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Miscellaneous

Service Manual

bremer VIVA XXL



bremer

These service instructions are intended for authorised bremer Customer Service staff only!

The adjustments, repairs and maintenance work described in these service instructions may only be carried out by qualified bremer service engineers using original bremer spare parts!



Safety information in service instructions

Caution: Always de-energise the unit before opening it!

If, for some reason, the unit has to be put into operation when open, please observe the following instructions:



WARNING! Risk of accident from electric shock!

Protect conductive parts against accidental contact, e.g. by covering them with an insulating mat.



WARNING! Risk of crushing!

Beware moving parts, e.g. during functional tests



CAUTION! Destruction of components!

Do not place any conductive objects on printed circuit boards

No static discharge may take place via lifters!

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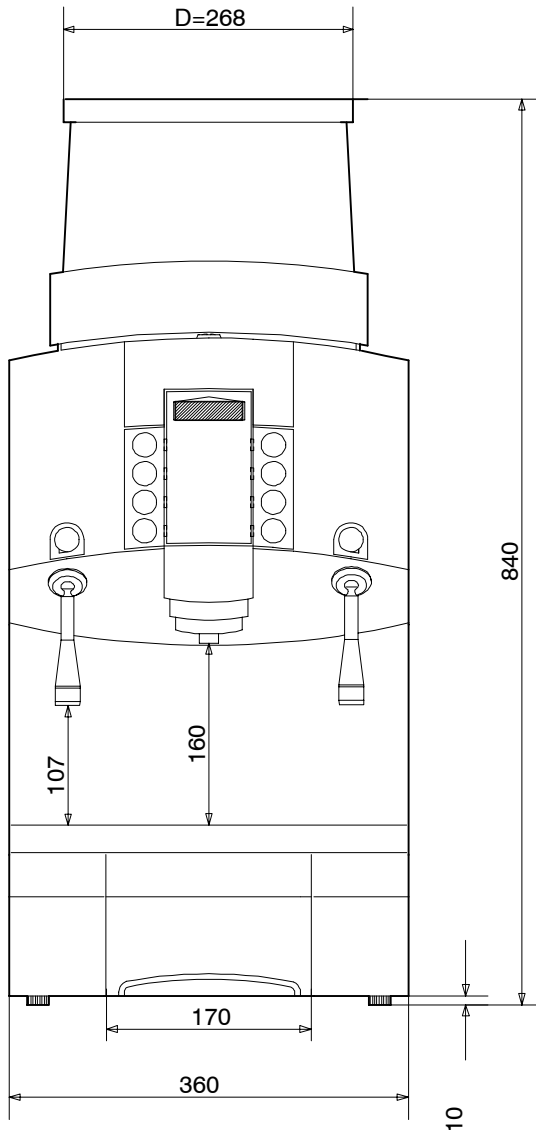
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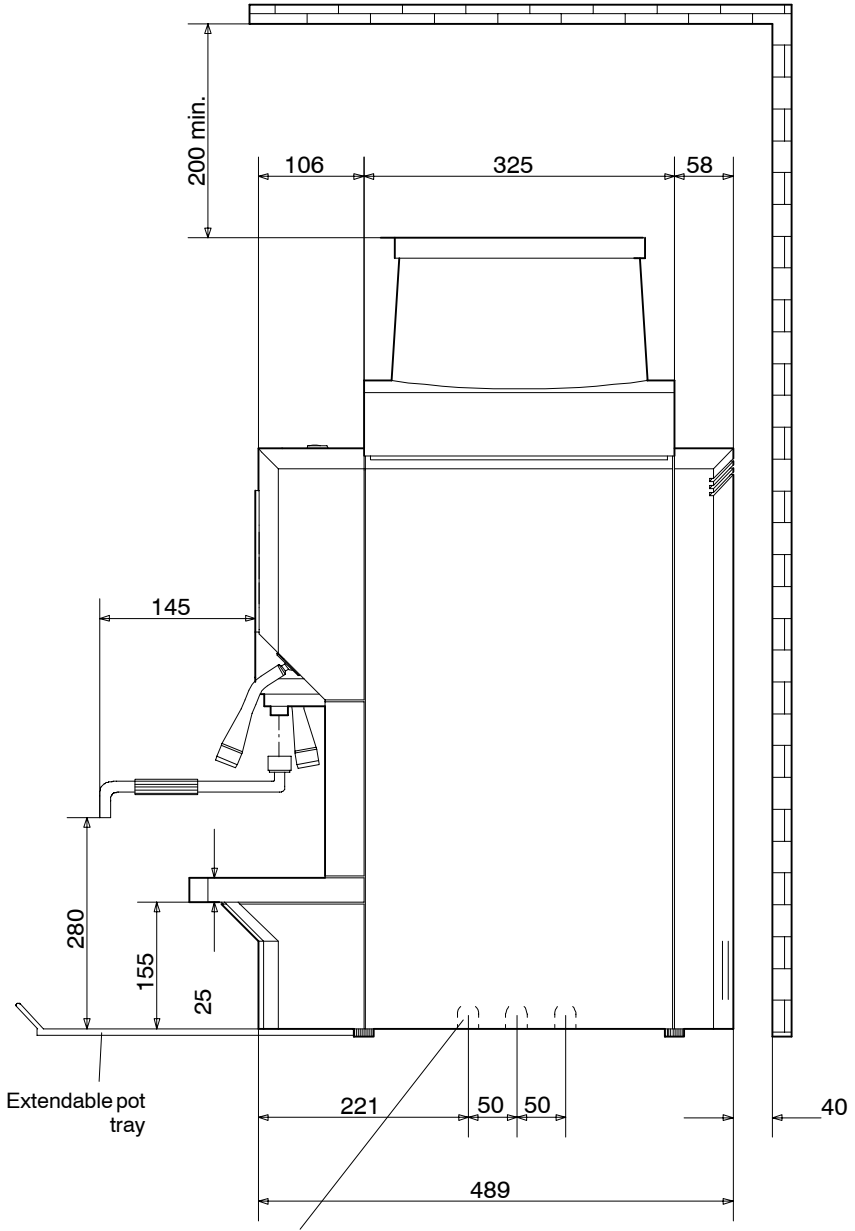
2. Dimensions, table openings

2.1 External dimensions

Front view

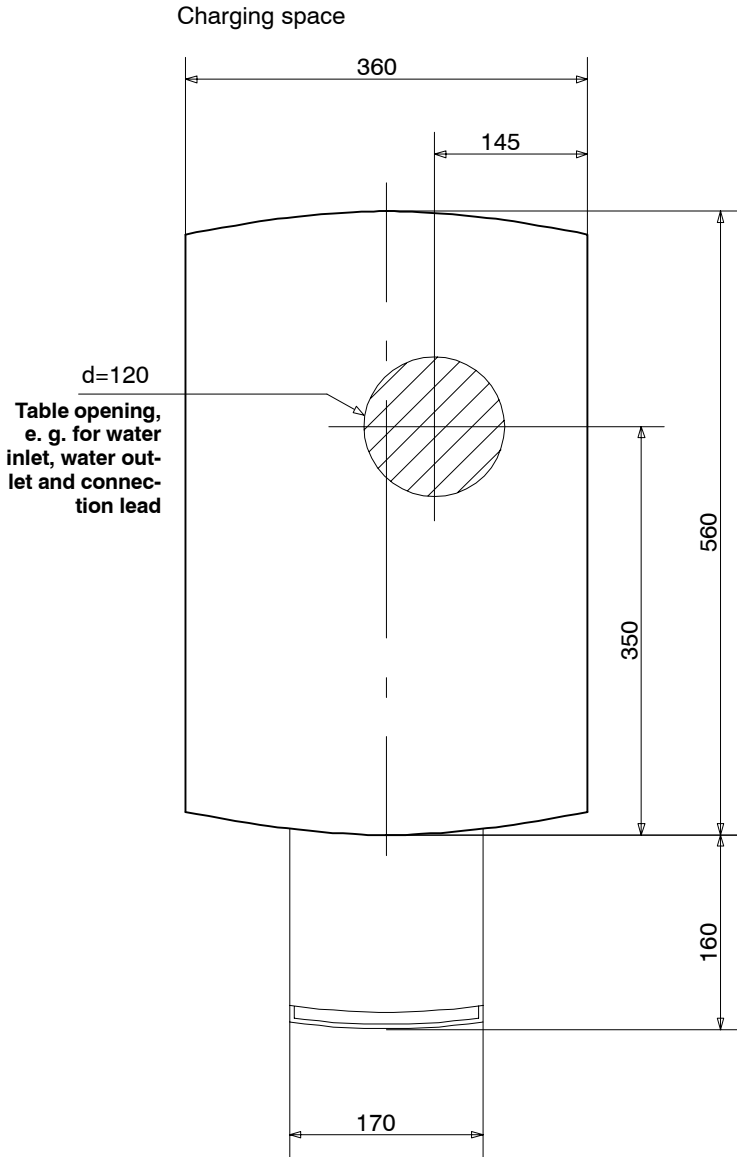


Side view



There may be openings on both sides for the connections of water inlet and electrical supply that come out laterally.

2.2 Table openinge



3. Operating instructions

Operating instructions bremer VIVA XXL German, identily no.: 670316

Operating instructions bremer VIVA XXL English, identily no.: 690325

4. Settings for first start-up





4.1 Adjust the coffee quality

Install and connect the machine acc. to the description given in the operating instructions!







Boiler filling is effected automatically, see Chapter 6.6.1

Adjust according to customer's requirements: Type of coffee, quantity of coffee powder, quantity of water, etc.

Standard settings ex works

	Quantity of coffee powder in gr	Brewing water in ml	Simmering time in seconds	After-brewing mark in ml
 Brew stage 1	50	1000	180	500
 Brew stage 2	90	2000	150	1000
 Brew stage 3	130	3000	90	1500
 Brew stage 4	170	4000	30	-





Note: The brewing water quantity and the quantity of the after-brewing mark in total must not exceed 4500 ml maximum! Adjusting more than a total of 4500 ml is not possible.







	Quantity to be delivered in ml
 Cup	140
 Small pot	280
 Big cup of coffee	250
 Pot of coffee	800
 Cup of hot water	140
 Small pot of hot water (option)	280

Brewing water temperature: 90°C

Notes regarding appliance settings required by the customer

Customer:





	Quantity of coffee powder in g	Brewing water in ml	Simmering time in seconds	After-brewing mark in ml
 Brew stage 1				
 Brew stage 2				
 Brew stage 3				
 Brew stage 4				







	Quantity to be delivered in ml
 Cup	
 Small pot	
 Big cup of coffee	
 Pot of coffee	
 Cup of hot water	
 Small pot of hot water (option)	

Brewing water temperature: °C
 Temperature of brew vessel: °C
 Temperature of storage container: °C

Notes regarding appliance settings required by the customer

Customer:





	Quantity of coffee powder in g	Brewing water in ml	Simmering time in seconds	After-brewing mark in ml
 Brew stage 1				
 Brew stage 2				
 Brew stage 3				
 Brew stage 4				







	Quantity to be delivered in ml
 Cup	
 Small pot	
 Big cup of coffee	
 Pot of coffee	
 Cup of hot water	
 Small pot of hot water (option)	

Brewing water temperature: °C
 Temperature of Brew vessel: °C
 Temperature of storage container: °C

Notes regarding appliance settings required by the customer

Customer:

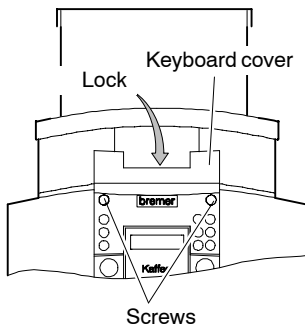
	Quantity of coffee powder in g	Brewing water in ml	Simmering time in seconds	After-brewing mark in ml
 Brew stage 1				
 Brew stage 2				
 Brew stage 3				
 Brew stage 4				

	Quantity to be delivered in ml
 Cup	
 Small pot	
 Big cup of coffee	
 Pot of coffee	
 Cup of hot water	
 Small pot of hot water (option)	


Brewing water temperature: °C
 Temperature of brew vessel: °C
 Temperature of storage container: °C

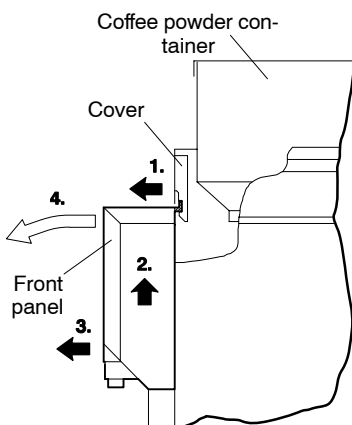
5. Dismounting of case lining

5.1 Open "front panel top" / dismount "front panel bottom"

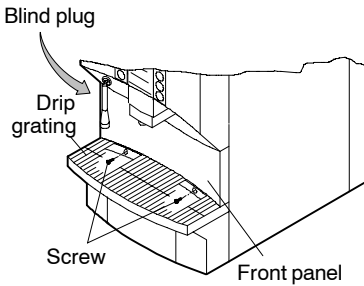


Preparations

- ☐ Unlock the keyboard cover with the key and open it.
- ☐ Press the circuit closer / circuit breaker  to set the machine on "stand-by".
- ☐ Disconnect the machine from the electrical power supply.
- ☐ Remove 2 screws.

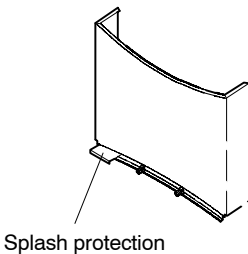
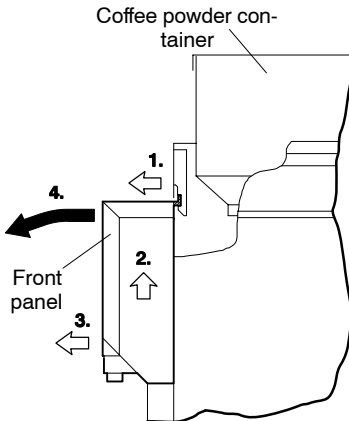


- ☐ "Front panel top"
 1. Push to the front at the upper edge until the front panel fits with the top of the cover,
 2. Shift the front panel upwards by approx. 6 mm – in this connection the coffee storage container is lifted.
 3. Push to the front at the lower edge up to the stop.



Remove the "front panel bottom"

- The "front panel top" must be opened, see previous page "Preparations step 1. to 3.!
- ☞ Remove the drip grating.
- ☞ Remove 2 screws.
- ☞ Remove the "front panel bottom" to the front.
- ☞ "Front panel top"
- 4. Fold up to the top or take off.

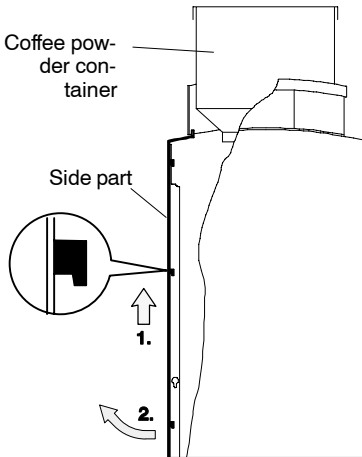


Assembly

The splash protection at the bottom of the front panel must fit with the bottom of the drip pan!

5.2 Dismount the left or right side part

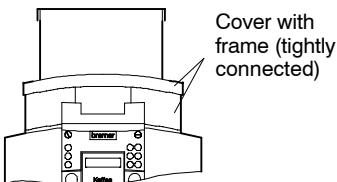
Before removal of the side parts, fold the front panel to the top, see Chapter 5.1.



- ▣ Side part
 1. Push to the top,
 2. push to the bottom and remove.

5.3 Dismount the cover with frame at the coffee powder container

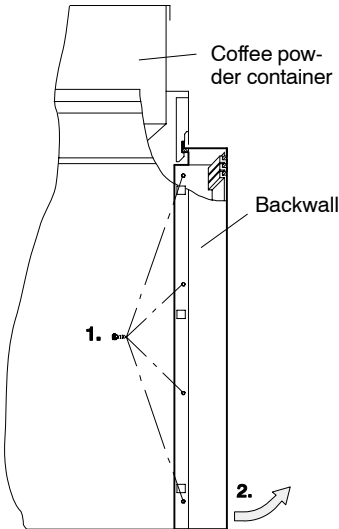
Before removal of the cover, open up the front panel on top, see Chapter 5.1.



- ▣ Remove ground cable.
- ▣ Slightly lift the cover in front and draw it to the front by approx. 5 mm to take it off the backwall.
- ▣ Wipe the cover by moving it upwards over the coffee powder container.

5.4 Dismounting the backwall

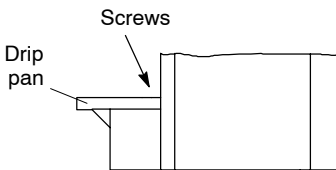
Before removal of the backwall, open up the front panel on top and remove the side parts, see Chapter 5.1 and Chapter 5.2.



- ☐ Remove 4 screws on each side.
- ☐ Draw off the backwall at the bottom and remove it.

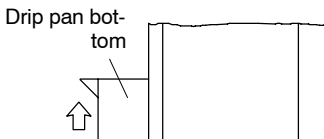
5.5 Dismounting the drip pan and the drip pan bottom

Before removal of the drip pan, remove the front panel bottom, see Chapter 5.1.



Drip pan

- ☐ Remove 2 screws.
- ☐ Draw the drip pan to the front.
- ☐ Remove the drain hoses.
- ☐ Remove the drip pan.



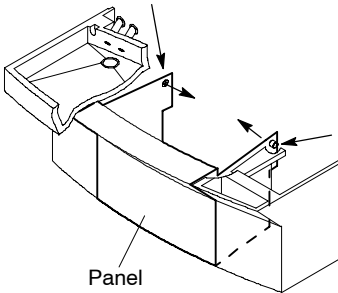
Drip pan bottom

Dismounting the pot tray, see Chapter 5.7 (option).

- ☐ Push the "drip pan bottom" upwards and remove it.

5.6 Dismounting the panel for fuse replacement

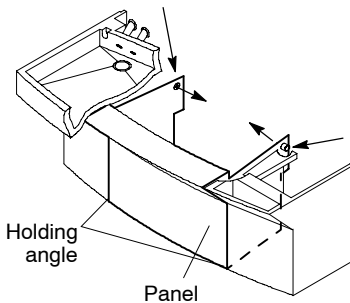
Before removal of the panel “remove the front panel bottom”, see Chapter 5.1.



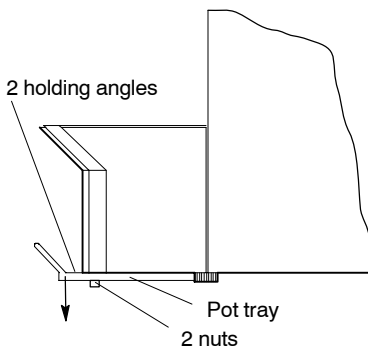
- ▣ Press the panel together on both sides and, at the same time, push it out.

5.7 Dismounting of panel and pot tray (option)

Before removal of the panel “remove the front panel bottom”, see Chapter 5.1.



- ▣ Press the panel together on both sides and, at the same time, push it out.



- ▣ Loosen 2 nuts at the pot tray guiding.
- ▣ Draw off 2 holding angles to the front.
- ▣ Swivel the pot tray downwards and take it off.

6. Modules

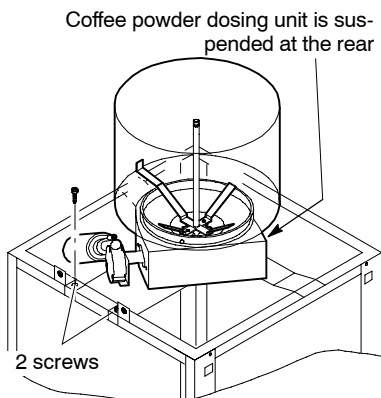
6.1 Coffee powder dosing unit

6.1.1 Function of coffee powder dosing unit

The encoder in the gear motor transmits 4 impulses per shaft rotation to the control. The impulses are converted into grams by the control. These indications in grams are an average value and can slightly change according to the grinding degree and the type of coffee

A light barrier is mounted at the coffee powder bin. In case the filling height falls below that level a message is transferred from the light barrier to the control. If the filling height falls below a certain level the message "stand-by operation" is displayed. 2 brewing operations maximum can be performed yet. After these 2 brewing operations the message "Fill the bin" is displayed. No more brewing is possible.

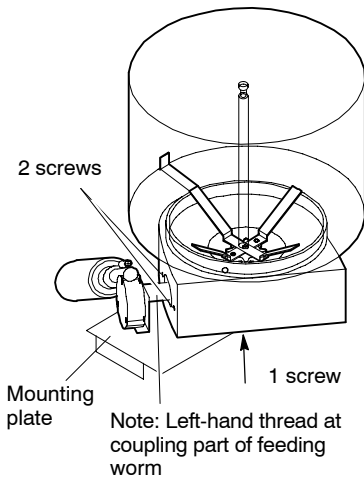
6.1.2 Dismounting of coffee powder dosing unit



- ☐ Remove the cables of light barrier and gear motor.
- ☐ Remove 2 screws.
- ☐ Lift up the coffee powder dosing unit in front, push it to the front and remove it.

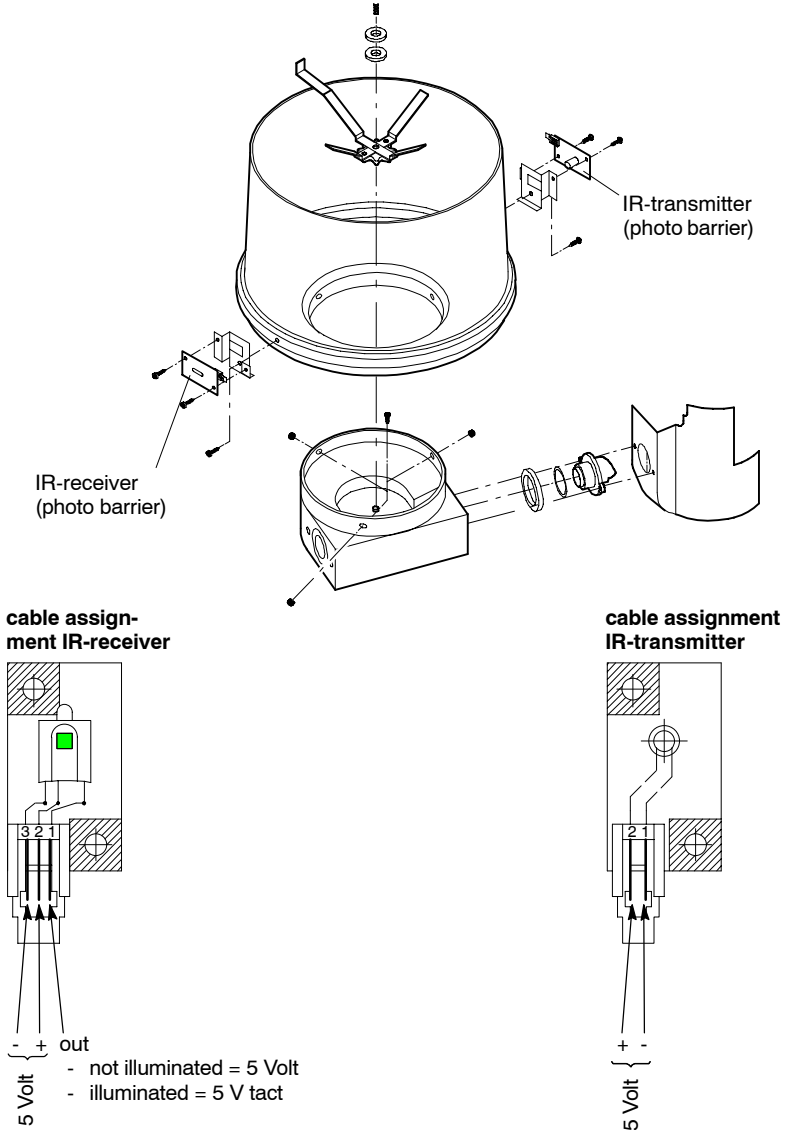
6.1.3 Dismantling and cleaning of the coffee powder dosing unit

Dismantle and clean the coffee powder dosing unit, e. g. upon semi-annual maintenance work at the machine to remove eventual coffee powder deposits.

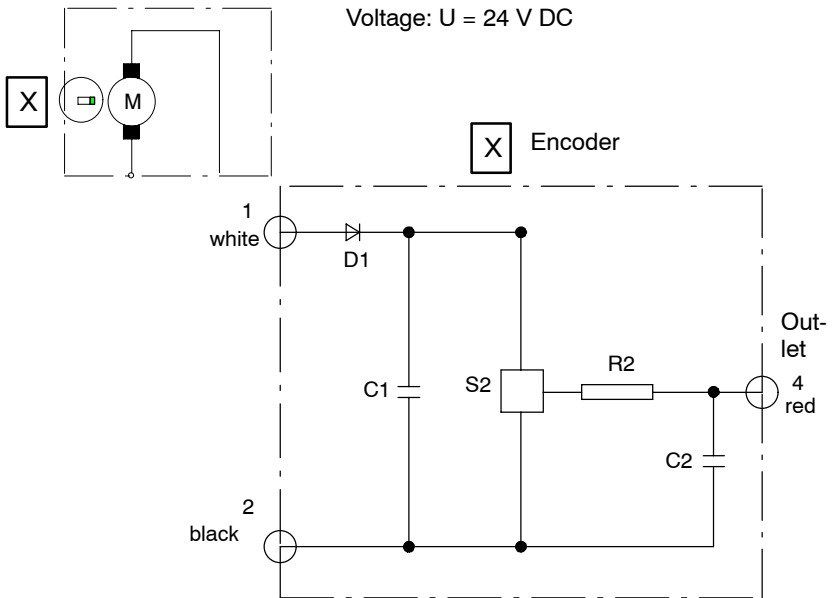


- ▣ Remove 1 screw at the mounting plate.
- ▣ Remove mounting plate with gear motor.
- ▣ Remove 2 screws at the dosing unit bottom.
- ▣ Pull out feeding worm.
- ▣ Clean the parts.

6.1.4 Voltage on the infrared-transmitter and on the Infrared-receiver



6.1.5 Electrical power supply/circuit diagram of gear motor



6.2 Brewing unit

6.2.1 Function of brewing unit

Brewing process

1. Emptying brew vessel
 - Bottom part of the male connecting nipple opens.
 - Water still existing in the brew vessel flows off.
 - Bottom part of the male connecting nipple closes.
2. Dosing brewing water and coffee powder
 - Top part of the male connecting nipple opens.
 - Brewing water and coffee powder are dosed.
3. Simmering time/cold shower
 - Top part of male connecting nipple closes.
 - After 70% of the simmering time which has been set there is a cold shower to destroy the coffee cake. The coffee powder settles at the bottom.
4. Re-filtering
 - An over-pressure of 0.5 bars maximum is generated in the brew vessel by the diaphragm pump.
 - The brewed coffee is re-filtered from the brew vessel into the storage container.
 - Re-filtering is independent of time up to falling below a minimum electrode. After falling short it is time-controlled.

During re-filtering a time control is active. If re-filtering takes more than 10 minutes the error message 11 is displayed.
5. Wash out brew vessel
 - The bottom part of the male connecting nipple opens.
 - The brew vessel is washed out. The coffee-grounds flow off.
6. Moistening/pre-heating of brewing sieve.
 - The bottom part of the male connecting nipple closes.
 - The top part of the male connecting nipple opens.
 - Approx. 250 ml of hot water flow into the brew vessel to heat the brew vessel bottom and to moisten the brewing sieve.

Notes: Brewing process

Setting in the service menu "Pre-heating of brew vessel yes":

- If after the brewing process the level has fallen below the after-brewing mark the brewing sieve is moistened. At the same time the hot water is used for pre-heating of the brew vessel bottom, which has cooled down during washing out.
- After approx. 8 seconds the pre-heating water flows off through the drain.

Setting in the service menu "Pre-heating of brew vessel no":

- If after completion of the brewing process the level has already fallen below the after-brewing mark the brew vessel will not be moistened or pre-heated.

Automatic cleaning of brewing unit/storage container

Time required for cleaning approx. 30 minutes

Water consumption for cleaning approx. 38 litres

- Main cleaning approx. 22 litres
- Final cleaning approx. 16 litres

Percentage: Warm water approx. 60%, cold water approx. 40%

Cleaning after start:

1. The brew vessel and the storage container are discharged through the drain.
2. The cleaning tablets or liquid cleansing agent are filled into the brew vessel with hot water. The brew vessel shall be exposed for 5 minutes.
3. The cleaning solution is filtered in the storage container from the brew vessel. The storage container shall be exposed for 5 minutes. The coffee delivery valve is opened 5 times to clean the coffee delivery unit.
4. During the reaction time in the storage container the brew vessel is filled:
 - to approx. 1/3 with cold water,
 - to approx. 2/3 with hot water.
5. Most of the cleaning solution in the storage container is discharged through the drain valve. The rest through the coffee delivery unit.
6. The water mixture in the brew vessel is filtered into the storage container.
7. The coffee outlet valve is opened 5 times to rinse the coffee delivery unit. The rest of the rinsing water is discharged through the drain valve.
8. The brew vessel is filled several times:
 - to approx. 1/3 with cold water,
 - to approx. 2/3 with hot water.
9. The water mixture in the brew vessel is filtered into the storage container.
10. Dependent on the menu setting
 - the machine is set on stand-by or
 - the cleaning program is completed with the following steps 11. to 12..
11. After restart of the machine or continuation of the cleaning program:
 - The coffee outlet valve is opened 5 times to rinse the coffee delivery unit. The rest of the rinsing water is discharged through the drain valve.
12. For neutralisation one brewing cycle with approx. 40 grams of coffee powder and 4 litres of brewing water is performed.
 - The neutralising solution is filtered into the storage container.
 - The coffee outlet valve is opened 5 times.
 - The rest of the neutralising solution is discharged through the drain valve.

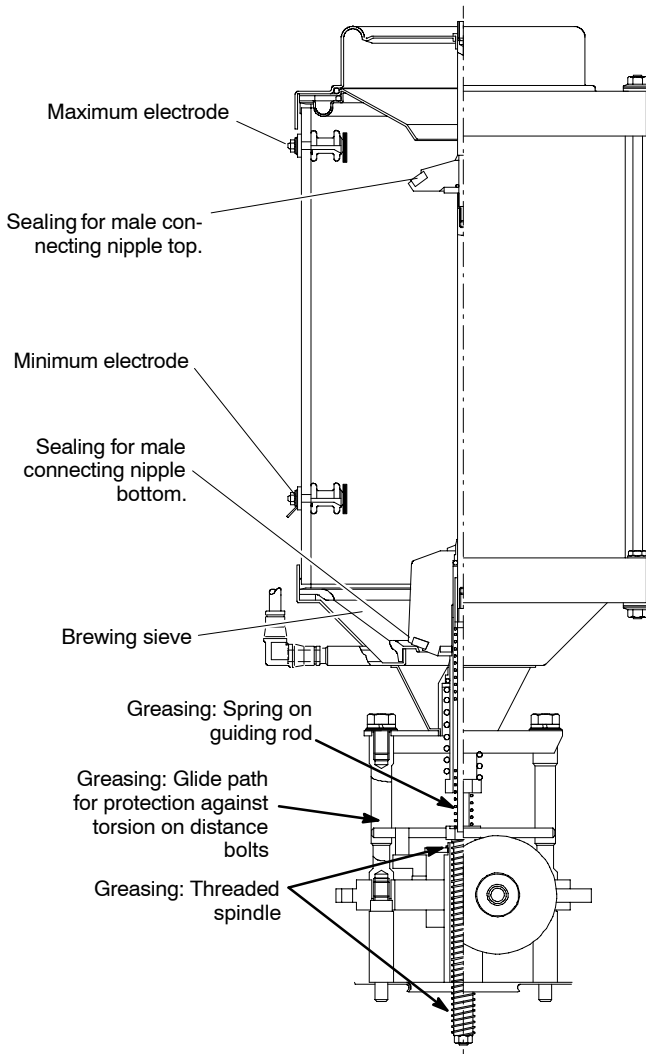
Notes regarding automatic cleaning

- Working in of the cleansing agent can be adjusted to two procedures: In that case the steps 1. to 3. are carried out twice.
- The brew vessel is washed out after each re-filtering (from the brew vessel into the storage container).
- The storage container is washed out after each emptying. The rinsing water is discharged through the drain.
- If the machine or the current are switched off during automatic cleaning washing out and neutralising of the elements, which are in contact with the coffee is automatically effected.

6.2.2 Maintenance of brewing unit

Maintenance includes:

- Replacement of wear parts such as sealing, brewing sieve, etc.
- Greasing with graphite fat (Ident-No. 106593, Molykote 1102, 25 g):
 - Threaded spindle,
 - Protection against torsion,
 - guiding rod with spring.



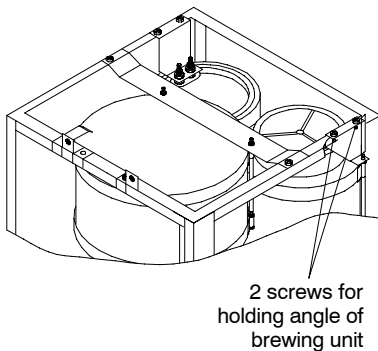
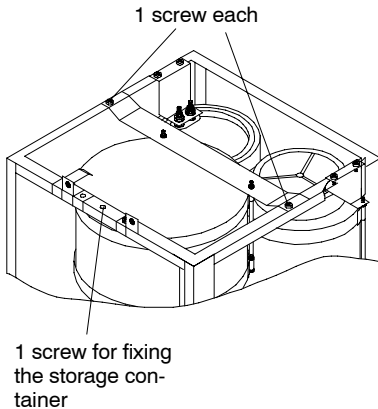
6.2.3 Checking of brewing unit

- ▣ Check all parts visually for wear, break, pollution, leakage e. g.:
 - Glass cylinder,
 - brewing sieve,
 - Magnetic valve for ventilation,
 - springs,
 - hoses, plug-in couplings, screwing,
 - guidings.

6.2.4 Dismounting of the brewing unit from the machine

- ☐ Emptying storage container.

⚠ Disconnect the machine from the electrical supply, close the water tap and release the pressure in the brewing water vessel!



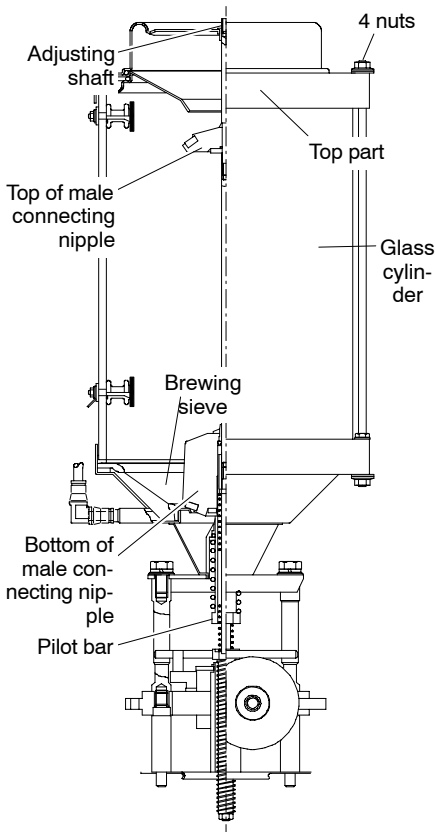
Preparations

- ☐ Dismounting of the coffee powder dosing unit (Chapter 6.1.2).
- ☐ Remove 1 screw for fixing the storage container.
- ☐ Loosen 1 screw on the left as well as on the right side for fixing the storage container.
- ☐ Push the storage container to the front until it stops.
 - Pay attention that the flow transmitter is not damaged.

Dismounting of the brewing unit

- ☐ Remove cables.
- ☐ Clamp hoses.
- ☐ Remove 2 screws.
- ☐ Remove holding angles from brewing unit.
- ☐ Swivel the brewing unit bottom laterally and remove it.

6.2.5 Replacement of brewing sieve, sealing or funnel with heating

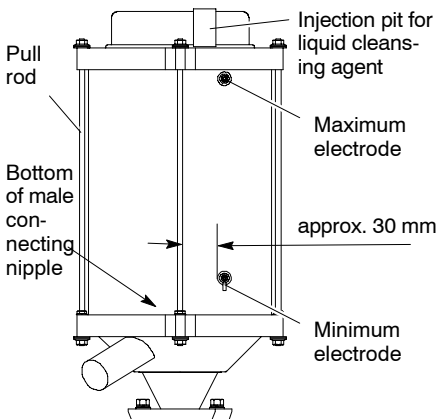


Replace sealing

- ▣ Dismounting of brewing unit (Chapter 6.2.4).
- ▣ Remove 4 nuts.
- ▣ Remove top part.
- ▣ Remove glass cylinder.
- ▣ Take out brewing sieve.
- ▣ Loosen and unscrew adjusting shaft by means of hexagon offset screw driver SW 2.5 mm. If required counter-hold at self-locking nut.
- ▣ Draw off top of male connecting nipple.
- ▣ Hold pilot bar with fork wrench and manually unscrew the male connecting nipple bottom.
- ▣ If required replace sealing,
 - at the top of the male connecting nipple,
 - at the bottom of the male connecting nipple,
 - at the glass cylinder,
 - under the brewing sieve.

Replacement of funnel with heating

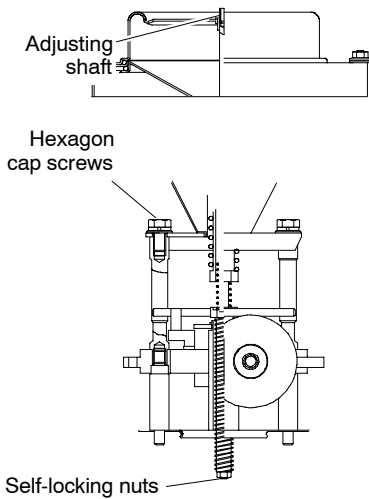
- ▣ Remove 2 hexagon cap screws.
- ▣ Remove funnel with heating.



Assembly

- Fix sealing at the glass cylinder with silicone. With that the silicone sealing will not move during assembly.
- Pay attention to torque when assembling.
 - 100 Ncm at the pull rod of the glass cylinder,
 - 100 Ncm at the "bottom of the male connecting nipple"
- Take care to correctly position the glass cylinder and the top part when setting in. Pay attention to the dimension on the picture!

6.2.6 Replacing motor with gear



- ▣ Dismounting brewing unit (Chapter 6.2.4).
- ▣ Remove self-locking nuts, counterhold at the adjusting shaft with hexagonal offset screw driver SW 2.5 mm.
- ▣ Remove 2 hexagon cap screws.
- ▣ Pull the top part of the brewing unit apart from the bottom part of the gear motor.
- ▣ Dismount parts from the gear motor.
 - Light barrier (encoder),
 - reference point switch,
 - distance bolts,
 - mounting bolts.

Assembly

- ▣ Tighten the self-locking nut up to the stop.

6.2.7 Test run of the brewing unit

Carrying out test run

- after dismounting and re-assembly of the brewing unit,
- replacing sealing,
- replacing sieves, etc.

Test run of the brewing unit: Carry out several brewing processes with various brewing quantities!

Check if

- the brewing chamber is tight during brewing,
- the quick-acting couplings are tight.

Also check:

- the electrical plug connections for solid fit,
- the Teflon hoses for solid fit and tightness.

6.2.8 Technical specifications of brewing unit/gear motor

Technical specifications of brewing unit

Capacity: 5 litres maximum
Maximum electrode 4.5 litres
Maximum brewing quantity 4 litres

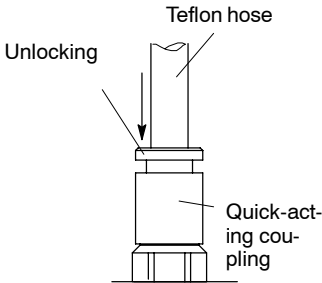
Surface heating: 230 volts, 120 watts

Technical specifications of gear motor

Voltage: $U = 24 \text{ V DC}$
Sense of rotation: left-hand/right-hand
Current consumption limited by the control to 4 A

End-to-end measurement: 32 impulses/rotation - 1 impulse/0.187 mm
Feed: 3.02 m / min

6.2.9 Quick-acting coupling/Teflon hose



Remove Teflon hose

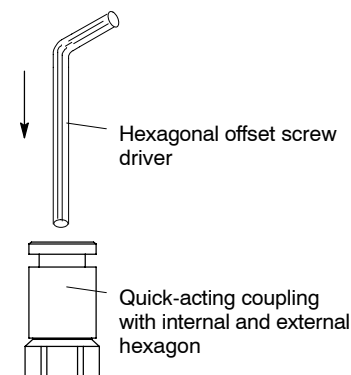
- ☐ Press the Teflon hose in the direction of arrow.
- ☐ Press the unlocking device in the direction of arrow and hold it..
- ☐ Draw off Teflon hose.

Insert Teflon hose

- ☐ Check the Teflon hose for damages. If required evenly and neatly cut the hose end with a sharp knife.
- ☐ Hold the Teflon hose with the abrasive cloth to avoid slipping.
- ☐ Push the Teflon hose strongly into the quick-acting coupling (up to the stop).
- ☐ Strongly draw at the Teflon hose to check if the Teflon hose is mounted solidly.

Unscrew quick-acting coupling

- ☐ Remove Teflon hose.
- ☐ Unscrew quick-acting coupling with hexagon offset screw driver or fork/ring spanner.

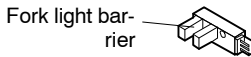


Replace Teflon hose

- The quick-acting coupling is equipped with an O-ring for sealing of the Teflon hose.
- To avoid damage of the O-ring,
 - the hose end must not be deformed,
 - the hose end must be without burrs,
 - evenly and neatly cut the hose end with a sharp knife.

6.3 Reference point switch and encoder (fork light barrier)

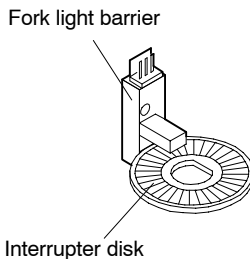
6.3.1 Function of reference point switch



The reference point switch transmits a message to the control when the “male connecting nipple bottom” is in the lowest position.

After start of the machine the path counter in the control is reset to zero after having reached the lowest position.

6.3.2 Function Encoder

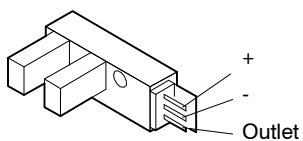


The encoder transmits impulses to the control. On the basis of the reported impulses the control calculates the position of the male connecting nipples.

- Lower position = top of male connecting nipple opened, bottom is closed (reference point).
- middle position = top and bottom of male connecting nipple closed,
 - Path from the reference point 86 impulses (approx. 16 mm)
- top position = top of male connecting nipple closed, bottom opened,
 - Path from the reference point 171 impulses (approx. 32 mm)

32 impulses are transmitted per rotation of the interrupter disk which corresponds with a path of 6 mm (0.187 mm/impulse).

6.3.3 Technical specifications of fork light barrier



Voltage: 5 V DC

Voltage at outlet

- for free light current: 0 V
- for interrupted light current: 5 V DC

6.4 Storage container

6.4.1 Function of storage container

Function “Brewing procedure and cleaning” of the brewing unit and the storage container, see Chapter 6.2.1

Settings of contents measuring in litres

After installation of a new control board or after loading of a new software “Contents measuring in litres” is automatically set on “Yes” in the service menu.

Important! After loading of a new software the machine must be made dead to make possible complete filling of the vessel and performance of contents measuring in litres.

After first switch-on of the machine contents measuring of the storage container in litres is automatically carried out. After contents measuring the setting in the service menu for contents measuring is automatically reset to “No”.

Contents measuring in litres

1. After heating of the brewing water vessel the brewing unit is filled with 4.5 litres of hot water.
2. The hot water is filtered into the storage container.
3. In the storage container the upper point is located for measuring.
4. The water is discharged through the coffee delivery unit.
5. Contents measuring is completed when reaching the lower value in the storage container. The control determines the coffee quantity in 0.1 litres by comparing the upper and the lower value.

6.4.2 Function of the level-sensor

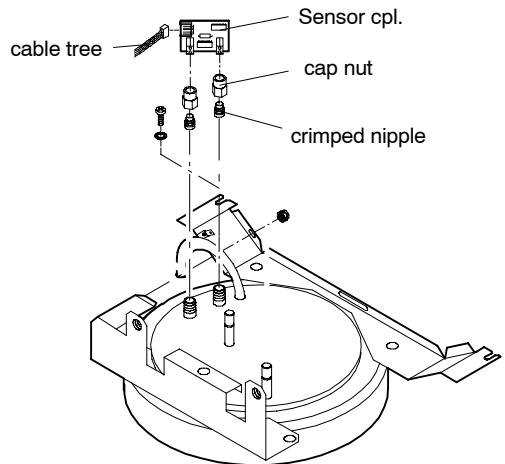
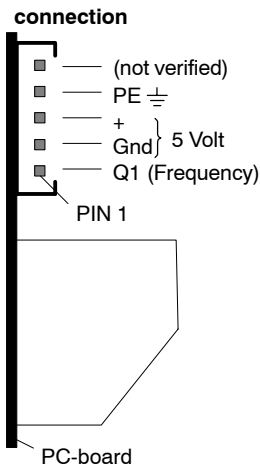
displaying the level of filling in the storage container

An exchange of the -filling level effects at the output "Q1" of the sensor from the storage container a frequency-change, which is measured from the Pc-board and is converted to -a filling level in the display

The higher the level, the lower the frequency at the output "Q1".

Voltages and frequencies can not be measured.

The resistant measurement-between electrode and earth must be infinitely.

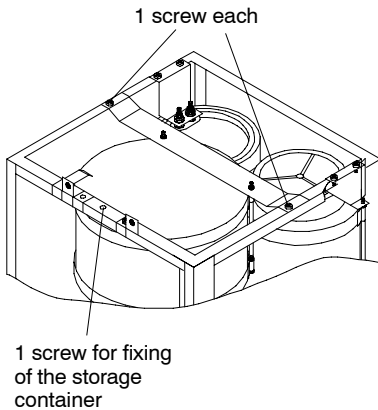



6.4.3 Maintenance of storage container

Check

- the storage container for cleanliness,
- the electrode for cleanliness, the electrode must not touch the storage container bottom,
- plug connections,
- function of heating,
- washing out,
- tightness.

6.4.4 Dismounting of storage container



- ☐ Empty storage container.
- ☐  Disconnect the machine from the electrical supply, close the water tap and release the pressure in the brewing water vessel!
- ☐ Dismount coffee powder dosing unit (Chapter 6.1.2).
- ☐ Remove plugs and hoses.
- ☐ Remove 1 screw for fixing of the storage container.
- ☐ Loosen 1 screw on the left as well as on the right side for storage container attachment.
- ☐ Push the storage container to the front and remove it.

6.4.5 Test run

Carry out test run of the machine after installation work

- at the brew vessel,
- at the storage container,
- at the pressure pump.

6.4.6 Technical specifications of storage container

Capacity: 4.8 litres

Surface heating: 230 volts, 140 watts

6.4.7 Electrical power supply of storage container

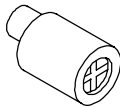
Cable connections of the storage container and the brewing unit heating must not be exchanged, see circuit diagram of relay Chapter 8.1!

6.5 Diaphragm pump

6.5.1 Function of diaphragm pump

Re-filtering of coffee from the brew vessel into the storage container. The brew vessel is locked at the top and at the bottom by means of a male connecting nipple. The diaphragm pump generates an over-pressure in the brew vessel. This is how the coffee is filtered into the storage container.

6.5.2 Check attachable filter

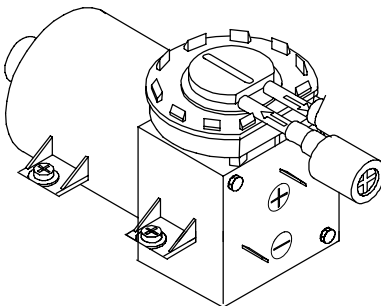


Check if the attachable filter is dirty.

6.5.3 Test run of diaphragm pump

Check if re-filtering has been carried out properly.

6.5.4 Technical and electrical specifications / Connecting diaphragm pump



Delivery medium: air

Pressure: 0.7 bars maximum

Pump capacity: 9 litres / minute

Operating voltage: 24 VDC

Current consumption: 0.4 A maximum

When connecting pay attention to:

- Electrical power supply: + and -
- Hose connection: Suction and pressure side

6.6 Brewing water vessel

6.6.1 Function of brewing water vessel

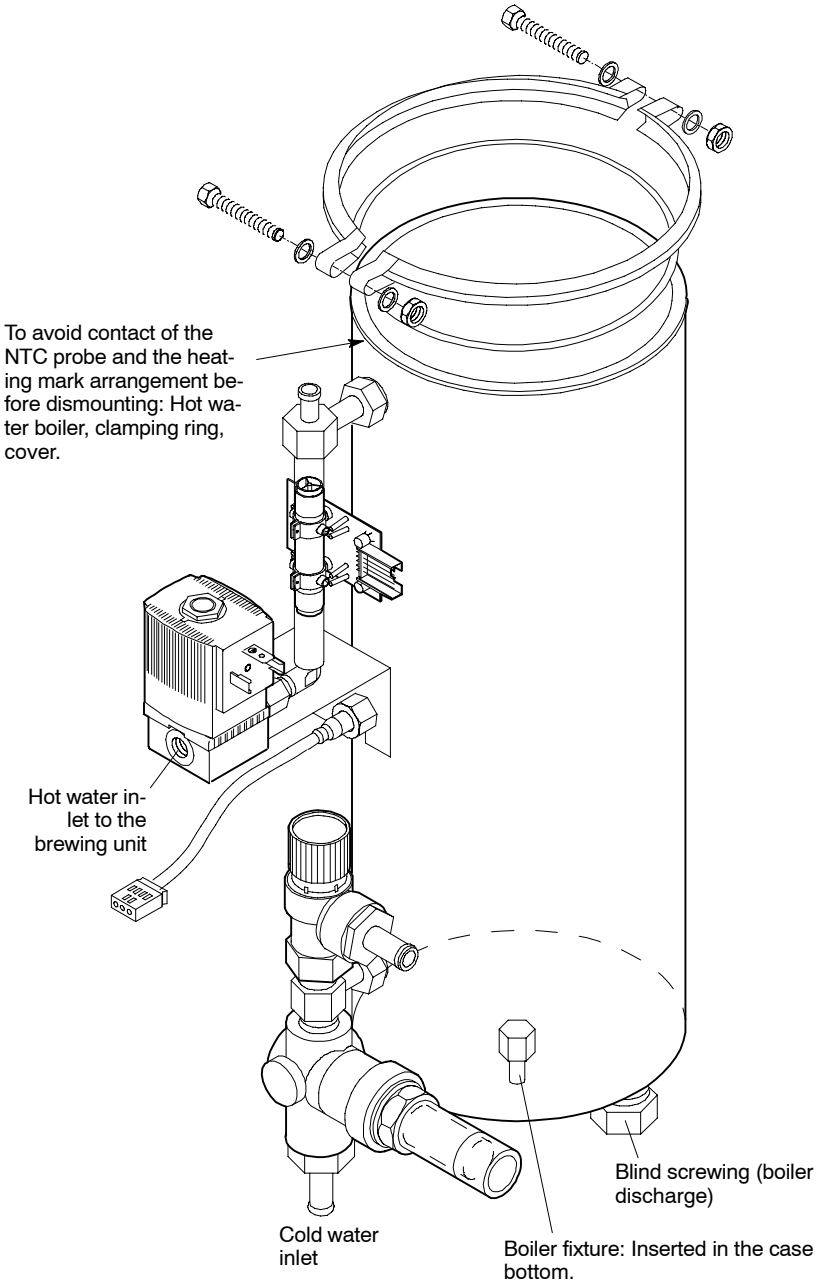
Hot water preparation for brewing process and hot water delivery.

- The vessel pressure amounts to 2.1 - 3 bars when ready for operation.
- When taking hot water from the brewing water vessel cold water is automatically flowing in.
- Temperature control is effected via the NTC thermometer probe.
- No non-return valve is installed in the water inlet. Therefore a re-flux prevention device (e. g. shut-off valve with re-flux prevention device) must be provided!

Filling of brewing water boiler

After first switch-on of the machine (electrical power supply ON) the brewing water boiler is automatically filled. If the brewing water boiler is full water continues flowing in and flows from the brewing water boiler into the brew vessel via the brewing valve. When the water level reaches the minimum electrode in the brew vessel the brewing water valve is switched off. Heating of the brewing water boiler is effected only now.

Brewing water boiler vmont.



6.6.2 Maintenance of brewing water boiler

Dependent on

- water hardness,
- Flow quantity.

- ☐ Decalcification of brewing water boiler: Dismounting, dismantling, cleaning and washing out.

For hardness of more than 8°dKH we recommend to superimpose a water softener!

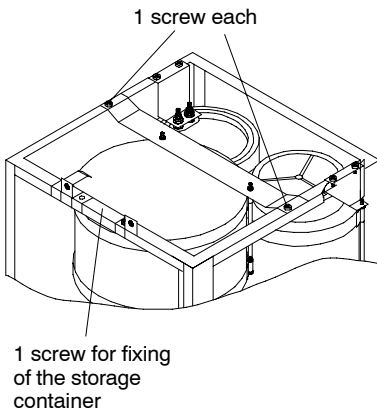
6.6.3 Dismounting of brewing water boiler

Preparations

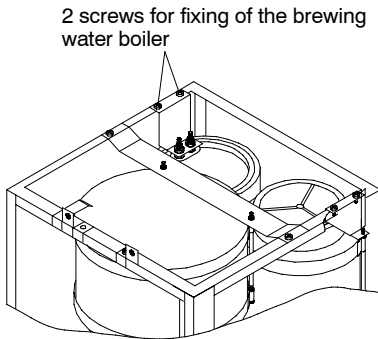
- ☐ Empty storage container.

⚠ Disconnect the machine from the electrical supply, close the water tap and release the pressure at the brewing water boiler.!

- ☐ Empty brewing water boiler.
- ☐ Dismounting of coffee powder dosing unit (Chapter 6.1.2).



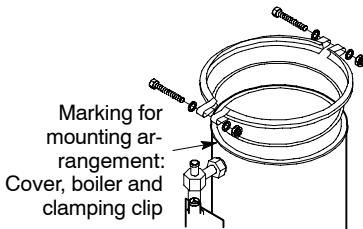
- ☐ Remove 1 screw for fixing of the storage container.
- ☐ Loosen 1 screw on the left as well as on the right side for fixing of the storage container.
- ☐ Push the storage container to the front up to the stop.



Dismount brewing water boiler

- ☐ Disconnect hose connections.
- ☐ Remove plugs/cables.
- ☐ Remove 2 screws.
- ☐ Lift the boiler slightly and remove it by pushing it to the side.

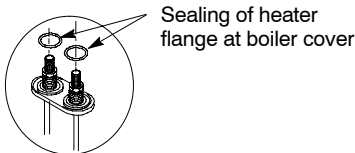
6.6.4 Open brewing water boiler / Dismount heater



- ☐ Before dismounting mark position of the cover, the clamping clip and the boiler with a pencil!

Assembly

- Pay attention to the markings at the cover and at the boiler! In case of incorrect re-assembly the NTC probe may be in contact with the heater or the machine case cannot be closed!
 - Pay attention to the position of the STB thermometer probe, see Chapter 6.9.2.
- ☐ Replace defective sealing.



6.6.5 Checking brewing water boiler

Carry out this check at least once a year!

- ☐ Start-up of the machine.
 - During heating the 3 bar safety valve at the brewing water boiler must open. The superfluous expansion water is drained.
- ☐ Check screwing and soldering connections for tightness (visual check).

6.6.6 Technical specifications of brewing water boiler

Temperature of medium: 130°C
max.

Voltage of heater: 230 V AC

Permanent operation pressure: 2.1
- 3 bars

Max. nominal voltage of heater: 254
V AC

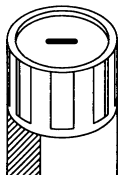
Contents: approx. 6 litres

Heater capacity: 3 x 3000 W

Heater resistance: approx. 17.6 Ω

6.7 Pressure regulator

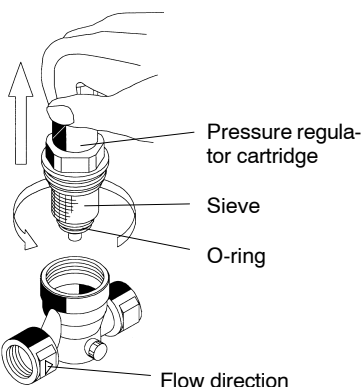
6.7.1 Function




The pressure regulator is adjusted to 2.1 bars.

For perfect function of the pressure regulator the inlet pressure should be at least 1 bar higher than the adjusted pressure (inlet pressure approx. 3 bars).

6.7.2 Maintenance: Cleaning of pressure regulator cartridge



 Disconnect the machine from the electrical supply!

- ☐ Close the water tap before the pressure regulator.
- ☐ Release pressure at the brewing water boiler via safety valves.
- ☐ Screw off pressure regulator cartridge from pressure regulator.
- ☐ Clean pressure regulator cartridge with clean water - without adding cleansing agents!

Replace

- If spare parts are needed it is not necessary to replace the complete pressure regulator. In this case it is sufficient to replace the pressure regulator cartridge.
- When replacing the complete pressure regulator pay attention to the flow direction!

6.7.3 Technical specifications of pressure regulator

Inlet over-pressure: 16 bars max., 3 bars min.

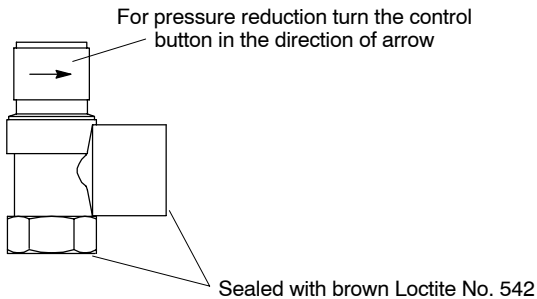
Operating temperature: 60°C max.

Outlet pressure: 2.1 bars

6.8 Safety valve

Safety valves are provided for protection of liquid systems which are under pressure against exceeding of pressure.

3 bar safety valve (at the brewing water boiler)



6.8.1 Checking/Maintenance of safety valves

Checking

Check safety valve:


- at the first start-up of the machine,
- at each maintenance,
- at least once a year.

For checking of the safety valve

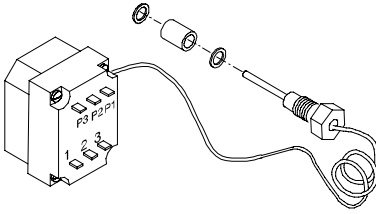
- of brewing water boiler, see Chapter 6.6.5.

If the safety valve is dripping it is dirty or the sealing is worn out.

Maintenance

 For safety reasons safety valves must not be decalcified or serviced. In any case safety valves which are not operating properly must be replaced without delay!

6.9 Safety thermostat (STB)



Temperature limitation 130°C.

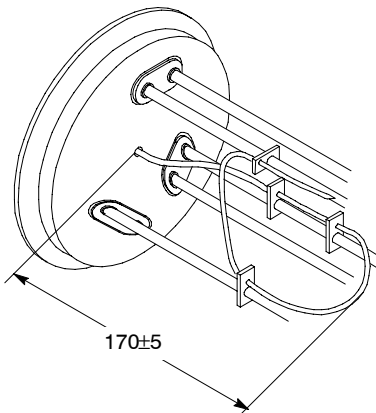
If a safety thermostat has been triggered:

- remove the cause of the error,
- have the brewing water boiler and the safety thermostat cool down,
- Reclose the safety thermostat by pressing the reset button.

6.9.1 Checking of safety thermostat

Check for mechanical damage! If for example the thermometer probe is bent, the safety thermostat must be replaced!

6.9.2 Replacement of STB thermometer probe



Do not bend the STB thermometer probe during assembly as the capillary tube may be damaged!

When completely assembled there must be no contact between the heater and the NTC probe! Therefore pay attention to the markings on the cover and on the brewing water boiler during assembly!

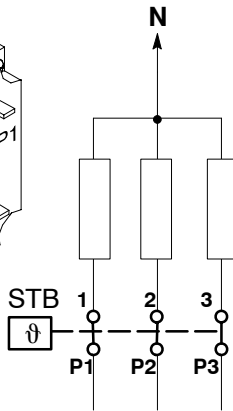
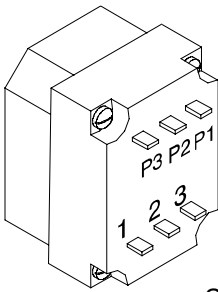
6.9.3 Technical specifications of safety thermostat

Nominal voltage: 400 V AC

Switching off temperature: 130°C

Nominal amperage: 20 A

6.9.4 Electrical supply of safety thermostat



Nominal voltage: 400 V AC

Nominal amperage: 20 A

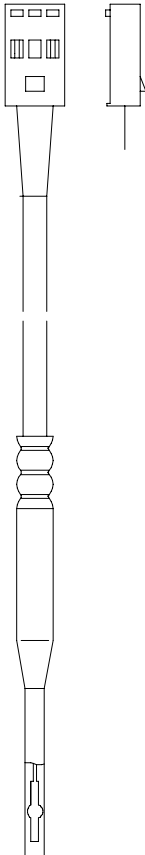
Switching off temperature: 130°C

6.10 NTC thermometer probe

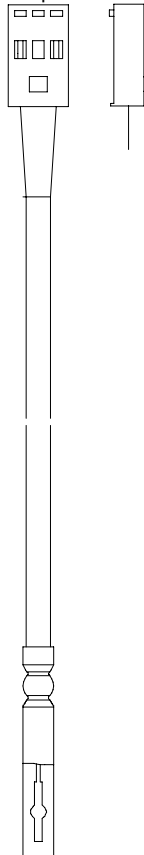
NTC thermometer probe

- in the brewing water boiler for temperature control:
 - Releasing temperature
 - Locking temperature Brewing/cleaning
 - Locking temperature Hot water delivery
- in the brew vessel bottom part for temperature control:
 - Empty brew vessel
 - Filled brew vessel
- in the storage container for temperature control:
 - Empty storage container
 - Full storage container

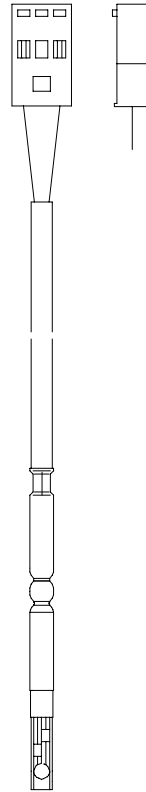
In the brewing water boiler



In the brew vessel bottom part

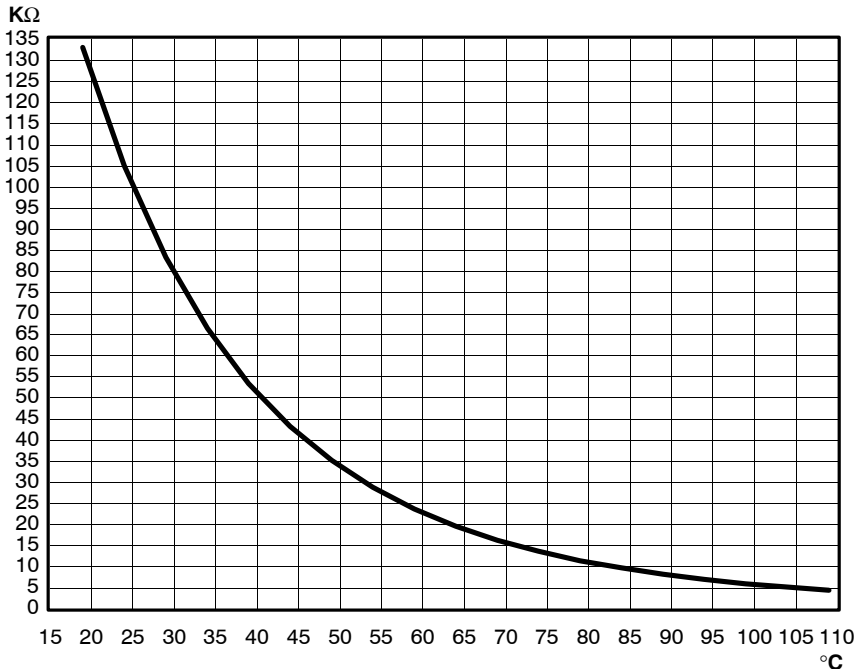


In the storage container



6.10.1 Function/Diagram of NTC thermometer probe


Resistors with negative temperature coefficients: The probe resistance is reduced with increasing heat.



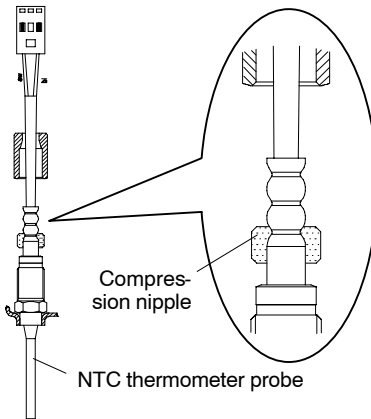
6.10.2 Checking of NTC thermometer probe

- ▣ Check connection lead and plug connection before replacement of the thermometer probe!
- ▣ Determine resistance of the NTC thermometer probe and ambient temperature with appropriate measuring instruments and compare the measured values with the diagram (Chapter 6.10.1).
Example: Ambient temperature 20°C, resistance 126 kΩ = probe is okay!

6.10.3 Replacing NTC probe in the brewing water boiler

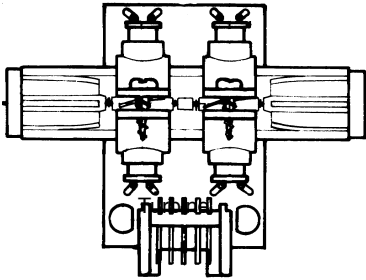
 Disconnect the machine from the electrical supply and close the water tap!

☞ Release the boiler pressure at the brewing water boiler via the safety valve!



- ☞ Replace NTC thermometer probe.
 - To avoid migration of the NTC thermometer probe during operation place the compression nipple as shown on the picture.
- ☞ Open the water tap.
- ☞ Switch the machine on to heat the boiler.
- ☞ Check the screwing for tightness (visual check), also see Chapter 6.6.5 (Over-pressure check).

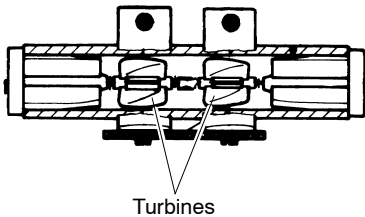
6.11 Flow transmitter Brewing water/coffee delivery



installed between

- the brewing water boiler and the brew vessel,
- Storage container and coffee delivery.

6.11.1 Function of flow transmitter



The light barrier is transmitting impulses to the control during rotation of the turbines.

The control displays an error message if both turbines have stopped rotating. The error is displayed after approx. 1.5 seconds (error code!).

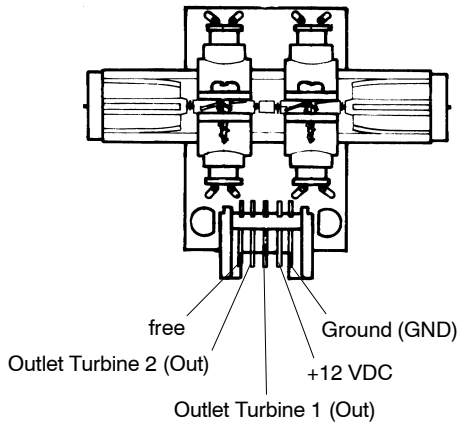
6.11.2 Maintenance of flow transmitter

The turbines must rotate smoothly.

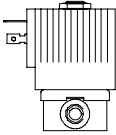
If the turbines do not rotate any longer dismantle the flow transmitter, clean it or replace it.

After re-assembly take care that the light barriers are centred above the turbines!

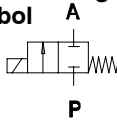
6.11.3 Electrical supply of flow transmitter



6.12 Magnetic valve



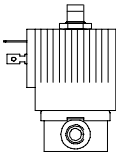
Switching symbol



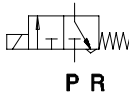
Closed out of circuit

2/2 way valve

- Y1 brewing water
- Y2 Hot water delivery 1
- Y8 Hot water delivery 2 (option)



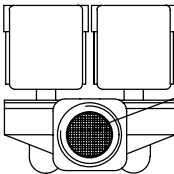
Switching symbol



Closed out of circuit

3/2 way valve

- Y4 Ventilation brew vessel

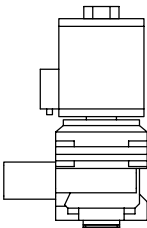


Closed out of circuit

Sieve

Double magnetic valve

- Y3 Washing out brew vessel
- Y5 Washing out storage container



Closed out of circuit

2/2 way valve Coffee delivery

- Y6 Coffee delivery
- Y7 Discharge of storage container

6.12.1 Technical specifications of magnetic valve

2/2 and 3/2 way valve

Operating voltage: 24 V DC

Coil resistance: approx. 58 ohms (cold)

Double magnetic valve

Operating voltage: 24 V DC

Coil resistance: approx. 68 ohms (cold)

Nominal capacity: 11 VA / 8,5 W

2/2 way valve Coffee delivery

Operating voltage: 24 V DC

Coil resistance: approx. 82 ohms (cold)

Nominal capacity: 7 Watt

6.13 Hose pump for cleansing agent dosing

6.13.1 Checking hose pump

Check hose pump for brittleness!

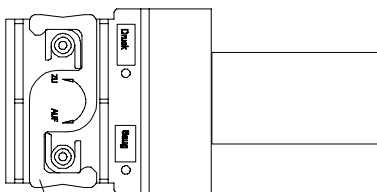
6.13.2 Dismounting hose pump

The hose pump is arranged behind the electrical mounting plate.

- ▣ Dismounting the electrical mounting plate (Chapter 8.4).
- ▣ Bend the bending fish-plates to the bottom, draw the hose pump off the fixture.
- ▣ Remove hoses.

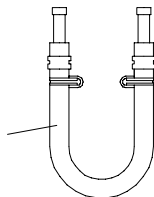
6.13.3 Replace hoses

Den Schlauch der Schlauchpumpe jährlich erneuern!



Locking

Spare part: Hose
with clamps and
fixture



- ▣ Open the locking by turning.
- ▣ Remove the hose from the case.
- ▣ Insert original spare hose
 - The original spare hose is provided with clamps and a fixture to guarantee the correct hose length.

6.13.4 Test run of hose pump

Carry out some cleaning cycles to completely fill the pipes with cleansing agent.
To reduce the time for these procedures quit cleaning via the service menu.

6.13.5 Technical specifications of hose pump

Pump capacity: 220 ml / min. \pm 20 ml / min

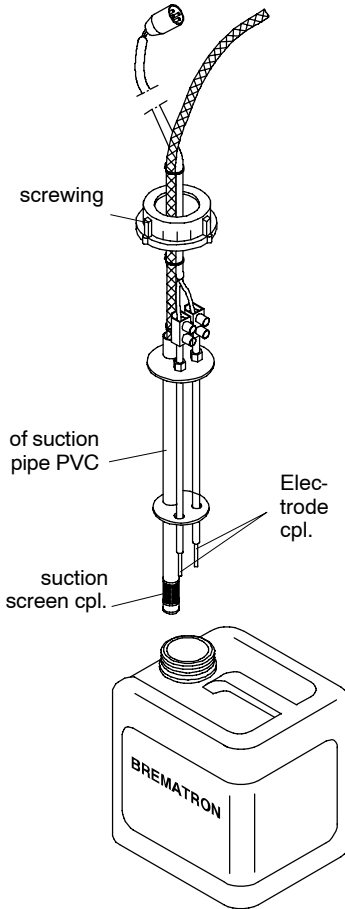
Pump medium: Alkaline cleansing agents

6.13.6 Electrical supply of hose pump

Operating voltage: 24 V DC

6.14 level electrode for liquid cleaning detergent-

6.14.1 function of level electrode



Display lack of cleaning-detergent

When both electrodes are not in contact with the cleaning liquid, appears during the operation in the display

- the information "lack of cleaner",
- By starting the cleaning cycle, for a duration of approx. 10 min., the message "Reserve operation9".
 - By every Start of a cleaning cycle occurs a back ward counting of the reserve operation from 9 bis 0.
 - By displaying "Reserveoperation 0" the pump for the cleaning detergent is not switched on.

7. Menu control

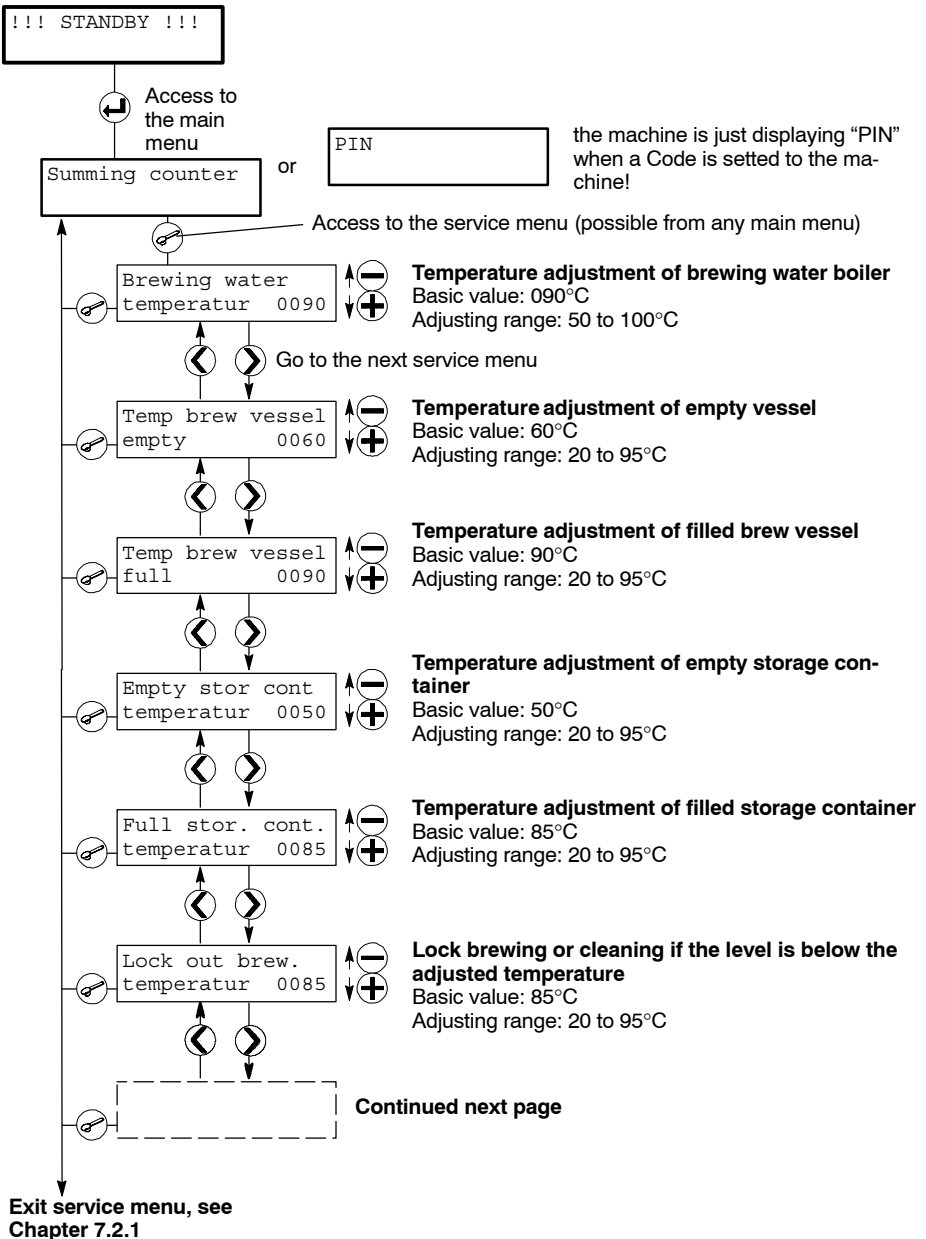
7.1 Settings/displays

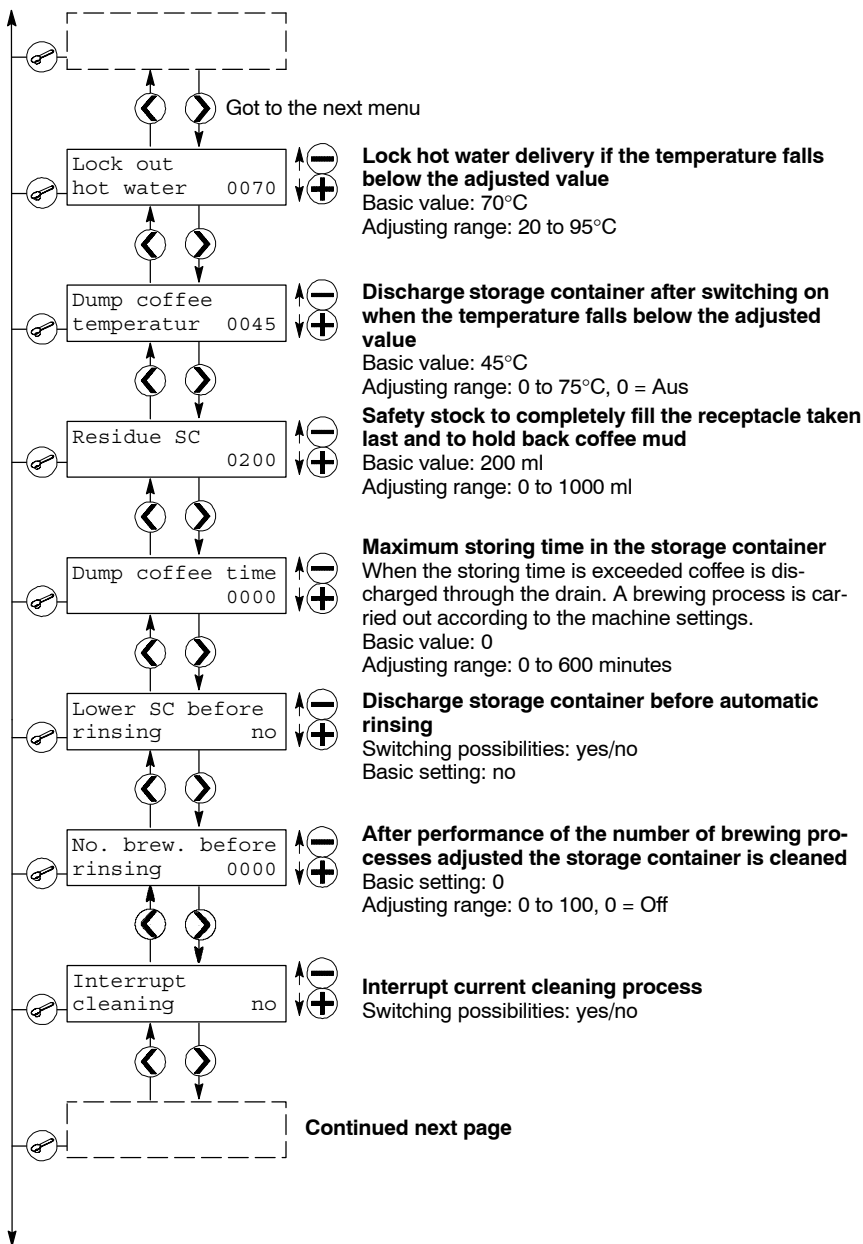
The following are described in the operating instructions:

- How to display or delete summing counter readings
- How to perform the settings for the various types of coffee.

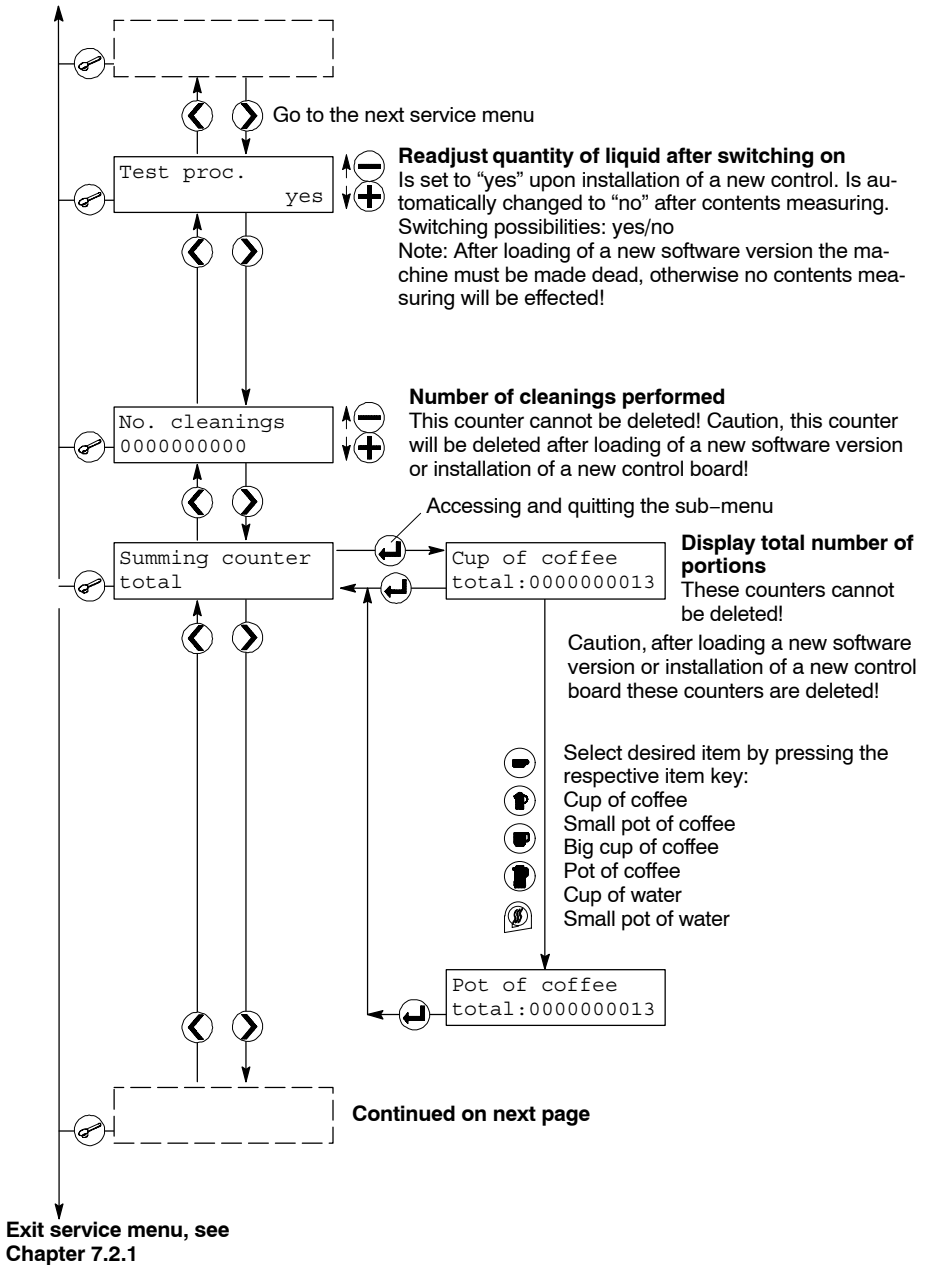
For adjustments to the device, see the following section 7.2.

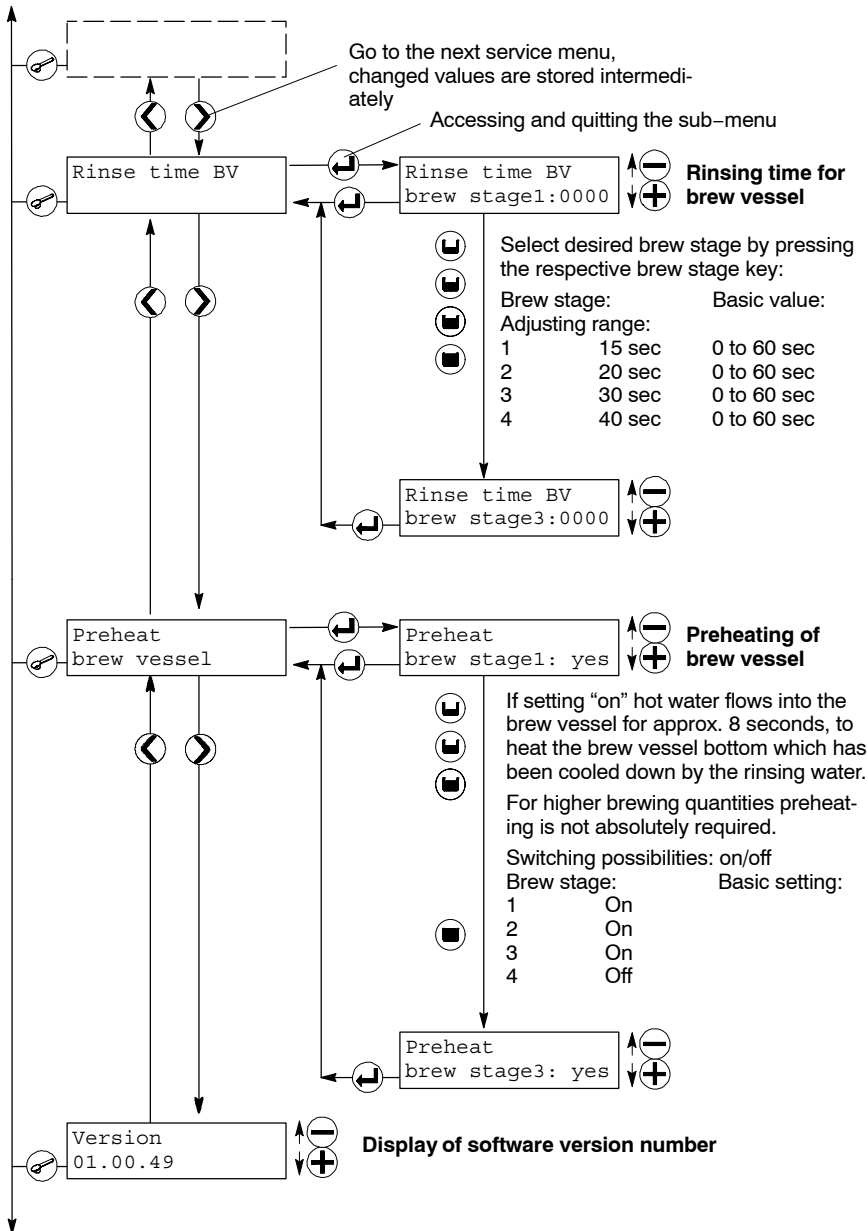
7.2 Service menu



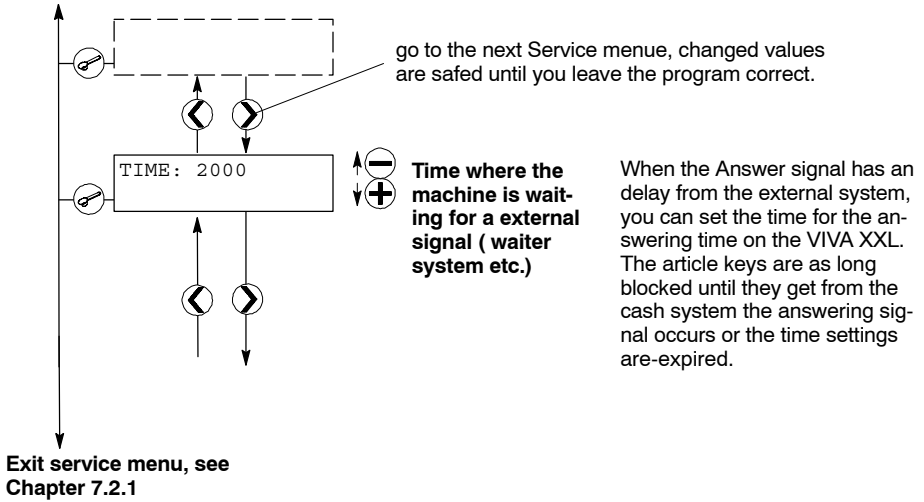


Exit service menu, see Chapter 7.2.1

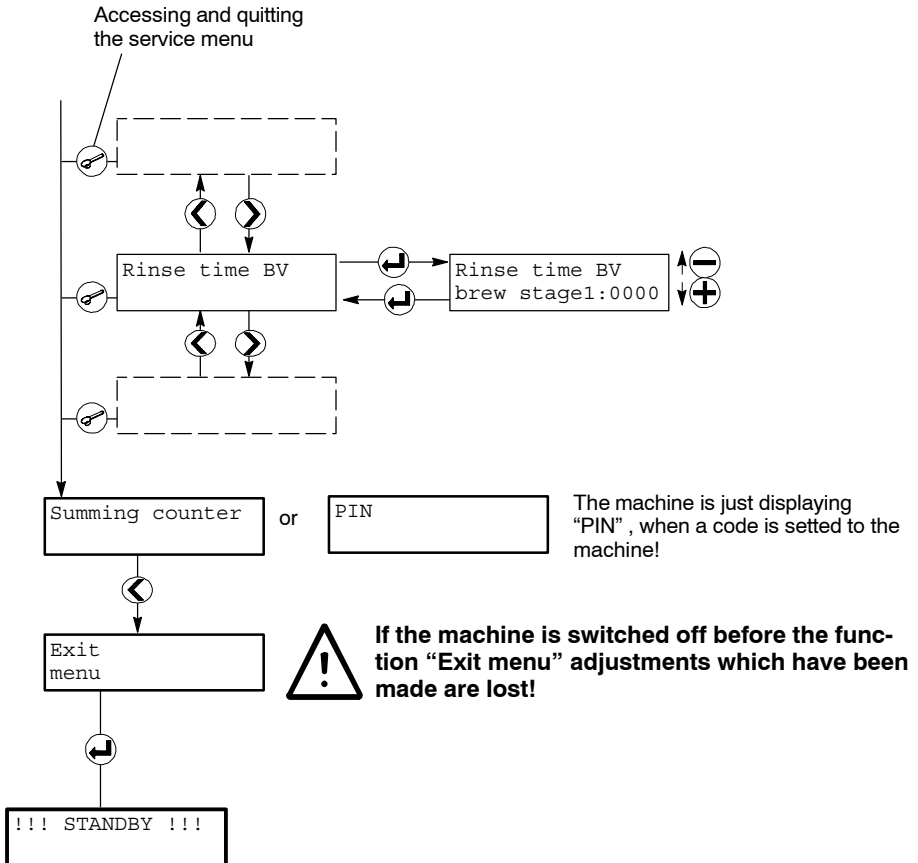




Exit service menu, see Chapter 7.2.1



7.2.1 Exit service menu



7.3 Parameter of adjusting ranges

Parameter	Basic value	Minimum value	Maximum value
Coffee powder Brew stage 1	50 g	0 g	250 g
Coffee powder Brew stage 2	90 g	0 g	250 g
Coffee powder Brew stage 3	130 g	0 g	250 g
Coffee powder Brew stage 4	170 g	0 g	250 g
Brewing water Brew stage 1	1000 ml	0 ml	4.5 litres – Quantity of after-brewing mark
Brewing water Brew stage 2	2000 ml	0 ml	4.5 litres – Quantity of after-brewing mark
Brewing water Brew stage 3	3000 ml	0 ml	4.5 litres – Quantity of after-brewing mark
Brewing water Brew stage 4	4000 ml	0 ml	4.5 litres
After-brewing mark Brew stage 1	500 ml	500 ml	4.5 litres – brewing quantity
After-brewing mark Brew stage 2	1000 ml	500 ml	4.5 litres – brewing quantity
After-brewing mark Brew stage 3	1500 ml	500 ml	4.5 litres – brewing quantity
After-brewing mark Brew stage 4	is deleted because of "Turbo stage"		
Simmering time Brew stage 1	180 sec	0 sec	600 sec
Simmering time Brew stage 2	150 sec	0 sec	600 sec

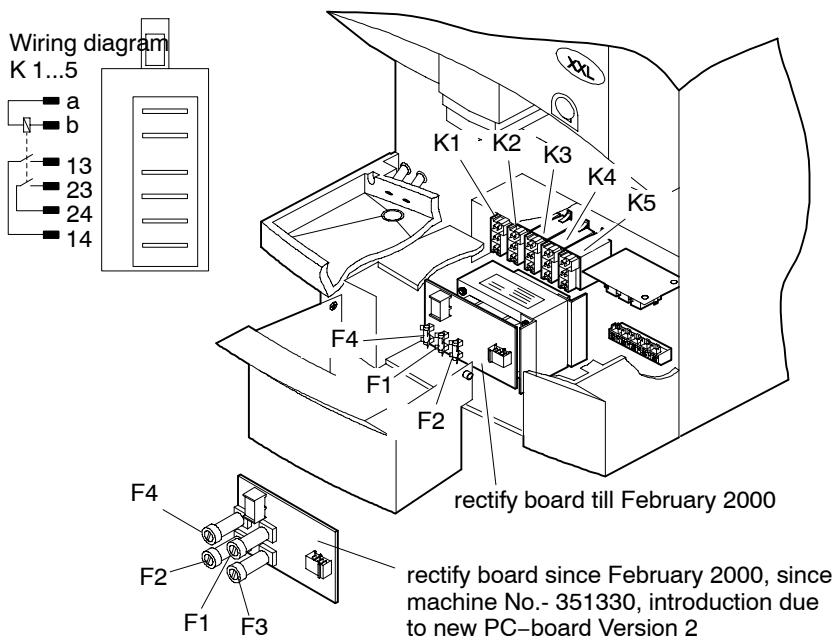
Parameter	Basic value	Minimum value	Maximum value
Simmering time Brew stage 3	90 sec	0 sec	600 sec
Simmering time Brew stage 4	30 sec	0 sec	600 sec
Release Brew stage 1	On	Off	On
Release Brew stage 2	On	Off	On
Release Brew stage 3	On	Off	On
Release Brew stage 4	On	Off	On
Rinse BV Brew stage 1	15 sec	0 sec	60 sec
Rinse BV Brew stage 2	20 sec	0 sec	60 sec
Rinse BV Brew stage 3	30 sec	0 sec	60sec
Rinse BV Brew stage 4	40 sec	0 sec	60 sec
Preheat Brew stage 1	On	Off	On
Preheat Brew stage 2	On	Off	On
Preheat Brew stage 3	On	Off	On
Preheat Brew stage 4	Off	Off	On
Output quantity Cup of coffee	140 ml	0 ml	4000 ml
Output quantity Small pot of coffee	280 ml	0 ml	4000 ml
Output quantity Big cup of coffee	250 ml	0 ml	4000 ml
Output quantity Pot of coffee	800 ml	0 ml	4000 ml
Output quantity Cup of water	140 ml	0 ml	4000 ml
Output quantity Small pot of water	280 ml	0 ml	4000 ml

Parameter	Basic value	Minimum value	Maximum value
Cup of coffee	dosed	not dosed	dosed
Small pot of coffee	dosed	not dosed	dosed
Big cup of coffee	dosed	not dosed	dosed
Pot of coffee	dosed	not dosed	dosed
Cup of water	dosed	not dosed	dosed
Small pot of water	dosed	not dosed	dosed
Off after cleaning	On	On	Off
Automatic/manual cleaning	Automatic.	Automatic.	
Coffee quantity neutral.	40 g	0 g	99 g
Number of cleanings	1	1	2
Dosing quantity of cleansing agent	200 1/10sec(approx. 40ml)	0 1/10sec	650 1/10sec
Boiler Desired temp.	90°C	50°C	100°C
Temp. increase at start Not activated!	3°C firmly set, however not more than max. temp. 100°C		
Temp. empty BV	60°C	20°C	95°C
Temp. full BV	90°C	20°C	95°C
Temp. empty SC	50°C	20°C	95°C
Temp. full SC	85°C	20°C	95°C
Locking temp. Brew/ Clean	80°C	20°C	95°C
Locking temp. HW	70°C	20°C	95°C
Min. Temp. SC discharge	45°C	0°C=off	75°C
Residual quantity SC	200 ml	0 ml	500 ml
Max. storage	0=aus	0	600min

Parameter	Basic value	Minimum value	Maximum value
Drain before rinsing	No	No	
No. of brewing proc. before rins.	0=aus	0	100
No. of brewing proc. when dosing unit has gone empty	2 firmly set		
Interrupt cleaning	No	No	Yes

8. Control

8.1 Arrangement of fuses and relays



F1 4 AT/ from 8.98 – 3.5 AT 230 V
AC

Primary voltage of transformer

F2 4 AT/ from 8.98 – 3.5 AT 22 V AC
for control board

F3 1 AT/ from 2.2000 mit Einführung
der Steuerplatine Version 2

F4 6,3 AT 230 V AC
for heating of brew vessel and storage
container

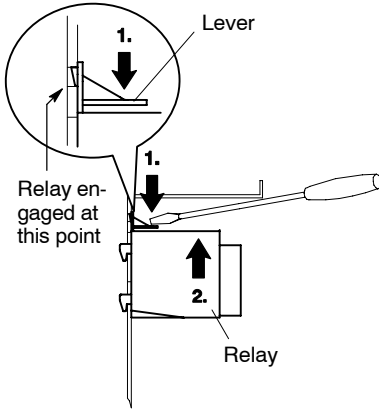
K1–K3 Brewing water heating

K4 Brew vessel heating

K5 Storage container heating

8.2 Dismounting relay

Remove front panel bottom, see Chapter 5.

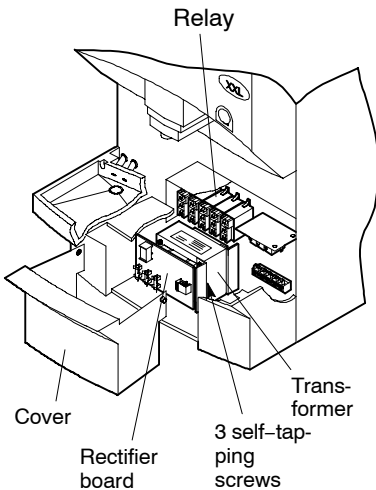


Dismounting

1. Press the lever and hold it,
2. push the relay up and remove it.

8.3 Dismounting rectifier board/transformer

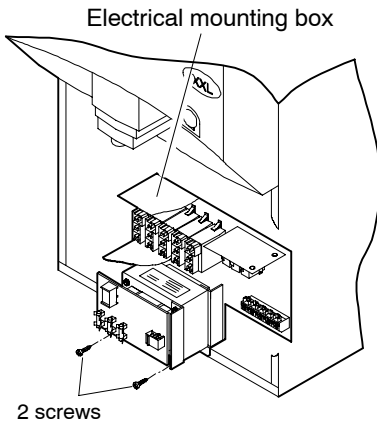
Remove front panel bottom and cover, see Chapter 5.



- ▣ Remove plug from rectifier board.
- ▣ Remove 3 self-tapping screws.
- ▣ Take the transformer with rectifier board out to the front.

8.4 Dismounting electrical mounting box

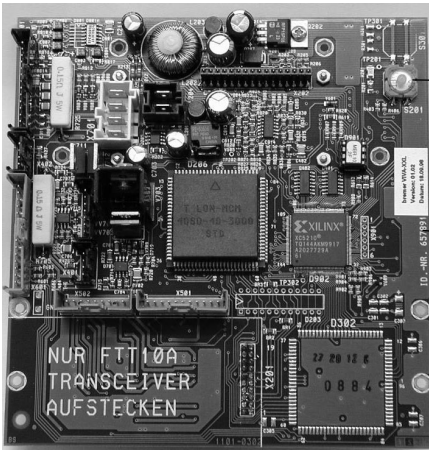
Remove front panel bottom, drip pan and drip pan bottom, see Chapter 5.



- ▣ Remove 2 screws.
- ▣ Pull the electrical mounting box out to the front.

8.5 PC – board

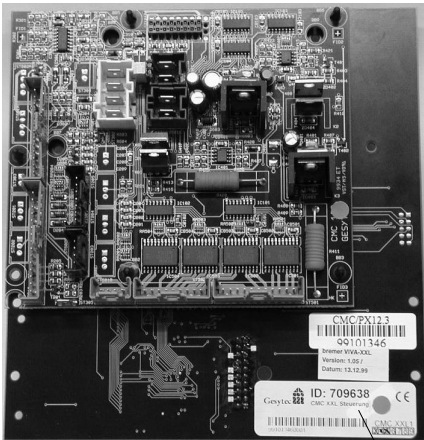
PC – board (Version 1) – implementation till February 2000



Key Service-PIN for withdrawing the Neuron-Identificationnumber

PC – board Id.-No. 657891 – with German Software Version(You will find other versions in the spare part catalogue)

PC – board (Version 2) – implementation starting February 2000, since machine-No. 351330



Neuron-Identifikationnummer

The key on thebackside of the PCB “Service-PIN” is escaped. The withdrawing of the Neuron-Identifikationnummer results through similar pressing of bothe arrow keys.

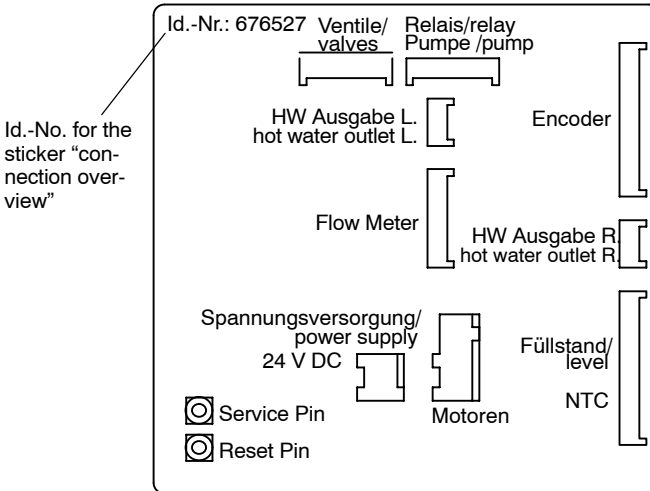
Softwareversions

- Firmwareversion 7
- You can just make a download with the software Versions starting from Version 1.05 !

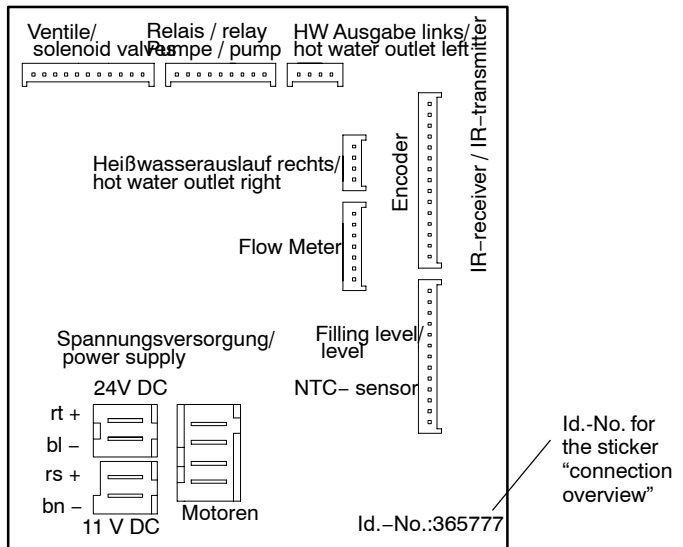
PC – board Id.-No. 709638 – with German Software Version You will find other Versions in the Spare part catalogue)

8.5.1 Connections PC – boards

Connections PC – board (Version 1) – performance till February 2000



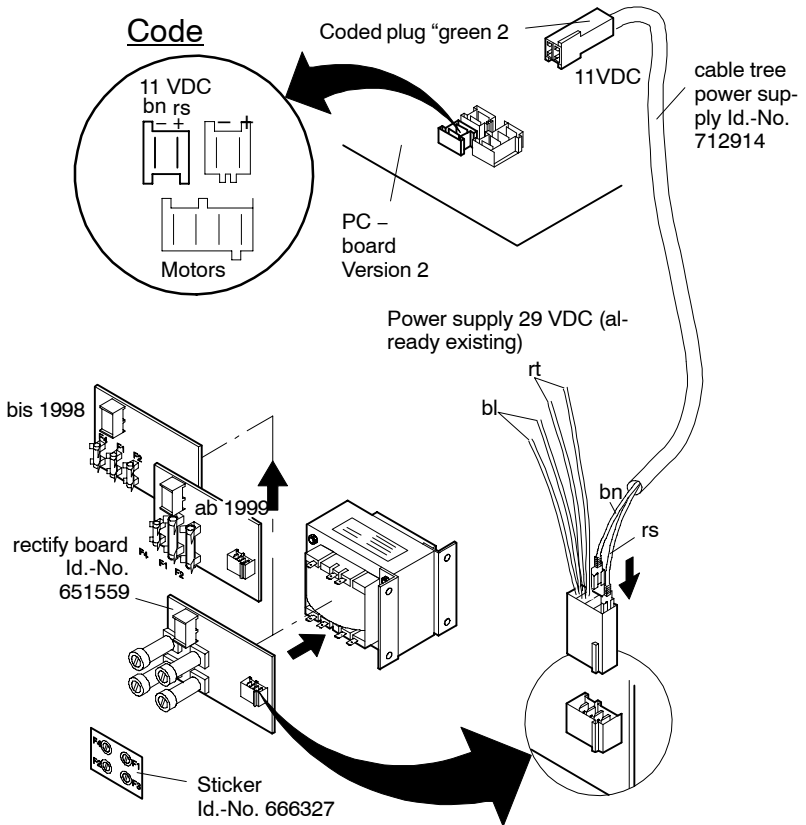
Connection PC– board (Version 2) – performance since February 2000, since Machine-No. 351330



8.5.2 Exchange of the PC – boards (different Versions)

Exchange of PC – board version 1 (TLon) to version 2

- ▣ One cable tree “Power supply” Id.-No. 712914 to reconstruct afterwards.
- ▣ Exchange the used rectify board (3 fuses) through the rectify board (4 fuses).
- ▣ Glue on the sticker “for the fuses” Id.-No. 666327.
- ▣ Glue on the stickere “connection overview” Id.-No. 365777 inside the fronpanel-



Exchange of the PC– board version 2 to version 1 (TLon)

- The rectify board Id.-No. 651559 can remain in the machine.
- The free ends of the cable tree “low voltage” remain not used.

8.6 Circuit diagrams/operating diagrams

Operating diagram Ident-No.: 676802

Steuerung Version 1

Circuit diagram VIVA XXL 400 Volt, Ident-No.: 670332

Circuit diagram VIVA XXL 440 Volt 3N 50/60 Hz, Ident-No.: 698458

Steuerung Version 2

Circuit diagram VIVA XXL 400 Volt, Ident-No.: 396044

9. Failures, trouble shooting, maintenance intervals, tools

9.1 Display of error codes on the machine

Error code till vers. 5.11	Error code since vers. 5.12	Error	Cause of error
01	01	Brewing unit has not reached the position. The machine changes to STANDBY, an error code is displayed.	Defective fork light barrier (encoder) Difficult operation of the brewing unit Defective motor control Defective motor
02	19	Failure of coffee powder dosing unit. Machine changes to STANDBY, an error code is displayed.	Foreign bodies in the dosing unit Defective motor Defective motor control
03	20	Flow transmitter No impulses from coffee output unit. No coffee output or no dosed coffee output possible. The control receives no impulses, coffee output only for approx. 1.5 seconds Display of error code only after changing to STANDBY.	Dirty / defective flow transmitter No voltage at infrared detector Defective infrared detector Dirty/defective magnetic valve of coffee output unit
04	04	No impulses from brewing water flow transmitter. Error message after approx. 1.5 seconds. Machine changes to STANDBY, an error code is displayed.	No water pressure Dirty/defective flow transmitter No voltage at infrared detector Defective infrared detector Dirty/defective magnetic valve of brewing water
05	05	Interruption of brewing water thermometer probe. Machine changes to STANDBY, an error code is displayed.	Cable is interrupted Defective thermometer probe
06	06	Short-circuit of brewing water thermometer probe. Machine changes to STANDBY, an error code is displayed.	Defective thermometer probe

Error code till vers. 5.11	Error code since vers. 5.12	Error	Cause of error
07	23	<p>Interruption of brew vessel thermometer probe.</p> <p>Brew vessel heating out of operation.</p> <p>Error code is displayed only after changing to STANDBY.</p>	<p>Cable interrupted</p> <p>Defective thermometer probe</p>
08	24	<p>Short-circuit of brew vessel thermometer probe.</p> <p>Brew vessel heating out of operation.</p> <p>Error code is displayed only after changing to STANDBY.</p>	<p>Defective thermometer probe</p>
09	25	<p>Interruption of storage container thermometer probe.</p> <p>Storage container heating out of operation.</p> <p>Error code is displayed only after changing to STANDBY.</p>	<p>Cable interrupted</p> <p>Defective thermometer probe</p>
10	26	<p>Short-circuit of storage container thermometer probe.</p> <p>Storage container heating is out of operation.</p> <p>Error code is displayed only after changing to STANDBY.</p>	<p>Short-circuit of storage container thermometer probe.</p>
11	27	<p>Diaphragm pump is running more than 10 minutes.</p> <p>Error code is displayed only after changing to STANDBY.</p>	<p>Clogged brew sieve.</p> <p>Leaky brew vessel, diaphragm pump cannot build up over-pressure.</p>
12	28	<p>Overflow in the brew vessel</p> <p>Machine changes to STANDBY, an error code is displayed.</p>	<p>Leaky rinsing valve, uncontrolled water flow into the brew vessel.</p>
	29	<p>Brew vessel overfills when starting</p>	
	30	<p>Coffee empty</p>	<p>The coffee powder container is empty. Refill it with fresh coffee powder.</p>
	32	<p>Cleaning agent empty</p>	<p>The canister is empty. Connect a full new canister BremaTron with liquid cleaning agent.</p>
		<p>Display shows: "Fault in dosage"</p>	<p>Settings for "Dosing time coffee > "Dosing time vor brewing water"</p>

9.4 Special tools/lubricants

Recommended special tools

Torx screw driver, size TX20

Phillips screw driver size 2, shaft length approx. 250 mm

Lubricant

Graphite grease (Ident-No. 106593, Molykote 1102, 25 g)

10. Miscellaneous

10.1 Completion of Service-Menu – VIVA control board II


- Guilty for the bremer VIVA-Series: Standard, au lait, Barista, XXL, XXL-T and VIVA Filtro – ab Version 5.03 BR13.

!!! STANDBY !!!



set the date
17:07:02


Set the time
13:58



int.temper.of
machine_60 C


- ▮ Switch off the bremer VIVA by pressing the  ON / OFF button.

- The bremer VIVA is now on Standby-Mode.


- ▮ Go to Service-Menus
 - key  afterwards press  key.

- ▮ By pressing the key  to Menue “set the date”.

- set day, month, year:
 - change value by  key
 - Move the the write mark or Cursor with key  to the right hand side.

- ▮ By pressing the key  to menue “set the time”.


- set the hours and minutes “like the date.

- ▮ By pressing the key  to menue “int. temper. of machine”.

- You can read-out the actual temperature on the control-board. there are no settings possible.

Britamodus 0

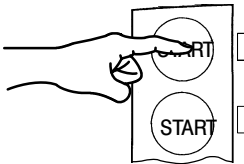
Filter: 6000
Rest:

By pressing the key  to menue "Brita Mode".

- You can adjust the predetermining counter to the desired mode of operation. More informations about that in the following chapter 10.3.

10.2 Set the language for the menuue



STANDBY




Ländercode

044 STANDBY

- You can set the language of the texts or country code at the machine
 - before switching on**
 - in STANDBY Mode.

Press the upper article key on the left hand side continuously, press at the same time key  or  till the requested country code appears in the display


<u>Country code</u>	<u>Language</u>
031	Netherlands
033	French
044	English
049	German
081	Japanese (2002-11)
095	Russian

Confirm the setted contry code with key 


Summenzähler

- Subsequently the setted language is shown (Summing counter) in the display.

Menü
verlassen

☞ Go to “Menü verlassen” (Exit menu) with key 

STANDBY

☞ Confirm the setting with key 

- The machine goes into the STANDBY Mode and stores the new setting.
- With deviating proceeding the setting may be lost after wetting running.

10.3 Prevented Service for Brita water softener

- The pulse trigger of the water gauge can be connected
 - on the 5 pole connectionbeneave the connection of the hot water outlet
 - PIN 1 + 5
 - Required 5– pol. plug (Id.Nr. 094196).

description of the system

To prevent calcification on coffee machines, Britta Waterfilters are placed into the water supply of the coffee machines. The Problem is, that they have a limited throughput rate and they have no effect anymore to soften the water. The Flowrate is dependent from different factors. f.e. from the water hardness in the area. Therefore is to each brita filter a table enclosed, how much water, at which water hardness can run through the filter before it has to be changed. Now you get a message in the display of the Coffee machine, if the water filter needs to be exchanged.

Function

Therefore you have a preselected counter from 00 000 to 99 999 .unit = Liter (realistic values are between 3000 and 50 000 Liter). With a parameter in the Service menu You can preset the counter to the Value which you need with your filter and water quality.

Presetting Counter = 6000 liter
Presetting operation mode = 0

operation mode 0 = no water softener

operation mode 1 = metering with the internal Waterturbine

operation mode 2 = metering with external water gauge

operation mode 3 = Measuring with internal water turbine and external water gauge

operation mode 0

- no metering
- no hint in the display

operation mode 1

The Impulses of the internal Turbine are counted and with a divider in the software side (1 Impuls is corresponding 0,5 bis 0,55 ml), will be the presetted counter counted down. 1 step corresponds 1 Liter. By reaching the value 00 000 ->further on [successive event]

operation mode 2

The trigger impulses of the external water gauge are counted and by a software side included Divider will the presetted counter be counted down. 1 impuls of the water gauge corresponds 10 Liter and stays on the control board for 1 second. 1 step is 1 liter -> that means per Impuls = 10 steps counted down. By reaching the value 00 000. ->further on "successive event".

operation mode 3

The impulses of the external water gauge are counted down and by a software side included Divider will the presetted counter be counted down. The Impulses of the internal turbine are also counted down and by a software side included Divider will the presetted counter be counted down (not displayed) the one which is first on 00 000 will be triggered -> further on "successive event".

Successive event:

An information (Error Nr. nn by "nn").
will be generated (Journalinformations; Network variable etc..)
- the presetted counter will count to the negative.
- no limitation of the function in the machine
- Hint "Waterfilter " in the Display.

You can quit this hint with an additional point in the menue "Quit error " and that hint is continuously switched off. (This point in the menue could also just appear, if there is a message).

10.4 Software to the new PC board, PlugIn (Version II)

Download of the new Software to the new PC board VIVA II (Id.nr. 810 932)

In the new PC board we have for controlling the device applications a 32 Bit processor inserted. The Neuronchip is just used for the communication of the LON–Network

- programdownload
- Communication in the network (f.e. VIVA with MDB Interface).

The APB–File for the Neuronchip is downloaded by the manufacturer and has just to be downloaded new, when there are changes in the ntework interface via ALEX (like untill now).

The Applicationprogramm (machineprogram) exists out of 4 blocks.They are zipped in a file and get automatic unzipped by a download start and after a programdownload again deleted – the zipped file remains. The name of the zipped file is the name of the Software Version

f.e. VMK_0501_22.zdl

The Firmware of the control board includes a program named Bootloader. It corresponds the BIOS of a PC. It is downloaded by the manufacturer and will be automatical installed by a download of the applicationprogram with plugin(improvement).

The Bootloader will be started first by switching on the PC board.

The Bootloader has following jobs:

- 1.Intialising of Hardware components (processor, memories – not In and Outputs)
- 2.Check of the applicationprogram (checksum)
- 3.Start application

If the application test is negative the machine application will not be started.

LED of the product keys will flash.

The applicationprogram must be new downloaded.

The Bootloader is starting a LON–Application to make a LON–Communication possible. This application, which is part of the bootloader program, is also used by the PlugIn by downloading of the applicationprogram.

When the application is started, the bootloader is not any more required.

How to make a download to the PCb:

With Alex you communicate via the LON Network. Creation of Project- and templates, Produce bindings, Read, change etc. the Networkvariables.

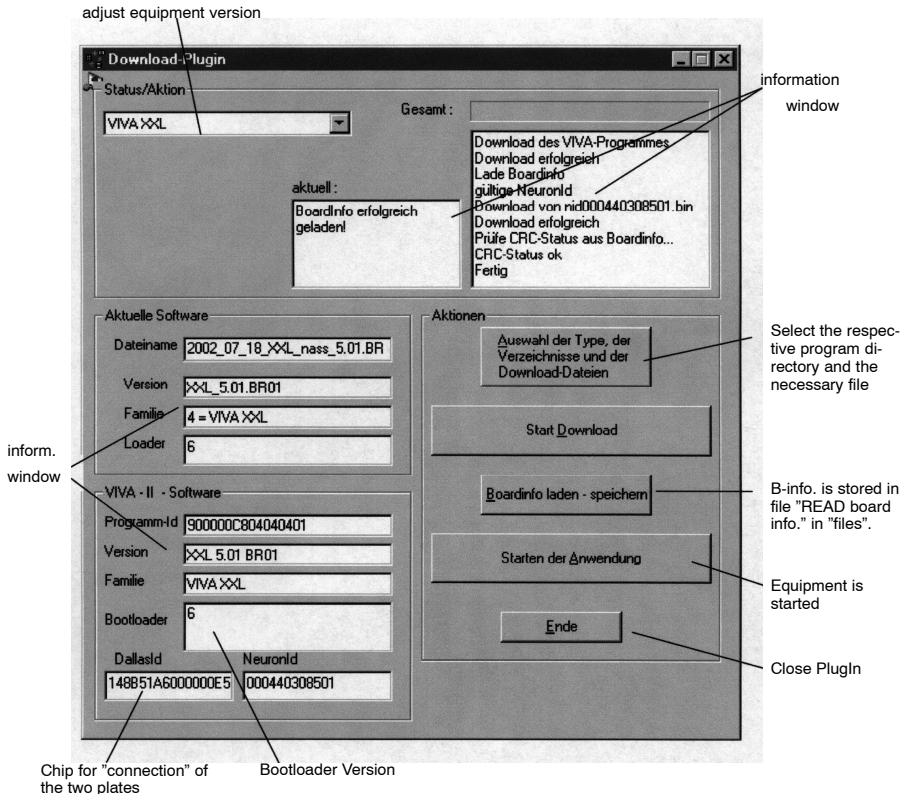
-> like until now.

1. generate a device template.
2. Generate a device and make your Reset and Test
 - APB-File must not be downloaded – just by changes in the Network interface.
3. register PlugIn (chapter EXTRAS)
4. Start PlugIn
 - Controls are done automatical.
5. choose device type – displayed in left upper side “device type”.
6. Choose directories and files.
This must be setted once per device Otherwise choose over point 5 – or by changes of directories f.e. Disk
7. Start Download
8. Start application
9. leave PlugIn.

Download of more PC boards:

Exchange the device in Alex and repeat – point 2 – 9 .

PlugIn – description



Remark : In ZDL-files are now all data blocks (programfiles) for the download included.

First the bootloader version is detected. by a new Bootloader, or already present application the last used device type/zdl-file **maintained**. In these cases the actual Board info is read out of the Control board and displayed in the lower left area.

If required you need to choose a new one.

Then Data access on the ZDL-file and detecting DATas and Displaying them

From the principle the download should now be possible, if not, then the downloaded XIF and APB is blocked, if the XIF/APB-file are not matching with the zdl-File.

The Download transfers the new Bootloader, the User - Blocks and is loading then the Dallas-ID. At least the board info is downloaded and the CRC values are checked.

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bremer VIVA XXL
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