



**Fully integrated,  
integrated, Built-under,  
freestanding Dishwasher  
with Easytronic**

© Electrolux  
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Spares Operation  
Edition: 10.01

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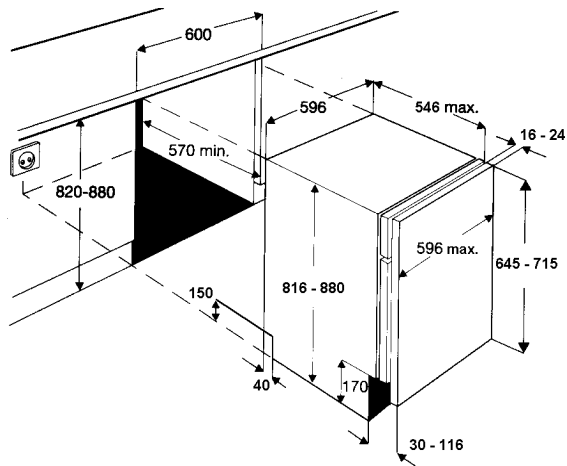
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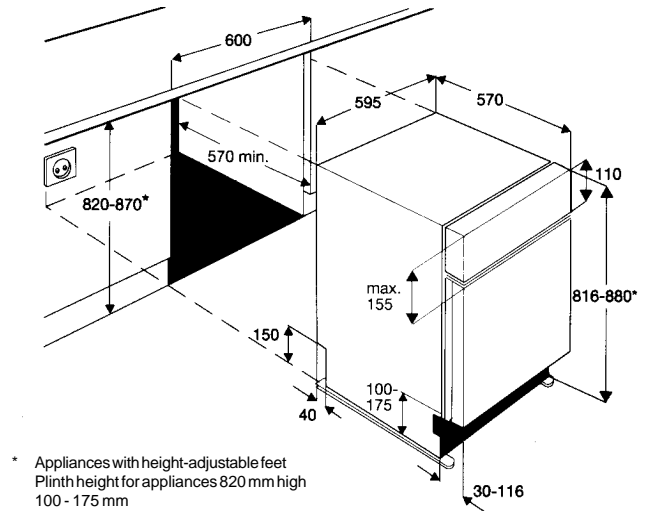
# 1. Technische Daten

## 1.1 Dimensions

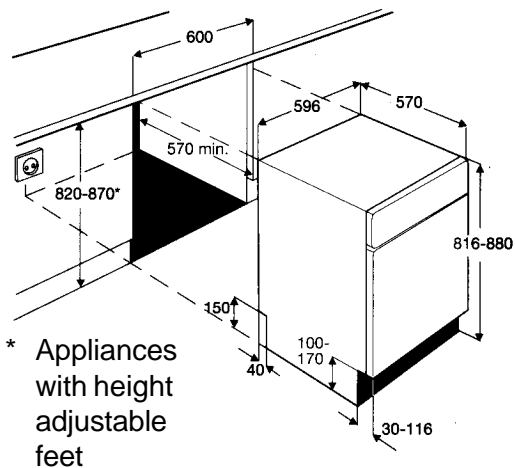
### Build-in dimensions for Fully Integrated Dishwashers



### Build-in dimensions for Integrated Dishwashers



### Build-in dimensions for Built-Under Dishwashers



### Dimensions for Freestanding Dishwasher

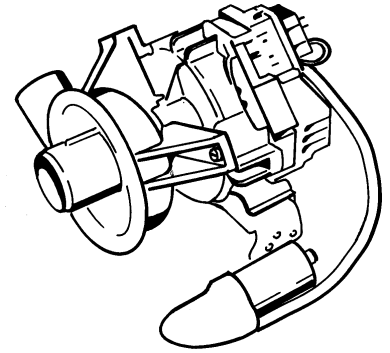
Height 85 cm  
Width 60 cm  
Depth 60 cm

Height with worktop removed 82 cm  
Feet adjustment 1 cm

## 1.2 Components

### Circulation Pump

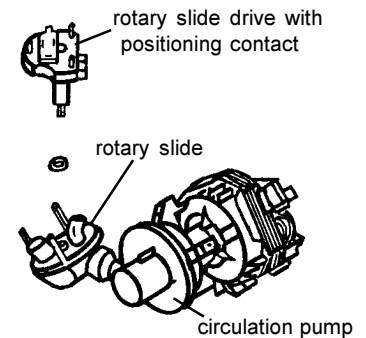
The circulation pump is driven by an asynchronous motor with an auxiliary winding. The auxiliary winding is in circuit with a 4 mF capacitor. A tachogenerator is used for speed control. The circulation pump is driven with different rotational speeds between 1600 1/min and 2800 1/min, capacity 50 W. The circulation pump supplies all spray levels simultaneously.



### Circulation Pump with rotary slide

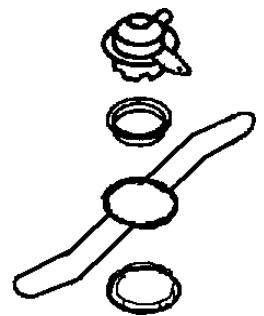
The circulation pump is driven by an asynchronous motor with an auxiliary winding. The auxiliary winding is in circuit with a 4 mF capacitor. A tachogenerator is used for speed control. The circulation pump is driven with different rotational speeds between 1600 1/min and 2800 1/min, capacity 50 W.

At the pressure connecting piece of the circulation pump there is a rotary slide which guarantees the water supply to the upper sprayarm alternating with the lower sprayarm and the ceiling shower and/or the ceiling sprayarm. During the heating phase only the upper sprayarm is operating.



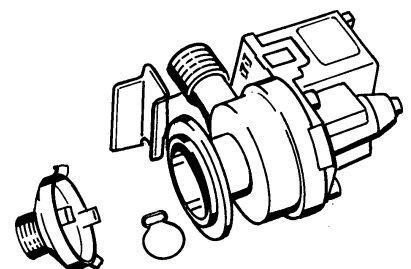
### Ceiling Sprayarm

The new cutlery basket is placed at the upper dishwasher basket. The ceiling sprayarm sprays the water directly onto the cutlery basket and guarantees an excellent washing result with the cutlery placed in that basket.



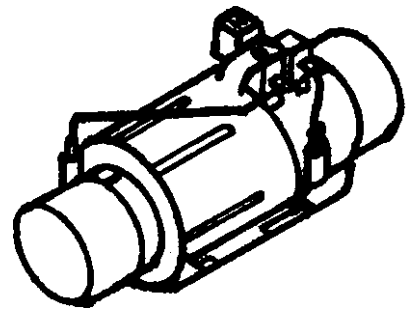
### Drain Pump

The drain pump is driven by a synchronous motor.  
Power output 26 W.  
Pump rate 15 l/min.



## Flow Heater

The flow heater heats the water to the required temperature. During the wash cycle, water is constantly passing through the flow heater and is located in the water circuit in front of the upper sprayarm.



Power output	2100 W
Resistor	25 W
Protector	98 °C ± 5 K
Thermal fuse	260 °C

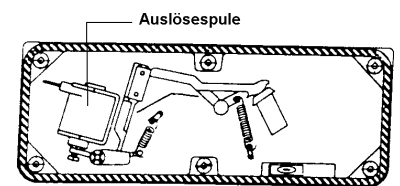
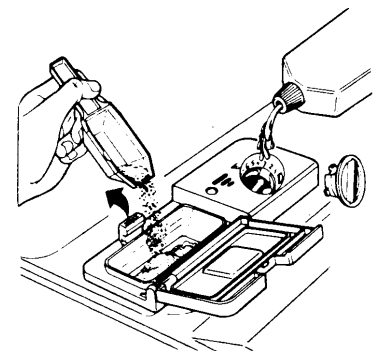
## Detergent / Rinse Aid Combination Dispenser Unit 1

This detergent dispenser has only been used at the beginning of the series.

Detergent dosage = 20 ml - 30 ml

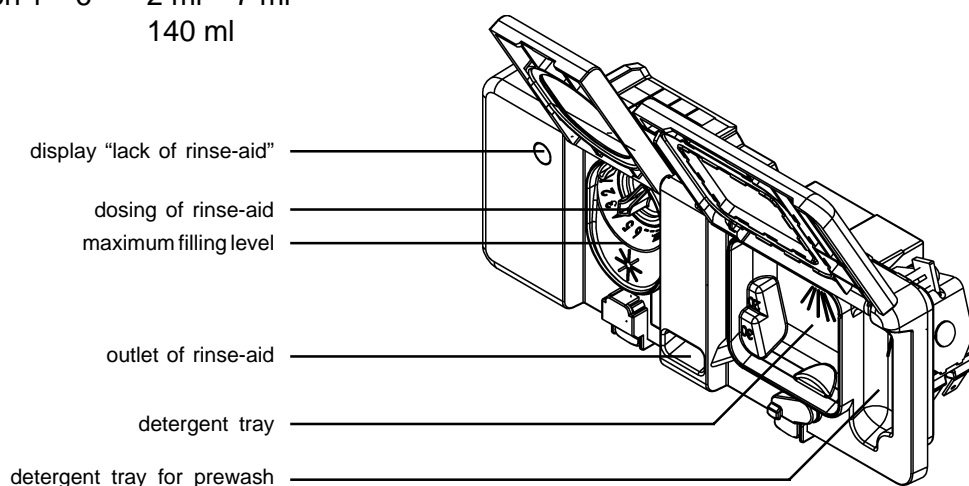
Rinse Aid capacity	150 ml
Dosage settings	1 - 6
Quantity	1 cm <sup>3</sup> - 6 cm <sup>3</sup>

The detergent dispenser is activated by a release coil. The first operation adds the detergent, and the second the rinse aid. If the door is opened, the latching bar is reset to the detergent dosage position.

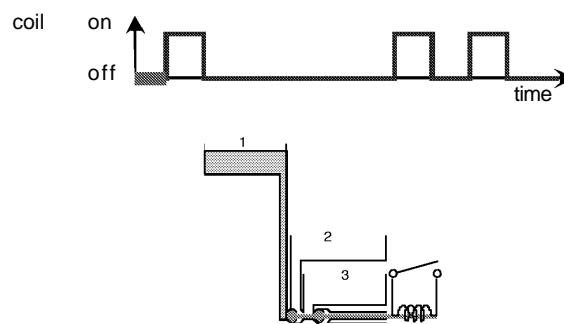


## Detergent dispenser 2

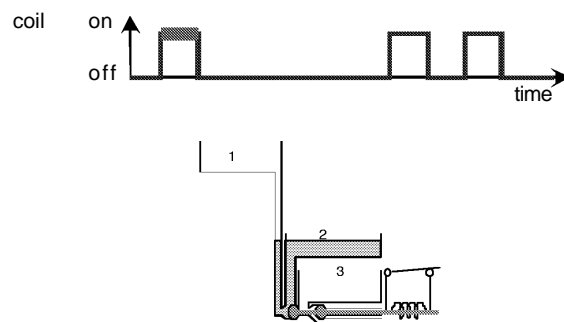
Dosing of detergent	prewash	10 ml
	wash	20 – 30 ml
Dosing of rinse-aid	position 1 – 6	2 ml – 7 ml
Capacity		140 ml



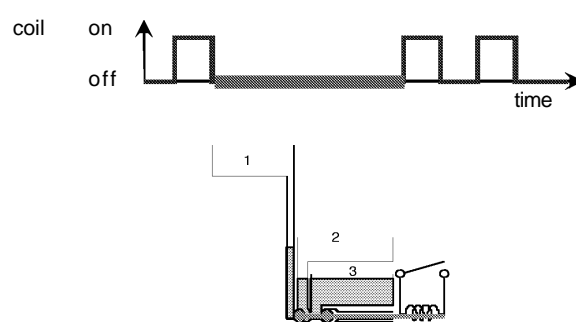
The detergent compartment 1 is filling corresponding to the set dosing quantity when the door is open. Possibly existing rinse-aid in compartments 2 and 3 flows back into the storage tank of the rinse-aid. The detergent trays are filled up. The door will be closed and the detergent for prewash will be rinsed out through the slots in the detergent dispenser cover.



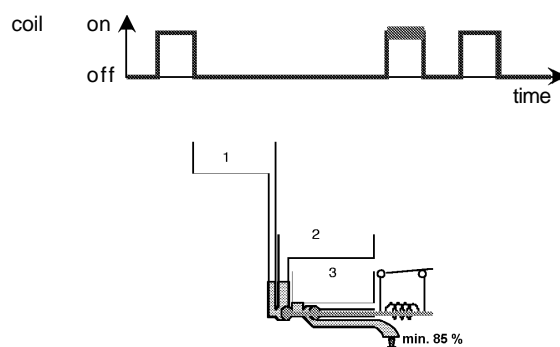
During the washing cycle the coil is switched on and the detergent compartment cover releases the detergent. The rinse-aid flows from compartment 1 into compartment 2.



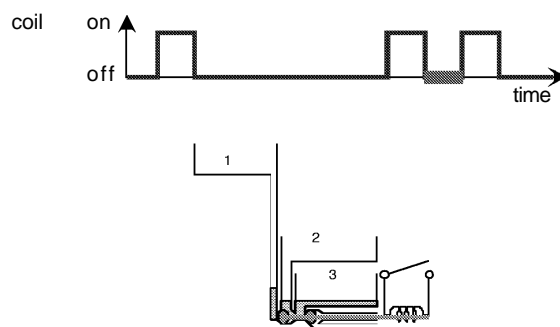
After switching off the coil, the rinse-aid flows from compartment 2 into compartment 3.



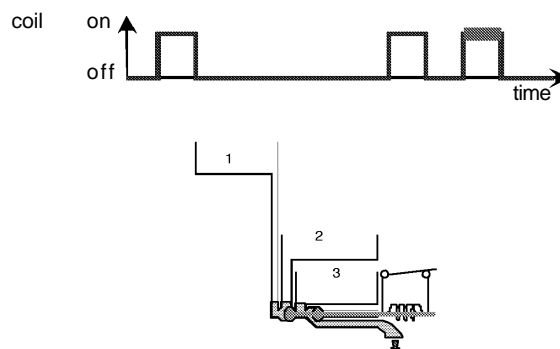
During the rinse cycle, the coil will be switched on when the rinse is warmed and the rinse-aid runs from compartment 3 into the rinse tank. At the same time, the remaining rinse-aid (15 %) runs from compartment 1 into compartment 2.



With the coil switched off, the rinse-aid flows from compartment 2 into compartment 3.



During the rinse cycle, the coil is always switched on twice. When it is switched on the second time, the remaining rinse-aid flows into the rinse tank.



## Electronic

On electronic models, a micro processor controls all components, this is done using triacs. The electronic also memorizes all programme data.

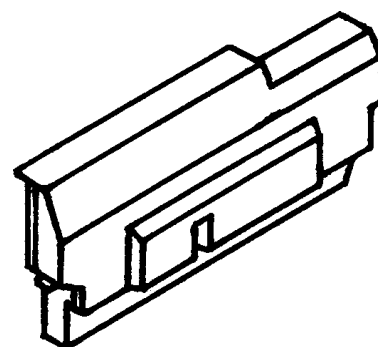
The software is continuously developed further. The later described software-dependent sections refer to the following numbers:

Easytronic + 2. software 111 573 600  
111 577 800

Easytronic 4. software 111 578 100  
111 578 200

These electronics are programmed in the factory and then receive a service PN number. As spare part you can only get the current software. Older versions are dropped. The assignment is determined by replacement notes.

10.2001 A. B.

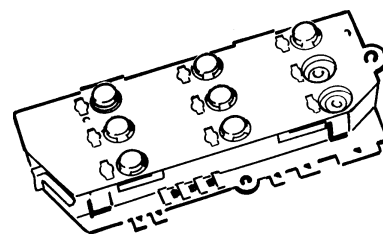




## Input Module

The programs are selected via the input module, which is mounted in the door. All components are connected to this module.

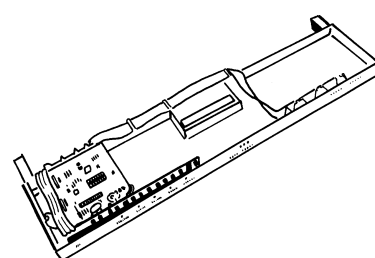
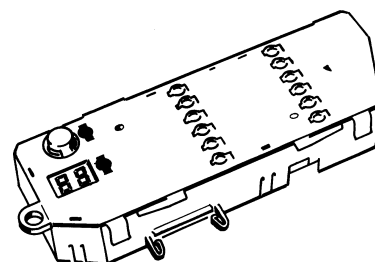
The key layout can be vertically or horizontally.



## Output Module

Depending on models displays are integrated into the output module.

- o salt
- o rinse aid
- o water
- o filter
- o display
- o residual run time
- o delay start
- o fault display
- o water hardness
- o program cycle display



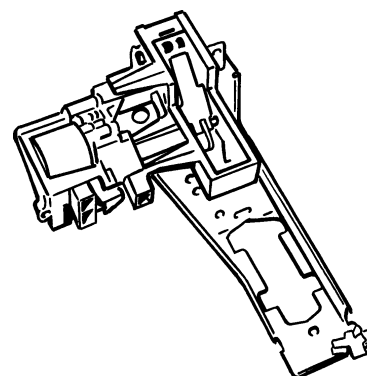
## Fully integrated control Panel

- 1 Input module
- 2 Output module

The panel is always supplied completely when needed as spare part.

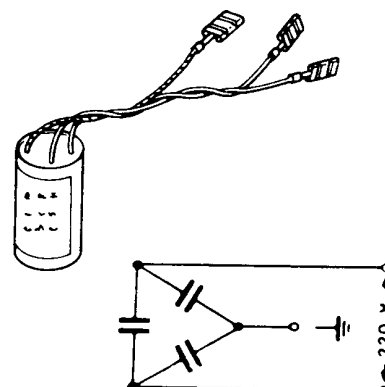
## Servo Door Lock

Fully integrated dishwashers have a servo door lock. Once the program has started the door is locked automatically, however the door can be opened by using extra effort.



## Interference Filter

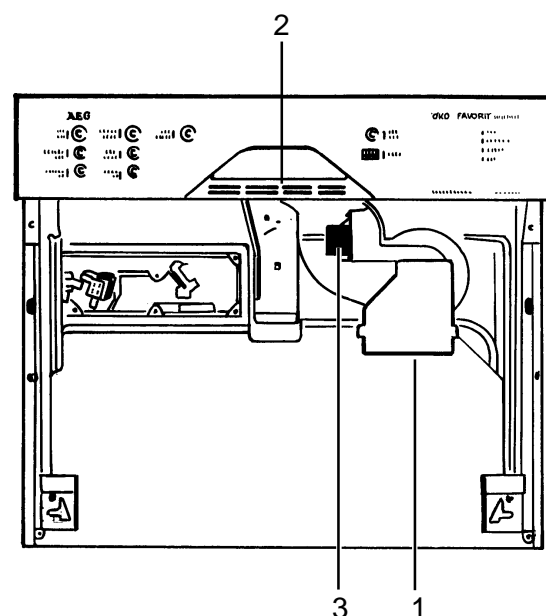
The interference filter is connected in the terminal board parallel to the mains feed.



## Drying Fan 1

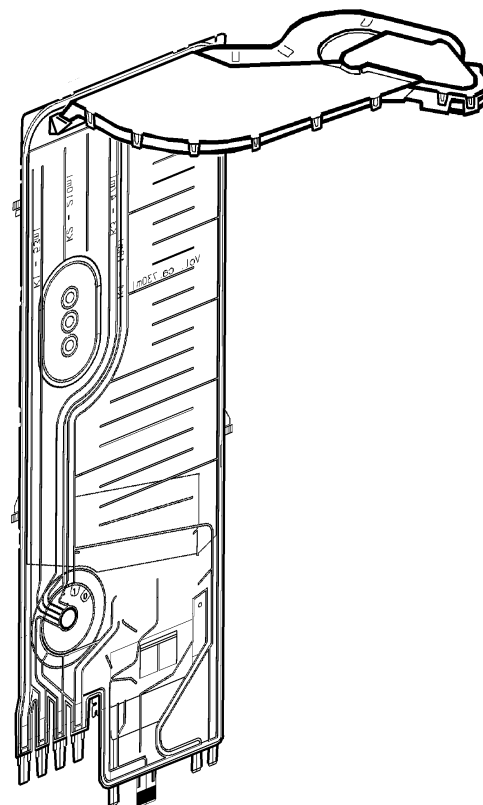
The drying fan sucks the humid air from the tub, and mixes it with dry air which is drawn up from in between the door panels (1) and blows it out through a vent situated below the door handle (2).

During the wash cycle the fan intake vent on the inside of the door is closed by a thermoelectric valve (3).



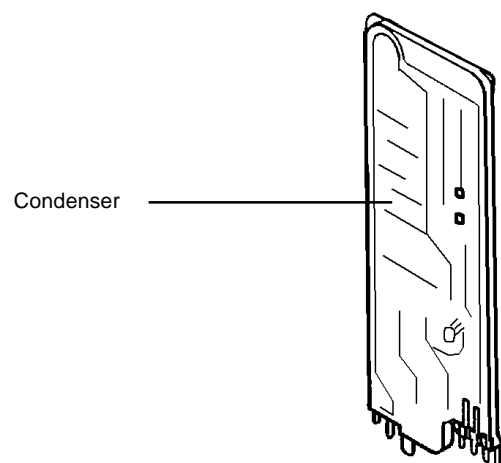
## Drying fan 2

The new drying fan is located at the top on the rinse tank.

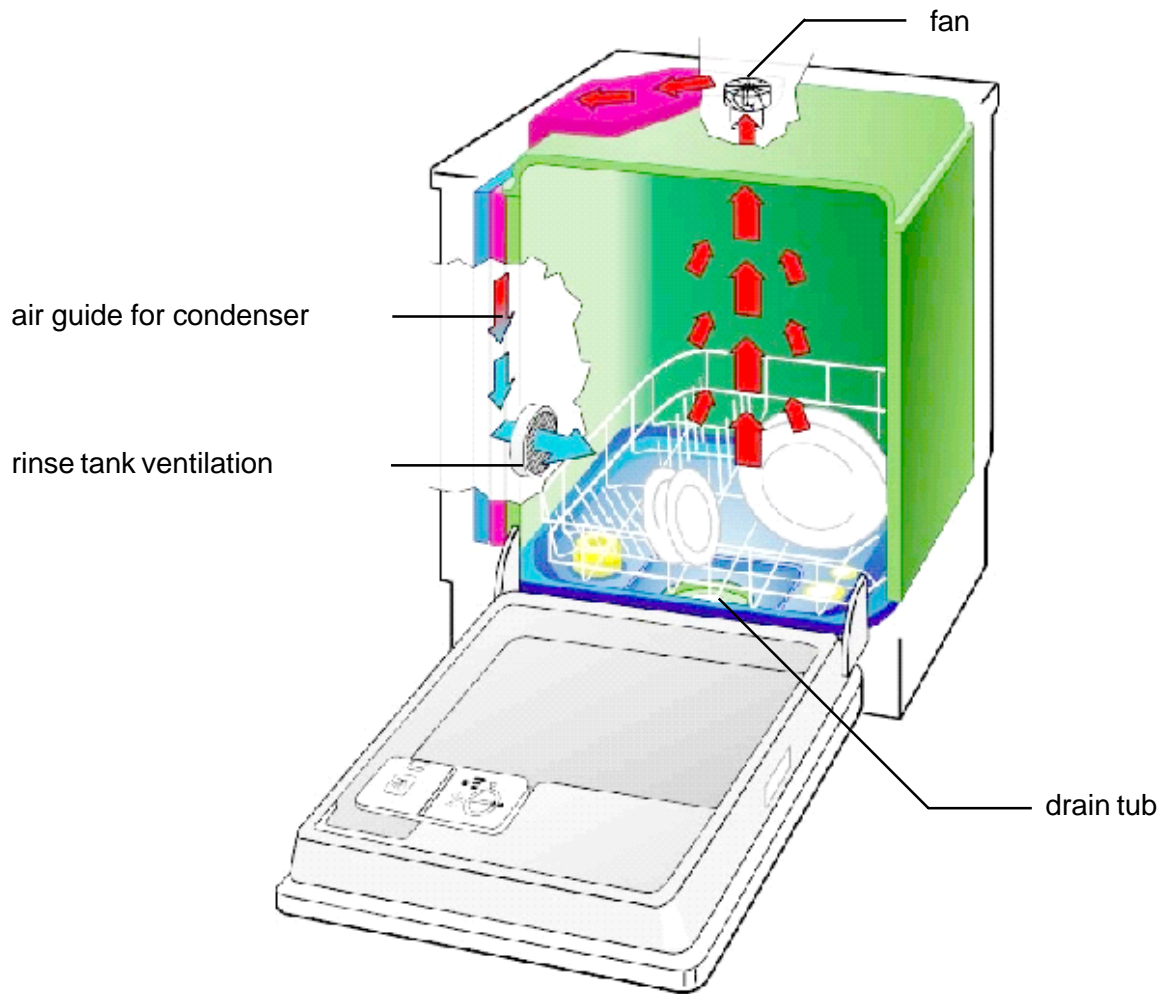


## Regenerating dosing with condenser

With every filling step, the condenser cools down due to the cold incoming water. Therefore another 1 liter of water is required during the drying cycle.



### 1.3 Function mode of the condensing drying



Rinse tank, fan and regenerating dosing with condenser form a closed circuit. The humid air is sucked from the top of the rinse tank and blown through an air guide between rinse tank and regenerating dosing. Thereby the air gets dry and the condensate is guided to the drain tub.

The dry air gets through the rinse tank ventilation into the rinse tank. During the drying phase, the condenser is additionally cooled with 1 liter of water.

## Water Softening 1

The incoming water flows through the softener which works according to the ion exchange principle. The ion exchanger is filled with small epoxy resin balls. The resins exchange the hardness constituents (calcium and magnesium), for sodium ions.

When all the sodium ions are used up, it is necessary to regenerate the softener. This is done by flushing a brine solution through the softener.

Afterwards the softener is washed out with fresh water and is now fully effective.

Depending on the water hardness, regeneration is only necessary after several wash cycles.

The softening system is designed for a water hardness of up to 50 °dH.

## Water softening 2

The water softening can be adjusted in 10 levels. The incoming water flows until position 5 to 85 % through the softener which works according to the ion exchange principle. The ion exchanger is filled with small epoxy resin balls. The resins exchange the hardness constituents (calcium and magnesium), for sodium ions.

When all the sodium ions are used up, it is necessary to regenerate the softener. This is done by flushing a brine solution through the softener.

Afterwards the softener is washed out with fresh water and is now fully effective.

Depending on the water hardness, regeneration is only necessary after several wash cycles.

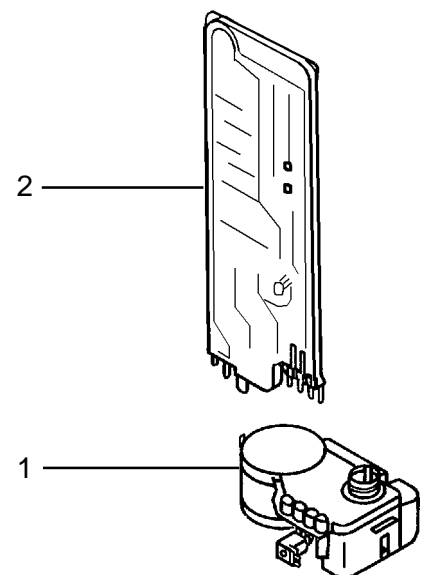
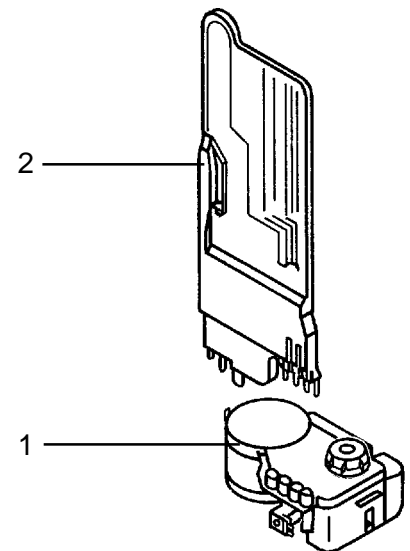
The remaining 15 % of water flow through the rinse tank ventilation directly into the appliance.

From setting of level 6, the whole water flows through the softener. For this purpose you also have to set mechanically from 0 to 1 with the regenerating dosing.

With the setting of level 9, it is additionally regenerated after the washing in a rinse cycle. With the settings 1 to 8, it is regenerated after the final rinse depending on need. The softening system is designed for a water hardness of up to 70 °dH.

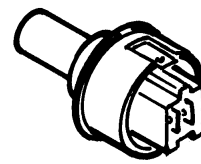
The components required for water softening.

1. softener unit
2. regeneration dosage chamber



## NTC Temperature Sensor

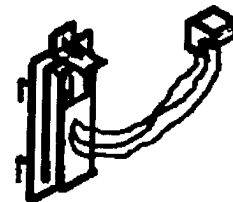
NTC temperature sensor	
temperature/resistance	20 °C / 6032 $\Omega$
	25 °C / 4829 $\Omega$
(only with fully electronic	30 °C / 3891 $\Omega$
dishwashers)	40 °C / 2573 $\Omega$
	50 °C / 1741 $\Omega$
	55 °C / 1444 $\Omega$
	60 °C / 1204 $\Omega$
	65 °C / 1009 $\Omega$
	70 °C / 849 $\Omega$



## Electronic rotational speed detection for the upper spray-arm

The rotation speed detection consists of a magnetic sensor (Hall generator) which is excited/driven by a magnet in the upper sprayarm.

The fault "sprayarm blocked" is indicated when less than 4 revolutions within 40 sec have been detected.

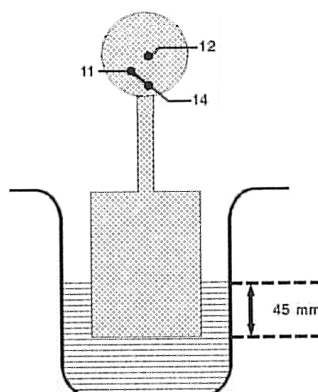
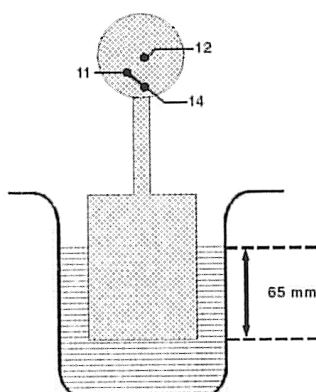
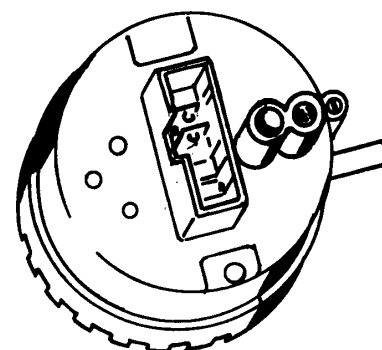


## Pressure Switch

The pressure switch controls the water level. Without water, contact 11 - 12 is closed.

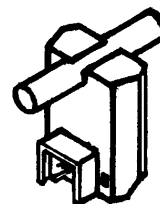
fN	Switch point with level	65 mm Ws
	Reset point with level	45 mm Ws

The pressure switch is not adjustable.



## Turbidity Sensor

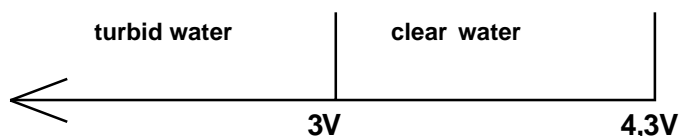
The turbidity sensor function is only activated in cycles "AUTO 65° and AUTO BIO 50°".



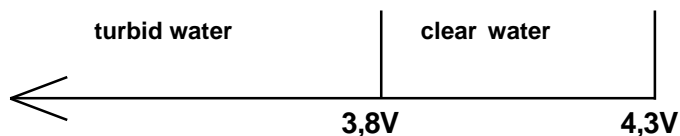
### Function:

The input voltage with the turbidity sensor may be between 6 V and 11.4 V. (The measurements are described in detail in the chapter "Measuring Points at the Electronic Control (in the base)"). For a clear water the output voltage must always be 4.3 V. If that value differs due to soiling of the turbidity sensor after a longer operational period, the Easytronic plus recontrols the input voltage with the turbidity sensor automatically until the output voltage is 4.3 V. This happens during the final rinse cycle. If the 4.3 V is not achieved within 8 seconds, the fault "C5" is stored in the fault memory. If the output voltage falls below 3 V in the prewash cycle and below 3.8 V in the intermediate rinsing cycle, turbid water will be detected. With the service test routine the turbidity sensor will be calibrated to 3.5 V not with water but with air. That corresponds to 4.3 V with water.

#### output voltage prewash:



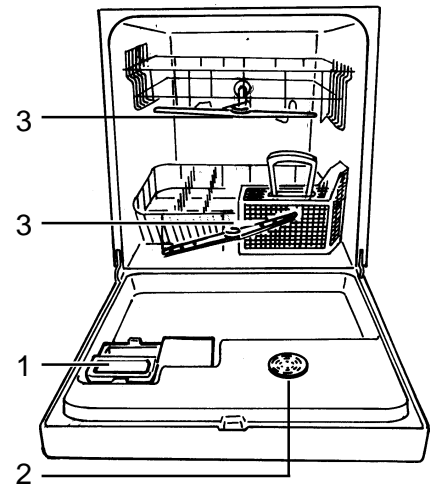
#### output voltage intermediate



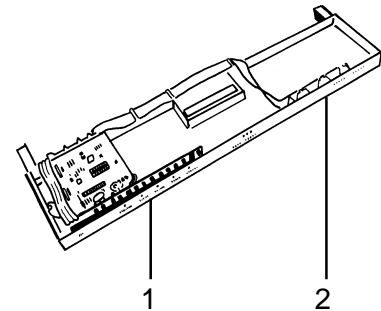
## 2. Repair informations

### 2.1 Position of Components

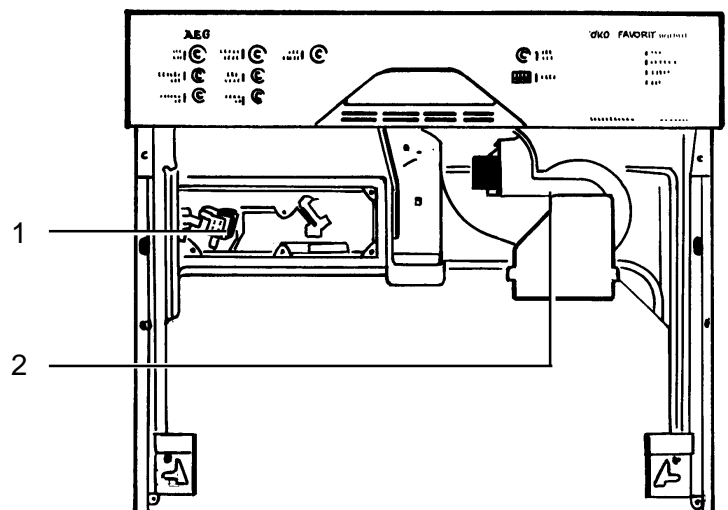
Detergent dispenser (1)  
Drying fan intake vent (2)  
Spray arms (3)



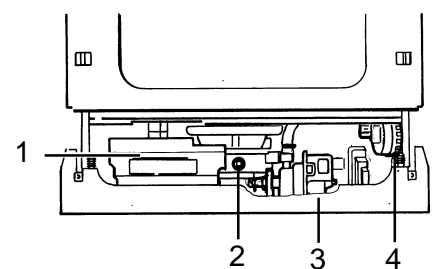
input module (1)  
output module (2)



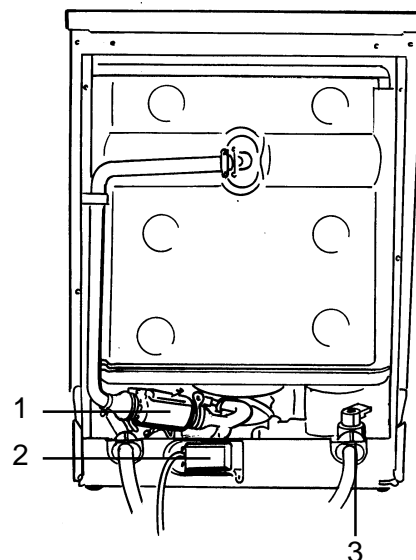
Detergent dispenser (1)  
Drying fan 1 (2)



Electronic (1)  
Thermal sensor (2)  
Drain pump (3)  
Pressure switch (4)

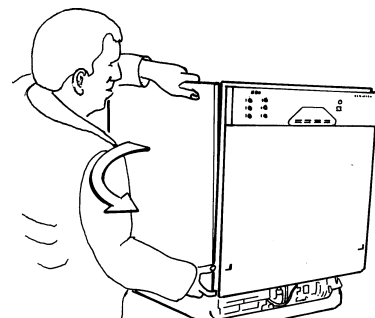


Flow heater (1)  
Terminal board (2)  
Inlet valve (3)



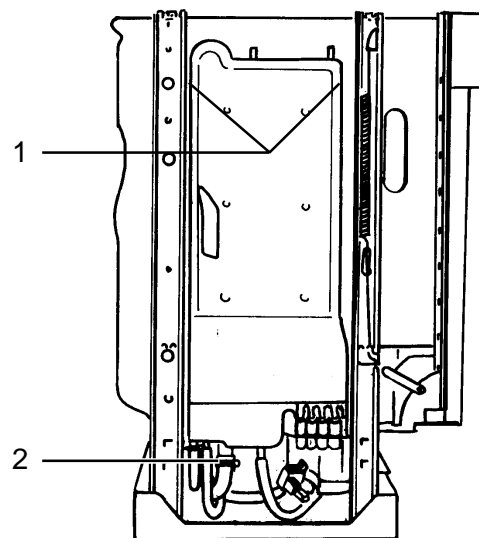
To remove side panel :

- Remove fixing screws
- Pull the panel away from the rear, and gently out of the front trim.



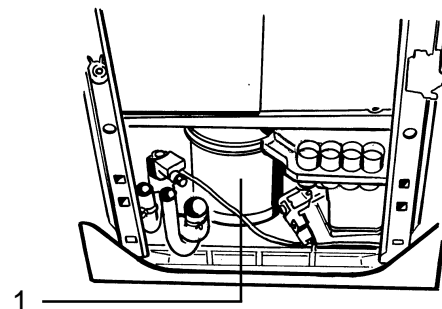
Removing the regeneration dosage chamber :

- disengage locking tabs (1)
- disconnect hoses (2)
- holding the top of the chamber, pull upwards disengaging it from the softener.



Removing the softener unit :

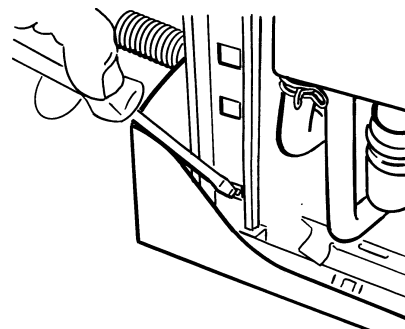
- remove the securing nut located under the salt cap.
- press softener (1) down and remove it through the front from the base area
- CAUTION if accessible release reed switch.





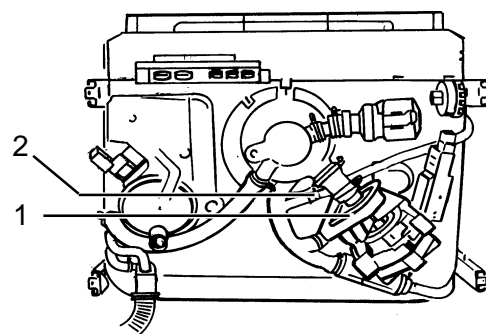
#### Removing the base :

- remove side panels, rear panel and plinth panel
- gently release base fixing clips with a screwdriver (figure)
- take off base carefully and release circulation pump, electronic and heater relay
- disconnect the float switch



With base removed the circulation pump (1) is accessible.

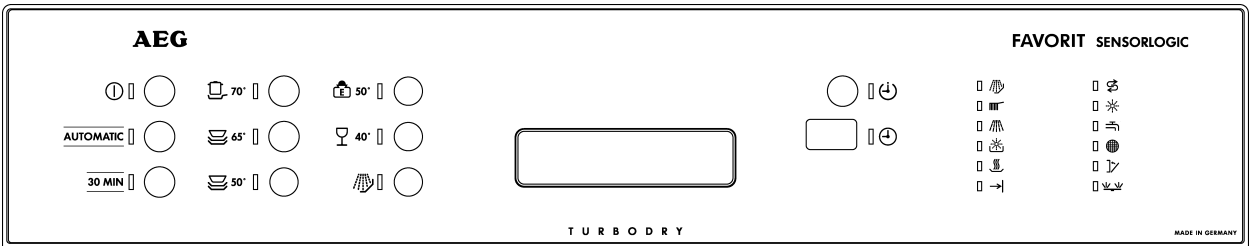
- 1 circuit pump
- 2 turbidity sensor



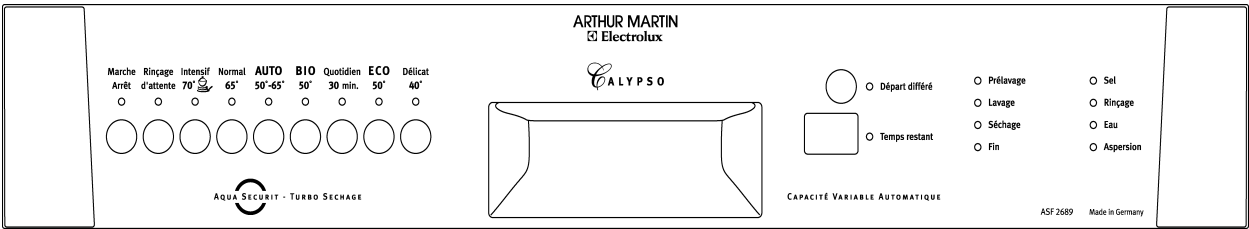
3. Examples for Panels and Circuit Diagrams

Easytronic + maximum equipment

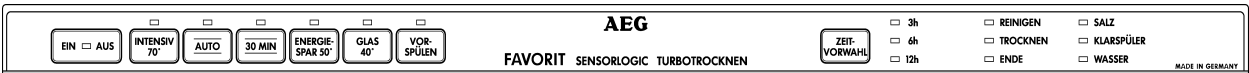
Control electronic 111 573 600



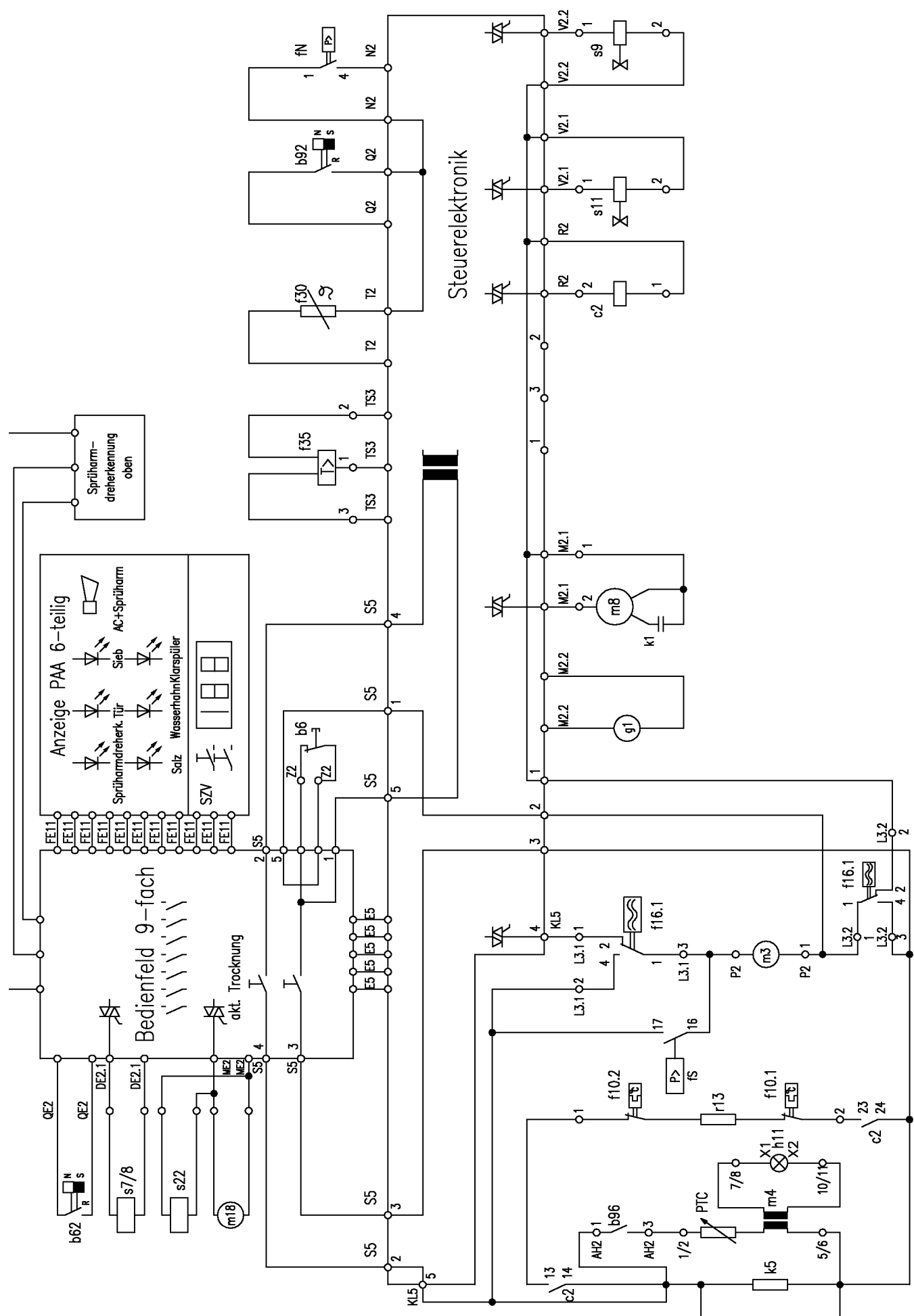
Circuit diagram 111 569 200

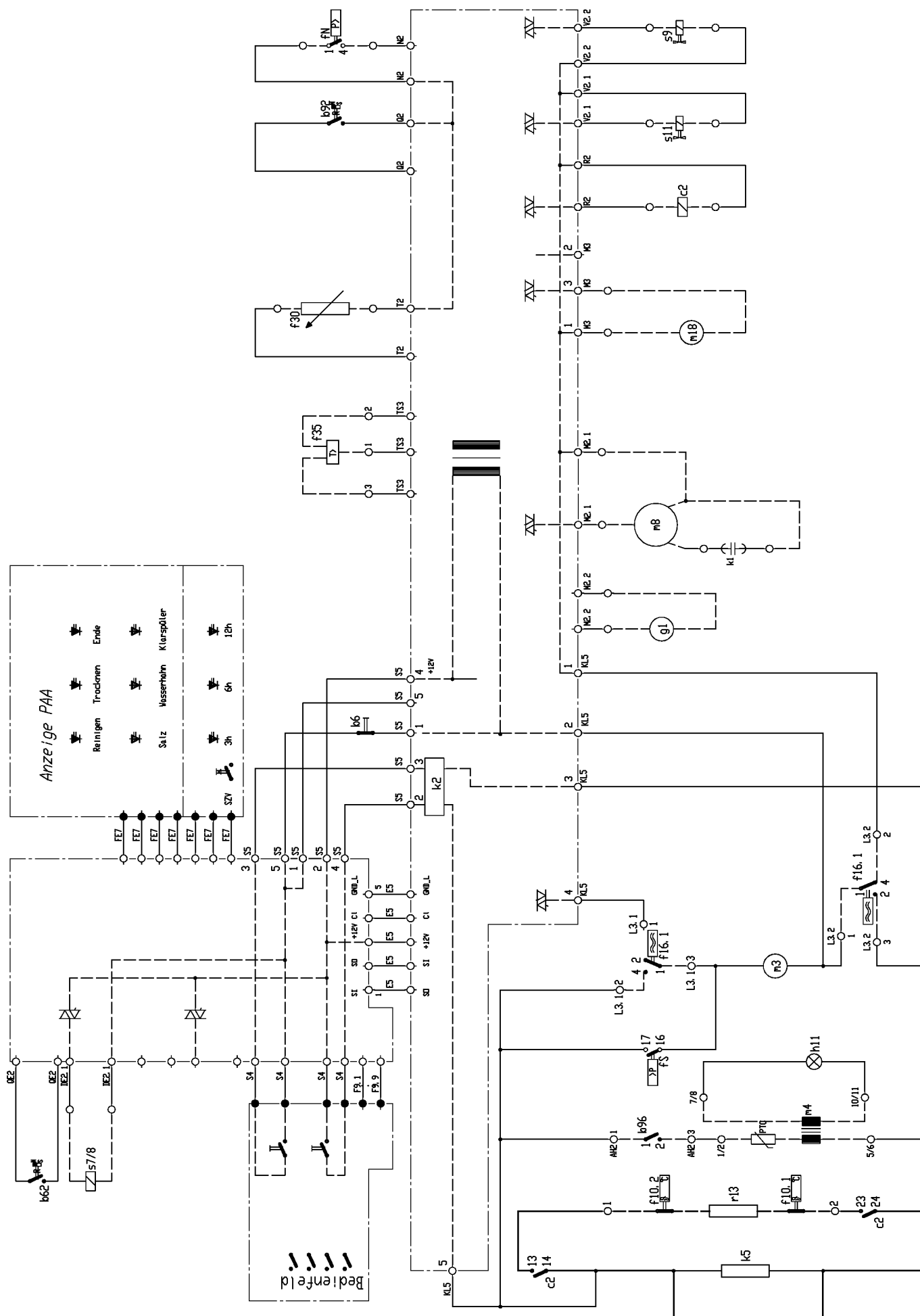


Circuit diagram 111 569 200



Circuit diagram of fully-integrated dishwashers 111 568 900



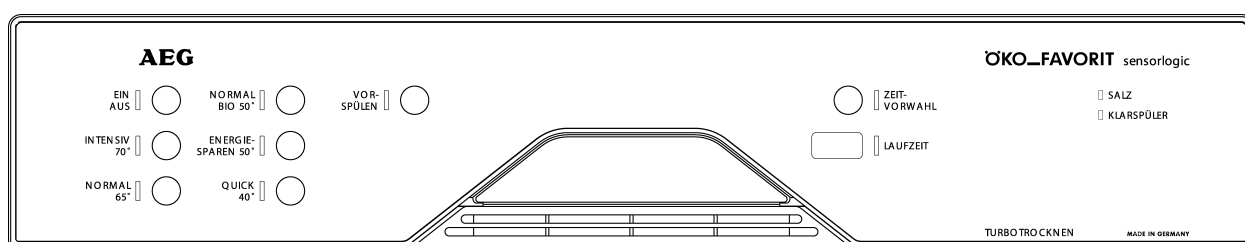


## Legend

A (ASG)	connection housing	rs	pink
B (b3)	Timer	rt	red
D (s7/s8)	Detergent and rinse-aid dosage	sw	black
D (s22)	Thermo Valve Drying	tk	turquoise
E/V (s11/s20)	Soft water valve	tr	transparent
E/A	In / Output electronic	vi	purple
F (SZV)	Variable start time	ws	white
F (PAA/PAAG)	Programme sequence indicator	blv	blue/purple
H (h6)	Illuminated "on" indicator	bro	brown/orange
H (h14)	Rinse-aid level indicator	gg	green/yellow
H (h15)	Salt refill indicator	orv	orange/purple
K (k1)	Operating capacitor for the motor	rsb	pink/blue
K (k5)	Suppressor	rsw	pink/white
L (f16)	Anti-flood switch	swv	black/purple
M (m8)	Circulation pump	tkt	turquoise/red
DS/M (m14)	Rotary distributor motor	viw	purple/white
M (g1)	Tachometric generator		
M (m18)	Fan Drying		
N (fN)	Pressure switch (normal level)		
N (fS)	Pressure switch (safety level)		
NS	Pressure Sensor		
O (b62)	Reed relay detergent an rinse-aid dosage		
O (b91)	Reed relay dosage for water re-generation		
O (b92)	Reed relay salt container		
O (b95)	Reed Relay Spray Arm		
P (m3)	Drain pump		
R (r1)	Heating		
R (c2)	Heater relay		
S (b7)	Pre-selection switch		
T (f5) 40°C	Thermostat		
T (f8) 50°C/55°C	Thermostat		
T (f9) 65°C	Thermostat		
T (f10)	Overheat protection thermostat		
T (f30)	Sensor NTC		
U (s17)	Aqua alarm buzzer		
V (s9)	Regeneration valve		
X	Distributor		
Y (b13)	Variable start time		
Z (b6)	Door switch		
(b65)	Position Contact / Rotary distributor motor		
(b66)	Push Buttons ½, SZV, Fan Drying		
(b96)	Door switch Lamp		
(h11)	Illumination Tub		
(m2)	Timer motor		
(m4)	Transformer		
(s10)	PGS clutch solenoid		
E (EM1)	Electronic input		
E (ES)	Main Modul		
TS (f35)	Sensor		
bg	beige		
bl	blue		
br	brown		
gr	grey		
or	orange		

## Easytronic + minimum equipment without sprayarm detection, turbidity sensor and rotary slide

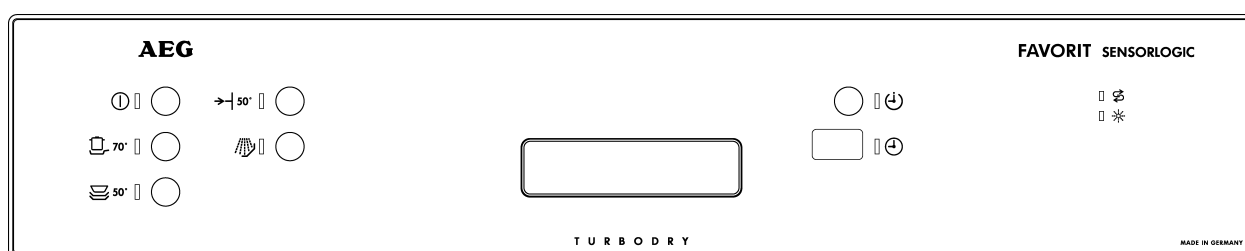
StControl electronic 111 577 800



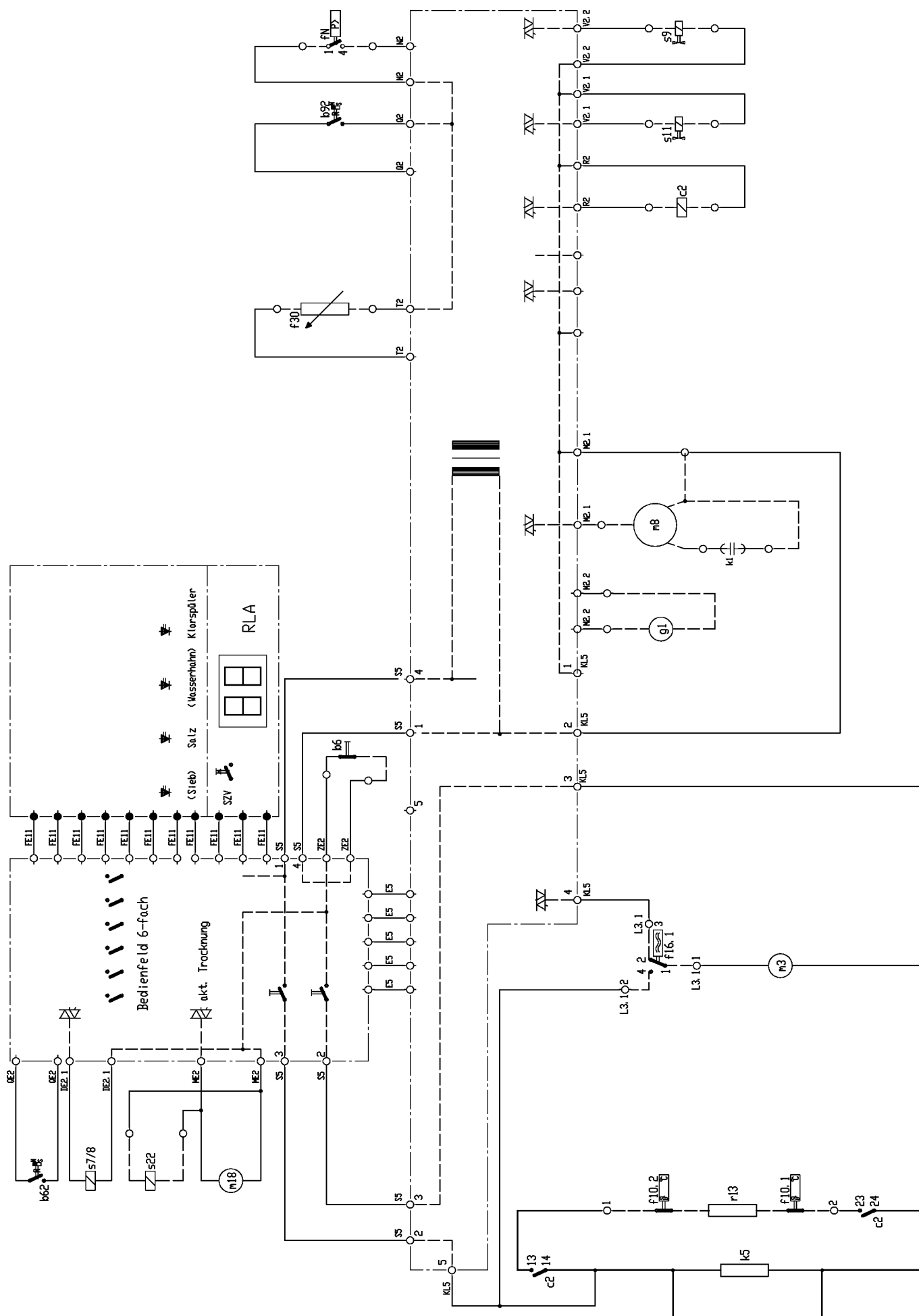
Circuit diagram 111 527 600

## Easytronic

Control electronic 111 578 100



Circuit diagram 111 527 600



## 4. Instructions for Use

### 4.1 New Cycles and Options

- o “Eat – Load – Run”
  - new 30 minute cycle incl. washing and drying
  - with covered fan running at the cycle end (max. 20 minutes)
- o “tablets”
  - specially suited for detergents containing enzymes structure similar to the bio-phase with washing appliances
- o addition of rinse-aid
  - The addition of rinse-aid can be switched off by the user.

### 4.2 General

Possible Options and Indications					
		Control Electronic 111 ...			
		573 600	577 800	578 100	578 200
1	start-time preselection Indication of remaining time and start time by 2 1/2 digit 7-segment display (With all „VGA“ variants: 3-level start-time preselection by LED display, no indication of remaining time. )	x	X	X	X
2	LED display for salt	x	X	X	X
3	LED display for rinse-aid	x	X	X	X
4	setting of water hardness / indication and change by control panel	x	X	X	X
5	fault memory for after-sales service	x	X	X	X
6	option “tablet cycle”	x	X		
7	option “superwash”	x	X		
8	option “1/2 load” (function can also be set as automatic detection)	x	X		
9	automatic cycles over turbidity sensor	x	X		
10	design of appliance for energy label AAA among other things only in connection with detection of sprayarm rotation, 3 sprayarms, fan drying possible, fan drying	x	X		
11	detection of sprayarm rotation to detect a blocked sprayarm resp. its position indication by LED and/or acoustically depending on variant	x	X		
12	cycle run display with LED displays (parallel to 7-segment display)	x	X		
13	LED display for water (water tap closed)	x	X	X	
14	LED display for sieve	x	X	X	
15	LED display for blocked sprayarm	x	X		
16	LED display for door	x			
17	rinse-aid addition which can be switched off	x	X	X	X
18	acoustic cycle end display which can be switched off	x	X		
19	acoustic fault indication (only in connection with ET + input/output units and “VGA”	x	X	X	X



## Key Design

The ON/OFF key is designed as a mains switch with over-stroke function, all other possible keys are “crackling frogs” on the printed circuit board. The input/output modules are supplied without key caps.

## Confirmations and Displays

All keys are confirmed via LED displays. The start-time preselection resp. running time display is indicated by means of a 7-segment display.

### 4.3 Displays of Cycle Run and Condition

#### Cycle run display

Depending on model

- The cycle run is indicated via 6 LEDs arranged one under the other.
- Following cycle sections are indicated:  
“prewash” – “wash” – “rinse” – “final rinse” – “drying” – “end”
- The indicated cycle sections are coordinated with the process run.
- When selecting a cycle key, however before the actual cycle start, all cycle parts of a cycle run are indicated simultaneously.
- After the cycle start lights only the LED which corresponds to the operational process.
- The conversion from one cycle part to the next one is made step by step.
- “END” is only displayed at the actual cycle end, when the control has come to the end condition.

#### Status display

- LED display salt generally existing
  - o “ON” when salt must be refilled
  - o goes out after salt addition
- LED display rinse-aid generally existing
  - o “ON” when rinse-aid must be refilled
  - o goes out after addition of rinse-aid

Information: The addition of rinse-aid can be switched off by the user depending on model.  
(see chapter “Service Functions / Addition of Rinse-Aid)
- LED display water existing depending on model
  - o “ON” with missing or insufficient water fill

(see under “C1”-fault)
- LED display sieve existing depending on model
  - Information: This LED is automatically selected after 20 rinse cycles)
  - o “ON” (if counter has reached 20) at the end of the cycle
  - o goes out after the start of a new cycle – counter is reset to 0.
- LED display door existing depending on model
  - o “ON” with door opened during the cycle run
  - o goes out when door is closed
- LED display sprayarm existing depending on model
  - o “ON” with blocked middle sprayarm
  - o additional acoustic signal

see under “A4”-fault

## 4.4 Input

- Before the start
  - o Switch on the appliance with the ON/OFF key – LED next to the ON/OFF key lights.
    - + appliance is in the pre-start mode
    - + all cycle keys are unlocked and can be actuated resp. set
  - o After actuating a cycle key, all belonging rinse cycle parts light during this mode by means of cycle run display LEDs and the cycle LED. The presumable cycle running time is indicated flashing via the 7-segment display.
  - o The pre-selection of a start-time is possible with the “SZV” key.  
(see chapter “Start-Time Preselection)
  - o The cycle option can be selected additionally by means of the corresponding key.  
(on the condition that the programmed software version allows it).
  - o Every key actuation within the operating time of 6 seconds resets the timer to 6 seconds again for locking the keys.
  - o If the electronic detects a cycle selection, it releases the cycle 6 seconds after the last actuation of one of the cycle keys.
    - + One LED of the cycle run display resp. the 7-segment display are now lighting continuously.
    - + A start-time preselection resp. the additional selection of a cycle option with a the corresponding key is no longer possible from that moment.
- Start-time preselection
  - o The start-time preselection can be activated before the cycle start only when the appliance is switched on.
  - o The activated start-time is confirmed by a red LED “SZV”.
  - o It is set scrolling per key actuation. The time is indicated via a 2-digit 7-segment display ( 1 – 2 - ... – 19 – 0 – 1 - ...).
  - o The timer for the preselection time will start 6 sec
  - o The preselected time can be changed at any time during the whole start-time.
  - o When the preselected time has passed, the selected washing cycle will start after 6 seconds.
  - o If no washing cycle was selected, the set “SZV” value remains and flashes until a valid cycle will have been set. After a cycle has been selected additionally, cycle LED, AA and 7-segment display continues flashing for 6 other seconds (possible time for change) and afterwards will light continuously. The start-time preselection is activated. The PAA goes out until the cycle starts.
  - o The start-time can be cancelled separately or together with the cycle.
    - + cancel with the cycle  
(see chapter “Cancel a Cycle”)
    - + cancel separately: setting the start-time “0”.
- Start of the cycle
  - o After the preselected start-time has passed resp. a set cycle has been detected, the cycle will start automatically.
  - o However, the cycle selection can be changed at any time. (see chapter “Change Cycle Selection”)
  - o From that moment it is no longer possible to additionally select a time preselection resp. cycle option. The appliance has completely to be started anew (not only to change the cycle selection) !
- Cycle run

see point “Cycle technology of the respective cycle run”

- Change cycle (after a successful cycle start)
  - o The cycle can be changed after the cycle start at any time.
    - + The new set cycle is executed from the very beginning!
  - o Actuate the key of the desired new cycle for approx. 3 seconds.
    - + During the time is changed, the LEDs of the previous and of the new cycle will flash. If the cycle option key was set in addition to the previous washing cycle, then this key does not flash.
    - + After the change has been finished, only the LED of the new set cycle will light.
  - o The cycle starts automatically and immediately.
  - o Here it is not possible to enter a start-time or to set the cycle option key. This can only be set after a completely new start, i.e. after the washing cycle has been cancelled.
  
- Interrupt the cycle / pause mode
  - o General information:
  - o With the ON/OFF key T1 or by opening the door, you can interrupt the cycle without any losses as long as one wants. This corresponds to a "pause" function.
  - o During the pause time, no rinse-relevant data will go lost. The cycle will be continued exactly at that point where it was stopped.  
Attention: However, such a pause may have a negative effect on the automatic load detection.
  - o When the running cycle is interrupted in certain washing cycles after regenerating, i.e. by means of the cycle part "drying" (please conclude details from the cycle run), the cycle will be stopped and the a
  - o Another proceeding is required to cancel an already set and started cycle. (see chapter "Cancel a Cycle").
  - o Switch off the appliance during the washing process.
    - + The ON/OFF key T1 can thus be regarded as "pause" key.
    - + The cycle run is continued after re-putting into service by the ON/OFF key T1 after approx. 3 seconds, without that another key actuation becomes necessary.
    - + All displays and conf
  - o The door is opened during the running cycle.
    - + The opening of the door can thus be regarded as a "pause" key.
    - + After the opening, all displays keep to be on the panel, as long as the appliance keeps to be switched on.
    - + When the door is closed, the appliance starts automatically and the cycle run is continued after approx. 3 seconds, without that another key actuation becomes necessary.
  - o The cycle is stopped due to a power failure.
    - + When the mains have returned, the appliance is again in the same state as before the power failure.
    - + No rinse-relevant data will go lost.
    - + All displays and confirmations appear in the same condition as before the interruption. When the remaining time is indicated, there may be differences in the still remaining time before and after.
    - + When the mains have returned, the cycle starts automatically and without any further key actuation.

- What happens when opening and closing the door?
  - o The appliance is switched on and is in the "pre-start mode".
    - + After opening, all displays (see Instructions Point 3 "Before the start") continue to light on the panel. The power supply of the electronics is fully guaranteed as long as the appliance keeps to be switched on by the ON/OFF key.
    - + The door LED lights in addition.
  - o The door is opened during the running cycle.  
(see chapter "Interrupt the cycle / pause mode")
  - o The door is opened when the cycle end has been reached.
    - + When the cycle end was reached and the door opened and closed again, the appliance is automatically again in the "pre-start" mode.
  
- Display of remaining time
  - o The remaining time indicates the expected running time of the set cycle combination.
  - o The display is indicated in minutes.
  - o The display of the remaining cycle running time is indicated by a 7-segment display.
  - o The display is 2 1/2-digit. This means a maximum of "199" minutes can be displayed. With times more than 199 minutes, the time 199 is indicated steadily until the cycle running time is below that value. Only from that moment the remaining time will be updated again automatically.
  - o After switching on the appliance without having set a washing cycle, the 7-segment display and the running time LED will remain dark.
  - o If a washing cycle has been set, the LED "running time" gives a red light, the 7-segment display flashes and will light permanently from the cycle start.
  - o The indicated times are to be taken from a table which is coordinated with the particular process steps. A correction factor depending on the load is considered when calculating the running time.
  - o If the door is opened during the washing or final rinse phase, this may for technical reasons result in "jumps" of the running time display when closing the door again.
  - o Digit "1" (= 1 min) shortly before the end of the cycle will be indicated as long as the appliance is still "working". Digit "0" will be  
Information: The 7-segment display among other things also indicates the fault display.  
(see chapter "Table of fault displays")
  
- Cancel a Cycle
  - o An already started cycle can be cancelled by actuating the current cycle key for at least 3 seconds. During these 3 seconds, the corresponding cycle key flashes. After the time has passed, the cycle selection is reset.
  - o The 7-segment display resp. the LED of the cycle running display go out.
  - o (see chapter "Before the Start")

- Cycle End
  - o The confirmation LED of the cycle key and the option key of the finished cycle continue to light.
  - o Depending on model, the LED “end” will light resp. the digit “0” will be indicated by the 7-segment display at the end of the cycle. If existing, the LED “running time” will go out.
  - o Only for “VGA” models it is valid that the LED of the cycle key will be cancelled and the LED “end” will light.
  - o In addition, a buzzer will indicate acoustically, when the cycle end has been reached. (buzzer 10 sec on – 270 sec off – 10 sec on). This acoustic indication will repeat 3 times at maximum and can be switched off optionally by a key combination.  
(see chapter “Switching off the Buzzer”)
  - o The cycle stored in the control unit will be cancelled.
  - o When the cycle end has been reached and the door opened and closed again, the appliance is automatically again in the “pre-start” mode, i.e. a new cycle could be set again immediately.
  - o The appliance must be switched off by the ON/OFF key.

## 4.5 Set the Water Softener

In order to avoid lime scale on dishes and in the dishwasher it is necessary to rinse the water with soft, i.e. decalcified water. Therefore, the dishwasher has a water softener, which decalcifies tap water from a hardness of 4 °d (German degree) onward with the help of special salt.

Set the water softener according to the table to that level which corresponds to the water hardness in the residential district. The water softener is set mechanically with the hardness area switch and in addition electronically with the keys of the control panel.

Water Hardness			Setting of Hardness Level		Number of Flashing Signals
in °d 1)	in mmol/l 2)	range	mechanical	electronical	
51 - 70	9.0 – 12.5	IV	1	9	9
43 - 50	7.6 – 8.9			8	8
37 - 42	6.5 – 7.5			7	9
29 - 36	5.1 – 6.4			6	6
23 - 28	4.0 – 5.0			5	5
19 - 22	3.3 – 3.9	III	0*	4	4
15 - 18	2.6 – 3.2			3*	3
11 - 14	1.9 – 2.5	II		2	2
4 - 10	0.7 – 1.8	I/II		1	1
below 4	below 0.7	I		0 no salt required	10

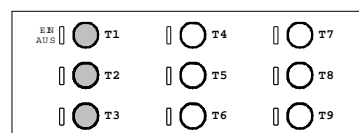
1) (°d) German degree, measure for water hardness

2) (mmol/l) millimol per liter, international unit for water hardness

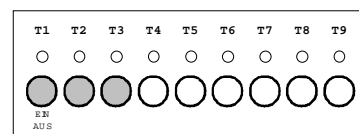
\*) setting by factory

**Set the water softener according to the table to the water hardness of your residential district:**

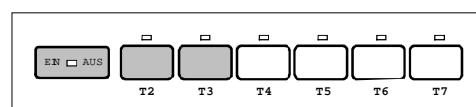
Key layout, vertically



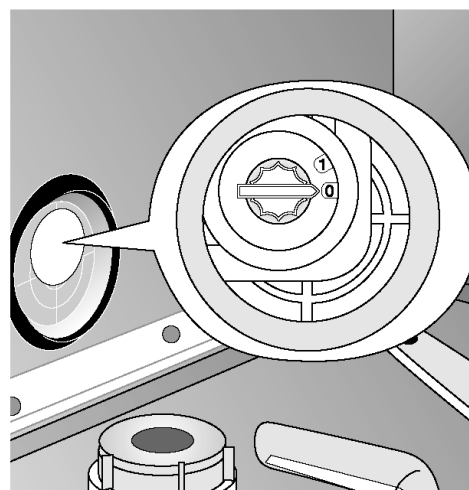
Key layout, horizontally



Key layout, VGA

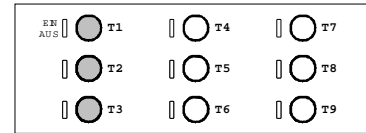


- The dishwasher must be switched on.
- Mechanical setting:  
Open door of dishwasher.
- Remove lower dishwasher basket from the dishwasher.
- Set hardness area switch to 0 or 1.
- Now re-insert lower dishwasher basket.
- Electronic setting:  
Press function keys 2 and 3 simultaneously and keep them pressed.  
Press ON/OFF key.  
The LED indications of the adjusted function keys are flashing.
- Press function key 3 again.
  - o LED display of function key 3 flashes
  - o The number of flashing digits corresponds to the set hardness level. (except: hardness level 0 is indicated by 10 flashing digits).
  - o This order of flashing digits is repeated several times after a pause of 5 seconds.
- Pressing the function key 3 increases the hardness level by 1. (exception: hardness level 0 will follow after hardness level 9).
- When the hardness level is set correctly, press the ON/OFF key. The hardness level is then stored.

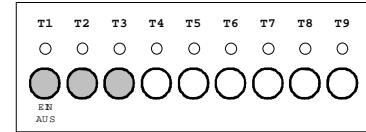


## 4.6 Switching off the buzzer

Key layout, vertically



Key layout, horizontally



### General information

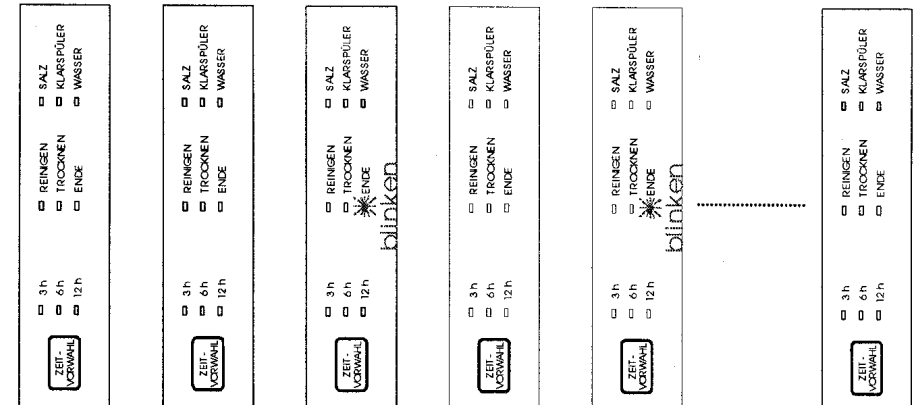
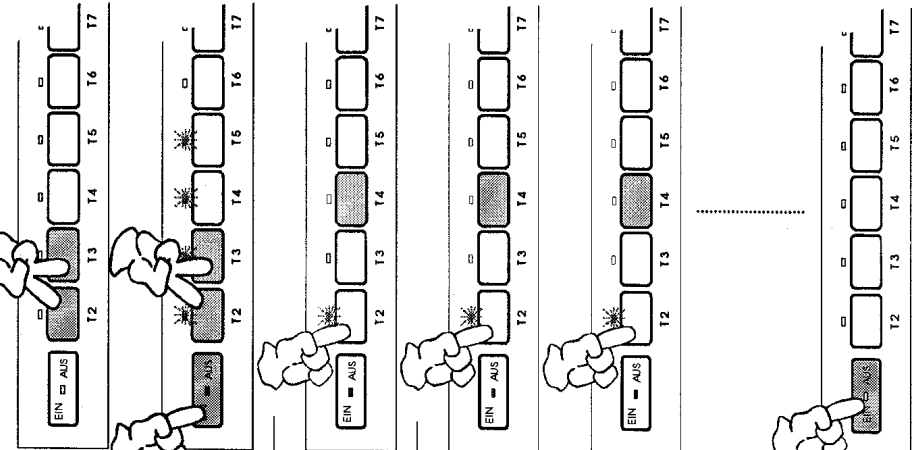
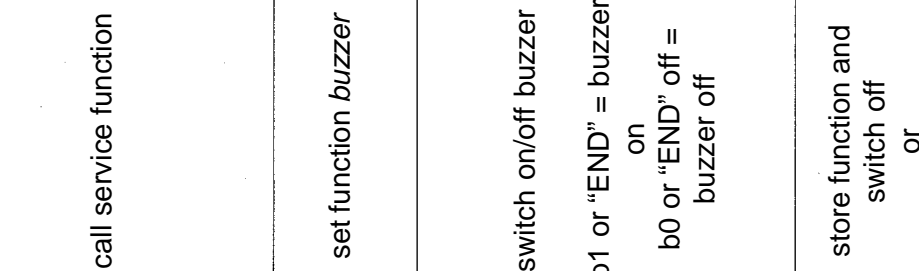
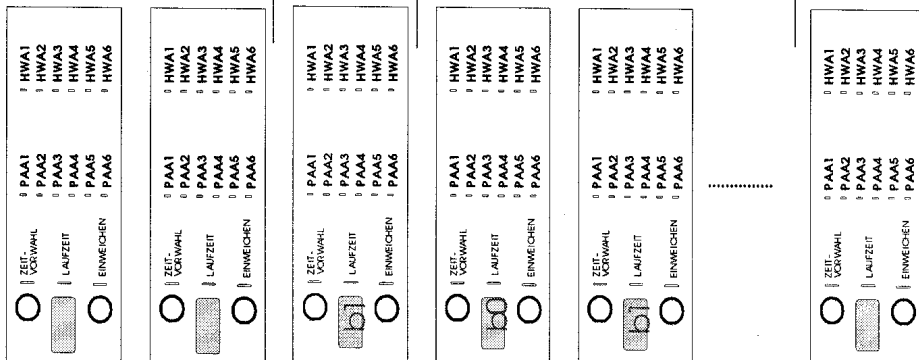
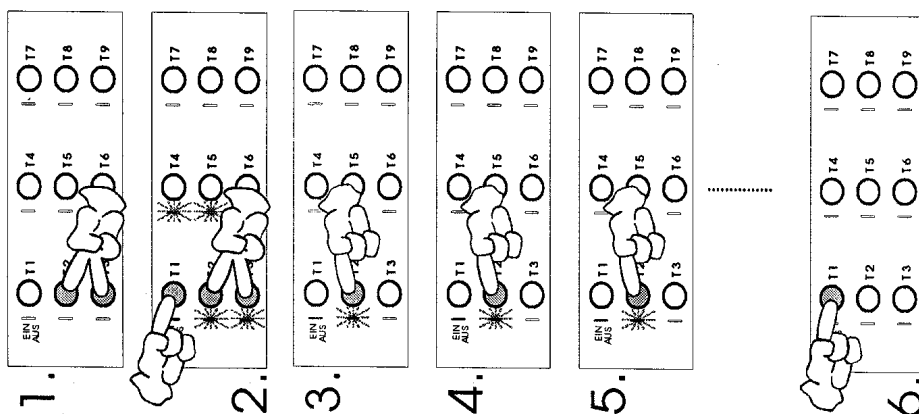
- The buzzer is switched off resp. on analogously in all designs resp. key layouts.
- For that you always have to use the keys T1 to T3, independent of its model-relevant cycle loads.
- Whether the buzzer is switched on resp. off, is indicated differently, depending on model, i.e. with or without a 7-segment display (VGA):

### Valid generally:

- Key 2 is the “buzzer key”.
- By the factory the buzzer is switched on.
- When the buzzer signal is switched off, all acoustic alarms as well as the end signal are generally switched off. The “VGA” models are exceptions. With VGA it is only possible to switch off the end signal.

General explanation regarding LED keys T4\* and T5\*:

- These two key LEDs light or flash only when the function was programmed depending on model. If there is no adjusted function specifically for the appliance, the relevant LED is switched off in the “service functions” mode.



automatically 60 seconds after the last change



## Easytronic plus

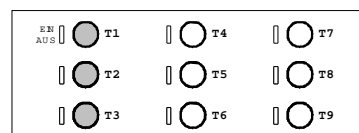
1. Press keys T2 and T3 simultaneously and ...
2. ...keep them pressed until the appliance is switched on by the ON/OFF key T1. The key LEDs T2, T3 as well as possibly T4\* and T5\* will flash to confirm that the service functions are active.
3. The current set condition is indicated when actuating key T2. The key LED T2 will flash and the 7-segment display will indicate the corresponding value (e.g. "b1").
- 4./5. By actuating key T2 once again it is possible to switch on resp. off the rinse-aid addition depending on the previous condition.  
b1 = buzzer on  
b0 = buzzer off
6. The buzzer function is stored immediately after any input. By switching off the appliance with the ON/OFF key T1 or after a defined time (approx. 60 sec), calculated from the last actuation of key T2, one automatically leaves the special cycle.

## VGA - Easytronic plus

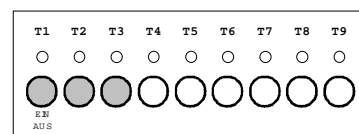
1. Press keys T2 and T3 simultaneously and ...
2. ...keep them pressed until the appliance is switched on by the ON/OFF key T1. The key LEDs T2, T3 as well as possibly T4\* and T5\* will flash to confirm that the service functions are active.
3. The current set condition is indicated when actuating key T2. The key LED T2 will flash. A flashing "end" LED indicates that the buzzer is active. The buzzer is switched off, when this LED does not flash.
- 4./5. By actuating key T2 once again it is possible to switch on resp. off the buzzer function depending on the previous condition.  
LED "end" is flashing = buzzer on  
LED "end" is off = buzzer off
3. The buzzer function is stored immediately after any input. By switching off the appliance with the ON/OFF key T1 or after a defined time (approx. 60 sec), calculated from the last actuation of key T2, one automatically leaves the special cycle.

## 4.7 Rinse-Aid Addition

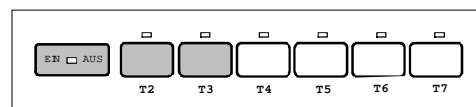
Key layout, vertically



Key layout, horizontally



Key layout, VGA



### General information

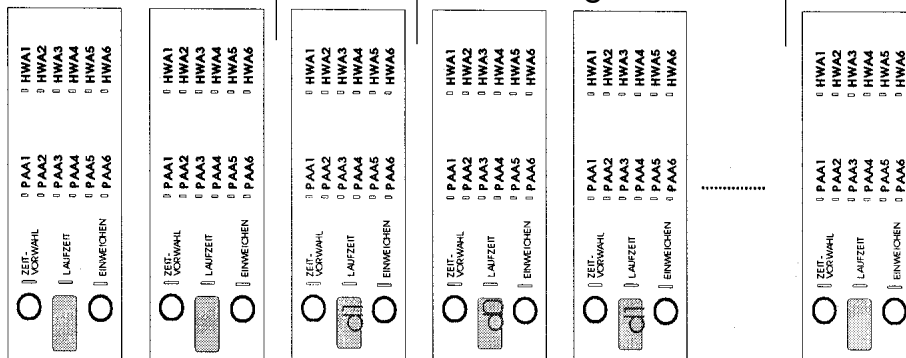
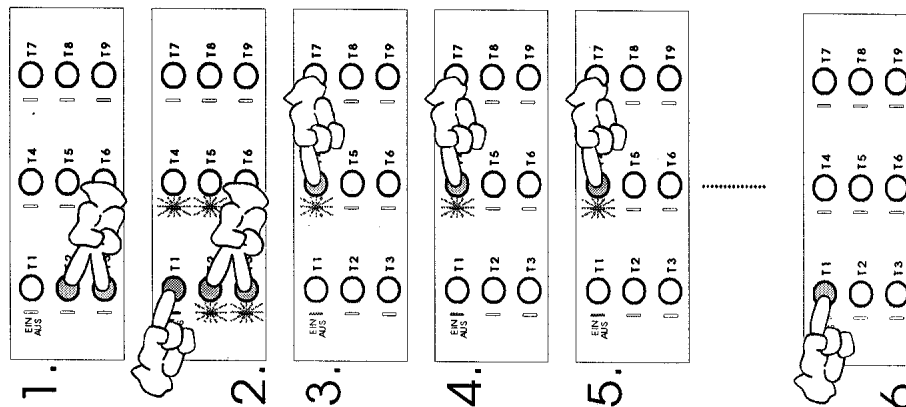
- Deactivating resp. activating the rinse-aid addition is executed analogously in all designs resp. key layouts.
- For that you always have to use keys T1 to T4, independent of their model-relevant cycle load.
- The display whether the rinse-aid addition is active or not, is indicated differently depending on the model, i.e. with or without 7-segment display (VGA).

### Valid generally:

- Key 4 is the “rinse-aid key”.
- By the factory, the rinse-aid addition is active.

### General explanation regarding LED key T5\*:

- This key LED lights or flashes only when the function was programmed depending on model. If there is no adjusted function specifically for the appliance, the corresponding LED is switched off in the “service functions” mode.



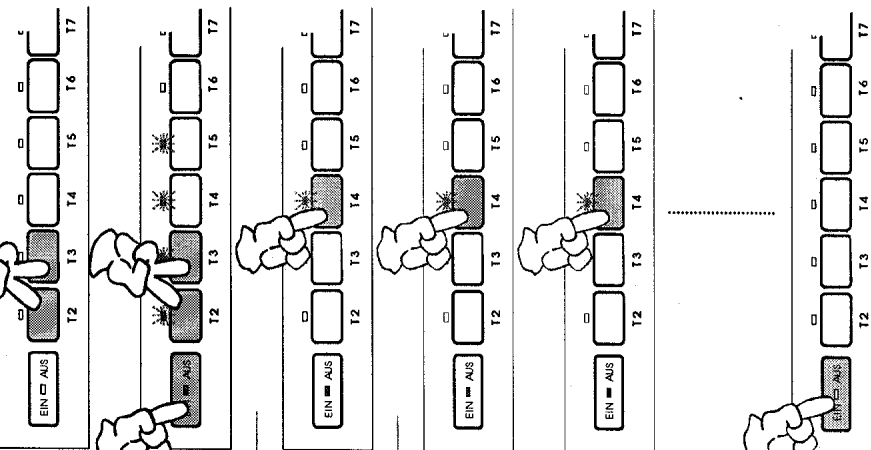
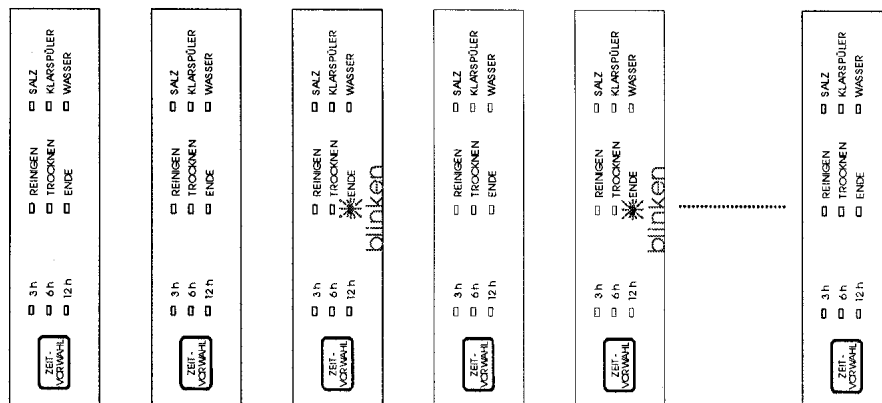
call service function

switch on/off rinse-aid addition

set function *rinse-aid*

d1 or "END" = rinse-aid addition on  
d0 or "END" off =  
rinse-aid addition off

store function and  
switch off  
or  
automatically 60 seconds after the last change



## Easytronic plus

1. Press keys T2 and T3 simultaneously and ...
2. ...keep them pressed until the appliance is switched on by the ON/OFF key T1. The key LEDs T2 to T4 as well as possibly T5\* will flash to confirm that the service functions are active.
3. The current set condition is indicated when actuating key T4. The key LED T4 will flash and the 7-segment display will indicate the corresponding value (e.g. "d1").
- 4./5. By actuating key T4 once again it is possible to switch on resp. off the rinse-aid addition depending on the previous condition.  
d1 = rinse-aid addition on  
d0 = rinse-aid addition off
6. The rinse-aid function is stored immediately after any input. By switching off the appliance with the ON/OFF key T1 or after a defined time (approx. 60 sec), calculated from the last actuation of key T4, one automatically leaves the special cycle.

## VGA - Easytronic plus

1. Press keys T2 and T3 simultaneously and ...
2. ...keep them pressed until the appliance is switched on by the ON/OFF key T1. The key LEDs T2 to T4 as well as possibly T5\* will flash to confirm that the service functions are active.
3. The current set condition is indicated when actuating key T4. The key LED T4 will flash. A flashing "end" LED indicates that the rinse-aid addition is active. The rinse-aid addition is switched off, when this LED does not flash.
- 4./5. By actuating key T4 once again it is possible to switch on resp. off the rinse-aid function depending on the previous condition.  
LED "end" is flashing = rinse-aid addition on  
LED "end" is off = rinse-aid addition off
3. The rinse-aid function is stored immediately after any input. By switching off the appliance with the ON/OFF key T1 or after a defined time (approx. 60 sec), calculated from the last actuation of key T4, one automatically leaves the special cycle.

## 4.8 Function of “superwash” or “soaking” options

### Can be selected additionally to which washing cycles?

- By the separate option key, which is located on the right side of the appliance (output side), it is possible to set the function “soaking” resp. “superwash” in addition to following washing cycles.
  - o intensive 70°
  - o intensive 65°
  - o normal 65°

For all other washing cycles, this function is presently not planned.

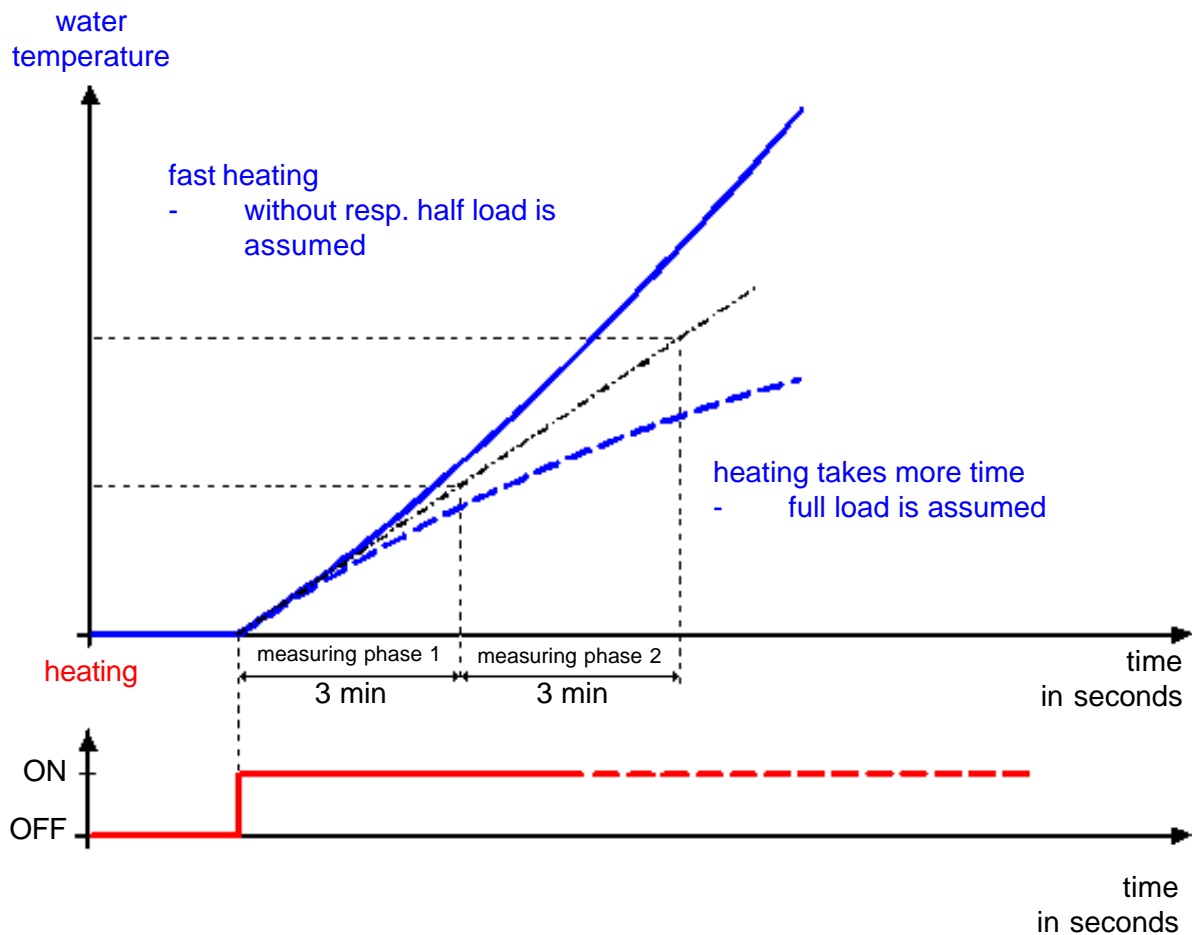
### Which effect has this option on the cycle run?

- Description of cycle differences
  - o The important changes of prewash
    - + With intensive cycles, the temperature is increased from 50°C to 55°C.
    - + With normal cycles, a prewash with 55°C is executed instead of a cold prewash.
  - o The important changes in washing
    - + heating up to 55°C and an additional time of soaking of 5 minutes
    - + additional washing of 10 minutes
    - + The cycle block “washing” extends with the set option by approx. 15 minutes.
  - o The option does not intervene into the cycle run of the final rinse and of the drying. With “normal 65°C” however, the 2. intermediate rinse, which already exists in the “intensive” cycle, is inserted additionally.
- How is the detergent added?
  - o The detergent can be added twice.
    - + Quantity: 30g each resp. 1 tablet at the cycle start
    - + Introduce it into the door for the warm “superwash” prewash
    - + Introduce it into the detergent dispenser for the “superwash” cycle

## 4.9 New Automatic Cycles

	Water	Energy	Time	Prewash	Wash	1. intermed. rinse	2. intermed. rinse	Final rinse	Drying
Full load and very polluted water	19,0 L	1,45 kWh	105 min	yes 10 min	65°C 36 min	yes 7 min	yes 5 min	70°C 23 min	yes 24 min
Full load and polluted water	15,5 L	1,35 kWh	97 min	yes 10 min	65°C 36 min	yes min	nein	70°C 20 min	yes 24 min
Full load and clean water	11,5 L	1,20 kWh	92 min	no (8 min)	55°C 31 min	yes 7 min	nein	70°C 22 min	yes 24 min
Half load and polluted water	14,5 L	1,00 kWh	87 min	yes 10 min	55°C 28 min	yes 5 min	nein	70°C 20 min	yes 24 min
Half load and clean water	10,5 L	0,95 kWh	84 min	no (8 min)	50°C 25 min	yes 5 min	nein	70°C 22 min	yes 24 min

#### 4.10 Fuzzy Detection of Load



##### Cycles with active Fuzzy detection:

- normal 65° and normal bio 50°
- energy saving
- automatic cycles
- eco 65°C and eco bio 50°

##### Cycle phases actively affected by the Fuzzy detection of load:

Changes, when half resp. empty load is detected

- time reduction in washing
- temperature reduction by 5°C in washing

##### “1/2 load” option, depending on model

- When this option was set by a key, the automatic load detection becomes inactive. The cycle will continue to run as if a half resp. empty load was detected, independent of the actually existing load in the appliance.
- When this option was not activated by a key, the automatic load detection is active. The appliance detects the load condition independently.

#### 4.11 Energy Label AAA

In order to be able to lead the optimum value “AAA”, among others following features have to exist and/or conditions to be made.

- Drying by Fan
  - o To get a very good drying result, a fan drying is absolutely necessary.
- Positioning of Sprayarm
  - o At the end of the final rinse, the middle sprayarm is in a defined position.
  - o This is to avoid that water will drop to the dry dishes and worsen the drying result when drawing out the upper basket.
- Intelligent Monitoring of Heating
  - o A connection will be made between the required heating time during washing and final rinse and the running times in the individual cycle phases.
  - o If the adjusted maximum heating time should not be sufficient to heat up to the required temperature, the heating will be interrupted in this step. This may happen e.g. due to a very cold water fill or dishes.
  - o The still missing temperature will be compensated by an additional cycle running time which is determined in a table. Thus the cycle phase period of “washing”, “final rinse” or “drying” could be extended.
  - o This is to guarantee that the energy value required for AAA will not be exceeded, but at the same time will not worsen the washing result.
- Miscellaneous
  - o Sprayarms with optimized arrangement of nozzles, in addition a third sprayarm instead of a ceiling shower.
  - o Cutlery deposit and optimized dishwasher baskets.
  - o Optimized process technology.



## 4.12 “Eat, Load and Run”

This means to load the dishwasher immediately and start after the meal.

### Why this cycle?

- The declaration cycles as technical standard have remarkably extended due to the requirements regarding energy label and the use of the flow-type heater. “Eat, Load and Run” is to comply with the customer`s wishes for a quick cycle for the washing of household-usual loads with dishes, glasses and cutlery.
- This cycle was designed for the daily use and is very user-friendly.

### Cycle-technical special features of this cycle

- The cycle run consists of washing, final rinse and drying (+ 20 minutes covered drying)
- the cycle has no intermediate rinse
- The washing is generally executed at full speed (mechanic).

### Consumption data

- energy 0.82 kWh
- water 8.3 liter
- time 33 minutes
- washing result very good

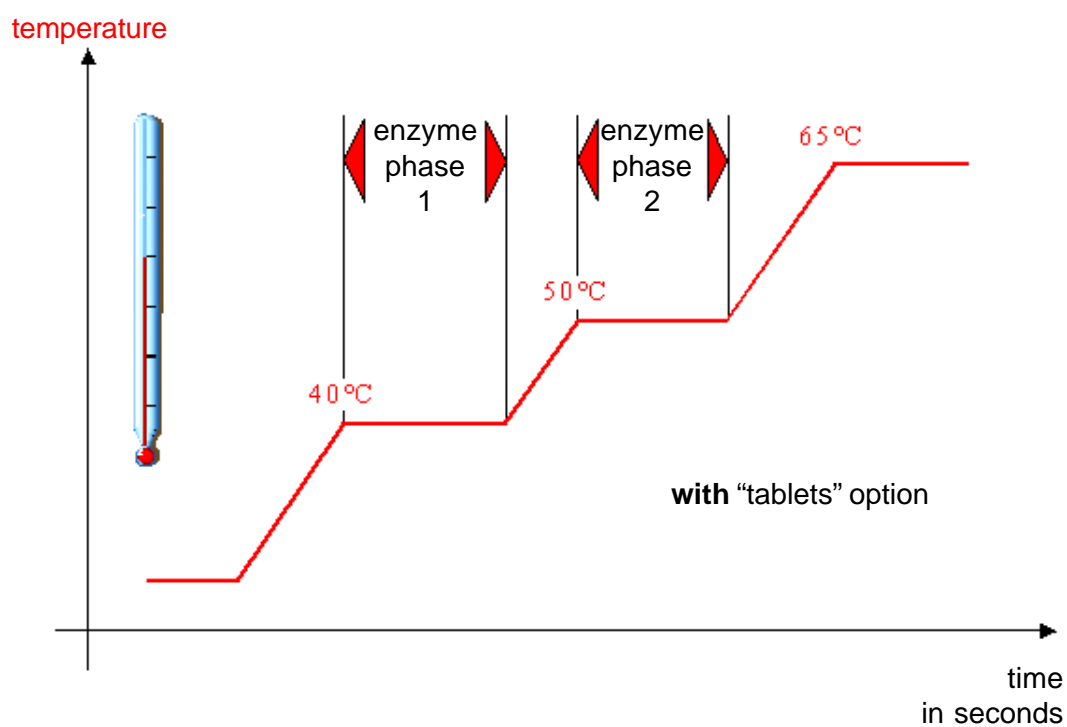
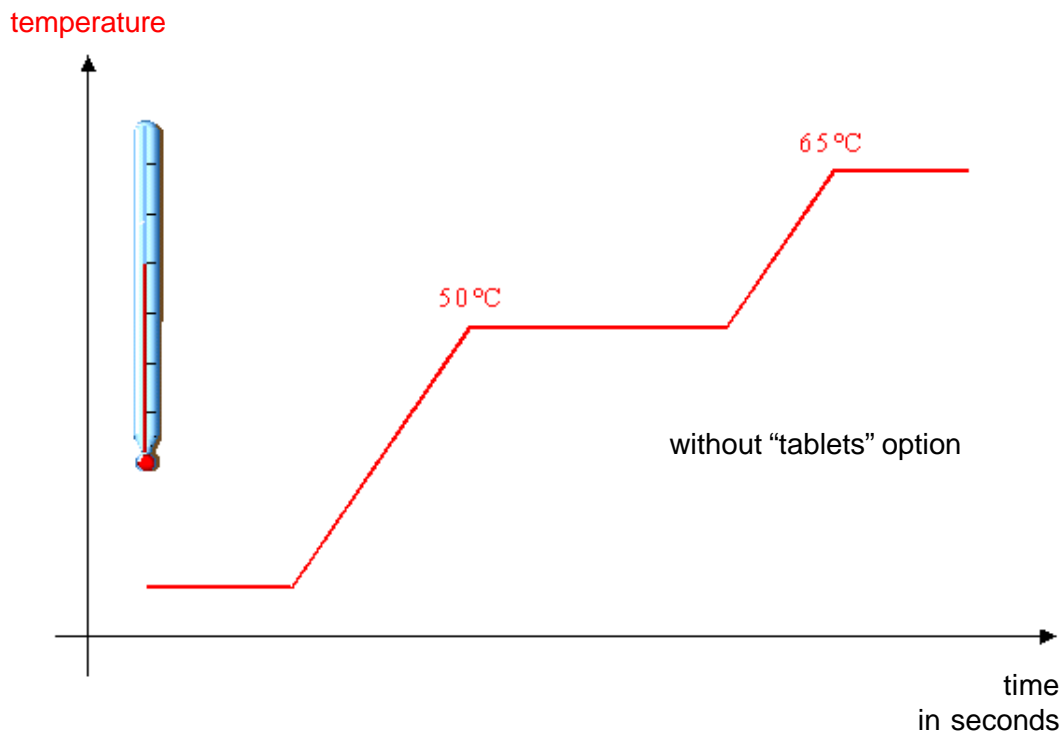
### 4.13 Function of “Tablets” Option

#### Why this option?

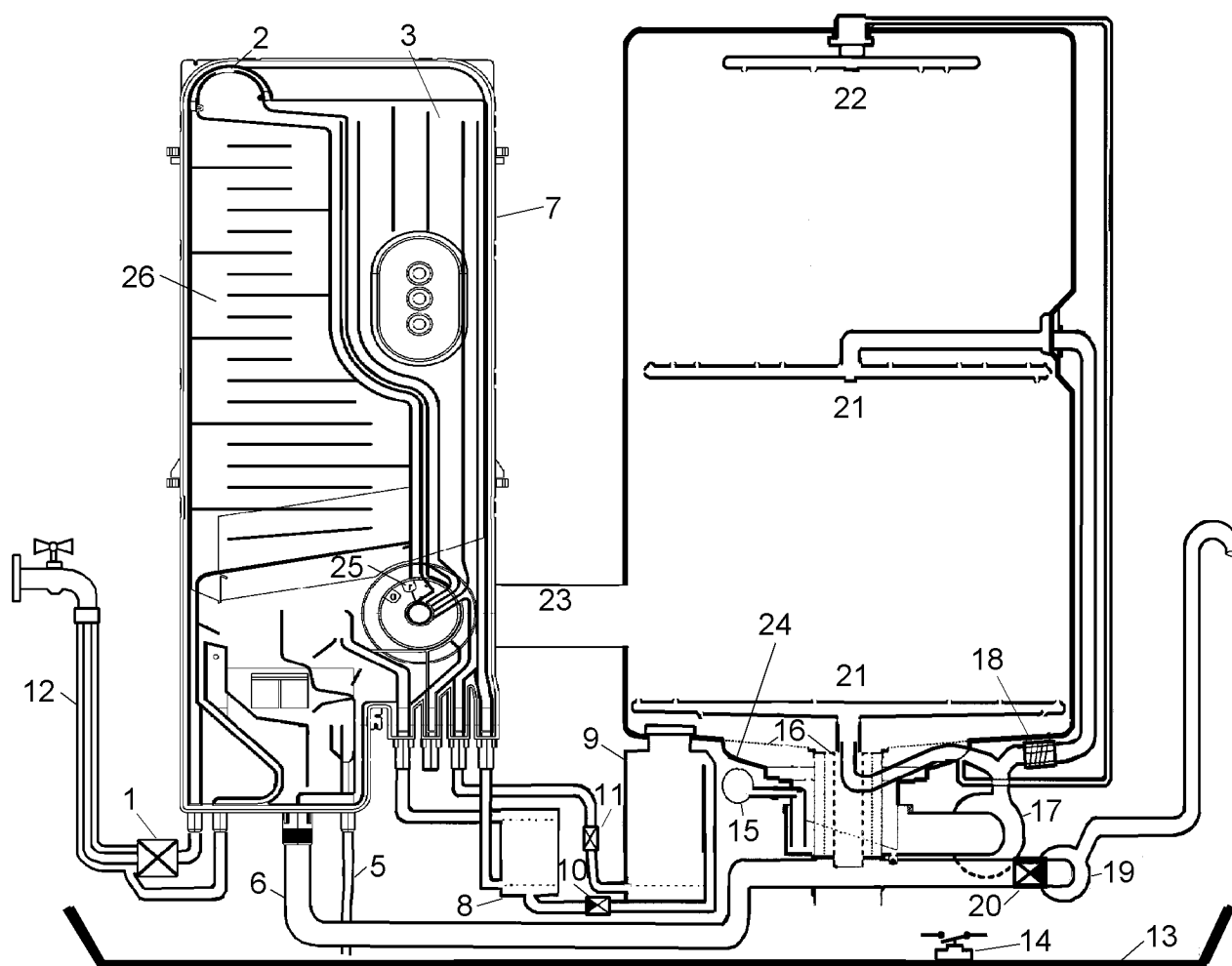
- The use of detergent tablets is essentially optimized.

#### Characteristics of this option

- An additional enzyme step is inserted during washing at 40°C.
- This enzyme phase takes 5 minutes.



## 5. Water Course Scheme



- |    |  |    |                                   |
|----|--|----|-----------------------------------|
| 1  | Inlet valve                                    | 14 | Float switch                      |
| 2  | Air break                                      | 15 | Pressure switch                   |
| 3  | Regeneration water dosage                      | 16 | Filter                            |
| 4  | Overflow safety level                          | 17 | Circulation pump                  |
| 5  | Safety overflow                                | 18 | Flow heater                       |
| 6  | Inlet to sump from regeneration dosage chamber | 19 | Drain pump                        |
| 7  | Regeneration dosage chamber                    | 20 | Non-return valve                  |
| 8  | Softener                                       | 21 | Spray arms                        |
| 9  | Salt container                                 | 22 | ceiling shower / ceiling sprayarm |
| 10 | Non-return valve salt container                | 23 | Tub vent                          |
| 11 | Regeneration valve                             | 24 | Sump assembly                     |
| 12 | Safety inlet hose                              | 25 | switch for fresh water blend      |
| 13 | Base tray                                      | 26 | condenser                         |

## **6. All-Around Water Protection**

### **6.1 Aqua-Control Inlet Hose**

The inlet hose has a double-wall construction. The inner hose is equipped with a flow restrictor built into the tap connection, and has a flow rate of 4 litres per minute. The inlet valve (1) is located in the base of the dishwasher. The safety outer hose (12) is connected to the regeneration chamber. If the inner hose should burst, the water, passes into the regeneration chamber and over the safety overflow (5) and into the base tray activating the float switch which energises the drain pump. This drains the dishwasher preventing water damage.

### **6.2 Leakage Protection**

The anti-flood switch in the base tray will activate the drain pump and drain the water from the tub in the event of an internal leakage.

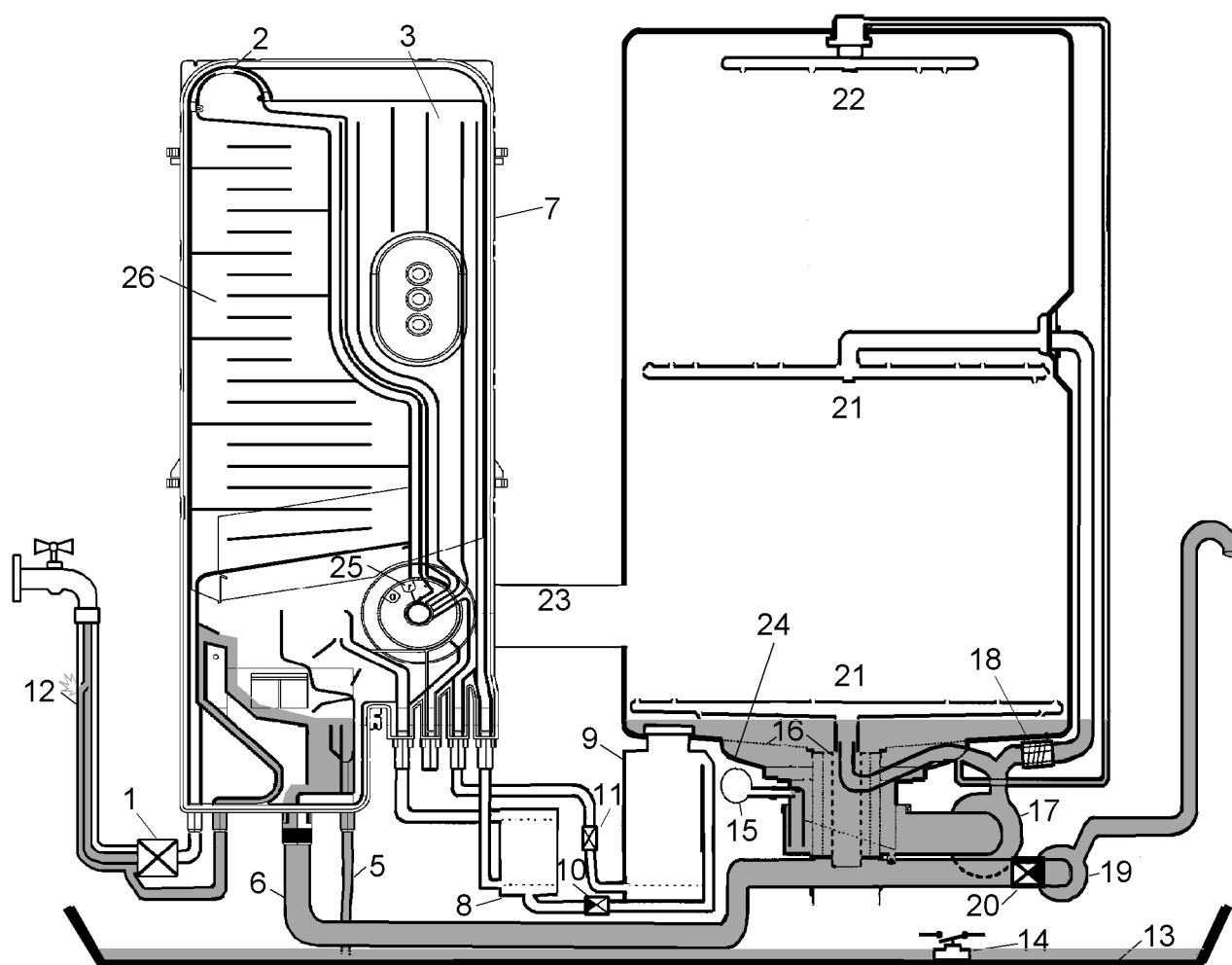
If the float switch is activated, all electric components are switched off except the electronic and the drain pump.

### **6.3 Electronic Control of Filling Times**

#### **Function mode**

1. The time to the static level is being determined.
2. The filling phase will be finished after the fourfold time, which was determined for reaching the static level.
3. The valve is no more selected until the next drain.
4. Level-dependent filling phases as well as heating phases are dropped during that time.
5. If there should be a malfunction in point 1, e.g. power failure or opening of door, a fixed time of 124 seconds will be used for point 2.
6. If the filling time until the static level is very short, a fixed time of 104 seconds will be used for point 2.

## 6.4 All-Around Water Protection



- |    |  |    |                                   |
|----|--|----|-----------------------------------|
| 1  | Inlet valve                                    | 14 | Float switch                      |
| 2  | Air break                                      | 15 | Pressure switch                   |
| 3  | Regeneration water dosage                      | 16 | Filter                            |
| 4  | Overflow safety level                          | 17 | Circulation pump                  |
| 5  | Safety overflow                                | 18 | Flow heater                       |
| 6  | Inlet to sump from regeneration dosage chamber | 19 | Drain pump                        |
| 7  | Regeneration dosage chamber                    | 20 | Non-return valve                  |
| 8  | Softener                                       | 21 | Spray arms                        |
| 9  | Salt container                                 | 22 | ceiling shower / ceiling sprayarm |
| 10 | Non-return valve salt container                | 23 | Tub vent                          |
| 11 | Regeneration valve                             | 24 | Sump assembly                     |
| 12 | Safety inlet hose                              | 25 | switch for fresh water blend      |
| 13 | Base tray                                      | 26 | condenser                         |

## 7. Pulsed Washing

### Dishwashers with Rotary Slides

have pulsed washing 1 only in the final rinse cycle.

During the pulsed washing 1, the circulation pump runs	at 1600 1/min	4 seconds
	at 2800 1/min	0.8 seconds

During the first washing cycles, the circulation pump runs at 2800 1/min

### Dishwashers without Rotary Slides

have pulsed washing 1 in all washing cycles.

Exception: There is no pulsed washing during prewash and washing in the cycles “intensive”, “normal”, 30-minutes cycle.

### With all dishwashers

The energy eco cycle uses pulsed washing 2.

During the pulsed washing 2, the circulation pump runs	at 1600 1/min	5 seconds
	at 2800 1/min	0.4 seconds

## 8. Water Intake

### For pulsed washing 1

Cycle phases		Time	Circulation Pump
Phase	Function		
1	static filling	to level	
2	static filling	15 seconds	
3	dynamic filling	5 seconds level monitored	1700 1/min
4	dynamic filling	5 seconds level monitored	1900 1/min
5	pause	5 seconds	
6	dynamic filling	15 seconds level monitored	1900 1/min
7	pulsed washing	4 seconds 0.8 seconds	1600 1/min 2800 1/min

### For washing cycles without pulsed washing

Cycle phases		Time	Circulation pump
Phase	Function		
1	static filling	to level	
2	static filling	15 seconds	
3	dynamic filling	5 seconds level monitored	2000 1/min
4	dynamic filling	5 seconds level monitored	2800 1/min
5	pause	5 seconds	
6	dynamic filling	15 seconds level monitored	2800 1/min
7	rinsing		2800 1/min

## For pulsed washing 2

Easytronic +

Control electronic 111 573 600 / 111 577 800

<b>Cycle phases</b>		<b>Time</b>	<b>Circulation pump</b>
<b>Phase</b>	<b>Function</b>		
1	static filling	to level	
2	static filling	15 seconds	
3	dynamic filling	5 seconds level monitored	1700 1/min
4	pause	5 seconds	
5	dynamic filling	15 seconds level monitored	1700 1/min
6	pulsed washing 2	5 seconds 0.4 seconds	1600 1/min 2800 1/min

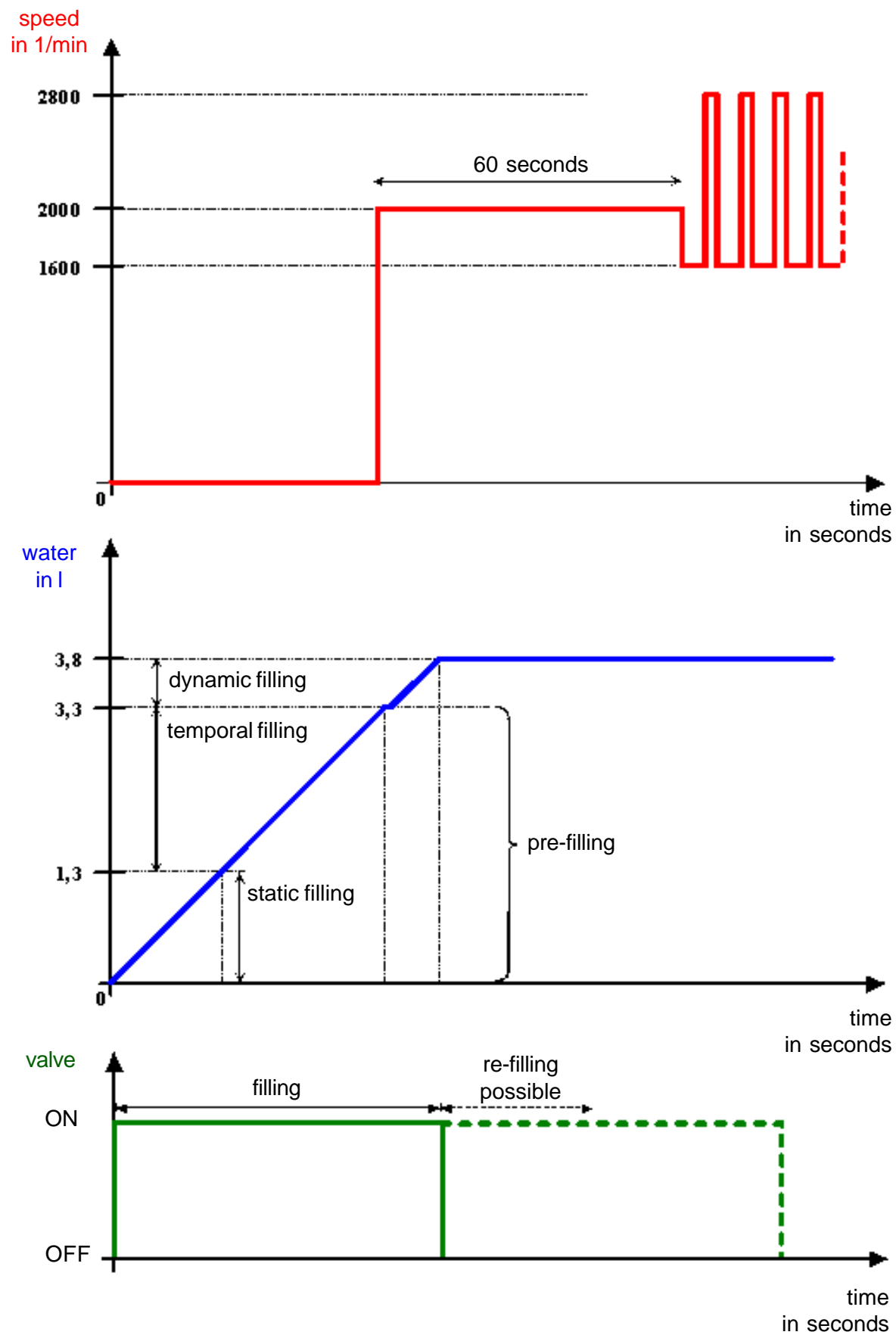
## For pulsed washing 2

Easytronic

Control electronic 111 578 100 / 111 578 200

<b>Cycle phase</b>		<b>Time</b>	<b>Circulation pump</b>
<b>Phase</b>	<b>Function</b>		
1	static filling	to level	
2	static filling	15 seconds	
3	dynamic filling	5 seconds level monitored	1700 1/min
4	dynamic filling	5 seconds level monitored	1700 1/min
5	dynamic filling	20 seconds level monitored	1900 1/min
6	pause	5 seconds	
7	pulsed washing 2	5 seconds 0.4 seconds	1600 1/min 2800 1/min

## 8.1 Water Intake and Pulsed Washing





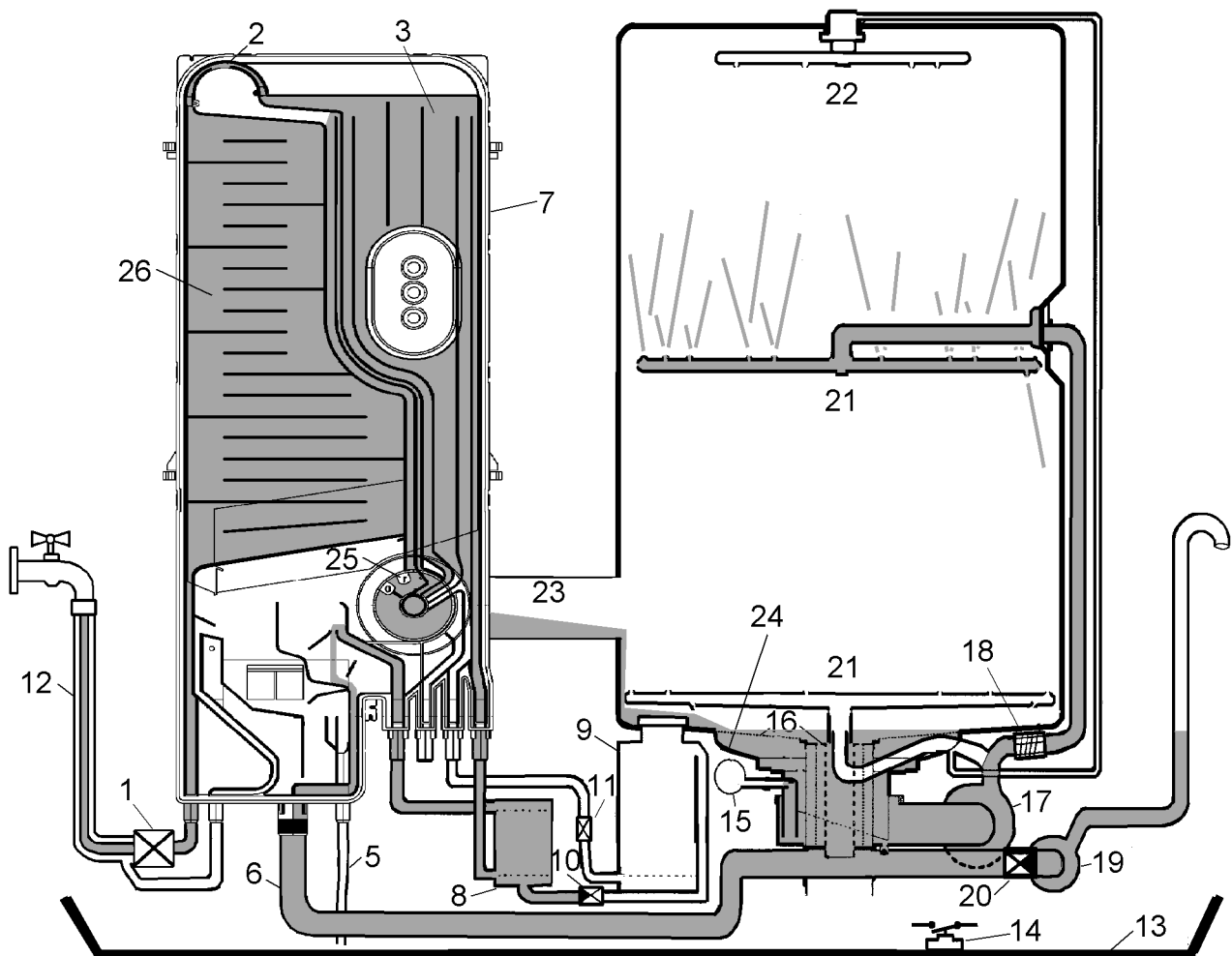
## 8.2 Water Course Scheme for Water Intake

The water flows over via inlet valve (1), condenser (26), air break (2), regeneration water dosage (3). After the regeneration water dosage is filled, the water divides.

85 % of the water flows through the softener (8), regeneration dosage chamber (7), hose (6), sump assembly (24) into the tub. 15 % of the water flows via switch for fresh water blend (25) and the tub vent directly into the tub.

The switch for fresh water blend has two positions:

- 0 = 85 % of the water flows through the softener  
15 % directly into the tub
- 1 = 100 % of the water flows through the softener



- |    |  |    |                                   |
|----|--|----|-----------------------------------|
| 1  | Inlet valve                                    | 14 | Float switch                      |
| 2  | Air break                                      | 15 | Pressure switch                   |
| 3  | Regeneration water dosage                      | 16 | Filter                            |
| 4  | Overflow safety level                          | 17 | Circulation pump                  |
| 5  | Safety overflow                                | 18 | Flow heater                       |
| 6  | Inlet to sump from regeneration dosage chamber | 19 | Drain pump                        |
| 7  | Regeneration dosage chamber                    | 20 | Non-return valve                  |
| 8  | Softener                                       | 21 | Spray arms                        |
| 9  | Salt container                                 | 22 | ceiling shower / ceiling sprayarm |
| 10 | Non-return valve salt container                | 23 | Tub vent                          |
| 11 | Regeneration valve                             | 24 | Sump assembly                     |
| 12 | Safety inlet hose                              | 25 | switch for fresh water blend      |
| 13 | Base tray                                      | 26 | condenser                         |

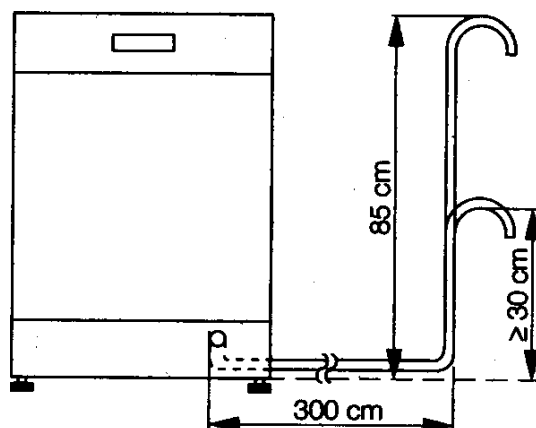
## 9. Pumping Out

During the wash cycle the water is pumped out at various stages. First the draining water cleans the filters (16). The filters are open at the bottom which allows any soilage to be rinsed off sufficiently. There is a non-return valve (20) at the inlet connection to the drain pump (19). This valve prevents the water running back from the drain hose into the dishwasher.

Easytronic + Electronic 111 573 600 / 111 577 800			
pump steps after prewash		time	pressure switch  until reset point "level"
1	pumping		
2	pause	20 sec	
3	pumping	15 sec	
after prewash in the eco program			
1	pumping		until reset point "level"
pumping normal			
1	pumping		until reset point "level"
2	pause	20 sec	
3	pumping	15 sec	
4	pumping	30 sec	

Easytronic Electronic 111 578 100 / 111 578 200			
pump steps after prewash		time	pressure switch
1	pumping	5 sec	until reset point “level”
2	pumping		
3	pause	20 sec	
4	pumping	20 sec	
after prewash in the eco program			
1	pumping	5 sec	until reset point “level”
2	pumping		
pumping normal			
1	pumping	5 sec	until reset point “level”
2	pumping		
3	pause	20 sec	
4	pumping	45 sec	

### 9.1 Installation of the Drain Hose



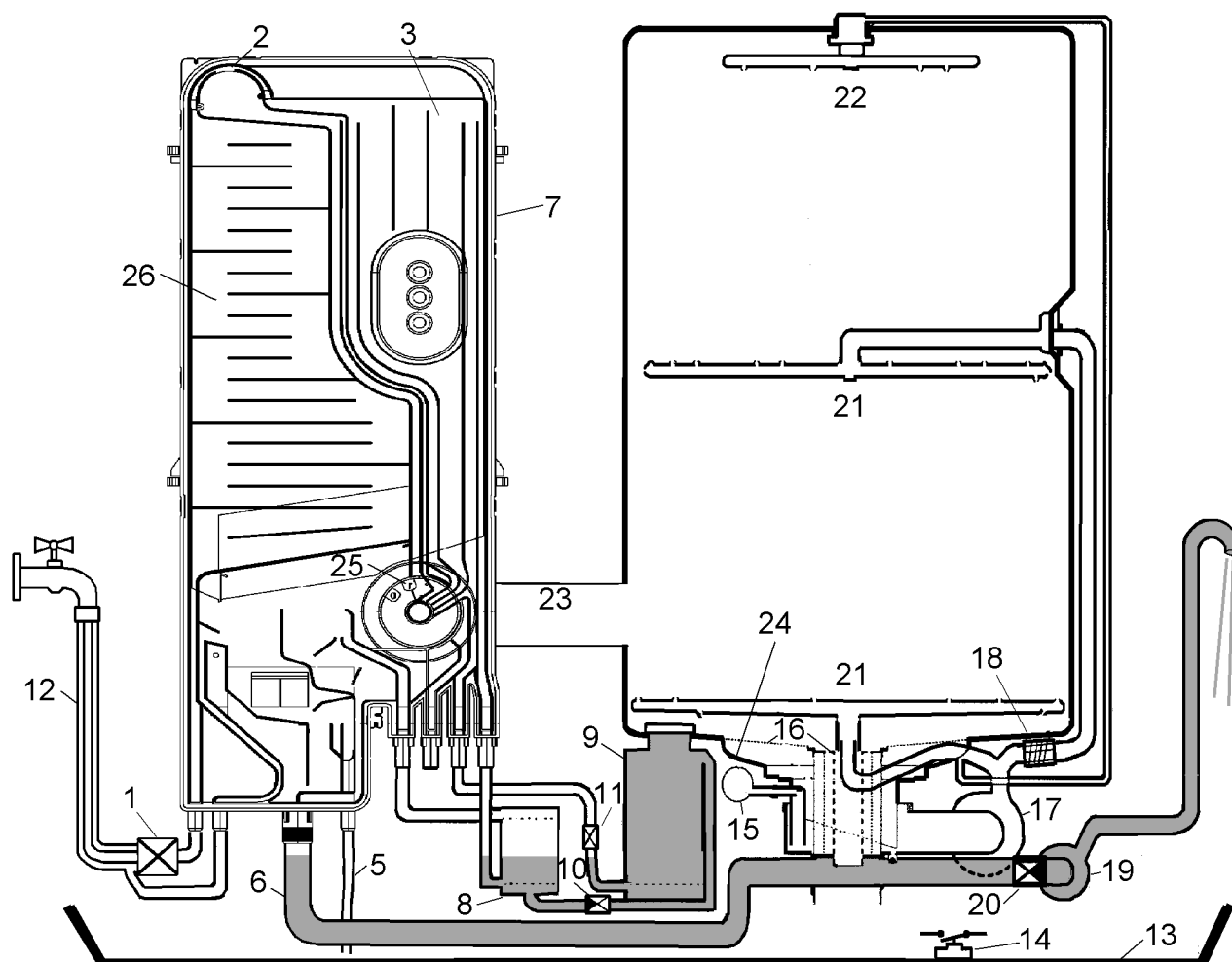
Drain hose connection:

Max. permissible height: 1 metre;

Min. height required 30 cm above floor level.

The drain hose can be extended horizontally to a maximum length of 3 metres, at a height of 85 cm.

## 9.2 Water Course Scheme for pumping out



- |    |  |    |                                   |
|----|--|----|-----------------------------------|
| 1  | Inlet valve                                    | 14 | Float switch                      |
| 2  | Air break                                      | 15 | Pressure switch                   |
| 3  | Regeneration water dosage                      | 16 | Filter                            |
| 4  | Overflow safety level                          | 17 | Circulation pump                  |
| 5  | Safety overflow                                | 18 | Flow heater                       |
| 6  | Inlet to sump from regeneration dosage chamber | 19 | Drain pump                        |
| 7  | Regeneration dosage chamber                    | 20 | Non-return valve                  |
| 8  | Softener                                       | 21 | Spray arms                        |
| 9  | Salt container                                 | 22 | ceiling shower / ceiling sprayarm |
| 10 | Non-return valve salt container                | 23 | Tub vent                          |
| 11 | Regeneration valve                             | 24 | Sump assembly                     |
| 12 | Safety inlet hose                              | 25 | switch for fresh water blend      |
| 13 | Base tray                                      | 26 | condenser                         |

## 10. Regeneration

The water chamber for regeneration (3) contains 350 ml water. During regeneration, the regeneration valve (11) is energized. The 350 ml water runs into the salt container (9) and mixes with the salt to form a brine solution.

In the top of the salt container there is an opening with a small filter, from here the brine solution passes through a non-return valve (10) and enters the softener (8) where the resins are regenerated.

The softener has 10 settings and can be adjusted to suit the degree of water hardness.

The adjustment of the water hardness is described in the short list of service functions.

Phase		Water Hardness		Remaining Water Hardness		Salt	Regenerating depending on need after	Regenerating after	
mech.	electr.	°d	°F	°d	°F			Final Rinse	Washing
0	0	< 4	< 7				428 liter	X	
0	1	4 - 10	7 - 18	1 - 5	2 - 9	90 g	130 liter	X	
0	2	11 - 14	19 - 25	2 - 5	4 - 9	90 g	94 liter	X	
0	3	15 - 18	26 - 33	3 - 5	5 - 9	90 g	70 liter	X	
0	4	19 - 22	34 - 40	3 - 5	5 - 9	90 g	53 liter	X	
0	5	23 - 28	41 - 51	3 - 6	5 - 11	90 g	37 liter	X	
1	6	29 - 36	52 - 65	4 - 6	7 - 11	90 g	20 liter	X	
1	7	37 - 42	66 - 76	3 - 7	5 - 11	90 g	15 liter	X	
1	8	43 - 50	77 - 91	4 - 7	7 - 13	90 g	10 liter	X	
1	9	51 - 70	92 - 127	-7	-13	100 g	3 liter	X	X

### 10.1 Regenerating Phases and Condenser Drying

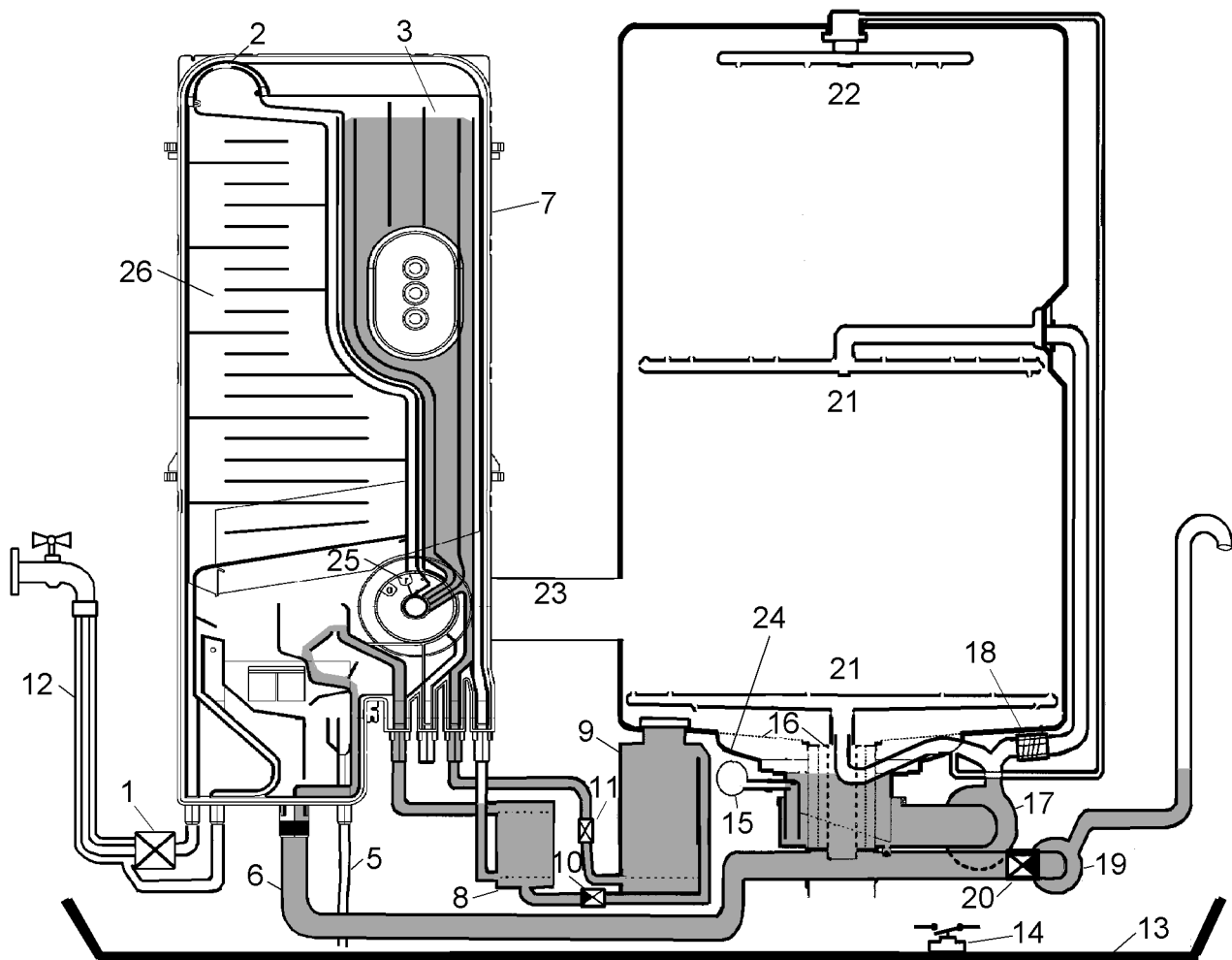
Easytronic +, Control Electronic 111 573 600 / 111 577 800			
Phases	Function	Time	Comment
1	drying, pumping	5 sec	
2	regenerating, drying	240 sec	*
3	pumping, drying	15 sec	
4	drying	300 sec	
5	drying, filling	15 sec	* rinse out softener
6	drying	5 sec	*
7	drying, filling	to level	* rinse out softener
8	drying, pumping, filling	5 sec	* rinse out softener
9	drying, pumping	5 sec	*
10	drying	180 sec	
11	drying, filling	15 sec	cool down condenser and rinse out softener
12	drying, pumping	15 sec	
13	drying	660 sec	
14	drying, pumping	15 sec	
* only when regenerated demanding on need			

<b>Easytronic, Control Electronic 111 578 100, 111 578 200</b>			
<b>Phases</b>	<b>Function</b>	<b>Time</b>	<b>Comment</b>
1	drying, pumping	5 sec	
2	renerating, drying	240 sec	*
3	pumping, drying	15 sec	
4	drying	300 sec	
5	filling	to level	* rinse out softener
6	pause	5 sec	*
7	pumping, filling	5 sec	* rinse out softener
8	pumping	5 sec	* rinse out softener
9	drying	60 sec	*
10	drying	120sec	
11	drying, filling	15 sec	cool down condenser and rinse out softener
12	drying, pumping	15 sec	
11	drying	660 sec	
14	drying, pumping	15 sec	
* only when regenerated demanding on need			

### **Regenerating after Washing only with Level 9**

<b>equal to all Easytronic control electronics</b>			
<b>Phases</b>	<b>Function</b>	<b>Time</b>	<b>Comment</b>
1	regenerating	120 sec	
2	regenerating, pumping	30 sec	
3	filling	to level	rinse out softener
4	pumping	5 sec	
5	pumping, filling	5 sec	rinse out softener
6	pumping	5 sec	
7	filling	15 sec	rinse out softener
8	pumping	to reset point	
9	pumping	20 sec	

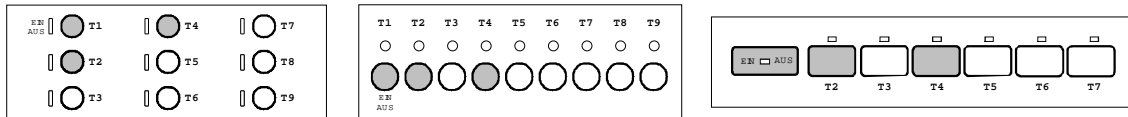
## 10.2 Water Course Scheme for Regenerating



- |    |  |    |                                   |
|----|--|----|-----------------------------------|
| 1  | Inlet valve                                    | 14 | Float switch                      |
| 2  | Air break                                      | 15 | Pressure switch                   |
| 3  | Regeneration water dosage                      | 16 | Filter                            |
| 4  | Overflow safety level                          | 17 | Circulation pump                  |
| 5  | Safety overflow                                | 18 | Flow heater                       |
| 6  | Inlet to sump from regeneration dosage chamber | 19 | Drain pump                        |
| 7  | Regeneration dosage chamber                    | 20 | Non-return valve                  |
| 8  | Softener                                       | 21 | Spray arms                        |
| 9  | Salt container                                 | 22 | ceiling shower / ceiling sprayarm |
| 10 | Non-return valve salt container                | 23 | Tub vent                          |
| 11 | Regeneration valve                             | 24 | Sump assembly                     |
| 12 | Safety inlet hose                              | 25 | switch for fresh water blend      |
| 13 | Base tray                                      | 26 | condenser                         |

## 11. Service Functions

### 11.1 Call for the Manufacturing Test Routine



- Activate the basic function by keys T1, T2 and T4
- Start the manufacturing test routine by key 4
- First you have to press keys 2 and 4 and keep them pressed until switching on the appliance by the ON/OFF switch T1.
- The key LEDs 2 and 4 will flash when doing so.
- The service mode is activated.
- Start the manufacturer's test routine by actuating key 4.
- The key LED 4 will flash during the whole test cycle run.
- If existing, the cycle run will be indicated analogously to the other washing cycles by means of the 7-segment display or by the cycle run display.
- The cycle run of the test routine has been listed under the point *Cycle Technology*.
- In case of a power failure, the test routine will be continued immediately after the mains have returned.
- At the end of the manufacturing test routine, the key LED 4 continues to flash. It is possible to exit the test routine by opening the door or by switching off the appliance.

### Test Routine for Dishwasher with Rotary Slide Drive and Automatic Easytronic +, Control Electronic 111 573 600 / 111 577 800

LED	Phase	Function	Time
prewash	1	pumping	to reset point
	2	pumping	15 sec
	3	calibrate turbidity sensor	to 3.5 V
	4	static filling	to level
	5	static filling	5 sec
	6	pumping	to reset point
	7	pumping	15 sec
intermed. rinse	8	static filling	to level
	9	static filling	15 sec
	10	filling, circulating 2000 1/min	5 sec level monitored
	11	filling, circulating 2800 1/min	20 sec level monitored
	12	washing, circulating 2800 1/min fill sprayarms in alternating operation	30 sec level monitored
	13	filling, level monitored, circulating 2800 1/min, rotary slide	to level and upper sprayarm
	14	heating, filling, circulating 2800 1/min	to 50 °C or level monitored for 1200 sec
	15	pumping	to reset point
	16	pumping	30 sec
final rinse	17	regenerating, drying	90 sec
	18	pumping	to reset point
	19	pumping	20 sec

**Test Routine for Dishwasher with Rotary Slide Drive without Automatic  
Easytronic +, Control Electronic 111 573 600 / 111 577 800**

LED	Phase	Function	Time
prewash	1	pumping	to reset point
	2	pumping	15 sec
	3	static filling	to level
	4	static filling	5 sec
	5	pumping	to reset point
	6	pumping	15 sec
intermed. rinse	7	static filling	to level
	8	static filling	15 sec
	9	filling, circulating 2000 1/min	5 sec level monitored
	10	filling, circulating 2800 1/min	20 sec level monitored
	11	washing, circulating 2800 1/min fill sprayarms in alternating operation	30 sec level monitored
	12	filling, level monitored, circulating 2800 1/min, rotary slide	to level and upper sprayarm
	13	heating, filling, circulating 2800 1/min	to 50 °C or level monitored for 1200 sec
	14	pumping	to reset point
final rinse	15	pumping	30 sec
	16	renerating, drying	90 sec
	17	pumping	to reset point
	18	pumping	20 sec

**Test Routine for Dishwasher without Rotary Slide Drive and with Automatic  
Easytronic +, Control Electronic 111 573 600 / 111 577 800**

LED	Phase	Function	Time
prewash	1	pumping	to reset point
	2	pumping	15 sec
	3	calibrate turbidity sensor	to 3.5 V
	4	static filling	to level
	5	static filling	5 sec
	6	pumping	to reset point
	7	pumping	15 sec
intermed. rinse	8	static filling	to level
	9	static filling	15 sec
	10	filling, circulating 1700 1/min	5 sec level monitored
	11	filling, circulating 1900 1/min	20 sec level monitored
	12	washing, filling, circulating, pulsed washing 1	30 sec level monitored
	13	heating, filling, circulating, pulsed washing 1	to 50 °C or level monitored for 1200 sec
	14	pumping	to reset point
final rinse	15	pumping	30 sec
	16	regenerating, drying	90 sec
	17	pumping	to reset point
	18	pumping	20 sec



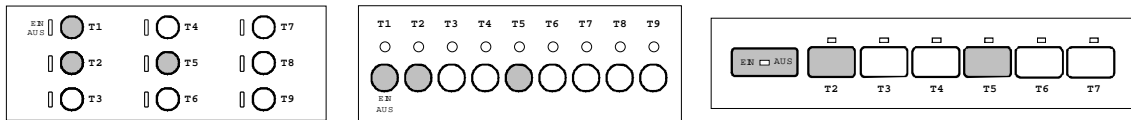
**Test Routine for Dishwasher without Rotary Slide Drive without Automatic  
Easytronic +, Control Electronic 111 573 600 / 111 577 800**

LED	Phase	Function	Time
prewash	1	pumping	to reset point
	2	pumping	15 sec
	3	static filling	to level
	4	static filling	5 sec
	5	pumping	to reset point
	6	pumping	15 sec
intermed. rinse	7	static filling	to level
	8	static filling	15 sec
	9	filling, circulating 1700 1/min	5 sec level monitored
	10	filling, circulating 1900 1/min	20 sec level monitored
	11	washing, filling, circulating, pulsed washing 1	30 sec level monitored
	12	heating, filling, circulating, pulsed washing 1	to 50 °C or level monitored for 1200 sec
final rinse	13	pumping	to reset point
	14	pumping	30 sec
	15	regenerating, drying	90 sec
	16	pumping	to reset point
	17	pumping	20 sec

**Test routine for Dishwasher Easytronic, Control Electronic 111 578 100 / 111 578 200**

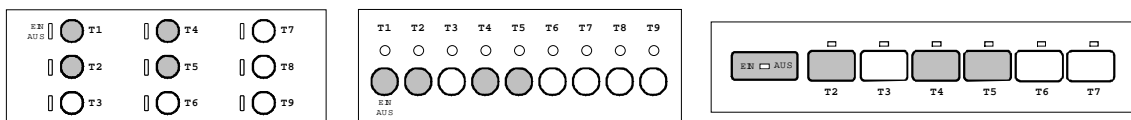
LED	Phase	Function	Time
prewash	1	pumping	to reset point
	2	pumping	15 sec
	3	static filling	to level
	4	static filling	5 sec
	5	pumping	to reset point
	6	pumping	15 sec
intermed. rinse	7	static filling	to level
	8	static filling	15 sec
	9	filling, circulating 1700 1/min	5 sec level monitored
	10	filling, circulating 1900 1/min	20 sec level monitored
	11	pause	5 sec
	12	washing, filling, circulating, pulsed washing 2	30 sec level monitored
final rinse	13	heating, filling, circulating, pulsed washing 2	to 50 °C or level monitored for 1200 sec
	14	pumping	5 sec
	15	pumping	to reset point
	16	pumping	30 sec
	17	regenerating, drying	90 sec
	18	pumping	to reset point
	19	pumping	20 sec

## 11.2 Call for Selection of Single Actuators



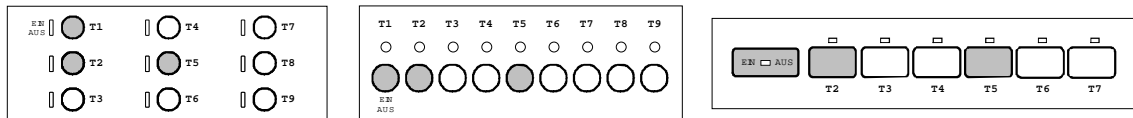
- Activate the basic function by keys T1, T2 and T5
- Start the manufacturing test routine by key T2
- First you have to press keys 2 and 5 and keep them pressed until switching on the appliance by the ON/OFF switch T1.
- The key LEDs 2 and 5 will flash
- The service mode is activated.
- Start the automatic selection of single actuators by actuating key 2.
- The key LEDs 2 and 5 continue to flash.
- The single actuators are selected and activated scrolling one after the other as follows:
  - 5 sec inlet valve
  - 5 sec regenerating valve
  - 5 sec circulation pump
  - 5 sec rotary slide
  - 5 sec drain pump
  - 5 sec fan
  - 5 sec detergent dispenser
- After 2 minutes this automatic run is exited again. You can exit the function earlier, however, also by switching off the appliance by the ON/OFF switch T1.

## 11.3 Output of the Service Fault Memory

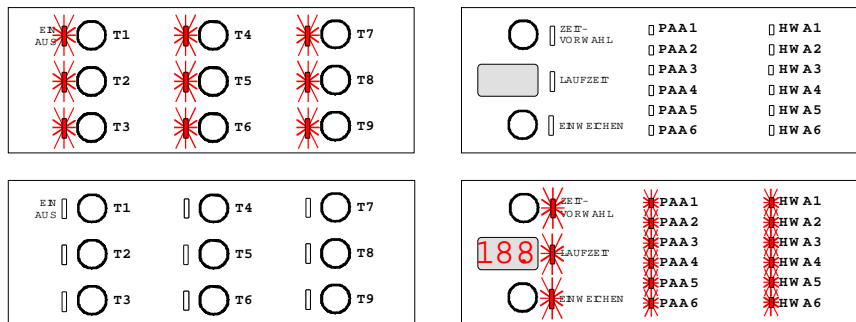


- Activate the basic function by keys T1, T2 and T5
- Call for the service fault memory using key T4.
- First you have to press keys 2 and 5 and keep them pressed until switching on the appliance by the ON/OFF switch T1.
- The key LEDs 2 and 5 will flash
- The service mode is activated.
- Start the service fault memory by actuating key 4.
- The key LEDs 2, 4 and 5 flash.
- The faults are indicated in a coded way by the 7-segment display or the cycle run display, depending on variant.  
(see chapter "Survey of Fault Indications")
- The faults can be indicated one after the other by further actuating key 4.
- The 3 last faults will be indicated at maximum.
- You can exit the function by switching off the appliance by the ON/OFF switch T1.

## 11.4 Deleting the Fault Memory and LED Test



- Activate the basic function by keys T1, T2 and T5
- Call for the service fault memory using key T5.
- First you have to press keys 2 and 5 and keep them pressed until switching on the appliance by the ON/OFF switch T1.
- The key LEDs 2 and 5 will flash
- The service mode is activated.
- The service fault memory is deleted and the LED test is started by actuating key 5.
- All LEDs of the left input side will light alternating with the LEDs of the right output side.
- This display will be repeated 3 times on the whole, finally the function is exited automatically.



## 11.5 Survey of Fault Indications – Display C

Valid for Easytronic + Control Units with I/O-Variants (Input/Output), Easytronic +, Easytronic VGA

I/O variants	=	input/output variants
VGA	=	fully integrated dishwasher
PAA	=	cycle run display
7 Seg.	=	7-segment display
AK	=	acoustic signal

Error Indication	Display 7-Segment	Display PAA - LEDs	Display Acoustic number of squealings if existing depending on variant	Fault Indication visible for customers	Inquiry Fault Memory (after-sales service)	Indication over Reference Display	Short Description	What happens?
	Either 7-segment or PAA possible If 7-segment existing, no PAA output			PAA 7-Seg. AK	PAA 7-Seg. AK		if existing depending on variant	
communication error	C0	washing	---			---	Is detected, when no data can be received resp. sent between input module and control unit after ten attempts.	Appliance stands still and is waiting until communication works again.
water tap closed	C1	end	once			LED water If LED water existing, only acoustically, no 7-segment and PAA for customers	Switching point of pressure switch is not reached after 60 sec latest.	Cycle LED is flashing. Cycle is stopped and can be continued by actuating the cycle key. Acoustic signal is interrupted by opening the door.
drain pump	C2	drying	twice			---	Reset point of pressures switch is not reached after 120 sec latest. Cycle is stopped.	Cycle LED is flashing. Cycle is stopped and can be continued by actuating the cycle key. Acoustic signal is interrupted by opening the door.
Aqua Control	C3	drying end	3 times			---	Drain pump is working longer than 15 sec, although not selected by electronic.	Cycle is stopped and continues again independently after the end of the fault.
---	C4	final rinse	---			---	---	---
turbidity sensor	C5	final rinse end	5 times			---	The turbidity signal required for calibration is not reached within 8 sec.	Turbidity is always detected. The cycle run is adjusted correspondingly.
---	C6	final rinse drying	--			---	---	---
heating	C7	final rinse drying end	7 times			---	The temperature does not increase by a minimum of 1.5K within 3 min during the heating phase.	Cycle will be executed up to the end without heating function!
NTC sensor	C8	intermediate rinse	8 times			---	NTC short circuit or interruption	Cycle will be executed up to the end without heating function!
speed indicator	C9	intermediate rinse end	9 times			---	With the circulation pump selected, no signal of the speed indicator is detected for 25 sec.	The circulation pump is driven without control. With "DFH"-appliances, the heating is switched off after 5 sec. This function is then checked anew in every phase.
circulation pump Triac short circuit	CA	intermediate rinse drying	10 times			---	Signals of the speed indicator are detected, although circulation pump is not selected.	Cycle is finished and water is taken in up to the switching point of the pressure switch.
rotary slide	Cb	intermediate rinse drying end	11 times			---	a) The set position of the rotary slide is not reached within 4.3 min. b) The position of the rotary slide is changing without that the rotary slide is selected.	Cycle continues running. With "DFH" appliances, the heating is switched off.
servo door lock (only "VGA")	CE	washing drying end	14 times			---	Door cannot be locked within 120 sec or a Triac short circuit was detected.	Cycle stops.
programming fault when forming variants	Cf	washing end	15 times			---	Checksum error in EEPROM. Is only detected after switching on.	No cycle selection possible. ON/OFF LED on.
fault I/O variant	---	---	---			---	Incorrect I/O variant was programmed. I/O unit does not coordinate with the control unit.	No cycle selection possible. ON/OFF LED on / with "VGA" ON/OFF LED is flashing

AK = with Easytronic +, when option existing and programmed, resp. always with VGA  
\*\* = when 7-segment display existing, no PAA of the fault

## 11.6 Survey of Fault Indications – Display A

Valid for Easytronic + Control units with I/O Variants, Easytronic +, not for Easytronic VGA

I/O variants	=	input/output variants
VGA	=	fully integrated dishwasher
PAA	=	cycle run display
7 Seg.	=	7-segment display
AK	=	acoustic signal

Error Indication	Display 7-Segment	Display PAA - LEDs	Display Acoustic number of squealings if existing depending on variant	Fault Indication visible for customers	Inquiry Fault Memory (after-sales service)	Indication over Reference Display	Short Description	What happens?
	Either 7-segment or PAA possible! If 7-segment existing, no PAA output			PAA 7-Seg. AK	PAA 7-Seg. AK		if existing depending on variant	
	A0	prewash wash	---					
	A1	prewash end	---					
	A2	prewash drying	---					
	A3	prewash drying end	---					
sprayarm	A4	prewash final rinse	steady sound when upper sprayarm positioned	③	③	LED sprayarm	At the cycle start and at the start of any partial cycle, as well as after door opened/closed resp. power failure, the sprayarm rotation is checked and evaluated.	Fault indication until rotational speed of sprayarm is detected, or there will be no selection.
	A5	prewash final rinse end	---					
over-flow protection	A6	prewash final rinse end	---		③	---	Max. filling time after filling to level is $T_{\text{sbtc lev}} \times 4$ (default value = 124 sec) When this time is exceeded, the fault will be detected.	Valve is no longer selected until the next drain phase (draining to level). Level-dependent filling phases as well as heating phases are skipped. During that time there is generally no heating selection.
	A7	prewash final rinse drying end	---					
	A8	prewash intermediate rinse	---					
	A9	prewash intermediate rinse end	---					
	AA	prewash intermediate rinse drying	---					
	Ab	prewash intermediate rinse drying end	---					
	AE	prewash wash drying end	---					
	Af	prewash wash end	---					

AK\* = with Easytronic +, when option existing and programmed

## 11.7 Short Survey of Service Functions

Easytronic +

1 ☐   
 2 ☐   
 3 ☐

4 ☐   
 5 ☐   
 6 ☐

7 ☐   
 8 ☐   
 9 ☐

0 ☐   
 1 ☐   
 2 ☐   
 3 ☐   
 4 ☐   
 5 ☐   
 6 ☐   
 7 ☐   
 8 ☐   
 9 ☐

	activation of basic function by key(s) before key 1 (ON/OFF) is actuated	display	by key	afterwards: selection, start or change of function display
set hardness area	key 2 + 3 →	LEDs 2 and 3 flashing		The hardness area value can be changed by actuating key 3 (LED 3 is flashing). When actuating it the first time, the currently set value will be indicated. Delivery condition "H3" Function scrolling – see point 6 / The indication will be updated correspondingly.
switching off of buzzer for cycle end	key 2 + 3 →	LEDs 2 and 3 flashing		The buzzer can be switched off resp. on by actuating key 2 (LED 2 is flashing): When actuating it the first time, the currently set value will be indicated. Delivery condition "b1" Indication b0 and LED "end" off = buzzer off Indication b1 and LED "end" flashing = buzzer on
rinse-aid addition switching on/off	key 2 + 3 →	LEDs 2 to 4 flashing	key 4 →	LED 4 flashing, rinse-aid inlet switched on LED 4 does not flash, rinse-aid inlet switched off. The setting can be changed by actuating key 4.
manufacturing test routine	key 2 + 4 →	LEDs 2 and 4 flashing	Taste 4 →	LED 4 flashing, cycle state over 7-segment display and PAA LED
selection of single actuator	key 2 + 5 →	LEDs 2 and 5 flashing	key 2 →	LEDs 2 and 5 flashing
output after-sales service fault memory	key 2 + 5 →	LEDs 2 and 5 flashing	Taste 4 →	LEDs 2, 4 and 5 flashing 7-segment display coded (PAA with "VGA")
delete after-sales service fault memory indications test	key 2 + 5 →	LEDs 2 and 5 flashing	key 5 →	All key LEDs flash alternating with the LEDs of the PAA and other right indications.

## 12. Cycle Structure

### 12.1 Cycles for Dishwasher without Rotary Slide Easytronic +, Control Electronic 111 573 600, 111 577 800

programs Programme	options Optionen			pre wash Vorspülen				main wash Reinigen				cold rinse Zwischenspülen				hot rinse Klarspülen				drying Trocknen				energy Energieverbrauch	water Wasserverbrauch	water New Fan Wasser New Fan Verbrauch
	half load	superwash	extra dry	tablet	time after temperature Zeit nach Erreichen d. Temperatur	wash type	total time Gesamt Zeit	time after temperature Zeit nach Erreichen d. Temperatur	temperature ( $\Delta T$ )	time after temperature Zeit nach Erreichen d. Temperatur	wash type	time after temperature Zeit nach Erreichen d. Temperatur	temperature ( $\Delta T$ )	total time Gesamt Zeit	time after temperature Zeit nach Erreichen d. Temperatur	temperature ( $\Delta T$ )	time after temperature Zeit nach Erreichen d. Temperatur	wash type	total time Gesamt Zeit	time + Fan Gesamtzeit	time New Fan Gesamtzeit	time No Fan Gesamtzeit	No Fan - VGA Gesamtzeit	energy Energieverbrauch	water Wasserverbrauch	water New Fan Wasser New Fan Verbrauch
super wash					( $\Delta T$ ) 55°C	ctrl	30	$\Delta T + 5$	( $\Delta T$ ) 70°C	$\Delta T + 16$	ctrl	36	---	10	puls_N	70°C	17	total + Fan Gesamt Zeit	24	120	120	120	130	1,85	20,0	21,0
Intensiv 65/70°		☺		☺	( $\Delta T$ ) 50°C	ctrl	23	$\Delta T + 2$	( $\Delta T$ ) 70°C	$\Delta T + 10$	ctrl	29	---	10	puls_N	70°C	22	total + Fan Gesamt Zeit	24	111	111	111	121	1,80	19,0	20,0
Normal 65°	☺	☺		☺	---	puls_N	9	$\Delta T + 2$	( $\Delta T$ ) 65°C	$\Delta T + 12$	puls_N	40	---	5	puls_N	70°C	20	total + Fan Gesamt Zeit	24	100	100	100	110	1,35	15,5	16,5
Normal Bio 50/55°+FAN	☺	☺		☺	---	puls_N	9	$\Delta T + 4$	( $\Delta T$ ) 55°C	$\Delta T + 12$	puls_N	35	---	5	puls_N	65°C	22	total + Fan Gesamt Zeit	24	97	97	97	109	1,12	15,5	16,5
Normal Bio 50/55°	☺	☺		☺	---	puls_N	9	$\Delta T + 4$	( $\Delta T$ ) 55°C	$\Delta T + 12$	puls_N	35	---	5	puls_N	70°C	24	total + Fan Gesamt Zeit	---	---	---	---	---	1,22	15,5	16,5
Energysaving AAA/C	☺				---	puls_N	9	$\Delta T + 42$	---	---	puls_N	60	---	5	puls_N	16Min. (= 65°C)	25	total + Fan Gesamt Zeit	54	155	155	155	155	1,11	15,5	16,5
Energys ABB - 12l	☺				---	---	---	$\Delta T + 42$	---	---	puls_N	60	---	5	puls_N	16Min. (= 65°C)	25	total + Fan Gesamt Zeit	54	146	146	---	---	1,09	11,5	12,5
Energysaving BAB/C	☺				---	puls_N	9	$\Delta T + 42$	---	---	puls_N	60	---	5	puls_N	70°C	27	total + Fan Gesamt Zeit	---	103	103	127	137	1,23	15,5	16,5
Energysaving ABB/C	☺			☺	---	puls_N	12	$\Delta T + 4$	( $\Delta T$ ) 55°C	$\Delta T + 12$	puls_N	35	---	5	puls_N	16Min. (= 65°C)	25	total + Fan Gesamt Zeit	54	133	133	133	133	1,13	15,0	16,0
Energysaving AAA_14l	☺				---	puls_N	12	$\Delta T + 42$	---	---	puls_N	60	---	5	puls_N	16Min. (= 55°C)	25	total + Fan Gesamt Zeit	54	155	155	158	155	1,11	14,5	15,5
Energysaving AAA_14l_1	☺				---	puls_N	12	$\Delta T + 42$	---	---	puls_N	60	---	5	puls_N	16Min. (= 55°C)	25	total + Fan Gesamt Zeit	54	155	155	158	155	1,11	14,5	15,5
Auto 65°	☺				---	puls_N	9	$\Delta T + 4$	( $\Delta T$ ) 50°C	$\Delta T + 12$	puls_N	42	---	4	puls_N	70°C	20	total + Fan Gesamt Zeit	24	98- 118	98- 118	102	108- 128	1,15- 1,45	11,5- 19,0	12,5-20,0
Auto Bio	☺				---	puls_N	9	$\Delta T + 4$	( $\Delta T$ ) 60°C	$\Delta T + 12$	puls_N	37	---	4	puls_N	70°C	22	total + Fan Gesamt Zeit	24	95- 115	95- 115	99	105- 125	1,10- 1,35	11,5- 19,0	12,5-20,0
ECO 65°	☺	☺		☺	---	puls_N	---	$\Delta T + 2$	( $\Delta T$ ) 65°C	$\Delta T + 12$	puls_N	40	---	5	puls_N	70°C	20	total + Fan Gesamt Zeit	24	91	91	91	101	1,33	12,5	11,5
ECO BIO 50/55°+FAN	☺	☺		☺	---	---	---	$\Delta T + 4$	( $\Delta T$ ) 50°C	$\Delta T + 12$	puls_N	35	---	5	puls_N	65°C	22	total + Fan Gesamt Zeit	24	88	88	64	---	1,07	12,5	11,5
ECO BIO 50/55°	☺	☺		☺	---	puls_N	---	$\Delta T + 4$	( $\Delta T$ ) 55°C	$\Delta T + 12$	puls_N	35	---	5	puls_N	70°C	24	total + Fan Gesamt Zeit	---	---	---	90	100	1,07	11,5	11,5
Quick 50°					---	puls_N	18	---	---	---	puls_N	13	---	3	puls_N	55°C	13	total + Fan Gesamt Zeit	---	36	36	36	36	0,84	11,5	11,5
Quick 40°					---	puls_N	13	---	---	---	puls_N	13	---	3	puls_N	55°C	16	total + Fan Gesamt Zeit	---	34	34	34	34	0,73	11,5	11,5
eat load + run					---	ctrl	17	---	---	---	---	---	---	---	---	6Min. (= 60°C)	12	total + Fan Gesamt Zeit	---	29	29	29	29	0,78	8,5	8,5
Pre wash					8	---	11	---	---	---	---	---	---	---	---	---	---	total + Fan Gesamt Zeit	---	11	11	11	11	0,01	4,5	4,5
Linetest + auto					---	---	1	---	---	---	---	---	---	---	---	---	2	total + Fan Gesamt Zeit	---	20	20	20	20	0,47	6,0	6,0
Linetest no auto					---	---	1	---	---	---	---	---	---	---	---	---	2	total + Fan Gesamt Zeit	---	20	20	20	20	0,47	6,0	6,0

## 12.2 Cycles for Dishwasher with Rotary Slide

### Easytronic +, Control Electronic 111 573 600,111 577 800

	options Optionen	pre wash Vorspülen					main wash Reinigen					cold rinse Zwischenspülen					hot rinse Klarspülen					drying Trocknen	time + Fan Gesamtlauzeit	time No Fan Gesamtlauzeit	energy Energieverbrauch	water Wasserverbrauch
		half load	superwash	extra dry	tablet	temperature	time after temperature	time after temperature	time after temperature	time after temperature	total time	wash type	temperature	time after temperature	temperature	Fuzzy	temperature	time after temperature	time after temperature	wash type	total time	Trocknen	Gesamt Zeit			
programs Programme																										
super wash					☺	(ΔT) 55°C	ΔT + 11	(ΔT) 55°C	ΔT + 6	(ΔT) 70°C	ΔT + 24	ctrl	49	---	---	---	(ΔT) 70°C	ΔT + 2	pulse_N	21	24	34	142	152	19,0	19,0
Intensiv 65/70°			☺		☺	(ΔT) 50°C	ΔT + 5	(ΔT) 50°C	ΔT + 2	(ΔT) 70°C	ΔT + 14	ctrl	38	---	---	---	(ΔT) 70°C	ΔT + 2	pulse_N	26	24	34	129	139	17,0	19,0
Normal 65°		☺	☺		☺	---	ΔT + 8	(ΔT) 50°C	ΔT + 2	(ΔT) 65°C	ΔT + 13	ctrl	47	3	---	3	(ΔT) 70°C	ΔT + 2	pulse_N	22	24	34	113	123	14,0	15,5
Normal Bio 50/55°_F		☺	☺		☺	---	ΔT + 8	(ΔT) 50°C	ΔT + 4	(ΔT) 55°C	ΔT + 15	ctrl	44	3	---	3	(ΔT) 65°C	ΔT + 2	pulse_N	21	24	---	109	X	1,19	15,5
Normal Bio 50/55°		☺	☺		☺	---	ΔT + 8	(ΔT) 50°C	ΔT + 4	(ΔT) 55°C	ΔT + 15	ctrl	44	3	---	3	(ΔT) 70°C	ΔT + 2	pulse_N	23	---	34	X	121	1,19	15,5
Energysaving AAA		☺				---	ΔT + 8	15Min. (= 65°C)	ΔT + 40	---	---	ctrl	58	3	---	3	16Min. (= 65°C)	ΔT + 8	pulse_N	27	54	---	159	X	1,18	15,5
Energysaving BAB		☺				---	ΔT + 8	15Min. (= 55°C)	ΔT + 40	---	---	ctrl	58	3	---	3	(ΔT) 70°C	ΔT + 2	pulse_N	26	---	34	X	138	1,30	15,5
Auto 65°		☺			☺	---	ΔT + 8	(ΔT) 50°C	ΔT + 4	(ΔT) 65°C	ΔT + 15	ctrl	47	3	---	3	(ΔT) 70°C	ΔT + 2	pulse_N	25	24	34	115	125	1,30	12,0
Auto Bio		☺			☺	---	ΔT + 8	(ΔT) 50°C	ΔT + 4	(ΔT) 60°C	ΔT + 15	ctrl	42	3	---	3	(ΔT) 70°C	ΔT + 2	pulse_N	27	24	34	112	122	1,20	12,0
ECO 65°		☺			☺	---	---	(ΔT) 50°C	ΔT + 2	(ΔT) 65°C	ΔT + 13	ctrl	47	3	---	3	(ΔT) 70°C	ΔT + 2	pulse_N	22	24	34	102	112	1,35	12,0
ECO BIO 50/55°_F		☺			☺	---	---	(ΔT) 50°C	ΔT + 4	(ΔT) 55°C	ΔT + 15	ctrl	44	3	---	3	(ΔT) 65°C	ΔT + 2	pulse_N	21	24	---	98	X	1,25	12,0
ECO BIO 50/55°		☺			☺	---	---	(ΔT) 50°C	ΔT + 4	(ΔT) 55°C	ΔT + 15	ctrl	44	3	---	3	(DT) 70°C	ΔT + 2	pulse_N	23	---	34	X	110	1,25	12,0
Quick 50°						---	---	(ΔT) 50°C	ΔT + 6	---	---	ctrl	24	---	---	---	(ΔT) 55°C	ΔT + 2		18	---	---	49	49	0,85	12,0
Quick 40°						---	---	(ΔT) 40°C	ΔT + 6	---	---	ctrl	19	---	---	---	(ΔT) 55°C	ΔT + 2		20	---	---	46	46	0,76	12,0
eat load + run						---	---	17Min. (= 65°C)	ΔT + 6	---	---	ctrl	26	---	---	---	6Min. (= 60°C)	---	pulse_N	14	---	---	40	40	0,76	8,0
Pre wash						---	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	11	11	<0,1	4,0
Linetest + auto						---	---	---	---	---	---	---	---	---	(ΔT) 50°C	---	---	---	---	---	---	---	21	21	0,50	6,0
Linetest no auto						---	---	---	---	---	---	---	---	---	(ΔT) 50°C	---	---	---	---	---	---	---	21	21	0,50	6,0



## 12.3 Cycles for Dishwasher without Rotary Slide

### Easytronic, Control Electronic 111 578 100,111 578 200

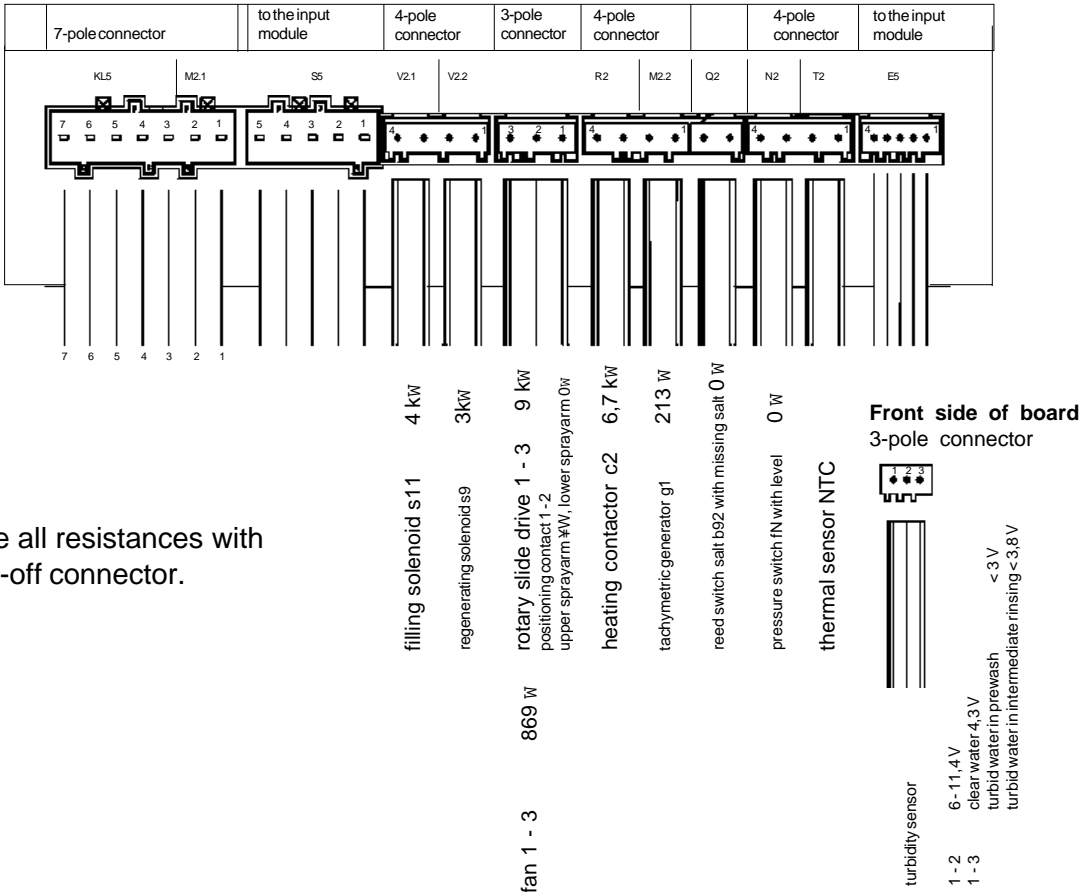
abbr. Abkürz.	programs Programme	options Optione	pre wash Vorspülen		main wash Reinigen		cold rinse Zwischenspüle		hot rinse Klarspülen	drying Trocknen				time + Fan Gesamtlauzeit	time New Fan Gesamtlauzeit	time No Fan Gesamtlauzeit	time - VGA Gesamtlauzeit	energy h [kWh]	water h [L]	water New h [L]
			temperature	wash type	temperature	wash type	temperature	wash type	temperature	total + Fan Gesamt Zeit	total New Fan Gesamt Zeit	total No Fan Gesamt Zeit	total -VGA Gesamt Zeit	[min]	[min]	[min]	[min]	[kWh]	[L]	[L]
SW	super wash		55 °C	ctrl	70 °C	ctrl		puls_N	70 °C	24	24	24	34	120	120	120	130			
I65/70	Intensiv		50 °C	ctrl	70 °C	ctrl		puls_N	70 °C	24	24	24	34	114	114	114	124	1,69	20,7	
N65	Normal 65°	☺		ctrl	65 °C	ctrl		puls_N	70 °C	24	24	24	34	102	102	102	112	1,33	15,1	
NBIO+F	Normal Bio + Fan	☺		puls_N	50 / 55 C	puls_N		puls_N	65 °C	24	24	--	--	96	96	--	--	1,15	14,8	
NBIO	Normal Bio	☺		puls_N	50 / 55 C	puls_N		puls_N	70 °C	--	--	24	34	--	--	96	106	1,30	15,0	
ENS-1	Energysaving 1 AAB/C	☺		puls_N	60 °C	puls_N		puls_N	70 °C	54	54	54	54	157	157	157	157	1,11	14,9	
ENS-2	Energysaving 2 AAB/C_2	☺		puls_N	60 °C	puls_N		puls_N	70 °C	54	54	54	54	158	158	158	158	1,12	14,8	
ENS-3	Energysaving 3 ABB/C	☺		puls_N	50 / 55 C	puls_N		puls_N	70 °C	54	54	54	54	130	130	130	130	1,10	15,0	
ENS-4	Energysaving 4 ABB/C - 12l	☺		---	60 °C	puls_N		puls_N	70 °C	54	54	54	54	147	147	147	147			
ENS-5	Energysaving 5 BAB	☺		puls_N	55 °C	puls_N		puls_N	70 °C	24	24	24	34	126	126	126	136	1,24	15,0	
E65	ECO 65°	☺		---	65 °C	puls_N		puls_N	70 °C	24	24	24	34	90	90	90	100	1,30	14,5	
EBIO+F	ECO BIO+ FAN	☺		---	50 / 55 C	puls_N		puls_N	65 °C	24	24	--	--	83	83	--	--	1,13	11,4	
EBIO	ECO BIO	☺		---	50 / 55 C	puls_N		puls_N	70 °C	--	--	24	34	--	--	87	97			
Q50	Quick 50°			---	50 °C	puls_N		puls_N	55 °C	--	--	--	--	39	39	39	39	0,75	11,4	
Q40	Quick 40°			---	40 °C	puls_N		puls_N	55 °C	--	--	--	--	36	36	36	36	0,65	11,4	
ELR	Eat load run			---	65 °C	ctrl		---	70 °C	--	--	--	--	32	32	32	32	0,78	8,7	
PW	Pre wash			puls_N		---		---		--	--	--	--	11	11	11	11	<0,1	4,2	
LT	Line test			---		---		puls_N	50 °C	--	--	--	--	21	21	21	21	0,45	5,6	

12.4 Legend

- DT + 10 = heating time + 10 minutes
- ctrol = recirculation 2800 1/min
- PulsN = pulsed washing 1 / pulsed washing 2
- New Fan = fan with condenser drying
- VGA = fully integrated dishwasher

13. Measuring points

Measure all resistances with plugged-off connector.



7-pole connector	Pin	Widerstand
Attention! With the 7-pole connector clamps 7 and 5 have the mains voltage. When measuring the resistance the mains plug must be absolutely unplugged or the fuse turned off.		
circulation pump main winding m8	1 - 2	35 Ω - 59 Ω
drain pump m3 normal	5 - 6	170 Ω
drain pump m3 float switch f 16.1 or safety pressure switch fS has reacted	5 - 7	170 Ω

NTC temperature sensor	
temperature/resistance	20 °C / 6032 Ω
	25 °C / 4829 Ω
(only with fully electronic dishwashers)	30 °C / 3891 Ω
	40 °C / 2573 Ω
	50 °C / 1741 Ω
	55 °C / 1444 Ω
	60 °C / 1204 Ω
	65 °C / 1009 Ω
	70 °C / 849 Ω