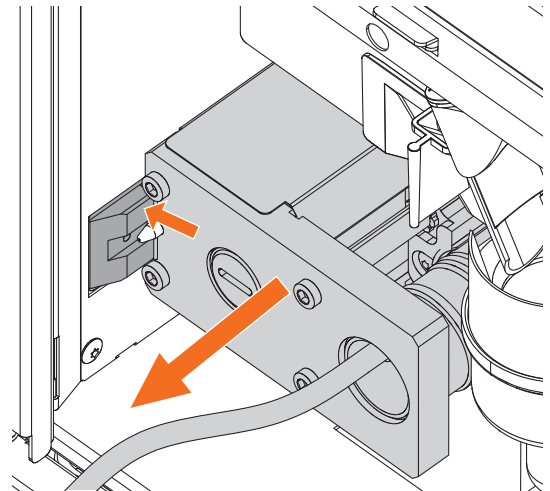
This hose conducts steam.
Silicone tube platinum-plated 5 x 1.5 mm



6. Replacing / modifying components

6.1 Taking out the brewer

1. Remove the discharge hoses from the outlet.
2. Remove the partition.
3. Press the brewer lock.
4. Pull the brewer forwards to remove.



TIP

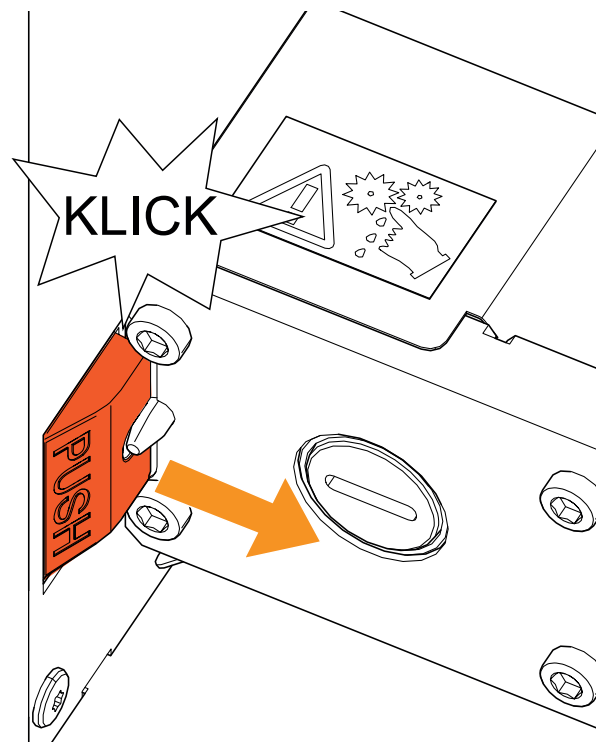
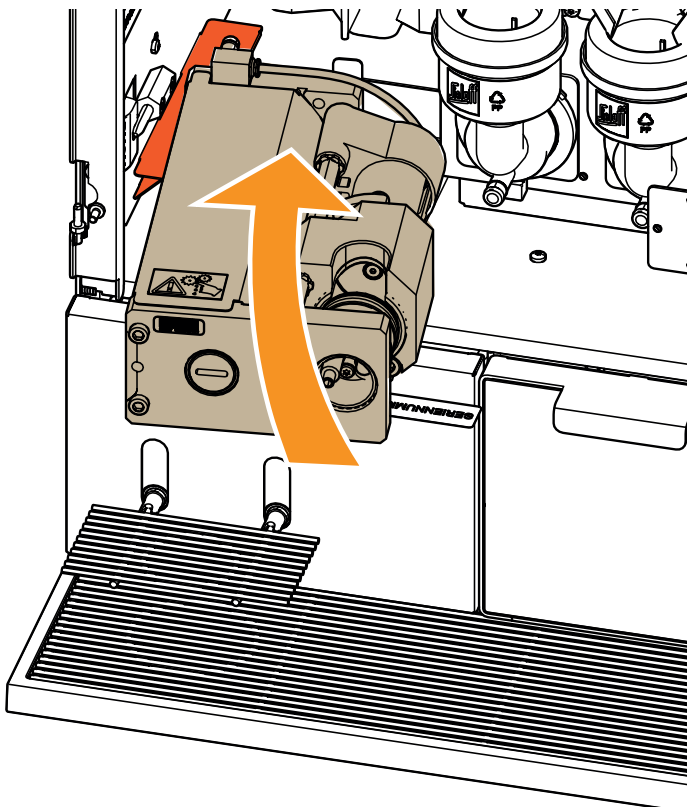
Inserting the brewer is a simple process.

The removal enables the brewing chamber to be moved, as when fitting the brewer in the worst case scenario jamming may occur.

Tip: the brewing chamber can be moved to home position by hand.
Refer to „5.1 Moving the brewing chamber“ at page 11

Inserting the brewer

1. Place the brewer to the left on the coloured guide rail.
2. Move the brewer to the left whilst pushing it towards the back.
At the same time watch the brewer locking mechanism: The pin must come out of the hole.
If the brewer is correctly positioned, the brewer locking mechanism clicks shut visibly and audibly.
3. Reconnect all tubes.



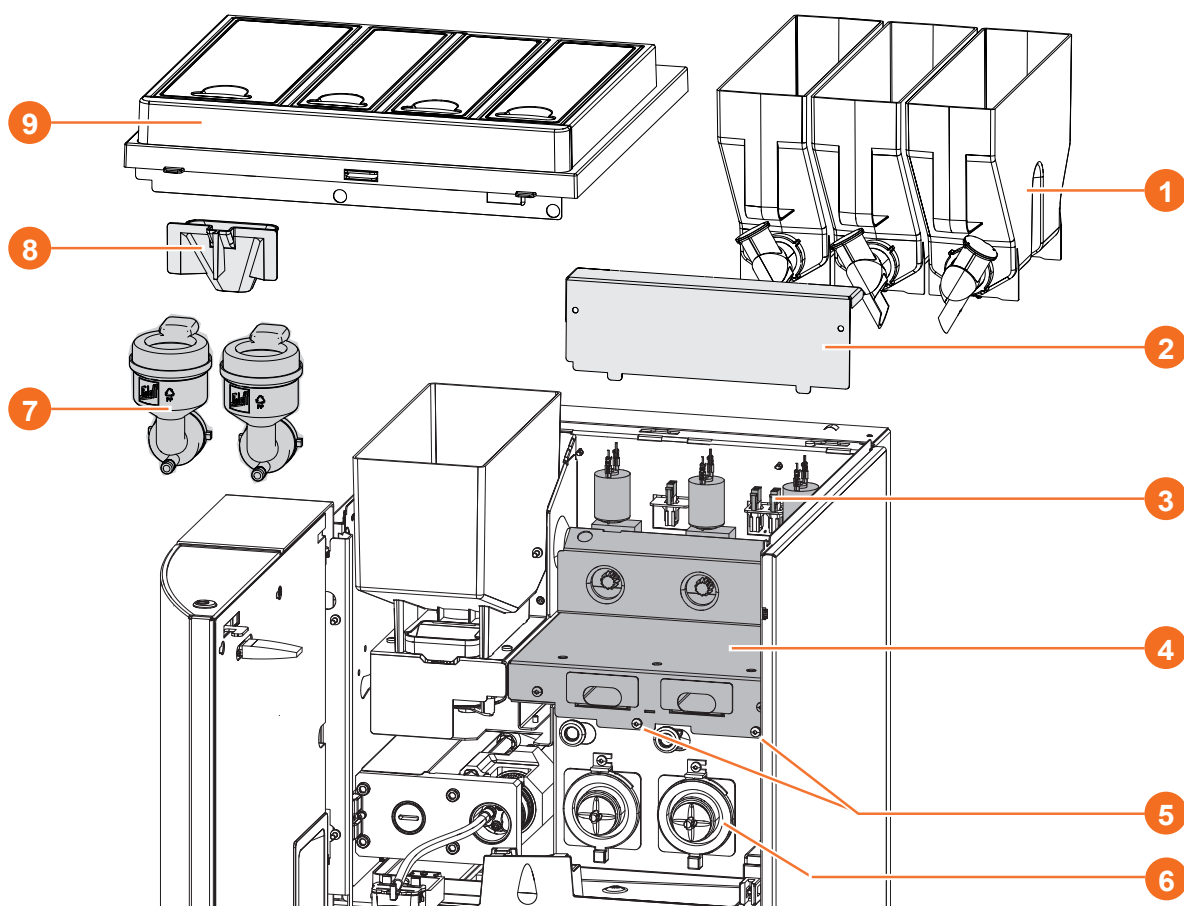
6.2 Removing container holder



WARNING electrical energy! Danger to life!

Disconnect the machine from the power supply ! Remove the mains plug.

1. Close the product chutes by pushing them upwards.
2. Remove the machine top cover.
3. Remove the cover plate.
4. Remove the mixer housing and powder slide.
5. Remove the two screws.
6. Remove the plug connections to the product motors.
7. Lift out the complete container holder.



- | | | | |
|---|--------------------|---|-------------------|
| 1 | Instant containers | 6 | Mixer motor |
| 2 | Cover plate | 7 | Mixer housing |
| 3 | Plug connections | 8 | Powder funnel |
| 4 | Container holder | 9 | Machine top cover |
| 5 | Screws | | |

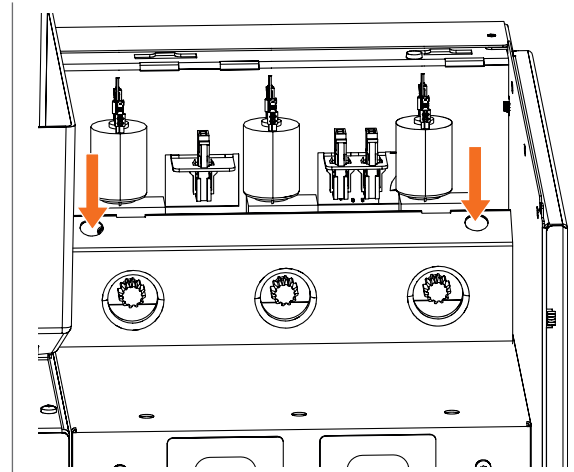
6.3 Removing the instant motors



TIP

To check that the instant motors are working use service numbers 12M, 15M and 16M.

1. Remove the machine top cover.
2. Remove the cover plate.
3. Close the product slides and remove the instant product containers.
4. Remove the plug connections to the instant motors.
5. Remove the two screws holding the plate where the instant motors are mounted



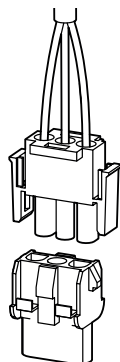
6.4 Removing the grinders



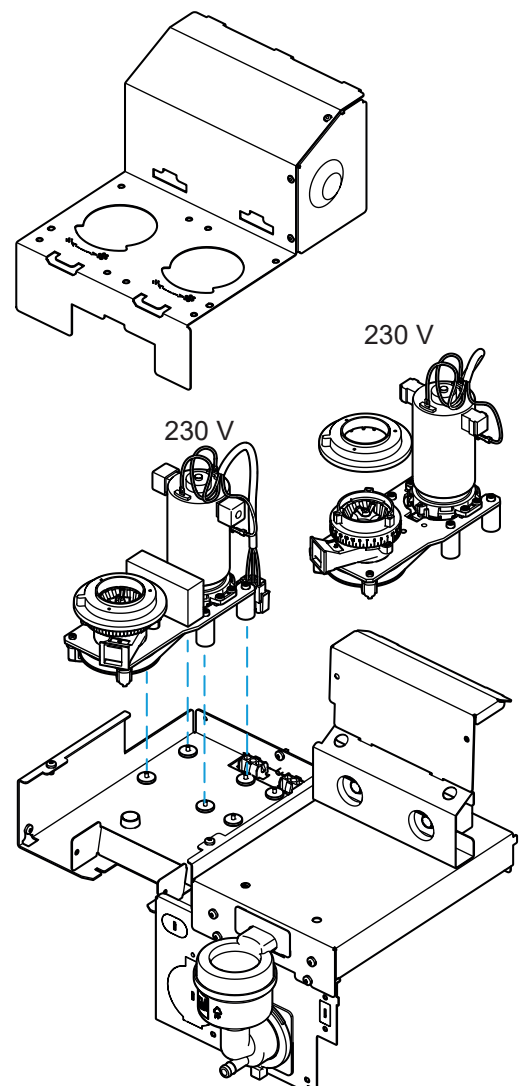
WARNING electrical energy! Danger to life!

The grinders are driven by 230V direct current
Disconnect the machine from the power supply !
Remove the mains plug.

1. Remove the machine top cover.
2. Pull the locking slider forwards on the bean container until it stops.
3. Lift out the bean container.
4. Remove two screws.
5. Remove the cover.
6. Remove the plug connection to the grinder.
7. Take out the grinder

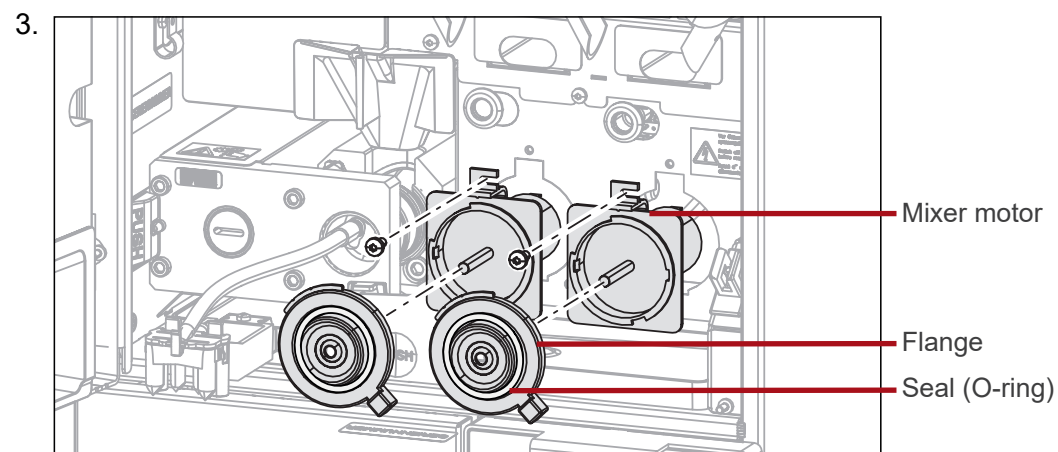
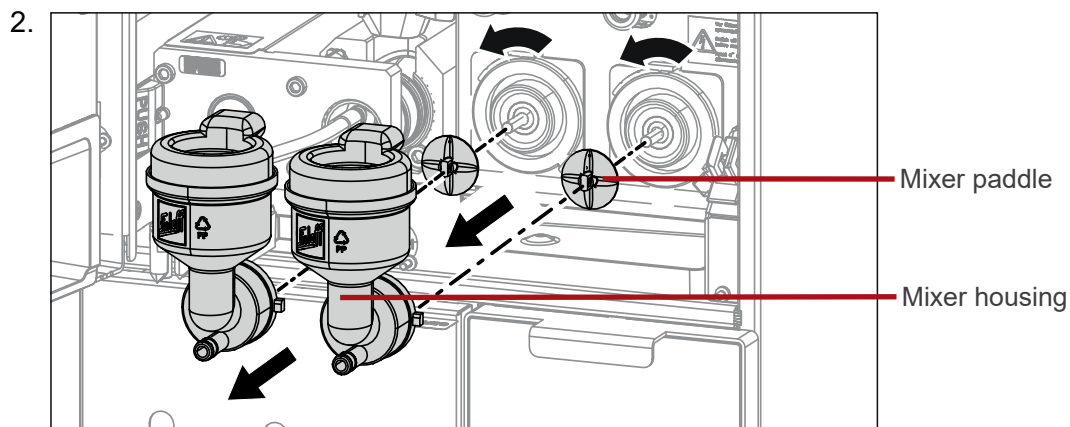
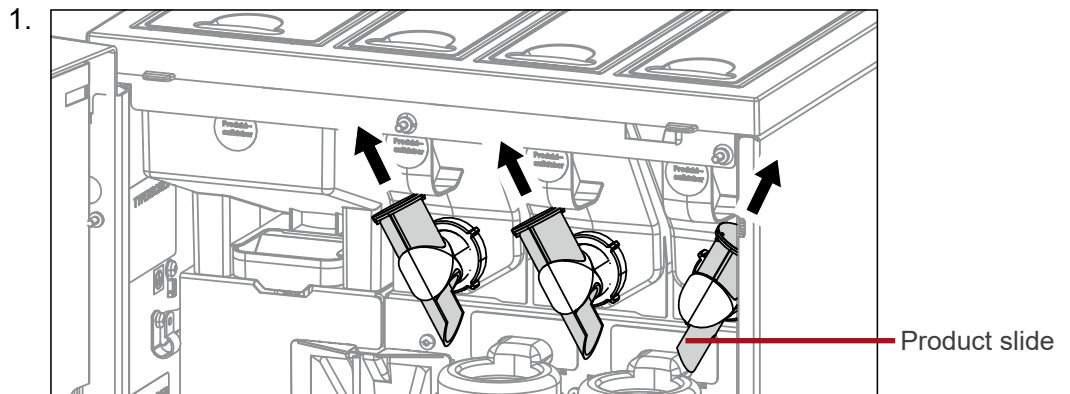


Plug connection grinder



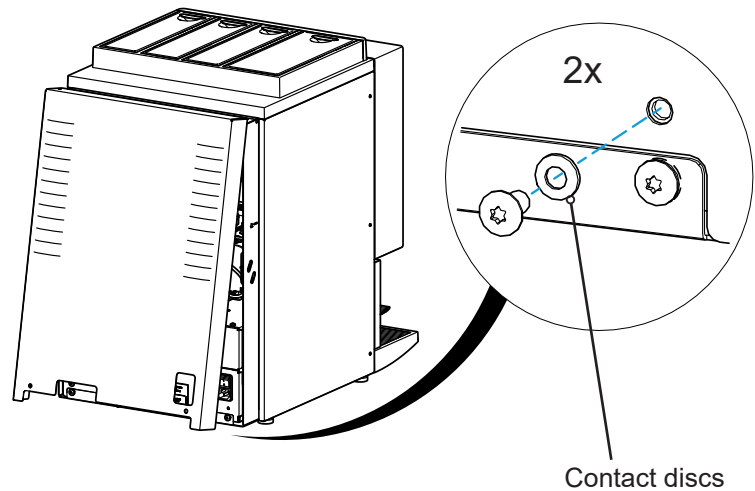
6.5 Dismantling the mixer motor

1. Push the instant product slides up.
2. Turn the flange slightly.
3. Remove the mixer housing and mixer paddle.
4. Remove the flange.
5. Remove the screw.
6. Remove the mixer motor.
7. Remove the flat plugs from the mixer motors.



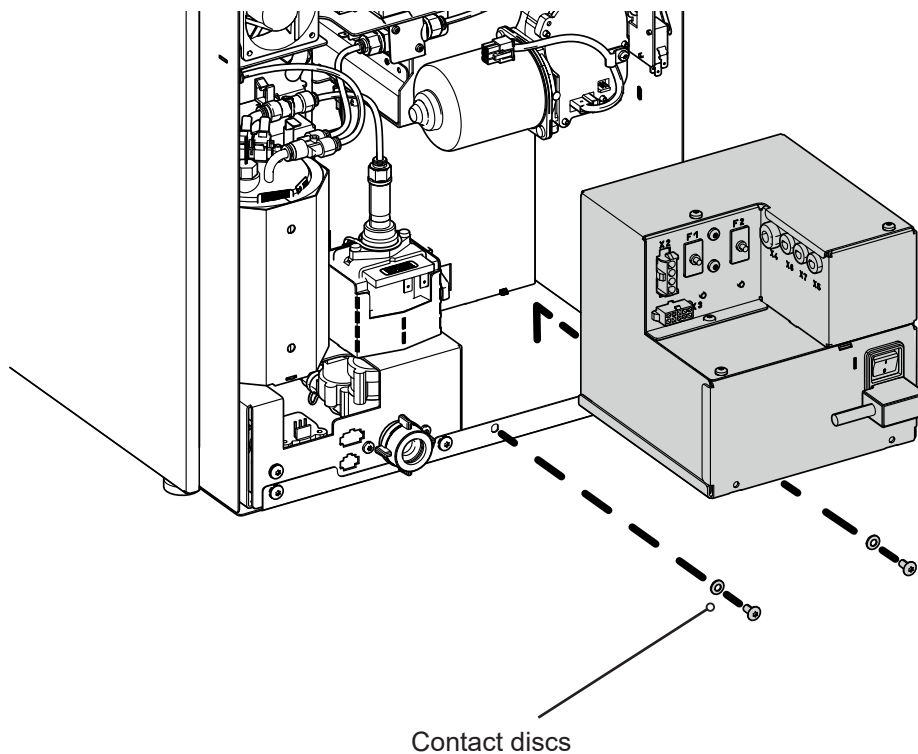
6.6 Removing the back cover

1. Disconnect the mains plug.
2. Remove two screws and contact discs.
3. Remove the rear panel.



6.7 Removing the power supply

1. Remove the machine rear panel.
2. Remove all cables connected to the power supply.
In order to avoid any confusion you are advised to mark the plugs to match the indicators on the power supply.
3. Remove the two fixing screws and contact discs.
4. To remove, lift the power supply slightly.
5. To re-install follow the instructions above in reverse order. Pay attention to the correct positioning of the contact discs.



6.8 Removing the boiler

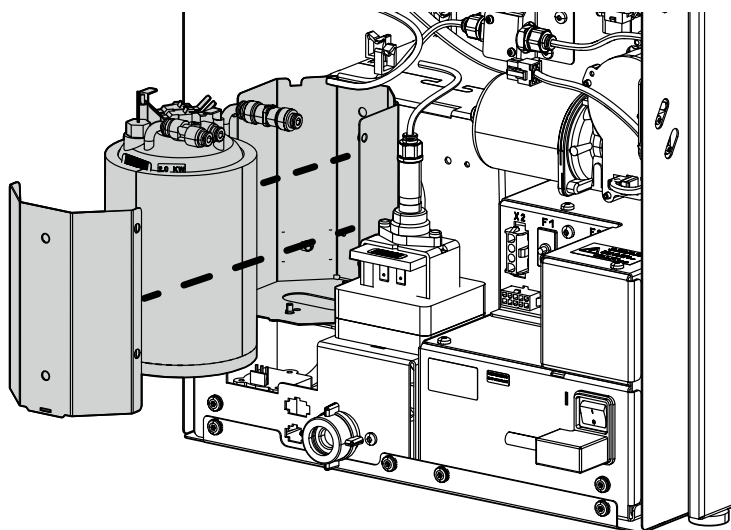


CAUTION! Hot surfaces

Risk of burns!

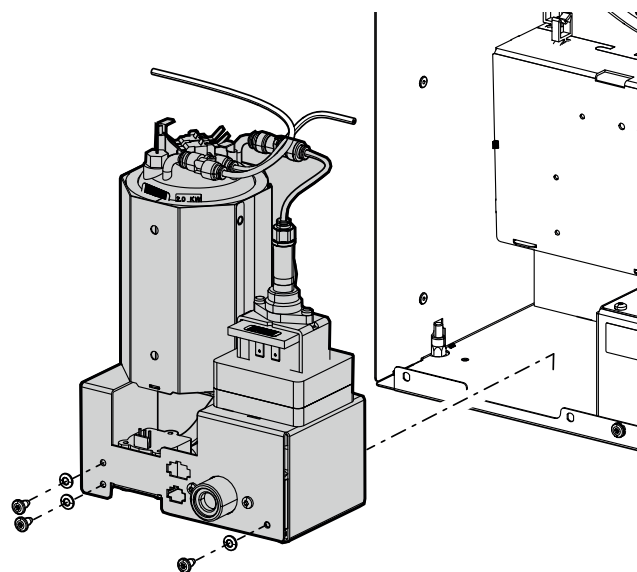
- The boiler may be hot. Allow the boiler to cool down.

1. Open the machine door.
2. Go to [Technician] - [Service functions] - [Direct input] - [87M]
3. Put the service key into the door contact switch.
4. Place a suitable container under the drinks dispense head.
5. Press  and carry out service function 87M.
6. Perform service function 87M twice more.
7. Disconnect the mains plug immediately.
8. Remove the machine rear panel.
9. Remove all water connections and electrical leads from the boiler.
10. Open the sheet metal casing on the boiler.
11. Remove the boiler.
12. Replace the boiler.
13. Install the new boiler following the instructions above in reverse order.
14. Fit the machine rear panel.
15. Switch the machine on and fill the boiler with service function 88 M.



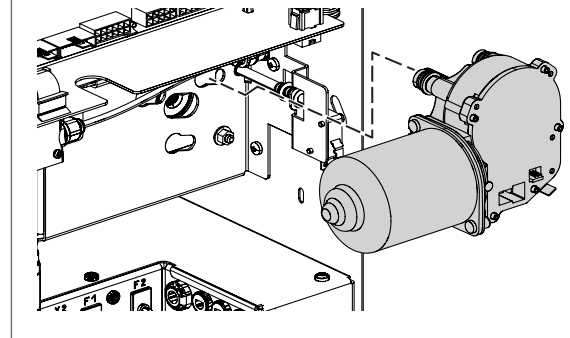
6.9 Removing the water tank

1. Switch the machine off.
 2. Remove the machine rear panel.
 3. Remove all water connections and all electrical leads.
 4. Remove the two screws.
 5. Take the water tank out.
- To re-install follow the instructions above in reverse order.



6.10 Removing the brewer motor

1. Remove the brewer (refer to „6.1 Taking out the brewer“ at page 20).
 2. Remove the machine rear panel.
 3. Remove the plug connections on the brewer motor.
 4. Push the brewer motor to the left and take out.
- To re-install follow the instructions above in reverse order.



6.11 Removing the outlet block

1. Remove the machine rear panel.
2. Disconnect the tubes and cable connections from the outlet valve block.
For cable layout: see „11.3 Dispensing valves“ at page 48
3. Lift the outlet valve block slightly and remove.

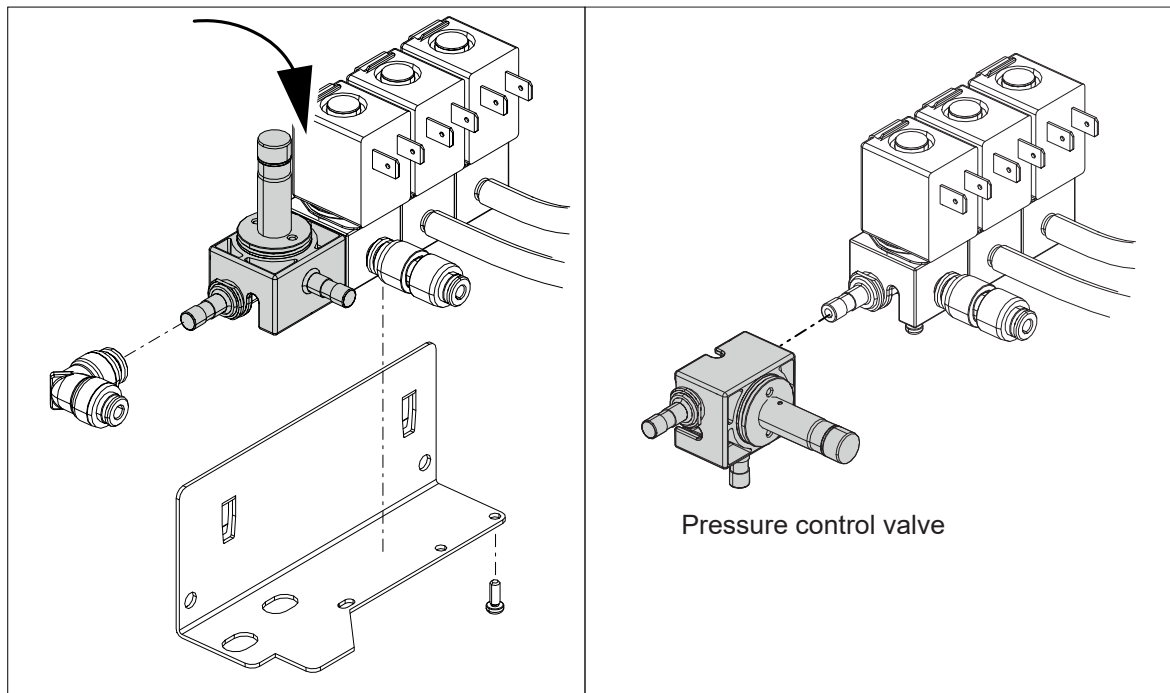


TIP

Once the container holder has been removed (see „6.2 Removing container holder“ at page 21) the outlet valve block can be lifted out.

6.12 Espresso boiler pressure relief valve

1. Remove the outlet valve block
2. Remove the espresso boiler pressure relief valve as shown in the diagram.



6.13 Changing the HG M32 control board



TIP

Before changing the control board, the configuration on the existing control board must be saved.

Saving the configuration

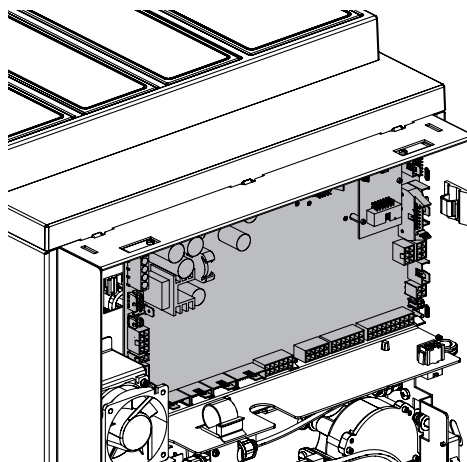
1. Connect a laptop/computer to the vending machine control board (dongle).
 2. Open Sielector and switch to raw data mode 
 3. Press .
 4. Tick [List 50] and [List 178] and press [OK]. Data transmission starts.
 5. Once the lists are uploaded click on [File] - [Save as] and save the document (.dts-file)
- Alternatively, insert a USB stick and save the configuration from the HMI.

Removing the control board.

1. Remove the machine rear panel.
2. Remove all the cable connections to the control board. The control board is fixed with PCB brackets.
3. Change the control board.

Uploading the software.

1. Connect laptop/computer to the new control board (dongle).
 2. Upload the latest software (for the specific machine) onto the control board.
- Alternatively, insert a USB stick and load the software from the HMI.



Transferring the configuration to the control board.

1. Load the saved configuration in Sielector [File] - [Open].
 2. Select [Raw data] and then press .
 3. Select [List 50] and [List 178] and confirm with [OK].
Transmission starts.
- Alternatively, insert a USB stick and send the configuration from the HMI.

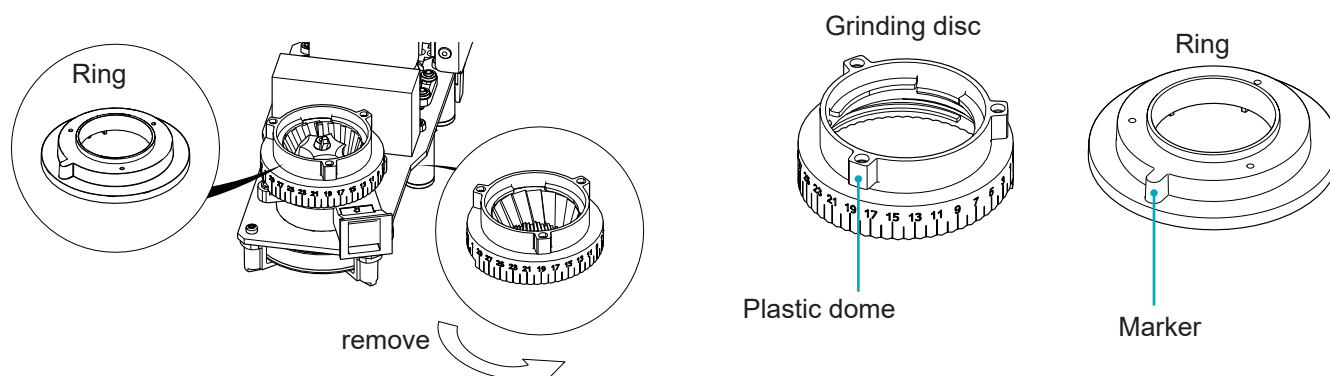
6.14 Changing the grinding disc

- The grinding disc with adjusting ring is easy to change.
- Every grinding disc has two dials numbered 1 to 29. It is important that following installation the grinding disc is in its correct position. Ensure that the number on the dial with the plastic dome or marker must be at a determined position (refer to the diagrams below).
- For the left and right grinder the numbers are different.

Removing the grinding disc

1. Lift off the ring
2. Turn the grinding disc anti-clockwise (to the left) until it can be removed.

- ✓ The existing grinding disc has been removed

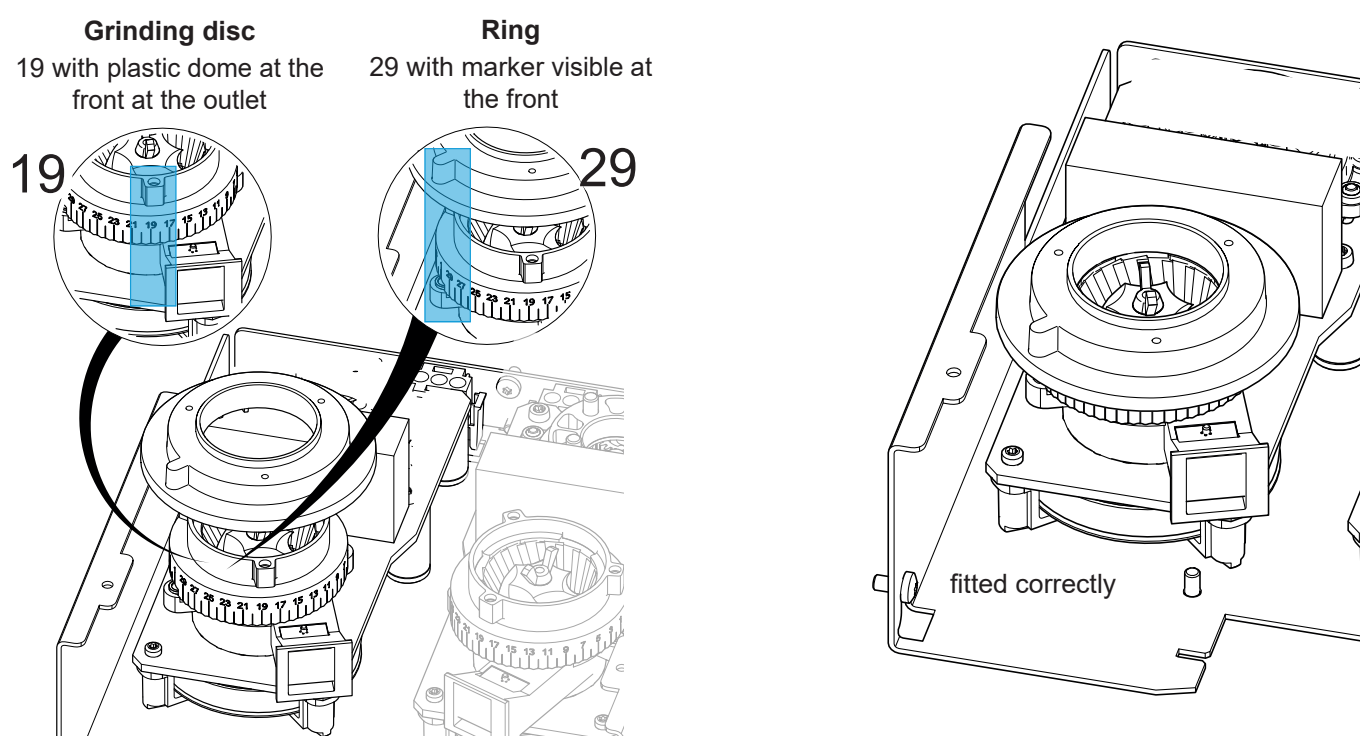


Fitting the grinding disc

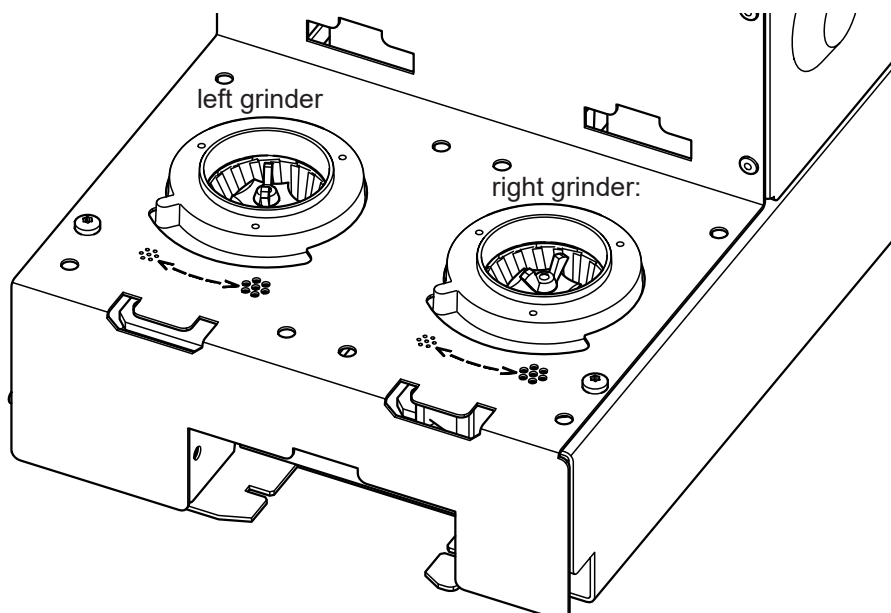
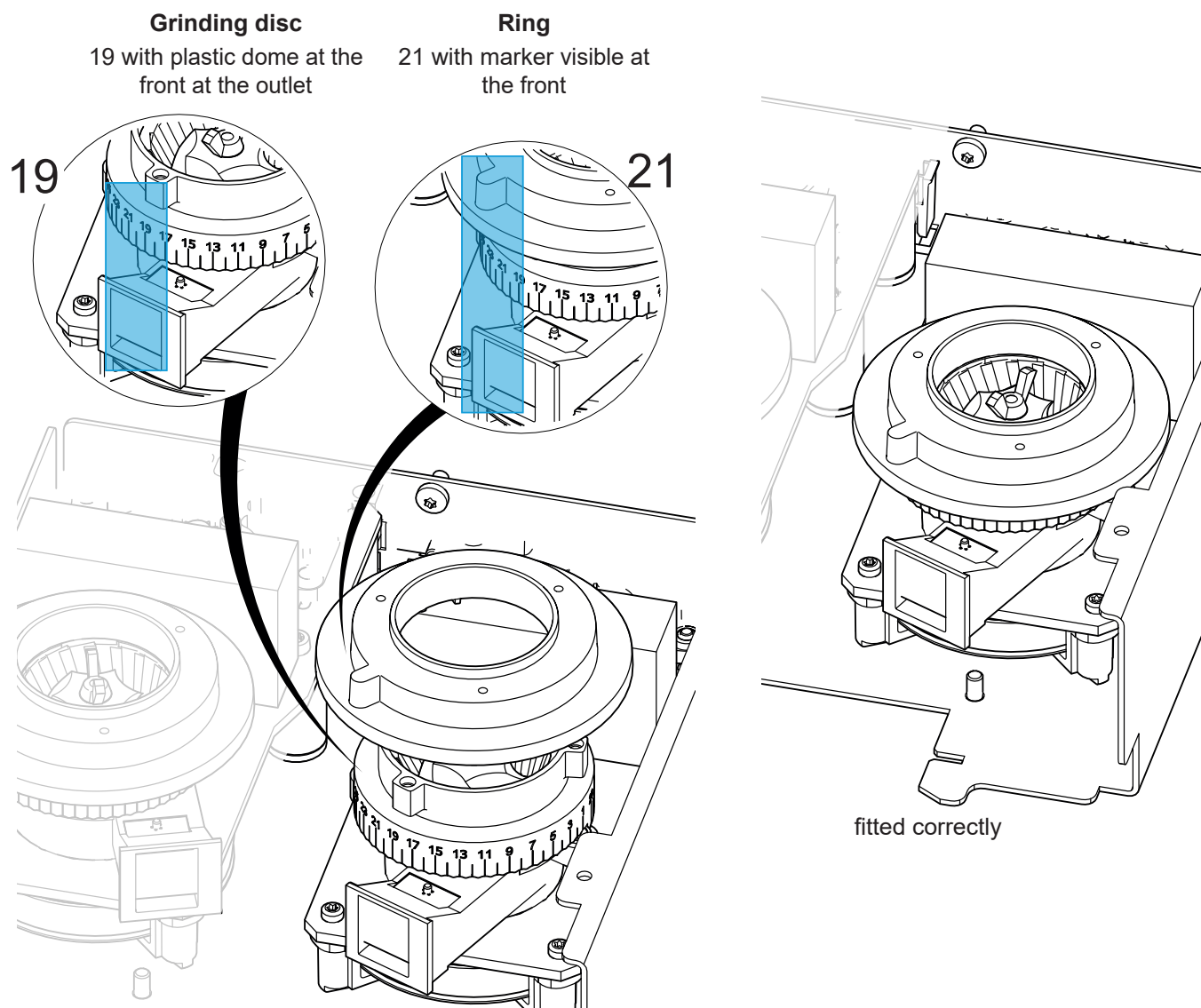
1. Place the grinding disc on the lower part of the grinder and turn clockwise (to the right) until it stops.
2. Finally check if the plastic dome or marker is at the correct position. If not, remove the grinding disc and twisting slightly refit.

- ✓ The grinding disc has been exchanged.

left grinder



right grinder (DUO variant only)



6.15 Removing the touchscreen

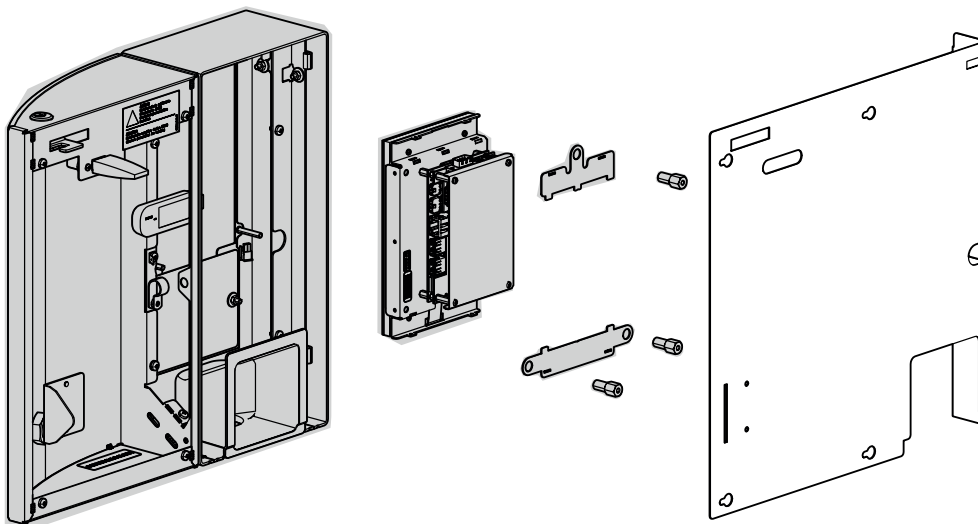
**WARNING electrical energy! Danger to life!**

Disconnect the machine from the power supply ! Remove the mains plug.

1. *Open the machine door.*
 2. *Remove the outlet cover.*
 3. *Remove the door cover by loosening the 6 fixing screws.*
 4. *Remove all cables connected to the touchscreen (USB-cable and cable connection to the control board).*
 5. *Remove the three hexagonal bolts. The complete touchscreen unit can now be taken out.*
- ✓ To re-install follow the instructions above in reverse order.

**TIP**

When re-installing, take note of the plug-in direction of the USB-connector (red cable on top)



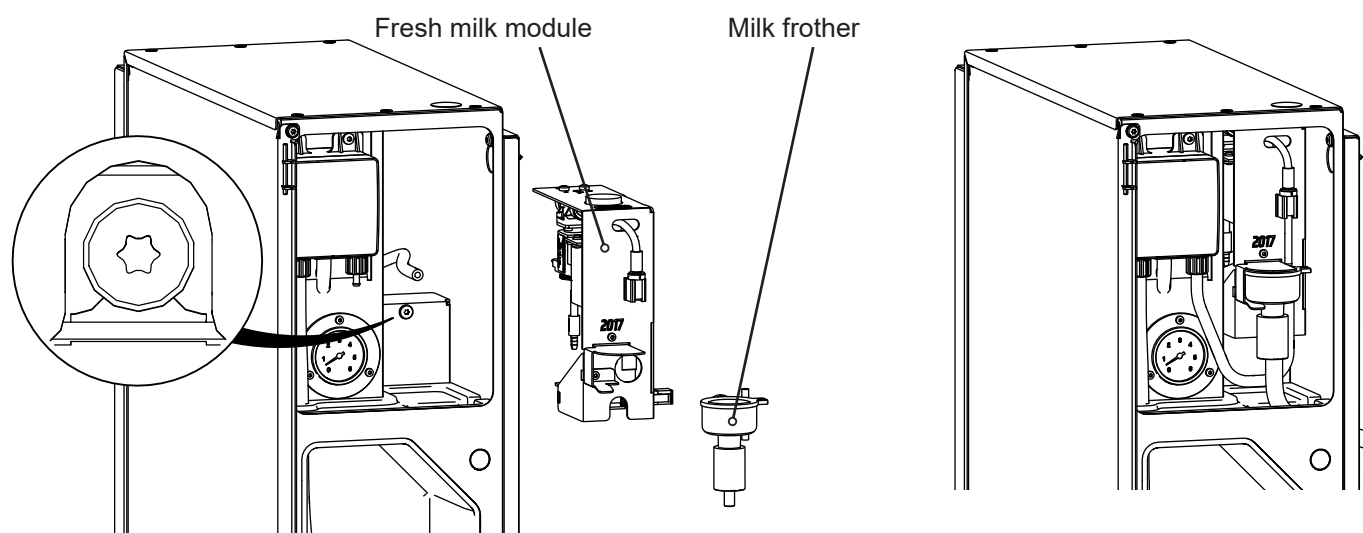
6.16 Remove fresh milk module (only with a milk module)

Resources:

- Screwdriver TX20

Proceed as follows

1. Remove pipes (3 in total)
2. Pull the milk frother out of its holder (do not turn)
3. Remove the screw using a screwdriver.
4. Lift the fresh milk module slightly upwards, remove it to the front and disconnect the connections for steam and water. There may be a small amount of water leakage when the JohnGuest® connection is loosened.



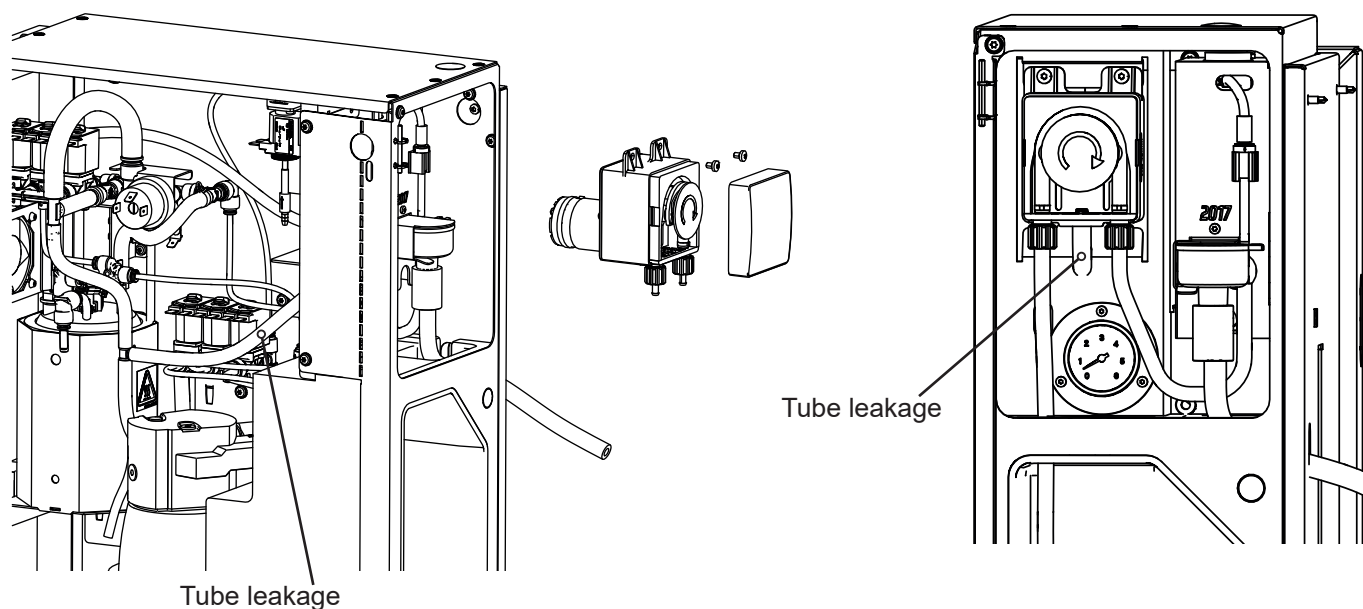
6.17 Removing the peristaltic pumps (only with a milk module)

Resources:

- Screwdriver TX20

Proceed as follows

1. Remove screws
2. Remove peristaltic pump and tubes (3 in total)



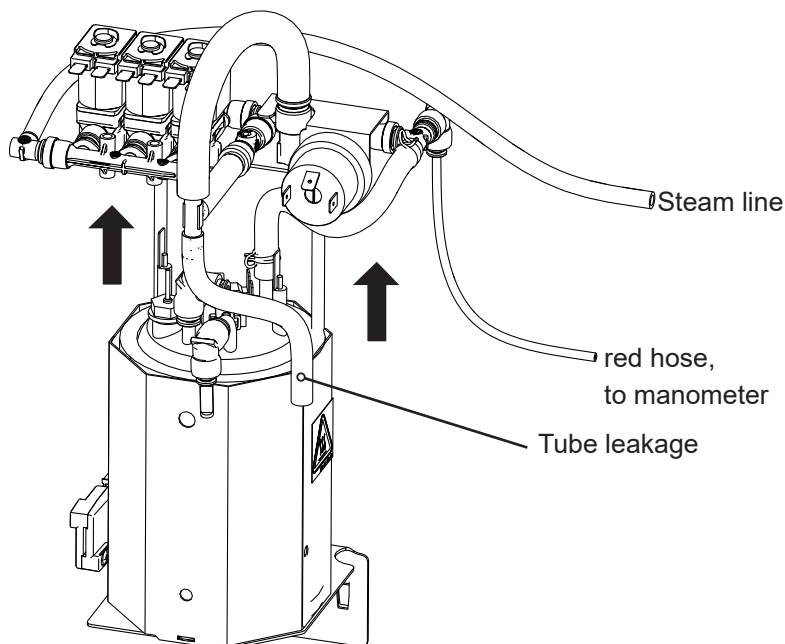
6.18 Removing the steam valve block (only with a milk module)

Requirements

- Side wall and rear wall of the milk module are removed
- The system must be depressurised.
- Disconnect from the power supply

Proceed as follows

1. Remove the tubes from the steam valve block.
2. Lift the steam valve block upwards out of the boiler.

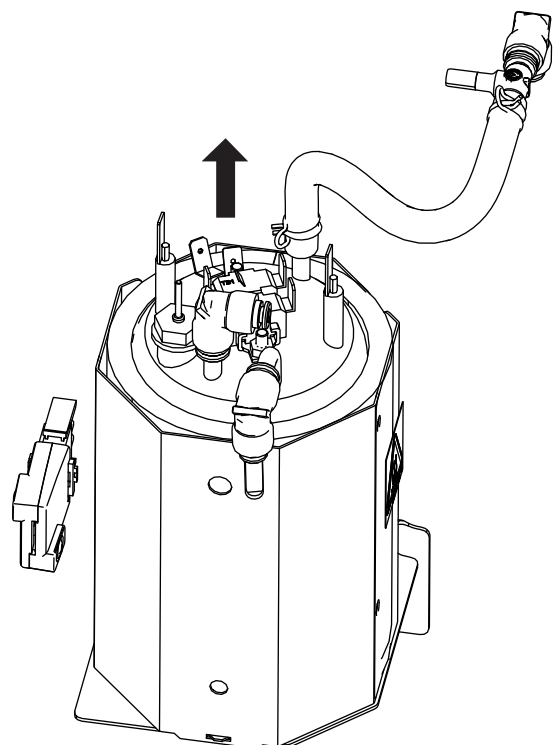


6.19 Removing the steam boiler

The steam boiler is easy to remove if the steam valve block has already been removed.

Proceed as follows

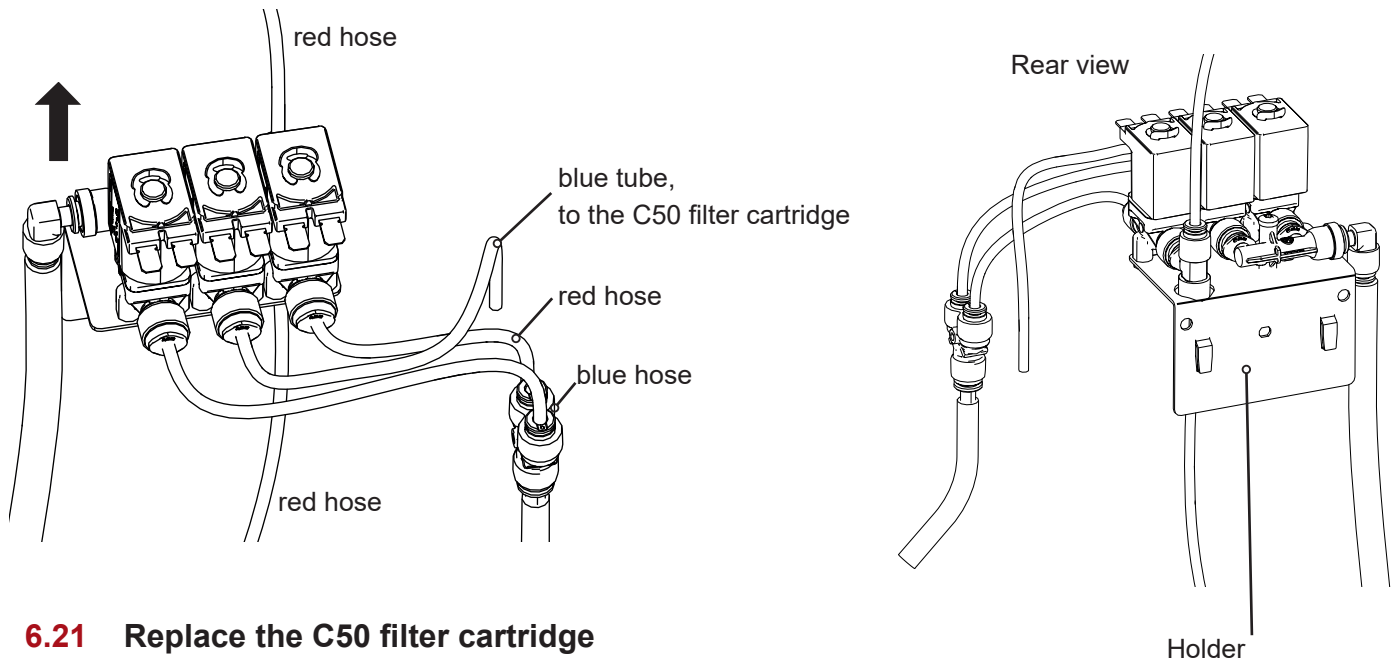
1. Deactivate heater in the service menu (34M)
2. Empty the boiler (87M)
3. Let the boiler cool down
4. Disconnect from the power supply
5. Remove electrical connections and tubes.
6. Pull the steam boiler out of its insulation



6.20 remove valve block

Proceed as follows

1. Remove electrical connections and tubes.
2. Unhook the valve block with bracket upwards from the side wall.



6.21 Replace the C50 filter cartridge

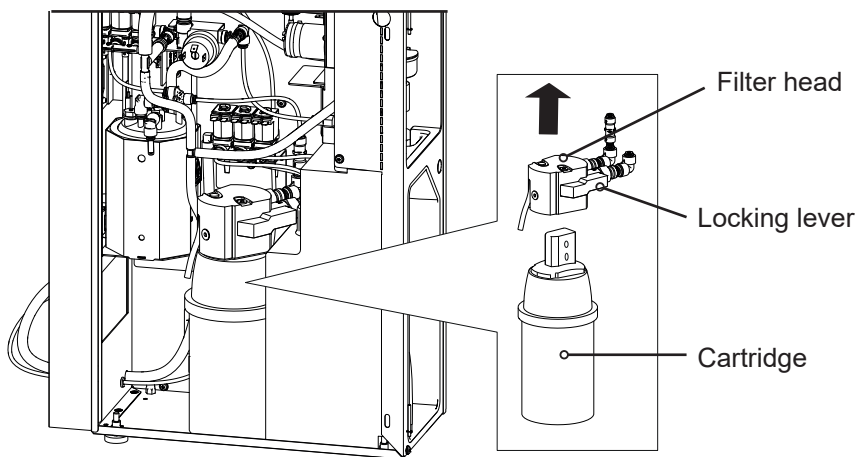


TIP

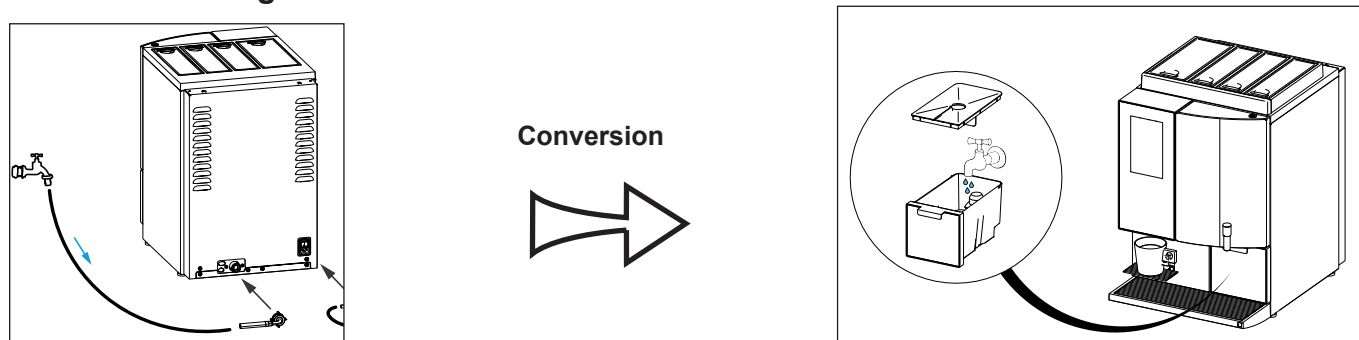
Flushing the filter cartridge should be carried out beforehand using a different filter head. This cannot be carried out in the milk module as there is no water pressure.

Proceed as follows

1. Remove the filter cartridge from the milk module
2. Turn the locking lever on the filter head (unlock, refer to the instructions on the filter head)
3. Separate the filter head and cartridge with a firm pull
4. Place the filter head onto a new, flushed cartridge
5. Turn the locking lever backwards (to lock)
6. Fit the filter cartridge back into the milk module
7. Reset the filter counter in the software



6.22 Converting from mains water connection to water tank



To make the conversion proceed as follows:

Hardware

- Supply and fit a water tank conversion kit. Refer to the operating manual

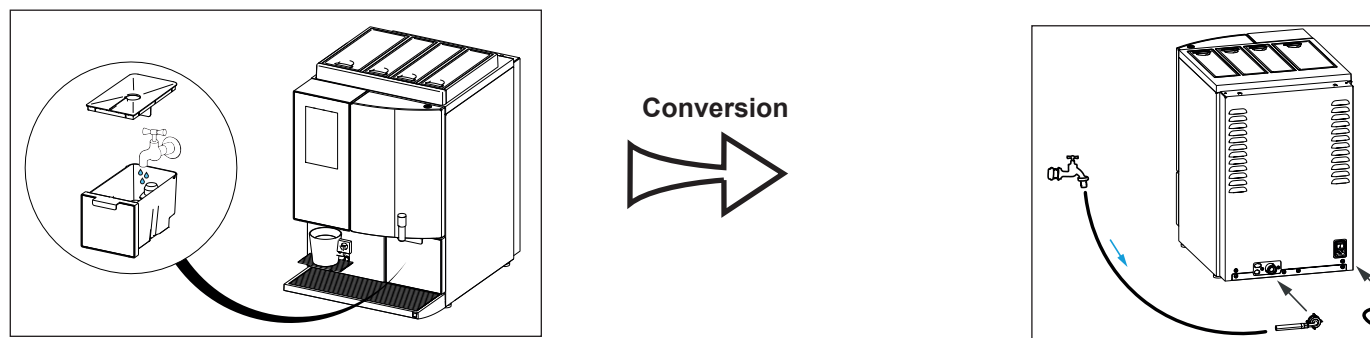
Software

- [Technician] - [Machine configuration] - [Heating/water system]
[Internal water tank] press [yes] to confirm.
- [Rinse water quantity after connecting water tank [ml], default 80
.To ensure that the next product is dispensed completely, 80 ml water is rinsed through.

Changing the filter

- [Technician] - [Maintenance] - [Filter change]
select [yes].
- Rinsing and fitting the new filter is explained via the on-screen guided menu.

6.23 Converting the water tank to fixed water connection



Hardware

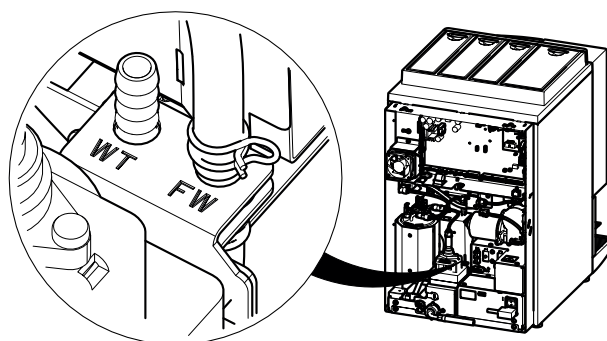
- Connecting the water pipe between the water tap and machine.

Connecting the pipe

- Behind the pump is a pipe which must be connected. The tube must be plugged into FW for mains water..

Software

- [Technician] - [Machine configuration] - [Heating/water system]
[Internal water tank] press [no] to confirm.



FW for mains water supply

7. Sielector

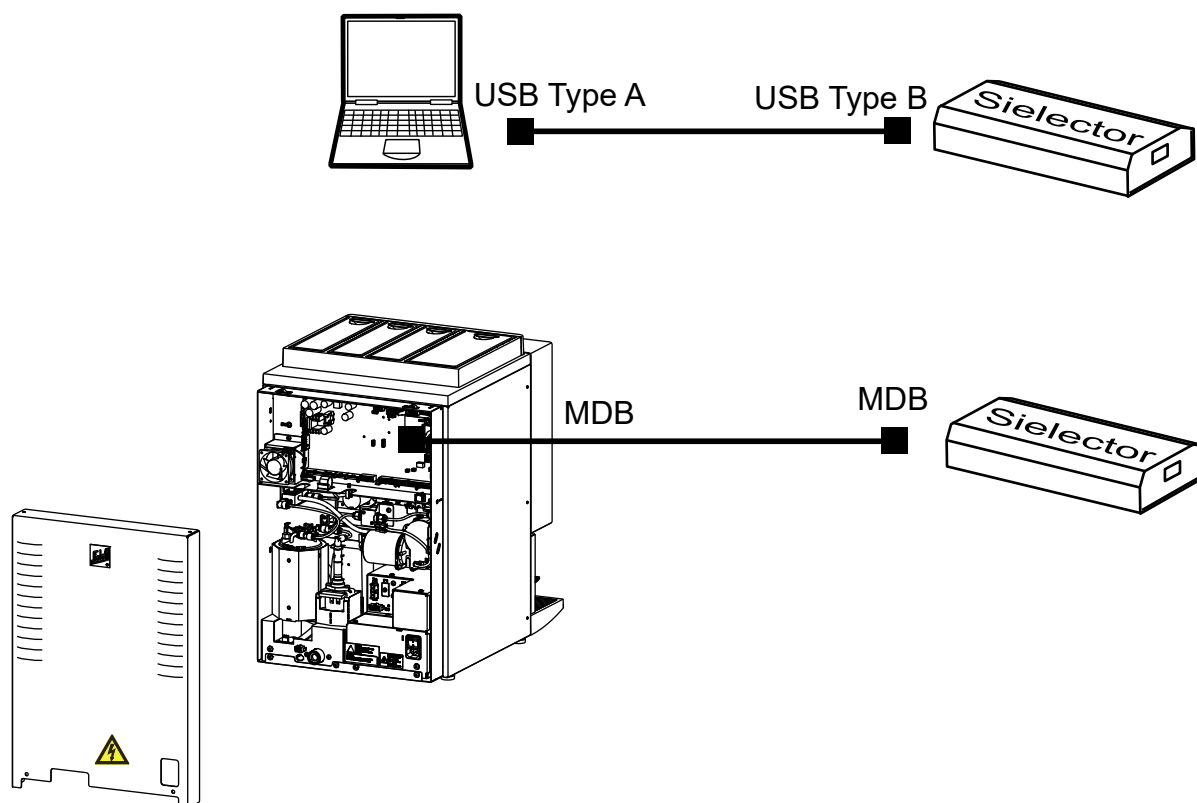


WARNING electrical energy! Danger to life!

Disconnect the machine from the power supply ! Remove the mains plug.

7.1 Useful information

Designation	Type	Comments
Sielector	Software	Installing software from Sielaff machines.
Dongle (Sielector)	USB Dongle	The software on the PC will only run if a Sielector adapter is connected or if the dongle is recognised. The dongle cannot be used for transferring data.
Sielector adapter	Hardware	Hardware box for connecting to a PC via USB or to an M32 control board via MDB plug
Operating instructions for Sielector software		Part no. 867 09 160 10
USB-Stick	Memory	For transferring data directly to the machine



7.2 Changing the board Software installation using Sielector

There are two different types of software in the Siamonie Smart.

1) Software for the HMI

The HMI software for the display on the front of the machine is usually automatically recognised and installed if the USB-stick is inserted into the USB-port inside the door.

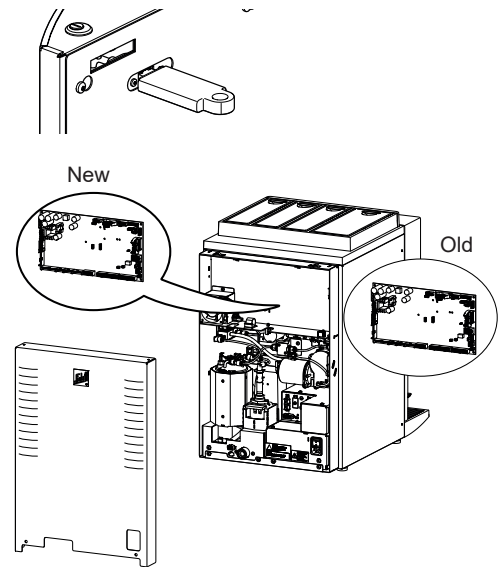
2) Software for the M32 control board

Installing the software for the M32 board does not always work if a board has been exchanged. The automatic function cannot work because the control board is not recognised.

In this case the software must be installed manually.

Requirements

- M32 control board (new) has been installed
- Sielector software is available
- Current software has been downloaded from the Sielaff homepage
- Remove the back panel
- Machine is switched off



Proceed as follows

1. *Connect the Sielector adaptor with USB-adapter cable to the laptop / PC*
 2. *Connect the Sielector adapter with the MDB adapter cable to the M32 control board.*
 3. *Switch on the machine.*
 4. *Run the Sielector software and access the new software*
 5. *Select options [Ignore boot sector] and [Overwrite ID]*
 6. *Using the "send" command send the software directly to the M32 control board*
- ✓ The M32 control board software has been installed
 - ✓ To finish disconnect the plug and then turn the machine off and then on again

8. Software update

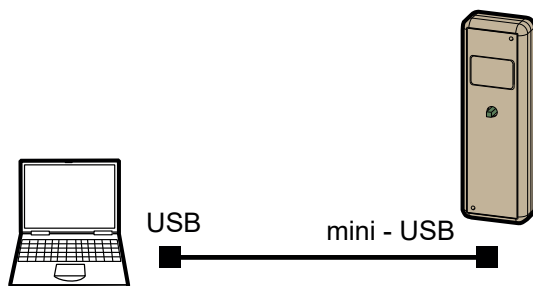
8.1 MDB programming device (Redbox)

(update only with bootsector)

A software update can be carried out on the M32 control board via MDB-connection. For this an MDB programming device is required.

1. The MDB programming device must be connected via USB to a Windows-PC.
The drive is displayed in Explorer.
REDBOX (E:) stands for drive E for example.
2. Copy the current software (e.g. MSMLsb07.pat) into the REDBOX (E:) sw file.
3. Disconnect the REDBOX (E:) drive using the windows command to correctly remove from the PC.
4. Take the MDB programming device to the machine.

✓ The current software is on the MDB programming device



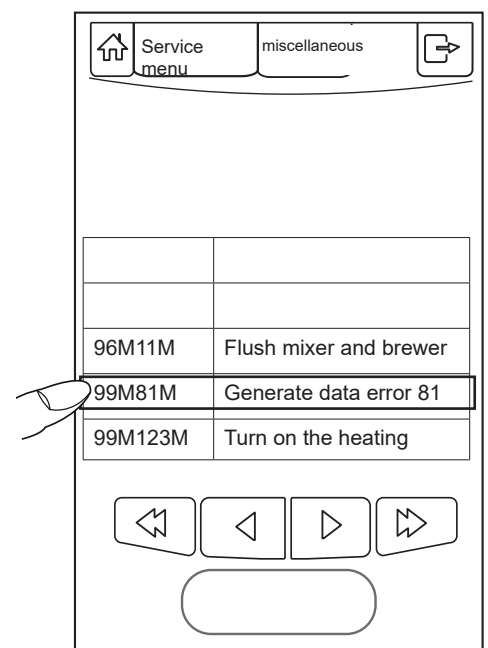
TIP

It is necessary to reset the control board if a new control board is fitted which does not have the Siamonie Smart software.

Recipes and statistical data is lost by resetting.

Reset the control board: generate error 81 to receive a defined output status

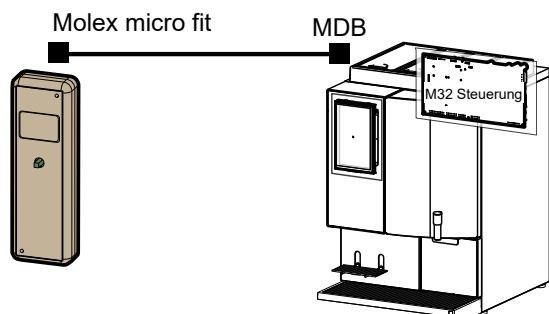
1. [Technician] - [Service functions] - [Miscellaneous]
 2. Insert service key.
 3. [Generate data error 81]
- After a few seconds the output status is generated.
4. Switch off the machine at the back at the ON/OFF switch.
 5. Wait 30 seconds.
 6. Switch the machine on.
- The control board is reset and the variant must be re-entered.
→ Recipes are only displayed if a variant is configured.



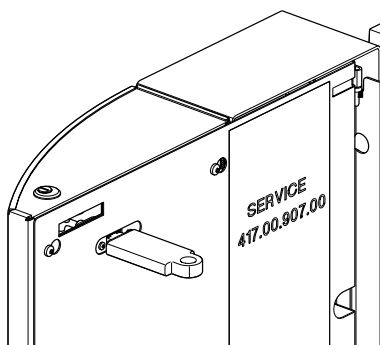
Updating the control board software at the back through MDB

1. Connect the MDB-plug on the programming device to the MDB-plug inside the inner door.
Put an asterisk on the 3 following options on the programming device (*) for yes (Joystick to the right until it stops):
 - Ignore Software Version *
 - Ignore Hardware Version *
 - Boot sector update *
 2. In the file [Select a File] under [sw] is the up-to-date software copied (e.g. MSMLsb07.pat).
 3. The upload commences when you press on the joystick, whilst the chosen data is selected.
- The upload takes place; you are requested not to switch off the machine. After a time the upload is complete.
- ✓ New software has been uploaded onto the M32 control board.

Machine variant (Error: G1_82) must be entered, as it has been deleted by data error 81.



1. Insert the USB-stick into the USB-interface, The HMI software recognises the USB-stick and offers a software upload. Press [yes] to start the upload
 2. [Control board software upload] - [Send]
A standard configuration is loaded.
 3. [Technician] - [Machine configuration] - [General settings]
 4. Under [Variant] you must select the information from the type plate regarding the machine variant.
To save exit the menu using the  button.
Respond to the question [Do you want to save changes?] with [yes].
- ✓ The variant has been entered. The machine operates to a standard configuration.
- Recipes are only displayed if a variant is configured.



9. Service functions

Service numbers are divided into functional categories M, double M and L.
M-functions trigger a function.

The M-functions are for testing control board outputs, which respond to a motor or similar. L-functions are for displaying values and additional functions.

9.1 Overview of all service numbers

Motors

All motors start immediately when M is pressed. It is possible to start several times in succession.

2	M	Mixer UNI/IN	
3	M	Mixer Chocolate powder	
5	M	Mixer Uni	
6	M	Mixer Topping/Sugar	
10	M	Grinder	MONO: Grinder left (coffee) DUO: Grinder right (coffee)
11	M	Product motor UNI/IN	DUO: Grinder left (espresso)
12	M	Dosing motor product motor Chocolate powder	
14	M	Product motor UNI	
15	M	Dosing motor product motor Topping	
16	M	Dosing motor product motor Sugar	
30	M	Peristaltic pump for milk	Milk module
33	M	Fan	Milk intake during chocolate powder/topping preparation
45	M	Vibration pump	Milk module
50	M	Refund	Only possible with an external coin mech.
57	M	Close brewing chamber	493+/- 8 End position, completely closed
58	M	Open brewing chamber	161 Home position 0 completely open
101	M	Eject a coin from tube 1	
102	M	Eject a coin from tube 2	
103	M	Eject a coin from tube 3	
104	M	Eject a coin from tube 4	
105	M	Eject a coin from tube 5	
106	M	Eject a coin from tube 6	
110	M	Eject all coins from tube 1	
111	M	Eject all coins from tube 2	
112	M	Eject all coins from tube 3	
113	M	Eject all coins from tube 4	
114	M	Eject all coins from tube 5	
115	M	Eject all coins from tube 6	
157	M	Brewer forwards	only one step
158	M	Brewer backwards	only one step

Valves

19	M	Inlet valve	Inlet valve with non-return valve min. pressure 4 bar, max. pressure 6 bar
21	M	Brewer valve	2/3-way brewer valve
23	M	Valve Chocolate powder	
25	M	Valve UNI	
26	M	Valve Topping/Sugar	
29	M	Hot water valve	Separate hot water outlet
31	M	Valve air supply (MS2012)	Milk module
32	M	Rinse valve hot (milk module)	Milk module
37	M	Steam boiler outlet valve	
39	M	Bypass valve	
41	M	Rinse valve cold (milk module)	
42	M	Steam boiler rinsing valve	Milk module
67	M	Steam boiler filling valve	
73	M	Air-water switching valve (MS2013)	
74	M	Steam valve air current dispersal	
75	M	Pinch valve	
87	M	Empty boiler	The heating switches off automatically, the boiler is emptied via the hot water valve
88	M	Fill espresso boiler	Press M to refill. After entering 99M121M the amount of water measured in ccm by the flowmeter will be dispensed.

Sensors

4	L	For machines with espresso brewer; selection button with brewer position error and offset value for the last brewer route measurement	Offset value = + or – of 494 Selection where the error occurred.
6	L	Duration of last brewing process	Measured: Pump running time in sec.
7	L	Boiler temperature	At 255 °C the supply line sensor is defective. Boiler heats up only if the door is closed or the service key inserted
8	L	Operating voltage of motors in millivolts	
9	L	Pressure switch steam boiler	
10	L	Test pulse generator (only for machines with a measuring turbine)	The number of generated pulses will be displayed as an 8-digit hex code
15	L	Level sensor steam boiler	
16	L	Number of activations and watchdog interventions	
17	L	Positions of the contacts and sensors	
21	L	Display software version	
22	L	Operating day display	
23	L	Operating hour display	
25	L	Number of cleanings and rinses	
26	L	Number of door openings	
28	L	Time of last 5 door openings and last 5 cleans	Door openings = DO Cleans = RI
30	L	Revision ID of the flash memory	
40	L	Date of last price change	
69	L	Program journal so that it can be read out again	Data can be activated to download again, if the original download is incorrect.
91	L	MDB equipment status CO=MSG BI= Banknote reader CR= Card system OLM= Online module	Capital letters: logged in and communication OK Small letters: no communication

94	L	Milk tube rinse test	
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Miscellaneous

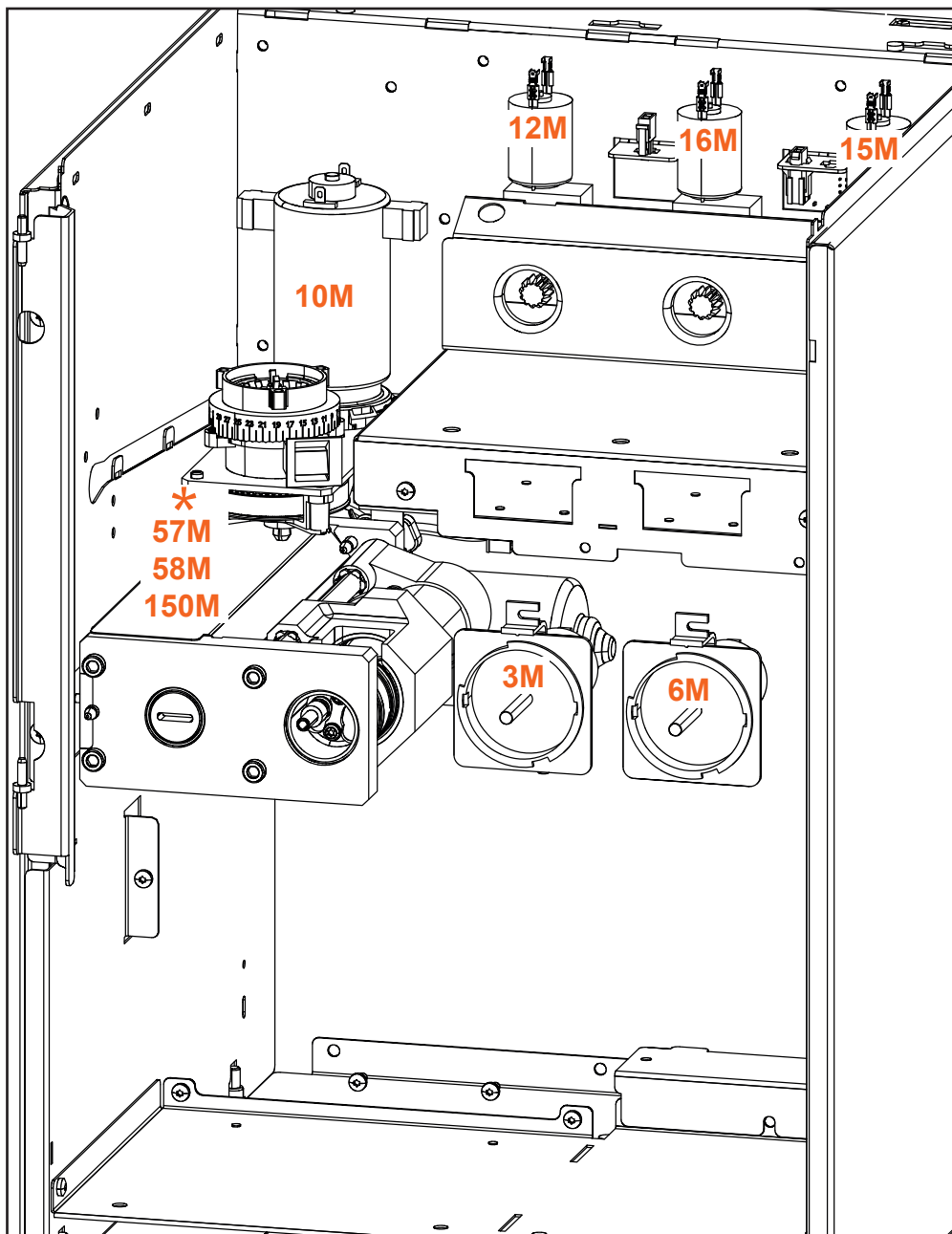
34	M	Espresso boiler heater	Note: Only switch the boiler on if it is full!
47	M	Lighting	Illumination in drinks dispense area
61	M	Heating 2-steam boiler	
86	M	Pressure test (dynamic pressure) for pump	
150	M	Brewer route reference run	Brewers that lie outside the defined route (causing wear) can be re-programmed using this function. After leaving the service menu a reference run is performed and the brewer route recorded will be regarded as the correct route. The brewer will then follow this new route.
154	M	Milk system 2012 Pass steam through the milk tube	
160	M	Set milk cleaning in 2 hours	
170	M	Testing the rinsing time Special settings H08 Intermediate cleaning (rinsing) 3 hours after the last product has been dispensed.	---> for test purposes the next rinse time can be set to the current minute using service number 170M. After triggering the service number an interim clean is carried out to the next full minute as a default in the control board (not in the menu).
222	M	Exhibition mode	The exhibition mode remains active when the machine is switched on and off. It can only be deactivated by programming 222M.
223	M	Boiler valve test Chocolate	
226	M	Boiler valve test Topping	
227	M	Valve test Sugar	
229	M	Valve test Hot water	
230	M	Flush brewer	
232	M	Cleaning valve test Hot water	
241	M	Cleaning valve test Cold water	

Double-M-Functions

96M10M	Drawing in milk	
96M11M	Flush mixer and brewer	
99 M 78 M	Delete error history	
99 M 81 M	Create data error 81	All data is being deleted
99 M 89 M	Flash memory	
99 M 90 M	Read out flash	Restore data (100 vends)
99 M 95 M	Patch Menu	See separate manual (Re-determine calibration data from the dosages on the selection buttons)
99 M 121M	Filling quantity is displayed	The quantity dispensed with function [88M Fill boiler] is displayed in ccm
99 M 122 M	Permit debug transmission (only if previously hidden times have been activated)	For service technicians only
99 M 123 M	Turn on the heating	Turns the heating on permanently. No information is displayed after entering the service code.
99 M 170 M	Test intermediate flushing	
99 M 180 M	Load standard dosages for all products	Attention: Product calibration required

9.2 Motors

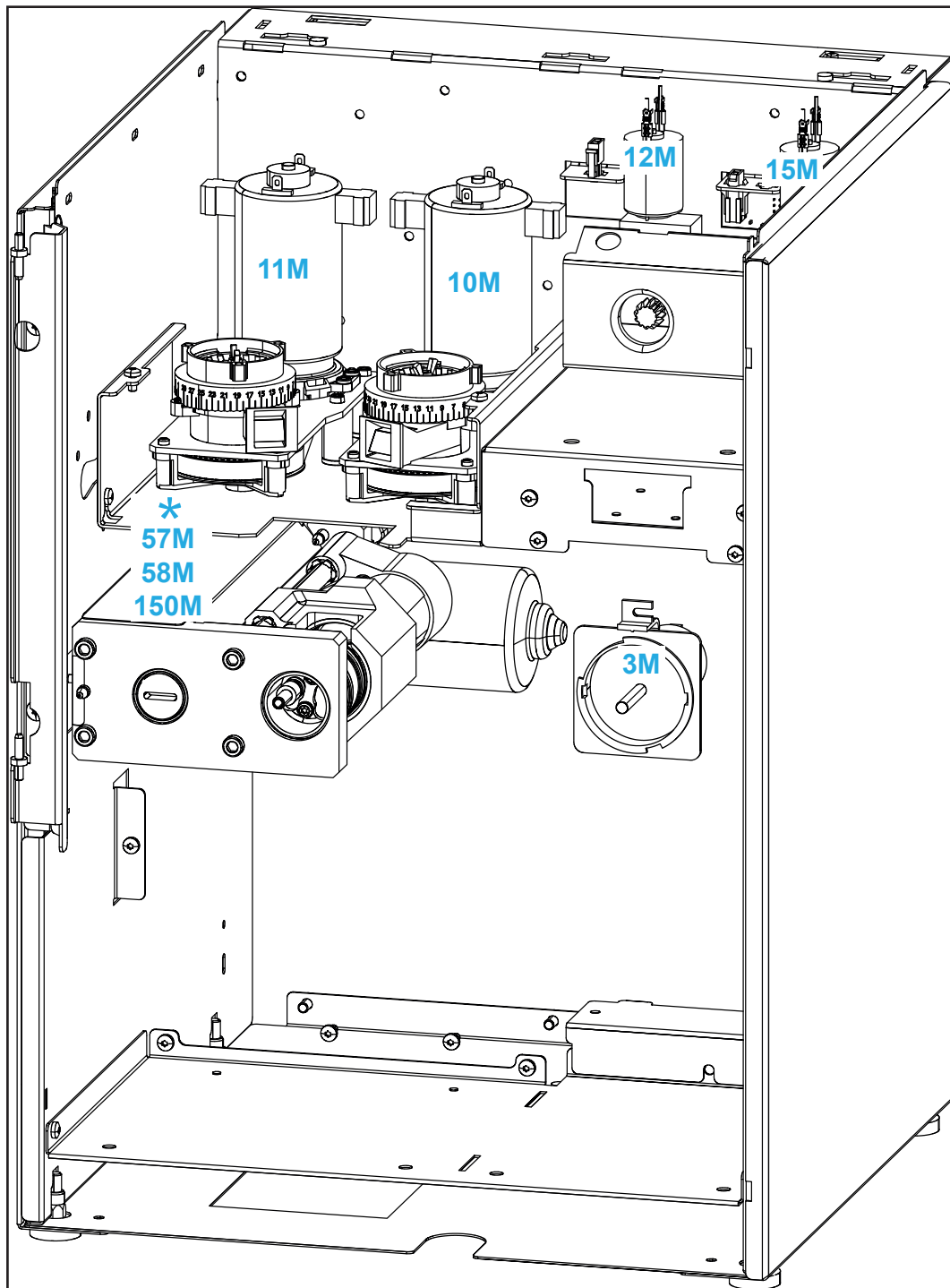
9.2.1 MONO-Variants



*

57M Close brewer
58M Open brewer
150M Teach brewer route

9.2.2 DUO-Variants



*

57M Close brewer
58M Open brewer
150M Teach brewer route

10. Special settings



TIP

If you want to activate several special settings per group, the values must be added up and the total entered in the software.

Example: Activate special setting C16 and C128: Value = 144

For machines with touch screen the special settings are selected directly.

Special settings B

16	use price B for cashless (MDB)	The price set as price B will be used for card payments.
----	--------------------------------	--

Special settings C

16	Deactivates detection of insufficient water via flowmeter	If the grind level is particularly fine (very slow product dispense), detection should be deactivated. If the error message "Lack of water" often occurs, this function should also be activated.
64	MDB with 100 ms polling rate	If there are communication problems between the coin mechanism and the machine control board, shortening the polling rate may help.
128	MDB with 50 ms polling rate	Activating 50 ms wins compared to activating 100 ms

Special settings D

8	Card system in multi-vend, no cancel session if credit remains	Normally the card must be taken out of the payment system after each vend. If this function is activated, multi-vends can be carried out without removing the card.
16	When milk is empty automatically switch to topping.	An information window on the sales screen gives a cancellation option when the fresh milk has run out, in case the drink is no longer required.
32	Leave brewing valve open between pre-infusion and brewing.	This function should be activated if the waste water container is subject to being overfilled quickly. This may, however, have negative effects on the taste of the brewed products.

Special settings E

1	Generally inhibits coins and card payment	If this function is activated, payment mixture of card and coins is inhibited.
2	No card revalue with value token	Crediting value tokens to a card is prevented with this function activated.
4	Count key position free vend as free vend (not key vend)	If the key switch is set to "free vend", this vend will be counted as free vend and not as key vend.

Special settings F

4	Do not delete non-refundable credit after 200 s	If, in multi-vend, a credit value remains after a vend, it will normally be deleted after 200 secs. if the machine remains inactive. If this function is activated, the remaining credit will not be deleted.
---	---	---

Special settings G

4	If one grinder is empty the other one can be used	If the machine detects an empty bean container (brewer closes too far), all brewed products will automatically use the other grinder. This function will be active as long as "bean container filled" is selected.
128	Two-point calibration for instant motors activated	Instant calibration is carried out at 30 % and 70 % of the instant speed.

Special settings H

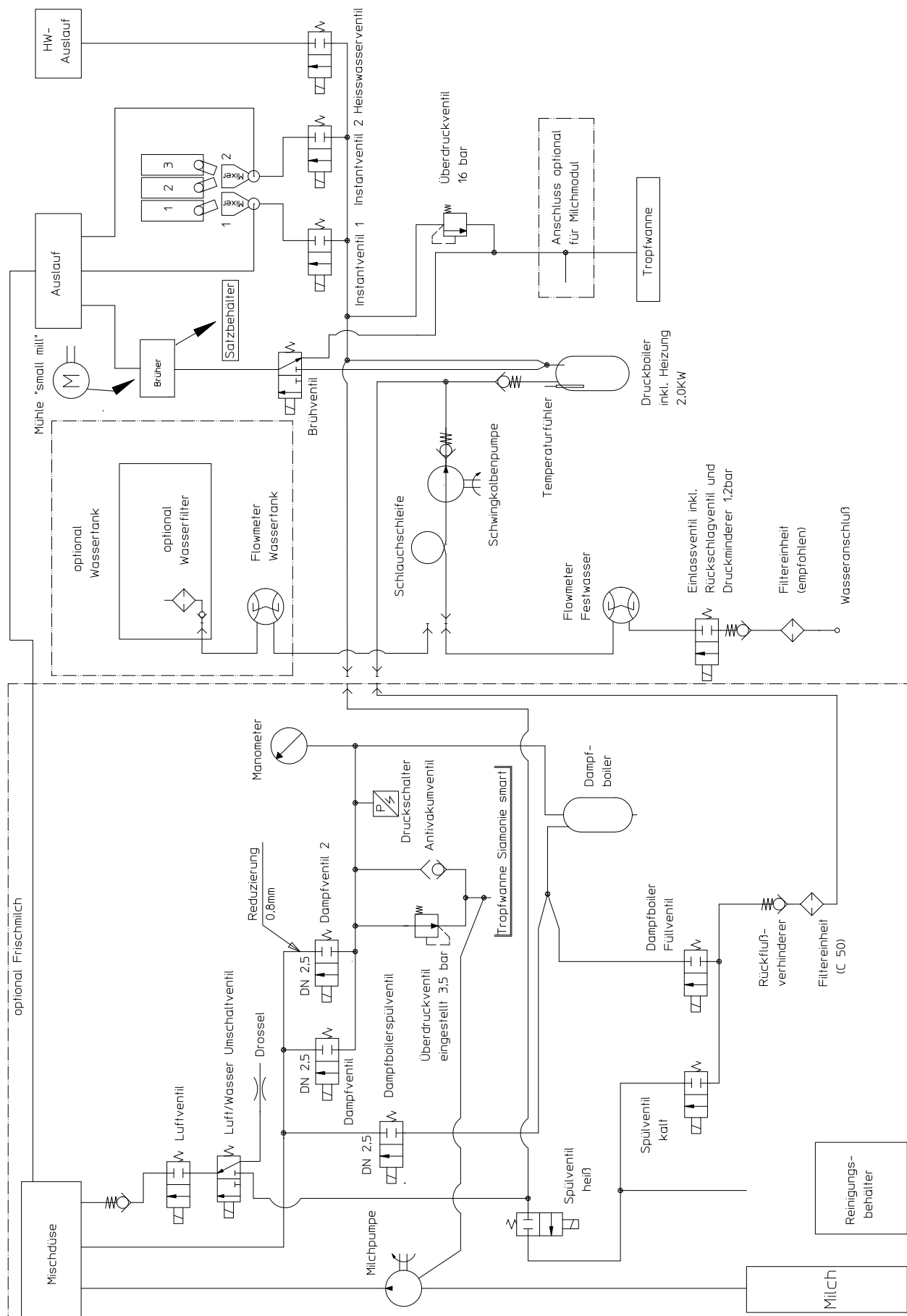
2	Pot sales via MDB-card system with the total amount debited at the beginning. No remaining credit with abort	All individual portions are debited at the beginning of the vend.
---	--	---

Special settings M

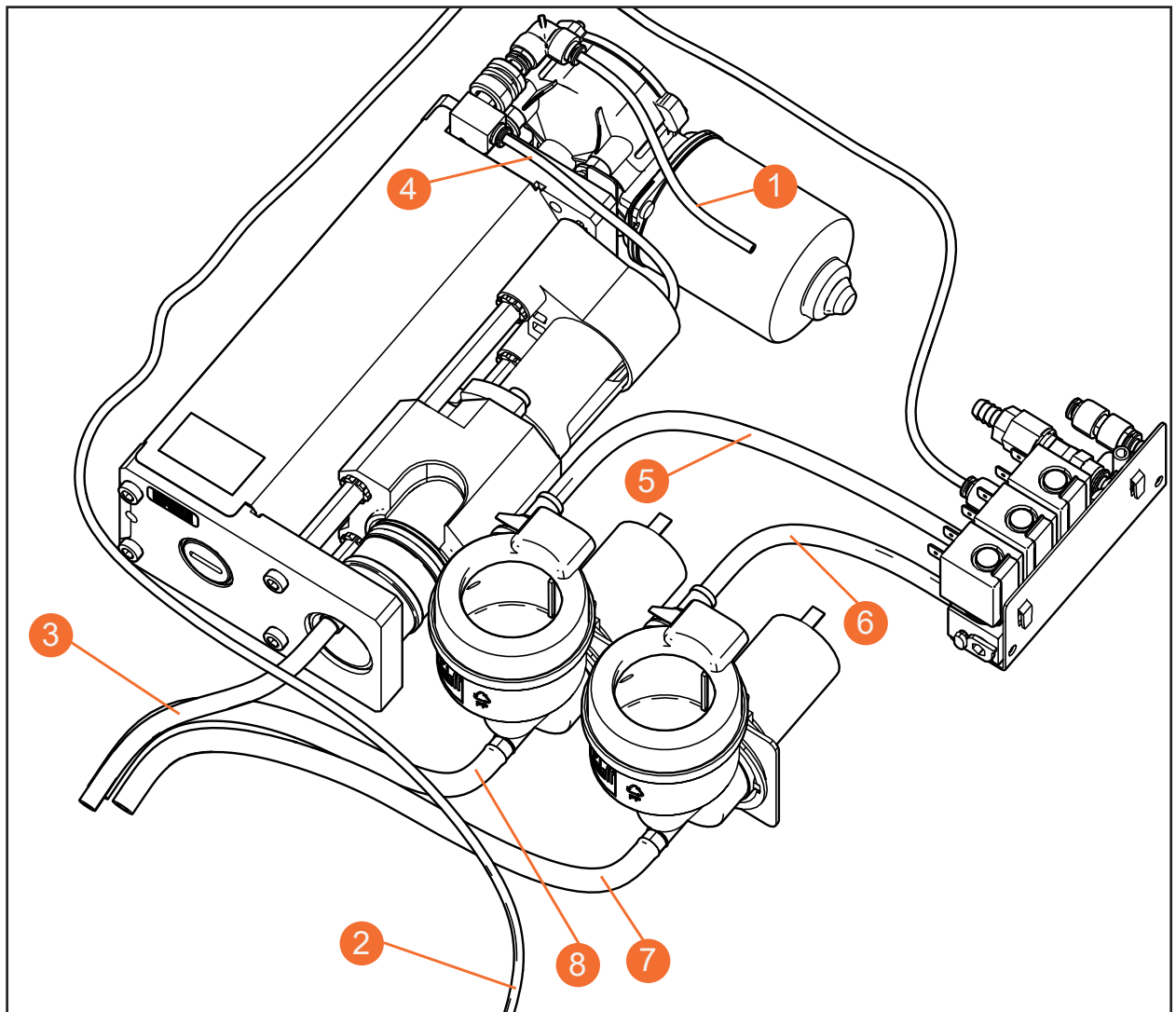
1	Alternative payout	The coin mechanism decides how the change is returned.
2	Calculating the tube contents via the coin mechanism	This is the recommended setting. Tube fill level is not counted by the machine control board, but by the coin mechanism. The tube level transmitted by the coin mechanism is what should be available for coin return. Please note that transmitting the tube level from the coin mechanism to the control board can take up to one minute.
4	Best practice	Activating this function can be helpful when there are communication problems between the coin mechanism and machine control board.

11. Drawings and plans

11.1 Water flow chart



11.2 Tube layout diagram



PTFE-hose - red 2x1

- 1 Brew valve - angle piece
- 2 Hot water valve - hot water outlet

Silicone hose - brown 4 x 2

- 3 Brewer - outlet

PTFE-hose - red 2x1

- 4 Water coupling - Piston inlet

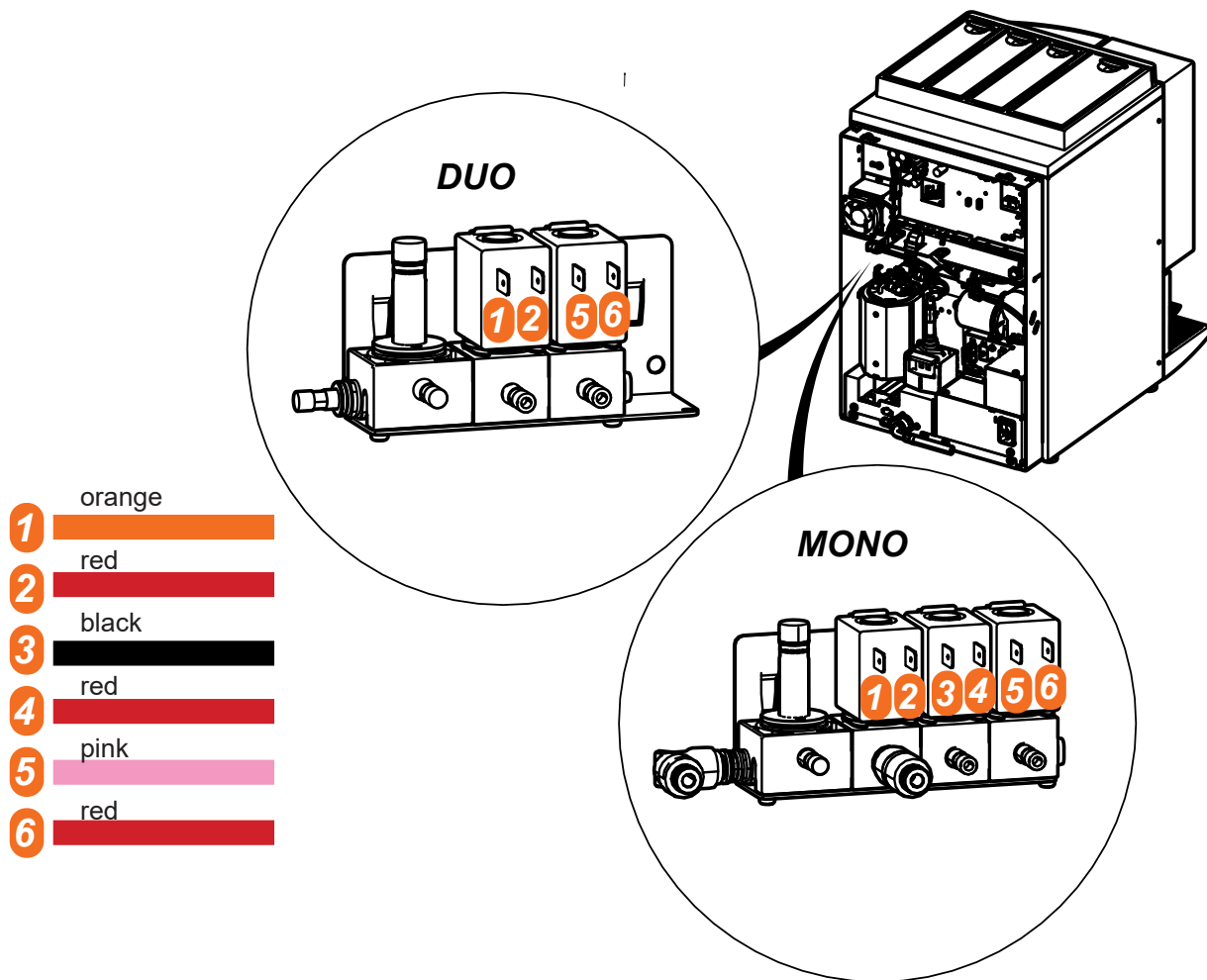
Silicone hose - black 4 x 2

- 5 Instant valve 1 - Mixer 1
- 6 Instant valve 2 - mixer 2

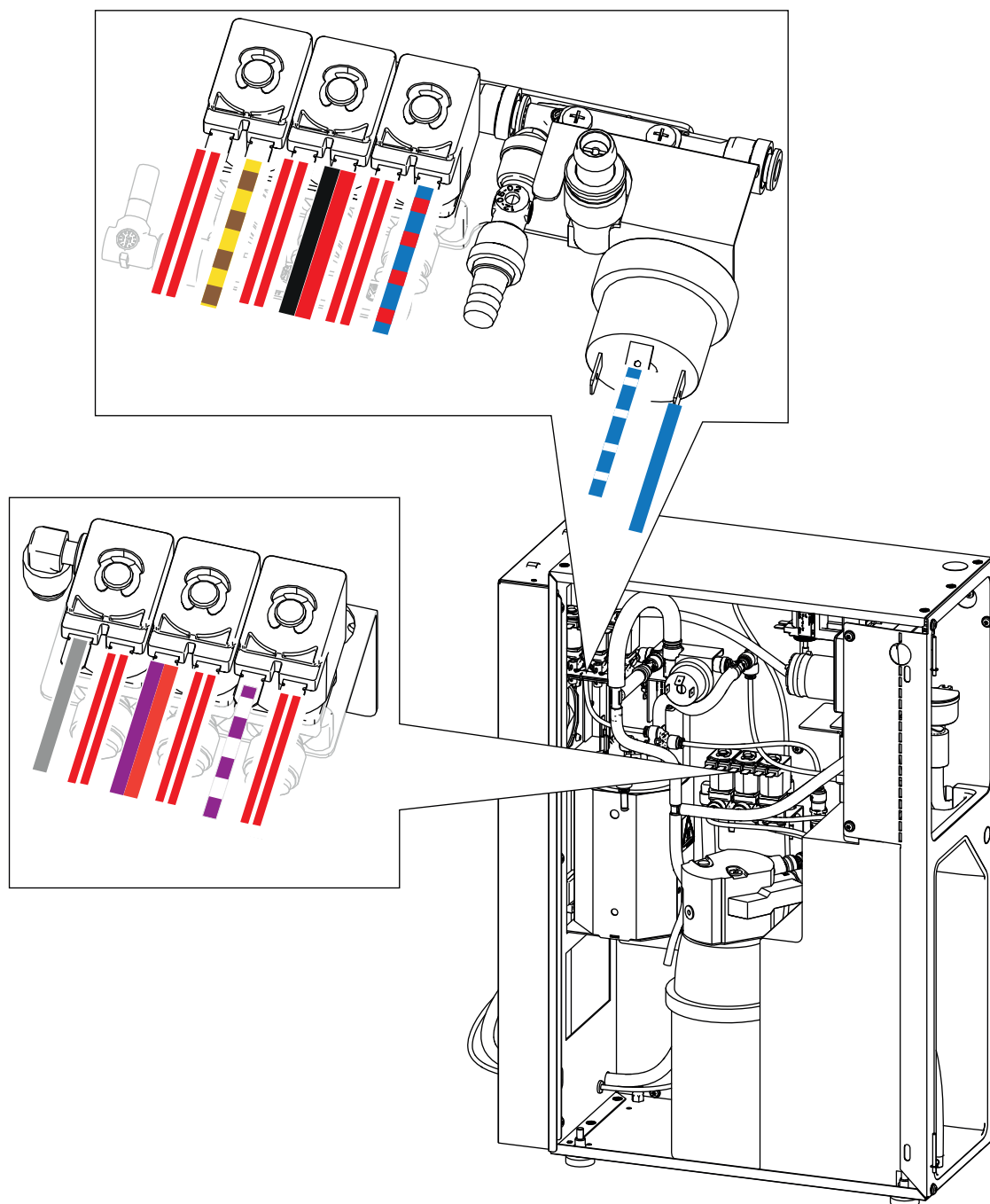
Silicone hose - black 6 x 2

- 7 Mixer 2 - outlet
- 8 Mixer 1 - outlet

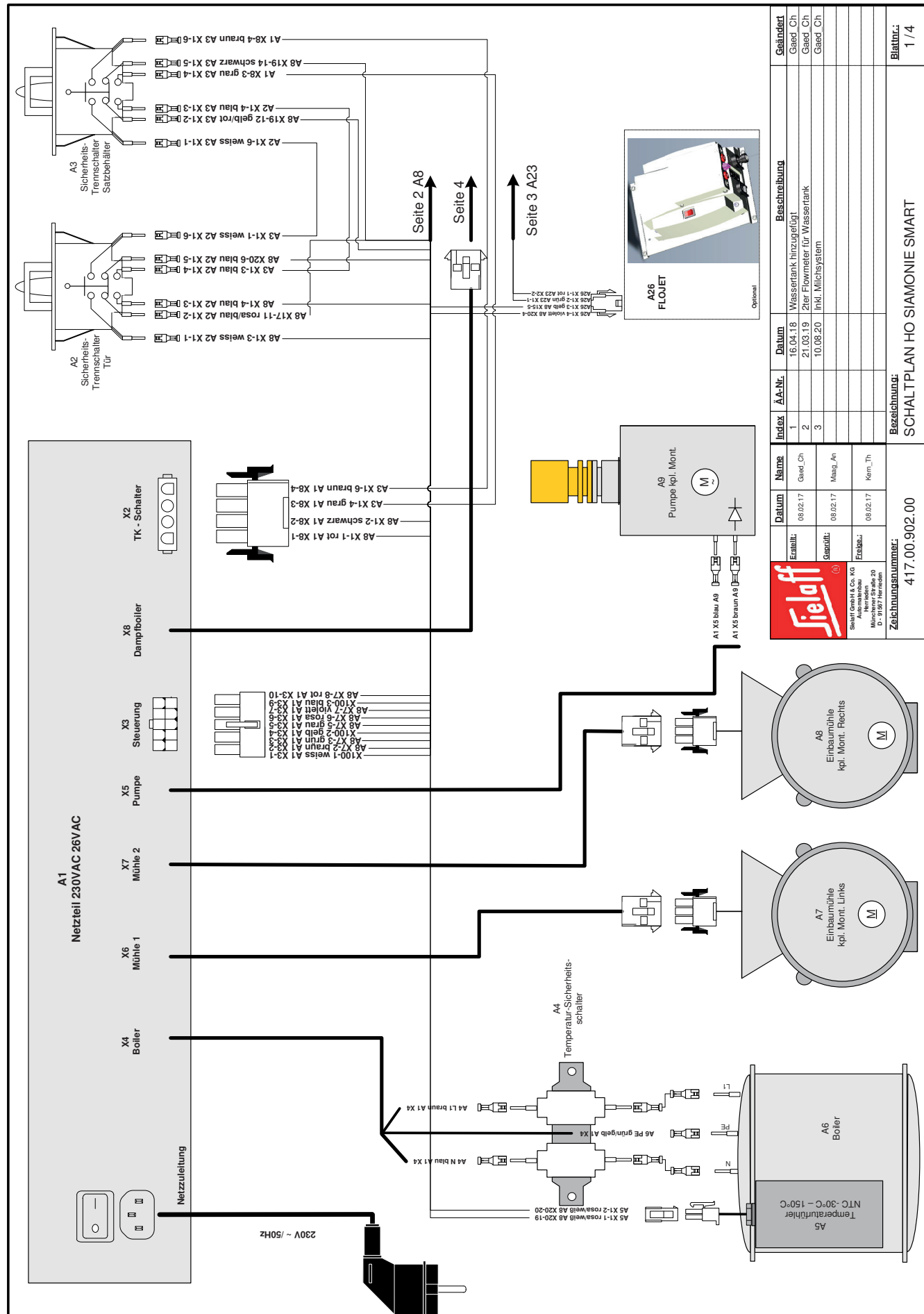
11.3 Dispensing valves

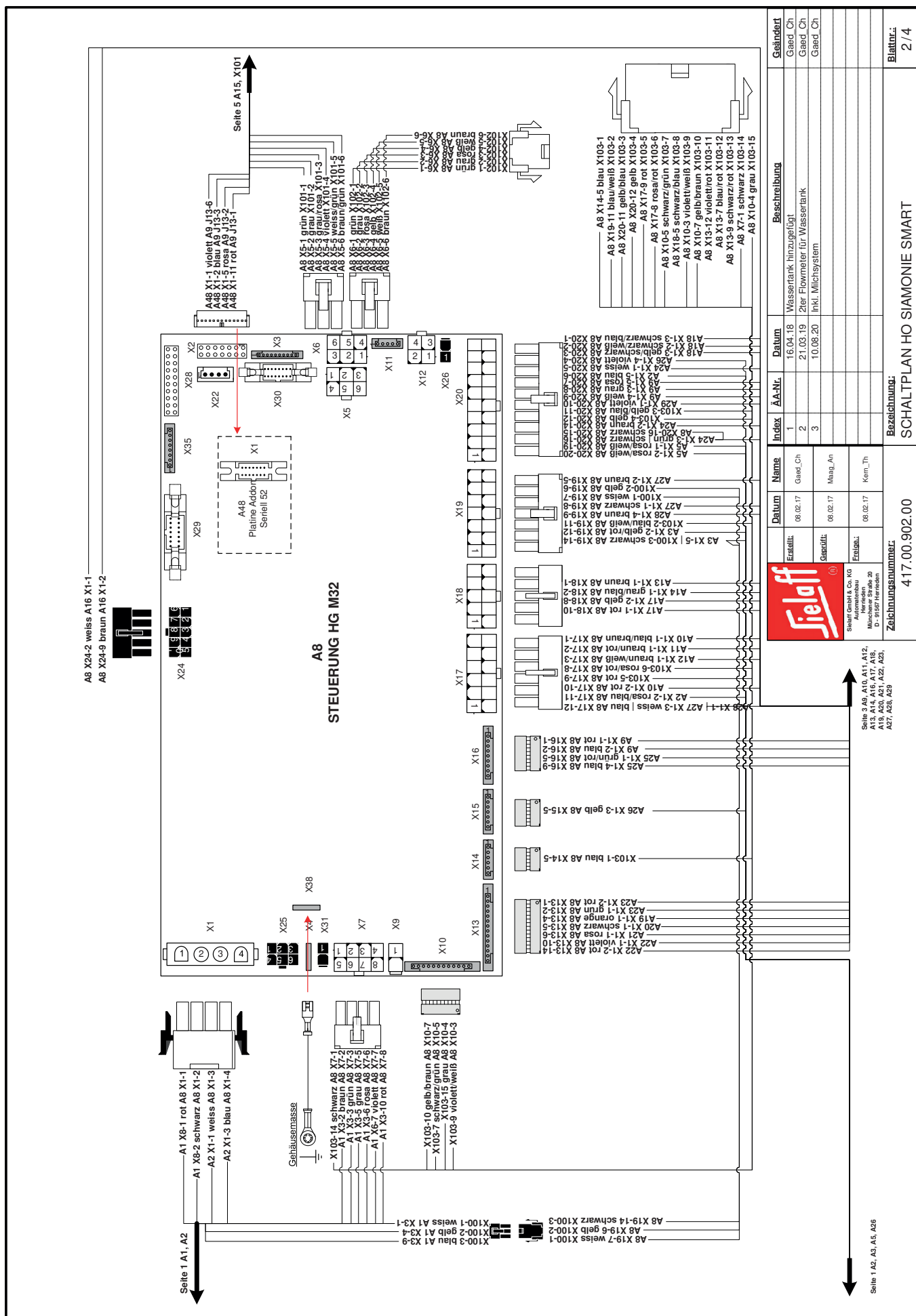


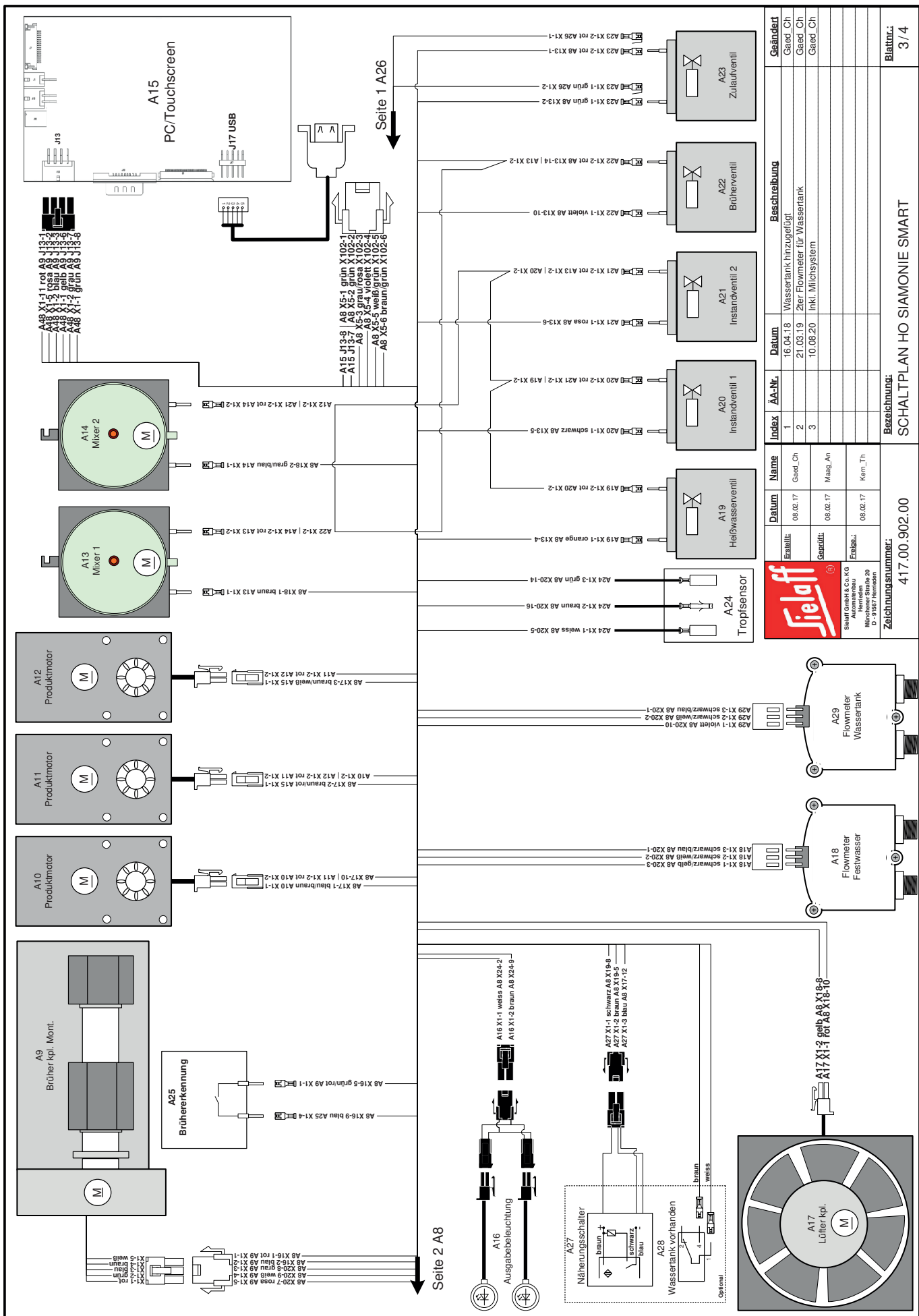
11.4 Milk module: Valves

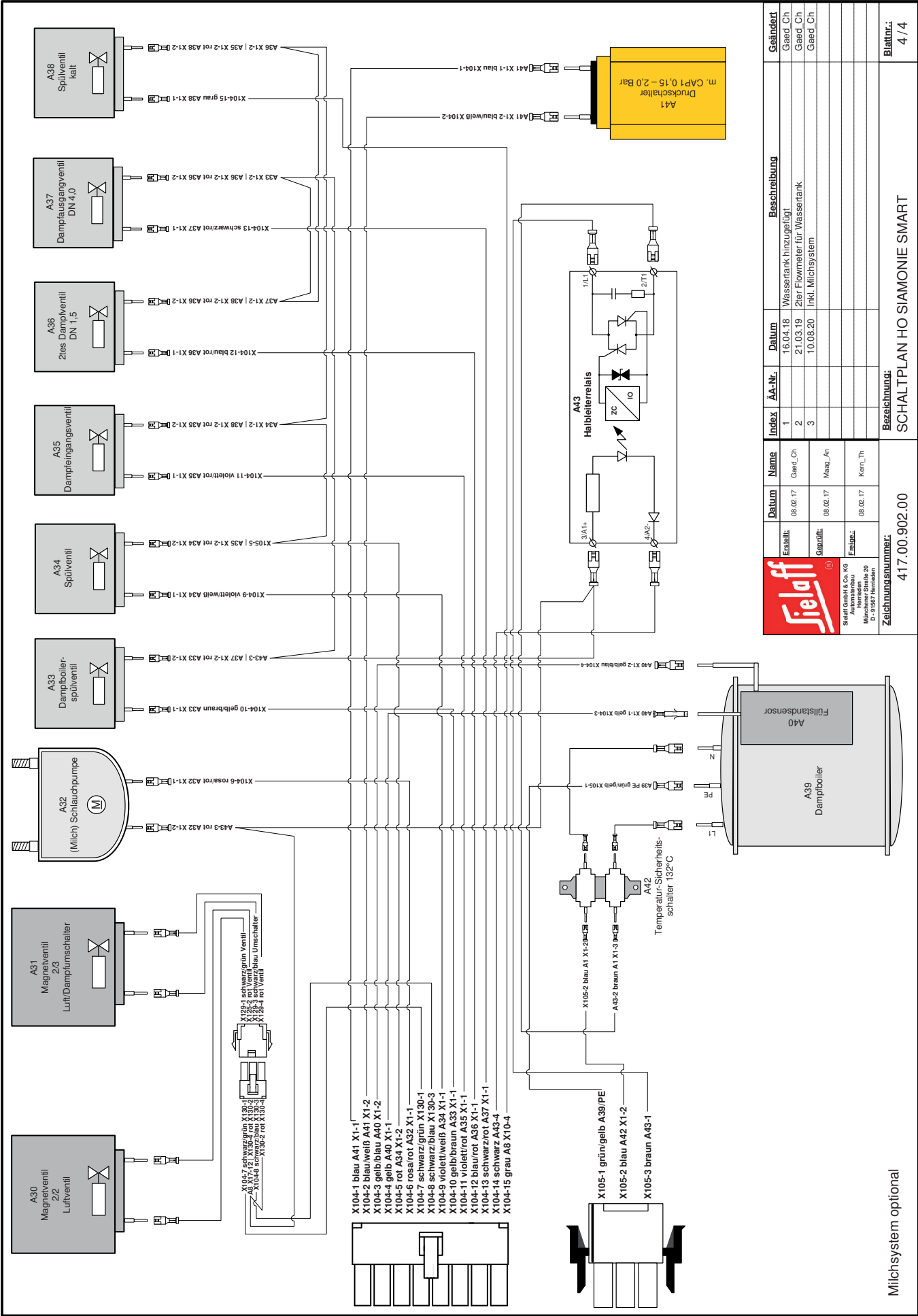


11.5 Wiring diagram

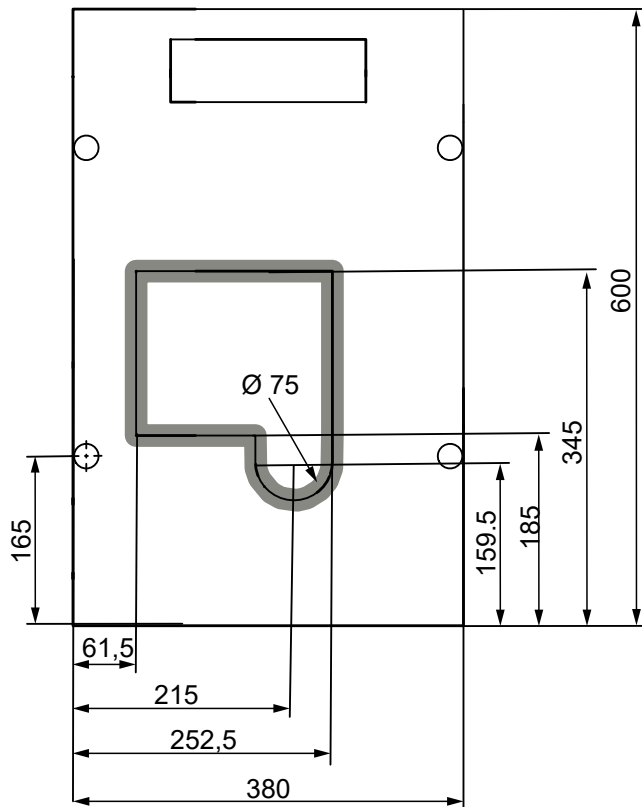




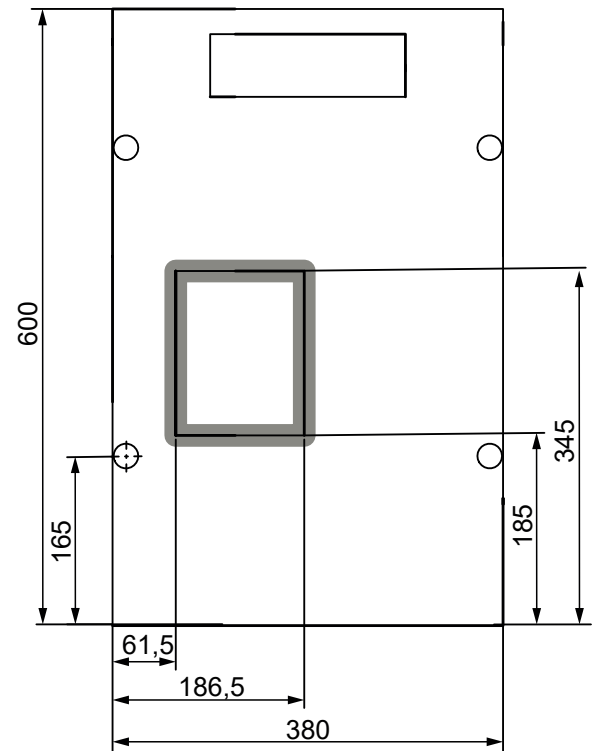




11.6 Dimensional drawing



Grounds waste disposal with direct drainage



Grounds waste disposal with direct drainage
(height-adjustable feet fitted)



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